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RECORD





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JUNE 30th, 1896.

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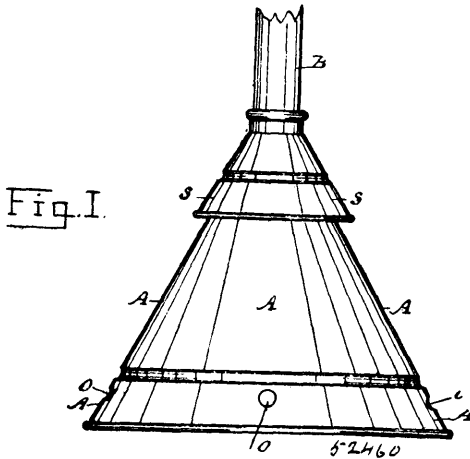
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INVENTIONS PATENTED.

NOTE.—Patents are granted for 18 years. The term of years for which the fee has been paid, is given after the date of the patent.

No. 52,460. Washing Machine. (*Machine à laver.*)



Asa Leroy Burke, Hamilton, Ontario, Canada, 1st June, 1896; 6 years. (Filed 8th May, 1896.)

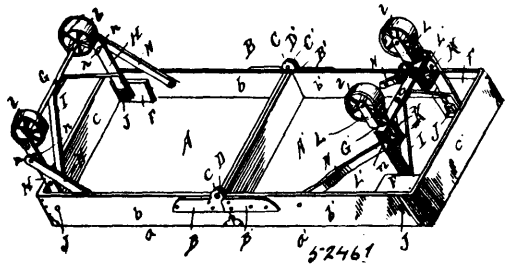
Claim.—In an atmospheric clothes washer, the non-corrosive metallic conical walls A, forming air chamber, having centrally located socket for handle, the base E, having a series of apertures K, and provided with lower projecting rings H, and radial partitions J, forming recesses, the angle braces M, having apertures N, the apertures O, into each said angle brace, and the upper series of apertures P, under their canopy S, all arranged, constructed and combined, substantially as and for the purpose hereinbefore set forth.

No. 52,461. Folding Wheel-Pedestal.

(*Pédale de roue pliante.*)

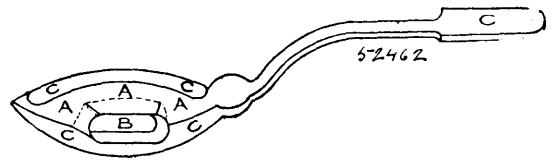
Charles T. Hartson, Eaton Rapids, Michigan, U.S.A., 1st June, 1896; 6 years. (Filed 8th May, 1896.)

Claim.—The combination with the hinged rectangular folding boxes, of the rectangular frames pivoted to the outer ends of said



boxes, the V-shaped braces, the caster-wheels the flat springs pivoted to said boxes and the studs on said rectangular frames with which said springs engage, substantially as described.

No. 52,462. Spoon. (*Cuillère.*)



— FIGURE N^o 1 —

Edward Francis Head, Rat Portage, Ontario, Canada, 1st June, 1896; 6 years. (Filed 11th February, 1896.)

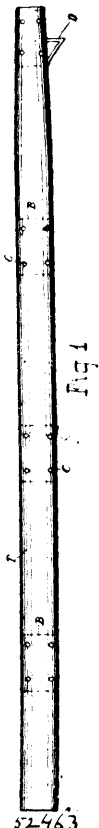
Claim.—A spoon provided with a covering over half of its top and having a tubular projection on its side to form a mouth-piece substantially as shown and for the purpose set forth.

No. 52,463. Tongue. (*Armon de wagon.*)

Andrew B. McKay, London, Ontario, Canada, 1st June, 1896; 6 years. (Filed 30th July, 1892.)

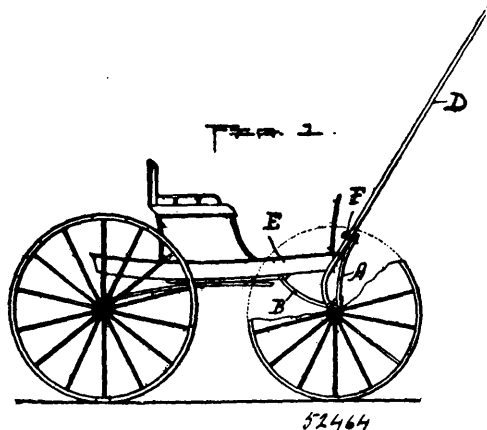
Claim.—1st. Longitudinal sections, hollowed, bent or otherwise curved laterally and connected together, for the purpose of forming a vehicle tongue or pole, substantially as described. 2nd. A vehicle tongue or pole, composed of two or more separate and independent sections of curved sheet metal, and means for supporting and connecting said sections substantially as set forth. 3rd. A vehicle tongue or pole, composed of two or more separate and independent sections, of curved sheet metal, provided with internal projections, and means for supporting and connecting said sections, substantially as described. 4th. A vehicle tongue or pole, constructed of sections, T, provided with ribs or flanges, R, in combination with the braces,

B, in which the sockets, S, are formed, substantially as described.
5th. A vehicle tongue or pole, composed of sections, T, in which



holes, C, are formed, and provided with ribs or flanges, R, in combination with the braces, B, having studs, A, secured to, or formed integral therewith, substantially as described.

No. 52,464. Shaft-Support for Vehicles.
(Support de limonière.)

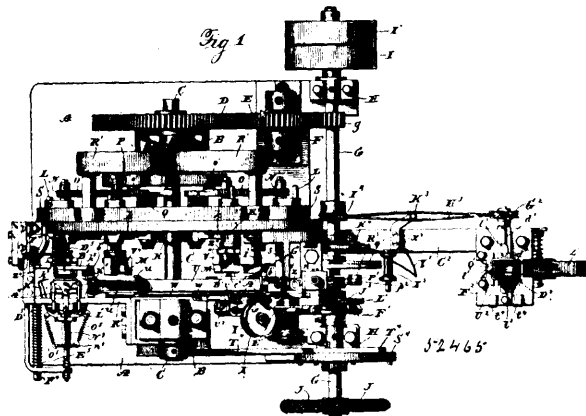


Stephen Randall Peters, Sterling, and Milton Moses Favor, Gardner, both in Massachusetts, U.S.A., 1st June, 1896; 6 years.
(Filed 5th September, 1895.)

Claim.—1st. A shaft-support for vehicles, comprising in combination the two arms A, B, the perforated place C, rigidly attached to the end of one arm, and to the outer end of which plate is pivoted the end of the other arm, and the holding-pin *c* passed transversely through one of the holes in said plate C, against which the end of the pivoted arm is adapted to bear, to hold said arm from swinging out beyond a certain point when the device is opened for use, and which admits of said device being compactly folded when not in use, substantially as shown and specified. 2nd. The combination with the shafts, the body and front axle attachments of a vehicle, of a shaft support comprising two arms A, B, the perforated place C, rigidly attached to the end of one arm and to the outer end of which

plate is pivoted the end of the other arm, and the holding-pin *c* passed transversely through one of the holes in said plate C, against which the end of the pivoted arm is adapted to bear to hold said arm from swinging out beyond a certain point when the device is opened for use and which admits of said device being compactly folded when not in use, substantially as shown and specified.

No. 52,465. Box Making Machine.
(Machine à faire des boîtes.)



The Diamond Match Company, Chicago, Illinois, U.S.A., assignee of Charles Loyens and Anders Paulson, both of Breda, Holland, 1st June, 1896; 18 years. (Filed 8th April, 1896.)

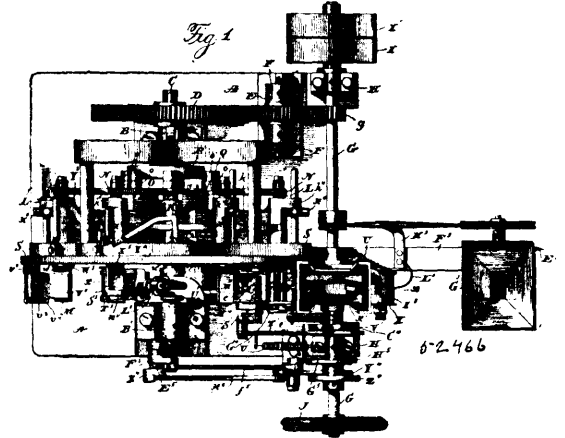
Claim.—1st. In a box making machine, the combination of a rotatable mandrel, means to co-operate therewith to form a box, and a pinion and rack mechanism for rotating the mandrel, substantially as and for the purpose specified. 2nd. In a box making machine, the combination of a rotatable mandrel, a series of devices to co-operate therewith to form a box, a carrier to move the mandrel to said devices in succession, and a pinion and rack mechanism for rotating the mandrel, substantially as and for the purpose shown. 3rd. In a box making machine, the combination of a rotatable series of rotatable mandrels, a series of devices to co-operate with each of the same to form a box, and a pinion and rack mechanism for rotating each mandrel, substantially as and for the purpose set forth. 4th. In a box making machine, the combination of a rotatable series of rotatable mandrels, sources of supply of material for forming boxes, a series of devices to co-operate with each mandrel to form a box, and a pinion and rack mechanism for rotating each mandrel, substantially as and for the purpose described. 5th. In a box making machine, the combination of a rotatable mandrel, a pinion connected therewith, a pivoted segment meshing with the pinion, means to co-operate with the mandrel to form a box, and means to vibrate said segment during a box-forming operation, substantially as and for the purpose shown. 6th. In a box making machine, the combination of a rotatable carrier, a series of shafts journaled therein, a mandrel upon each shaft, a pinion on each shaft, a segment meshing with each pinion and pivoted to the carrier, cam mechanism to vibrate the segments, and a series of devices to co-operate with the mandrels to form boxes, substantially as and for the purpose specified. 7th. In a box making machine, the combination of a source of supply of blanks to form the sides and ends of a box, a source of supply of box bottoms, a source of supply of paper, a mandrel or former movable from one of said sources of supply to the other, in succession, a pinion and rack mechanism for rotating said mandrel, means for folding a blank upon the mandrel to form the box sides and ends, means for placing a bottom in the path of the folded blank, means for simultaneously attaching the paper to the bottom and said folded blank, and means for completing the folding and attaching of the paper to the latter and the bottom, substantially as and for the purpose specified. 8th. In a box making machine, the combination of means to form the frame composed of sides and ends, and for placing a bottom in position for attachment thereto, a rotatable mandrel upon which said frame is formed, a pinion and rack mechanism for rotating said mandrel, means for securing paper to adjacent portions of the frame and bottom, and mechanism acting after the frame and bottom have had the paper attached thereto, for placing the bottom in its final position in the complete box, and suitably folding and securing the paper to the latter, substantially as and for the purpose described. 9th. In a box making machine, the combination of the mandrel, or former, a pinion and rack mechanism for rotating said mandrel, a source of supply of paper, a knife, and means to move the paper to the knife to sever it and to place it in contact with a blank on the mandrel, substantially as and for the purpose specified. 10th. In a box making machine, the combination of the mandrel, pinion and rack mechanism for rotating said mandrel or former, a source of supply of paper, a knife, and a pivoted arm to move the paper against the knife to sever it and carry it in contact with a blank on the mandrel, substantially as and for the purpose set forth. 11th. In a box making

machine, the combination of the mandrel or former, means for forming box ends and sides thereon, a pinion and rack mechanism for rotating said mandrel, a support for holding a box-bottom in position for attachment to the blank on the mandrel, means for attaching paper to said blank and the bottom, and means for moving the bottom on its paper connection, with the ends and sides blank on the mandrel to place the same in its proper relative position in the finished box, substantially as and for the purpose shown. 12th. In a box making machine, the combination of the travelling mandrel, means for forming box ends and sides thereon, a pinion and rack mechanism for rotating said mandrel, a hopper for box bottoms, a support for one end of a blank fed from the hopper, relative to which the mandrel moves, means for attaching paper to the blank on the mandrel and to the box bottom, and arms to engage the latter as the mandrel moves along, substantially as and for the purpose described. 13th. In a box making machine, the combination of the travelling mandrel, a pinion and rack mechanism for rotating said mandrel, means for forming box ends and sides thereon, a hopper for box bottoms, a support for one end of a blank fed from the hopper, relative to which the mandrel moves, a knife, an arm to move paper against the latter and into contact with the blank on the mandrel and the bottom, and arms to engage the latter as the mandrel moves along, substantially as and for the purpose specified. 14th. In a box making machine, the combination of the travelling mandrel, a pinion and rack mechanism for rotating said mandrel, its carrier, a finger, a cam-arm and spring for moving the finger relative to the path of the mandrel, and a part carried by the carrier to engage the cam-arm, substantially as and for the purpose shown. 15th. In a box making machine, the combination of the travelling mandrel, a pinion and rack mechanism for rotating said mandrel, its carrier, a folding finger, means to move the same, and a supplemental finger connected therewith, substantially as and for the purpose described. 16th. In a box making machine, the combination of a mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating said mandrel, means for folding paper on the exterior of the box part, and means for folding and securing the paper on the interior of the box part, comprising a device for sliding the box part off the mandrel, fingers for turning the paper across the open end of the box part, and a follower for pushing the box part back on the mandrel, substantially as and for the purpose shown. 17th. In a box making machine, the combination of a mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating said mandrel, a device for sliding a box part off the same, a follower in line with said box part as it is moved off the mandrel, pivoted fingers movable into and out of the path of said box part, and means to move the follower to replace the box part on the mandrel, substantially as and for the purpose specified. 18th. In a box making machine, the combination of a mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating said mandrel, a device for sliding a box part off the same, a follower in line with the box part as it is moved off the mandrel, a spindle to which the follower is attached, pivoted fingers movable into and out of the path of the box part, a collar on the spindle engaging said fingers to move them in one direction and a spring or springs to move them in the opposite direction, substantially as and for the purpose shown. 19th. In a box making machine, the combination of a mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating said mandrel, a device for sliding a box part off the same, a follower in line with the box part, as it is moved off the mandrel, a spindle to which the follower is attached, cam mechanism for moving the spindle, pivoted fingers moving into and out of the path of the box part, a collar on the spindle engaging said fingers, a sleeve on the spindle also engaging the fingers, and a spring connecting each finger and said sleeve, substantially as and for the purpose set forth. 20th. In a box making machine, the combination of a mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating the mandrel, a device for sliding a box part off the same, a follower in line with the box part as it is moved off the mandrel, means for reciprocating said follower, a support for the box part when it moved off the mandrel, the fingers for folding the covering paper across the end of the box part, substantially as and for the purposes described. 21st. In a box making machine, the combination of the travelling mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating said mandrel, devices for folding within the box part of the covering paper, and a carrier for said devices that moves along with the mandrel, substantially as and for the purposes specified. 22nd. In a box making machine, the combination of the rotatable series of mandrels, means for forming a box part upon each of the same, a pinion and rack mechanism for rotating each of said mandrels, devices for folding within the box part of the covering paper, and an arm carrying said devices that is pivoted concentric with the series of mandrels, substantially as and for the purposes shown. 23rd. In a box making machine, the combination of a travelling mandrel or corner, a pinion and rack mechanism for rotating the same, a hopper for blanks to form the sides and ends of the box, mechanism for feeding such blanks one at a time into the path of the mandrel, the movable fingers in the path of the mandrel to fold the blanks thereon, a hopper containing box bottoms, mechanism for feeding bottoms one at a time therefrom, a source of supply of paper, means for applying paste or glue to such paper, means for affixing the free end of the paper to the folded blank upon the mandrel and to the fed-out box

bottom, a paper cutting mechanism, a series of arms for folding and pasting the paper to the box-bottom, and devices for folding and pasting the paper against the interior of the box, substantially as and for the purpose described. 24th. In combination with a hopper, the shouldered feeding-piece movable across the bottom of the same, having its shouldered portion grooved, and a part at the exit side of the hopper to project into the groove of the feeding piece, substantially as and for the purpose specified. 25th. In combination with a hopper, the shouldered feeding-arm movable across the bottom of the same, having a groove in the shouldered portion, and a plate having a rib to project into such groove, and pressed yieldingly towards the arm, substantially as and for the purpose shown.

No. 52,466. Box Cover Making Machine.

(Machine à faire les couvercles de boîtes.)



The Diamond Match Company, Chicago, Illinois, U.S.A., assignee of Charles Loyens and Anders Paulson, both of Breda, Holland, 1st June, 1896; 18 years. (Filed 8th April, 1896.)

Claim.—1st. In a machine for making box covers, the combination of a travelling mandrel, a pinion and rack mechanism for rotating said mandrel, a source of supply of blanks, the two pivoted folding-plates in the path of the mandrel, means for feeding one blank at a time from the source of supply to a position in line with said plates, the devices for folding the ends of the blank upon the mandrel, and the series of rollers for attaching paper to the folded blanks, substantially as and for the purpose specified. 2nd. In a machine for making box covers, the combination of a revolving carrier, a series of rotary mandrels carried thereby, a pinion and rack mechanism for rotating each mandrel, a source of supply of blanks, the two pivoted folding-plates in the path of the mandrels, means for feeding one blank at a time from the source of supply to a position in line with said plates, the devices for folding the ends of the blanks upon the mandrel, and the series of rollers for attaching paper to the folded blank, substantially as and for the purpose specified. 3rd. In a machine for making box covers, the combination of a revolving carrier, a series of rotary mandrels carried thereby, a pinion and rack mechanism for rotating each mandrel, a source of supply of blanks, means for feeding blanks one at a time into the path of the mandrels, the devices for folding a blank upon each mandrel, a source of supply of paper, the series of rollers for attaching the paper to the blank and the cutting mechanism for severing the paper from the roll, substantially as and for the purpose specified. 4th. In a machine for making boxes, the combination of a travelling mandrel, a pinion and rack mechanism for rotating the same, folding devices for co-operating therewith, and a label affixing device adapted to move along with the mandrel, substantially as and for the purpose shown. 5th. In a machine for making box parts, the combination of the revolving mandrel carrier, means for forming a box part on the mandrel, a pinion and rack mechanism for rotating the mandrel, a label holder adapted to move along with the mandrel, and means for feeding a label therefrom to the box part upon the mandrel, substantially as and for the purpose specified. 6th. In a machine for making box parts, the combination of the revolving mandrel carrier, means for forming a box part on the mandrel, a pinion and rack mechanism for rotating the mandrel, a pivoted label-holder, means for moving the same to and from the path of the mandrel, and means for feeding a label therefrom to the box part upon the mandrel, substantially as and for the purpose specified. 7th. In a machine for making box parts, the combination of the revolving mandrel-carrier, means for forming a box part on the mandrel, a pinion and rack mechanism for rotating the mandrel, a label-holder adapted to move along with the mandrel pivoted concentric therewith, means for moving the same to and from the path of the mandrel, means for moving said label-holder along with the mandrel, and means for feeding a label therefrom to the box part upon the mandrel, substantially as and for the purpose specified. 8th. In a machine for making box parts, the combination of the

travelling mandrel, means for forming a box part on the mandrel, a pinion and rack mechanism for rotating the mandrel a label-holder adapted to move along with the mandrel, the follower for feeding a label to a box part upon the mandrel, means for alternately lifting and dropping said follower, and means for moving the label-holder to and from the path of the mandrel, substantially as and for the purpose specified. 9th. In a label-affixing machine, the combination of a label-holder, the follower for feeding labels therefrom having a rod or stem, the rocking pawl or grip through which the latter passes, the reciprocating plate engaging said pawl, and moving the same and the rod, and a relatively fixed part to engage the pawl to release the rod therefrom, substantially as and for the purpose specified. 10th. In a label-affixing machine, the combination of a label-holder, the follower for feeding labels therefrom, having a rod or stem, a clutch device adapted to be engaged with and disengaged from said rod, means connected with said clutch device for moving the follower away from the labels, and means to disengage said clutch device from the rod to permit movement of the follower in the opposite direction, substantially as and for the purpose specified. 11th. In a label-affixing machine, the combination of the label-holder, the follower for feeding labels therefrom, having a rod or stem, a pawl adapted to be moved into and out of engagement with the rod, means connected with said pawl for raising the same and said follower, and means to disengage the pawl and rod to permit the follower to drop, substantially as and for the purpose shown. 12th. In a machine for making box parts, the combination of the travelling mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating the mandrel, a paste-applying device in the path of the mandrel, a label holder and means to feed labels therefrom, substantially as and for the purpose described. 13th. In a machine for making box parts, the combination of the travelling mandrel, means for forming a box part on the mandrel, a pinion and rack mechanism for rotating the mandrel, a paste-applying device in the path thereof, a brush, also in said path, a label-holder, and means to feed labels therefrom, substantially as and for the purpose specified. 14th. In a machine for making box parts, the combination of the travelling mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating the mandrel, a paste-applying device in the path thereof, a label-holder means for feeding labels therefrom, and a device for pressing a label to the box part upon the mandrel, substantially as and for the purpose specified. 15th. In a machine for making box parts, the combination of the travelling mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating the mandrel, a movable paste-receptacle having its paste-delivering part normally in the path of the mandrel and adapted to be moved by the latter to one side of such path, substantially as and for the purpose shown. 16th. In a machine for making box parts, the combination of the travelling mandrel, means for forming a box part thereon, a pinion and rack mechanism for rotating the mandrel, and a movable paste receptacle having a roller at its bottom normally in the path of such mandrel, and adapted to be moved by the latter to one side of such path, substantially as and for the purpose specified. 17th. In a machine for making box parts, the combination of the revolving mandrel carrier, a label-holder, a pivoted bar upon which said holder is slidingly mounted, a follower to feed labels from the holder, having a rod or stem, a reciprocating plate, a pawl or grip to connect the latter and the rod or stem, an arm for raising said plate and the label holder, means for causing the lowering thereof, means for releasing the pawl or grip from the rod or stem, and means for swinging the pivoted label-holder bar, substantially as and for the purpose specified.

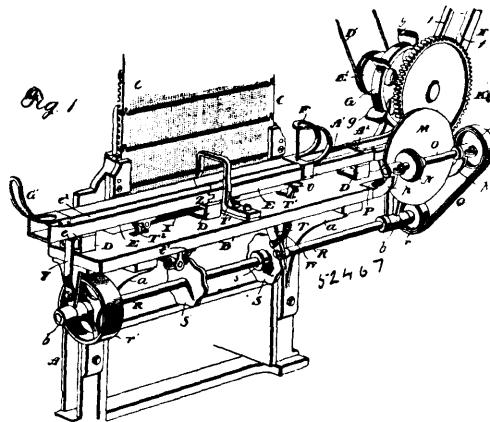
No. 52,467. Box Filling Machine.

(Machine à remplir les boîtes.)

The Diamond Match Company, Chicago, Illinois, U.S.A., assignee of Charles Henry Palmer, John William Denmead and Joseph Alvirtus Baughman, all of Akron, Ohio, U.S.A., 1st June, 1896; 18 years. (Filed 8th April, 1896.)

Claim.—1st. In a machine for boxing matches, in combination with a source of supply of the matches to be boxed, a support to hold the box in position to receive the matches from the source of supply, and means for giving the box a to and fro jarring motion, in a direction out of a vertical line, and substantially at right angles to the matches as they are to lie in the box, substantially as and for the purpose specified. 2nd. In a machine for boxing matches, in combination with a source of supply of the matches to be boxed, means for passing a box across the path of the matches from such source of supply and a jarring device to give the box a to and fro longitudinal jarring in a direction substantially at right angles to the matches as they are to lie in the box, substantially as and for the purposes shown. 3rd. In a machine for boxing matches, in combination with a source of supply of the matches to be boxed, means for passing the boxes across the stream of matches from such source, so that they will be gradually filled, as they pass along, and means for jarring the boxes, while being filled, in a direction out of vertical line and substantially at right angles to the matches as they are to lie in the filled boxes, substantially as and for the purpose set forth. 4th. In a machine for boxing matches, in combination with a source of supply of the matches to be boxed, means for passing a

series of boxes placed close together, across the stream of matches from the source of supply, so that several of the boxes will be receiv-

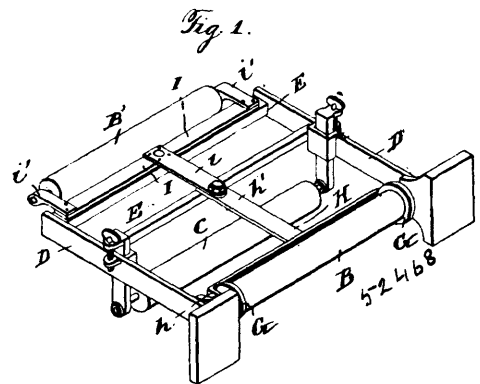


ing matches at a time, and means for giving the boxes, as they pass along, a series of jars in a direction out of a vertical line and at right angles to the matches, as they are to lie in the filled boxes, substantially as and for the purpose described. 5th. In a machine for boxing matches, in combination with a source of supply of the matches to be boxed, a support for the boxes over which the latter are moved in a direction across the stream of matches from the source of supply, means for moving the boxes over such support, and means for giving such support a to and fro jarring motion in a direction substantially at right angles to the matches as they are to lie in the filled boxes, substantially as and for the purpose specified. 6th. In a machine for boxing matches, in combination with a support for the box and means for moving the box over the same, means for jarring the support longitudinally with reference to the travel of the box over the support, substantially as and for the purpose described. 7th. In a machine for boxing matches, in combination with a support over which the box is moved, means for filling the box, and means for jarring the support longitudinally with reference to the travel of the box over it, and in a direction substantially at right angles to the position which it is desired that the matches shall assume in the filled box, substantially as and for the purpose specified. 8th. In a box filling machine, in combination with a trough to hold the boxes to be filled, means for reciprocating such trough longitudinally substantially as and for the purpose described. 9th. In a box filling machine, in combination with a trough to hold the boxes to be filled, means for moving the boxes through such trough, and means for giving the latter a series of longitudinal reciprocations, substantially as and for the purpose specified. 10th. In combination with a source of supply of matches, a trough extending across the path of the matches from such source, in a direction substantially at right angles to the matches, means for moving the boxes along in the trough, and means for giving the latter a series of longitudinal reciprocations, substantially as and for the purpose shown. 11th. In a box-filling machine, in combination with a source of supply of the material to be boxed, the trough through which the boxes to be filled are moved, divided transversely into separate parts, and separate jarring devices for such part, adapted to give the part of the trough through which the boxes first pass a greater jarring motion than the other, substantially as and for the purpose set forth. 12th. In a box-filling machine, in combination with a source of supply of the material to be boxed, the trough extending across the path of the material from such source of supply, and divided transversely into separate parts, means for moving the boxes through the trough, and jarring devices for the respective parts of the trough, whereby that part through which the boxes first pass is given greater jarring motion than the other part, substantially as and for the purpose described. 13th. In a box-filling machine, in combination with a trough through which the boxes are passed, means for holding the boxes from rising, as they pass through the trough, an adjustable friction device to engage the bottoms of the boxes, and means for jarring the trough longitudinally, substantially as and for the purpose specified. 14th. In a box-filling machine, in combination with a trough through which the boxes are passed, means for holding the boxes down in the trough as they pass through the same, a plate to engage the bottoms of the boxes, means for adjusting such plate to regulate the amount of friction on the boxes and means for jarring the trough longitudinally, substantially as and for the purpose shown. 15th. In a box-filling machine, in combination with a trough through which the boxes are passed, a spring plate engaging the under sides of the boxes, and means for jarring the trough longitudinally, substantially as and for the purpose specified. 16th. In a box-filling machine, in combination with a trough section through which the boxes are passed, two pins or lugs connected with the trough, a swinging arm, an inclined bar carried by the latter, engaging the pins, and means for swinging such arm, substantially as and for the purpose shown. 17th. In a box-filling machine, in combination

with a trough section through which the boxes are passed, two pins or lugs connected with such trough, a swinging arm, means for swinging the same transversely with reference to the trough, and the inclined bar adjustably attached to the swinging arm so that its angle, with reference to the swing of the arm, may be varied, substantially as and for the purpose set forth. 18th. In a box-filling machine, in combination with a trough section through which the boxes are passed, pins or lugs connected with the trough, the arm swinging transversely with reference to the trough, the inclined bar carried by such arm and engaging the pins or lugs on the trough, the rock-shaft to which such arm is attached, the cam-wheel, a second arm on the rock-shaft, having a bearing engaging the cam-wheel, and a spring forcing such arm towards the wheel, substantially as and for the purpose described. 19th. In a box-filling machine, in combination with a trough section through which the boxes are passed, a transverse rock-shaft having two arms swinging in a plane longitudinal with reference to the trough section, of which one has its free end connected with the latter, a cam-wheel, means carried by the second arm on the rock-shaft, to engage the cam-surfaces on the wheel, and a spring tending to swing the first arm in a direction opposite to that in which the cam moves it, substantially as and for the purpose specified. 20th. In a box-filling machine, in combination with the chute down which the boxes are fed, the rotating feed-wheel having fingers to engage the inner side of the forward ends of the boxes, substantially as and for the purpose shown. 21st. In a box-filling machine, in combination with a chute through which the boxes are fed, and a support over which the boxes pass from the chute, the rotating feed-wheel having fingers to engage the inner sides of the forward ends of the successive boxes, so as to force the same along through the chute and over the support for the moving boxes, substantially as and for the purpose set forth. 22nd. In a box-filling machine, in combination with the chute for the boxes, and the trough through which they are to be moved, the means for feeding the boxes from the chute into and through the trough, which consists in a rotating wheel having fingers adapted to engage the inner sides of the forward ends of the successive boxes, and force them forward, substantially as and for the purpose described. 23rd. In a box-filling machine, in combination with a suitable support over which the boxes are moved, and means for so moving them, a series of removable transverse partitions for each box arranged to divide the space within a box up into several divisions, into which the matches can fall from above the box and a moving carrier carrying such partitions along with the boxes, substantially as and for the purposes specified. 24th. In a box-filling machine, in combination with a suitable support for the boxes, and means for moving the latter along, a series of transverse plates for each box projecting above the level of the box edges, and so situated as to divide the space just above each box into several divisions, and a moving carrier carrying such plates along with the boxes, substantially as and for the purpose shown. 25th. In a box-filling machine, in combination with a suitable support for the boxes to be filled, and means for moving them along, a moving carrier travelling with the boxes, having a series of plates for each box, with wedge-shaped upper portions situated above the tops of the boxes, so as to divide the space just above each box into several divisions, substantially as and for the purpose described. 26th. In a box-filling machine, in combination with a suitable support for the boxes to be filled, and means for moving them along, a moving carrier having a series of transverse plates for each box extending down into and above the box, and arranged relatively, so as to divide the space within and just above the box into several divisions, substantially as and for the purpose specified. 27th. In a box-filling machine, in combination with a support for the boxes to be filled, a moving chain of links, each having a plate to project into a box and engage the inner side of one of its ends, such plate having a portion extending up and above the box engaging part, substantially as and for the purpose set forth. 29th. In a box-filling machine, in combination with a support for the boxes to be filled, a moving chain of links each having a plate to project down into a box in contact with the inner side of an end of the box, and an upwardly-projecting part made wedge-shaped at its top, substantially as and for the purpose described. 30th. In a box-filling machine, in combination with a support for boxes to be filled, a moving chain of links each having one or more transverse plates adapted to project down into a box and divide the interior of the latter up into several divisions into which the matches can fall from a source of supply above the boxes, substantially as and for the purpose specified. 31st. In a box-filling machine, in combination with a source of supply of the matches to be boxed, and a suitable support for the boxes, a moving chain of links, one for each box to be filled, each having several transverse upwardly-projecting plates over the respective boxes, arranged so as to divide the space above the respective boxes into several divisions into which the matches can fall from a source of supply, and means for causing the chain of links to move with the boxes, substantially as and for the purpose specified. 32nd. In combination with a support for the boxes to be filled, a moving chain of links, each having a projecting part to engage the inner side of one end of a box, and one or more transverse partition-plates projecting down into the

box, situated so as to divide the box interior into separate divisions, and means for moving the boxes along, substantially as and for the purpose set forth. 33rd. In combination with a support for the boxes to be filled, a moving chain of links each having a projection to engage the inner side of an end of one of the boxes, and one or more transverse partition-plates to extend down into the interior of the box, having their upper portions extending above the box provided with an edge and oppositely-inclined faces on opposite sides of such edge, and means for moving the boxes along, substantially as and for the purpose described. 34th. In a box-filling machine, in combination with the box receiving-trough with overhanging longitudinal shoulders, means for moving the boxes through the trough, and the chain of links, each provided with a projection to engage the inner side of one end of a box, and one or more partitions to project down into a box and divide up its interior, substantially as and for the purpose specified. 35th. In a box-filling machine, in combination with the box receiving-trough with overhanging longitudinal shoulders, means for moving the boxes through the trough, the moving chain of links each carrying transverse partition-plates to project down into the interior of a box arranged so as to divide up the same into small divisions adapted to receive matches falling from a source of supply above the box, and guiding and supporting devices for such chain to guide it into the trough with the boxes, and raise it from the latter beyond the end of the trough, substantially as and for the purpose shown. 36th. In a box-filling machine, in combination with the trough with overhanging longitudinal shoulders, means for moving the boxes through the trough, a moving chain of links, each having a projection to engage the inner face of the rear end of a box, and transverse plates with wedge-shaped tops projecting above the top of the box, and suitable supports and guides for the chain to guide it into the trough with the boxes so that it will come between the upper edges of the latter, and the longitudinal shoulders on the trough, and then cause it to rise away from the boxes at a point beyond the rear end of the trough, substantially as and for the purpose set forth. 37th. In combination with the trough and means for feeding the boxes to be filled to and through such trough, a moving chain of links each having the transverse division-plates for the respective box, a spring-plate to hold the boxes down in place, as they pass to the point where the chain of links enters the trough, longitudinal shoulders on the trough, to hold the chain down in place on the boxes, as it moves along, a guide to guide the chain to the trough, supporting and actuating wheels to guide the chain upward from the boxes beyond the trough end, and return it to the entrance of the trough again, and means for rotating one or more of these wheels, substantially as and for the purpose described.

No. 52,468. Belt Adjuster. (*Ajusteur de courroie.*)



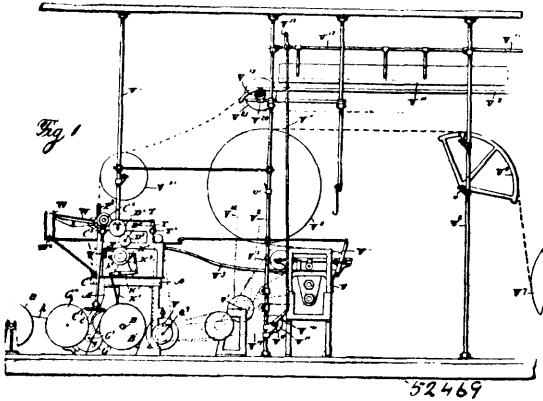
The Diamond Match Company Chicago, Illinois, assignee of Ebenezer Beecher, Westville, and Jacob Pulver Wright, New Haven, both in Connecticut, all in the U.S.A., 1st June, 1896; 18 years. (Filed 8th April, 1896.)

Claim.—1st. In combination with the belt and a roller over which the belt passes, a second roller around which the belt travels so that the tension of the belt at or near opposite ends of the roller will be changed as the roller is moved to change the angle of its axis with relation to the axis of the other roller, a swinging frame having bearings in which this second roller is journaled, and means engaged and actuated by the edge of the belt as the latter moves to the side of its proper position, to swing the frame to change the position of the axis of the roller carried thereby, substantially as and for the purpose specified. 2nd. In combination with the belt and a roller over which the belt passes, a second roller around which the belt travels, bearings for such roller mounted on a swinging frame, a lever connected with such frame, and means connected with the lever, and engaged and actuated by the belt, as it moves to one side or the other of its proper position, so as to move the lever and swing the frame so as to carry the end of the movable roller toward which the belt has moved farther from the other roller, substantially as and for the purpose shown. 3rd. In combination with the belt, a roller over which the belt passes, the second roller around which the belt travels, bearings for such roller mounted on a swinging frame, a

forked lever connected with the frame, and devices engaged by the forked arms, adapted to be engaged and moved by opposite edges of the belt as the latter moves to one side or the other of its proper position, substantially as and for the purpose set forth. 4th. In combination with the belt, the roller, the movable collars on opposite sides of the belt where the latter passes over the roller, the second roller, the swinging frame upon which the latter is journaled, and the lever connected with the frame and the collars, substantially as and for the purpose described.

No. 52,469. Match-making Machine.

(Machine à faire des allumettes.)



The Diamond Match Company, Chicago, Illinois, Assignee of Ebenezer Benton Beecher, Westville, and Jacob Pulver Wright, New Haven, both in Connecticut, all in the U. S. A., 1st June, 1896; 18 years. (Filed 8th April, 1896.)

Claim.—1st. In a machine for making matches, in combination with a source of supply of a continuous strip of material, from which the sticks or bodies of the matches are to be made, a carrier for such sticks or bodies, intermittently acting devices for inserting the strip into the carrier, and continuously acting drawing devices, drawing the strip from the source of supply and feeding it to the inserting devices, so that before each movement of the latter there will be a slack portion of the strip between the drawing and inserting devices, substantially as and for the purpose specified. 2nd. In a machine for making matches, in combination with a source of supply of a continuous strip of material, from which the sticks or bodies of the matches are to be made, a carrier for such sticks or bodies, intermittently acting devices for inserting a portion of the strip into the carrier and cutting off enough to form the desired match sticks, and a means for drawing the strip from the source of supply and feeding it into the inserting devices, arranged to draw enough of the strip from the source of supply, before each movement of the inserting devices, to produce a slack portion in the strip, between such inserting devices and the means for drawing the strip, substantially as and for the purpose shown. 3rd. In a machine for making matches, in combination with a carrier for the match sticks, a source of supply of a continuous strip of material from which such sticks are to be formed, continuously rotating drawing rolls to draw the strip from the source of supply, and intermittently acting devices for inserting the strip end into the carrier, substantially as and for the purpose set forth. 4th. In a machine for making matches, in combination with a carrier for the match sticks, a source of supply of a continuous strip of material from which such sticks are to be formed, continuously rotating drawing rolls to draw the strip from the source of supply, and intermittently acting devices for inserting the strip end into the carrier, and a means for cutting the strip, substantially as and for the purpose described. 5th. In a machine for making matches, in combination with a carrier for the match sticks, a source of supply of a continuous strip of material from which such sticks are to be formed, continuously rotating drawing rolls to draw the strip from the source of supply, and intermittently acting devices for inserting the strip end into the carrier, and a means for cutting the strip, substantially as and for the purpose specified. 6th. In a machine for making matches, in combination with a carrier for the match sticks, a source of supply of a continuous strip of material from which such sticks are to be formed, the rotating drawing rolls to draw the strip from the source of supply, the feed rolls to feed the strip into the carrier, one having a grooved periphery and the other having an elastic face engaging and holding the strip in the groove of the other, and means for rotating the feed rolls

with a step by step movement, substantially as and for the purpose set forth. 8th. In a machine for making matches, in combination with a source of supply of a continuous strip of the material of which the match sticks are to be formed, the rotating drawing rolls, having elastic faces to grip the strip, the two feed rolls, one having in its periphery a groove to receive the strip, and the other having an elastic face to engage the strip and hold it in the groove of the former feed roll, and means for giving such feed rolls a step by step rotation, made adjustable to regulate the travel of the peripheries of the rolls at each forward step, substantially as and for the purpose described. 9th. In a match-making machine, in combination with the carrier for the match-sticks, the intermittently rotating feed rolls for feeding the material for such sticks up into the carrier, one having a groove to receive the strip of material, and the other having an elastic face, substantially as and for the purpose specified. 10th. In a match-making machine, in combination with the carrier for the match sticks, the intermittently rotating feed rolls, the one grooved and the other having an elastic face opposing the grooved face of the former roll, gearing connecting the rolls together, a ratchet-wheel connected with the shaft of one roll, a lever carrying a pawl to engage the ratchet-wheel, means for swinging such lever, and an adjustable connection between such means and the lever made adjustable along the latter to adjust its throw, substantially as and for the purpose shown. 11th. In a machine for making matches, in combination with a carrier for the match sticks, a source of supply of a continuous strip of material from which such sticks are to be formed, intermittently acting feed devices, a guide to inclose the strip and guide it from the feed devices towards the carrier, and a cutter actuated to cut the strip close to the upper end of such guide, substantially as and for the purpose set forth. 12th. In a machine for making matches, in combination with a carrier for the match sticks, a source of supply of a continuous strip, from which such sticks are to be formed, continuously acting drawing devices, to draw the strip from the source of supply, intermittently acting feed devices, a guide to inclose the strip and guide it from the feed devices towards the carrier, and a cutter actuated to cut the strip between the feed devices and the carrier, substantially as and for the purposes described. 13th. In a machine for making matches from a strip of material, in combination with the carrier for the match sticks, feed devices for the strip, a guide beyond such devices, arranged to guide and inclose closely the strip, on its way to the carrier from the feed devices, and a cutter for cutting the strip arranged to cut in close contact with the edge of the opening in the guide, substantially as and for the purpose specified. 14th. In a machine for making matches from a strip of material, in combination with the carrier for the match sticks, feed devices for the strip, a guide beyond such devices arranged to guide and inclose closely the strip on its way to the carrier from the feed devices, and a cutter for cutting the strip arranged to cut in close contact with the edge of the opening in the guide, substantially as and for the purpose shown. 15th. In a machine for making matches from a strip of material, in combination with the carrier for the match sticks, feed devices for feeding the strip, a guide between the carrier and the feed devices, having the opening to receive and guide the strip, fitting such strip closely, a cutter moving over the outer end of the opening in close contact with the edges of the latter, and a pressure device engaging the cutter and pressing it towards the plane of such edges, substantially as and for the purpose set forth. 16th. In combination with the guide for the strip of material, having the opening to fit and support the strip during the cutting operation, a cutter having its edge adapted to slide over the end of such opening close to the edges thereof, means for moving the cutter, and a spring presser engaging the cutter, so as to press it towards the plane of the edge of the opening, substantially as and for the purpose described. 17th. In combination with a piece having in it an opening to fit and support a strip passed up through it, a cutter having its cutting portion resting on such piece so as to bring its edge close to the plane of the edges of the opening, a spring, and a movable piece engaged by the spring and engaging the cutter, so that the force of the spring acts to bear the cutter down into close contact with the plane of the edges of the opening, substantially as and for the purpose specified. 18th. In combination with a piece containing a series of openings, through which strips can be passed, a series of cutter bars, means for guiding the latter, an actuating head connected with the bars, and a series of spring pressure devices, one for each bar, pressing forward portions of such bars towards the face of the piece in which are the openings, substantially as and for the purpose shown. 19th. In combination with a piece containing a series of openings, through which strips can be passed, a series of cutter bars, one for each opening, means for guiding such bars, an actuating head connected with the bars, a series of springs, one for each cutter bar, and the series of movable pieces interposed between the springs and the respective cutter bars, whereby the pressure of the springs towards the face of the piece containing the openings is transmitted to the forward portions of the cutter bars, substantially as and for the purpose set forth. 20th. In combination with the plate containing the guiding openings for the material to be cut, the series of cutter bars, having their cutting ends sliding over such plate, the plate provided with the grooves for guiding the bars, a series of springs one for each of the bars, the movable lugs between the springs and the cutter bars, and means for actuating such bars, to slide them over the openings in the first-named plate, substantially as and for the purpose described. 21st. In combination with

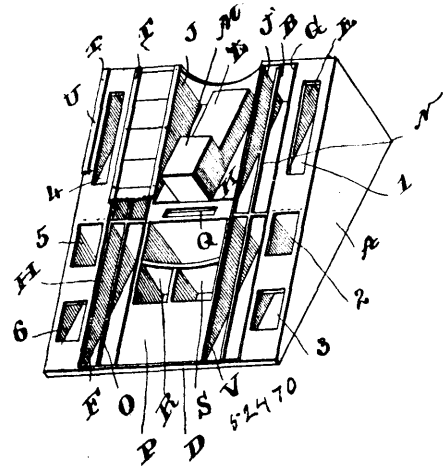
a supporting plate, and the series of cutter bars sliding over the same, the plate provided with the guiding grooves for the cutter bars, springs attached to the latter plate, movable pieces guided in holes in the plate, and engaging with their opposite ends the springs and the cutter bars, the plate situated on the side of the forward portions of the cutter bars which is opposite to the faces thereof, which are engaged by the movable spring pressed pieces, and having in it the strip guiding openings, one for each cutter bar, situated in front of the respective bars, so that the edges of the latter slide over them, as the bars are advanced, and means for reciprocating the bars, substantially as and for the purpose specified. 22nd. In combination with the series of cutter bars having holes, a reciprocating head having the grooves to receive the bars, and the holes coinciding with those in the cutter bars, pins passing through the holes in the latter and in the head, a plate attached to the head, and having holes to receive the ends of the pins, and a second plate detachably attached to the head, abutting against the ends of the pins opposite to those in the perforated plate, substantially as and for the purpose shown. 23rd. In combination with the strip feeding rolls, the one having a series of strip receiving circumferential grooves, and the other an elastic face opposing the grooved surface of the former roll, the series of clearing pins projecting into the grooves of the grooved roll, adapted to scrape and clear out any clogging material from such grooves, and the scraper plate having its edge close against the periphery of the grooved roll so as to clean the portions of the face thereof which are between the grooves, substantially as and for the purpose set forth. 24th. In a machine for making matches, in combination with a source of supply of a series of strips of material of which the match sticks are to be formed, the drawing rolls to draw such strips from the source of supply, the feed rolls, one provided with a series of grooves to receive the strips, and the other having an elastic face to grip the strips in the grooves, means for intermittently rotating such rolls, and means, beyond the feed rolls, for cutting the strips, to form the required separate match sticks, substantially as and for the purpose described. 25th. In a machine for making matches, in combination with a source of supply of a series of strips of the material of which the match sticks are to be made, the feed rolls, of which one has a series of grooves to receive the strips, and the other has an elastic surface to grip the strips in such grooves, means for intermittently rotating such rolls, the drawing rolls for drawing the strips from the source of supply, means for rotating them so that before each forward turning of the feed rolls, there will be, in the strips between the drawing and feed rolls, slack enough to allow for the next step in the forward feed of the strips, substantially as and for the purpose described. 26th. In a machine for making matches, in combination with a source of supply of a series of strips of material, of which the match sticks are to be formed, the continuously rotating drawing rolls, the feed rolls beyond the latter, means for rotating such feed rolls intermittently, a sufficient amount to feed forward the series of strips a distance equal to the desired length of the match stick to be used, a moving carrier adapted to receive and hold portions of the parts of the strips fed up by the feed rolls, and cutting mechanism to cut the strips, at a point between the carrier and feed rolls, substantially as and for the purpose shown. 27th. In a machine for making matches, in combination with a moving carrier to receive and hold the match-sticks, means for moving it forward with a step-by-step motion, the intermittently rotating feed rolls, gripping between them a series of strips of material to form the match sticks, means for rotating the rolls while the carrier is at rest, to feed the strips up into the grasp of the latter, a piece between the carrier and the feed rolls having strip-guiding openings fitting such strips closely, and cutting mechanism cutting the strips close to the planes of the edges of the upper ends of such openings, substantially as and for the purpose set forth. 28th. In combination with the intermittently rotating feed rolls, and the means for driving the same, made adjustable, to vary the amount of each forward rotation of the rolls, a source of supply of the strips to be used, the drawing rolls for drawing the strips therefrom, and passing them to the feed rolls, and means for rotating the drawing rolls made changeable, to vary the rate of rotation of the rolls, substantially as and for the purpose described. 29th. In combination with the drawing rolls, and the gear-wheel connected therewith, so as to rotate them, a driven gear-wheel, a pivoted frame swinging on a pivot substantially in line with the axis of the latter wheel, a gear-wheel carried by this frame and meshing with the driven gear, and a pinion removably connected with this gear-wheel on the swinging frame, situated so as to be moved towards and from the gear-wheel connected with the drawing rolls as the frame is swung on its pivot, substantially as and for the purpose specified. 30th. In combination with the drawing rolls, and the gear-wheel connected therewith, so as to rotate the same, a driven gear-wheel, a pivoted frame swinging on a pivot substantially in line with the axis of rotation of the driven gear-wheel, a rotating gear-wheel supported on the frame, situated so as to be in gear with the driven wheel, and having a hub adapted to be moved towards and from the gear-wheel connected with the drawing rolls by movement of the swinging frame, a pinion detachably secured upon this hub, so as to be readily removed and replaced by another of a different number of teeth, and a means for fixing the frame at different points in its swing, substantially as and for the purpose shown. 31st. In combination with the drawing rolls, and the gear-wheel connected therewith, so as to rotate them, a driven gear-wheel, the pivoted frame swinging about an axis, substantially in line with that of the

driven gear-wheel, the gear-wheel journaled upon a suitable bearing on the frame, and meshing with the driven wheel, the pinion detachably secured on the hub of the wheel carried by the frame, a threaded pin on the frame projecting through a slot in a fixed plate, and a nut on such pin engaging the fixed plate so as to hold the pivoted frame from swinging, substantially as and for the purpose set forth. 32nd. In a machine for making matches, the moving carrier for carrying the match sticks while they are being made into matches, having a series of grooves to receive the sticks, and spring clamping devices to hold the sticks in such grooves, substantially as and for the purpose described. 33rd. In a machine for making matches, the moving carrier for receiving and holding the match sticks, having a series of grooves to receive the sticks, spring clamping devices to hold the sticks in the grooves in combination with means for inserting the match sticks in the grooves of the carrier, and an opener to press the spring devices back from the grooved faces of the carrier, to permit the insertion of the sticks in the grooves and there release them, so that they spring against the groove-held strips, substantially as and for the purpose specified. 34th. In a machine for making matches, the match stick holding carrier, having a portion provided with a series of stick receiving grooves, and a series of spring fingers for the different grooves, to engage and hold the sticks inserted therein, substantially as and for the purpose shown. 35th. In combination with the carrier having a portion provided with a series of grooves to receive the match sticks, and the series of spring fingers opposite such grooves, an opener to force such fingers away from the grooved face on the carrier, to allow the insertion of the match sticks in the grooves, and then release the fingers to allow them to engage the sticks in the grooves, substantially as and for the purpose set forth. 36th. In combination with the carrier having a portion provided with a series of grooves to receive the match sticks, and a series of spring fingers opposite such grooves, the opener to press such fingers back, to allow insertion of the sticks in the grooves, having the series of fingers to engage the stick holding spring fingers on opposite sides of the grooves or the carrier, substantially as and for the purpose described. 37th. In combination with the carrier, a bar provided with a series of grooves, and a series of separate spring fingers, one for each groove, springing towards the grooved face of the bar, an opener to force such fingers back from the grooved face, having the fingers to engage the spring fingers separated from each other by spaces coinciding with the grooves in the carrier bars, substantially as and for the purpose specified. 38th. In a carrier for match sticks and the like, in combination with a bar having a series of grooves, a plate having formed on it a series of spring fingers, and means for supporting such plate, so that the fingers will spring towards the grooves and press upon the sticks therein, substantially as and for the purpose shown. 39th. In a carrier for match sticks and the like, in combination with two adjoining bars having grooves in their opposing faces, a plate having its opposite sides made into a series of spring fingers to engage the contents of the grooves in the respective bars, substantially as and for the purpose set forth. 40th. In a carrier for match sticks and the like, in combination with two adjoining bars having grooves in their inner or opposing faces, a plate bent on a longitudinal line to bring its opposing sides down opposite grooved faces of the bars, and having such sides divided to form series of separate spring fingers for the different grooves and a support for such plate, substantially as and for the purpose described. 41st. In a carrier for match sticks and the like, in combination with two adjoining bars having grooves in their inner or opposing faces, a rod supported on the carrier, and a plate supported on such rod, bent so that its sides extend down into the space between the grooved bars, and having such sides divided to form separate outwardly springing fingers, one for each groove, in the adjoining face of the carrier bar, substantially as and for the purposes specified. 42nd. In a carrier for match sticks and the like, in combination with three parallel bars having their opposing sides and faces grooved, the plates bent to bring their sides down close to the opposite grooved faces of adjoining bars, and such sides divided up into separate spring fingers, one for each groove, in the respective bar face, substantially as and for the purpose shown. 43rd. In a carrier for match sticks and the like, in combination with three parallel bars having their opposing faces grooved, the rods supported over the spaces between the bars, and the plates supported on these rods, having on their opposite sides a series of separate spring fingers projecting downward between the adjoining bars, and tending to normally spring outward toward the grooved faces of such bars, substantially as and for the purpose set forth. 44th. The carrier, consisting of sections formed of parallel grooved bars, with spring-holding devices to hold the sticks in the grooves, in combination with links connecting the sections together, substantially as and for the purpose described. 45th. The carrier, consisting of sections having bars to receive the match sticks and links connecting the sections, in combination with rotating toothed wheels engaging the projecting ends of the bars, substantially as and for the purpose specified. 46th. The carrier, consisting of sections having bars to receive the match sticks, in combination with links attached to one section and engaging the projecting ends of one of the bars of the next section, substantially as and for the purpose shown. 47th. The carrier consisting of sections having bars to receive the match sticks, in combination with links attached to one section and provided with an opening with convex face to engage the projecting ends of one of the bars of the next section, substantially as and for

the purpose set forth. 48th. The combination with the carrier sections each having the three transverse bars adapted to receive the match sticks, and the front and rear bars made thinner than the middle one, the links attached to each section, each provided with an opening with convex rear side to engage the rear face of the front bar of the next section, substantially as and for the purpose described. 49th. In combination with the carrier sections each consisting of three bars of which the middle one is grooved to receive the match sticks on its front and rear sides, and the others are made thinner and correspondingly grooved, but only on their sides turned towards the middle bar and plates attached to and extending rearward from each section, having openings to allow the passage of the projecting ends of the rear bars of their respective section, and the front bar of the following one, and convex faces at the rear side of such openings, to engage the rear side of the latter bar, such bar drawing its upper and lower edges rounded off to allow rocking of the plates with relation to the bar, substantially as and for the purpose specified. 50th. A carrier for match sticks and the like, consisting of a series of sections having grooved bars to receive the sticks, and links connecting such sections, in combination with toothed wheels engaging the bars, so as to move the carrier along, means for giving such wheels a step-by-step movement sufficient to bring the series of grooves of the bars successively over a given point, and match stick supplying and feeding devices adapted to feed the sticks into the grooves of the bars, at such point, while the carrier is at rest between step-by-step advances, substantially as and for the purpose shown. 51st. In combination with a carrier having transverse series of match stick receiving grooves, and spring devices for holding the sticks in the grooves, the reciprocating opener, adapted to engage and force the spring holding devices back from the grooves, and means for reciprocating it to move it into and out of engagement with such devices, substantially as and for the purpose set forth. 52nd. In combination with a carrier having transverse series of match stick receiving grooves, and series of separate holding fingers to act with such grooves, the reciprocating head carrying a series of opening fingers to engage said spring fingers and force them away from the respective grooves, means for reciprocating said head, and means for feeding the sticks into the grooves, while the spring holding fingers are thus retracted, substantially as and for the purpose specified. 53rd. In combination with a carrier having transverse series of match stick receiving grooves, and spring holding devices to grip the sticks in such grooves, the reciprocating head carrying a series of opening fingers, to engage such spring holding devices and force them away from the grooves, such fingers being separated from each other so as to allow for the passage of the sticks up into the grooves, means for moving such head, and means for feeding the material for the sticks up into the grooves of the carrier, while the opener is down in operative position, substantially as and for the purpose specified. 54th. In combination with a carrier having a series of oppositely turned faces equi-distant from each other, provided with match stick receiving grooves, and spring holding devices, to hold the sticks in the grooves, means for moving the carrier with a step-by-step motion so as to bring the faces in which are the grooves, successively to a given line, the opener adapted to engage and press the spring holding devices back from the respective series of grooves, means for reciprocating such opener towards and from its operative position, and means for giving it alternately a slight forward and back motion with reference to the travel of the carrier before it moves to engage the spring holding devices, substantially as and for the purpose shown. 55th. In combination with a carrier having a series of oppositely turned faces equi-distant from each other, provided with match stick receiving grooves, and spring holding devices to hold the sticks in such grooves, means for giving the carrier a step-by-step movement equal to the distance between two of its adjacent faces, the reciprocating opener to engage and press the spring holding devices back from their respective grooves, having a head guided in plates, so as to move towards and from the plane of the carrier, means for reciprocating such head, and means for moving the plates in which the head is guided, forward and back with reference to the travel of the carrier, so that successive opening movements of the opener will be in different planes, to enable it to pass the successive grooved faces of the carrier, substantially as and for the purpose set forth. 56th. In combination with the carrier having a series of oppositely turned faces equi-distant from each other, provided with match stick receiving grooves, and spring holding devices to hold the sticks in the latter, means for giving the carrier a step-by-step movement equal to the distance between two of its adjacent faces, the reciprocating opener to engage and force back the spring holding devices from their respective grooves, having a head, plates with guides for such head, to guide it in its movements towards and from the carrier, means for reciprocating the head in such guides, and the cam mechanism connected with the guide plates, to move them alternately forward and back with relation to the travel of the carrier, substantially as and for the purpose described. 57th. In combination with the reciprocating opener head, the rock shaft, the arms thereon, and the links connecting the head with such arms, the plates having guides for the opposite ends of the head, the bars connected with such plates, the cams engaged by bearing devices on the bars, so as to move the latter and the plates in one direction at a right angle to the reciprocation of the head on such plates, springs to return the bars, and means for guiding the head in its movements with such bars, substantially as

and for the purpose specified. 58th. In a match making machine, in combination with the travelling carrier to receive and hold the match sticks, while being treated a discharging device to discharge the completed matches from the carrier, and a pusher, adapted to engage and push outward, before they reach the discharging device, the rear ends of the match sticks projecting beyond the rear or inner side of the carrier, substantially as and for the purpose shown. 59th. In a match making machine, in combination with the travelling carrier to receive and hold the match sticks, while being treated, a discharging device to discharge the completed matches from the carrier, and the reciprocating pusher plate moved towards, and from the carrier, at a point where it can engage and push forward the rear ends of the matches, before they come into position in front of the discharging device, substantially as and for the purpose set forth. 60th. In a match-making machine, in combination with the travelling carrier to receive and hold the match sticks while being treated, the reciprocating punches for discharging the completed matches from the carrier, and the reciprocating pusher plate, adapted to engage and push outward, into such position that they can pass with the motion of the carrier in front of the punches, the rear ends of any matches projecting beyond the carrier, substantially as and for the purpose described. 61st. In a match-making machine, in combination with the carrier to receive and hold the match sticks, while being treated, the reciprocating head carrying the discharging punches, means for actuating such head, and the pusher plate connected with the head so as to move with the same, arranged to engage the ends of match sticks projecting beyond the carrier, at a point before such sticks are brought to the punches by the movement of the carrier, substantially as and for the purpose specified.

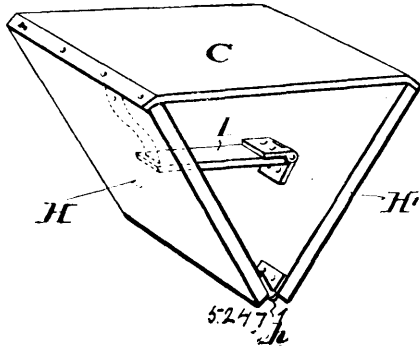
No. 52,470. Advertising Cabinet. (Cabinet d'annonce.)



Charles H. Tebbets, Boston, and Martin J. Sauter, Greenfield, both in Massachusetts, U.S.A., 1st June, 1896; 6 years. (Filed 8th April, 1896.)

Claim.—1st. In an advertising cabinet for hotel counters, the combination of a body having a bottom piece, a rear wall, two side walls inclined towards the front, inclined braces extending from the rear walls to the front edges of said bottom piece, a shelf rigidly attached to the rear wall thereof, pockets between the said wall and inclined braces for the reception of removable compartments, suitable metallic cards inserted between said braces and rigid shelf and means for holding the same in position, substantially as and for the purposes set forth. 2nd. In an advertising cabinet for hotel counters, the combination of a body having a bottom piece, a rear wall, two inclined side walls, inclined braces extending from the rear walls to the front edge of said bottom piece, a shelf rigidly attached to the rear wall thereof, a removable compartment adapted to fit snugly between said shelf and the front edge of said bottom piece, the outer edges of which are provided with lips for the reception of metallic advertising cards and means for holding said advertising cards firmly in position, substantially as and for the purposes set forth. 3rd. In an advertising cabinet for hotel counters, the combination of a body having a bottom piece, a rear wall, two inclined side walls, inclined braces extending from the rear wall to the front edge of said bottom piece, said braces being provided with lips on both sides, a shelf rigidly attached to said rear wall having inclined sides, the outer edges of which are provided with lips, a compartment for the reception of letters and like articles, also provided with lips on its outer edges, pockets between said braces and said outer walls for the reception of removable compartments, metallic advertising cards capable of being inserted between said inclined braces and said rigid shelf, and between said solid compartment and said braces, an upright partition extending from the lower front edge of said shelf to both sides, and means for holding said compartments and advertising cards in position, substantially as and for the purposes set forth.

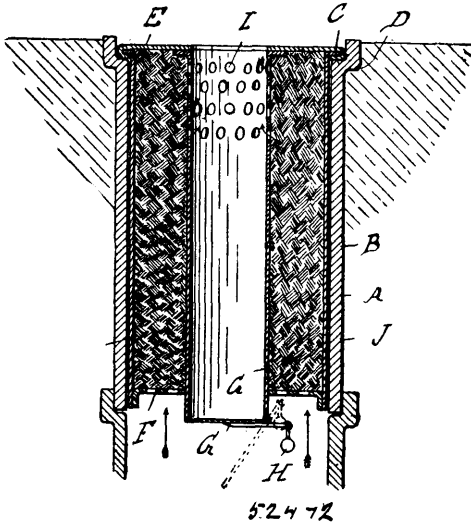
No. 52,471. Vehicle Seat. (*Siege de voiture.*)



Bernard John McGram, Grand View, Pennsylvania, U.S.A., 1st June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—A supplemental seat for a vehicle, consisting of a pair of counterpart flat plates hingedly connected as to their lower edges and connected to their upper edges by a top or seat proper consisting of canvas or other flexible material permanently secured to the upper ends of the respective plates, substantially as set forth.

No. 52,472. Sewer Trap. (*Fermeture d'égout.*)



Joseph Ellis, Detroit, Michigan, U.S.A., 1st June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—1st. The combination with a sewer trap formed with a shoulder at the top, of an annular casing therein, an annular top secured to said casing and forming with the casing a shoulder adapted to engage said shoulder in the sewer pipe, a disinfectant in said casing, perforations in its inner wall, and a valve for its central opening, substantially as described. 2nd. The combination of a receptacle fitting in the sewer pipe having annular top and bottom, the sewer tube G concentrically arranged within the receptacle apertured at its top and secured to the top and bottom of the casing, to form a surrounding disinfecting chamber, a perforated bottom on the receptacle, pulverulent material such as charcoal in the disinfecting chamber charged with a disinfectant as described, the extension of the sewer tube below the casing and the weighed valve controlling the lower end thereof, substantially as described.

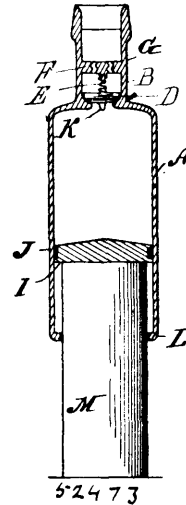
No. 52,473. Non-Refillable Bottle.

(*Appareil pour empêcher le remplissage des bouteilles.*)

Willeve T. Merriman, Jackson, Michigan, U.S.A., 1st June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—In a bottle, an outwardly opening check valve controlling the outlet of the bottle held normally closed under tension, and adapted to prevent the ingress of liquid, in combination with means for forcing out the liquid contained in the bottle against the pressure of the valve, by pressure from the outside. 2nd. In a bottle an outwardly opening check valve controlling the outlet of the bottle held normally to its seat under tension, in combination with a piston in the body of the bottle adapted to force out the liquid against the pressure of the valve. 3rd. A bottle having the neck B and a valve seat thereon, the outwardly opening valve D, the baffle plate F above said valve and the spring E between, a piston slidingly secured

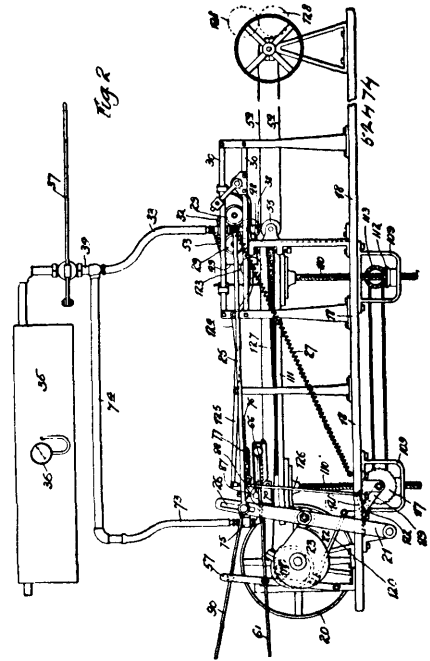
in the body of the bottle and forming a movable bottom therefor, and means for preventing the withdrawal of the piston. 4th. In a



bottle, the combination with a piston forming a movable bottom for the bottle, of an outwardly opening check valve in the neck of the bottle and a graduate or measuring vessel formed above said valve.

No. 52,474. Printing Press Paper Feeding Machine.

(*Machine d'alimentation du papier pour presses à imprimer.*)



George Frederick Leiger and Lewis Benedict, both of Chicago, Illinois, U.S.A., 1st June, 1896; 6 years. (Filed 13th April, 1896.)

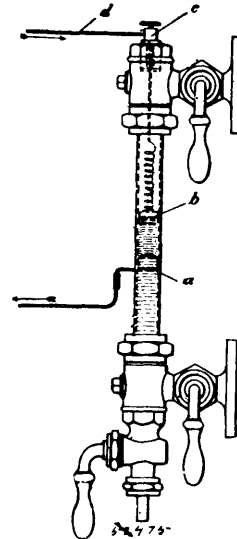
Claim.—1st. The combination with a carriage, and mechanism for reciprocating said carriage, of a telescopic pneumatic picker carried by said carriage, a valve controlling said pneumatic picker, mechanism adapted to automatically open and close said valve as said carriage is reciprocated, and guides bearing upon said pneumatic picker and adapted to raise the same as said carriage moves forward, substantially as described. 2nd. The combination with a carriage, supports for said carriage, and mechanism adapted to reciprocate said carriage in said supports, of a pneumatic tube carried by said carriage, a valve chamber mounted in said tube, a valve mounted in said valve chamber and adapted to open and close said tube, mechanism adapted to automatically open and close said valve as said carriage reciprocates, a vertically-movable picker mounted upon said tube, and guides bearing upon said vertically-movable picker and adapted to raise the same as said carriage moves forward, substantially as described. 3rd. The combination with a carriage, supports for said carriage, and mechanism adapted to reciprocate said carriage in said supports, of a

pneumatic tube carried by said carriage, a valve chamber mounted in said tube, a valve mounted in said valve chamber and adapted to open and close said tube, mechanism adapted to automatically open and close said valve as said carriage reciprocates, a vertically-movable picker mounted upon said tube, guides bearing upon said vertically-movable picker and adapted to alternately raise the same and permit the same to be lowered as said carriage reciprocates, a valve mounted upon said vertically-movable picker, and mechanism connected with said valve and adapted to automatically open and close the same as said carriage reciprocates, substantially as described. 4th. The combination with a carriage, guides supporting said carriage, mechanism for reciprocating said carriage in said guides, a pneumatic tube mounted on said carriage, a valve chamber mounted in said pneumatic tube, and a valve located in said valve chamber, of a valve rod secured to said valve and projecting beyond said valve chamber at both sides, a stop adapted to close said valve as said carriage reciprocates, a lever hinged to said valve chamber and provided with a latch adapted to engage with said valve rod and adapted to be raised out of engagement with said valve rod as said carriage moves backward, and springs connected with said pneumatic tube and said valve rod and adapted to open said valve when said valve rod is disengaged from said latch, substantially as described. 5th. The combination with pneumatic mechanism adapted to lift a sheet of paper at its front edge and move it forward, of a rotating reciprocating pneumatic tube provided with a series of openings upon its side, mechanism adapted to reciprocate and rotate said tube, a valve controlling the air inlet into said tube, mechanism adapted to automatically open and close said valve as said tube reciprocates, and mechanism adapted to raise the rear end of the sheet of paper against said pneumatic tube as the same reciprocates, substantially as described. 6th. The combination with a rotating reciprocating pneumatic tube provided with a series of openings upon its side, and mechanism adapted to rotate and reciprocate said tube, a vacuum tube connected with and opening into said rotating and reciprocating pneumatic tube, a valve chamber mounted in said vacuum tube, a valve mounted in said chamber and controlling said vacuum tube, of a valve rod connected with said valve, a support for said valve rod, a spring mounted upon said valve rod and bearing upon said valve rod and said support and adapted to close said valve as said pneumatic tube is moved forward, a lever hinged to said valve chamber and provided with a latch adapted to engage with said valve rod when said valve is closed and adapted to be lifted from said engagement when said pneumatic tube is moved backward, and a spring mounted upon said valve rod and bearing upon it and said support and adapted to open said valve as said latch is freed from engagement with said valve rod, substantially as described. 7th. The combination with a rotating reciprocating pneumatic tube provided with a series of openings upon one side, adapted to pneumatically engage with and lift the rear end of the top sheet of a pile of paper, and mechanism for rotating and reciprocating said tube, of a shaft, mechanism for rocking said shaft, and a series of lifting rods adjustably mounted upon said shaft and adapted to automatically lift the rear portion of a pile of sheets against said rotating and reciprocating pneumatic tube as said tube is moved to its backward position, substantially as described. 8th. The combination with a rotating reciprocating pneumatic tube provided with a series of openings upon one side, and adapted to pneumatically engage with and lift the rear end of the top sheet of a pile of paper, and mechanism for rotating and reciprocating said tube, of a shaft, mechanism for rocking said shaft, a series of lifting rods adjustably mounted upon said shaft and adapted to automatically lift the rear portion of a pile of sheets against the rotating and reciprocating pneumatic tube as said tube is moved to its backward position, and holders mounted upon said shaft and adapted to hold down the rear end of a pile of sheets after the top sheet has been engaged with said pneumatic tube, substantially as described. 9th. The combination with a rotating reciprocating pneumatic tube provided with a series of openings upon one side, and adapted to pneumatically engage with and lift the rear end of the top sheet of a pile of paper, and mechanism for rotating and reciprocating said tube, of a shaft, mechanism for rocking said shaft, a series of lifting rods adjustably mounted upon said shaft and adapted to automatically lift the rear portion of a pile of sheets against said rotating and reciprocating pneumatic tube as said tube is moved to its backward position, hollow holders having a series of openings in their front edges and adapted to hold down the rear end of a pile of sheets after the top sheet has been engaged with said pneumatic tube, as described, and air tubes connected with said holders through which a stream of air may be forced through said holders under said lifted sheet, substantially as described. 10th. In a pneumatic sheet-delivering device, the combination with a suction roller, a shaft, and mechanism for rocking said shaft, of a ring adjustably secured to said shaft and provided with a circumferential groove, a ring mounted in said circumferential groove, and flexible lifters secured to said last-named ring, substantially as described. 11th. In a pneumatic sheet-delivering machine, the combination of a shaft, an inner ring adjustably mounted upon said shaft and provided with a circumferential groove and having a slot in said groove extending through a portion of the ring periphery, an outer ring mounted in said circumferential groove of the inner ring and provided with a slot throughout a portion of its circumference, screws mounted in the slot of the inner ring and adapted to engage the ends of the slots in the outer

ring to impart movement to said outer ring on forward and backward rotation of the shaft and inner ring, a flexible lifting rod mounted upon said outer ring, and a suction roller, substantially as described. 12th. The combination with mechanism adapted to engage one end of a sheet of paper and move it toward a printing press, of a coating, rotating, reciprocating pneumatic-tube provided with one or more openings, mechanism adapted to reciprocate and rotate said tube, valve mechanism controlling the air inlet into said tube, and adapted to automatically open and close said air inlet as said tube reciprocates, and mechanism adapted to raise the other end of said sheet of paper against said pneumatic tube as the same reciprocates, substantially as described.

No. 52,475. Electric Water Gauge.

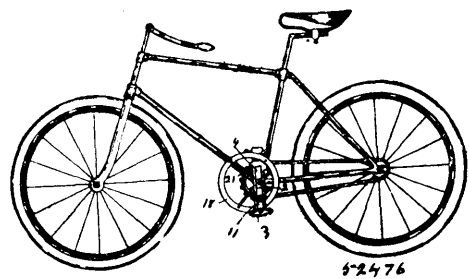
(Indicateur d'eau électrique.)



Hermann Biermann, Breslau, Prussia, Germany, 1st June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—Electrical water-gauge for preventing boiler explosions in consequence of insufficient water, characterized by a float (*b*) within the glass which in case of the water reaching the lowest level permissible, sets itself upon a wire (*a*) within the glass in such a way that the electric current is enclosed in a circuit to which the alarm and safety apparatus attached.

No. 52,476. Crank Motion. (Mouvement de bielle.)

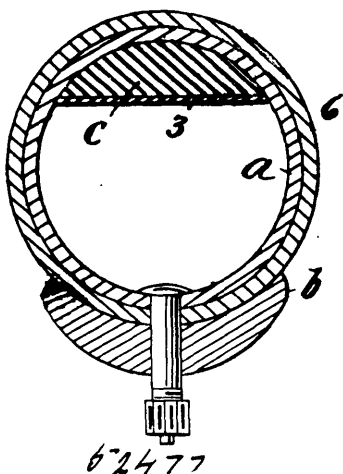


William J. Devers, Frank H. Lewis and Charles E. Hamlin, all of Scranton, Pennsylvania, U.S.A., 1st June, 1896; 6 years. (Filed 29th April, 1896.)

Claim.—1st. The combination with a driven-shaft, of a crank-arm having one member fixed to the shaft, and a slidable member provided with a slot in which the fixed member fits, the contacting surfaces of said member being provided with intermeshing ribs and grooves, a track or guide eccentric with the driven-shaft, and anti-friction rolls carried by the slidable member of the crank-arm and respectively engaging the inner and outer peripheries of the track or guide, said rollers and the track or guide being provided with interlocking peripheries, substantially as specified. 2nd. The combination with a driven-shaft, of a crank-arm having one member fixed to the shaft, and a movable member slidably mounted upon the first-named member, a track or guide eccentric with the driven-shaft and provided with sectionally V-shaped inner and outer grooves, and inner and outer anti-friction guide rollers, mounted upon the movable member of the crank-arm and operating, respectively, in the said grooves of the track or guide, said rollers having reduced or V-shaped peripheries to form an interlocking connection with the track or guide, substantially as specified. 3rd. The com-

bination with a driven-shaft, of a crank-arm having a movable member slidably mounted upon said shaft, an annular track or rim arranged eccentrically with relation to the driven-shaft, and anti-friction rolls carried by the crank-arm and engaging the inner and outer edges of the track or rim, one of said rolls being spring-actuated to hold it in contact with the track or rim, substantially as specified. 4th. The combination with driven-shaft, and a crank-arm having a head or guide fixed to the shaft, and a movable member slidably mounted upon the head or guide, of an eccentrically disposed track or rim comprising an annular core of wood provided in its inner and outer edges with V-shaped grooves, annular side or facing plates secured to the opposite sides of said core with their edges flush with the edges of the same, and anti-friction rolls carried by the crank-arm and provided with V-shaped peripheries to engage the V-shaped grooves of the track or rim, whereby said rolls are held out of contact with the side or facing plates of such track or rim, substantially as specified. 5th. The combination with a driven-shaft, of a crank-arm having one member fixed to said shaft, an interlocking sliding connection between the members of the crank-arm, a guide or track arranged eccentrically with the driven-shaft, and anti-friction rolls mounted on the slidable-member of the crank-arm and engaging the track or guide, said rolls having an interlocking bearing on the track or guide to prevent lateral deflection either toward or from the track or guide, substantially as specified.

No. 52,477. Pneumatic Tire. (Bandage pneumatique.)



The Self Healing Pneumatic Tire Company, New York, assignee of George Hostel Chimcock, Brooklyn, both in New York, U.S.A., 1st June, 1896; 6 years. (Filed 1st May, 1896.)

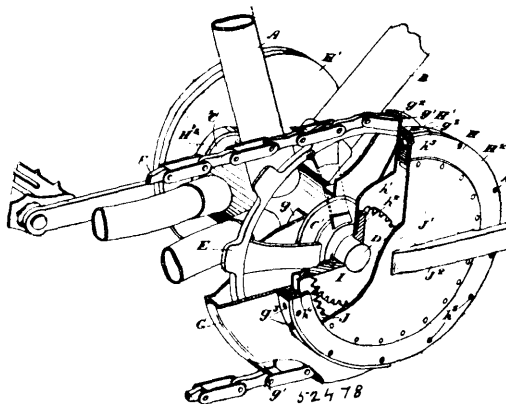
Claim.—1st. A pneumatic tire, consisting of a tube provided with a non-elastic portion and a band of self healing material. 2nd. A pneumatic tire, consisting of a tube of vulcanized rubber provided with a non-elastic portion, a band of self healing compound, and a suitable elastic tread. 3rd. In a pneumatic tire a vulcanized rubber tube provided with suitable thickened or re-enforced portion, a non-elastic portion located between said thickened portions, a band of self healing material between said thickened portions and upon said non-elastic portions, and a suitable elastic tread to complete the circular contour of the tire. 4th. In a pneumatic tire the combination of a tube provided with a non-elastic portion and a band of self healing material and also provided with suitable ribs or projections, with an outer cover provided with suitable recesses to fit said ribs or projections, and held in position by the pressure of the air within the tube.

No. 52,478. Drive Gear for Bicycles. (Engrenage de bicycles.)

John George Sydney Clark and Susan Fleming, both of Toronto-Ontario, Canada, 1st June, 1896; 6 years. (Filed 30th April, 1896.)

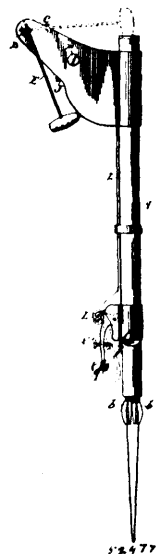
Claim.—1st. In combination the main driving wheel, the journal box, the gearing connecting the main driving wheel to the main driving gear externally journaled in a suitable casing forming part of the journal box, and the pedal cranks secured to the face of the main driving gear as and for the purpose specified. 2nd. In combination the main driving wheel and sprocket secured to its axle, sprocket-wheel on the pedal crank, sprocket-chain connecting both sprocket-wheels, the journal for supporting the pedal axle, the pinions on the end of the axle and the internal gear ring meshing therewith and supported in suitable bearings attached to or forming part of the journal box as and for the purpose specified. 3rd. In combination the pedal axle journal box, pedal axle, sprocket-wheel secured on the axle, sprocket-chain, the casing for the sprocket-wheel with openings for the chain, the inner flange on the casing secured to the journal box, the outer arc-shaped flange, the divided ring with inner shroud h^1 forming part of the inner portion, the pinion to the

outside of the shroud secured on the pedal axle, the toothed ring, meshing with the pinion and having ball bearings at its periphery



between it and the divided ring, the disc secured to the toothed ring within the divided ring and having its outer surface flush therewith and the pedal cranks secured to such disc as and for the purpose specified. 4th. In combination the pedal axle journal box, pedal axle, sprocket-wheel secured on the axle, sprocket-chain, the casing for the sprocket-wheel with openings for the chain, the inner flange on the casing secured to the journal box, the outer arc-shaped flange, the divided ring with inner shroud h^1 forming part of the inner portion, the pinion to the outside of the shroud secured in the pedal axle, the toothed ring meshing with the pinion and having ball bearings at its periphery between it and the divided ring, the disc secured to the toothed ring within the divided ring and having its outer surface flush therewith, the pedal cranks secured to such disc, the opposite part H^1 provided with inwardly extending flange h^2 to the journal box, the part H^2 secured thereto and the corresponding toothed ring, pinions, disc and crank all arranged as and for the purpose specified. 5th. In combination the journal box C, the sprocket-wheel E, the casing H, having an inner flange g^1 secured to the journal box and the outer arc-shaped flange G^2 , the divided ring H consisting of the parts H^1 and H^2 , the toothed ring I, having external bearings in the divided ring, the disc J^1 and crank J^2 , and the screws h^2 , all arranged as and for the purpose specified.

No. 52,479. Dental Plugger. (Bouchon dentaire.)



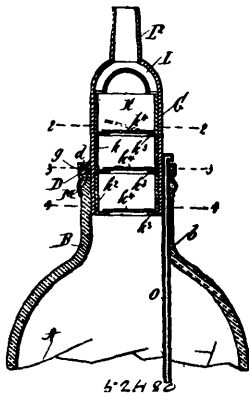
Joseph Russel Jones and John F. O'Connor, both of Ontonagon, Michigan, U.S.A., 1st June, 1896; 6 years. (Filed 4th April, 1896.)

Claim.—1st. The combination in a dental plugger, of the mallet, the arc lever, the connection between said lever and the mallet, the intermediate lever connected with the arc lever, the finger lever, and connections between the finger lever and the intermediate lever substantially as set forth. 2nd. In a dental plugger, the combination of the mallet, the arc lever, the flexible connection extending over the arc surface of the lever and connecting the latter with the mallet and devices by which to operate the arc lever, substantially as set forth. 3rd. In a dental plugger, the combination with the mallet and its shaft having a sprocket-wheel of the chain engaging

said wheel, the spring connected with one end of said chain and the operating device connected with the other end of the chain, substantially as set forth. 4th. The combination in a dental plugger of the holder, the lateral frame at the upper end thereof, the mallet and lever devices supported in said frame and connected as described, the finger lever and the slide rod engaged by said finger lever and connected with the lever devices of the lateral frame, substantially as set forth. 5th. The improved dental plugger, comprising the holder having open upper end and provided at such end with an inwardly projected stop to limit the upward movement of the instrument, and provided near its lower end with the clamp, the mallet having its shaft provided with a sprocket-wheel, the chain engaging such wheel, a spring connected with one end of said chain, the arc lever connected with the other end of the chain, the intermediate lever, the finger lever and the slide rod, all substantially as and for the purpose set forth.

No. 52,480. Bottle. (Bouteille.)

Fig. 1

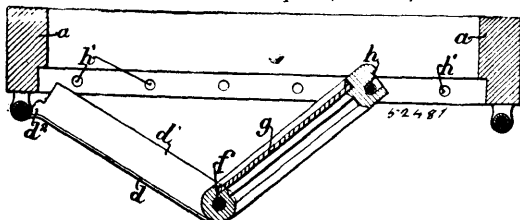


Michael John Nolan, New York, State of New York, U.S.A., 1st June, 1896; 6 years. (Filed 29th April, 1896.)

Claim.—1st. A bottle or other vessel provided with a neck, in which is placed a neck attachment, comprising a tube, which is provided with a plurality of inwardly directed annular flanges, each of which is provided with a hinged valve, said attachment being also provided with a conical upper end, within which is placed a conical partition, by means of which an annular chamber is formed, substantially as shown and described. 2nd. A bottle or other vessel provided with a neck, in which is placed a neck attachment, comprising a tube which is provided with a plurality of inwardly directed annular flanges, each of which is provided with a hinged valve, said attachment being also provided with a conical partition, by means of which an annular chamber is formed, said attachment being also provided at one side with a vent tube, which is secured thereto, and to the neck, and which projects downwardly into the bottle between the lower end of said attachment and the neck, substantially as shown and described. 3rd. A bottle or other vessel provided with a neck, in which is placed a neck attachment, comprising a tube which is provided with a plurality of inwardly directed annular flanges, each of which is provided with a conical upper end, within which is placed a conical partition, by means of which an annular chamber is formed, said attachment being also provided at one side with a vent tube, which is secured thereto, and to the neck, and which projects downwardly into the bottle between the lower end of said attachment, and the neck and said attachment being also provided with an annular flange which is adapted to bear upon the end of the neck or a packing ring placed thereon, and an annular screw-threaded cap which is provided with an annular inwardly directed flange, and which is adapted to be secured to the neck by a screw-thread, substantially as shown and described.

No. 52,481. Swinging Sash for Windows.

(Châssis tournant pour fenêtres.)

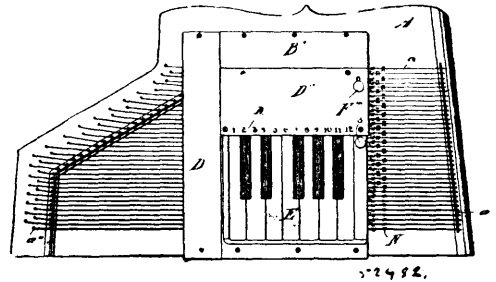


Hermann Sell, Neumünster, Holstein, Peussia, Germany, 1st June, 1896; 6 years. (Filed 5th May, 1896.)

Claim.—1st. A swinging window sash, comprising two arms hinged to the window frame and supporting pivotally upon their swinging ends the sash frame, substantially as described. 2nd. In a swinging window sash, the combination with the window frame of a swinging arm of T-shaped cross section, and supporting a sash frame pivotally upon its outer end, substantially as described. 3rd. The combination with the window frame having mortised holes therein, swinging arms hinged to said frame, a sash frame pivotally mounted upon the swinging ends of said arms, and a bolt to engage with the holes in the window frame, substantially as described. 4th. A swinging arm for supporting the sash upon the frame of a window, consisting of a T-iron of wrought metal having the end section bent to receive the hinged rod at one end, and also bent at the other end to receive the sash rail, substantially as described.

No. 52,582. Autoharp. (Autoharpe.)

Fig. 1



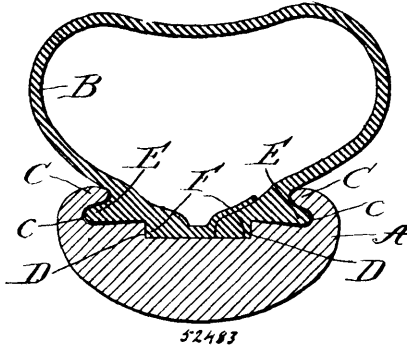
James Simpson Back and (George Lewis Orme, both of Ottawa, Ontario, Canada, 1st June, 1896; 6 years. (Filed 3rd April, 1896.)

Claim.—1st. In an autoharp, the combination with the body of a casing secured above the sound board, of a series of damper bars pivoted in said casing at one end above and parallel to the strings and each carrying a damper at the other or free end, each adapted to press upwards against one of the strings, a cross-bar in said casing carrying a series of springs, each holding up one of said bars, a series of presser bars placed transversely above said damper bars and provided with pins, each adapted to bear upon one of the damper bars, a spring at each end of each of said presser bars holding the same up, a board above said bars provided with guides for vertical pins, and forming the bottom of a key board, a series of pins in said bottom adapted to move vertically and each in contact with one of the presser bars, a series of keys arranged in the manner of an organ key board suitably pivoted and each bearing upon one of the aforesaid pins, a muffer bar similar to the presser bars but without pins and bearing bodily upon the free ends of the damper bars, a rocking bar pivoted to the bottom of the key board under the rear end of the keys and adapted to have its rear edge depressed by the keys, an arm or lever at one end of said rocking bar bearing by its forward end upon one of the vertical pins which move in said bottom and which is in contact with said muffer bar and a spring holding up the rear end of said arm or lever, substantially as set forth. 2nd. In an autoharp, the combination with the body of a casing secured thereto above the sound board, a damper bar for each string pivoted in said casing above and parallel to the string, so as to have its free end towards the bridge and having its pivoted end held down by a cover board, a damper at the free end of each damper bar, having a shank passing between a pair of strings and a crook passing under one of the strings and adapted to bear on said string when pressed upwards, a cross rail under said damper bars limiting their downward movement, a spring for each damper bar secured to said rail and bearing on the undersides of said damper bar and pressing it upwards, substantially as set forth. 3rd. In an autoharp, the combination with the body of a casing secured thereto above the sound board, a series of damper bars parallel to the strings pivoted in said casing and carrying dampers adapted to muffle the strings, a series of presser bars disposed transversely above said damper bars and having downwardly projecting pins adapted to come into contact with a limited series of said damper bars so as to depress them, a spring rail under each end of said presser bars and secured to said casing, a series of vertical guide pins in each of said rails, one for each presser bar, and passing through the latter near the end, a spring upon each pin between said rail and bar end holding up the latter, substantially as set forth. 4th. In an autoharp, the combination with the body of a casing secured thereto above the sound board, a series of damper bars pivoted in said casing at one end and carrying dampers at the other and held up by springs, a series of presser bars disposed transversely above said damper bars and provided with pins adapted to depress some of the said damper bars and suitably guided and held up by a spring at each end, a board covering said casing adapted to hold a series of pins slidingly, a series of vertical pins adapted to move vertically in said board and depress said presser bars, and a series of keys pivotally supported upon said board and adapted to depress said presser bars by means of said pins, substantially as set forth.

5th. In an autoharp, the combination with the body of a casing secured thereto above the sound board, a board or false bottom covering said casing provided with perforations or guides for a series of vertical pins, an organ key board arranged upon said false bottom, a series of pins having a vertical motion in said false bottom and adapted to be depressed by said keys, a series of presser bars under said bottom corresponding to said keys and pins held up by springs and adapted to be depressed by said keys and pins, a rocking bar pivoted to said bottom adapted to have one edge depressed by the keys and having at one end an arm or lever, a spring holding up the rear end of said arm or lever, a vertical pin under the forward end of said arm or lever held vertically sliding in said false bottom, a muffler bar under said pin guided and supported at each end by pins and springs and a series of damper bars disposed transversely to said muffler bar and parallel to the strings of the instrument and upon which said muffler bar bears bodily so that the spring supporting the arm or lever depresses said muffler bar and with it all the damper bars, substantially as set forth. 6th. In an autoharp, the combination of a casing secured above the sound board, an organ key board disposed upon a false bottom in said casing, a rocking bar pivoted upon said bottom transversely under said keys and adapted to have its rear edge depressed by any one or more of said keys, an arm or lever at the end of said rocking bar bearing with its forward end upon the pin and depressing a presser bar which depresses the free end of a series of dampers, a spring under the rear end of said arm or lever holding the same up and a clamp pin by which the spring actuated end of said arm or lever may be held depressed, substantially as set forth.

No. 52,483. Wheel Rim and Tire.

(*Jante et bandage de roues.*)



Thomas B. Jeffery, Chicago, Illinois, U.S.A., 2nd June, 1896; 6 years. (Filed 29th April, 1896.)

Claim.—The combination with the rim provided on each edge with two abutting flanges or ridges of the tire, also provided on each edge with two corresponding abutting ribs or flanges, the distance between the two tire ribs when the tire is deflated being less than the distance between the two corresponding rim flanges whereby when the tire is inflated a bearing is first established between the inner ribs and later between the outer ribs, substantially as described.

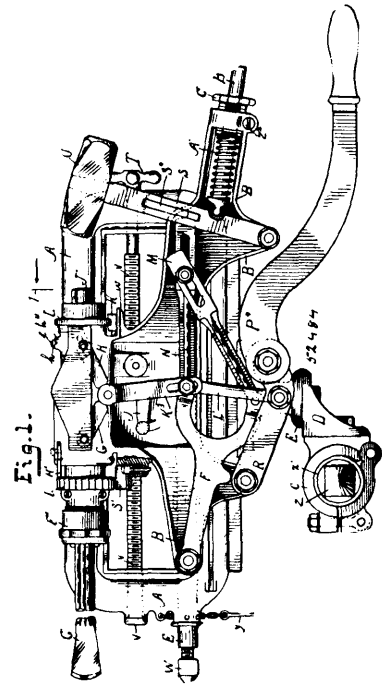
No. 52,484. Hand Power Rock Drilling Machine.

(*Forêt de mine.*)

Riverious Palmer Elmore, Chicago, Illinois, U.S.A., 2nd June, 1896; 6 years. (Filed 29th April, 1896.)

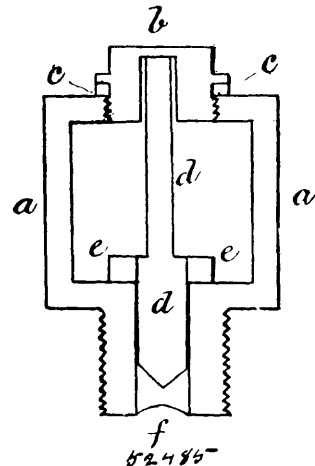
Claim.—1st. In a hand power rock drilling machine the combination of frame A, frame B adapted to slide upon frame A and carrying a reciprocating drill holder S² and its spring, screw rod V journaled in frame A, and having the hand-wheel T on its outer end, ratchet-wheel l splined on said screw shaft, and seated in a recess in frame B, bell crank paul K pivotally connected at its angle to gib n by means of pin P having the coil spring m for yieldingly holding said paul at its point of pivot, said paul being adapted to engage and turn said ratchet wheel by means of one of its arms, and the other arm having the lugs O for carrying between them the flange of nut P on the drill holder for actuating said paul, nut P, half nut Y, and detent latch K² all arranged to operate substantially as and for the purpose set forth. 2nd. In a hand power rock drilling machine the combination of frame A and frame B arranged to slide thereon, a drill holder carried by frame B and arranged to reciprocate therein, a screw rod carried by frame A, and a bell crank ratchet paul K pivotally connected to sliding frame B and adapted to engage said ratchet-wheel, and adapted to be actuated by the drill holder all arranged to operate substantially as and for the purpose set forth. 3rd. In a hand power rock drilling machine the combination of the frame B the reciprocating drill holder S² having the longitudinal groove S² spring bolt or latch i having the radial arms j near its upper end, and the hollow nut h¹ adapted to screw into barrel h² and having the radial recess P¹ across its upper end for receiving arms j and the coil spring introduced in said barrel around said latch and between a shoulder thereon and the lower end of said nut all arranged to operate substantially as and for the pur-

pose set forth. 4th. In a hand power rock drilling machine the combination of frame B hammer handle S pivotally connected at its



outer end to said frame, rod B having its inner end connected with said hammer handle by a ball and socket joint, and having its outer end pass free through hollow nut C¹, nut C¹ screwed into the screw threaded extension end of said frame B and the coil spring A¹, sleeved on said rod between the head thereof and the inner end of said nut, all arranged to operate substantially as and for the purpose set forth. 5th. In a hand power rock drilling machine the combination of the sliding frame B, drill holder S¹ adapted to reciprocate therein, ratchet-wheel l on said drill holder, paul H¹ pivotally attached to the top of said frame adjacent to said drill holder and ratchet-wheel for engaging and partially rotating said drill holder as it reciprocates, and the detent spring or bolt S for preventing backward rotation of said drill holder, all arranged to operate substantially as and for the purpose set forth. 6th. In a hand power rock drilling machine the combination of the frame A, frame B adapted to slide on frame A, drill holder S² adapted to reciprocate in said frame B and having the flange nut or hand L, hammer head J¹ and ratchet-wheel l, coil spring J² sleeved on said drill holder, pauls H¹ and K, spring bolt or latch i for fitting the groove in said drill holder, screw shaft V, ratchet-wheel l splined thereon, hammer U, and the means for actuating said drill holder and drill and hammer are arranged to operate substantially as and for the purpose set forth.

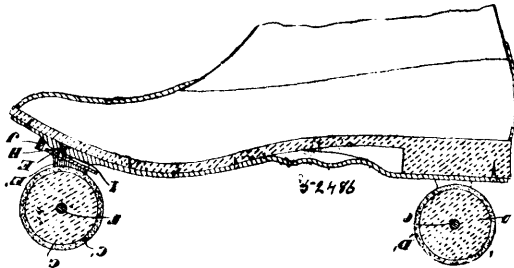
No. 52,485. Device for Oiling Carriages and other Vehicles. (*Graisneur pour voitures, etc.*)



Albert Shepherd Geiger and Samuel Irwin, both of Waterloo, Ontario, Canada, 2nd June, 1896; 6 years. (Filed 29th April, 1896.)

Claim.—1st. An oil cup to be attached to the hub of the wheel of a carriage or other vehicle, substantially as and for the purpose as hereinbefore set forth. 2nd. An oil cup to be attached to the hub of a carriage or other vehicle and provided with the removable plug, substantially as and for the purpose hereinbefore set forth. 3rd. The combination of the oil cup A, the cap b, the washer c, the plug d and the washer e, substantially as and for the purpose hereinbefore set forth.

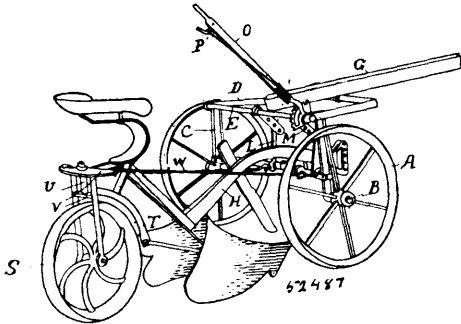
No. 52,486. Cycle-Skate. (Patin à roulettes.)



Samuel Martin, Toronto, Ontario, Canada, 2nd June, 1896; 6 years. (Filed 28th April, 1896.)

Claim.—1st. In combination, the attached plate, the rigid rear hangers and rear wheel journalled therein, the front swivelled plate with hangers, pin connecting it to the attaching plate, washer between the swivelled plate and attached plate, front wheel journalled in the hangers and means for limiting the movement of the swivelled plate, as and for the purpose specified. 2nd. In combination, the attached plate, the rigid rear hangers and rear wheel journalled therein, the front swivelled plate with hangers, pin connecting it to the attaching plate, washer between the swivel plate and attaching plate, front wheel journalled in the hangers and the stop pins suitably cushioned for limiting the movement, as and for the purpose specified.

No. 52,487. Sulky-Plough. (Charrue à siège.)



William Humphrey Perrin, Merricksville, Ontario, Canada, 2nd June, 1896; 6 years. (Filed 30th April, 1896.)

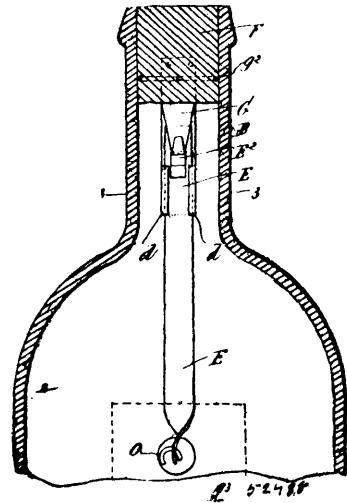
Claim.—1st. In a sulky-plough frame, the channelled posts C having stub axles for the carrying wheels of the sulky, a rock-shaft journalled in suitable bearings on the frame, and operated by a hand lever, arms secured on said rock-shaft so as to turn with it, and connected by links, with a cross-bar which supports the plough beam, substantially as shown. 2nd. In a sulky-plough, a cross-bar supporting the forward end of the plough beam, and connected by links, with arms secured to a rock-shaft which is operated by a hand lever having a spring latch arranged to engage with a ratchet fixed to the sulky frame, substantially as shown and described. 3rd. In a sulky-plough, a cross-bar, having a pivotal connection with the plough beam, by means of a bolt passing through the beam and through a socket secured to said cross-bar, bifurcated ends on said cross-bar, in which are journalled rollers running in channels formed in posts for guiding said rollers, and links connecting said cross-bar with arms and a lever for raising the same. 4th. In a sulky-plough, a follower wheel S for supporting the rear end of the plough, journalled in a bracket which is pivoted vertically to a truss T, which is secured to the body of the plough, and the crossed rods W connecting the lateral extremities of said bracket, with the cross-bar K, substantially as herein shown and described.

No. 52,488. Bottle. (Bouteille.)

Richard Searing Seaman, Brooklyn, New York, U.S.A., 2nd June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. A bottle provided with a neck, a stopper which is adapted to be secured therein, a spring connected with one side of said stopper, and provided with a hook at its lower end, a vertically movable plate or bar having a slot in its upper end into which said hook is adapted to enter, and means adapted to connect with the

lower end of said plate or bar and passing through the side of the bottle, for operating the same, substantially as shown and de-



scribed. 2nd. A bottle provided with a neck, a stopper which is adapted to be secured therein, a spring connected with one side of said stopper, and provided with a hook at its lower end, a vertically movable plate or bar having a slot in its upper end into which said hook is adapted to enter, and means adapted to connect with the lower end of the said plate or bar passing through the side of the bottle for operating the same, said means consisting of a plug which is adapted to close a port or opening formed in the side of the bottle through which passes a rod having a hook at its inner end, and which is adapted to operate in connection with the lower end of said plate or bar, substantially as shown and described. 3rd. A bottle provided with a neck, a stopper which is adapted to be secured therein, a spring connected with one side of said stopper, and provided with a hook at its lower end, a vertically movable plate or bar having a slot in its upper end into which said hook is adapted to enter, and means adapted to connect with the lower end of said plate or bar and passing through the side of the bottle, for operating the same, said means consisting of a plug which is adapted to close a port or opening formed in the side of the bottle through which passes a rod having a hook at its inner end and which is adapted to operate in connection with the lower end of said plate or bar, the side of the bottle, being also provided with a countersunk, circular chamber, which is provided centrally with a shoulder or projection through which said plug passes, and a hook which is adapted to be secured in position over said shoulder or projection, substantially as shown and described. 4th. A bottle provided with a neck, a stopper which is adapted to be secured therein, a spring connected with one side of said stopper, and provided with a hook at its lower end, a vertically movable plate or bar having a slot in its upper end into which said hook is adapted to enter, and means adapted to connect with the lower end of said plate or bar and passing through the side of the bottle, for operating the same, said means consisting of a plug which is adapted to close a port or opening formed in the side of the bottle, through which passes a rod having a hook at its inner end, and which is adapted to operate in connection with the lower end of said plate or bar, the side of the bottle being also provided with a countersunk, circular chamber which is provided centrally with a shoulder or projection through which said plug passes, a cap which is adapted to be secured in passing over said shoulder or projection, said bottle being also provided with a plate which is adapted to be secured in position over said cap, substantially as shown and described.

No. 52,489. Composition for Blackening and Dressing Leather. (Composition pour noircir et préparer le cuir.)

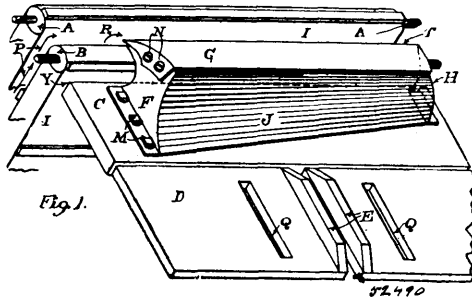
Daniel Z. Woods and William P. Maclay, both of Wurtsborough, New York, U.S.A., 2nd June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. A leather dressing and colouring made up of neat's-foot-oil, tallow, petrolatum and a nigrosine colouring matter ground in fat acid, for the purpose set forth. 2nd. A leather dressing or colouring made up of one part of "Belgian black," or nigrosine colouring matter ground in fat acid, thirty-three parts of neat's-foot-oil, thirty-three parts of tallow, and thirty-three parts of petrolatum, substantially as set forth.

No. 52,490. Harvesting Machine. (Moissonneuse.)

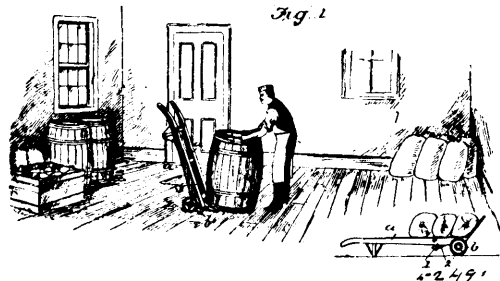
Marcus E. Hunter, Samborn (Gane Tenney and Willard Evans Hoyt, all of Williamstown, Massachusetts, U.S.A., 2nd June, 1896; 6 years. (Filed 26th March, 1896.)

Claim.—1st. In a harvesting machine, the combination with the crop-elevating devices thereof, of a table fixed at the side of said



devices and extending thereabove, on which the crop is deposited by said devices, the top of said table having a convex form in cross-section, and having one edge extending over one of the rolls of said elevating devices, substantially as set forth. 2nd. In a harvesting machine, the combination with the crop-elevating devices thereof, of a table fixed at the side of said devices and extending thereabove, on which the crop is deposited by said devices, the top of said table having a convex form in cross-section, and having one edge thereof extending diagonally to the axis of said roll, substantially as set forth. 3rd. In a harvesting machine, the combination with the crop-elevating devices thereof, of a table of tapering form from end to end fixed on the side of said devices and extending thereabove, on which the crop is deposited by said devices, the top of said table having one edge thereof extending over the adjoining roll of said elevating devices, and a rear side, having one end concave and the opposite end convex, thereby producing a warped surface, substantially as set forth. 4th. In a harvesting machine, the combination with the crop-elevating devices thereof, of a table of tapering form from end to end fixed on the side of said devices and extending thereabove, on which the crop is deposited by said devices, the top of said table being adjustably secured thereon and having a convex form in cross-section, and having one edge thereof extending over the adjoining roll of said elevating devices, substantially as set forth.

No. 52,491. Hand-Truck. (Camion à bras.)



Harry York and George E. Slaughter, both of Colton, California, U.S.A., 2nd June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. The combination, with the hand-truck proper of the transverse swinging brake-bar, 3, having parallel arms secured to the frame of such truck, the arms, 2, jointed to said arms, and attached to said brake bar, and a helical spring which connects the latter with said bar, 3, the joints or pivots of the bar 2 being in rear of, and thus out of alignment (when the spring is extended or under tension) with the brake-bar and bar 3, as shown, and described. 2nd. The combination, with the hand-truck proper, of the pivoted swinging chock, or brake bar, having flat outer sides, pivoted arms 2 carrying the same, and having such length and their pivots being so located that the brake-bar may engage or lock with the wheels on the rear side, and a spring connected with the brake-bar and the truck, as shown and described, whereby, when under tension, it lies out of alignment with the brake-bar and the joints or pivots of the bars carrying it, as shown and described.

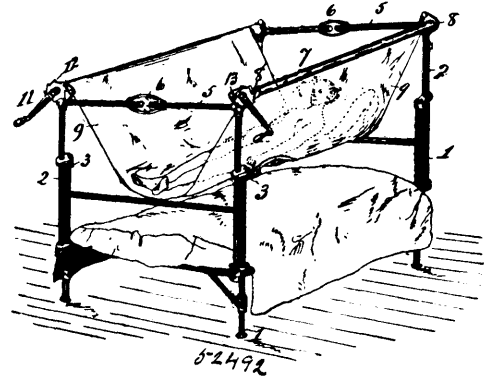
No. 52,492. Device for Lifting Invalids.

(Appareil pour le maniement des invalides.)

David H. Shuttars, Greenwood, Indiana, U.S.A., 2nd June, 1896; 6 years. (Filed 30th April, 1896.)

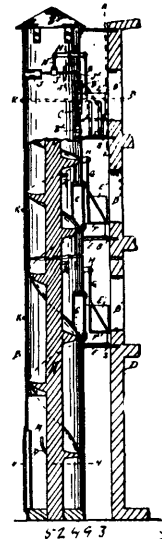
Claim.—1st. The combination with a bedstead, of a device for lifting a sick person, which consists of supports slidably mounted on the uprights of the bedsteads, means of holding such supports at any desired elevation, bearings secured to the upper end of such supports, lifting-bars loosely mounted in such bearings, a crank secured to each lifting bar whereby the same is rotated, means of locking such lifting bar in any certain position, and a sheet secured at its sides to such lifting bars, substantially as shown and described. 2nd. The

combination with a bedstead, of a device for lifting a sick person, which consists of suitable supports slidably mounted on the uprights



of the bedstead, means of securing such supports at any desired elevation, bearings mounted on the upper end of such supports, one of which is a rocket-bearing and the other an open shoulder-bearing, lifting bars on each side mounted in such bearings, means of rotating such lifting bars, and a sheet secured at its side to the lifting bars, substantially as shown and described.

No. 52,403. Fire Escape. (Sauveteur d'incendie.)



Timothy Lemond, Detroit, Michigan, U.S.A., 2nd June, 1896; 6 years. (Filed 30th April, 1896.)

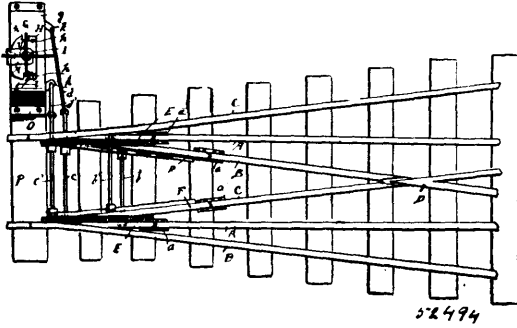
Claim.—1st. In a fire escape, the combination of a spiral runway, an inclosing case provided with doors to permit access through the case upon the runway, and a movable platform engaged to open the doors when the platform is forced downward, substantially as set forth. 2nd. In a fire escape, the combination of a spiral runway, an inclosing case provided with sliding doors to permit entrance through the case upon the runway, a weighted bell crank lever engaged with each of said doors, and a sliding platform connected with said bell crank lever, whereby a weight upon the sliding platform will open the corresponding doors, substantially as set forth. 3rd. In a fire escape, the combination of a spiral runway, an inclosing case, doors of admission into said case, a fixed platform adjacent to said doors, and a movable platform above the fixed platform engaged to open the doors when the movable platforms are forced downward, substantially as set forth. 4th. In a fire escape, the combination of the spiral runway, an inclosing case, doors of admission thereto, a movable platform adjacent to the doors, weighted bell cranks connected with the doors, toggle lever mechanism connected with the weighted bell crank, and rods connecting the platform with the toggle lever mechanism, whereby the doors will be opened when the platform is moved downward and whereby the platform will be raised to normal position and the doors be closed automatically when the platform is free to rise, substantially as set forth.

No. 52,494. Three-Throw Switch for Railroads.

(Aiguille de chemin de fer.)

Joseph P. Hasty, Superior, Nebraska, U.S.A., 2nd June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. In a three-throw switch, the combination with a main line, two turnouts, one on either side of the main line, two sets



of switch-points, one set being connected to the ends of the main-line rails, and the other to the inner rails of the turnouts, and tie-bars connecting the switch-points of one set with those of the other, of a switch-stand provided with a hollow base, a disk located in said base, the disk having a recess in its periphery, bell-cranks pivotally mounted within the hollow base, their forward ends projecting through openings therein, and their ends adapted to bear on the periphery of the disk and enter the recess therein in operation, and means for turning the disk, whereby the bell-cranks are operated to open or close either track at will. 2nd. In a three-throw switch, the combination with a main line, two turnouts, one on either side of the main line, two sets of switch-points, one set being connected to the ends of the main-line rails, and the other to the inner rails of the turnouts, and tie-bars connecting the switch-points of one set with those of the other, of a switch-stand provided with a hollow base, a peripherally-recessed disk located within the base, said disk having a lateral projection provided with a stud in line with the recess, bell-cranks pivotally mounted within the hollow base, their forward ends projecting through openings therein and their rear ends adapted to bear on the periphery of the disk and be guided into and held in the recess by said stud, an operating-rod on which the disk is secured, and a switch-lever secured to the operating-rod for turning the latter, whereby the bell-cranks are operated to open or close either track at will. 3rd. In a three-throw switch, the combination with the main line, two turnouts, one on either side of the main line, two sets of switch-points, one set being connected to the ends of the main-line rails, and the other to the inner rails of the turnouts, and tie-bars connecting the switch-points of one set with those of the other, of a switch-stand provided with a hollow base, a peripherally-recessed disk located within the base, said disk having a lateral projection provided with a stud in line with the recess, bell-cranks pivotally mounted in the hollow base, their forward ends projecting through openings therein and their rear ends adapted to bear on the periphery of the disk and be guided into and held in the recess by said stud, an operating-rod on which the disk is secured, a notched cap, a switch-lever secured to the operating-rod above the notched cap, a handle secured in the outer end of a switch-lever and adapted to turn the operating-rod, whereby the bell-cranks are operated to open or close either track at will, said handle resting normally in one of the notches in the cap, and means for automatically locking the handle when in normal position. 4th. In a three-throw switch, the combination with a main line, two turn-outs, one on either side of the main line, two sets of switch-points, one set being connected to the ends of the main-line rails, and the other to the inner rails of the turnouts, and tie-bars connecting the switch-points of one set with those of the other, the ends of which project through openings in the base of the switch-stand and are connected with the tie-bars, means for operating the bell-cranks to open or close either track at will, and guard-plates sliding loosely with the bell-cranks in operation and adapted to close the openings in the base of the switch-stand.

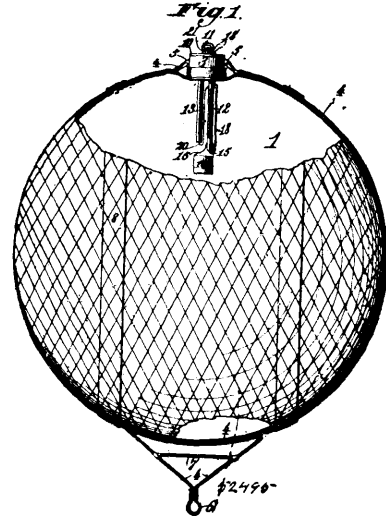
No. 52,495. Apparatus for Raising Sunken Ships, etc.

(Appareil pour mettre à flot les vaisseaux coulés.)

Frederick Findt and John Charles Davis, both of Saratoga, Wyoming, U.S.A., 2nd June, 1896; 6 years. (Filed 7th April, 1896.)

Claim.—1st. In apparatus to raise sunken vessels and prevent the sinking of ships, an inflatable gas tight and water tight bag or sack adapted to be secured to water craft or submerged objects and provided, in the interior of said bag, with a holder for gas producing material, and electrical devices for igniting said material to generate a gas for inflating the bag, substantially as described. 2nd. In apparatus to raise sunken vessels and prevent the sinking of ships, an inflatable gas tight and water tight bag or sack provided with means for securing it to water craft or submerged objects, and including a detachable holder for gas producing material, in combination with electrical devices for igniting said material to generate a gas for inflating the bag, substantially as described. 3rd. In apparatus to raise sunken vessels and prevent the sinking of ships, the combination of an inflatable gas tight and water tight bag, a steel cable secured to and surrounding said bag and adapted to serve as a means

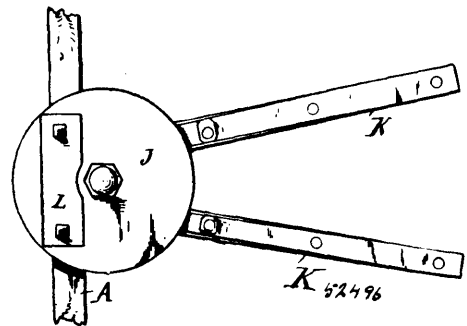
for attaching the bag to water craft or submerged objects, means for bracing the bag on its outer side, a holder for gas producing material



inclosed in the bag, and means for igniting or exploding said material to generate a gas and inflate the bag, substantially as described. 4th. In apparatus to raise sunken vessels and prevent the sinking of ships, the combination of an inflatable gas tight and water tight bag, means for securing said bag to water craft or submerged objects, an internally screw threaded collar secured in an aperture in one side of the bag, a screw plug detachably fastened in said collar and carrying within the bag a holder for gas producing material, and electrical devices for igniting said material to generate a gas and inflate the bag, substantially as described. 5th. In apparatus to raise sunken vessels and prevent the sinking of ships, the combination of an inflatable gas tight and water tight bag adapted to be secured to water craft or submerged objects, a collar fastened in an aperture in one part of said bag, a plug detachably secured in said collar and provided with a safety valve, tubes secured to the inner side of said plug to contain a gas producing material and each communicating at one end with the interior of the bag, a cartridge in the open end of one of said tubes, electric wires connecting with said cartridge, a fuse extended from the material in the closed end of one tube to the material in or near the open end of the other tube, and a hood for the open ends of said tubes, substantially as described.

No 52,496. Ball Bearing Fifth-Wheel.

(Rond d'avant-train à coussinet à boule.)



Francis A. Taylor, Mansfield, Ohio, U.S.A., 2nd June, 1896; 6 years. (Filed 30th April, 1896.)

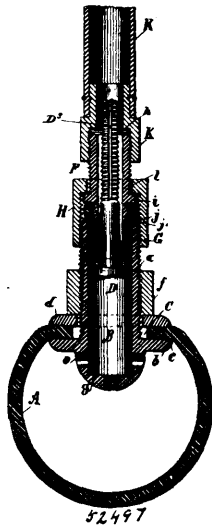
Claim.—A ball-bearing fifth-wheel composed of an upper and lower half, the lower half forming part of the axle, the upper half formed into a hollow cap, and provided with a tempered steel ring to form the upper track for the balls, the lower half provided with a flat tempered steel plate, having a ball track formed within the face of the same, and provided with suitable balls, sleeves formed upon the upper side of the lower half, and upon the under side of the upper half, the said sleeves to fit one within the other, and held together by a centre bolt substantially as shown and described.

No. 52,497. Valve. (Soupape.)

The Redway Manufacturing Company, New York, State of New York, assignee of William Edwin Gibbs, Fanwood, New Jersey, both in the U.S.A., 2nd June, 1896; 6 years. (Filed 11th May, 1896.)

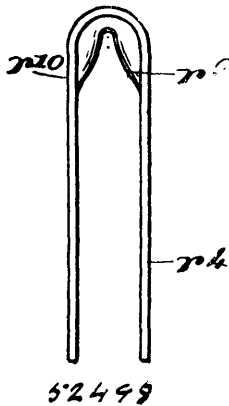
Claim.—1st. The combination of the hollow body B, the tube F formed with the nipple extension *j*, the packing tube G fitting over

Fig. 1



the nipple extension forming a swell which fits snugly against the end of body B, said packing tube extending into body B, means for securing tube F to body B, valve D supported in body B below packing G, and having a valve stem *D*² extending through said packing, and means for pressing the valve firmly against the packing, substantially as set forth. 2nd. The combination of the hollow body B, the tube F formed with nipple extension *j* and annular flange *i*, the packing tube G, fitting over the nipple extension and against the flange *i*, forming a swell which rest on end of body B, means for securing tube F to body B, valve D supported in body B, below packing tube G, and having a valve stem *D*², which latter extends through packing and tube F, and is formed with groove *D*³, a threaded portion on stem *D*², and nut E engaging said threaded end and adapted to force valve against packing, substantially as set forth.

No. 52,498. Loom Reed. (Peigne pour métiers.)



The Compton Loom Works, Assignee of John Allison Clarke and Charles Waterman Clark, all of Worcester, Massachusetts, U.S.A., 2nd June, 1896; 6 years. (Filed 2nd March, 1896.)

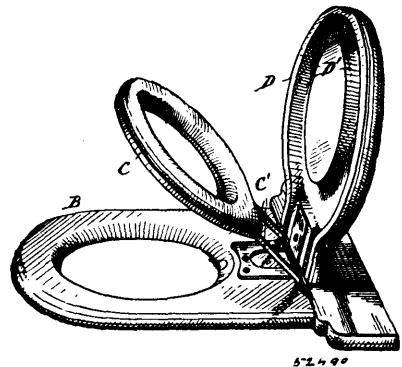
Claim.—1st. A loom reed containing uniform warp receiving spaces of a normal width sufficient to permit free crossing of two or more warp threads in shedding, and contracted at one of their ends to form warp receiving and centering spaces to prevent lateral movement of and to uniformly center or space the threads moved thereinto, substantially as described. 2nd. The herein described reed composed of a plurality of independent Ω -shaped members, a support slotted for the reception of the lower end of said member, means engaging the edges of said members to secure the latter to said support, said members standing side by side, each containing a single reed space, whereby adjacent legs of adjacent members together co-operate to form the reed dents of substantially uniform thickness throughout the reed, substantially as described. 3rd. The described reed composed of a series of like independent Ω -shaped members, and a support to which they are secured, said Ω -shaped members at or adjacent their rounded or crown ends being bent

inwardly to contract the adjacent ends of the reed spaces, to thereby form warp receiving and centering spaces to uniformly center or space the threads moved thereinto, substantially as described. 4th. In a loom, the combination with tuft-inserting devices, of a reed containing warp receiving spaces uniformly of a normal width sufficient to permit free crossing of two or more warp threads, and contracted at or near their ends adjacent said warp inserting devices to thereby form warp-receiving and centering spaces to uniformly center or space the wrap threads moved thereinto, substantially as described. 5th. The combination with a support provided with a series of slots and an intersecting groove, of a plurality of reed members arranged in said slots, and notched to register with said groove, a clamping plate having a projection to enter said groove and notches and means to hold said clamping plate in position, substantially as described. 6th. The herein described reed composed of a plurality of independent Ω -shaped members and a support therefor, said members being arranged side by side, each containing a single reed space, whereby adjacent legs of adjacent members co-operate to form the reed dents of uniform thickness throughout the reed, substantially as described. 7th. The herein described loom reed, containing reed dents provided at or near the upper ends and back of the face of the reed with converging portions, to thereby contract the reed spaces back of the face of the reed, to present relatively flaring entrances to the contracted portions of the reed spaces, substantially as described. 8th. The described loom reed composed of reed dents, provided at or near their upper ends with central converging portions serving to contract the middle upper portions of the reed spaces leaving opposite relatively flaring entrances to the contracted portions of said reed spaces, substantially as described. 9th. The described loom reed composed of reed dents formed to present for a greater part of their length intervening reed spaces of substantially the same width from one to the opposite side of the reed, said reed dents being formed at or near their upper ends to present relatively flaring entrances to the adjacent portions of the intervening reed spaces, substantially as described. 10th. The described loom reed composed of a plurality of Ω -shaped members and a support to which they are secured, said Ω -shaped members being contracted at or near their crown ends and back of the face of the reed to present reed spaces having contracted top portions, substantially as described. 11th. The described loom reed composed of a plurality of Ω -shaped members and a support to which they are secured, said Ω -shaped members being contracted at their crown ends and intermediate the front and back faces of the reed, to thereby present reed spaces having contracted upper portions with opposite relatively flaring entrances to said contracted upper portions, substantially as described. 12th. The described loom reed containing Ω -shaped members and a support to which they are secured, said Ω -shaped members being contracted at or near their crown ends and back of the face of the reed, to thereby form reed spaces having contracted upper portions with flaring entrances to said contracted upper portions, said reed dents being also depressed at their crown ends and back of the reed face, whereby said entrances are made vertically as well as laterally flaring, substantially as described.

No. 52,499. Closet Seat and Cover.

(Siège et couvercle de latrines.)

Fig. 1

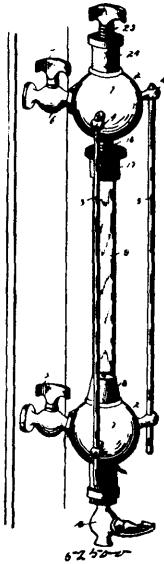


Frank G. High, San Francisco, California, U.S.A., 2nd June, 1896; 6 years. (Filed 2nd May, 1896.)

Claim.—1st. In a closet, two seats with openings of different diameters and a cover, both of said seats and also the cover being hinged to turn about a single fulcrum common to them all, said cover having a groove or channel to receive one of the seats, so that the latter may be closed into and lie flush with the lower side of the cover. 2nd. In a closet, two seats having openings of different diameters adapted to approximately coincide with each other and with a cover which is hinged to turn about a common fulcrum point with the seats, the intermediate seat having extension rearwardly to connect with the hinge joint, an annular groove or channel formed in the cover to receive the intermediate seat, and grooves or

channels corresponding with the extensions of said seat, whereby the seat and its extensions may be closed into and lie flush with the lower side of the cover. 3rd. In a closet, a main seat, a supplemental seat having rearward extensions, an annular groove or channel upon its upper surface, an independent removable filling for said channel and a cover hinged upon an axis common to both seats and having a groove or channel to receive the supplemental seat and its rearward extensions.

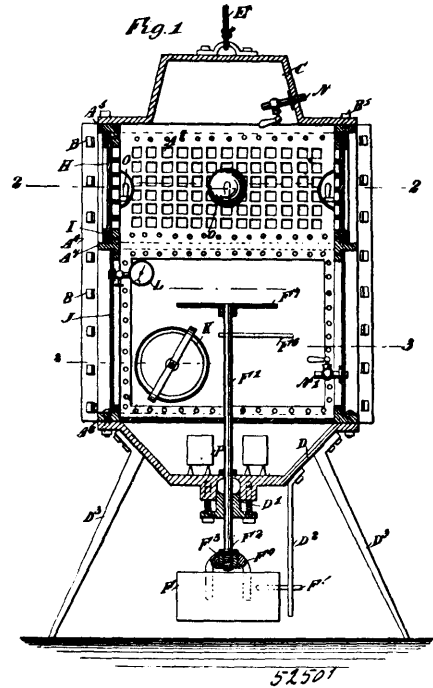
No. 52,500. Water Gauge. (Indicateur d'eau.)



Barnet Long, Henry Riedel and Ira Decker, all of Greencastle, Pennsylvania, U.S.A., 2nd June, 1896; 6 years. (Filed 9th May, 1896.)

Claim.—1st. In a water-gauge, the combination of upper and lower valve-casings provided with aligned bores having enlarged outer and reduced inner portions to form intermediate valve-seats, imperforate valves arranged to operate in the enlarged outer portions of the bores in operative relation with said seats and provided with inwardly-extending tubular stems projecting through the seats and fitting snugly in the reduced inner portions of the bores, said stems being provided adjacent to the planes of the inner sides of the valves with lateral parts which are closed when the valves are seated and said stems are arranged in the reduced portions of the bores, direct lateral inlet-openings communicating with the casings slightly beyond or outside of the valve-seats in the enlarged portions of the bores, and being covered and closed by the valves when the latter are seated, said inlet-openings being arranged between the planes of the valve-seats and the outer ends of the valves in either the seated or unseated portions of the latter, actuating-springs arranged in alignment with the bores with their inner ends in contact with the outer surfaces of the valves, to insure the seating of the latter when released, and a transparent tube arranged to repress and hold the valves unseated against the tension of said actuating-springs, substantially as specified. 2nd. In a water-gauge, the combination of upper and lower valve-casings provided with lateral ports and aligned bores surrounded by valve-seats, valves arranged in operative relation with said seats and having channelled stems extending through the bores, springs arranged in operative relation with the valves to press them toward their seats, a drain-cock removably secured to the lower valve-casing in alignment with the lower spring, a tension-screw arranged in the cap for varying the tension of the upper spring, and a transparent tube arranged to repress said valve-stems to hold the valve nominally unseated, substantially as specified. 3rd. In a water-gauge, the combination of the upper and lower valve-casings having aligned bores enlarged to form valve-seats communicating with the bores, and also provided with lateral ports communicating with the enlarged portions of the bores valves arranged in the enlarged portions of the bores and adapted to occupy a position on either side of the planes of the lateral ports, said valves having inwardly-extending tubular stems provided contiguous to the planes of the valves, with lateral openings adapted when the valves are unseated and arranged beyond or outside of the lateral ports in the casing to align with said lateral ports, and adapted when the valves are seated to be closed by the walls of the bores, a fixed transparent tube-seat arranged in alignment with the bore of one of the casings and having an opening in alignment with said bore through which the contiguous valve-stem projects, a transparent tube-seat carried by the other valve-stem and movable therewith, and a transparent tube fitted at its extremities in said seats, the interior diameter of said tube being smaller than the exterior diameter of the stem which projects through the fixed tube-seat, substantially as specified.

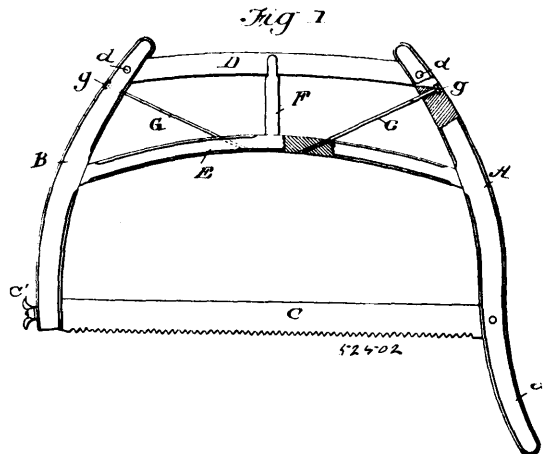
No. 52,501. Diving Apparatus. (Appareil de plongeur.)



Hubert Schon and Anton Lutz, both of Allegheny, Pennsylvania, U.S.A., 2nd June, 1896; 6 years. (Filed 9th November, 1895.)

Claim.—1st. A diving apparatus, comprising a casing provided with side frames having angular flanges bolted together, panels set and fastened in the said frames, a top bolted to the upper end of the said casing and adapted for connection with a cable or other lifting device, and a bottom bolted to the said casing and carrying a weight, substantially as shown and described. 2nd. A diving apparatus, comprising a casing provided with side frames having flanges bolted together, panels set and fastened in the said frames, and electric lights held in the said casing and adapted to shed their light through the said panels, to permit the occupants of the apparatus to observe the surrounding water and objects therein, substantially as shown and described. 3rd. A diving apparatus, comprising a casing provided with side frames having angular flanges bolted together, panels set and fastened in the said frames, a top bolted to the upper end of the said casing and adapted for connection with a cable or other lifting device, a bottom bolted to the said casing and carrying a weight, and means, substantially as described, for disconnecting and dropping the said weight from within the said casing, as set forth.

No. 52,502. Saw. (Scie.)



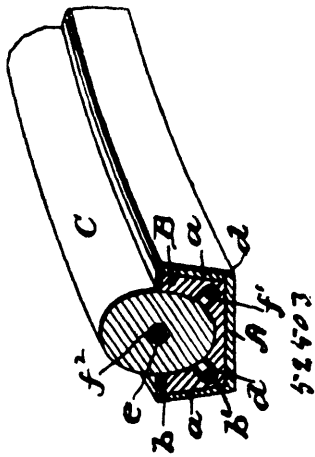
Charles Treadwell Redfield, Glen Haven, New York, U.S.A., 2nd June, 1896; 6 years. (Filed 2nd May, 1896.)

Claim.—1st. The improved saw herein described, consisting of the end bars, means by which the lower ends of such bars may be

strained toward each other, the top bar made fast to and extending between the upper ends of the end bars, the cross-bar extending between the end bars at a point below the top bar, the post arranged between the cross-bar and the top bar, and the truss rods passed through the end bars near the upper ends thereof extended thence diagonally downward and inward and threaded at their inner ends into connection with the cross-bar at about the middle of the latter, whereby they may be caused to exert a drawing tension upon said cross-bar, substantially as and for the purpose set forth. 2nd. The saw herein described, comprising the end bars, the top bar connecting said end bars, the cross-bar extending between the end bars at a point below the top bar, the post arranged between the cross-bar and the top bar, and the truss rods extending diagonally between the upper ends of the opposite end bars and the middle portion of the cross-bar and adapted to exert a drawing tension whereby the frame is trussed and the cross-bar is held from lateral displacement, substantially as described and shown.

No. 52,503. Rubber Tire for Vehicle Wheels.

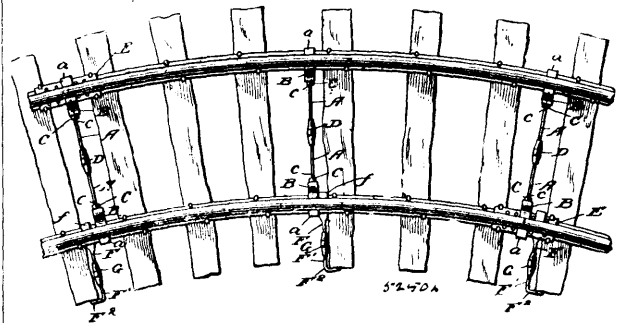
(*Bandage de roue en caoutchouc.*)



James Goodman Rodgers, Springfield, Ohio, U.S.A., 2nd June, 1896; 6 years. (Filed 2nd May, 1896.)

Claim.—1st. A two-part rubber tire for vehicle wheels, consisting of an inner bed or cushion part, of rubber, conforming to the shape of and confined wholly within the wheel rim and formed with a peripheral groove or concavity in its outer face, for the reception of and in combination with an outer wearing part of rubber, made of less diameter than the bed or cushion part and embedded therein, and a non-extensible, metallic core for said outer part, for securing the same to and within the groove of the inner bed or cushion, in the manner substantially as specified. 2nd. A two-part rubber tire for vehicle wheels, consisting of an inner bed or cushion part of rubber, conforming to the flanged rim in which it is confined and provided with a peripheral, fabric lined groove on its outer face for the reception of and in combination with a rounded outer, wearing part of rubber, of less diameter than the cushion part and embedded therein, the cushion part terminating at the edges of the wheel-rim flanges in shoulders extending to the wearing part, for preventing the latter from coming in contact with said edges, substantially as described. 3rd. A rubber tire for vehicle wheels, consisting of an inner or base part, of rubber, formed with a peripheral, longitudinal tire-holding groove for the reception of an outer part or tire of rubber, and provided with parallel grooves opening into said tire groove, for its retaining wires, in combination with a rounded, outer part, or tire, embedded in said grooved part and having a longitudinal bore or perforation, and the central, metallic core on which said outer part is compressed and which prevents its elongation, substantially as described. 4th. The combination with a double-flanged, metallic rim, of a bed or cushion of rubber, conforming to the shape of said rim and contained wholly within the same and formed with a peripheral groove for the reception of the tire, and with supplemental grooves, opening into said tire groove, for the retaining wires or cores, in combination with an outer, wearing part, or tire proper, of rubber, embedded in said bed or cushion, and a facing or layer of canvas, applied to and covering or lining the tire-groove, and also the supplemental core-grooves for protecting the same from injury, substantially as described. 5th. The combination in a rubber tire, made in two parts, of an inner, grooved bed or cushion part, confined within and conforming to the shape of the flanged rim, and the outer, wearing part, of rubber, lying in the groove of and surrounding said inner part, and the flat, metallic core, for the outer part, provided with the slits or notches for uniting the ends thereof, in the manner and substantially as described.

No. 52,504. Track-Brace. (*Lien de rails.*)

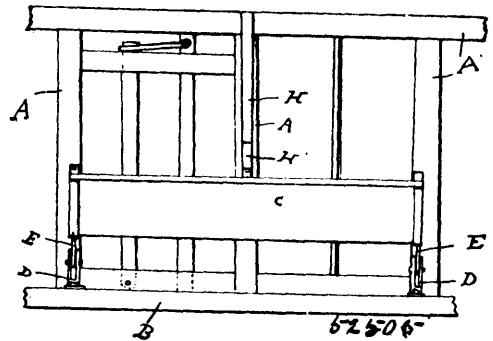


Charles J. Redifer, Munson Station, Pennsylvania, U.S.A., 2nd June, 1896; 6 years. (Filed 1st May, 1896.)

Claim.—A rail brace, comprising a tie rod having a jaw, a rod having clamping arms, and the double nut or turn buckle, substantially as shown and described.

No. 52,505. Animal Feed-Box and Manger.

(*Crèche, etc.*)



Don L. Richmond, Wheeler, Indiana, U.S.A., 2nd June, 1896; 6 years. (Filed 7th May, 1896.)

Claim.—1st. In combination with an animal stall or range, a feed-box pivoted beyond the head of the stall or range at a line remote from the bottom of the box below the same, and forward of the rear edge and above the floor, and adapted to be tilted over such pivot backward and downward through substantially ninety degrees to bring its rear edge to the level of the floor, whereby when tilted it forms a rear wall for the manger, whose height is the width of the box and whose width is greater than that width. 2nd. In combination with an animal stall, the feed-box at the head thereof having the brackets E extending downward from the bottom at the ends, the fixed standards D, to which said standards are adapted to be pivoted, the standards having a plurality of pivot holes in vertical line and the brackets having a corresponding plurality of pivot holes in horizontal line, whereby the pivotal point may be selected to adapt the box, when tilted rearward, to stop at desired position. 3rd. In combination with an animal stall or range having the feed-box pivotally secured beyond the head of the stall or range and adapted to be tilted down backward from horizontal position near the head of the stall backward to approximately vertical position, a partition or guard secured to the head of the stall, and projecting thence in a vertical plane above the feed-box, the lower edge of such partition or guard being cut substantially to conform to the path described by the forward edge of the box in the tilting movement of the latter.

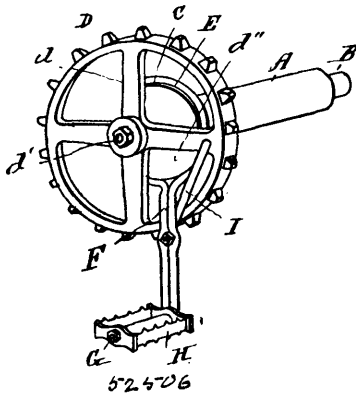
No. 52,506. Driving Gear for Foot-propelled Vehicles.

(*Engrenage pour propulsion de véhicules.*)

Samuel J. Henderson, Woodstock, Ontario, Canada, 3rd June, 1896; 6 years. (Filed 6th May, 1896.)

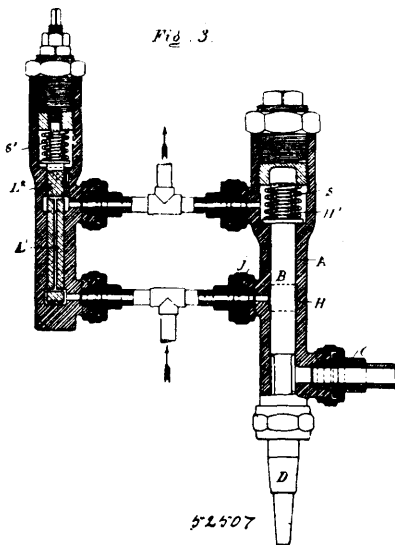
Claim.—1st. A driving gear for foot-propelled vehicles, consisting of the crank axle, a sprocket-wheel mounted on one end of the crank axle, a disk eccentric to the crank axle, mounted on that end of the crank axle bracket contiguous to the sprocket-wheel, an eccentric strap working on the said disk and terminating in a crank extending through an opening in the sprocket wheel, a link connected to the crank and to the sprocket-wheel, in such a manner as to cause the sprocket-wheel to travel at a faster rate of speed than the crank during the downward portion of the stroke, and to cause the crank to travel at a faster rate of speed than the sprocket-wheel during the upward portion of the stroke, substantially as specified. 2nd. A driving gear for foot-propelled vehicles, consisting of a crank axle, a sprocket-wheel mounted on one end of the crank axle, a disk eccentric to the crank axle, mounted on that end of the crank

axle bracket contiguous to the sprocket-wheel, an eccentric strap working on the said disk and terminating in a crank extending



through an opening in the sprocket-wheel, a link connected to the crank and to the sprocket-wheel, in such a manner as to cause the sprocket-wheel to travel at a faster rate of speed than the crank during the downward portion of the stroke, and to cause the crank to travel at a faster rate of speed than the sprocket-wheel during the upward portion of the stroke, and bearing balls interposed between the eccentric strap and disk, substantially as specified.

No. 52,507. Means for Regulating Motors.
(*Régulateur pour moteurs.*)

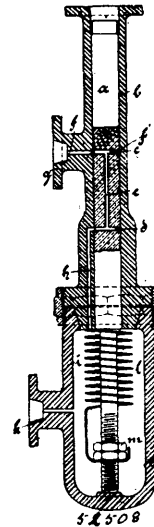


Carl Gustaf de Laval, Stockholm, Sweden, 3rd June, 1896; 12 years. (Filed 1st April, 1896.)

Claim.—1st. In regulating means for steam motors, the combination of a cylinder, constructed with steam and liquid inlets and outlets, a piston guided in the cylinder, throttling means, inserted in the outlet conduit for the liquid and adapted to be acted on by the governor of the motor, and a spring, said piston at one side being adapted to be acted on by the steam-pressure, and at the other by that of the combined spring and liquid pressures, substantially as set forth. 2nd. In regulating means for steam motors, the combination of a cylinder, constructed with steam and liquid inlets and outlets, a piston guided in the cylinder and provided with an annular recess at a point intermediate of its ends, throttling means, inserted in the outlet conduit for the liquid and adapted to be acted on by the governor of the motor, and a spring, said annular recess being adapted to receive liquid at approximately the same pressure as that of the steam, and said piston at one side being adapted to be acted on by the steam-pressure, and at the other by that of the combined spring and liquid pressures, substantially as set forth. 3rd. In regulating means for steam motors, the combination of a cylinder, constructed with steam and liquid inlets and outlets, and provided with an annular recess at a point intermediate of its ends adapted to receive liquid at approximately the same pressure as that of the steam, throttling means, inserted in the outlet conduit for the liquid and adapted to be acted on by the governor of the motor, a spring and throttling means, arranged between the said recess and the liquid space at one end of the cylinder, said piston at one side being adapted to be acted on by the steam pressure, and at the other by

that of the combined spring and liquid pressure, substantially as set forth. 4th. In regulating means for steam motors, the combination of a cylinder, constructed with steam and liquid inlets and outlets, a piston guided in the cylinder and provided with an annular recess at a point intermediate of its ends adapted to receive liquid at approximately the same pressure as that of the steam, throttling means, inserted in the outlet conduit for the liquid and adapted to be acted on by the governor of the motor, a spring, and throttling means, arranged between the said recess and the liquid space at one end of the cylinder, and consisting of a spring-actuated plunger, guided in a cylinder and having a passage communicating at one end with said annular recess and at the other end with said liquid space, said piston at one side being adapted to be acted on by the steam pressure, and at the other side by that of the combined spring and liquid pressure, substantially as set forth.

No. 52,508. Differential Pressure Reducing Apparatus. (*Appareil à réduire la pression.*)



Carl Gustaf Patrick de Laval, Stockholm, Sweden, 3rd June, 1896; 12 years. (Filed 1st April, 1896.)

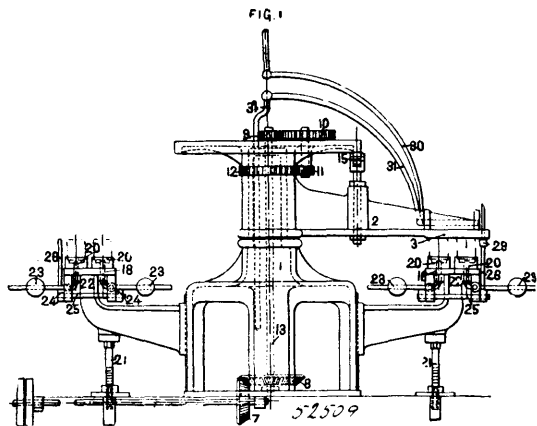
Claim.—1st. In differential pressure reducing apparatus, the combination of a cylinder, provided with an inlet and an outlet opening for the pressure liquid, a piston movable in the cylinder and provided with a spring or its equivalent and throttling means, said piston being on one side acted on by the steam pressure and by the other by the reduced pressure of the liquid as well as by the force of said spring, substantially as set forth. 2nd. In differential pressure reducing apparatus, the combination of a cylinder, provided with an inlet and an outlet opening for the pressure liquid, and constructed in its wall with a longitudinal passage, leading from the box to the space from which the outlet opening leads, a piston guided in the cylinder and having communicating transverse passages, one of which communicates with the liquid inlet opening, while the other communicates with the longitudinal passage in the wall of the cylinder, and a spring or its equivalent influencing the movements of the piston, said piston being on one side acted on by the steam pressure and on the other by the reduced pressure of the liquid, as well as by the force of said spring, substantially as set forth. 3rd. In differential pressure reducing apparatus, the combination of a cylinder, a piston guided in the cylinder and provided with throttling means, and a spring or its equivalent influencing the movements of the piston, said cylinder having liquid inlet and outlet openings, the former of which terminates symmetrically around the piston for the purpose of avoiding the jamming of the same, substantially as set forth.

No. 52,509. Process of and Machine for Soldering Metallic Boxes. (*Procédé et appareil pour souder les boîtes métalliques.*)

Otto Asche, Paris, France, 3rd June, 1896; 6 years. (Filed 18th December, 1895.)

Claim.—1st. A process for soldering empty or filled metallic boxes, wherein an arrangement of cold and hot tables, or plates, is caused to pass over, or under, the boxes to be soldered, said boxes being supplied with solder (by previous tinning or other suitable means) and being held tight by pressure, during the passage of the tables, or plates, against metal strips or blades of a good conductor of heat and cold, interposed between the boxes and tables to prevent friction between them, substantially as described. 2nd. A machine for carrying out the above claimed process, and consisting of an arrangement or combination of cold and hot tables rotating around a pillar and passing successively over a series of box-holders capable of being released so as to exert a pressure upon the boxes to be

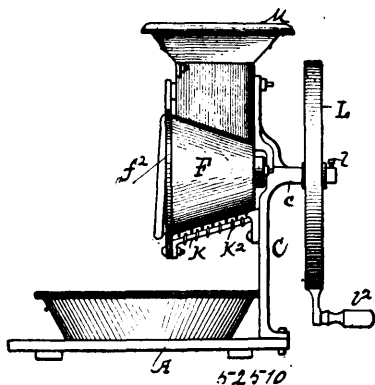
soldered, between the rotating soldering tables, fixed metallic strips or blades, of a good conductor of heat, being employed to prevent



any injurious effect of friction on the boxes to be soldered, as hereinbefore described. 3rd. A machine for carrying out the above claimed process, and consisting of an arrangement or combination of cold and hot tables travelling around two drums and passing in a straight line over the boxes to be soldered, fixed metallic strips or blades of a good conductor of heat being employed to prevent any injurious effect of friction on the boxes to be soldered, as hereinbefore described.

No. 52,510. Macerators and Presses for Fruit, etc.

(Appareil à macérer et presse à fruits, etc.)



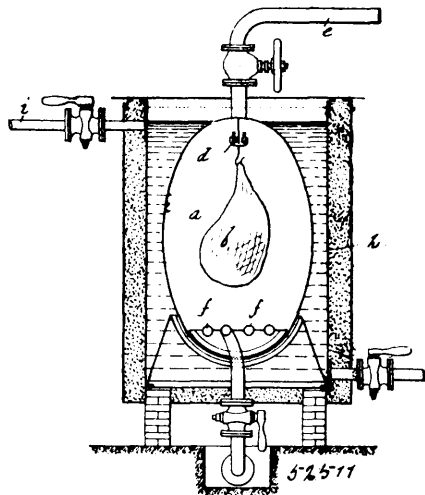
Otis Everett Davidson, Nashville, Tennessee, U.S.A., 3rd June, 1896; 6 years. (Filed 22nd August, 1895.)

Claim.—1st. In a mill, the combination with the frame, the casing having the discharge openings in the front and bottom respectively and the feed or hopper opening at the top, of the foraminous macerating or cutting cylinder having its end open and registering with the opening in the front of the casing with means for rotating said cylinder, and the tooth-edged plate at the bottom opening of the casing for holding pieces of apple in contact with the cylinder until reduced, substantially as described. 2nd. In a mill, the combination with the frame, the foraminous macerating cylinder journaled therein and having the open end, of the casing surrounding the cylinder, pivoted at the upper end to the frame and having the slot in the rear face and discharge opening at the bottom, the shaft for the cylinder passing through the slot in the casing and the cam on the shaft co-operating with the walls of the slot to oscillate the casing, substantially as described. 3rd. In a mill, the combination with the frame and macerating cylinder journaled therein, of the oscillatory casing around the cylinder having the discharge opening at the bottom and the stationary plate over said opening for holding the pieces which pass around the cylinder against the same until reduced, substantially as described. 4th. In a mill, the combination with the frame and macerating cylinder journaled therein, of the oscillatory casing around the cylinder, having the discharge opening at the bottom and the stationary plate over said opening having the toothed edge for holding the pieces which pass around the cylinder, substantially as described. 5th. In a mill, the combination with the base, the frame secured thereon and having the central bearing, the shaft journaled in said bearing, the conical macerating cylinder on the shaft at one end and the removable fly-wheel and handle on the opposite end of the shaft, of the casing pivotally connected with the frame at the upper end surrounding the cylinder and having the discharge openings in front and bottom and the slot in the rear side, the cam on the shaft lying in the slot for oscillating the casing and a toothed plate at the bottom dis-

charge opening, substantially as described. 6th. In a mill, the combination with the rotary macerating cylinder, of the oscillatory hopper casing having the transverse ribs on the side and a driving mechanism for oscillating the casing, substantially as described.

No. 52,511. Method of Refrigeration.

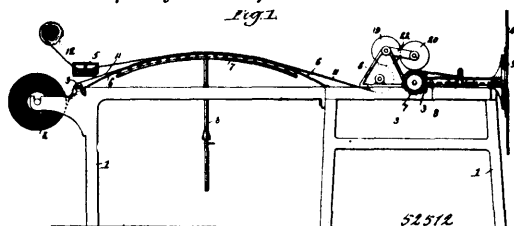
(Méthode de refroidir.)



Charles Joseph Séverin Lambert, Paris, France, and William Cook Smithfield, London, England, 3rd June, 1896; 6 years. (Filed 8th July, 1895.)

Claim.—The process of effecting the refrigeration, and particularly the freezing, of organic substances and alimentary products, which consists in establishing a rapid calorific exchange within the mass under treatment by alternate compression and dilation or rarefaction of the enveloping atmosphere of air or gas, more particularly oxygen, brought to a suitable temperature by any appropriate means.

No. 52,512. Wrapper for Newspapers, etc., and Machine for making the same. (Chemise pour journaux.)



Benajah Williams, Chicago, Illinois, U.S.A., 3rd June, 1896; 6 years. (Filed 22nd April, 1896.)

Claim.—1st. In a machine of the class described, a printing roller, means for operating the same, a shaft operated in unison with said printing roller, having an eccentric, an eccentric rod operated thereby, and an ink delivery roller, a ratchet mounted thereon, means operated by said eccentric rod for periodically operating said ratchet, whereby said ink delivering roller is periodically and positively rotated, a train of ink transferring rollers and means also operated by said eccentric rod, for reciprocating one of said transferring rollers longitudinally, as and for the purpose set forth. 2nd. In a machine of the class described, a printing and slit-cutting roller, means for positively rotating the same, a shaft, gearing intermediate said shaft and roller for operating the former from the latter, a cutter head carried by said shaft, comprising a slotted plate, a cutter disk adapted to be secured to said plate adapted to carry cutters, as and for the purpose set forth. 3rd. In a machine of the class described, a printing and slit-cutting roller, means for supplying ink to said roller, means for attaching a string or cord to the blank material feed rollers, and means for positively operating the same in combination with a cutter head comprising a radially slotted cutter carrying disk, a slotted plate to which said disk is adapted to be secured, whereby the same is capable of rotary adjustment, and severing cutters adapted to be received in said radial slots, and a ledger blade over which the material is adapted to be fed, as and for the purpose set forth. 4th. In a machine of the class described, means for supporting and feeding the blank material to be operated upon, means for feeding a thread or cork or thread thereto, a drying table over which said blank material is fed, and means for bringing the pasted thread or cord into contact with said blank material simultaneously with its travel over said

table, as and for the purpose set forth. 5th. In a machine of the class described a supporting and feeding mechanism for a strip of blank material, a table having a curved surface over which the blank material is fed, means for heating said table, means for applying an adhesive substance to a thread or cord, arranged adjacent to the feeding end of the machine, and in different parallel plane with respect to the top surface of said table, and means for feeding said thread or cord, whereby, after receiving the adhesive substance, it is applied to said strip of blank material and subjected to heat, as and for the purpose set forth. 6th. In a machine for making newspaper wrappers, means for applying an adhesive substance to a thread or cord, mechanism for feeding the blank material out of which the wrapper is made, an arching table over which said material is adapted to be fed, means for heating said table, whereby the thread or cord is applied and attached to said blank material, in combination with severing mechanism, and means for operating the same, as and for the purpose set forth. 7th. In a machine of the class described, means for supporting a roll of paper at the feed-end of the machine, a roll of thread or cord arranged adjacent thereto, a receptacle adapted to contain an adhesive substance, and through which said cord is adapted to pass, a stationary arching table over which the material and the thread or cord are adapted to be fed, means for heating said table, whereby the thread or cord is subjected to heat during its travel over said table and in contact with the strip of blank material, thereby becoming attached to said strip, cutters arranged to slit the strip of material, a severing cutter and means for feeding the strip of material and for operating the slitting and severing devices, as and for the purpose set forth. 8th. In a machine of the class described, and in combination with means for securing a thread or cord to a strip of material, and for feeding said strip with the thread or cord attached thereto, of a slit-cutting mechanism, having cutters arranged to slit the strip of material adjacent to the thread or cord and a severing cutter arranged to sever a wrapper from said strip, as and for the purpose set forth. 9th. In a machine of the class described, and in combination with means for applying a thread or cord longitudinally, with respect to a strip of blank material and for feeding the same, of a slitting mechanism, comprising a pair of cutters so arranged that the thread or cord passes therebetween, as the strip of material is fed through the machine, and a severing cutter arranged to sever a wrapper from said strip adjacent to the slit therein, as and for the purpose set forth. 10th. In a machine of the class described, and in combination with means for securing a thread or cord to the surface of a strip of blank material and for feeding the same, a roller arranged transverse to the line of feed of said strip provided with a groove, a plate adjustably mounted in said groove and carrying cutters arranged to make a cut or perforation in said strip on each side of the thread or cord attached thereto, and a severing cutter arranged to sever a wrapper from said strip adjacent to said cuts or perforations, as and for the purposes set forth. 11th. In a wrapper machine, and in combination with means for securing a thread or cord to a strip of blank material and for feeding the same, a die arranged in the line of feed thereof, carrying cutters, arranged to perforate said strip adjacent to said thread or cord, printing devices, arranged to print said strip, means for supplying ink to said printing devices and a cutter arranged to sever a slitted and printed wrapper from said strip, as and for the purpose set forth. 12th. In a machine of the class described, and in combination with means for attaching a thread or cord to a strip of blank material, a roller carrying printing and cutting devices arranged to print and to slit said strip adjacent to said thread or cord, feed rolls for feeding said strip, and a severing cutter arranged to sever a wrapper from said strip at the point where said slits are made, as and for the purpose set forth. 13th. In a machine of the class described, and in combination with means for securing a thread or cord upon a strip of blank material longitudinally with respect thereto, a roller provided with printing and slit cutting devices, arranged to print and slit said strip adjacent to said cord or thread, a cutter arranged to sever a wrapper from said strip, feed rolls arranged intermediate said roller and severing cutter, means for actuating the same, and delivery rolls for the detached wrapper, as and for the purpose set forth. 14th. In a machine of the class described, and in combination with means for attaching a thread or cord to a strip of blank material and for feeding the same, a roller carrying printing and cutting devices arranged to print and slit said strip adjacent to the thread or cord attached thereto, means for rotating said roller, a rotary severing cutter arranged to sever a wrapper from said strip adjacent to the slit therein, gearing intermediate said roller and rotary cutter for actuating the latter from the former, as and for the purpose set forth. 15th. In a machine of the class described, and in combination with means for attaching a thread or cord to a strip of blank material, means for feeding said strip with the thread or cord attached thereto, means for printing and slitting said strip adjacent to said thread or cord, a ledger blade over which said strip is adapted to be fed, and a cutter arranged to co-act with said ledger blade to sever a wrapper from said strip adjacent to the slits therein, as and for the purpose set forth. 16th. The process of manufacturing wrappers for newspapers, periodicals, and the like, which consists in applying an adhesive substance to a thread or cord, then simultaneously applying said thread or cord to the surface of a strip of blank material and subjecting the same to heat, whereby said adhesive substance is dried and said thread or cord is permanently attached to said strip, then slitting said strip on opposite sides and

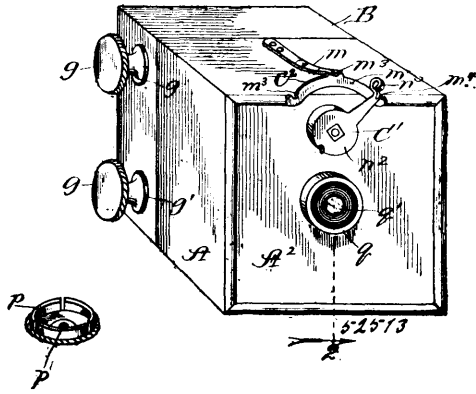
adjacent to said thread or cord, and, finally, severing a wrapper therefrom on a line transverse thereto and adjacent to the ends of said slits, as and for the purpose set forth. 17th. In a machine for making wrappers for newspapers, periodicals and the like, and in combination with a receptacle for containing an adhesive substance, a scraper, as and for the purpose set forth. 18th. In a machine for making wrappers for newspapers, periodicals and the like with a thread or cord attached thereto, a receptacle for containing an adhesive substance to be applied to said thread or cord, a scraping device arranged in the path of feed of said thread or cord and adapted to remove excess of adhesive substance from said thread or cord, as and for the purpose set forth. 19th. In a machine of the class described, a scraper, comprising a spring, as and for the purpose set forth. 20th. In a machine of the class described, a scraper, comprising an adjustable spring, as and for the purpose set forth. 21st. In a machine of the class described, a scraper, comprising an arm or bar, and a spring, as and for the purpose set forth. 22nd. In a machine of the class described, a scraper, comprising an arm or bar, angular in cross-section and carrying a spring, as and for the purpose set forth. 23rd. In a machine of the class described, a receptacle adapted to contain an adhesive material, and means for taking up the adhesive material and applying the same to a thread or cord, as and for the purpose set forth. 24th. In a machine of the class described a receptacle adapted to contain an adhesive material, a roll mounted therein and adapted to take up said adhesive material and apply the same to a thread or cord, as for the purpose set forth. 25th. In a machine of the class described, a receptacle adapted to contain an adhesive material, a roller mounted therein, adapted to take up said adhesive material and apply the same to a thread or cord, and means for removing excess of the adhesive material from said thread or cord, as and for the purpose set forth. 26th. In a machine of the class described, and in combination with a pair of ink transferring rolls, an ink delivery roll, and means for adjusting the relative positions of said transferring and delivery rolls, whereby the ink is delivered only to a portion of the length of said transferring rolls, as and for the purpose set forth. 27th. In a machine of the class described, an ink receptacle, an ink delivery roll mounted therein and fixed relation relative thereto, a train of ink transferring rolls, and means for adjusting the position of said receptacle and delivery roll, relative to said transferring rolls, whereby ink is delivered to said transferring rolls only a portion of the length thereof, as and for the purpose set forth. 28th. In a machine of the class described, an ink receptacle, an ink delivery roll carried thereby in fixed relation relative thereto, set screws arranged to bear against said receptacle at the opposite ends of one side thereof, a bearing for the opposite side of said receptacle and centrally with respect thereto, in combination with a train of ink transferring rolls, as and for the purpose set forth. 29th. In a machine for making wrappers for newspapers, periodicals and the like, a die arranged to perforate the wrappers in rows, as and for the purpose set forth. 30th. In a machine of the class described, a die carrier, dies carried thereby, arranged to perforate the body of a wrapper in parallel rows, leaving a strip of material between said rows of perforations as a tearing strip, as and for the purpose set forth. 31st. In a machine of the class described, a die carrier, dies carried thereby arranged in rows, the individual dies of each row disposed at an angle relative to the line of said row, as and for the purpose set forth. 32nd. A wrapper, for newspapers, periodicals and the like provided with rows of perforations across the same, as and for the purpose set forth. 33rd. A wrapper for newspapers, periodicals and the like provided with rows of perforations across the same, the individual perforations of each row being angularly disposed with reference to the direction of said rows, as and for the purpose set forth. 34th. A wrapper for newspapers, periodicals and the like provided with an opening thread or cord secured thereto, as and for the purpose set forth. 35th. A wrapper for newspapers, periodicals, and the like, having a thread or cord secured thereto, and provided with slits adjacent to the end of said thread or cord, as and for the purpose set forth.

No. 52,513. Camera. (Camera.)

Alfred Constantine Kemper, assignee of Christian Hans Støelting, both of Chicago, Illinois, U.S.A., 3rd June, 1896; 6 years. (Filed 11th November, 1895.)

Claim. - 1st. In a camera, a casing formed with a front-part A, and a rear part, or roll-holder B, the parts telescoping together and each having sides which afford meeting-edges, an exposure-opening and shutter in the part A, an inner frame E in the part B having sides parallel with and out of contact with the sides of the part B, film-rollers extending through openings in one side of the part B, and through coincident bearing-openings in the sides of the frame E, and supports on the frame E, for a removable mat and platen, substantially as described. 2nd. In a camera, the combination with the casing provided with an exposure-opening, of a swinging-shutter at said opening inside the casing, an arbor *n*, to which the shutter is rigidly secured, extending through and journaled in the casing, a cup-shaped latch secured to the arbor on the outside of the case, a coiled-spring housed by the latch, and a spring-catch on the case with which the latch engages when turned against the resistance of the spring, substantially as and for the purpose set forth. 3rd. In a Camera such as described, a roll-holder forming the part B of the casing, and provided with an inner frame having a base, at which it

is secured to the part B, sides provided with bearings for the film-rollers and supporting shelves for a platen, and spring ends provided



with inclined shoulders to receive a removable mat and press it in the direction of the plates, substantially as described. 4th. In a camera such as described, a roll-holder forming the part B of the casing, and provided with an inner frame, having a base, at which it is secured to the part B, sides provided with bearings for the film-rollers, bearings for film-guiding-rollers and supporting shelves for a platen, and spring ends provided with inclined-shoulders to receive a removable mat and press it in the direction of the platen, substantially as described. 5th. In a camera such as described, a roll-holder, forming the part B, of the casing, having film-roller bearing openings g^2 , surrounded by recesses g^1 , and an inner frame having sides provided with roller-bearing openings, in combination with film-rollers, having knobs g , at one end provided with shoulders g^1 , and recesses g^2 , at their opposite ends, and a spring plate bearing against the frame and engaging the recesses, g^2 , and operating to hold the rollers at their shoulders g^1 , against the outer surface of the casing in the recesses g^1 , substantially as described. 6th. In a camera such as described, a roll-holder forming the part B, of the casing, and provided with an inner frame having a base, sides k , k^1 , and spring ends i , formed with inclined shoulders i^1 , in combination with a removable mat having inclined ends to fit under the said shoulders, substantially as described. 7th. In a camera such as described, a roll-holder provided with an inner frame E, having film-roller bearing-sides k , k^2 , and an end i , provided with a film-guiding recess i^2 , substantially as and for the purpose set forth. 8th. In a camera such as described, a roll-holder forming the part B, of the casing, provided with an inner frame having a base, sides k , k^1 , formed with shelves k^2 , film-roller bearing openings, and guide-roller bearing slots k^3 , k^4 , and spring ends i , formed with inclined-shoulders i^1 , in combination with film-rollers F, F¹, in the said film-roller bearings, a removable platen e , on the shelves k^2 , removable mat G, fitting between the shoulders i^1 , guide-rollers c^1 , in the bearing slots k^3 , k^4 , a spring-click on the frame, and a click-engaging projection on one of the guide-rollers c^1 , substantially as and for the purpose set forth.

No. 52,514. Process of Production of Alkaline Chlorates by Electrolysis. (*Procédé de production d'alcalin de chlorite par l'électrolyse.*)

Carl Kellner, Vienna, Lower Austria, Hungary, 3rd June, 1896 : 6 years. (Filed 18th March, 1896.)

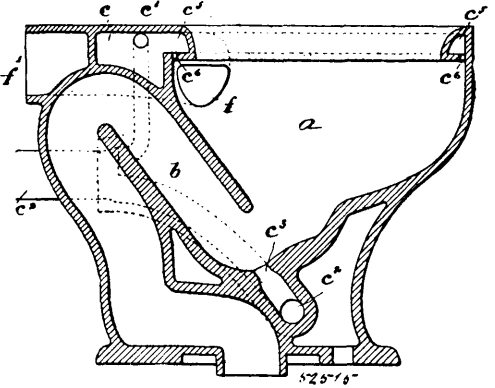
Claim.—1st. A process of production of alkaline chlorates by electrolysis, said process consisting in mixing the chlorides of the alkaline metals with an oxide or a hydroxide not easily soluble in water (such as for instance, the oxides or hydroxides of calcium or of magnesium), which oxide or hydroxide is kept in a suspended condition in the electrolyte during the whole duration of the electrolytical process, which latter is carried out without the employment of a diaphragm, substantially as described. 2nd. A modification consisting in that the chloride of calcium, magnesium, etc., are submitted to electrolysis, and the chlorate thus produced is transformed into the respective alkaline chlorate by the addition of a chloride of the alkaline metal, substantially as described.

No. 52,515. Water-Closet Bowl. (*Bassin de latrines.*)

The Smith & Anthony Company, assignee of William Henry Lloyd, both of Boston, Massachusetts, U.S.A., 3rd June, 1896; 6 years. (Filed 26th June, 1895.)

Claim.—1st. A water-closet bowl comprising a receiver, a trap arranged substantially as shown relatively to the receiver, a water-chamber above the trap having a contracted outlet or outlets communicating with the receiver and trap, and a water-supply passage communicating with said chamber, the capacity of the chamber and the rate of discharge therefrom being such that the chamber continues to deliver water after the discharge of the contents of the receiver, substantially as and for the purpose specified. 2nd. A water-closet bowl having a water-receptacle at the rear of its

hopper or receiver, two outer casings or walls forming with the walls of said receptacle two air passages communicating with and extend-

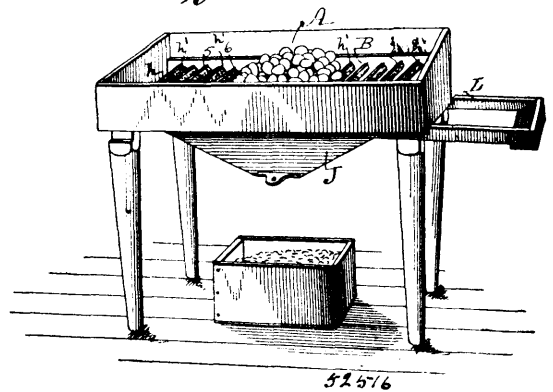


ing rearwardly from the upper portion of the bowl at opposite sides of said water-receptacle, and a neck in which said air passages unite, said neck projecting rearwardly from the rear portion of the bowl for connection with a ventilating pipe or flue. 3rd. A water-closet bowl having a central rearwardly projecting neck communicating with the interior of the bowl and adapted to be connected with a ventilating flue. 4th. A water-closet bowl having a central rearwardly projecting neck and two air passages connecting said neck with the interior of the bowl.

No. 52,516. Egg and Packing Separator.

(*Séparateur et emballage des œufs.*)

Fig. 1.

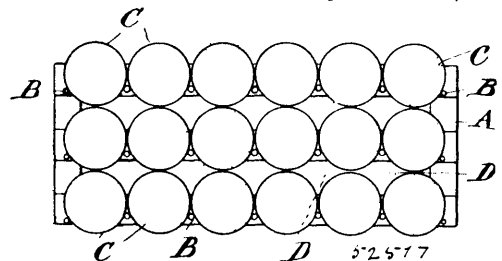


Arthur W. McFarland and John P. Hird, both of West Bend, Iowa, U.S.A., 3rd June, 1896; 6 years. (Filed 15th May, 1895.)

Claim.—1st. In an egg and packing separator, a flexible tube having parallel edges connected and projected outward in combination with the bar of a rack, in the manner set forth, for the purposes stated. 2nd. An egg and packing separator comprising an open-topped stand, a rack composed of parallel bars covered with flexible tubes and the seams of the tubes projecting upward, a hopper under the rack and a table or basket support at the end of the stand, substantially as shown and described.

No. 52,517. Can Carrier and Box Filling Machine.

(*Porte-bidon et machine à remplir les boîtes.*)

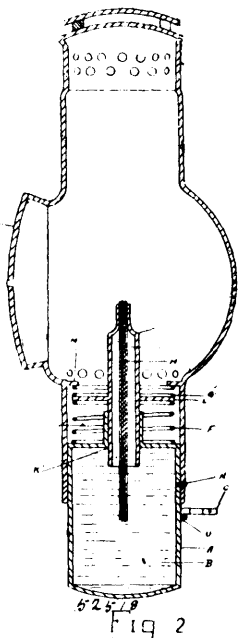


Guillermo Antonio Farini, London, England, 3rd June, 1896; 6 years. (Filed 17th March, 1896.)

Claim.—1st. A frame with pegs, or board with pins, spikes or pegs inserted in it for carrying several cans at a time. 2nd. A frame

with pegs attached with sufficient space between each peg to hold the size cans required for the purpose of holding, carrying, picking up, or piling several cans at one movement. 3rd. A frame with pins or pegs to hold as many cans as are contained in a box that will pick up a box full which can be pushed into it. 4th. A frame with pegs to act as a box filler by rolling the cans into it.

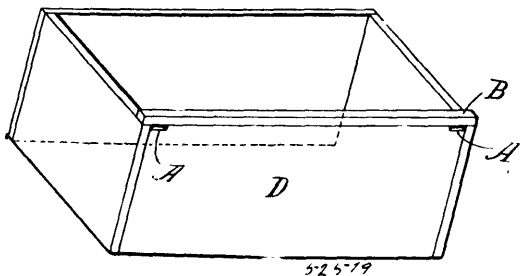
No. 52,518. Bicycle Lantern. (Lanterne de bicycle.)



Charles Murry Bump, Bay City, Michigan, U.S.A., 3rd June, 1896; 6 years. (Filed 18th March, 1896.)

Claim.—1st. A bicycle lantern comprising a coiled spring F, the burner D provided with the flange L, said flange placed upon the said coiled spring and the said burner supported thereby substantially as described. 2nd. A bicycle lantern comprising a burner provided with an extended flange near its midway and the means for supporting the wick, the lower supporting spring F, the upper cushioning spring G and the globe I provided with the inward projecting flange M, the said extended flange placed upon the said spring and supported thereby, the said cushioning spring placed upon the said extended flange and held in position by means of the said inward projecting flange provided in the said globe substantially as described. 3rd. A bicycle lantern comprising a oil receptacle A provided with an upwardly projecting tube J and forming an opening therein, the supporting spring F, the burner D, the cushioning spring G, and the globe I, the said supporting spring placed upon the said oil receptacle and concentric with the said tube, the lower end of the said burner telescoped into the said tube and oil receptacle with its extended flange L, resting upon the said supporting spring and supported thereby, the said cushioning spring placed upon the said flange and held in position by means of the inward projecting flange M, of the globe I, substantially as described. 4th. In a bicycle lantern, comprising of an oil receptacle A with an upper extended tube J which forms an opening therein therein, the pin M, and the clamping device C, in combination with the globe I provided with the bayonet slot O at its lower end and the inner projecting flange M, the said globe telescoped over the said oil receptacle and supported by the said bayonet slot locking over the said pin, combined with the supporting spring F, the burner D, and the cushioning spring G, all said parts combined substantially as described.

No. 52,519. Boîte. (Box.)

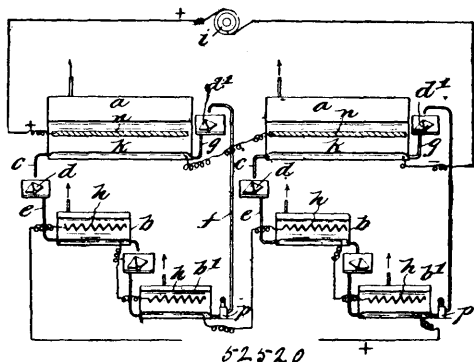


Joseph Adolphe Christin, Montréal, Québec, Canada, 3 juin 1896; 6 ans. (Déposé 1er mai 1896.)

Résumé.—Une boîte dans un des côtés D de laquelle sont pratiquées des entailles A, la dite boîte étant pourvue d'une triangle B solidement cloué sur le dit côté D de manière à ne dépasser ni à l'intérieur ni à l'extérieur, le tout tel que décrit et pour les fins indiquées.

No. 52,520. Electrolysis of Metallic Salts.

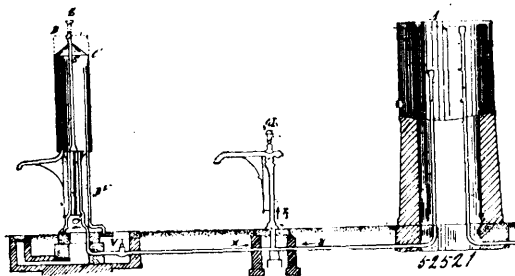
(Appareil pour l'électrolyse des sels métalliques.)



Carl Kellner, Vienna, Austria, 3rd June, 1896; 6 years. (Filed 18th March, 1896.)

Claim.—1st. In the electrolysis, by means of a mercury cathode, of compounds the electro-positive constituent of which forms an amalgam with mercury, removing the mercury employed as the cathode after it has become enriched with an electro-positive metal, from the decomposing cell and transferring it into forming cells b, b', which are bodily and electrically separate from the said decomposing cell, are provided with electrodes b, and are adapted to be brought by being connected together in series, to a potential independent of the decomposing current, substantially as hereinbefore described for the purpose specified. 2nd. In the described electrolytical method, starting the decomposition of the water in the forming cells b, b', by passing a separate electric current through the latter so as to thereby ensure the decomposition of amalgams that are difficult to decompose, substantially as hereinbefore described. 3rd. In the described electrolytical method, employing the current generated in the forming cells for the purpose of performing external work, substantially as hereinbefore described. 4th. My improved electrolytical apparatus combined and operating substantially as hereinbefore described.

No. 52,521. Water Accumulator. (Réservoir.)

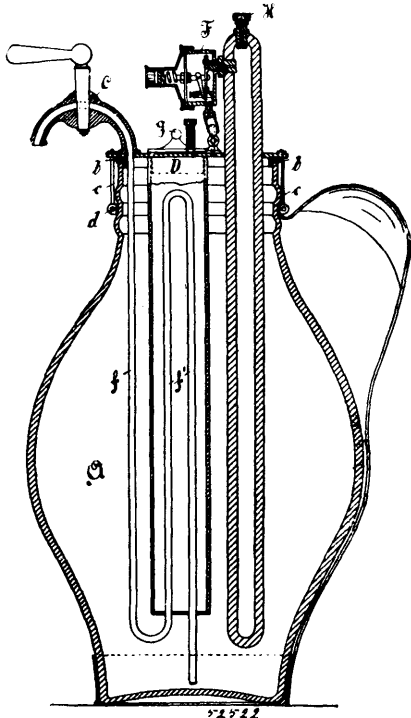


Carlo Coda, Civita, Necchia, Italy, 3rd June, 1896; 6 years. (Filed 25th March, 1896.)

Claim.—1st. A water supply apparatus, comprising a main reservoir, an auxiliary reservoir or water tower communicating therewith and extending upwardly to the same level as the main reservoir, and a discharge nozzle connected to the said reservoir, substantially as described. 2nd. A water supply apparatus, comprising a main reservoir, an auxiliary reservoir or water tower communicating therewith and provided with an air-tight cover continued upwardly by a vent pipe beyond the level of the main reservoir, and a discharge nozzle connected to the said reservoirs, substantially as described. 3rd. The combination, of the main reservoir A, the auxiliary reservoir or reservoirs E, the connecting pipe, and the discharge nozzle connected to said pipe, substantially as described. 4th. The combination of the main reservoir, the auxiliary reservoir extending upwardly to the same level as the main reservoir, the pipe connecting said reservoirs, a discharge nozzle connected directly to said auxiliary reservoir, and another discharge nozzle connected to said pipe, substantially as described. 5th. The combination of the main reservoir, the auxiliary reservoir communicating therewith, a discharge nozzle secured directly to the said auxiliary reservoir, and another discharge nozzle connected to the pipe whereby the main reservoir communicates with the auxiliary reservoir, substantially as described. 6th. A water supply apparatus for railway locomotives, comprising a discharge nozzle arranged centrally above the track, and a water supply connected to said nozzle, substantially as described. 7th. A water supply apparatus

for railway locomotives, comprising an overhead pipe arranged transversely of the track, a discharge nozzle carried by said pipe, and a water supply connected to said pipe, substantially as described. 8th. A water supply apparatus for railway locomotives, comprising a frame having a hollow beam extending over the track, a pipe carried by said beam and communicating with the interior thereof, a discharge nozzle carried by said pipe, and a water supply connected to said pipe, substantially as described. 9th. A water supply apparatus for railway locomotives, comprising an overhead reservoir arranged centrally above the track, and a discharge nozzle depending from said reservoir, substantially as described.

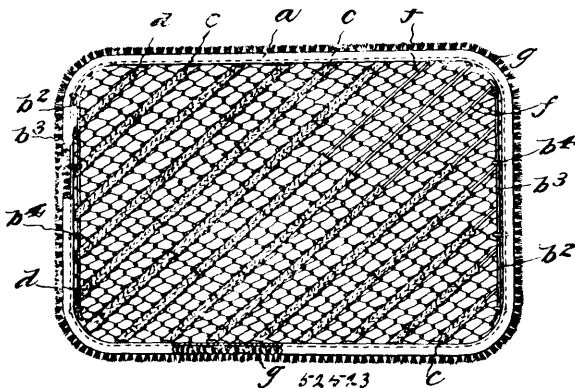
No. 52,522. Beer-Jug. (Pot à bière.)



Heinrich Reissing, 79, Landsberger Strasse, Berlin, Germany, 3rd June, 1896; 6 years. (Filed 26th March, 1896.)

Claim.—1st. A jug for beer and similar beverages, having a cover provided with a carbonic-acid reservoir and a draw-off tap, the former being connected with the interior of the vessel by means of a self-regulating valve, so that the beer contained in the jug is always under the pressure of the carbonic acid. 2nd. A jug for beer and similar beverages, having a cover provided with a carbonic acid reservoir, a draw-off tap, and a cooling cylinder, in which last named is a pipe extending upwards from the bottom of the jug, through the cooling cylinder to the draw-off tap. 3rd. A jug for beer and similar beverages, having a cover provided with a carbonic acid reservoir, a draw-off tap, a cooling chamber and an automatic safety valve.

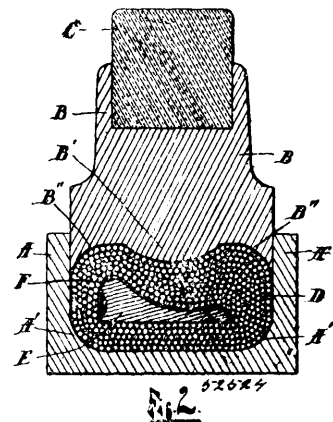
No. 52,523. Door Mat. (Paillasson.)



Franz Hermann Donath, Vienna, Lower Austria, Austria-Hungary, 3rd June, 1896; 6 years. (Filed 23rd March, 1896.)

Claim.—1st. A door-mat or scraper essentially consisting of a scraper proper made of wire-work, wood or iron bars or of rubber strips, within which scraper is inserted a filling of material capable of easily absorbing moisture, such as fibres of bast, jute, coir, hemp or hair, bristles, wool, and the like, in such a manner that the door-scraper has the double effect of scraping off the mud from the shoes, and of absorbing the moisture from them, substantially as described and shown. 2nd. A door-mat or scraper having the general arrangement specified and consisting of an outer frame having a semi-circular cross-section and provided with perforations, and of a wire-work for the reception of the fibrous filling, elastic pieces of cane or other suitable material being interposed between the wire-work and the filling, substantially as described and shown. 3rd. In a door-mat or scraper having the arrangement specified, the connection of the wire work with the frame consisting in passing the free ends of the wires through the perforations of the frame and connecting together each two adjacent wire-ends by twisting, whilst the free meshes of the wire-work are fastened to the frame by passing through the same, on each side of the frame a rod and firmly fastening this rod to the frame by a number of staples passed through the perforations of the frame and bent over on the outside, substantially as described and shown. 4th. In a door-mat or scraper having the construction specified, providing the outer groove-shaped periphery of the frame with filling of fibrous material, substantially as described and shown.

No. 52,524. Swage for Dental Plates. (Etampe pour plaques dentaires.)



Joel Catton Parker, Grand Rapids, Michigan, U.S.A., 3rd June, 1896; 6 years. (Filed 7th April, 1896.)

Claim.—1st. In a swaging device, the combination with the casing, and the mould therein having a compound-curved face, of the granular rounded or shot-like material around said mould, and the presser having a working face approximating in shape to the compound curvature of said mould, substantially as described and for the purpose specified. 2nd. In a swaging device, the combination with the cup-shaped casing having a curved inner angle, and the mould having a compound-curved face, of the granular rounded or shot-like material around said mould, and the presser having a working face formed with a convex middle part, and a concave part surrounding said convex part, substantially as shown and described.

No. 52,525. Surgical Splint. (Eclisse chirurgical.)



Edward A. Tracy, Boston, Massachusetts, U.S.A., 3rd June, 1896; 6 years. (Filed 13th April, 1896.)

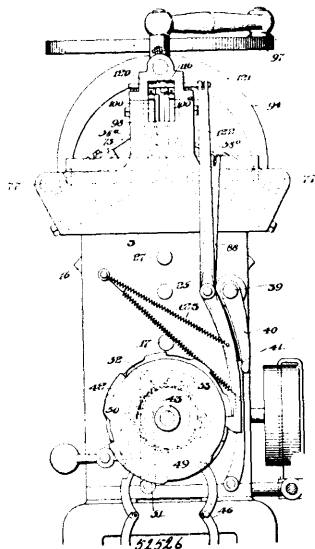
Claim.—A surgical splint formed of wood pulp slabs or boards having a fibrous reinforcing addition, and cut and adapted to be moulded to shape and rendered moisture repellent and stiff, substantially as described.

No. 52,526. Straight Knitting Machine. (Machine à tricoter.)

Joseph Bendor, Macon, Georgia, U.S.A., 3rd June, 1896; 6 years. (Filed 13th April, 1896.)

Claim.—1st. In a knitting machine, the combination, with the needle bed, of the oscillatory needle-supporting jack provided with a

cam slot therein, and a support co-acting with said slot, substantially as described. 2nd. In a knitting machine, the combination, with



the needle bed, of a series of independently-movable needle-supporting jacks provided with cam slots therein, and a rod extending through said slots, substantially as described. 3rd. In a knitting machine, the combination, with the needle bed, of a series of needle-supporting jacks therein, the same being longitudinally and vertically moveable and being provided with cam ways, and a fixed rod co-acting with said cam ways, substantially as described. 4th. In a knitting machine, the combination, with the needle bed, of a series of needle-supporting jacks therein, the same being longitudinally and vertically moveable and being provided with cam ways, a fixed rod co-acting with said cam ways, and means for longitudinally reciprocating said jacks, substantially as described. 5th. In a knitting machine, the combination, with a needle bed provided with a longitudinally-disposed jack-supporting bar therein, a series of needle-supporting jacks contained in said bed, the upper ends of the jacks resting upon said bar and the lower ends thereof being provided with cam ways, a rod co-acting with said cam ways, and means for reciprocating the jacks, substantially as described. 6th. The combination, with the needle bed, the jacks therein, the needles, and provisions whereby the jacks are temporarily sustained in the raised or the depressed position, of the follower, the rocking device thereon having provisions to act upon the jacks, means whereby said follower and rocking device are intermittently impelled, and means whereby the latter is rocked during its traverse, substantially as described. 7th. In a knitting machine, the combination, with the oppositely arranged needle-beds, oscillatory needle-supporting jacks therein provided with cam ways, those of the jacks in one bed being the reverse of those in the other bed, rods co-acting with the said cam ways respectively, and means for longitudinally reciprocating the jacks, substantially as described. 8th. The combination, with the needle beds, their needles, the cam carriers and their cams, a predetermined number of needles at the end of each bed being laterally movable in respect to the bed, of a support for each set of needles to maintain them temporarily in action, a screw, a follower thereon, and a connection between said follower and the needle support, substantially as described. 9th. The combination with the needle beds, their needles, the cam carriers and their cams, a predetermined number of needles at the ends of each bed being laterally moveable in respect to the bed, of a support for each set of end needles, to maintain them temporarily in action, a screw, a follower thereon, a connection between said follower and the needle support, and provisions for throwing certain of the remaining needles out of and into action at certain intervals, substantially as described. 10th. The combination, with the needle beds, the jacks therein, and the needles, of a follower, a reciprocative plate thereon having provisions to act upon the individual jacks of the respective beds, means whereby said follower and plate are impelled, and means whereby said plate is reciprocated during its traverse, substantially as described. 11th. The combination of the supporting frame, a shaft, a follower thereon, a rocking segment having provisions for effecting the action and inaction of the needles, and being fitted to a guide in the follower, screw devices to impel said follower and segment, an oscillatory arm, provided with an elongated opening therein, provisions whereby it is connected with the segment, an eccentric fitted to said opening and a shaft for the eccentric, substantially as set forth. 12th. The combination, with the needle beds, the jacks therein, their supporting parts, and the needles, of the follower, the segment thereon provided with means to act upon the jacks in the respective beds, means for impelling

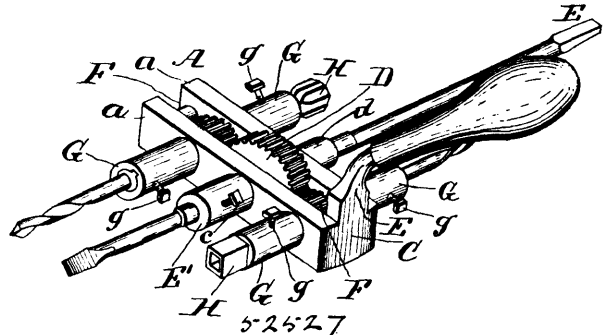
said follower and segment, and means for oscillating said segment during its traverse, substantially as described. 13th. The combination, with the needle beds, the jacks therein, their supporting parts, and the needles, of the follower, the segment thereon provided with means to act upon the jacks in the respective beds, an oscillatory arm on said follower, provisions whereby the arm is connected with the segment, means whereby the follower is impelled, and means whereby the arm thereon is oscillated, substantially as described. 14th. In a knitting machine, the combination, with the follower and its supporting parts, of the screw-threaded sleeve on the follower, the shaft for said sleeve, the gear nut on the sleeve, means for holding the nut in place, a pinion engaged with said nut, the shaft for the pinion, and means for actuating the shaft, substantially as described. 15th. The combination, with the follower, oscillatory needle-controlling mechanism thereon, a shaft upon which said follower is supported and guided, a screw-threaded sleeve on the follower, a shaft for said sleeve, a gear nut on the sleeve, means for holding the nut in place, a pinion engaged with said nut, the shaft for said pinion, means on the latter shaft to oscillate the said needle-controlling mechanism, and means for actuating the shaft, substantially as described. 16th. The combination, with the needle beds, the jacks therein, their supporting parts and the needles, of the follower, the segment thereon with means to act upon the jacks, an oscillatory arm on said follower, provisions whereby it is connected with the segment, the screw-threaded sleeve on the follower, the shaft for said sleeve, the gear nut on the sleeve, means for holding the nut in place, a pinion engaged with said nut, the shaft for said pinion, an eccentric on the shaft to oscillate the said arm, and means for operating the shaft, substantially as described. 17th. The combination, with the needle bed, of the open or slotted bar thereon, the sinker frame on said bar, and the sinkers in said frame, substantially as described. 18th. The combination, with the sinker frame, vibratory sinkers therein, the sinker cam and its supporting and operating parts, of the independent looped springs detachably fitted to kerfs in the frame rearward of the sinkers so as to act upon the sinkers individually, the looped portions of the springs extending above the upper side of the frame in rear of the path traversed by the sinker cam, substantially as described. 19th. The combination, with the needle beds, their needles, the cam carriers, their cams, the sinkers and their supporting and operating parts, of provisions whereby a predetermined number of needles at the ends of the needle beds, respectively, and their co-acting sinkers, may be rendered idle and active at predetermined intervals, substantially as described. 20th. The combination, with the needle beds, their needles, the cam carriers, their cams, the sinkers and their supporting and operating parts, of devices for temporarily supporting out of action a predetermined number of sinkers at the adjacent ends of the beds, respectively, and means for operating said supporting devices to permit said sinkers to become active, substantially as described. 21st. The combination of the needle beds, their needles, the cam carriers, their cams, the sinkers and their supporting and operating parts, of a support for a series of sinkers at each end of each needle bed to maintain them temporarily inactive, oppositely pitched screws, followers thereon, and connections between said followers and the sinker supports, substantially as described. 22nd. The combination, with the needle beds, their needles, the sinkers and their supporting parts, of the reciprocating head fitted to the throat of the machine, so as to act upon the sinkers in both beds, and means for operating said head, substantially as described. 23rd. The combination, with the needle beds, their needles, the sinkers and their supporting parts, of the reciprocative head fitted to the throat of the machine, so as to act upon the sinkers in both beds, the bracket support for said head, the spring tending to force the head inward, and means for forcing the head outward against the action of the spring, substantially as described. 24th. The combination, with the needle beds, their needles, the sinkers and their supporting parts, of the reciprocative head fitted to the throat of the machine, so as to act upon the sinker in both beds, the follower, means for impelling the same, and connections between said follower and the reciprocative head, substantially as described. 25th. The combination, with the needle bed and its needles, of a bar or support on said bed, a gib bar connected with said bar by means of a pin and cam slot connection, and a spring acting upon said gib bar to effect its depression, substantially as described. 26th. In a knitting machine, the combination of the needle bed and its needles, the knitting cam, a sectional carriage therefor, one of the sections supporting the knitting cams and being bodily movable toward and away from the needle bed, longitudinal guide devices for the carriage, a sinker cam, means whereby it is connected with said movable section, provisions whereby said section is operated to throw its cams into and out of action, together with the sinkers and their supporting parts, substantially as described. 27th. In a knitting machine, the combination of the needle bed and its needles, knitting cams, a sectional carriage therefor, one of the sections supporting the knitting cams and being pivotally connected with the other section, an arm extending from said pivoted section, a sinker cam on said arm, and provisions whereby the pivoted cam-supporting section is operated to throw the cams into and out of action, together with the sinkers and their supporting parts, substantially as described. 28th. In a knitting machine, the combination of the needle bed and its needles, a sectional cam carriage, one section thereof being movable toward and from the needle bed, a transversely reciprocative plate on said movable section carrying the knitting cams, provisions for

reciprocating said plate, and provisions whereby the movable section is operated to throw said cams into and out of action, substantially as described. 29th. In a knitting machine, the combination of the needle bed and its needles, a sectional cam carriage, one section thereof being movable toward and from the needle bed, a transversely reciprocative plate on said movable section carrying the knitting cams, a slide-bar, provisions whereby it is operatively connected with said section, a spring connecting on said plate against the operation of the bar, a slide-bar having provisions whereby it is operatively engaged with the movable section, and a spring acting upon said section against the operation of the bar last-named, substantially as described. 30th. In a knitting machine, the combination of the needle bed and its needles, a sectional cam carriage, one section thereof being movable toward and from the needle bed, a transversely reciprocative plate on said movable section carrying the knitting cams, provisions for reciprocating said plate, provisions whereby the movable section is operated to throw said cams into and out of action, an arm connected with said plate, a sinker cam thereon, the sinkers and their supporting parts, substantially as described. 31st. In a knitting machine, the combination of the needle bed and its needles, knitting cams, a sectional carriage therefor, one of the sections being arranged at the lower portion of the needle bed, and the other section being pivotally connected therewith and supporting the knitting cams, a rod pivotally connecting said sections and affording a longitudinal guide for the carriage, and provisions whereby the pivoted cam-supporting section is operated to throw the cams into and out of action, substantially as described. 32nd. In a knitting machine, the combination of the needle bed and its needles, knitting cams, a sectional carriage therefor, one of the sections being a slide section and the other section supporting the knitting cams and being pivotally connected with the slide section, a latched spring actuated plate arranged on the slide section to depress the pivoted section, and provisions whereby the latter section is thrown out of action, substantially as described. 33rd. In a knitting machine, the combination of the needle bed and its needles, knitting cams, a sectional carriage therefor, one of the sections being arranged at the lower portion of the needle bed and the other section being pivotally connected therewith and supporting the knitting cams, a rod pivotally connecting said sections and affording a longitudinal guide for the carriage, a sinker cam, means whereby it is connected with said pivoted section, provisions whereby said pivoted section is operated to throw the cams into and out of action, together with the sinkers and their supporting parts, substantially as described. 34th. In a knitting machine, the combination, with the needle bed, the longitudinally reciprocative needle-supporting jacks therein provided with inward projections, and the cam carriage provided with a cam to co-act with said projections, substantially as described. 35th. The combination of the reciprocative carrier, the supporting bar therefor provided with a longitudinal groove, 105, 106, therein, a vertically reciprocative rod in said carrier, and a pin or roller on said rod engaging said groove, substantially as described. 36th. The combination, with the needle beds, the needles, and the knitting cams, of the reciprocative carriers mounted above the needles in the respective beds, the longitudinal guide devices for said carriers, the yarn guides connected with the latter so as normally to be in line with each other longitudinally, and means adapted to raise one of said yarn guides above the path of the other at predetermined intervals, together with longitudinally reciprocating means for engaging one of the carriers and releasing the other at the position where the carrier is raised, the released carrier remaining at rest until it is re-engaged, substantially as described. 37th. The combination of the reciprocative carrier provided with a vertical opening in the face plate thereof, the supporting bar for said carrier provided with a longitudinal guiding and raising groove therein, a vertically-reciprocative rod in said carrier bearing a yarn-guide head, a pin or roller engaging the groove, the stem of which roller extends through a slot in the rod, and a set nut on said stem, substantially as described. 38th. The combination, with the needle beds, the needles, the cam carriers and their cams, of the projecting pins on the carriers, the yoke, and means for adjustably securing its ends on the pins, substantially as described. 39th. The combination, with the needle beds, the needles, the cam carriers and their cams, of the screw-threaded pins on said carriers, the yoke having its ends fitted to the pins, respectively, and the adjusting nuts on said pins, substantially as described. 40th. The combination, with the needle beds, the needles, the cam carriers and their cams, of the yoke connecting said cams, the partially rotatable sleeve on said yoke, the collar thereon provided with depending lugs, a reciprocative yarn carrier, supporting means therefor, and provisions whereby the sleeve is actuated at predetermined intervals to engage the lugs with or disengage them from the carrier, substantially as described. 41st. The combination, with the needle beds, the needles, the cam carriers and their cams, of the yoke connecting said carriers, the longitudinal guide rod for the yoke, said yoke being provided with a boss or extension, the sleeve on said boss or extension, the collars on said sleeve provided with depending lugs, the reciprocative yarn carriers, supporting means therefor, and provisions whereby the sleeve is actuated at predetermined intervals to engage the lugs with or disengage them from the carriers, substantially as described. 42nd. The combination, with the needle beds, the needles, the cam carriers and their cams, of the yoke connecting said carriers, the partially rotatable sleeve on said yoke, the collars 115 and 188 on the sleeve provided with depending lugs 116 and 119, respectively,

the reciprocative yarn carriers mounted above the respective beds, the reciprocative cam head at one end of the machine, and means for laterally setting said head at predetermined intervals in respect to the path of the lug 119, substantially as described.

No. 52,527. Screwing and Boring Hand Tool.

(Outil à percer et visser.)

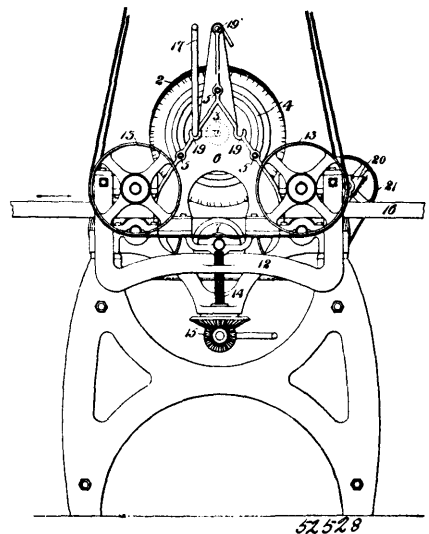


Loudon Silcott, Mount Vernon, Ohio, U.S.A., 3rd June, 1896; 6 years. (Filed 7th April, 1896.)

Claim.—1st. The combination in a reversible screwing and boring hand tool, the U-shaped frame, the projection for carrying a handle, formed in the same piece with the frame and extending therefrom at an angle on the same vertical plane of the opening of the frame, the spindles having a set of gears, and projecting beyond each side of the said frame to receive a suitable screwing or boring implement upon each end, as set forth. 2nd. In a reversible screwing and boring hand tool, the tool frame having parallel sides, the back piece C, and the projection B, all formed in one piece, the said projection extending out from the back at an angle in a vertical plane with the opening between the said sides, in combination with the spindles, having tool sockets at both ends, and gear-wheels secured upon all of the spindles between the sides of the frame, substantially as shown and described and for the purpose set forth.

No. 52,528. Wood Indenting Mechanism.

(Machine à dentiler le bois.)

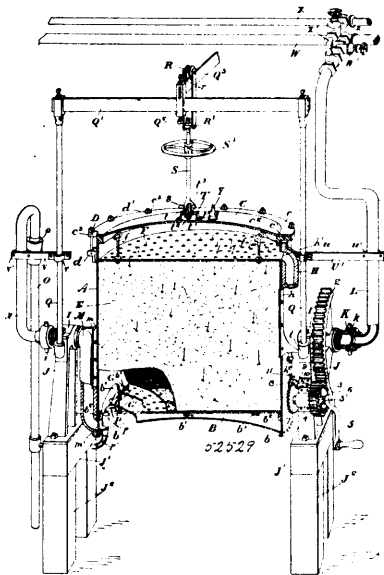


William Watson Grier, Hulton, Pennsylvania, U.S.A., 3rd June, 1896; 6 years. (Filed 10th April, 1896.)

Claim.—1st. Indenting mechanism, comprising a series of indenting knives, supported by the material to be indented, said knives being independently movable edgewise and urged against the material by gravity, substantially as described. 2nd. Indenting mechanism, comprising an upright series of discs, said discs being independently movable edgewise, and urged by gravity against the material to be indented, substantially as described. 3rd. Indenting mechanism, comprising a series of rotatory discs independently movable edgewise, and having their peripheries adapted to indent, substantially as described. 4th. Indenting mechanism, comprising a series of parallel discs having their peripheries adapted to indent, and a shaft which passes through eyes in said discs, said eyes being of greater diameter than the shaft to permit independent edge-wise motion of the discs, substantially as described. 5th.

Indenting mechanism, comprising an upright series of parallel discs independently movable edgewise and urged downwardly by gravity, but connected by slotted connections to cause their united rotation, substantially as described. 6th. In indenting mechanism, a rotatory indenting frame or roller, having wiping indenters, substantially as described. 7th. In indenting mechanism, a rotatory indenting frame or roller, having wiping indenters secured thereto by a flexible spring connection, substantially as described. 8th. In indenting mechanism, a rotatory indenting frame or roller, having wiping needles, substantially as described. 9th. In indenting mechanism, a series of rotatory parallel axially unconfined discs, side cheeks or plates between which they are confined laterally, and adjusting mechanism, substantially as described. 10th. In indenting mechanism, a series of rotatory discs independently movable edgewise, and a dummy separator interposed between adjacent discs, substantially as described.

No. 52,529. Bagasse Filter. (Filtre.)



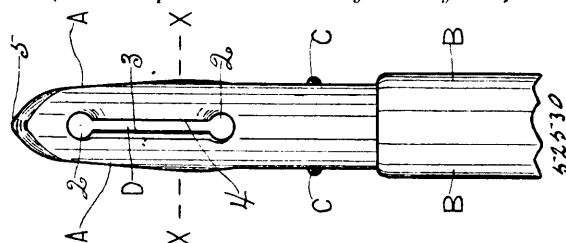
Alexander Hislop Wright, Stratford, Ontario, Canada, 5th June, 1896; 6 years. (Filed 8th April, 1896.)

Claim.—1st. In a filter for syrup and like products, the combination with the cylindrical body provided with a concavo-convex bottom and a concavo-convex top removably secured to the body, of a perforated bottom plate suitably supported above the bottom, the bagasse supported upon such plate, and the perforated top plate and means for limiting its upward movement, and an inlet pipe leading into the cylinder above the top plate, and an outlet pipe leading from the cylinder beneath the bottom perforated plate, as and for the purpose specified. 2nd. In a filter for syrup and like products, the combination with the cylindrical body provided with a concavo-convex bottom and a concavo-convex top removably secured to the body, of a perforated bottom plate suitably supported above the bottom, the bagasse supported on such plate, a straining cloth upon such plate, and the perforated top plate and means for limiting its upward movement, and an inlet pipe leading into the cylinder above the top plate, and an outlet pipe leading from the cylinder beneath the bottom perforated plate, as and for the purpose specified. 3rd. In a filter for syrup and like products, the combination with the cylindrical body provided with the concavo-convex bottom and concavo-convex top removably secured to the body, of a perforated plate suitably supported upon an edge ring and central plate, the bagasse supported upon a perforated plate, and the perforated top plate and means for limiting its upward movement, and an inlet pipe leading into the cylinder above the top plate, and an outlet pipe leading from the cylinder beneath the bottom perforated plate, as and for the purpose specified. 4th. In a filter for syrup and like products, the combination with the cylindrical body provided with a concavo-convex bottom and concavo-convex top removably secured to the body, of a perforated plate suitably supported above the bottom, the bagasse supported upon such plate, and the perforated top plate and the ring bolts having the lower end secured in the plate, as and for the purpose specified. 5th. The combination with the cylindrical body interiorly arranged as specified, of flanged pipes secured to the cylinder diametrically opposite each other and having outwardly extending bent ends forming trunnions, and bearings for the trunnions, the outer ends of the pipe being connected to the supply and discharge pipes, and the upper end of the inlet pipe extending into the cylinder above the top perforated plate, and the lower end of the outlet pipe extending into the cylinder below the bottom perforated plate, as and for the purpose specified. 6th. The combination with the cylindrical filter interiorly

riorly arranged as specified and pipes secured to the cylinder diametrically opposite each other, and having outwardly extending bent ends forming trunnions, and bearings and standards for supporting the trunnions, of a supply pipe connected by a union coupling to the end of the inlet pipe, and a discharge pipe connected by a union coupling to the end of the outlet pipe of the filter, as and for the purpose specified. 7th. The combination with the cylindrical filter interiorly arranged as specified and pipes secured to the cylinder diametrically opposite each other, and having outwardly extending bent ends forming trunnions, and bearings and standards for supporting the trunnions, of a supply pipe connected by a union coupling to the end of the inlet pipe, and a discharge pipe connected by a union coupling to the end of the outlet pipe of the filter, and a down pipe separated from the upper end of the discharge pipe, as and for the purpose specified. 8th. The combination with the cylindrical filter interiorly arranged as specified and pipes secured to the cylinder opposite each other and having outwardly extending bent ends forming trunnions, and bearings and standards for supporting the trunnions, of the supply and discharge pipes suitably connected to the inlet and outlet pipes respectively, the supply pipe being provided with a suitable faucet and connected to the syrup pipe, and having a branch pipe leading to a water pipe, such branch pipe also having a suitable faucet, as and for the purpose specified. 9th. The combination with the cylindrical filter interiorly arranged as specified and pipes secured to the cylinder diametrically opposite each other and having outwardly extending bent ends forming trunnions, and bearings and standards for supporting the trunnions, of the supply and discharge pipes suitably connected to the inlet and outlet pipes respectively, a quadrant on the horizontal end of the inlet pipe provided with an end lob or stop, a pinion held on a suitable spindle journaled on one of the trunnion standards and a crank handle for turning such spindle, as and for the purpose specified. 10th. The combination with the cylindrical filter interiorly arranged as specified and pipe secured to the cylinder diametrically opposite each other and having outwardly extending bent ends forming trunnions, and bearings and standards for supporting the trunnions, of the supply and discharge pipes suitably connected to the inlet and outlet pipes respectively, a quadrant on the horizontal end of the inlet pipe provided with an end lob or stop, a pinion held on a suitable spindle journaled on one of the trunnion standards and a crank handle for turning such spindle, as and for the purpose specified. 11th. The combination with the cylindrical filter interiorly arranged as specified and pipes secured to the cylinder diametrically opposite each other and having outwardly extending bent ends forming trunnions, of the supply and discharge pipes suitably connected to the inlet and outlet pipes respectively, a quadrant on the horizontal end of the inlet pipe, a pinion held on a suitable spindle journaled on one of the trunnion standards, a crank handle for turning such spindle, a toothed wheel secured on the opposite end of the spindle and a supplemental spindle containing a double dog designed to engage with the toothed wheel, as and for the purpose specified. 12th. In a filter of the class described, the combination with the cylinder provided with a suitable removable top having a central metal strap and an eye bolt secured thereto, of a screw spindle provided with lower jaws, pin for connecting the jaws to the eye-bolt, a block for supporting the spindle secured at the lower end of the parallel bars, a wheel at the upper end of the bars, a longitudinal bar for supporting the wheel and a cross bar for supporting the end of the longitudinal bar, as and for the purpose specified. 13th. The combination with the filter interiorly constructed as specified and down pipe, of a tap at the bottom of the filter and pipe leading from the mouth of the tap to the down pipe, as and for the purpose specified.

No. 52,530. Vegetable Peeler and Corer.

(Machine à peler et extraire les noyaux de légumes.)



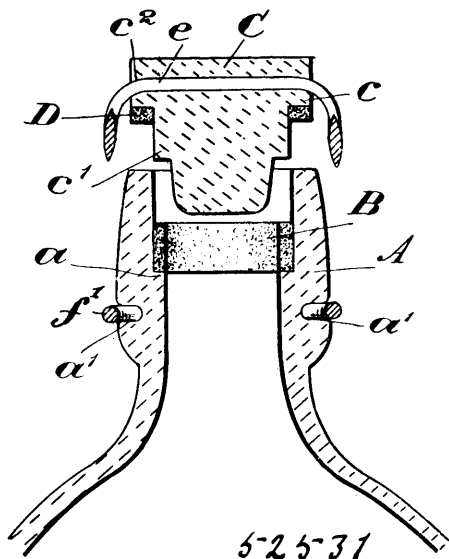
Emile Chérière, Hamilton, Ontario, Canada, 5th June, 1896; 6 years. (Filed 10th April, 1896.)

Claim. In a vegetable and fruit peeler and corer, the bent steel plate A, of semicircular section having vertical aperture, widened out in circular form 2, at each end, the cutting edge 3, the depressed edge 4, the upper quick rounded corer 5, and the lower part formed as a rear opened socket to receive the shouldered shank of handle B, with securing pin C, all formed, arranged and combined substantially and for the purpose hereinbefore set forth.

No. 52,531. Bottle Stopper. (Bouchon de bouteilles.)

John Henry Stone, Toronto, Ontario, Canada, 5th June, 1896; 6 years. (Filed 15th October, 1895.)

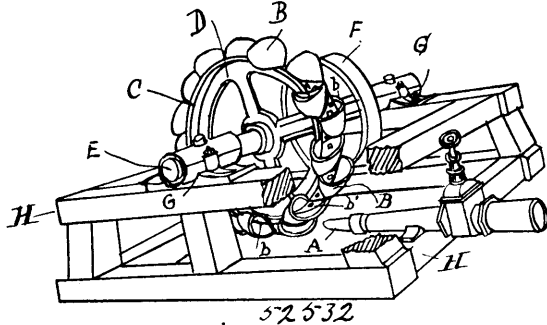
Claim.—1st. In a bottle stopper, the combination, with the neck having an interior shoulder formed therein, a yielding neck placed



upon the shoulder and a stopper provided with double shoulders, one designed to fit upon the shoulder formed of the cork ring, and the other close to the top of the neck, and clamping means for such stopper, as and for the purpose specified. 2nd. In a bottle stopper, the combination, with the neck having an interior shoulder formed therein, a yielding neck placed upon the shoulder and a stopper provided with double shoulders, one designed to fit upon the shoulder formed of the cork ring, and the other close to the top of the neck, and a rubber ring placed beneath the upper shoulder, and the top of the neck, and clamping means for such stopper, as and for the purpose specified. 3rd. The combination, with the neck and the stopper, of a double arm having the upper end extending through the stopper, the lower end bent, a wire loop with eyes for the reception of the double arm, and inner bent ends and recesses in the neck for the reception of the ends, and a thumb piece formed on the outer end of the loop at an obtuse angle thereto, as and for the purpose specified.

No. 52,532. Rotary Hydraulic Motor.

(*Moteur hydraulique.*)



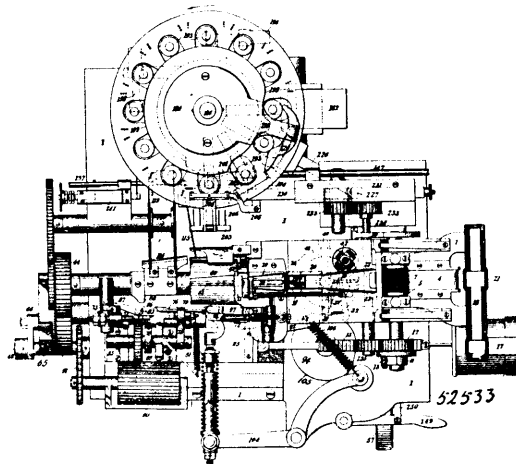
Stephen J. Tutthill, Ashland, Oregon, U.S.A., 5th June, 1896; 6 years. (Filed 26th February, 1896.)

Claim.—1st. In a rotary hydraulic motor, a bucket having one side flat and slightly curved to fit the face of the wheel and provided with bolt holes, the remaining sides of the bucket being curved and forming by their meeting with the said flat side a plane angle upon the outside of the bucket adapted to abut against the wheel and to closely fit the edge of the wheel-face as shown and described, for the purpose of preventing the displacement of the bucket by the repeated blows of the jet as set forth. 2nd. In a rotary hydraulic motor, the combination of a delivery nozzle suitably directed and provided with a valve, a shaft revoluble at right angles to the axis of the said nozzle in bearings borne by a supporting frame, a wheel fixed upon the said shaft, buckets attached to the face of the said wheel, each bucket having one side flattened slightly curved to fit the face of the wheel and bolt holes through the flat side as shown, the remaining sides of each bucket being curved and starting in opposite directions from opposite sides of the said flat side, the said curving portion upon one side turning about and reversing its direction to meet the curved portion from the other side, the meeting of the said curved and flat

portions forming at one side a plane angle on the exterior of the bucket adapted to abut against the wheel and to closely fit the edge of the wheel-face, the outwardly-curved portions forming the said plane angles with the said flat sides being alternately arranged upon opposite sides of the wheel-face, substantially as shown and described for the purposes set forth.

No. 52,533. Machine for making Cigarettes.

(*Machine à cigarettes.*)



Hugo Bilgram Philadelphia, Pennsylvania, U.S.A., 5th June, 1896; 18 years. (Filed 2nd April, 1896.)

Claim.—1st. In a machine for making cigarettes, the combination of a hopper for receiving the tobacco, two rotating proximate cylinders located in said hopper and having their surfaces exposed to the tobacco and one of said cylinders being toothed, whereby the toothed cylinder acts to engage and draw the tobacco from the mass and the other cylinder acts upon said toothed cylinder and upon the mass of tobacco to limit the quantity drawn therefrom by the toothed cylinder. 2nd. In a machine for making cigarettes, the combination of a hopper for receiving the tobacco, two rotating proximate cylinders located in said hopper and having their surfaces exposed to the tobacco, one of said cylinders being toothed and being driven at a slower rate of speed than the other cylinder, whereby the toothed cylinder acts to engage and draw tobacco from the mass and the other cylinder acts to regulate the quantity of tobacco so drawn. 3rd. In a machine for making cigarettes, the combination of a hopper for receiving the tobacco, a toothed feeding cylinder and a filling cylinder located proximate thereto and both cylinders being exposed to the tobacco, said cylinders being rotating in the same direction and the teeth of the feeding cylinder being inclined in the direction of its rotation. 4th. In a machine for making cigarettes, the combination of a hopper for receiving the tobacco, a feeding cylinder and a filling cylinder located in said hopper and exposed to the tobacco and being similarly driven, the teeth of the feeding cylinder being inclined in the direction of its motion and the teeth of the filling cylinder being inclined in a direction opposite to that of its motion. 5th. In a machine for making cigarettes, the combination of a hopper for receiving the tobacco, two similarly rotating proximate cylinders located in said hopper and having their surfaces exposed to the tobacco and one of said cylinders being toothed, whereby the toothed cylinder acts to engage and draw tobacco from the mass and the other cylinder acts to regulate the tobacco so drawn, and a brush roll located to have action upon the toothed cylinder for the purpose of removing the tobacco therefrom. 6th. In a machine for making cigarettes, the combination of a hopper for receiving the tobacco, two rotating proximate cylinders located in said hopper and having their surfaces exposed to the tobacco and one of said cylinders being toothed, whereby the toothed cylinder acts to engage and draw tobacco from the mass and the other cylinder acts to regulate the quantity of the tobacco so drawn, a stripping roll located to have subsequent action upon the toothed cylinder for the purpose of removing the tobacco therefrom, and a travelling surface or belt located adjacent to said roll for receiving the tobacco therefrom as it is stripped from the said toothed cylinder. 7th. In a machine for making cigarettes, the combination of a hopper containing a feed cylinder, mechanism acting to strip the tobacco from the feed cylinder, a travelling surface or belt located adjacent said stripping mechanism and for receiving the tobacco as the same is stripped from the feed cylinder, and a guide between said travelling surface and stripping mechanism for directing the tobacco upon said surface, and having a guide or delivery passage of varying size whereby the tobacco is more thickly delivered at one point of the said surface than at another. 8th. In a machine for making cigarettes, the combination of a feed cylinder, substantially as specified, a stripping roll rotating in contact therewith and acting to sweep the tobacco therefrom, a travelling surface or belt located adjacent

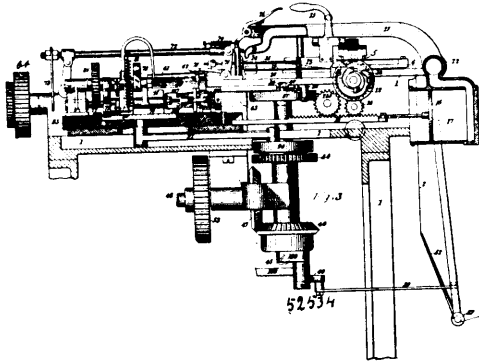
to said brush, a deflecting plate located between said brush and said belt and positioned to direct the tobacco in varying thickness along said belt. 9th. In a machine for making cigarettes, the combination of a toothed feeding cylinder and a filling cylinder, substantially as specified, a stripper roll whose teeth mesh with the teeth of the feeding cylinder, a conveyer in position to receive the tobacco swept off by the brush, a feed stripper roll whose teeth make proximate contact with the conveyer, and a chute or hopper in position to receive tobacco swept off the conveyer by the brush. 10th. In a machine for making cigarettes, the combination of a hopper mechanism acting to assort measured quantities or filler charges of tobacco from a mass of tobacco, which quantities are arranged in form corresponding to the shape of a filler for cigarettes, and to deliver the same to a series of moulding dies, and means for intermittently operating said dies to close upon and mould the filler charges, and means for intermittently delivering said filler charges to the dies. 11th. In a machine for making cigarettes, the combination of a hopper mechanism operating to assort and form charges of tobacco corresponding to the shape of the filler of a cigarette, mechanism acting to intermittently receive said charges from the hopper mechanism and deliver the same to a series of dies adapted to finally mould the filler, and means for intermittently opening and closing said dies. 12th. In a machine for making cigarettes, the combination of a hopper mechanism operating to separate filler charges of tobacco in form as described, a pocket for receiving the said charges and mechanism acting to preliminarily compress the tobacco in the said pocket, a series of dies acting to finally compress and mould the filler, means for delivering the preliminarily compressed tobacco from the pocket to the dies, and means for intermittently operating these mechanisms. 13th. In a machine for making cigarettes, the combination with a series of two-part filler dies and means for intermittently moving the same, of a pocket (138) arranged to register with the dies in turn, a compressor (182) arranged to compress the tobacco in the pocket, a plunger or discharger (183) arranged to deliver the preliminarily compressed tobacco into the dies, and means for closing the die parts on the filler. 14th. In a machine for making cigarettes, the combination of a series of two-part filler-moulding dies, means for intermittently moving the same, mechanism arranged adjacent the dies and adapted to force the tobacco charge into each mould in turn, mechanism for closing the moulding dies on the charges and finally compressing the same into form, and mechanism for opening the moulds and discharging the formed fillers therefrom. 15th. In a machine for making cigarettes, the combination of an intermittently moving die-carrying wheel, of a series of moulding die blocks (194), secured to and rotating with the wheel, and a series of die heads (192) radially movable in the wheel, said dies being of form for the purpose of moulding the filler of a cigarette and being arranged to open downwardly to receive the filler charges and discharge the formed fillers. 16th. In a machine for making cigarettes, the combination with a substantially horizontal mould-carrying wheel and means for intermittently rotating the same, a series of opening and closing moulding dies secured to and rotating with the wheel, the matrices of the dies being of form as described and opening downwardly, mechanism for delivering filler charges successively to the dies, and means for closing the dies upon the charges and for opening the same, and means for discharging the moulded filler from the dies. 17th. In a machine for making cigarettes, the combination with the herein described series of filler-molding dies and the mechanism for opening and closing the same, a wiper 218 operating to successively enter the dies when open, for the purpose of wiping and lubricating the moulding faces of the same. 18th. In a machine for making cigarettes, the combination with the herein described series of filler-moulding dies and the mechanism for opening and closing the same, a wiper 218 operating to successively enter the dies when open for the purpose of wiping and lubricating the moulding faces of the same, mechanism for closing the die parts upon the wiper, and mechanism for causing the wiper to be reciprocated between the die parts. 19th. In a machine for making cigarettes, the following intermittently-acting groups of mechanism which operate to mould the fillers; mechanism for receiving separate charges of tobacco and preliminarily compressing the same; a series of opening and closing dies and means for delivering the partially compressed fillers successively thereto; mechanism for discharging the moulded filler from the dies when the latter are open, and mechanism for wiping and lubricating the moulding faces of the dies after the filler has been discharged. 20th. In a machine for making cigarettes, the combination of a series of dies acting to mould the fillers into conical form, a receiver for receiving the formed filler when discharged from said dies, a movable support as disc wheel 119 arranged to bring a finished cigarette wrapper or shell to register with the receiver, and a plunger acting to force the formed filler into the shell. 21st. In a machine for making cigarettes, the combination of a receiver 200 adapted to successively receive and support the formed fillers, a movable support operating to bring a cigarette wrapper or shell into registry with said receiver and to hold the shell at an angle thereto, supports for engaging the ends of the shell while it is being charged with the filler, and a plunger for inserting the formed filler into the shell. 22nd. In a machine for making cigarettes, the combination of a filler receiver 200, a carrier as disc wheel 119 arranged to bring a cigarette shell into registry with said receiver and to hold the shell at an angle thereto, said carrier being formed as with holes 123 to give passage to a filler moving in line with the said receiver

as in case when no shell is presented to receive the filler. 23rd. In a machine for making cigarettes, the combination of a cigarette shell carrier, means for filling the shells with a formed filler, mechanism controlling the movement of the machine which is provided with a movable piece (as feeler 243) and means for alternately holding said feeler away from a cigarette shell being charged and for allowing the same to rest upon the shell after being charged, whereby if a completed cigarette be not present at the time said feeler rests upon the same, the machine will be stopped. 24th. In a machine for making cigarettes, the combination of a filler receiver 200, a carrier (as disc 119) arranged to bring a cigarette shell into registry with said receiver and to hold the shell at an angle thereto, said carrier being formed as with holes 123 to give passage to a filler moving in line with the said receiver as in case when no shell is presented to receive the filler, and a mechanism for stopping the machine by the deflection of a part thereof (as feeler 243) normally inactive by resting upon the charged shell at the time the same is charged. 25th. In a machine for making cigarettes, the combination with the filler receiver 200 and the shell carrier 119, a movable support (as slide 236) adapted at the proper time to move to engagement with one end of the shell and cause the other end to be engaged by the said receiver, for the purpose of lifting the shell from the carrier and supporting it while the filler is being thrust therein. 26th. In a machine for making cigarettes, the combination with the filler receiver 200 and the shell carrier 119, a movable support (as slide 236) adapted at the proper time to move to engagement with one end of the shell and cause the other end to be engaged by the said receiver, for the purpose of wholly supporting the shell while the filler is being thrust therein, and means whereby as the filler is properly seated in the shell the said slide will retract from the cigarette and leave it supported upon the wheel and free of engagement with the receiver. 27th. In a machine for making cigarettes, the combination with the filler receiver 200, a carrier operating to bring a cigarette shell to registry with the receiver, means together with the receiver for supporting the shell, independently of its carrier, and a plunger 229 for inserting the filler in the shell when the latter is thus supported. 28th. In a machine for making cigarettes, the combination with the filler receiver 200 and the filler charging plunger 229, the shell carrier wheel 119 for bringing the shell opposite the said receiver, a slide 236 acting to engage one end of the shell and cause the other end to be inserted in the said receiver, and mechanism for actuating said slide so that it moves backwardly a short distance with the plunger after the filler is properly seated in the shell for disengaging the cigarette from the receiver. 29th. In a machine for making cigarettes, the combination of the side walls and base of the pocket 29, corresponding to the shape of the wrapper blank 28, an intermittently acting flap or plate 30 arranged to press the blank down in said pocket, and means for feeding said blank out of the pocket over the base to the blank-forming mechanism. 30th. In a machine for making cigarettes, the combination with one or more mandrels mounted to have radial motion on a mandrel head 60 and provided with serrated faces, mechanism for folding and crimping a wrapper blank upon said mandrels, and a lubricating device arranged to apply a lubricant upon the serrated portion of the mandrels after the blank has been shaped thereon and before another blank is engaged. 31st. In a machine for making cigarettes, the combination with an intermittently rotating mandrel head 60 and the mandrels connected therewith and operated as described, of an oiler or lubricant applying device arranged to come in contact with each mandrel in turn for the purpose of lubricating the surface of the same. 32nd. In a machine for making cigarettes, the combination with the intermittently revolving mandrel head 60 and the mandrel-supporting slides 62, of a mechanism such as tappet 71 for operating said slides. 33rd. In a machine for making cigarettes, the combination with a wrapper-forming mandrel, of a stripper finger 115 acting to strip the formed shell from the mandrel. 34th. In a machine for making cigarettes, the combination with a series of mandrels and mechanism for forming blanks into finished cigarette wrappers or shells around the same, of mechanism acting to engage the completed shell on a mandrel and to draw said shell off or partially off the mandrel. 35th. In a machine for making cigarettes, the combination with a series of mandrels and mechanism for forming blanks into completed cigarette wrappers or shells around the same, of a revolving stripper roll arranged to come in contact with the completed shell on a mandrel and to draw said shell off or completely off the mandrel, and mechanism for intermittently moving said roll against each mandrel in turn. 36th. In a machine for making cigarettes, the combination with a series of mandrels 61, the stripper roll 107 intermittently acting to partially remove the completed shells from the mandrels, and a pusher finger acting to finally remove the shells from the mandrels. 37th. In a machine for making cigarettes, the combination with a series of intermittently moving mandrels and mechanism for forming blanks into completed wrappers or shells thereon, of an intermittently moving carrier such as wheel 119, having a series of shell-receiving recesses adapted to register in turn with one of the mandrels to receive a formed shell therefrom, and mechanism adapted to strip the formed shell from each mandrel in turn and carry the shell into the recesses of said carrier. 38th. In a machine for making cigarettes, the combination with a series of intermittently moving mandrels and mechanism for forming cigarette shells thereon, an intermittently moving carrier having a series of shell-receiving recesses each

adapted to register in turn with one of the mandrels and to receive the shell therefrom, mechanism adapted to strip the shell from each mandrel in turn and project the same into the carrier recesses, a filler receiver (such as trough 200) with which said carrier recesses register in turn, and mechanism operating to push the filler from said receiver into a shell registering therewith.

No. 52,534. Machine for making Cigarettes.

(Machine à cigarettes.)



James Albert Bonsack, Philadelphia, Pennsylvania, U.S.A., 5th June, 1896; 18 years. (Filed 2nd April, 1896.)

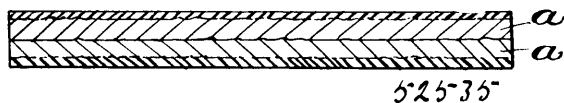
Claim.—1st. In a machine for making cigarettes, the combination of an intermittently-acting paper-strip feeding mechanism, a cutting bed arranged to support the paper strip as it is fed forward, knives arranged at angles with the edges of the paper strip to cut converging slits in the edges thereof, a knife arranged transversely to the bed for severing the tapered paper blanks, a pocket arranged in advance of and below the face of the cutting bed, and an intermittently acting plate arranged to press the cut blank down into said pocket preparatory to its being removed therefrom. 2nd. In a machine for making cigarettes, the combination of an intermittently acting paper-strip feeding mechanism, a cutting bed arranged to support the paper strip as it is fed forward, knives arranged at angles with the edges of the paper strip to cut converging slits in the edges thereof, a knife arranged transversely to the bed for severing the tapered paper blanks, a pocket arranged in advance of and below the face of the bed, and an intermittently acting plate arranged to press the cut blank down into said pocket preparatory to its being advanced to the blank shaping part of the machine, and an air pump or similar blast mechanism acting to blow the severed pieces from the paper strip at the time they are being cut off by the knives. 3rd. In a machine for making cigarettes, the combination of an intermittently acting paper-strip feeding mechanism, a cutting bed arranged to support the paper strip as it is fed forward, knives arranged at angles with the edges of the paper strip to cut converging slits in the edges thereof, a knife arranged transversely to the bed for severing the tapered paper blanks, a pocket arranged in advance of and below the face of the bed and an intermittently acting plate arranged to press the cut blank down into said pocket preparatory to its being advanced to the blank shaping part of the machine, a blast mechanism acting when the knives descend to blow away the strips cut from the blank, and a deflecting plate 19^a acting to hold the blank in position and to direct the blast into the parts of the strip cut away. 4th. In a machine for making cigarettes, the combination of an intermittently acting paper-feeding mechanism and a bed for supporting the paper, knives arranged at angles with the paper to cut converging slits therein, a knife arranged transversely of the paper to sever the cut blanks, a pocket arranged in advance of and below the said bed, an intermittently acting plate operating to press the cut blank into the said pocket, and an intermittently acting pusher operating to engage the blank and push it from said pocket. 5th. In a machine for making cigarettes, the combination of the pocket 29 and the blank depressing plate 30, the pusher 33 frictionally mounted upon the slide 35, and a stop 36, whereby the said pusher bar has movement in its slide if obstructed and is restored to proper position after such movement. 6th. In a machine for making cigarettes the combination of knives for intermittently cutting individual cigarette blanks, means for actuating said knives, a pair of feed rollers for intermittently advancing the blanks, a reciprocating rack for operating said rolls when the knives are not in action, and an air-pump piston also actuated by said rack so as to effect a blast of air through nozzle 18 at the time the knives are actuated to sever the blank. 7th. In a machine for making cigarettes, the combination of knives for cutting blanks from a paper strip, a bed for supporting the paper strip, a cam 41 operating to intermittently raise and lower the knives, feed rolls operating to intermittently raise and lower the knives, feed the knives, and a rack 15 for operating said feed rolls and driven from the shaft 45, geared with the cam 41. 8th. In a machine for making cigarettes, the combination of knives for cutting cigarette blanks, the paper strip supporting bed 20, a guide plate 19 arranged above said bed, the pusher bar 33 carried on a slide below said bed,

a rotating shaft and connections between the same and the said slide for intermittently operating the same. 9th. In a machine for making cigarettes, the combination of the blank supporting bed 20 and the blank cutting mechanism, the slide 35 and pusher bar 33 carried thereon, the cam 41, and mechanism for intermittently operating said slide and said knife mechanism from said cam. 10th. In a machine for making cigarettes, the combination with the bed 20 and the blank cutting mechanism, the pusher bar 33 and its carrying slide, pocket 29 and the plate 30, and mechanism operatingly connecting said plate with the said slide so that the blank will be brought in front of the pusher preparatory to its being removed from said pocket. 11th. In a machine for making cigarettes, the combination of the pocket 20 for receiving the cut blank and the intermittently operated and frictionally supported pusher bar 33, a mandrel carrier such as head 30 containing a slot 70 of form similar to the cut blank and for receiving the same preparatory to the blank being shaped into form. 12th. In a machine for making cigarettes, the combination of the pocket 29 for receiving the cut blank and the intermittently operated and frictionally supported pusher bar 33, a mandrel carrier such as head 60 containing a slot of form similar to the cut blank and for receiving the same preparatory to the blank being shaped into form, and a mandrel around which said blank is to be formed, and mandrel supporting mechanism acting to hold the mandrel away from the mandrel head at the time the blank is inserted in said slot and to subsequently move to engagement with the blank. 13th. In a machine for making cigarettes, the combination of a mandrel carrier as head 60, and having a converging slot 70 therein for receiving a cigarette blank adapted to form the wrapper of a conical cigarette, a mandrel carried on said head and moving to and from the same, a die in the said head of form corresponding to the shape of the mandrel, means for feeding a cigarette blank to said slot 70, and means for causing the mandrel to engage the blank and force the same into said die. 14th. In a machine for making cigarettes, the combination of a mandrel carrier (as head 60) having a series of converging slots therein for receiving the cigarette blanks, a series of mandrels carried on said head of form corresponding to the shape of the finished cigarette, means for feeding cigarette blanks to said slots, and means for causing said mandrels to engage the blanks and force the same into said dies. 15th. In a machine for making cigarettes, the combination with an intermittently rotating mandrel head 60 provided with blank receiving angular slots 70, mechanism arranged to feed blanks into said slots, and mandrel and seaming mechanisms for converting the blanks into finished cigarette wrappers or shells. 16th. In a machine for making cigarettes, the combination of a mandrel mechanism adapted to grip a paper blank to hold the same against movement, mechanism arranged to form said blank around said mandrel, and a crimper arranged to act in conjunction with the mandrel to seam or join the edges of the wrapper together. 17th. In a machine for making cigarettes, the combination with a conical mandrel 61 of the jaws 76 for bringing the edges of the wrapper blank together, and a curler or folder 95 having movement along said edges with said jaws so that the curling or interlocking of the seam is more or less accomplished while its edge portions are held clamped between said jaws. 18th. In a machine for making cigarettes, the combination with a conical mandrel, of the jaws 76 for bringing the edges of the wrapper blank together, and a curler 95 carried by one of said jaws and having movement along said edges with said jaws so that the curling or interlocking of the edges is more or less accomplished while the uncured portions are held clamped between said jaws. 19th. In a machine for making cigarettes, the combination of a mandrel having a serrated face, mechanism adapted to wrap or fold the paper blank around said mandrel without moving it longitudinally thereon and to fold the edges of said blank down on the serrated face of the mandrel, and a crimper arranged to act on the folded edges of the blank and against the mandrel to seam the edges of the wrapper together. 20th. In a machine for making cigarettes, the combination of a conical mandrel, mechanism for folding a paper blank around said mandrel to form the wrapper or shell of a conical cigarette, and an external crimper arranged to act on the folded edges of the wrapper and against the mandrel for the purpose of securing or seaming said edges together. 21st. In a machine for making cigarettes, the combination with a mandrel and a die having motion relatively to each other, whereby a cigarette blank will be engaged by the die of the mandrel and be partially shaped as into a U-form, preliminarily to the wrapper being further wrapped about the mandrel. 22nd. In a machine for making cigarettes, the combination of a mandrel and a die having motion relatively to each other, whereby a cigarette blank while engaged by the die of the mandrel is partially shaped as into a U-form, preliminarily to the wrapper being further wrapped about the mandrel, and elastically supported parts in said die (as plungers 75), acting to hold the blank in position while the mandrel and die are being brought together. 23rd. In a machine for making cigarettes, the combination with a mandrel and a die having motion relatively to each other, whereby a cigarette blank while engaged by the die of the mandrel is partially shaped as into a U-form preliminarily to the wrapper being further wrapped about the mandrel, mechanism operating to further fold the blank around the mandrel, and a crimper acting to seal the opposite edges of the wrapper together. 24th. In a machine for making cigarettes, the combination of a mandrel mechanism for folding a paper blank around said mandrel and bringing the edges thereof into contact without moving said blank longitudinally on the mandrel, mechanism for folding down

the abutting edges of the blank to form a seam, and a crimper arranged to crimp said seam against the mandrel as a support. 25th. In a machine for making cigarettes, the combination of a mandrel and mechanism for folding a blank around the same which comprises two clamping jaws, mechanism for drawing said jaws along the mandrel so that they gradually release their hold upon the blank, and seam-forming mechanism arranged to follow the jaws and form a seam of the jointed edges of the blank as they issue from the jaws. 26th. In a machine for making cigarettes, the combination of a die and mandrel having relative motion to and from each other, whereby the blank is folded around one side of the mandrel, mechanism acting to bring the edges of the blank together on the other side of the mandrel, mechanism for folding down the joined edges of the blank upon the mandrel to form a seam, and a crimper mechanism arranged to act on the said seam and against the mandrel. 27th. In a machine for making cigarettes, the combination of a mandrel and mechanism for folding the blank around the same and without the blank moving longitudinally thereon, a mechanism acting to prevent the edges of the folded blank being deflected one by the other, and a curling or folding device acting on the edges to form a folded seam. 28th. In a machine for making cigarettes, the combination of a mandrel and mechanism for folding the blank around the same and bringing the edges of the blank together on the outside of the mandrel, and mechanism arranged to move said folding mechanism along the mandrel while closed on the said edges. 29th. In a machine for making cigarettes, the combination of a mandrel, mechanism acting to fold the blank around the same and bring the edges thereof together, mechanism arranged to move the folding device along the mandrel while closed upon the blank edges, a curler or folder having longitudinal motion with the folding mechanism, and a crimper arranged to act on the folded seam and against the mandrel to complete the seam. 30th. In a machine for making cigarettes, the combination of the intermittently rotating mandrel head containing a series of dies and carrying a series of mandrels, movable supports for said mandrels whereby they move to and from the dies, and mechanism arranged to act on the mandrels and press them to and from the dies as the head revolves. 31st. In a machine for making cigarettes, the combination with a mandrel and mechanism for wrapping a blank around the same and bringing its opposite edges together, a crimping mechanism moving along the joined edges to form a seam, and mechanism arranged to elastically or yieldingly press said crimping wheel against the seam as it moves along the mandrel in one direction and also acting to draw said wheel away from contact with the mandrel as it moves along the same in the opposite direction. 32nd. In a machine for making cigarettes, the combination with a mandrel and mechanism for wrapping a blank around the same and bringing its opposite edges together, a crimping wheel and mechanism for moving the same along the joined edges to form a seam, mechanism arranged to slightly press said crimping wheel to meshing engagement with the serrations in the mandrel before the seam is reached and to then increase the pressure upon the crimping wheel for the purpose of forming the seam.

No. 52,535. Material to be known as Fabricoid.

(Tissu.)

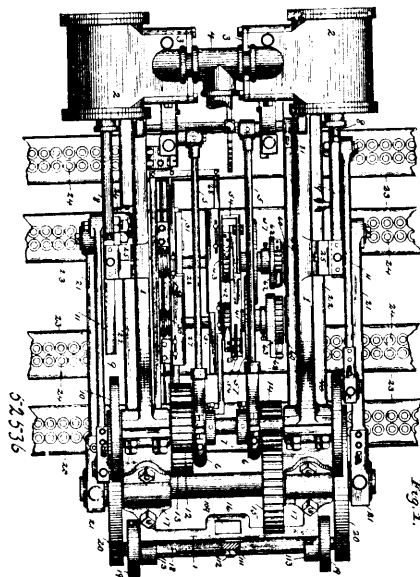


John Christopher Nichol, Montreal, Quebec, Canada, 5th June, 1896; 6 years. (Filed 20th November, 1895.)

Claim.—1st. The new and useful material to be known as fabricoid, of a solid rigid nature and consisting of a fabric the threads or fibres of which are intimately connected with and bound together by a gum resin permeating the whole. 2nd. The new and useful material to be known as fabricoid, of a solid rigid nature and consisting of a fabric the threads or fibres of which are intimately connected with and bound together by a gum resin permeating the whole and presenting a hard smooth exterior. 3rd. The new and useful material to be known as fabricoid, of a solid rigid nature and consisting of two outer layers of canton flannel and an intermediate body of cotton batting, the threads or fibres of which are intimately connected together and with and by a gum resin such as "gum shellac" permeating the whole. 4th. The new and useful material to be known as fabricoid, of a solid rigid nature and consisting of two outer layers of canton flannel and an intermediate body of cotton batting, the threads or fibres of which are intimately connected together and with and by a gum resin such as "gum shellac" permeating the whole and presenting a hard polished exterior. 5th. The new and useful material to be known as fabricoid, of a solid rigid nature and consisting of two outer layers of canton flannel with their woolly or fluffy surfaces facing each other, and an intermediate body of cotton batting, the threads or fibres of which are intimately connected together and with and by a gum resin such as "gum shellac" permeating the whole. 6th. The process of manufacturing the new and useful material to be known as fabricoid, which consists in impregnating a fabric with a gum resin such as "gum shellac" in a melted condition and subjecting same to the simultaneous action of heat and pressure.

No. 52,536. Coal Mining Machine.

(Machine pour l'exploitation des mines de charbon.)



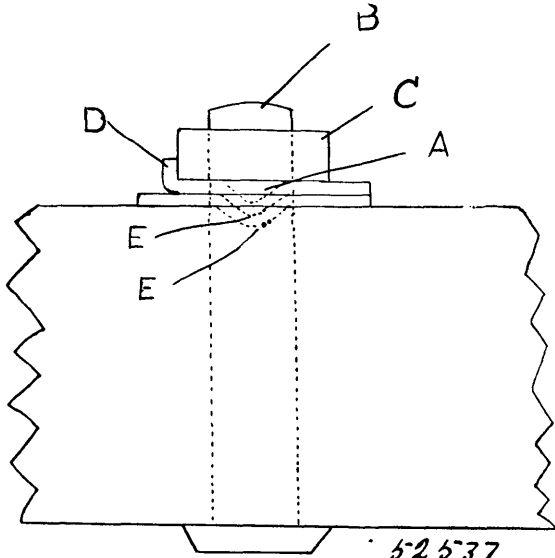
Jonathan Washington Harrison, Ypsilanti, Michigan, U.S.A., 5th June, 1896; 6 years. (Filed 13th January, 1896.)

Claim.—1st. In combination with a cutter bar, the double-pronged cutter having the prongs flaring from each other and extending lengthwise of the cutter bar, and a single cutter secured to the cutter alongside the double cutter, and extending between the prongs of the double cutter, substantially as described. 2nd. A cutter for undercutting coal, consisting of the removable point 103, a V-shaped inwardly tapering shoulder 100, a recess 101 formed at the rear of the tongue 103, a shank 97 adapted to be attached to the cutter bars, having a slo for the reception of the said tongue 103, provided with a registering V-shaped bearings, and integral portion 102 arranged within the said slot, whereby said removable point may be retained in position without bolts or other fastenings, substantially as and for the purpose described. 3rd. In combination, a reciprocating frame, cutter bars carried thereby, feeding mechanism, a stationary frame above the shafts, levers 31 secured to the shafts by a pawl and ratchet connection, said levers having points or extensions engaging openings in the stationary frame whereby in the reciprocation of the cutter carriage the said lever 31 rotate the said shafts, substantially as described. 4th. In combination with the cutter bars, shaft 35 and the feeding shafts 27-28 of a machine such as described, the ratchet-wheels 42 attached thereto, the hand wheels attached to the hubs of said ratchet wheels, spring-actuated pawls 43 to engage to the said ratchets, the levers 54 to operate the said pawls to disengage the same, substantially as described. 5th. In combination with the shaft 35 and the shafts 27-28 for moving the centre bars, and the means for rotating the said shafts 27-28, the gear-wheels 60, attached to the ratchet-wheels 62, discs 63 arranged in connection with the said ratchet-wheels rigidly attached to the said shafts, spring-actuated pawls 64 pivoted to the said discs, and the rack-bar 77, pivoted to the frame, and capable of being lowered in mesh with the said gear-wheels, or disengaged therefrom, as and for the purpose described. 6th. In a mining machine, a reciprocating frame consisting of side portions 22 moving on guides on the main frame of the machine, a series of slots in said side portions to receive the cutter bar supports extending between the sides 22 and diagonally arranged braces passing beneath the tie rods and connected thereto, substantially as described. 7th. In a mining machine, a pair of cutter bars joined together at their adjacent ends by a tongue and groove connection, recesses in the top and bottom surfaces adapted to receive suitable cutters secured thereto, feed-bars for said cutters and dovetail connections between said feed-bars and cutter-bars, substantially as described. 8th. In combination with a machine such as described, the cutter-bars, the feed-bars, each consisting of a bar of sufficient length having a dovetail recess formed in the forward end, and a series of openings 24 formed with a bell-mouth, and spur-wheels for feeding the bars, substantially as described. 9th. In combination with the feed-bars, the triangular levers 31, the ratchets and pawls, the stationary frame 68 and the plates 70 and 75 adapted to engage with the said levers, the said plates being adjustable toward or from each other, the parts being connected and operating substantially as described.

No. 52,537. Nut Lock. (Arrête-écrou.)

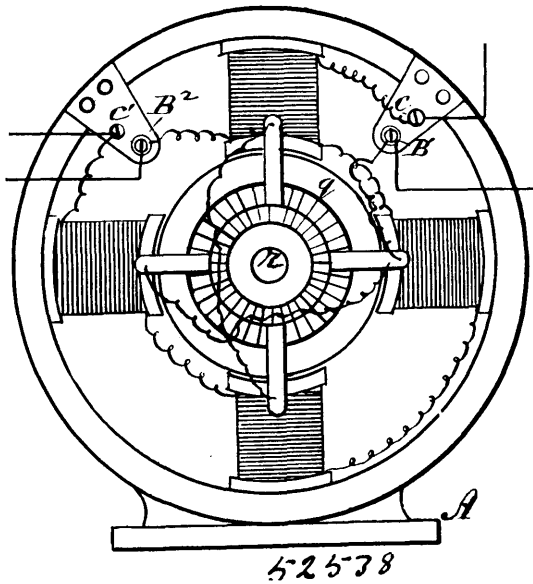
Charles C. Grant, St. Thomas, Ontario, Canada, 5th June, 1896; 6 years. (Filed 8th April, 1896.)

Claim.—A nut-lock comprising a washer having indentations on the side next to the nut, and projections on the other side opposite



the said indentations, to prevent the washer from turning when the nut or bolt is turned, and the edge of the washer bent up against the nut to lock the same, as shown and described.

No. 52,538. Automatic Electric Apparatus for Controlling and Operating Elevators. (*Appareil électrique automatique pour éleveurs.*)



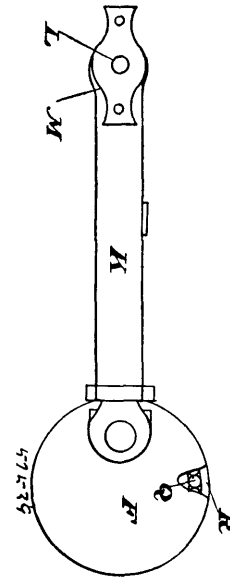
Thomas Laing Kay, Hamilton, Ontario, Canada, 5th June, 1896; 6 years. (Filed 30th December, 1895.)

Claim.—1st. In combination with an elevator operated electrically, of a controller with its several metallic contacts for electrically controlling the speed of the elevator, substantially as described. 2nd. A controller for elevators operated electrically, constructed of a circular cast iron box, and a central cylinder of slate or other non-conducting substance affixed in the centre of said box, and having on its exterior surface a series of metal contact strips so arranged as to communicate with corresponding metal fingers to which wires are attached leading to the brake and to electric switches or circuit breakers and also to the fields of the motor for the purpose of supplying current to the same, substantially as described. 3rd. In an elevator operated electrically, the combination of a controller with the brake lifts or celluloids electrically connected for the purpose of releasing the brake, substantially as specified. 4th. In an elevator operated electrically in combination with a motor, controller and rheostat, a series of electric switches or circuit breakers all electrically connected for the purpose of supplying more or less current to the motor and to enable the elevator to be run at any desired rate of speed, substantially as described. 5th. An electric switch or circuit breaker, having a helix or celluloid mounted on a frame or bracket,

surrounding a wrought iron core which is pivoted to a fibre rod at the bottom end, the said rod being pivoted to a fulcrum bracket at the centre, terminating at the outer end with a carbon held with a carbon holder, the same being electrically connected to one of the main wires to supply current to a similar holder affixed to the base, electrically connected to the rheostat and motor, substantially as described. 6th. The device for stopping an elevator automatically at the top and bottom of the shaft or well-way, substantially as described. 7th. The device for stopping an elevator automatically at the top and bottom of the shaft or well-way consisting of the combination of the two pivoted cast iron arms *m, l*, metallic contacts I^1 and I^2 at their extreme ends, which are insulated from the said arms, the corresponding metal contacts J^1 and J^2 , operated by means of a pin K^1 , on the wheel *W*, or the equivalent, and the wires 7 and 8, connecting the lower metal contacts J^1 and J^2 with the controller *D*, and the circuit breakers and electric brake, substantially as specified. 8th. The combination with an elevator operated electrically, of the motor *A*, the controller *D*, the stop mechanism, the brake mechanism, the circuit breakers, and the rheostat, all as connected electrically, substantially as and for the purpose specified.

No. 52,539. Driving Gear for Cycles.

(*Mécanisme conducteur pour cycles.*)



Peter James Smith and George Singer, both of Toronto, Ontario, Canada, 5th June, 1896; 6 years. (Filed 8th August, 1895.)

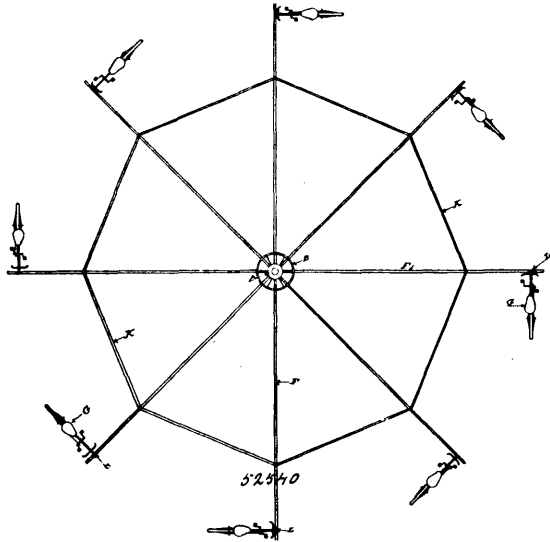
Claim.—1st. In a driving gear, the combination with the axle *E*, of a crank comprised of a crank member *H* connected to the axle *E*, a sleeve *K* slidingly movable on the crank member *H*, a disc *F* connected to the frame, eccentric to the axle *E*, an eccentric strap *R* encircling the said disc, an eccentric rod *S* connected to the strap *R* and to the sleeve *K*, whereby the crank is lengthened or contracted during its revolution, substantially as specified. 2nd. In a driving gear, the combination with the axle *E*, of a crank comprised of a crank member *H* connected to the axle *E*, a sleeve *K* slidingly movable on the crank member *H*, a disc *F* connected to the frame, eccentric to the axle *E*, an eccentric strap *R* encircling the said disc, an eccentric rod *S* connected to the strap *R* and to the sleeve *K*, whereby the crank is lengthened or contracted during its revolution, and bearing balls (*Q*) interposed between the eccentric strap and the eccentric, substantially as specified. 3rd. In a driving gear, the combination with the axle *E*, of a crank comprised of a crank member *H* connected to the axle *E*, a sleeve *K* slidingly movable on the crank member *H*, a disc *F* connected to the frame, eccentric to the axle *E*, an eccentric strap *R* encircling the said disc, an eccentric rod *S* connected to the strap *R* and to the sleeve *K*, whereby the crank is lengthened or contracted during its revolution, bearing balls (*Q*) interposed between the eccentric strap *R* and the eccentric disc *F*, and bearing balls (H^1) interposed between the sleeve and the crank member, substantially as specified.

No. 52,540. Merry-Go-Round. (*Carrousel.*)

Anthony H. Sanders and Frederic J. Potter, both of Yarmouth, Nova Scotia, Canada, 5th June, 1896; 6 years. (Filed 23rd December, 1895.)

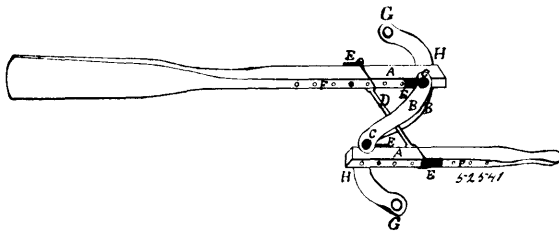
Claim.—1st. In the construction of merry-go-rounds, the use of bicycles or unacycles (*G G*) revolving around a central shaft (*D*) and connected therewith by and jointed to radial arms (*F F*) by universal joints (*L L*) or other suitable connections, substantially as and for the purposes herein set forth. 2nd. The general arrange-

ment of shaft (D), radial arms (F F), universal joints (L L), bearings (A and J), and braces (E E) in connection with bicycles or



unacycles or any other suitable wheel or wheels fitted with cranks or treadles to be operated by the feet of the rider and revolving around central shaft D, substantially as shown by drawings herewith and for the purposes hereinbefore set forth.

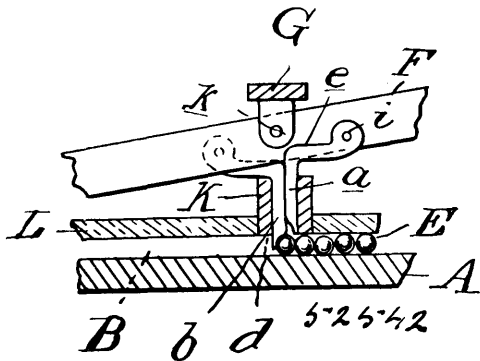
No. 52,541. Oar. (*Rames servant à faire mouvoir les chaloupes ou autres embarcations de ce genre.*)



Onésime Isaïe Bergeron, St. Grégoire, Québec, Canada, 5 juin 1896; 6 ans. (Déposé, 6 octobre 1894.)

Résumé.—La combinaison, dans une rame articulée, des deux membres A A, munis de trous F F, des bras B B, munis de trous C et du rivet e, l'un des bras ayant deux projections G G, du lien D, et des plaques E E E E, servant de pièces d'ajustage pour les dits bras et le lien, le tout tel que décrit et pour les fins indiquées.

No. 52,542. Cash Register. (*Registre de monnaie.*)



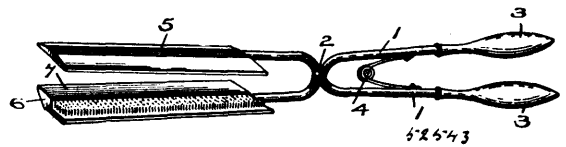
Luther E. Allen, Detroit, Michigan, U.S.A., 5th June, 1896; 6 years. (Filed 7th April, 1896.)

Claim.—1st. The combination with a receptacle, of a series of direct inclined chutes leading therefrom and having permanently closed lower ends and open upper ends constituting the inlet and exit therefor, a plurality of gates from the chutes and spheres in the receptacle adapted to move into the chutes, substantially as described. 2nd. The combination of the inclined plate, the grooves in the upper face thereof, the receptacle at the top of the chutes, the spheres in the receptacle adapted to enter the chutes, a gate for each chute, a key for operating each gate, and means for raising the gates to permit the return of the spheres, substantially as described

3rd. The combination with an inclined base having a series of direct chutes therein formed with a combined inlet and outlet opening at their upper ends only, a series of spheres adapted to move in the chutes, gates for controlling the movement of the spheres in opposite directions, and means permitting the removal of the gates to allow the spheres to be moved back through the chutes comprising a spring-pressed bar, and means for compressing the spring, substantially as described. 4th. The combination of a grooved base plate, the spheres in the grooves, the guide bar K having vertical grooves therein, of the gates a, b, working in the grooves having the curved arms c, extending in opposite directions and pivotally engaging with a key on opposite sides of its fulcrum, and the key for operating said gates, substantially as described. 5th. The combination of the inclined groove plate, the spheres therein, the gates a, b, the key for operating said gates as set forth, the standards H, the cross-bar G upon which said keys are secured, the springs I under the cross-bar and the nuts J above the cross-bar, substantially as and for the purpose described. 6th. In a register, the combination with a base, of a series of inclined chutes therein, gates for each chute, keys for operating the gates, means common to all the gates for raising the same from the chutes, and spheres in the chutes, substantially as described.

No. 52,543. Hair Straightener.

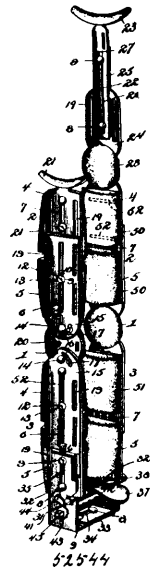
(*Appareil pour redresser les cheveux.*)



Ada Harris, Indianapolis, Indiana, U.S.A., 5th June, 1896; 6 years. (Filed 4th April, 1896.)

Claim.—1st. A hair straightener comprising suitable spring controlled handles pivoted to each other and having meeting jaws secured thereon provided with a longitudinally extending series of teeth separating the hair, and flat meeting surfaces for pressing the hair straight, the teeth being flush with the flat faces, substantially as shown and described. 2nd. A hair straightener comprising suitable spring controlled handles pivoted to each other and having meeting jaws secured thereon, the meeting face of one of such jaws being flat for its whole length and breadth, and the other jaw having a portion of its surface longitudinally made flat and the other portion provided with teeth flush with the flat face, substantially as shown and described.

No. 52,544. Adjustable Splint. (*Eclisse ajustable.*)

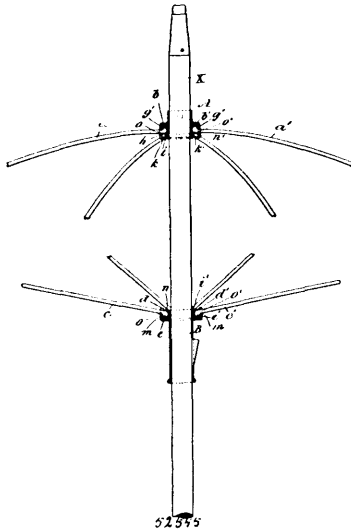


John H. Rankin, Versailles, Missouri, U.S.A., 5th June, 1896; 6 years. (Filed 4th April, 1896.)

Claim.—1st. A splint comprising similar femoral and tibial sections composed of slidable parts having corresponding and registering middle and side longitudinal slots, the side slots being provided to receive the bandages, and fastenings operating within the middle slots to guide the parts in their sliding movements and secure them in the located position, substantially as set forth. 2nd. A splint comprising femoral and tibial sections having their contiguous or adjacent ends separated or spaced apart, and a knee-plate inter-

posed between the separated ends of said sections and having the latter pivotally connected therewith at diametrically opposite points, substantially as and for the purpose set forth. 3rd. A splint comprising femoral and tibial sections having their opposing or adjacent ends separated or spaced apart, a knee plate interposed between the separated ends of the said sections and having the latter pivotally connected thereto at diametrically opposite points, stops for limiting the movements of the sections and assuring their alignment, and fastenings for securing the parts in the located position with respect to the knee-plate, substantially as set forth. 4th. In a splint, the combination with the tibial sections, of a roller extension comprising similar side sections having their lower portions bent inward and overlapping, means for adjustably connecting the said overlapping portions whereby the roller extension can be contracted or expanded, and provisions for adjustably securing the roller extension to the tibial sections, whereby the splint can be lengthened or shortened, substantially as specified. 5th. In a splint, the combination with the lowermost extension provided with upwardly-inclined notches in its edges, of a foot-brace, and a rod therefor, adapted to be supported in the said notches, and held from longitudinal movement, substantially as set forth. 6th. In a splint, the combination with the tibial sections, of a foot-rest to be secured to the sole of a slipper or other foot gear and comprising two plates of similar construction each hanging a side extension, and means for adjustably connecting the side extension, and means for adjustably connecting the side extensions with the respective tibial sections, substantially in the manner set forth, for the purpose described. 7th. A splint comprising inner and outer femoral sections, in combination with a perineal section or pad attached to the inner femoral section, and an auxiliary extension having pivotal connection with the outer femoral section and terminating in an arm-pad, said auxiliary extension being composed of slidable parts having longitudinal registering slots within which operate the fastenings by means of which that parts are adjustably connected together, substantially as specified. 8th. The herein described splint comprising knee-plates, similar femoral and tibial sections having pivotal connection with the opposite ends of the knee-plates and comprising slidable parts, means for securing the movable parts in a fixed position, a roller section removably and adjustably connected with the tibial sections, a roller and foot-brace supported by the roller extension, a thigh plate, and an auxiliary extension, having pivotal connection with the thigh-plate, and extensible, and provided with an arm-rest or section, substantially as set forth. 9th. The combination with a splint comprising slidable parts, of a leg pad formed of similar parts, having transverse slots, and having both a longitudinal and lateral adjustment, substantially in the manner set forth for the purpose described.

No 52,545. Umbrella Fixture. (Attache de parapluies.)



Harvey D. Sabin, Montpelier, Vermont, U.S.A., 5th June, 1896; 6 years. (Filed 26th March, 1896.)

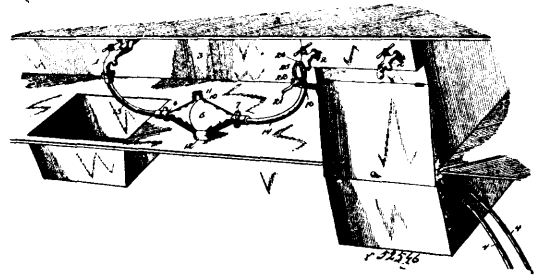
Claim.—1st. In an umbrella and parasol frame the combination of headed ribs with a notched head and a slotted cap having fingers of unequal length and of which the longer fingers are bent inward to lock the cap in place. 2nd. An umbrella comprising in combination a series of headed ribs and a notched head, a series of headed stretchers pivoted to said ribs and a notched runner, the notched heads and runners being provided with slotted caps having fingers of unequal length and of which the longer fingers are bent inward to lock the caps in place.

No. 52,546. Beer Pump Cleaner.

(Nettoyeur de pompe à bière.)

John J. Geiger, Clyde, Ohio, U.S.A., 5th June, 1896; 6 years. (Filed 4th April, 1896.)

Claim.—1st. A device for cleansing apparatus for dispensing beer or other malt beverages, comprising a vessel or receptacle having



ingress and egress nozzles and a depressed chamber between the nozzles for containing the cleaning agent, a hose pipe for connecting the ingress nozzle with the water fixture, and a hose pipe for connecting the egress nozzle with the dispensing apparatus to be cleansed, substantially as set forth. 2nd. A device for cleansing apparatus for dispensing malt beverages, the same comprising a vessel or receptacle having an ingress and an egress nozzle and a depressed chamber between the nozzles to receive the cleaning agent, a deflector at the inner end of the ingress nozzle to direct the water into the said chamber, and means for connecting the ingress nozzle to a water fixture and the egress nozzle to the dispensing apparatus to be cleansed, substantially as specified. 3rd. In a device for cleansing apparatus for dispensing malt beverages, the combination of a vessel or receptacle flaring from its ends to an intermediate point and having nozzles at its ends, and hose-pipe connections for attaching the nozzle ends of the said vessel to a water fixture and the dispensing apparatus to be cleansed, substantially as described. 4th. A device for cleansing apparatus for dispensing malt beverages, the same comprising a vessel gradually flaring from its ends towards an intermediate point, presenting the appearance of two funnels united at their bases or enlarged ends, and having an opening in its side for the admission of a cleaning agent, nozzles at the ends of the vessel and extending into the latter a short distance, and means for connecting the nozzles with a water fixture and the apparatus to be cleansed, substantially as described. 5th. In a device for cleaning apparatus for dispensing malt beverages, the combination with a vessel or receptacle, and a hose pipe connected therewith, of a coupling applied to the free end of the hose pipe and adapted to be fitted to the end of a beer faucet, a bail to be engaged with the body of the faucet, and a lever having pivotal connection with the bail and coupling to draw the parts together and secure them to the beer faucet, substantially as set forth. 6th. In a device for cleaning apparatus for dispensing malt beverages, the combination with a vessel or receptacle, and a hose pipe having connection therewith, of a coupling applied to the free end of the hose pipe and adapted to be fitted to the end of a beer faucet, a lever having a forked end which embraces the sides of the coupling and is pivotally connected thereto, and a bail to be engaged with the body of the faucet and having pivotal connection with the forks of the said lever, whereby upon operating the latter the coupling will be clamped to the faucet, substantially in the manner set forth. 7th. In a device for cleaning apparatus for dispensing malt beverages, the combination with a vessel or receptacle for containing the cleaning agent, and a hose pipe coupled thereto, of a coupling applied to the free end of the hose pipe and having an enlarged and shouldered end to receive a gasket and the end of a beer faucet, and having oppositely-disposed ears, a lever having a forked end and having the outer portions of the forks bent approximately at right angles and pivotally connected with the said ears, and a bail having pivotal connection with the forks of the lever at or near the point of flexion of their end portions, substantially as set forth.

No. 52,547. Compound of ingredients known as Caberfeidgh Bitters. (Composition d'ingrédients connus sous le nom d'amer Caberfeidgh.)

James Mackenzie, Sydney, Nova Scotia, Canada, 5th June, 1896; 6 years. (Filed 7th April, 1896.)

Claim.—An extract of the above named drugs, in the proportions named, as and for the purpose set forth.

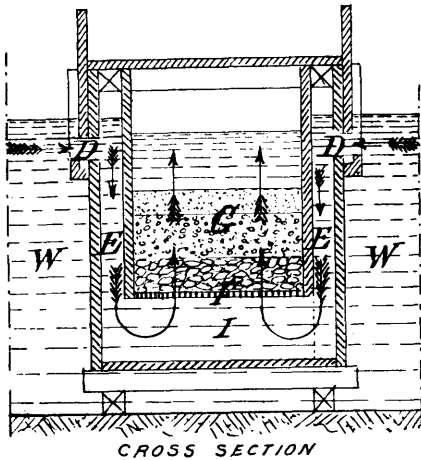
No. 52,548. Reversible Water Filter.

(Filtre à eau renversant)

Joseph Archer, sr., Quebec City, Quebec, Canada, 5th June, 1896; 6 years. (Filed 7th April, 1896.)

Claim.—The double box or flume with the gates by which the current of water is reversed; the upward current being obtained by shutting the gate A and shutting also the gate B of the discharging sewer, by opening the gate C, by admitting the unfiltered water through the side gates DD and by forcing it to flow downwards through the lateral spaces EE left between the outside flume or box and the inside one containing the filtering matters; the downward current, used for cleaning the filtering matters, being obtained by

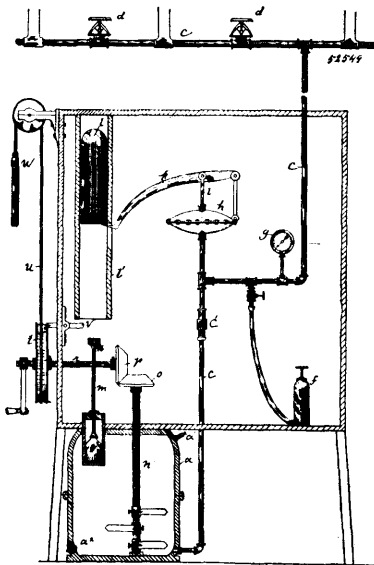
shutting the gate C and the side gates DD, and by opening the gate A and also the gate B of the discharging sewer; the current



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created through the filtering matters under those circumstances being downwards or the reverse of the current when the filter is in operation, substantially as described.

No. 52,549. Chemical Fire Extinguisher.
(*Extincteur d'incendie chimique.*)

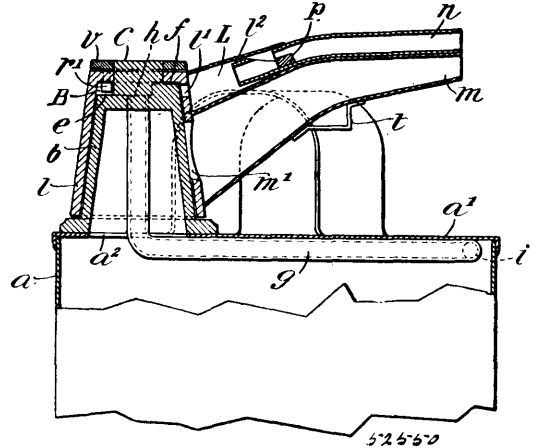


Thomas J. Vail, Hartford, Connecticut, assignee of Frederick H. Cyrenius, Oswego, New York, both in the U.S.A., 5th June, 1896; 6 years. (Filed 20th April 1896.)

Claim.—1st. An automatic chemical fire extinguisher comprising a gas generating tank, an agitator and acid receptacle therein, pipes leading from the tank and communicating with the fusion valves, a diaphragm connected with the pipes and having an arm adapted to normally uphold a weight located in a chute, a vertically movable rod erected beneath the chute and entering the tank, a pressure gauge communicating with the pipes in proximity to the diaphragm member, means intermediate of the aforesaid and the supply tank for automatically preventing the generated gas from passing through the pipes to the fusion valves until a predetermined degree of pressure is attained, and means for charging the pipe or pipes above the point of restriction with compressed air of sufficient quantity to entail normally the diaphragm arm assuming and retaining a raised position, substantially as described. 2nd. In a device of the class described, the combination of a tank adapted to receive a liquid, a fragile vessel within the tank, a breaker-rod in engagement with the fragile vessel, a system of delivery pipes leading from the tank, a restriction valve between said tank and distributors, a pressure-held support adapted to be energized from said pipes, a weight bearing upon said support and in line with the breaker-rod, means independent of the tank for supplying pressure to the delivery pipes, and means for releasing said pressure to release the support and allow the latter to drop the weight and

fracture the fragile vessel, substantially as described. 3rd. A device of the class described, comprising a tank adapted to receive a liquid, a fragile vessel supported therein, a weight adapted to fracture said fragile vessel when released, a pressure retained support for said weight, means for removing the pressure to release the support and weight thereon, a stirrer in the tank, means for operating said stirrer, and a lock for said operating means in the path of the aforesaid weight and adapted to be opened thereby whereby when the said vessel is fractured, the liquid in the tank may be agitated, substantially as described.

No. 52,550. Oil Can, etc. (*Bidon à huile, etc.*)



Henry C. Terry, assignee of Washington Wooster Webster, both of Philadelphia, Pennsylvania, U.S.A., 6th June, 1896; 6 years. (Filed 3rd May, 1896.)

Claim.—1st. An oil can provided with a pouring faucet, comprising a flanged standard having an air tube connected with the can and a fluid-way, a cap connected with the standard and provided with an air chamber and a liquid discharge spout, a projection of the standard located above the flange thereof and of less diameter than the standard, whereby an inner air chamber is established between said standard and cap with the can, substantially as and for the purposes described. 2nd. An oil can provided with a pouring faucet, comprising a standard having an air tube connected with the can, a fluid-way and lugs extending therefrom, a cap movably connected with said standard and provided with an air chamber, a liquid discharge spout and pins or lugs and an inner air chamber established between said standard and cap with the can, substantially as and for the purposes described. 3rd. An oil can provided with a pouring faucet, comprising a flanged standard having an air tube and a fluid-way, a cap movably connected with said standard and provided with an air chamber and a tube, an acoustic indicator, a fluid discharge spout and a projection of the standard located above the flange thereof and of less diameter than the standard, whereby an inner air chamber is established between said standard and cap with the can, substantially as and for the purposes described. 4th. An oil can provided with a pouring faucet, comprising a perforated standard provided with a stop or stops, a cap or thimble movably connected with said standard and provided with a liquid discharge spout and a portion of an air vent, chamber or tube, an inner air chamber established between said standard and cap, and the latter provided with a pin or pins adapted to engage the stop or stops of said standard to limit the range of movement of the cap, substantially as and for the purposes described. 5th. An oil can provided with a pouring faucet, comprising two members, one fixed the other movable, and provided with a discharge spout, an inner air chamber established between the two members and said movable member provided with an acoustic indicator operative in one position of the device, substantially as and for the purposes described.

No. 52,551. Rasp. (*Râpe.*)

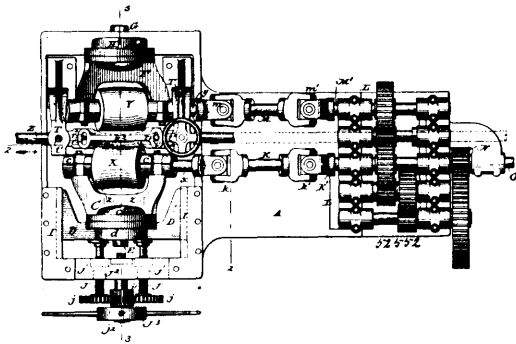


The Shaw Electric Rasp Company, assignee of William Shaw, both of Detroit, Michigan, U.S.A., 6th June, 1896; 6 years. (Filed 18th April, 1896.)

Claim.—1st. An article of manufacture comprising the headed rods, the plates or blades having cutting edges mounted to snugly fit on said rods, the washers between said plates and mounted on said rods, and the plates having the operating handles mounted thereon, all adapted to be closely united by means on the ends of

said rods, when arranged as shown and described. 2nd. In a rasp, the combination of the headed rods, the plates having shanks thereon, the plates and washers mounted on said rods between said shanked-plates, and means for locking them in place on said rods, substantially as set forth. 3rd. In a rasp, the combination of the headed rods, the angled plate having a shank thereon, said shank being provided with a handle, the washers, the plate having a shank extending straight therefrom, said shank being provided with a handle, the plates without shanks, said plates and washers adapted to be strung on said rods, and means for locking them in place, in the manner set forth and for the purpose specified.

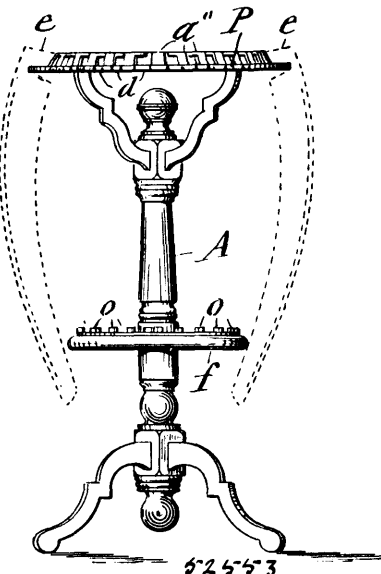
No. 52,552. Machine for Straightening and Polishing Shafts, Tubes, etc. (*Machine pour redresser et polir les arbres, tubes, etc.*)



Philip Medart and William Medart, both of St. Louis, Missouri, U.S.A., 6th June, 1896; 6 years. (Filed 18th April, 1896.)

Claim.—1st. In a machine for straightening shafting, the combination of the two feeding and straightening rolls, one of which is concave and the other straight or slightly convex, means for supporting and rotating said rolls and for adjusting the angles thereof relatively to each other, and the guide bars interposed between said rolls, the organization being such that the guide bars support and guide the shaft to be straightened on the opposite sides while the rolls bear against the remaining sides thereof. 2nd. In a machine for straightening shafting, the combination of the two combined feeding and straightening rolls, one of which is concave and the other straight or slightly convex, yokes in which the rolls have bearings, means for adjusting the yokes, and the combined guiding and polishing bars interposed between the rolls. 3rd. The combination of the rolls, the upper and lower guides, means for adjusting the upper guide, the frame in which the lower guide is supported and which has inclines on its under side, the wedges on which the inclines bear, the inclined blocks below the wedges and a right and left hand screw for moving the wedges to raise and lower the guide.

No. 52,553. Display Apparatus. (*Appareil d'étalage.*)

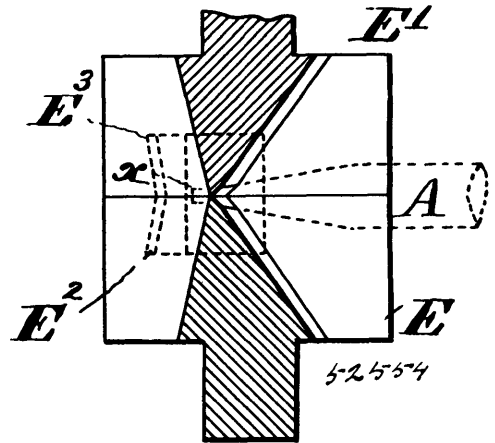


Harry Frederick Zimmerlin and Charles George Zimmerlin, both of Lyons, New York, U.S.A., 6th June, 1896; 6 years. (Filed 15th April, 1896.)

Claim.—The within described display apparatus, consisting of a suitable support or standard, two horizontal annular plates secured

respectively to the top of the standard and to the lower portion thereof, the upper of said plates being provided with slots and lugs for supporting therefrom axes or scythes resting with their lower ends against the edge of the aforesaid lower plate, as set forth.

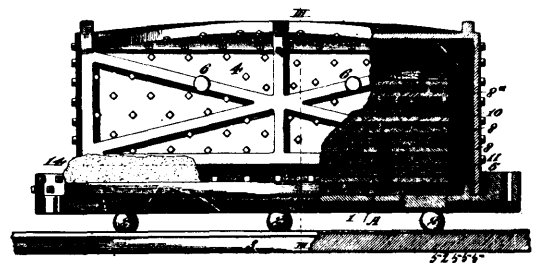
No. 52,554. Method of and Apparatus for Sharpening and Making Rock Drills, etc. (*Méthode et appareil pour aiguiser et faire les forets de mines.*)



Thomas Henry Bradbury, Johannesburg, Heidelberg, South African Republic, 6th June, 1896; 6 years. (Filed 16th April, 1896.)

Claim.—1st. The improved method of making or re-sharpening rock drills, which consists in subjecting them to the action of shaping, cutting, gauging and finishing dies in the manner set forth. 2nd. The shaping dies, which consist of top and bottom dies having inclined surfaces of imparting the "chisel bit" or wedge shape to the end of the drill, substantially as described. 3rd. The gauging dies, which consist of top and bottom dies having tapering grooves for the purpose of imparting the desired width to the chisel edge of the drill, substantially as described. 4th. The cutting dies, which consist of top and bottom dies having cutting edges for imparting the proper curvature and short bevils to the chisel edge of the drill, substantially as described. 5th. The finishing die, which consists of a block of steel provided with a hollow the cross section of which corresponds to the V-shape of the short bevils of the drill, and the longitudinal section of which corresponds at the bottom with the camber or curved shape widthwise of the drill, substantially as described.

No. 52,555. Method of and Apparatus for Treating and Annealing Sheet Metal. (*Méthode et appareil pour traiter et recuire les feuilles métalliques.*)



William Edwin Harris, Niles, Ohio, U.S.A., 6th June, 1896; 6 years. (Filed 16th April, 1896.)

Claim.—1st. The improved method of treating and annealing metallic sheets, which consists in annealing the sheets, then cold rolling the sheets, then stacking the sheets with a separating medium of copper filings and pulverized soapstone interposed between the respective sheets, and then annealing the sheets a second time, substantially as set forth. 2nd. The improved method of treating and annealing metallic sheets, which consists in first annealing the sheets, then cold rolling the sheets, then stacking the sheets with interposed layers of copper filings and pulverized soapstone between the respective sheets, and then annealing the sheets a second time, substantially as set forth. 3rd. The improved method of annealing metallic sheets herein described, which consists in placing upon the sheets a coating of copper filings and pulverized soapstone, and then annealing the sheets, substantially as described. 4th. The improved method of annealing metallic

sheets herein described, which consists in placing upon the sheets a coating of copper filings, pulverized soapstone and iron ore, and then annealing the sheets, substantially as described.

No. 52,556. Skirt Binding. (*Bordure de jupes.*)

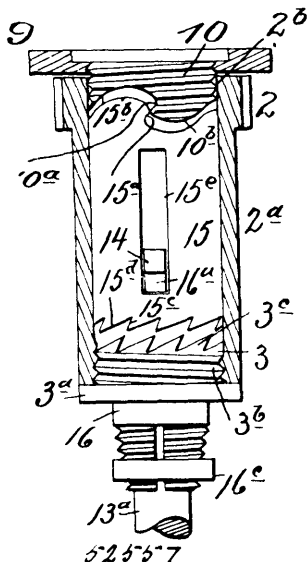


5-2556

Joseph John Westgate, Montreal, Quebec, Canada, 6th June, 1896; 6 years. (Filed 17th April, 1896.)

Claim.—Skirt binding comprising a length of braid, a binding strip folded longitudinally and enclosing one edge of the braid, the inside surfaces and the enclosed portion of braid being cemented together, and a line of stitching with the stitches transversely of the edges of such binding strips, as and for the purpose set forth.

No. 52,557. Tapping Attachment. (*Attache de robinets.*)



5-2557

Franklin Alfred Errington, Edgewater, New York, U.S.A., 6th June, 1896; 6 years. (Filed 18th April, 1896.)

Claim.—1st. The combination of three rotative clutch members located in line and having rotary-driving faces in their opposing surfaces, certain of said clutch members having a longitudinal-driving face or faces sloping outward longitudinally beyond and backward from the outer extremity of said rotary-driving face or faces, certain of said clutch members having longitudinal movement adapted to engage and rotate one another, means to disengage said rotary-driving faces, the length of the intermediate clutch member between the outer extremities of the rotary-driving faces at its opposite ends being less than the shortest distance between the outer extremities of the rotary-driving faces of the two end clutch members, and the extreme length of said intermediate clutch member being greater than the shortest distance between the opposing surfaces of said end clutch members, substantially as described. 2nd. The combination of three rotative clutch members located in line and having rotary-driving faces in their opposing surfaces, certain of said clutch members having a longitudinal-driving face or faces extending outward longitudinally beyond and sloping backward from the outer extremity of the respective associate rotary-driving face or faces, certain of said rotary-driving faces extending inward longitudinally and sloping backward from their respective outer extremities, certain of said clutch members having longitudinal movement to engage to rotate one another, and means to disengage said rotary-driving faces, the length of the intermediate clutch member between the outer extremities of its rotary-driving faces at its opposite ends being less than the shortest distance between the outer extremities of the rotary-driving faces of the two end clutch members, and the extreme length of said intermediate-clutch member being greater than the shortest distance between the opposing surfaces of said clutch member, substantially as described. 3rd. The combination of two end clutch members, means for rotat-

ing said clutch members in opposite directions, a longitudinally movable intermediate clutch member located between said two end clutch members having rotary-driving faces in their opposing surfaces to turn one another, one of said clutch members having a longitudinal-driving face or faces extending outward longitudinally beyond and sloping backward from the outer extremity of the respective associate rotary-driving face or faces, the length of said intermediate clutch member between the outer extremities of its rotary-driving faces at its opposite ends being less than the shortest distance between the outer extremities of the rotary-driving faces of said two end clutch members and the extreme length of said intermediate clutch member being greater than the shortest distance between the opposing surfaces of said end clutch members, and means to disengage said rotary-driving faces. 4th. The combination of a spindle, two rotative clutch members located on said spindle, one of said clutch members being longitudinally movable on said spindle, said clutch members having rotary-driving faces in their opposing surfaces to turn one by the other, and a stop-piece carried by said spindle and adapted to engage longitudinally with said longitudinally movable clutch member to disengage said rotary-driving faces. 5th. The combination of a spindle, two rotative clutch members located on said spindle, one of said clutch members being movable longitudinally on the said spindle, said clutch members having rotary-driving faces in their opposing surfaces, one of said clutch members having a longitudinal-driving face extending outward longitudinally beyond and sloping backward from the outer extremity of said rotary-driving face, and a stop-piece carried by said spindle and adapted to engage longitudinally with said longitudinally movable clutch member to disengage said rotary-driving faces. 6th. The combination of a spindle, a stop-piece carried thereby, two rotative clutch members located on said spindle and having rotary-driving faces in their opposing surfaces to turn one another, one of said clutch members being longitudinally movable on said spindle and having a slot extending through part of its length, said stop-piece being adapted to have longitudinal movement within said slot to engage its ends to engage or disengage said rotary-driving faces. 7th. The combination of two wheels, each of said wheels having a clutch, means for rotating said wheels in opposite directions, a spindle, an intermediate clutch connected to rotate with said spindle and movable longitudinally thereon, one of said elements having a slot, and a stop-piece carried by said spindle and located in said slot, whereby said stop-piece is enabled to have longitudinal engagement with said spindle clutch. 8th. A longitudinally movable spindle, a wheel and a clutch driven by said spindle, combined with another longitudinally movable spindle, a clutch connected with said last-mentioned spindle, another wheel having a clutch, a non-rotative part carrying gearing to transmit and reverse motion from one of said wheels to the other, whereby said last-mentioned spindle can be rotated in opposite directions, and an adjustable stop-piece on one of said spindles to limit the longitudinal movement of said oppositely rotative spindle. 9th. The combination of a wheel, a friction disc, self-locking means for adjusting the tension of the frictional contact of said wheel and said disc in accordance with the work to be done, one of said parts being provided with a positive clutch, a spindle, a clutch connected therewith and adapted to engage said first-mentioned clutch, another wheel provided with a clutch, and a casing carrying gearing to transmit and reverse motion from one of said wheels to the other. 10th. The combination of a wheel having a plurality of eccentrically located screw-threaded rods projecting from its face, a disc having frictional contact with said wheel, located between said rods, and provided with a positive clutch, a clamping part connected with each of said rods, a longitudinally movable spindle, a clutch connected therewith, another wheel provided with a clutch, and a casing carrying gearing to transmit and reverse motion from one of said wheels to the other. 11th. The combination of two wheels journaled in a casing carrying gearing adapted to secure the simultaneous rotation of said wheels in opposite directions, one of said wheels having a clutch-chamber 2^c within the plane of its inner face, a positive clutch located in said clutch-chamber and connected to rotate with said wheel, the face of said clutch also lying within the plane of the inner face of said wheel, another clutch connected with the other of said wheels, a longitudinally movable spindle having a transverse bore, a transversely and laterally movable clutch-bar located in said transverse bore in said spindle and extending beyond the periphery thereof into said clutch-chamber between said wheel clutches, the walls of said clutch-chamber serving to retain said clutch-bar in position in said transverse spindle bore. 12th. The combination of a gear-wheel having a clutch-chamber 2^c within the plane of its inner face, a positive clutch located in said clutch-chamber and connected to rotate with said wheel, the face of said clutch also lying within the plane of the inner face of said wheel, a longitudinally movable spindle, a clutch connected therewith, another gear-wheel provided with a clutch, and a non-rotative part carrying gearing adapted to secure the simultaneous rotation of said wheels in opposite directions. 13th. The combination of a driving wheel and a reversing wheel, each of said wheels having gear-teeth upon its periphery, the driving faces of said gear-teeth being parallel with the axes of said wheels, said axes being concentric, one of said wheels having a clutch-chamber 2^c in its inner face, a positive clutch located in said clutch-chamber and connected to rotate with said wheel, the face of said clutch lying within the plane of the face of said wheel. Another clutch

connected with the other of said wheels, and an intermediate clutch connected to rotate with said spindle and located in said clutch-chamber between

14th. The combination of a wheel, a clutch connected therewith, a spindle carrying a clutch for engagement with said wheel clutch, another wheel having a concentric screw-threaded-bore, a clutch-sleeve provided with a concentric bore for the reception of said spindle, and having a shoulder and an externally screw-threaded portion carrying on its inner face a positive clutch, said screw-threaded portion of said clutch-sleeve being adapted to mesh with said screw-threaded bore in said wheel, and said shoulder of said clutch-sleeve being arranged to bear upon said wheel to limit the distance that said screw-threaded portion of said clutch-sleeve shall enter said screw-threaded bore of said wheel, the depth of said screw-threaded bore of said wheel being greater than the length of that portion of said clutch-sleeve which extends from said shoulder of said clutch-sleeve to the inner face of said clutch-sleeve upon which said positive clutch is located, to provide a clutch-chamber 2c between the inner face of said clutch-sleeve and the plane of the inner face of said wheel, and a non-rotative casing carrying gearing adapted to secure the simultaneous rotation of said wheels in opposite directions. 15th. The combination of a driving wheel 6, and a reversing wheel 2, each of said wheels having gear-teeth upon its periphery, the driving faces of said gear-teeth being parallel with the axes of said wheels, said axes being concentric, each of said wheels being provided with a clutch, a longitudinally movable spindle, a clutch connected therewith and located between said wheel clutches, a non-rotative casing 1 having a cover 7, and studs 4a, 5a, a reversing pinion 4 journaled on said stud 4a, resting upon the inner face of said casing 1 and meshing with said wheel 2, and a double-depth transmitting pinion 5, journaled on the stud 5a, and having gear-teeth upon its periphery whose driving faces are of greater depth (or width) than those of the gear-teeth of the driving-wheel 6, the inside working-depth diameter of said driving-wheel 6 being greater than the addendum (or outside) diameter of the reversing-wheel 2, to enable said double-depth transmitting pinion to mesh with said driving-wheel 6, and with the reversing pinion 4, and avoid engagement with the reversing wheel 2, whereby the maximum bearing surface for the inner face of said cover 7 upon the outer face of said wheel 6 is secured. 16th. The combination of a driving-wheel 6, adapted for connection with a rotative driving part and having gear-teeth upon its periphery that are parallel with its axis, a friction disc to be driven by frictional contact with said wheel, a longitudinally movable spindle, means to connect said disc with said spindle to turn the latter in one direction, a reversing wheel 2 surrounding said spindle and having gear-teeth upon its periphery that are parallel with its axis, means to connect said last-mentioned wheel with said spindle to turn the latter in the reverse direction to that first mentioned, a reversing pinion 4 carried by a non-rotative casing 1 and meshing with said reversing wheel 2, and a double-depth transmitting pinion, similarly carried and meshing with the driving-wheel 6 and the reversing pinion 4. 17th. The combination of a driving-wheel 6 adapted for connection with a rotative driving part and having gear-teeth upon its periphery that are parallel with its axis, a longitudinally movable spindle, a friction disc to be driven by frictional contact with said wheel, means to regulate the frictional tension between said disc and said wheel in accordance with the work to be done, means for connecting said longitudinally movable spindle with said disc to turn said spindle in one direction, a reversing wheel 2 surrounding said spindle and having gear-teeth upon its periphery that are parallel with its axis, means to connect said last-mentioned wheel with said spindle to turn the latter in the opposite direction to that first mentioned, a reversing pinion 4 carried by a non-rotative casing 1 and meshing with said reversing wheel 2, and a double-depth transmitting pinion similarly carried and meshing with the driving wheel 6, and the reversing pinion 4. 18th. The combination of two wheels journaled in a non-rotative casing having a non-rotative spindle-bearing 1c, in its base-plate and carrying gearing adapted to secure the simultaneous rotation of said wheels in opposite directions, one of said wheels having a clutch-chamber 2c within the plane of its inner face, a positive clutch located in said clutch-chamber and connected to rotate with said wheel, the face of said clutch lying within the plane of the inner face of said wheel, another clutch connection with the other of said wheels, and a longitudinally movable spindle provided with an intermediate clutch and having direct bearing in said non-rotative spindle-bearing in said base-plate of said casing. 19th. The combination of two wheels, each of said wheels having a clutch, means to rotate one of said wheels in the opposite direction to the other, a spindle, a clutch connected to rotate with said spindle and capable of longitudinal movement thereon, one of said elements having a slot, a clamping sleeve adjustably connected with said spindle, and a stop-piece projecting from said clamping-sleeve and meshing with said slot, to engage said spindle clutch longitudinally, substantially as described.

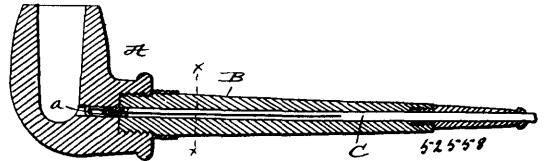
No. 52,558. Pipe Cleaning Device.

(Appareil à nettoyer les tuyaux.)

Ira B. Sturges, Portland, Oregon, U.S.A., 6th June, 1896; 6 years (Filed 18th April, 1896.)

Claim.—1st. As an improved article of manufacture, the herein described pipe cleaner formed, from a piece of resilient wire of circu-

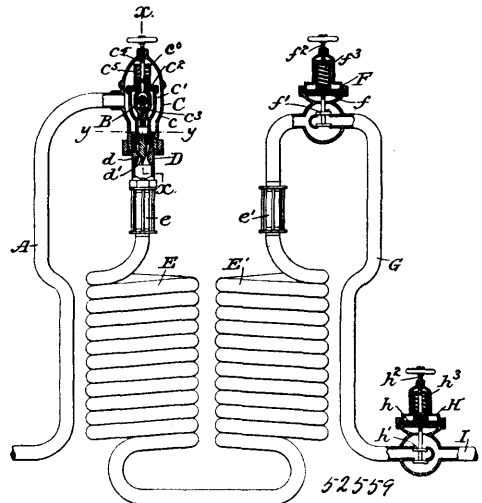
lar form in cross-section, so as to facilitate its introduction into the stem and having the longitudinal slot c, at an intermediate point in



its length and also having the longitudinal cutting or scraping portions d, formed by the slot c, and having the contiguous flat sides; the said cutting or scraping portions d, being adapted to spread or move apart when the cleaner is turned in the bore or passage of a pipe stem so as to enable the edges formed by the flat sides of said portions to scrape the sediment off the wall of the bore of the pipe stem, all substantially as specified. 2nd. As an improved article of manufacture, the herein described pipe cleaner, formed from a piece of resilient wire of circular form in cross-section, so as to facilitate its introduction into the stem, and having the longitudinal slot c, at an intermediate point of its length and also having the longitudinal cutting or scraping portions d, formed by the slot c, and having the contiguous flat sides; the said cutting or scraping portions d, being adapted to spread or move apart when the cleaner is turned in the bore or passage of a pipe stem, so as to enable the edges to scrape the sediment off the wall of the bore of the pipe stem, all substantially as and for the purpose set forth.

No. 52,559. Method of Charging Liquids with Gas.

(Méthode de charger les liquides de gaz.)

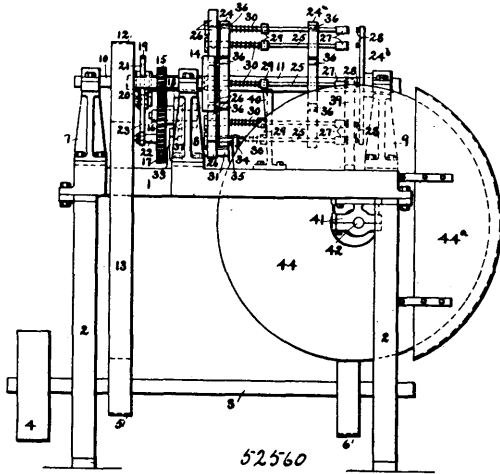


Joseph Schneible, New York, State of New York, U.S.A., 6th June, 1896; 6 years. (Filed 18th April, 1896.)

Claim.—1st. The method of charging liquids with gas which consists in supplying the liquid under pressure, supplying the gas under lower pressure than that on the liquid, and causing the liquid as it flows to draw the gas with it and to effect the incorporation thereof with itself. 2nd. The method of charging liquids with gas which consists in supplying the liquid under pressure, supplying the gas under a lower pressure than that on the liquid, causing the liquid as it flows to draw the gas with it and to effect the incorporation thereof with itself, and maintaining pressure on the mingled gas and liquid while absorption is taking place. 3rd. The method of charging liquids with gas which consists in supplying a stream of liquid under pressure, supplying the gas under a pressure less than that on the liquid, causing the liquid to mingle the gas with itself as it flows, permitting the stream of mingled gas and liquid immediately after the mingling to increase to an area in cross section considerably greater than the area in cross section of the stream of liquid at the point of contact of the gas therewith, and maintaining pressure on the mingled gas and liquid while absorption is taking place. 4th. The method of charging liquids with gas which consists in supplying the liquid under pressure, supplying the gas under less pressure than that on the liquid, causing the liquid to mingle the gas with itself as it flows, and afterward maintaining on the mingled gas and liquid, while absorption is taking place, a pressure greater than that under which the gas is supplied, the gas being forced by and with the liquid against the greater pressure. 5th. The method of charging liquids with gas which consists in supplying the liquid under pressure, supplying the gas under less pressure than that on the liquid, causing the liquid to draw and impel the gas with it and to effect the mingling thereof with itself, and afterward maintaining on the

mingled gas and liquid, while absorption is taking place, a pressure greater than that under which the gas is supplied, the gas being forced by and with the impelling liquid against the greater pressure. 5th. The method of charging liquids with gas which consists in supplying the liquid under pressure, supplying the gas under a pressure lower than that on the liquid, causing the pressure on the liquid to control the supply of the gas whereby variations in the pressure on the liquid are accompanied by corresponding variations in the supply of the gas, and causing the liquid as it flows to draw the gas with it and to effect the incorporation thereof with itself.

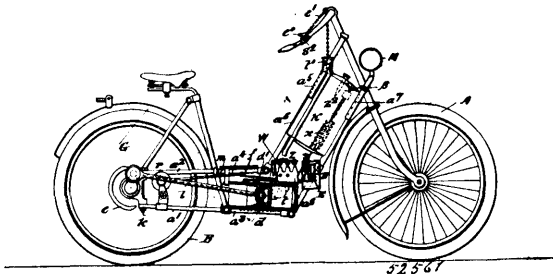
No. 52,560. Cork Shaving Machine.
(Machine à couper le liège.)



John Hughes, Cleveland, Ohio, U.S.A., 6th June, 1896; 6 years. (Filed 20th April, 1896.)

Claim.—1st. The combination in a cork shaving machine, of notched racks and a disc fast to a shaft, a revoluble shaft carrying a pinion and a friction-wheel, a stud carrying a gear meshing with said pinion, a cam fast to said gear, ratchet mechanism operated by said gear for rotating said rack shaft, a latch mechanism operated by said cam for alternately engaging the rack notches, spring and finger-actuated spindles carried by said racks capable of holding and releasing pieces of cork between said disc and adjacent ends of said spindles, and friction-wheels on said spindles arranged to alternately engage the friction-wheel on said revoluble shaft, substantially as and for the purpose set forth. 2nd. The combination in a cork shaving machine, of notched racks and a disc fast to a shaft, a revoluble shaft carrying a pinion and a friction-wheel, a stud carrying a gear meshing with said pinion, a cam fast to said gear, ratchet mechanism operated by said gear for rotating said rack shaft, a latch mechanism operated by said cam for alternately engaging the rack notches, spring and finger-actuated spindles carried by said racks capable of holding and releasing pieces of cork between said disc and adjacent ends of said spindles, friction-wheels on said spindles arranged to alternately engage the friction-wheel on said revoluble shaft, and a co-acting rotary knife adapted to cut said cork, substantially as and for the purpose set forth.

No. 52,561. Motor Propelled Velocipede. (Vélocipède.)

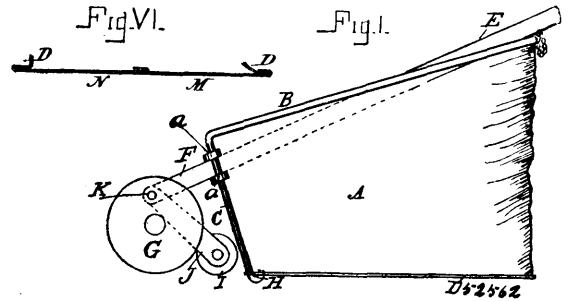


Alois Wolfmüller, Munich, Germany, 6th, June. 1896; 6 years (Filed 20th April, 1896.)

Claim.—1st. The combination of a twin cylinder explosive motor having separate suction, exhaust, and ignition valves for each cylinder, with the driving-wheel or wheel axle of the cycle adapted to be driven by said motor and a curved pin or equivalent device *e* thereon adapted to cause periodical displacement of a rod operating a device adapted to oscillate and alternately operate the exhaust valves with the ignition valves of the two cylinders in the manner specified. 2nd. The combination with a gas mixture valve of a device for adjustment thereof consisting of a screw-threaded spindle connected to said valve by a chain or otherwise, a fixture within

which said spindle may be adjusted longitudinally and means for releasing the screw-threads of said spindle for sudden closure of the valve, substantially as set forth. 3rd. The combination with a motor of a counter-spring adapted to be brought into tension by the force of outstroke of the piston and to re-act during instroke for the purpose of equalizing the power and effect on the driving-wheel of the cycle. 4th. An igniting device to which inflammable gas is supplied through an annular orifice formed by the adjustment of a needle axially within a circular orifice. 5th. The combination with the frame consisting of two parallel angular frames each formed of four tubes in the manner specified, of a motor having its various parts arranged between the two said angular frames, substantially as described. 6th. The combination of a cycle frame composed of or with tubes, with a motor, whereby said tubes are utilized for supply and exhaust in connection with said motor, substantially as described. 7th. The combination with a motor of a water jacketting in connection with a reservoir placed above the rear or other wheel and adapted to be cooled by air set in movement by said wheel and to serve as a mudguard thereto. 8th. The combination with the ignition lamp of an air supply pipe thereto and exhaust pipe therefrom, the said pipes being carried to the box *M* where they open at the same height and place into compartments of said box having openings *j, j'*, around the periphery, substantially as and for the purpose specified.

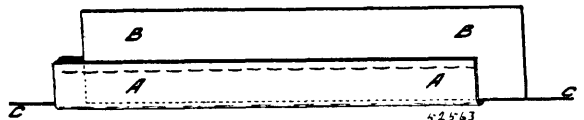
No. 52,562. Grass Carrier for Lawn Mowers.
(Réceptacle à herbe pour faucheuses de pelouses.)



Roswell Franklin Krause, Chicago, Illinois, U.S.A., 6th June, 1896; 6 years. (Filed 21st April, 1896.)

Claim.—1st. As an improved article of manufacture, a grass-carrier to be used as an attachment for lawn mowers, consisting of a receptacle having a flexible upper frame and provided with a bottom composed of two overlapping pieces adjustable laterally upon each other, means for holding said pieces in adjustable positions, and a clamping device for attaching the carrier to the mower. 2nd. In combination with the handle and forked portion thereof, of a lawn mower, a grass carrier or receptacle, and a clamping device adjustable on the frame of the receptacle and also upon the forked portions of the handle, each clamp comprising a body having a hook-shaped portion for grasping the side of the frame of the receptacle and adapted to accommodate the forked portions of the handle, and a set-screw for clamping the parts together. 3rd. As an improved article of manufacture, a grass carrier to be used as an attachment for lawn mowers, consisting, in combination with the handle and forks thereof, of a grass receptacle open at the side adjacent to the mower and adapted to contain the cut grass, such grass receptacle having a two-part bottom consisting of two pieces adjustable upon each other, and means for holding the same in adjustable positions, in combination with clamps for adjustably securing the receptacle to the handle and forks, each clamp comprising a hook-shaped portion or jaw adapted to grasp the frame of the receptacle and having another portion to encompass the forks and a set screw for clamping the parts together, whereby the receptacle is adjustable vertically as well as horizontally with respect to the mower.

No. 52,563. Skirt Facing. (Bordure de jupes.)



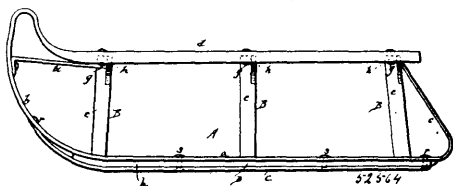
DeLotbinière Macdonald and Alain Chartier Macdonald, both of Montreal, Quebec, Canada, 6th June, 1896; 6 years. (Filed 22nd April, 1896.)

Claim.—The combination of steel-wire or cord, as a stiffener, with the braid and leather bands, substantially as and for the purpose hereinbefore set forth.

No. 52,564. Sleigh, etc. (Traineau, etc.)

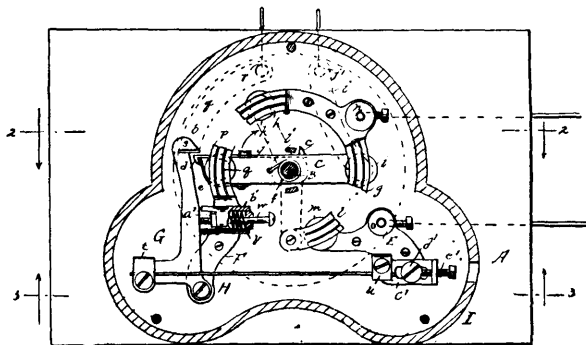
Truman Coleman, Lee Centre, New York, U.S.A., 6th June, 1896; 6 years. (Filed 24th April, 1896.)

Claim.—In a sled or sleigh, the combination of the uprights *e*, the cross beam *F* and brace *o*, said parts being constructed of angle iron



or other suitable material, horizontal portion *a* of the runner, angle-plates on said portion, the wooden strips between the said angle-plates and the runner attached to said strip and to said portion *a*, substantially as and for the purpose set forth.

No. 52,565. Electric Switch. (Commuteur électrique.)

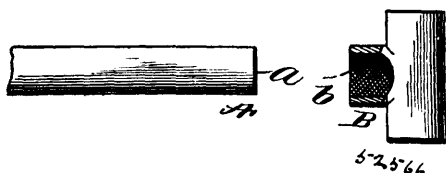


Henry B. Whitehead, Memphis, Tennessee, U.S.A., 6th June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—1st. In an electric switch, the combination with contact-springs, of a spring-impelled switch-lever, a releasing bar adapted to slide on the lever and having a portion extended over the end of the lever, a detent-lever for engaging with the end of said bar, an adjustable spring for operating the detent-lever in one direction and an expansion-wire in the electric circuit for normally holding the detent in engagement with the sliding bar, substantially as specified. 2nd. In a switch, the combination, with contacts and a spring-pressed switch-lever, of a bar mounted to slide on said lever and having a nib projecting over the end of the lever and also having a nib at its opposite end to be engaged by a key, and a detent for engaging the bar, substantially as specified. 3rd. In an electric switch, the combination with a switch-lever having a rotary motion, of a curved plate having contact-springs on each of its ends, a plate provided with a binding post and having a contact-button, a spring contact adapted for electrical connection with the button, a plate having a spring contact normally in engagement with one end of the switch lever, a detent-lever pivoted on said last-named plate and an expansion-wire engaging with the detent-lever, substantially as specified. 4th. In a switch, the combination with a switch-lever, of a detent therefor, an expansion wire having one end engaging with the detent lever, and a clamp engaging the other end of said wire and comprising a slotted plate, a screw passing through said slot and an adjusting screw passing through a tapped hole in the upturned end of the plate and impinging against the first-named screw, substantially as specified.

No. 52,566. Method of Making Bicycles.

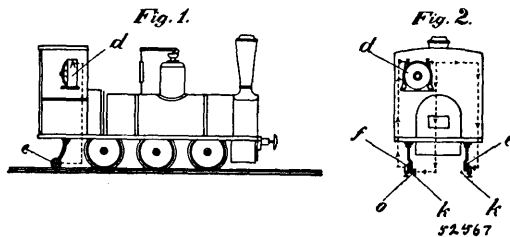
(Méthode de faire les bicycles.)



Samuel Palmiter, Jamestown, New York, U.S.A., 6th June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—1st. The method of making the joints of bicycles and other articles made wholly or partly of tubing, which consists in serrating one of the parts by expanding the inner part into the serration by the cold roller process. 2nd. The method of reinforcing the parts or joints of bicycles and other articles made wholly or partly of tubing, which consists in serrating one of the parts and uniting the parts by expanding the inner tube into the serrations.

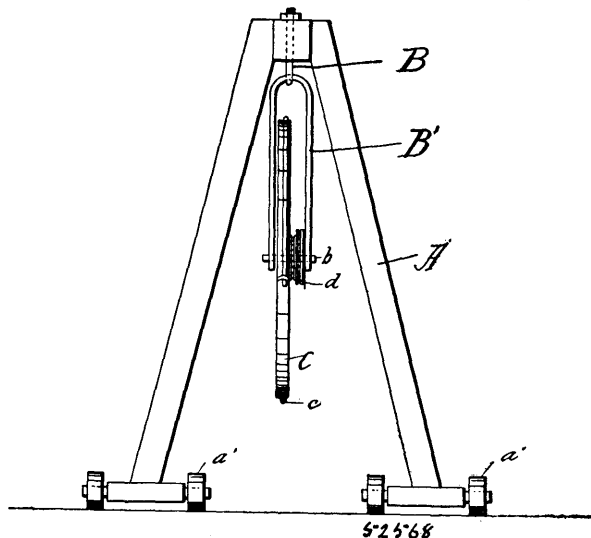
No. 52,567. Apparatus for Preventing Railway Accidents. (Appareil pour empêcher les accidents sur les chemins de fer.)



Hermann Biermann, Breslau, Silesia, Prussia, Germany, 6th June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—The new or improved apparatus for preventing railway accidents, which consists, firstly, of a dynamo, storage battery, or other source of electricity, mounted on the train; secondly, of the rails of the track divided into sections and used as a conductor for the electric current generated by the said source of electricity on the train; thirdly, of secondary conductors, and, fourthly, of contact making and breaking apparatuses, constructed and operating so as to indicate, on an approaching train, the fact of the breakage or loosening of a rail in a section of the line in advance of such train, substantially as described and specified for the purpose set forth.

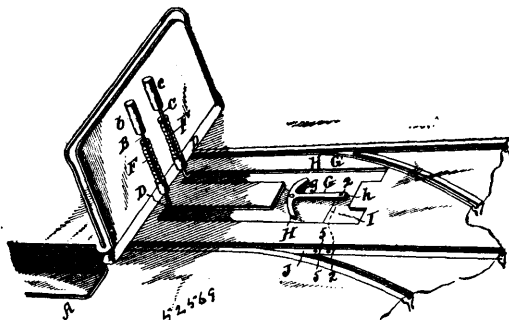
No. 52,568. Stump Extractor. (Arrache-souche.)



Michael Alexander Kennedy, Montreal, Quebec, Canada, 6th June, 1896; 6 years. (Filed 6th May, 1896.)

Claim.—In a stump extractor, the combination, with a supporting frame, of a shackle suspended therefrom and provided with a pin at its lower end, a large wheel journaled on the said pin and provided with a flexible connection for revolving it, a differential tackle having its upper pulleys secured to the hub of the said wheel and journaled on the said pin, and a flexible connection connected to the frame of the lower pulley and adapted to be attached to the stump, substantially as set forth.

No. 52,569. Switch. (Aiguille.)

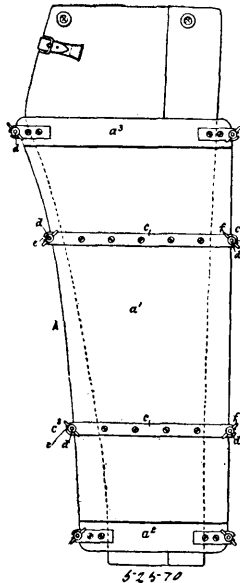


William D. Murphy, Boston, Massachusetts, U.S.A., 6th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—1st. The combination with the switch and the pivoted switch-plate connected therewith, of the vertically movable rod

carried by the car and provided with a shoe and a foot-lever, substantially as specified. 2nd. The combination with the switch and the pivoted switch-plate connected therewith, of the vertically movable rod carried by the car and provided with a shoe and a foot-lever, and a spring acting on the rod to normally hold it in its uppermost position, substantially as specified. 3rd. The combination with the switch and the pivoted switch-plate connected therewith, of the vertically movable rod carried by the car and provided with a shoe and a foot-lever, and a spring acting on the rod to normally hold it in its uppermost position, said switch-plate being provided with oppositely disposed hooks, substantially as specified. 4th. The combination with the car and the independently movable, vertically disposed rods provided with shoes and foot-levers, and the springs acting upon the same to normally hold them in their uppermost position, of the switch-plate pivoted between the tracks and having oppositely disposed arms, the switch pivotally mounted, and the rod pivotally connected with said switch and with the switch-plate, substantially as specified.

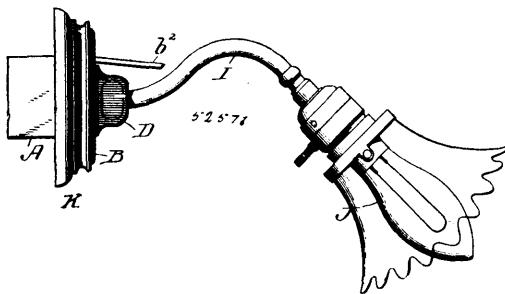
No. 52,570. Presser and Stretcher for Trousers, etc.
(*Pressoir et tendeur pour pantalons, etc.*)



Robert Brown Colley, St. Heliers, Jersey, Channel Islands, 6th June, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—A combined presser and stretcher for trousers and other articles, consisting in the combination of a base-board, two short clamping-boards or portions to hold the garment stretched, a long intermediate presser portion, and means of connecting the clamping and pressing portions to the base-board consisting of pivoted screw-bolts, notched lugs, and wing-nuts, substantially as specified.

No. 52,571. Electric Light Fixture.
(*Applique pour lumières électriques.*)



Frederic Augustus Chapman, Philadelphia, Pennsylvania, U.S.A., 8th June, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. In an electric light fixture, a plug provided on opposite sides with chambers, electrical connections within the chambers, a casing inclosing the plug and provided with contact-plates engaging similar plates on the plug, and a lamp electrically connected with the plug, substantially as described. 2nd. In an electric light fixture, a plug provided on opposite sides with chambers, electrical connections within the chambers, external contact-plates electrically connected with the said connections, a casing inclosing the plug and having contact-plates connecting with the source

of electricity, and a lamp electrically connected with the plug, substantially as described. 3rd. In an electric light fixture, a plug-casing provided with contact-plates, and a lid, substantially as described. 4th. In an electric light fixture, a plug-casing having internal contact-plates, a lid, and a mat, substantially as described. 5th. In an electric light fixture, the combination with a plug-casing, of a face-plate secured thereto having a lid, and a mat to which the said plate is attached, substantially as described.

No. 52,572. Process of Preparing a Beverage.
(*Procédé de préparation de breuvage.*)

Alexander Bernstein, Berlin, Germany, 8th June, 1896; 6 years. (Filed 18th May, 1896.)

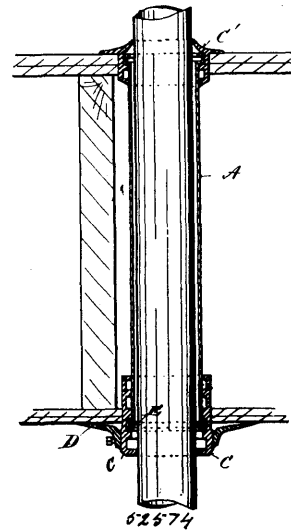
Claim.—1st. The process of preparing a beverage from the by-products of dairies, such process consisting first, in separating the whey, then acidulating this whey and subsequently heating it, and then filtering it after solidifying the fat by cooling, substantially as set forth. 2nd. The process of preparing a beverage from the by-products of dairies, which consists of the following steps: first, separating the whey; second, acidulating the whey; third, heating it; fourth, cooling the whey for solidifying the fat; fifth, filtering the liquid, and lastly, subjecting it to alcoholic fermentation, substantially as set forth. 3rd. As a new article of manufacture, a clear, transparent beverage obtained from the by-products of dairies, and being free of fat and containing of protein-matter only the albumose and lactoprotein of the milk, substantially as set forth. 4th. As a new article of manufacture, a clear, transparent, fermented beverage, obtained from the by-products of dairies, being free of fat and containing no other protein-matter than albumose and lactoprotein, substantially as set forth.

No. 52,573. Fire Brick. (*Brique réfractaire.*)

Edward New, Hamilton, Ontario, Canada, 8th June, 1896; 6 years. (Filed 19th May, 1896.)

Claim.—A compound composed of freestone, ground to a proper fineness, and fire-clay both mixed together, and diluted with water when necessary, to form the proper consistency for the moulding, and hardening process, substantially in the proportions and for the purposes set forth.

No 52,574. Pipe Thimble. (*Brides pour tuyaux.*)

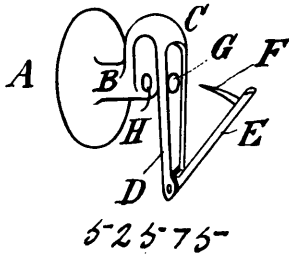


David A. Brislin, St. Louis, Missouri, U.S.A., 8th June, 1896; 6 years. (Filed 11th May, 1896.)

Claim.—1st. The combination with a pipe passing through a partition, of a resilient tube enclosing said pipe and of fixed length, and end pieces or sockets, mounted on said tube to support its ends away from the pipe and form an air space, one or both of said end pieces being adjustable lengthwise of the tube by the resiliency of the latter. 2nd. The combination with a partition and a pipe passing therethrough, of a resilient split tube of fixed length that is substantially the thickness of the partition, and enclosing said pipe, a socket at one side of the partition, and a matching socket or end piece, at the other side of the partition, one of the said end pieces being adjustable on the tube by means of interlocking grooves and projections on the tube and end piece, substantially as described. 3rd. As an improved article of manufacture, a slip-tube guard for a hot pipe through a partition, consisting of an enclosing tube for the pipe and of a fixed length and forming a dead air space about the pipe, a socket at each end of the said tube, one or both provided with independent grooves and projections adapted to engage with the corresponding shoulder on the end of the tube, for the adjustment of the end pieces to the partition, and an adjustable collar

mounted on the adjustable end piece, substantially as described. 4th. As an improved article of manufacture, a flanged socket having a plurality of circumferential alternating grooves and ridges, of a resilient slip tube having a circumferential bead and shoulder at one end adapting it to be adjusted lengthwise with regard to said socket, and a flanged end piece on the other end of said tube, whereby a single tube adjustably connects the two flanged end pieces. 5th. A slip tube having overlapping unconnected side edges and an outwardly projecting circumferential bead or groove at the end, and provided with a spring hoop or ring mounted in said groove, substantially as described. 6th. The combination with a slip tube having unconnected side edges, and a spring ring or hoop tending to return the tube to its original diameter after varying its diameter.

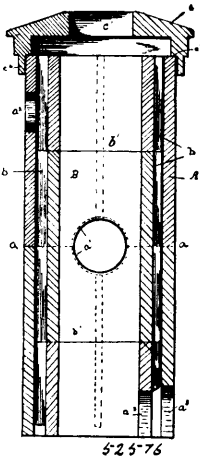
No. 52,575. Collar Button. (*Bouton de faux-col.*)



Charles H. Knubel, New York, State of New York, U.S.A., 8th June, 1896; 6 years. (Filed 12th May, 1896.)

Claim.—1st. A collar button provided with a shank shaped into the form of a hook which is adapted to receive a tie or scarf, in combination with a pin or spur carried by the button and having movement into and out from the space between the members of the hook, whereby to engage and hold the tie or scarf, substantially as set forth. 2nd. A collar button provided with a shank shaped into the form of a hook adapted to engage and hold a tie or scarf, a spur or pin pivotally mounted upon said hook and capable of movement into and out from the space between the members of the said hook, for the purpose of engaging and holding the tie, substantially as set forth. 3rd. In combination with the head A and shank B, the hook C attached to the shank for the purpose of receiving the tie or scarf, and the spur or pin F pivotally attached to said hook and extending through one of the two members thereof and into the hook space occupied by the scarf or tie, substantially as and for the purpose set forth.

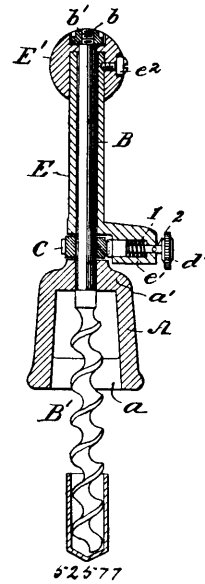
No. 52,576. Tile Flue, etc. (*Cheminée en tuile.*)



Henry J. McKnight, Shelburne Falls, Massachusetts, U.S.A., 8th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—1st. In a tile flue or chimney, an inner, hollow tile, provided with laterally-projecting, integrally formed ribs, and the separately formed, outer hollow tile, surrounding said inner tile and forming therewith an intermediate ventilating duct, in combination with the centrally perforated cap, recessed above the ventilating and smoke flues, secured to the outer tile and serving to unite the ventilating and smoke flues in a common outlet, substantially as described. 2nd. The combination in a tile flue or chimney, of the inner hollow tiles, made rectangular in form, in cross-section, and having the integrally-formed, laterally-projecting ribs midway of their flat sides, the outer hollow tiles, also rectangular in form, made separate from and arranged to break joints with the inner tiles and to form in connection therewith an intermediate air-flue, and the recessed cap covering said air-flue and uniting it with the inner smoke flue, in a common discharge outlet, substantially as described.

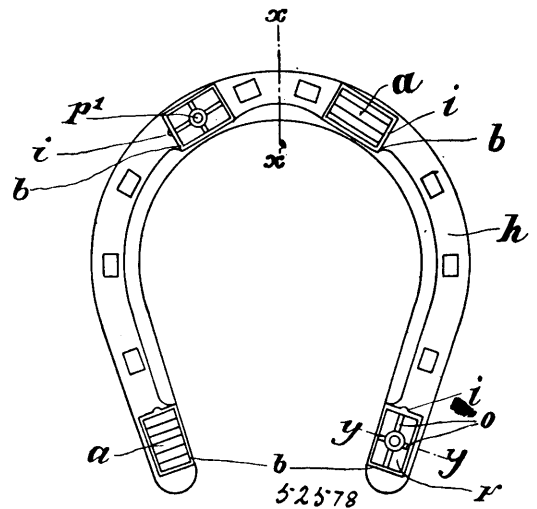
No. 52,577. Cork Screw. (*Tire-bouchon.*)



Robert A. Brown, New York, State of New York, U.S.A., 15th May, 1896.

Claim.—1st. A cork screw, comprising a screw portion having a ratchet wheel upon the spindle thereof and a collar surrounding said spindle, said collar having an arm thereon which carries a reversible spring-pressed bolt for engagement with the said ratchet-wheel, substantially as shown and described. 2nd. In a cork screw, the combination of a handle having a collar attached thereto which has an arm projected therefrom and a spring-pressed bolt secured to said arm, and a screw portion having a spindle projected upwardly through the said collar and having a ratchet-wheel connected thereto for engagement with the said spring-pressed bolt, substantially as shown and described. 3rd. In a cork screw, the combination of a screw having a spindle projected from its upper end and an arbour through which said spindle is journaled and a ratchet-wheel secured to said spindle, and a collar surrounding the said spindle, said collar having a handle and an arm thereon said arm having a reversible spring-pressed bolt thereon for engagement with the said ratchet-wheel, substantially as shown and described.

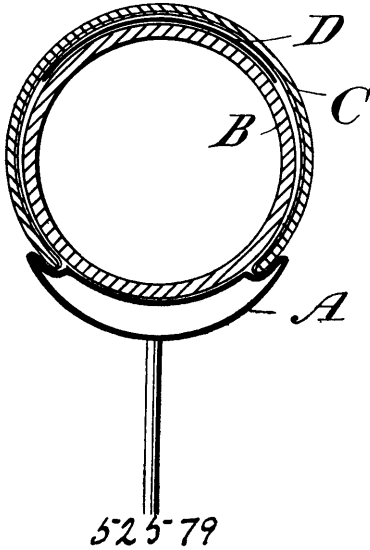
No. 52,578. Horse Shoe, etc. (*Fer à cheval.*)



Duncan Albert Davidson, Kingston, Ontario, Canada, 8th June, 1896; 6 years. (Filed 7th May, 1896.)

Claim.—1st. In horse and other analogous shoes the arrangement on the under side thereof, of three or more recesses wherein are fitted a similar number of self-adjusting calks or wearing pieces, substantially as herein described and shown, and for the purpose set forth. 2nd. The improved shoe for horses and other beasts of burden arranged, constructed and operating, substantially as herein described and shown.

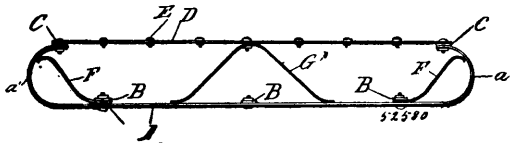
No. 52,579. Pneumatic Tire. (*Bandage pneumatique.*)



Robert Edward Sparks, Kingston, Ontario, Canada, 8th June, 1896; 6 years. (Filed 7th May, 1896.)

Claim.—1st. In a pneumatic tire, the combination with the rim, inflatable tube and cover or tread, of a thin and flexible metallic hoop having open and overlapping ends and curved in cross-section to the same curvature as the inflated tube and fitting upon the same, substantially as set forth. 2nd. A pneumatic tire protector consisting of a hoop of thin flexible and hard material curved in cross-section to fit and lie upon the tread portion of the inflated tube, substantially as set forth.

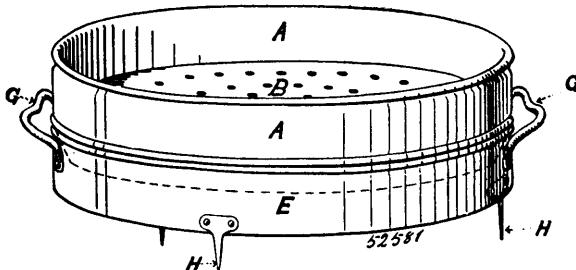
No. 52,580. Spring Bed. (*Sommier élastique.*)



William Raphaël Boisvert, Levis, Quebec, Canada, 8th June, 1896; 6 years. (Filed 11th May, 1896.)

Claim.—1st. In a spring bed, the combination, with a series of longitudinal bars provided with upwardly curved ends, and the cross-pieces B and C secured to the said bars, of a series of spring bars D secured to the cross-pieces C, and a series of spring cross-bars secured to the outer end bars of the series of spring bars D and interlacing with the said spring bars, substantially as set forth. 2nd. In a spring bed, the combination, with a series of longitudinal bars A provided with upwardly curved ends, cross-pieces B secured to the lower parts of the bars A, and cross-pieces C secured to the said curved ends of the bars A, of a series of spring bars D secured to the said bars C, a series of spring cross-bars secured to the outer end bars of the series of spring bars D, and springs interposed between the bars A and their curved ends and between the bars A and the said spring bars, substantially as set forth.

No. 52,581. Basting Colander. (*Passoire.*)

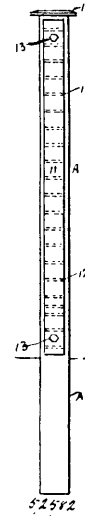


Edward Charles Johnston, Folkestone, Marrickville, New South Wales, Australia, 8th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—The improved basting colander consisting of upper and lower compartments or vessels, the upper fitting within the lower

and each having a perforated bottom or disc, the upper perforations being larger than those in the lower vessel, substantially as herein described and explained and as illustrated in the drawing.

No. 52,582. Fence-Post. (*Pieu de clôture.*)

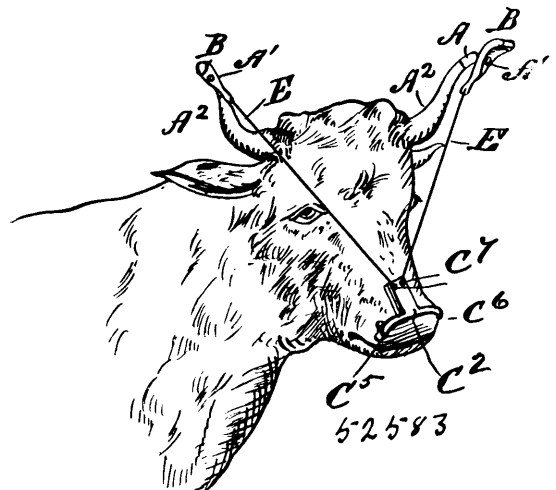


William John Sleep, Birmingham, Alabama, U.S.A., 8th June, 1896; 6 years. (Filed 11th May, 1896.)

Claim.—1st. In a fence-post, a binding-strip adapted for contact with the said post and having transverse grooves or channels formed on its contact-face, and means for securing the binding-strips to the post, as and for the purpose set forth. 2nd. The combination with a fence-post, of a binding-strip having one of its faces provided with transverse grooves or channels, the said face being adapted for contact with one of the faces of the said post, bolts passing through the binding-strip and post, and lock-nuts carried by the bolts for holding the strip in contact with the post, as and for the purpose specified. 3rd. A fence-post of box-like construction provided with longitudinal slots or openings, and having one or more drainage openings located at or near the ground-line and communicating with the interior of the post, the said post being provided with undercut downwardly-inclined brackets to receive the upper ends of braces, and a binding-strip held in engagement with one of the faces of said post and provided with transverse grooves on its contact-face for securing wires to said post, as and for the purpose set forth.

No. 52,583. Guards for the Horns of Cattle.

(*Défense pour cornes d'animaux.*)

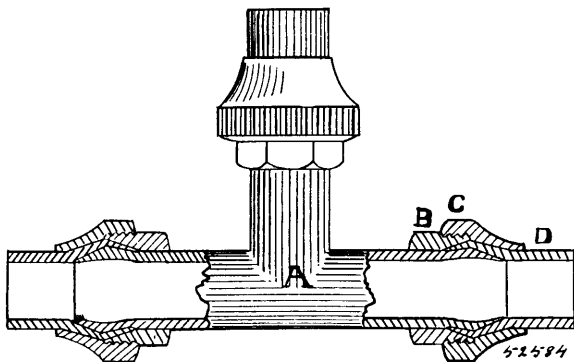


Joseph Lemuel Straw, Seward, Illinois, U.S.A., 8th June, 1896; 18 years. (Filed 9th May, 1896.)

Claim.—1st. In guards for the horns of bees, in combination, a bearing-stud rigidly secured in relation to one of the horns of the animal, a lever mounted on the stud and having a universal bearing therewith, between the end of the lever by means of a longitudinal slot in said lever, a nose-ring and a suitable connection between the lower end of the movable lever and the nose-ring, substantially as

and for the purpose specified. 2nd. In guards for the horns of beeves, in combination, a socket inclosing the end of the horn, a rigid mounting-stud integral therewith, a lever having a longitudinal slot forming a universal joint with said stud, a retaining-button secured to the stud, a nose-ring and a suitable connection between the lower end of the movable lever and the nose-ring, substantially as and for the purpose specified. 3rd. In guards for the horns of beeves, in combination, a socket inclosing the end of the horn, a stud projecting therefrom, a retaining-button on the stud, a curved lever, having a longitudinal slot between its ends, mounted upon the stud and having a universal bearing therewith by means of the slot therein, a nose-ring and a flexible connection between the ends of the lever and the nose-ring, substantially as and for the purpose specified.

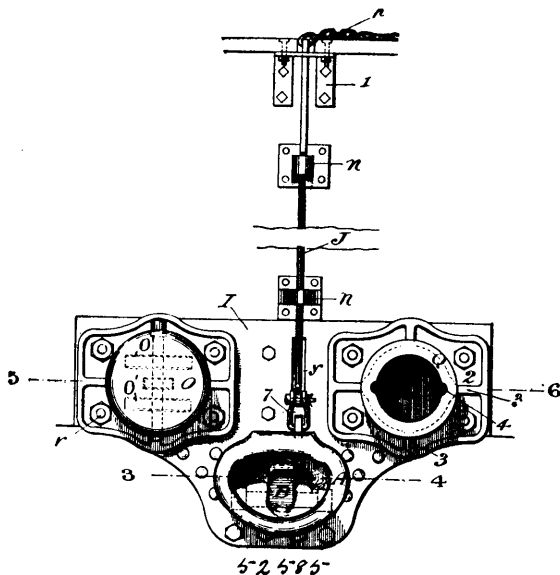
No. 52,584. Pipe Coupling. (*Joint de tuyaux.*)



George Henry Meakins, Hamilton, Ontario, Canada, 8th June, 1896; 6 years. (Filed 11th May, 1896.)

Claim.—The double taper end of stock piece in combination with the hollowed tapered nut screwed on the outside, and the hollowed taper screwed cap, substantially as and for the purpose hereinbefore set forth.

No. 52,585. Railroad Car. (*Char de chemin de fer.*)



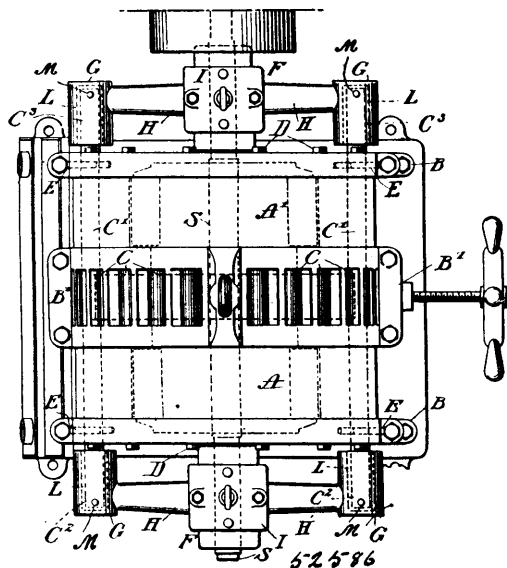
George Thomas Tribe, Worcester, Massachusetts, U.S.A., 9th June, 1896; 18 years. (Filed 18th May, 1896.)

Claim.—1st. In a draw-head for railway-cars, the combination with the head A provided with an opening for the reception of the tumbler B and with the shoulder A', of the belt b secured in the draw-head below the centre, the tumbler B, pivoted on the bolt b, provided with the link-hook B', the back hook B² and the heel B³, the heel-latch C provided with the rearward-extending arm C', the lever D having the lug c under the arm C', and the horizontal rod M having handle N for operating the same from the side of the car, as described. 2nd. The combination, in a car-coupling device, with the draw-head A provided with the shoulder A', the tumbler having the hooks B¹ and B² and the heel B³, the heel-latch C with the arm C' and the bolts b and d, of the rod M, the lever D provided

with the lug c, the bell-crank-lever E one arm provided with the lug e, and connections with the rod M and the bell-crank-lever E constructed to operate the coupling device from the side of the car and from the roof, as described. 3rd. In a railroad-car, the combination with the draw-head and draw-bar, of the plate I at the end of the car forming the base for the buffers and support for the draw-head, the plates H, H, at each side of the draw-head-channel, the flanged plates K, K, forming the sides of the draw-bar-channel and secured to the plates H, H, the frame G secured to the plates K, K, and forming the support of the draw-head-spring, the sleeves l, l, and the spring m, the whole constructed to support the draw-head and draw-bar add connect the same with the car-frame, as described. 4th. The combination with the car-frame, of the plate I, the plates H, H, forming supports for the draw-bar-spring, the flanged plates K, K, secured to the plates H, H, the sleeve g, and the angle-plates X, X, by which the plates K, K, and the sleeve g are secured to the plate I; the whole constructed to form a rigid support for the draw-head and the buffers, as described. 5th. The buffer herein described, the same consisting of the cylindrical base Q provided with the ways 4, the piston P having the ribs 5, the rod S secured to the head of the piston, the spring s, and the pivoted disc O, as described. 6th. In combination, in the end-frame of a railway-car with the plate I provided with an opening for the draw-head and two openings for the bases of the buffers, the flanged-plates K, the plates H, the sleeve g, and the angle-plates X, X, and h, of the draw-head provided with a coupling device, the draw-bar, the iron frame G, the sleeves l, l, and the spring m for connecting the draw-head with the car-frame, and the buffers, one on each side and above the draw-head, consisting of the cylindrical bases Q, the piston P, the springs S and the pivoted disc O, constructed to yieldingly resist the concussion of the ends of the cars, as described.

No. 52,586. Pillow Block and Support.

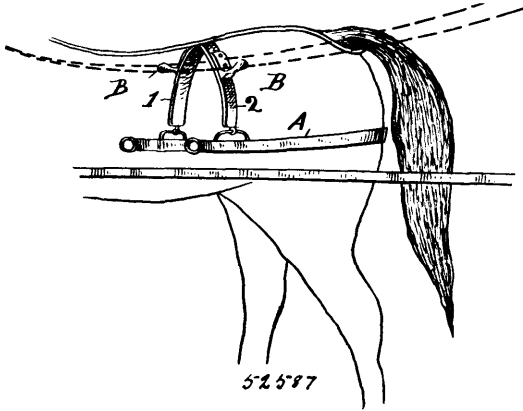
(*Palier et support.*)



Pomeroy W. Power, Pittsfield, Massachusetts, U.S.A., 9th June, 1896; 6 years. (Filed 27th April, 1896.)

Claim.—1st. In a machine having suitable projections, a pillow block having tubular or cup-shaped portions fitted over said projections, and a filling of lead poured into the space between the projections and the interior of the cup-shaped portions, the parts being secured against relative movement, substantially as described. 2nd. In a dynamo electric machine having a stationary armature, two bars extending through the machine so as to have ends protruding from each end of the machine, in combination with a pillow block supported from said protruding ends, the parts being secured against longitudinal movement, substantially as described. 3rd. In a dynamo electric machine having a stationary armature composed of two parts connected by a magnetic bridge consisting of a series of bars, two bars of the magnetic bridge extending through the machine and protruding at each end, in combination with two pillow blocks supported by the ends protruding in the same direction, substantially as described. 4th. In a dynamo electric machine having a stationary armature composed of two parts connected by a magnetic bridge consisting of a series of bars, two bars of the magnetic bridge extending through the machine and protruding at each end, in combination with two pillow blocks, each having tubular partitions surrounding one pair of said protruding ends, and a filling of soft metal poured into the spaces between the ends and the surrounding tubular portions, substantially as described.

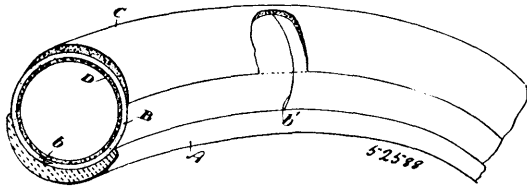
No. 52,587. Harness Attachment. (Attache de harnais.)



Orrin Berkley Reid, Charlotte, Vermont, U.S.A., 9th June, 1896; 6 years. (Filed 29th April, 1896.)

Claim.—1st. In combination with a harness, a rein-holder, comprising oppositely arranged plates secured to the hip-straps of the harness, and formed at one end with a vertically projecting rein-holding lug, substantially as specified. 2nd. In combination with a harness, a rein-holder, comprising oppositely arranged bent or curved plates secured to the hip-straps of the harness, and formed at one end with vertically projecting lugs having curved necks and enlarged heads, substantially as and for the purpose specified. 3rd. As a new and improved article of manufacture, the rein-holder herein shown and described, consisting of a metal strap-piece curved or bent for the purpose stated and formed with a projecting lug at one end having a curved neck or shank and an enlarged end, substantially as specified and for the purpose stated.

No. 52,588. Pneumatic Tire. (Bandage pneumatique.)



Benson Peter Alexander and David Watson Alexander, both of Toronto, Ontario, Canada, 9th June, 1896; 6 years. (Filed 20th April, 1896.)

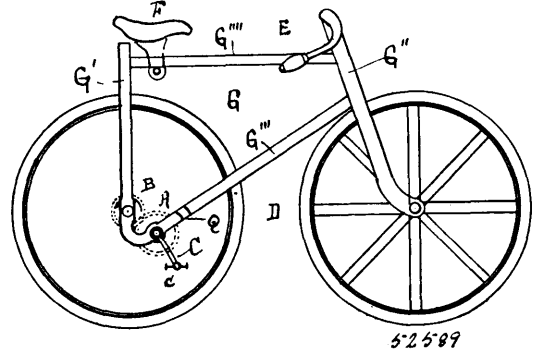
Claim.—1st. In a bicycle or other wheel the combination with the rim, of a thin leather envelope designed to fit thereon and having suitable joints for the ends and circumferential edges and held by the air-tube when expanded in substantially circular cross sectional form, and a tread of rubber encircling the periphery of the envelope and designed to cover and hold the end joint from ripping, as and for the purpose specified. 2nd. In a bicycle or other wheel the combination with the rim, of a thin leather envelope designed to fit thereon and held by the air-tube when expanded in substantially circular cross sectional form and a tread consisting of a band extending around the peripheral outer surface of the envelope or tire and formed crescent-shaped in cross section the thickest portion of the crescent being in the centre of the tread and such band being securely cemented to the envelope throughout and a reinforcing lining of fibrous material between the band and the envelope, as and for the purpose specified.

No. 52,589. Bicycle. (Bicycle.)

George James Lunn, Montreal, Quebec, Canada, 9th June, 1896; 6 years. (Filed 9th April, 1896.)

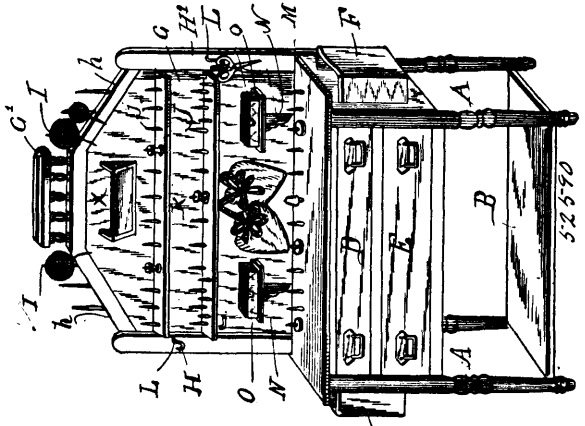
Claim.—1st. A bicycle, having its saddle placed vertically above its driving wheel and spur wheels journalled to the frame thereof, meshing into pinions made one with the driving wheel on each side thereof, the spur wheels operated by rearwardly turning crank arms moved by the feet of the rider, substantially as set forth. 2nd. A bicycle, having its saddle placed above but in rear of its driving wheel and having spur wheels journalled to its frame, meshing into pinions made one with the driving wheel on each side thereof, the spur wheels operating by rearwardly turning cranks, substantially as set forth. 3rd. A bicycle, having its saddle placed vertically over its driving wheel and a sprocket wheel or wheels journalled to the frame thereof, the chain or chains whereof engaged with the teeth of the smaller sprocket wheel or wheels made one with the driving wheel, the driving sprocket wheel placed very near to the rider and operated by forwardly turning crank arms, substantially as set forth. 4th. A bicycle, having its saddle placed vertically in rear of and above its driving wheel and a sprocket wheel or wheels journalled to the frame thereof, the chain or chains whereof engaged

with the teeth of a smaller sprocket wheel or wheels made one with the driving wheel, the driving sprocket wheel placed very near



to the rider and operated by forwardly turning crank arms moved by the feet of the rider, substantially as set forth. 5th. A bicycle, having saddles placed vertically above its driving and its guiding wheels whereby the legs of the riders as well as their weight will be brought to bear directly upon the crank arms, each wheel moved independently of the other, substantially as set forth. 6th. A bicycle, having saddles placed vertically in rear of but above its driving and its guiding wheels whereby the legs of the riders as well as their weight will be brought to bear directly upon the crank arms, each wheel moved independently of the other, substantially as set forth. 7th. A bicycle, having a frame made up of a vertical and a horizontal side, the former bearing the saddle and the driving mechanism, the latter joined to the rearwardly inclined side of said frame, bearing the guiding wheel and mechanism, and a forwardly and upwardly extending side to brace the other three sides firmly and to assist the closer assembling of parts, substantially as set forth. 8th. A bicycle driving mechanism, consisting of internally toothed gear wheels centrally placed upon a shaft or arbour extending from side to side of the machine, loosely moving in a sleeve bearing a pinion at each of its ends, the teeth of which are in line with those of the internally toothed wheels, meshing with those of idle wheels suitably journalled to the frame of the machine and conveying the motion imparted by the internally toothed wheels to the pinions, said pinions made one with the bicycle wheel, substantially as set forth. 9th. A driving mechanism for bicycles, consisting of a pinion mounted upon a hollow arbour or sleeve, within which an arbour turns loosely, bearing at its ends two internally toothed wheels extending into cranks, the whole suitably journalled to the frame of the bicycle, substantially as set forth. 10th. A rearwardly turned bearing for the guiding wheel of a bicycle, substantially as and for the purposes hereinbefore set forth. 11th. A bicycle step, arranged to be folded up by the crank of the machine, and to be held out of the way of the crank by means of a spring or detent, substantially as set forth. 12th. The bicycle step S, pivotally secured to the block Q, through the centre S¹, holding against the frame G when down, but held up out of the way of the crank arm by means of the spring R, having the terminal or detent T, all combined and arranged, substantially as set forth.

No. 52,590. Work-Table. (Table à ouvrage.)

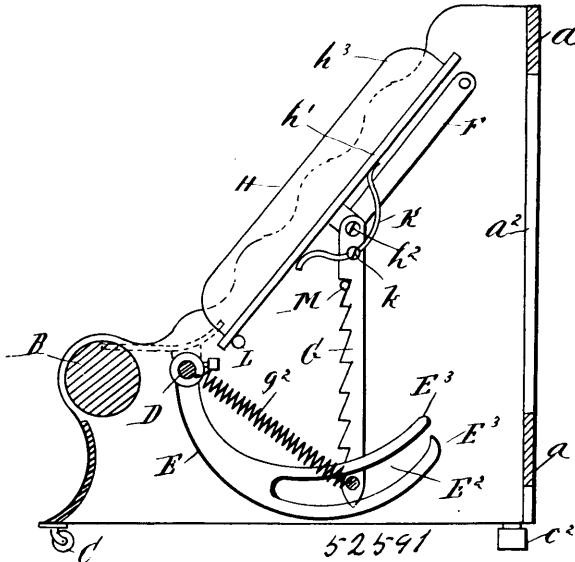


Lottie Cox, Blue Springs, Nebraska, U.S.A., 9th June, 1896; 6 years. (Filed 7th May, 1896.)

Claim.—1st. A work-table provided with pockets at the ends and rear, as set forth. 2nd. A work-table provided with pockets at the ends and rear and having a back provided with pegs for the reception of thimbles, spools and other articles, as set forth. 3rd. A work-table provided with pins, hooks, pockets, drawers, boxes, and a shelf, substantially as described. 4th. The work-table described

consisting of the supporting legs, a shelf and a top supported thereby, pockets at each end, pockets at the back, cross-bars upon the front face of the back, and pins supported in said cross-bars, substantially as and for the purpose specified. 5th. The work-table described consisting of the legs, the shelf, the top and the back, the pockets at each end, the pockets on the rear face of the back, the cross-bars at the front of the back, the pins held in said cross-bars, the brackets, the boxes thereon, the hooks, and the pins on the inclined side portions of the back, all substantially as shown and described.

No. 52,591. Foot-Rest. (Appui-pieds.)



Ruffus Day Brown, Gardner, Massachusetts, U.S.A., 9th June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. A foot-rest provided with a stationary and with an adjustable support or rest for the feet substantially as shown and described. 2nd. A foot-rest provided with a stationary and with an adjustable support or rest for the feet which comprises a frame or casing which is provided with two side plates between which the adjustable support or rest is mounted, substantially as shown and described. 3rd. A foot-rest substantially as herein shown and described, comprising a stationary frame or casing having pivotally connected therewith a support or rest for the feet rendered adjustable by means of levers and rack bars mounted upon a transverse shaft, which shaft also carries backwardly curved arms as means for operating the rack bars and shaft, substantially as shown and described. 4th. The combination with a chair of a stationary depending frame with side plates, a foot-rest pivoted to said plates and adjustable by means of rack bars held forward by spiral springs and operated by backwardly directed curved arms, substantially as shown and described. 5th. The combination of a chair of an adjust-foot-rest comprising a stationary frame side plates, pivoted shaft, levers, rack bars, spiral springs backwardly directed arms disposed in relation to each other so as to operate and adjust the foot-rest, substantially as shown and described.

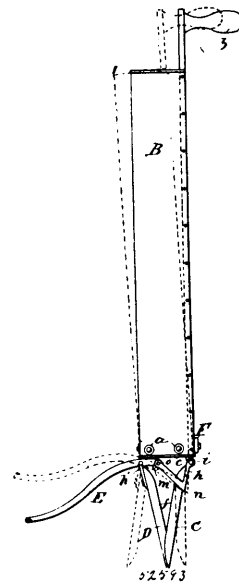
No. 52,592. Lap-Board. (Planche à plier.)



Sophia Magdalena Rivers, New York, State of New York, U.S.A., 9th June, 1896; 6 years. (Filed 11th May, 1896.)

Claim.—1st. A lap-board having an arched or rounded outer face, substantially as shown and described. 2nd. A lap-board having its outer face curved and its bottom surface adapted to fit over the lap of the user, as and for the purpose specified. 3rd. A lap-board of substantially circular formation, having a recess in its bottom portion, whereby the lap of the operator may enter the said board, as and for the purpose specified. 4th. A lap-board of substantially circular or rounded construction, having its under portion adapted to the lap of the user, its inner face being provided with a frictional surface to prevent the board from slipping from the lap, as and for the purpose specified. 5th. An arched lap-board having its exterior surface adapted to receive fastening devices and its lower portion shaped to fit over the lap of the user of the board, as and for the purpose specified.

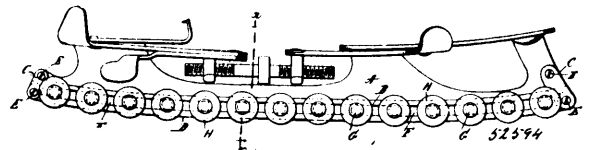
No. 52,593. Planter. (Plantoir.)



Delmer H. Moore and Charles J. Abbot, both of Greenville, Michigan, U.S.A., 9th June, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. In a planter, the combination of the opposed jaws hinged independently, the operating handle, the outwardly-extending actuating arm mounted on one of said jaws, and the means connecting said jaws for causing them to recede and approach in unison. 2nd. In a planter, the combination of the spout and handle, the opposed jaws hinged independently to the lower end of said spout, the extended actuating arm mounted on one of said jaws, and the means connecting said jaws for causing them to act in unison as said arm is actuated. 3rd. In a planter, the combination of the spout and handle, the opposed jaws hinged to the lower end of said spout and adapted to close beneath the opening therein, the lateral arm mounted on one of said jaws, and the inwardly-extending arms fixed to said jaws, their inner ends being pivoted together. 4th. In a planter, the combination of the spout and handle, of the opposed jaws hinged to the bottom of said spout, the lower ends of said jaws meeting but leaving an opening between the sides thereof, the extended actuating arm mounted on one of said jaws, and the jointed coupling connecting said jaws whereby they are caused to act in unison through the operation of said arm.

No. 52,594. skate. (Patin.)



Samuel Louis Schwartz, New York, State of New York, U.S.A., 9th June, 1896; 6 years. (Filed 11th May, 1896.)

Claim.—1st. A roller skate having a longitudinal and continuous bottom in which is mounted a number of pairs of rollers on shafts, which extend therethrough and which are free to revolve therein, substantially as shown and described. 2nd. A roller skate having a longitudinal and continuous bottom in which is a longitudinal slot, through which passes a number of shafts each of which has mounted thereon at each end a roller, the arrangement being such that the shafts are free to move in said slot, substantially as shown and described. 3rd. A roller skate having a longitudinal and continuous bottom piece, flat on its lower side, a plate substantially the same form secured thereto in such manner as to leave a long

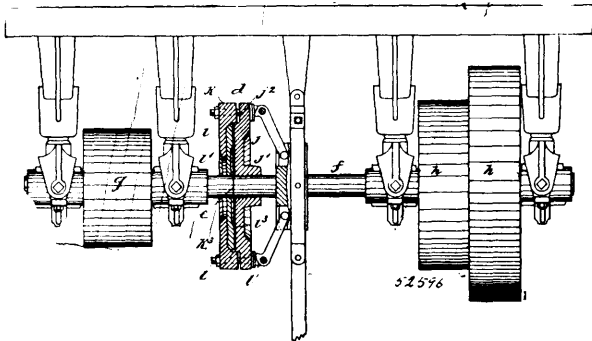
tudinal slot between the bottom piece and plate, and a number of shafts loosely mounted in said slot, each of which has a roller on each end thereof, the shafts being free to revolve and move longitudinally in the slot, substantially as shown and described.

No. 52,595. Process of Producing Basic Carbonate of Lead. (*Procédé pour la production de carbonate de plomb.*)

Oswald Hamilton, The Undershoe, Northfleet, Kent, England, 9th June, 1896; 6 years. (Filed 11th May, 1896.)

Claim.—The herein described process of producing basic carbonate of lead (white lead) from oxide of lead or litharge, which consists in treating the latter with a dilute solution of the acetates of lead and ammonium in or in about the proportions specified, substantially as set forth.

No. 52,596. Friction Clutch. (*Embrayage à friction.*)

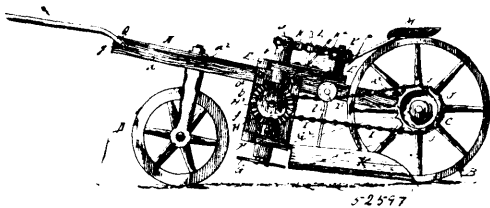


Thomas Hemenway Worrall, assignee of Alexander Lesperance, both of Laconia, New Hampshire, U.S.A., 9th June, 1896; 6 years. (Filed 1st May, 1896.)

Claim.—1st. A friction clutch mechanism, comprising in its construction two co-operating clutch members, one connected with the driving means and the other with the driven means, a clamping member constructed as a ring, unconnected directly with either the driving or driven means, and arranged to bear upon one of the clutch members, bolts connecting the said clamping member with the remoter clutch member, and levers fulcrumed upon the said bolts and adapted to act upon the last mentioned clutch member to effect the drawing of the members together as described, two of the said members having co-operating bevel surfaces, as set forth, to effect the alignment or centring of the parts and their connections. 2nd. A machine or shaft drive, comprising in its construction a divided shaft, a driven pulley fast upon one part of the said divided shaft, and a friction clutch coupling arranged upon the shaft at the point of division to connect and disconnect the two parts of the shaft, the said clutch coupling being constructed and arranged to centre or bring into alignment the parts of the said shaft. 3rd. A machine or shaft drive, comprising in its construction a shaft divided at two points transversely of its length, a driven pulley fast upon the central part of the said shaft, and friction clutch couplings arranged upon the shaft at the points of division to connect and disconnect the two end or outer parts of the shaft and with the central part, substantially as described.

No. 52,597. Corn Harvester.

(*Moissonneuse pour blé d'inde.*)

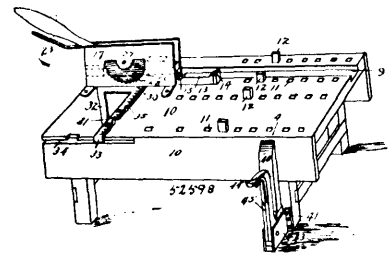


Wilson William Smith, Fritchton, Indiana, U.S.A., 10th June, 1896; 6 years. (Filed 15th May, 1895.)

Claim.—1st. In a corn harvester, the combination with a wheel supported frame provided with a transverse beam suspended therefrom, a revolving shaft mounted in the beam, and a cutter on the lower end of the said shaft, of a rock-shaft mounted on the rear side of the transverse beam and projecting beyond the end of the same, said shaft being provided with a rearwardly-projecting arm, a semi-cylindrical dumping platform secured to the end of the said shaft, a foot-lever on the frame, and a rod connecting the foot-lever with the arm of the rock-shaft, substantially as described. 2nd. In a corn harvester, the combination with a wheel-supported frame provided with a platform on the upper part and with a transverse beam suspended from the frame below the platform, the ends of the platform and beam projecting beyond the sides of the frame, of a shaft

mounted in the projecting end of the transverse beam and provided with a cutter on its lower end and a pinion on its upper end, a transverse shaft mounted in the hangers supporting the transverse beam and provided with a gear-wheel meshing with the pinion of the cutter shaft, means for operating the transverse shaft from the axle of the drive-wheels, an endless chain on the platform and provided with fingers, and means for operating the endless chain from the transverse shaft, substantially as described. 3rd. In a corn harvester, the combination with a wheel-supported frame provided with a platform and with a transverse beam suspended below the platform, the ends of the platform and beam projecting beyond the frame, of a shaft mounted in the projecting end of the transverse beam and provided with a cutter on its lower end and a pinion on its upper end, a transverse shaft mounted in the hangers of the transverse beam and provided with a gear-wheel meshing with the pinion of the cutter-shaft, means for operating the transverse-shaft from the axle of the supporting wheels, a vertical shaft mounted in the projecting end of the platform and provided with a sprocket-wheel at its upper end and on its lower end with a pinion meshing with the gear-wheel of the transverse-shaft, a shaft also mounted in the projecting end of the platform and provided with a flanged pulley on its upper end, and an endless chain provided with arms and passing around the flange-pulley and sprocket-wheel, substantially as described. 4th. A corn harvester, comprising an inclined and wheel-supported frame, provided with a platform and a transverse beam suspended below the platform, the ends of the platform and beam projecting beyond the sides of the frame, cutter-shafts mounted in the projecting ends of the transverse beam, semi-cylindrical dumping platforms hinged to the rear of the transverse beam, means for operating the dumping-platforms from the platform of the frame, shafts mounted in the projecting ends of the frame-platform, one of the said shafts being provided with a sprocket-wheel, and the other with a flanged pulley, endless belts provided with fingers and passing around said sprocket-wheels and pulleys, and means for operating the cutter-shafts and one of the shafts of the platforms from the axle of the supporting-wheels, substantially as herein shown and described. 5th. A corn harvester comprising an inclined frame supported at the rear by two drive-wheels and at the platform front by a caster-wheel, said frame being provided with a transverse beam below the platform, cutter-shafts mounted in the ends of the transverse beam and provided with pinions on their upper ends, vertical shafts mounted in the ends of the platform and provided with pinions on their lower ends and sprocket-wheels on their upper ends, shafts also mounted in the ends of the platform and provided with flanged pulleys, endless chains provided with fingers and passing around the sprocket-wheels and pulleys, transverse shafts provided with a pinion meshing with the pinions of the cutter-shaft and the pinions of the vertical shafts mounted in the platform, means for operating the transverse shafts from the drive-wheels, semi-cylindrical dumping platforms mounted on the rear of the transverse beam and means for operating the dumping platforms from the platform of the frame, substantially as herein shown and described.

No. 52,598. Carpenter's Bench. (*Etabli.*)

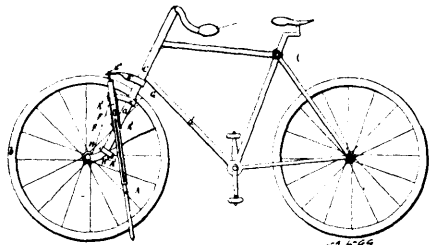


Eldridge M. Brown, Greenbank, West Virginia, U.S.A., 10th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—1st. The combination with the bench, the plunger slidable thereon, and the mechanism for working the plunger, of the laterally extending gage bar hinged to the plunger and provided with work-holding clips, substantially as described. 2nd. The combination with the bench, the sliding plunger thereon and the plunger working mechanism, of the gage bar having a hinge connection with the plunger, a guide for the gage bar, and work-holding clips on the gage bar, substantially as described. 3rd. The combination of a bench having a slot on one side, a plunger mounted on the bench and movable parallel to the slot, means for moving said plunger and locking same in position, and a gage bar hinged at one end to the plunger and having a bent portion adapted to slide in said slot in the bench, substantially as set forth. 4th. The combination of a bench having a slot at one side and a recess extending into said slot and forming an enlargement thereof, a plunger mounted on the bench and movable parallel to the slot, means for moving said plunger and locking the same in position, and a gage bar hinged at one end to the plunger and having at the other end a bent portion adapted to pass through the recess in the bench, substantially as set forth. 5th. The combination of a bench having a dog, a plunger movably mounted thereon adapted to clamp the work on the bench, and a gage carried by said plunger and extend-

ing over the face of the bench, substantially as set forth. 6th. The combination of a bench, a plunger movably mounted thereon, a gage bar hinged at one end to the said plunger and extending over the face of the bench, the other end of said bar being provided with means for holding it to the bench, substantially as set forth. 7th. The combination of a bench, a housing thereon comprising parallel sides having aligned perforations, one side of said housing being provided with a recess having a series of ratchet teeth arranged concentric with its perforation, a plunger mounted to slide in the housing and provided with a rack surface, a handled gear journaled between the perforations in the side of the housing with its teeth adapted to engage the rack surface of the plunger, and a locking device carried by the gear for locking the same to the housing, said locking device comprising a lever and a pawl connected thereto and adapted to engage the ratchet teeth on the side of the housing, substantially as set forth. 8th. The combination of a bench, a housing thereon comprising parallel sides, said housing having a series of ratchet teeth, a plunger arranged to play between the sides of the housing and provided with a rack surface, a handled gear journaled between the sides of the housing, with its teeth engaging the rack surface of the plunger, said gear having a recess formed transversely across it, a pawl located in said recess and adapted to engage the ratchet teeth on the housing, and an elbow lever pivoted to said gear, with one arm connected to the said pawl and the other arm arranged adjacent to the handle, substantially as set forth.

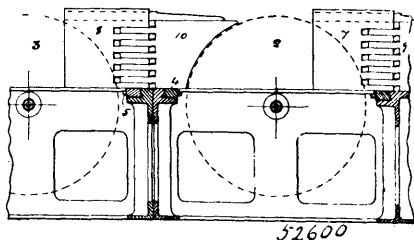
No. 52,599. Bicycle Support. (*Support de bicycles.*)



George Woolley, Goulburn, New South Wales, Australia, 10th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—1st. An improved adjustable support or rest or standard or leg attached or clipped to the front fork of a bicycle and adapted to be carried clear of the ground and of the wheels when the machine was in motion and to rest upon the ground and against the tire of the front wheel when the machine is at rest, substantially as herein described and explained. 2nd. The combination and arrangement with a bicycle of a telescopic standard or leg pivoted or hinged to a clip on the fork of said bicycle and adapted when closed up to be supported by a second clip on said fork, substantially as herein described and explained. 3rd. The combination and arrangement with a bicycle of a telescopic standard or leg pivoted or hinged to a clip on the fork of said bicycle and having an upward extension adapted to press against the tire of the front wheel and to receive a stop pin to prevent said wheel from swerving and turning, substantially as herein described and explained. 4th. The combination and arrangement with a bicycle of a telescopic standard or leg hinged to a plate swinging upon a pivot pin on the fork of said bicycle and having its upper end adapted to press upon the tire of the front wheel and to catch a holding spring, substantially as herein described and explained. 5th. The combination and arrangement of mechanical parts all together forming an adjustable telescopic standard or leg and attachments (and modifications of the same) for a bicycle, substantially as herein described and explained and as illustrated in the drawing.

No. 52,600. Circular Saw Machine. (*Scie circulaire.*)

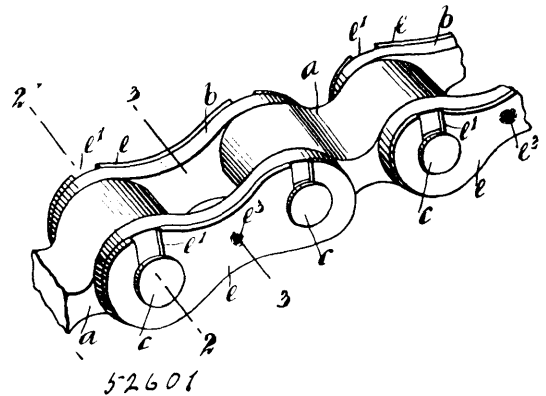


Charles Eaton Turnock, Liverpool, England, 10th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—1st. In circular saw machines the combination of two or more saws carried by separate spindles, one or more or all of them being capable of adjustment transversely and the combination therewith of plates, such as 9, 10, and fences 7, 8, substantially as herein shown and described and for the purpose stated. 2nd. In circular saw machines in which two or more saws are employed, the formation, construction and use of fences, such as 7, 8, and the com-

ination therewith of plates such as 9, 10, brackets 11, 12, and division-plates 13, 14, substantially as described and illustrated. 3rd. In circular saw machines employing two or more saws, the formation and use of guide plates such as 15, 16, and the combination therewith of feed rollers such as 24-28, substantially as described and for the purpose stated. 4th. In circular saw machines employing two or more saws as herein described, the method of driving the several saw spindles by mounting the pulleys upon sleeves to allow of endway movement of said spindles, substantially as herein described and illustrated. 5th. The general combination of parts constituting a circular saw machine for effecting the cutting of two or more boards simultaneously and embodying means for readily varying the lateral distance between the successive saws and for the employment of "swage" as well as ordinary circular saws, substantially as herein described and illustrated.

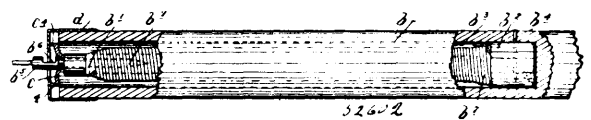
No. 52,601. Bicycle Chain. (*Chaîne de bicycles.*)



Frederick Knapp Patric, Jersey City Heights, New Jersey, U.S.A., 10th June, 1896; 6 years. (Filed 13th May, 1896.)

Claim.—1st. A chain comprising links, grooved pins, and auxiliary devices slotted to engage the grooved pins and having projections engaging indentation in the links, substantially as described. 2nd. In a chain, the combination with transversely bored links, one of which has a depression in its outer side, and grooved pins passing through such bores, of the spring fastening plates having slots to engage the pins and an intermediate projection adapted to enter the aforesaid depression the parts being held engaged, and yet adapted for disengagement, by the elasticity of the plates, as shown and described.

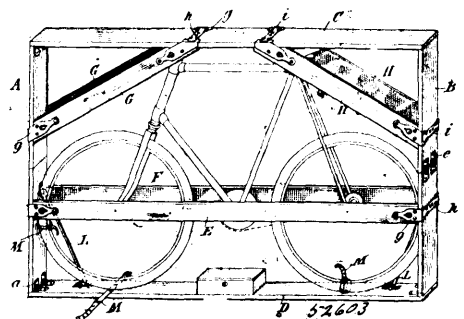
No. 52,602. Spring Roller. (*Rouleau à ressort.*)



Enoch Broberg, assignee of Truman M. P. Chapman, both of Minneapolis, Minnesota, U.S.A., 10th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—In a spring roller, the combination with the spear and spring-stick, of the guides *c*, having the spear passage *c*², the brads *c*³ and the side flanges *c*¹, all formed integral from a flat piece of metal, the pair of locking-dogs *e*¹ having shoulders *e*² and cam surfaces *e*³, mounted for radial sliding motion on said guide, on opposite sides of the spear, and the roller-cap *d* co-operating with the guides *c*, to hold the dogs *e*¹ in working position, all arranged and operating substantially as described.

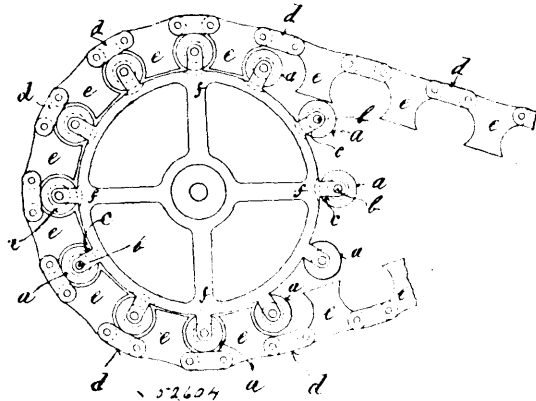
No. 52,603. Bicycle Crate. (*Boîte pour bicycles.*)



Herbert G. Street, New York, State of New York, U.S.A., 10th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—1st. A collapsible crate for bicycles composed of a four-sided frame, the sides of which are jointed together at the corners, in combination with the cross-bars E, F, detachably secured upon either side of the shorter lengths A, B, at a point to support the bicycle and hold the frame in expanded position, as set forth. 2nd. A collapsible crate for bicycles having the four sides of the frame jointed together at the corners and at two opposite central points on its ends, in combination with cross bars E, F, detachably secured upon either side of the ends A, B, at a point to support the bicycle, and diagonal braces G, H, having their ends detachably secured to the sides and ends of the frame in the manner set forth. 3rd. A collapsible crate for bicycles composed of a four-sided frame secured at the corners by hinges, two of the opposite sides being also hinged at or near their centres, in combination with cross-bars E, F, and the diagonal braces G, H, arranged to support the bicycle when placed in the crate, said cross-bars and braces being provided with catches for engaging with the sides, and when in such engagement forming a rigid frame or crate for containing a bicycle, as set forth. 4th. The combination with the frame, braces and cross-bars of a crate, of the metal plates *g*, and the spring-plates *l*, adapted to engage with lugs or the plates *g*, as herein set forth. 5th. In a collapsible crate substantially as herein described, the hinged braces *l*, and binding-straps *m*.

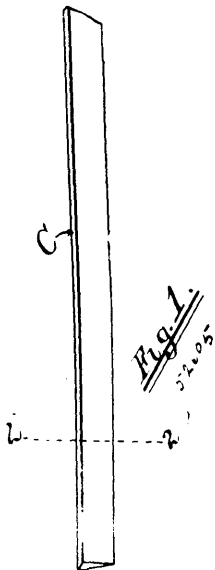
No. 52,604. Velocipede Chain, etc.
(*Chaine pour velocipedes.*)



Joseph Hollis, Ilkeston, England, 10th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—In combination a chain wheel having rollers carried upon ball bearings instead of the ordinary teeth or spurs thereon, a chain for use with same having engaging pieces attached to or formed integral with the links forming the chain and so shaped and adapted as to engage with the rollers aforesaid upon the wheel.

No. 52,605. Welting Strip. (*Bande d'ajustage.*)

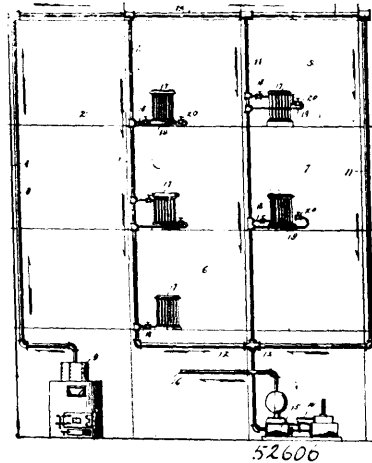


Frank Woodard Merrick, Boston, Massachusetts, U.S.A., 10th June, 1896; 6 years. (Filed 16th May, 1896.)

Claim.—1st. As a new manufacture, the improved welting or closing strip consisting of a strip of leather which is tapering in

cross-section from one edge thereof to the other, the thicker edge being rounded, substantially as described. 2nd. The combination with the two pieces of material A, B, of the interposed welting or closing strip consisting of a strip of material which is tapering in cross-section from one edge thereof to the other, the whole united by stitches passing transversely therethrough, substantially as described.

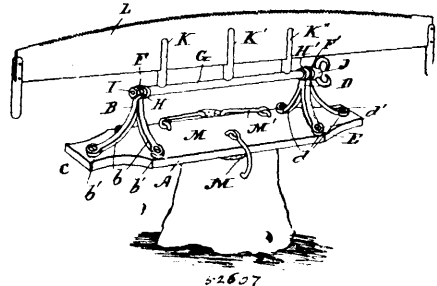
No. 52,606. Heating System. (*Système de chauffage.*)



John C. Febiger, jr., New Orleans, Louisiana, U.S.A., 10th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—In heating apparatus, the combination with a system embodying one or more vertically disposed supply-pipes, a source of steam-supply communicating with one end of the system, and a vacuum-producing apparatus communicating with the other end thereof, of one or more radiators communicating individually with one of the vertical steam-supply pipes exclusively, and substantially at right angles thereto, so as to produce at the juncture or junctures with the vertical pipe a means of separating the water of condensation from the steam, the vapour of water or steam filling the system including the radiators, to supply the vacuum created by the vacuum-producing apparatus, and the water of condensation through its superior gravity following the course of each individual vertical pipe, and thereby separating itself from the steam, substantially as set forth.

No. 52,607. Saw-Vise. (*Etau pour scies.*)



Harry C. Hawkins, Blind River, Algoma, Ontario, Canada, 10th June, 1896; 6 years. (Filed 18th May, 1896.)

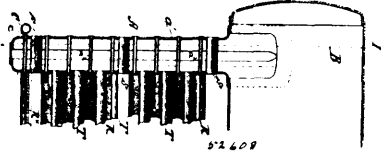
Claim.—1st. A saw-vise consisting of two oppositely opposed standards, a shaft journaled in the said standards, a series of bifurcated arms carried by the shaft adapted to hold the saw-blade, substantially as specified. 2nd. A saw-vise consisting of two oppositely opposed standards, a shaft journaled in the said standards, a series of bifurcated arms carried by the shaft, adapted to hold the saw-blade, and a jamb-nut to lock the shaft in any adjusted position, substantially as specified. 3rd. A saw-vise consisting of two oppositely opposed standards, a shaft journaled in said standards, a series of bifurcated arms carried by the shaft, adapted to hold the saw-blade, and a jamb-nut to lock the shaft in any adjusted position, a base to which the standards are connected, and a series of hooks connected to the base adapted to be driven into a stable object to temporarily hold the saw-vise, substantially as specified.

No. 52,608. Steam Generator. (*Générateur à vapeur.*)

Edward D. Meier, St. Louis, Missouri, U.S.A., 10th June, 1896; 6 years. (Filed 18th May, 1896.)

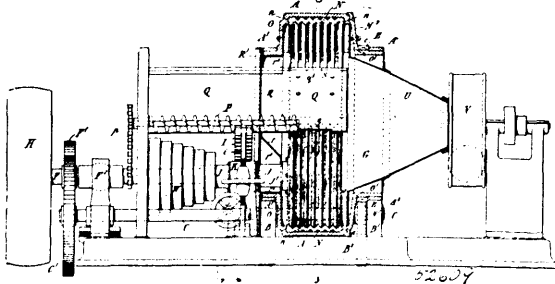
Claim.—1st. In a water tube boiler, the combination of water legs, a nest of water tubes arranged in horizontal rows, hollow par

tition tiles or plates extending alternately from the respective legs, the tiles or partitions having downwardly-opening passages at inter-



vals and an air-supply connected with the chambers in the tiles, substantially as described. 2nd. The combination with the tubes of a water tube boiler, of a series of hollow tiles or plates arranged and disposed to form a horizontal partition and having downwardly-opening passages from their hollow interiors and an air-supply connected with the chambers of said tiles, substantially as described. 3rd. The combination of horizontally-arranged rows of water tubes of a boiler, a series of longitudinally-extending hollow tiles or plates having passages through their under side supported by adjacent tubes in the same row and an air-supply connected with the chamber of said tiles, substantially as described. 4th. In a water tube boiler, the combination of water legs, a nest of water tubes arranged in separate groups and stay tubes for a boiler head and tube sheet having an area approximating that of the water tubes opposite the spaces by which the water tubes are divided into groups, substantially as described. 5th. In a water tube boiler having its tubes arranged in horizontal staggered rows and having stay tubes for heat plate and tube sheet, a series of longitudinally-extending tiles or plates constructed to be inserted through the stay tubes and to fit between and to be sustained by adjacent tubes of adjacent rows, said tubes and tiles together forming a zig-zag transverse partition or diaphragm across the boiler, substantially as described. 6th. In a boiler of the character described, the combination of two water legs, a nest of tubes extending from leg to leg and separated at intervals into groups by enlarged spaces and stay tubes extending through both water legs opposite enlarged spaces, the tubes approximating in transverse area, that of the boiler tubes, to afford adequate space for the introduction of tools adequate to clean the tubes and partitions, or of tiles or partition plates, substantially as described. 7th. In a boiler embracing water legs and a nest of water tubes, the combination of a series of longitudinally-extending hollow tiles sustained by the water tubes, hollow stay bolts or stay tubes arranged to register with the hollow tiles and an air supply connected with and discharging to said stay bolts and hollow tiles, substantially as described. 8th. The improved dry pan herein described connected with the boiler shell, the same being provided with openings in its walls for the admission of steam and with depending wings or plates opposite said openings to prevent the entrance of water or spray, substantially as described. 9th. The combination of a boiler or steam drum and a dry pan arranged in the upper part thereof having openings in its walls for the admission of steam and outwardly and downwardly flaring wings above and below the openings to prevent the entrance of water or spray to the pan, substantially as described.

No. 52,609. Crushing and Grinding Mill.
(Machine à broyer.)

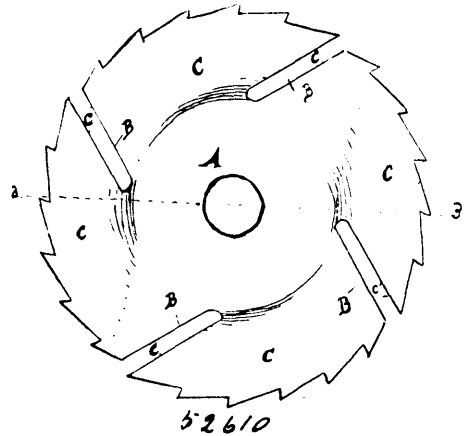


William Henry Coward, Hastings Villa, Bexley Road, England, 10th June, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. A roller mill of the kind described wherein both the drum and the roller are driven positively and at different surface speeds so as to produce a grinding as well as a crushing action, substantially as specified. 2nd. A roller mill of the kind described wherein the drum and the roller shaft are geared together, substantially as described, so that both are positively driven, the gearing being so proportioned that they have different surface speeds, as specified. 3rd. In a roller mill of the kind described wherein both roller and drum are positively driven, the combination, with the vertically-sliding spring-loaded roller-shaft bearing, of an adjustable stop for supporting the roller out of contact with the cylinder, substantially as specified. 4th. In a roller mill of the kind described, the combination of a positively driven grinding roller having a V-grooved periphery and a positively driven drum having a corresponding V-grooved internal grinding surface, substantially as specified. 5th. In a roller grinding mill of the kind described, the V-

grooved grinding surface of the drum constructed of segments held between dovetailed gibs, substantially as described. 6th. The combination, with the herein described roller mill, of a feed trough and screw conveyer passing into the drum through the cover, as described. 7th. The combination, with the herein described roller mill, of a feed trough and screw conveyer passing into the drum through the cover, as described, the trough being formed as described so as to act as a hopper outside the drum and as a shoot within the drum to receive the material falling from the cups and return it over the grinding roller to the front thereof as described. 8th. The combination, with the trough-shoot within the drum, of the under shoot attached below the trough and passing up between the two sets of cups to receive the material which first falls therefrom and return it over the grinding roller, as described. 9th. In the herein described roller mill, the perforated gauge plate covering the outlet from the drum and forming the backing of the cups at that side of the drum with clearance between it and the side of the drum so that the area of the gauge plate corresponds to the full internal diameter of the drum, as specified. 10th. In the herein described roller mill, the combination of the packed joint for the roller-shaft bearing and of the dust guard preventing the access of dust thereto, as specified.

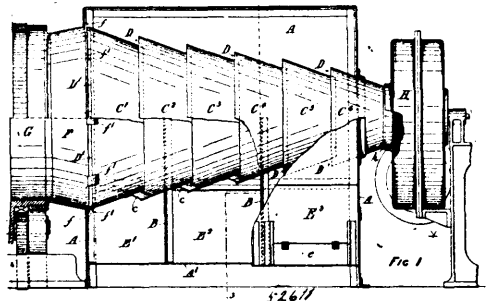
No. 52,610. Grooving Saw. (Scie à cameler.)



Charles Baar, Grand Rapids, Michigan, U.S.A., 10th June, 1896; 6 years. (Filed 16th May, 1896.)

Claim.—1st. A circular grooving saw, having a flat central portion and a series of deep openings extending from its periphery to said central portion thereby forming toothed segments, detached from each other at their adjacent ends, said segments being turned or twisted out of the plane of the central portion of the saw, substantially as described. 2nd. A circular grooving saw, having a flat central portion and a series of openings extending from its periphery to said central portion, and forming segments detached from each other at their adjacent ends, each of said segments being formed with a series of cutting teeth and said segments being turned or twisted alternately in opposite directions, substantially as described.

No. 52,611. Apparatus for Concentrating, Grading, or Classifying Crushed Ore and other matters. (Appareil de concentration et de régalaage des minerais.)

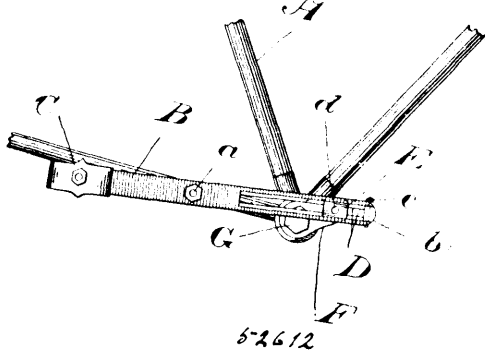


William Henry Coward, Hastings Villa, Bexley Road, England, 10th June, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. Apparatus for concentrating, grading, or classifying crushed or ground ore or other matters, consisting of a series of cones separated by intervening annular spaces, the cones being connected and mounted to revolve together as one about a substantially horizontal axis and enclosed within a casing divided into compartments, substantially as specified. 2nd. The combination, with a revolving grinding mill and with an exhaust fan, of an apparatus for concentrating, grading, or classifying ore or other matters, consisting of a

series of cones separated by annular apertures and mounted to revolve about a horizontal axis within an internally divided casing, substantially as specified.

No. 52,612. Bicycle Gear. (*Engrenage de bicyclee.*)

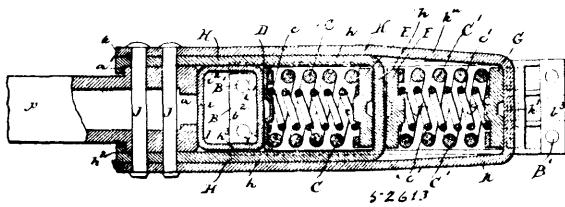


William Hale, Malton, Ontario, Canada, 10th June, 1896; 6 years. (Filed 19th May, 1896.)

Claim.—1st. In a bicycle, the lever B, pivoted on the frame and provided with the pedal C at one end, and the guide ways D, at the other end, in combination with the crank F, connected to the ordinary crank spindle of the bicycle, and the block E sliding in the guide ways D, and having the outer end of the crank F, journaled therein, substantially as and for the purpose specified. 2nd. In a bicycle, the levers B, pivoted on the frame and provided with the pedals C at one end, and the guide ways D at the other end, in combination with the cranks F, connected to the ordinary crank spindle of the bicycle, and the blocks E sliding in the guide ways D, and having the outer ends of the cranks F journaled therein, and the sprocket-wheel H, suitably geared to the drive-wheel of the bicycle, substantially as and for the purpose specified. 3rd. In a bicycle, the lever B pivoted on the frame and provided with a pedal C on one end, and slotted at the other end, in combination with a crank F connected to the ordinary crank spindle of the bicycle, the other end of it being adapted to engage with and slide in the slot in the lever B, substantially as and for the purpose specified.

No. 52,613. Car Coupler Attachment.

(*Attache d'attelage de chars.*)

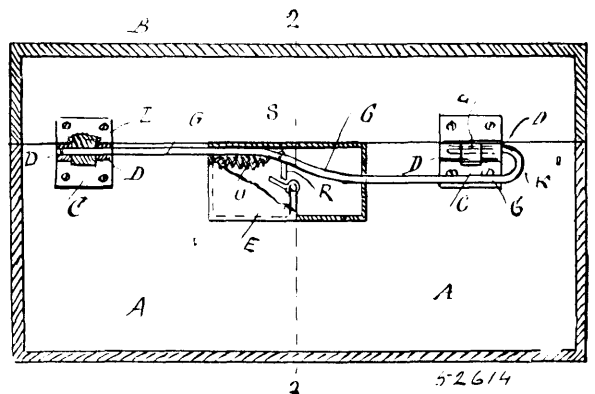


Henry Smith Bryan, Two Harbors, Minnesota, U.S.A., 10th June, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. In a car coupler attachment, a casing consisting of two parts or side pieces provided with a flange, running lengthwise along each edge, and end pieces or cross heads at each end, both flanges and cross heads projecting on the inner face of the said piece, the ends farther than the flanges, a tension spring or springs arranged within said casing, a draw bar connected at its rear end with said spring within the casing, and devices for securing the two parts of the casing firmly together at the ends thereof, substantially as described. 2nd. In a car coupler attachment, a metal casing, in combination with a tension spring or springs arranged within the casing, a draw bar provided at its rear end with a device adapted to surround and enclose the spring within the casing, and a sliding box mounted on bearings at the front end of the casing, on which it is free to slip forward and backward, and arranged between the front end of the spring and the rear end of the draw bar, but disconnected from each, substantially as described. 3rd. In a car coupler attachment, a casing composed of two separate side pieces having inward flanges on their respective edges and end pieces or cross heads at their respective ends extending inward and meeting beyond the respective side flanges, whereby a central open space is left between the latter, a tension spring and suitable followers mounted within said casing, a draw bar for coupling adjacent cars, a yoke or tail strap composed of a strip of metal, the width of which is about the same as the central open space between the side edges of the casing, doubled upon itself to enclose a rectangular space, secured at its free ends to the draw bar and at its rear, closed and embracing the spring within the casing, and an independent rectangular box, mounted on a support at the front end of the casing, on which it is free to slide, and arranged between the rear end of the draw bar and the front follower of the spring, substantially as described. 4th. In a car coupler attachment, a casing provided with interior stops on its

sides whereby it is divided into two sections, in combination with a tension spring arranged with movable followers in each section, a draw bar provided with devices at its rear end adapted to extend back into the casing and embrace each spring separately, and a sliding box arranged at the front end of the casing, between the front spring and the rear end of the draw bar, but independent of both, and mounted upon a support on which it is free to slide back and forth within the limits of its interior space, substantially as described. 5th. In a car coupler attachment, a casing composed of two side pieces provided with inwardly projecting edge flanges, end pieces extending beyond said flanges and cross ribs or stops dividing the space between the flanges into two parts, a tension spring mounted in each part or section of the casing and provided with followers of greater width than the space between said stops, a draw bar of any ordinary construction, a yoke or tail strap of rectangular form, connected at its free ends with the draw bar and embracing the front tension spring within the loop at its rear end, a second and longer yoke or tail strap secured at its front open end to the draw bar, in connection with the shorter yoke, extending along the latter to the rear and beyond the rear end thereof to embrace the rear tension spring within its loop in rear of the shorter yoke, the width of each yoke being about the same as the central space between the casing flanges, and an independent rectangular box, having an interior space of greater width than the thickness of the front case end, mounted in suitable guide-ways on the upper and lower faces of the front case end, and free to slide back and forth thereon, being arranged between the rear end of the draw bar and the front follower of the forward tension spring, substantially as described. 6th. In a car coupler attachment, a metal casing for the tension spring and draw bar connection, constructed with inwardly projecting flanges on the edges of each piece and end pieces or sections extending inwardly beyond the flanges, with transverse ribs or stops between the respective flanges, a little in front of the rear end piece, substantially as described. 7th. In a car coupler attachment, a metal casing, B, composed of two rectangular sections, b, provided with edge flanges, b', end cross heads, b², b³, extending inward beyond the respective flanges, and cross ribs or bars, b⁴, b⁵, extending across the space between the edge flanges, to divide it into sections, tension springs, C, C', arranged within the respective sections of the casing and provided with followers at each end, wider than the space between opposite cross ribs, a draw bar, and devices for connecting the latter with the respective tension springs, substantially as described. 8th. In a car coupler attachment, a metal casing composed of two rectangular side pieces, perforated or of skeleton form, and provided with edge flanges and end sections both extending inward, and cross ribs or bars, b⁵, near the rear end of the side pieces, provided with perforations, b⁷, in combination with bolts passing through the adjacent end cross heads, a tension spring arranged within the casing, a draw bar, and a device connecting the latter with said spring, substantially as described. 9th. In a car coupler attachment, a metal casing for the tension spring, in combination with a rectangular box, I, mounted in suitable guide-ways on the front end of the casing and free to slide back and forth thereon, the space within the box being of greater width than the thickness of the case end which it encloses, a tension spring mounted in the casing in rear of the said box, but unattached thereto, a draw bar abutting at its rear end against the sliding box, and a connecting device attached to the rear end of the draw bar, extending back therefrom, and enclosing the spring within the casing, substantially as described.

No. 52,614. Trunk Lock. (*Serrure de coffre.*)



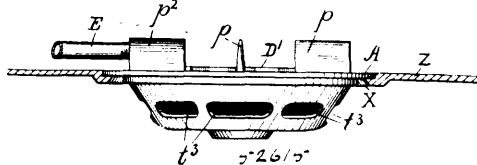
Russell T. Shelley, New Haven, Connecticut, U.S.A., 10th June, 1896; 6 years. (Filed 19th May, 1896.)

Claim.—A lock for trunks, chests, &c., consisting of a bolt G mounted in the end walls of a casing E, the said bolt bent near its middle portion and continued in a horizontal plane, its end being bent upon itself and in alignment with the opposite end of the bolt, combined with the plates C and D secured to the meeting edges of the trunk body and cover, and having registering eyes adapted to be engaged by the ends of the said bolt, a spring U having one end

secured to the end of the casing and its other end to a hook on the bolt, and a lug R against which a key may bear to cause the bolt to lock and unlock, substantially as shown and described.

No. 52,615. Hydrocarbon Burner.

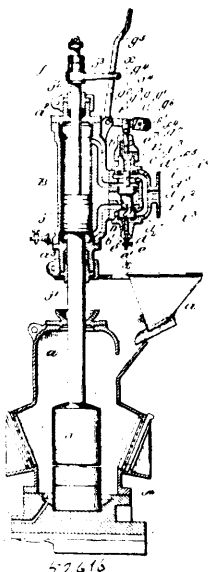
(Foyer à hydrocarbures.)



Patrick H. Cooney, London, Ontario, Canada, assignee of Lewis T. Cornell, Chicago, Illinois, U.S.A., 12th June, 1896; 6 years. (Filed 31st March, 1896.)

Claim.—1st. In a hydrocarbon burner, the combination of a dish-shaped casing having a circumferential flange at its upper side to fit a stove-hole, upper and lower annular burner plates fitting into said casing and affording an annual vaporizing chamber above the base of the casing, and provided with a narrow continuous inner circumferential burner-opening, a top plate upon the casing having an oil supply passage leading to said burner, and a central draft opening, a damper at the draft opening, and outlet openings in the casing about the lower burner plate, whereby products of combustion pass from the burner opening around the vaporizing chamber to heat the latter, substantially as described. 2nd. In a hydrocarbon burner, the combination of a dish-shaped base, A, having a circumferential flange at its upper side, to fit a stove-hole, outlet openings below the flange, and an inner annular wall, t², a top-plate having a draft opening, and a burner, mounted in the base, A, having an annular chamber provided at the top with an inner circumferential burner opening, and an inner circumferential downward extending flange, s³, the top-plate having a supply passage leading to said chamber, substantially as described. 3rd. A hydrocarbon burner comprising, in combination, a dish-shaped base portion, A, provided with a flange, t, adapted to fit into a stove-hole, and openings, t³, around the side, a lower annular burner plate, B, having a gutter s¹, an upper annular burner plate, C, fitting upon the plate, B, affording therewith a burner opening, r¹, and having an opening, q¹, a top-plate, D, having a supply passage, p², registering with the said opening, q¹, and draft openings, p¹, and a damper, D¹, on the top plate, the whole being constructed and arranged to operate substantially as and for the purpose set forth. 4th. In a hydrocarbon burner, the combination of the lower burner plate, B, having a spiral gradually widening and deepening gutter, s¹, and an annular burner surface, r, and the upper annular burner-plate, C, fitting upon the plate, B, to afford therewith a chamber having narrow annular burner opening, r¹, at the surface, r, the plate, C, having a supply opening, q¹, at the shallow end of the gutter, substantially as and for the purpose set forth.

No. 52,616. Power Hammer. (Marteau mécanique.)



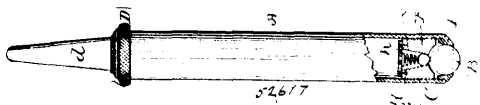
George Smith, assignee of Albert Frederick Louis Reussner, both of Jersey City, New Jersey, U.S.A., 12th June, 1896; 6 years. (Filed 17th April, 1896.)

Claim.—1st. A steam-operated drop-hammer, comprising a cylinder having two ports, a piston movable in said cylinder having a

tail-rod, the hammer being carried by said piston, the valve-casing having a steam-chamber and ports corresponding to said former ports, a steam inlet valve movable in said casing and normally held raised by lower steam pressure, a primary valve for admitting steam against the upper end of said steam-inlet valve for lowering the latter, and means for operating said primary-valve operatively connected to said tail-rod, substantially as set forth. 2nd. A steam-operated drop-hammer, comprising a cylinder having two ports, a piston movable in said cylinder having a tail-rod, the hammer being connected to said piston, a piston-like steam-inlet valve having upper and lower seats, said valve being raised and lowered by steam-pressure and controlling the admission of steam through said ports, and allowing alternate exhaust therethrough, whereby the inertia of the parts is utilized for effecting the blow of the hammer, and means operatively connected to said tail-rod for controlling the upper steam-pressure on said valve, as set forth. 3rd. The combination with the piston-cylinder having two ports, of the valve-casing having a steam-chamber and ports corresponding to said former ports, a steam-inlet valve movable in said casing for alternately admitting steam to and exhausting steam from said ports of said cylinder, and communications between said steam-chamber and said casing above and below said valve, whereby the latter is raised and lowered by steam-pressure, substantially as set forth. 4th. The combination with the piston-cylinder having two ports, of the valve-casing having a steam-chamber and ports corresponding to said former ports, a steam-inlet valve movable in said casing for alternately admitting steam to and exhausting steam from said ports of said cylinder, communications between said steam-chamber and said casing above and below said valve, and a primary-valve for controlling the admission of steam above said steam-inlet valve, substantially as set forth. 5th. The combination with the piston cylinder having two ports, of the valve-casing having a steam-chamber and ports corresponding to said former ports, a steam-inlet valve movable in said casing for alternately admitting steam to and exhausting steam from said ports of said cylinder, communications between said steam-chamber and said casing above and below said piston-rod, and a primary-valve for controlling the admission of steam against said upper piston-rod, substantially as set forth. 6th. The combination with the piston-cylinder having two ports, and the piston movable therein having a tail-rod, of the valve-casing having a steam-chamber and ports corresponding to said former ports, a steam-inlet valve movable in said casing and normally held raised by the steam-pressure therein, connections between said steam-chamber and the upper end of said casing above said valve, a primary-valve for controlling the admission of steam against the upper end of said steam-inlet valve, and means for operating said primary-valve connected to said tail-rod, substantially as set forth. 7th. The combination with the piston-cylinder having two ports, of the valve-casing having a steam-chamber and ports corresponding to said former ports, a steam inlet valve movable in said casing having a port therein forming communications between said steam-chamber and said casing beneath said valve, whereby the latter is normally held raised by steam-pressure, and means for lowering said valve as against said lower steam-pressure, substantially as set forth. 8th. The combination with the piston-cylinder having two ports, of the valve-casing having upper and lower bores or chambers, a central steam-chamber, and ports corresponding to said former ports, said upper bore or chamber being of greater diameter than the lower, the piston-like valve movable in said casing having upper and lower piston-rods corresponding to and movable in said bores or chambers and also having a port extending through said lower piston-rod and opening at its upper end into said steam-chamber, a pipe connecting said steam-chamber to said upper bore or chamber, a primary valve for admitting steam into said upper bore or chamber and means for operating said primary-valve, substantially as set forth. 9th. The combination with the cylinder having two ports, of the valve-casing having a steam-chamber and ports corresponding to said former ports, the steam-inlet valve movable in said casing and normally held raised by steam-pressure, the primary-valve casing having steam-inlet and exhaust ports opening into said former casing above said steam-inlet valve, a pipe connecting said steam-inlet port to said steam-chamber, the primary-valve movable in said casing, and means for automatically operating the same, substantially as set forth. 10th. The combination with the piston cylinder having two ports, and the piston movable therein having a tail-rod, of the valve-casing having a steam chamber and ports corresponding to said former ports, the steam-inlet valve, the primary valve for admitting steam against said former valve, the weighted lever to which said primary valve is connected and the arm carried by said tail-rod engaging said lever, whereby said primary valve is operated, substantially as set forth. 11th. The combination with the piston-cylinder having two ports, and the piston movable therein having a tail-rod, of the valve casing having a steam chamber and ports corresponding to said former ports, the steam-inlet valve, the primary valve for admitting steam against said former valve, the lever having a short arm to which said primary valve is connected, its long arm having an incline or offset at or near its upper end, the weight on said short arm, and the arm carried by said tail-rod and engaging said long arm, of said lever, substantially as set forth. 12th. The combination with the piston-cylinder having two ports, and the piston movable therein to which the hammer is connected having a tail-rod, of the valve

casing having upper and lower bores or chambers, the former being of greater diameter than the latter, a central steam chamber and ports corresponding to said former ports, the piston-like valve having upper and lower piston-rods fitted in said bores or chambers, said lower piston-rod having a port therein leading from said steam chamber to said lower bore or chamber, the upper valve casing secured to said former valve casing having steam-inlet and escape ports opening into said upper bore or chamber, the steam supply pipe opening into said steam-inlet port, the primary valve designed to alternately open and close said inlet and exhaust ports, the lever to which said primary valve is connected, and the arm carried by said tail-rod engaging said lever, substantially as set forth. 13th. The combination with the piston cylinder having two ports, and the piston movable therein to which the hammer is connected having a tail-rod, of the valve-casing having upper and lower bores or chambers, the former being of greater diameter than the latter, a central steam chamber and ports corresponding to said former ports, the piston-like valve having upper and lower piston-rods fitted in said bores or chambers, said lower piston-rod having a port therein leading from said steam chamber to said lower bore or chamber, the upper valve casing secured to said former valve casing having a central chamber, steam-inlet and outlet ports opening at their inner ends into said upper bore or chamber and having angular portions extending across said central chamber at different altitudes, the steam supply pipes leading from said steam chamber of said valve casing to the steam-inlet port of said primary valve casing, the primary valve movable in said chamber having a peripheral groove forming a port and designed to alternately coincide with the branches of said inlet and exhaust ports, the lever to which said primary valve is connected, and the arm carried by said tail-rod engaging said lever, substantially as set forth. 14th. The combination with the piston-cylinder having two ports, and the piston movable therein to which the hammer is connected having a tail-rod, of the valve casing having upper and lower bores or chambers, the former being of greater diameter than the latter, a central steam chamber and ports corresponding to said former ports, the piston-like valve having upper and lower piston-rods fitted in said bores or chambers, said lower piston-rod having a port therein leading from said steam chamber to said lower bore or chamber, the upper valve casing having a central chamber, steam inlet and outlet ports opening at their inner ends into said upper bore or chamber and having angular portions extending across said central chamber at different altitudes, the steam supply pipes leading from said steam chamber of said valve casing to the steam-inlet port of said primary valve casing, the primary valve movable in said chamber having a peripheral groove forming a port and designed to alternately coincide with the branches of said inlet and exhaust ports, the lever having a weight on its short arm to which latter said primary valve is connected, the long arm of said lever having an incline or offset at its upper end, and the arm carried by said tail-rod having a bifurcated end and roller mounted therein engaging said long arm of said lever, substantially as set forth.

No. 52,617. Fountain Pen. (Plume à réservoir.)

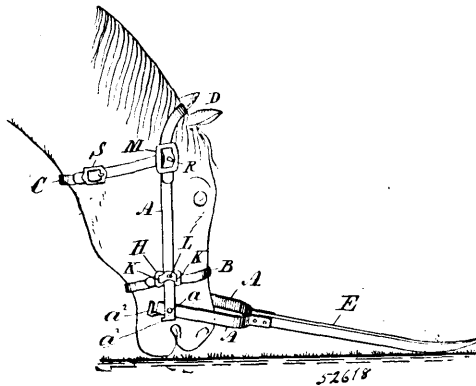


Arthur Wilkinson Askew, Altoona; Edwin S. Herman and George A. Werner, both of Harrisburg, all in Pennsylvania, U.S.A., 12th June, 1896; 6 years. (Filed 17th April, 1896.)

Claim.—1st. The combination with a fountain reservoir, of a rotatable distributor held therein, and a valved controlling mechanism operated by the distributor, substantially as and for the purposes described. 2nd. The combination with a fountain reservoir, of a rotatable distributor seated therein, and a spring-controlled valve mechanism which is normally pressed into contact with said distributor and adapted to be opened thereby, substantially as and for the purposes described. 3rd. The combination with a fountain reservoir, of a rotatable distributor seated therein and partially protruding therefrom, and a spring-pressed ball valve in contact with said distributor, substantially as and for the purposes described. 4th. The combination with a reservoir having a seat at one end, of a spherical distributor protruding through said seat, a diaphragm or nut within said reservoir, and having a passage, and a check-valve seated within said diaphragm, substantially as and for the purposes described. 5th. The combination of a fountain reservoir having a seat near one end, a rotatable distributor therein, a diaphragm provided with a transverse passage, and a spring-pressed ball-valve seated in said passage of the diaphragm, substantially as and for the purpose described. 6th. The combination of a fountain reservoir, a rotatable distributor, a diaphragm provided with an axial-tapered passage, a ball-valve seated in said passage, and a tension device which forces said valve upon the distributor, and which holds the valve and distributor to their seats, substantially as and for the purposes described. 7th. The fountain reservoir having a detachable nut forming a seat, and a diaphragm or nut fixed within said reservoir and provided with an axial-tapered passage, combined with a spherical distributor fitted to the seat in said reservoir, a ball-valve seated in the passage of the diaphragm, and a spring which

normally holds the valve in contact with the distributor, substantially as described. 8th. The combination of a fountain reservoir having a seat, a diaphragm provided with an axial passage, a spherical distributor fitted to said seat, ball-bearings interposed between said spherical distributor and the diaphragm, a ball-valve seated in the diaphragm, and a spring which presses said ball-valve into contact with said distributor, substantially as described.

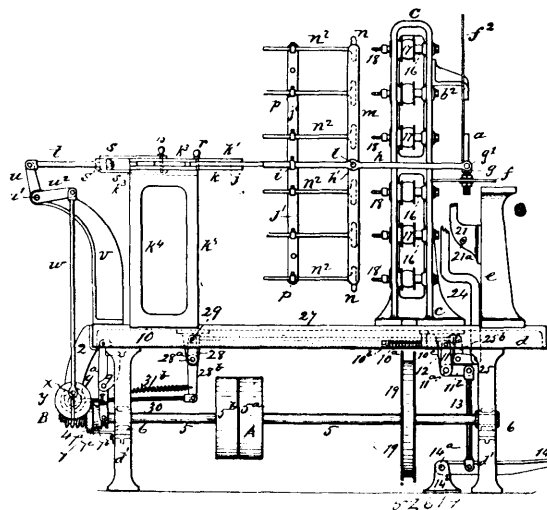
No. 52,618. Animal Poke. (Carcan à cheval.)



James E. Fletcher, Brockville, assignee of George Bolton, Elizabeth-town, both in Ontario, Canada, 12th June, 1896; 6 years. (Filed 19th May, 1896.)

Claim.—1st. An animal poke, comprising parallel cheek bars A, A, in two sections pivotally connected by a rivet and having interlocking ends to form a stop joint, the lower sections curved inwardly, and a shaft or horn E, intermediately bolted near one end to said bars, the upper section of said bars provided with buckles and straps to secure the poke to the head of the animal, substantially as set forth. 2nd. In an animal poke, the combination of the upper and lower cheek sections connected by a stop joint, and the shaft or horn bolted to the lower section intermediately of bent ends, as set forth. 3rd. The combination of the upper and lower cheek-bar sections connected by an interlocking joint, the shaft or horn E, bolted to the lower section intermediately of bent ends, and the upper sections provided with buckles H, M, for the reception of straps, as set forth. 4th. In combination with the upper cheek sections, the buckles H, having a fixed tongue or prong intermediately of side loops and riveted to said sections, buckles M, having a fixed tongue or prong intermediately of end loops and riveted to said sections, and straps threaded through said loops and pierced by the tongue or prong, as and for the purpose set forth.

No. 52,619. Machine for Drilling Holes in the Boards or Stocks of Brushes, etc. (Machine à percer.)



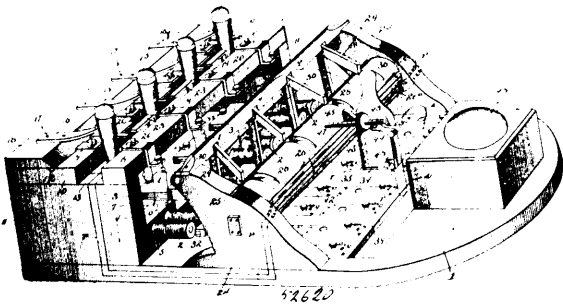
George Shaw and Thomas Shaw and John Peter Ditchfield, all of Warre Street, Ashton-under-Lyne, England, 12th June, 1896; 6 years. (Filed 23rd April, 1896.)

Claim.—1st. In a machine for drilling holes in the boards or stocks of brushes and brooms, the combination of a number of drills 18 capable of revolution but incapable of longitudinal movement, a templet a, rods b, moved by means of such templet a, holders or sets of parts for holding brush boards or stocks to be drilled equal in number to the drills 18, and supported upon the rods h, so as to be

purposes and substantially in the manner hereinbefore described. 38th. In a machine for drilling holes in the boards or stocks of brushes and brooms, the combination with the stud 15 by means of which motion is communicated to the framework carrying the brush-boards or stocks of a plate connected to the said framework and formed with a curved slot q^2 serving to receive the said stud and vary the point of action of such stud upon the said plate as is requisite in accordance with the manner in which the parts of the brush-boards or stocks which are to be drilled at any particular time tend to be moved towards or away from the drills by the angular movement of such brush-boards or stocks due to the lateral movement of the temple controlling their movements, all arranged, employed and operating for the purposes and substantially in the manner hereinbefore described. 39th. In a machine for drilling holes in the boards or stocks of brushes and brooms, the combination with the rods supporting an appliance for holding the brush-boards or stocks to be drilled, of an adjustable stop-plate 42 supported by the said rods and moved similarly to the appliance for holding the brush-boards or stocks to be drilled, and an adjustable stud 44 secured in a fixed part of the machine to act as a stop to such stop-plate 42, all arranged, employed and operating for the purposes and substantially in the manner hereinbefore described.

No. 52,620. Telephone Switch-Board.

(Appareil d'échange de téléphone.)



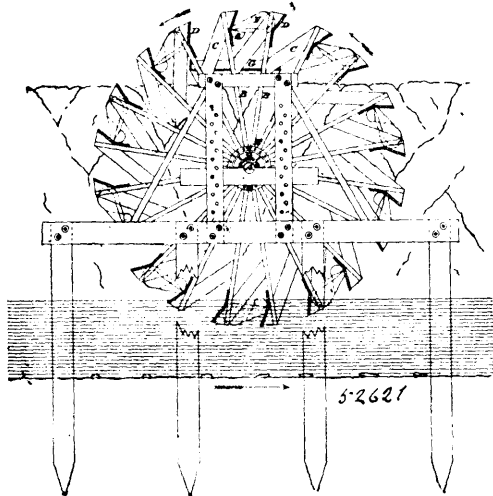
Isaac Anderson, Saginaw, Michigan, and Louis C. Walker, Dayton, Ohio, both in U.S.A., 12th June, 1896; 6 years. (Filed 24th August, 1895.)

Claim.—1st. In a telephone switch-board, the combination of an electro-magnet, the core of which is included in the speaking circuit of a telephone, a working battery circuted with the magnet to energize the same, the main line wire, and automatic circuit closing connections between the main line wire and the core of the magnet, substantially as set forth. 2nd. In a telephone switch-board, an electro-magnet, the core of which is included in the speaking circuit of a telephone, a working battery circuted with the magnet to energize the same, a movable armature for the magnet, and the main line wire having circuit connections with the said armature, substantially as set forth. 3rd. In a telephone switch-board, an electro-magnet, the core of which is included in the circuit of a telephone, a working battery circuted with the magnet to energize the same, the main line wire, automatically controlled circuit closing connections between the main line wire and the core of the magnet, and a call-bell included in the circuit connections between the main line wire and the core of the magnet, substantially as set forth. 4th. In a telephone switch-board, an electro-magnet, the core of which is included in the circuit of a telephone, a working battery circuted with the magnet, the main line wire, circuit connection between the main line wire and the core of the magnet, and a call-bell included in said circuit connections, substantially as set forth. 5th. In a telephone switch-board, an electro-magnet, the core of which is included in the speaking circuit of a telephone, a working battery circuted with the magnet to energize the same, a movable armature for the magnet, the main line wire having circuit connections with the armature, and a call-bell included in said circuit connections, substantially as set forth. 6th. In a telephone switch-board, an electro-magnet, the core of which is included in the circuit of a telephone, the working battery circuted with the magnet to energize the same, a circuit roller having a contact core circuted with the working battery, a movable armature for the magnet having a pawl connection with the roller to partially rotate the same, a suitably supported circuit closing lever normally resting against the core of the circuit roller, and the main line wire having a circuit connection with the armature and also with said circuit closing roller, substantially as set forth. 7th. In a telephone switch-board, an electro-magnet, the core of which is included in the circuit of a telephone, a working battery circuted with the magnet, the zinc element of said battery having a ground connection, a circuit closing device included in the line of the circuit connections for the battery, a circuit closing roller having a contact core circuted with the circuit closing device, a movable armature for the magnet having a pawl connection with the roller to partially rotate the same, a suitably supported circuit closing lever normally resting against the core of the circuit roller, and a main line wire having a circuit connection with the armature and also with the circuit closing roller,

substantially as set forth. 8th. In a telephone switch-board, an electro-magnet, the core of which is included in the circuit of a telephone, a working battery circuted with the magnet, the zinc element of said battery having a ground connection, a circuit closing device included in the line of the circuit connections for the battery, a circuit closing roller having a contact core circuted with the circuit closing device, a movable armature for the magnet having a pawl connection with the roller to partially rotate the same, a suitably supported circuit closing lever normally resting against the core of the roller, a call-bell having a circuit connection with said lever, and the main line wire having a circuit connection with the call-bell and also with the armature, substantially as set forth. 9th. In a telephone switch-board, the combination of the base-board, an electro-magnet supported on the board, the core of which magnet is included in the circuit of the telephone, a working battery circuted with the magnet, a circuit closing device included in the line of the circuit connections for the battery, a circuit closing roller mounted on the base-board and having a pawl notch, and a contact core circuted with the circuit closing device, a movable armature for the magnet having a pawl-arm adapted to engage the pawl-notch of the roller, a series of contact plates arranged on the base-board and having main line wire connections therewith, a shifting key adapted to be fitted on any of the contact plates and having a metallic heel-plate, a gravity circuit closing lever mounted on the shifting key and normally contacting with the contact core of the roller and a circuit connection between the heel-plate of the key and the armature, and also between the heel-plate and said circuit closing lever, substantially as set forth. 10th. In a telephone switch-board, the combination of a base board, an electro magnet supported on the base board, the core of which is included in the speaking circuit of a telephone, a pair of spaced contact plates arranged above the magnet, a spring-supported push-button arranged to work between the contact plates and provided with a bridge plate adapted to contact with said contact plates, a working battery, circuit connections between the working battery, said contact plates, and the battery, the main line wire, and automatically controlled circuit closing connections between the main line wire and the core of the magnet, substantially as set forth. 11th. In a telephone switch-board, the combination of a base board, a series of electro magnets supported on the base board, the cores of which magnets are included in the circuit of a telephone, a pair of spaced contact plates arranged above each magnet and provided at their adjacent ends with spring clips, spring-supported push-buttons arranged to work between the contact plates and provided with bridge plates adapted to engage in said spring clips, a working battery, circuit connections between the battery, said contact plates and the magnet, the main line wire, and automatically controlled circuit closing connections between the main line wire and the cores of the magnets, substantially as set forth. 12th. In a telephone switch board, the combination of a base board, a series of electro magnets supported on the base board, the cores of which magnets are included in the circuit of the telephone, a pair of spaced contact plates arranged above each magnet and provided at their adjacent ends with spring clips, one of said contact plates being additionally provided with a contact lip, spring-supported push-buttons arranged to work between the contact plates and provided with bridge plates to contact with the former, and with flanged contact plates adapted to normally contact with said contact lips, a working battery, circuit connections between the battery, contact plates and the magnets, a circuit closing roller having a series of contact cores respectively circuted with the flanged contact plates of the several successive push-buttons, movable armatures for the magnets having pawl connections with the roller to partially rotate the same, the main line wire, a suitably supported circuit closing lever normally resting against the uppermost core of the circuit roller, and circuit connections between the main line wire and the armatures, and the circuit closing lever, substantially as set forth. 13th. In a telephone switch-board, the combination of a base board having a series of guide boxes, a series of electro magnets having flat core extensions adjustably fitted in the guide boxes and included in the circuit of a telephone, a pair of spaced contact plates arranged above each magnet and provided at their adjacent ends with spring clips, spring-supported push-buttons arranged to work between the contact plates and provided with bridge plates adapted to engage in the spring clips and with off-standing press-fingers which overlap one another, a working battery, circuit connections between the battery, the contact plates, and the magnets, the main line wire, and automatically controlled circuit closing connections between the main line wire and the cores of the magnets, substantially as set forth. 14th. In a telephone switch-board, the base board, a series of electro magnets supported on the base board, the cores of said magnets being included in the circuit of a telephone, a working battery circuted with the magnets, a circuit closing device included in the line of the circuit connections for the battery, a weighted oscillating circuit roller provided with a series of spirally arranged pawl notches and a series of longitudinal contact cores corresponding in number to the number of magnets, and the lower of which cores is looped or doubled, circuit connections respectively between each core and said circuit closing device, a series of pivotally suspended bell-crank armatures arranged adjacent to each magnet and having pawl arms adapted to engage in the pawl notches of the roller, a suitably supported circuit closing lever normally resting against the uppermost core of the circuit roller, the main line wire,

and circuit connections between the main line wire, the armatures and the circuit closing lever, substantially as set forth. 15th. In a telephone switch-board, the combination of the base board, a series of suitably energized electro magnets, the cores of which are included in the circuit of a telephone, a weighted circuit roller having a series of contact cores, respectively circuited with the several successive magnets, the swinging armatures having a pawl connection with said roller, a series of contact plates separated from each other and having openings therein and main line wire connections therewith, an adjustable shifting key provided at its lower end with a stud to engage the openings of said contact plates and with a heel plate to contact with the same, a gravity circuit closing lever pivoted at one side of the key and provided at one end with a toe to contact with the cores of the roller, the call-bell having a circuit connection with said lever and the heel plate of the key, and a circuit connection between said heel plate and the swinging armatures, substantially as set forth. 16th. In a telephone switch-board, the base board, a series of suitably energized electro magnets, the cores of which are included in the circuit of a telephone, a weighted circuit roller provided with a series of contact cores having suitable circuit connections with the several successive magnets, the swinging armatures having pawl connections with the roller, a slide board adjustably fitted in the base board below the roller and provided with separate longitudinal rows of contact plates separated from each other and having openings therein and main line wire connections therewith, an adjustable shifting key provided at its lower end with a heel plate to contact with said contact plates, a gravity circuit closing lever pivoted at one side of the key and adapted to contact with the cores of the roller, the call-bell having a circuit connection with the lever and the heel plate of the key, and a circuit connection between the heel plate and the swinging armatures, substantially as set forth.

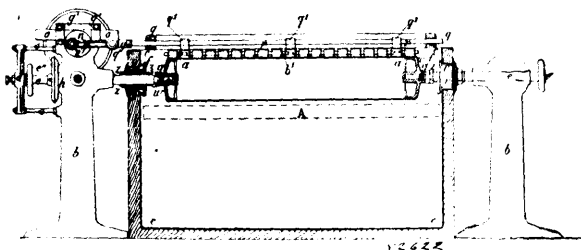
No. 52,621. Current-wheel for the elevating of Water. (*Appareil d'alimentation d'eau.*)



Archibald William Porton, Regina, Assiniboia, 12th June, 1896; 6 years. (Filed 26th August, 1895.)

Claim.—1st. A water elevator comprising a current-wheel having axle A, spokes B, braces C, floats D, and buckets F, for raising water and discharging it at or near the highest point of rotation into receiving trough G, substantially as and for the purpose set forth. 2nd. A water elevator wheel-bucket F, of the form shown having a discharge-spout and set in said current wheel at a suitable distance apart, substantially as and for the purpose hereinbefore set forth.

No. 52,622. Manufacture of Copper and other Metal Tubes, etc. (*Fabrication de tubes en cuivre, etc.*)

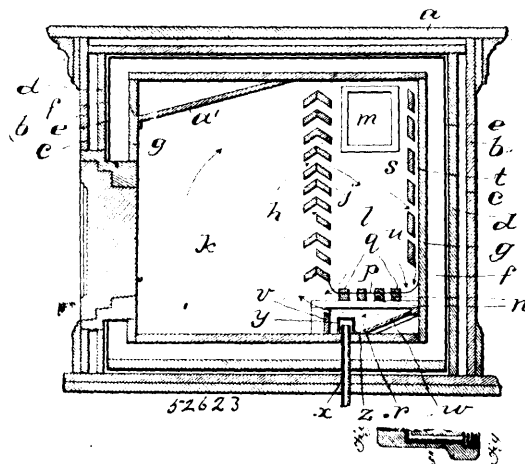


Emilien Dumoulin, Paris, France, 12th June, 1896; 6 years. (Filed 7th January, 1896.)

Claim.—A process for depositing metals regularly by electrolysis in which insulating materials are kept in contact with the cathodes

during the process, in such a manner that only the projecting or rough parts of the cathode are coated by the insulating material, the insulating particles, removed in this way by the projections in the same way as ink is removed by the type in printing, becoming oxidized in the bath or wiped off and re-taken up by the impregnators when the projections have disappeared by the rising of the surface of the cathode, substantially as hereinbefore described.

No. 52,623. Refrigerator. (*Refrigerateur.*)

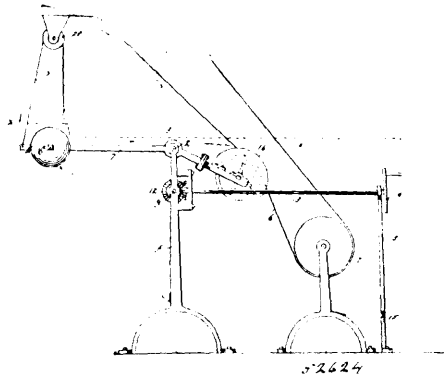


The G. F. Quinn Refrigerator Company, assignee of Gilbert F. Quinn, both of Portland, Maine, U.S.A., 12th June, 1896; 6 years. (Filed 23rd July, 1895.)

Claim.—In a combined refrigerator and freezer, a suitable outside case, a refrigerating room and an ice bunker therein, separated by a partition, inverted V-shaped ports in said partition leading from the refrigerating or freezing room into said ice bunker, and ports leading through the bottom of said ice bunker and thence into the bottom of the refrigerating room, substantially as and for the purposes set forth.

No. 52,624. Combined Belt-tightener and Shifter.

(*Tendeur et appareil de déplacement de courroie combinés.*)



Patrick H. Quinn, Salamanca, New York, U.S.A., 12th June, 1896; 6 years. (Filed 7th February, 1896.)

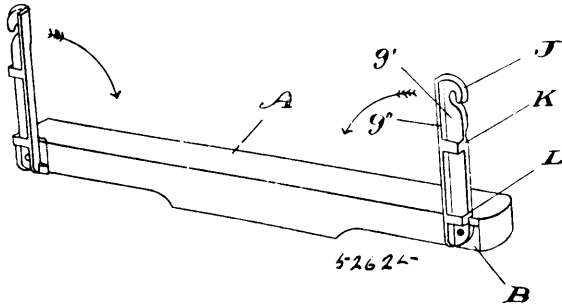
Claim.—The combination with the frame, the bar at the upper end thereof, the slidable sleeve mounted thereon, and formed with a slot, the tightening pulley, the flanged yoke connected with said sleeve and with the tightening pulley, and the arm provided with an adjustable weight, of the worm shaft located beneath said bar, the sleeve-nut mounted thereon having an arm engaging with the slot in said sleeve, and means, substantially as described, for rotating said worm shaft.

No. 52,625. Bolster Stake. (*Epée de coussinet.*)

James H. Jackson, Keady, Ontario, Canada, 12th June, 1896; 6 years. (Filed 25th April, 1896.)

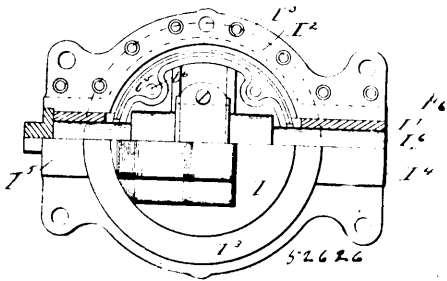
Claim.—1st. The combination of the bolster, a bolster stake, a plate connected to the bolster, stops fastened to the said plate adapted to bear against the bolster stake and maintain it in a vertical position, and a bolt to pivotally connect the bolster stake with the plate, substantially as specified. 2nd. The combination of the bolster, a bolster stake pivotally connected to the bolster, and a socket formed on the bolster stake to receive extension stakes, substantially as specified. 3rd. The combination of the bolster, the bolster stake, a plate connected to the bolster, stops fastened to the plate, adapted to bear against the back of the bolster stake and

maintain it in a vertical position, a bolt pivotally connecting the bolster stake with the bolster, and a socket formed on the bolster



stake to receive an extension stake, substantially as specified. 4th. A bolster stake made of angle metal, consisting of two sides *g, g'*, a socket for an extension stake consisting of two caps, one secured to the middle of the stake, and the other to the lower end of the stake, and a hook-shaped head for the bolster stake, strengthened by an increase of metal at that point, substantially as specified.

No. 52,626. Air Brake. (Frein à air.)



George S. Lee, Hawthorne, New Jersey, U.S.A., 12th June, 1896; 6 years. (Filed 18th May, 1896.)

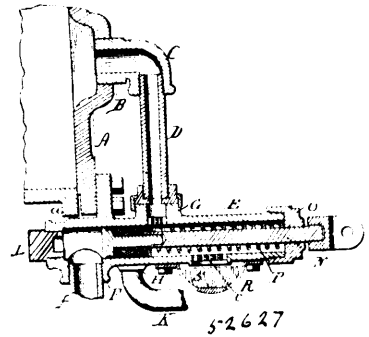
Claim.—1st. In air brake systems, a compressor pump, consisting of a casing having a cylindrical bore of uniform diameter throughout its length, a piston consisting of two discs of the same diameter as the interior of the cylinder, with their opposing faces formed with ways for the play and guidance of a yoke, a piston shaft having an eccentric mounted thereon, and an eccentric yoke embracing said eccentric and arranged to move in said ways so as to impart from the rotary motion of the piston rod a reciprocating motion to the piston, substantially as described. 2nd. In air brake systems, the combination with a pinion mounted on a car axle, of a compressor pump having a rotary piston shaft passing through its cylinder, a gear wheel loosely mounted on said piston shaft and meshing with said pinion, a sliding clutch member mounted on said piston shaft, an engaging clutch member mounted on the gear wheel, and an automatic governor operated by air pressure and coupled to the sliding clutch member, substantially as described. 3rd. In air brake systems, the combination with a compressor pump and gearings for driving the same from the car axle, of a piston shaft connecting the pump piston and gearings and made in sections connected together by a universal coupling, substantially as described. 4th. A compressor pump for air brakes, consisting of a cylinder having a bore of uniform diameter throughout its length, with air inlet and outlet valves, a hollow cylindrical piston composed of two cylindrical recessed heads, bolted together and formed with diametrical ways on their inner faces, a shaft passing laterally through said cylinder and piston, and having an eccentric mounted or formed thereon and a rectangular sliding yoke embracing said eccentric and sliding in said ways, substantially as described. 5th. A compressor pump for air brakes, consisting of a cylinder having suitable inlet and exhaust valves, a piston composed of two cylindrical heads connected together, a shaft passing laterally through said cylinder, and between said piston heads, and having an eccentric formed or mounted thereon and a rectangular sliding yoke, embracing said eccentric, and a constant contact with both said piston heads, substantially as described. 6th. The pump driving mechanism enclosed within a casing which is supported at one end upon the axle of the car by suitable bearings, while the other end is sustained or suspended from the floor of the car or supported on the channel bearings in such manner as to yield and adapt itself to the forward and backward play of the axle carrying the motor.

No. 52,627. Air Brake. (Frein à air.)

George S. Lee, Hawthorne, New Jersey, U.S.A., 12th June, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. In air brakes, the combination with the brake cylinder and air reservoir, of a valve cylinder located adjacent to the former and having an inlet port and pipe communicating with the brake cylinder, an exhaust port and a reciprocating retractable

piston valve, with connections between said valve and operating lever on the car platform, substantially as described. 2nd. In an



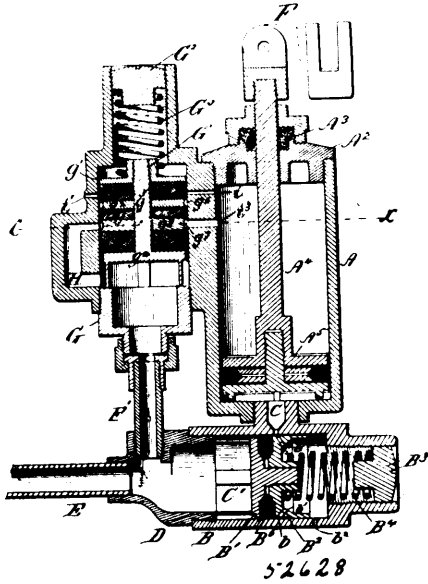
air brake system, the combination with the brake cylinder, of an air controlling valve chamber with a reciprocating valve adjacent thereto communicating with the brake cylinder and reservoir, a train pipe, a branch leading thereto from the valve chamber, and a brake cylinder located on a trailer and communicating with said train pipe, substantially as described. 3rd. A controlling valve for brake cylinders of air brakes comprising a cylindrical valve chamber having an inlet port for connection to a brake cylinder, an exhaust port, a supplementary port for connection to a train pipe and a reciprocating piston valve arranged and adapted to admit air to a series of brake cylinders simultaneously, and to allow the air to escape from said series, simultaneously, substantially as described. 4th. A jam or brake cylinder for air brakes having supply and exhaust valves attached to one of its heads, in combination with a manually operable lever coupled to both valves, for operating them in one direction, and a retracting spring to return the valves to normal, substantially as described. 5th. The combination with a jam or brake cylinder for air brakes, of supply and exhaust valves, coupled together for conjoint action, and mechanism whereby the exhaust valve will be fully closed before the supply valve is opened. 6th. The combination with a jam or brake cylinder for air brakes of reciprocating supply and exhaust valves, coupled together by an operating lever, the exhaust valve being formed with a divided telescopic stem, and an interposed spring, so constructed and arranged that the parts move together when the valve is approaching its seat and that the movement of one section of the stem may be continued, after the seating of the valve, substantially as described. 7th. The combination with a jam or brake cylinder, of an air brake, of reciprocating supply and exhaust valves, coupled together by an operating lever for conjoint action, the supply valve being connected to the operating lever by a yielding connection which will allow the lever to be partially moved without operating the valve, and the exhaust valve provided with a divided telescopic stem, substantially as described. 8th. The combination with a jam or brake cylinder having supply and exhaust or controlling valves attached thereto and coupled together by an operating lever, of a controlling lever mounted on a platform of the car, and connected to said valve operating lever, substantially as described. 9th. The combination with the jam or brake cylinder having supply and exhaust valves attached thereto, and having a supplementary outlet port, of a train pipe running lengthwise of the motor car and coupled to said port and provided with means for connecting the same with corresponding pipes in the trailer cars, the latter being in connection with brake cylinders, the whole being so constructed that the brakes on each car are simultaneously operated when the air is admitted to the main brake cylinder by the operation of a single inlet valve, substantially as described.

No. 52,628. Air Brake. (Frein à air.)

George S. Lee, Hawthorne, New Jersey, U.S.A., 12th June, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. In a governor for air brakes, the combination with a chamber containing pistons of different areas, of means for admitting air at different pressure alternately and automatically in contact with said pistons to operate the same, substantially as described. 2nd. In a governor for air brakes, the combination of a chamber, pistons of different areas both attached to the clutch mechanism of a pump driving shaft and arranged in said chamber, with means for automatically admitting air under pressure to move said pistons in one direction and for admitting air under different pressure to move said pistons in the opposite direction, substantially as described. 3rd. In a governor for air brakes, the combination of a chamber, having sections of different areas, pistons of different areas fitting said chamber, a spring valve adapted to admit air under determined pressure to the piston of lesser area, and a spring valve adapted to admit air at a lower pressure to the piston of greater area, substantially as described. 4th. In an automatic governor for air brakes, the combination of a chamber in sections of different areas, pistons working in said chambers, means for automatically admitting air under pressure to the piston of smaller area and automatically releasing the air from the chamber of greater area and means for cutting off the supply of air at high pressure, releasing the air from

the chamber of lesser area and simultaneously admitting air at lower pressure to the piston of greater area, substantially as descri-



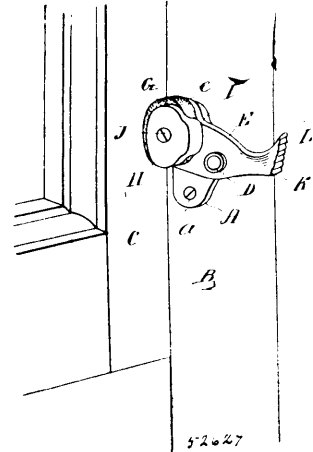
bed. 5th. In an automatic governor for air brakes, a chamber in sections of different area, pistons fitting thereto and mounted on a rod, a valve admitting air at a predetermined maximum pressure to one of said pistons, a valve connected to the supply pipe operable by a decrease of pressure to a predetermined minimum and a third valve operable by the said valve on the supply pipe to admit air under the minimum pressure to the other of said pistons, substantially as described. 6th. In an automatic governor for air brakes, the combination with a chamber containing a piston, of means for automatically admitting air under low pressure to one side of said piston and means for automatically admitting air under high pressure to the other side of said piston, whereby variations of pressure effect automatically the reciprocation of the piston in both directions, substantially as described. 7th. In an automatic governor for air brakes, the combination with a cylinder and piston, of a valve controlling the inlet and exhaust on one side of said piston and automatically operable by air under low pressure to open the inlet and close the exhaust and by air under high pressure to close the inlet and open the exhaust, with a second valve controlling the inlet and exhaust on the other side of said piston and operating to open and close the inlet and exhaust on that side under reverse conditions of air pressure, substantially as described. 8th. In an apparatus of the class described, the combination of a cylinder, a piston therein connected to a pump regulating device, and a valve adapted to admit air to one side of the piston at the predetermined lowest working pressure of the brake system and to open an exhaust when said predetermined minimum is exceeded, with a second valve adapted to admit air to the other side at the desired maximum of pressure and to open the exhaust on that side when the pressure diminishes to below the minimum, substantially as described. 9th. In an automatic governor for air brakes, the combination with a cylinder and piston of an adjustable automatic valve controlling the inlet and exhaust on one side of said piston, substantially as described. 10th. In an automatic governor for air brakes, the combination with a cylinder and piston of two automatic valves both communicating with a common source of compressed air and with said cylinder, one of said valves being adapted to operate under a predetermined low pressure, and the other to operate under a predetermined high pressure, substantially as described. 11th. In an automatic governor for air brakes, the combination with a cylinder and piston of an automatic valve adapted to open and close the inlet and exhaust of said cylinder, a spring to move said valve in one direction and a screw to regulate the pressure of the spring, substantially as described.

No. 52,629. Window Fastener and Lock.
(*Fermeture de croisée et serrure.*)

Theodore Martin, Wallaceburg, Ontario, Canada, 12th June, 1896; 6 years. (Filed 6th May 1896.)

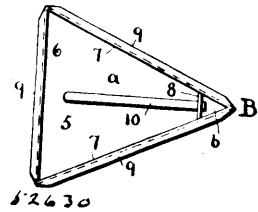
Claim.—1st. A sash fastener, consisting of an arm pivotally connected at or about its middle to the front stop, a lug projecting from the side face at one end of the arm, the said end and lug curved to permit of their dropping readily into place, a rubber band on the said lug, a plate fastened to the side face of the lug and provided with a lug to overlap the rubber band and lock it in place, the opposite end of the arm curved and provided with a serrated face, substantially as specified. 2nd. A sash fastener, consisting of a plate adapted to be fastened to the window stop, an arm pivoted at or about its middle to the said plate, one end of the said

arm enlarged, a lug extending from the side face at one end of the said arm, the said end and lug curved to allow the arm to drop



readily into place against the sash, a rubber band mounted on the said lug, a plate secured to the side face of the said lug, having a lug to overlap the band and lock it in place, the opposite end of the arm provided with a foot, having a curved serrated face, substantially as specified.

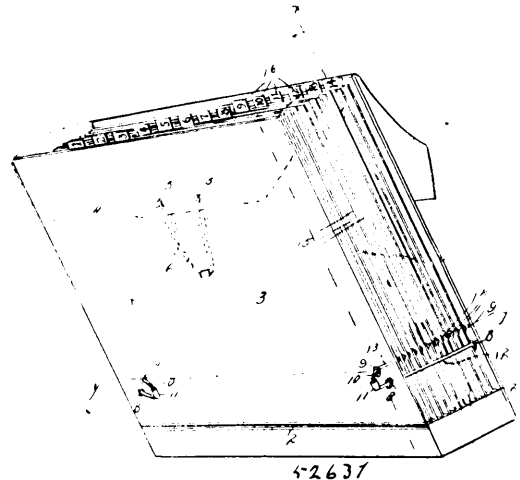
No. 52,630. Disinfecter. (*Désinfectant.*)



Robert S. West, Cleveland, Ohio, U.S.A., 12th June, 1896; 6 years. (Filed 20th April, 1896.)

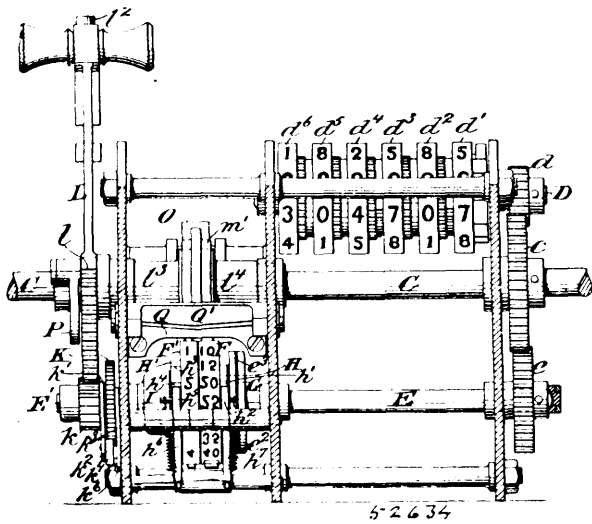
Claim.—1st. The combination in a graduated disinfecter, of a reservoir having converging sides, a partition dividing said reservoir into two compartments of unequal capacity by connecting said converging sides near their junction, said compartments opening into each other over the top of said partition, and a tube opening at one end into the smaller of said compartments and at the other end beneath the larger of said compartments, substantially as and for the purpose set forth. 2nd. The combination in a graduated disinfecter, of a hinged receptacle cover, a reservoir having converging sides, a partition dividing said reservoir into two compartments of unequal capacity by connecting said converging sides near their junction, said compartments opening into each other over the top of said partition, and a tube opening at one end into the smaller of said compartments and at the other end beneath the larger of said compartments, substantially as and for the purpose set forth.

No. 52,631. File. (*Serre papier.*)



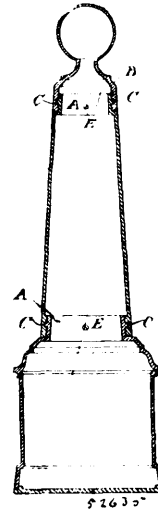
Richard Bennett, Neihart, Montana, U.S.A., 12th June, 1896; 6 years. (Filed 7th April, 1896.)

said liquid dispensing device or devices to indicate the sum total of the prices of several portions of liquid dispensed, a printing mech-



anism for making a record of said sum total, and means under the control of the said printing mechanism for moving the said type wheels either simultaneously or independently of one another to return them to zero or normal position after each printing, substantially as set forth. 2nd. In combination, type wheels, a divided shaft on which the type wheels are mounted, the wheels being arranged to move either with the shaft or relatively thereto, as may be required, means for operating the shaft at intervals to advance the type wheels, and means for operating one section of the shaft to return the type wheels to normal, substantially as set forth. 3rd. In combination, type wheels, a shaft on which the type wheels are mounted, the wheels being arranged to move either with the shaft or relatively thereto, as may be required, one of the wheels being under the control of the other, both to advance and release it, means for advancing the shaft and means for returning the wheels, substantially as set forth. 4th. In combination, liquid dispensing devices, a divided shaft under the control of the liquid dispensing devices to be rotated in one direction, type wheels mounted on the divided shaft and arranged to be moved in one direction by one section of the shaft and in the opposite direction by another section of the shaft, a printing platen, a lever for operating the printing platen, and a connection between said lever and the shaft section for returning the type wheels to normal, substantially as set forth. 5th. In combination, a divided shaft, type wheels mounted on the shaft, means for rotating the shaft sections in one direction, means for rotating one of the shaft sections in the opposite direction, the type wheels having a frictional engagement with the shaft and with each other, and means for taking an impression from the type wheels, substantially as set forth. 6. In combination, a divided shaft, type wheels mounted on the shaft, means for rotating the shaft sections in one direction, means for rotating one of the shaft sections in the opposite direction, one of the type wheels having a ball bearing with the shaft at one end of its hub and a frictional engagement with the shaft at the opposite end of its hub, another type wheel having a frictional engagement with two shaft sections, and means for taking an impression from the type wheels, substantially as set forth. 7th. In combination, a divided shaft, type wheels mounted on the shaft and having a frictional engagement with the shaft and with each other, means for rotating the shaft in one direction, means for rotating one section of the shaft in the opposite direction, stop wheels fixed to rotate with the type wheels, dogs for arresting the movement of the type wheels in one direction and a pawl for holding one of the type wheels against movement in the opposite direction, the said pawl being under the control of a companion type wheel to release it, substantially as set forth. 8th. In combination, type wheels, means for operating them, a movable pressure plate or platen, means for operating it, a feed roller, means for operating it, a stationary cutting blade and a movable cutting blade carried by the platen, substantially as set forth. 9th. In combination, type wheels, means for operating them, an impression plate or platen, a lever for operating it, a gear on the lever, a pinion loosely mounted on the type wheel shaft adapted to intermesh with the gear on the lever, a ratchet-toothed wheel fixed on the type wheel shaft, an arm fixed to rotate with the pinion and carrying a spring actuated pawl in position to engage the ratchet wheel, an arm loosely mounted on the type wheel shaft and provided with a stop to arrest the pawl and release it from the ratchet wheel and a fixed stop in position to engage the stop carrying arm to arrest it and hence the stop which releases the pawl, substantially as set forth.

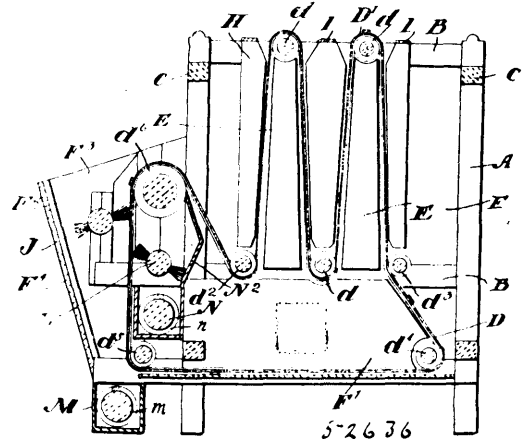
No. 52,635. Monument and Marker. (Monument.)



Robert Drury and James Bowden, both of the City of Toronto, Ontario, Canada, 12th June, 1896; 6 years. (Filed 6th February, 1896.)

Claim.—1st. In an iron monument, built in parts, a joint comprising the knobs or pins C C and right-angular grooves D D, as shown and described. 2nd. In an iron monument, built in parts, a recess with incut grooves F F F to receive an inscription plate, and provided with a holding clamp I fastened on the inside, as shown and described. 3rd. In an iron monument, built in parts, a plate glass inscription plate G provided with an inscription, and covered with rubber to display the inscription, as shown and described. 4th. An iron monument, built in parts, and joined together with the knobs or pins C C and right-angle grooves D D, and having an inscription plate protected on its back with rubber, and a recess with grooves and a holding clamp fastened on the inner side, as shown and described. 5th. In a monument, a plate glass inscription plate, protected on its back by rubber, as shown and described.

No. 52,636. Dust Collector. (Aspirateur de poussière.)

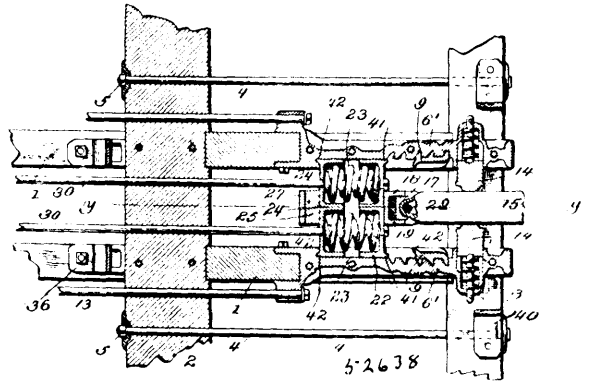


Alexander Dolson, Beaverton, Ontario, Canada, 13th June, 1896; 6 years. (Filed 6th May, 1896.)

Claim.—1st. A dust collector, comprising an endless belt passing over and supported upon suitable rollers and suitably driven, side boards for closing the side spaces at the end of the rollers, an exhaust pipe leading from the mill into the chamber formed by the cloth belt and side boards, and means for keeping the mesh or texture of such cloth belt open and free from dust, as and for the purpose specified. 2nd. A dust collector, comprising an endless belt passing over and supported upon suitable rollers and suitably driven, side boards for closing the side spaces at the end of the rollers, an exhaust pipe leading from the mill into the chamber formed by the cloth belt and side boards, exterior and interior rotating brushes situated so as to come in contact with the cloth belt on the inside and outside as it travels, as and for the purpose specified. 3rd. A dust collector, comprising an endless belt passing over and supported upon suitable rollers and suitably driven, side

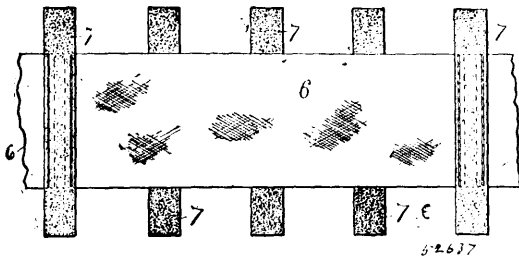
boards for closing the side spaces at the end of the rollers, an exhaust pipe leading from the mill into the chamber formed by the cloth belt and side boards, exterior and interior rotating brushes situated so as to come in contact with the cloth belt on the inside and outside as it travels, and a dust box for receiving the dust so collected from each brush, as and for the purpose specified. 4th. A dust collector, comprising an endless belt passing over and supported upon suitable rollers and suitably driven, side boards for closing the side spaces at the end of the rollers, an exhaust pipe leading from the mill into the chamber formed by the cloth belt and side boards, exterior and interior rotating brushes situated so as to come in contact with the cloth belt on the inside and outside as it travels, a dust box for receiving the dust so collected from each brush, and a screw conveyer in the upper box, spout leading from the end of the upper box into the lower dust box, and a screw conveyer in the lower box rotating in the opposite direction from the conveyer in the upper box, and an exit for such lower box, as and for the purpose specified. 5th. In a dust collector, in combination an endless belt passing over and supported upon suitable rollers and suitably driven, side boards for closing the side spaces at the end of the rollers, and transverse strips extending from one edge of the cloth to the other, as and for the purpose specified. 6th. In a dust collector, in combination an endless belt passing over and supported upon suitable rollers and suitably driven, side boards for closing the side spaces at the end of the rollers, transverse strips extending from one edge of the cloth to the other, and internal supplemental belts for passing over the opposite ends of the rollers, as and for the purpose specified. 7th. In a machine of the class described, in combination the endless cloth belt, the rollers for supporting the same having reduced central portions, as and for the purpose specified. 8th. In a dust collector, in combination an endless cloth belt passing over and supported upon suitable rollers and suitably driven, upwardly extending loops in the belt, side boards for closing the side spaces at the end of the rollers, and end boards extending between the upper loops of the belt beneath each end of the rollers, transverse strips extending from edge to edge of the cloth belt, and down hangers having the edges located in proximity to the edges of the belt, as and for the purpose specified. 9th. In a dust collector, in combination the endless cloth belt, the rollers for supporting the same, driving roller, the internal brush, dust box and partition extending from the upper dust box into proximity to the driving roller, as and for the purpose specified.

the follower block, substantially as described. 5th. The combination with a coupler having a round perforated end, of a socket-



piece fitting said round end, a pivotal block, a cushion between said pivotal block and socket, a pair of followers in the rear of the pivotal block, springs connecting the followers, and a yoke connecting the followers and couplers together, substantially as described. 6th. In a draft mechanism, a draw-iron, consisting of a piece of channel iron having castings *b*, *b'* secured to it at each end, casting *b* having a socket for a spring plug, and casting *b'* a socket to receive a filling-block, substantially as described. 7th. In a draft mechanism, a draw-iron consisting of a piece of channel iron, having recesses pressed into its web, in combination with a movable stop-plate having corresponding projections fitting into said recesses, substantially as described. 8th. In a draft mechanism, a draw-iron provided with recesses in its side, and an adjustable stop-plate provided with corresponding projections, substantially as described. 9th. In a draft mechanism, the combination of two pairs of draw-irons, each draw-iron having a socket to receive the end of a rod, with a pair of tie rods, running from one pair of draw-irons to the other, substantially as described.

No. 52,637. Puncture-proof Covering for Pneumatic Tires. (*Enveloppe pour piqûres dans les bandages pneumatiques.*)



Charles W. Hazeltine, St. Louis, Missouri, U.S.A., 13th June, 1896; 6 years. (Filed 21st May, 1896.)

Claim.—1st. A puncture-proof covering for pneumatic tires, made in sections, and having strips of elastic material joining the sections, substantially as and for the purpose set forth. 2nd. A puncture-proof covering for pneumatic tires, composed circumferentially of layers of woven fibrous material arranged over the tread thereof, and having strips of rubber joining the sections, substantially as and for the purpose set forth. 3rd. A puncture-proof covering for pneumatic tires, composed circumferentially of sections of layers of woven fibrous material arranged over the tread thereof, and having strips of rubber joining the sections, with an elastic envelope therefor, whose edges are secured to the rim.

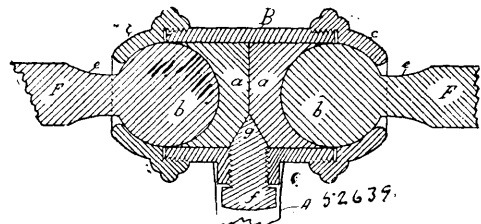
No. 52,638. Draft Mechanism. (*Mécanisme de tirage.*)

Perry Brown, Wilmington, Delaware, U.S.A., 13th June, 1896; 6 years. (Filed 27th May, 1896.)

Claim.—1st. The combination with a coupler, of a pair of followers, springs set between said followers, a connection between the coupler and the rear follower, and draw-rods connected with another coupler and running through said springs and both followers, substantially as described. 2nd. The combination with a coupler, of two sets of follower blocks, a headed bolt having its head set into the draw-bar, a stop keyed between the two sets of blocks, and a yoke connected to the draw-bar and passing in the rear of all of the follower blocks, substantially as described. 3rd. In a draft mechanism, a follower having lips at its ends adapted to engage with lips on the draw-irons to prevent spreading, substantially as described. 4th. The combination with a draw-iron and follower-block, of an adjustable movable stop-plate bolted directly to and supported by said draw-iron and adapted to co-operate with

No. 52,639. Steering Gear for Bicycles.

(*Appareil à gouverner pour bicycles.*)



Edwin F. Cobb, Onslow, Nova Scotia, 13th June, 1896; 6 years. (Filed 27th May, 1896.)

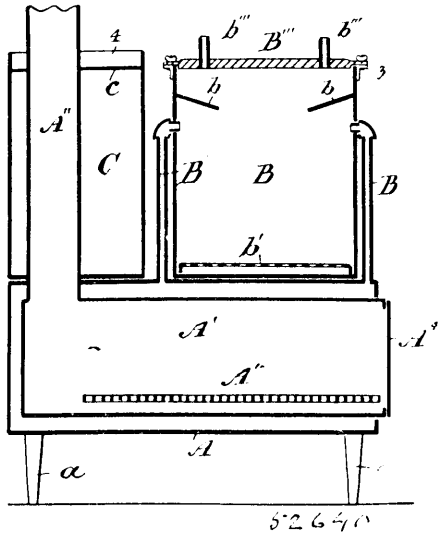
Claim.—1st. A bicycle handle bar comprising handle grips and arms adjustable by means of ball and socket joints, and a set screw located near the centre of the handle bar, substantially as and for the purpose hereinbefore set forth. 2nd. In a bicycle handle bar, the combination of the handle grips E E, the arms F F, and the balls b b, with the shank A, the cylinder B, the ball socket a a, the ball caps c c, and the set screw f, substantially as and for the purpose hereinbefore set forth. 3rd. The combination of the set screw having a conical point g, with the ball socket a a, substantially as and for the purpose hereinbefore set forth.

No. 52,640. Boiler. (*Chaudière.*)

William McCallum, Wetaskiwin Territory, Alberta, Canada, 13th June, 1896; 6 years. (Filed 8th April, 1895.)

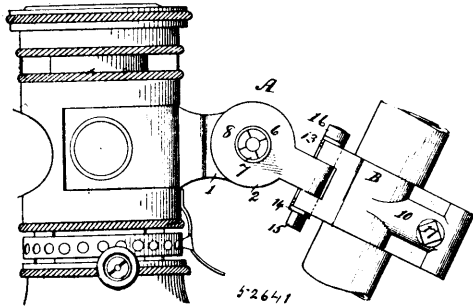
Claim.—1st. In a boiler, the combination of a horizontal cylindrical closed vessel with internal flue and a grate and upright smoke stack at the rear end of said flue and provided with a draw-off cock, with an open vertical vessel placed at the top and provided with removable cover and perforated false bottom, steam pipes connecting the top of the lower closed vessel with the upper part of the open vessel, shields above the orifices of said steam pipes in said open vessels, drain pipes connecting the bottom of the upper closed vessel with the sides of the lower vessel and a closed vertical cylindrical vessel surrounding the smoke pipe and connected with the open vessel by pipes near the top and bottom and provided with stop cocks and said vessel having its head sunk and provided with vent pipe and feed nozzle, substantially as set forth. 2nd. The combination with the horizontal steam boiler, of an open vessel placed at the top and connected by steam pipes from the top of the boiler to the upper part of the open vessel and by drain pipes from the bottom of the upper vessel to the sides of the boiler, substantially as set forth. 3rd. The combination with the horizontal steam boiler, of an open vessel placed at the top and connected by steam

pipes from the top of the boiler to the upper part of the open vessel and by drain pipes from the bottom of the open vessel to the sides



of the boiler, a vertical closed vessel at the top of said boiler surrounding the smoke pipe and connected to the open vessel by pipes near the top and bottom and provided with stop cocks and said vessel having a sunk top provided with vent pipe and feed nozzle, substantially as set forth.

No. 52,641. Holder for Bicycle Lamps.
(*Porte-lampe de bicyclette.*)



The Bridgeport Brass Company, assignee of Frank Rhind, Samuel G. Stoddard and George W. Baldwin, all of Bridgeport, Connecticut, U.S.A., 13th June, 1896; 6 years. (Filed 21st May, 1896.)

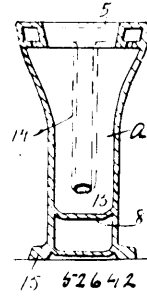
Claim.—1st. The combination with a bicycle lamp and a carrier, one of said parts having a block 1, and the other part having side plates lying on opposite sides of the block and means for pivotally securing said side plates to the block, of a clamp to which the carrier is adjustably connected, said clamps consisting of arms provided with depressions to adapt them to engage a bicycle head, and with other depression to adapt them to engage a bicycle fork and means for locking the arms to the bicycle. 2nd. The combination with a bicycle lamp and a carrier to which the lamp is pivotally connected, of a clamp consisting of two arms to which the carrier is adjustably connected, said carrier and the arms of the clamp being formed from single pieces of sheet metal and said arms having depressions 11 to partially inclose a bicycle head and depressions 12 to partially inclose a bicycle fork and a locking bolt which passes through the arms between the depressions.

No. 52,642. Water Closet. (*Latrine à eau.*)

Wesley Knight, St. Johns, Quebec, Canada, 13th June, 1896; 6 years. (Filed 3rd December, 1895.)

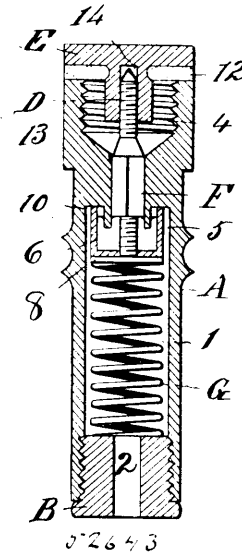
Claim.—1st. A water closet the flushing stream of which is directed immediately in contact with or against the body of water contained in the bowl or receptacle, with suitable conductors for such flushing stream from the water supply, for the purposes set forth. 2nd. A water closet bowl or receptacle, having an outlet or discharge and an inlet for the flushing stream, such inlet being located below the centre of such bowl for the purpose set forth. 3rd. A water closet the bowl of which is formed of a downwardly inclined diaphragm extending transversely of the shell of such closet from one side thereof to the other and from the front of such shell rearward to about the centre thereof, and a second diaphragm extend-

ing also transversely of such shell and from the rear thereof forward past the lower end of such inclined diaphragm and being turned up



underneath the same for a short distance, and an inlet for the flushing stream located near the bottom of such bowl and a suitable outlet from such bowl, for the purpose set forth. 4th. A water closet the bowl of which is formed of a downwardly inclined diaphragm extending transversely of the shell of such closet from one side thereof to the other end from the front of such shell rearward to about the centre thereof, and a second diaphragm extending also transversely of such shell and from the rear thereof forward past the lower end of such inclined diaphragm and being turned up underneath the same for a short distance, and an inlet for the flushing stream located near the bottom of such bowl, an outlet passage connecting the space between such diaphragm with the coil pipe, for the purpose set forth. 5th. A water closet the bowl of which is formed of a downwardly inclined diaphragm extending transversely of the shell of such closet from one side thereof to the other and the front of such shell rearward to about the centre thereof, and a second diaphragm extending also transversely of such shell and from the rear thereof forward past the lower end of such inclined diaphragm and being turned up underneath the same for a short distance, and an inlet for the flushing stream located near the bottom of such bowl, an outlet passage connecting the space between such latter passage with the soil pipe and a second passage connecting such latter passage with the ventilation pipe, for the purpose set forth. 6th. A water closet, having a bowl with suitable flushing stream inlet and outlet and a ventilation passage extending from the outlet passage horizontally rearward and adapted to be connected with a suitable ventilation device, for the purpose set forth.

No. 52,643. Valve Device for Pneumatic Tires.
(*Appareil de soupape pour bandages pneumatiques.*)

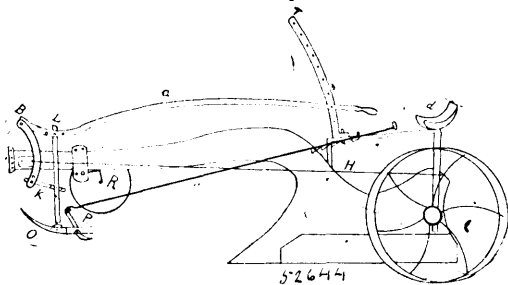


Fred W. Morgan and Rufus Wright, both of Chicago, assignees of Henry William Adams, Elgin, all of Illinois, U.S.A., 13th June, 1896; 6 years. (Filed 16th May, 1896.)

Claim.—1st. A valve device for pneumatic tires comprising a casing containing a valve chamber and a throat leading from the same, a valve arranged within the valve chamber and constructed with a cup, an elastic packing fitted within the cup, and a stem extending through the elastic packing, and provided with a polygonal portion formed by a sleeve which is held upon the stem and arranged to fit within and work through the throat, and a spring acting to normally close the valve, substantially as described. 2nd. A valve device for pneumatic tires, comprising a casing containing a valve chamber

and a throat leading from one end of the same, a valve arranged within the valve chamber and provided with a threaded stem and an elastic packing, and an externally polygonal sleeve which is internally threaded and screwed upon the valve-stem, substantially as and for the purpose set forth. 3rd. A valve device for pneumatic tires comprising the shell A containing a valve chamber 1 and a throat 3 leading therefrom, a valve arranged within the valve chamber and constructed with a cup 5 containing an elastic packing, a screw threaded stem having a disc 8 fitted against the cup, and a sleeve F secured upon the stem and arranged to work within the throat, and a spring arranged to normally close the valve, substantially as described. 4th. A valve device for pneumatic tires, comprising a shell containing a valve chamber and a throat leading therefrom and having one of its end portions formed by a neck 10, a valve C arranged within the valve chamber and constructed with a cup, an elastic packing fitted within the cup, and a stem, and a sleeve F secured upon the valve stem and arranged to work through the throat substantially as described. 5th. A valve device for pneumatic tires, comprising the shell or casing constructed with an internally arranged valve chamber, a neck forming a valve seat at one end of such chamber, and a throat leading from the valve chamber and extending centrally through the neck which forms the valve seat, a valve arranged within the valve chamber and comprising a cup containing an elastic packing arranged with its face below the rim of the cup so as to provide space wherein the neck which forms the seat is received when the valve is closed, a spring arranged within the valve chamber and tending to seat the valve, and a valve stem extending from the bottom of the cup centrally through the elastic packing and having a polygonal portion which works within the throat and engages the wall of the same, substantially as described.

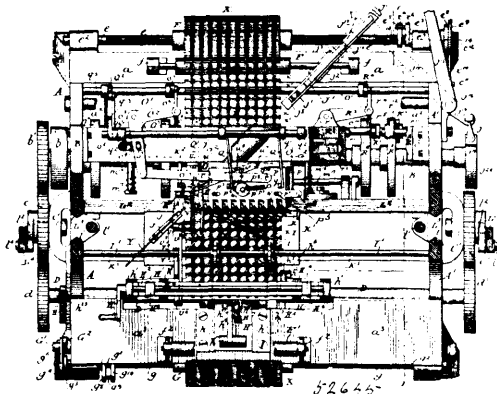
No. 52,644. Plough Sulky. (Charrue à siège.)



Henry Mulkins and Robert J. Davis, both of Simcoe, assignees of James Marr, Port Dover, all in Ontario, Canada, 13th June, 1896; 6 years. (Filed 26th May, 1896.)

Claim.—1st. The combination of circular lever a, standards T, B and L, substantially as and for the purposes hereinbefore set forth. 2nd. The combination of a grip-box D, slide H, cutter P and rod S, substantially as and for the purposes hereinbefore set forth.

No. 52,645. Machine for Inserting Threads in Fabrics. (Machine pour insérer le fil dans les tissus.)



Ford Johnson & Co., assignee of Edmund Morris, both of Michigan City, Indiana, U.S.A., 13th June, 1896; 6 years. (Filed 2nd December, 1895.)

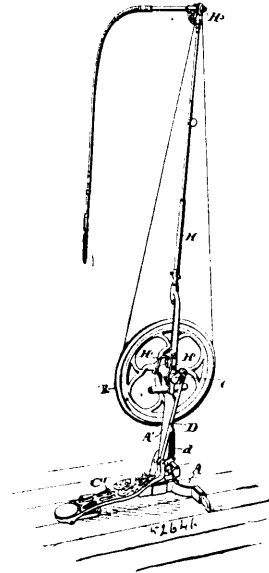
Claim.—1st. The combination with means for supporting an open-mesh fabric, of a series of pullers adapted to reciprocate towards and from the face of the fabric to draw an additional thread successively through its meshes, threaders for supplying a thread to the pullers, and means for actuating the pullers and threaders. 2nd. The combination with means for supporting an open-mesh fabric, of a series of pullers adapted to reciprocate through the meshes of the previously woven fabric, and threaders for supplying additional threads to the pullers to be interwoven diagonally in the fabric. 3rd. The combination with means for supporting an open-mesh fabric, of

pullers arranged on opposite sides of the fabric and adapted to reciprocate towards and from the previously woven fabric to draw additional threads back and forth through the meshes thereof, and threaders for supplying threads to the pullers. 4th. The combination of the upper and lower series of pullers, means for reciprocating the pullers through the meshes of a fabric arranged between them, means for supplying an additional thread to a puller of one series, and means for transferring the thread after it has been drawn through the fabric from said puller to a puller of the other series to be drawn in an opposite direction through the fabric, substantially as described. 5th. The combination with means for supporting an open-mesh fabric, of a series of pullers adapted to reciprocate towards and from the face of the fabric to draw additional threads back and forth through the meshes thereof, threaders for supplying threads to the pullers, and mechanism for advancing the fabric step by step during the operation of the threaders and pullers, the combination being and operating substantially as described to interweave additional threads diagonally with the warp and weft threads. 6th. The combination with means for supporting an open-mesh fabric, of pullers having hooked ends and adapted to reciprocate towards and from the previously formed fabric to draw an additional thread successively through its meshes, and threaders for supplying a thread to the hooked ends of the pullers. 7th. The combination with means for supporting an open-mesh fabric, of pullers having hooked ends provided with opening and closing jaws and adapted to reciprocate through the meshes of the previously formed fabric to draw additional threads back and forth through the meshes thereof, and threaders for supplying threads to the hooked ends of the pullers when the jaws are open. 8th. The combination with means for supporting an open-mesh fabric, of pullers having hooked ends and opening and closing jaws, rods for opening and closing the jaws, means for operating the rods, mechanism for reciprocating the pullers towards and from the fabric, to draw additional threads through the meshes thereof, and threaders for supplying threads to the pullers. 9th. The combination with means for supporting an open-mesh fabric, of pullers arranged on opposite sides of the fabric, and adapted to reciprocate towards and from the fabric to draw additional threads through the meshes thereof, transverse bars above and below the fabric, to which the pullers are secured, rods connecting the two bars, means for reciprocating the puller-carrying bars together towards and from the fabric, and threaders for supplying threads to the pullers. 10th. The puller herein described for drawing an additional thread through the meshes of an open-mesh fabric, having a side recess near its tapered end provided with a seat for the thread, and also provided with a pivoted jaw adapted to close one side of the recess adjacent to a seat for the thread, and an operating rod connected with the jaw and extending to the opposite end of the puller. 11th. The combination with means for supporting a fabric, of a picker, means for operating it to draw a thread from a supply to be interwoven with the fabric, a pincer for grasping the thread drawn by the picker, pullers adapted to reciprocate towards and from the fabric, to draw the additional thread through its meshes, and threaders for presenting the thread to the pullers. 12th. The combination with means for supporting a fabric, of a picker, means for operating it to draw a thread from a supply to be interwoven with the fabric, a pincer for grasping the thread drawn by the picker, a knife for severing the portion of thread drawn by the picker from the other portion thereof, pullers adapted to reciprocate towards and from the fabric to draw the additional thread through its meshes, and threaders for presenting the thread to the pullers. 13th. The combination with means for supporting a fabric, of a picker, means for operating it to draw a thread from a supply to be interwoven with the fabric, a pincer for grasping the thread drawn by the picker, a knife for severing the portion of thread drawn by the picker from the other portion thereof, pullers adapted to reciprocate towards and from the fabric to draw the additional thread through its meshes, threaders for presenting the thread to the pullers and a clamp for holding partially interwoven threads. 14th. The combination with means for supporting an open-mesh fabric, of pullers adapted to reciprocate towards and from the fabric to draw additional threads through the meshes thereof, threaders for supplying threads to the pullers, the clamp having the upper and lower opening and closing clamp bars and provided with mechanism for moving them back and forth to advance the fabric through the machine, a picker, means for operating it to draw a thread from a supply to be interwoven with the fabric, a pincer for grasping the thread drawn by the picker, a thread-clamp for holding partially interwoven threads, and connections between the thread-clamp and the operating mechanism of the cloth-feed-clamp, whereby the thread-clamp is operated coincidentally with the cloth-feed-clamp. 15th. The combination with means for supporting an open-mesh fabric, of a picker provided with mechanism for operating it to draw a thread from a supply to be interwoven with the fabric, a pincer having an arm pivoted on a fixed axis and provided with mechanism for oscillating it, a knife or cutter operated by the pincer, a thread-clamp having a member pivoted to move vertically, a supporting plate for the pivoted member of the clamp, means for oscillating said pivoted member, means for reciprocating the supporting plate towards and from the pincer, and mechanism for weaving into the fabric the threads drawn by the picker and held by the pincer and clamp. 16th. The combination with means for supporting an open-mesh fabric, of the upper and lower series of pullers adapted to reciprocate towards and from the fabric and to

draw additional threads through the meshes thereof, the "first-threader" adapted to receive an additional thread, and to present it to the first puller of one of the series of pullers, independently movable threaders adapted to present the thread to the other pullers, and mechanism for actuating the pullers and threaders. 17th. The combination with means for supporting an open-mesh fabric, of the upper and lower series of pullers adapted to reciprocate towards and from the fabric, and to draw additional threads through the meshes thereof, the first threader having opening and closing jaws bevelled or inclined on their adjacent inner walls and adapted to receive an additional thread and to present it to the first puller of one of the series of pullers, means for reciprocating the first threader longitudinally of the machine and also transversely thereto, and independently movable threaders adapted to present the thread to the other pullers. 18th. The combination with means for supporting an open-mesh fabric, of the upper and lower series of pullers adapted to reciprocate towards and from the fabric and to draw additional threads through the meshes thereof, the first threader adapted to receive an additional thread and to present it to the first puller of one of the series of pullers, independently movable threaders adapted to present the thread to the other pullers, and a clamp for grasping the thread while being operated upon by the first few pullers. 19th. The combination with means for supporting an open-mesh fabric, of the pullers adapted to reciprocate towards and from the fabric to draw additional threads through the meshes thereof, the toothed, recessed, independently movable threader-plates, means for moving the threader-plates both longitudinally of the machine and also transversely thereto, and means for supplying additional threads to the threaders. 20th. The combination with means for supporting an open-mesh fabric, of the pullers adapted to reciprocate through the meshes of the fabric to draw additional threads therethrough, the toothed, recessed, independently movable threader-plates, means for moving the threader-plates both longitudinally of the machine and transversely thereto, and means for advancing the fabric step by step, the combination being and operating substantially as described, to interweave additional threads diagonally with the warp and weft threads. 21st. The combination with means for supporting an open-mesh fabric, of the pullers adapted to reciprocate through the meshes of the fabric to draw additional threads therethrough, the toothed, recessed threader-plates, means for moving the threader-plates both longitudinally of the machine and also transversely thereto, means for advancing the fabric past the pullers step by step, the first threader adapted to present the additional thread to the first puller, and means for actuating the first threader independently of the other threaders. 22nd. The combination with means for supporting an open-mesh fabric, of the upper and lower series of pullers on opposite sides of the fabric, and adapted to reciprocate through the meshes thereof, the threaders above the fabric consisting of independently movable, toothed, recessed plates adapted to reciprocate back and forth past the vertical plane of the pullers and also transversely thereto, the threader-plate below the plane of the fabric adapted to reciprocate both longitudinally of the machine and transversely thereto, mechanism for actuating the pullers and threaders, means for feeding the fabric step by step, and means for supplying thread to the threaders. 23rd. The combination with means for supporting an open-mesh fabric, of the pullers having hooked ends provided with pivoted jaws and arranged on opposite sides of the fabric, means for reciprocating the pullers through the meshes of the fabric and for opening and closing their jaws, the first threader for supplying thread to the first hook of one of the series, the toothed, recessed threader-plates arranged one above the other and adapted to reciprocate transversely of the machine independently of each other, a supporting plate on which the threader-plates are mounted and which also supports the first threader, means for reciprocating the supporting plate to move the threader-plates and the first threader together transversely of the machine, means for reciprocating the threader-plates together longitudinally of the machine, and mechanism for giving an independent, longitudinal movement to the first threader. 24th. The combination with means for supporting a fabric, of the opening and closing clamp bars, means for actuating them to open and close, a lever for imparting a longitudinal movement to the clamp bars to feed the fabric forward, and an arm connecting the clamp bars with the operating lever and having adjusting devices, whereby the longitudinal movement of the clamp bars may be varied while the machine is in operation. 25th. The combination with means for supporting a fabric, of the clamp bars, means for opening and closing them to clamp or release the fabric, a frame on which the clamp bars are supported, a lever for giving a longitudinal movement to the clamp bars, means for actuating the lever, an arm pivotally connected with the frame of the clamp bars and having an adjustable connection with the lever and devices for adjusting the connection between the arm and the lever whereby the longitudinal movement of the clamp bars may be varied while the machine is in operation. 26th. The combination with means for supporting a fabric, of the clamp bars, means for opening and closing them to grasp or release the fabric, a frame on which the clamp bars are mounted, a bell-crank lever, means for oscillating it, an arm pivoted to the frame of the clamp bars and connected at its opposite end with a slot in one arm of the bell-crank lever, an arm on the shaft of the bell-crank lever connected by a link with the arm which is pivoted to the frame of the clamp bars, and a hand

lever for turning the shaft of the bell-crank lever for adjusting the position of the pivoted arm whereby the longitudinal movement of the clamps may be varied while the machine is in operation.

No. 52,646. Dental Engine. (*Engin dentaire.*)

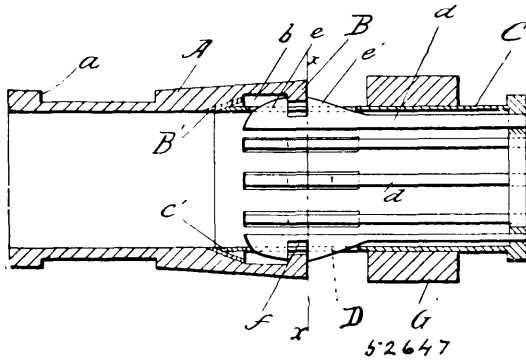


The S. S. White Dental Manufacturing Company, Philadelphia, Pennsylvania, assignee of Arthur William Brown, Prince's Bay, New York, both in the U. S. A., 13th June, 1896; 6 years. (Filed 25th April, 1896.)

Claim.—1st. The combination of the dental engine frame constructed with the bearing opening having the enlarged end portions terminating in the curved bearing surfaces, the driving shaft passing loosely through the bearing opening, the cone-bearing sleeve fast on one end of the driving shaft and entering the enlarged portion of the bearing opening at one end thereof, the cone-bearing sleeve entering the other enlarged end portion of the bearing opening and adjustable along the driving shaft, means for adjusting this cone-bearing sleeve, and the two sets of balls confined between the cone-bearing sleeves and the curved bearing surfaces of the enlarged end portions of the bearing opening, substantially as set forth. 2nd. The combination of the dental engine frame constructed with the bearing opening having the enlarged end portions terminating in the curved bearing surfaces, the driving shaft passing loosely through the bearing opening and screw threaded at one end, the cone-bearing sleeve fast on the unthreaded end of the driving shaft and entering the enlarged portion of the bearing opening at one end thereof, the adjustable cone-bearing sleeve on the threaded portion of the driving shaft and projecting into the adjacent enlarged end portion of the bearing opening, the adjusting nut on the driving shaft, and the two sets of balls confined between the cone-bearing sleeves and the curved bearing surfaces of the enlarged end portions of the bearing opening, substantially as set forth. 3rd. The combination of the dental engine frame provided with the bearing opening, the bearing sleeves in the opposite ends of the bearing opening, each having the internally enlarged portion and the curved bearing surface, the driving shaft passing loosely through the bearing sleeves, the cone-bearing sleeve fast on one end of the driving shaft and entering the enlarged portion of the bearing sleeve at one end of the bearing opening, the cone-bearing sleeve entering the enlarged portion of the bearing sleeve at the other end of the bearing opening and adjustable along the driving shaft, means for adjusting this cone-bearing sleeve, and the two sets of balls confined between the cone-bearing sleeves and the curved bearing surfaces of the bearing sleeves in the bearing opening of the frame, substantially as set forth. 4th. The combination of the dental engine frame provided with the bearing opening, the bearing sleeves in the opposite ends of the bearing opening, each constructed to provide a bearing surface for anti-friction balls and externally shouldered, and the rocking standard of the engine mounted by its forks to rock about said bearing sleeves, substantially as set forth. 5th. The combination in a dental engine, of the frame, the driving shaft provided with the crank, the crank-pin having the grooved bearing surface, the pitman provided with the bearing opening in its head, the cone-bearing sleeves adjustable in said bearing opening, and the balls working in contact with the bearing sleeves and the grooved bearing surface of the crank-pin, substantially as set forth. 6th. The combination in a dental engine, of the frame, the driving shaft provided with the crank, the crank-pin, the pitman provided with the bearing opening in its head and having the slot extending to said opening, the clamp screw passing through the slatted portion of the pitman, the cone-bearing

sleeves adjustable in said bearing opening, and the balls in contact with the crank-pin and the bearing sleeves, substantially as set forth. 7th. The combination in a dental engine, of the pulley head provided with the bearing opening, the two non-adjustable cone-bearing sleeves in the bearing opening, the two adjustable cone-bearing sleeves in the bearing opening, the tubular journal in the cone-bearing sleeves, the two sets of balls in contact with the tubular journal and with their respective bearing sleeves, the driven shaft section passing through the tubular journal, and the pulley on said journal, substantially as set forth. 8th. The combination in a dental engine, of the pulley head provided with the tubular portion constituting the bearing opening and having the transverse slots, the longitudinal slot, and the lugs at opposite sides of this longitudinal slot, the clamp screw passing through the lugs, the two non-adjustable cone-bearing sleeves in the bearing opening, the two adjustable cone-bearing sleeves in the bearing opening, provided with the circumferential holes, the journal in the cone-bearing sleeves, and the two sets of balls in contact with the journal and with their respective bearing sleeves, substantially as set forth.

No. 52,647. Hose Coupler. (Joint de boyau.)



Pierre Etienne Guérard and Napoléon Malhieu, both of Montreal, Quebec, Canada, 13th June, 1896; 6 years. (Filed 20th May, 1896.)

Claim.—1st. In a hose coupling, the combination, with one half of the coupling provided with a shoulder at its front end and an annular groove behind the said shoulder; of the other half of the coupling provided with a series of longitudinal slots, a series of spring fingers each having two inclined projections extending through the slots, and notches between the said projections; and a slidable ring for pressing inward the said spring fingers, substantially as set forth. 2nd. In a hose coupling, the combination with one half of the coupling provided with a conical ring of soft material, a shoulder at its front end, and an annular groove between the said shoulder and ring; of the other half of the coupling provided with a conical front end for bearing against the said ring, a series of longitudinal slots, a series of spring fingers, each having two inclined projections extending through the said slots, and notches between the said projections; and a slidable ring for pressing inward the said spring fingers simultaneously and releasing the halves of the coupling, substantially as set forth.

No. 52,648. Brush. (Brosse.)

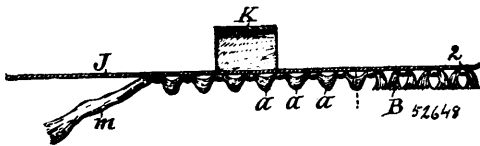


Fig. 2.

Anthony Eugene Magoris, Binghampton, New York, U.S.A., 16th June, 1896; 6 years. (Filed 6th November, 1895.)

Claim.—1st. The herein described process of forming a brush which consists in securing fibres arranged in a parallel relation to a back by parallel rows of fastenings, looping the fibres between the said fastenings, and severing the loops to form the tufts or bristle surface, substantially as set forth. 2nd. That improvement in the process of forming a brush, which consists in securing fibres arranged in parallel relation to a back by stitches, and looping the fibres between the said stitches, substantially as described.

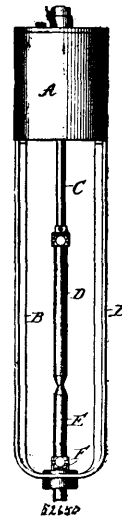
No. 52,649. Manufacture of Artificial Fuel.

(Fabrication de combustible artificiel.)

William Henry Biggs, Cardiff, and Robert Ralph Greenhow, Lanishen, both in Glamorgan, Wales, 16th June, 1896; 6 years. (Filed 17th June, 1895.)

Claim.—1st. The process of manufacture of artificial fuel which consists in first reducing anthracite small coal or duff to a state of fineness in which the coarsest particles will pass through a sieve of 20 wires to the lineal inch; then mixing therewith 6 per cent of pitch reduced approximately to the same state of fineness as the anthracite; then incorporating with this mixture about 6 per cent of coal-tar; then heating the mass for approximately ten minutes, and finally moulding it by heavy pressure into briquettes, substantially as described. 2nd. The process of manufacture of artificial fuel which consists in first reducing anthracite small coal or duff to a state of fineness in which the coarsest particles will pass through a sieve of 20 wires to the lineal inch; then mixing therewith about 6 per cent of pitch reduced to approximately the same state of fineness as the anthracite; then incorporating with this mixture about 6 per cent of coal-tar; then heating the mass for approximately ten minutes; then moulding it by heavy pressure into briquettes; then subjecting the briquettes to a gradually increasing heat for about three hours until the maximum temperature of about 800° to 900° C. is attained and keeping them at this temperature for about twenty minutes, and then gradually cooling them for approximately three and one-half hours, substantially as described and for the purpose specified.

No. 52,650. Arc Lamp. (Lampe à arc.)

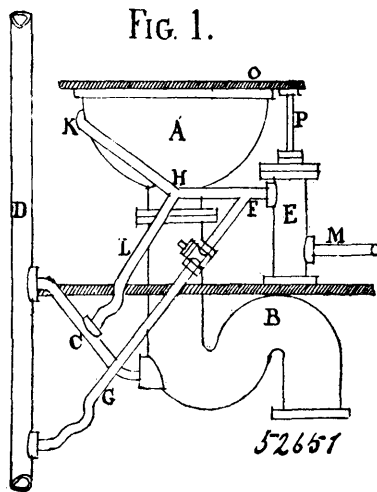


Samuel P. Parnly, Chicago, Illinois, U.S.A., 16th June, 1896; 6 years. (Filed 26th July 1895.)

Claim.—1st. A pair of carbon pencils for an electric arc lamp burning the pencils by holding them in line end to end and having a feed mechanism adapted to adjust the pencils toward one another as they are consumed formed each with a total cross sectional area approximately twice that of the round carbons ordinarily employed on a circuit carrying the same current, and at least one of them formed as a flattened bar or prism of elliptical cross section with a thickness at the minor axis approximately equal to the diameter of the ordinary round carbon. 2nd. A pair of carbon pencils for an arc lamp adapted to be presented to one another end to end and to be adjusted toward one another as they are consumed by an arc passing between them, each of said pencils having a cross sectional area of the ordinary round carbon and substantially in the form of a flattened bar with thickness and width as one to two and rounded or flattened along its edges. 3rd. In an electric arc lamp burning its carbons end to end and provided with means for feeding them towards one another as they are consumed by the arc, pencils or electrodes formed each as a flattened bar or prism thickest at the middle and becoming thinner towards the edges and having a total cross sectional area approximately twice that of the round carbon ordinarily employed on a circuit carrying the same current. 4th. A pair of carbon pencils for an electric arc lamp burning two and only two pencils by holding them in line end to end and having a feed mechanism adapted to adjust the pencils towards one another as they are consumed, said pencils having each a transverse area double that of the ordinary cylindrical lamp carbons commonly employed on circuits carrying the same number of amperes, and at least one of them formed as a flattened bar or prism of a thickness approximately equal to the width diameter of the ordinary cylindrical single lamp carbon and of a width approximately twice its thickness and tapered or thinned from its middle towards its edge. 5th. A pair of carbon pencils for an electric arc lamp adapted to be presented to one another end to end and to be adjusted towards one another as they are consumed by an arc passing between them, formed each with an elliptical or oval figure in cross-section the minor diameter of which is approximately that of the round carbon ordinarily employed on a circuit having the same current while its major diameter is sufficient to give the increased mass any cross-section required to diminish the rate of consumption to the desired degree. 6th. A pair of carbon

pencils for an arc lamp adapted to be presented to one another end to end and to be adjusted towards one another as they are consumed by an arc passing between them, formed each as a flattened bar or prism thickest at the middle and becoming thinner towards the edges, as and for the purposes described. 7th. A pair of carbon pencils for an arc lamp adapted to be presented to one another end to end and to be adjusted towards one another as they are consumed by an arc passing between them, formed each with an elliptical or oval figure in cross section, as and for the purpose described. 8th. A pair of carbon pencils for an arc lamp adapted to be presented to one another end to end and to be adjusted toward one another as they are consumed by an arc passing between them, each of said pencils having a cross sectional area substantially twice the cross sectional area of the ordinary round carbon and substantially in the form of a flattened bar with thickness and width as one to two. 9th. A pair of carbon pencils for an arc lamp adapted to be presented to one another end to end and to be adjusted toward one another as they are consumed by an arc passing between them, each of said pencils having a cross sectional area substantially twice the cross sectional area of the ordinary round carbon for the same current and with a long diameter substantially twice the diameter of an ordinary round carbon for the same current and shaped so that the arc travels back and forth without material localization.

No. 52,651. Double Vent, Double Flushing Water Closet. (*Citerne de lavage de latrines.*)



Philip Nicolle, Toronto, Ontario, Canada, 16th June, 1896; 6 years. (Filed 13th November, 1895.)

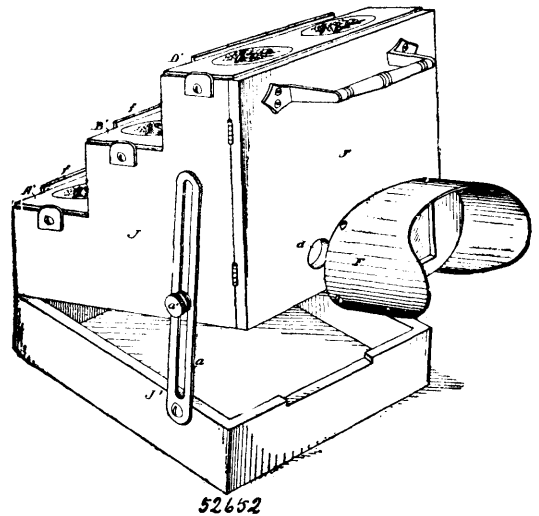
Claim.—1st. The combination of juncture F from valve E to closet bowl flushing pipe K, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of frost-proof flushing and draining trapped pipe G, and tap on top from juncture F and the draining of closet bowl flushing pipe K into G, going down to main vent pipe D, and trap B, substantially as and for the purpose hereinbefore set forth. 3rd. The combination in the water sealing of vent pipe C to trap B, the water sealing of main vent pipe D to trap S, substantially as and for the purpose hereinbefore set forth. 4th. The combination of completely sealing trap X by means of supply pipe V, through branch T, the pipe V, the branch T, and the tap W, substantially as and for the purpose hereinbefore set forth. 5th. The combination of entrance on top of trap X, the stoppage of sewer gas from getting through traps X and S and through pipes D, G, B, L and C into closet bowl A, substantially as and for the purpose hereinbefore set forth.

No. 52,652. Photochromoscopes and Photochromoscope Cameras. (*Camera photochromoscopique.*)

Frederick Eugene Ives, Philadelphia, Pennsylvania, U.S.A., 16th June, 1896; 6 years. (Filed 26th November, 1895.)

Claim.—1st. A photochromoscope or photochromoscope camera consisting of a casing having a series of inclined reflecting mirrors some of which are transparent, a series of colour screens and a chromogram or plate receiver having the support or supports for the chromogram so disposed that the images of the chromogram or plate will be located one above another, substantially as specified. 2nd. A photochromoscope or photochromoscope camera consisting of a casing having a series of inclined mirrors some of which are transparent, a series of colour screens and a series of chromogram or plate supports arranged one above another in step-like form, substantially as specified. 3rd. A photochromoscope comprising a casing having a series of inclined mirrors some of which are transparent, a series of colour screens, a chromogram support or supports disposed so as to bring the images one above another, and means for varying the angle of said instrument in respect to the direction of

the light rays, substantially as specified. 4th. The combination in a photochromoscope, of a casing having a series of inclined mirrors,



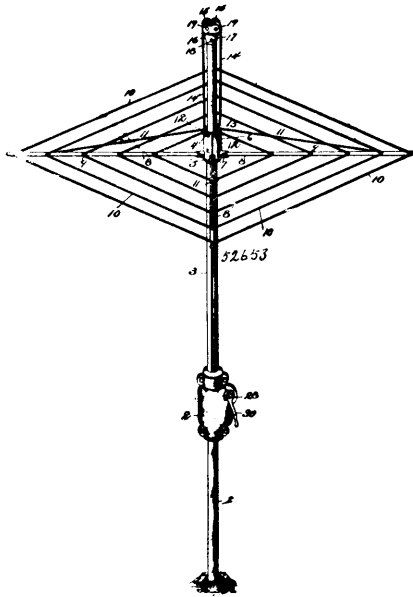
some of which are transparent, a series of colour screens, one or more supports for the chromogram so arranged that the images are located one above another, and a binocular or stereoscopic eye piece, substantially as specified. 5th. A chromogram consisting of a series of sections united so as to be capable of folding one upon another, the images of the sections being identical in size and perspective, but with differences in gradations of light and shade, which differences constitute a colour record, substantially as specified. 6th. A chromogram consisting of a series of sections united by flexible cords or strips, the images of the sections being identical in size and perspective, but with differences in gradations of light and shade, which differences constitute a colour record, substantially as specified. 7th. A chromogram consisting of a series of pairs of images, the images of each pair being alike, except for the difference of perspective which characterizes the two images of a stereoscopic photograph and the pairs of images being identical in size and perspective, but with differences in gradations of light and shade, which differences constitute a colour record, substantially as specified. 8th. A photochromoscope casing having a series of seats one above another for a sectional chromogram, and a series of inclined mirrors, said chromogram seats and mirrors being so disposed that two of the images will be viewed by reflection and one will be viewed direct. 9th. A photochromoscope comprising a casing having a series of seats one above another, for a sectional chromogram, a series of inclined mirrors, and a series of colour screens, the chromogram supports and mirrors being so arranged that the instrument is adapted for use in connection with an external reflector, substantially as specified. 10th. A photochromoscope having a transparent mirror located therein at an angle, so as to reflect and also transmit rays of light, said mirror being so coloured that it will absorb unreflected rays of a character which the mirror is designed to reflect, but transmit rays of a character which the mirror is designed to transmit. 11th. A binocular or stereoscopic photochromoscope having one or more chromogram supports so disposed that the images of the chromogram are located one above another, a series of colour screens, and a series of mirrors some or all of which are transparent, said mirrors being inclined in a horizontal plane and located one behind another in the line of sight, substantially as specified. 12th. A photochromoscope comprising a casing having one or more chromogram supports, so disposed that the images of the chromogram are located one above another, and a series of inclined mirrors some or all of which are transparent, said mirrors being located one behind another in the line of sight and inclined in a horizontal plane, substantially as specified. 13th. A photochromoscope having one or more chromogram supports so disposed that the images of the chromogram are located one above another, a series of mirrors some or all of which are transparent, and condensing lenses one located in the path of the rays from the image or images of one section of the chromogram to the first mirror of the series, and another located behind said mirror, and in the path of the rays from the images of the other sections of the chromogram.

No. 52,653. Clothes Drier. (*Appareil pour sécher le linge.*)

Peter Schaefer, St. Peter, Minnesota, U.S.A., 16th June, 1896; 6 years. (Filed 26th December, 1895.)

Claim.—1st. In a clothes drier, the combination of an upright tubular standard, a clothes reel mounted to slide on said standard, a pulley-cap detachably fastened on the upper extremity of said standard and provided with a pair of parallel bearing-plates, opposite guide-pulleys mounted between said bearing-plates and disposed out of alignment with each other in parallel planes, an elevating cable having its opposite extremities connected with said clothes reel, and having its

opposite portions passed over said guide-pulleys and within the standard, and an adjusting device having a connection with the



elevating cable within the standard, substantially as described. 2nd. In a clothes drier, the combination of an upright tubular standard, a gearing-box connected with the lower end of the standard, gearing mounted within the box, one of the wheels of the gearing being a chain wheel, a clothes reel mounted to slide on the standard, an elevating cable working within the standard and having its opposite portions passed out of the upper end of the standard and connected with the clothes reel, and an adjusting chain passed around the chain wheel and the gearing-box, and having one end suitably connected with the elevating cable within the standard and its other end connected with the clothes reel outside of the standard, substantially as described. 3rd. In a clothes drier, the combination of an upright tubular standard, a gearing-box connected with the lower end of the standard, worm-gearing mounted within the box and operating a chain wheel, a revolving clothes reel mounted to slide on the standard and having a hook, an elevating cable working within the standard and having its opposite portions passed over guide-pulleys at the upper end of the standard and connected with the clothes reel, and an adjusting chain passed around the chain wheel in the gearing-box and having one end suitably connected with the elevating cable within the standard, and its other end detachably engaged with the hook of the clothes reel outside of the standard, substantially as set forth. 4th. In a device of the class described, the combination with the gearing-box provided in its opposite sides with bearing openings, of the worm-shaft journaled in said bearing openings and provided in one extremity with a bearing concavity, a ball-cap detachably fastened to one side of the gearing-box over one of the bearing openings, and a single bearing ball mounted in said cap and fitting the bearing concavity of said shaft, substantially as described.

No. 52,654. Process of Manufacturing Mineral Wool.

(*Procédé pour la fabrication de laine minérale.*)

Thomas Sloan Bell Wood, Sharon, Pennsylvania, U.S.A., 16th June, 1896; 6 years. (Filed 9th January, 1896.)

Claim.—The herein described process for the manufacture of mineral wool consisting in melting, in a cupola, slag or scoria, with floor-spar and converting the molten product into mineral wool, substantially as shown and described.

No. 52,655. Cooking Stove. (*Poêle de cuisine.*)

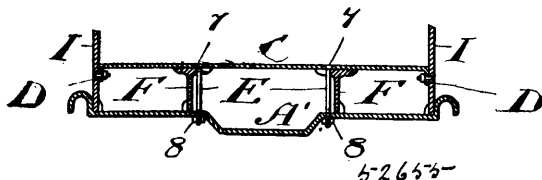
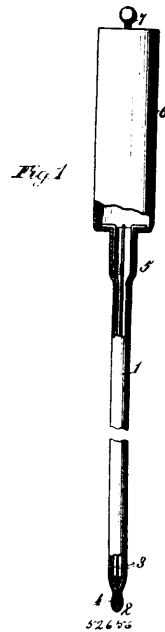


Fig. 2.

John Milne, Hamilton, Ontario, Canada, 16th June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. A stove, having a sheet steel oven formed of one or more pieces and provided with side flanges with holes formed therein through which bolts pass so as to fasten the oven to the frame of the stove, substantially as and for the purpose specified. 2nd. A stove, having a sheet steel oven formed of one or more pieces and provided with side flanges with holes formed therein through which bolts pass to fasten the oven to the frame of the stove by nuts on their threaded ends, in combination with flue strips, and an air chamber in front of the oven substantially as specified. 3rd. In a stove, the combination with a sheet steel oven, of a flue strip, to which the bottom of the oven is so secured as to prevent twisting and warping of the oven, and permit of expansion and contraction of the same, substantially as specified. 4th. In a stove, the combination with a sheet steel oven formed of one or more pieces, of a flue strip and projections therefrom, to form a substantial bearing for the oven and to which it is rigidly secured, substantially as specified. 5th. In a stove, the combination with a sheet steel oven formed of one or more pieces, of flue strips provided with projections to form a substantial bearing for the oven, and through which the bottom of the oven is bolted to the leg bottom of the stove, substantially as specified. 6th. In a stove, a sheet steel oven formed of one or more pieces, and provided with side flanges with holes formed therein, through which bolts pass so as to secure the oven to the frame of the stove, in combination with a flue strip provided with projections to which the bottom of the oven is rigidly secured, substantially as specified. 7th. In a stove, a sheet steel oven formed of one or more pieces, and provided with side flanges with holes formed therein, through which bolts pass so as to secure the oven to the frame of the stove, in combination with flue strips provided with projections to form a substantial bearing for the oven and through which the bottom of the oven is bolted to the leg bottom of the stove, and an air chamber in front of the oven, substantially as specified.

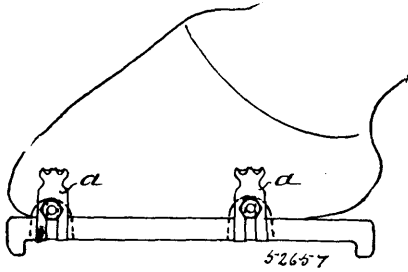
No. 52,656. Dilator. (*Dilatateur.*)



Elisha Jefferson Parker, Dallas, Texas, U.S.A., 16th June, 1896; 6 years. (Filed 15th April, 1896.)

Claim.—1st. A dilator consisting of a tubular flexible and laterally expansible stem, a series of non-extensible longitudinal wires bent at substantially the middle portion thereof and connecting the two ends of said tubular stem and serving to prevent lengthening of the dilator when its diameter is increased by internal pressure, the end of said stem being formed solid, and the bent portion of said wires being embedded in said solid portion, substantially as described. 2nd. A dilator consisting of a tubular flexible and expansible stem, a series of steel wires running longitudinally of, and embedded in the side wall of the stem, the end portion of said stem being contracted and made solid, and the ends of the longitudinal wires being embedded in said solid portion, substantially as described. 3rd. A dilator consisting of a tubular flexible and expansible stem provided at its end with a solid contracted portion, longitudinal wires partially embedded in the wall of said stem, and in the solid contracted portion, an enlarged chamber communication with the other end of the tubular stem, and a pump integrally connected to the enlarged chamber, the free ends of said longitudinal wires emerging from the stem into the enlarged chamber and then bent outward and upward, traversing the wall of said latter named chamber and passing into the end of the fluid pump, substantially as shown and described.

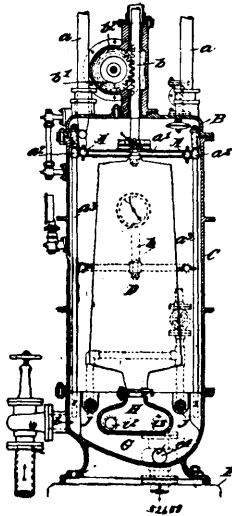
No. 52,657. Horse-Shoe. (Fer à cheval.)



Christian Eisenberg, Berlin, Germany, 16th June, 1896; 6 years. (Filed 10th April, 1896.)

Claim.—1st. In combination with a horse-shoe, the clamps extending therefrom and having hooks with grooves therein, substantially as described. 2nd. In combination, the horse-shoe having a dove-tail recess, the wedge-shaped connecting-piece therein, and the clamp held to the wedge-shaped piece adjustably, substantially as described.

No. 52,658. Asbestos Filter. (Filtre en asbeste.)



Friedrich Breyer, Vienna, Lower Austria, 16th June, 1896; 6 years. (Filed 27th March, 1896.)

Claim.—1st. In asbestos filters of the kind in which the asbestos layer is formed on the outer surface of porous hollow bodies, the use, for cleansing such layers of deposit, of a water-rinsing device consisting of jet pipes such as *a*¹ arranged between the filter elements and supplied with water under pressure, substantially as described. 2nd. In cleansing apparatus such as is referred to in the first claim, the use of jet pipes *a*¹ connected together by pipes *A*, to which are fixed the water pressure supply pipes working through stuffing boxes in the casing, the framing carrying the jet pipes being arranged to receive an up-and-down motion and preferably to slide on guides *a*², substantially as described. 3rd. In the cleansing apparatus referred to in the second claim, effecting the up-and-down motion of the rinsing frame by means of a toothed rack *b* fixed to such frame, with which gears a pinion *b*¹ contained in a casing *b*² on the head piece of the filter casing, substantially as described. 4th. In cleansing apparatus such as is referred to in the first claim, the use of jet pipes *a*¹ carried by a tubular shaft *E* mounted in bearings in the filter casing and connected to the water pressure supply, such shaft receiving a reciprocating rotary motion for causing the jet pipes *a*¹ to swing up and down over the surfaces of the filter elements, substantially as described. 5th. In asbestos filters of the kind herein referred to, providing the filter casing with a base or lower part *G*, which is formed in one with the collecting chamber *H* of the filter elements, and in which are arranged the inlet and outlet branches *i*¹, *i*², *i*³ and *i*⁴ in such manner that the hand-wheels of the shut-off valves are all situated at the same convenient height from the ground for working them, substantially as described.

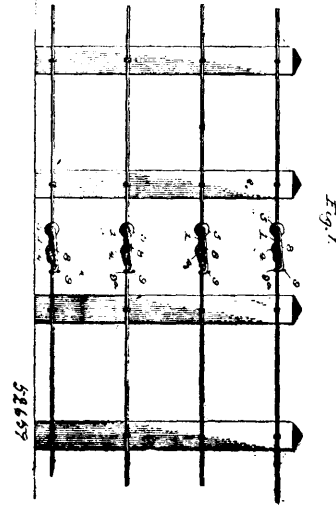
No. 52,659. Mid-Wire Take-Up.

(Appareil à soutenir le fil de fer pour clôtures.)

George S. Dorney and Robert J. Dorney, both of Finlay, Ohio, U.S.A., 16th June, 1896; 6 years. (Filed 16th April, 1896.)

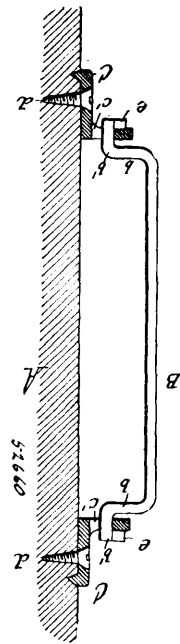
Claim.—As a new article of manufacture, a mid-wire take-up for wire fences comprising an approximately V-shaped frame *l* open at

its outer end and formed with a straight arm 2, with an outwardly bent curved arm 3 and with a loop 4, connecting the curved arm



with the straight arm at the inner end of the frame, to one side of the latter, and the detachable winding pin 6 located at the open end of the frame, and formed with a diametric orifice 7 adjacent to the straight arm, and with a crank-arm 8 having a down-bent, in-bent and up-bent hook 9, providing a pocket 9^a located transversely of the crank-arm for the reception of the wire, substantially as described.

No. 52,660. Stall Fixture. (Appareil de stallie.)



Reuben Cadwell Eldridge, Niagara Falls, Ontario, Canada, 16th June, 1896; 6 years. (Filed 17th April, 1896.)

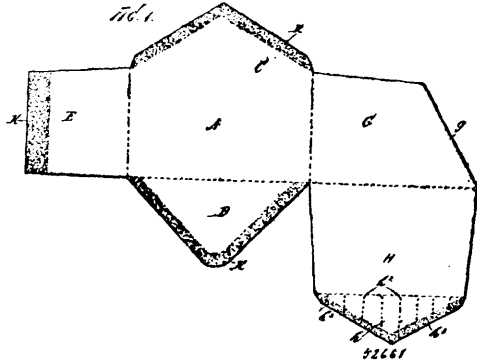
Claim.—The combination with a pair of brackets each having an opening provided in its edge with a notch, of an upright crank rod journaled in the openings of said brackets and provided with locking lugs which break register with the notches of said openings in the normal position of said rod, substantially as set forth.

No. 52,661. Envelope. (Enveloppe.)

Henry Du Pré Boumetheau, Jacksonville, Florida, U.S.A., 16th June, 1896; 6 years. (Filed 17th April, 1896.)

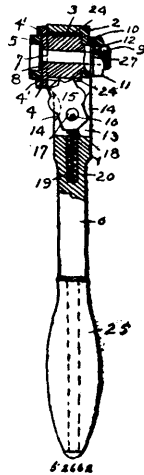
Claim.—1st. An envelope comprising a body portion, a folding side, a folding flap, and two ends, one of said ends being provided with a side piece which is provided with a flap, substantially as shown and described. 2nd. An envelope, comprising a body portion, a folding side, a folding flap, and two ends, one of said ends being provided with a side piece which is provided with a flap, and said end being also cut off at an inclination, substantially as shown and described. 3rd. An envelope, comprising a body portion, a folding

side, a folding flap, and two ends, one of said ends being provided with a side piece which is provided with a flap, and said end being



also cut off at an inclination, and said folding side, the flap and the end opposite the end which is provided with a side piece being each gummed on their inner surfaces, substantially as shown and described.

No. 52,662. Ratchet Wrench. (Clé à rochet.)



Henry Markel, Spencerville, Indiana, U.S.A., 17th June, 1896; 6 years. (Filed 18th April, 1896.)

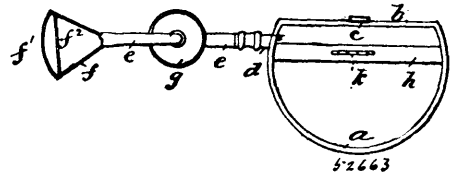
Claim.—1st. In a ratchet wrench, the combination of a hollow hub 2 having an integral neck 1 provided at its upper extremity with a slot 13 for the holding pawl, and at its lower end with a spring-pressed supporting-pin mounted therein as shown, a rotatable ratchet 3 mounted in said hub, as described, having a toothed periphery to engage the said pawl, provided at one end with a screw-threaded shank for the holding nut, and at the other end with a flanged die-holding plate 4, a spring-pressed holding-pawl 15 pivotally mounted in said slot 13 as described, adapted for a holding engagement with said ratchet, and a removable die-plate 5 mounted as shown on the front face of the rotatable ratchet, substantially as described. 2nd. A ratchet wrench comprising a hollow hub 2 apertured as shown, having an integral neck 1 and an external shank 6 for the fixed handle, the said neck having at its upper end a transverse slot 13 for the holding pawl and having in its lower end a central aperture 20 containing a spring-pressed pin 18 adapted to press the said pawl normally into engagement with the ratchet, a cylindrical ratchet having a toothed periphery, rotatably mounted in said hub as described, provided upon one end with a threaded shank for the securing nut, and upon the other end with means for securing the removable die, the die 5 adapted to engage a nut or burr, and having a central perforation coincident with that of the ratchet on which it is detachably mounted, and the holding pawl 15 apertured as described, pivotally mounted in the said slot 13, provided with oblique faces upon both extremities, for the purpose specified, being vertically movable on its pivoted support, and adapted to normally engage the rotatable ratchet under the tension of the said spring-pressed pin, substantially as described.

No. 52,663. Sprinkler. (Arrosoir.)

Jessie Lyon Philip, Montreal, Quebec, Canada, 17th June, 1896; 6 years. (Filed 22nd April, 1896.)

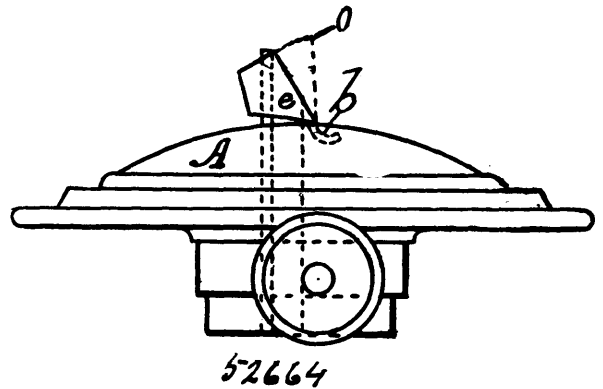
Claim.—1st. A portable sprinkler comprising a can or receptacle for water, an outlet at the bottom thereof, a flexible delivery tube connected with the outlet, a suction bulb in said tube, and a suit-

able carrying handle, for the purpose set forth. 2nd. A portable sprinkler comprising a can or receptacle for water, an outlet at the



bottom thereof, a flexible delivery tube connected with the outlet, a suction bulb in said tube, and a spraying nozzle formed with inner and outer perforated diaphragms, for the purpose set forth. 3rd. A spraying nozzle formed with inner and outer perforated diaphragms, for the purpose set forth. 4th. The portable sprinkler comprising the can *a*, with flat side *b* and handle *h*, the outlet *d*, rubber tubing *e*, with pumping or suction bulb *g* and spraying nozzle *f*, all as and for the purpose set forth. 5th. The portable sprinkler comprising the can *a*, with flat side *b* and handle *h*, having spring clip *k*, the outlet *d*, rubber tubing *e*, with pump or suction bulb *g* and spraying nozzle *f*, all as and for the purpose set forth.

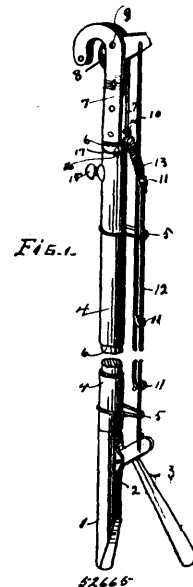
No. 52,664. Petroleum Burner. (Brûleur de pétrole.)



Hugh H. Sutherland, Truro, Nova Scotia, 17th June, 1896; 6 years. (Filed 22nd April, 1896.)

Claim.—1st. In a petroleum burner, the extinguisher *e*, having coiled portions *d d*, and curved points or hinges *b b*, substantially as and for the purpose hereinbefore described. 2nd. In a petroleum burner, the combination of the extinguisher *e*, having coiled portions *d d*, and curved points or hinges *b b*, with the wick tube *a*, the perforations *c c*, and the perforated dome *A*, substantially as and for the purpose hereinbefore described.

No. 52,665. Pruning Rod. (Sécateur.)

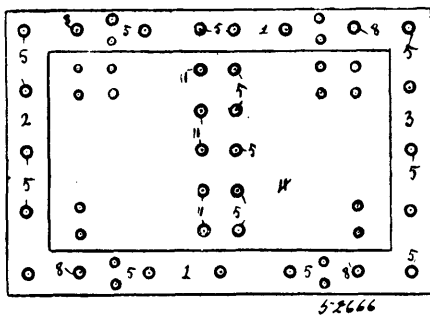


William S. Young, Pomona, California, U.S.A., 17th June, 1896; 6 years. (Filed 25th April, 1896.)

Claim.—1st. A pruning instrument made in telescopic sections so as to be extensible, in combination with an extensible pull-rod or wire interposed between the knife and operating handle or lever, said pull-rod being made in sections, one of which is provided with eyes and the other with a hooked end or finger which may be engaged with any one of said eyes, substantially as and for the purpose specified. 2nd. The combination with a telescopic pruning implement of an extensible pull-rod or wire interposed between the pruning knife and the operating lever or handle, said pull-rod being formed in two separate sections, one of which is connected with the knife and formed with eyes or coils at suitable intervals throughout its length, and the other connected with the operating lever or handle and formed with a hook or finger for engaging one of said eyes or coils, and a tension spring connected with and interposed between the outer pull-rod section and the knife-pole, substantially as set forth. 3rd. An extensible telescopic pruning implement, comprising a suitable handle, a tube secured thereto, a telescopic knife-pole sliding within the same and carrying a pruning hook and knife, a set screw for holding the knife-pole at any desired adjustment with relation to said tube, an operating lever pivotally attached to the handle of the implement, and an extensible pull-rod interposed between the pruning knife and the operating lever and connected therewith, substantially in the manner and for the purpose described.

No. 52,666. Device for Protection against Robbers.
(Appareil de protection contre les voleurs.)

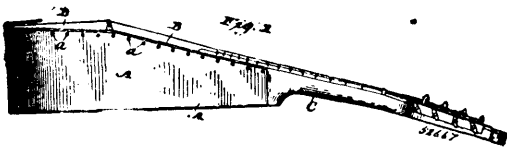
Fig. 1.



George H. Jackson, Ypsilanti, Michigan, U.S.A., 17th June, 1896; 6 years. (Filed 27th April, 1896.)

Claim.—1st. The combination with a suitable support of a plurality of guns provided with hinged muzzles and a muzzle plate, of catches for sustaining the muzzle plate in the elevated position or whereby it may be released, and the muzzles simultaneously swung upon their pivots, substantially as specified. 2nd. The combination with a door and movable panel, of a gun and frame secured to the door, and mechanism connecting the gun trigger with the movable panel, substantially as set forth. 3rd. The combination with a door, movable panel, and embrasure therein, of a gun, gun frame, and trigger actuating mechanism communicating with the panel to discharge the gun, substantially as set forth. 4th. The combination with a door, movable panel, embrasure therein, and means for concealing the embrasure, of a gun, and discharging mechanism operatively connecting the panel with the gun, substantially as set forth. 5th. The combination with a door, spring supported movable panel, gun, frame, and discharging mechanism connecting the gun with the panel, substantially as set forth. 6th. The combination with a door, movable panel and gun frame, of a plurality of guns, hinged muzzles, muzzle plates connecting the same, a muzzle plate sustaining mechanism, triggers and trigger rod and rods projecting from the trigger rod toward and adjacent to the panel, substantially as set forth.

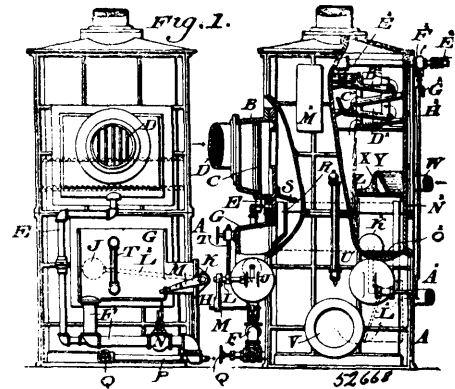
No. 52,667. Musical Instrument.
(Instrument de musique.)



Neil Merrill, Oshkosh, Wisconsin, and Arthur William Jones, Pittsburgh, Pennsylvania, both in the U.S.A., 17th June, 1896; 6 years. (Filed 28th April, 1896.)

Claim.—A musical instrument comprising a body portion, consisting of metal sides and back, and pressed, spun, or cast in one piece, a neck attached thereto, and a wood face sounding-board having a reinforcing strip secured to its under side at its edge, and removably secured to the body portion, substantially as described.

No. 52,668. Feed Water Heater, etc.
(Réchauffeur d'eau d'alimentation, etc.)



The Harrison Safety Boiler Works, assignee of David Cochrane, both of Philadelphia, Pennsylvania, U.S.A., 17th June, 1896; 6 years. (Filed 30th May, 1896.)

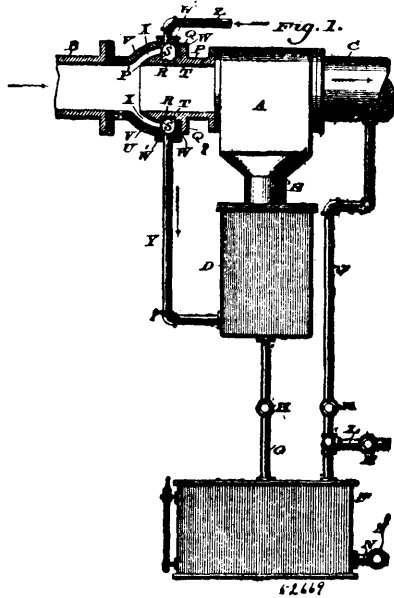
Claim.—1st. The herein described water seal box and tray, having a base X, and the serrated partitions Y and Z arranged at an angle thereto, said box being adapted to be attached to a heater, substantially as described. 2nd. A water seal box and tray provided with a base X, and the partitions Y and Z adapted to be attached to the interior of a feed water heater, substantially as described. 3rd. A feed water heater, a steam separator, and a steam trap suitably attached thereto, and independent passages leading from the heater and separator to the same, said trap being provided with a valve, waste-pipe, and float-actuated mechanism communicating therewith, said parts being combined substantially as described. 4th. A feed water heater, a steam separator and trap attached thereto, independent passages from the separator and heater leading to the trap, float-actuated mechanism for relieving the trap of any accumulation of water, and a water seal device located opposite the return pipe of the heater, said parts being combined, substantially as described. 5th. In a feed water heater, having a return pipe, a water seal box and tray adjacent thereto, a pipe leading to a feed pump, an inlet for exhaust steam above the water level of the heater, a cold water supply pipe for the heater, float-actuated mechanism connected to the cold water supply pipe, whereby any lowering of the water level in the tank will cause an inflow of cold water, and vice versa, substantially as described. 6th. In a feed water heater, having a return pipe, a water seal box or tray adjacent thereto, a pipe leading to a feed pump, an inlet for exhaust steam above the water level of the heater, a cold water supply pipe for the heater, a hood projecting over said pipe leading to the feed pump, float actuated mechanism connected to the cold water supply pipe, whereby any lowering of the water level in the tank will cause an inflow of cold water, and vice versa, substantially as described. 7th. A feed water heater provided with a separator, and a trap attached thereto, independent passages leading from the separator and heater to said trap, float-actuated mechanism, whereby any undue accumulation of water in the trap is prevented, a water seal placed adjacent to the return pipe inlet, a cold water inlet pipe, float-actuated mechanism connected therewith, said parts being combined, substantially as described. 8th. In a feed water heating device of the character described, a pipe P¹ leading to the atmosphere, a back pressure valve therein, pipes below said valves leading to radiators or heating systems, an auxiliary live steam pipe S¹ entering the pipe P¹ below the back pressure valve, provided with a reducing valve T¹ set at a lower pressure than the back pressure valve, said parts being combined substantially as described. 9th. A feed water heater, a steam separator, and a steam trap attached thereto, and independent passages leading from the heater and separator to said trap, the passage leading from the heater being provided with a valved waste pipe and float-actuated mechanism operating therewith, said parts being combined substantially as described.

No. 52,669. Steam Separator. (Séparateur de vapeur.)

The Harrison Safety Boiler Works, assignee of David Cochrane, both of Philadelphia, Pennsylvania, U.S.A., 17th June, 1896; 6 years. (Filed 30th May, 1896.)

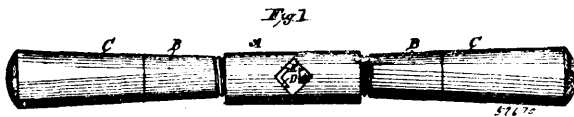
Claim.—1st. A steam separator, an inlet pipe therefor having a chamber or trap located within the same, and in communication with a current of incoming steam, a connection therefrom to the drip well of the separator, and an inlet pipe for introducing a cooling fluid into said trap, substantially as described. 2nd. The steam separator A, having inlet pipes B, U and P, a chamber or trap W¹, formed between the two latter, said chamber being in communication with the inlet pipe B by means of the passage X, the inlet pipe Z and the outlet pipe Y leading to the drip well of the separator, substantially as described. 3rd. The steam separator A, inlet and outlet pipes B and C, the drip well D, in communication

with said separator, a tank F in communication with said drip well, the valved connections G, J and L, the pipe sections U and P,



means for holding the same in position, the trap W¹, a passage X in communication therewith, and with the inlet pipe, a water inlet Z, and a drain pipe Y common to said trap and drip well, substantially as described. 4th. In a device of the character described, an inlet pipe, a pipe projecting thereinto, and having its edge in the path of the incoming steam, and a chamber or trap adjacent said edge, in combination with a passage leading into said inlet pipe therefrom, and means for introducing a cooling fluid into said chamber, substantially as described. 5th. In combination with a steam separator, a steam inlet pipe therefor, having secured to the interior thereof a curved or bent shell, one edge or portion of the latter being open to the incoming steam, and means for introducing water or other cooling fluid into said steam pipe adjacent said shell, substantially as described. 6th. In combination with a separator, the inlet pipe K¹, having an enlarged portion L¹, a shell N¹ secured within said pipe, thereby forming a chamber R², and means for conducting a cooling fluid into said chamber, substantially as described. 7th. A steam separator, a drip tank, a valved connection intermediate the same, a valved outlet for said drip tank, and means for creating a vacuum in the latter, substantially as described. 8th. A steam separator, a drip tank, a valved connection intermediate the same, a valved outlet for said drip tank, and means for introducing atmospheric pressure into the latter, substantially as described. 9th. A steam separator, a drip tank, a valved drip pipe leading from said separator to said tank, a valved outlet for the latter, means for introducing atmospheric pressure into said tank, and means for creating a vacuum in the latter, substantially as described. 10th. A separator, a steam inlet and outlet, and a well therefor, a drip tank having a valved outlet, a pipe intermediate said tank and well, a valved pipe leading from said steam outlet to said tank, and means for admitting atmospheric pressure into the latter, substantially as described.

No. 52,670. Auger Handle. (Manche de tarière.)



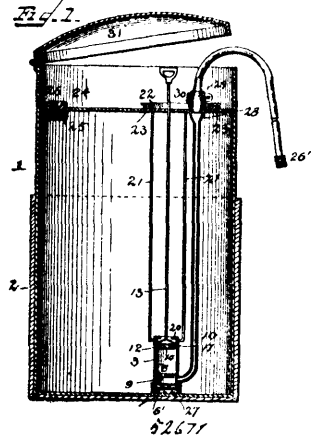
Aaron Thomas Binkerd, Allegheny City, Pennsylvania, U.S.A., 17th June, 1896; 6 years. (Filed 27th April, 1896.)

Claim.—1st. The combination with the barrel threaded in both ends, and provided with an intermediate auger-seat or bit-seat, the adjusting block, the toothed steel rod, and the threaded sockets provided with handles for operating the adjusting, toothed steel rod and bits, substantially as specified. 2nd. The combination with the barrel threaded in both ends, and provided with an intermediate auger-seat or bit-seat, of the threaded sockets and with handles, the adjusting block, and the reversible-toothed steel rod for holding the shanks of auger-bits, and the like, in place in the auger-seat in the threaded barrel, substantially as specified.

No. 52,671. Oil Can. (Bidon à huile.)

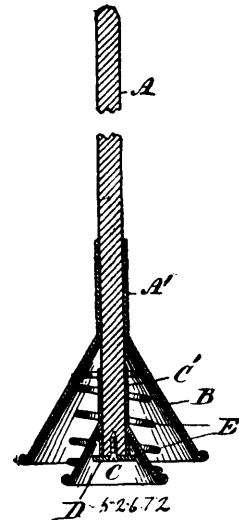
William Allen Wallingford, Newberry, South Carolina, U.S.A., 17th June, 1896; 6 years. (Filed 27th April, 1896.)

Claim.—The combination with a can having two openings in its top, one opening being provided with a strainer and a screw-plug,



and the other opening provided with a screw-cap, the top being arranged across the can below the upper end, and a cover for the upper end, of a chamber removably secured to the lower end of the can and communicating therewith, rods connecting the chamber with the screw-cap, said chamber provided with a strainer, a valve-seat secured to the open bottom of said chamber, a cage secured above the valve-seat, a float-valve which normally rests against the bottom of the cage, a plunger within said chamber provided with an operating rod which projects upward through the screw-cap, the metal tube connected with the chamber at a point between the upper limit of the valve and its seat, the end of the said tube extending through the screw-cap and formed with a bulge, the flexible tube inserted in said bulged end of the metal tube, the short bulged pipe in the inner end of the flexible tube and corresponding with the bulged end of the metal pipe and the clamping band encircling the upper end of the metal tube, substantially as described.

No. 52,672. Clothes Pounder. (Pilon à linge.)



Enoch J. Rogers, Newmarket, Ontario, Canada, 17th June, 1896; 6 years. (Filed 20th May, 1896.)

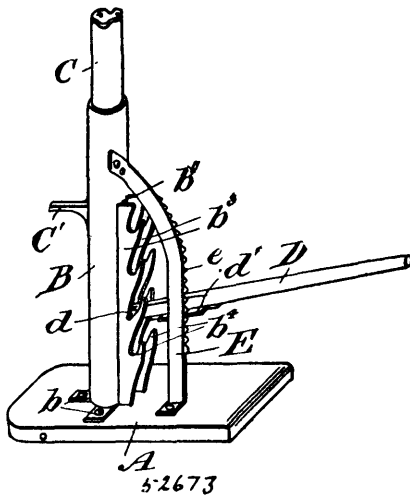
Claim.—1st. A clothes pounder, comprising a handle *a*, passing through the apex of a cone *b*, and fixed thereto by a tube *a'*, a smaller cone *c*, having a sleeve *c'*, sliding reciprocally on the handle within the cone *b*, a spiral spring *e*, surrounding said handle within the cone *b*, and intervening both cones, and a stop *d*, as set forth. 2nd. The combination with the handle *a*, of the fixed cone *b*, movable cone *c*, and the intervening spiral spring *e*, surrounding said handle intermediately of the cones, as set forth.

No. 52,673. Wagon-Jack. (Chèvre de wagon.)

George N. Campbell, Southampton, Ontario, Canada, 17th June, 1896; 6 years. (Filed 22nd May, 1896.)

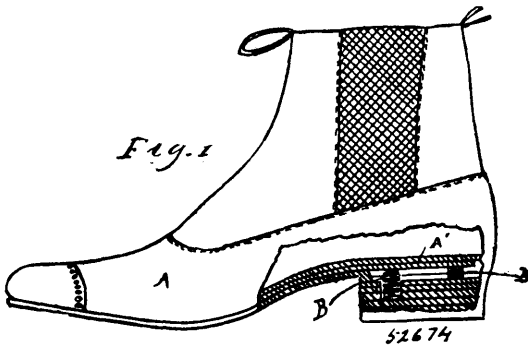
Claim.—1st. In a wagon-jack, the combination of a foot or base, an upright tubular post secured upon said foot, a plunger in said tubular post, a bracket on said plunger, a slot in the tubular post in which said bracket slides, another slot in said tubular post adapted

for the insertion of the point of a lever, ridges or flanges at the edges of said slot serrated with hooked teeth adapted to form sup-



ports for a cross pin, an upright bar secured to the foot and post and provided with lateral ratchet teeth, a lever adapted to be inserted in said slot under said plunger, a cross pin on said lever adapted to rest in the hooked teeth and a laterally projecting plate at the rear of said cross pin adapted to engage the lateral rack bar, substantially as set forth. 2nd. In a wagon-jack, the combination of a foot or base, an upright tubular post secured upon said foot, a plunger in said tubular post, a slot in said tubular post adapted for the insertion of the point of a lever, ridges or flanges at the edges of said slot serrated with hooked teeth adapted to form supports for a cross pin, an upright bar secured to the foot and post and provided with lateral ratchet-teeth, a lever adapted to be inserted in said slot under said plunger, a cross pin on said lever adapted to rest in hooked teeth and a laterally projecting plate at the rear of said cross pin adapted to engage the lateral rack bar, substantially as set forth.

No. 52,674. Spring-Heel for Shoes.
(*Talon de chaussure.*)



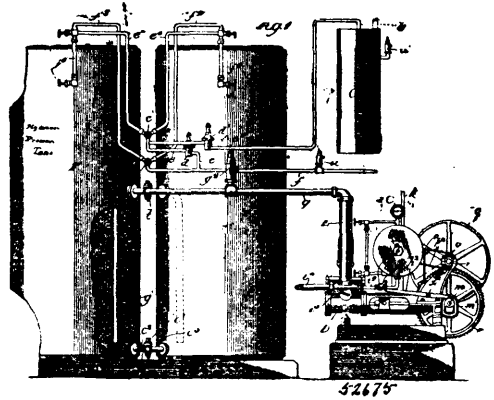
Henry D. Richey, Bellevue, Pennsylvania, U.S.A., 17th June, 1896; 6 years, (Filed 21st May, 1896.)

Claim.—1st. A boot or shoe having a rigid heel, the leather at the heel as much thinner as the thickness of the plate, combined with a metallic plate set into the heel flush with the insole, and a spring arranged in a recess in the heel beneath said plate and disconnected therefrom, substantially as described. 2nd. A boot or shoe having a rigid heel, the leather at the heel as much thinner as the thickness of the plate, combined with a metallic plate set into the heel flush with the insole, and a spring arranged in a recess in the heel beneath said plate and disconnected therefrom, said spring being in the form of a leaf-spring secured at its centre in the bottom of the recess in which the spring and plate are located and having its ends bearing against the under side of said plate near the edge thereof, substantially as described.

No. 52,675. Process of and Apparatus for Charging Liquids with Gas. (*Procédé et appareil pour charger les liquides de gaz.*)

The A. M. Hofman Carbonating and Racking Company, assignee of Alves M. Hofman and Charles Bright Van Horn, all of Chicago, Illinois, U.S.A., 17th June, 1896; 6 years. (Filed 18th April, 1896.)

Claim.—1st. The process of enhancing the incorporation, in a finished liquid, of its contained gas, which consists in filling a holder



to its capacity with, and confining against escape therefrom the finished liquid and compressing the finished liquid in said holder, substantially as described. 2nd. The process of enhancing the incorporation in a gas-charged liquid of its contained gas, which consists in first filling to its capacity a holder, with the finished liquid, and there-upon compressing said contents, while under confinement in the holder, by continuing to force liquid against said contents, substantially as described. 3rd. The process of charging a liquid with gas, which consists in forcing the liquid to be charged into a holder against adequate counterpressure and injecting into said liquid, in its course to said holder and against said counterpressure, a liquid supercharged with gas, thereby filling said holder to its capacity with finished liquid, and continuing the forcing operation into said holder, against its confined finished-liquid contents, to raise the liquid-pressure of said contents, substantially as and for the purpose set forth. 4th. The process of carbonating beer, which consists in pumping beer into a holder against counterpressure, injecting into said beer in its course to the holder and against counterpressure, beer supercharged with carbonic acid gas, thereby filling said holder to its capacity with finished liquid and displacing with the beer so charged the counterpressure medium as the supply in the holder increases, and thereupon raising the pressure of liquid while confined against escape in said holder and enhancing the incorporation in it of its contained gas by continuing to pump beer into the holder, substantially as described. 5th. The process of carbonating beer and preparing it for racking off, which consists in pumping beer into a holder against counterpressure, injecting into said beer, in its course to the holder, and against counterpressure, beer supercharged with carbonic acid gas, thereby filling said holder to its capacity with finished liquid and displacing with the beer so charged the counterpressure medium, as the supply in the holder increases, thereupon raising the pressure of liquid while confined against escape in said holder and enhancing the incorporation in it of its contained gas by continuing to pump beer into the holder, and finally discontinuing the supply to the holder and reducing the liquid-pressure therein to the racking-off point, substantially as described. 6th. The process of carbonating beer, which consists in pumping beer into a holder against counterpressure, mixing of such beer and supercharging it with carbonic acid gas and periodically injecting into said beer in its course to the holder and against counterpressure a suitable proportion of the supercharged beer, thereby filling said holder to its capacity with finished liquid and displacing with its liquid contents the counterpressure medium, as the supply in the holder increases, and thereupon raising the pressure of liquid while confined against escape in said holder and enhancing the incorporation in it of its contained gas by continuing to pump beer into the holder, substantially as described. 7th. The process of carbonating beer and preparing it for racking off, which consists in pumping beer into a holder against a counterpressure of air of forty pounds to the square inch, or thereabout, mixing of such beer and supercharging it with carbonic acid gas and periodically injecting into said beer in its course to the holder and against said counterpressure, a suitable proportion of the supercharged beer, thereby filling said holder to its capacity with finished liquid and overcoming with its contents said counterpressure, as the supply in the holder increases, thereupon raising the pressure of liquid in said holder to one hundred and fifty pounds to the square inch, or thereabout, and thus enhancing the incorporation in it of its contained gas, by continuing to pump beer into the holder against the finished liquid confined therein from escaping, and finally discontinuing the supply to the holder and reducing the liquid-pressure therein to the racking-off point, substantially as described. 8th. In an apparatus for charging liquids with gas, the combination with a holder of a pump adapted to be connected with the supply of liquid to be charged, a conduit connecting the pump from its discharge-end with said holder and containing a mixing-chamber interposed between the discharge end of the pump and the holder, a gas-charging valve-controlled pipe leading from a supply of the charging medium into the mixing-chamber,

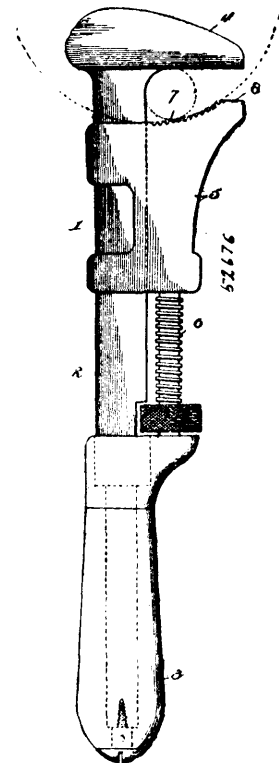
and means for exerting counterpressure against the flow of liquid through the mixing-chamber and into the holder, substantially as described. 9th. In an apparatus for charging liquids with gas, in combination with a holder, a pump adapted to be connected with the supply of liquid to be charged, a conduit connecting the pump from its discharge-end with said holder and containing a mixing-chamber interposed between the discharge end of the pump and the holder, a receptacle for liquid supercharged with gas, having a valve-controlled pipe connection with the mixing-chamber, and means for exerting counterpressure against the flow of liquid through the mixing-chamber and into the holder, substantially as described. 10th. In an apparatus for charging liquids with gas, the combination of a holder provided with a draw-off device for racking, a pump adapted to be connected with the supply of liquid to be charged, a conduit connecting the pump from its discharge-end with said holder and leading downward therein nearly to its base, a mixing-chamber interposed in said conduit between the discharge end of the pump and the holder, a receptacle for liquid supercharged with gas, having a valve-controlled pipe connection with the mixing-chamber, and means for exerting counterpressure against the flow of liquid through the mixing-chamber and into the holder, substantially as described. 11th. In an apparatus for charging liquids with gas, the combination with a holder of a pump adapted to be connected with the supply of liquid to be charged, a conduit connecting the pump from its discharge-end with said holder and containing a mixing-chamber interposed between the discharge end of the pump and the holder, a fluid-pressure relief-valve for the overflow from said holder, a gas-charging valve-controlled pipe leading from a supply of the charging medium into the mixing-chamber, and means for exerting counterpressure against the flow of liquid through the mixing-chamber and into the holder, substantially as described. 12th. In an apparatus for carbonating beer, the combination with a holder of a pump D and a pump D¹, communicating from their suction-sides with the beer-supply, an agitator B communicating with the supply of carbonic acid gas and with the discharge-side of the pump D¹, a conduit g leading from the discharge-side of the pump D into the holder and containing a mixing-chamber E communicating with the agitator through a valve-controlled tube i¹, a pressure-relief valve g² for the overflow from the holder, and counterpressure mechanism on the holder, substantially as and for the purpose set forth. 13th. In an apparatus for carbonating beer, the combination with a holder of a pump D and a pump D¹, communicating from their suction-sides with the beer-supply and operatively connected with a crank-shaft m carrying a cam m¹, an agitator B communicating with the supply of carbonic acid gas and with the discharge-side of the pump D¹, an agitator B communicating with the supply of carbonic acid gas and with the discharge-side of the pump D¹, a conduit g leading from the discharge-side of the pump D into the holder and containing a mixing-chamber E, a tube i¹ connecting the agitator with the mixing-chamber and containing a valve h connected from its handle with a lever h² extending into the path of said cam, a pressure-relief valve g² for the overflow from the holder, and counterpressure mechanism on the holder, substantially as and for the purpose set forth. 14th. In an apparatus for carbonating beer, the combination with a holder of a pump D adapted to be connected with the supply of beer to be charged, a conduit g connecting the pump from its discharge-end with said holder and containing a mixing-chamber E, and a relief g², an agitator B communicating with a carbonic acid gas supply and discharging into the mixing-chamber through a valve-controlled tube, means for periodically opening the valve in said tube, a pump D¹ communicating from its suction-end with said beer-supply and discharging into the agitator, a compressed-air supply-pipe f containing a shut-off valve and discharging into said holder, and a vent-pipe e² leading from the holder and containing a shut-off valve, substantially as and for the purpose set forth. 15th. An apparatus for carbonating beer comprising, in combination, a holder provided with a draw-off pipe, an air-supply pipe f containing a shut-off valve and leading into the holder, a vent-pipe e² containing a shut-off valve and leading from the holder into a branch c of the pipe f containing a pressure-reducing valve d, a back-pressure reservoir G communicating with said branch c, through a pipe c¹ containing a pressure-reducing valve d¹, pumping mechanism communicating at its suction-side with the beer-supply and from its discharge-side with the holder through a conduit g containing a pressure-relief valve g², and a mixing-chamber E, a gas charged liquid supply discharging into said mixing-chamber through a valve-controlled injector tube, and means for periodically opening the valve in said injector tube, the whole being constructed and arranged to operate substantially as described.

No. 52,676. Wrench. (Clé à écrou.)

Elbert Henry Smith and William Oren Vausehaik, both of Canisteo, New York, U.S.A., 17th June, 1896; 6 years. (Filed 1st May, 1896.)

Claim.—In a combined nut and pipe wrench, the combination of the shank having a fixed jaw and a curved friction surface 9, located at the inner end of and merging into the flat face of said fixed jaw, and the movable jaw provided on its working face with an outer flat nut gripping surface 8 parallel with the opposing face of the opposite jaw, and an inner curved pipe gripping surface 7 leading from a point at the inner edge of the nut gripping surface directly up to the shank of the wrench and lying within the arc of a circle

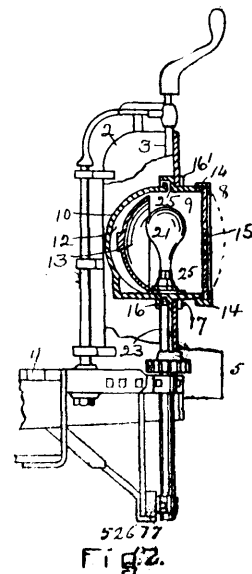
whose centre is disposed in substantially the same longitudinal plane as at inner side of the shank, whereby the curved pipe



gripping surface will lie in a plane further from the opposite jaw than the flat nut gripping surface, the particular disposition and curvature of the pipe gripping surface insuring the wedging of the pipe between the two jaws and directly against the inner side of the shank and within the curved friction surface 9 thereof, substantially as set forth.

No. 52,677. Headlight for Electric Cars.

(*Fanal pour chars électriques.*)



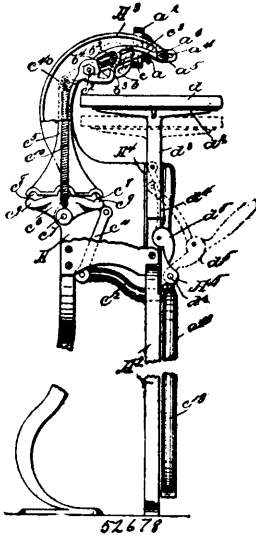
Franklin Elias Huntress, assignee of James Henry Neal, both of Boston, Massachusetts, U.S.A., 17th June, 1896; 6 years. (Filed 21st May, 1896.)

Claim.—1st. A street railway car provided with a dashboard forming a continuous front extending from side to side of the car platform, and having a substantially central opening or hole located below the upper edge of the dashboard to leave a continuous upper surface above the said hole or opening, and a headlight permanently

secured to the dashboard in line with said opening, for the purpose specified. 2nd. A street railway car provided with a dashboard forming a continuous front extending from side to side of the car platform and having a substantially central opening or hole located below the upper edge of the dashboard to leave a continuous upper surface above the said hole or opening, and an electrically illuminated headlight permanently secured to the dashboard in line with said opening and consisting of a casing provided within it with an electric lamp, and with a reflecting surface behind said lamp substantially in its focus, the said casing being extended through the said hole or opening, for the purpose specified. 3rd. A street railway car provided with a solid or continuous sheet metal dashboard having a hole or opening substantially central with relation to the tracks upon which the said car travels and located below the top edge of the said dashboard, and a headlight permanently secured to said dashboard and consisting of a metal casing composed of a body portion closed at the rear end and normally open at its front end, a removable transparent cover for the front end, an annular flange on the body portion intermediate of its ends, the said body portion projecting through the opening in the dashboard on opposite sides of the same, and a clamping ring fitted over one end of the casing and secured to the dashboard and to the annular flange on the opposite side of the dashboard, for the purpose specified. 4th. The combination with the solid or continuous sheet metal dashboard of a street railway car having a hole or opening made in the dashboard substantially central with relation to the tracks upon which said car travels and intermediate of the top and bottom of the dashboard, of an electrically illuminated headlight permanently secured to the said dashboard and consisting of a light-containing casing closed at its rear end and provided at its front end with a light-transmitting cover removably secured to said casing, the front portion of the said casing being located in front of the dashboard in line with said opening, and the rear portion of said casing being located on the back or rear side of said dashboard in line with said opening, substantially as and for the purpose specified.

No. 52,678. Cancelling and Stamping Device.

(Machine à tamper.)

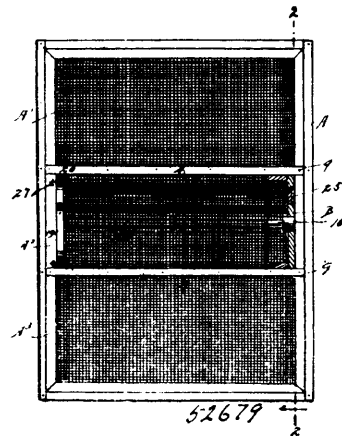


Frederic Tilden Bailey, North Scituate, and Richmond Talbot, Plymouth, both in Massachusetts, U.S.A., 17th June, 1896; 6 years. (Filed 29th April, 1896.)

Claim.—1st. In a printing or stamping machine, the combination with a movable printing-bed, of a lever pivotally connected thereto for moving the same from an inking-pad to a platen, a guide for the said bed, an inking-pad carried by said lever and movable with relation thereto, and a device for moving said pad during the operation of the lever, substantially as described. 2nd. The combination with the movable bed and actuating-lever therefor, of an inking-pad having a cylindrical surface and mounted in guides in said lever so as to be free to rotate on its axis, and a guide for the bed whereby the printing surface carried by said bed is caused to have a rolling contact with the said pad, as and for the purpose described. 3rd. The combination with a swinging operating lever, of a printing-bed pivotally connected thereto, a guide for the said bed whereby the said bed is turned on its pivot during the movement of the lever, an inking-pad carried by said lever and longitudinally movable with relation thereto and adapted to come in contact with the face of the printing-bed in one position of the lever, and a cam engaging said pad to move the same away from the surface of the printing-bed during the movement of the lever, substantially as described. 4th. In a printing or stamping machine, the combination with a movable printing-bed, of an operating-lever pivotally connected thereto and a guide for the said bed, an inking-pad carried by said lever and

movable with relation thereto, means for moving said pad during the movement of the lever, an actuating member for the lever having an oscillating movement, and a connecting member pivotally connected at one end to said lever and engaging at its opposite end with the said actuating member, substantially as described. 5th. In a printing or stamping machine, the combination with a movable printing-bed, of a lever pivotally connected thereto for moving the same from an inking-pad to a platen, a guide for the said bed, an inking-pad carried by said lever and movable with relation thereto, a device for moving said pad during the operation of the lever, and means for raising and lowering said platen, substantially as described. 6th. The combination with the main frame and platen supported thereby, of two overhanging arms or projections having a guide-pin extending from one to the other directly over the platen, a printing-bed having a guide-slot co-operating transversely with said guide-pin, levers mounted on a pivot extending transversely from one of said projections to the other, said lever being pivotally connected to the said bed, longitudinal guide-slots in said levers, an inking-pad movably supported in said guide-slots, and means for moving said inking-pad with relation to the lever when said lever is actuated, as and for the purpose described. 7th. In a printing or stamping machine, the combination with an operating-lever for the printing-bed, of an actuating member for said lever consisting of a pivotally-supported rocker, a connecting member pivotally connected at one end to said lever and having its opposite end provided with an engaging surface co-operating with a corresponding engaging surface on the said actuating member, and a swinging pedal-lever connected with said actuating member to produce an oscillating movement thereof, substantially as described. 8th. In a printing or stamping machine, the combination with the movable impression member, of the actuating mechanism comprising an oscillating rocker having engaging portions at both sides of its axis of oscillation, a connecting member provided at one end with a bearing surface co-operating with said engaging portions and at its other end with a pivotal joint connected with said movable impression member, the engaging surfaces of said rocker and connecting member having a rolling engagement and being provided with projections and recesses to prevent relative sliding movement, and means for oscillating said rocker in both directions, whereby an impression is made by the oscillation in either direction, substantially as described. 9th. In a printing or stamping machine, the combination with an operating-lever for a printing-bed, of an actuating member consisting of a rocker pivotally connected to the frame of the machine, a connecting member pivotally connected at one end to said lever and provided at its opposite end with an engaging surface co-operating with the surface of said actuating member, and a spring connection between said actuating and connecting members, substantially as and for the purpose described. 10th. In a printing or stamping machine, the combination with a lever for operating the printing-bed, of an actuating member consisting of a rocker pivotally connected to the frame of the machine, a connecting member pivotally connected at one end to said lever and provided at its opposite end with an engaging surface co-operating with the surface of said rocker, a spring connected at one end to said actuating-lever and at the opposite end to said rocker at a point normally in line with said connecting member but removed from the centre of oscillation of said rocker, and means for oscillating said rocker, substantially as described.

No. 52,679. Screen. (Ecran.)



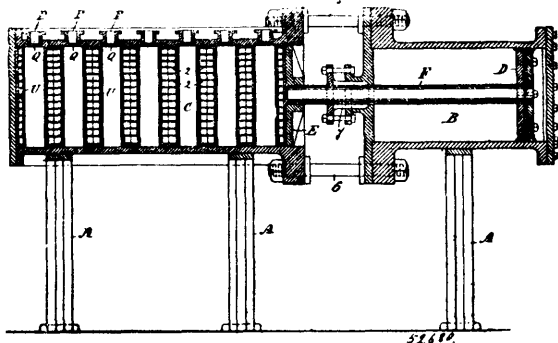
George D. Henry, West Grove, Iowa, U.S.A., 17th June, 1896; 6 years. (Filed 20th May, 1896.)

Claim.—1st. A window or door screen provided with a removable insect-trap comprising a frame having end members each provided at the front and rear edge with a substantially angular recess, a screen-surface secured to the said frame and having longitudinal inward depressions conforming to the recesses in the end members,

the screen-surface being provided at the angle formed by the depressed portions with passages for the entrance of insects, as and for the purpose specified. 2nd. A window or door-screen provided with a trap-section comprising a frame having end members each provided at its edges in the front and rear with a substantially angular recess, a screen-surface secured to the said frame and virtually surrounding the same, the said screen-surface having longitudinal inward depressions formed therein conforming to the angular recesses in the end members of the frame, the screen-surface being provided in said depressed portions with passages for the entrance of insects, and a bait-holder located within the trap-section and connected with the end members of the frame, as and for the purpose set forth. 3rd. A trap for flies, the same consisting of a frame provided with a removable bait-holder, an interior screen surrounding the same, and an exterior screen-surface secured to and virtually surrounding the frame, the said outer screen-surface being provided with passages for the entrance of flies into the trap, as and for the purpose specified. 4th. A screen-trap for flies, consisting of a frame, a bait-holder located within said frame, an inner screen surrounding the said bait-holder, an outer screen covering the frame and provided with openings through which flies enter the trap, and a partition located above said entrance-openings, being inclined upward and provided with openings in the top through which the flies may enter, and a concentrating chamber formed by the location within the trap of the aforesaid partition, the partition being also of a screen material, as and for the purpose specified.

No. 52,680. Wood Pulp Squeezer.

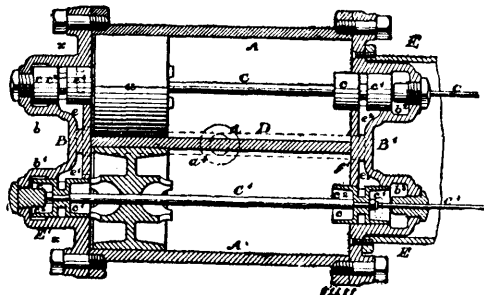
(Machine à comprimer la pulpe de bois.)



Joseph S. Hughes, New Germany, Nova Scotia, 17th June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. In a pulp squeezing machine, the combination, with a pressure cylinder, of a squeezing chamber C, having one end closed by a plunger E, operated by said cylinder and its piston rod F, said chamber having a hinged side or door G, and means for opening and closing said door mechanically and locking the same; and provided with a series of feed apertures F, closed by valves simultaneously operated, and a series of perforated hollow flat strainers U, fitting into said squeezing chamber interveningly of the feed apertures, whereby the pulp fed to the chamber interveningly of the strainers is squeezed by compression of the strainers pushed by the advance of the plunger, and the water forced out of the pulp collected in the strainers, substantially as set forth. 2nd. A pulp squeezing apparatus, comprising a chamber having at one end a plunger E, and hinged side or door G, a gear opening and closing said door or side, a rocking shaft and screws locking said door or side, a series of feed inlets P, at top, a series of valves G connectedly operated by a shaft and toothed pinions R, and a series of perforated hollow flat strainers U, to intervene the feed apertures, so that when the pulp is fed between the strainers, and the plunger operated, the pulp is compressed, and the extracted water is collected in the strainers, substantially as set forth.

No. 52,681. Liquid Meter. (Metre.)



William Miles Fowler, Stamford, Connecticut, U.S.A., 17th June, 1896; 6 years. (Filed 29th April, 1896.)

Claim.—1st. A liquid meter, comprising a plurality of cylinders each provided with a movable piston, valves at the ends of the cylinders independent of the pistons throughout a portion of the stroke of the pistons and under the control of the pistons to be simultaneously operated at opposite ends of the cylinders as the piston approaches each end of the cylinder, inlets and outlets under the control of the valves, the inlet and outlet of a cylinder being under the control of the moving piston in a companion cylinder to keep the flow of liquid constant, and means for recording the number of strokes of one of the pistons, substantially as set forth. 2nd. A liquid meter, comprising a plurality of cylinders each provided with a movable piston, valves at the ends of the cylinders, valve rods each connecting the valves at the opposite ends of the cylinder and having a sliding engagement with the piston of that cylinder, the said valves being under the control of the piston to operate them as it nears each end of the stroke, and inlets and outlets under the control of said valves, the inlet and outlet of a cylinder being under the control of the valves of a companion cylinder to keep the flow of liquid constant, substantially as set forth. 3rd. A liquid meter, comprising a plurality of cylinders each provided with a movable piston, valves at the opposite ends of each cylinder, rods connecting the said valves at the opposite ends of each cylinder, one of said rods extending through the end of the cylinder, the said rods having a sliding engagement with the pistons, the said valves being under the control of the piston as it nears the limit of its stroke to operate them, inlets and outlets under the control of the valves, the inlet and outlet of the cylinder being under the control of the valves in a companion cylinder and a recording device engaged with the projecting valve connecting rod, substantially as set forth.

No. 52,682. Persian Lamb Imitation.

(Imitations textiles de pelletterie de mouton de Perse.)



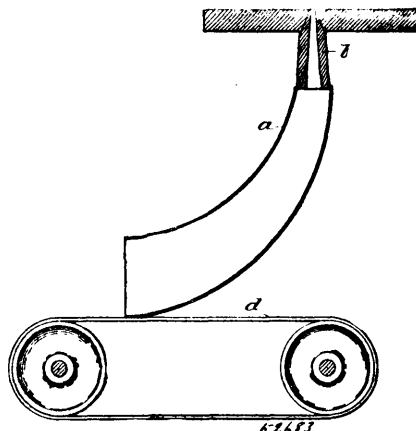
52682

George Robidoux, St. Robert, Québec, Canada, 17th juin 1896; 6 ans. (Déposé 22 mai 1896.)

Résumé.—Un tissu fabriqué au métier dans lequel, à tous les trois ou quatre brins de tissure, se trouve placée une rangée de coites de laine non filée B, laquelle rangée de coites de laine est soulevée de manière à former, à tous les quatre ou cinq brins de chaîne, des loupes B, dont l'ensemble imite la pelletterie de mouton de Perse; le tout tel que décrit et montré au dessin.

No. 52,683. Machine for Making Wooden Tooth Picks.

(Machine pour faire des cures-dents.)

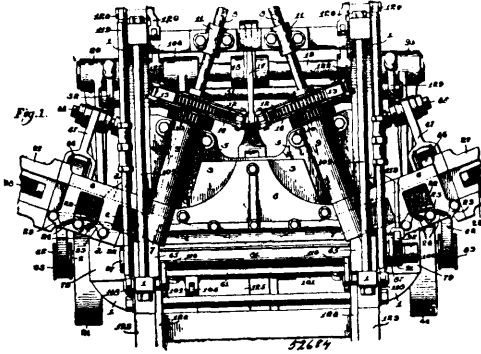


John Charles Freemont Scamman, Deering, Maine, U.S.A., 18th June, 1896; 6 years. (Filed 6th March, 1896.)

Claims.—1st. As an attachment for a tooth pick machine, a receiving tube for the picks, having a narrow throat and an enlarged lower end, and curved gradually from the vertical to the horizontal, thus acting to gather the splints without permitting their disarrangement, and which serves to deliver the picks in bulk, substantially as shown. 2nd. In a tooth pick machine, a receiving tube for the picks, having a narrow throat and an enlarged lower end, and curved gradually from the vertical to the horizontal, thus acting to gather the splints without permitting their disarrangement, and which serves to deliver the picks in bulk, combined with a carrier bolt laced below the lower end of the tube, substantially as described.

No. 52,684. Match-making Machine.

(Machine à faire les allumettes.)



Joseph Charles Donnelly, Philadelphia, Pennsylvania, U.S.A., 19th June, 1896; 6 years. (Filed 6th May, 1896.)

Claim.—1st. In a match-making machine, the combination, with splint-cutting mechanism, of two converging feed hoppers, the bottoms of which are on the same horizontal plane and the inner or discharging ends of which terminate in a common transverse line or edge in the path of the splint-cutting mechanism, whereby there is cut simultaneously from separate blocks of wood a row of uniformly separated splints, substantially as described. 2nd. In a match-making machine, the combination, with splint-cutting mechanism, of two feed hoppers, the rear walls of which converge centrally of the cutting mechanism and the inner or discharging ends of the two hoppers terminate in a common transverse line or edge that intersects the apex of said walls, substantially as described. 3rd. In a match-making machine, the combination with a feed hopper, of feed mechanism therein, and automatically-yielding plates in rear of said mechanism, pivotal studs for said plates, opposite arms on the studs of the successive plates, and springs connecting the arms successively, whereby the plates bear against blocks of different thickness and force them against the back or feed line of the hopper, substantially as described. 4th. In a match-making machine, the combination, with a feed hopper provided with guide ribs therein, of a feed mechanism in rear of said ribs, and automatically-yielding presser plates in rear of said mechanism, pivotal studs for said plates, opposite arms on the studs of the successive plates, and springs connecting the arms successively, substantially as described. 5th. In a match-making machine, the combination, with splint-cutting mechanism, of two feed hoppers converging toward the same, the bottoms of which hoppers are on the same horizontal plane and the inner or discharging ends of which terminate in a common transverse line or edge in the path of the splint-cutting mechanism, feed mechanisms in said hoppers, respectively, and means for simultaneously actuating said feed mechanisms, whereby there is cut simultaneously from separate blocks of wood a row of uniformly separated splints, substantially as described. 6th. In a match-making machine, the combination, with splint-cutting mechanism, of two feed hoppers converging toward the same, the bottoms of which hoppers are on the same horizontal plane and the inner or discharging ends of which terminate in a common transverse line or edge in the path of the splint-cutting mechanism, feed rolls in the respective hoppers, the shafts of said rolls converging toward to the median line of the machine, and means for simultaneously actuating said shafts, substantially as described. 7th. In a match-making machine, the combination, with splint-cutting mechanism, of two feed hoppers converging toward the same, the bottoms of which hoppers are on the same horizontal plane and the inner or discharging ends of which terminate in a common transverse line or edge in the path of the splint-cutting mechanism, feed rolls in the respective hoppers, the shaft of said rolls verging toward the median line of the machine, co-acting gearing on the shafts of each set of rolls, pawl-and-ratchet mechanism for actuating said shafts, a driving shaft, a cam thereon, and operative connections between said cam and the pawl-and-ratchet mechanism, substantially as described. 8th. In a match-making machine, the combination, with the auxiliary hopper, of a longitudinal screw-shaft therein, means for operating said shaft, and a follower in said hopper comprising a slide guided in the hopper, a head pivoted thereto provided with a segmental nut which engages the screw-shaft, a bearing plate on said follower having independent movement longitudinally of the follower, and means for independ-

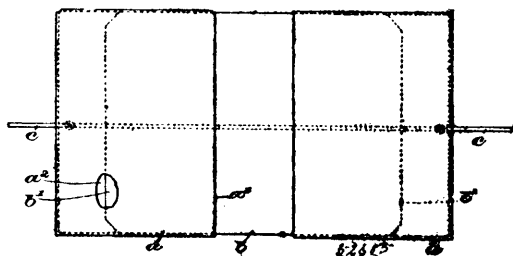
ently moving said plate, substantially as described. 9th. In a match-making machine, the combination, with an auxiliary hopper, of a longitudinal screw-shaft therein, means for operating said shaft, and a follower in said hopper comprising a slide guided in the hopper, a head pivoted thereto provided with a segmental nut which engages the screw-shaft, a stem extending through the upper portion of the head, a plate on said stem, a spring tending to maintain the stem and plate normally advanced, and means for retracting said stem and plate against the action of the spring, substantially as described. 10th. In a match-making machine, the combination, with an auxiliary hopper, provided with a stop near the forward or discharging end thereof, a longitudinal screw-shaft in said hopper, a frictional pulley on said shaft, a driving shaft, a pulley on said shaft, a belt connecting said pulleys, a belt tension roller, and its supporting and operating parts, of a follower in said hopper comprising a slide, a head pivoted thereto provided with a segmental nut which engages the screw-shaft, a bearing plate on the forward end of the head, means whereby said plate is longitudinally movable in respect to, and independently of, the head and stops on the follower adapted to abut against the stops first named, substantially as described. 11th. In a match-making machine, the auxiliary hopper, a follower therein, a shaft for actuating said follower, a frictional pulley on said shaft, a driving shaft, a pulley on said shaft, a belt connecting said pulleys, a belt-tension roller, an arm supporting said roller, a rock-stud for said arm, a toothed sector on said stud, a sector co-acting therewith, a shaft for said latter sector, and means for operating said latter shaft, substantially as described. 12th. In a match-making machine, the combination, with splint-cutting mechanism, the converging main hoppers, the bottoms of which are on the same horizontal plane and the inner or discharging ends of which terminate in a common transverse line in the path of the splint-cutting mechanism, the feed mechanisms in said hoppers, and means for simultaneously operating said mechanisms, of auxiliary hoppers, auxiliary feed mechanisms therein, means for actuating said last-named feed mechanisms simultaneously, and means for automatically rendering the same inactive independently of the first-named feed mechanisms, substantially as described. 13th. In a match-making machine, the combination of a main feed hopper, feed mechanism therein, a main driving shaft, operative connections between said shaft and feed mechanism, an auxiliary feed hopper communicating with the main hopper, feed mechanism in said auxiliary hopper communicating with the main hopper, and means for arresting said latter feed mechanism and thereupon automatically throwing the said connections out of operative position, substantially as described. 14th. In a match-making machine, the combination, with a main feed hopper, feed mechanism therein, a main driving shaft, a cam thereon, connections between said cam and feed mechanism, of an auxiliary feed hopper communicating with the main hopper, feed mechanism in said auxiliary hopper, and means for simultaneously arresting said last-named feed mechanism and moving the said connections above the path of the cam, substantially as described. 15th. In a match-making machine, a splint cutter comprising a hollow tubular head, provided with a shank, the lower or cutting portion of the head being internally and externally bevelled, to the end that the splint cut from the block will be of larger diameter than the inner upper portion of the head and will be thereby compressed and held rigidly therein, substantially as described. 16th. In a match-making machine, the combination, with a cutter bar, of cutters thereon provided with shanks having their upper surfaces bevelled downward in respect to the forward end of the shanks, and a clamp-bar bevelled coincidentally with said shanks, superposed on the latter and secured to the cutter-bar, together with a tongue or rib against which the ends of the cutter-shanks are drawn when the clamp-bar is applied, substantially as described. 17th. In a match-making machine, the combination with a cutter-bar provided with a longitudinal groove or way therein, and with transverse interspaces communicating with said way, of cutters provided with shanks having their upper surfaces bevelled downward in respect to the forward ends of the shanks, which shanks are fitted to said interspaces, and a clamp-bar provided with a longitudinal tongue or rib that registers with said groove or way, and with a bevelled portion that is superposed on the shanks, whereby the cutters are drawn uniformly into line against said tongue or rib and fixedly held in alignment, substantially as described. 18th. In a machine for making matches, the combination with a cutter-bar, of cutters thereon provided with shanks, having their upper surfaces bevelled downward in respect to the forward ends of the shanks, and a superposed clamp constructed to engage said bevelled surfaces, whereby said shanks are clamped on the bar and drawn up into alignment, substantially as described. 19th. In a match-making machine, the combination with a cutter-bar, of cutters thereon provided with shanks which are rearwardly enlarged so as to be wedge-shaped in vertical longitudinal section, and a bar imposed on said shanks and adapted to draw them into alignment and clamp them fixedly therein, substantially as described. 20th. In a match-making machine, the combination with a reciprocative carrier having its upper edge bevelled or inclined, of a longitudinally-movable wedge having a correspondingly-bevelled face imposed upon said edge, a cutter-supporting bar imposed on the upper or horizontal face of said wedge, and means for guiding the bar vertically during the longitudinal movement of the wedge, together with a splint-receiving device mounted

above the cutter-supporting bar, substantially as described. 21st. In a match-making machine, the combination with a carrier, and a vertically adjustable cutter-supporting bar thereon, of an adjustable wedge interposed between said bar and carrier, means for longitudinally moving the wedge, and vertically-adjustable means connecting said bar to the carrier and adapted to secure the bar in its position of adjustment, together with a splint-receiving device mounted above the cutter-supporting bar, substantially as described. 22nd. In a match-making machine, the combination, of a reciprocating cutter head carrying a line of cutters, means for feeding stock to said cutters whereby a row of splints is produced, a transfer device mounted above the cutters in said head and adapted to receive the successive rows of splints from the cutters, means for actuating said device independently of the cutter-head, and a splint-receiving plate adjacent to said device and adapted to receive the splints therefrom, substantially as described. 23rd. In a match-making machine, the combination of a reciprocating cutter-head carrying a line of cutters, means for feeding stock to said cutters whereby a row of splints is produced, a hollow transfer device mounted above said head, means for exhausting air from said device to the end that the row of splints will be drawn thereto by suction, and means whereby said splints are thrust from the said device into a splint-receiving plate, substantially as described. 24th. In a match-making machine, the combination of a reciprocating cutter-head, a transfer device mounted thereon, means for moving said device independently of the cutter-head, and a splint-receiving plate or holder adjacent to said device, substantially as described. 25th. In a match-making machine, the combination of a reciprocating cutter-head, a transfer device mounted thereon, an abutment co-acting with said transfer device, means for moving said device independently of the cutter-head, and a splint-receiving plate or holder adjacent to said device, substantially as described. 26th. In a match-making machine, the combination of a reciprocating head, a rotatable cylinder mounted thereon, said cylinder having provisions for receiving and retaining the splints as they are cut, an abutment or thrust bar on the cylinder, a splint-receiving plate or holder adjacent to the cylinder, and means for rotating said cylinder, substantially as described. 27th. The combination with a source of splint supply, of a plate or holder, and a chambered structure in which a current of air is induced, the same being constructed to receive one end of a row of splints and to effect the engagement of the opposite end thereof with said plate, substantially as described. 28th. The combination with a source of splint supply, of a splint-receiving device, means whereby a current of air is induced to effect the endwise engagement of the splints with said device, and a plate or holder to which the ends of the splints are subsequently presented by said receiving device, substantially as described. 29th. The combination of a reciprocative splint receiving device, actuating mechanism therefor, means for exhausting the air from said device, means for presenting or directing splints to said device, and a plate or holder to which the splints are subsequently directed by said device, substantially as described. 30th. The combination of a reciprocating cutter-head, a rotatable transfer device mounted thereon, and provided with ways or openings to receive one end of a row of splints at intervals apart, and a splint receiving plate or holder into which the opposite ends of the splints are introduced, substantially as described. 31st. The combination of a reciprocating cutter head, a rotatable transfer device mounted thereon, means for intermittently rotating said device, and means for removing the splints therefrom while the cylinder is at rest, substantially as described. 32nd. The combination of a reciprocating cutter-head, a rotatable transfer device mounted thereon, means for exhausting air from said device, means for intermittently rotating the same, and a splint receiving plate or holder into which the splints are thrust by said device, substantially as described. 33rd. The combination of a reciprocating cutter-head, means for feeding wood thereto, a transfer device mounted on said head, means for exhausting air from said device, and a splint-receiving plate or holder into which the splints are thrust, substantially as described. 34th. The combination of a reciprocating cutter-head, means for feeding wood thereto, a rotatable transfer cylinder mounted on said head, said cylinder being provided with circumferential openings to which the splints are laterally applied, means for exhausting air from said cylinder, and a splint receiving plate or holder into which the splints are thrust by said cylinder, substantially as described. 35th. The combination of a reciprocating cutter-head, means for feeding wood thereto, a rotatable transfer device mounted on said head, means for intermittently rotating said device, a splint receiving plate or holder into which the splints are inserted by the transfer device, and means for temporarily locking said device, substantially as described. 36th. The combination, with a carrier provided with hollow guides, the supporting and operating parts for said carrier, of a hollow splint receiving device communicating with said guides, means for exhausting the air from said device by way of the guides, means for presenting or directing splints to said device, and a plate or holder into which the splints are endwise inserted by said device, substantially as described. 37th. The combination, with a carrier provided with hollow guides, the supporting and operating parts for said carrier, of a hollow rotatable device communicating with said guides, means for exhausting the air from said device by way of the guides, means for directing or presenting splints to said device, a plate or holder, and means for

actuating said device to effect the introduction of the splints endwise to said plate or holder, substantially as described. 38th. In a match-making machine, the combination, with a carrier, its supporting and operating parts, cutters on said carrier, and means for feeding wood to the cutters, of a transfer device mounted on the carrier and adapted to receive the splints as they are cut, means for exhausting the air from said device, and a rack or holder to which the splints are directed by the transfer device, substantially as described. 39th. In a match-making machine, the combination, with a carrier, its supporting and operating parts, cutters on said carrier, and means for feeding wood to the cutters, of a rotatable transfer device, mounted on said carrier, means for intermittently rotating the same, and a plate or holder to which the splints are directed by the transfer device, substantially as described. 40th. In a match-making machine, the combination, with a carrier, its supporting and operating parts, cutters on said carrier, and means for feeding wood to the cutters, of a rotatable transfer device, mounted on said carrier, means for exhausting the air therefrom, means for intermittently rotating said device, and a plate or holder to which the splints are directed by the transfer device, substantially as described. 41st. In a match-making machine, the combination, with a carrier, its supporting and operating parts, cutters on said carrier, and means for feeding wood to the cutters, of a rotatable transfer device mounted on said carrier, means for intermittently rotating the same, and a plate or holder to which the splints are directed by the transfer device, together with means for temporarily locking said device, substantially as described. 42nd. In a match-making machine, the combination, with a carrier provided with hollow guides, the supporting and operating parts for said carrier, cutters on the carrier, and means for feeding wood to the cutters, of a hollow transfer device mounted on the carrier and communicating with said guides, means for exhausting air from the device by way of said guides, and a plate or holder to which the splints are directed by the transfer device, substantially as described. 43rd. In a match-making machine, the combination, with the cutters, and means for supporting and operating the same, of a rotatable cylinder mounted on the carrier and provided with circumferential openings or slots corresponding in number and position with the cutters so as to receive the splints as they are cut, means for exhausting the air from said cylinder, and means for intermittently turning the cylinder, substantially as described. 44th. In a match-making machine, the combination, with the cutters, and means for supporting and operating the same, of a rotatable cylinder provided with circumferential openings or slots corresponding in number and position with the cutter so as to receive the splints as they are cut, said openings or slots being graduated in size as described, means for exhausting the air from the ends of said cylinder, and means for intermittently turning the cylinder, substantially as described. 45th. In a match-making machine, the combination, with the cutters and means for supporting and operating them, of a rotatable cylinder provided with circumferential openings or slots corresponding in number and position with the cutters so as to receive the splints as they are cut, means for exhausting the air from said cylinder, means for intermittently turning the cylinder, a plate or holder, and means for actuating the cylinder to thrust the splints into said plate or holder, substantially as described. 46th. In a match-making machine, the combination, with the cutters, and means for supporting and operating them, of a rotatable cylinder provided with circumferential openings or slots arranged to receive the splints as they are cut, an abutment or thrust-bar on the cylinder, means for exhausting the air therefrom, a plate or holder, and means for actuating the cylinder to thrust the splints into said plate or holder, substantially as described. 47th. In a machine for making matches, the combination, with the cutters, and means for supporting and operating them, of a rotatable cylinder provided with two diametrically opposite series of openings, means for intermittently rotating said cylinder to bring the series successively into line with the cutters so as to receive the rows of splints as they are successively cut, means for exhausting the air from the cylinder, and means for removing the splints from the cylinder at predetermined intervals, substantially as described. 48th. In a machine for making matches, the combination, with the cutters and means for supporting and operating them, of a rotatable cylinder reciprocative with the cutters and constructed to receive the splints as they are cut, a fixed ratchet wheel on said cylinder, a pinion, a pawl connected therewith and engaged with the ratchet wheel, a rack engaging said pinion, a driving shaft, a cam thereon, and connections between said cam and rack, substantially as described. 49th. In a machine for making matches, the combination, with the cutters, and means for supporting and operating them, of a rotatable cylinder reciprocative with the cutters, and constructed to receive the splints as they are cut, means for intermittently rotating said cylinder, bolts to lock said cylinder at predetermined intervals, a driving shaft, a cam thereon, and connections between said cam and the bolts, substantially as described. 50th. A hollow transfer cylinder for match-making machines, said cylinder being provided with circumferential openings therein that communicate with the interior of the cylinder, and such openings being formed at right angles to the axial line of the cylinder, in combination with a reciprocative support for said cylinder, means for reciprocating said support, and means for exhausting the air from the cylinder, substantially as described. 51st. In a match-making machine, a plate-supply hopper, provided

with lateral horizontal flanges therein reduced at their forward ends, and with a strip or ledge at the rear of and slightly above said flanges, the lowermost plate in the hopper normally resting upon said strip or ledge and upon the flanges, and the superposed plates resting upon said lowermost plate, in combination with means for withdrawing the lowermost plate step-by-step from the hopper, whereby when the said latter plate is withdrawn from the ledge the plate is bodily sustained upon the flanges, and the contiguous plate is sustained at one end upon the ledge and at its opposite end upon the underlying plate, substantially as described. 52nd. In a match-making machine, a plate-supply hopper provided with plate supports therein, and with a strip or ledge at the rear of and slightly above said supports, the lowermost plate in the hopper normally resting upon said strip or ledge and upon the supports, and the superposed plates resting upon said lowermost plate, in combination with means for withdrawing the lowermost plate step-by-step from the hopper, whereby when the said latter plate is withdrawn from the ledge the plate is bodily sustained upon the supports, and the contiguous plate is sustained at one end upon the ledge and its opposite end upon the underlying plate, substantially as described. 53rd. In a match-making machine, a plate-supplying hopper provided with lateral horizontal flanges therein having at their forward ends bevelled impact pieces, together with a strip or ledge at the rear of and slightly above said flanges, the lowermost plate in the hopper normally resting upon said strip or ledge and upon the supports, and the superposed plates resting upon said lowermost plate, in combination with means for withdrawing the lowermost plate step-by-step from the hopper, whereby when the said latter plate is withdrawn from the ledge the plate is bodily sustained upon the supports, and the contiguous plate is sustained at one end upon the ledge and its opposite end upon the underlying plate, substantially as described. 54th. In a match-making machine, a hopper, splint holding plates therein, means for moving the successive plates step-by-step from the hopper, and means for thrusting splints into the plates immediately below the forward end of the hopper, substantially as described. 55th. In a machine for making matches, the combination of a reciprocating cutter head, mechanism for reciprocating the same, a transfer device mounted on said head, means for feeding wood to the cutters, splint receiving plates, into which the splints are inserted by said device, means for actuating said plates in concert with the transfer device, and mechanism for arresting the wood feeding means and the plate actuating means independently of the mechanism for reciprocating the cutter head, substantially as described.

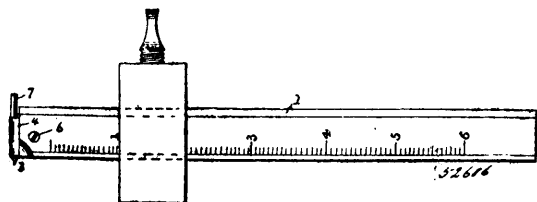
No. 52,685. Case for Pamphlets, etc.
(*Enveloppe pour pamphlets, etc.*)



Risbrough Hammete Tilley, Newport, Rhode Island, U.S.A., 18th June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—A case for magazines and pamphlets, composed of two independent side flaps having pockets therein, a back telescopically extended into said pockets and connecting the side flaps, and a flexible fastening secured to the said back and having its loose ends drawn through openings in the flaps adjacent their outer edges, to regulate the movement of the back and to hold the fronts of said flaps together, substantially as described.

No. 52,686. Gauge. (*Jauge.*)



Elijah Homer Holmes, Prairie View, Texas, U.S.A., 18th June, 1896; 6 years. (Filed 27th April, 1896.)

Claim.—A gauge, comprising a beam having a saw kerf at its end, a clamp composed of a tube having laterally projecting parallel wings which are inserted in said kerf, a scribing point or mark

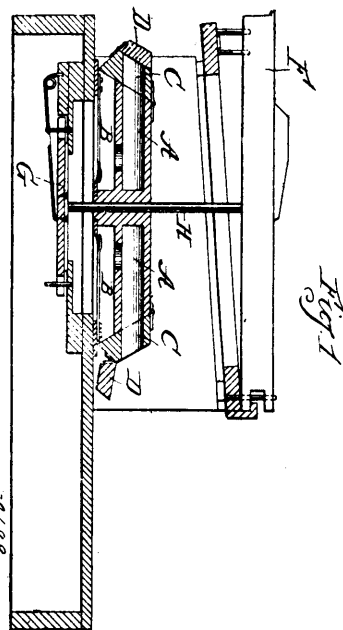
located in the tubular portion of the clamp exposed to view, and means for clamping the separated ends of the beam tightly against the parallel wings of the clamp, substantially as set forth.

No. 52,687. Process of Making Moulded Articles from Wood Pulp. (*Procédé pour la fabrication d'objets de la pulpe de bois.*)

Henry Polhanus Lane and Elias Folk, both of Franklin, Ohio, U.S.A., 18th June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—The process of making moulded articles of wood pulp, which consists in moulding the article, then impregnating the article with oil and rosin, then baking the same, and then subjecting the article after the moulding and baking process to heavy pressure between smooth mould surfaces warmed sufficiently to soften the coating but not the material.

No. 52,688. Reed Organ Action. (*Action d'orgue*)

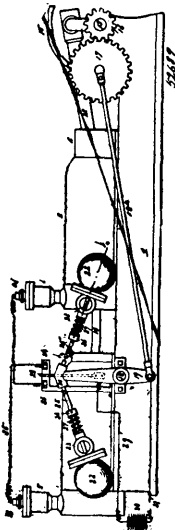


Albert L. White, Chicago, Illinois, U.S.A., 18th June, 1896; 6 years. (Filed 27th April, 1896.)

Claim.—1st. In a reed organ action, the combination with a reed cell, of an overdraft pipe cell, having a graduated throat forming an air communication between the two cells, and a compound mute arranged to control both of said cells, substantially as and for the purpose set forth. 2nd. In a reed organ action, the combination of a reed cell, of a superposed parallel pipe cell, having a graduated throat formed in the wall between the cells, and constituting a communicating passage for the air, and a single compound mute arranged to control both of said cells, as and for the purpose set forth. 3rd. In a reed organ action, the combination with a reed cell, of an overdraft pipe cell, each cell being open at one end, and a mute hung over the said open ends and provided with a graduated opening forming an extension of said pipe cell, substantially as and for the purpose set forth. 4th. In a reed organ action, the combination with a reed cell, and an overdraft pipe cell communicating with such reed cell, both cells being open at one end, and a double mute hanging over the open ends of both cells, said mute provided with an opening communicating with said pipe cell and with the outer air, as and for the purpose set forth. 5th. In a reed organ action, the combination with a reed cell and an overdraft pipe cell, having an air passage through its wall, communicating with the reed cell directly over the point of the tongue of the reed, and a mute arranged to control both of said cells, said mute provided with an opening communicating with said pipe cell and the outer air, and means for controlling said opening, as and for the purpose set forth. 6th. In a reed organ action, the combination with a reed cell and an overdraft pipe cell, each open at one end and having an air communication between their other ends of a double mute covering both the reed cell and the pipe cell, and having its top portion formed with a hole therethrough, and a second mute hung over the hole thus formed in the inner mute, substantially as and for the purpose set forth. 7th. In a reed organ action, a series of reed cells, a corresponding series of pipe cells, an air passage formed in the wall intervening between each reed cell and its corresponding pipe cell, a mute arranged to control the entrance to both sets of cells and provided with a series of apertures, corresponding in number and arrangement to said pipe cells and forming extensions thereof, said apertures being graduated from base to treble, and means for

controlling said apertures, as and for the purpose set forth. 8th. In a reed organ action, a series of reed cells, a corresponding series of pipe cells, an air passage formed in the well intervening between each reed cell and its corresponding pipe cell, said passages being graduated from base to treble, a mute arranged to control the entrance to both sets of cells and provided with a series of apertures, corresponding in and number arrangement to said pipe cells, and each forming an extension of a pipe cell, said apertures being graduated from base to treble, and a second mute arranged to control said apertures, as and for the purpose set forth.

No. 52,689. Gas Engine. (Machine à gaz.)

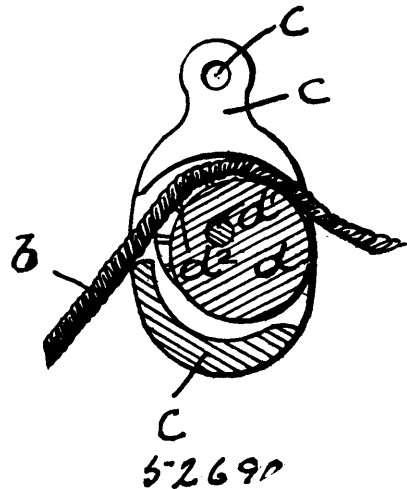


James Albert Hockett, Sterling, Kansas, U.S.A., 18th June, 1896 ; 6 years. (Filed 27th April, 1896.)

Claim.—1st. A gas engine, comprising a pair of cylinders arranged tandem, plungers therein, inlet-valve passages communicating therewith, exhaust-valve passages communicating therewith, pins projecting from the plungers, electrical conductors extending through the inlet-valve passages, plates electrically connected thereto, a walking-beam, an electrical battery electrically connected to the base of the engine, a contact-plate carried by the walking-beam and insulated therefrom and electrically connected also to said battery, and means to operate said plungers and rock said walking-beam, whereby the circuit will be completed and broken and the exhaust valves open, substantially as described. 2nd. A gas engine, comprising a pair of cylinders arranged tandem, plungers therein connected together, a crank-shaft, a pitman connecting the same with one of the plungers, inlet-valves for the cylinders for the admittance, periodically, of an explosive mixture, exhaust-valves for the cylinders, a walking-beam operatively connected to the crank-shaft, and adapted alternately to open the exhaust-valves of the cylinders, substantially as described. 3rd. A gas engine, comprising a pair of cylinders arranged tandem, plungers therein, a rod connecting the plungers, a crank-shaft, a pitman connecting the same with one of the plungers, a walking-beam geared to said crank-shaft, inlet-valve passages for an expansive mixture communicating with the cylinder, exhaust-valve passages connected to said cylinder, valves therefor, and springs holding them yieldingly upon their seats, so that under the pressure of the walking-beam they may be alternately opened, substantially as described. 4th. A gas engine, comprising a pair of cylinders arranged tandem, plungers therein, a rod connecting said plungers, valve-controlled inlet passages for an explosive mixture connected to said cylinders, exhaust-valves for the explosive mixture connected with said cylinders, a crank-shaft, a pitman connecting the same with one of the plungers, a walking-beam geared to the crank-shaft, a spring contact-arm carried by and insulated from the walking-beam, contact-plates at opposite sides of the same, conductors electrically connected to said plates and projecting into the cylinder, pins projecting from said cylinder, a source of electrical supply having one pole connected to said spring-arm of the walking-beam and the other to the base of the engine, all arranged substantially as and for the purpose described. 5th. A gas engine comprising a pair of cylinders arranged tandem, inlet valve-controlled passages for an explosive mixture connected to the cylinders, exhaust valve-controlled passages also communicating with the cylinders, plungers therein provided with pins, a rod connecting the plungers, a bracket, insulated contact-plates secured thereto, conductors insulated from the engine and extending downward into the cylinders, conductors connecting the same with said contact-plates, a walking-beam, pins projecting from the same to alternately open the exhaust-valves, a spring arm insulated from and carried by said walking-beam, an electric battery, conductors connecting the same with said spring-arm and with the base of the

engine, and means to reciprocate said plungers and said walking-beam, substantially as and for the purpose described.

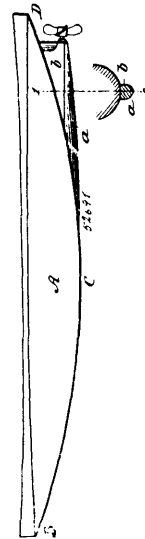
No. 52,690. Line Holder. (Porte-cable.)



Louis Hansen, Minneapolis, Minnesota, U.S.A., 18th June, 1896 ; 6 years. (Filed 30th April, 1896.)

Claim.—The line-holder, comprising the two-walled cam-block *c*, and the cam *d* eccentrically pivoted between the walls of said cam-block, one of the walls of said cam-block being slotted at *c'*, above the cam, and provided with the guide lip or flange *c''*, substantially as and for the purpose set forth.

No. 52,691. Hull for Vessels. (Coque de vaisseaux.)



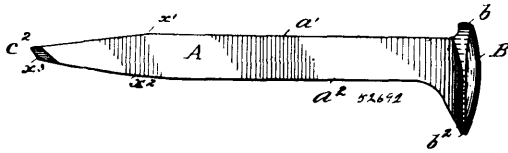
George Wheelwright Schermerhorn, Philadelphia, Pennsylvania, U.S.A., 18th June, 1896 ; 6 years. (Filed 30th April, 1896.)

Claim.—1st. A vessel having on its bottom a supplemental run whose lower part has the form of a section of a spindle, the stern post or thin end of which is in a line radial to a cross section of the vessel. 2nd. A vessel provided with a supplemental run on its bottom, attached to or forming part thereof, so that a plane passing longitudinally through its centre will pass longitudinally through the longitudinal axis of the vessel. 3rd. The combination, with a vessel whose hull beneath the water line is of the form of a section of a spindle, of two or more runs the under parts of which have the form of a section of a spindle and the upper parts of which are formed of dead woods, which unite said lower parts to the hull of said vessel, each of said runs being so placed that a plane passing longitudinally upward through its centre will pass longitudinally through the longitudinal axis of the spindle-shaped part of the vessel.

No. 52,692. Railroad Spike. (Cheville de chemin de fer.)

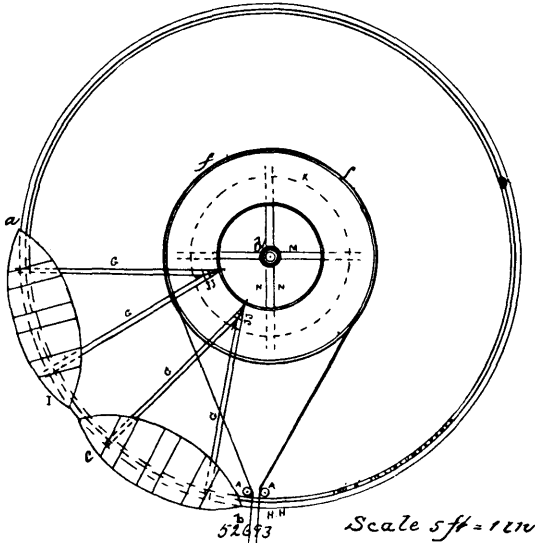
Lewis A. Bower, Wilmington, Delaware, U.S.A., 18th June, 1896 ; 6 years. (Filed 1st May, 1896.)

Claim.—As a new article of manufacture, a rail spike tapering to a cutting edge, such edge being in the form of two points with



bevelled sides, and a bevelled channel of gouge shape between such points, substantially as described.

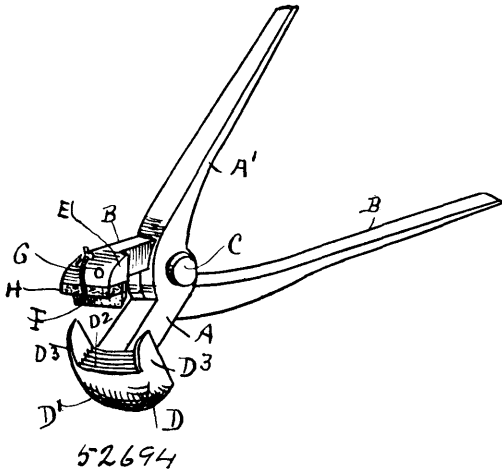
No. 52,693. Merry-Go-Round. (Carrousel.)



Frank Gray, Canning, Nova Scotia, Canada, 18th June, 1896; 6 years. (Filed 1st May, 1896.)

Claim.—The combination of the boats, I, running on track, HH, with wave motion and arms, GG, and wheel FF running on track K, and brace M for track K with centre pin D and NN, centre brace turning on centre pin D and revolving with wheel FF, substantially as and for the purpose hereinbefore set forth.

No. 52,694. Castrating Forceps. (Forceps.)

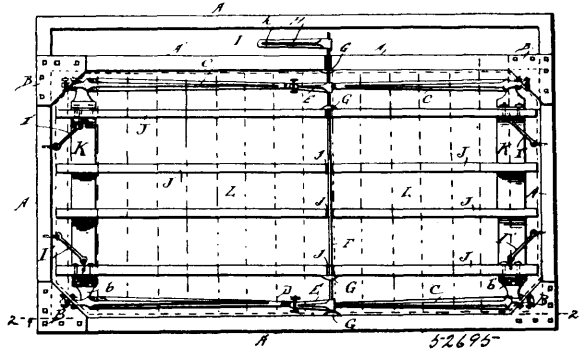


Ned Farish, Jackson, Mississippi, U.S.A., 18th June, 1896; 6 years. (Filed 2nd May, 1896.)

Claim.—1st. A castrating implement, comprising a pair of oppositely arranged movable jaws, a projection on the top of the lower jaw at the end thereof, the said projection having its upper surface roughened for the purpose set forth, upwardly extending flanges at the sides of said projection, the upper jaw being adapted to enter between the said flanges, and a transversely extending knife held on the upper jaw and adapted to cut on the inner face of said projection, substantially as shown and described. 2nd. A castrating implement, comprising a pair of movable jaws, a projection in the top of the lower jaw, a knife on the upper jaw, and a medicated sponge held on the upper jaw in front of the knife and opposite the said projection,

substantially as shown and described. 3rd. A castrating implement, comprising a lower jaw having a serrated or fluted projection and side flanges, an upper jaw, a knife held on the upper jaw and adapted to cut on the inner face of said projection, and a sponge held on the under side of the said upper jaw in front of the said knife and directly opposite the said serragations, substantially as shown and described.

No. 52,695. Scale. (Balance.)

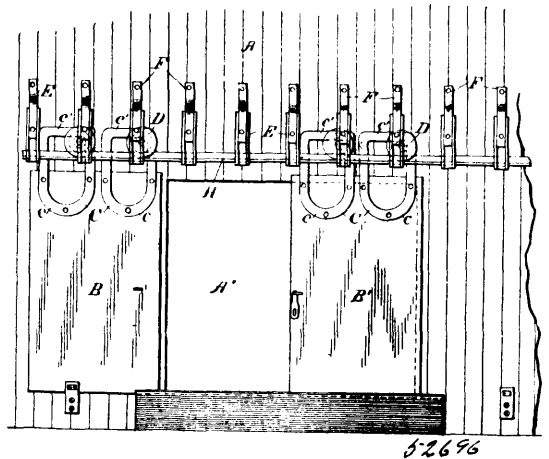


Charles F. Edminster, Wyanet, Illinois, U.S.A., 18th June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. The combination with the scale-frame and the caps at the corners, of the levers suspended at their outer ends from said caps and extended parallel with the longitudinal timbers of the frame and within the height thereof, substantially as described. 2nd. The combination with the scale-frame and the caps at the corners, of the levers suspended from said caps parallel with and alongside the timbers of said frame and within the height thereof and the short levers connected by clevis to the adjacent ends of the first-mentioned levers in the same vertical plane, substantially as described. 3rd. The combination with the scale-frame and the caps at the corners, of the levers suspended from said caps and extended toward the centre, the transverse rod connected with the weigh-beam and the short levers connected with said rod and with the adjacent ends of the levers in the same vertical plane therewith, substantially as described. 4th. The combination with the scale-frame and the levers suspended from the corners thereof within the height of the frame parallel with the side timbers thereof, of the floor-joists within the height of the frame, the transverse rod connected with said levers in the same vertical plane therewith and with the weigh-beam, stay-links connecting the floor-joists with the end timbers of the scale-frame, substantially as described.

No. 52,696. Door Hanger and Roller.

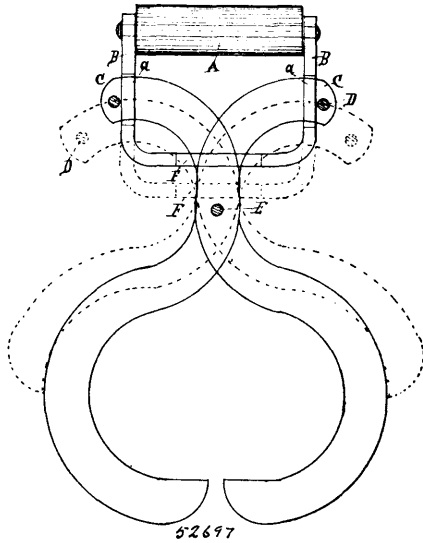
(Coulisse de porte et rouleau.)



Samuel E. Horning, Malvern, Illinois, U.S.A., 18th June, 1896; 6 years. (Filed 2nd May, 1896.)

Claim.—The combination of the roller carriage D consisting of the wheels d, the flanges d¹, and the sleeve d² secured between said flanges, of the L-shaped double track with a slot between the rails thereof and having the webs of the rails adapted to project up inside of said wheels towards said guide flanges d¹, and the hanger secured to the door and suspended on said sleeve, substantially as described.

No. 52,697. Ice Tong, etc. (*Tenailles pour la glace, etc.*)

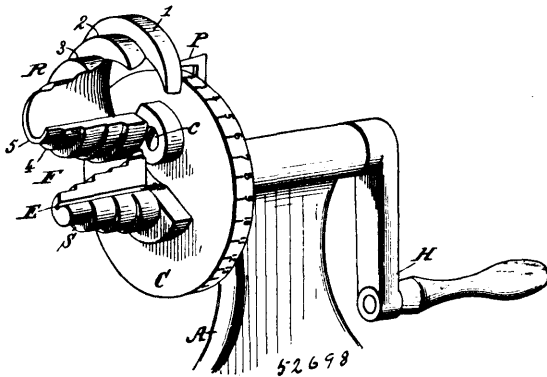


Charles Samuel Bird and Edward Dee Weston, both of Jackson, Michigan, U.S.A., 18th June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—The combination of handle A, yoke B, provided with slots F and G G, curved tongs C C, pivoted together and passing through said slots, and the stop-pins D D, in the upper ends of the tongs, substantially as shown and for the purpose described.

No. 52,698. Metal Working Tool.

(*Outil pour travailler le métal.*)



Theodore L. Stewart, Brooklyn, New York, U.S.A., 18th June, 1896; 6 years. (Filed 1st May, 1896.)

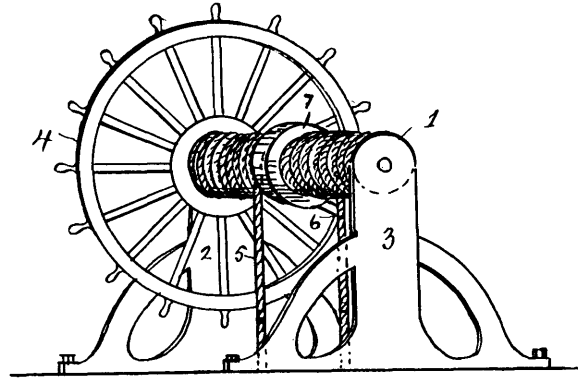
Claim.—1st. In a metal working tool, a former consisting of an interrupted stepped cone, each step having a spiral periphery, as and for the purpose described. 2nd. In a metal working tool, a former consisting of one movable and one rigid section, making when the two sections are in contact, a cone composed of a series of steps the peripheries of which are spirally curved, as and for the purpose described. 3rd. In a metal working tool, a former composed of a series of steps projecting from the face of a disc to which it is secured, each step having a graduated plane surface parallel to the face of the disc, and a spirally curved surface at right angles thereto, in combination with means for actuating the said disc, as and for the purposes described. 4th. In a metal working tool, a disc adapted to be rotated by suitable mechanism and provided with an interrupted stepped cone, each step having a spiral periphery, as and for the purposes described. 5th. In a metal working tool, a former composed of a fixed section longitudinally slotted, and a movable section, and making when the two sections are in contact, a stepped cone, each step of which has a spiral periphery, as and for the purposes described.

No. 52,699. Steering Apparatus for Ships.

(*Appareil à gouverner les vaisseaux.*)

George F. Woodman, Newburyport, Massachusetts, U.S.A., 18th June, 1896; 6 years. (Filed 2nd May, 1896.)

Claim.—In a steering device, the combination with a winding drum, of ropes coiled in opposite directions upon said drum, and a



sleeve mounted upon said drum, sliding between and operated by said coils.

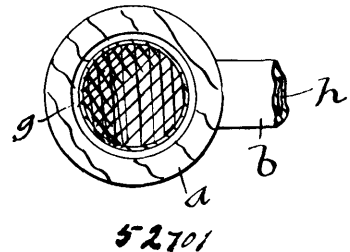
No. 52,700. Composition Médicale.

(*Medical compound.*)

Marie Rose de Lima Emma D'Avignon, St. Ours, Québec, Canada, 18 juin, 1896; 6 ans. (Déposé 1er mai 1896.)

Résumé.—Une composition médicale consistant dans le mélange de sirop de salsepareille, de sirop de verge d'or, de sirop de goudron, de teinture de capsicum, d'alcool et de sucre dans les proportions indiquées.

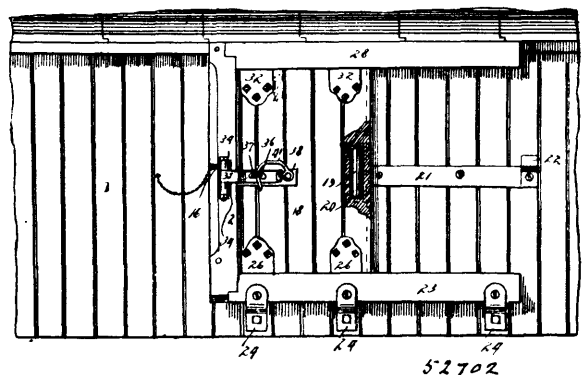
No. 52,701. Pipe. (Pipe.)



William Bohrer, Montreal, Quebec, 20th June, 1896; 6 years. (Filed 10th June, 1896.)

Claim.—1st. An adjustable basket-like receptacle for pipes. 2nd. An elastic basket for pipes formed of wire netting. 3rd. A pipe containing a perforated basket-like receptacle within its bowl cavity, for the purpose set forth. 4th. A pipe containing a perforated basket-like receptacle within its bowl cavity, and air space between such receptacle and the bowl, for the purpose set forth. 5th. A pipe having an enlarged channel through its stem, for the purpose set forth. 6th. A pipe having a perforated basket-like receptacle within its cavity, an air space between such receptacle and the bowl and an enlarging channel through its stem, for the purpose set forth.

No. 52,702. Car Door. (Porte de chars.)

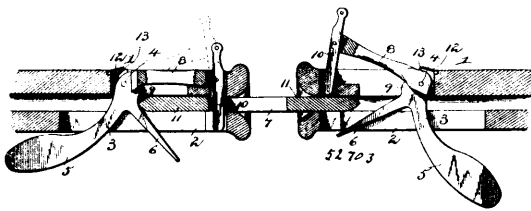


Heinrich Wilhelm Friederich Zaeger, Sandusky, Ohio, U.S.A., 22nd June, 1896; 6 years. (Filed 23rd May, 1896.)

Claim.—1st. The combination in a car having an opening in the side thereof, of a door, tracks mounted above and below the opening, a roller at one edge of the door and engaging one track, a

stationary housing at the opposite edge of the door, and having slots therein, a movable housing within the stationary housing, a spring engaging the movable housing, and a roller mounted in the movable housing and having its trunnions slidable in the slots of the stationary housing, substantially as described. 2nd. The combination with a car having an opening in the side thereof, of a door, a track above and below the opening, a roller mounted at one edge of the door and engaging the adjacent track, a stationary housing at the opposite edge of the door, and having slots therein, a U-shaped and movable housing within the stationary housing, a bow-spring fixed to the U-shaped housing and engaging the stationary housing and a roller mounted in the U-shaped housing and having its trunnions extended and slidable in the slots of the stationary housing, substantially as described. 3rd. The combination of a stationary housing having two side portions respectively formed with oppositely-disposed slots, a U-shaped housing movable between the side portions of the stationary housing, a roller journaled in the U-shaped housing and having its trunnions extended to and respectively movable in the slots of the stationary housing, and a spring carried in the stationary housing and connected to the U-shaped housing, substantially as described. 4th. The combination of a stationary housing composed of two side portions, one of which is formed with a transverse plate, and the other being formed with an opening receiving a portion of the transverse plate, the parts of the side portions outward from the transverse plate being each formed with a slot, a roller located between the slotted portions of the stationary housing and having its trunnions extended to and movable in the slots of the same, and a spring bearing on the transverse plate and connected to press the trunnions of the roller, substantially as described. 5th. As a new article of manufacture, a housing composed of two side portions, one of which has a transversely-extending plate, and the other having an opening receiving a portion of the transverse plate whereby two divisions are made of the space enclosed by the side portions, the side portions of one division being formed with bearings, and a roller mounted in the bearings, substantially as described.

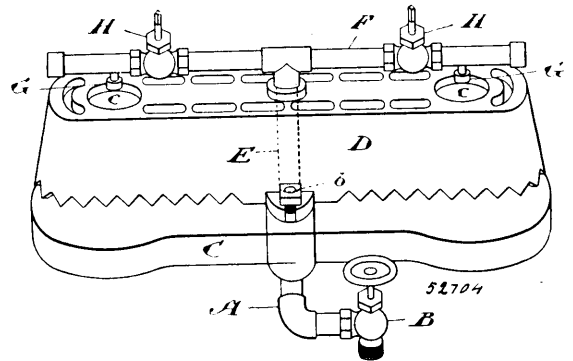
No. 52,703. Car Coupler. (Attelage de chars.)



Lowell E. Redden, Tempe, Arizona, U.S.A., 22nd June, 1896; 6 years. (Filed 23rd May, 1896.)

Claim.—1st. In a car coupling, the combination of a draw-head, a bell crank lever fulcrumed on the draw-head and comprising a rearwardly extending weighted arm, and a downwardly extending inclined arm arranged to be engaged by a link, a forwardly extending arm pivotally connected with the draw-head and supported by the bell crank lever, a coupling pin connected with and carried by the forwardly extending arm, substantially as described. 2nd. In a car coupling, the combination of a draw-head, a bell crank lever fulcrumed on the draw-head and composed of a rearwardly extending weighted arm, and a forwardly extending inclined arm, a coupling pin, a forwardly extending arm pivoted to the draw-head and carrying the coupling pin, and arranged to be supported in an elevated position by the bell crank lever, and a link adapted to engage the inclined arm to cause the coupling pin to fall, said link having its end portion extended sufficiently to maintain the inclined arm in a depressed position when in engagement with the coupling pin, substantially as and for the purpose described. 3rd. In a car coupling, the combination of a draw-head having a longitudinal slot, the bell crank lever 3 fulcrumed in the slot of the draw-head by a transverse pin and composed of a rearwardly extending weighted arm, and an inclined arm extending downward and forward, said bell crank lever being provided at its front below its pivot with a lug 9, the arm 8 pivoted to the draw-head by the said transverse pin, and supported by the lug 9, a coupling pin secured by the arm 8, and a link having elongated ends and adapted to engage the inclined arm of the bell crank lever, substantially as and for the purpose described. 4th. In a car coupling, the combination of a draw-head, a lever fulcrumed on the draw-head, a forwardly extending arm pivotally connected with the draw head and supported by the lever and adapted to carry a coupling pin, and a catch mounted on the draw-head and arranged to engage the arm automatically and hold the latter elevated when the same is swung upward for uncoupling, substantially as described. 5th. In a car coupling, the combination of a draw-head, a bell crank lever fulcrumed on the draw-head, a forwardly extending arm pivotally connected with the draw-head and supported by the bell crank lever and provided with a shoulder and a pivoted catch mounted on the draw-head in rear of said arm and adapted to engage the same to hold the arm elevated, such catch being adapted to be engaged and released by the lever, after a link has been withdrawn from the draw-head, substantially as described.

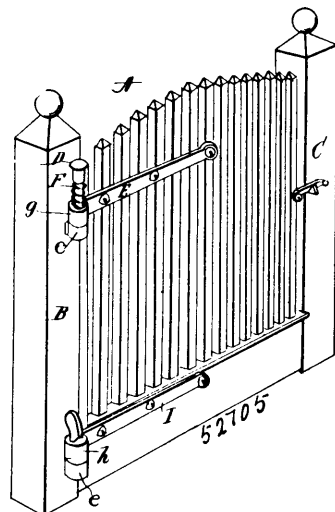
No. 52,704. Burner for Liquid Fuel. (Brûleur pour combustible liquide.)



Maurice Dalton, Toronto, Ontario, Canada, 22nd June, 1896; 6 years. (Filed 26th May, 1896.)

Claim.—1st. In a burner for liquid fuel, a vaporizing chamber provided with an oil inlet, in combination with one or more vapour jets connected with the vaporizing chamber and arranged to direct their discharge against the said chamber, substantially as and for the purpose specified. 2nd. In a burner for liquid fuel, a vaporizing chamber provided with two longitudinal partitions extending part of the length of the chamber and with an oil inlet located between one of the partitions and the side of the said chamber in combination with one or more jets connected with the vaporizing chamber between the said partitions and arranged to direct their discharge against the said chamber, substantially as and for the purpose specified. 3rd. A vaporizing chamber for liquid fuel burners having rounded ends, two longitudinal partitions extending part of the length of the chamber, an oil inlet located between one of the partitions and the side of the chamber, and a vapour outlet located between the said partitions, substantially as and for the purpose specified. 4th. In a burner for liquid fuel, the vaporizing chamber C provided with the oil inlet *a*, in combination with the jets G, connected with the said chamber and the suitably supported hood D open below and provided with the openings *c* below the jets G, substantially as and for the purpose specified. 5th. In a burner for liquid fuel, the vaporizing chamber C provided with the horizontal partitions J and the oil inlet *a*, in combination with the jets G connected with the said chamber at *b*, and the suitably supported hood D, substantially as and for the purpose specified. 6th. In a burner for liquid fuel, the combination of the oil pipe A; the vaporizing chamber C provided with the openings *a* and *b*, the rounded ends I, and the longitudinal partitions J; the vertical pipe E; the horizontal pipe F; the jets G; the hood D, open below and provided with the openings *c*, substantially as and for the purpose specified. 7th. In a burner for liquid fuel, the combination of the oil pipe A; stopcock B; the vaporizing chamber C provided with the openings *a* and *b*, the rounded ends I, and the longitudinal partitions J; the vertical pipe E; the horizontal pipe F; the stopcock H; the jets G; the hood D open below and provided with the openings *c*, substantially as and for the purpose specified.

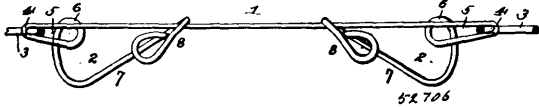
No. 52,705. Gate Hinge. (Penture de barrière.)



William Horace Hefner, Rock Hill, South Carolina, U.S.A., 22nd June, 1896; 6 years. (Filed 26th May, 1896.)

Claim.—The combination with a hinge-post and a gate, of the lower hinge having one section provided with a flat twisted pintle, and the other section having an eye corresponding in cross-section to a cross-section of the pintle, the upper hinge having one section provided with a pintle threaded at its upper end and the other section having a circular eye to receive the same, a cap-nut on the threaded end of the pintle, and the spring interposed between the cap nut and the adjacent section of the hinge and surrounding the pintle, substantially as specified.

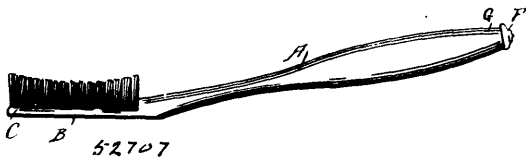
No. 52,706. Pinless Clothes Line. (Corde à linge.)



Fred Sterling, Austin, Texas, U.S.A., 22nd June, 1896; 6 years. (Filed 27th May, 1896.)

Claim.—1st. A section for a pinless clothes line, consisting of a wire having formed on one of its ends a wedge-shaped eye 5, the point of said wedge-shaped eye being directed outward in line with the section, a spring-coil extending upward to near the main wire and serving to close said wedge-shaped eye, and a spring-arm formed of a continuation of said spring-coil and curved downward and inward and engaged over the main wire to form the clothes clamp, and a ring threaded on said arm and over said spring-coil into the wedge-shaped eye, as and for the purpose set forth. 2nd. A wire section for a pinless clothes line having one end bent to form an eye for the retention of the connecting link, then coiled upwardly to or alongside the main wire and turned downward to close the eye 5 and form a spring-coil and then bent downward and upward and provided at its end with a hook engaging over the arm wire, whereby the connecting link may be threaded on and off the clamp, substantially as and for the purpose set forth.

No. 52,707. Tooth Brush. (Brosse à dents.)

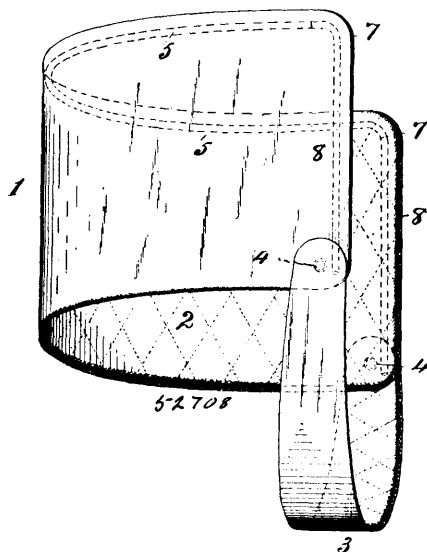


Walter G. Stoul and Hiram O. Cowdrick, both of Philadelphia, Pennsylvania, U.S.A., 22nd June, 1896; 6 years. (Filed 27th May, 1896.)

Claim.—As a new article of manufacture, a tooth brush consisting of a hollow handle, a nozzle, and a back with side flanges formed of a single piece of material, a detachable head fitting in said flanges, and a plug closing the inlet end of the handle, the discharge end of the nozzle being at the inner end of the brush, said parts being combined substantially as described.

No. 52,708. Ear and Throat Protector.

(Protecteur pour la gorge et les oreilles.)

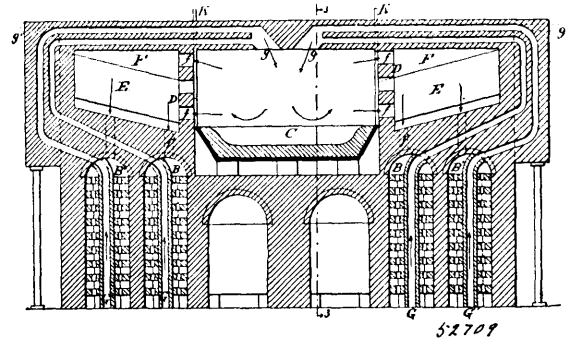


Adolphus Carrette, New York, State of New York, U.S.A., 22nd June, 1896; 6 years. (Filed 6th May, 1896.)

Claim.—The combination, with an ear protector having a body for covering the back part of the head and ears, of the support formed of a single piece of spring metal extending along the upper edge of the protector and having its ends extending downwardly along the face edges of the protector for fitting the face edges snugly to the sides of the face and for spreading the bearings for the support on each side of the face, substantially as described.

No. 52,709. Metallurgical Furnace.

(Fournaise métallurgique.)

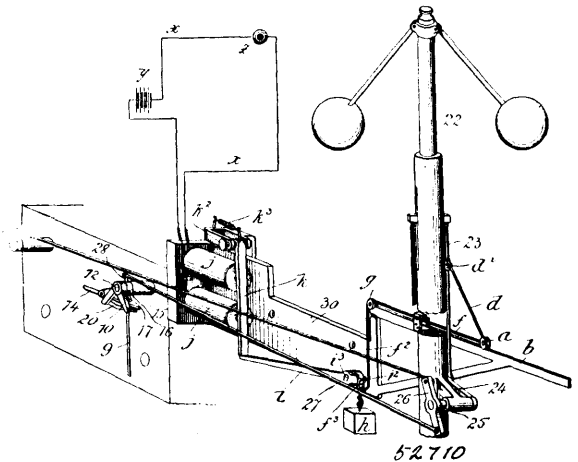


William Bell and Company, New York, assignee of Michael R. Conley, Brooklyn, both in the State of New York, U.S.A., 22nd June, 1896; 6 years. (Filed 27th May, 1896.)

Claim.—1st. A metallurgical furnace having a melting chamber and reducing retorts at opposite ends of the melting chamber, with air and gas flues opening into said chamber, checker-work immediately below said retorts, and outlet flues leading around the retorts to the checker-work, the air inlet flues extending through said checker-work, substantially as described. 2nd. A metallurgical furnace having a melting chamber and reducing retorts at opposite ends of the melting chamber with, air and gas flues opening into said chamber, checker-work immediately below the retorts and outlet flues leading around the retorts to the checker-work, the air and gas inlet flues extending through said checker-work, substantially as described.

No. 52,710. Electric Stop Motion for Engines.

(Appareil électrique d'arrêt pour machines à vapeur.)

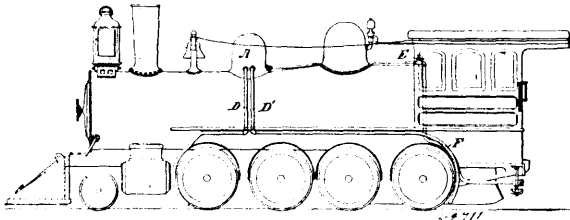


Louis St. Peter, John D. Millea and Thomas D. Millea, all of Springfield, Massachusetts, U.S.A., 22nd June, 1896; 6 years. (Filed 26th May, 1896.)

Claim.—1st. In an electrical stop motion for engines, the combination with a valve-operating device of the engine, of an electro-magnet and armature, electric conductors for forming a circuit, means for closing the circuit, a lever to act on the valve-operating device and engaged by the armature of the electro-magnet, all so that on the closing of the circuit and energizing of the magnet the armature is withdrawn from its lever-engaging position, leaving the lever free to be swung, substantially as described. 2nd. In an electric stop-motion for engines, the combination with the track-bar *b*, and a reciprocatory part, as 23, of the governor mechanism, of the rod *d*, pivoted to the said reciprocatory part and having the roller to move in said track-bar, the sheave *g*, the lever *l*, the weighted cord *f*, connected to the said rod *d*, and having a guiding engagement with the sheave and having in its depending portion the eye *f*, and provided at its portion therebelow with the weight *h*,

the electro-magnet having its armature adapted for a restraining engagement with said lever *f*, and electric apparatus for duly energizing the said electro-magnet, substantially as described.

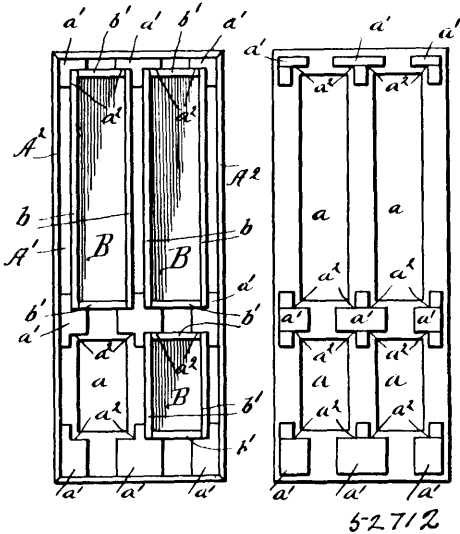
No. 52,711. Track Sanding Apparatus.
(Appareil à sabler les rails.)



Jerome Adolphe Houston, Springfield, Missouri, U.S.A., 22nd June, 1896; 6 years. (Filed 26th May, 1896.)

Claim.—1st. A sanding device for locomotives comprising in combination with the sand box, one or more pairs of siphon ejectors located above or below the bottom of the box, a pipe supplying compressed air to each pair of siphons, a valve controlling said pipes, and delivery pipes conveying the sand from said siphons to the rails, substantially as described. 2nd. In a sanding device for locomotives, the combination with the sand box, of two pairs of siphon ejectors, located either above or below the bottom of the box, two pipes each supplying air to one pair of siphons, an engineer's valve controlling both pipes, and delivery pipes leading from one pair of siphons to the forward drivers and from the other pair to the back drivers, substantially as described. 3rd. The combination with the sand box *A*, of the two pairs of siphon ejectors *B B'*, the tees *C C'* connecting said pairs, the delivery pipes *D D'*, the air pipes *H H'* connected with the tees, and the valve *G* having two ports controlling the pipes *H H'*. 4th. The combination with the sand box *A*, of the pairs of siphons *B B'*, the delivery pipes *D D'*, supporting said siphons above the bottom of the box, and the packing sleeve *d* surrounding said pipes, substantially as described. 5th. In a sanding device for locomotives, the combination with an air supply pipe, of a valve casing *E* containing a valve seat having ports *e¹, e²*, leading to two delivery pipes, and a disc valve *G* containing two ports *g¹, g²*, adapted to open either one or both of said ports or to close them both, substantially as described.

No. 52,712. Door. (Porte.)

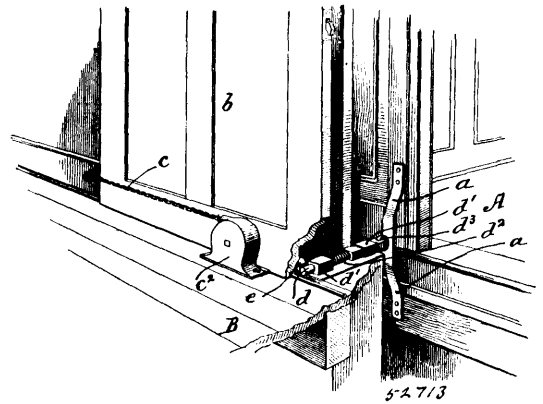


John Slade Carter, Buffalo, New York, U.S.A., 22nd June, 1896; 6 years. (Filed 27th May, 1896.)

Claim.—1st. In a door, the combination with the side frames provided with panel openings, of panel securing blocks secured to said frames and adapted to receive portions of the panel casings, the panels, casings surrounding said panels, and the filling strip, substantially as set forth. 2nd. In a door, the combination with the side frames provided with panel openings and panel securing blocks secured to said frames and provided with rectangular recesses to receive the panel casings, the panels, the casings loosely engaging said panels and retained within said recesses, and a filling strip of a width equal to the combined thicknesses of said blocks, whereby the blocks of one frame will engage those of the other when the parts of the door are assembled, substantially as set forth. 3rd. In a door,

the combination with the side frame provided with panel openings, of panel securing blocks secured to said frames and adapted to receive the panel casings, certain of said blocks being located adjacent to the hinge and lock receiving portions of the door, the panels, grooved panel casings for said panels and operatively engaging said blocks, and a filling strip engaging the edges of the side frames, the thickness of said filling strip and panel casings being the same as the combined width of said blocks when the parts of the door are assembled, whereby solid portions are provided to receive the lock and hinges, substantially as set forth. 4th. In a door, the combination with side frames provided with panel openings, of recessed panel securing blocks secured to said frames in position to retain the panels in place, the panels of substantially the size of the panel openings, the panel casings loosely engaging said panels and fitting the recesses of said blocks, the filling strips and mouldings for said panels and secured to said panel casings, whereby said panels are left free to shrink or swell, substantially as described.

No. 52,713. Automatic safety Attachment for Elevators. (Attache automatique de surté pour élévateurs.)

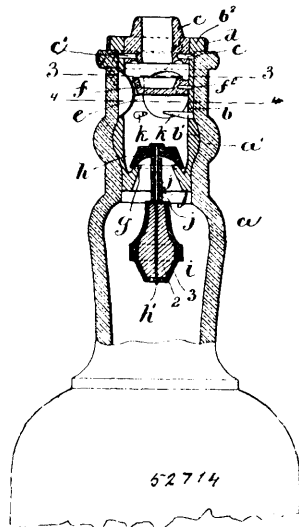


Richard Francis Brocq, New York, State of New York, U.S.A., 22nd June, 1896; 6 years. (Filed 28th May, 1896.)

Claim.—In combination, the elevator having the cam thereon, a horizontally sliding door carrying the pawl pivoted thereto to have free movement in one direction; means for keeping the door closed normally and for returning it to closed position, a bolt arranged to slide in bearings on the door frame independently of the pawl and transversely to the movement of the door, and a spring for forcing the bolt away from the door and out of the path of the pivoted pawl, said bolt being in the path of the cam on the elevator, whereby it will be moved towards the door upon the arrival of the elevator ready to catch the pawl when the door is opened, substantially as described.

No. 52,714. Non-refillable Bottle.

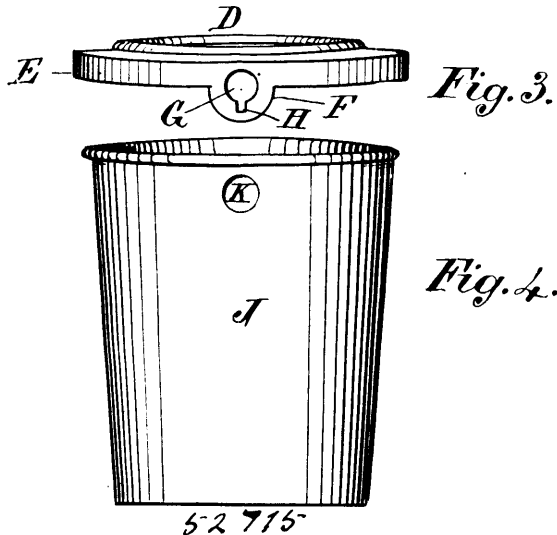
(Appareil pour empêcher le remplissage des bouteilles.)



George Wolfgang Steffens, Boston, Massachusetts, U.S.A., 22nd June, 1896; 6 years. (Filed 29th May, 1896.)

Claim.—1st. A bottle-stopper comprising a hollow casing of absorbent and expansive material and formed to serve as a conduit and provided with suitable closing means and with a neck of substantially uniform diameter which is compressed and adapted after its insertion in a bottle to expand and form a shoulder, caused by the absorption of the liquid. 2nd. A bottle-stopper comprising a hollow wooden casing provided with a valve seat, a valve, and a valve-guard, and having at its lower end a neck of substantially uniform diameter which is compressed and adapted after its insertion in a bottle to expand and form a shoulder caused by the absorption of the liquid. 3rd. A bottle-stopper comprising in its construction a shell or casing of absorbent and expansive material having a compressed portion adapted to lock said shell in a bottle-neck, a valve-seat, a suitable guard, and a weakened portion above the locking portion. 4th. The combination with the shell *b* having a compressed shoulder *b*¹, and provided with the shoulder *b*² at its upper end, of the metal band *b* enclosing said shoulder *b*², and the pouring nipple *c* within the said shoulder. 5th. In a bottle-stopper, the combination with an absorbent and expansive shell having a locking portion, a weakened portion, and a valve and valve-seat, of a nipple and guard of vitreous material secured in the upper end of said shell. 6th. In a bottle-stopper, the combination with a valve-seat and a valve, of a weight having a flexible connection with said valve, and a plurality of loose collars embracing said flexible connection between the valve and the weight.

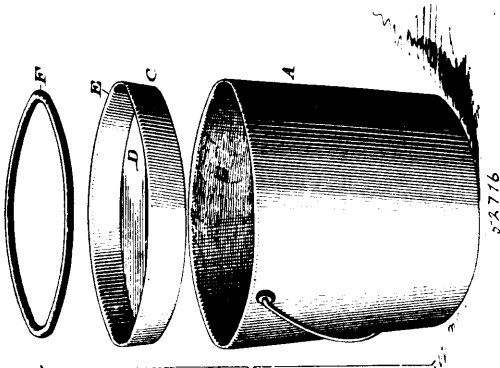
No. 52,715. Sap-Bucket Cover and Spout Combined.
(*Couvercle et siphon de seau combinés pour la sève.*)



Louis Gaucher, Lawrenceville, Quebec, Canada, 22nd June, 1896; 6 years. (Filed 30th May, 1896.)

Claim.—1st. The combination of the spout *B*, having lug *C*, and the cover *D* having a lip *F*, provided with a hole *G*, and slot *H*, as set forth. 2nd. The combination of the spout *B*, provided with a lug *C*, upwardly, near the outlet, a pail *J*, having a hole *K* to receive said spout, and a cover *D* fitting the pail and having a downwardly-turned lip *F*, perforated by a hole *G*, and slot *H* to fit on the spout and over the lug when the cover is inverted, and when turned is prevented from being blown away by resistance of the lug, substantially as set forth.

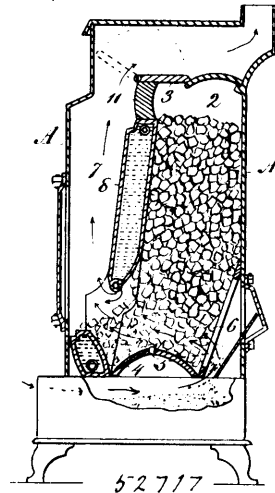
No. 52,716. Fire Bucket. (*Sseau pour le feu.*)



William Rowland Myers, Haddonfield, New Jersey, U.S.A., 22nd June, 1896; 6 years. (Filed 30th May, 1896.)

Claim.—1st. A fire bucket having a cover on the interior thereof, and means for holding the same in contact with the inner side of said bucket, substantially as described. 2nd. The combination of a fire bucket, a cover fitted to the interior thereof, and a ring adapted to hold said cover in contact with the inner side of said bucket, substantially as described. 3rd. A bucket adapted to receive a suitable chemical having a coating therefor adapted to resist the action of said chemical, a cover adapted to seal said bucket, and a ring of wire or other suitable material adapted to hold said cover in contact with the inner side of said bucket, cemented to said coating, substantially as described. 4th. In a fire bucket, a flanged cover adapted to be cemented to the inner side of said bucket, and a ring within the cover adapted to press the same against said side, substantially as described.

No. 52,717. Heating Stove. (*Poêle de chauffage.*)

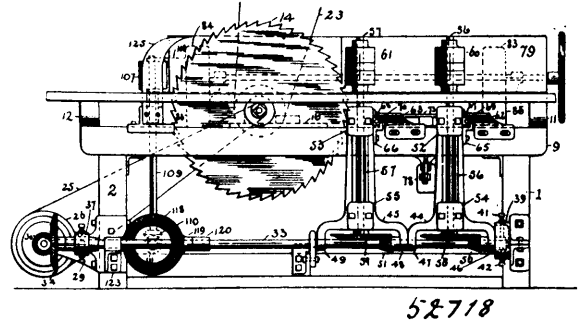


Frank Vincent Knauss, Portsmouth, Ohio, U.S.A., 22nd June, 1896; 6 years. (Filed 27th May, 1896.)

Claim.—In a heating stove, the combination of the magazine having a solid arched bottom and an inclined grate with its upper end resting against the rear side of the magazine, a gas-chamber at the front of said magazine and a water-chamber interposed between said magazine and gas-chamber, with a gas-passage through its lower portion communicating with said gas-chamber and magazine, said water-chamber having an air-tube provided with air-passages or ducts opening through the upper wall of said gas-passages, substantially as set forth.

No. 52,718. Slab-Sawing Machine.

(*Machine à scier les croûtes.*)

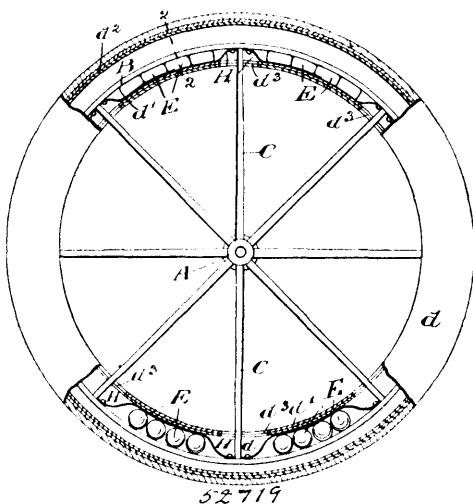


Austin Waters Goodell, Philadelphia, Pennsylvania, U.S.A., 22nd June, 1896; 6 years. (Filed 28th May, 1896.)

Claim.—1st. In a slab-sawing machine, a saw attached thereto, a movable fence thereon, means to move the fence simultaneously at each end from a single operative point, upright feed-rolls therefor seated upon a rectangular shaft, the rolls being in longitudinal and removable sections, and carried in a yoke upon a shaft normally upright but having means for side adjustment, substantially as described. 2nd. In a slab-sawing machine, a saw attached thereto, a movable fence thereon adjusted from a fixed point, a driven delivery-roll attached to the fence and movable therewith, a depression in the fence opposite the saw, and feed-rolls to press and feed the material against the fence, said feed-rolls being held in position and contact with the material being fed by a counterweight acting automatically so each roll may have equal pressure and assume a

position farther from or nearer to the fence, to roll over uneven material, and means to move the feed-rolls by hand mechanism when desired, substantially as described. 3rd. In a slab-sawing machine, a saw therefor, a fence therefor having attached thereto a delivering mechanism suited to shifting positions of the fence, feed-rolls therefor mounted upon shafts normally perpendicular, but pivotally supported from a feed-shaft arranged for outward and inward moving, means for raising or lowering the end of the feed-shaft nearest the feed-end of the machine, and means for connecting the feed-shaft to the cross feed-shaft for such adjustment and the maintenance of their driving-contact under such adjustment, substantially as specified. 4th. In a slab-sawing machine, a saw therefor, a movable fence therefor, feed-rolls therefor swingingly and tiltingly supported, and means to support the feed-rolls against the pressure produced in feeding against the saw, by brackets adjustably attached to the frame for that purpose, substantially as described. 5th. In a slab-sawing machine, a saw therefor, a movable fence therefor, a delivery-roll attached thereto, driven from the feed-shaft, and a spreader opposite the roll and in line with the edge of the saw, substantially as described. 6th. In a slab-sawing machine, a saw therefor attached, feeding mechanism against a fence automatically and mechanically adjustable thereto, a driven delivery-roll for the fence driven from the feed-roll mechanism, means to adjust the fence for different thicknesses of material to be sawed, and a scale and index to guide the operator in setting and adjusting the fence to the saw, substantially as described. 7th. In a slab-sawing machine, a saw therefor secured on an arbor mounted on bearings seated upon a bed-plate secured to the machine frame, a driving pulley on the arbor between the bearings, a table, a slit in the table through which the saw is inserted, a fence at one side of the table movably attached, a fluted delivery-roll at the back edge of the saw, a spreader back of the saw, in line therewith, and opposite the delivery roll, substantially as specified. 8th. In a slab-sawing machine, a saw, a frame, a table, a fence, cross and longitudinal feed-shafts therefor, forked yokes doubly embracing and resting upon one of the feed-shafts for swinging motion, gears to drive the feed roll shafts, within the yokes, from the feed-shaft, a carrier for one end of the feed-shaft having means for elevating and securing in elevation the feed-shaft, and at the other end of the shaft a bearing centrally suspended for oscillation to permit the elevation of the opposite end of the shaft, feed-rolls upon the shafts seated on the yokes, the feed-rolls being seated upon rectangular seats formed therefor, brackets secured at the upper end of the yokes at one side, swivelling-blocks secured to the brackets and yokes, equalizing screws secured in the swivelling-blocks having means for hand adjustment outside of the swivelling-block, and at their inner end connection with an equalizing beam and counter-weight, substantially as specified. 9th. In a slab-sawing machine, a saw, a table, a frame, a movable fence and a driven delivery-roll thereto attached, feed-shafts, feed-roll shafts swingingly attached thereto, means to press the feed-rolls automatically and by hand against the material being operated upon, and stops secured to the framing to limit the movement of the equalizing-lever, substantially as specified.

No. 52,719. Vehicle Wheel. (Roue de voitures.)

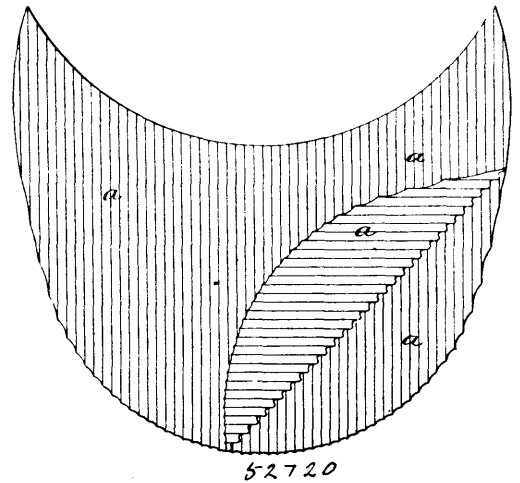


John Rufus Terry, Long Island, New York, U.S.A., 22nd June, 1896; 6 years. (Filed 28th May, 1896.)

Claim. 1st. A vehicle wheel comprising a felly, a hub, spokes connecting the felly with the hub, a rim free to move independently of the felly and provided with bearings intermediate the felly and hub, and a cushion interposed between the inner side of the felly and the said bearings for sustaining the load at the upper portion of the wheel, substantially as set forth. 2nd. A vehicle wheel comprising a felly, a hub, spokes connecting the hub with the felly, a hollow rim enclosing said felly and a cushion interposed between

the felly and the inner wall of the rim, whereby the load is sustained at the upper portion of the wheel, substantially as set forth. 3rd. A vehicle wheel comprising a felly, a hub, spokes connecting the hub with the felly, a rim enclosing the felly, the inner walls of said rim being cut away for the admission therethrough of the spokes of the wheel, and a cushion interposed between the felly and the inner wall of the rim, substantially as set forth. 4th. A vehicle wheel comprising a hollow rim, a felly, within the rim, a hub, spokes connecting the felly with the hub, yielding cushions interposed between the felly and the inner walls of the rim and springs carried by the felly engaging said cushions for yieldingly holding them in position, substantially as set forth. 5th. A vehicle wheel comprising a rim formed in two ring sections, each section comprising a side plate, and inner and outer laterally extended rings, the said rings of the two sections overlapping each other to form the inner and outer walls of the rim, a tire carried upon the rim, a felly within the rim, a hub, spokes connecting the felly with the hub, and a yielding cushion interposed between the felly and the inner walls of the rim, substantially as set forth.

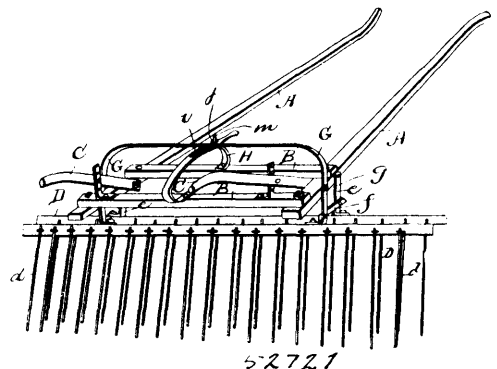
No. 52,720. Dress Shield. (Protecteur de vêtements.)



Benjamin Franklin Sutton, Brooklyn, New York, U.S.A., 22nd June, 1896; 6 years. (Filed 28th May, 1896.)

Claim.—A dress shield of pliable and flexible material corrugated to form in connection with the dress and body of the wearer when in use a series of collapsible and dilatible tubular channels, substantially as herein described.

No. 52,721. Weeder. (Sarclcur.)

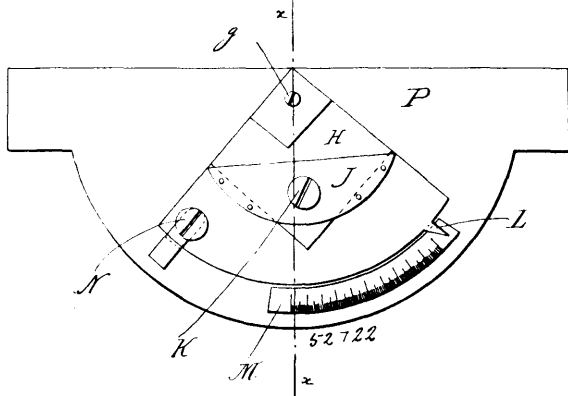


William E. Whitman, Auburn, Maine, U.S.A., 22nd June, 1896; 6 years. (Filed 30th May, 1896.)

Claim. 1st. The herein described weeder consisting of two connecting parallel tooth-bars having spring-teeth, a pair of shafts to which said bars are pivoted, an adjusting-lever, each end of which is connected with one of said bars at each side of said pair of shafts, the said lever forming an arch extending above said shafts from side to side, cross-bars on said shafts, a circular segment secured to said cross-bars, and means for clamping said lever in various positions on said circular segment. 2nd. The herein described weeder consisting of two connecting parallel tooth-bars having spring-teeth, a pair of shafts to which said bars are pivoted, an adjusting-lever, each end of which is connected with one of said bars at each side of said pair of shafts, the said lever forming an arch extending above said shafts from side to side, cross-bars on said shafts, a flat bar secured to said cross-bar and forming a circular segment, said bar having formed

therein a longitudinal slot, a bolt passing through said slot and said lever and a nut on said bolt for clamping said lever. 3rd. The herein described weeder consisting of two connecting parallel tooth-bars having spring teeth, a pair of shafts for supporting said bars, hangers secured to the tops of said bars and pivoted to said shafts, the connecting rear hangers extending upward and above said shafts from side to side and forming an adjusting-lever and means for securing said adjusting lever in any desired position.

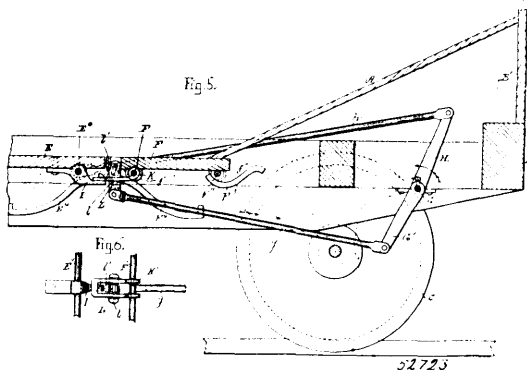
No. 52,722. Rafter Cutting Machine.
(Instrument pour tailler des chevrons.)



Napoleon Joseph Millette, L'Ange Gardien, Québec, Canada, 22 juin 1896; 6 ans. (Déposé 29 mai 1896.)

Résumé.—Dans un instrument pour tailler les chevrons, la combinaison d'une pièce à surface plane P, munie de la planche P', de l'arc gradué M et de la vis de pression N, avec un segment de cercle G, articulé à la pièce P par la vis u et dans lequel est partiquée une cavité H convenable pour recevoir une équerre, le dit segment étant pourvu au-dessus de la cavité H d'une planchette J dans laquelle se trouve la vis de pression K, le tout tel que décrit et pour les fins indiquées.

No. 52,723. Coal Dumping Car. (Char à bascule.)



William George Lane, North Sidney, Nova Scotia, 22nd June, 1896; 6 years. (Filed 30th May, 1896.)

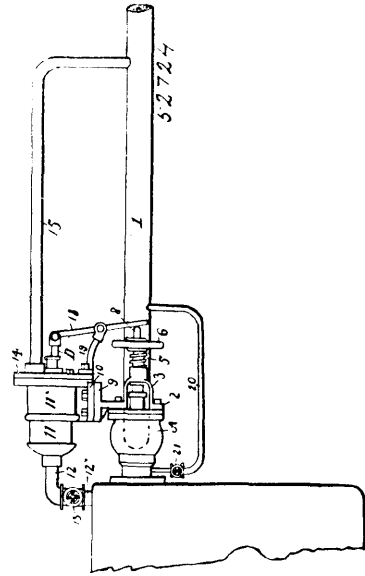
Claim.—1st. A dumping car having a hopper open at its lower end and a pair of doors adapted to roll on curved or inclined ways, and connected by means of links and levers to a rock shaft journalled on the car frame, substantially as and for the purpose set forth. 2nd. A dumping car having a discharge opening at its bottom and a pair of doors mounted on rollers and adapted to roll on inclined or curved guide-ways, combined with links pivoted to said doors and to levers secured to a rock shaft journalled on the car frame and an automatic locking and unlocking device, substantially as and for the purpose set forth. 3rd. A dumping car having a discharge opening and a pair of movable doors mounted on rollers combined with inclined or curved guide-ways E³, E², E⁴, F¹, for said door, the ways E³, E², being inclined or curved upwardly and the ways E⁴, F¹, being curved or inclined downwardly to cause the inner ends of the doors to descend and the outer ends thereof to ascend during the dumping operation, and suitable connecting mechanism for actuating and locking said doors, as and for the purpose set forth.

No. 52,724. Safety Device for Steam Boilers.
(Appareil de sûreté pour chaudières à vapeur.)

Georges Joseph Nicolas Carpentier, Newport News, Virginia, U.S.A., 22nd June, 1896; 6 years. (Filed 30th May, 1896.)

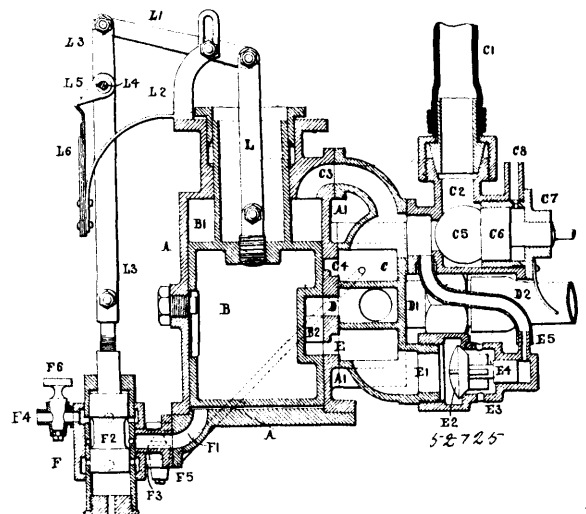
Claim. 1st. A safety device for steam boilers, comprising a valve in the path of the steam pipe, a cylinder having chambers of differ-

ent diameters, a pipe connection with the boiler opening into the smaller chamber of the cylinder, a pipe connection from the larger



chamber to the steam pipe, a piston in the cylinder having heads of different diameters to fit the chambers in the cylinder, and a lever on the end of the piston rod to operate the valve in the path of the steam-pipe. 2nd. A safety device for steam boilers, comprising a stop-valve in the steam-pipe, a guide for the stem of the valve, a cylinder having steam chambers of different diameters, and having steam ports in connection with the boiler and steam-pipe, a piston in the cylinder having two heads to fit the respective chambers in the cylinder, and a lever operated by the piston rod to move the stop valve, substantially as set forth. 3rd. In a safety device for a steam boiler, the combination with the boiler and the steam-pipe, of a stop-valve suitably mounted to admit and cut off the steam from the boiler and formed with a stem, a guide for the stem, a cylinder having connection to the boiler and steam-pipe and having steam-chambers of different diameters, a piston rod carrying piston heads for each steam-chamber, and a lever on the piston rod to act on the valve stem, substantially as set forth.

No. 52,725. Milking Apparatus.
(Appareil pour traire les vaches.)

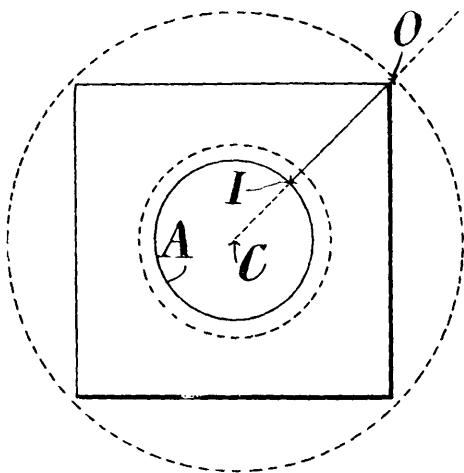


William Henry Lawrence and Robert Kennedy, both of Pollok-shields, Glasgow, Scotland, 23rd June, 1896; 12 years. (Filed 30th May, 1896.)

Claim.—In milking apparatus operating by suction, the improved automatic pulsating apparatus working pneumatically by means of a piston and cylinder or equivalent acting on valves to intermittently alter the pressure or degree of suction in the pipes connected to the milk pails, the said pulsating apparatus being actuated by the suction and being placed at any convenient distance from the suction-producing apparatus, substantially as hereinbefore described.

No. 52,726. Manufacture of Coiled Lock Nuts.

(*Arrête-téron*)



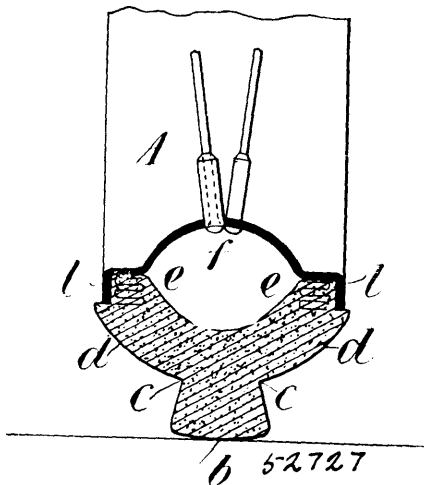
52726

Thomas Gore, 25 Booth street, Edgeley, Chester, and Thomas Septimus Hardeman, Manchester, Lancaster, both in England, 23rd June, 1896; 6 years. (Filed 3rd June, 1896.)

Claim.—In the manufacture of coiled lock nuts, the use of a bar the section of which has two opposite sides sloped, the wider of its other two sides convexly curved and the narrower concavely curved, substantially in the manner and for the purpose set forth.

No. 52,727. Elastic Tire for Wheels.

(*Bandage élastique pour roues.*)



52727

Pierre Ambjorn, Paris, France, 23rd June, 1896; 6 years. (Filed 2nd June, 1896.)

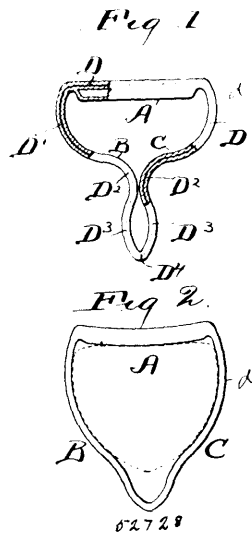
Claim.—1st. A wheel tire moulded to an arch or channel shape and having at its outer side a longitudinal peripheral rib or flange the base of which is narrower than the distance between the inside walls of the arch, such rib or flange being designed to transmit the pressure to the centre of the arched channelled tire in such a manner that the said tire will more or less collapse, substantially as described. 2nd. The combination with an elastic tire moulded to an arch or channel shape and having a peripheral rib or flange *a* of a strip or strips of canvas or other suitable fabric fluted, or folded backwards and forwards in the ends of the arch or channel, substantially as set forth.

No. 52,728. Device for Strengthening Sexually Weak Men. (*Appareil pour renforcer la sexualité chez les hommes.*)

Horace Delamater Taggart and Joseph Stable Smith, both of Akron, Ohio, U.S.A., 23rd June, 1896; 6 years. (Filed 14th May, 1895.)

Claim.—1st. A device of the character indicated, shaped to embrace the member to which it is applicable and composed of elastic substance or material, and furthermore suitably shaped to render it capable of bearing upon the dorsal vein of the member during the engorgement and subsequent depletion of the corpora, substantially

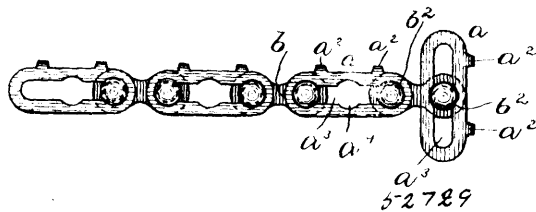
as set forth. 2nd. A device of the character indicated, shaped to embrace the member to which it is applicable and composed of



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elastic substance or material, and furthermore suitably shaped to render it capable of bearing upon the dorsum and adjacent sides of the corpora, substantially as set forth. 3rd. A device of the character indicated, triangular in general contour and composed of an elastic substance or material, substantially as and for the purpose set forth. 4th. A device of the character indicated, consisting of metallic spring *D, D', D'', D'''* having the contour shown and covered with any suitable material.

No. 52,729. Sprocket Chain. (*Chaîne dentée.*)



52729

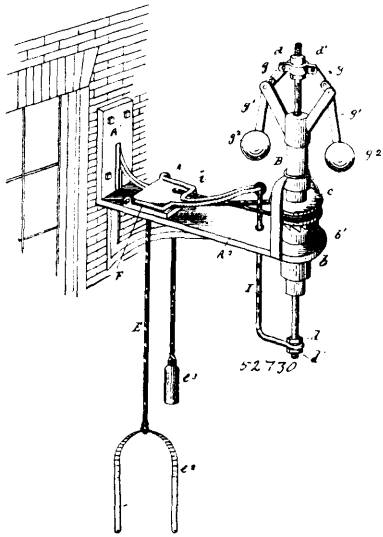
Frederick Myers, New York, State of New York, U.S.A., 23rd June, 1896; 6 years. (Filed 27th April, 1896.)

Claim.—1st. A chain composed of links and coupling blocks, alternately coupled together, each link comprising two parallel straps containing longitudinal slots, and cross-bars connecting the outer edges of said straps, their inner edges being disconnected, so that there is a space between the straps which is open or unobstructed at the inner edges of the straps, while the coupling-blocks are formed to enter said space and are provided at their end portions with oppositely projecting transverse pintles formed to enter the said slots and provided with heads to engage the outer sides of the straps. 2nd. A chain composed of links and coupling-blocks, alternately coupled together, each link comprising two parallel straps containing longitudinal slots, and cross-bars connecting the outer edges of said straps, their inner edges being disconnected, so that there is a space between the straps which is open or unobstructed at the inner edges of the straps, while the coupling-blocks are formed to enter said space and are provided at their end portions with oppositely projecting transverse pintles formed to enter the said slots and provided with heads to engage the outer sides of the straps, the said straps having provision for the insertion and removal of the pintles. 3rd. A chain composed of links and coupling-blocks alternately coupled together, each link comprising two parallel straps provided with longitudinal slots which are centrally enlarged, and cross-bars connecting the outer edges of said straps, their inner edges being disconnected, while the coupling-blocks have in their end portions removable studs the ends of which form oppositely projecting transverse pintles, which are formed to fit the end portions of the slots and have heads which engage the outer sides of the straps, the diameter of said studs and heads being less than that of the enlarged portions of the slots, so that the studs are independently insertable and removable when in line with said enlargements.

No. 52,730. Fire Escape. (*Sauveteur d'incendie.*)

John Spence, Hybla, Ontario, Canada, assignee of Fred Hutchinson, Bird City, Kansas, U.S.A., 23rd June, 1896; 6 years. (Filed 4th April, 1896.)

Claim.—1st. A fire escape comprising a frame, a drum mounted on the frame, a rope provided with a belt or the like passed round



the drum, a plate over which the rope passes, a reciprocating rod, a brake attached to the rod and adapted to bear on the rope, and a ball-governor attached to the reciprocating rod, substantially as described. 2nd. A fire escape comprising a frame, a drum mounted on the frame, a rope passing around the drum, one end of the rope being provided with a belt or the like and the other end being provided with a weight, a plate over which the rope passes, a reciprocating rod, a brake attached to the rod and bearing on the rope, and a ball-governor attached to the rod, substantially as described. 3rd. A fire escape comprising a frame provided with means for attaching it to a window frame or the like, a drum mounted on the frame and provided with teeth, a vertical revolvable portion having teeth engaging those on the drum, a rope passed around the drum, a plate on the frame over which the rope passes, a reciprocating bar, a brake attached to the rod and adapted to bear on the rope where it passes over the plate, and a ball-governor connected to the bar and receiving motion from the drum, substantially as set forth.

No. 52,731. Art of Plate Printing.

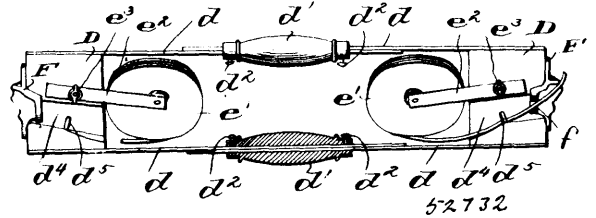
(*Art d'imprimer les plaques.*)

The American Bank Note Company, New York, assignee of Amos Henry Smith, Brooklyn, both in the State of New York, U.S.A., 23rd June, 1896; 6 years. (Filed 15th April, 1896.)

Claim.—1st. The process of preparing a surface for printing, which consists in inking, wiping and polishing a plate having a design engraved thereon, and then placing upon the surface of the plate a second design, substantially as set forth. 2nd. As an improvement in the art of plate printing, the process of superimposing upon an engraved plate, previously inked, wiped and polished, a design, tint or printing offset from a separate plate or other printing surface, previously inked, and then printing from the first plate, substantially as set forth. 3rd. As an improvement in the art of plate printing, the process of offsetting a design, from a previously inked plate or other printing surface, upon a transferring surface, then offsetting upon or transferring from the transferring surface to the surface of a second engraved plate, also previously inked, wiped and polished, the lines, design or tint of the first plate, and then printing from said second plate, substantially as set forth. 4th. As an improvement in the art of plate printing, the process of first inking, wiping and polishing an engraved plate, then inking a second engraved plate or design, transferring the lines or design of the second plate to a transferring surface, then transferring said lines or design in ink from the transferring surface to the surface of the first plate, and then printing from said first plate, substantially as set forth. 5th. As an improvement in the art of plate printing, the process of first inking, wiping and polishing an engraved plate and inking a second engraved plate or design, transferring the ink lines or design or tint of said second plate to a transferring surface, consisting of a gum or suitable composition, then transferring the said ink lines, design or tint from the transferring surface to the surface of the first plate, and then printing from the first plate, substantially as set forth. 6th. As an improvement in the art of printing, the process of first engraving a plate in intaglio, and engraving or otherwise preparing a second plate in relief or otherwise, then inking, wiping and polishing the intaglio plate and inking the second plate, impressing upon said second plate a transferring surface to receive the ink lines, design or tint of the second plate, then impressing the transferring surface upon the first plate to

transfer the said ink lines, design or tint to the surface of said first plate, and then printing from the first plate, substantially as set forth.

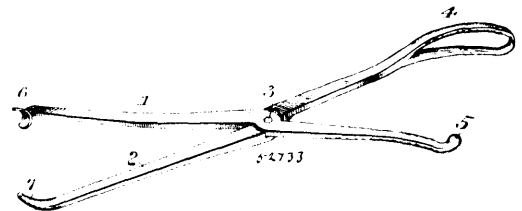
No. 52,732. Device for Attaching Stay Wires to Wire Fences. (*Appareil pour attacher les étais de fil de fer aux clôtures.*)



Henry C. Pratt, Canadaigua, New York, U.S.A., 23rd June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. A device for attaching stay wires to wire fences comprising an adjustable frame, and two wire delivering devices, adjustable toward and from each other, whereby two stay wires can be simultaneously applied, and at variable distances apart, substantially as described. 2nd. A device for attaching stay wires to wire fences comprising the end blocks each provided with a wire delivery spool, and wire guiding devices, and adjustable parts connecting said end blocks forming therewith an adjustable frame, substantially as described. 3rd. A device for attaching stay wires to wire fences comprising the end blocks, each provided with a delivery spool and a wire delivery plate having a delivery eye and adjacent thereto a projection for engaging the wire between said eye and the fence wire, said projection having an inclined face to engage the stay wire as the device is rotated to lay the first coil at a greater distance from the delivery plate than the succeeding coils, substantially as described. 4th. A device for applying stay wires to wire fences comprising among its members a wire delivery spool, and a delivery plate having a delivery eye and adjacent thereto a wire engaging portion for engaging the wire after it leaves said delivery eye, said wire engaging portion of said plate having an initial delivery recess in line with the natural curvature of the wire in leaving the spool, through which the wire is delivered when moving the device from one wire to another, and a main delivery recess out of the line of curvature of the wire, through which the wire is fed in coiling the same upon the fence wire, whereby the tension of said wire is increased during the operation of coiling, substantially as described. 5th. A device for attaching stay wires to wire fences comprising the end blocks, each provided with a delivery spool and wire guiding devices connecting bars extending from each block toward the other block and handles adjustably secured to a bar from each block, whereby said blocks may be adjusted toward and from each other to lay the stay wires at different distances apart, substantially as described. 6th. A device for attaching stay wires to wire fences comprising the adjustable frame, and the wire delivery spools adjustable toward and from each other, said spools being mounted on said frame with their axes inclined to the plane of the frame, to facilitate the delivery of wire from said spools, and wire guiding devices adjacent to each spool substantially as described.

No. 52,733. Obstetrical Forceps. (*Forceps.*)



Charles Barber, Tiskilwa, Illinois, U.S.A., 23rd June, 1896; 6 years. (Filed 27th April, 1896.)

Claim.—Obstetrical forceps, comprising two bars pivoted together midway their length, one bar having at one end a fenestrated blade, and at its other end an upwardly curved point, and the other bar having at one end an upwardly projected ball to co-act with the fenestrated blade and the other end of said bar being provided with a wide curved face, substantially as set forth.

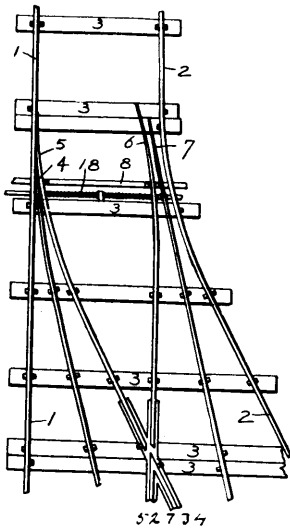
No. 52,734. Three-way Railway Switches.

(*Aiguille de chemin de fer.*)

James D. Bailey, Utica, New York, U.S.A., 23rd June, 1896; 6 years. (Filed 30th March, 1896.)

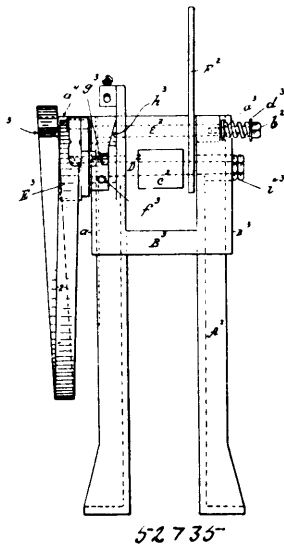
Claim.—1st. The combination in a three-way switch, of two diverging fixed rails, four intermediate pointed rails, a shifting-bar to which the two middle movable rails are immovably secured, and having shoulders engaging from the outer sides only, the two outer

movable rails and springs acting against the outer movable rails from the inner sides, substantially as set forth. 2nd. The combina-



tion in a switch of two diverging rails, intermediate movable split rails 4, 5, 6 and 7, a shifting-bar to which rails 5 and 6 are fastened, and having means for engaging and moving rails 4 and 7 from the outer sides only, and a spring operating against the inner sides of rails 4 and 7, substantially as set forth.

No. 52,735. Machine for Forming Rims for Wheels, etc. (*Machine pour former les jantes de roues, etc.*)

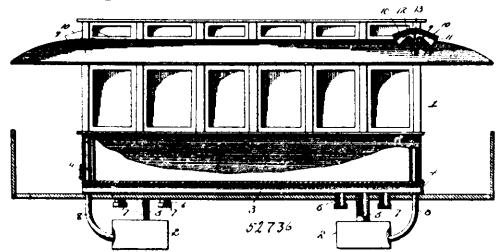


Edward B. Dake, Muskegon, Michigan, U.S.A., 23rd June, 1896; 6 years. (Filed 28th March, 1896.)

Claim.—1st. The apparatus for forming circular rims or felloes for wheels of the character herein set forth and described. 2nd. The apparatus herein described, for forming a coupling for the ends of circular rims or felloes, substantially as herein set forth and described. 3rd. An apparatus for bending and forming the material for vehicle rims or felloes, and for forming the ends or joints thereof, whereby the rim is produced having a series of tenons or projections adapted to interlock, and being provided with parallel vertical faces, the ends of the tenons or projections and abutments therefor being bevelled as and for the purpose set forth. 4th. An apparatus for forming tenons or projections on the ends of a circular rim or felloe, as herein described, which consists of a vertical frame, a movable frame mounted thereon, a shaft mounted in said frame, and saws or cutters connected with the shaft, said parts being connected with operating devices comprising clamps, a lever and other operative mechanism connected therewith, substantially as set forth. 5th. An apparatus for bending straight sticks or strips of wood into circular forms, for use as rims or felloes of a wheel, and for other purposes, said apparatus comprising a suitable frame, a circular support mounted thereon, a circular form connected therewith, a

groove adapted to receive said stick or strip, a chain for forcing the same therethrough, and into said form, and means for operating said parts, substantially as described. 6th. An apparatus for bending sticks or strips of wood into circular forms for use as rims or felloes of a wheel and for other purposes, said apparatus comprising a suitable frame, a circular support mounted thereon, a circular form connected therewith, a groove adapted to receive said stick or strip, a chain for forcing the chain therethrough and into said forms, and means for operating parts, consisting of power shaft, a pulley mounted thereon, a clutch adapted to operate in connection therewith, a gear wheel or pinion mounted on said shaft, and a gear wheel operating in connection therewith and mounted on a shaft which is adapted to operate sprocket wheels on which the drive chain is mounted, as and for the purpose set forth.

No. 52,736. Device for Ventilating Electric Motors on Cars. (*Appareil pour la ventilation des moteurs électriques sur les chars.*)



James J. Devine and Charles Crawford, both of Clifton Heights, Pennsylvania, U.S.A., 23rd June, 1896; 6 years. (Filed 30th April, 1896.)

Claim.—1st. The combination with the motor box for an electrically propelled car, of a conduit pipe arranged longitudinally of the car and provided at its ends with caps which may be opened and closed when desired, and flexible connections between the conduit pipe and the lid of the motor box, substantially as set forth. 2nd. In an electric motor car, the combination of the conduit pipe 3 having end pipe caps 4 and short depending pipe projections 6 provided with removable caps 7, and a flexible heat outlet pipe fitted at one end in the lid of the motor box of the car and joined at its upper end with said conduit pipe 3, substantially as set forth. 3rd. In an electric motor car, the combination of the longitudinal conduit pipe 3 having end caps 4, and short depending pipe projections 6 forming traps and provided with removable caps 7, the motor box provided with an aperture in its lid, a flexible heat outlet pipe fitted at one end in the aperture of the lid of the motor box and joined at its other end with the conduit pipes 3, and a cold air inlet pipe connected at one end with the motor box, substantially as set forth. 4th. The combination with an electric motor car and the motor box for the motor thereof, of a conduit pipe arranged longitudinally within the car and provided with opposite open ends closed by caps, a flexible pipe connection between said conduit pipe and the motor box, a cold air inlet pipe extended through the roof of the car and connected at its lower end with said motor box, and a cold air collecting hood arranged on the upper end of the cold air inlet pipes above the roof of the car, substantially as set forth. 5th. The combination with a motor car and the motor box for the motor thereof, of a suitably arranged conduit pipe, a pipe connection between said conduit pipe and the motor box for circulating the heated air from the latter into the conduit pipe, a cold air inlet pipe extended through the roof of the car and connected at its lower end with said motor box, and a cold air collecting hood arranged on the upper end of said cold air inlet pipe and essentially comprising a pair of oppositely extending downwardly diverging funnels having screened outer ends, and a self-adjusting valve gate pivotally suspended at its upper edge within the hood and having its lower free edge arranged to work within the upper end of the cold air inlet pipe, substantially as set forth.

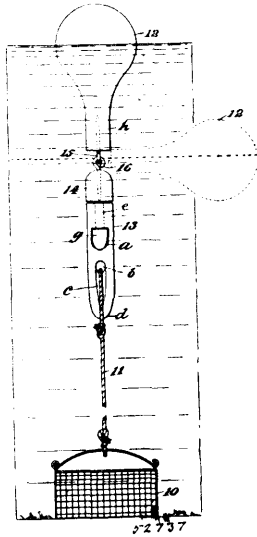
No. 52,737. Swivel for Fishing Purposes.

(*Emerillon pour l'usage de la pêche.*)

David Shaw Haskell and James William Haskell, both of Port Maitland, Nova Scotia, Canada, 23rd June, 1896; 6 years. (Filed 27th March, 1896.)

Claim.—1st. A floating swivel device for the purpose herein described. 2nd. A swivel device, comprising a body and a head having swivel connection with each other, and formed of material adapted to float on water, as specified. 3rd. The combination with a buoy, a fishing trap, and a line of a swivel device connected to the trap and buoy, as specified. 4th. A swivel device for traps and other fishing devices using a float, comprising a two part wooden body, one part having a swiveled connection with the other, the said swivel device being adapted for convenient connection with the float and also with the trap or other fishing device, as specified. 5th. The combination with a buoy, and a fishing trap, of a line, and a swivel device, said device comprising a wooden body having an eye-hole near one end for the attachment of one end of the line, an axial perforation at the opposite end of the body intersecting a

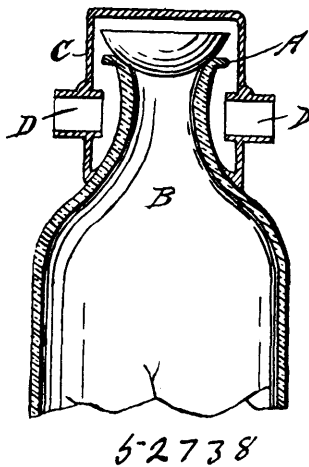
transverse orifice of larger diameter than said perforation, a head constructed of wool and having an axially projecting shank at one



end, said shank having an enlarged head on its free end, the two parts of the swivel device being loosely joined by expansion of the body and head and their subsequent contraction after the body of the shank has been forced through the axial perforation of the body and the head of said shank occupies the transverse orifice of said body, as specified. 6th. The combination, with a fishing buoy, of the herein described swivel device, and screw eye-bolts adapted to loosely connect the buoy with the head portion of the swivel device, as specified.

No. 52,738. Non-refillable Bottle.

(Appareil pour empêcher le remplissage des bouteilles.)

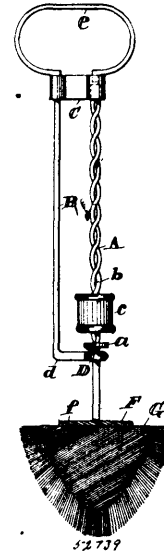


Horatio G. Wood, Newport, Rhode Island, U.S.A., 23rd June, 1896; 6 years. (Filed 23rd March, 1896.)

Claim.—1st. The combination with a bottle, the nozzle of which is closed by a valve, having a convex lower surface, of a cap secured to the neck of the bottle, having a closed top adjacent to said valve, and provided with a side port below the nozzle of the bottle, and adapted to communicate therewith, through which the contents of the bottle may be discharged, substantially as shown and described. 2nd. The combination of a bottle having an outwardly-directed flange on its nozzle, a cap arranged on the nozzle and a portion of the neck of the bottle and provided with ports below the nozzle, and a valve having a convex lower face adapted to fit in the nozzle to close the same and a flat upper surface to contact with the top of the cap, substantially as described. 3rd. The combination with a bottle, the nozzle of which is provided with an outwardly-directed flange, and a valve having a convex lower surface, to close the same, of a cap secured to the neck of the bottle, and provided with a closed top, adjacent to the valve, and with side ports below the nozzle of the bottle through which the contents of the bottle may be discharged, and means for closing said ports, consisting of pads or stoppers, secured to a wire frame, arranged on the bottle-neck, substantially as shown and described. 4th. The combination with a

bottle, the nozzle of which is provided with an outwardly-directed flange, having notches or serrations formed therein, and a valve having a convex lower surface to close the nozzle, of a cap, secured to the neck of the bottle, and provided with a closed top, adjacent to the valve, and with a side port or ports below the nozzle, through which the contents of the bottle may be discharged, and means for closing said port, or ports, substantially as shown and described.

No. 52,739. Rotary Brush. (*Brosse rotatoire.*)

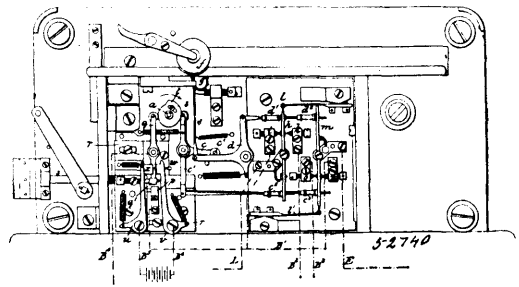


Henry Eummelen, Vancouver, British Columbia, Canada, 23rd June, 1896; 6 years. (Filed 26th February, 1896.)

Claim.—1st. In a rotary brush, the combination of a revoluble shaft, carrying a conoid brush, the said shaft being loosely mounted in a parallel wire frame, and being provided with a suitable handle at one end, substantially as and for the purposes hereinbefore set forth. 2nd. In a rotary brush, the combination of a revoluble shaft A, loosely mounted in a parallel wire frame B, by means of the clasp C, and the loop at the end of the wire B as D, a collar a, securely fixed to the said shaft adjacent to the loop D, and a bobbin c, mounted upon the shaft, and made to rotate the same, substantially as and for the purposes hereinbefore set forth.

No. 52,740. Telegraph Transmitter.

(*Transmetteur télégraphique.*)



Herbert Arnlund Taylor, London, England, 23rd June, 1896; 6 years. (Filed 22nd November, 1895.)

Claim.—1st. In an automatic telegraph transmitter of the character described, the combination of mechanism for feeding or drawing a perforated transmitting tape through the machine, needle levers working through the perforations in the tape and contact devices controlled thereby, whereby a battery contact is effected when either needle enters a perforation in the tape, means for maintaining such contact for a predetermined interval of time, after the restoration of the needle lever to the normal position, and means for then operating such contact devices to open the battery contact, substantially as set forth. 2nd. In an automatic telegraph transmitter of the character described, the combination of mechanism for feeding or drawing a perforated transmitting tape through the machine, needle levers working through the perforations in the tape, contact levers, a lever operatively interposed between each needle lever and contact lever, whereby when the needle lever enters a perforation the contact lever is actuated by the interposed lever to establish a battery contact, means for then restoring the needle lever and interposed lever to the normal position without

disturbing the battery contact, and means for restoring the contact lever to the normal position after the lapse of a regulated interval of time, substantially as set forth. 3rd. In an automatic telegraph transmitter, the combination with contact levers, a punched paper tape and needle levers, of cams adjustable relatively to each other, located on an arbor of the driving mechanism of the instrument, and intermediate levers each operated by one of said cams, one cam with its operated intermediate lever serving, in conjunction with the punched paper tape, to control the movements of the contact levers in one direction, and another cam with its operated intermediate lever serving to return or reset the contact levers to their normal positions after a regulated interval of time. 4th. In a curbing device of an automatic telegraph transmitter, the combination of a cam carried on an arbor of the driving mechanism, a lever oscillated by said cam, a pole changer, said oscillating lever and pole changer being carried by an insulating sliding block that is capable of adjustment relatively to the cam axis, whereby said oscillating lever may be brought more or less into the path of said cam and the amount of curb regulated while the instrument is running. 5th. The combination, substantially as set forth, with a telegraph transmitter, of relays having their coils connected either directly or indirectly with one pole of the line-battery, and the contact points to which the contact levers of the transmitter pass when operated to send a current to line, a local circuit completed through the tongue of one relay by the action of outgoing positive currents to line and another local circuit completed through the tongue of another relay by the action of outgoing positive currents to earth, and means in said local circuits whereby a record is preserved of such outgoing signals. 6th. In combination, substantially as set forth, a telegraph transmitting key having its front bar divided into two parts and with which parts its levers respectively come into contact when operated, relay coils in separate branches of a divided circuit connected respectively between one part of the divided front bar and the one pole of the line battery, two local circuits completed through the relay tongues, and means in said local circuits whereby a message is preserved of outgoing signals. 7th. The combination, substantially as set forth, with a telegraphic transmitter, of relays having their coils connected with the same pole of the line battery and respectively with the contact points to which the transmitter contact levers pass when operated to send a current to line, the opposite or back contacts of such levers being respectively connected to the other pole of the said battery, and one lever being connected to earth, and the other to line, a local circuit completed through the tongue of one relay by the action of outgoing positive currents to line, and another local circuit completed through the tongue of another relay by the action of outgoing positive currents to earth, and means in said local circuits whereby a record is preserved of such outgoing signals. 8th. In combination, an automatic telegraph transmitter, means for preserving a record of outgoing signals, relays operating through their tongues to close local circuits and bring into action said recording means, a transmitting key with its front bar divided and the coils of a relay in circuit between each of those divisions and the one pole of the line battery, and a switching device serving to put either the automatic transmitter or the transmitting key into circuit.

No. 52,741. Tire Tightener. (Lien de jante.)

Fig. 1.

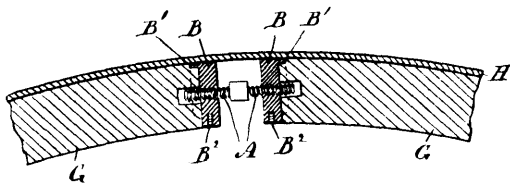
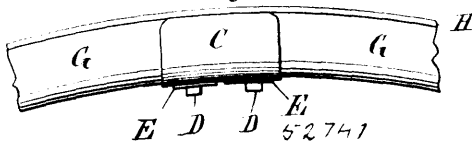


Fig. 2.



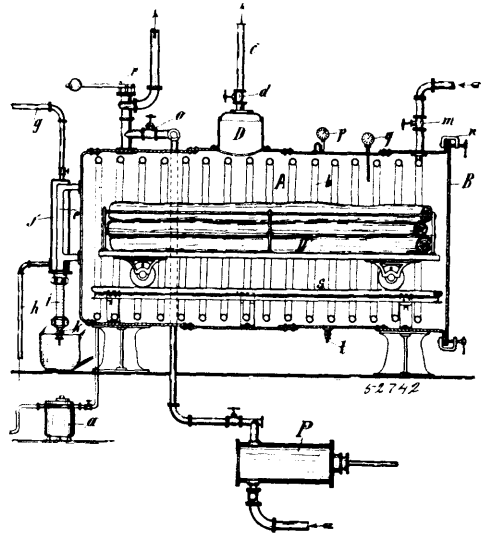
George H. Lintott, Clamdeboye, Ontario, Canada, 23rd June, 1896; 6 years. (Filed 12th September, 1895.)

Claim.—In a tire tightener, the combination of the dowel-screw A, the flange nuts B, the casing C, having slots C', and the screws D, holding the casing to the nuts, as set forth.

No. 52,742. Process of Preserving and Hardening Timber. (Procédé pour préserver et durcir le bois.)

Frederick Maurice Grumbacher, Berlin, Prussia, Germany, 23rd June, 1896; 6 years. (Filed 21st January, 1895.)

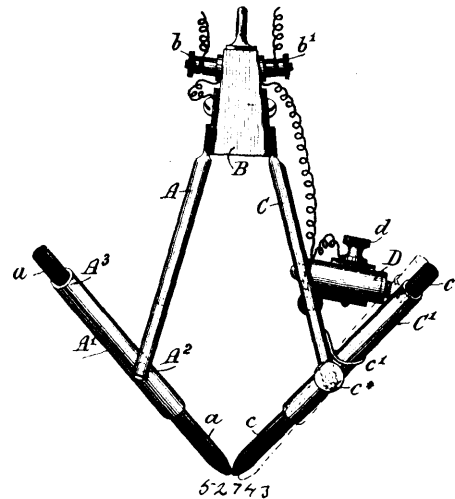
Claim.—The hereinbefore described process for preserving and hardening wood, consisting in first subjecting the wood to a pre-



liminary drying at a comparatively low temperature and then to complete preserving and hardening under pressure at a higher temperature, substantially as hereinbefore described.

No. 52,743. Electric Arc Lamp.

(Lampe électrique à arc.)



Sir Charles Henry Augustus Frederick Lockhart Ross, Balmagowan Castle, Roxshire, Scotland, 23rd June, 1896; 6 years. (Filed 13th August, 1895.)

Claim.—An arc lamp, consisting of a main frame in insulated parts and adapted to carry holders for two pairs of converging self supporting electrodes, preferably carbons; a counter weighted rocking frame formed with converging holders for one pair of carbons, an armature on the rocking frame, an electro-magnet carried by the main frame, and electrical conductors, all combined, arranged and operating as herein shown and described.

No. 52,744. Advertising Medium.

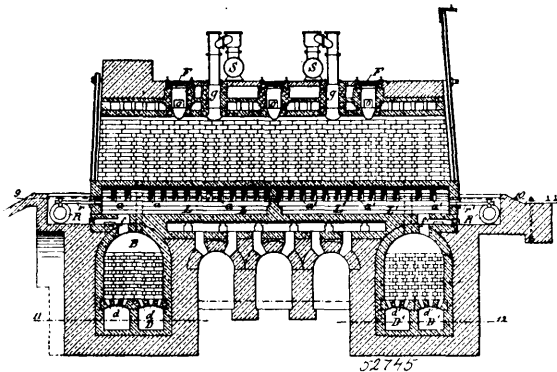
(Appareil d'annonce.)



Maurice Barsalou, Montreal, Quebec, Canada, 24th June, 1896; 6 years. (Filed 13th May, 1896.)

Claim.—As an advertising medium, a lamp chimney having its crown formed by a band C, on which is made to appear advertising matter, by means of letters or designs being either sunk or raised thereon, substantially as described.

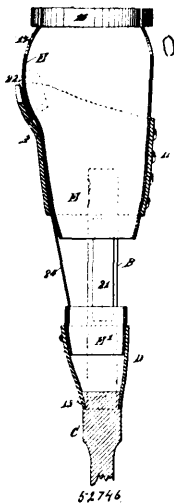
No. 52,745. Coke Oven. (Fourneau.)



Gustav Hoffmann, Gottersburg, Prussia, 25th June, 1896; 6 years. (Filed 12th November, 1894.)

Claim.—In combination the ovens having the combustion chambers under the same, and the shafts *b* extending about them, the canals *c* at the top of said shafts, the regenerators *b*, *b*¹, with air passages leading thereto, the gas conduits *F* leading from the ovens, and the ports *o* connecting the same with the canals *c*, and the passages *h*, *h*¹, leading directly from the regenerators to the canals *c* and past the combustion chambers, substantially as described.

No. 52,746. Artificial Limb. (Membre artificiel.)



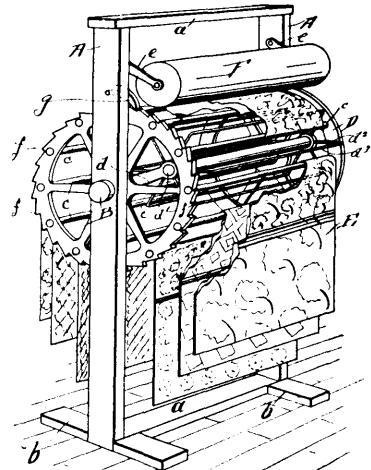
Samuel Morekellum, Macon, Colorado, U.S.A., 25th June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—1st. In the construction of artificial limbs, an inner and an outer socket section, the outer section having free movement upon the inner one, the inner one being provided with means for binding it closely to the natural limb or stump, and a waist belt having independent connections with both the inner and the outer socket sections, substantially as and for the purpose set forth. 2nd. In the construction of artificial limbs, an inner and an outer socket section, a support common to both, the outer section having free movement upon the inner section, means substantially as described for binding the inner socket section to the stump or natural limbs and a guard or shield carried by the outer socket section, located at the rear and extending above an upper portion of the said socket section, as and for the purpose specified. 3rd. In the construction of artificial limbs, the combination, with the socket sections of the artificial limb proper and the connecting strips for the same, of auxiliary socket sections loosely fitted in the main socket sections, the upper auxiliary socket sections being provided with openings, and closing devices for the same, whereby said auxiliary sections may be fitted snugly to the natural limb or stump, a belt connected with the upper main socket section and the upper auxiliary socket section, and a protecting shield or guard carried by the upper back portion of the upper main socket section, as set forth. 4th. In an artificial limb, the combination of upper inner and outer sections arranged to embrace the thigh portion of a natural limb, lower

inner and outer sections arranged to embrace the lower portion of a natural limb, and independent connections between the inner and outer sections, substantially as set forth.

No. 52,747. Wall Paper Displayer.

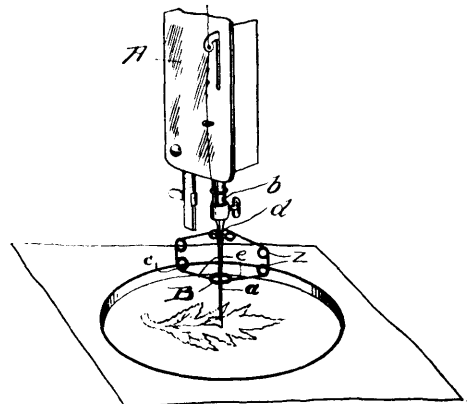
(Montre de papier de tenture.)



Joseph James Reid, Salineville, Ohio, U.S.A., 25th June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—1st. A revolving cylinder supported by a fixed shaft or bar, a pressure roller located upon the upper portion of the cylinder, samples of wall paper connected to the bars forming a portion of the revolving cylinder, and a reel located within the cylinder, substantially as and for the purpose specified. 2nd. The combination of uprights having connected thereto a fixed bar, a revolving cylinder having heads, and the heads connected by bars, and one of said cylinder heads provided with teeth, a dog to engage the teeth of the cylinder head, a pressure roller, and samples of wall paper connected to the bars forming a part of the cylinder, substantially as and for the purpose specified. 3rd. The combination of a revolving cylinder, a pressure roller bearing upon the periphery of the cylinder, samples of wall paper connected to and revolving with the cylinder, and a reel located within the cylinder carrying the wall paper samples and revolving with said cylinder, substantially as and for the purpose specified.

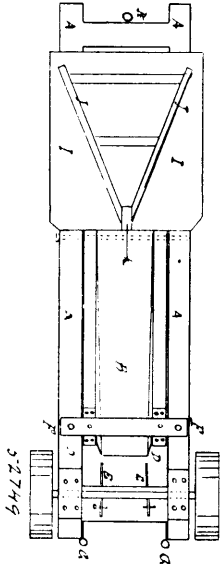
No. 52,748. Embroidering Attachment for Sewing Machines. (Appareil à broder pour machines à coudre.)



Jacob W. Smith, Canton, Ohio, U.S.A., 25th June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—1st. The combination of the presser foot *B*, having attached thereto the arms *c*, provided with the loops *c*, and the loop *d*, and a vibrating needle located between the wires forming the arms *c*, substantially as and for the purpose specified. 2nd. The combination of a vibrating needle having removably attached thereto the arms *c*, said arms being provided with the loops *c*, located below the wires forming the arms, and loops or coils located between the loops *c* and the pressure foot, substantially as and for the purpose specified.

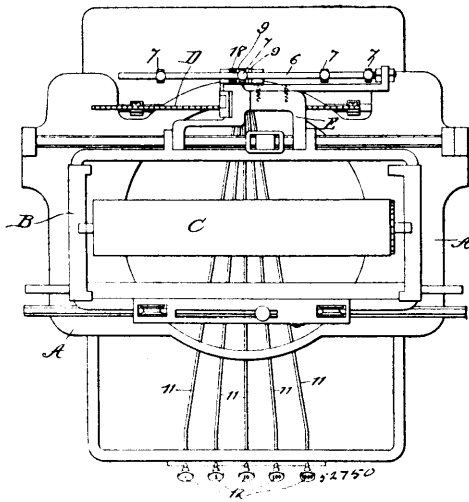
No. 52,740. Ditching Machine. (Machine à fossoyer.)



Calvin C. Green, Ladner, British Columbia, Canada, 25th June, 1896; 6 years. (Filed 4th May, 1896.)

Claim.—1st. The combination of the cutter knives E E and D D, and the inclined plane B, including the dividing knife K, together with the framework to which the cutter knives are secured and regulated by the adjusting screws F F, as shown in figure 1, and hereinbefore set forth. 2nd. The cutter knife X, and the inclined plane M, of the smaller machine shown in figure 3, and heretofore described.

No. 52,750. Typewriting Machine. (Clavigraphie.)

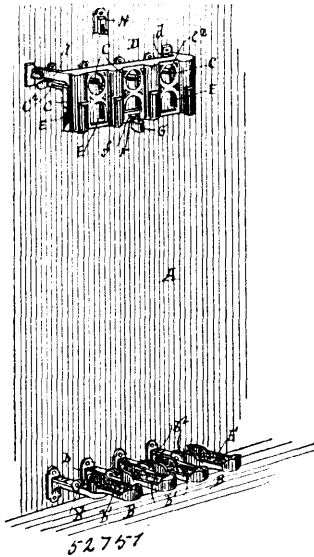


Fred P. Gorin, Chicago, Illinois, U.S.A., 25th June, 1896; 6 years. (Filed 5th May, 1896.)

Claim.—1st. A spacing attachment for typewriters, comprising a series of auxiliary keys, each key arranged to disengage the carriage from its feeding mechanism and to arrest the same at a different distance from a predetermined point, whereby the carriage is automatically arrested in position to record in uniform columns numbers of varying denominations, as and for the purpose set forth. 2nd. A spacing attachment for typewriters, comprising a series of auxiliary keys, means actuated by each of said keys for disengaging the carriage from its feeding mechanism, said means adapted to arrest the carriage at varying distances from a predetermined point, whereby the carriage is moved automatically and by a single operation into position to uniformly columnate numbers of varying denominations, as and for the purpose set forth. 3rd. A spacing attachment for typewriters, comprising a stop upon the carriage, a series of auxiliary keys, arranged when manipulated to disengage the carriage from its feeding mechanism and to engage said stop, whereby said carriage is automatically released and arrested by a single operation at different distances from the predetermined posi-

tion of said stop to uniformly columnate numbers of varying denominations, as and for the purpose set forth. 4th. In combination with a paper feed carriage of a typewriting machine and its step by step feeding mechanism, a spacing attachment comprising a series of auxiliary keys, arranged a letter space distance apart, a series of plungers actuated thereby, each of the said plungers when actuated adapted to engage and release said feeding mechanism, and a stop carried by said carriage and adapted to be adjusted to a predetermined position, said stop adapted to impinge against said plunger to arrest at the predetermined point the movement of said carriage, when it is released from its feeding mechanism by said plunger, as and for the purpose set forth. 5th. In a typewriter, a paper feed carriage, a step by step feeding mechanism therefore, a spacing attachment comprising a series of auxiliary keys, a series of plungers actuated thereby, said plungers arranged a letter space distance apart and each adapted when actuated to engage and release said feeding mechanism, a series of adjustable stops carried by said carriage, adapted to impinge against the plungers to arrest at predetermined points the movement of said carriage when released by said plungers, as and for the purpose set forth. 6th. In a typewriter, a paper feed carriage, a step by step feeding mechanism therefore, an arm carried thereby, a series of auxiliary keys, a corresponding series of plungers actuated thereby, each adapted to engage said arm and release said step by step feed, an adjustable stop carried by said arm, adapted to engage said plunger and arrest the movement of said carriage at a predetermined point when it is released from said feed, as and for the purpose set forth. 7th. In a typewriter, a paper feed carriage, a step by step feed therefore, an arm carried thereby, a series of auxiliary keys, a corresponding series of plungers actuated thereby, each adapted to engage said arm and release said step by step feed, an adjustable stop carried by said arm, adapted to engage said plunger and arrest the movement of said carriage at a predetermined point when it is released from said feed, as and for the purpose set forth. 8th. In a typewriter, a paper feed carriage, a step by step feed therefore, a series of auxiliary keys, a corresponding series of plungers actuated by said keys, each adapted to release said feed mechanism, a stop mounted upon said carriage, adapted to impinge against said plunger to arrest the movement of the carriage when released from its feed, and a cushion adapted to relieve the force of the impact, as set forth. 9th. In a typewriter, a framework, a casing mounted thereon, a series of plungers mounted to slide in said casing, a series of keys, each connected to and adapted to actuate one of said plungers, a paper carriage and a feed mechanism therefore, said feed mechanism adapted to be engaged and released by said plungers when actuated, and a stop for arresting the carriage at a predetermined point when released, as and for the purpose set forth. 10th. In a typewriter, a framework, a casing mounted thereon a series of slotted plungers mounted to slide in said casing, a guiding pin arranged to pass through said slots, a series of keys connected to and adapted to actuate said plungers, a paper carriage, a feed mechanism therefore, adapted to be engaged and released by said plungers when actuated, as and for the purpose set forth. 11th. In a typewriter, a paper feed carriage, a feed mechanism therefor, a series of auxiliary keys, a corresponding series of plungers, each adapted to be projected into position to release said feed mechanism, means for normally retaining said plungers in retractive or inoperative position, and a stop adapted to arrest the movement of said carriage at variable points when released, as and for the purpose set forth. 12th. In a typewriter, a key bar, provided with an inclined portion, a guide adapted to receive said inclined portion and adapted to remove said key bar laterally when it is projected longitudinally, a plunger connected to move with said key bar during its lateral movement, a paper feed carriage, a ratchet feed therefore, said ratchet feed adapted to be released when said plunger is projected, and a stop for arresting said carriage at a predetermined point, as and for the purpose set forth. 13th. In a spacing attachment for a typewriter, a series of plungers of a thickness corresponding to one letterspace, said plungers arranged side by side, a series of keys connected to and arranged to actuate said plungers, a paper feed carriage, a feeding mechanism therefore, said feed mechanism adapted to be engaged and released by each of said plungers, stops mounted on said carriage, adapted to be adjusted to a predetermined position, and adapted to impinge against a plunger when said plunger is actuated by an auxiliary key to arrest the movement of said carriage when it is released from its feed mechanism, as and for the purpose set forth. 14th. In a spacing attachment for typewriters, a series of plungers arranged side by side, and each of a thickness corresponding to a letter space, a casing adapted to receive said plungers, a cushion interposed between the wall of said casing and the last plungers of the series, a series of keys adapted to actuate said plungers, a paper feed carriage, a feed mechanism therefore, adapted to be released by the engagement therewith of any one of said plungers, and adjustable stops mounted on said carriage and adapted to impinge against said plungers to arrest the movement of said carriage when it is released from its feeding mechanism, as and for the purpose set forth. 15th. In a typewriter, a spacing attachment, comprising a series of auxiliary keys, a series of plungers arranged a letter space distance apart and each connected to and adapted to be actuated by an auxiliary key, in combination with a paper feed carriage and its feed mechanism, each of said plungers when actuated adapted to release said carriage from its feed mechanism, and stops adapted to impinge against said plungers to arrest the movement of said carriage at a predetermined point, as and for the purpose set forth.

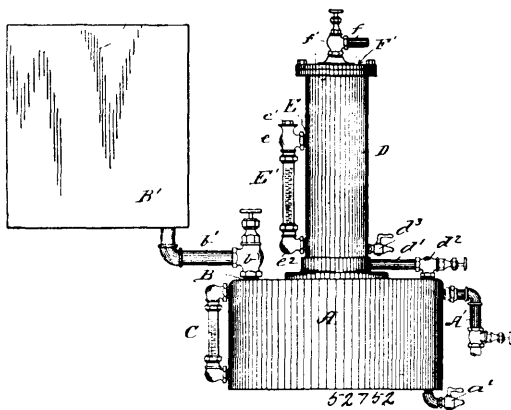
No. 52,751. Gun Rack. (Ratelier pour fusils.)



George Falk, Lacrosse, Wisconsin, U.S.A., 25th June, 1896; 6 years. (Filed 7th May, 1896.)

Claim.—1st. In a gun-rack, the combination, with a top and base supports, said top support comprising a spring actuated plug or tampion, of a hinged locking frame, adapted to engage the upper portions of the barrels of the gun held between the top and base supports, said frame having a series of socket portions adapted to receive the upper portion of the barrel and the ramrod, substantially as shown and described. 2nd. In a gun-rack, the combination, with a base support, of a top support, comprising a spring plug or tampion, the tubular socket therefor, and the extension E, having an opening c, substantially as shown and described. 3rd. In a gun-rack, the combination, with the base support, comprising the spring actuated plug or tampion, and the socket extension c, and the hinged frame having a series of socket portions adapted to receive a portion of the barrel, and the ramrod, substantially as shown and described.

No. 52,752. Oil Filter. (Filtre à huile.)

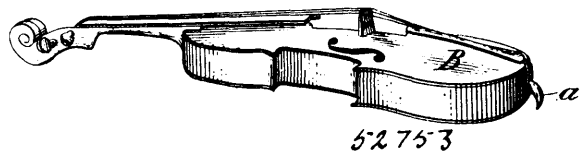


Rudolph Conrader, Erie, Pennsylvania, U.S.A., 25th June, 1896; 6 years. (Filed 7th May, 1896.)

Claim.—1st. An oil filtering apparatus, consisting of a closed tank having an opening in the top thereof and adapted to be filled with oil to be filtered, a pipe communicating with said tank and connected with means for supplying water or steam thereto under pressure, and a filtering mechanism so connected with the opening in the top of the tank, that the pressure of the water or steam supplied to the tank will force the oil out of the tank and through the filtering mechanism, substantially as and for the purpose set forth. 2nd. The combination in an oil filtering apparatus, of a closed tank having an opening in the top thereof and adapted to be filled with oil to be filtered, a pipe communicating with said tank and connected with means for supplying water or steam thereto under pressure, a closed chamber communicating with said opening in the top of the said tank, a water space in the lower part of said chamber, filtering material in the upper part thereof, and an opening in the upper part thereof for the discharge of oil after it has passed through

the filtering material therein, substantially as and for the purpose set forth. 3rd. The combination in an oil filtering apparatus, of a closed tank adapted to be filled with oil to be filtered, a pipe connecting with said tank and supplying water or steam thereto under pressure, a closed chamber and a pipe connecting the top of said tank with said chamber and terminating into an aperture opening therein, and a filtering material within said chamber through which the oil is forced, and finally discharged from said chamber by means of the pressure exerted upon the oil in said closed tank, substantially as and for the purpose set forth. 4th. The combination in an oil filtering apparatus, of a closed tank adapted to be filled with oil to be filtered, a pipe connecting with said tank and supplying water or steam thereto under pressure, an enclosed chamber connected with said tank adapted to be partially filled with water, and oil separating and washing device submerged in the water within said chamber, a connection between the upper part of said tank and said separating and washing device in said chamber, filtering material in the upper part of said chamber, and a pipe for discharging the oil after it has passed through said filtering material, substantially as and for the purpose set forth. 5th. The combination in an oil filtering apparatus, of a closed tank adapted to be filled with oil to be filtered, a pipe connecting with said tank and supplying water or steam thereto under pressure, an enclosed chamber on said tank adapted to be partially filled with water, an oil distributor submerged in the water in said chamber, a pipe extending from said chamber up into said oil distributor, a filtering device, in the upper part of said closed chamber, and a discharge pipe leading from said filtering device, substantially as and for the purpose set forth. 6th. A distributing device for oil filters, consisting substantially of an upright pipe closed at the upper end, a chamber at the base of said pipe, a worm thread around said upright pipe, a downwardly projecting flange on the periphery of said worm thread, and an opening in the top of said chamber under the end of the lower section of said worm thread, substantially as and for the purpose set forth. 7th. The combination in an oil filtering apparatus, of a closed tank having an opening in the top thereof, and adapted to be filled with oil to be filtered, a pipe communicating with said tank, and connected with means for supplying water or steam to said closed tank under pressure, a closed chamber, an oil distributor in the lower part, and a filtering device in the upper part of said closed chamber, and a connection between the opening in the top of said tank and the lower part of said closed chamber, so that the pressure of the water or steam in said tank will force the oil out of the top of said tank and up through the distributing and filtering mechanism in said closed chamber, substantially as and for the purpose set forth. 8th. The combination in an oil filter, of a perforated tube having a fixed recessed collar on one end and a screw thread on the outer end thereof, a fibrous cord or tape wound closely around said tube, and a recessed screw cap adapted to be screwed upon the end of said tube so as to compress the coils of said cord or tape longitudinally upon said tube, substantially as and for the purpose set forth. 9th. The combination in an oil filter, of a shell or case adapted to enclose filtering mechanism, a perforated tube removably secured within said shell, a cap secured to one end of said tube having a recessed collar thereon, a screw thread on the opposite end of said tube, a recessed cap adapted to be screwed thereon, and a fibrous cord or tape wound around said perforated tube, so as to completely fill the space and be firmly compressed between the collar thereon and said screw cap, substantially as and for the purpose set forth.

No. 52,753. Violin. (Violon.)



Edward Thomas Cass, Whitewater, Wisconsin, U.S.A., 25th June, 1896; 6 years. (Filed 7th May, 1896.)

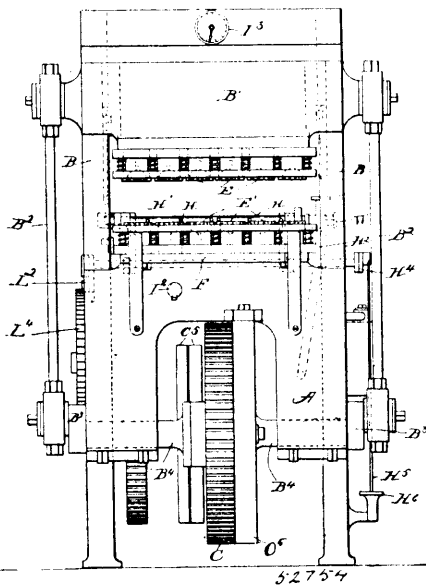
Claim.—1st. A violin end-pin having a shank b and a spur a, substantially as set forth and described. 2nd. In a violin, the combination with the large end thereof, of an end-pin having a hook or spur, substantially as set forth. 3rd. The combination with the large end of a violin, of an end-pin having a shank b and a spur a, substantially as set forth.

No. 52,754. Process of and Machine for making hollow soft Rubber Articles. (Procédé et machine pour la fabrication des objets creux en caoutchouc.)

Henry Goodrick Walcott, Fishkill-on-the-Hudson, New York, U.S.A., 25th June, 1896; 6 years. (Filed 8th May, 1896.)

Claim. 1st. The herein described art of manufacturing hollow articles of elastic material, consisting of superposing sheets of stock or material from which the article is to be formed, confining the sheets together along the line they are to be united, separating the sheets in the confined area to set or form the stock and finally

uniting the sheets along the edge of the confined area, substantially as described. 2nd. The herein described art of forming hollow

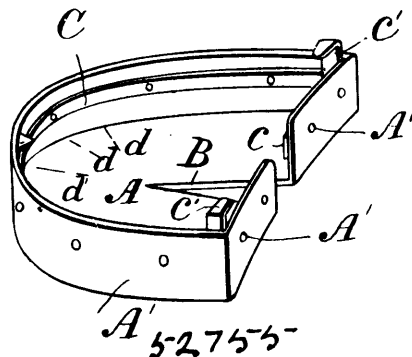


articles of elastic material, consisting of superposing sheets of material from which the article is to be formed, confining the sheets together along the line they are to be united, inflating the confined area and finally while so inflated uniting the sheets along the edge of the confined area, substantially as described. 3rd. The herein described art of manufacturing hollow articles of elastic material, consisting in forming the article ready for inflation, then inflating it and simultaneously supporting those portions subjected to the greatest tension, whereby a uniform expansion or attenuation of the material is secured, substantially as described. 4th. The herein described art of manufacturing hollow articles of elastic material, consisting in forming the article ready for inflation, then inflating it and simultaneously supporting with a yielding pressure those portions subjected to the greatest tension, whereby a uniform expansion or attenuation of the material is secured, substantially as described. 5th. The herein described art of manufacturing hollow articles of elastic material, consisting in superposing sheets of the material from which the article is to be formed, clamping the sheets together on a line approximating the shape of the article, and finally uniting the sheets autogeneously and severing the same from the surrounding material by pressure applied within the clamped area, whereby the material displaced is forced inward to form a seam with thickened or upset edges on the inner side, substantially as described. 6th. The herein described art of manufacturing hollow articles of elastic material, consisting in superposing sheets of the material from which the article is to be formed, confining the sheets together along the line they are to be united, inflating the confined area and simultaneously supporting those portions subjected to greatest tension to secure a uniform attenuation, and finally severing the sheets while inflated by pressure applied within the confined area whereby the material displaced is caused to flow inward and form upset or thickened seams, substantially as described. 7th. In a machine for making hollow articles of elastic material, the combination with the co-operating concave dies having co-operating severing edges for severing the material held between them and clamping dams surrounding the edges of said dies and having co-operating clamping edges for clamping the material, of inflating injectors movable toward and from the dies, substantially as described. 8th. In a machine for making hollow articles of elastic material, the combination with the co-operating concave dies, of the clamping dams surrounding said dies, movable with relation thereto, and normally standing in advance of the edges of the dies, whereby the clamps may remain stationary while the dies advance, and means for inflating the article held by the dams, substantially as described. 9th. In a machine for making hollow articles of elastic material, the combination with the concave die and co-operating die, of an anvil arranged centrally of the concave die for supporting the portion of the material subjected to the greatest tension with means for inflating the article held by the dies, substantially as described. 10th. In a machine for making hollow articles of elastic material, the combination with the co-operating concave dies, and means for inflating the article therein, of independent anvils arranged centrally of the dies for supporting the portions of the material subjected to the greatest tension while being inflated, substantially as described. 11th. In a machine for making hollow articles of elastic material, the combination with the co-operating concave dies, of yielding anvils located centrally thereof for supporting the portion of the material subjected to the greatest tension, and a means for inflating the article within the dies, substantially as described. 12th. In a

machine for making hollow articles of elastic material, the combination with the co-operating concave dies and the yielding clamps surrounding the dies, of the supporting anvils arranged centrally of the dies, substantially as described. 13th. In a machine for making hollow articles of elastic material, the combination with the co-operating concave dies and the yielding clamps surrounding the dies, of the yielding supporting anvils centrally located in the dies, and a means for inflating the article within the dies, substantially as described. 14th. In a machine for making hollow articles of elastic material, the combination with the co-operating concave dies, of the movable anvils forming the bottom of the dies and locks for said anvils, substantially as described. 15th. In a machine for making hollow articles of elastic material, the combination with the co-operating concave dies, of the spring-pressed anvils forming the bottom of the dies and the locks for holding the anvils retracted, substantially as described. 16th. In a machine for making hollow articles of elastic material, the combination with the dies movable toward and from each other, of the injector for inflating the article movable toward and from the dies, substantially as described. 17th. In a machine for making hollow articles of elastic material, the combination with the dies movable toward and from each other, and the yielding clamps surrounding the dies, of the injector for inflating the article adapted to rest between the faces of the clamps, substantially as described. 18th. In a machine for making hollow articles of elastic material, the combination with the co-operating dies and injector for inflating the article in the dies, of a valve for allowing the pressure from the article to escape, whereby the pressure may be reduced, substantially as described. 19th. In a machine for making hollow articles of elastic material, the combination with the co-operating dies, an injector for inflating the article in the dies, of a pressure-reducing valve connected with the injector, whereby the pressure in the article may be reduced before its release from the dies, substantially as described. 20th. In a machine for making hollow articles of elastic material, the combination with the co-operating dies, mechanism for moving said dies toward and from each other, and spring-pressed anvils in the dies, of bolts for holding said anvils retracted when the dies are together, with means whereby the bolts are released automatically by the separation of the dies, to permit the anvils to advance, substantially as described. 21st. In a machine for making hollow articles of elastic material, the combination with the dies movable toward and from each other, and the spring-pressed anvils within said dies, of the bolts for holding said anvils retracted, and the inclines for withdrawing said bolts as the dies separate to allow the anvils to advance, substantially as described. 22nd. In a machine for making hollow articles of elastic material, the combination with the dies movable toward and from each other, of the injector, a manually-operated treadle controlling said injector, and a stop for arresting the backward movement of said injector at an intermediate point, substantially as described. 23rd. In a machine for making hollow articles, the combination with the driving mechanism and dies movable towards and from each other, of the injector, a spring for retracting, and a manually-operated treadle for controlling the advance of the injector, and stops released by the driving mechanism for holding the injector advanced, substantially as described. 24th. In a machine for making hollow articles from soft rubber, the combination with the stationary dies having the clamps surrounding them, the sliding head carrying the movable dies, the crank-shaft for reciprocating the sliding head, the driving gear and the intermittently-operating clutch between the driving gear and shaft, substantially as described. 25th. In a machine for making hollow articles from soft rubber, the combination with the stationary and movable dies and the sliding head carrying the movable dies, of the crank-shaft for reciprocating the sliding head, the toothed disc thereon, the driving gear, the pawl thereon adapted to engage the toothed disc, and the fixed guide for throwing the pawl into engagement, substantially as described.

No. 52,755. Detachable Rubber Heel.

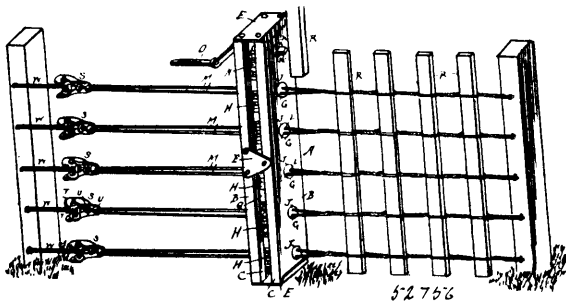
(*Talon de chaussures en caoutchouc.*)



Thomas Jackson Williams, Kountze, Texas, U.S.A., 25th June, 1896; 6 years. (Filed 11th May, 1896.)

Claim.—1st. A detachable rubber heel tap adapted to fit heels of varying size having a divided breast, a raised flange terminating upon each side of said division, and a steel spring secured to said flange and adapted to grasp the sides and breast of the heel. 2nd. A detachable heel tap having a raised flange provided with a spring adapted to clamp the side, back and breast of a heel, and lugs adapted to press inwardly over the shank above the heel. 3rd. A detachable rubber heel tap having a raised flange, a divided breast, and an elastic band adapted to clamp the breast of a heel and provided with lugs adapted to press inwardly over the shank above the corners of said heel. 4th. The combination with a heel made of soft or yielding fabric, of a detachable heel tap formed of a rubber tube and a series of staples embracing said tube and driven through said heel, whereby said tube is compressed at intervals and presents a corrugated bearing surface, substantially as described.

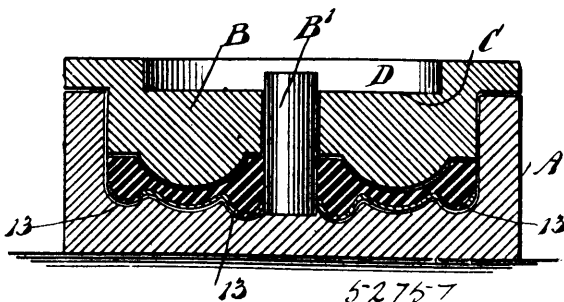
No. 52,756. Fence Machine. (Machine à cloture)



Ole P. Pierson, Sioux Falls, South Dakota, U.S.A., 25th June, 1896; 6 years. (Filed 27th May, 1896.)

Claim.—1st. In a fence wiring machine, an upright frame, the opposite parallel sides of which are provided with aligned bearing openings, a series of vertically aligned twisters arranged within the frame and having integral sprocket-wheels and oppositely projected hub portions journaled in the bearing openings of the frame sides, one of said hub portions lying flush in the bearing opening therefor, and the other opposite hub portion being provided with a tapered extremity K to project into the space leading to the contracted neck of a narrow picket, and all of the hubs of the twisters being provided with separate wire openings extending the entire length thereof and convergently disposed toward the tapered hub extremities, a suitable arranged drive sprocket-wheel, and a sprocket chain engaging the teeth of the several sprocket wheels, substantially as set forth. 2nd. In a fence wiring machine, the combination of the parallel frame sides having inwardly disposed guide and retaining flanges at their opposite inner edges, the sprocket-twister-wheels journaled between said frame sides, and the sprocket chain having its opposite parallel portions meshing with opposite sides of the several twister-wheels and adapted to have its side edges guided inside of the machine frame by said guide and retaining flanges, substantially as set forth. 3rd. The combination with a fence wiring machine having twister wheels provided with single pairs of wire openings; of a combined stretcher and tension device, comprising a body having notched bearing ears at one end, wire notches or openings at the inner ends or base of said ears, and tension posts arising from the body and adapted to receive the interlaced fence-wires, a ratchet drum journaled in said bearing ears and having at one end a ratchet flange, and a check dog adapted to engage said ratchet flange, said wire notches or openings being adapted to receive the free portions of the wires that are interlaced around said tension posts, substantially as set forth.

No. 52,757. Valve. (Soupape.)

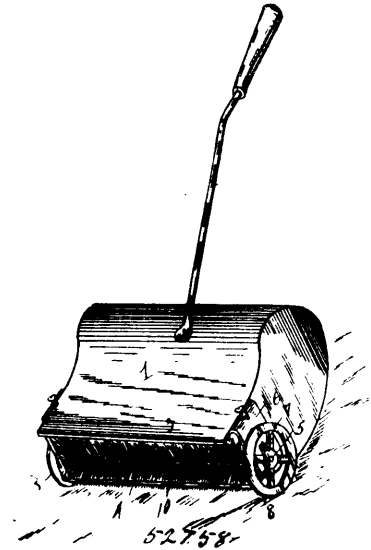


James Hewitt, Brooklyn New York, U.S.A., 25th June, 1896; 6 years. (Filed 4th June, 1896.)

Claim.—1st. As a new article of manufacture, a valve, comprising a metal back provided with a series of perforations, and a seating face on the lower face of the back and provided with projections entering the apertures of the back and keying the same to the back,

substantially as described. 2nd. As a new article of manufacture, a valve, comprising a metal back, provided with grooves on its under face, and with openings in said grooves of the back and provided with projections entering the apertures thereof, as and for the purpose set forth. 3rd. As a new article of manufacture, a valve, comprising a metal back provided with a central opening, a groove on its under side around said opening and an annular groove at the margin, and a seating face of yielding material provided with a central aperture, a central seating surface and a marginal seating surface, the said seating surfaces fitting in the grooves of the back and provided with projections entering the apertures of the grooves, substantially as specified.

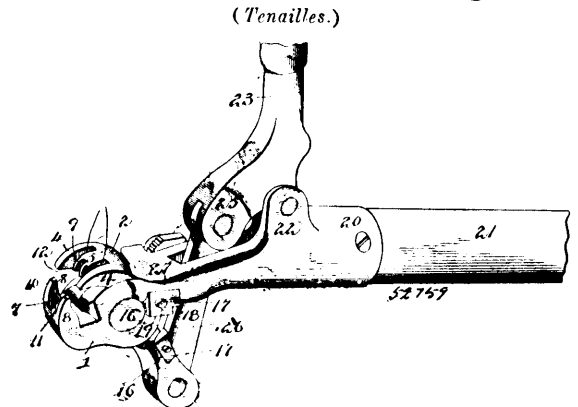
No. 52,758. Dust Gatherer. (Ramasse-poussière.)



Thomas H. Paris, Monon, Indiana, U.S.A., 25th June, 1896; 6 years. (Filed 4th June, 1896.)

Claim.—1st. The combination with the casing 1, open at its front and under side, of the shaft having its ends mounted in bearings adapted for vertical adjustment in the casing, the brush mounted on the shaft, wheels mounted upon the shaft at opposite ends, the plate 9 arranged within the casing and secured to the upper side thereof and extending downwardly into contact with the brush and having its lower edge serrated, and an arm 10 secured at the ends to the sides of the casing and projecting forwardly and across the brush adjacent thereto.

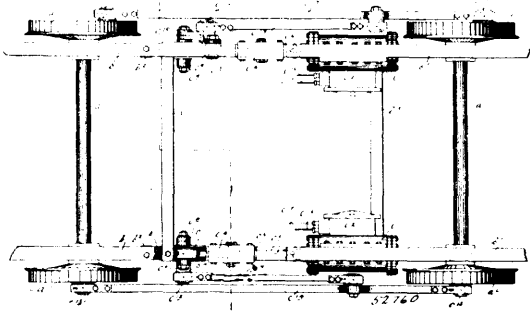
No. 52,759. Wire Crimping and Fastening Pliers. (Tenailles.)



John S. Williams, Jerseyville, Illinois, U.S.A., 25th June, 1896; 6 years. (Filed 4th June, 1896.)

Claim.—1st. The combination with the stationary jaw provided with the handle socket and slot as described, of the pivoted jaw, the operating lever therefor, and the pivotal connecting link interposed between said lever and the pivoted jaw and passing through the slot in the stationary jaw, substantially as described. 2nd. The combination with the pivoted jaws provided at corresponding sides with recesses, of the wire cutters arranged in said recesses, one of said cutters being formed with a notch for the point of the other cutter and being also provided with a rest or seat for the wire, substantially as described.

No. 52,760. Tramway Locomotive. (Locomotive.)

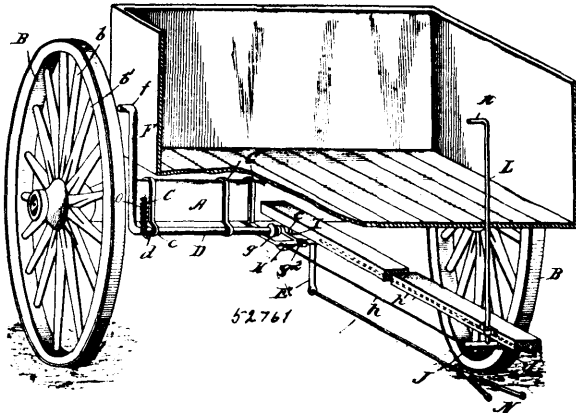


Robert Hardie, Rome, New York, U.S.A., 25th June, 1896; 6 years. (Filed 3rd June, 1896.)

Claim.—1st. The combination with the front and rear truck wheels of an engine located between the truck axles and inside the wheel line, an outside rod connecting said wheels, a rocker receiving motion from the engine piston, and a main rod connecting said rocker to said outside rod, substantially as and for the purposes set forth. 2nd. The combination with front and rear truck wheels of an engine located between the truck axles and inside the wheel lines, an outside rod connecting the truck wheels, a cross-head mounted on a part of the truck frame as a guide, a rocker journaled on the truck frame, an inside rod connecting said rocker with said cross-head, and a main rod connecting said rocker with the outside rod, substantially as and for the purpose set forth. 3rd. The combination with the front and rear truck wheels and axles of the pair of engines between the truck axles inside the wheel lines with the cylinder castings forming parts of the sides of the truck frame, the cross-heads working on the top side bars of the frame as guides, the rockers *e*¹⁰, the inside rods *e*⁷ connecting said rockers with said cross-heads, the outside rods *e*¹¹ connecting the truck wheels and the main rods *e*¹², connecting said rockers with said outside rods, all substantially as and for the purposes set forth. 4th. In a locomotive, the combination with the truck side frames formed with vertically spaced longitudinal bars of the pair of engines having their cylinders rigidly clamped between the upper and lower members of said side frames, whereby said side frames form supports for said cylinders, and said cylinders in turn form reinforcing braces for said frames, substantially as described. 5th. In a locomotive, the combination with the truck side frames formed with a longitudinal cross-head guide of the engine located between the truck axles and inside of the wheel lines, a cross-head mounted on the guide portion of said frame, a rocker journaled on the truck frame, an inside rod connecting said rocker with said cross-head, and outside connections from said rocker to the drive wheels, involving an outside main rod and an outside connecting rod, substantially as described.

No. 52,761. Device for Stopping Horses.

(Appareil pour empêcher les chevaux de prendre le mors aux dents.)



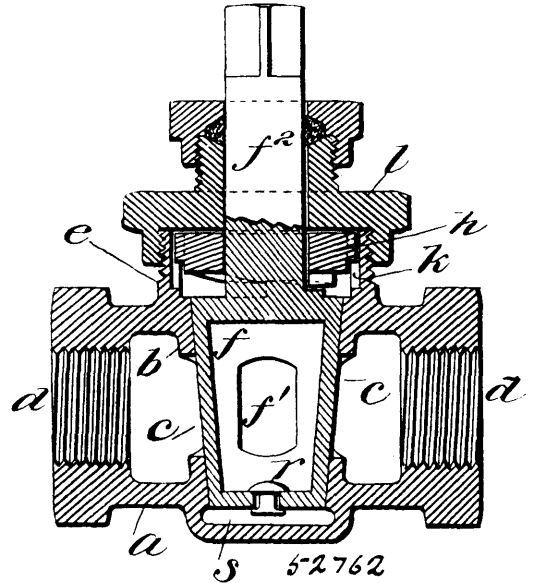
James Gordon Casey, Lehigh, Indiana Territory, U.S.A., 25th June, 1896; 6 years. (Filed 28th September, 1895.)

Claim.—1st. In a device for checking runaway horses, the combination with the rock shaft having at one end a downward projecting crank, and at the opposite end an upward projecting wheel crank and means for moving the wheel crank into engagement with the wheel, substantially as set forth. 2nd. In a device for checking runaway horses, the combination with a rock shaft having two oppositely projecting cranks, of which one is disposed in close proximity to the axle, of means for moving the wheel crank into engagement with the wheel, whereby as the wheel rotates forward a crank is

moved from the axle and when the wheel rotates backward the said crank engages with the axle and serves as a stop to resist backward movement of the vehicle, substantially as set forth. 3rd. In a device for checking runaway horses, the combination with a rock shaft having two oppositely projecting cranks, of a spring for rotating the shaft backward, and a stop for resisting the backward rotation of the shaft beyond its normal position, substantially as set forth. 4th. In a device for checking runaway horses, the combination with the rear axle, of the rock shaft having at one end the wheel crank arranged vertically in front of the axle, a downward rein-crank, and means for moving one crank into engagement with the wheel, whereby as the reins are pulled upon the said vertical crank is moved from the axle and when the rein crank is moved forward the said vertical crank engages with the axle and serves as a stop to resist backward movement of the vehicle, substantially as set forth.

No. 52,762. Cock, Faucet and Valves.

(Robinets et autres soupapes.)



The Homestead Manufacturing Company, assignee of William Heston, both of Homestead, Pennsylvania, U.S.A., 26th June, 1896; 6 years. (Filed 30th May, 1896.)

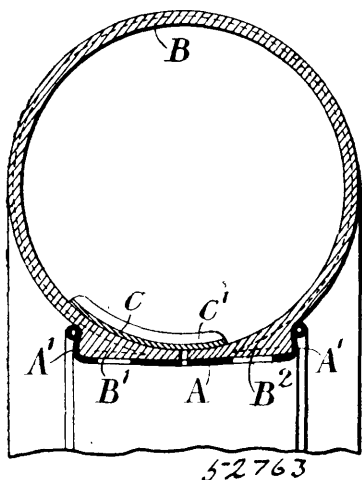
Claim.—1st. In a device of the character described, the combination of a valve casing, a plug, a non-rotating locking device, and inclines or cam-faces interposed between the plug and locking device and forming part of each, and co-operating to forcibly seat the plug, and to arrest its undue movement in opening the valve, substantially as described. 2nd. In a device of the character described, the combination of a valve casing, a seat therein, a plug or valve arranged to turn in said seat, and provided upon its head with a suitable number of inclines terminating in vertical abutments, a non-rotating locking device connected with or forming part of the valve casing, and supplied with complementary inclines and abutments, the inclines of which co-operate with the inclines on the plug or valve to ease off the plug from its seat, and the abutments interlocking positively to restrain the undue movement of the plug or valve in the act of opening, the inclines themselves serving also to force the plug or valve to its seat and restraining undue movement thereof in closing, substantially as described.

No. 52,763. Pneumatic Tire. (Bandage pneumatique.)

The Fleuss Pneumatic Tire Syndicate, 6 Jeffrey's Square, London, assignee of Henry Albert Fleuss, 5 Brampton Terrace, Heathfield, South Twickenham, Middlesex, both in England, 26th June, 1896; 6 years. (Filed 3rd June, 1896.)

Claim.—1st. A pneumatic tire composed of a rigid wheel rim having a trough or hollow groove around it, a tubular flexible ring surrounding the rim having a radial division around its inner circumference and solid external projections on each side of the division to fit to the trough or groove when a narrow space is left between the two projections, a free escape for air from this space and a stretched elastic band, not only covering over the division on the inside of the tubular ring and bearing by its elasticity against the inside of this ring, but also extending beyond one side of the rigid rim, substantially as described. 2nd. A pneumatic tire composed of a rigid wheel rim having a trough or hollow groove around it, a tubular flexible ring surrounding the rim and having a radial division around its inner circumference and solid external projections on each side of the division to fit to the trough or groove when a narrow space is left between the two projections, a free escape for air from this space and a stretched elastic band covering over the division on the inside

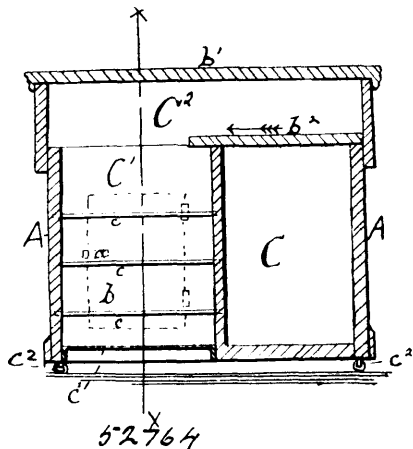
of the tubular ring and cemented to the ring on one side of the division and extending beyond the side of the rigid rim on the opposite



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side of the division, substantially as described. 3rd. A pneumatic tire composed of a rigid wheel rim, a tubular flexible ring surrounding the rim having a radial division around its inner circumference and cemented on one side of the division to one side of the rim and on the other side of the division having an external projection upon it to fit into a groove around the rim, and a stretched elastic band covering over the division on the inside of the tubular ring and cemented to the tubular ring on that side of the division where the tubular ring is cemented to the rim and on the opposite side of the division extending beyond the side of the rigid rim, substantially as described. 4th. In pneumatic tires such as are herein described providing a free escape for air from the space or spaces which are covered over on the inside of the tubular ring by the stretched elastic band, substantially as described. 5th. In pneumatic tires such as are herein described forming the stretched elastic band used for covering over the space between the edges of the divided tubular flexible ring tire with transverse ribs or corrugations on its exterior, substantially as described.

No. 52,764. Bread Raising Box. (Huche.)



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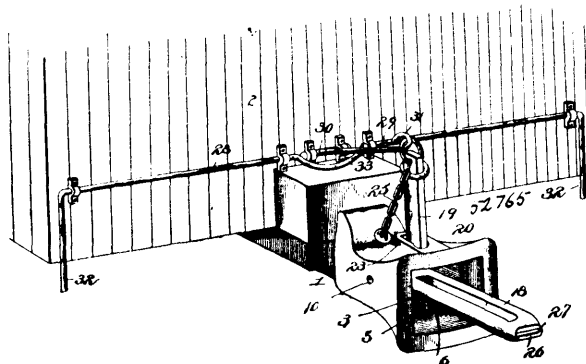
George W. Cowan and William H. Dunlap, both of Camonsburg, Pennsylvania, U.S.A., 26th June, 1896; 6 years. (Filed 3rd June, 1896.)

Claim.—In a bread-raiser, a casing having a hinged cover and a horizontal guide-way formed in its interior intermediate between the said cover and the bottom of the casing, said casing being also provided with a transverse vertical partition extending from its bottom up to the said guide-way, whereby a flour-chamber and a heating-chamber are formed therein, each of said chambers having an open top and the heating-chamber having a metal bottom and a door formed through the wall of the casing and a kneading board mounted to slide on the horizontal guide-way in the upper part of the casing, and adapted to close the open upper end of each of said chambers, substantially as set forth.

No. 52,765. Car-Coupler. (Attelage de chars.)

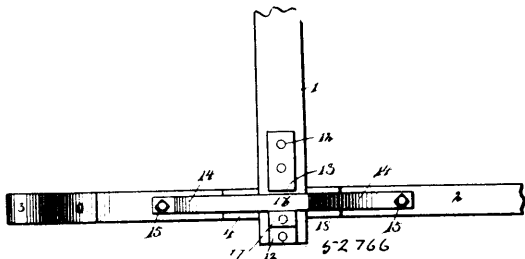
The Lee Car Coupling and Manufacturing Co., and John W. Schuchardt, assignees of Charles Lee, all of Antonio, Texas, 26th June, 1896; 6 years. (Filed 4th June, 1896.)

Claim.—1st. In a car-coupling, the combination with a draw-head having a coupling-pin perforation, and provided at the rear of the



upper portion thereof with a shoulder, adapted to form a seat, a coupling-pin provided with a shoulder to engage the seat, to hold it in an elevated position, and a spring-actuated block arranged to engage the lower end of the coupling-pin to disengage the same from the seat, and adapted to receive and support the coupling-pin in an elevated position, substantially as and for the purpose described. 2nd. In a car-coupling, the combination with a draw-head having a coupling-pin perforation, and provided at the rear side of the upper portion thereof with an inclined seat, a coupling-pin arranged in the coupling-pin perforation, and provided a short distance from its lower end with an inclined shoulder interlocking with the seat, said coupling-pin projecting below the top wall of the draw-head, and a spring-actuated block mounted in the draw-head and arranged to engage the lower end of the coupling-pin to carry it off of said seat and to receive and support it in an elevated position, substantially as described. 3rd. In a car-coupling, the combination of a draw-head having a coupling-pin perforation, provided at its top with a seat and having a rounded front portion and a rectangular rear portion, a coupling-pin having a shoulder to engage the seat, and a spring-actuated block, substantially as described. 4th. The combination of a draw-head provided at its top and bottom with longitudinal grooves and having horizontal grooves on the inner faces of its sides and provided at the front terminals of the latter grooves with perforations or openings located slightly above the horizontal plane of those grooves, a spring-actuated sliding block arranged in the draw-head and provided with upper and lower projections fitting in the longitudinal grooves, said block being provided with a transverse perforation, and a pin arranged in the perforation of the block and projecting laterally therefrom and fitting in the horizontal grooves, said pin being adapted to be withdrawn through the perforations or openings of the draw-head, substantially as specified. 5th. In a car-coupling, the combination of a draw-head provided at its top and bottom with longitudinal grooves and having at its sides horizontal grooves and longitudinal ribs, a spring-actuated block provided at its sides with grooves to receive the ribs and having a transverse perforation and provided at the top and bottom with projections fitting in the longitudinal grooves, and a removable transverse pin arranged in the perforations of the block and fitting in the horizontal grooves, substantially as described. 6th. In a car-coupling, the combination of a draw-head provided at its top and sides with grooves and having longitudinal ribs arranged on the inner faces of its sides, a sliding block provided at its sides with grooves to fit the said ribs and having a transverse perforation and provided with upper and lower projections to fit the longitudinal grooves at the top and bottom of the draw-head, a transverse pin arranged in said perforations and fitting in the grooves of the sides of the draw-head, a back stop arranged within the draw-head and consisting of a longitudinally disposed pin and a rectangular head arranged at the rear end of the pin, and a spiral-spring interposed between the block and the head and receiving the longitudinally disposed pin, substantially as described. 7th. In a car-coupling, the combination with a car, of a draw-head, a coupling-pin, a lever provided at its outer end with a hook to receive the coupling-pin and having at its inner end laterally extending journals arranged in suitable bearings of the car, and a rock-shaft journaled on the car and provided with a central loop forming an arm and arranged beneath the link, substantially as described. 8th. In a car-coupling, the combination of a draw-head provided with a coupling-pin perforation and having longitudinal grooves at its top and bottom, a sliding block arranged in the draw-head, provided at its top with a socket and having at its bottom a depending projection to fit the lower groove, an upper projection 4, adapted to be inserted through the coupling-pin perforation and provided with a shank fitting in said socket, and means for securing the shank in said socket, substantially as described. 9th. In a car-coupling, the combination of a draw-head provided at its top and sides with grooves, and having longitudinal ribs on the inner faces of the sides, a sliding block provided at its sides with grooves to receive the said ribs, having a transverse opening and provided at its top with a vertical socket, the top projection engaging the top groove of the draw-head and provided with a shank fitting in said socket, and a transverse pin engaging the said shank, substantially as described.

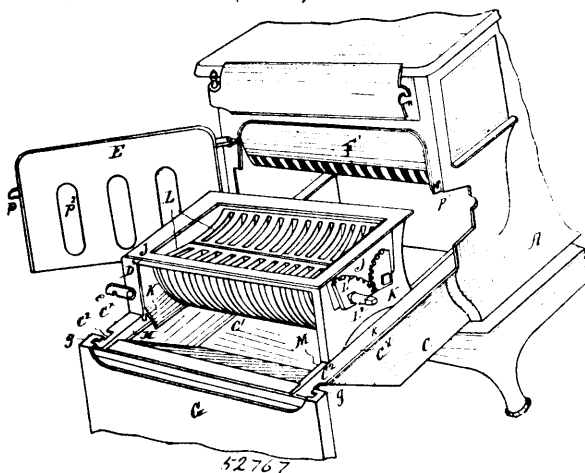
No. 52,766. Sleigh Knee. (*Courbe pour traineaux.*)



Franklin De Forest and Jacob R. Dudley, both of Fremont, Michigan, U.S.A., 26th June 1896; 6 years. (Filed 6th June, 1896.)

Claim.—1st. A sleigh knee, comprising a bearing piece adapted to be secured to the runner and having a socket, a beam having a perforated journal to engage said socket, and having a shoulder on its upper side, a brace secured to the runner and arranged over said beam, one side of said brace engaging the shoulder on the upper side of the beam, and a pin passed through the perforation in the journal, said pin also engaging said brace on the side thereof opposite to the side engaged by the shoulder on the beam, substantially as set forth. 2nd. A sleigh knee, comprising a bearing piece having a transverse socket, a bracket having a journal to engage the socket, said journal being provided at its inner end with a shoulder to engage the side of the bearing piece when the journal is in place in the socket, and a pin passed through the bracket and arranged to engage the side of the bearing piece opposite to the side engaged by said shoulder, substantially as set forth. 3rd. A sleigh knee, comprising a bearing piece having a transverse socket, a bracket having a journal to engage said socket, said journal being provided at its inner end with a shoulder to engage the side of the bearing piece when the journal is in place in the socket, and a pin passing through said bracket and arranged to engage the side of the bearing piece, opposite to the side engaged by said shoulder, substantially as set forth. 4th. A sleigh knee comprising a bearing piece having its upper end provided with a transverse socket, one side of which is provided with an open slot of less width than the body of the socket, a bracket having a journal to engage said socket and provided with a contracted neck to engage said slot, a shoulder on the bracket to engage one side of the bearing piece when the journal is in place in the socket, and means for locking the journal against removal from the socket, substantially as set forth. 5th. A sleigh knee, comprising a bearing piece having a socket, a bracket having a journal to engage said socket, said journal being provided of its inner end with a shoulder to engage one side of the bearing piece when the journal is in said socket and at its other end with a perforation, and a pin arranged to pass through the said perforation and engage the side of the bearing piece, opposite to the side engaged by said shoulder, substantially as set forth. 6th. A sleigh knee, comprising a bearing piece adapted to be secured to the runner and having a socket, a bracket adapted to be secured to the beam and having a journal to engage said socket, a brace secured to said runner and arranged over the beam, a shoulder on said bracket to engage one side of said bearing piece, a bearing plate on the beam, having a shoulder to engage one side of the brace, and a locking pin arranged to pass through the beam and engage the sides of the bearing piece and the bearing plate opposite said shoulders, substantially as set forth.

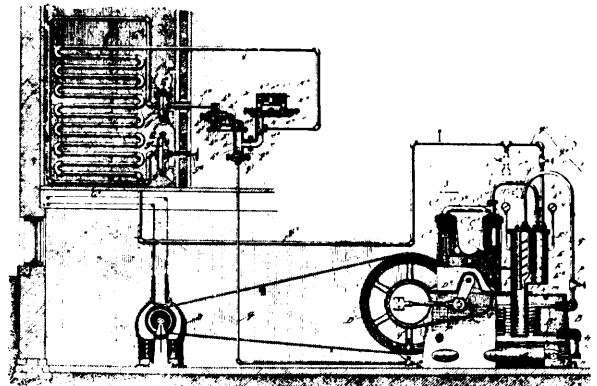
No. 52,767. Stove. (*Poêle.*)



The Co-operative Foundry Company, assignee of Thomas Richard Kennedy, both of Rochester, New York, U.S.A., 26th June, 1896; 6 years. (Filed 8th June, 1896.)

Claim.—1st. The combination with a stove having the fire-pot, the ways extending beneath the fire-pot and outside of the stove frame, and the opening into the ash-pit, of the grate-frame movable on said ways beneath the fire-pot, substantially as described. 2nd. The combination with a stove having the fire-pot and the ash-pit extending beyond the stove wall, having the ways at the sides, and the removable hearth, of the grate-frame normally within the stove body and movable on the ways at the sides of the ash-pit, substantially as described. 3rd. The combination with the stove having the fire-pot, the ash-pit and supports or ways at the sides thereof, of the removable grate-frame having the end plates resting upon the supports or ways and independent of the fire-pot and the lugs in the stove engaging the inner sides of said end plates to prevent warping, substantially as described. 4th. In a stove, the combination with the front having the opening, the ash-pit door and the removable plate D¹, of the removable grate-frame, the grate thereon having the extended operating journal and supports for said grate-frame, substantially as described. 5th. The combination with a stove casing, the fire-pot therein, the ash-pit and ways at the sides thereof extending out beyond the stove casing, of the frame having the movable dumping section therein and movable on the ways and beneath the fire pot, the ash-pit door hinged to the casing, securing devices therefor and the stove casing section engaging the grate-frame and engaged and held by the ash-pit door, substantially as described. 6th. The combination with the stove having the fire-pot, the ash-pit extended as shown, the ways at the side of the ash-pit, and the movable hearth-plate, of the grate-frame sliding on the ways having the movable grate sections, and the operating shaft, the removable casing section D¹, the catch d¹, the catch c, and the ash-pit door, substantially as described.

No. 52,768. Refrigerator. (*Réfrigérateur.*)



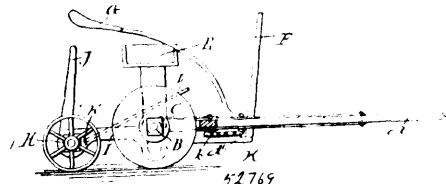
The Economical Refrigerating Company, assignee of George Francis Knox and Eliel Long Sharpneck, all of Chicago, Illinois, U.S.A., 26th June, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—1st. In a refrigerating machine, a casing formed with a compartment for a liquid-refrigerant reservoir, a condensing compartment and a compartment surmounted by cylinders and induction and eduction chambers, in combination with a motor, compressors in the cylinders actuated by the motor, circulating conduits and traps interposed in said conduits, substantially as described. 2nd. In a refrigerating apparatus, the combination with the liquid-refrigerant reservoir, the compressor, condenser and circulating conduit, of high and low pressure traps interposed in said conduits, the traps being so disposed with relation to each other that one will influence the temperature of the other, substantially as and for the purpose set forth. 3rd. In a refrigerating apparatus, the combination with the liquid-refrigerant reservoir, the compressor, condenser, supply pipe, refrigerating conduit and return pipe, of a fluid pressure regulator between the supply pipe and refrigerating conduit, and traps interposed in said pipe, substantially as described. 4th. In a refrigerating apparatus, the combination with the liquid-refrigerant reservoir, the compressor, condenser, supply pipe, refrigerating conduit and return pipe, of a thermostatic governor and a fluid pressure regulator between the supply pipe and refrigerating conduit, and traps interposed in said pipes, substantially as described. 5th. In a refrigerating machine, the combination with the compressor and its induction and eduction chambers, the condenser and the refrigerating conduit, of a return conduit extending from the refrigerating conduit to the said induction chamber, a trap interposed in said return conduit, a discharge conduit leading from said eduction chamber to the condenser, a trap interposed in said discharge conduit, and a heat-conducting wall separating the traps and operating as a means for communicating the temperature of one trap to the other, thereby modifying the temperature of the other, substantially as and for the purpose set forth. 6th. In a refrigerating machine, the combination with the compressor and its induction and eduction chambers, the condenser and the refrigerating conduit, of a casing having two chambers separated by a wall and forming respectively a low-pressure trap and a high-

pressure trap, a return pipe leading from the refrigerating conduit into the low-pressure trap, a pipe connecting the low-pressure trap with the said induction chamber, a pipe leading from the high-pressure trap to the condenser, and a pipe leading from the eduction chamber into the high-pressure trap, substantially as described. 7th. In a refrigerating machine, the combination with the shaft chamber, the compressor and its induction and eduction chambers, the condenser and the refrigerating conduit, of a return conduit extending from the refrigerating conduit to the said induction chamber, a low-pressure trap interposed in said return conduit, an outlet conduit leading from the said eduction chamber to the condenser, a high-pressure trap interposed in the said outlet conduit, a heat-conducting wall separating the traps and operating as means for communicating the temperature of one trap to the other, thereby modifying the temperature of the other, a drainage pipe provided with a valve and extending from the lower part of the high-pressure trap into the low-pressure trap, and a pipe extending from the lower part of the low-pressure trap to the shaft chamber, substantially as and for the purpose set forth. 8th. In a refrigerating machine, the combination, with the shaft-chamber, the compressor and its induction and eduction chambers, the condenser and the refrigerating conduit, of a casing having two chambers separated by a wall, and forming, respectively, a low-pressure trap and a high-pressure trap, a return-pipe leading from the refrigerating conduit into the low-pressure trap, a pipe connecting the low-pressure trap with the said induction chamber, a pipe leading from the high-pressure trap to the condenser, a pipe leading from the said eduction chamber into the high-pressure trap, a pipe provided a valve and extending from the lower part of the high-pressure trap to the low-pressure trap, and a pipe extending from the lower part of the low-pressure trap to the shaft chamber, substantially as and for the purpose set forth. 9th. In a refrigerating machine, the combination, with the compressor and its induction and eduction chambers, the condensing chamber and the refrigerating conduit, of a casing having a chamber forming a low-pressure trap and a chamber extending downward into the condensing chamber and forming a high-pressure trap, a return pipe extending from the refrigerating conduit into the low-pressure trap, a pipe leading from the upper portion of the low-pressure trap to the said induction chamber, a pipe extending from the said induction chamber into the lower part of the high-pressure trap, and a pipe extending from the upper part of the high-pressure trap to the condensing chamber, substantially as and for the purpose set forth. 10th. In a refrigerating machine, the combination with the compressor and its induction and eduction chambers, the condensing chamber and the refrigerating conduit, of a casing having a chamber forming a low-pressure trap and a chamber extending downward into the condensing chamber and forming a high-pressure trap, a return pipe extending from the refrigerating conduit into the low-pressure trap, a pipe leading from the upper portion of the low-pressure trap to said induction chamber, a pipe extending from the said eduction chamber into the lower part of the high-pressure trap, deflectors in the high-pressure trap between the outlet from said pipe and the top of the trap, and a pipe extending from the upper portion of the high-pressure trap to the condensing chamber, substantially as and for the purpose set forth. 11th. In a refrigerating apparatus, a fluid-pressure regulator, having a valve-operating mechanism, comprising pressure-actuated, differentially moving, co-acting diaphragms connected with the valve-stem, whereby the valve is operated by differentiation due to accumulation of pressure, substantially as described. 12th. In a refrigerating apparatus, a fluid-pressure regulator, having a valve-operating mechanism, comprising in combination with the valve, diaphragms receiving uniformly the fluid-pressure, and a lever connection at said diaphragms and valve affording a differential leverage, whereby on accumulation of pressure a power sufficient to operate the valve is obtained by differentiation of movement of the diaphragm, substantially as described. 13th. In a refrigerating apparatus, a fluid-pressure regulator, having a valve-operating-mechanism, comprising in combination with the valve, diaphragms receiving uniformly the fluid-pressure, and an adjustable lever-connection at said diaphragms and valve affording a differential leverage, whereby on accumulation of pressure a power sufficient to operate the valve is obtained by differentiation of movement of the diaphragms, substantially as described. 14th. In a refrigerating apparatus, a fluid-pressure regulator, comprising in combination, a chamber or casing having an inlet-port from the supply-pipe and an outlet to the refrigerating conduit, separate diaphragms at said chamber differentially movable under pressure therein, a valve at said inlet port connected with one of said diaphragms, and a lever-connection between the diaphragms adjustable to change the relative resistance of the diaphragms against movement under pressure in the chamber, substantially as and for the purpose set forth. 15th. In a refrigerating apparatus, a fluid-pressure regulator, comprising, in combination, a chamber or casing having an inlet port from the supply-pipe and an outlet to the refrigerating conduit, separate diaphragms at said chamber movable under accumulated pressure therein, a valve at said inlet port connected with one of said diaphragms, a lever connected at opposite end-portions with the respective diaphragms, and a screw-actuated sliding-block mounted upon the casing and affording a shifting fulcrum for the lever between the ends of the latter, substantially as and for the purpose set forth. 16th. The combination with a refrigerating conduit and a storage chamber through which the

conduit passes, of a passage between the liquid-refrigerant supplier and refrigerating conduit, a valve at said passage, and thermostatic mechanism in said chamber communicating with the said valve and operating under rise of temperature in said chamber to produce opening movement of the valve, substantially as and for the purpose set forth. 17th. The combination with a refrigerating conduit and a storage chamber through which the conduit passes, of a passage between the liquid-refrigerant supplier and refrigerating conduit, a valve at said passage, valve-opening mechanism and a fluid thermostatic column in said chamber communicating with said valve-opening mechanism and operating under rise of temperature in said chamber to produce opening movement of the valve, substantially as and for the purpose set forth. 18th. The combination with a refrigerating conduit and a storage-chamber through which the conduit passes, of a passage between the liquid-refrigerant supplier and said conduit, a valve at said passage, a fluid thermostatic column in said chamber communicating with the said valve and operating under rise of temperature in the said chamber to produce opening movement of the valve, and regulating means for the said thermostatic column, substantially as and for the purpose set forth. 19th. The combination with a refrigerating conduit and a storage-chamber through which the conduit passes, of a passage between the liquid-refrigerant supplier and said conduit, a movable abutment at said passage, a valve in the said passage operatively connected with the said abutment, a fluid thermostatic column in the said chamber, a movable abutment at said thermostatic column, and a fluid column confined between said movable abutments, whereby in the expansion of the thermostatic column pressure is exerted through the abutments and intervening column to produce opening movement of the said valve, substantially as and for the purpose set forth. 20th. The combination with the refrigerating conduit and a storage-chamber through which the conduit passes, of a passage between the liquid-refrigerant supplier and said conduit, a movable abutment at said passage, a valve in the said passage operatively connected with the said abutment, a fluid-thermostatic column in the said chamber, movable diaphragms between which the said thermostatic column is confined, adjusting means at one of said diaphragms operative to increase and diminish the pressure of the diaphragm against the column, and a fluid-column confined between the other said diaphragm and the said valve operating abutment, whereby in the expansion of the thermostatic column pressure is exerted thereby through the said fluid-column against the said abutment to produce opening movement of the said valve, substantially as and for the purpose set forth.

No. 52,769. Disk Harrow. (Herse à disque.)

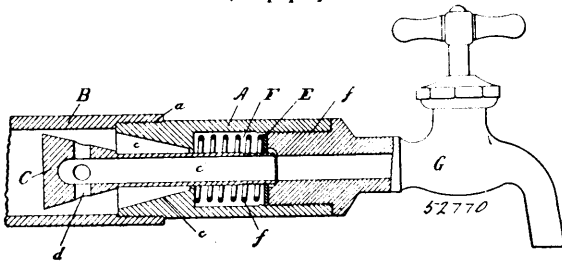


Lars T. Wicks, Newark, George W. Gurley, Sandwich, both of Illinois, U.S.A., and Nelson Hickey, Montreal, Quebec, Canada, 26th June, 1896; 6 years. (Filed 27th May, 1896.)

Claim. 1st. In disk harrows, the combination with the disks thereof and their carrying means, of a supplemental device adapted to raise said disks and their carrying parts from the ground, for the purpose set forth. 2nd. In disk harrows, the combination with the disks thereof and their carrying means, of a supplemental trailing device connected to said disk carrying means, and adapted to raise said disks and their carrying parts from the ground, and means for tilting said trailing device, for the purpose set forth. 3rd. In disk harrows, the combination with the disks thereof and their carrying means, of a supplemental trailing device detachably connected to said disk carrying means, and adapted to raise said disks and their carrying parts from the ground, and means for tilting said trailing device, for the purpose set forth. 4th. In disk harrows, the disk-shafts, in combination with a supplemental axle of angular form in cross-section and provided with carrying-wheels, arms I, constructed at one end with angular apertures, *i*, corresponding to the angular axle, whereby they may be applied to and fixed on said axle without bolts or other like devices, having an enlarged opening at their front ends adapted to receive and engage the disk-shafts, and a detachable and adjustable connecting device between the supplemental axle and the harrow-supporting frame, substantially as described. 5th. In disk harrows, the disk-shafts, in combination with a supplemental axle, II, provided with carrying-wheels *h*, arms I, mounted at one end on said axle and at their outer or free ends provided with an enlargement or head *i*¹, having an oblong, vertical opening or slot *i*², and a side opening *i*³, about midway of the front arm enclosing said slot, and an adjustable and detachable connecting device between said supplemental axle and the main frame of the harrow, substantially as described. 6th. In disk harrows, the disk-shafts, in combination with the supplemental axle and wheels, arms I, secured at one end to said axle and at their free ends enlarged vertically to form a kind of head, *i*¹, which is constructed with an oblong slot or opening *i*², running vertically and

concave at each end, and a front cut or opening, i^3 , leading into this slot, link-rod, L, hinged or pivoted at one end to the supplemental axle, and link-arm, K, hinged or pivoted at one end to a support on the main frame and provided with a series of apertures, k, with either of which the front end of the connecting-rod may be engaged, substantially as described. 7th. In disk harrows, the disk-shafts, in combination with the supplemental axle, H, and carrying-wheels h, arms I, mounted at one end on said supplemental axle and at their forward, free, ends constructed with a vertical enlargement, i^1 , having a vertical, oblong opening i^2 , concave at both upper and lower ends, and a front passage, i^3 , into said opening, with a short stud, i^4 , projecting outward slightly about midway of the back, and a link-rod L hinged or pivoted at one end of the supplemental axle and adjustably and detachably connected at its other end to the main frame, substantially as described. 8th. In a harrow, a wheeled attachment comprising a supplemental axle, wheels loosely mounted on the said axle, arms rigidly attached to the said axle and pivotally and detachably connected to the harrow, a lever-arm mounted on the said supplemental axle rigidly and adapted to rotate the same, whereby the harrow is raised or lowered, and means for locking the said supplemental axle when the harrow is raised. 9th. In a harrow, a wheeled attachment comprising a supplemental axle, wheels loosely mounted on the ends thereof, arms rigidly attached to the said supplemental axle and pivotally and detachably connected to the harrow, a lever-arm rigidly mounted on the said supplemental axle, a lever device connecting the said lever-arm and the harrow and adapted to rotate the supplemental axle, and means for locking the said lever device. 10th. The harrow, a supplemental axle connected to the harrow by elevating arms, wheels carried by the said supplemental axle, a lever, K, pivotally connected to the harrow-frame, an arm, M, rigidly connected to the supplemental axle, and an arm pivotally connected with the arm, M, and the lever, K, for elevating the harrow and throwing its weight upon the supplemental wheel-carried axle. 11th. The non-rotatable axle, R, the adjustable boxes, O, loosely adjustable on the end of the axle, the boxes being provided with flanges at one end and mechanisms on the opposite end for securing them to the axle in any desired position, and the wheels, G, mounted and revolving on the said boxes. 12th. In a wheeled attachment for a harrow, substantially as described, the supplemental axle, R, having elevating arms, H, adapted to be connected to the harrow by means of their front ends being bifurcated, the flanges, S, on said bifurcated arms, and pins, I, for locking said bifurcated arms to the harrow.

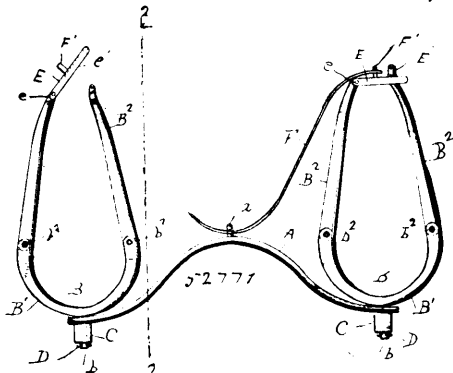
No. 52,770. Valve. (Soupape.)



Thomas Alfred Ryan, Lowell, Massachusetts, U.S.A., 26th June, 1896; 6 years. (Filed 4th Jan., 1896.)

Claim.—The combination, with a valve casing provided with means for attaching it to a pipe or barrel, and having a conical valve seat, and an internal chamber provided with a screw-threaded portion at its front end, of a conical valve provided with a hollow stem and holes for the passage of liquid when the said valve is off its seat, a plate secured on the end of the valve stem, and spring arranged in the said chamber and bearing against the said plate, whereby the valve is held on its seat, substantially as set forth.

No. 52,771. Neck Yoke. (Volée de boutte timon.)

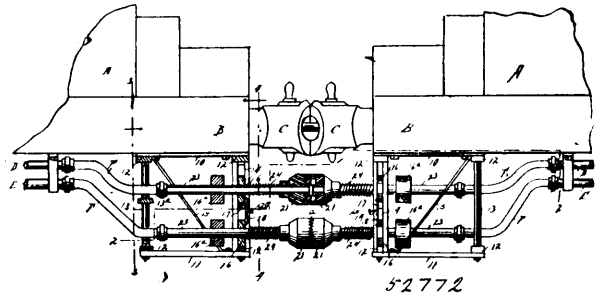


Henry W. Wilcox, Whitesboro, New York, U.S.A., 26th June, 1896; 6 years. (Filed 5th June, 1896.)

Claim.—1st. The combination with the yoke, of the hames mounted on the ends thereof to swivel and having a portion hinged and provided with a fastening device carrying an upwardly-projecting pin, and a spring yoke supported by the first mentioned yoke with its ends engaging said pin, substantially as described. 2nd. The combination with a yoke provided at the centre on its upper face with draft-attaching means and at its ends on its lower face with depending hollow portions, of hames in hinged sections, one of which is provided at its upper end with a hinged bar adapted to receive the end of the opposite hinged portion, said hames having depending portions passed through the ends of the yoke and through said hollow depending portions and mounted to swivel therein, and keys passed through the ends of pintles on the hames beneath the said depending portions, substantially as specified. 3rd. The combination with the oppositely-disposed yokes united at their centres by the swivel connection, the upper yoke being of spring material, of the hames having studs at their upper and lower ends and mounted to swivel in the ends of the yokes, and bars carrying the upper studs and hinged to one portion of the hames and at the other end having openings to receive the upper end of the opposite portions of the hames, substantially as described.

No. 52,772. Automatic Pipe Connection.

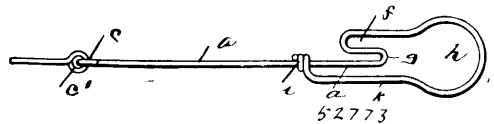
(Joint de tuyau.)



Harrison Reed, Logansport, Indiana, U.S.A., 26th June, 1896; 6 years. (Filed 8th June, 1896.)

Claim.—1st. The combination, with a car, of a depending support on same, two coupling-head sections, a pipe-section projecting from each coupling-head section, the said pipe and head sections being respectively arranged one above the other, two cross-heads vertically movable on the depending support and by which the pipe-sections are respectively held in connection with the cross-heads, and a lifting lever, substantially as described. 2nd. The combination, with a car, of a depending support, two coupling-head sections having serrated front ends, two pipe-sections respectively connected to the coupling head sections, two cross-heads movable in the support and with which the pipe-sections are connected and a lever adapted for lifting the cross-heads, substantially as described. 3rd. The combination with a car, of a depending and vertically-elongated support, two transversely-extending cross-heads movable in the support, a link connecting the cross-heads, means attached to the link for operating the cross-head, and a coupling head section connected to each cross-head, substantially as described. 4th. The combination of an elongated support, two cross-heads movable in said support, coupling-head sections respectively in connection with the cross-heads, and means for moving the cross-heads in the support and in unison with each other, substantially as described.

No. 52,773. Bale Tie. (Lien de ballot.)



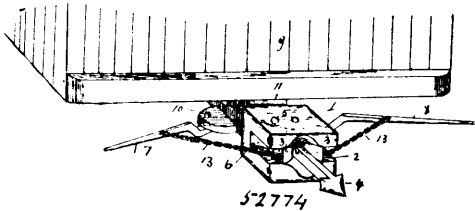
Samuel Holister Cochran, Westerville, Ohio, U.S.A., 26th June, 1896; 6 years. (Filed 5th June, 1896.)

Claim.—1st. A binding or baling device consisting of a wire girdle composed of a series of links connected to each other by means of interlocking eyes or loops e and e', in combination with a hook having a mouth g^1 of less diameter than the eyes, and capable of receiving the body portion of the links, and a hand-loop h, consisting of an enlargement at the head of the hook, substantially as described. 2nd. The combination in a binding or baling device, of a strand or section of wire having knot-like projections arranged at intervals thereon, a hook f having a mouth g^1 narrower than the diameter of said projections and being bent out of or connected with said wire, a loop h by which one end of the device is held, and a suitably shaped ring or link b on the opposite end of the wire, substantially as and for the purpose specified.

No. 52,774. Car-Coupler. (Attelage de chars.)

Charles E. Ward, West Milford, West Virginia, U.S.A., 26th June, 1896; 6 years. (Filed 8th June, 1896.)

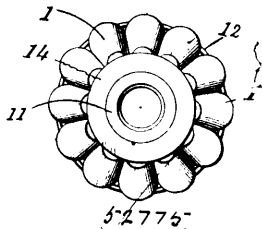
Claim.—1st. In a car-coupling, the combination with a car of a draw-head mounted thereon, horizontally-disposed spring-actuated



jaws mounted in the draw-head and adapted to engage an arrow-head link, levers located at the opposite sides of the car fulcrumed intermediate of their ends and having their inner portions engaging each other, and chains connecting the levers with the jaws, substantially as described. 2nd. In a car-coupling, the combination with a car, of a draw-head, spring-actuated jaws, pivotally mounted in the draw-head and adapted to engage an arrow-head link, a frame receiving the shank of the draw-head and provided with extensions oppositely-disposed levers fulcrumed intermediate of their ends on the extensions and having their inner portions engaging each other, a keeper mounted on the frame and receiving the inner portions of the levers, and connections between the outer portions of the levers, and the spring-actuated jaws, substantially as and for the purpose described. 3rd. In a car-coupling, the combination with a car, of a draw-head, spring-actuated jaws mounted in the draw-head, a pair of oppositely-disposed levers fulcrumed intermediate of their ends, and having their inner ends arranged to engage each other, and their outer portions connected with the said jaws, and a connection between the inner portions of the levers, substantially as and for the purpose described.

No. 52,775. Antifriction Bearing.

(*Coussinet de tourillon sans friction.*)



William Hamilton Wright, Buffalo, New York, U.S.A., 26th June, 1896; 6 years. (Filed 8th June, 1896.)

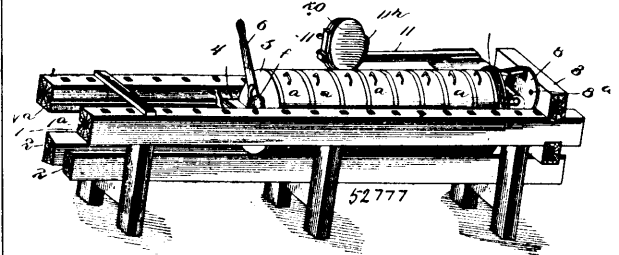
Claim.—1st. A roller bearing, consisting of a removable tapering nut having a surrounding depression forming a roller seat, a series of tapering rollers 1 having a retaining projection at each end adapted to fit in said seat, rim bands for keeping the rollers in place, and an outer bearing case provided with a screw nut 10 for excluding the dust, forming the outer bearing in combination with an inner bearing at the large end of the hub, consisting of a tapering portion 16a, a series of tapering rollers having retaining projections, rim bands for retaining them in place and an outer bearing case, the two outer cases being retained in place in the hub by a connecting sleeve 7 secured rigidly to them, and a felt washer 24 for excluding the dust located between two retaining washers 22 and 23, substantially as described. 2nd. A roller bearing, consisting of a removable tapering nut having a surrounding depression forming a roller seat, a series of tapering rollers having a retaining projection at each end adapted to fit in said seat, rim bands for keeping the rollers in place, and an outer bearing case provided with a screw nut, for excluding the dust, forming the outer bearing, in combination with an inner bearing at the large end of the hub, consisting of a tapering portion 16a, a series of tapering rollers having retaining projections, rim bands for retaining them in place, and an outer bearing case, the two outer cases being retained in place in the hub by a connecting sleeve 7 secured rigidly to them, substantially as described. 3rd. The combination with a series of tapering rollers, of a cone forming the inner bearing around which the rollers travel, and having a tapering form corresponding with the rollers, and an outer tapering case forming the inclosing bearing for the rollers, the whole formed on corresponding tapering lines which terminate at a common centre, for the purposes described. 4th. A roller bearing consisting of a tapering nut, a series of correspondingly tapering rollers, an inclosing bearing case of a tapering form corresponding with the rollers, and means for preventing the rollers from leaving the bearing when detached, substantially as described. 5th. A roller bearing consisting of a tapering nut, a series of correspondingly tapering rollers, an inclosing bearing case of corresponding tapering form, rim bands for keeping the rollers in place, and means for locking the tapering nut to the shaft, substantially as described.

No. 52,776. Process of Reducing Lead Scum to Powder. (*Procédé pour réduire l'écume du plomb en poudre.*)

Joseph Williams, sr., Sharpsburg, Pennsylvania, U.S.A., 26th June, 1896; 6 years. (Filed 8th June, 1896.)

Claim.—The process of reducing the scum or litharge to a powder by conveying the litharge while hot into pure water or water impregnated with alkali or other substances.

No. 52,777. Cheese Press. (*Presse à fromage.*)

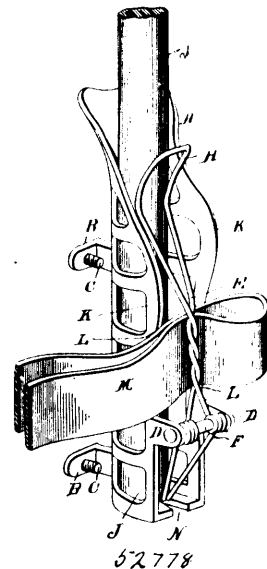


Daniel Arnold Sprague, Poland, New York, U.S.A., 26th June, 1896; 6 years. (Filed 8th June, 1896.)

Claim.—1st. In a continuous-pressure press, a frame, a fixed head or end, a movable head, a pressure-exerting mechanism acting in opposition to the movable head and between which and the movable head the cheese-hoops are placed, a continuous-pressure lever operating on the movable head and an equalizer consisting of jointed connections between the head or end and movable head and a cross connection between the joints of the connections combined, substantially as set forth. 2nd. In a continuous-pressure press, a fixed head, a movable head, a pressure-lever having an arm extending between the fixed head and movable head, a fixed fulcrum therefor on the fixed head, a movable block between the lever and movable head and a rolling weight on the pressure-lever combined, substantially as set forth. 3rd. In a press, a frame, a fixed head, a movable head, a lever having a projecting arm extending between the fixed head and movable head, a fixed fulcrum therefor, a movable block between the lever-arm and the movable head and a weight on the lever combined, substantially as set forth. 4th. In a press, the combination of a fixed head, a movable head, a pressure-lever having an arm extending between the fixed head and movable head and operating on the movable head, a movable weight on the lever, an equalizer consisting of two jointed connections between the movable head and fixed head, and a cross connection between the joints, substantially as set forth.

No. 52,778. Whip and Line Holder.

(*Porte-fouet et guides.*)

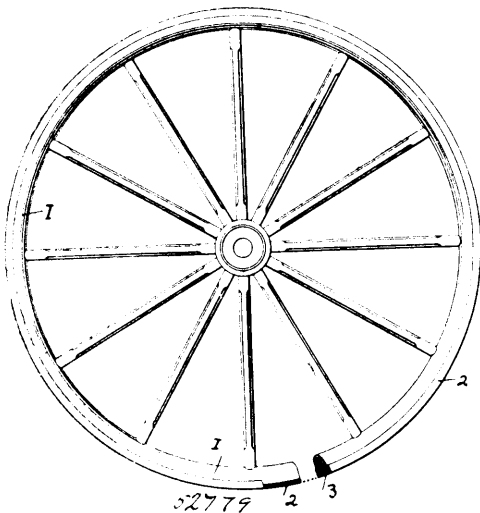


Hugh Wright, Rock Island, Illinois, U.S.A., 27th June, 1896; 6 years. (Filed 8th June, 1896.)

Claim.—1st. The combination of the socket A adapted to be fastened to the dash of the vehicle and provided with perforated ears D, bolt F seated in said ears, and the spring E intermediately coiled about said bolt and adapted to press at both of its ends towards the interior of said socket, substantially as and for the

purpose hereinbefore set forth. 2nd. In a combined whip and line holder, the combination of a socket A having a suitable base and one open side, ears D D formed on the walls of said socket and projecting outwardly at each side of said open side, bolt F seated in said ears and a spring H intermediately coiled between said ears D around said bolt F with its extremities adjustably projected within said socket through said open side thereof, substantially as and for the purpose hereinbefore set forth. 3rd. In a whip and line holder, the combination of the socket A adapted to be attached to the dash of the vehicle and provided with a suitable base having a recess N and further provided with projections K and an open side between said projections, a spring E suitably seated across said open side of the socket A with its lower end projected into said recess and its upper end between the walls of said socket, substantially as and for the purpose hereinbefore set forth. 4th. In a combined whip and line holder, the combination of a open sided socket A having a suitable base and adapted to be fastened to the dash or other suitable locality on a vehicle and adapted to receive a whip J having its lower end resting on the upper side of the base of said socket A, a spring E intermediately seated on the open side of said socket in position to press at or near each of its extremities against the whip J and hold the latter rigidly against the circular wall of said socket, substantially as and for the purpose hereinbefore set forth. 5th. In a combined whip and line holder, the combination of socket A having an open side and a suitable base to receive the whip J and adapted to be attached to a vehicle, and further provided with projecting walls K K, a suitable spring E intermediately seated in the open side of said socket and adapted to press its extremities within said socket and to intermediately clamp the lines M against the edges of the open side of said socket A, substantially as and for the purpose hereinbefore set forth.

No. 52,779. Tire. (Bandage.)

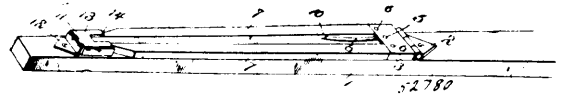


Howard Malcolm Dubois and William Henry Gray, both of New York, State of New York, U.S.A., 27th June, 1896; 6 years. (Filed 30th May, 1896.)

Claim.—1st. A metallic tire for vehicle wheels, having flanges upon its margin of unequal width, that upon the side of the greater wear being the wider, substantially as described. 2nd. The combination with a vehicle wheel, of an elastic cushion having a width greater than that of the face or tread of the wheel, and a tire having flanges upon its sides, one of which is bent outward to enable the tire to be applied, and then pressed upon the rim, thereby compressing the cushion in the direction of its width, substantially as described. 3rd. The combination with a vehicle wheel of a metallic tire having flanges upon its edges, one of which is bent or curved outward, and an elastic cushion of a width greater than the space between the flanges, said outwardly bent flange being pressed against the lateral face of the rim of the wheel, to compress the cushion in width substantially as described. 4th. The combination with a vehicle wheel of a metallic tire having flanges upon its edges, that upon the inner edge of the wheel being less in width and thickness substantially as described. 5th. The combination with a vehicle wheel of an elastic cushion of greater width than the rim of the wheel, and a tire having flanges upon its edges, between which the said cushion is compressed in width, said tire being also compressed upon the cushion, substantially as described. 6th. The combination with a vehicle wheel, of an elastic cushion of greater width than the rim of the wheel with which it is in direct contact, and a tire having flanges upon its edges, the inner diverging faces of which are pressed against the lateral faces of the rim of the wheel, thereby compressing the cushion in width substantially as described.

7th. The method herein described of applying an elastic cushion and metallic tire to vehicle wheels, which consists in welding the tire with due allowance for contraction, compressing an elastic cushion between marginal flanges on said tire, forcing both upon the wheel, compressing the flanges of the tire against the rim, and contracting said tire by cooling, substantially as described. 8th. The method of increasing or reinforcing the elasticity of a rubber cushion interposed between a wheel and metallic tire having marginal flanges, said method consisting in compressing said cushion in two directions, substantially as described. 9th. The method of increasing or reinforcing the elasticity of a rubber cushion interposed between a wheel and a metallic tire having marginal flanges, said method consisting in first compressing the cushion in the direction of its thickness and then in the direction of its width so that it is ultimately compressed in two directions, substantially as described. 10th. The method of reinforcing the elasticity of a rubber cushion for vehicle wheels, said method consisting in compressing marginal flanges on the outer metallic tire, between which the cushion lies, thereby decreasing its width, and applying compression in two directions, substantially as described. 11th. The method of reinforcing the elasticity of a rubber cushion for vehicle wheels, said method consisting in compressing marginal flanges on the outer metallic tire, between which the cushion lies (the cushion having been first expanded laterally by compression upon its face) thereby decreasing its width, and applying compression in two directions substantially as described. 12th. The apparatus described for rolling down the flange of the tire, the same consisting of two rolls, one cylindrical and the other having the form of a frustum of a cone, mounted on parallel shafts adapted to approach each other, substantially as described.)

No. 52,780. Tongue Support. (Tuteur de timons.)



Robert B. Clement, Crayneville, Kentucky, U.S.A., 27th June, 1896; 6 years. (Filed 8th June, 1896.)

Claim.—1st. In a tongue support, the combination of a tongue provided on its lower face with a keeper having a longitudinally disposed socket, and provided intermediate of its sides with a slot or opening communicating with the same, and a pair of outwardly springing or separating legs, hinged to the pole and adapted to be compressed and to have their lower ends pass through the slot or opening of the keeper, whereby the resiliency of the legs will hold them in the socket of the keeper away from the opening or slot thereof, substantially as described. 2nd. In a tongue support, the combination of a tongue provided on its lower face with a rigid longitudinally disposed keeper, provided intermediate of its sides with an entrance slot or opening, a hinge secured at one leaf to the lower face of the tongue, and having its other leaf provided with a socket, a pair of separable legs pivoted in the socket of the hinge and having their other ends arranged in the keeper, and a spring interposed between the legs and adapted to spread the same and hold them in engagement with the keeper, substantially as described.

Continuation of Claim.

No. 52,280.—(See page 491 of Patent Record for May 31st, 1896.)

Claim. 8th. The combination with the wall of a car having a series of port-holes, a rock-shaft journaled opposite the same, and a battery supported below said shaft, of a lever for operating the rock-shaft in one direction, a spring for operating the shaft in the other direction, and trigger-tripping devices between the shaft and pieces of the battery and operated by the movements of the shaft, substantially as specified. 10th. The combination with the wall of a car, the same having port-holes, a rock-shaft journaled opposite the same, a lever for operating the same, bearings on the rock-shaft and a superimposed rock-shaft, journaled therein, a battery carried by the lower shaft, a lever for operating the upper shaft, rock-arms extending from the latter shaft, levers intermediately pivoted in rear of each piece of the battery, a link connecting the same with the rock-arms and sliding trigger-trips arranged in ways at the side of each piece of the battery and connected at their rear ends to the lower ends of the aforesaid intermediately pivoted levers, substantially as specified. 11th. The combination with the wall of a car, the same being provided with port-holes, a rock-shaft arranged opposite the same and provided upon its upper sides with bearings, a lever for operating said rock-shaft, a superimposed independent shaft arranged in said bearings, a lever for operating the same, springs for drawing said superimposed shaft in one direction, a series of revolver-embracing clamps arranged on the lower rock-shaft, and trigger-tripping devices carried by the upper shaft, of a series of revolvers located in the aforesaid clamps, substantially as specified.

CERTIFICATES OF THE PAYMENT OF FEES FOR FURTHER TERMS HAVE BEEN ATTACHED TO
THE FOLLOWING PATENTS.

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| 4381. ISAAC ALLAN COWIE and CHARLES R. DUNSFORD, 2nd term of No. 36,713, from the 2nd June, 1896. Seeding Machine, June 2nd, 1896. | 4394. CHARLES HORATIO SHEPHERD, 2nd term of No. 36,916, from the 2nd July, 1896. Valve for Sewer Pipes, June 10th, 1896. |
| 4382. CALEB M. EDDY and ELMER E. EDDY, 2nd term of No. 36,892, from the 24th June, 1896. Artificial Leg, June 3rd, 1896. | 4395. ARTHUR BURNHAM and JOHN A. DUGGAN, 2nd term of No. 36,823, from the 16th June, 1896. Railroad Switch, June 16th, 1896. |
| 4383. JOSEPH M. RUDDOCK, 2nd term of No. 36,737, from the 3rd June, 1896. Can Heading Machine, June 3rd, 1896. | 4396. J. O. DROUIN and A. J. DUTILE, 2nd term of No. 36,927, from the 4th July, 1896. Power Hammer, June 19th, 1896. |
| 4384. THE ONEIDA COMMUNITY, (assignee), 2nd term of No. 36,881, from the 23rd June, 1896. Cow Tie, June 3rd, 1896. | 4397. RUDOLPH A. MAY, 2nd term of No. 37,013, from the 17th July, 1896. Heating Furnace, June 19th, 1896. |
| 4385. CHRISTOPHER CLARKE, 3rd term of No. 24,227, from the 3rd June, 1896. Fire Escape Tower, June 3rd, 1896. | 4398. MELBOURNE WALKER and WELLINGTON W. BOBIER, 2nd term of No. 37,067, from the 25th July, 1896. Trace Buckle, June 20th, 1896. |
| 4386. JOHN THOMAS ELLIS, 2nd term of No. 36,808, from the 15th June, 1896. Steam Boiler Furnace, June 4th, 1896. | 4399. EDWIN BENJAMIN DENNIS, 2nd term of No. 37,158, from the 14th August, 1896. Calculator for Percentages, June 24th, 1896. |
| 4387. GEORGE WASHINGTON BOND, 2nd term of No. 36,823, from the 16th June, 1896. Fence Post, June 4th, 1896. | 4400. A. HARRIS, SON AND COMPANY, (assignee), 2nd term of No. 36,990, from the 15th July, 1896. Mower, June 24th, 1896. |
| 4388. NETTLEFOLDS LIMITED, 2nd term of No. 37,168, from the 15th August, 1896. Screw, June 4th, 1896. | 4401. SAMUEL V. ESSICK, 3rd term of No. 24,390, from the 28th June, 1896. Printing Telegraph, June 25th, 1896. |
| 4389. ALPHONSE DANSEREAU, 2nd term of No. 36,774, from the 8th June, 1896. Hay Press, June 5th, 1896. | 4402. THOMAS E. SPENCER, 2nd term of No. 36,941, from the 9th July, 1896. Gas Stove, June 26th, 1896. |
| 4390. DAVID BELL, 2nd term of No. 36,787, from the 10th June, 1896. Buckle, June 5th, 1896. | 4403. ALLAN JOSEPH BEATON, 2nd term of No. 36,960, from the 14th July, 1896. Floor and Ceiling Plates for Steam Pipes, June 29th, 1896. |
| 4391. WILLIAM JOHN HAMILL, 2nd term of No. 36,817, from the 16th June, 1896. Sleigh Gear, June 9th, 1896. | 4404. GEORGE BRANUM DOWSWELL, 2nd term of No. 36,926, from the 4th July, 1896. Churn, June 30th, 1896. |
| 4392. CARL KELLNER, 2nd term of No. 36,805, from the 15th June, 1896. Digester for Paper Pulp, etc., June 10th, 1896. | 4405. GEORGE WILKINSON, 3rd term of No. 24,438, from the 6th July, 1896. Jaw and Clevis for Ploughs, June 30th, 1896. |
| 4393. CARL KELLNER, 2nd term of No. 36,806, from the 15th June, 1896. Digester for Paper Pulp, etc., June 10th, 1896. | |

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8541. NOUVEAU COURS CANADIEN D'ÉCRITURE DROITE. (Nos. 1-5.)
John Ahern, Quebec, Que., 1st June, 1896.
8542. MUSIC CHART. Richard H. Ball, Port Burwell, Ont., 1st June, 1896.
8543. HIGH SCHOOL BOOK-KEEPING BLANKS FOR PRIMARY EX-
AMINATION AND COMMERCIAL DIPLOMA COURSE.
(Part 2.—With Notes.) Prepared by J. A. Wisner, M.A. The
Copp, Clark Co., Ltd., Toronto, Ont., 2nd June, 1896.
8544. BE MY HEART'S QUEEN. Words by Fred C. Vorhauer. Music by Will
A. Vorhauer. Whaley, Royce & Co., Toronto, Ont., 4th June,
1896.
8545. CHARIOT RACE, OR BEN HUR, MARCH. By E. T. Paull. Whaley,
Royce & Co., Toronto, Ont., 4th June, 1896.
8546. SHRINERS' MARCH TO MECCA. (Two-Step.) By Fred Kueeland.
Whaley, Royce & Co., Toronto, Ont., 4th June, 1896.
8547. ROD AND CANOE, RIFLE AND SNOWSHOE IN QUEBEC'S ADIRON-
DACKS. By G. M. Fairchild, jr., Cap Rouge, Que., 4th June,
1896.
8548. MAKING FATE. By "Pansy." (Mrs. G. R. Alden.) Wm. Briggs (Book-
Steward of the Methodist Book and Publishing House), Toronto,
Ont., 4th June, 1896.
8549. 'NEATH THE WILLOWS I AM WAITING. Words by Edward Oxenford.
Music by Albert I. Bowbeer, Brantford, Ont., 5th June, 1896.
8550. A SHRINE TO WAGNER. (Photograph from Original painting executed by
Applicant.) James Brotherwood, Stratford, Ont., 5th June, 1896.
8551. THE CANADIAN MAGAZINE, JUNE, 1896. The Ontario Publishing Co.,
Ltd., Toronto, Ont., 6th June, 1896.
8552. THE MIND OF THE MASTER. By John Watson, D.D. (Ian Maclaren.)
Hodder & Stoughton, London, England, 8th June, 1896.
8553. BILLS, NOTES AND CHEQUES. By J. J. Maclaren, Q.C., D.C.L., LL.D.
(Second Edition.) The Carswell Co., Ltd., Toronto, Ont., 8th
June, 1896.
8554. PROMISES FORGOTTEN. Words by Fred C. Vorhauer. Music by Will
A. Vorhauer. Whaley, Royce & Co., Toronto, Ont., 10th June,
1896.
8555. THE GRAND SEIGNEUR. (Canadian Ballad.) Words by William H.
Drummond, M.D. Music by Percival J. Hilsley, Mus. Bac.
Whaley, Royce & Co., Toronto, Ont., 10th June, 1896.
8556. RAYS OF LIGHT FROM BIBLE LANDS. By Rev. Robert Wilson, Ph.D.
Robert A. H. Morrow, St. John, N.B., 10th June, 1896.
8557. L'INDICATEUR DE QUÉBEC ET LÉVIS, 1896-1897. Boulanger et
Marcotte, Québec, Que., 11 juin 1896.
8558. LE SYSTEME MÉTRIQUE DÉCIMAL. (Conversion de toutes les Mesures
Françaises en Mesures Anglaises. Valeur en Francs de toutes les
Monnaies du Globe.) Par A. de Grandpré. C. O. Beauchemin
et fils, Montréal, Qué., 13 juin 1896.
8559. THE RAILROAD MEN'S NATIONAL TIME BOOK. Geo. M. Morrison,
Toronto, Ont., 15th June, 1896.
8560. POEMS AND PASTELS. By Wm. E. Hunt. (Keppell Strange.) Wm.
Briggs (Book-Steward of the Methodist Book and Publishing
House), Toronto, Ont., 15th June, 1896.
8561. SOUVENIR DE STE. ANNE DE BEAUPRÉ. L. J. A. Derome, Mont-
real, Qué., 15 juin 1896.
8562. DICTIONNAIRE DE NOS FAUTES CONTRE LA LANGUE FRAN-
ÇAISE. Par Raoul Rinfret, Montréal, Qué., 18 juin 1896
8563. MEMORIES OF MARGARET GRAINGER, SCHOOL-MISTRESS. By
Annie S. Swan. William Briggs (Book-Steward of the Methodist
Book and Publishing House), Toronto, Ont., 19th June, 1896.
8564. CANADIAN SUMMER RESORT GUIDE. Frederick Smily, Toronto,
Ont., 19th June, 1896.

8565. LIFE AND TIMES OF THE HONOURABLE JOSEPH HOWE. By George E. Fenety, Fredericton, N.B., 22nd June, 1896.
8566. NOUVEAU COURS DE COMMERCE ET DE COMPTABILITÉ. (Cours Élémentaire Théorique et Pratique). Par F. T. D. Frère Marie Siebert, Ste-Martine, Qué., 22 juin 1896.
8567. A LOVER IN HOMESPUN. (And other stories.) By F. Clifford Smith. Wm. Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 25th June, 1896.
8568. FASHIONS. (An Illustrated Monthly Journal for Canadian Women, June, 1896.) D. I. Barnett, Toronto, Ont., 25th June, 1896.
8569. THE SERMON ON THE MOUNT. (And other Extracts from the New Testament.) (A faithful rendering of the Original, with explanatory notes.) By Aretas. A. E. S. Smythe, Toronto, Ont., 25th June, 1896.
8570. MEDALLION PORTRAIT OF ROBERT BURNS, SCOTTISH POET. James E. Smeall, Toronto, Ont., 26th June, 1896.
8571. L'HONORABLE WILFRID LAURIER. (Tableau Peinture.) Georges Delfosse, Montreal, Qué., 27 juin 1896.
8572. COMMENTARIES ON THE LAW OF ONTARIO. (Being Blackstone's Commentaries on the Laws of England adapted to the Province of Ontario.) By R. E. Kingsford, M.A., LL.B. Volume I. The Carswell Co., Ltd., Toronto, Ont., 29th June, 1896.
8573. ECHOES FROM MANHATTAN. (Polka Caprice.) By R. Peggio. Arranged by A. W. Hughes. Willimott H. Billing, Toronto, Ont., 29th June, 1896.
8574. ILLUSTRATED CATALOGUE AND PRICE LIST OF THE JAMES MORRISON BRASS MANUFACTURING COMPANY, LIMITED, 1896. The James Morrison Brass Manufacturing Co., Ltd., Toronto, Ont., 29th June, 1896.
8575. FOSTER'S VEST POCKET CYCLIST'S RUN BETWEEN TORONTO AND MONTREAL. J. G. Foster & Co., Toronto, Ont., 30th June, 1896.
8576. FOSTER'S VEST POCKET CYCLIST'S ROAD MAP FOR THE COUNTY OF YORK. J. G. Foster & Co., Toronto, Ont., 30th June, 1896.
8577. PROSPECTUS SHOWING THE GUARANTEED INCOME ANNUITY PLAN OF THE RELIANCE LOAN AND SAVINGS COMPANY OF ONTARIO. The Reliance Loan and Savings Company of Ontario, Toronto, Ont., 30th June, 1896.
8578. WAYSIDE SONGS. By Mrs. E. A. Isard, Newmarket, Ont., 30th June, 1896.