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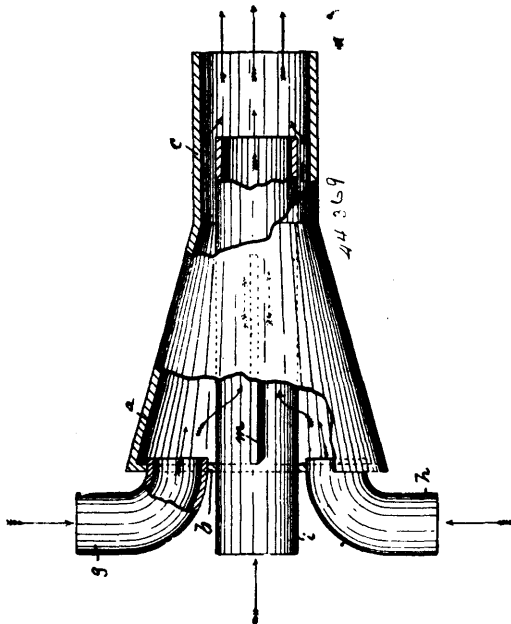
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INVENTIONS PATENTED.

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No. 44,369. Induction Apparatus and Increaser.

(Appareil d'induction et d'augmentation.)



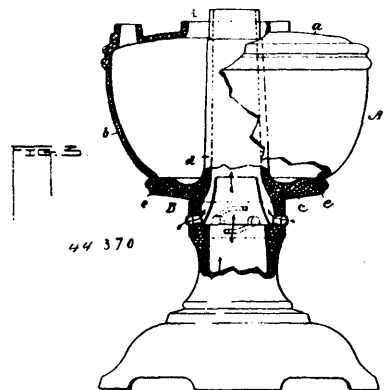
Martin Rose Ruble, Newark, New Jersey, U.S.A., 2nd October, 1893; 6 years.

Claim.—1st. In an induction apparatus, the combination of the air tube *i*, leading from a suitable air forcing apparatus, with the funnel or trumpet-shaped case *a*, enclosing said tube *i*, and closed at one end and ending in a discharge tube *c*, and with a series of one or more suction tubes *g* and *h*, entering the closed end of said case and adapted to convey gas, dust, shavings or similar material, substantially as described. 2nd. The combination of the air conveying tube *i*, flaring case *a*, and discharge tube *c*, with the suction tubes *g* and *h*, entering the closed end of said case *a*, and

designed to convey gas, dust, shavings, etc., to said case *a*, and with the partitions *m*, separating said case *a* into separate compartments, into each of which one of said tubes *g* or *h* enters, substantially as and for the purposes set forth. 3rd. In an induction apparatus, a case into which the suction tubes discharge, divided by suitable partitions into compartments corresponding to the number of suction tubes employed, substantially as described.

No. 44,370. Central Draft Lamp.

(Lampe à courant central.)



Julius Proeger, of Greensburg, Pennsylvania, U.S.A., 2nd October, 1893; 6 years.

Claim.—1st. The method of manufacturing glass central draft lamps, consisting in forming the bowl in two parts separately, one of which parts embodies the central draft tube, and in uniting the two parts by heating and joining the same, substantially as described. 2nd. The method of manufacturing glass central draft lamps, consisting in pressing the top and sides of the bowl, pressing the bottom of the bowl and the central draft tube integral with each other, bending the sides of the bowl, and uniting the bottom of the bowl to the sides by reheating and joining the same, substantially as described. 3rd. The method of manufacturing glass central draft lamps, consisting in forming the bowl with an open bottom forming the central draft tube in a separate piece, and uniting the two parts by heating and joining the same, substantially as described.

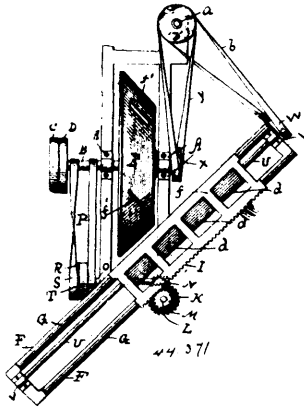
No. 44,371. Wood Barking Machine.

(Machine à décortiquer l'écorce.)

The Hadley & Macdonald Machine Company, assignees of William Hadley and Augustus T. McDonald, all of Shelton, Connecticut, U.S.A., 2nd October, 1893; 6 years.

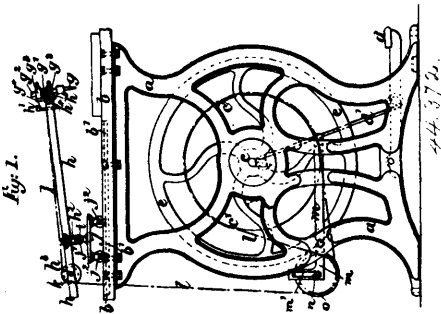
Claim.—1st. In a wood barking machine, the combination of a revolving cutter head, a carriage arranged upon a track in substantially the plane of the driving shaft, but diagonally thereto, mechanism substantially such as described for imparting a backward and forward movement to said carriage, rollers arranged to travel with the said carriage, the axis of the rollers being parallel with the path of movement of the carriage, mechanism substantially such as described for imparting revolution to said rollers while so moving with the carriage, and substantially as specified, whereby the stick to be barked may be placed upon said carriage and receive a rota-

tive movement as the said carriage advances the stick with surface contact with said revolving cutter-head. 2nd. The combination of



a driving shaft, a cutter arranged thereon and so as to revolve therewith, a track arranged in a plane substantially parallel with the plane of said shaft, a carriage on said track, a longitudinal shaft parallel with said carriage, rollers on said shaft, arranged to partake of the revolution of said shaft, but also adapted to move longitudinally with the carriage, the surface of the said rollers roughened and projecting above the upper surface of the carriage, with mechanism substantially such as described to impart longitudinal backward and forward movement to said carriage and rotative movement to said roller shaft and rollers, the said carriage and rollers being arranged in such relation to the revolving cutter-head that the stick placed upon the carriage will rest upon said rollers and receive a longitudinal movement from the carriage and rotative movement from said rollers, substantially as described.

No. 44,372. Machine for Carving and Engraving Wood. (*Machine à sculpter et graver le bois.*)



Thomas Ryland, and Earle Bird, both of Brixton, Surrey, England, 2nd October, 1893; 6 years.

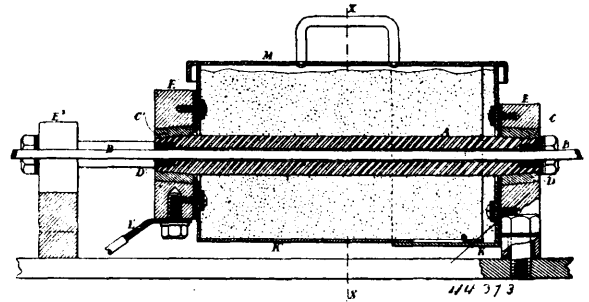
Claim.—1st. In carving or engraving machine, the combination of a driving spindle, a long drum on said spindle, a counter shaft having a normally downward tendency, band pulleys mounted freely on said counter shaft, a cutter frame mounted on a guide parallel with machine front, and carried by a frame mounted on guides at right angles to machine front, band guiding pulleys mounted loosely on a shaft forming part of cutter frame, a tracing pointer and rotary cutter or cutters mounted on front of cutter frame, and cutter driving bands passing partly around the cutter pulleys, guide pulleys on cutter frame, guide pulleys on counter shaft, and partly around the long drum, substantially as herein shown and described. 2nd. In carving or engraving machines, the combination, with suitable driving means of a cutter frame mounted on guides carried by the bed of the machine, and capable of freely moving in any direction over the said bed, and a fixed tracer and rotary cutter or cutters carried by the cutter frame, substantially as herein shown and described.

No. 44,373. Method of Heating Metal Rods in Machinery for Making Nails, etc. (*Méthode de chauffer le métal en barre, etc., pour l'alimentation des machines à faire le clou.*)

Sunens Brothers & Co., Westminster, assignee of Alfred David William, Canonbury, both of Middlesex, England, 2nd October, 1893; 6 years.

Claim.—1st. The herein described method of heating a metal rod, bar or wire that is being fed to a nail making or other like machine,

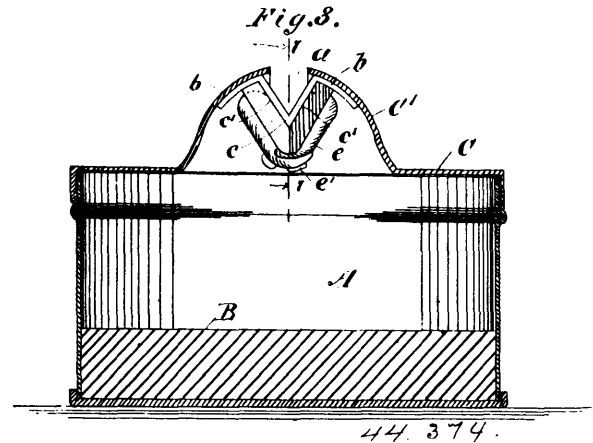
by causing it to pass through an electrically heated tube of carbon or other material of low electrical conductivity. 2nd. The combina-



tion in an electrical heater for rods, bars or wires, &c., of an insulated refractory tube A, fixed sleeve C, and movable sleeve C', refractory pieces D D', spring G, box made in two parts K K', filled with refractory material, and conductors L L', the whole substantially as and for the purposes set forth.

No. 44,374. Chalk Sharpening Implement.

(*Taille-craie.*)



George Hay, Pictou, Nova Scotia, Canada, 3rd October, 1893; 6 years.

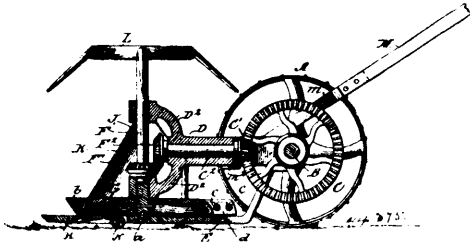
Claim.—1st. The combination, with a hollow base, and a lid having a hollow slotted projection, of a cutter device located in the lid below the slot, substantially as described. 2nd. The combination, with a hollow base, and a lid having a slotted projection, of a pair of divergent cutter blades fixed below the slot, substantially as described. 3rd. The combination, with a hollow base, a lid, and a slotted spherical projection on the lid, of a pair of cutter blades depending from within the projection below its slot, and divergent at like angles on opposite edges, substantially as described. 4th. The combination, with a hollow cylindrical base, a removable lid, and a slotted spherical projection on the lid, of a pair of V-shaped blades sharp on edges that diverge in pairs at like angles, substantially as described. 5th. The combination, with a hollow base, a lid, a hollow slotted projection on the lid, and a pair of cutter blades below the slot, of a wiper device on the cutter device between its blades, substantially as described. 6th. The combination, with a hollow base, a lid, a hollow slotted projection on the lid, and a pair of V-shaped depending cutter blades sharp on edges that diverge in pairs at like angles, of a pliable wiper strip secured on the cutter blades between the pairs of V-shaped sharp edges, substantially as described. 7th. The combination, with a hollow base, a weighty bottom thereon, a removable lid, a slotted spherical projection central on the lid, and a wiper on the projection at its slot, of a pair of cutter blades below the slot in the lid, and a wiper device on the cutter blades between their edges, substantially as described.

No. 44,375. Lawn Mower. (*Tondeuse pour pelouses.*)

Horace L. Freeman and Baxter Shemwell, both of Lexington, North Carolina, U.S.A., 3rd October, 1893; 6 years.

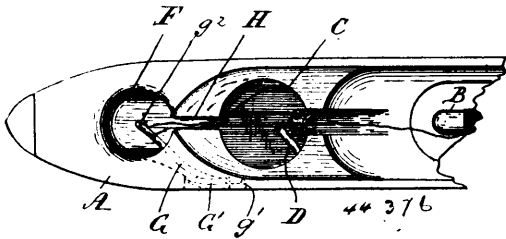
Claim.—1st. The frame D, having a central tubular portion with bifurcated branches at its rear end with bearings for the axle, and with vertical arms D², D², at its front end with bearings for the vertical cutter shaft, and also with horizontal arms D¹, D¹, at its front end, in combination with the axle B, with gear wheel C, the shaft C², arranged within the tubular part of frame D, and carrying

bevel gear C¹ at its rear end, and bevel gear F² at its front end, and the vertical cutter shaft F, arranged in the arms D², the finger



bar plate, and rods I, connecting the same to the horizontal arms D¹, substantially as shown and described. 2nd. The means for adjusting the revolving cutter and subjacent finger bar plate in relation to each other, consisting of the frame arms D¹, D¹, rods I, connecting the same to the finger bar plate, and having nuts f, f¹, on opposite sides of the arms at the upper ends of the rods, the yoke-shaped frame E, with finger bar plate, the revolving cutter shaft and set screw a, tapped through the finger bar plate and forming the step bearing for the cutter shaft, substantially as shown and described. 3rd. The combination with the finger bar plate, of the roller N, lever arm N¹, carrying the same, each having fulcrum bearing n, with adjusting screws n¹, n², on opposite sides of it, substantially as shown and described.

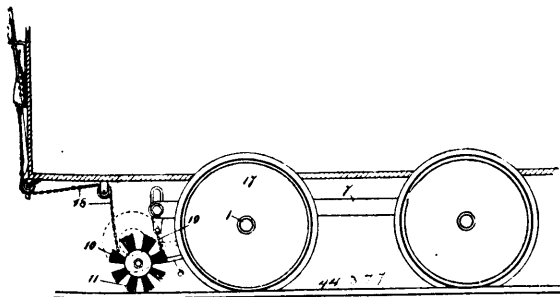
✓ **No. 44,376. Self-Threading Shuttle for Looms.**
(*Navette de métier renvideuse automatique.*)



Joseph H. Nason, Somerville, and Henry M. Hewes, Boston, both in Massachusetts, U.S.A., 3rd October, 1893; 6 years.

Claim.—1st. In combination, shuttle body A, perforated at F, and recessed at F, and a spiral of wire forming an eye, and lining perforation E, with an upwardly bent portion thereof extending into said recess F, in the shuttle body, and constituting the guiding pin, and a bent portion to secure the spiral to the shuttle body, substantially as described. 2nd. A shuttle body having a recess C, eye E, space F, and slot H, in combination with the feeding pin g², leading to the shuttle eye, all substantially as described.

✓ **No. 44,377. Street Rail Cleaning Brush.**
(*Brosse pour nettoyer les rails de rues.*)

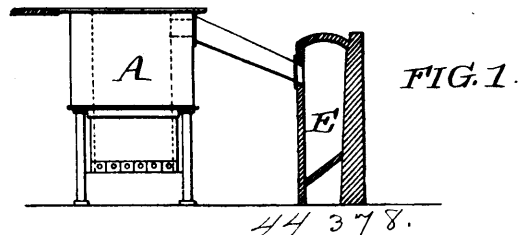


James A. Gowans, Toronto, Ontario, Canada, 3rd October, 1893; 6 years.

Claim.—1st. In a street rail cleaning brush, the combination of the supplemental frame pivotally connected to the car, a spindle journaled in said supplemental frame in advance of the car axle, a rotatable brush mounted on said spindle at each end thereof, a sprocket-wheel mounted on said spindle intermediate said brushes and adapted to rotate therewith, a sleeve encircling the car axle and

sliding there along, a sprocket-wheel mounted on said sleeve, a clutch rigidly secured to said axle and rotating therewith, said clutch adapted to engage with the clutched end of the said sleeve, a bar connected to the supplemental frame, a forked lever pivotally connected to said bar, the forked end of said lever engaging with the hub of the sprocket-wheel mounted on the sleeve, a spring connected to the said lever, said spring and lever when in their normal positions adapted to throw the clutched end of the sleeve into engagement with the said clutch, a sprocket chain passing over the said sprocket-wheel and adapted to transmit motion from the sprocket wheel on the car axle to the sprocket-wheel on the brush spindle, substantially as described. 2nd. In a street cleaning brush, the combination of the supplemental frame pivotally connected to the car, a spindle journaled in said supplemental frame in advance of the car axle, a rotatable brush mounted on said spindle at each end thereof, a sprocket-wheel mounted on said spindle intermediate said brushes and adapted to rotate therewith, a sleeve encircling said car axle and sliding there along, a sprocket-wheel mounted on said sleeve, a clutch rigidly secured to said axle and rotating therewith, said clutch adapted to engage with the clutched end of the said sleeve, a bar connected to the supplemental frame, a forked lever pivotally connected to said bar, the forked end of said lever engaging with the hub of the sprocket-wheel mounted on the sleeve, a spring connected to the said lever, said spring and lever when in their normal positions adapted to throw the clutched end of the sleeve into engagement with the said clutch, a sprocket chain passing over the said sprocket-wheel and adapted to transmit motion from the sprocket wheel on the car axle to the sprocket wheel on the brush spindle, a bracket pivotally secured to each of the said side bars between the car axle and the brush spindle, a spindle mounted in said brackets and wheels mounted on said spindle and adapted to travel along the rail in advance of the car wheel, a slot formed in each of said brackets and a pin secured to the side bars of the supplemental frame projecting through said slot allowing the said bracket a vertical movement, substantially as described. 3rd. In a street rail cleaning brush, the combination of the supplemental frame pivotally connected to the car, a spindle journaled in said supplemental frame in advance of the car axle, a rotatable brush mounted on said spindle at each end thereof, a sprocket wheel mounted on said spindle intermediate said brushes and adapted to rotate therewith, a sleeve encircling the car axle and sliding there along, a sprocket-wheel mounted on said sleeve, a clutch rigidly secured to said car axle and rotating therewith, said clutch adapted to engage with the clutched end of the said sleeve, a bar connected to the supplemental frame, a forked lever pivotally connected to said bar, the forked end of said lever engaging with the hub of the sprocket wheel mounted on the sleeve, a spring connected to the said lever, said spring and lever when in their normal positions adapted to throw the clutched end of the sleeve into engagement with the said clutch, a sprocket chain passing over the said sprocket-wheel and adapted to transmit motion from the sprocket wheel on the car axle to the sprocket-wheel on the brush spindle, a bracket pivotally secured to several of the said side bars between the car axle and the brush spindle, a spindle mounted in said brackets, wheels mounted on said spindle and adapted to travel along the rail in advance of the car, a slot formed in each of said brackets and a pin secured to the side bars of the supplemental frame projecting through said slot, allowing said brackets a vertical movement, and a chain connected to the said supplemental frame and passing up the side of the dash-board, substantially as described.

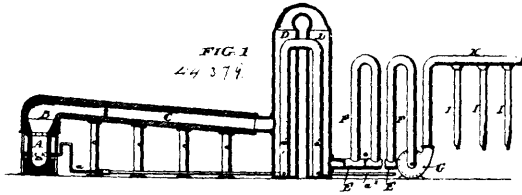
No. 44,378. Method of and Apparatus for Saving Fumes of Lead Sulphide. (*Méthode et appareil pour ménager les fumées de sulfure de plomb.*)



Eayre O. Bartlett, Joplin, Missouri, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. The combination of two or more lead smelting furnaces of the high cupola shaft type with a common system of cool-flues for conducting the gases and fumes therefrom, and a series of fabric screens situated at the end of said flues for separating the fumes from the gaseous constituents of the furnace smoke. 2nd. The method of saving the fumes of lead sulphide driven off in reducing lead ores in high cupola shaft furnaces, which consists in drawing the smoke and fume from a series of such stack furnaces so operating into a common system of cooling flues, and through said flues, to a series of fabric screens whereby said lead sulphide fume is separated unaltered from the furnace gases.

No. 44,379. Process of Making Sublimed Lead Pigment. (*Procédé de fabrication du blanc de plomb sublimé.*)



Eayre O. Bartlett, Joplin, Missouri, U.S.A., 4th October, 1893; 6 years.

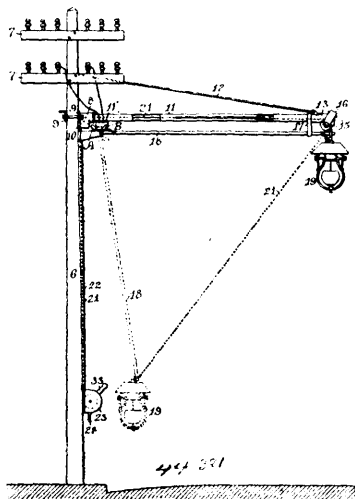
Claim.—1st. The process of manufacturing a sublimed lead pigment which consists in driving off fumes of lead from lead bearing material in suitable furnaces, conducting the fume and products of combustion through fumes connected with the furnaces and maintained at a bright red heat in order to effect the fusion of a part of the fume, and to increase the purity and density of the unfused portion, and separating the purified fume from the gaseous products of combustion by screening. 2nd. The process of manufacturing a sublimed lead pigment, which consists in maintaining a flue of refractory material at a bright red heat by conducting it through the products of combustion from two or more furnaces, driving off lead fumes from material treated in all or a portion of said furnaces and conducting it with the products of combustion through said flue to effect a partial melting of said fumes and increase the purity and density of said fume, and finally separating the purified fumes from the gaseous products of combustion by screening.

No. 44,380. Method of Treating Roasted and Ground Coffee. (*Méthode de traitement de café grillé et moulu.*)

Samuel J. Bradley, Paris, Texas, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. As an improved article of manufacture and commerce, roasted and ground coffee with which is incorporated a suitable quantity of egg albumen, after which the coffee thus treated is pressed into blocks or tablets of suitable size and shape and then dried, substantially as and for the purpose set forth. 2nd. As a merchantable article of manufacture, compressed coffee blocks or tablets consisting of roasted and ground coffee mixed with egg albumen, pressed into shape and dried, substantially as and for the purpose set forth.

No. 44,381. Support for Electric Lamps. (*Support pour lampes électriques.*)

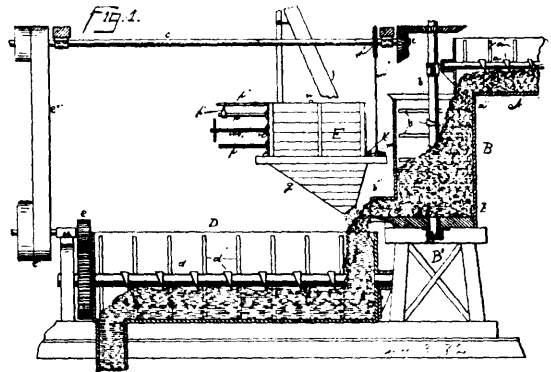


Augustus Wright, Providence, Rhode Island, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. In an electric lamp support, the combination, with a mast arm suitably supported, a pivoted drop arm, a lamp secured to the end thereof, and a metallic band by which the lamp is sustained, of a rocking bearing, over which the band is passed, carried by the outer end of the mast arm, as described. 2nd. In a support for electric lamps, the combination, with a mast arm suitably supported, and a hollow fitting 13 secured thereto, of the pulley frame 14 pivoted in the fitting, a pulley 15 journalled between the ends of

said frame, a metallic band 21 bearing on said pulley, and a lamp secured to the end of said band, as described. 3rd. In a support for electric lamps, the combination, with a mast and an arm extending therefrom, of a capstan case 23, a drum 24 carried by the shaft 25, having the pin 26 journalled therein and having a groove to receive the band 21, a brake band 27 extending around said drum and operated by the lever 28, extending through and pivoted to the bottom of the case, a ratchet wheel 29, also secured to said shaft, a pawl 30, having the depending arm 31 pivoted to the back of the case and engaging said ratchet, a crank shaft 32 having the tapering enlargement 35, an axial recess formed in said shaft, and a transverse slot cut through the end portion thereof and adapted to engage the transverse pin 36, a groove 37 formed around said crank shaft, and a counterweighted pivoted plate 38, adapted to engage in said slot, and to be operated by the arm 41, as described. 4th. The combination, with the pole 6, and a capstan secured thereto, the hollow casting 8 secured to the upper portion thereof by the yokes 9 9, and suitable bolts, a pulley 10 journalled within said casting, a tubular mast arm 11 rigidly secured in the end of said casting and having the depending fingers 17, and the upper stay 12 secured to the outer end of said arm, the hollow fitting 13 secured to the end of the arm, a pulley frame 14 supported by said fitting, and a pulley 15 journalled between the ends of said frame, of the tubular rigid stay 18 pivoted to the mast 6, and a metallic band 21, secured to the outer end of said stay, passing over said pulleys 10 and 15, and secured at the outer end to the capstan drum contained within said case 23, as and for the purpose described. 5th. In a support for electric lamps, the combination, with a mast, a rigid mast arm, and connecting blocks pendent therefrom and connected in the main circuit, of a pivoted drop arm carrying contact fingers and local electrical wires connected therewith. 6th. The combination, in a support for electric lamps, with a mast, the rigid tubular mast arm 11, the pendent connecting blocks 11' supported therefrom, and the main conductors connected with said blocks, of the drop arm 18 pivoted to a bracket on said mast, the contact fingers A and B carried by the drop arm, and the local conductors contained within the arm and connected with the fingers B, as and for the purpose described.

No. 44,382. Process of and Apparatus for Making Portland Cement. (*Procédé et appareil pour faire le ciment de Portland.*)

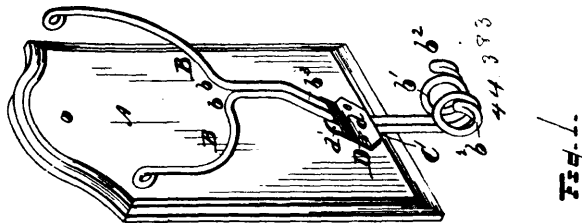


Henry Froehling, Richmond, Virginia, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. The combination with the pug mill, the brick machine connected to its discharge opening, of the feed box consisting of a body having a hopper shaped bottom and the discharge orifice therefrom, longitudinal grooved grinding rollers mounted in said body above the discharge orifice, and adapted to be rotated inwardly, and the vertical partition above said roller, reciprocated longitudinally to said rollers by a hand screw connected to it and passing through a nut on said body, said brick machine and feed box being arranged to commingle their discharge, and a second pug mill receiving said commingled matters, and a scale bar attached to said body, and a pointer mounted upon said partition connected to said partition and passing outward through said body and provided with a pointer upon its outer end, to indicate upon said scale the distance of the longitudinal traverse of the partition. 2nd. In a mixing apparatus, a feed box consisting of a body having a hopper shaped bottom and discharge orifice therefrom, longitudinal rollers mounted in the bottom of the body, provided with V-shaped longitudinal grooves and adapted to be rotated inwardly, and a vertical sliding partition in said body, standing transverse to said rollers, and a hand screw passing through a nut upon said body and centrally connected to said partition, whereby the latter is adjusted longitudinally above said rollers and longitudinally thereto. 3rd. The combination with the pug mill, the brick machine receiving the discharge therefrom, of the feed box provided with feed rolls having longitudinal V shaped grooves and adapted to be rotated inwardly, and means to adjust it longitudinally in the box to vary the feed of the rollers, and the pug mill receiving the commingled discharges from said brick machine and feed box. 4th. The combination with the pug

mill, the brick machine receiving the discharge therefrom, of the feed box provided with the feed rolls having longitudinal V shaped grooves and adapted to be rotated inwardly, and with a sliding partition and means to adjust it longitudinally in the box to vary the feed of the rollers, and a pug mill receiving the commingled discharge from said brick machine and feed box, a scale and a pointer moved by the traverse of the partition aforesaid, to indicate the feed from the feed box.

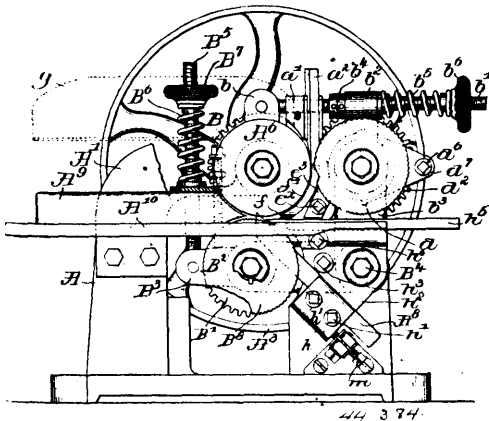
No. 44,383. Hat, Coat and Umbrella Rack.
(*Porte-chapeau, habit et parapluie.*)



Emerson W. Trout, Detroit, Michigan, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. As a new article of manufacture, a combined hat rack or holder consisting of two wires, each bent at the top to form half of a hat holder, and supported at the centre and coiled at the bottom in opposite directions to form coat and umbrella holders, substantially as described. 2nd. As a new article of manufacture, a combined hat rack and holder consisting of two wires bent at the top in opposite directions to form a hat holder, and lying alongside in the central portion and coiled at the bottom in opposite directions to form coat and umbrella holders, in combination with a board or frame provided with a groove into which the two wires are laid, and a holding piece for retaining the wires in said groove, and supporting the same in a fixed position, substantially as described. 3rd. As a new article of manufacture, a hat rack and holder, consisting of a wire or wires formed as shown and described, in combination with the board A, and the holding piece D, substantially as described. 4th. As a new article of manufacture, a hat rack consisting of a wire or wires so formed as to provide a hat holder at the top, and supported wholly at the lower end of said wire or wires, substantially as described. 5th. In a hat rack, a supporting frame having a portion adapted to rest on or be sunk into a supporting frame, and lying parallel therewith, and bent upward to carry the holder away from said frame, in combination with a holding piece provided with a notch *d*², adapted to embrace the elevated portion and hold the same from turning, substantially as described. 6th. In a device as described, two wires, forming the respective side portions, said wires soldered at the centre to prevent them from rolling, substantially as described. 7th. A combined coat and umbrella holder consisting of two wires having contiguous support coiled in opposite directions, and forming a support for the umbrella, between the portions of the first turn of each coil, substantially as described. 8th. The combination of a hat holder as described, and the locking bail E, substantially as described.

No. 44,384. Welt Making Machine.
(*Machine pour faire les trépointes.*)

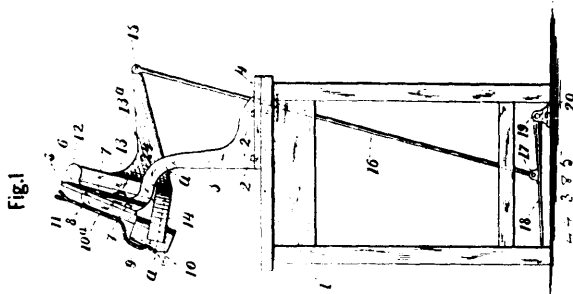


Zachary F. French and William C. Meyer, both of Boston, Massachusetts, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. In a welt making machine, the wheels A^o, B^s, between which the leather is passed, and a slitting knife, combined with wheel *d*, and a lifter and guide to turn away the welt as cut

from the side, and a skiving knife supported above the wheel B^s, and adapted to skive the edge of the welt, substantially as described. 2nd. In a welt making machine, the wheels A^o, B^s, between which the leather is passed, and a slitting knife, combined with wheel *d*, and a lifter and guide to turn away the welt as cut from the side, and a skiving knife supported above the wheel B^s, and adapted to skive the edge of the welt, and a grooving knife to groove the welt on its passage between the rolls *d* and A^o, substantially as described. 3rd. In a welt making machine, the wheels A^o, B^s, and *d*, combined with the splitting knife *h*^s, its carrier, and the edge skiving knife *a*² and its holder, substantially as described. 4th. In a welt making machine, the wheels A^o, B^s and *d*, and the splitting knife, combined with groover and the welt lifter, substantially as described. 5th. In a welt making machine, the wheels A^o, B^s and *d*, combined with the splitting knife *h*^s, its carrier, and the edge skiving knife *a*² and its holder, and with the lifter to act as a guide, substantially as described. 6th. In a welt making machine, the wheels A^o, B^s, between which the leather is passed, and a slitting knife, combined with wheel *d*, and a lifter and guide to turn away the welt as cut from the side, and a skiving knife supported above the wheel B^s, and adapted to skive the edge of the welt, and a receiver for the welt as it emerges from between the wheels *d* and A^o, substantially as described. 7th. The wheels A^o, B^s, their support, a spring to keep them pressed toward each other, a work support, a knife carrier *h*^s, a slitting and a splitting knife attached thereto, and an adjusting device for said carrier, combined with a wheel *d*, a welt lifter and guide, and a skiving and a grooving knife, substantially as described.

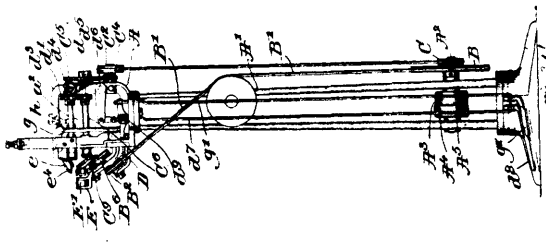
No. 44,385. Machine for Forming Collars.
(*Machine pour former les collets.*)



Adelbert W. Cummings, Dunkirk, New York, U.S.A., 4th October, 1893; 6 years.

Claim.—The combination of a stationary hollow former and a means for heating it, with hollow forming jaws pivoted to the upper portion of the frame so as to have a swinging motion to or from the former, a means substantially as above described for keeping said forming jaws away from the former and in a normal position, a connecting rod pivoted to the forming jaw arm, and a treadle for forcing them forward when shaping a collar, substantially as described.

No. 44,386. Channelling Machine.
(*Machine à canneler.*)

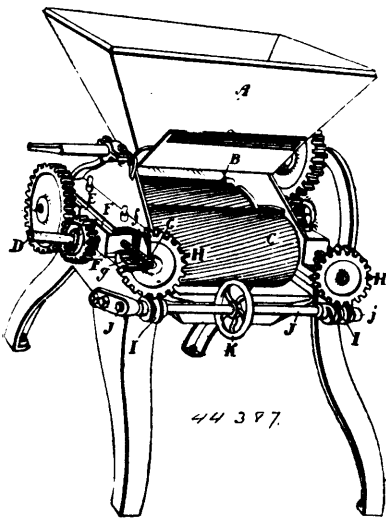


Zachary T. French and William C. Meyer, both of Boston, Massachusetts, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. In a channelling machine, the following instrumentalities, viz., a channel knife, a bevelled face work-supporting wheel adapted to sustain the outer sole to be channelled, the said wheel being provided with gear teeth, a movable lever, a yoke pivoted thereon, a rotating bevel faced presser wheel, provided with gear teeth and mounted on said yoke, and adapted to bear on the welt, a shaft carried by said yoke and having a gear to engage the teeth of said presser wheel, a shaft having a gear to engage the teeth of the said work supporting wheel, and suitable gearing to rotate the said shafts and actuate said wheels at substantially the same surface speed to thus feed the sole and shoe through the machine, substantially as described. 2nd. A cutting knife, means to reciprocate the same, a bevel faced wheel adapted to support the outer edge of the sole, a presser wheel having a bevelled face to bear

on the welt of the shoe, and suitable gearing to rotate the said wheels in unison at substantially the same surface speed to feed the sole and shoe through the machine while the cutter acts. 3rd. A feeding and a supporting wheel adapted to act upon and sustain the edge of the sole outside the line of the channel, combined with an opposed presser wheel or roll to bear on the welt portion of the shoe at the opposite side of the sole, a bearing yoke or carrier for the said presser wheel or roll, and an upper gage located near the said presser wheel or roll and carried by the said yoke and adapted to bear against the upper on the last and rise and fall with the presser roll, substantially as described. 4th. In a channelling machine, the following instrumentalities, viz., a channel knife, a wheel like support for the outer face of the sole to be channelled, and a bevelled face presser wheel to bear on the welt portion of the shoe at the opposite side of the sole, combined with devices to move the presser wheel substantially at right angles to the channel knife during the cutting of the channel, to thereby vary the distance of the channel from the median line of the sole, substantially as described. 5th. In a channelling machine, the following instrumentalities, viz., a channel knife, a wheel like support for the outer face of the sole outside the channel, a bevel faced presser roll to bear against the welt portion of the sole, an upper gage to bear against the upper next the edge of the last, and devices to move the presser roll and upper gage in unison toward and from the vertical plane occupied by the edge of the channel knife, substantially as described. 6th. In a channelling machine, the following instrumentalities, viz., a channel knife, a bevel faced press or roll to bear against the welt portion of the sole, an upper gage to bear against the upper next the edge of the last, devices to move the presser roll and upper gage in unison toward and from the vertical plane occupied by the edge of the channel knife, and devices to determine the extent of the lateral movement of the said presser roll and upper gage, substantially as described. 7th. In a channelling machine, the following instrumentalities, viz., a channel knife, a bevelled face feed wheel adapted to engage near its edge the outer sole to be channelled and provided with teeth, a presser wheel mounted just above it and having a bevelled face to bear on the welt, said presser wheel being provided with gear teeth, gears engaging the teeth of said feed wheel and presser wheel, suitable gears engaging the teeth of said wheels, parallel shafts carrying said gears, gearing to rotate the said shafts in unison at substantially the same surface speed to feed the sole and shoe through the machine, and an independent support for the central part of the sole, substantially as described. 8th. The stand, and the bevel wheel C⁹, having a bevelled face to support the edge of the sole, combined with the frame E, having the roller support E¹, to support the central part of the sole, and an adjusting device for said frame, substantially as described. 9th. The bevel faced wheel C⁹, the presser wheel c, co-operating therewith, means to rotate the said wheel, and a wheel E¹, to support the sole near its median or centre line, combined with a cutter located between said wheels C⁹ and E¹, to operate, substantially as described.

No. 44,387. Grain Crusher. (*Machine à broyer le grain.*)



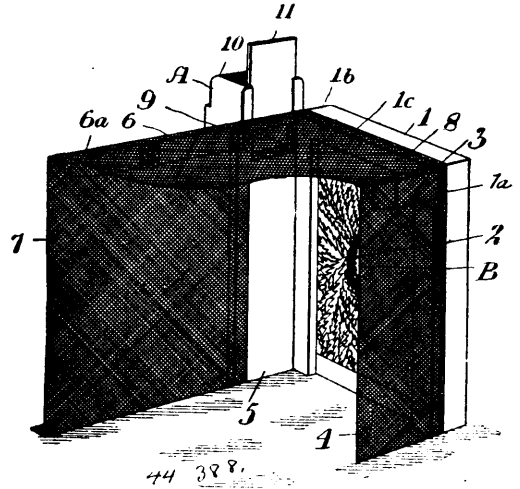
James Irving, Seaforth, Ontario, Canada, 4th October, 1893; 6 years.

Claim.—1st. In a grain crusher, the combination, with the stationary roll held in stationary bearing blocks, the adjustable roll C, journaled in bearing blocks E, held in guideways F, F, of the partially threaded spindle G, connected to or in contact with the bearing blocks and passing through the end f, of the guideways and gearing connecting the spindles G, whereby both bearing blocks may be adjusted simultaneously, as and for the purpose specified. 2nd.

In a grain crusher, the combination, with the stationary roll held in stationary bearing blocks, the adjustable roll C, journaled in bearing blocks E, held in guideways F, F, of the partially threaded spindle G, connected to or in contact with the bearing blocks and passing through the end f, of the guideways, the worm wheels G, secured in the ends of the spindles G, the worms i, secured in the shaft J, and the hand wheel K, arranged as and for the purpose specified.

No. 44,388. Trap for Horn Flies.

(*Piège pour mouches à cornes.*)

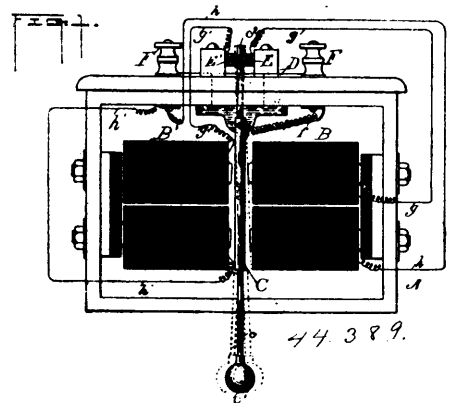


Robert Henry, Guthrie, South Dumfries, Ontario, Canada, 4th October, 1893; 6 years.

Claim.—1st. In a trap for horn flies, the combination of a frame, a brush in said frame, means for permitting the passage of cattle through said brush, and means for securing the flies after being removed by said brush, substantially as described. 2nd. In a trap for horn flies, the combination of a frame, a brush mounted in said frame, said brush having an opening to permit the passage of the cattle therethrough, hinged arms connected to the top of said frame, fabric netting secured to the top and sides of said arms to form a trap for flies after being removed by said brush, a cage, and an opening from said trap into said cage, substantially as described.

No. 44,389. Electro-Magnetic Bell.

(*Cloche électro-magnétique.*)

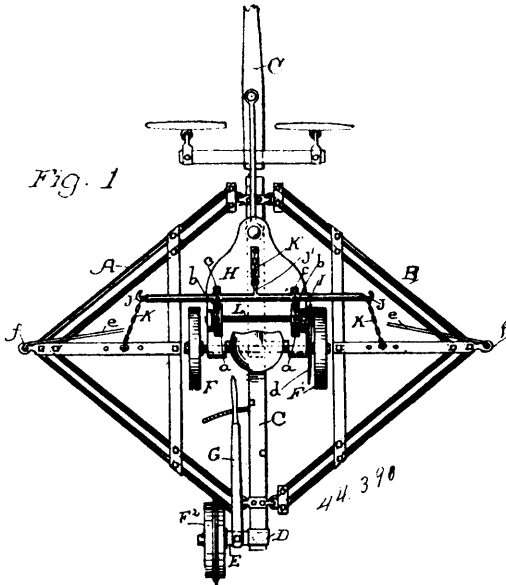


James Jasper Ross and George R. Holden, both of Detroit, Michigan, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. In an electric bell ringing apparatus, the combination, with two or more electro-magnets, of the armature lever pivoted intermediate the ends thereof between said magnets and carrying a hammer at one end, the bell or bells arranged in proximity to said hammer, the contact springs resting against opposite sides of the other arm or end of said armature lever and circuit connections, substantially as described, normally closed through said armature lever and both of said magnets and contact springs, whereby a continuous bell ringing action is produced by the reciprocal action of the magnets, substantially as set forth. 2nd. A continuous bell ringing apparatus, comprising two or more electro-magnets, an armature lever pivoted intermediate the ends thereof between said magnets, a hammer on the long arm of said lever, a suitable bell or

bells arranged in proximity to said hamer, contact springs resting against opposite sides of the short arm of said lever and tending to normally centre the same between the magnets, and electric circuit connections normally closed through said armature lever and both of said magnets and contact springs, whereby a rapid vibratory movement of the lever may be produced by the reciprocal action of the magnets and springs, thus causing the hammer to strike opposite sides of the bell or bells alternately in quick succession, substantially as described. 3rd. In combination with the electro-magnets, the rocking armature lever pivotally supported intermediate the ends thereof between said magnets, a suitable hammer secured to the longer arm of said lever, the guide plate having the elongated slot in which the short arm or extension of said lever works, the spring plates secured in frictional contact with opposite sides of said extension, and suitable circuit connections through said magnets, armature lever and springs, whereby said springs will be automatically polished, so as to ensure perfect electrical contact between the same and said armature lever, substantially as described.

No. 44,390. Cultivator. (Cultivateur.)



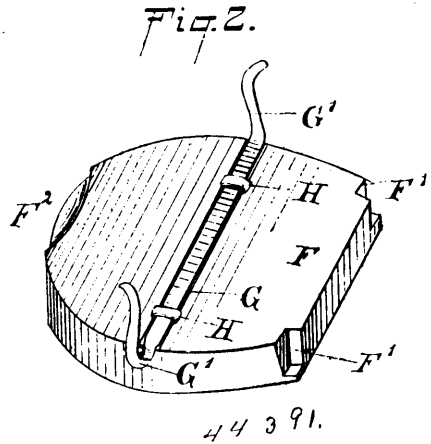
Thomas J. Hubbell, Santa Cruz, California, U.S.A., 4th October, 1893; 6 years.

Claim—1st. A cultivator consisting of a triangular frame, a draft pole attached thereto in line with one of the sides, supplemental teeth carrying bars hinged to the other sides of the triangle, a lever and connection by which they may be turned about their hinges, and swivel and steering wheels upon which the angles of the frame are supported, substantially as herein described. 2nd. A cultivator consisting of a triangular tooth carrying frame, a draft pole attached thereto in line with the longer side of the triangle, an axle having a flanged bearing wheel at one end, and the opposite end adapted to swivel about a vertical axis and support at the rear of the frame, a lever connected with the axle, whereby it may be turned, and rack which is engaged by the lever to hold it at any desired angle, substantially as herein described. 3rd. A cultivator consisting of the central draft bar, triangular frames hinged upon either side of the bar and adapted either to carry cultivator teeth or cutters, a shaft journalled across the seat platform having projecting arms at the ends connecting with the triangular frames, and a central arm connecting with the central draft bar, a second shaft journalled upon the platform having an operating lever connected with it, a segment *a*, and chain *b*, connecting with the lever arm upon the first named shaft, whereby the latter may be rotated and the frame timbers raised or depressed, substantially as herein described. 4th. A cultivator consisting of the triangular frames connected together upon a central line, a short axle detachably connected with the central frame timber, a vertical swivelled post attached to the rear end of said timber, having the upper end adapted to receive one end of the axle from which the wheel has been removed, a lever arm projecting from said axle, and a rack extending outwardly from the side of the seat and engaged by the lever arm, whereby the wheel may be turned to travel more or less parallel with the line of travel of the machine, and act as a rudder wheel therefor, substantially as herein described. 5th. A harrow consisting of the sections arranged longitudinally in line of travel with the draft and draft tongue, a short axle connected with the longitudinal central timber, and wheels mounted upon the ends of said axle within the exterior projecting frames of the harrow, a lever fulcrumed upon the axle and connected with the central frame timber, whereby the latter may be raised or depressed, cultivator

teeth fixed to the triangular frames, levers fulcrumed upon the seat platform, and rods connecting said levers with the hinged bars, whereby the latter may be turned up or down about their hinges to throw the cultivator teeth in or out of the ground, substantially as herein described. 6th. A harrow and cultivator consisting of the triangular frames connected together upon a central line, with a draft tongue secured to the front end of the frame, an axle removably attached to the central timber, and a lever fulcrumed upon said axle and connected with the central timber of the harrow, substantially as herein described.

No. 44,391. Moccasin Attachment.

(Attache pour mocassins.)

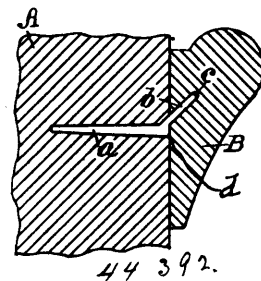


James R. Russell, Hopewell Hill, New Brunswick, Canada, 4th October, 1893; 6 years.

Claim.—1st. A moccasin attachment comprising a flat iron plate bent in U-form, and having calks at the ends and middle and means, substantially as described, for removably attaching the said plate on the rear or heel end of the moccasin, substantially as shown and described. 2nd. A moccasin attachment comprising a flat iron plate bent in U-form, and having calks at the ends and middle, the said plate being also provided with tapped screen holes, and flat headed screws passing through the soles of the moccasin to engage the said tapped holes to fasten the plate to the moccasin, substantially as shown and described. 3rd. A moccasin attachment comprising a flat iron plate bent in U-form and having calks at the ends and middle, means, substantially as described, for removably attaching the said plate on the rear or heel end of the moccasin, and a heel block provided with recesses for the said calks, and adapted to engage the under side of the said plate, substantially as shown and described. 4th. A moccasin attachment comprising a flat iron plate bent in U-form, and having calks at the ends and middle means, substantially as described, for removably attaching the said plate on the rear or heel end of the moccasin, and a bar secured on the said heel block, and having bent ends forming spring clamps for engagement with the moccasin to hold the block in place, substantially as shown and described.

No. 44,392. Means for Hanging Mouldings.

(Moyen de suspendre des moulures.)



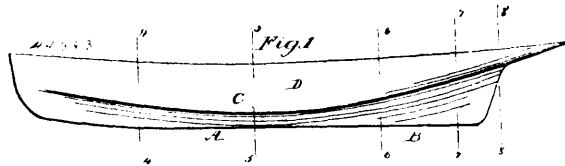
Nickolaus Hoffend, Rochester, New York, U.S.A., 4th October, 1893; 6 years.

Claim.—A moulding having a continuous longitudinal kerf or channel formed in its rear surface, in combination with nails, each having its head formed with a surface at right angles with the shaft or body of the nail to receive the stroke of the hammer in driving, and an inclined extended part at one side of the head, the latter,

with its extended part, being received in said kerf or channel in the moulding when the latter is put to place on the nails, substantially as shown, and for the purpose specified.

No. 44,393. Method of making Hulls of Vessels.

(Méthode de faire les coques de vaisseaux.)



Patrick O'Brien, Presbytery, Riverhead, St. Johns, Newfoundland, 4th October, 1893; 6 years.

Claim.—1st. The hereinbefore described improvement in the construction of hulls of vessels, which consists in constructing said hulls with a bottom extending upwardly from the keel, said bottom being concaved in transverse direction, and sides inclined inwardly from the top of the hull towards the bottom, said bottom and sides meeting along a sharp edge to form bilges which are adapted to serve as side keels, substantially as set forth. 2nd. The hereinbefore described improvement in the construction of hulls of vessels, which consists in constructing said hulls with a bottom extending upwardly from the keel, said bottom being convex in longitudinal and concaved in transverse direction, and essentially straight sides inclined inwardly from the top of the hull towards the bottom, said bottom and sides meeting along a sharp edge to form bilges which are adapted to serve as side keels, substantially as set forth. 3rd. The hereinbefore described improvement in the construction of hulls of vessels, which consists in constructing said hulls with a bottom extending upwardly from the keel, said bottom being convex in longitudinal and concaved in transverse direction, the concavity increasing towards the stern, and essentially straight sides inclined inwardly from the top of the hull towards the bottom, the portion of the sides near the stern being convex, and the inclination of the sides increasing from one end of the vessel to the other, the said bottom and sides meeting along a sharp edge to form bilges which are adapted to serve as side keels, substantially as set forth with reference to the accompanying drawings. 4th. A vessel's hull having a bottom extending upwardly from the keel, said bottom being concave in transverse direction, and sides inclined inwardly from the top of the hull towards the bottom, said bottom and sides meeting along a sharp edge to form bilges which are adapted to serve as side keels, substantially as set forth. 5th. A vessel's hull having a bottom extending upwardly from the keel, said bottom being convex in longitudinal and concave in transverse direction, and essentially straight sides inclined inwardly from the top of the hull towards the bottom, said bottom and sides meeting along a sharp edge to form bilges which are adapted to serve as side keels, substantially as set forth. 6th. A vessel's hull having a bottom extending upwardly from the keel, said bottom being convex in longitudinal and concave in transverse direction, the concavity increasing towards the stern, and essentially straight sides inclined inwardly from the top of the hull towards the bottom, the portion of the sides near the stern being essentially convex and the inclination of the sides increasing from one end of the vessel to the other, the said bottom and sides meeting along a sharp edge to form bilges which are adapted to serve as side keels, substantially as set forth with reference to the accompanying drawings. 7th. The improved vessel's hull, substantially as illustrated in the accompanying drawings and described with reference thereto.

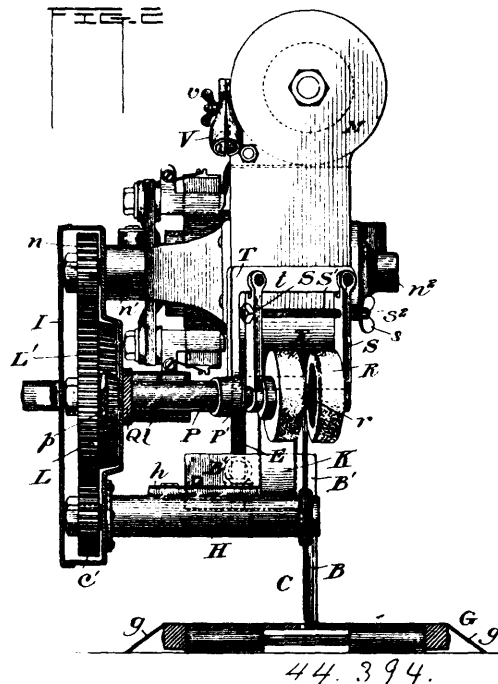
No. 44,394. Cloth Cutting Machine.

(Machine à découper le drap.)

John Wolf, junr., and Jacob Block, both of Cincinnati, Ohio, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. A cloth cutting machine, comprising the foot plate having a standard rising therefrom, the cloth lifting plate fitting loosely around said foot plate, a motor mounted on said standard, a rotary cutter journaled below said motor, and means arranged to impart motion from the motor to the cutter, substantially as described. 2nd. In a cloth cutting machine, the combination, with the foot plate and cutting mechanism supported thereon, of the gravitating cloth lifting plate fitting loosely about said foot plate flush with the upper surface thereof and having its sides and ends inclined outwardly and downwardly therefrom, substantially as described. 3rd. In a cloth cutting machine, the combination, with the foot plate having the standard rising therefrom and supporting the cutting mechanism, of the cloth lifting plate surrounding said foot plate flush with the upper surfaces thereof and having its sides and ends inclined downwardly and outwardly from such surface, substantially as described. 4th. In a cloth cutting machine, the combination, with the foot plate having the standard thereon, of the rotary cutter journaled at one side of said standard, the rotary electric motor mounted over said cutter so as to throw a preponderance of its weight on one side of the standard, the cutter shaft, the

armature shaft of the motor, and the framing of the machine being extended laterally at the opposite side of the standard so as to over-



hang the foot plate and counterbalance the weight, a pinion on each of said shafts and an intermediate gear wheel journaled in said framing and meshing with said pinions whereby the several parts of the machine are assembled in compact form and the weight on opposite sides of the standard is counterbalanced while the centre of gravity is lowered so as to balance and steady the movements of the machine and impart a positive motion to the cutter from the armature shaft of the motor, substantially as described. 5th. In a cloth cutting machine, the combination, with the foot plate having the standard thereon, of the rotary cutter journaled in a frame supported by said standard, a rotary motor mounted over the cutter, gearing arranged to impart motion from the motor to the cutter and a casing enclosing said gearing, substantially as described. 6th. A cloth cutting machine, comprising the foot plate having the standard rising therefrom, the frame supported by said standard so as to overhang the foot plate at one side, the casing supported above said foot plate at said side thereof, an arbour extending from said casing and supporting a rotary cutter adjacent to said standard, a rotary electric motor mounted over said cutter with its shaft extending laterally to said casing, and spur gearing enclosed in said casing and adapted to transmit motion from the motor to the cutter, substantially as described. 7th. In a cloth cutting machine, the foot plate having a plain upper surface with a standard rising therefrom and supporting a rotary cutter, and mechanism for rotating the cutter, in combination with the cloth lifting plate fitting loosely about said foot plate with its inner edges normally flush with the upper surface thereof and sloping outwardly therefrom, said cloth lifting plate being free to rise and fall independently of the foot plate, substantially as described. 8th. In a cloth cutting machine, the rectangular foot plate having a plain top with a standard rising therefrom and supporting a rotary cutter and its actuating mechanism, in combination with the cloth lifting plate having the rectangular opening to receive said foot plate and inclined outwardly and downwardly therefrom at its sides and ends, the inclined portion of the cloth lifting plate at one end being lengthened so as to form an extended gently sloping surface in advance of the cutter, substantially as described. 9th. In a cloth cutting machine, the foot plate mounted on rollers and having a standard rising therefrom and supporting a rotary cutter and its actuating mechanism, in combination with the gravitating cloth lifting plate fitting loosely about said foot plate so as to permit a free vertical movement thereof, said cloth lifting plate having sloping sides and ends the inner edges of which are normally flush with the upper adjacent edges of the foot plate, substantially as described. 10th. The combination, with the foot plate of the standard, the post adjustably secured to said standard, the motor mounted upon said post, the rotary cutter journaled in a depending portion of the motor supporting frame and in gear with said motor, an elevating device for raising and lowering the post, and means for securing the parts in the desired position, substantially as described. 11th. The combination, with the foot plate, of the standard, the post adjustably secured to said standard, the motor mounted upon

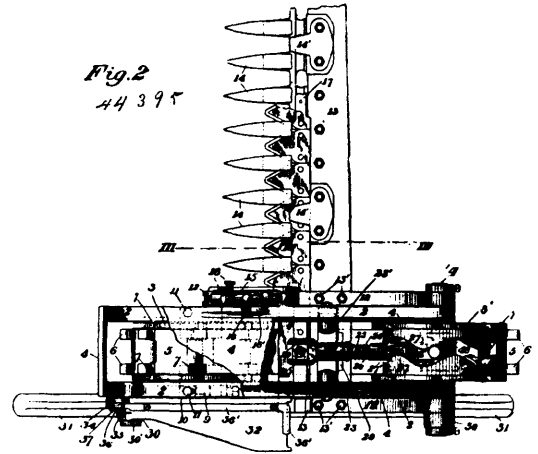
said post, the rotary cutter journaled in a depending portion of the motor supporting frame and in gear with said motor, and an elevating device for raising and lowering the post, comprising a screw-threaded rod depending from the main frame, a bevel wheel screwed on said rod, a similar bevel wheel meshing therewith fixed on a rotatable stud or arbour, and a clamp adapted to release or secure the rod against rotation, substantially as described. 12th. In combination, with the cutter and its actuating mechanism, the notched segment, and the vertically and laterally swinging handle provided with a detent for engaging the notches of the segment, substantially as described. 13th. In combination, with the rotary cutter, the grinding discs supported obliquely to the axis thereof, a tension device for holding the discs in yielding engagement with opposite sides of the cutter, and means for adjusting said device so as to vary the pressure upon the cutter at will, substantially as described. 14th. In combination with the rotary cutter, the swinging bracket arm and means for securing the same in the desired position, the shaft projecting obliquely from said arm, the grinding discs keyed on said shaft and engaging opposite sides of the cutter, the spring for separating said discs, a tension device for holding the discs in yielding engagement with the cutter, and means for varying the tension, substantially as described. 15th. In combination with the rotary cutters, the shaft extending obliquely to the axis thereof, the radially adjustable support for said shaft, a pair of grinding discs placed on said shaft so as to rotate therewith in contact with opposite sides of the cutter, means for adjusting the discs toward or from each other and sustaining them in yielding contact with the cutter, and a motor geared to said shaft and cutter so as to rotate the same, substantially as described. 16th. In combination with the rotary cutter, the shaft extending obliquely to the axis thereof, the radially adjustable support for said shaft, a pair of grinding discs placed on said shaft so as to rotate therewith in contact with opposite sides of the cutter, a spring interposed between said discs and tending to force them apart, means for adjusting the discs toward or from each other and sustaining them in the adjusted position in yielding contact with the cutter, and means for rotating the discs and cutters, substantially as described. 17th. In combination with the rotary cutter, the shaft extending obliquely to the axis thereof, the hanging bars pivoted at one end and having their opposite end loosely fitted on said shaft, the rod connecting said bars, the adjusting nut on said rod, the spring interposed between said nut and one of said bars, the grinding discs mounted on said shaft between said bars so as to rotate with the shaft, in contact with opposite sides of the cutter, and the spring tending to force the discs apart, substantially as described. 18th. In combination with the foot plate having a plain top, the standard mounted thereon near one side and end, the frame adjustably secured to said standard so as to overhang the side of the foot plate opposite the standard, the rotary cutter journaled in a depending portion of the frame, the rotary electric motor mounted at one side of the frame centrally above the cutter, a casing secured at the opposite side of the frame, and a train of spur gearing housed in said casing and adapted to impart motion from the motor to the cutter, substantially as described. 19th. The combination in a cloth cutting machine, with the cutter and its actuating mechanism, of the lamp, and means for changing the position of the lamp in respect to the cutter and securing it in the desired position, substantially as and for the purpose set forth. 20th. The combination in a cloth cutting machine with an electrically actuated rotary cutter, of an electric lamp, and means for adjusting and securing the lamp in the desired position in respect to the cutter, comprising a knob upon the lamp socket, a bifurcated clamp embracing said knob, and means for tightening the clamp so as to secure the lamp in the desired position, substantially as described.

No. 44,395. Mowing Machine. (Faucheuse.)

Simon L. McCulloch, Wheeling, West Virginia, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. In a mowing machine, the combination with a finger bar and a vertically movable support carrying the same, of a rigid main frame independent of said support, and situate directly above the finger bar, said frame having an upwardly extending recess to permit vertical motion of said parts, substantially as described. 2nd. In a mowing machine, the combination with the finger bar, of a finger bar support extending lengthwise of the machine and movable in a vertical direction, a lifting and adjusting rod freely movable upwardly, and stops adapted to hold the finger bar from descending, substantially as described. 3rd. In a mowing machine, the combination with the finger bar, of a finger bar support extending lengthwise of the machine and movable in a vertical direction, a lift rod at one end of the support, and means for supporting said rod in different positions, said rod being freely movable upwardly, substantially as described. 4th. A mowing machine, having but two main frame supporting and driving wheels arranged in tandem and mechanically connected so as to combine the tractive forces of the two wheels, a finger bar and reciprocating knife located in a line which passes between the wheels, and a power connection, connecting the knife with one of the wheels, substantially as described. 5th. A mowing machine, having all its main frame supporting driving wheels arranged in tandem and mechanically connected, so as to combine the tractive forces of the said wheels, a finger bar and knife, supports radially supporting the finger bar from the axis of

one of said wheels, and a power connection connected with the knife and deriving its power from the wheel, substantially as



described. 6th. In a mowing machine, the combination with a finger bar having supporting arms rigidly attached thereto at the machine end and mounted pivotally on an axis transverse to the machine, said bar being freely movable upwardly by obstruction in the field independently of the machine frame, of a carrying support or wheel at the outer end of the finger bar and held thereby with its axis substantially in the axial line of the pivot of the supporting arms, said outer carrying support or wheel having no axle connecting it with said machine save by the finger bar which serves as an axle therefor, substantially as described. 7th. A mowing machine, having all its main frame supporting driving wheels arranged in tandem and mechanically connected so as to combine the tractive forces of the said wheels, a finger bar having at the machine end supporting arms pivotally mounted on an axis transverse to the machine, a carrying support or wheel set at the outer end of the finger bar and held thereby substantially in the axial line of the supporting arms, and means for lifting the finger bar, substantially as described. 8th. In a mowing machine, the combination with the finger bar and guard, of a knife having means for imparting thereto a tipping tension towards the opposing cutting edges of the guard, substantially as described. 9th. A mowing machine, having main frame supporting wheels arranged in tandem and mechanically connected so as to combine their tractive forces, a finger bar, and another support or wheel at the outer portion of the finger bar, substantially as described. 10th. A mowing machine, having main frame supporting wheels, which derive their rotary motion by the traction of the machine over the ground, said wheels being arranged in tandem and mechanically connected so as to combine their tractive forces, cutting mechanism situate at one side only of the machine and connected with and driven by said wheels, and means for the connection of the machine to power in order to draw the same and by traction to rotate the wheels, substantially as described. 11th. In a mowing machine, the combination of the finger bar and guards, a knife comprising a knife rod with knife sections attached thereto, a spring acting on the knife at a point eccentric to its longitudinal axis and exerting on the same a tipping tension (as distinguished from a direct pressure) to force the knife sections towards the opposing cutting edges of the guards, substantially as described. 12th. A mowing machine, having main frame supporting wheels arranged in tandem and mechanically connected so as to combine their tractive forces, a rigid machine frame carried by said wheels, a finger bar, another support or wheel at the outer portion of the finger bar, and means for moving the finger bar vertically and maintaining it in substantially horizontal position, substantially as described. 13th. A mowing machine, having supporting wheels which derive their rotary motion by the traction of the machine over the ground, said wheels being arranged in tandem and mechanically connected by an endless flexible connection which passes around the peripheries of the wheels so as to combine the tractive forces of the said wheels, which are arranged with the lowest points of their peripheries in substantially the same horizontal plane, whereby a flat portion of the endless flexible connection is in contact with the ground, cutting mechanism connected with and driven by said wheels, and means for the connection of the machine to power in order to draw the same and by traction to rotate the wheels, substantially as described. 14th. A mowing machine, having supporting wheels which derive their rotary motion from the traction of the machine over the ground, said wheels being set in tandem and mechanically connected by an endless flexible connection which passes around the peripheries of the wheels and has a flat intermediate portion in contact with the ground, said flexible connection being provided with projections adapted to enter the ground, so as to combine the tractive force of the two wheels, cutting mechanism connected with and driven by said wheels, and means for the connection of the machine to power

in order to draw the same and by traction to rotate the wheels, substantially as described. 15th. A mowing machine, having supporting wheels, which derive their rotary motion by the traction of the machine over the ground, all of said wheels being arranged in tandem and mechanically connected by an endless sprocket chain which passes around the peripheries of the wheels, and has links provided with stops to prevent inward bending of the chain, so as to combine the tractive force of the said wheels, cutting mechanism connected with and driven by said wheels, and means for the connection of the machine to power in order to draw the same and by traction to rotate the wheels, substantially as described. 16th. In a mowing machine, the combination of a supporting and knife driving wheel, means for transmitting power therefrom to the mechanism of the machine, a supplemental support, and means for lifting the first named driving wheel from the ground and transferring the weight of the machine to the supplemental support, thereby destroying the traction of the driving wheel and stopping the knife, substantially as described. 17th. In a mowing machine, the combination with supporting wheels and means for transmitting power therefrom to the mechanism of the machine, of a supplemental support, and means for depressing the supplemental support to lift the first named wheels from the ground, substantially as described. 18th. In a mowing machine, the combination with the finger bar and reciprocatory knife, of a post on said knife, a lever enclosing the post, means for vibrating the lever, a lip fixed to the lever, and a projection on the cutter bar under which the lip fits, detachably holding the lever in operative position, substantially as described. 19th. In a mowing machine, the combination with the finger bar and reciprocatory knife, of a vibratory lever, and a spring backed sleeve on said lever connecting it with the knife, substantially as described. 20th. In a mowing machine, the combination with the finger and reciprocatory knife, of a post on said knife, a lever having a spring backed sleeve enclosing the post, and means for vibrating the lever, substantially as described. 21st. In a mowing machine, the combination with a wheel having separated opposite peripheral cam faces, of a vibratory lever extending through the cam slot formed by the opposing cam faces and pivotally connected with a sleeve on the axis of the wheel, said lever bearing on said faces, and connected with the machine knife, substantially as described. 22nd. In a mowing machine, the combination with a supporting wheel having two portions provided with corresponding cam faces and interlocking forked hubs, of a vibratory lever extending through the cam slot formed by said cam faces, substantially as described. 23rd. The combination with a wheel having separated opposite peripheral cam faces, of a vibratory lever extending between said faces and pivotally connected with a sleeve on the axis of the wheel, said lever bearing on said faces, and said wheel being formed of two annular parts having interlocking hubs, substantially as described. 24th. In a mowing machine, a finger bar connected to radial levers, one of said levers extending past the connecting point, and a lift bar pivoted to such extension, substantially as described. 25th. In a mowing machine, the combination of a finger bar carried by an upwardly movable support, a rotary lift bar connected to said support and having upholding pins at different levels and on different lines, adapted to engage the frame and to hold the bar at different levels, substantially as described. 26th. A mowing machine attachment comprising a runner, links connecting the runner with the frame work, a foot lever extending upward from one link, and means for locking said lever, substantially as described. 27th. A mowing machine comprising main frame supporting wheels, all said wheels being arranged in tandem and mechanically connected to combine their tractive force, a finger bar extending between said wheels, a knife connected with said tandem wheels, and a third support or wheel on the finger bar side of the machine, substantially as described. 28th. A mowing machine, comprising two driving wheels arranged in tandem, a chain passing over them, a frame work which is located over the chain and serves as a guard therefor, and cutting mechanism located between the wheels, substantially as described. 29th. A mowing machine attachment, comprising a runner connected by pivoted links to the frame work, a foot lever arranged to raise and lower the runner, a pawl engaging the lever in its different position, and a spring holding the pawl in locked position, substantially as described. 30th. In a mowing machine, the combination with knife actuating wheels arranged in tandem, and a lateral finger bar, of a runner extending lengthwise of the machine, and means for transferring the weight of the machine from the wheels to the runner, substantially as described. 31st. In a mowing machine, the combination of wheels arranged in tandem and mechanically connected so as to combine their tractive forces, a lateral finger bar situate on a line which passes transversely between the wheels, and radial levers extending lengthwise of the machine at the sides of the wheels, pivoted at one end and secured to the finger bar, substantially as described.

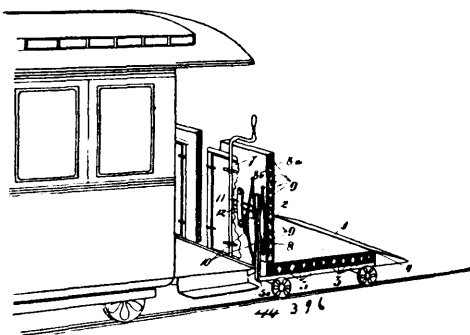
No. 44,396. Life Saving Guards for Street Cars.

(Garde de sauvetage pour chars urbains.)

William T. Lacon, Toronto, Ontario, Canada, 4th October, 1893; 6 years.

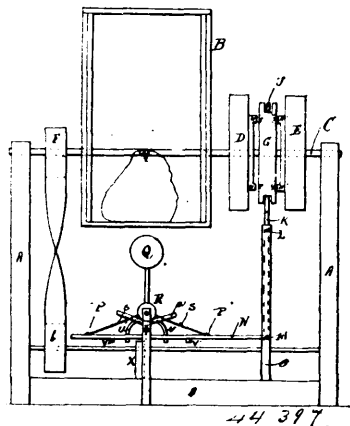
Claim.—1st. A life saving guard composed of a platform having a cushioned top, and an inclined wedge shaped front, substantially as and for the purpose set forth. 2nd. In a life saving guard for street cars, the combination of a platform 1, composed of a cushioned top

2, and an inclined wedge shaped front 4, springs 3 to support the top 2, and a frame work 5 to hold the springs 3, substantially as and for the purpose set forth. 3rd. In a life saving guard for street



cars, the combination of a platform 1, composed of a cushioned top 2, and an inclined wedged shaped front 4, springs 3 to support the top 2, a frame work 5 supporting the springs 3, and a cushion 8 comprised of a front 8^a, a frame work 8^b, and springs 9 between the front and frame work, substantially as and for the purpose set forth.

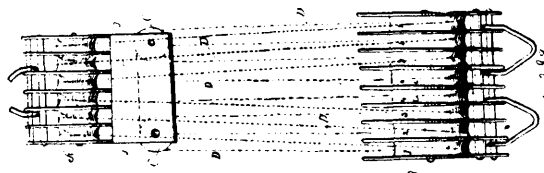
No. 44,397. Tanning Machine. (Machine à tanner.)



Joseph Henri Chartier et Louis S. Durand, Coaticooke, Québec, Canada, 4^e Octobre, 1893; 6 ans.

Résumé.—1°. Une machine à tanner, consistant en une boîte fixe B, traversée par un arbre C, portant des boulons Z, pour y assujétir les peaux, ainsi que des poids c, c, c, tel que décrit. 2°. Le système d'embrayage composé de la vis Y, du bloc X, de la planche N, des blocs V, V¹, des tiges S, S¹, des fourchettes U, U¹, du poids Q, du levier K, de l'anneau J, des poulies G, D, E, F, b avec les mortaises et blocs H¹, H, I, I¹. 3°. La combinaison de la machine à tanner, composée de la boîte B, de l'arbre C, des boulons Z, et poids c, avec l'appareil d'embrayage composé de la vis Y, du bloc X, de la planche N, des blocs v, v¹, des tiges s, s¹, des fourchettes, u, u¹, du poids Q, du levier K, de l'anneau J, des poulies G, D, E, F, C, avec les mortaises et blocs H, H¹, I, I¹, tels que décrits dans la spécification ci-annexée. 4°. Le procédé de préparation des peaux consistant en une dissolution de potasse dans l'eau, et le graissage avec le suif et l'huile, telle que décrit précédemment, en rapport avec la machine précédente.

No. 44,398. Hoisting Apparatus. (Ascenseur.)



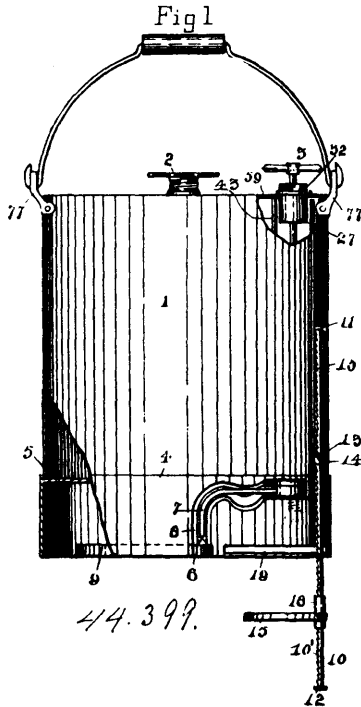
Noble H. Gilmore, William H. Gilmore, Joseph M. Fuller and Charles S. Fuller, all of Grenville, Michigan, U.S.A., 4th October, 1893; 6 years.

Claim.—1st. In a compound pulley system, the combination with the upper and lower pulley blocks, of draft equalizing pulleys sus-

pended from the upper pulley block, and a chain arranged in connection with said parts, substantially as shown and described. 2nd. In a compound pulley system, the combination with the upper and lower pulley blocks, of draft equalizing sheaves suspended from the upper pulley block, and arranged in a plane at a right angle to the axle of the sheaves of said upper pulley block, and a chain running each way from the centre of said pulley blocks, as shown and described. 3rd. A compound pulley block, having sheaves secured to its under side and arranged in a plane at right angles to the axis of the sheaves of said pulley block, as shown and described. 4th. The improved portable hoisting apparatus, consisting of the hoisting apparatus, proper, composed of upper and lower compound pulley blocks, equalizing sheaves and chain arranged on the same, in the manner described, the windlass, to which said chain is attached, and the triangular transportable wheeled frame, the hoisting apparatus proper, being arranged at the rear side of said frame, as and for the purpose specified.

No. 44,399. Lamp Filling Oil Can.

(*Bidon à huile pour remplir les lampes.*)

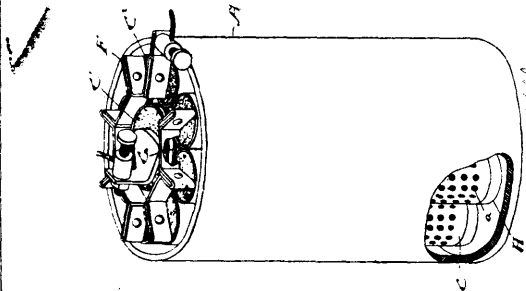


James Geary, Bradford, Pennsylvania, U.S.A., 5th October, 1893; 6 years.

Claim.—1st. An oil can provided with a supporting band at its bottom, having a slot 8 therein, and with an oil discharging spout jointed to the can and adapted to be swung through said slot, and a drip pan secured to the band on each side of the slot, said spout in its closed position being entirely within the band, and having both ends over the pan, all substantially as set forth, whereby the band is strengthened, and drip either from the spout or from its joint with the can is received. 2nd. An oil can provided with a supporting band at its bottom, having a slot 8 therein, and with an oil discharging spout and an air inlet pipe in proximity thereto, the spout and pipe being connected to a disc 39, supplied with suitable ports and eccentrically pivoted to a disc 36, fixed to the can bottom and having corresponding ports, said spout and pipe being adapted to be swung together and entirely within the band through said slot, substantially as set forth. 3rd. An oil can provided with a supporting band at its bottom, having a slot 8 therein, and with an oil discharging spout communicating with an opening in the bottom of the can, and an air inlet pipe in proximity thereto, both being adapted to be swung together through said slot, said air inlet pipe communicating with a pipe extending within the can to its upper part, and a valve adapted to close both the oil and air passages, substantially as set forth. 4th. An oil can provided with a supporting band at its bottom, having a slot 8 therein, and with an oil discharging spout, in combination with the vertically adjustable lamp holding device attached to the can, substantially as set forth. 5th. An oil can provided with a supporting band at its bottom having a slot 19 therein, in combination with a horizontally movable pivoted lamp support adapted to be moved through said slot and under the can, substantially as set forth. 6th. An oil can provided with a supporting band at its bottom, having a slot 9 therein, in combination with a horizontally movable pivoted lamp support adapted to be moved through said slot and under the can, said sup-

port being also vertically adjustable, substantially as set forth. 7th. An oil can provided with a supporting band at its bottom having a slot 8 therein, in combination with a horizontally movable lamp support adapted to be moved through said slot and under the can, said support being attached to a rod vertically adjustable on the can, whereby its foot can be raised to a level with the bottom of the can supporting band, substantially as set forth. 8th. In an oil can, the plug 39 rotatably supported near its bottom, and provided with air passages 58 and 54, and oil passages 45, in combination with air inlet pipes 43 and 41, and with an oil outlet in the can bottom and a valve therefor, said oil passage being eccentrically situated with respect to the plug, substantially as set forth, whereby the rotation of the plug opens or closes the passages. 9th. In an oil can, the combination of the correspondingly apertured plugs 39 and 36, with the air pipes and the oil spout and air inlet pipe, said oil spout and air inlet pipe being secured to the rotatable apertured plug 39, substantially as set forth. 10th. In an oil can, an oil spout and an air inlet pipe having the open ends in proximity, and each provided with tapered points to prevent the retention of drops, and the end of the air pipe being above that of the spout, whereby the retention of a drop between them is avoided, substantially as set forth. 11th. In an oil can, its cover, the plug 27, the flanged nut 32 having air inlet holes, and the valve stem having a screw threaded and perforated enlargement 22, all in combination, whereby air may be admitted to or excluded from the can, substantially as set forth. 12th. In an oil can, its cover, the plug 27, the flanged nut 32, having air inlet holes, and the valve stem having a screw threaded and perforated enlargement 22, the bottom having an oil discharge passage, and a pipe whereby the upper part of the can and such oil discharge passage communicate, whereby external air may be admitted to said discharge passage, substantially as set forth. 13th. In an oil can, the combination of an oil discharge passage at the bottom of the can, a valve therefor, and a pipe from the inner end of said passage to the upper part of the can, and a discharge spout communicating with the lower or outer end of said passage, whereby air may be admitted to the inner end of the spout to facilitate the discharge of drip, substantially as set forth.

44,400. Secondary Battery. (Pile secondaire.)

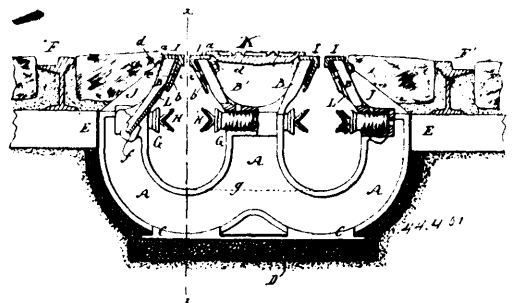


Henry Woodward, Toronto, Ontario, Canada, 5th October, 1893; 6 years.

Claim.—1st. In an improved secondary battery, a positive or negative electrode surrounded by but electrically insulated from a series of electrodes connected together and forming an electrode to work with the central electrode, substantially as and for the purpose specified. 2nd. In a secondary battery, a perforated cylinder of lead containing a spiral-shaped core of lead and filled with pellets of lead, a stem attached to the core and connected to the electrical pole, substantially as and for the purpose specified.

No. 44,401. Electric Railway Conduit.

(*Conduit pour chemins de fer électriques.*)



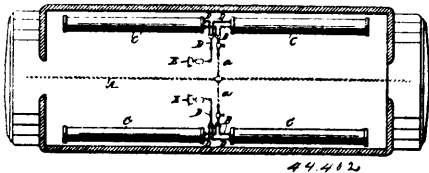
Augustine W. Wright, Chicago, Illinois, U.S.A., 5th October, 1893; 6 years.

Claim.—1st. In an underground conduit for electric railways, the combination, with a yoke provided with upper vertical converging

slot rail supports and a mortise adjacent to the base of the outer support, of angular slot rails having horizontal portions resting on the top of said supports and dependent diverging portions facing said supports and bolted thereto, an independent water-shed seated in said mortise and locked by the adjacent angular plate, and a suitable supply conductor or conductors in said conduit, substantially as described. 2nd. In a double underground conduit for electric railways, the combination, with the double yoke casting provided with the double series of converging rail supports so that the inner supports relatively diverge, of angular slot rails seated on and bolted to the supports, the spaces between the inner diverging supports forming openings for access to the conduits at either side, and man holes bearing on the inner slot rails for closing said openings, substantially as described.

No. 44,402. Steam Radiator. (*Calorifere à vapeur.*)

Fig. 1

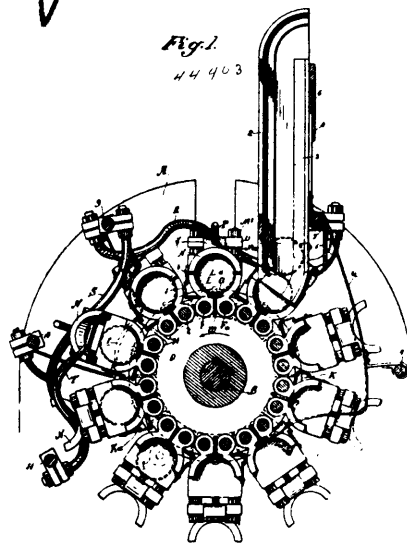


Edward Ethel Gold, New York City, New York, U.S.A., 5th October, 1893; 6 years.

Claim.—1st. A heat storage radiator, comprising a nearly horizontal elongated tubular outer shell, inclined sufficiently to drain toward one end, and having steam inlet and drainage openings both at the lower end of the shell, the drainage opening at the bottom and the inlet opening above it, a heat storage body enclosed in said shell, constructed to form a steam conduit, communicating with said inlet opening and extending to the opposite end of the shell, and to form a space or channel for water of condensation along the bottom communicating with said drainage opening, whereby the entering stem is conducted to the farther end of the radiator through said conduit, and the water of condensation flows back beneath to said drainage opening. 2nd. A heat storage radiator, comprising a nearly horizontal elongated tubular outer shell, inclined sufficiently to drain toward one end, having steam inlet and drainage openings both at the lower end of the shell, the drainage opening at the bottom and the inlet opening at the top, a heat storage body enclosed in said shell, the two constructed to form a steam conduit between them along the top of the radiator, extending from the inlet opening to the opposite end of the shell, and to form a space or channel for water, of condensation along the bottom communicating with said drainage opening, and a steam inlet pipe entering the shell at said inlet opening, and in line with said stem conduit to discharge steam thereinto, whereby the entering steam is conducted at the top of the farther end of the radiator through said conduit, and the water of condensation flows back beneath to said drainage opening. 3rd. A heat storage radiator, comprising an elongated tubular shell, an enclosed solid heat storage body, formed in section, with a steam space or channel along the upper side of each section, a steam inlet pipe entering the end of the shell near the top, and extending within the shell in the channels in said sections, whereby said sections are retained in position with their channels in line, and the steam is conducted to the farther end of the radiator, and a drainage pipe for condensed water, connecting with the same end of the shell near the bottom. 4th. The combination of a radiator, having a shell extended nearly horizontally, but inclined sufficiently to drain toward one end, and constructed with steam inlet and drainage openings, both at the lower end, the former above and the latter beneath, and with an interior steam conduit extending from the steam inlet opening to the opposite end of the shell, whereby entering steam is conducted to the remote end of the radiator, and an interior passage or space for collecting water of condensation, returning along the lower side of the shell to the drainage opening, a steam pipe extending to said steam inlet opening, and a drainage pipe extending from said drainage opening to a trap or discharge. 5th. The combination on a railway car, of two radiators, having shells extended approximately horizontally along the side of the car, and formed with steam inlet and drainage openings in the adjacent ends of said shells, the inlet opening above and the drainage opening beneath, and said radiators inclined to drain toward the middle of the car, and constructed each with an internal steam passage extending from the steam inlet to the opposite end of the radiator, and with an interior space or passage for collecting water of condensation, returning along the lower side of the shell to the drainage opening, with a steam pipe, having branches extending to the steam inlet openings of both radiators, and a drainage pipe leading from the drainage openings of both radiators, and extending down through the car floor to a trap or discharge.

No. 44,403. Can Heading Machine.

(*Machine pour fonder les boîtes.*)



Milton A. Wheaton, of San Francisco, California, U.S.A., 5th October, 1893; 6 years.

Claim.—1st. In a can heading machine, the combination of the inner semi-circular jaw, which is carried around a central axis without changing its position in the radial line of the circle in which it is carried around, with an outside movable jaw which opens to receive the can head and end of the can body, and again closes around them, substantially as and for the purposes herein set forth. 2nd. In a can heading machine, a set of jaws which are carried around a central axis without changing their radial position to such central axis, in combination with mechanism for opening and closing such jaws, substantially as and for the purpose herein set forth. 3rd. In a can heading machine, the combination of a set of jaws which are carried around a central axis without changing their position radially from such axis, in combination with mechanism for moving such set of jaws towards another set of similar jaws, substantially as and for the purposes herein set forth. 4th. In a can heading machine, two sets of jaws facing towards each other, in combination with mechanism that will open and close such jaws as required and mechanism for forcing the jaws towards each other for putting the can heads on to the can body with mechanism for making the sets of jaws recede farther from each other after the heads have been placed upon the can body, all substantially as and for the purposes herein set forth. 5th. The combination of the inside jaws with the two rods which carries them, one of said jaws being fixed to one of such rods while the other jaw is fixed to the other of such rods, substantially as and for the purposes herein set forth. 6th. In a can heading machine, a set of jaws so constructed and operating that they remain in the same radial line when carried around a central axis, and the upper or outside jaw opens away from the inner or lower jaw, and remains open while the can head and end of the can body is received by the inner or lower jaw, and then closes with the inner or lower jaw, and is locked therewith while the can head is forced upon the end of the can body, all substantially as herein set forth. 7th. In a can heading machine, the bent lever *m* for the purpose of forcing the headed can out of the inner or lower jaw constructed and operating, substantially as herein described. 8th. In a chute for guiding the can heads into the jaw of a can heading machine, the swinging part 16, or its equivalent operating, substantially as and for the purposes herein described. 9th. In a set of jaws used in a can heading machine, the combination of the blocks *O*, hinge bolt *h* and screw bolts *M*, for the purpose of adjusting the jaws and holding them in their positions, substantially as herein described. 10th. The combination of the pins *P P*, or their equivalent with the outside jaws *N N*, and the bent rods *R R*, for the purpose of closing said jaws, substantially as herein described. 11th. The combination of the pins *P P*, with the outside jaws *N, N*, and the bent rods *S and T*, for the purpose of opening said jaws, substantially as herein set forth. 12th. The spring *j*, and pivoted latch, or their equivalents, in combination, with the jaws of a can heading machine, substantially as and for the purposes herein described. 13th. The combination, in a can heading machine, of the jaw supporting rod *F* or *F^a*, with the sectional cam rings and a suitable connecting device, such as a friction wheel, slide or lug, substantially as and for the purposes set forth. 14th. In a can heading machine, the combination of the discs *D, D*, with movable rods *F* or *F^a*, and the cam rings *K* and *K^a*, and a connecting device such as a friction wheel, slide or lug, substantially as and for the purposes set forth. 15th. In a can heading machine, the

combination of the rods F and F^a, with the collar H, and friction roller G, substantially as and for the purposes set forth. 16th. A can heading machine, consisting of the discs mounted upon a shaft and rotated in unison, rods passing through the discs in pairs near the periphery and parallel with the axis of rotation, opposing jaws mounted upon the rods and each consisting of an inner half capable of movement parallel with the axis, and an outer half movable with the inner half when closed together, said outer half being hinged to open outwardly from the inner half to admit the can heads and bodies, substantially as herein described. 17th. A can heading machine, consisting of discs mounted on a shaft to rotate in unison, rods passing through the discs parallel with the axis of rotation, opposing jaws movable to and from each other upon the rods and each consisting of an inner half and outer half hinged to open away from the inner half to admit the can heads and bodies, blocks to which the outer jaws are hinged and screw bolts and nuts by which the blocks are moved and the outer jaws adjusted with relation to the inner ones, substantially as herein described. 18th. A can heading machine, consisting of parallel discs rotating in unison, rods passing through the discs parallel with the axis of rotation, opposing jaws movable to and from each other upon the rods, and each consisting of an inner half having a single motion parallel with the axis, an outer jaw hinged to open and close about the inner jaw, and also partaking of the end motion of the inner jaw, and a latch by which the jaws are locked together when closed, substantially as herein described. 19th. In a can heading machine, the opposing jaws in pairs adapted to receive the can bodies and the opposite heads thereof and movable to and from each other, said jaws comprising an inner half and an outer half hinged to open and close with relation to the inner half, a latch by which the two parts are locked together when closed, the spring l, and the studs i and k, substantially as herein described. 20th. In a can heading machine, the opposing jaws in pairs adapted to receive the can bodies and the opposite heads thereof and movable to and from each other, said jaws comprising an inner half, and an outer half hinged to open and close with relation to the inner half, discs by which the jaws are carried around a common centre of rotation, cams fixed with relation to the revolving discs and pins fixed to the hinged outer jaws to engage the cams and open and close the jaws during their revolution, substantially as herein described. 21st. In a can heading machine, parallel disks rotating in unison about a common centre, rods passing through the discs in pairs parallel with and around the centre of rotation opposing two part jaws with mechanism by which the outer jaws of each set is opened and closed with reference to the inner jaw, fastenings by which one of an opposing set of jaws is secured to one of a pair of rods, and the opposite set to the other rod, and mechanism by which the rods are moved longitudinally and the jaws are caused to approach and recede from each other, substantially as herein described. 22nd. In a can heading machine, the parallel discs rotating in unison about a common centre, rods passing through the discs in pairs parallel with and about the centre of rotation, opposing two part jaws with mechanism by which each opposing pair of jaws is opened to receive the can heads and body, fastenings securing one set of jaws to one of the rods and the opposite set to the other rod, collars fixed to the rods and anti-friction rollers journaled thereon, and stationary cam rings over which the rollers pass to move the rods and cause the opposing jaws to approach and recede from each other, substantially as herein described. 23rd. In a can heading machine, the parallel discs rotating in unison about a common centre, rods passing through the discs in pairs parallel with and about the centre of rotation, opposing two part jaws into which can heads are received and placed upon the ends of can bodies each opposing set of jaws being secured to one of a pair of parallel rods, a mechanism by which the rods and opposing jaws are caused to approach and recede from each other as they revolve about the common centre, and adjusting screws and nuts by which the sets of jaws may be moved towards or from each other upon their carrying rods, substantially as herein described. 24th. In a can heading machine, the opposing two part jaws supported around a common centre, mechanism by which the jaws are opened to receive can heads and bodies, closed and moved towards each other to fix the heads upon the ends of the bodies, and then retracted from each other, and a lever m fulcrumed so that one end will act to lift the completed cans from the jaws when the latter are opened, and a fixed stud arm engaging the opposite end of the lever and actuating it, substantially as herein described. 25th. In a can heading machine, the opposing sets of jaws arranged and revolving around a common centre, hinges and a mechanism by which the outer half of each set of jaws is opened to receive can bodies and heads, closed to hold and guide them when they are united together, and opened to discharge the completed product, and guide rods Q whereby the outer swinging jaws are held open as they pass beneath the supply chute to receive the can heads and body, substantially as herein described.

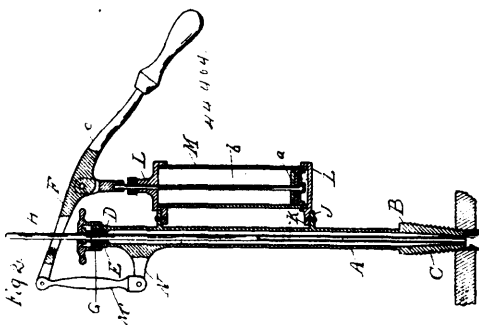
No. 44,404. Beer Tap and Pump.

(Robinet et pompe à bière.)

Nicholas Hardoin, Detroit, Michigan, U.S.A., 5th October, 1893; 6 years.

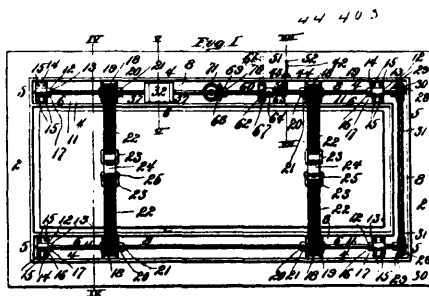
Claim.—1st. In a beer tap and pump, the combination of a tubular standard having a screw threaded foot, a stuffing box at its upper end, a discharge pipe in said standard slidingly engaging through

the stuffing box, and an air pump discharging into the standard, substantially as described. 2nd. In a beer tap and pump, the combination of a tubular standard, of a screw threaded foot, the stuffing



box at its upper end, a discharge pipe in said standard engaging through the stuffing box, a valve in said discharge pipe, a pump support on one side and having its discharge pipe connected therewith, a lever for operating the pump secured to the standard, and a valve controlled connection between the pump and the standard, substantially as described. 3rd. In a beer pump and tap, the combination of a tubular standard having a screw threaded foot, the stuffing box at its upper end, a discharge pipe in said standard slidingly engaging through the stuffing box, an air pump secured to one side of the standard, a lever c, for operating the pump extending across the top of the standard, the bracket N, on the opposite side of the standard on which said lever is fulcrumed, and a connection between the discharge pipe of the pump and the standard, substantially as described.

No. 44,405. Burial Apparatus. (Appareil d'enterrement.)



Maria Carolina Scherer, Bayonne, New Jersey, U.S.A., 5th October, 1893; 6 years.

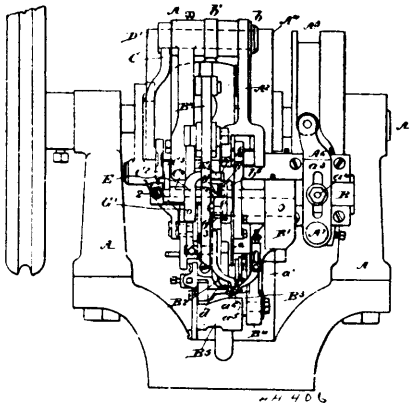
Claim.—1st. In a burial apparatus, the combination of the platform, the system of bevel gear operated piston shafts 11, beneath said platform, the reels 18 on said shafts, the lowering straps mounted on said reels, the fluid pressure cylinder, and the piston head brake that works therein, substantially as set forth. 2nd. In a burial apparatus, the combination of the platform, the system of bevel gear operated piston shafts 11, the fluid pressure cylinder 32, and the piston head brake that works therein, the rails 18 on said shafts, the duplex sectional lowering straps 22, having the connecting blank tongueless buckles or links 23, and the locking trip clutch hooks 24, that alternately connect and trip the connection of said links of the lowering straps, substantially as set forth. 3rd. In a burial apparatus, the combination of the platform 2, the system of gear operated rotary piston shafts 11, the reels 18 on said shafts, the sectional duplex straps 22, the connecting links 23 at the joint ends of said straps, the locking trip lever hooks, the fluid pressure cylinder 32, through which the rotary piston shaft 11 passes, the rotary screw working piston head 36 mounted on said shaft in said fluid compression cylinder 32, the fluid in said cylinder, and the said cylinder provided with the recessed channel groove duct 41, substantially as set forth. 4th. In a burial apparatus, the combination of the platform 2, the system of rotary piston shafts 11, and reels 18 on said shafts, the lowering straps 22 mounted on said reels, the fluid pressure cylinder 32, the drive member of said rotary shafts constituting a screw-threaded piston shaft, the piston head or traveller valve 36, that is mounted on said piston shaft, the said fluid pressure cylinder provided with the fluid duct 41, through which the fluid gradually passes said cylinder head as said cylinder rotates, the fluid in said cylinder, the fulcrum trip lever 42, said piston shaft provided with the countersunk locking recess 50, and said lever having the foot key 49, the spiral spring 47 that enforces the locking of said foot key, and the said trip lever provided with the tappet head 53, which when depressed works said lever on its fulcrum journal to release said foot key, substantially as set forth.

5th. In a burial apparatus, the combination of the platform 2, the system of rotary piston shafts 11, the reels 18 on said shafts, the set screws 17 that fasten said reels to said shafts, the lowering straps mounted on said reels, the fluid pressure cylinder 32, the drive member of said rotary shafts constituting a screw threaded rotary piston shaft that works in said cylinder, the rotary piston head 36 mounted on said piston shaft, the said cylinder provided with the fluid duct 41, the fluid in said cylinder, the vertical winding stem 72, the bevel pinion 71 on said stem, the bevel pinion 68 on one of said piston shafts 11, the key 77 that fits on said stem 72, and winds up the piston shaft, and its head, substantially as described. 6th. In a burial apparatus, the combination of the platform 2, the duplex piston shafts 11, the fluid pressure cylinder 32, the screw mounted piston head or traveller valve in said cylinder, the reels 18, the sectional lowering straps 22, the links 23 of said straps, the trip trigger hooks that connect said strap sections, and release the same, the sprocket wheels 28 on said piston shafts, and the sprocket chain 31 that connects said sprocket wheels, substantially as described. 7th. In a burial apparatus, the combination of the platform 2, the side and end pieces 4, 5, 6 and 7 secured beneath said platform that constitute the box chamber 8, the duplex piston shafts that work in said chamber, the journal boxes 14 in which said shafts are mounted, the reels 13, the sectional lock trip lowering straps, the spiral springs 59, the bracket foot plates 54, and the supporting pins 56, substantially as described. 8th. In a burial apparatus, the combination of the platform 2, the duplex piston shaft 11, the fluid pressure cylinder 32, and the piston head brake that works therein, the reels 18 mounted on said shafts, the sectional lowering straps mounted on said reels, the links secured to the corresponding ends of said straps, the automatic trip trigger connection of said links, the pulley rollers 83, over which said straps pass in the vicinity of said reels, and the friction brake 60, having the lever 61, the friction drum 62, and the friction brake straps 67, substantially as described.

No. 44,406. Sole Sewing Machine.

(Machine à coudre les semelles.)

Fig A

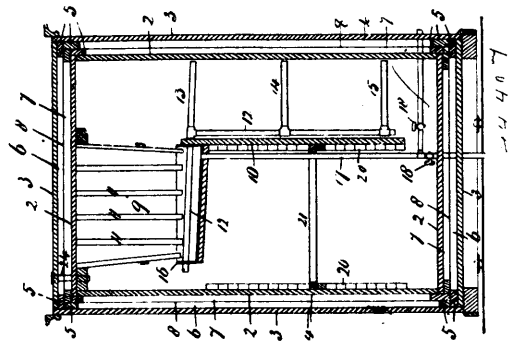


Francis Joseph Freese, of Montreal, Quebec, Canada, 5th October, 1893; 18 years.

Claim.—1st. In a chain stitch wax thread sewing machine, the following instrumentalities, viz.: a channel guide, a hooked needle, the needle segment, feeding mechanism, actuating means for the said needle segment to force the needle with a loop upon its shank into the stock and out through the inner channel of the sole and there hold the needle temporarily substantially at rest while the stitch is being set, a thread guide, means to actuate it to supply the hooked needle with thread, and a take-up as *b*², a cam as *C*¹, and connecting devices intermediate the said cam and the said take-up, the said cam through the said connecting devices actuating the said take-up to pull upon the loop of needle thread about the shank of the needle while the needle is in the stock and holds the said loop upon its shank, the said take-up drawing the said loop about the shank of the needle, as described, to set the last stitch of which the said loop forms a part without straining the between substance, the said stitch being set before the loop to form the next stitch is drawn through it, a positively operated thread clamping device disconnected from said take-up and adapted to act upon and firmly lock the thread only after the said take-up has pulled the loop of needle thread about the shank of the needle, held said loop upon such shank and commenced to draw said loop about the shank of the needle, as described, and just before it has finished setting the stitch, and means other than the thread itself for positively actuating such clamping device, substantially as described. 2nd. In a chain stitch wax thread sewing machine, the channel guide, a hooked needle, the needle segment, feeding mechanism, actuating means for the said needle segment, a thread guide with means to actuate it, a take-up with actuating means and a positively operated thread clamp dis-

connected from said take-up and consisting of a pivoted arm as *E*, carrying a clamping piece adapted to bear upon a thread sheave and effect a positive locking of the thread at a point between the tension device and the take-up only after the said take-up has pulled the loop of needle thread about the shank of the needle, held said loop upon such shank and commenced to draw said loop about the shank of the needle, as described, and just before it has finished setting the stitch, and means other than the thread itself for positively operating said clamping device to firmly lock the thread, substantially as described. 3rd. In a wax thread sewing machine, the combination, with the channel guide, the hooked needle, the needle segment, feeding mechanism, actuating means for the said needle segment, the thread guide with means to actuate it, the take-up for setting the stitch with actuating means, including the stud or rock shaft *C*⁵, and sleeve *C*⁴, a positively operated thread clamp adapted to bear upon a thread sheave and effect a positive locking of the thread at a point between the tension device and the take-up, just before the take-up has finished setting the stitch, a spring normally holding said clamp free from its work and a projection from the underside of said sleeve adapted to intermittently bear upon said clamp to depress same upon the thread sheave and the thread so as to positively lock or hold the latter, as and for the purposes set forth. 4th. In a wax thread sewing machine, the combination, with the channel guide, the hooked needle, the needle segment, feeding mechanism, actuating means for the said needle segment, the thread guide with means to actuate it, the take-up for setting the stitch with actuating means, including the stud or rock shaft *C*⁵, and sleeve *C*⁴, a positively operated thread clamp consisting of an arm, as *E*, pivoted to the side of the framework head, projecting forward of same under said sleeve, having an upward band or vertical portion, and a horizontal inwardly projecting free end carrying a clamping piece adapted to bear upon a thread sheave and effect a positive locking of the thread at a point between the tension device and the take-up just before the take-up has finished setting the stitch, a spring normally sustaining or elevating said arm to hold the clamping piece free from its work, and a projection from the underside of said sleeve adapted to intermittently bear upon the main length of said arm to depress same and cause said clamping piece to positively lock or hold the thread, as and for the purpose set forth. 5th. In a wax thread sewing machine, the combination, with the thread clamping arm, as *E*, of an adjustment device carried by it and receiving the impact or pressure of the actuating means normally out of contact with such adjustment device, as and for the purpose set forth. 6th. In a chain stitch wax thread sewing machine, the combination, with feeding mechanism, means for producing a chain stitch with a single thread and take-up with actuating means, of a positively operated thread clamping device disconnected from said take-up and adapted to firmly lock the thread by pressure applied directly to it at a point between the tension device and said take-up and means, other than the thread itself, normally out of contact with said clamping device for positively actuating same to clamp the thread, as described.

No. 44,407. Refrigerator. (Réfrigérateur.)

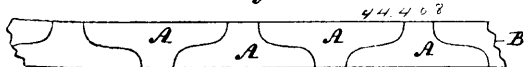


George Fee, North Bay, Ontario, Canada, 5th October, 1893; 6 years.

Claim.—1st. A refrigerator having the walls made of inner and outer shells 2, 3, a lining of oil cloth 4, secured by slats 5, and an oil cloth divisional partition 8, intervening the slats, whereby dead air spaces 6, 7, are formed between said inner and outer shells, as set forth. 2nd. A refrigerator having an ice chamber 9, near or at the top, and pipes 12, forming the bottom of the ice chamber, said pipes extending to the compartments of the refrigerator and terminating near the floor, as set forth, for the purpose described. 3rd. A refrigerator having a series of metal pipes 12, entering the ice chamber and extending downwardly, said pipes open at both ends, and branch pipes 13, 14, 15, extending from said pipes 12, and closed at their termination, said pipes 12, transmitting cold externally and carrying off moist or warm air internally to a ventilating passage or hole 24, through the top of the refrigerator, thereby inducing an air current in the compartments for the preservation of the food, substantially as set forth.

No. 44,408. Art or Process of Rolling Blanks for making Socket Shovels, Spades, Scoops, etc. (*Art ou procédé de laminage des blancs pour faire des pelles, bûches, escopes, etc., à douilles.*)

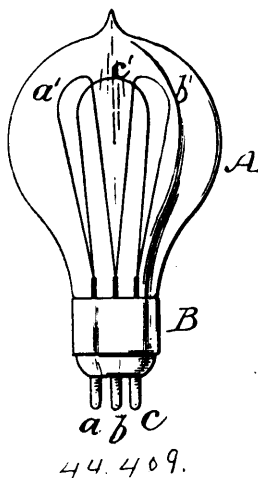
Fig. 1.



John McMurchy, Gananoque, Ontario, Canada, 5th October, 1893; 6 years.

Claim.—The art or process of rolling blanks for making socket shovels, spades, scoops, &c., from T-shaped blocks of steel or other metal, which consists in first thinning the narrower arm or tang portion *a*, from opposite sides between suitably grooved rolls, whereby the disturbed metal will be carried towards one end of the block, then further thinning said tang portion by a second pass between said rolls having a suitable groove, whereby the disturbed metal will be forced in an opposite direction to the first pass, and finally thinning the blank uniformly between a smooth or plain portion of said rolls, the thin or tang portion presented first to the rolls, whereby the block will be elongated to the length required for the socket, and the other portion elongated by the same pass or passes to the required length for the blade of the shovel, spade, scoop, &c., substantially as set forth.

No. 44,409. Incandescent Lamp. (*Lampe incandescente.*)



Johannes H. F. Gorges, Berlin, Germany, 5th October, 1893; 6 years.

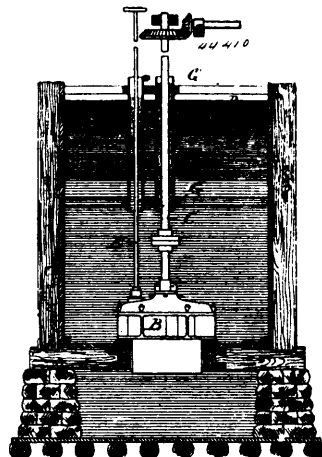
Claim.—1st. An incandescent lamp provided with three terminals connected with each other through three independent carbon filaments of equal resistance. 2nd. An incandescent lamp provided with an uneven number of terminals and an equal number of carbon filaments of equal resistance, connected to said terminals in multiple in pairs, and with each other in multiple series. 3rd. An incandescent lamp provided with a plurality of independent carbon filaments of equal resistance and a plurality of terminals equal in number to the filaments and connected with each other through said filaments. 4th. An incandescent lamp provided with a plurality of carbon filaments of loop form, having two ends, and of equal resistance, a plurality of terminals equal in number to the filaments, and said terminals connected with each other within the lamp by connecting each two of the terminals by a filament.

No. 44,410. Art or Mode of Preventing Surface Ice Stopping Water Wheel Shafts. (*Art ou mode d'empêcher la glace de surface d'arrêter les arbres de couche des roues d'eau.*)

William Faint, Peterborough, Ontario, Canada, 5th October, 1893; 6 years.

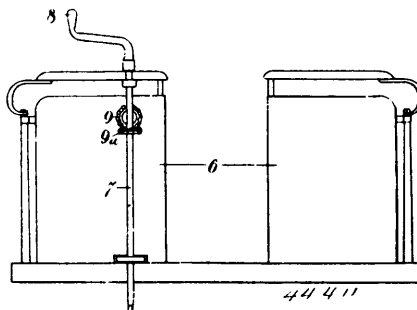
Claim.—1st. The art or mode of preventing the formation of surface ice around the shaft of submerged water wheels by surrounding the shaft with a column of oil to a depth from the surface of the water below the action of frost, said oil confined in a jacket or tube partially submerged and enclosing the shaft, whereby the column of oil is supported by the water within or below said jacket or tube, substantially as set forth. 2nd. The combination with a flume, a submerged water wheel and its partially submerged shaft and gate rod, of a jacket or tube surrounding said shaft or rod, and an oil

column H, filling or partially filling the space between said jacket and the shaft or rod, whereby said oil column is supported by its



own buoyancy in the water, as set forth, for the purpose described. 3rd. The combination with a submerged wheel or turbine, having a vertical driving shaft partly submerged, of a column of oil surrounding said shaft from the surface of the water to a depth below the action of frost, and an exterior jacket or tube enclosing the oil column, to prevent dispersion by the flow of water into the wheel or through a flume, as set forth.

No. 44,411. Magnetic Car Brake. (*Frein de char magnétique.*)



William E. Dillon, Toronto, Ontario, Canada, 5th October, 1893; 6 years.

Claim.—1st. In a magnetic car brake, the combination of an electro magnet suspended to the car, the running gear of the car, means for magnetizing the electro magnet, and means for cutting off and on the electric current to the electro magnet, substantially as set forth. 2nd. In a magnetic car brake, the combination with the car wheel comprised of a hardened body and a soft metal flange, an electro magnet suspended to the car in close proximity to the soft metal flange whereby the electro magnet can magnetize the car wheel, means for magnetizing the electro magnet, and means for cutting on and off the electric current to the electro magnet, substantially as set forth. 3rd. In a magnetic car brake, the combination of the car wheel comprised of a hardened body and a soft metal flange, an electro magnet suspended to the car in close proximity to the wheel flange, a switch located at the front of the car mounted upon a spindle, a bevelled gear mounted upon the spindle, a brake standard, a bevelled gear mounted upon the brake standard, a connection between the switch and the electro magnet whereby the electric current can be cut on and off to the electro magnet, substantially as set forth.

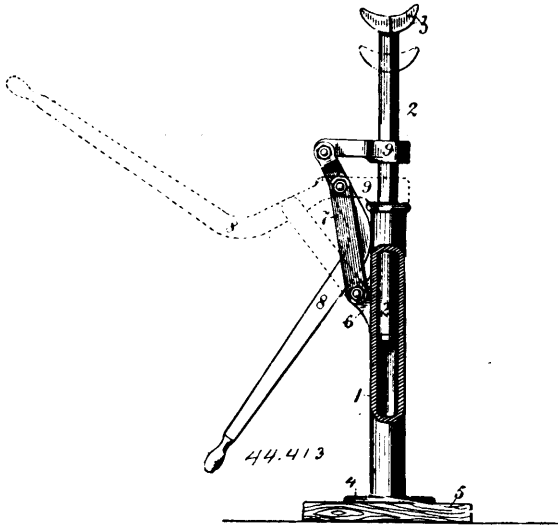
No. 44,412. Paper Pulp. (*Pâte à papier.*)

Henry James Bird, Hoboken, New Jersey, U.S.A., 6th October, 1893; 6 years.

Claim.—1st. The method herein specified of utilizing the contents of the paunches of slaughtered animals, consisting of utilizing the gastric juices in the disintegration of the vegetable fibre for the production of paper stock, substantially as set forth. 2nd. The method herein specified of disintegrating vegetable substances and separating the fibre for paper stock, consisting in subjecting such vegetable material to the action of gastric juices in the presence of sufficient heat to render such gastric juices efficient in the disintegration of the material, and washing out the other substances for the separa-

tion of the fibre, substantially as set forth. 3rd. The method herein specified of disintegrating vegetable fibre for the production of paper stock, consisting in subjecting such vegetable fibre to the action of gastric juices, and an alkali in the presence of sufficient heat to render such gastric juices efficient, and washing the other substances from the fibre, substantially as set forth. 4th. The method herein specified for disintegrating and separating the vegetable substances contained in the vegetable paunches in slaughtered cattle, consisting in adding thereto an alkali, such as lime, heating the same in a suitable vessel, and subjecting such material to a beating or pulping operation for separating the fibres and washing out the softened materials to obtain paper stock, substantially as set forth. 5th. The method herein specified of utilizing the contents of the paunches of slaughtered cattle, consisting in passing the solid and liquid contents of such paunches upon a screen to separate the finer materials from the coarser, retaining such finer vegetable fibres for use as paper stock, and treating the coarser materials with an alkali in the presence of gastric juices, and sufficient heat for disintegrating such coarser materials, and then washing and beating such materials for the separation of the paper stock, substantially as set forth.

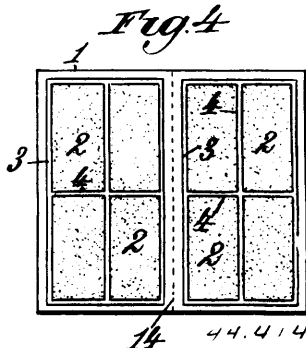
No. 44,413. Vehicle Jack. (*Chèvre de voitures.*)



James Kinghorn and William McGlashan, both of Youngstown, New York, U.S.A., 6th October, 1893; 6 years.

Claim.—In a vehicle jack, the combination of the hollow standard having a lug near its centre, a post freely fitted within said hollow standard, the links jointed to said lug on the standard, the lever jointed to the opposite ends of said links, and the collar on said post and jointed by a shank thereon to the upper end of said lever and by which it is elevated.

No. 44,414. Fly Paper. (*Papier à mouches.*)



Jay H. Smith, Rochester, New York, U.S.A., 6th October, 1893; 6 years.

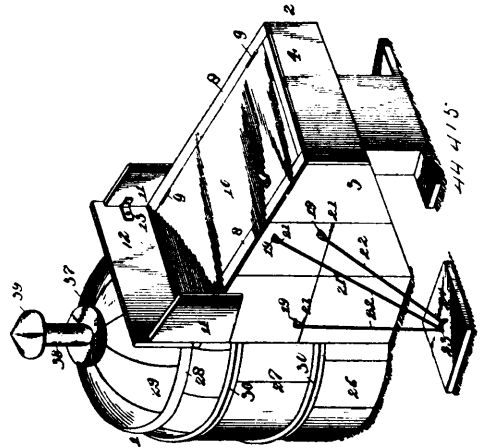
Claim.—A sheet of sticky fly paper having a field of soft sticky fly catching material intersected by bars or strips of more adhesive material and surrounded by a border of material which is more adhesive than that composing the field, substantially as described.

No. 44,415. Cyclone Cave. (*Caveau pour cyclones.*)

Orlando O. Walker, Bedford, Iowa, U.S.A., 6th October, 1893; 6 years.

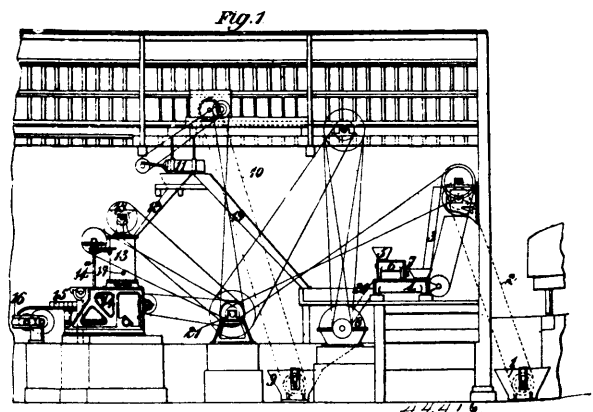
Claim.—1st. A cave consisting of a series of annular tiers each comprising a series of tile sections, the upper sections of which have

their edges converged toward their upper ends and provided upon their lower edges with depending flanges for overlapping the ad-



acent edges of the adjacent sections, the lower sections having their upper edges provided with off-set flanges for overlapping the lower ends of adjacent sections, cement fillings for the flanges, grooves formed in the meeting vertical edges of the sections, cement fillings therefor, and inverted U-shaped keys let into openings formed in the upper edges of adjacent tiles and crossing the vertical cement joints therein between, substantially as specified. 2nd. The combination, with a cave having a convex dome and formed of sections meeting at the centre of the dome to form an opening, of an annular key seated in the opening having a bore, and an external flange overlapping the dome, the pipe passing through the bore, the ventilating cap arranged over the pipe, the operating rod depending through the pipe and connected to the dome, and friction arms depending from the cap and engaging with the side of the pipe, substantially as specified. 3rd. The combination, with a cave of a stairway or cellar leading thereto, anchoring plates at opposite sides of the stairway, and anchoring rods connected to the plates and to the stairway, substantially as specified. 4th. The combination, with a cave and a stairway or cellar leading thereto, of eye bolts passing through the side walls of the cellar, opposite anchoring plates, eye bolts passing therethrough, nuts for the eye bolts, and anchoring rods connecting the eye bolts of the cellar and plates, substantially as specified. 5th. The combination, with a cave having an opening, of a door frame located in the opening, opposite side walls at the sides of the opening formed of a series of slabs, a connecting end wall, grooves in the meeting edges of the slabs, cement fillings for the grooves, inverted U-shaped keys let into the ends of the slab and crossing the fillings, a door frame surmounting the walls, a hinged door for the frame, stairs arranged in the cellar thus constructed, horizontal braces between the door frame and stairs, bolts passing through the slabs and braces, and a flooring for the cellar, substantially as specified.

No. 44,416. Process of Manufacturing Blocks or Briquettes of Fuel. (*Procédé de fabrication de blocs ou briquettes de combustible.*)

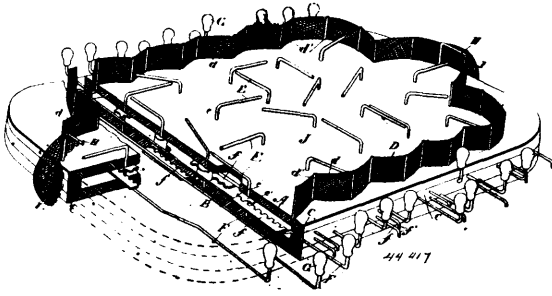


Thomas Wilton Lee, Northumberland Avenue, County of London, England, 6th October, 1893; 6 years.

Claim.—1st. The process of manufacturing blocks or briquettes of fuel which consists in intimately mixing powdered carbonaceous fuel of the kind specified, with a binding agent composed of organic material of the kind specified, and caustic alkaline material of the

kind specified, subjecting the mixture to the direct action of steam, and compressing the mixture whilst in a moist and heated condition into blocks or briquettes, substantially as described. 2nd. The process of manufacturing blocks or briquettes of fuel which consists in intimately mixing powdered carbonaceous fuel with a binding agent composed of flour and lime, subjecting the mixture to the direct action of steam, and compressing the mixture whilst in a moist and heated condition into blocks or briquettes, substantially as described. 3rd. A compressed block or briquette of fuel composed of carbonaceous fuel combined with a binding agent consisting of organic material of the kind specified, and caustic alkaline material of the kind specified, in the manner and substantially in the proportions herein specified. 4th. A compressed block or briquette of fuel composed of carbonaceous fuel combined with a binding agent consisting of flour and lime, in the manner and substantially in the proportions herein specified.

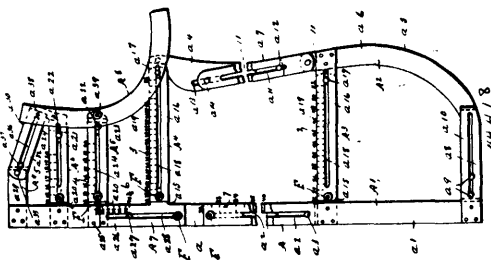
No. 44,417. Foot Ball Game. (Jeu de ballon.)



Thomas Knight, Islington, Ontario, Canada, 7th October, 1893; 6 years.

Claim.—1st. As a foot ball game, a board provided with two sets of pivoted arms interspersed, means for manipulating each set from opposite sides of the board, a fence to enclose the field and goals situated at opposite ends of the field, as and for the purpose specified. 2nd. The board A, provided with two sets of pivoted arms E, attached to or forming part of the spindle *e*, a pinion *e*¹, on each spindle *e*, and racks *f*, meshing with the pinions *e*¹, and secured on rods *F*, which are manipulated by knobs *G*, a fence *D*, enclosing the field and goals *H*, arranged at each end of the field, as and for the purpose specified. 3rd. The board A, provided with two sets of pivoted arms E, attached to or forming part of the spindle *e*, a pinion *e*¹, on each spindle *e*, and racks *f*, meshing with the pinions *e*¹, and secured on rods *F*, which are manipulated by knobs *G*, a fence *D*, composed of the arc sections *d*¹, and goals *H*, comprised of the arched wires having pockets *I*, suspended as and for the purpose specified.

No. 44,418. Shirt. (Chemise.)



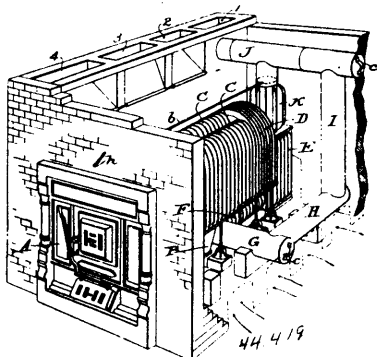
Terence J. Goodwin, Syracuse, New York, U.S.A., 7th October 1893; 6 years.

Claim.—1st. The combination with the divisional patterns for the back, yoke, sleeve, and bosom pieces of a shirt, of the herein described divisional pattern for the front piece of the shirt, the same comprising the lengthwisely adjustable side plate A¹, forming one edge thereof, the lengthwisely adjustable side plate A², having a curved edge and formed of the sections *a*⁴, *a*⁵, the section *a*⁷, being composed of the division *a*⁶, having an edge curved at its base towards the lower end of the plate A¹, and the division *a*⁷, having its base hinged to the division *a*⁶, the lengthwisely adjustable cross plate A³, between the plate A¹ and the upper end of the plate A², and connecting plates, substantially as described, between the upper ends of the plates A¹, A², substantially as and for the purpose described. 2nd. The combination with the divisional patterns for the back, yoke, sleeve, and bosom pieces of a shirt, of the herein described divisional pattern for the front piece of a shirt, the same comprising the lengthwisely adjustable plate A¹, forming one edge thereof, the lengthwisely adjustable side plate A², lengthwisely adjustable cross plates A³, A⁴, connected, substantially as described, to the plates A¹, A², the top plate A⁵, composed of the section *a*²⁹, extending laterally from the side plate A¹, and having one end

fixed thereto, and the section *a*³⁰, inclining towards the base of the side plate A¹, and comprising the division *a*³², hinged at one end to the section *a*²⁹, and the division *a*³¹, having one end adjustably secured to the outer end of the division *a*³², the lengthwisely adjustable cross plate A⁶, extending laterally from the side plate A¹, and having one end fixed to said side plate and the other hinged to the division *a*³¹, of the top bar section *a*³⁰, and a connecting plate, substantially as described, between the upper end of the side plate A², and the division *a*³¹, of the top plate A³, substantially as and for the purpose specified. 3rd. The combination with the divisional patterns for the back, yoke, sleeve, and bosom pieces of a shirt, of the herein described divisional pattern for the front piece of a shirt, the same comprising the lengthwisely adjustable side plate A¹, forming one edge thereof, the lengthwisely adjustable side plate A², lengthwisely adjustable cross plates connected, substantially as described, to the plates A¹, A², the lengthwisely adjustable plate A⁷, consisting of sections *a*²⁵, *a*²⁶, one being secured to the plate A¹, and the other to the plate A², the top plate A⁹, composed of the section *a*²⁹, extending laterally from the side plate A¹, and the lengthwisely adjustable section *a*³⁰, inclining towards the base of the side plate A¹, and having one end hinged to the section *a*²⁹, the hinged plate A⁸, having a curved edge, and supports, substantially as described, for the section *a*³⁰, of the plate A⁹, and the plate A⁸, substantially as and for the purpose described. 4th. The combination with the divisional patterns for the front, yoke, sleeve, and bosom pieces of a shirt, of the herein described divisional pattern for the back piece of a shirt, the same comprising the lengthwisely adjustable plates B¹, B², connected together, substantially as described, and forming opposite edges of the pattern, the lengthwisely adjustable top plate B⁶, having one end fixed to the upper end of the plate B¹, and connecting plates, substantially as described, between the outer end of the plate B⁶, and the upper end of the plate B², substantially as and for the purpose specified. 5th. The combination with the divisional patterns for the front, yoke, sleeve, and bosom pieces of a shirt, of the herein described divisional pattern for the back piece of the shirt, the same comprising the lengthwisely adjustable plates B¹, B², forming opposite edges of the pattern, lengthwisely adjustable cross plate B³, B⁴, connected, substantially as described, to the plates B¹, B², the lengthwisely adjustable plate B⁷, consisting of sections *b*²⁵, *b*²⁶, one being secured to the plate B¹, and the other to the plate B², the lengthwisely adjustable top plate B⁶, having one end fixed to the upper end of the plate B¹, and formed with a lengthwise edge having a down turned outer end, and connecting plates, substantially as described, between the outer end of the plate B⁶ and the upper end of the plate B², substantially as and for the purpose set forth. 6th. The combination with the divisional patterns for the front, yoke, sleeve, and bosom pieces of a shirt, of the herein described divisional pattern for the back piece of the shirt, the same comprising the divisional lengthwisely adjustable side plate B¹, forming one edge thereof, the lengthwisely adjustable side plate B², having a curved edge and formed of the sections *b*⁴, *b*⁵, the section *b*⁵, being composed of the division *b*⁶, having an edge curved at its base towards the lower end of the plate B¹, and the division *b*⁷, having its base hinged to the division *b*⁶, the lengthwisely adjustable cross plate B⁴, between the plate B¹, and the upper end of the plate A², the lengthwisely adjustable plate B⁷, consisting of sections *b*²⁵, *b*²⁶, one being secured to the plate B¹, and the other to the plate B², the lengthwisely adjustable top plate B⁶, having one end fixed to the upper plate B¹, the plate B³, having one end fixed to the outer end of the top plate B⁶, and the plate B⁵, hinged at its upper end to the lower end of the plate B², and having its lower end adapted to register with the upper end of the plate B², substantially as and for the purpose specified. 7th. The combination, with the divisional patterns for the front, back, sleeve, and bosom pieces of a shirt, of the herein described pattern for the yoke piece of the shirt, the same comprising a base plate C³, formed with a projecting arm *c*¹² at the central portion of its upper edge, a plate C¹ adjustable lengthwisely on the base plate C³, and formed with a bottom edge *c*⁸, and a right hand end edge *c*⁹, arranged at substantially right angles with each other, and the plate C² adjustable lengthwisely on the base plate C³, and formed with a bottom edge *c*⁴, and a left hand end edge *c*¹¹ extending at substantially right angles with each other, said parts being constructed and operating substantially as and for the purpose set forth. 8th. The combination, with the divisional patterns for the front, back, sleeve, and bosom pieces of a shirt, of the herein described pattern for the yoke pieces of a shirt, the same comprising a base plate C³, a plate C¹ adjustable lengthwisely on the base plate C³, and formed with a bottom edge *c*⁸, and a right hand end edge *c*⁹, arranged at substantially right angles with each other and provided with a tongue *c* extending laterally from the opposite end edge of said plate C¹, a plate C² adjustable lengthwisely on the base plate C³, and formed with a bottom edge *c*⁴, and a left hand end edge *c*¹¹ extending at substantially right angles with each other and provided with an open slot *c*¹ extending inwardly from its right hand end edge for receiving the tongue *c*, substantially as and for the purpose set forth. 9th. The combination, with the divisional patterns for the front, back, sleeve, and bosom pieces of a shirt, of the herein described divisional pattern for the yoke piece of the shirt, the same comprising a base plate C³, a plate C¹ hinged at one extremity and having its top edge arranged in advance of the corresponding edge of the base plate, and plates C¹, C², lapping with each other and adjustable lengthwisely on the base plate, said plates being formed

with their opposite end edges substantially parallel and one of said plates being provided with a cam for engaging the free end of said plate C³, substantially as and for the purpose specified. 10th. The combination, with the divisional patterns for the front, back, sleeve, and bosom pieces of a shirt, of the herein described pattern for the yoke piece of the shirt, the same comprising a base plate C³, a plate C⁵ arranged substantially crosswise of the plate C³ and movable lengthwise thereon, a plate C⁴ hinged at one extremity of the top end of the plate C³, and having its top edge arranged in advance of the corresponding edge of the base plate, plates C¹, C², lapping with each other and adjustable lengthwise on the base plate, one of said plates being formed with a cam for moving the plate C⁵ lengthwise and the other plate being provided with a cam for engaging the free end of said plate C⁴, substantially as and for the purpose described. 11th. The combination, with the divisional patterns for the front, back and bosom pieces of a shirt, of the herein described pattern for the sleeve piece of the shirt, the same comprising lengthwise adjustable arms D², D², having their adjacent ends relatively fixed and having lengthwise edges curved downwardly from their inner to their outer ends, lengthwise adjustable arms D³, E², of less length than the former arms D², D², having their adjacent ends relatively fixed and lengthwise adjustable side plates D⁴, D⁴, consisting of lapping sections, said side plates having corresponding ends secured to the outer ends of the arms D², D², and having their opposite ends secured to the outer ends of the arms D³, D³, substantially as specified. 12th. The combination, with the patterns for the front, back, yoke and bosom pieces of a shirt, of the herein described pattern for the sleeve piece of the shirt, the same comprising a lengthwise plate D¹, having a substantially straight longitudinal edge, a lengthwise adjustable arm D², extending laterally from one end of the plate D¹, and having a longitudinal edge curved downwardly from its inner to its outer end, said arm D² consisting of lapping sections, one of which is fixedly secured to the plate D¹, a lengthwise adjustable arm D³, extending laterally from the opposite end of the plate D¹, and consisting of lapping sections, one of which is fixedly secured to the plate E¹, and a lengthwise adjustable plate D⁴, having one extremity hinged to the outer end of the arm D², and the other extremity hinged to the corresponding end of the arm D³, substantially as set forth. 13th. The combination, with the patterns for the front, back, yoke and sleeve pieces of a shirt, of the pattern for the bosom piece of a shirt, the same comprising lengthwise adjustable arms E², E², each having a substantially straight longitudinal edge, lengthwise adjustable arms E³, E³, disposed in a plane substantially parallel with that of the arms E², E², and each having substantially straight longitudinal edges and lengthwise adjustable side plates E⁴, E⁴, having corresponding ends secured to the outer ends of arms E², E², and having their opposite ends secured to the outer ends of the arms E³, E³, and provided with longitudinal edges having their upper portions substantially perpendicular to the longitudinal edges of the arms E², E², and their lower ends curved inwardly, substantially as specified. 14th. The combination, with the patterns for the front, back, yoke and sleeve pieces of a shirt, of the pattern for the bosom piece of the shirt, the same comprising a lengthwise adjustable plate E¹, having a substantially straight longitudinal edge, an arm E², extending laterally from one end of the plate E¹, consisting of sections lapping with each other and adjustable lengthwise in a plane at substantially right angles to the plane of adjustment of the plate E¹, one of said sections being fixedly secured to the plate E¹, an arm E³, extending laterally from the opposite end of the plate E¹, and consisting of sections lapping with each other and adjustable lengthwise in a plane at substantially right angles to the plane of adjustment of the plate E¹, one of said sections being fixedly secured to the plate E¹, and a lengthwise adjustable side plate E⁴, having one extremity secured to the outer end of the arm E², and the other extremity secured to the corresponding end of the arm E³, said side plate being formed with a longitudinal edge turned inwardly at its lower end, substantially as and for the purpose described.

No. 44,419. Furnace. (Fournaise.)



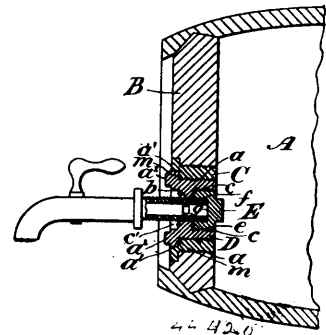
Isaac D. Smead, Toledo, Ohio, U.S.A., 7th October, 1893; 6 years.

Claim.—1st. A sectional casting for furnaces, consisting of a curved plate or body, as S or T, having a laterally projecting flange

or rib *f*, within a groove *r*, in one side and a rib *t*, on the opposite side of said flange, substantially as shown and described. 2nd. A furnace, having its body composed of a series of the curved sectional plates, each provided with the laterally flange *f*, having a groove *r*, on one face and a rib *t*, on its opposite face, the sectional plates being held together by bolts which extend through each adjoining pair of flanges only, as shown and described. 3rd. A heat or smoke pipe, composed of a series of annular plates or rings, each provided with an annular groove on one edge and a corresponding rib or projection on its opposite edge, each ring being provided with a laterally projecting rib or flange, and each ring composing the series being separately bolted to the next adjoining one by bolts which pass through the flanges of two adjoining rings only, substantially as shown and described. 4th. The combination in a furnace or air warmer, of a fire box B, duplicate combustion chambers C, C, smoke chamber D, breeching E, with pipes arranged to convey the products of combustion from said breeching first along below the furnace body, thence upward and to the chimney, and a direct draft pipe connecting said breeching with the pipe leading to the chimney, and having therein a damper for opening and closing the same at will, all being constructed and combined to operate, substantially as herein set forth.

No. 44,420. Faucet and Vent Bung and Bushing.

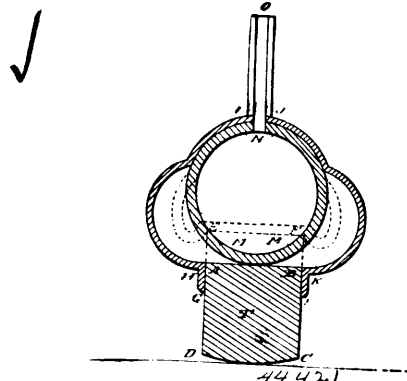
(*Robinet, coude et de de fausset.*)



Dillon Beebe, Newark, New Jersey, U.S.A., 7th October, 1893; 6 years.

Claim.—1st. The combination with a bung, provided on its exterior with screw threads and a flange, and on its interior with an annular screw threaded flange and a screw threaded recess, of a hollow plug interiorly and exteriorly screw threaded, its interior thread being continuous with the interior thread of the flange of the bung when it is in a closed position, substantially as described. 2nd. The combination with a bung D, provided on its exterior with screw threads *a*, and a flange *a*¹, and on its face with projections or lugs *a*², and on its interior with an annular screw threaded flange *b*, a screw threaded recess *c*, and an annular recess *c*¹, in its face, of a hollow plug E, provided on its outer circumference with screw thread *e*, and its inner circumference with screw thread *f*, which are continuous with the interior thread of the bung when it is in a closed position, and on its face with a lug *d*, substantially as described.

No. 44,421. Bicycle Tire. (Bandage de bicycles.)

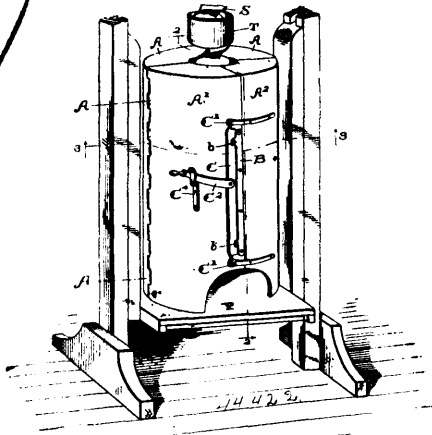


Otto L. Wullwebber and Francis E. Augustin, both of Chicago, Illinois, U.S.A., 7th October, 1893; 6 years.

Claim.—1st. The flexible tire T, having the two vertical sides A, D and B, C, parallel to each other, in combination with a tubular wheel rim or felly having its periphery longitudinally slotted, the sides of the slot being upset to form parallel flanges adapted to frictionally embrace the vertical sides of the tire, substantially as

described. 2nd. In a bicycle wheel, the combination with a flexible tire, of an annular air cushion for supporting the tire and a rigid tubular felly for enclosing the cushion, the felly chamber being wider than the cushion, substantially as described. 3rd. In a bicycle wheel, the combination with a flexible tire having its vertical sides parallel, and with rigid flanges having frictional contact with said tire sides, of an annular air cushion for supporting the tire, substantially as described. 4th. In a bicycle wheel, the combination with an elastic tire having its vertical sides flat and parallel, of an annular air cushion immediately within and for the purpose of supporting the tire, and a tubular felly for enclosing the air cushion and being of greater internal width than said cushion, and having its periphery longitudinally channelled to receive the tire, and parallel radial flanges upon each side of the channel, adapted to frictionally embrace the tire, substantially as described.

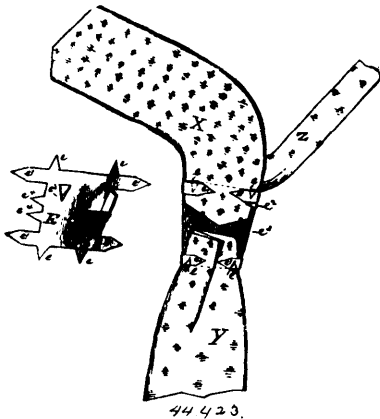
No. 44,422. Sack Case. (*Chassis pour sacs.*)



The Nordyke & Marmon Company, assignees of Evert M. Thompson, all of Indianapolis, Indiana, U.S.A., 7th October, 1893; 6 years.

Claim.—1st. In a casing for enclosing sacks while being filled by a packing machine, the combination of a main and two swinging parts, a multipronged catch on one, and a swinging latch having a handle on the other, said latch being arranged to engage behind the prongs of said catch, and thus draw and hold said two swinging parts together, substantially as set forth. 2nd. The combination with the swinging parts of a casing to contain the sacks in a packing machine while being filled, of a multipronged catch on one, a swinging latch on the other, said catch and latch being arranged to interlock, and a pivoted handle on the swinging latch with a catch for holding said handle while closed, substantially as set forth.

No. 44,423. Neck Tie. (*Cravate.*)

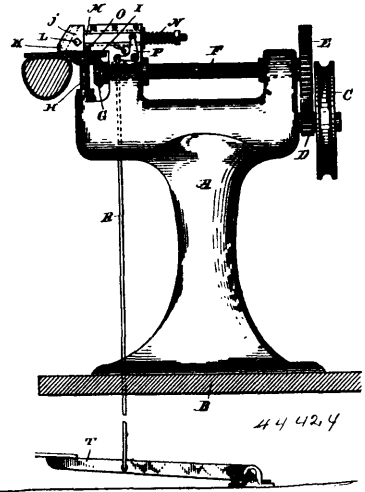


James Scott Milne, Dubois, assignee of Jacob B. Beam, Big Run, both in Pennsylvania, U.S.A., 9th October, 1893; 6 years.

Claim.—1st. The combination with a necktie having the upper and lower portion X and Y, of a plate provided with a series of spurs along its upper edge, which engage with one end of the section X, spurs at the lower edge of the plate which engage with the section Y, scarf engaging means at the side edges of the plate, the neckband, means for securing it to the plate, and a device carried by the plate for securing the outer end of the neck band in position. 2nd. The combination with the necktie having the upper and lower

portion X and Y, of a plate provided with spurs along its upper edge, and spurs along its lower edge and with folding laterally projecting arms at top and bottom, the neckband, means for securing it to the plate, and devices for holding the end of the neckband in position, substantially as and for the purposes hereinbefore set forth.

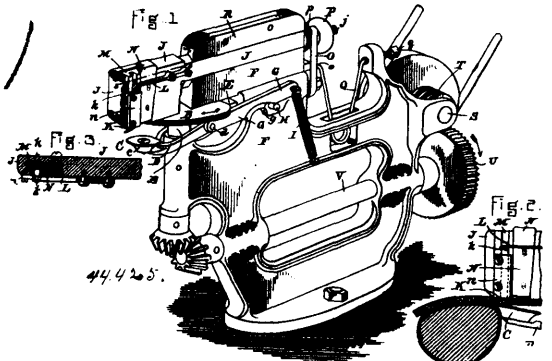
No. 44,424. Shoe Sole Channelling Machine. (*Machine à canneler les semelles de chaussures.*)



The Goodyear Shoe Machine Company, Montreal, Quebec, Canada, assignee of Francis Joseph Freese, Lowell, Massachusetts, U.S.A., 9th October, 1893; 6 years.

Claim.—1st. In a sole channelling machine, a single power driven feed wheel, having a roughened surface in position to engage the outer periphery or edge of a shoe sole, and a channelling knife supported at a little distance from the edge of the wheel, and extending in a direction to enter the face of a sole when the periphery of said sole bears against the periphery of the feed wheel, substantially as described. 2nd. In a sole channelling machine, the power driven feed wheel presenting its periphery or edge to the periphery or edge of the shoe sole, the knife arranged at a little distance from the edge of said wheel so as to enter the face of a shoe sole, and means for adjusting said knife in a direction toward or from the wheel, so as to regulate the distance of the channel from the edge of the sole, substantially as described. 3rd. In a sole channelling machine, the power driven feed wheel presenting its edge or periphery to the edge or periphery of the shoe sole, the knife adjustably supported on the frame to enter the face of the shoe sole, and a treadle mechanism connected to the knife, by which its position relatively to the feed wheel may be adjusted, substantially as described. 4th. The improvement in the art of channelling boot and shoe soles, which consists in holding the edge of the sole of the lasted shoe, by hand, against a continuously rotating surface, increasing, diminishing or suspending the feed by change of manual pressure of such edge against said surface, and forming the channel by suitable means as the boot or shoe is thus rotated.

No. 44,425. Shoe Sole Channelling Machine. (*Machine à canneler les semelles de chaussures.*)



The Goodyear Shoe Machine Company of Canada, Montreal, Quebec, Canada, assignees of Francis Joseph Freese, Lowell, Massachusetts, U.S.A., 9th October, 1893; 6 years.

Claim.—1st. The serrated feed wheel, mounted on a shaft adapted to revolve in fixed bearings, in combination with a channelling knife and a movable channel guide, said knife and guide having

a simultaneous yielding movement toward and from said feed wheel, substantially as set forth. 2nd. A vertically adjustable channelling knife and a horizontally adjustable knife holder in which it is mounted, in combination with a positively driven serrated feed wheel, and with a circular channel guide rotatable by the friction of the shoe thereon, substantially as set forth. 3rd. A positively driven serrated feed wheel, in combination with a channelling knife and a carrier or holder therefor above said feed wheel, and with a rotatable channel guide and lever or holder therefor below said wheel, substantially as set forth. 4th. A positively driven serrated feed wheel and a channelling knife, having a horizontally yielding movement with relation thereto, in combination with a rotatable channel guide, a pivoted lever on which said guide is mounted, a horizontally yielding slide to which said lever is pivoted, and a cam formed arm pivoted to said lever and spring actuated to raise the channel guide when its slide moves rearwardly, substantially as set forth. 5th. In a shoe channelling machine, the knife holder J, and the channel guide slide E, adapted to reciprocate horizontally in suitable ways in the frame F, in combination, with a transverse yoke connecting these parts for simultaneous movement toward and from the feed wheel, and with a spring acting upon said yoke in opposition to the force exerted by the workman, substantially as set forth. 6th. The described method of channelling the sole bottoms of lasted shoes, such method consisting in holding the shoe and its enclosed last by hand with pressure against the circular edge of a rotatable channel guide, and simultaneously pressing the sole edge against the periphery of a rotating feed wheel, and the sole bottom upwardly against the bottom of a knife holder, from which the channelling knife protrudes, whereby such knife is caused to enter the sole bottom, and the shoe is turned about in the workman's hands and channelled by the action of such mechanism and pressure, substantially as set forth.

No. 44,426. Sole Trimming Machine.

(Machine pour dresser les semelles.)

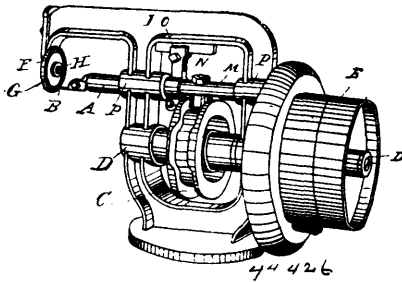


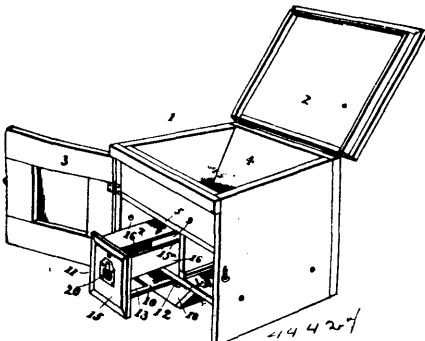
Fig 1

The Goodyear Shoe Machine Company of Canada, Montreal, Quebec, Canada, assignees of Francis Joseph Freese, Lowell, Massachusetts, U.S.A., 9th October, 1893; 6 years.

Claim.—1st. In a sole trimming machine, the grooved form or guide F, having a thin, smooth, peripheral edge, fitting between the upper and the welt or sole, in combination with the reciprocating cutting blade working with its tip within said groove in the flat face of the form, for the purpose set forth. 2nd. In a sole trimming machine, the rotatable form or guide F having a flat, vertical face and annular groove G therein, in combination with the reciprocating cutting blade working at its tip within said groove, and with suitable driving mechanism, substantially as set forth.

No. 44,427. Measuring Vessels.

(Vaisseau compteur.)



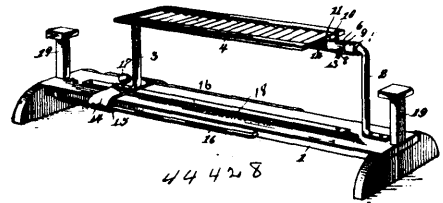
Anson H. Cell, Ellsworth G. Pester, David L. Cell and Bert Husted, all of Colorado Springs, Colorado, U.S.A., 9th October, 1893; 6 years.

Claim.—1st. The combination of a casing provided with a bin having a discharge opening, a measuring chamber arranged below

the bin and having its top and bottom open, a spout located beneath the measuring chamber, and slides rigidly connected with each other and simultaneously operated in the same direction and arranged above and below the measuring chamber, and provided respectively with openings at their inner and outer ends adapted to register alternately with the discharge opening of the bin and the bottom of the measuring chamber, substantially as and for the purpose described. 2nd. The combination of a casing provided at its top with a bin having a discharge opening, a measuring chamber arranged beneath the bin and having its top and bottom open and provided at its side walls with horizontal ways, a guiding frame provided with parallel guide bars arranged in said ways, and the upper and lower slides having at their inner and outer ends discharge openings and secured to and carried by the guiding frame, substantially as described. 3rd. The combination of a casing provided at its top with a bin having a discharge opening, a measuring chamber having its top and bottom open and provided at its side walls with openings, a guiding frame provided with guide bars arranged in the openings and having a cross piece connecting the inner ends of the guide bars and forming a stop, and the slides secured to and carried by the guide frame and provided with openings arranged respectively at their outer and inner ends, substantially as described. 4th. The combination of a casing provided at its top with a bin having discharge openings, a measuring chamber located beneath the bin and having an open top and bottom and provided in its side walls with openings, the ways arranged beneath the bin and the measuring chamber and constructed of sheet metal and provided with openings and having securing flanges, a guide frame provided with guide bars arranged in the openings of the side walls of the measuring chamber and provided at their rear ends with a stop cross piece, the upper and lower slides secured to and carried by the guide frames and arranged in said ways and provided at their inner and outer ends with openings, and a spout arranged beneath the measuring chamber, substantially as described.

No. 44,428. Stand for Window Shutters.

(Support pour contrevents.)



Frank Harris and William Douglas, assignees of Augustus D. Webster, all of Springfield, Illinois, U.S.A., 9th October, 1893; 6 years.

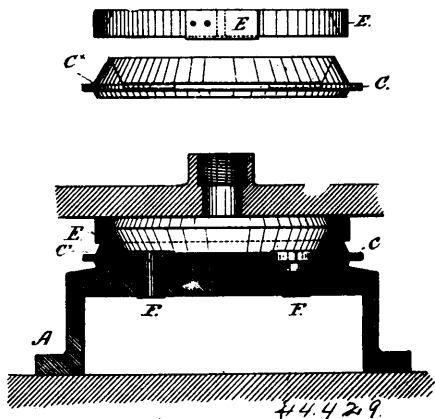
Claim.—In a supporting stand for shutters, the combination of a base, a stationary standard rising from one end of the base, and provided with a horizontal spindle portion, and having a collar fixed thereon, and provided with oppositely disposed projections, a cylindrical chuck mounted on the spindle portion of the stationary standard, and provided at one end with notches and having a limited longitudinal movement to engage and disengage the projections of the collar, and provided at its other end with engaging points and with supporting flanges, and an adjustable standard rising from the opposite end of the base and adapted to engage and form a pivot for one end of the shutter, substantially as described.

No. 44,429. Balanced Slide Valves for Steam Engines. (Soupape équilibrée pour machines à vapeur.)

American Balance Slide Valve Company, San Francisco, assignee of William J. Thomas, Sausalito, all in California, U.S.A., 9th October, 1893; 6 years.

Claim.—1st. The combination, with a slide valve, of a circular rim on the top or back of the valve, having a tapering outer face extending upward toward the top or cover of the valve chest and a circular bearing ring having a flat top face to seat against and slide on the inner face of the cover, a tapering inner face to fit the corresponding tapering face of the rim on the valve, and a perpendicular outer face presented to the steam pressure and adapted by such pressure and the said tapering surfaces to be held to a close seat on the rim and against the cover above it, substantially as hereinbefore described. 2nd. The combination, with a slide valve, of the balance plate C, having a tapering outer face C', the bearing ring E, having a flat top face, a tapering inner face to seat on the face C', of the balance plate, and a perpendicular outer face exposed to the steam pressure of the valve chest, constructed to operate substantially as described. 3rd. The combination, with a slide valve, of the balance plate C, having a tapering outer face C', a central space or cavity connected with the exhaust through the valve, and an expandible bearing ring E, having an inner face fitted to seat on the tapering face C', a flat top face setting against the cover of the valve chest and a perpendicular outer face exposed to the steam pressure constructed to operate substantially as described. 4th. The combination, with the slide valve, of a balance plate having a standing rim

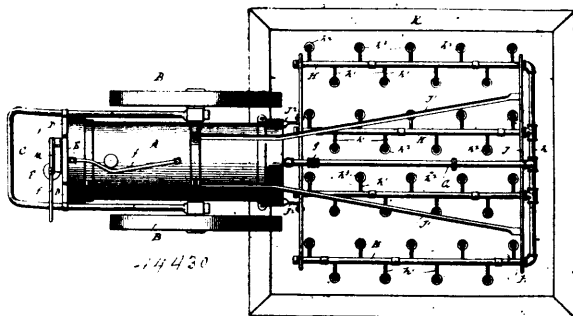
with a tapering outer face, an expansible bearing ring tapered to fit the rim of the balance plate with a flat top to travel on the inner



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face of the valve chest over the valve and having its outer face exposed to steam pressure, and a holding screw having a longitudinal passage through it extending from the balance plate through the back of the valve into the exhaust passage, constructed for operation substantially as described. 5th. The combination, with the balance plate C, having a tapering outer face C', and a central depressed space or cavity below the top edge, of the bearing ring E, having an expansion joint, the said plate C, to be fixed to the back of the slide valve, and the bearing ring being adapted to form an universal bearing for said balance plate when set between said plate and the top or cover of the valve chest, to operate substantially as described.

No. 44,430. Method of Repairing Asphalt Pavement.
(Méthode de réparer les pavages en asphalte.)

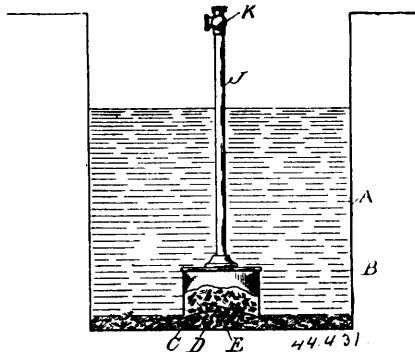


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Amos Henry Perkins, Chicago, Illinois, U.S.A., 9th October, 1893; 6 years.

Claim.—1st. The method of repairing asphalt pavements which consists in subjecting the spot to be repaired to heat, adding new material and smoothing and burnishing it, substantially as described. 2nd. The method of repairing asphalt pavements, which consists in subjecting the spot to be repaired to heat until the material is softened, agitating it and mixing with it new material, and finally smoothing and burnishing it, substantially as described. 3rd. In an apparatus for repairing asphalt pavements, the combination of a series of burners, and means for movably supporting the same in close proximity to the pavement, substantially as described. 4th. In an apparatus for repairing asphalt pavements, the combination of a series of hooded burners, and means for movably supporting the same in close proximity to the pavement, substantially as described. 5th. In an apparatus for repairing asphalt pavements, the combination of a series of hooded fluid burners, and a reservoir for supplying fuel thereto, said reservoir and burners being mounted upon a wheel frame, and the burners being supported in close proximity to the pavement, substantially as described. 6th. In an apparatus for repairing asphalt pavements, the combination of a series of hooded fluid burners supported in close proximity to the ground, of a reservoir for supplying fuel to the burners, and means for supplying pressure to the fuel to force it to the burners, and a wheeled frame for carrying the apparatus, substantially as described. 7th. In an apparatus for repairing asphalt pavements, the combination of a fuel reservoir, a pump for exerting a pressure on the fuel therein, a series of burners connected with the series of horizontal pipes which are connected with the reservoir, and a plate forming a hood or shield through which each burner passes, the orifice around each burner being somewhat larger than the burner itself, substantially as described.

No. 44,431. Cistern Cleaning Device.
(Appareil pour nettoyer les citernes.)

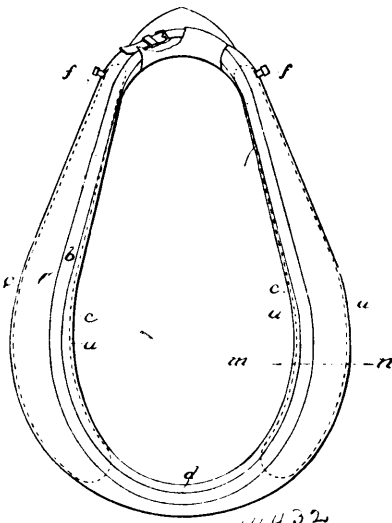


44431

John Shepherd and Gustavus Barton, both of Memphis, Michigan, U.S.A., 9th October, 1893; 6 years.

Claim.—1st. In a cistern cleaning device, the combination of a receptacle, a movable bottom having a valved aperture, and a vent pipe extending above the water level, substantially as described. 2nd. In a cistern cleaning device, the combination of a receptacle, a bottom hinged to one side, a lock for the free edge thereof, a check valve controlling a central aperture therein, and a valved vent pipe extending from the top thereof, substantially as described. 3rd. In a cistern cleaning device, the combination of a receptacle, a concave convex bottom therein, a check valve controlling a central aperture therein, the rod G, crank H at the upper end thereof, locking arm I at the lower end, the vent pipe J extending centrally from the top of the receptacle, and the valve K at the top thereof, substantially as described.

No. 44,432. Horse Collar. (Collier de cheval.)



44432

Lauren Ingles, Seattle, Washington, U.S.A., 9th October, 1893; 6 years.

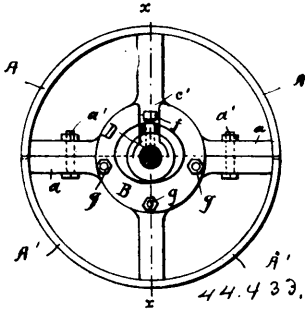
Claim.—1st. A horse collar having the main or pad portion on each side without any stuffing material, thus forming two cavities, in a combination with an air tight bag or sack within each cavity, and means for inflating the same with air and retaining it therein, substantially as shown and described. 2nd. A horse collar having the casing or cover c, the roll b, containing a stiffening material, throat portion d, containing any customary stuffing material, and inflated air sacks a, for filling the body or pad portions of the collar on each side, and means for retaining the air therein, substantially as shown and described.

No. 44,433. Split Pulley. (Poulie d'assemblage.)

John C. Fiester and Jacob S. Annon, both of Reading, Pennsylvania, U.S.A., 10th October, 1893; 6 years.

Claim.—The herein described pulley, consisting of the separable sections, means for removably securing the same together, the hub piece B, located on each side of the sections, and each having substantially elliptical bosses and formed with openings, said openings consisting of the semi-circular portions b', forming half bearings for the shaft, portions b, communicating with said portions b', and of greater diameter than the same, and portions c', communicating

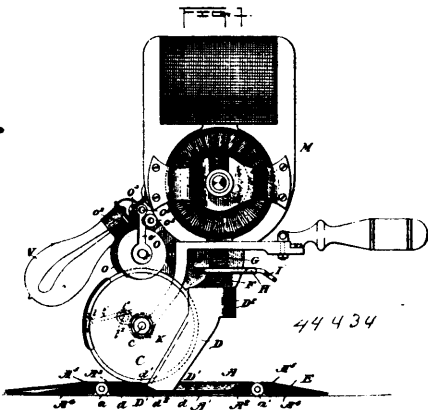
with said portions *b*, slidable blocks fitted in said portions *b*, and having bosses extending into said portions *c'*, said blocks being



adapted to bear directly against the shaft and forming the other half bearing therefor, and set screws engaging said blocks, substantially as shown and described.

No. 44,434. Cloth Cutting Machine.

(Machine à découper le drap.)



John Wolf, Jr., and Jacob Bloch, both of Cincinnati, Ohio, U. S. A., 10th October, 1893; 6 years.

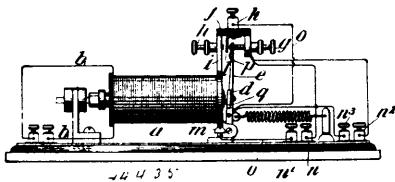
Claim.—1st. In a cloth cutting machine, the foot plate having the concavity in the upper surface thereof extending in the rear of and at one side of a standard mounted thereon, whereby the cloth is adapted to dip at the side and in the rear of the cutter, substantially as described. 2nd. In a cloth cutting machine, the foot plate having the concavity formed in the upper surface thereof and extending partially across the plate in rear of the cutter, and also at one side of the latter, in combination with the cloth lifting plate surrounding said foot plate, and having one side thereof drawn down flush with the surface of said concavity, substantially as and for the purpose described. 3rd. In a cloth cutting machine, the foot plate having the standard thereon, and the rotary knife and its actuating mechanism mounted on said standard, in combination with the foot plate having the concavity in the upper surface thereof extending in rear of and at one side of the knife, substantially as and for the purpose described. 4th. In a cloth cutting machine the combination with the foot plate having the standard thereon supporting the rotary knife and its actuating mechanism, the cloth lifting plate supporting said foot plate and resting upon extensions or projections therefrom, with its surface flush with the surface of the foot plate, substantially as described. 5th. In a cloth cutting machine, the combination of the foot plate having the standard thereon, the rotary knife and motor in gear with said knife, supported by said standard, and the cloth lifting plate surrounding said foot plate, the surfaces of said plates being depressed in rear of the knife and at one side thereof, substantially as described. 6th. In a cloth cutting machine, the combination of the foot plate having the standard thereon, and the rotary cutter and its actuating mechanism supported by said standard, said foot plate having a concavity in its upper surface extending in the rear of and at one side of said standard, together with a cloth lifting plate encircling the foot plate and resting upon extensions or projections therefrom, with its inner edges abutting against a shoulder upon the foot plate and its surface flush with the surface of the latter, substantially as described. 7th. In a cloth cutting machine, the foot plate having the standard thereon and provided with a concavity in its upper surface extending from a point back of the knife edge to the rear of the plate and having upwardly inclined walls at its front and rear extremities, said concavity also extending at one side of said standard, the latter having a flat foot seated and secured in said concavity so as to form part of the front and side walls thereof, and the surface of said foot being flush with the surface of said foot plate, substantially as described. 8th. In combination, with the rotary knife, the motor

and means for rotating the knife, the elevating mechanism consisting of a differential screw which supports said motor, knife and knife actuating mechanism, and means for turning the screw so as to raise or lower the knife, substantially as described. 9th. In a cloth cutting machine, the combination of the foot plate, the standard mounted thereon and having the bifurcated clamp with screw threaded opening therein, the interiorly and exteriorly screw threaded sleeve fitting said opening, the post screwed into said sleeve, the rotary motor and knife in gear therewith mounted on said post, and means for rotating said sleeve so as to raise and lower said knife and its actuating mechanism, substantially as described. 10th. The combination in a cloth cutting machine, of the foot plate, the standard, the cutter, the motor and gearing for imparting motion from said motor to said cutter, with the elevating and sustaining mechanism comprising the exteriorly screw threaded post on which said cutter, motor and gearing are mounted, the interiorly and exteriorly screw threaded bushing in which said post is fitted, and means for adjusting the bushing so as to cause the post and bushing to move in opposite directions for the purpose of raising or lowering the knife, substantially as described. 11th. In combination, with the foot plate and standard, the rotary cutter journaled at one side of said standard in a frame mounted thereon, together with a rotary motor and driving gearing for imparting motion to the cutter, mounted on said frame, and the elevating mechanism comprising the clamp having the vertical by interiorly screw threaded opening therein the exteriorly and interiorly screw threaded sleeve or bushing fitting said opening, the post screwed into said bushing, and means for rotating the bushing so as to raise and lower the knife and frame supported upon said post, substantially as described. 12th. The combination in a cloth cutting machine with the foot plate and standard, of the motor, the motor supporting frame mounted upon said standard and having the rotary knife journaled therein, means for imparting motion from said motor to said knife, and mechanism for raising and lowering the knife and supporting frame, comprising the interiorly screw threaded clamp on said standard, the rotatable bushing having the notched collar on the head thereof screwed into said clamp and provided with interior screw threads having the exteriorly screw threaded post fitted therein, together with the adjusting lever adapted to engage said notched collar for the purpose of rotating the bushing, substantially as described. 13th. In a cloth cutting machine, the combination with the foot plate and standard, the knife and means for imparting motion thereto, of the exteriorly screw threaded post, and the exteriorly and interiorly screw threaded bushing into which said post is screwed, said bushing being screwed into a bifurcated spring clamp upon the head of said standard having an interiorly screw threaded cylindrical opening therethrough to receive the bushing, means for binding said bushing in said clamp so as to prevent rotation thereof, and means for rotating the bushing when said clamp is loosened, substantially as described. 14th. In a cloth cutting machine, the combination with the elevating mechanism consisting essentially of a screw threaded post upon which the motor and knife supporting frame and driving gearing are mounted, the exteriorly and interiorly screw threaded bushing into which said post is screwed and the standard supporting said parts, of the adjusting device comprising a plate having a circular opening therethrough, a thumb piece or lever fitted to slide in an elongated slot in said plate and having a projecting point or tooth to engage a notch in the head of said bushing, and a pair of similarly shaped plates fitting one above and the other below said slotted plate so as to sustain said device in position upon the head of the bushing, substantially as described. 15th. In a cloth cutting machine, the combination with the foot plate and standard, the rotary knife and the differential screw for raising and lowering the knife, of the adjusting device comprising triple plates superimposed one upon the other, the upper and lower plates having circular openings therethrough of different sizes fitting over different sized screws, and the intermediate plate having a larger opening, and a lateral extension provided with an elongated slot, and a sliding thumb piece or lever working in said slot and having a toothed end projecting beyond the opening in the plate for engaging and rotating one of the screws, substantially as described. 16th. In a cloth cutting machine, the combination, with the rotary knife, of the guard and the sliding bars pivoted to said guard, the pivotal connection of the one being placed above that of the other together with a clamp for securing the opposite ends of said bars and sustaining the guard in proper position upon the knife, whereby the guard is adapted to be adjusted either forward or back and tilted to conform to the size of the knife as the latter is reduced by wear, substantially as described. 17th. In combination, with the rotary knife, the curved tilting guard having the adjusting bars pivoted thereto with their pivots arranged one above the other, and the clamp for holding said bars, consisting of a lug projecting from the knife arbour bearing, the recessed nut or washer, and the set screw for clamping the bars in said recess, substantially as described. 18th. The combination, in a cloth cutting machine, of the foot plate and the rollers journaled therein and projecting slightly below the same, the front rollers being encircled by elastic rings which are raised slightly above the surface or periphery of the rollers, substantially as and for the purpose described. 19th. In combination, with the foot plate, the rollers journaled therein and provided with ball bearings, and the detachable boxes supporting said bearings underneath the foot plate, substantially as described. 20th. The combination, in a cloth cutting machine,

provided with the rotary knife and means for driving the same, of the grinding discs mounted upon a shaft arranged obliquely to the axis of the knife, and means for holding said discs in yielding engagement with the edge of the knife and for adjusting the tension or pressure thereon, comprising the upright supporting arm, the rod or bar projecting therefrom in the plane of said shaft, the sliding pendant arms connecting said shaft and rod, with the discs between the arms, the springs adapted to separate said discs and pendant arms, the intermediate adjusting rod connecting said arms but permitting one arm to slide thereon, a spring tending to force said arms together and means for adjusting the tension of said springs so as to vary the force thereof and yieldingly sustain the discs in engagement with opposite sides of the knife, substantially as described. 21st. In a cloth cutting machine, the combination, with the foot plate, the standard, the rotary knife and means for imparting motion to said knife, of the grinding discs mounted upon a shaft which extends obliquely to the axis of the knife, means for imparting motion to said shaft, and a radially swinging clamping arm supporting said shaft at one end and having its opposite end journaled upon a projection from the frame, and a binding screw, whereby said clamping arm may be adjusted for the purpose of raising and lowering the discs, and secured in the desired position by tightening said screw, substantially as described. 22nd. The combination, in a cloth cutting machine, of the rotary knife, the motor, and gearing for imparting motion from the motor to the knife, with the oblique shaft having the grinding discs mounted thereon, the pinion on said shaft, the loose gear wheel meshing with said pinion, and means for engaging and disengaging said loose wheel and gearing so as to start and stop said grinding discs at will without interfering with the operation of the knife, substantially as described. 23rd. In combination with the rotary knife, the motor and main driving gear for imparting motion from the motor to the knife, the oblique shaft, having the grinding discs mounted thereon, the pinion on said shaft, the loose gear wheel meshing with said pinion, the clutch sleeve adapted to engage said main driving gear and rotate therewith, the lever for shifting said clutch sleeve, and means for sustaining said lever in position to hold the clutch disengaged, substantially as described. 24th. In a cloth cutting machine, the combination with the foot plate and standard, the rotary knife, the rotary motor, and the intermediate driving gearing mounted upon said standard, of the grinding discs and driving gear therefor, and means for engaging and disengaging the same with said motor driving gearing, together with a casing or housing formed in two separable parts, and having a step-like offset portion in one part thereof adapted to snugly house the train of gearing and clutch mechanism for stopping and starting said discs, substantially as described. 25th. An automatic take up device, comprising a plurality of weights and cords connected at intervals with a flexible circuit wire or conductor connecting the machine, to be driven with the source of power, so as to automatically take up and pay out the slack while the machine is being moved about the room or from table to table, substantially as described. 26th. In a cloth cutting machine, the combination with the cutting instrument and the electric motor, carried thereby for actuating the knife, of the flexible conductor connected to said instrument, and an automatic take up device, comprising a series of weights connected at intervals by suitable cords with said conductor over an elevated support, so as to automatically take up any slack or superfluous length of wire and permit the same to be readily drawn out at will, substantially as described. 27th. In combination with a cloth cutting machine, and the electric motor carried thereby for actuating the knife, the flexible insulated circuit wires in circuit with said motor, and the automatic take up device comprising a series of cords passing over elevated friction rollers and connected at intervals with said wires, and a separate weight for each cord carrying a pulley adapted to move along the cord when the latter is drawn out or slackened, whereby any slack or superfluous length of wire is automatically taken up ready to be paid out when desired, substantially as described.

electric signalling circuit normally operating by the making or breaking of contact between said main contact points, said main signalling circuit including a signalling device, of a shunt circuit of relatively low resistance, excluding the signalling device, said shunt circuit also having contact points, and of an electro-magnet in reverse said shunt contact points, said shunt contact points being capable of movement under the control of the electro-magnet independently of said main contact points, all so combined that the action of said electro-magnet which, by tending to open one of said sets of contact points, affects the signalling device in one direction, by the same movement tends to affect the signalling device in the same direction by closing the other of said sets of contact points, whereby the control of said electro-magnet over the signalling device is rendered more certain, substantially as set forth. 3rd. The combination with an electric signalling circuit and its signalling device, said signalling circuit operating to give a danger signal when no current is flowing through its signalling device, and said signalling circuit having contact points in its main circuit, and normally operating to give a danger signal by the breaking of contact between said main contact points, and said signalling circuit having a normally open parallel branch or shunt circuit of less resistance excluding said signalling device, said parallel branch or shunt circuit also having contact points, of an electro-magnet controlling said main contact points, and also controlling in reverse said shunt contact points, said shunt contact points being capable of movement under the control of the electro-magnet independently of said main contact points, whereby said electro-magnet normally both breaks said main signalling circuit, and by the same movement shunts the current from the signalling device, and whereby any interference with the breaking of said main contacts will not affect the making of the shunt contacts, substantially as set forth. 4th. An electric signalling circuit, including a signal operating device in combination with a relay comprising a spring and its contact point in series in the said signalling circuit, an oscillating armature bar and its contact point in a shunt around the said signal operating device, said spring and armature bar bearing loosely upon each other at their free ends through the intervention of an insulating and non fusible substance, and both having a natural bent in one direction which maintains the spring and its contact open and the armature bar and its contact closed, the said contacts being arranged opposite each other with the spring and armature bar between them, an electro-magnet normally energized and acting upon the armature bar and spring against their natural bent whereby the signalling circuit is normally closed through the signal operating device and the shunt is open and when the electro-magnet is de-energized current is excluded from the signal operating device by both the break in the signalling circuit and the completion of the shunt circuit and whereby the shunt is completed if the break should fail, substantially as set forth. 5th. In an electric circuit including a translating device, a series of movable contacts each bearing loosely upon another, other contacts for said movable contacts connected with the circuit, said movable contacts having a natural bent in the same direction and so arranged in relation to the other contacts that when any one is controlled by its natural bent it excludes current from the translating device, and when all are moved contrary to their natural bent a free path through the translating device is provided, substantially as set forth. 6th. In an electric signalling circuit including a signal operating device, a series of movable arms each bearing loosely upon another through the medium of an insulating and non-fusible substance, contacts for said movable arms connected with the circuit, said movable arms having a natural bent in one direction and so arranged in relation to their contacts that when any one is controlled by its natural bent it excludes current from the said signal operating device and when all are moved contrary to their natural bent a free path through the signal operating device is provided, substantially as set forth. 7th. The combination of a main signalling circuit including a signal operating device and a movable arm in series therewith and adapted to make and break the circuit, of a shunt circuit around the said signal operating device and including a movable arm adapted to make and break the shunt circuit, the movable arm in the shunt circuit bearing loosely upon the movable arm in the main circuit through the medium of an insulating and non-fusible substance, whereby the movement of the arm in the shunt circuit to break the shunt circuit will operate upon the arm in the main circuit to complete the main circuit and whereby the shunt circuit may be completed whatever may be the condition of the main circuit, substantially as set forth. 8th. In a signalling circuit, including a signal operating device, two contact points located opposite each other and near together, two movable contact arms adapted to vibrate with their free ends between the contact points, one connected in series in the circuit and the other connected in shunt around the signal operating device and bearing loosely with its free end upon the free end of the arm in series, through the medium of an insulating and non-fusible substance, and an electro-magnet adapted to operate the arm in shunt to make or break the shunt circuit, whereby the arm in series may be moved to close on its contact point when the shunt circuit is broken and the arm in shunt may make its circuit whatever may be the position of the arm in series, substantially as set forth. 9th. The combination, in electric relays, of a movable metallic medium *l*, actuated by an armature, a non-fusible rest *p*, insulation *q*, insulation *j*, closing point, back stop and connections, substantially as shown and

No. 44,435. Electric Circuit. (Circuit Electrique.)



The Hall Signal Company, New York City, assignee of John P. Buchanan, Boston, Massachusetts, all in the U.S.A., 10th October, 1893; 6 years.

Claim.—1st. An electric circuit including a translating device, in combination with a primary circuit controller operating to energize and de-energize the translating device, a secondary circuit controller in a shunt around the translating device but not in circuit with the translating device, and provided with means for moving it independently of the primary circuit controller, and electrically controlled means for normally operating said circuit controller in reverse, substantially as set forth. 2nd. The combination with a main electric signalling circuit having contact points therein, said main

for the purposes set forth. 10th. In electric relays, the combination of a movable metallic medium *l*, flexible spring *c*¹, actuated indirectly by an armature, a non-fusible rest *p*, closing point *b*, back stop *g*, and connections used as part of the return circuit, all for the purposes and in the manner set forth.

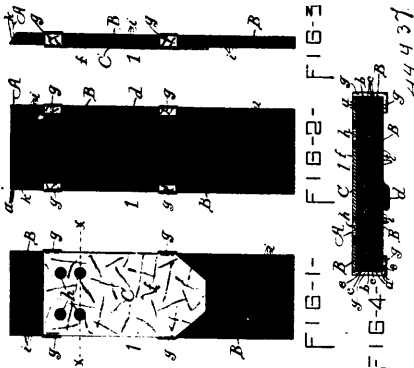
No. 44,436. Method of Obtaining Dye Stuff from Hydrocarbon by Nitration. (*Méthode d'obtenir des matières tinctoriales de l'hydrocarbure au moyen de nitrate.*)

The Grasselli Chemical Company, all of Cleveland, Ohio, U.S.A., 10th October, 1893; 6 years.

Claim.—1st. The art of manufacturing dye stuffs from petroleum, natural mineral oils or the distillates or derivatives thereof, which consists in nitrating the substance and removing the free acid, separating the soluble from the insoluble and oily matters in the remainder, splitting the soluble matter into soluble and insoluble lime salts, and ultimately converting these salts into distinct dye stuffs, substantially as described. 2nd. The art of manufacturing dye stuffs from petroleum, natural mineral oil or the distillates or derivatives thereof, which consists in nitrating the substance, removing the free acid, separating the soluble and insoluble and oily matters from the remainder, splitting the soluble matter into a soluble and insoluble lime salt, and precipitating from the soluble lime salt solution a dye stuff by addition of hydrochloric acid, chloride of sodium or any other salt in whose solution the dye stuff is insoluble, substantially as described. 3rd. The art of manufacturing dye stuffs from petroleum, natural mineral oil or the distillates or derivatives thereof, which consists in nitrating the substance, removing the free acid, separating the soluble and insoluble and oily matters from the remainder, splitting the soluble matter into a soluble and insoluble lime salt, adding to the insoluble lime salt an alkali or any other base which will displace the calcium and precipitating from the resulting solution a dye stuff by the addition of hydrochloric acid, chloride of sodium or any other salt in whose solution the dye stuff is insoluble, substantially as described. 4th. As an article of manufacture, a nitro body producing with carbonate of lime or caustic lime a salt soluble in water and another salt insoluble in water, and emitting the characteristic odour of petroleum or coal oil when highly heated, substantially as described. 5th. As an article of manufacture a nitro dye stuff or colour base, emitting characteristic odour of coal oil when highly heated, and whose calcium salt is soluble in water, substantially as described. 6th. As an article of manufacture, a nitro dye stuff or colour base which will dye silk or wool in acidulated solution a reddish brown without the use of a mordant, substantially as described.

No. 44,437. Ventilated Brushes for Dynamos.

(*Brosse ventilée pour dynamos.*)



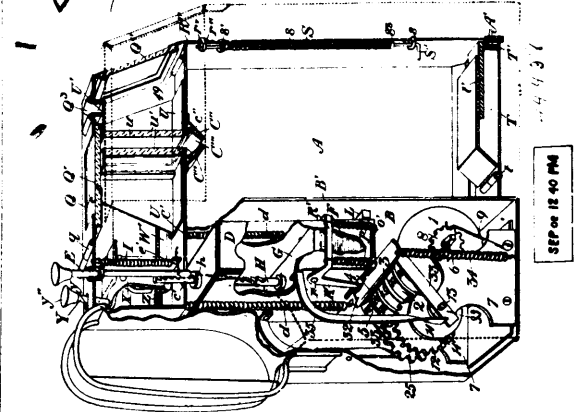
Howard H. Cherry, Seward D. Younglove, Louis House, and William C. Raymond, all of Syracuse, New York, U.S.A., 10th October, 1893; 6 years.

Claim.—1st. A ventilated brush for dynamos, consisting of a perforated core, a perforated wrapper inclosing the core, and a clasp or shield movably attached to said wrapper, substantially as described. 2nd. A brush for dynamos, comprising a perforated core or interior portion formed of folds or layers of wire fabric, a perforated wrapper of wire fabric surrounding same, and a shield or clasp secured longitudinally movably upon said wrapper, in combination, substantially as described. 3rd. A ventilated brush for dynamos, comprising a laminar perforated body, and a longitudinally adjustable clasp or shield attached thereto, substantially as described. 4th. A ventilated brush for dynamos, a perforated laminar core of electric conducting material, a perforated electric conducting wrapper or binder inclosing same immovably, the meeting edges of the wrapper interlocked by a lapped joint, and a clasp or guard of electric conducting material movably secured to the wrapper aforesaid, substantially as described. 5th. In a dynamo brush, a perforated laminar core, a wrapper thereto, said core and wrapper being coincidentally bevelled or concave at an end, and a clasp plate attached movably to the wrapper portion, substantially as described. 6th. A ventilated dynamo brush, made of perforated metallic layers retained together

by a perforated metallic wrapper extending the length of the layers, substantially as described. 7th. A ventilated brush for dynamos, constructed of layers of wire fabric wherein the individual wires in one direction are disposed parallel to the axis of a commutator, and the other individual wires arranged transversely to the said axis, substantially as described and shown. 8th. A ventilated brush for dynamos, comprising a sheet or sheets of wire fabric disposed in folds held contiguous to each other, substantially as described.

No. 44,438. Fare and Transfer Ticket Box.

(*Boîte pour billets de passage et transfert.*)



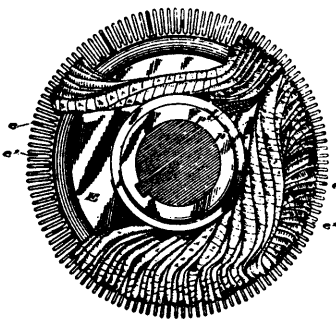
Duncan S. Macorquodale and James Black Perry, Toronto, Ontario, Canada, 10th October, 1893; 6 years.

Claim.—1st. In a fare box, a transfer ticket chamber having a rectangular case to contain the tickets, a plunger to support and operate it, guide ways for the case, a slot made in the bottom of it, and means for printing the ticket through the slot, as and for the purpose specified. 2nd. In a fare box, a transfer ticket chamber having a rectangular case to contain the tickets, a plunger to support and operate it, guide ways for the case, a slot made in the bottom of it, means for printing the ticket through the slot, an end slot made in the case, and means for ejecting the ticket through such slot, as and for the purpose specified. 3rd. In a fare box, a transfer ticket chamber having a rectangular case to contain the tickets, a plunger to support and operate it, guide ways for the case, a follower or compression plate for the tickets operated through the plunger, a slot made in the bottom of it, and means for printing the ticket through the slot, as and for the purpose specified. 4th. In a fare box, a transfer ticket chamber having a rectangular case to contain the tickets, a plunger to support and operate it, guide ways for the case, a slot made in the bottom of it, spiral springs connected to the case and to the top plate of the transfer ticket chamber, and means for printing the ticket through the slot, as and for the purpose specified. 5th. The combination with the case D, having a slot M, made in the bottom of it, guide ways to hold it laterally rigid, and spiral springs *d*, to hold the case in its normal position, of a follower G, situated on top of the tickets F, provided with a toothed rack H, the plunger E, having teeth *e*, designed to engage with the rack H, and the spiral springs I, arranged to hold the plunger E in its normal position, as and for the purpose specified. 6th. The combination with the case D, having a slot M, made in the bottom of it, guide ways to hold it laterally rigid, and spiral springs *d*, to hold the case in its normal position, of a follower G, and a plunger to operate it as specified, a slot N, made in one end of the ticket case, and a corresponding slot N¹, made in the box, a cross plate O, having a projecting rib *o*, and means whereby the cross plate is given a forward movement from the opposite end of the case immediately upon the plunger being caused to ascend, as and for the purpose specified. 7th. The combination with the case D, having a slot M made in the bottom of it, guide ways to hold it laterally rigid, and spiral springs *d*, to hold the case in its normal position, of a follower G, and plunger to operate it as specified, a slot N, made in one end of the ticket case, and a corresponding slot N¹ made in the box, a cross plate O, having a projecting rib *o*, and projecting U-shaped ends extending through the slots P, and means whereby the cross plate is given a forward movement from the opposite end of the case immediately upon the plunger being caused to ascend, as and for the purpose specified. 8th. The combination with the case D, having a slot M, made in the bottom of it, guide ways to hold it laterally rigid, and spiral springs *d*, to hold the case in its normal position, of a follower G, and plunger to operate it as specified, a slot N made in one end of the ticket case, and a corresponding slot N¹ made in the box, a cross plate O, having a projecting rib *o*, and projecting U-shaped ends extending through the slots P, rocking arms R, having the forward ends extending into the U-shaped ends of the cross plate, and their rear ends connected by a cross bar R¹, which is connected to the bottom of the case by the spiral spring *p*, and the contact brackets *s*, designed to press the cross bar R¹, of the rocking arms as it passes it in its ascent, as and for the purpose

specified. 9th. The combination, with the ticket case D, plunger E, for operating it, slot N, made in the bottom of the case and follower G, with mechanism connected to the plunger for holding it against the slot, of the printing wheels 1, 2, 3, 4, 5, designed to imprint the particulars on the ticket through the slot, as for the purpose specified. 10th. The combination, with the ticket case D, plunger E, for operating it, slot N, made in the bottom of the case and follower G, with mechanism connected to the plunger for holding it against the slot, of the printing wheels 1, 2, 3, 4, 5, designed to imprint the particulars on the ticket through the slot, an inking pad 32, supported on the ends of the levers 33, spiral springs 34, designed to hold the pad normally against the surface of the type on the printing wheels, arms 35, connected to the ticket case and designed to tilt the levers 33, and throw the pad outside the path of the case as it is caused to descend, as and for the purpose specified. 11th. The combination, with the plunger E, ticket case D, having a slotted bottom, of the minute wheel 2, connected to the spindle 6, the one toothed disc 10, meshing with the gear wheel 12, secured on the spindle 13, the two toothed disc 14, arranged to engage with the pinion 15, attached to the A. M., and P. M. wheel, and means for retaining the minute wheel and A. M., and P. M. wheels, rigidly in position after being moved, as and for the purpose specified. 12th. The combination, with the plunger E, ticket case D, having a slotted bottom, of the minute wheel 2, connected to the spindle 6, the one toothed disc 10, meshing with the gear wheel 12, secured on the spindle 13, and the pinion 17, secured on the hour wheel 3, and also arranged to mesh with the gear wheel 12, as and for the purpose specified. 13th. The combination, with the plunger E, ticket case D, having a slotted bottom, of the minute wheel 2, connected to the spindle 6, the one toothed disc 10, meshing with the gear wheel 12, secured on the spindle 13, the dog 20, also secured on the spindle 13, and meshing with the toothed disc 21, attached to or forming part of the month wheel 4, as and for the purpose specified. 14th. The combination, with the plunger E, ticket case D, having a slotted bottom, of the minute wheel 2, connected to the spindle 6, the one toothed disc 10, meshing with the gear wheel 12, secured on the spindle 13, the dog 20, also secured on the spindle 13, meshing with the toothed disc 21, attached to or forming part of the month wheel 4, the one toothed disc 22, designed to engage with the toothed pinion 24, secured to the gear wheel 25, which is loose on the spindle 13, and meshes with the gear wheel 24', attached to or forming part of the month wheel 5, as and for the purpose specified. 15th. In a fare box, the combination, with the minute wheel connected to and operating in rotation, the hour wheel A.M., and P.M., wheel, date wheel and month wheel as specified, of the hour hand secured to the sleeve, of the hour wheel and the minute hand secured to the spindle 6, and the dial plate arranged to indicate the hour of the day, as and for the purpose specified. 16th. In a fare box, the combination, with the hinged top Q, provided with a depending plate R², having an eye r, which is inserted through a slot r¹, in the front side of the chamber, of a spring plunger rod secured to the side of the fare box and designed to be inserted in the eye r¹, as and for the purpose specified. 17th. In a fare box, the combination, with the chamber A, having the hinged flap T, with a rib T¹, around three sides, of a U-shaped rib A¹, extending around three sides of the openings and fitting over the rib T¹, when the flap T, is closed as and for the purpose specified. 18th. In a fare box, the combination, with the hinged top Q, having a receiving slot Q³, and transparent top and side Q¹, and Q¹¹, and the intermediate plates C¹, located between the top and the chamber A, and having a slotted opening c¹¹, of the frame U having the slot u, with transparent sides u¹, and means whereby the frame is caused to move from above the slot c¹¹, to beneath the slot Q¹¹, and back again, as and for the purpose specified. 19th. In a fare box, the combination, with the receiving slot Q³, and the slot u, in the frame U, operated as specified, of the slot c¹¹ having a hopper C¹¹ situated beneath it, and flaps C hinged within the hopper, as and for the purpose specified. 20th. In a fare box, the combination with the hinged top Q, having a receiving slot Q³, and transparent top and side Q¹, and Q¹¹, and the intermediate plates C¹ located between the top and the chamber A, and having a slotted opening c¹¹, of the frame U having a slot u, with transparent sides u¹, the frame U being connected by bars W, W¹ to the pivoted bell crank X, which is operated by a plunger Y, as and for the purpose specified. 21st. In a fare box, the combination with the hinged top Q, having a receiving slot Q³, and transparent top and side Q¹ and Q¹¹, and the intermediate plates C¹ located between the top and the chamber A, and having slotted openings c¹¹, of the frame U having a slot u, with transparent sides u¹, the frame U being connected by bars W, W¹ to the pivoted bell crank X, which is operated by the plunger Y, and springs Z, being provided as and for the purpose specified. 22nd. In a fare box, the combination with the hinged flap Q, having a receiving slot Q³, and depositing slot c¹¹, of the slot u made in the frame U, the bars W, W¹ pivotally connected to the frame at one end and to the bell crank X, which is operated by the plunger Y, the bell 37, spring hammer 38, and trip 40 connected to the bar W, all arranged as and for the purpose specified. 23rd. In a fare box, the combination with the hinged flap Q, having a receiving slot Q³, and depositing slot c¹¹, of the slot u made in the frame U, the parallel bars 44, extending above and beneath the cross bar 44¹, and spring dog 46 connected to or forming part of the parallel bar and engaging with the ratchet toothed registering disc 41, and means whereby the frame U is moved backwards and forwards, as and for the purpose speci-

fied. 24th. In the fare box, the combination with the hinged flap Q, having the receiving slot Q³, and depositing slot c¹¹, of the slot u made in the frame U, the parallel bars 44, extending above and beneath the cross bars 44¹, spring dogs 46 and 48, and staple 47 extending over the spring dog 46, and parallel bar 45, and means whereby the frame U is moved backwards and forwards, as and for the purpose specified. 25th. The combination with the receiving slot Q³, the depositing slot c¹¹, the frame U, provided with a slot u, means for imparting a backward and forward movement to the frame U, and a stop 49 to control such movement, as and for the purpose specified.

No. 44,439. Armatures for Electric Machines and Method of Constructing the Same. (*Armature pour machines électriques et méthode de construction.*)

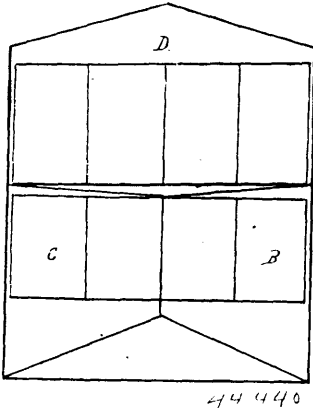


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Westinghouse Electric and Manufacturing Company, assignee of Benjamin G. Lamme, all of Pittsburgh, Pennsylvania, U.S.A., 11th October, 1893; 6 years.

Claim.—1st. The combination with a drum armature core having radiating teeth, of separately wound coils placed within the spaces between the teeth, each coil spanning several teeth. 2nd. The combination with a drum armature core having radiating teeth, of coils of insulate wire placed within the spaces between the teeth, each coil spanning several teeth, said coils being separately wound and separately insulated. 3rd. The combination of a toothed armature core, machine wound coils placed in slots between the teeth of said core, each of which coils spans several of the teeth. 4th. A coil for the armature of an electric machine having its two sides lying in converging planes and its two ends each containing a half turn whereby the upper wire upon one side becomes the under wire upon the other side. 5th. An armature for an electric machine consisting of a toothed core and two series of coils placed within the spaces between the teeth, each coil of each of said series being separately wound and separately insulated. 6th. An armature for electric machines consisting of a toothed core, a series of insulated armature coils laid in the spaces between the teeth and each coil spanning two or more teeth, and a second series of insulated coils laid in the spaces upon the first series. 7th. An armature for electric machines consisting of a toothed armature core, a series of previously wound armature coils laid in spaces between teeth and each coil spanning several teeth and having its ends afterwards bent down upon the ends of the armature core, and a second series of previously wound coils laid above the first named and having their ends afterwards bent down against the end of the armature core and the underlying coils. 8th. In an armature for electric machines, two sets of separately wound and insulated armature coils, one set being placed radially over the other, the length of the coils of one set being greater than that of the coils of the other set. 9th. An armature coil consisting of convolutions of insulated wire, and a longitudinal insulating sheath applied to the two sides of said coil. 10th. The combination with a toothed armature core, of coils of wire laid through the teeth and pressed down upon the ends of the core, each coil binding in position the previous coils, substantially as described. 11th. In an armature for electric machines, the combination with a toothed armature core or previously wound and insulated coils laid within the spaces between the teeth and each coil spanning several teeth, the ends of the coils being pressed down against the ends of the armature core and forming two or more rolls or projections at each end of the core, substantially as described. 12th. In an armature for electric machines, a toothed armature core and two layers of armature coils, each layer divided into sections, all of the coils having their ends pressed down toward the respective ends of the armature core, and the ends of each section forming a roll or projection, the rolls or projections formed by one layer of coils coming between the rolls or projections formed by the other layer of coils. 13th. An armature for electric machines, previously wound and insulated coils applied thereto, said coils being pressed down against the ends of the armature core at an angle to the portions lying across the face of the armature, the portions against the ends of the armature having their edges appropriately perpendicular to the axis of rotation, substantially as described.

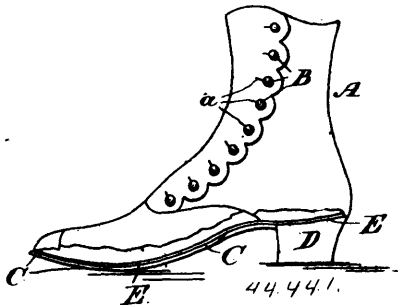
No. 44,440. Advertising Envelope.
(*Enveloppe d'annonce.*)



L. Arthur Dion and Adjutor Carmel, both of Montreal, Quebec, Canada, 11th October, 1893; 6 years.

Claim.—The combination of an envelope with a large flap (part D) bearing advertisements on the inside, with the two parts B and C, in such a way as to be seen in closing and opening the envelope, substantially as and for the purpose hereinbefore set forth.

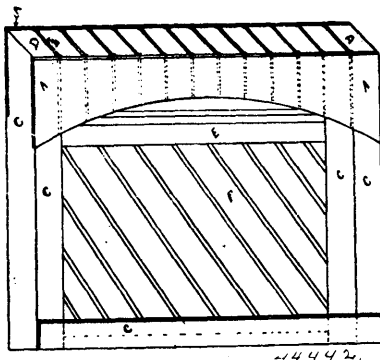
No. 44,441. Electric Shoe Soles.
(*Semelles électriques de chaussures.*)



Rufus F. Carnes and James Northcutt, both of Wingfield, Alabama, U.S.A., 11th October, 1893; 6 years.

Claim.—The combination with a shoe, of the inside electric conducting sole, the electric conducting points formed upon the bottom of the said sole, and the electric wire stitching forming additional conducting points in contact with the inside, substantially as shown and described.

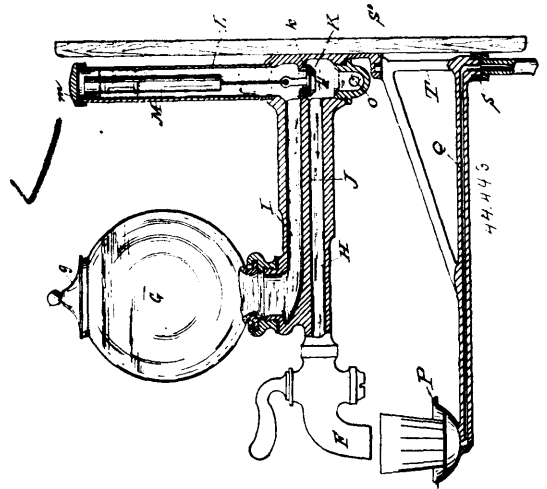
No. 44,442. Arch Plate Frame for Upright Pianos.
(*Cadre pour plaques d'arche de pianos-droits.*)



John B. Mitchell, Bowmanville, Ontario, Canada, 11th October, 1893; 6 years.

Claim.—The combination of the arched plates A, ribs B, posts C, and rail E connected to the piano plate H by the bolt K, and wrest plank G, substantially as and for the purpose hereinbefore set forth.

No. 44,443. Filter. (*Filtre.*)



The Boston Filter Company, assignee of Frank K. Way, all of Chelsea, Massachusetts, U.S.A., 11th October, 1893; 6 years.

Claim.—1st. In a storing and delivering device for filtered water, the combination with a supply pipe and a transparent, aseptic storage vessel of globular form, of a chambered connection between said supply pipe and storage vessel, consisting of a supporting arm having passages therein, one connected with the storage vessel, and the other leading to the outlet, and an inlet opening to said chambers for the supply pipe, a draw off cock at the outlet end, and a float valve mounted between said inlet and storage vessel, and adapted to be closed when the water reaches a predetermined height in said vessel to shut off the water from said supply pipe. 2nd. In a storing and delivering device for filtered water, the combination with a supply pipe and a storage vessel; of a chambered connection consisting of a supporting arm having parallel passages, a draw off cock mounted at the end of one passage, the storage vessel being mounted at the end of the other passage, the said connection being provided with an inlet opening for the supply pipe and an extension from said passages corresponding to the predetermined height of water in the storage vessel, a float mounted in the said extension and a valve connected to said float and seated in said passage between the supply pipe and the storage vessel to shut off the admission of water thereto. 3rd. In a storing and delivering device for filtered water, the combination with a storage vessel and a filtering apparatus located at distant points, of interconnecting pipes between said apparatus and said vessel, a cock controlled chambered vessel mounted in the path of said pipes, and consisting of an inlet passage to the storage vessel, an outlet passage to the discharge cock, and a valve seated between said inlet and outlet passages, and adapted by the influx of water to close at a predetermined water level in said vessel, and to open to allow the efflux of water, when the pressure beneath the valve is relieved by opening said discharge cock. 4th. In a storing and delivering device for filtered water, the combination with a supply pipe and a storage vessel, of a chambered connection having an inlet for said supply pipe, a regulated outlet opening, and a passage leading therefrom in one direction towards the supply pipe, and a similar passage in the other direction towards the storage vessel, a storage vessel communicating therewith and a valve seated between said passages, a valve therefor, one member provided with hard rubber surface, and the other with a matching, yielding, soft rubber surface, a float connected to said valve and mounted in the extension from said connection whereby the water is maintained at a predetermined height in said vessel by said float valve, and readily admits a supply thereto when a portion is drawn off. 5th. The combination with a storage vessel, a filtering apparatus, and a conducting pipe to deliver the water to said storage vessel, a chambered cock controlled connection mounted in the path of said pipe and provided with an extension corresponding to the water level desired in said storage vessel, a float mounted in said extension, a valve operated by said float and seated in said connection in the path of the water, between said storage vessel and the discharge cock of said connection, whereby the water will flow into said storage vessel till the predetermined water level is reached, when the valve will be closed and maintain such level until the discharge cock is opened to draw the water therefrom. 6th. The combination with a case, a can therefor, and a filter proper having a projecting shoulder at one end and mounted within said case, of a flexible coupling between said filter proper and said cap, and consisting of an annular recessed portion embracing said shouldered end of the filter proper, and of a tubular portion opposite thereto, the said cap having an extension matching said tubular portion of the coupling, and a stud bolt supporting said coupling and mounted in said cap extension. 7th. The combination with a casing, a cap therefor, and a filter proper mounted within the said casing, of couplings between

said cap and casing and said cap and filter proper respectively, the first consisting of an annular portion or ridge extending outward to be gripped between the edges of the cap and the casing, and of flaring portions thinned at their edges and pressing against the inside of the casing, the other consisting of an under cut recessed portion forming a lip adapted to support the filter proper and an oppositely extending tubular portion adapted to embrace a matching portion of the cap and be pressed tightly against the same by the pressure of the water, and means to maintain the said couplings and their adjacent parts respectively in engagement.

No. 44,444. Vail Fastener.

(Attache pour voiles.)

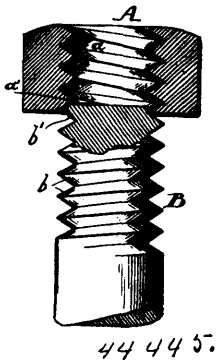


William Henry Harrison, Newark, New Jersey, U.S.A., 11th October, 1893; 6 years.

Claim.—1st. A vail fastener, comprising two coupling members, each provided with a loop forming a vail end adjuster, one of the said coupling members being provided with an eye adapted to be engaged by a hook on the other coupling member, the said hook being formed of two curved bars united at their free ends by a connecting bar having an inner bend, substantially as shown and described. 2nd. A vail fastener, comprising two coupling members, each provided with a loop having a cross-bar to form a vail end adjuster one of the said members being provided with an eye having its front bar widened at or near the middle, and a hook on the other coupling member to engage the said eye, the said hook being formed of two curved bars united at their free ends by a cross-bar formed an inward bend, substantially as shown and described.

No. 44,445. Bolt and Nut

(Ecrin et boulon.)

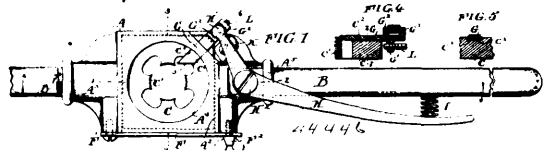


Clinton A. Higbee, Philadelphia, Pennsylvania, U.S.A., 11th October, 1893; 6 years.

Claim.—1st. As a new article of manufacture, a nut and bolt the threads of which are tapered at the end so as to be of less height than the total height of the thread, and the aggregate height of the thread ends of which is equal to or greater than the total height of the thread. 2nd. As a new article of manufacture, a nut and bolt the threads of which are tapered at the end so as to be of less height than the total height of the thread and bevelled as described, to facilitate engagement, and the aggregate height of the thread ends of which is equal to or greater than the total height of the thread.

No. 44,446. Tool for Cutting Down Screw Threads.

(Outil pour couper les filets de vis.)

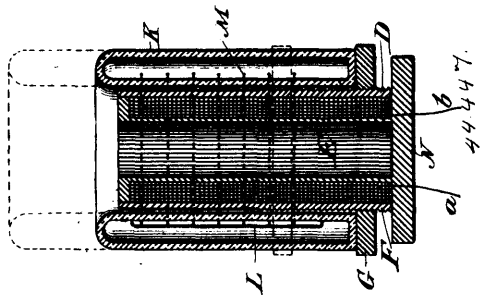


Clinton A. Higbee, Philadelphia, Pennsylvania, U.S.A., 11th October, 1893; 6 years.

Claim.—1st. As a device for cutting down screw threads, a die having a threaded centre C adapted to screw on the screw to be treated in combination with a longitudinally movable cutting tool G adjustably secured to said die so that its edge can be forced against the thread of the screw or withdrawn from its path at will, and means for moving said cutting tool longitudinally and so that its edge will be forced within or retracted from the threaded die centre. 2nd. As a device for cutting down screw threads, a die having a threaded centre C adapted to screw on the screw to be treated in combination with a fixed handle or handles attached to said die, a pivoted lever H secured to the die, a cutting tool arranged to be thrust into operation by lever H and stops arranged to regulate the movement of the cutting tool. 3rd. The combination of a die C, a holder A in which the die is removably held, a longitudinally movable cutting tool G secured in guides directly to the die C and free to move with said die in the holder and means for moving said tool so as to force it toward or from the die cavity, substantially as specified. 4th. The combination of a die C, a holder A in which the die is removably held, a cutting tool G secured in guides directly to the die C, a stop L secured to the cutting tool and arranged to abut against the die C and means for actuating said tool, substantially as specified. 5th. The combination of the die C, a holder A in which the die is removably held, a cutting tool G, secured in guides directly to the die C and an actuating lever pivoted to the holder and in engagement with the cutting tool. 6th. The combination of the die C, a holder A in which the die is removably held, a cutting tool G secured in guides directly to the die C and an actuating lever H, pivoted to the holder and in engagement with the cutting tool at one end and a cam lever J also pivoted to the holder and arranged to act on the free end of the lever H, as described.

No. 44,447. System of Electrical Illumination.

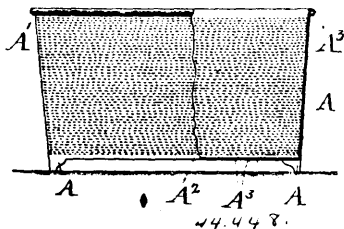
(Système d'illumination électrique.)



Edward A. Colby, Newark, New Jersey, U.S.A., 11th October, 1893; 6 years.

Claim.—1st. The method of causing incandescence in an electric glow lamp, which consists in subjecting a ring or closed coil filament enclosed in a substantially exhausted receiver to the inductive influence of the field produced by varying currents in an external electric conductor, substantially as and for the purpose hereinbefore set forth. 2nd. The method of causing incandescence in an electric glow lamp, and of varying the light intensity thereof, which consists in subjecting a ring or closed coil filament enclosed in a suitably exhausted receiver to the inductive influence of the field produce by varying currents in an external electric conductor, and then varying the inductive effect of said field upon said filament, substantially as and for the purpose hereinbefore set forth. 3rd. An electric glow lamp, having an annular receiver, substantially exhausted of air and containing therein a filament in the form of a series of parallel closed rings or a spiral, the said filament being wholly within the receiver, and having no leading in wires, substantially as and for the purpose hereinbefore set forth. 4th. An electric glow lamp, having an annular receiver substantially exhausted of air and containing therein a filament in the form of a series of parallel closed rings or a spiral, the said filament being wholly within the receiver and having no leading-in wires, in combination, with a means of producing a varying field of force, in which the said lamp is placed and the filament thereby caused to glow by induction from said field, the intensity of the light given being variable by changing the inducing effect of the field upon the filament, substantially as and for the purpose hereinbefore set forth.

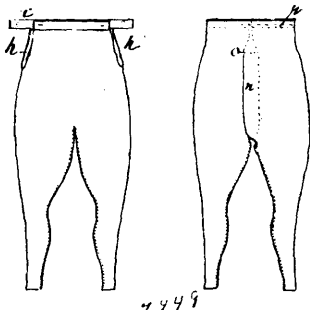
No. 44,448. Baking Tin. (Casserole.)



Tom Parkinson and George M. Parkinson, both of Doncaster, England, 11th October, 1893; 6 years.

Claim.—1st. A baking tin, composed of perforated sheet metal or wire gauge, in combination with an upper and a lower supporting frame, held together by rods projecting through the lower frame to form feet, substantially as and for the purpose specified. 2nd. A baking tin composed of a series of troughs of perforated sheet metal or wire gauge supported side by side on transverse rods, substantially as and for the purpose specified.

No. 44,449. Manufacture of Ribbed Knitted Ladies' Drawers. (Fabrication de Caleçons tricotés en côtes.)



John Moodie, jr., and James R. Moodie, both of Hamilton, Ontario, Canada, 11th October, 1893; 6 years.

Claim.—1st. A pair of ladies' drawers formed of a seamless tubular shaped rib, knitted fabric, the portion between the legs cut away and the edges of the legs seamed up, substantially as specified. 2nd. A pair of ladies' drawers formed from seamless tubular shaped rib knitted fabric A, folded in the centre, and the portion e, between the legs cut therefrom to the pattern B, the inner leg seams f to g, sewed to form a closed drawer, substantially as specified. 3rd. A pair of ladies' drawers formed from a seamless tubular shaped rib knitted fabric A, doubled to one side and cut to the pattern R¹, with two open rear flaps n, n, one to overlap the other, and a slit from 3 to 4 to form an open drawer, and finished substantially as described.

No. 44,450. Preparation of Building Material. (Matière de construction.)

Hermann Meise and Carl Wassmuth Mason, both of Giebichenstein, Prussia, 11th October, 1893; 6 years.

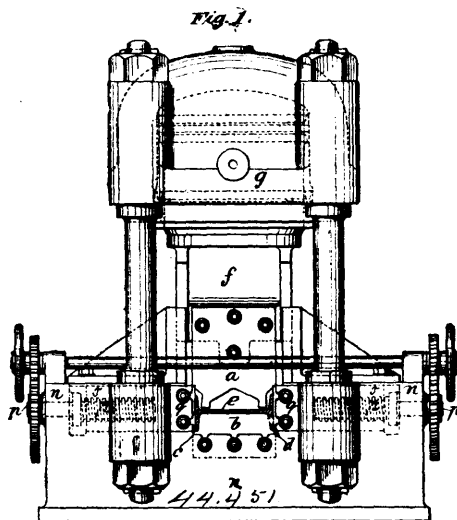
Claim.—A process for the preparation of a material for building or other purposes, consisting in adding to a paste formed of gypsum (or decorator's cement) and water, pieces of gypsum and clean coke ash or clinkers broken into small pieces either with or without the addition of alum, the well mixed mass being used as it is or in the form of plates, blocks or pieces of any desired shape and thickness, substantially in the manner and for the purposes hereinbefore set forth.

No. 44,451. Machine for Cutting or Shearing Iron and Steel. (Appareil pour couper le fer et l'acier.)

Moses H. Cameron and William Snape, both of Salford, Lancaster, England, 12th October, 1893; 6 years.

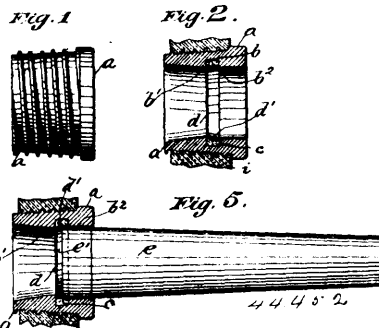
Claim.—1st. In machines for cutting or shearing iron or steel bars, beams, girders and the like, the combination of three relatively fixed pairs of knife or shear blades b, b¹, c, c¹, d, d¹, with a movable knife or shear blade a, adapted to enter between the said bottom and side knife or shear blades, which together form a die and punch and are adapted to cut or shear the iron or steel bar, beam, girder e, or the like, by cutting out a piece equal in thickness to the knife or shear blade a, the full width of the iron or steel bar, beam, girder e,

or the like itself, substantially as and for the purpose specified. 2nd. The knife or shear blades b, b¹, c, c¹, d, d¹, rendered movable and



the knife or shear blade a, stationary, substantially as and for the purpose specified.

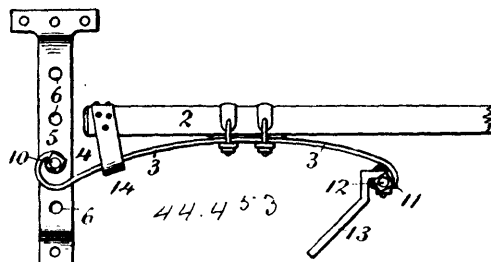
No. 44,452. Bung. (Bondon.)



Edward Hazlehurst, Oldham, Lancaster, England, 12th October 1893; 6 years.

Claim.—1st. A stopper, seal or protector for the tap holes of barrels, consisting of the combination of a hollow bush a, to be inserted in the barrel provided with an internal groove b, a packing ring c, inserted in the said groove and a flanged disc d, d¹, driven therein and the flange d¹, expanded against the packing, substantially as described and shown. 2nd. A tool for inserting the sealing disc d, d¹, and expanding its flanges d¹, when in position, formed with an expanding end, consisting of a hollow socket e, arranged to slide on a plug f, having a shoulder f¹, and carrying a split ring g, which latter is expanded against the flange d¹, of the disc d, d¹, on the edge of the hollow socket e, being driven against the split ring a, substantially as and for the purpose set forth.

No. 44,453. Road Cart. (Désobligeante.)

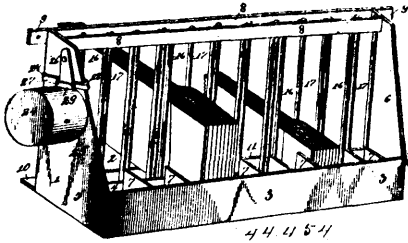


William Cobeau, Markham, Ontario, Canada, 12th October, 1893; 6 years.

Claim.—1st. In a road cart, the reversely curved spring secured medially to the shaft and terminating with an eye formed on each of its opposite ends, as a means by which it is secured to the box of the cart, substantially as described. 2nd. In a road cart, the combin-

tion of the reversely curved springs secured medially to the shafts, and having an eye on each of their opposite end and reversely curved ends, the shafts having loops on their rear ends enclosing said springs to limit their vibration, means on the front of the cart box to secure the front ends of said springs, and vertical bars having a series of holes therein by which to secure and adjust the rear ends of said springs, said vertical bars carried by the cart box, substantially as described.

No. 44,454. Holder for Paper Bags.
(*Porte-sacs en papier.*)



George Staley, Versailles, Missouri, U.S.A., 12th October, 1893; 6 years.

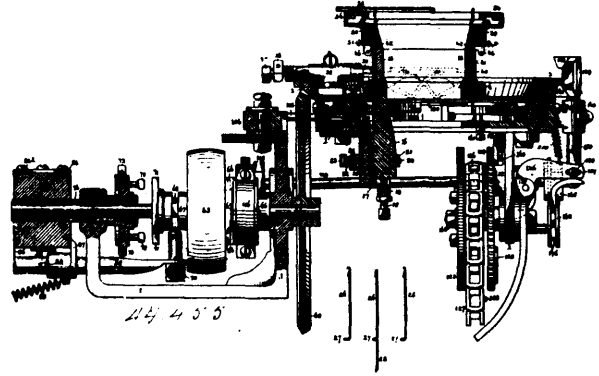
Claim.—1st. In a bag holder, the combination of a main body or frame, provided with a series of partitions to form bag compartments, a series of vertically disposed rods at the entrances of the compartments, one of each of said rods being yieldingly mounted, and means for securing the rods, substantially as described. 2nd. In a bag holder, the combination of a main body or frame having a trough or box at the lower part thereof with a series of partitions therein, and vertically disposed rods at the back of said body or frame, one of said rods of each pair being yieldingly mounted, substantially as described. 3rd. In a bag holder, the combination of a main body or frame, upper strips or rails arranged parallel, a lower vertical wall, a keeper in rear of said wall hinged at one end, and pairs of vertically disposed rods adjacently arranged in pairs, and having their ends between the said strips or rails and the said wall and keeper, one of each pair of said rods being yieldingly mounted, substantially as described. 4th. In a bag holder, the combination of a main body or frame having a box or trough wider at one end than at the other, and a front wall higher than the rear wall, a series of partitions in said box or trough gradually increasing in length toward the wider end of the latter, a series of vertically disposed rods arranged in pairs, one of each pair of said rods being yieldingly mounted, and means for holding said rods in position, substantially as described. 5th. In a bag holder, the combination of a main body or frame having a box or trough formed in the bottom thereof with a rear wall of less height than the front wall, said box or trough being wider at one end than at the other, ends projecting above the said box or trough, strips or rails connected to the inner opposing parts of the said ends, a series of vertically disposed rods arranged in pairs, one of each being yieldingly mounted, a keeper to close against the lower ends of said rods, and pivotally mounted angle plates in rear of said keeper to hold the latter in position when closed, substantially as described. 6th. The combination with a bag holder having a tapering wedge shaped end, of a cord receptacle provided with an arm extending upward from the receptacle and pivoted to the tapering end, said receptacle having its side or end adjacent to the end of the bag holder open, and adapted to be closed by the bag holder when in position, and a clasp provided at its ends with hooks to engage the tapering wedge shaped end of the bag holder, and provided intermediate of its ends with an offset portion receiving and confining the arm of the cord receptacle, substantially as described.

No. 44,455. Knitting Machine. (*Machine à tricoter.*)

Emil John Franck, Philadelphia, Pennsylvania, U.S.A., 12th October, 1893; 6 years.

Claim.—1st. The combination of the needle cylinder having a downwardly projecting finger, with the bed, having a support for said finger and means for securing the finger to the bed, substantially as and for the purposes set forth. 2nd. The combination of the needle cylinder having a downwardly projecting finger, the bed having a set screw serving as a support for said finger, and means for securing the finger to the bed, substantially as and for the purposes set forth. 3rd. The combination of the needle cylinder, having a downwardly projecting finger with a bevelled face, the bed having a bevelled recess in which said finger fits, a vertical support for the finger, and means for securing said finger within the recess of the bed, substantially as and for the purposes set forth. 4th. The combination of the needle cylinder, having a downwardly projecting finger, the bed having a support for said finger and a clamping yoke and set screw, whereby said finger is confined to the bed, substantially as and for the purposes set forth. 5th. The combination of the needle cylinder, having a support in the bed thereof, a finger and clamping means whereby said finger can be confined within said bed, substantially as and for the purposes set forth. 6th. The combination of the needle cylinder, having a downwardly projecting

finger with a bevelled face, the bed having a bevelled recess for the reception of said finger, a vertical support therefor and a



clamping yoke and set screw, whereby the finger is secured within the recess of said bed, substantially as and for the purposes set forth. 7th. The combination of the needles, the needle cylinder, having an annular groove therein and a needle retaining ring adapted to said groove and composed of separable sections, and having between the adjoining sections a gap for the withdrawal of a needle, substantially as and for the purposes set forth. 8th. The combination of the needle carrier, needles some of which have bits longer than others, a pivoted switch cam so mounted in respect to the needles that when in one position it will engage with the long bits and raise the needles, and when in the opposite position will engage with said long bits and depress the needles, and means for shifting said pivoted switch cam from one position to the other, substantially as and for the purposes set forth. 9th. The combination of the needle carrier, the needles some of which have longer bits than the others, a pivoted switch cam so mounted in respect to the needles that when in one position it will engage with the long bits and raise the needles, and when in the opposite position will engage with said long bits and depress the needles, a projection on said switch cam, a spring acting upon said projection and serving to hold the switch cam in its extreme position, and means for shifting said switch cam from one position to the other, substantially as and for the purposes set forth. 10th. The combination of the needle cylinder and its needles, some of which have longer bits than others, a switch cam mounted in respect to the needles, so as to raise the long bit needles out of action when in one position and return them when in the other position, a rock shaft carrying said switch cam, a pin or projection on said rock shaft, and a spring acting upon said pin or projection and serving to retain it in its extreme positions, substantially as and for the purposes set forth. 11th. The combination of the needle cylinder, the needle operating cams, needles, some of which are movable into and out of range of said cams, fashioning cams for acting on the lower portions of the needle shanks to so move them into and out of action, and a rest for the lower ends of the needles when they are out of action, substantially as and for the purposes set forth. 12th. The combination of the needle carrier, the knitting cams, the needles, some of which are movable into and out of range with said knitting cams, some of the fashioning needles having bent lower ends, and fashioning cams for acting on the lower portion of said fashioning needles to move them into and out of range of the knitting cams, substantially as and for the purpose set forth. 13th. The combination of the needle carrier, the knitting cams, the needles, some of which are movable into and out of range of said knitting cams, the fashioning cams acting upon the lower portion of the needles to move them into and out of range of said knitting cams, and a cam carrier having a bevelled portion at the point where the movement of the needle is effected, substantially as and for the purposes set forth. 14th. The combination of the needle cylinder, the knitting cams, needles, some of which are movable into and out of range of said knitting cams, fashioning cams acting on the shanks of the needles to move them into and out of range of the knitting cams, slides carrying said fashioning cams, means for reciprocating said slides, and a friction ring acting as a brake upon the slides, substantially as and for the purposes set forth. 15th. The combination of the fashioning cams and their slides, means for reciprocating said slides, a ring bearing upon the slides and having bevelled portions and set screws acting upon said bevelled portions of the retaining ring to press it down upon the slides, substantially as and for the purposes set forth. 16th. The combination of the fashioning cams, slides carrying said cams, means for reciprocating said slides, rings, one attached to one slide and the other to the opposite slide, and an encircling ring bearing upon said cam slides and their rings, substantially as and for the purposes set forth. 17th. The combination of the fashioning cams, slides carrying said cams, means for reciprocating the slides, and adjustable stops for limiting the movement of the slides in either direction, substantially as and for the purposes set forth. 18th. The combination of the fashioning cams, slides carrying said cams,

means for reciprocating said slides, and an eccentric stop for limiting the approach of the slides towards each other, substantially as and for the purposes set forth. 19th. The combination of the needle cylinder, the knitting cams, the needles, some of which are movable into and out of range of said cams, the fashioning cams for acting on the needles to move them into and out of action, toothed slides carrying said cams, reciprocated rack bars having fixed pawls in different planes for engaging with the said toothed slides, and means for raising and lowering said reciprocated bars so as to throw one or the other of the pawls of each bar into operation, substantially as and for the purposes set forth. 20th. The combination of the needle cylinder, the knitting cams, the needles, some of which are movable into and out of said knitting cams, the fashioning cams acting on the needles to move them into and out of action, toothed slides, reciprocated bars bearing against the toothed faces of said slide pawls carried by said bars and arranged in different horizontal planes, and means for raising and lowering the bars so as to throw one or the other of the pawls of each bar into operation, substantially as and for the purposes set forth. 21st. The combination of the toothed slide with the reciprocated rack bars having recesses or notches in opposite faces, and pawls consisting of blocks secured in said recesses and projecting therefrom so as to engage with the toothed slides, substantially as and for the purposes set forth. 22nd. The combination of the cam box, the driving shaft, gearing connecting said shaft to the cam box, a clutch sleeve having a pulley for the driving belt, means for connecting said sleeve to the driving shaft, a sprocket wheel adapted to engage with the clutch sleeve, a second sprocket wheel having a crank arm, a belt for connecting said sprocket wheel, a rod connected to the crank arm, a drum in connection with said rod, and a clutch for connecting said drum to the driving shaft, substantially as and for the purposes set forth. 23rd. The combination of the driving shaft, a drum, and means for connecting the latter to the driving shaft, with a reciprocated bar and straps connected to said bar and to said drum, one strap passing around the drum in one direction and the other strap passing around the drum in the opposite direction, and one end of each strap secured to the drum and the opposite end to the bar, substantially as and for the purposes set forth. 24th. The combination of a drum, a reciprocated bar and a strap consisting of a single piece connected to the drum at or near the centre and having projecting portions, one of which is single and central and the other bifurcated so that its arms are on opposite sides of the single central portion, one portion passing around the drum in one direction and the other passing around in the opposite direction, one portion of the strap being connected to the upper portion of the reciprocated rod, the drum and the other portion of the strap being connected to the lower portion of said rod, substantially as and for the purposes set forth. 25th. The combination of the driving shaft of the machine, an arm thereon, a vibrating drum, an opening in one of said parts, a pin or projection on the other part for engaging with said opening, a shifter rod having fingers embracing the drum, one of said fingers being free to move on the rod, and a spring connecting said finger to a projection on the rod, substantially as and for the purposes set forth. 26th. The combination of the driving shaft and its arm, having a projecting pin, the vibrating drum having an opening for the reception of said pin and a bevelled block having an abrupt face in the line of said opening, substantially as and for the purposes set forth. 27th. The combination of the needle cylinder, the knitting cams, the needles, some of which are movable into and out of range of said cams, fashioning cams acting on the needles to move them into and out of action, toothed slides carrying said fashioning cams, bars having pawls for engaging with said toothed slides, a lever carrying said bars and a rotated drum having opposite tappets for acting on the said lever and moving the same first in one direction and then in the opposite direction, substantially as and for the purposes set forth. 28th. The combination of the driving shaft, a power driven clutch member adapted to engage directly with a complementary element on said shaft, mechanism for imparting to and from movement to the shaft, said mechanism having an element with which the power driven clutch member is also adapted to engage, a rock shaft having tappets thereon, means for vibrating said rock shaft, a bar having arms, one of which is adapted to be acted on by one of said tappets and the other by the opposite tappet, means for connecting said bar to the clutch member and means for raising and lowering the bar so as to carry the arms respectively into and out of range of the tappets, substantially as and for the purposes set forth. 29th. The combination of the pawl carrying bars, a lever for actuating the same, a rotating drum and a sleeve thereon carrying tappets for acting on said lever, said sleeve being made in sections and adjustable laterally with respect to each other to vary the action of the tappets on said lever, substantially as and for the purposes set forth. 30th. The combination of the needle cylinder and its needles, some of which have longer bits than others, the switch cam for throwing said long bit needles into and out of action, a rock shaft carrying said cam, an arm on said rock shaft, cams acting on said arm to move it from one position to the other, a pattern wheel and intermediate mechanism, whereby said pattern wheel is adapted to govern the adjustment of the switch cam operating devices, substantially as and for the purposes set forth. 31st. The combination of the driving mechanism having two shafts, a clutch movable into or out of engagement with either clutch elements on said shafts, a rock shaft having tappets thereon, means for vibrating said rock

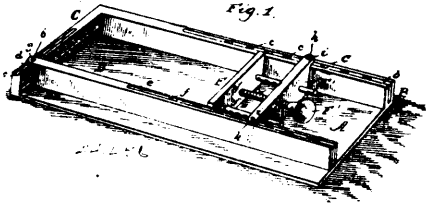
shaft, a bar having bifurcations, one of which is adapted to be acted on by one of said tappets, and the other by the opposite tappet, means for connecting said bar to the clutch, and means for raising and lowering the bar so as to carry its arms respectively into and out of range of the tappets, substantially as and for the purposes set forth. 32nd. The combination of a shifting clutch member, a vibrated shaft having tappets thereon, a bar connected to said shifting clutch member, and having a bifurcated end or arm movable into and out of range of the tappets, one of said arms having a notched end, a pattern chain, and means whereby said chain is caused to lift the bar for the action of the tappets so as to effect a partial movement of the shifting clutch member, to throw the machine out of gear, substantially as and for the purposes set forth. 33rd. The combination of the needle cylinder, the knitting cams, the needles, some of which are movable into and out of range of said knitting cams, fashioning cams for acting on the needles to move them into and out of action, slides carrying said cams, means for reciprocating the slides, a clutch member for changing the machine from to and fro to round and round knitting, a clutch operating rod, and a bar or finger carried by said rod and acting on one of said cam slides, substantially as and for the purposes set forth. 34th. The combination of a pattern chain, a sprocket-wheel carrying the same, a ratchet wheel connected to said sprocket-wheel, a toothed pattern wheel, pawls for acting on said toothed wheels, a shaft or stud carrying said wheels and permitting them to turn thereon, and a washer interposed between the toothed pattern wheel and the sprocket-wheel and said washer keyed to the pivotal shaft or studs, substantially as and for the purposes set forth. 35th. The combination of the cam slides, reciprocated bars carrying pawls in different planes, for operating said slides, shifting levers and slides for effecting the raising and lowering of said bars, and the pattern wheel having cams for operating said levers, substantially as and for the purposes set forth. 36th. The combination of the toothed cam slides, reciprocated bars having pawls for engaging with said slides, levers and slides for vertically shifting said bars, one of said levers overlapping the other, and a pattern wheel having cams for acting on said levers, whereby the movement of one lever is imparted to the other, when said lever moves in one direction, the levers moving independently of each other in the opposite direction, substantially as and for the purposes set forth. 37th. The combination of the toothed cam slides, reciprocated bars having pawls in different planes engaging with said teeth, slides guided on the frame of the machine and engaging with said bars, levers acting on said slides and a pattern wheel having cams for acting on said levers, substantially as and for the purposes set forth. 38th. The combination of the toothed cam slides, reciprocated bars having pawls in different planes for acting on said slides, guided slide bars engaging with said pawl bars, levers acting on said slides, and a frictional retaining device or brake acting upon each slide, substantially as and for the purposes set forth. 39th. The combination of the needle cylinder and its needles, the cam box, a switch cam for acting on the bits of some of the needles, an arm on the shaft of said switch cam, a clutch forming part of the driving mechanism of the machine, mechanism for moving said clutch, a vibrated tappet acting on a bar forming part of said mechanism, and a slide rod carrying said bar and having cams for acting upon the arm of the switch cam, substantially as and for the purposes set forth. 40th. The combination of the needle cylinder and its needles, web holders working over the top of the cylinder, a carrier for said web holders and a cam ring having cams for projecting the web holders at points where the needles are not in action and withdrawing said web holders beyond the line of the needles when the stitch is being formed, substantially as and for the purposes set forth. 41st. The combination of the needles, a cylinder having ribs extending to the top of the same so as to serve as sinks for the stitches, the guided web holders working close to the top of the cylinder and each notched at its inner end so as to serve both as a web holder and as a means of "knocking over" the stitch a grooved carrier for said web holders, a cam for acting upon the web holders to project and retract the same, and means for operating said cam, substantially as and for the purposes set forth. 42nd. The combination of the needles, the knitting cams for actuating the same, cam slides having cams whereby said needles are caused to engage with or are released from the control of the knitting cams, a lever and devices carried thereby for operating said cam slides, means for vibrating said lever and set screws and lugs whereby the movement of the lever in either direction is positively limited, one of said elements being carried by each arm of the lever, and the other by the fixed frame, substantially as and for the purposes set forth.

No. 44,456. Printer's Galley. (*Galée d'imprimeur.*)

Nicholas G. Duffy, Charleston, South Carolina, U.S.A., 13th October, 1893; 6 years.

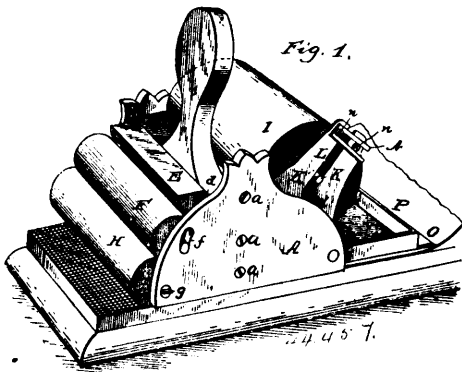
Claim.—1st. The improved galley, consisting of the bed plate A, the stationary side ledge B, having holes *c, c*, the stationary head ledge C, having the hole *d*, the removable side ledge D, having vertical holes *f*, corresponding to the vertical holes *c, c*, in the stationary ledge B, and the adjustable foot piece, consisting of the flat bar E', and the supplementary adjustable bar F, the side ledge D, being provided with a pin *h*, to enter the hole *d*, and the plate E', being provided with pins *k, k*, to enter the holes in the side ledges, substantially as described. 2nd. A printer's galley, having a stationary

side ledge B, a stationary head ledge C, a detachable side ledge D, and an adjustable foot ledge, said foot ledge comprising the flat bar



E¹, supplementary adjustable bar F, and adjusting screw F¹, substantially as described. 3rd. The combination, with the side ledges B and D, having vertical holes for the reception of pins on a foot piece, of an adjustable foot piece consisting of a flat bar E¹, having toes i, i, and pins k, k, a supplementary bar F, and an adjusting screw F¹, substantially as described.

No. 44,457. Proof Press. (Presse.)



Nicholas G. Duffy, Charleston, South Carolina, U.S.A., 13th October, 1893; 6 years.

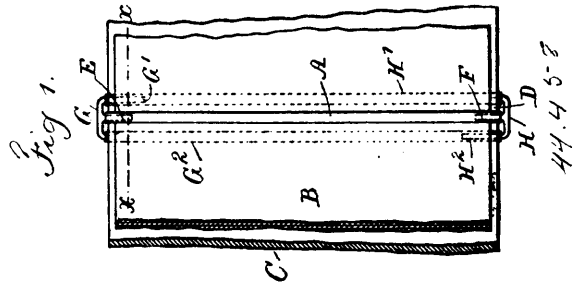
Claim.—1st. In a proof press, the combination, with the carriage or frame of the ink fount D, mounted on the frame, the ink distributing roller F, journaled in the frame below the ink fount, the paper reel shaft K, also journaled in the frame, the impression roller M, and the inking roller H, both journaled in the frame and in such position that the peripheries thereof project below the bottom of the frame whereby the said inking and impression rollers constitute the sole support and bearing of the frame, substantially as described. 2nd. In a proof press, the combination of a suitable frame, an ink distributing roller and a paper reel shaft both journaled in the said frame, with an inking roller and an impression roller journaled respectively at the front and rear of the frame and at such points that the peripheries of both project below the lowest part of the said frame, substantially as described. 3rd. In a proof press, the combination, with a frame or carriage mounted on and supported by an inking roller and an impression roller, of an ink fount arranged above the inking roller and an ink distributing roller journaled in elongated bearing slots between the ink fount and the inking roller whereby when proof is being taken the distributing roller will bear on the inking roller out of contact with the ink fount and when the carriage is turned over said distributing roller will rest against the ink fount out of contact with the printing roller, substantially as described. 4th. In a proof press, the combination, with a frame or carriage mounted on an inking and impression roller journaled in the frame at such position that the peripheries of both project below the bottom of the frame and having a distributing roller above and normally in contact with the inking roller, of an ink fount located above the distributing roller and consisting of a transversely arranged trough provided with a sliding gate at its lower and open side, whereby the flow of ink to the distributing roller may be regulated, substantially as described. 5th. In a proof press, consisting of a frame or carriage mounted on and supported solely by an inking roller and an impression roller, and capable of being tilted upon the fulcrum formed by the impression roller, of a rectangular frame projecting rearwardly from the proof press and having a sharpened lip or flange on its lower edge, substantially as described.

No. 44,458. Binder. (Lieuse.)

Richard R. Vernon, Brooklyn, New York, U.S.A., 13th October, 1893; 6 years.

Claim.—1st. A binder having a bar or tube adapted to pass within the back of the signature or leaves, and frames having rigid side portions or legs adapted to pass at each side of the back and devices for connecting said frames to said tube or bar at its respective ends,

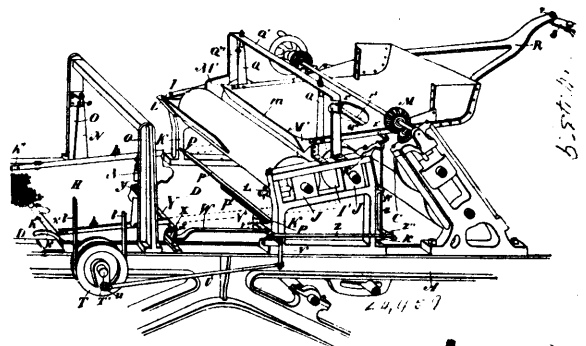
substantially as specified. 2nd. A binder composed of bar or tube to pass into the fold of the signature or sheets and end frames con-



nected therewith and having legs that pass outside the signature and at each side of the fold, substantially as specified. 3rd. A binder composed of three parallel tubes or rods, the middle one of which passes into the fold of the sheets, and end frames that connect the bars or tubes and are separable therefrom, substantially as specified. 4th. A binder composed of three parallel tubes or rods and frames for connecting together the tubes or rods at their respective ends and adapted to receive the fold of the sheets or leaves between them, substantially as specified. 5th. A binder composed of three or more parallel tubes or rods the outer members of which engage the outside of the flexible back, and the inner member of which is within the fold of the leaves and secures them in place, and means for connecting together all the tubes or rods at their respective ends, substantially as specified. 6th. A binder composed of three or more parallel tubes or rods, the outer members of which engage the outside of the flexible back, and the inner member of which frame is within and secures the leaves within the covers and back, and frames or bars that connect together the outer members at their respective ends and to which frames the respective ends of the inner member are removably connected, substantially as set forth. 7th. A binder composed of three or more parallel tubes or rods, and forked or double U-shaped frames adapted to engage and connect the tubes or rods at their respective ends, substantially as specified. 8th. A binder composed of three or more parallel tubes, and forked or double U-shaped frames, the legs of which are adapted to enter and connect the ends of the respective tubes, substantially as specified. 9th. The combination, with the covers C C, the flexible back D, and the folded leaves B, of a binder composed of a tube adapted to be placed within the folds at the back of the leaves, and frames with legs to enter the ends of such tube, and outside tubes connected at their respective ends to the legs of said end frames, substantially as specified. 10th. The combination, with the covers C C, the flexible back D, and the folded leaves B, of a binder composed of a tube adapted to be placed within the folds at the back of leaves, U-shaped frames with central pins to enter and engage the respective ends of such tube, and outside tubular portions adapted to engage the covers C C, and into which the legs of the U-shaped frames enter and telescope, substantially in the manner and for the purposes set forth.

No. 44,459. Machine for Making Biscuits.

(Appareil pour faire les biscuits.)

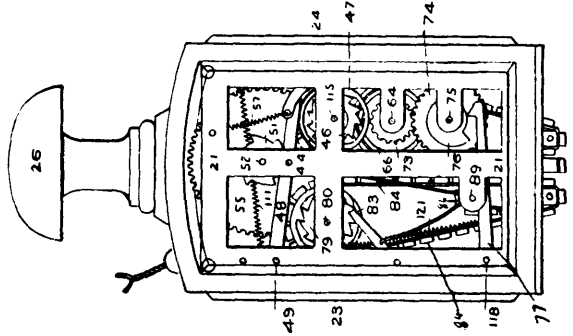


William Christie, Toronto, Ontario, Canada, 13th October, 1893; 18 years.

Claim.—1st. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of a slanting shaker board suitably supported and having its forward end supported slightly above the sheet of dough, and means whereby the board is given a lateral vibratory movement, as and for the purpose specified. 2nd. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of a slanting shaker board suit-

ably supported and having its forward end supported slightly above the sheet of dough on the travelling apron, the forward end having attached to it a flexible lip which rests and passes over the sheet of dough as it travels beneath it, and means whereby the shaker board is given a lateral vibratory movement, as and for the purpose specified. 3rd. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of slanting shaker boards arranged and deriving a vibratory movement as specified, the upper board being designed to receive the fruit from the feed hopper and carry it to the lower board, the forward and lower end of which extends down close to the sheet of dough, as and for the purpose specified. 4th. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of the upper and lower shaker boards, means for causing their lateral vibration, the forward end of the lower shaker board extending into proximity with the sheet of dough upon the travelling apron, and having a flexible lip attached to it which rests upon the apron, as and for the purpose specified. 5th. The combination with two sets of dough delivery rollers, and a travelling apron to receive the sheets of dough from such rollers, of the upper shaker board and means for giving it a vibratory lateral movement, fruit flattening rollers located beneath the forward end of the upper board, and the lower shaker board having its rear and upper end extending beneath the rollers and its forward end supported slightly above the travelling apron, as and for the purpose specified. 6th. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of the upper and lower shaker boards, the feed hopper supported above the rear end of the upper shaker boards, means for causing a vibratory lateral movement to the shaker boards, a fruit bin having an arc shaped bottom and an endless chain provided with buckets which are constructed and arranged to carry the fruit from the bin to the feed hopper, as and for the purpose specified. 7th. The combination with two sets of dough delivery rollers, travelling apron to receive the sheets of dough from such rollers, and a shaker board designed to carry the fruit upon the bottom sheet of dough, of a moisture pipe extending above the travelling apron, and having a perforated branch pipe extending from the top of it over the fruit on the sheet of dough, as and for the purpose specified. 8th. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of the shaker board H, supported and deriving a vibratory movement, as specified, and the butters h^{11} , extending forwardly from the sides h , of the shaker board H, as and for the purpose specified. 9th. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of the shaker board H, supporting and deriving a vibratory movement, as specified, and the spring fingers h^{111} extending inwardly over the sheet of dough, as and for the purpose specified. 10th. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of a shaker board H, supported on hangers N, and the laterally adjustable cross bar P, and means for causing a vibratory motion to the shaker board, as and for the purpose specified. 11th. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of a shaker board H, supported on hangers N, and the laterally adjustable cross bar P, rods p^1 and Y, connected to the cross bar P, and shaker board H at one end and at the other end to the cranks X and V, which are connected together by the rod W, and derive motion by means of the pitman U, from the crank wheel T, as and for the purpose specified. 12th. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of a shaker board H supported on hangers N, and the laterally adjustable cross bar P, deriving motion as specified, and the flattening rollers I, I', provided with end guiding plates M', situated at the ends of the space between the rollers, as and for the purpose specified. 13th. The combination with two sets of dough delivery rollers and a travelling apron to receive the sheets of dough from such rollers, of a shaker board H, supported on the hangers N, and the laterally adjustable cross bar P, rods p^1 and Y connected to the cross bar P, and shaker board H at one end, and at the other end to the cranks X and V, which are connected together by the rod W, the shaker board M supported on hangers Q, and by the reach R upon the arm S, the rods z^2 connecting the shaker board M, to the cranks z^1 at the upper end of the rod z^1 , the arm z secured to the lower end of the rod z^1 , and connected by the rod Z, to the crank V, which is connected by the pitman U, to the crank wheel T, as and for the purpose specified.

stamp having an impulse receiving device, a one minute mechanism operated thereby to register the minutes, a cam having six inclines



gearing intermediate of said cam and the one minute mechanism, an escapement controlled by said cam, and a ten minute wheel governed by said escapement. 3rd. A time stamp comprising an impulse receiving mechanism, a one minute wheel operated thereby, printing characters controlled by said minute wheel, repeated in three series from 0 to 9, inclusive, a ten minute wheel arranged adjacent to the one minute wheel, connections intermediate the impulse receiving device and the ten minute wheel for actuating said ten minute wheel once every ten minutes, and printing characters governed by the ten minute wheel, repeated in five series from 0 to 5, and an hour wheel actuated by mechanism intermediate the same and the impulse receiving device, and controlling printing character from 1 to 12 repeated in two series and operated once each hour. 4th. A time stamp comprising an impulse receiving mechanism, a one minute wheel operated thereby, printing characters controlled by said minute wheel, repeated in three series from 0 to 9, inclusive, a ten minute wheel arranged adjacent to the one minute wheel, connections intermediate the impulse receiving device and the ten minute wheel for actuating said ten minute wheel once every ten minutes, and printing characters governed by the ten minute wheel, repeated in five series from 0 to 5, an hour wheel actuated by mechanism intermediate the same and the impulse receiving device, controlling printing characters from 1 to 12 repeated in two series and operated once each hour, and a meridian wheel moving with the hour wheel and controlling the printing characters A and P, the former repeated twelve times and the latter eleven times, with a blank space between the two, with the character M fixedly arranged adjacent to the said meridian wheel and adapted, together with the A's and P's of the meridian wheel, to print A.M., and P.M. 5th. A recording stamp comprising a series of travelling recording flexible bands located side by side and means for actuating said bands one from another, said means being arranged about the assembled bands so as not to interfere with the proximity of the one band to the other, substantially as described. 6th. A time stamp comprising minute and hour recording flexible bands located side by side and impulse receiving and storing mechanism for actuating said bands one from the other, said impulse receiving and storing mechanism being arranged about the series of bands so as not to interfere with the proximity of the one band to the other, substantially as described. 7th. A time stamp comprising two minute recording flexible digit bands and an hour recording flexible band located side by side, and impulse receiving and storing mechanism for actuating one of the digit bands from the other and the hour recording band from the second digit band, said impulse receiving and storing mechanism being arranged about the series of bands so as not to interfere with the proximity of the one band to the other, substantially as described. 8th. A time stamp comprising an impulse receiving and storing mechanism automatically and intermittently operated, a minute wheel carried by a shaft controlled thereby, a flexible band passing over said minute wheel and positively geared thereto and a small wheel at the bottom of the stamp, the said band carrying numbers to represent the minutes, an hour wheel upon an independent or second shaft, controlled by gearing intermediate the impulse receiving and storing mechanism, and a second flexible band passing over said hour wheel and positively geared thereto and a small wheel at the bottom of the stamp, the said second band carrying printing characters to represent the hours, the axis of said wheels and shafts being arranged substantially parallel, whereby the printing of the minutes of hours may be gotten within small compass and the time registered by the stamp will not be interfered with by printing. 9th. A time stamp comprising an impulse receiving and storing mechanism intermittently and automatically operated, a minute wheel carried by a shaft controlled thereby, a flexible band passing over said minute wheel and positively geared thereto and a small wheel at the bottom of the stamp, the said band carrying numbers to represent the minutes, an hour wheel upon a second or independent shaft controlled by gearing actuated by the impulse receiving and storing mechanism, a second flexible band passing over said hour wheel and positively geared to the same and a small wheel at the bottom of the stamp, the said second band carrying printing

No. 44,460. Time Stamp. (Timbre horaire.)

Samuel H. Hoggson, Chicago, Illinois, U.S.A., 13th October, 1893; 6 years.

Claim.—1st. A time stamp comprising an impulse receiving mechanism, a one minute wheel operated thereby, printing characters controlled by said minute wheel, repeated in three series from 0 to 9, inclusive, a ten minute wheel arranged adjacent to the one minute wheel, connections intermediate the impulse receiving device and the ten minute wheel for actuating said ten minute wheel once in every ten minutes, and printing characters governed by the ten minute wheel and repeated in five series from 0 to 5. 2nd. A time

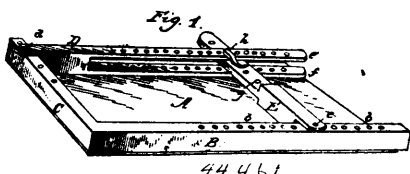
44,460

characters to represent the hours, a meridian wheel rigidly fixed upon the last mentioned shaft, and a third flexible band passing over said meridian wheel and positively geared to the same, and a third small wheel at the bottom of the stamp and carrying suitable printing characters, the axis of said wheels and shafts being arranged substantially parallel, whereby the minutes, hours and meridian characters may be printed within small compass and the time registered by the stamp will not be interfered with by printing. 10th. A time stamp comprising an impulse receiving and storing mechanism, an hour wheel carried by a shaft operated thereby, a flexible band passing over said wheel and positively geared to the same and a small wheel at the bottom of the stamp, the said band carrying printing characters to represent the hours, a day wheel upon a second or independent shaft, controlled by the impulse receiving and storing mechanism, and a second flexible band passing over said day wheel and positively geared to the same and a second small wheel at the bottom of the stamp, the said second band having printing characters thereon to represent the days, the axis of said wheels and shafts being arranged substantially parallel, whereby the hours and days may be printed within small compass and the time registered by the stamp will not be interfered with by printing. 11th. A time stamp comprising an impulse receiving and storing mechanism intermittently and automatically actuated, an hour wheel controlled by a shaft operated thereby, a flexible band passing over said hour wheel and positively geared to the same and a small wheel at the bottom of the stamp, the said band carrying printing characters to represent the hours, a meridian wheel upon said shaft, controlled by the impulse and storing mechanism, a second flexible band positively geared to said meridian wheel and a second small wheel at the bottom of the stamp, the said second band carrying suitable printing characters, a day wheel also upon a second or independent shaft, controlled by the impulse receiving and storing mechanism, and a third flexible band passing over said day wheel and positively geared to the same, and a small wheel at the bottom of the stamp, the said third band having printing characters to represent the days, the axes of all said wheels being arranged substantially parallel, whereby the hours, meridian characters, and days automatically registered by the stamp may be printed within small compass, and the time registered by the stamp will not be interfered with by printing. 12th. A time stamp comprising an impulse receiving and storing mechanism, a minute wheel controlled by a shaft operated thereby, a flexible band carrying printing characters to represent the minutes positively geared to said minute wheel, and a small wheel upon a shaft at the bottom of the stamp, wheel, and a small wheel upon an independent or second shaft, governed by the impulse receiving and storing mechanism, a second flexible band positively geared to said hour wheel, and a small wheel on the aforesaid shaft at the bottom of the stamp, the second flexible band carrying printing characters to represent the hours, a meridian wheel upon the hour wheel shaft, also governed by the impulse receiving and storing mechanism, a third flexible band positively geared to the same, and a third small wheel on the said shaft at the bottom of the stamp, the said third flexible band carrying suitable meridian printing characters, a day wheel upon a third shaft, controlled by the impulse receiving and storing mechanism, a fourth flexible band positively geared to said day wheel, and a fourth small wheel upon a second shaft at the bottom of the stamp parallel and adjacent to the aforesaid shaft at the bottom of the stamp, the said fourth band having printing characters to represent the days, the axes of all of said wheels being arranged substantially parallel, whereby the minutes, hours, meridian characters, and days automatically registered by the stamp may be printed within small compass, and the time registered by the stamp will not be interfered with by printing. 13th. A time stamp comprising an impulse receiving mechanism, a one minute wheel operated thereby, a band travelling over said one minute wheel, and having the digits thereon repeated in three series, a small wheel at the lower end of the stamp over which said band passes, a ten minute wheel arranged adjacent to the aforesaid one minute wheel, mechanism intermediate the said ten minute wheel and the said one minute wheel for actuating the said ten minute wheel once in every ten minutes, a band travelling over said ten minute wheel, having the numbers from 0 to 5, repeated thereon in five series, and a small wheel at the lower end of the stamp adjacent to the previously mentioned small wheel, over which second mentioned small wheel the said latter band travels. 14th. A time stamp, comprising an impulse receiving mechanism, a one minute wheel operated thereby, a band travelling over said one minute wheel and having the digits thereon repeated in three series, a small wheel at the lower end of the stamp over which said band passes, a ten minute wheel arranged adjacent to the aforesaid one minute wheel, mechanism intermediate the said ten minute wheel and the said one minute wheel for actuating the said ten minute wheel once in every ten minutes, a band travelling over said ten minute wheel, having the numbers from 0 to 5 repeated thereon in five series, a small wheel at the lower end of the stamp adjacent to the previously mentioned small wheel, over which second mentioned small wheel the said latter band travels, an hour wheel controlled by the impulse receiving mechanism, and a band upon the hour wheel, having numbers thereon from 1 to 12 repeated in two series and passing over a third small wheel at the bottom of the stamp adjacent to the small ten minute wheel at the bottom of the stamp. 15th. A time stamp comprising an impulse receiving mechanism, a one minute wheel operated thereby, a band

travelling over said one minute wheel and having the digits thereupon repeated in three series, a small wheel at the lower end of the stamp over which said band passes, a ten minute wheel arranged adjacent to the aforesaid one minute wheel, mechanism intermediate the said ten minute wheel and the said one minute wheel for actuating the said ten minute wheel once in every ten minutes, a band travelling over said ten minute wheel, having the numbers from 0 to 5 repeated thereon in five series, a small wheel at the lower end of the stamp adjacent to the previously mentioned small wheel, over which second mentioned small wheel the said latter band travels, an hour wheel, an escapement therefor, a cam controlling said escapement and actuated by the aforesaid mechanism between the one minute and the ten minute wheels, and a band upon the hour wheel having numbers thereon from 1 to 12 repeated in two series and passing over a third small wheel at the bottom of the stamp. 16th. A time stamp, comprising an impulse receiving mechanism, a one minute wheel operated thereby, a band travelling over said one minute wheel and having digits thereon repeated in three series, a small wheel at the lower end of the stamp over which said band passes, a ten minute wheel arranged adjacent to the aforesaid one minute wheel, mechanism intermediate the said ten minute wheel and the said one minute wheel for actuating the said ten minute wheel once in every ten minutes, a band travelling over said ten minute wheel, having the numbers from 0 to 5 repeated thereon in five series, a small wheel at the lower end of the stamp adjacent to the previously mentioned small wheel, over which second mentioned small wheel the said latter band travels, an hour wheel, an escapement therefor, a cam controlling said escapement and actuated by the aforesaid mechanism between the one minute and ten minute wheels, a band upon the hour wheel having numbers thereon from 1 to 12 repeated in two series, and passing over a third wheel at the bottom of the stamp, adjacent to the small ten minute wheel at the bottom of the stamp, a meridian wheel controlled by the same escapement which governs the hour wheel and carrying a band with the characters A and P thereupon, the former repeated twelve times and the later eleven times, with a blank space between the two and corresponding with the numbers upon the hour hand, a fourth small wheel at the bottom of the stamp over which said latter band travels and adjacent to the one minute band, and the characters M permanently affixed to and arranged adjacent to the meridian band at the bottom of the stamp. 18th. A time stamp comprising an impulse receiving mechanism, a one minute wheel operated thereby, a band travelling over said one minute wheel and the digits thereupon repeated in three series, a small wheel at the lower end of the stamp over which said band passes, a ten minute wheel arranged adjacent to the aforesaid one minute wheel, mechanism intermediate the said ten minute wheel and the said one minute wheel for actuating the said ten minute wheel once every ten minutes, a band travelling over said ten minute wheel, having the numbers from 0 to 5 repeated thereon in five series, a small wheel at the lower end of the stamp adjacent to the previously mentioned small wheel, over which second mentioned small wheel the said latter band travels, an hour wheel controlled by the impulse receiving mechanism, a band upon the hour wheel, having the numbers thereon from 1 to 12 repeated in two series and passing over a third small wheel at the bottom of the stamp adjacent to the small ten minute wheel at the bottom of the stamp, a meridian wheel also controlled by the impulse receiving mechanism and carrying a band with the characters A and P thereupon, the former repeated twelve times and the latter eleven times, with a blank space between the two and corresponding with the numbers upon the hour hand, a fourth small wheel at the bottom of the stamp, over which said latter band travels and adjacent to the one minute band, the character M permanently affixed to and arranged adjacent to the meridian band at the bottom of the stamp, a day wheel governed by the impulse receiving mechanism, and a band passing over said day wheel having numbers thereon from 1 to 31, and travelling over a small wheel at the bottom of the stamp arranged parallel with and contiguous to the aforesaid small wheel at the bottom of the stamp. 19th. A

time stamp comprising an impulse receiving mechanism, a one minute wheel operated thereby, a band travelling over said one minute wheel and having the digits thereon repeated in three series, a small wheel at the lower end of the stamp over which said band passes, a ten minute wheel arranged adjacent to the aforesaid one minute wheel, mechanism intermediate the said ten minute wheel and the said one minute wheel for actuating the said ten minute wheel once in every ten minutes, a band travelling over said ten minute wheel, having the numbers from 0 to 5 repeated thereon in five series, a small wheel at the lower end of the stamp adjacent to the previously mentioned small wheel, over which second mentioned small wheel the said latter band travels, an hour wheel, an escapement therefor, a cam controlling said escapement and actuated by the aforesaid mechanism between the one minute and the ten minute wheels, a band upon the hour wheel, having numbers thereon from 1 to 12, repeated in two series and passing over a third small wheel at the bottom of the stamp adjacent to the small ten minute wheel at the bottom of the stamp, a meridian wheel controlled by the same escapement which governs the hour wheel and carrying a band with the characters A and P thereupon, the former repeated twelve times and the latter eleven times, with a blank space between the two and corresponding with the numbers upon the hour band, a fourth small wheel at the bottom of the stamp over which said latter band travels, and adjacent to the one minute band, the character M, permanently affixed to and arranged adjacent to the meridian band at the bottom of the stamp, a day wheel, an escapement governing the same, mechanism intermediate the day wheel and said latter escapement for controlling said day wheel, and a band passing over said day wheel, having numbers thereon from 1 to 31, and travelling over a small wheel at the bottom of the stamp arranged parallel with and contiguous to the aforesaid small wheel at the bottom of the stamp.

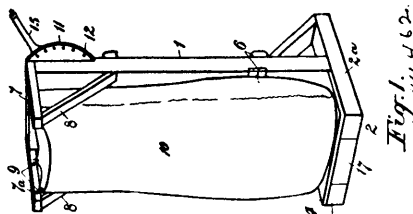
No. 44,461. Printers' Galley. (*Galée.*)



Nicholas G. Duffey, Charleston, South Carolina, U.S.A., 13th October, 1893; 6 years.

Claim.—1st. A self-locking job galley, consisting of the base plate A, the stationary side ledge B, the stationary head ledge C, the slotted adjustable side stick D, the tenoned adjustable foot stick E, and means substantially as described for adjusting and locking up the galley, as set forth. 2nd. In a printers' galley, the combination with the base plate A, and the stationary ledges B, and C, having the vertical holes *b*, and *c*, arranged at intervals corresponding to a standard measurement of type, of the adjustable sticks D, and E, adapted to intersect each other and provided with holes for the reception of a pin key and with toe pieces carrying pins adapted to enter the holes in the stationary ledges, substantially as described.

No. 44,462. Bag Holder. (*Porte-sac.*)

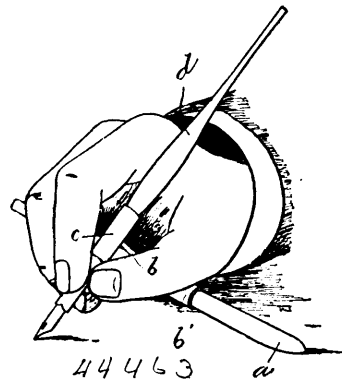


George J. Hancock, Forest, Ontario, Canada, 13th October, 1893; 6 years.

Claim.—1st. A bag holder comprised of a base, standards secured to the base, a vertical sliding frame held by the standards, a supplemental base carried by the sliding frame, outwardly projecting arms secured to the top of the standards and means on the arms for holding the bag, and means for raising and lowering the sliding frame, substantially as and for the purpose set forth. 2nd. In a bag holder, the combination of a base 2, standards 1 and 1^a secured to the base, a sliding frame 3, held by the standards, arms 7 and 7^a connected to the top of the said standards, means on said arms for holding the top of the bag, a supplemental base 4, secured to the lower end of the sliding frame 3, a quadrant 11 secured to the standard 1, a lever pivoted to the standard 1, one end of which is secured to the sliding frame 3, and provided with a dog to engage with the quadrant, substantially as and for the purpose set forth.

No. 44,463. Apparatus for Teaching Penmanship.

(*Appareil pour enseigner l'écriture.*)



William H. Kingman, Reading, Massachusetts, U.S.A., 13th October, 1893; 6 years.

Claim.—The improved appliance for teaching penmanship, the same comprising a rod, an arm projecting from said rod at a point about midway of its length, and a pen stock holding tube or sleeve affixed to the outer end of said arm and standing substantially at a right angle with the rod, the relative arrangement of the said parts being such that, when a pen stock inserted in said tube is grasped between the thumb and the first and second fingers, one end of the rod may rest on the third and fourth fingers, and the other end on the paper or surface on which the pen bears, the pen stock being thus caused to stand at the desired angle relatively to the body of the user, as set forth.

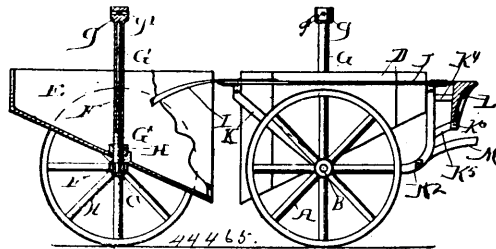
No. 44,464. Method of Finishing Wood Veneer.

(*Méthode pour finir le placage.*)

John F. Barker, assignee of Joseph R. McCargar, both of Grand Rapids, Michigan, U.S.A., 13th October, 1893; 6 years.

Claim.—The herein described process of preparing wood veneer surfaces, which consists in applying the colouring or filling material from the under side of the veneer, attaching the veneer by glue or cement with pressure, thereby forcing the colouring material into and through the pores of the veneer to the exposed surface, substantially as described.

No. 44,465. Wagon. (*Wagon.*)

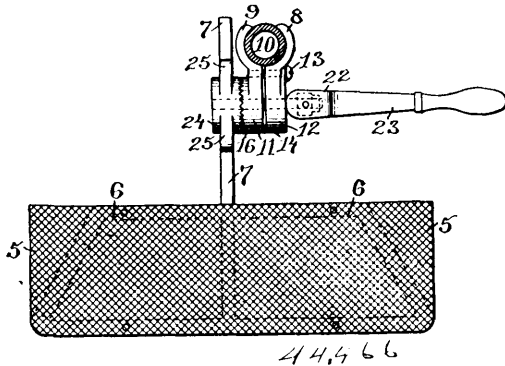


Marcus W. Montgomery, Chicago, Illinois, U.S.A., 14th October, 1893; 6 years

Claim.—1st. The combination with the wheels and front and rear axles of a wagon, of separate boxes mounted upon said axles, a frame secured to the front axle, a reach secured to the rear axle, and a fifth wheel of sufficient size to encircle the forward box secured to said reach and pivoted to the frame upon the forward axle, substantially as described. 2nd. In a wagon of the class described, the combination with the encircling annular plate J, of the pivoted bars *k*, *k*², supported from the front axle and provided at their ends with rollers running upon the inner edge of the encircling plate, substantially as described. 3rd. The combination with the frame of a wagon, of a suitable block or abutment upon the forward portion thereof, adapted to be pressed against by a horse in backing the wagon, substantially as described. 4th. The combination with the frame of a wagon, of a suitable block or abutment supported upon the forward portion thereof and adjustable thereon, said block or abutment being adapted in form to be pressed against by a horse in backing the wagon, substantially as described. 5th. The combination with the wheels and axle of a wagon, of a vertical pin extending upward from the axle and secured thereto, and a box pivoted upon said pin, substantially as described. 6th. The combination with the wheels and axle of a wagon, of a screw threaded pin extending upward from said axle and rigidly secured thereto, a

hollow screw internally threaded upon said pin and provided with means for turning it upon the latter, and a box carried upon said screw by means of a nut secured to the box and threaded to the exterior of the screw, the threads upon the interior and exterior of the screw being cut in opposite directions, so that when the screw is turned in the direction to raise the box upon itself, it raises itself upon the pin.

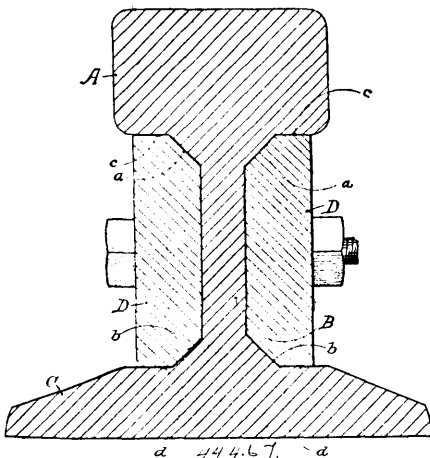
No. 44,466. Shelf for Radiators. (Rayon pour radiateurs.)



Albert J. Bennett, Woonsocket, Rhode Island, U.S.A., 14th October, 1893; 6 years.

Claim.—1st. A radiator attachment, consisting of a clamping device and a shelf having a shank adapted to be adjustably supported by the clamping device. 2nd. In a radiator attachment, the combination, with a two-part clamp adapted to enter between the pipes of a radiator and to be secured, of a shelf, a shank for supporting the shelf and means for adjustably securing the shank to the clamp. 3rd. The combination, with a shelf provided with a supporting shank, of a clamping device having jaws, a cam operated clamping bar movable in perforations in the bases of said jaws and having a slotted enlargement to receive the shelf shank, and a block transversely slotted and having a central opening, as described. 4th. The combination, with the jaws 8 and 9, extending from the perforated bases 11 and 12, the screw 13, for partially securing the same, the ratchet 16, on the base 11, the ratchet block 24, transversely and centrally slotted, having braces 25 and 26, the clamping bar 17, having the slotted end 18, and thread 19, extending through the perforations in the bases, the check nut 20, and the sliding block 21, pivoted between the cam arms of the frame 22, which is provided with a handle, of the shelf 5, the frame 6, secured thereto, and the shank 7, adapted to be clamped in the block 24, as described. 5th. The combination, in a radiator attachment, with a clamping device having a curved slot furnished with a fulcrum tooth, of a shelf having a curved shank notched on its inner curved edge, adapted to be received and held in the curved slot of the clamping device, as described.

No. 44,467. Rail Joint. (Joint de rail.)

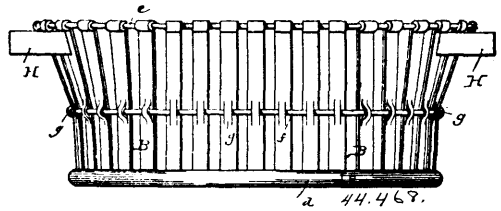


Winfield Curtis, May, California, U.S.A., 14th October, 1893; 6 years.

Claim.—1st. In a rail joint, the combination, with the two abutting rail ends, having the vertical webs B, the bevelled surfaces a and b, and the flat horizontal surfaces c and d, of fish plates of proper shape in cross section to fit the said web and said bevelled and

horizontal surfaces, as and for the purpose hereinbefore set forth. 2nd. In a rail joint, the combination, with the two abutting rail ends having the vertical webs B, and at the lower edge of each web the bevelled surface b, and the flat horizontal surface d, of fish plates of proper shape in cross section to fit the said web and its bevelled and flat faces and bolts passing through the web and plates, as and for the purposes hereinbefore set forth.

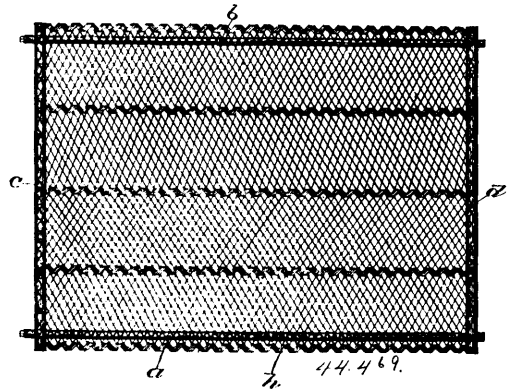
No. 44,468. Metallic Basket (Panier métallique.)



Leon M. Cabana, Buffalo, New York, U.S.A., 14th October, 1893; 6 years.

Claim.—1st. The combination with the upright metallic bars of the basket having seats or depressions at their lower portions, of a separate bottom having its edge confined in the seats of said bars, and a wire or band connecting the bars above the bottom, substantially as set forth. 2nd. The combination with the upright metallic bars of the basket having indentations on the inner side of their lower portions, of a separate bottom seated with its edge in said indentation and a binding strip or band surrounding the indented portions of said bars, substantially as set forth. 3rd. The combination with the upright metallic bars of the basket having indentations on the inner side of their lower portions, of a separate bottom seated with its edge in said indentations, and a concave binding strip surrounding said bars and bearing with its concave side against the portions of the bars opposite their indentations, substantially as set forth. 4th. The combination with the bottom of the basket and the top wire or band, of upright metallic side bars connecting the bottom with said top wire and provided between the latter and the bottom with seats or loops, and an intermediate binding wire or band encircling said bars and confined in the loops of the same, substantially as set forth. 5th. The combination with the bottom of the basket and the top wire or band, of upright metallic side bars connecting the bottom with said top wire and provided between the latter and the bottom with upright slits forming intermediate horizontal loops or eyes, and an intermediate binding wire or band passing through said eyes or loops, substantially as set forth. 6th. The combination with the upright metallic bars provided at their upper ends with eyes, at their lower ends with seats or indentations and between said eyes and indentations with loops, all formed integrally with the bars, of a top wire passing through the eyes of the metallic bars, a separate bottom confined in the indentations of said bars, and an intermediate binding wire passing through the loops thereof, substantially as set forth.

No. 44,469. Frame for Mattresses. (Cadre pour matelas.)

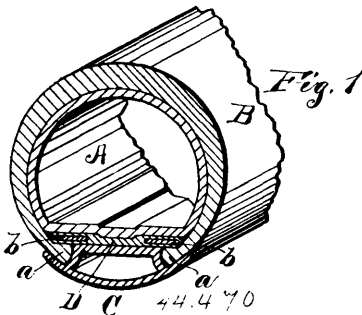


Alphonse E. Kenny and Winfield H. Taber, both of Boston, Massachusetts, U.S.A., 14th October, 1893; 6 years.

Claim.—1st. The mattress frame herein described consisting of the combination of the cylindrical tubular side rails a, b, and the cylindrical tubular end rails c, d, and interposed grooved blocks e, made as shown, and bolts or equivalent fastenings securing said side and end rails together. 2nd. The mattress frame herein described consisting of the combination of the side rails a, b, slotted at the ends as at a, the end rails c, d, and interposed grooved blocks e as shown, means for securing the end rails d to the side rails, and the bolts c² for securing the end rail c to the side rails, movable in the slots a¹ thereof, nuts e⁴ and eye bolts e⁵ engaging the bolts c², and nuts therefor, substantially as described. 3rd. In a mattress frame,

the combination of the side rails *a, b*, and end rails *c, d*, one of which is slotted from end to end to receive the end of the mattress, and means for contracting said slotted end rail to thereby firmly clamp and hold the end of the mattress. 4th. In a mattress frame, the combination of the side rails *a, b*, and end rails *c, d*, one of which is slotted from end to end to receive the end of the mattress, and means for contracting said slotted end rail to thereby firmly clamp and hold the end of the mattress, and straps *d'* embracing said end rail, the ends of which are connected with the side rails, and means for turning said end rail when the straps are loosened. 5th. The mattress frame herein described, consisting of the combination of the tubular side rails *a, b*, and tubular end rails *c, d*, and means for securing them together at the corners. 6th. In a mattress frame, the combination of the side rails *a, b*, and end rails *c, d*, one of which is slotted from end to end to receive the end of the mattress.

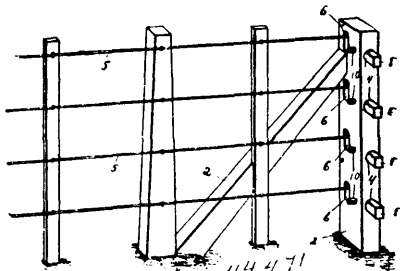
No. 44,470. Tire. (Bandage.)



Albert E. Spangler, Syracuse, New York, U.S.A., 14th October, 1893; 6 years.

Claim.—1st. In a tire, continuous flat bands connected together and adapted to be contracted or expanded in the plane of their faces. 2nd. In a tire, continuous flat bands having a resilient connection between them and adapted to be contracted or expanded in the plane of their faces. 3rd. In a tire, the herein described continuous plates or bands secured together, yielding laterally, in the plane of their faces. 4th. A pneumatic tire comprising a sack, a shoe having enlarged edges, a rim having pockets for receiving said edges continuous plates or bands mounted upon said rim, and yielding laterally in the plane of their faces, and means for limiting their lateral movement. 5th. A pneumatic tire comprising a sack, a shoe having enlarged edges, a rim having pockets for receiving said edges, a web having continuous plates or bands secured within or to its lateral edges, as set forth. 6th. A pneumatic tire comprising a sack, a shoe having enlarged edges, a rim having pockets for receiving said edges, continuous plates or bands mounted upon said rim, and means for forcing them apart in the plane of their faces and retaining them in this position. 7th. A pneumatic tire, comprising a shoe having thickened edges, a rim concaved to receive said edges, and a lock comprising flat bands and a flexible connection between them, in combination with a pneumatic sack within said shoe, adapted to engage with said connection and spread said bands apart in the plane of their faces. 8th. A pneumatic tire, comprising a sack, a shoe having enlarged edges, a rim having pockets for receiving said edges, plates mounted upon said rim, cams engaging with the adjacent face of said plates, and adapted to force them apart for the purpose of locking the edges of the tire within the rim, and a cap upon said cam for the purpose of keeping the edges thereof in engagement with the adjacent edges of the plates. 10th. In a tire, the herein described continuous plates secured together yielding laterally, as set forth.

No. 44,471. Stretcher for Wire. (Tendeur de fil de fer.)

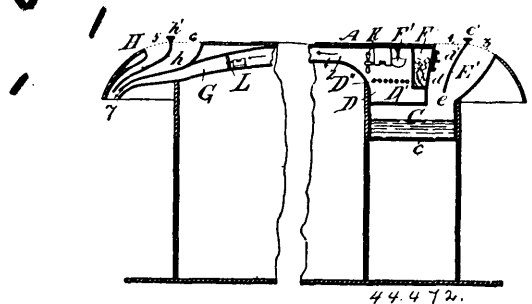


Elijah J. Fox, Broadway, Ohio, U.S.A., 14th October, 1893; 6 years.

Claim.—In a wire stretcher, the combination of a fence post provided with a series of transversely arranged horizontally disposed

cylindrical bearing openings not extending through the post, and having a vertical series of elongated wire openings communicating with the bearing openings, said post being provided with a vertical series of perforations arranged between said wire openings and the corner of the post and intersecting the bearing openings, a series of winding shafts journaled in the bearing openings and extended beyond the post and provided with wire and locking pin perforations, and a series of locking pins arranged in the perforations of the post and engaging the locking pin perforations of the shafts and retaining the shafts in the journal openings, substantially as described.

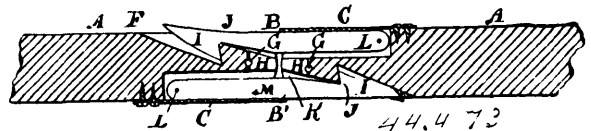
No. 44,472. System of Ventilating Railway Carriages. (Système de ventiler les voitures de chemins de fer.)



Samuel Hughes, Lindsay, Ontario, Canada, 14th October, 1893; 6 years.

Claim.—1st. In a ventilating system for railway cars, the combination with the fresh air ducts 2, of blast fans placed in the mouth thereof, substantially as set forth. 2nd. In a ventilating system for railway cars, the combination with the exhaust ducts or channels G, of suction or exhaust fans placed near their outlets, substantially as set forth. 3rd. In an overhead tank for a ventilating system for railway cars, the combination with a duct 2, of a blast fan K, at its junction with the uptake, an uptake D, joining said duct to the top of a tank, an injector E, joined to the front of said uptake, a tank C, having openings in said injector and uptake, an ice box F, secured to the partition between said injector and uptake, a door *d'*, in said partition, and a movable top on the mouth of said injector, substantially as set forth.

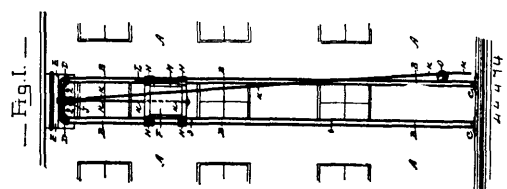
No. 44,473. Car Coupler. (Attelage de chars.)



Fred A. Gaudet, East Longmeadow, Massachusetts, U.S.A., 14th October, 1893; 6 years.

Claim.—In car couplers, the draw-heads A, A, in combination with the hooked grip arms B, B', held in place by flat springs C, C, the pins M, passing through each arm B, B', and terminating upwardly in the lever D oscillating on fulcrum E, and whose arc of motion is limited by pin F, the pivotal pins L, L, permitting the vibration, of the grip arms B, B', and the recesses H, I, in the draw-head formed as shown and described, to accommodate said arms B, B', having the whole co-acting as and for the purpose set forth.

No. 44,474. Fire Escape. (Sauveteur d'incendie.)

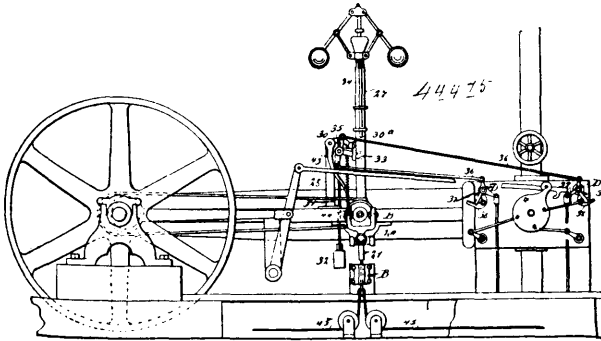


Isaac Mills, Hamilton, Ontario, Canada, 14th October, 1893; 6 years.

Claim.—1st. In a fire escape device, the combination of the parallel vertical tubes joined as at 3, the lower ends provided with plates C, having raised pieces, and the upper ends having cross tube, provided with elbow couplings D, wall bolts 2, and the canopy E, substantially as and for the purpose hereinbefore set forth. 2nd. In a fire escape device, the vertical tubes B, with their cross connec-

tion having couplings D, base plates C, wall bolts 2, in combination with the canopy, the pulley block J, the chain or wire rope K, the vertical sliding car having side projections with apertures, and the headed pin O, substantially as and for the purpose hereinbefore set forth.

No. 44,475. Auxiliary Cut-off for Engines.
(*Détente pour machines à vapeur.*)



John Howard Tennyson, New York, State of New York, U.S.A.,
14th October, 1893; 6 years.

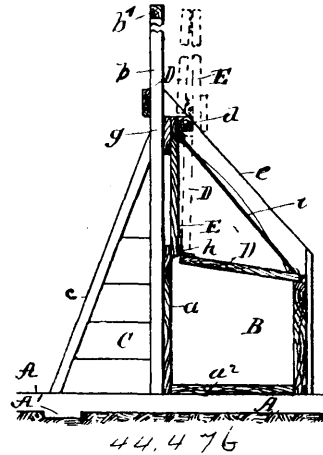
Claim.—1st. In an engine, an auxiliary cut-off mechanism connected with the cut-off valve and controlled by the governor, substantially as and for the purpose specified. 2nd. A shifting governor gear, and a trip mechanism controlled thereby and adapted to act upon the governor crank, substantially as described. 3rd. In an engine, a governor gear provided with a shifting section, a device for shifting the same, substantially as described, and a trip mechanism controlled by the governor and having a shifting action upon the cut-off-rods, whereby the governor gear is disconnected and the trip mechanism automatically closes the cut-off valves, substantially as described. 4th. In an engine, a shifting governor gear, a trip mechanism controlled thereby adapted to act upon the governor crank, a shifting mechanism connected with the governor gear, a locking device connected with the shifting mechanism, and means, substantially as shown and described, for releasing the lock from said mechanism at the engine or at any point remote therefrom, as and for the purpose specified. 5th. In an engine, a shifting mechanism adapted to operate upon the governor crank of the engine, the two being normally held out of engagement, and a releasing device having connection with the trip mechanism, capable of being operated at the engine or at a point remote therefrom, whereby when the releasing device is operated the trip mechanism acting upon the governor crank will close the cut-off valve of the engine, substantially as and for the purpose specified. 6th. In an engine, the combination with a shifting governor gear, a rocking arm adapted for engagement with the governor crank, a support normally maintaining the arm out of engagement with the crank, and a shifting mechanism connected with the governor gear, capable of being operated from a point near the engine or remote therefrom, and a releasing device connecting the shifting mechanism and the support of the rocking arm, whereby the shifting mechanism and arm will operate simultaneously, as set forth. 7th. In an engine, the combination, with a shifting governor gear, of a rocking arm adapted to act upon the governor crank, tension devices connected with the rocking arm and tending to draw it to an engagement with the governor crank, a supporting device connected with the rocking arm, a shifting mechanism connected with the governor gear, and a releasing device carried by the shifting mechanism and engaging with the supporting device of the rocking arm, as and for the purpose specified. 8th. In an engine, the combination, with a shifting governor gear, a rock shaft, a trip arm projected from the rock shaft and adapted to engage with the crank of the governor, and tension devices tending to draw the arm to a contact with the governor crank, of a shifting mechanism connected with the governor gear, tension devices connected with the shifting mechanism and operating to carry the sections of the gear out of engagement, a supporting arm connected with the rock shaft, a releasing device adapted for engagement with the supporting arm and connected with the shifting mechanism, a locking device adapted for engagement with the shifting mechanism, and means for tripping said locking devices, as and for the purpose specified.

No. 44,476. Cattle Stall. (*Stalle pour bestiaux.*)

Jacob Aeberly, of St. Paul, Minnesota, U.S.A., 14th October, 1893; 6 years.

Claim.—1st. A cattle stall, having a feed crib protected by a pendent gate, a cover hinged to the lower edge of said gate, a rotatable shaft attached to the gate, and a flexible device on the cover which by manipulation, will adjust said cover toward or from the feed crib, substantially as described. 2nd. A cattle stall and feed crib therefor, comprising a stall having a platform or base, a feed

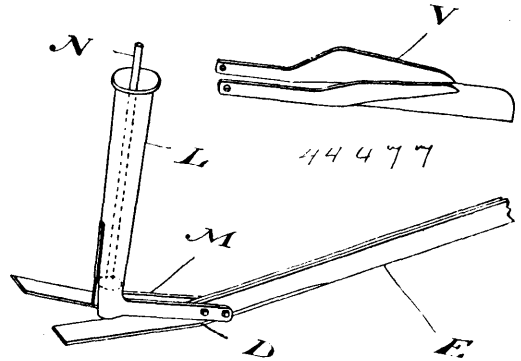
crib at the head of the stall, a pendent gate between the top of the feed crib and the stall, a crib cover hinged to the lower edge of the



gate, and devices adapted by manipulation to elevate the gate and fold the cover upon said gate, substantially as described. 3rd. A feed crib for a cattle stall, and attachments for said crib, comprising a rectangular crib at the head of a stall, a transverse shaft journaled in the upper part of the side walls of the crib, a gate attached by one edge to the shaft and pendent therefrom, a crib cover hinged by one edge to the lower edge of the gate, a flexible device for the cover to raise or lower it, a handle bar on the end of the shaft, and a latch piece therefor, substantially as described.

No. 44,477. Cultivator and Seeder.

(*Scarificateur et semoir.*)

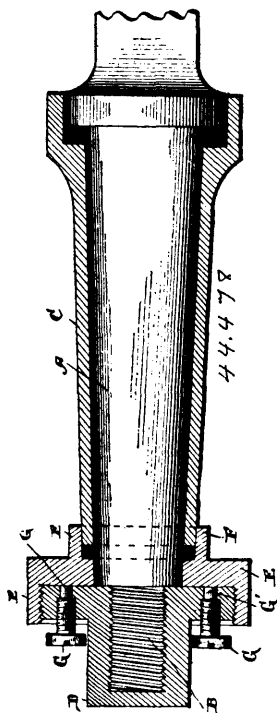


William Hull, Souris, Manitoba, Canada, 14th October, 1893; years.

Claim.—1st. In a cultivator and seeder, a seed covering device suitably connected to the machine and having side walls converging together from the front rearwardly, in combination with a weighted tail, substantially as and for the purpose specified. 2nd. In a cultivator and seeder, a drag-bar formed in two halves bolted together, the lower ends being turned outwardly and horizontally, in combination with the seed spout connected to the said drag-bar, and having the opening in its lower end above the space between the outwardly turned ends of the said drag-bar, substantially as and for the purpose specified. 3rd. In a cultivator and seeder, the seed spout held close to the ground and having a spring valve located therein, in combination with a vertical rod passing through said spout and means for reciprocating the same, substantially as and for the purpose specified. 4th. In a cultivator and seeder, the rods N connected to the rock shaft O, carried by the arm P, in combination with the arm P¹, pinion Q, gear wheel S, and means for holding the arm P¹, substantially as and for the purpose specified. 5th. In a cultivator, a drag-bar having a pair of shears formed on or connected to its lower end, in combination with means for forcing the said shears into the ground, substantially as and for the purpose specified. 6th. In a cultivator and seeder, a drag-bar formed in two halves bolted together, the lower ends being turned outwardly and horizontally, substantially as and for the purpose specified. 7th. In a cultivator and seeder, a drag-bar formed in two halves bolted together, the lower ends being turned outwardly and horizontally and sharpened on the outer edge; the forward edge of the drag-bar immediately above the shears also being sharpened to act as a coultter, substantially as and for the purpose specified. 8th. In a cultivator and seeder, a seed

spout held close to the ground, in combination with a vertical rod passing through said spout and means for reciprocating the same, substantially as and for the purpose specified. 9th. In a cultivator and seeder, a seed covering device suitably connected to the machine and having side walls converging together from the front rearwardly, substantially as and for the purpose specified.

No. 44,478. Hub Attaching Device.
(Appareil à attacher les moyeux.)



Charles F. Carlson, Honolulu, Hawaii, 14th October, 1893; 6 years.

Claim.—1st. In a hub attaching device, the combination with a nut, having its periphery screw threaded, of a flanged washer or follower, having internal screw threads which engage the threads of the washer, substantially as shown and described. 2nd. In a hub attaching device, the combination with a spindle, having reduced screw threaded end, a nut to fit the said end and screw threads on the exterior of the said nut, of a washer, having an opening of the same diameter as the spindle upon which it is adapted to move longitudinally, and an interiorly screw threaded shoulder on said washer, which engages the screw threads of the nut, substantially as shown and described. 3rd. In a hub attaching device, the combination of a spindle and an exteriorly screw threaded nut therefor, of a washer adapted to fit the spindle, a screw threaded flange on said washer, which engages the nut, and longitudinally moving screws or bolts in the nuts, which engage the washer at their inner ends, substantially as shown and described. 4th. In a hub attaching device, the combination with a spindle, a nut therefor and a washer, which moves longitudinally on the spindle and nut, of screws or bolts, which extend through the nut and which are reduced at their inner ends where they bear against the washer, substantially as shown and described. 5th. In a hub attaching device, the combination with a spindle, and a nut therefor having a screw threaded periphery, of a washer adapted to move longitudinally on the spindle, a screw threaded shoulder on the said washer, which engages the periphery of the nut, the said shoulder being provided with concavities upon its outer surface, for the purpose substantially as shown and described. 6th. The combination of a spindle, having a reduced screw threaded end, a nut having a circular inner portion of greater diameter than the spindle, and which is screw threaded, a washer adapted to fit closely, and move longitudinally on the spindle, circular shoulder E, projecting outward from the periphery of the washer and which is screw threaded on its inner side, whereby it is adapted to receive the circular screw threaded portion of the nut, substantially as shown and described.

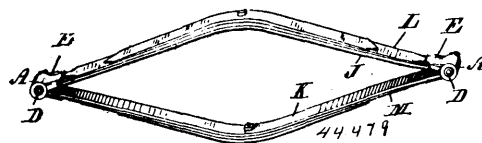
No. 44,479. Elliptic Carriage Spring.
(Ressort elliptique de voiture.)

Thos. B. Dowsley, Owen Sound, Ontario, Canada, 14th October, 1893; 6 years.

Claim.—1st. In an elliptic spring, the combination of the head A, having a cavity B, spring plates J, K, having ends filling said

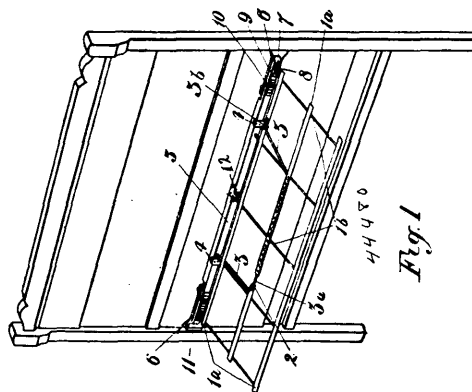
cavity and a bolt D, passing through the cavity of said head and between said plates, whereby the ends of said plates are held in-

Fig. 1



movably in the cavity when the spring is collapsed, and said plates when pressed together mutually re-enforce one another, as set forth. 2nd. In an elliptic spring, the combination with the head A, having a cavity B, of the spring plates J, K, the ends filling said cavity, a bolt D, holding said plates firmly in said cavity, and spring plates L, M, having the ends thinned and inserted in said head above and below said plates J, K, respectively, to re-enforce said spring plates J, K, as set forth. 3rd. The head A, having a cavity B, and a flat extended arm E, provided with internal grooves C, and a recess H, as and for the purpose set forth.

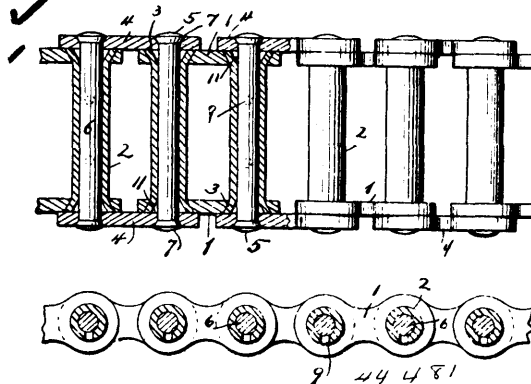
No. 44,480. Pillow Sham Holder.
(Porte-garniture d'oreiller.)



Henry Collin Wills, Toronto, Ontario, Canada, 16th October, 1893; 6 years.

Claim.—1st. In a pillow sham holder, the combination of a suitable framework, a longitudinally adjustable cross-piece, means for swinging the framework to the cross-piece and means for securing the cross-piece to the bedstead, substantially as set forth. 2nd. In a pillow sham holder, the combination of a suitable framework, a cross-piece having a slot formed at or near either end thereof, a sliding piece located at either end of the cross-piece a thumb screw passing through said slot and entering said sliding piece, a swinging base connecting the framework to the cross-piece and means for locating the framework in its raised position, substantially as set forth.

No. 44,481. Drive Chain. (Chaîne sans fin.)

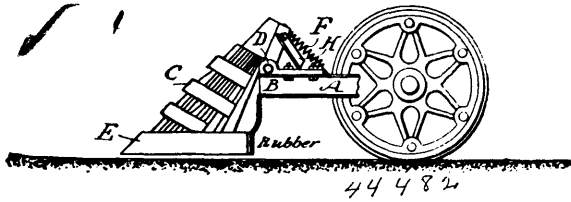


Adolf Wörner, Budapest, Austria, Hungary, 16th October, 1893; 6 years.

Claim.—1st. The combination in a drive chain, of links having cross-bars and link connecting parts arranged at each side, said links

being provided with distinct lubricating chambers at each side adjacent to the engagement of the link connecting parts, substantially as described. 2nd. The combination in a drive chain, of links having cross-bars and link connecting parts arranged at each side said links being provided with distinct lubricating chambers at each side adjacent to the engagement of the link connecting parts, and said cross-bars being provided with oil admission openings and ducts or passages to convey the oil to the links connecting parts of the chain, substantially as described. 3rd. The combination in a drive chain, of links comprising side plates provided with tapering perforations and tubular cross-bars seated and expanded in said perforations and provided with an oil admission opening, together with bolts passing through the cross-bars and engaging link connecting plates, the expanded portions of the cross-bars presenting oil collecting chambers, substantially as described.

No. 44,482. Tram Car. (Chariot.)

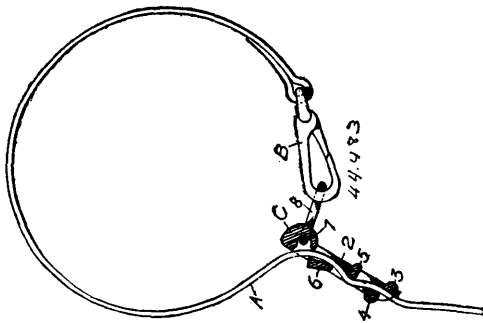


Adolf Wörner, Budapest, Austria, Hungary, 16th October, 1893; 6 years.

Claim.—1st. The combination with a tram car or with the trucks thereof, of a safety device pivoted on the ends of said car or trucks, a spring connected at one end with the safety device above its pivotal point, and at its other end with the car body or trucks for normally holding the said safety device above the level of the ground, and a stop for limiting the upward motion of the safety device connected thereto above its pivotal point. 2nd. The combination with a tram car or with the trucks thereof, of a safety device pivoted on the ends of said car or trucks, a rubber covering carried over the lower edge of said safety device, and a retractile spring connected to said safety device above its pivotal point, substantially as described. 3rd. The combination with a tram car or with the trucks thereof, of a safety device pivoted on the ends of said car or trucks, a retractile spring connected to said safety device above its pivotal point, a device for limiting the upward motion of the safety device connected thereto above its pivotal point, and an elastic covering for the lower edge of the safety device.

No. 44,483. Safety Horse Hitcher.

(Courroie d'enrénore.)



Charles A. Conger, San Francisco, California, U.S.A., 16th October, 1893; 6 years.

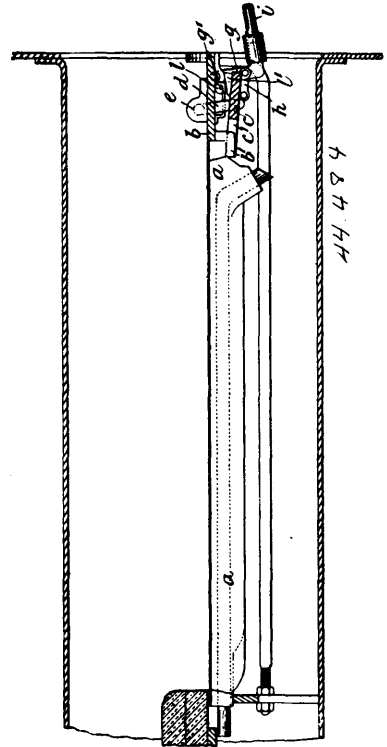
Claim.—1st. The combination with a strap having a snap hook at one or both ends, of a clamp through which the strap passes, and a ring loosely connected to the clamp and held in position by the strap, substantially as set forth. 2nd. An attachment for straps, consisting of a clamp having transverse bars between and by which the strap is guided, and a hook, all formed in one piece and for the purposes set forth. 3rd. As an attachment for straps, a clamp consisting of a rectangular frame having transverse bars 4, 5, 6, 7, adapted to guide and clamp the strap between them, and a curved hook 8, adjacent to the bar 7, all formed in one piece and for the purpose set forth.

No. 44,484. Furnace. (Fournaise.)

Thomas Edward Caddy, Nottingham, England, 16th October, 1893; 6 years.

Claim.—1st. In a furnace, the combination with a dead or bearer plate *b* of a rocking bearer plate *c*, substantially as described and illustrated. 2nd. In a furnace, the combination with a dead or bearer plate *b* of a rocking bearer plate *c* carried by links *d* and

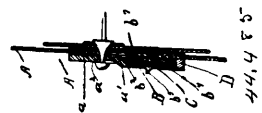
operated by a lever *g*, substantially as described and illustrated. 3rd. In a furnace, the combination with a dead or bearer plate *b* of



a rocking bearer plate *c*, links *d*, roller *l*, working on inclined surfaces on the plate *c* and lever *g*, substantially as described and illustrated. 4th. In a furnace, the combination with a dead or bearer plate *b* of a rocking bearer plate *c*, links *d* and *r* and lever *g*, substantially as described and illustrated. 5th. A furnace bar in which the tube which is cast therein is reduced in width at its lower edge *a'* so that the thickness of the bar may be reduced below the upper face to facilitate the fall of the refuse between the bars when rocked, substantially as described and illustrated.

No. 44,485. Carriage Curtain Fastener.

(Agrafe pour rideaux de voiture.)



Alpha Burkner, Hueneme, California, U.S.A., 16th October, 1893; 6 years.

Claim.—The herein described improved carriage curtain fastener, consisting of the stationary plate having a hole or opening and a slot and parallel guide ways, the movable member having flanged ends fitting in said guide ways and having a longitudinally cylindrical chamber fitting said slot, the bridge near the inner end of said cylindrical chamber, the lug or stop secured to said stationary plate and projecting into said cylindrical chamber, and the coil spring bearing at its inner end against the inner end of said cylindrical chamber and at its outer end against said lug or stop, substantially as set forth.

No. 44,486. Connections for Belting.

(Attache pour courroies.)

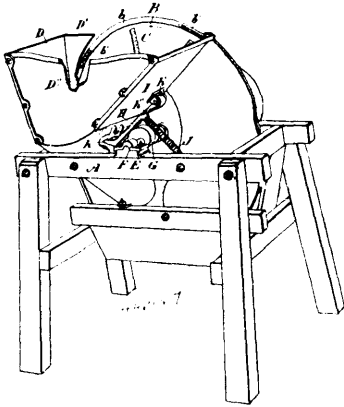


Arthur W. M. Keen, Montreal, Quebec, Canada, 16th October, 1893; 6 years.

Claim.—1st. In combination, with the meeting edges of the belting or the like, a metallic connection between same. 2nd. In combination, with the meeting edges of belting or the like metallic facings for such edges connected by fusion. 3rd. In combination, with the meeting edges of the parts to be connected, the metallic

facing strips C C, with means for securing them in place, and connected by fusion. 4th. In combination, with the meeting edges of the ends of belting as A, B, the metallic facing strips C C, with the retaining screws D D, and united by fusion, as set forth.

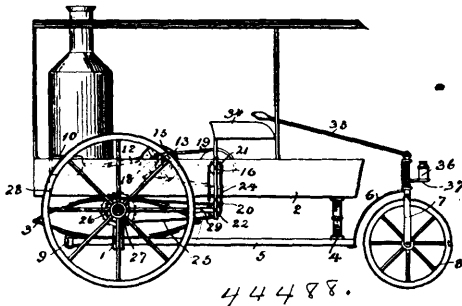
No. 44,487. Root Cutting and Pulping Machine.
(*Coupe-racine et machine à pulpe.*)



James Irving, Seaforth, Ontario, Canada, 16th October, 1893; 6 years.

Claim.—1st. The combination, with the cutters, cutter disk and feed basket or hopper, of fingers extending through openings in the basket and means whereby such fingers are caused to oscillate within the basket, as and for the purpose specified. 2nd. The combination, with the cutters, cutter disc and feed basket or hopper, of fingers extending through openings in the basket and deriving an oscillating movement from a cam on the main shaft and held in contact with such cam by a suitable spring, as and for the purpose specified. 3rd. The combination, with the cutters, cutter disc and feed basket or hopper having an edge D¹, in proximity to the rim of the disc and projecting portion D¹¹, extending beyond the rim, of teeth b¹, cut at intervals in the beaded edge of the rim, as and for the purpose specified.

No. 44,488. Steam Motor. (*Moteur à vapeur.*)

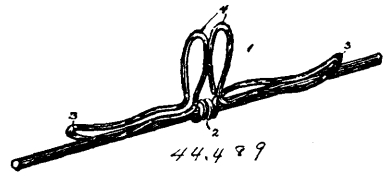


Josiah M. Richmond, Raymond, Nebraska, U.S.A., 16th October, 1893; 6 years.

Claim.—1st. The combination of a vehicle, an engine mounted thereon, a shaft arranged in front of the engine and connected therewith, the opposite side shafts 16 arranged at the middle of the vehicle, gearing connecting the side shafts with the shaft in front of the engine, frames 20 hingedly connected to and depending from the shafts 16, and gearing connected with and supported by the lower ends of the hinged frames and receiving motion from the shafts 16, and connected with the vehicle wheels, substantially as described. 2nd. The combination of a vehicle, an engine mounted thereon, shafts 16 arranged at the sides of the vehicle and connected by gearing with the engine, depending frames hingedly connected to the shafts 16, and provided at their lower ends with sprocket-wheels, sprocket-wheels mounted on the shafts 16, gearing connected to the vehicle wheels, chains, connecting said sprocket-wheels and said gears, and stays hingedly connected to the lower ends of the hinged frames and to the vehicle, substantially as described. 3rd. The combination of a vehicle, the stationary rectangular supporting frames 30 secured to the sides of the vehicle, an engine mounted on the body of the vehicle, shafts 16 journaled in said frames 30, hinged frames 30 depending from said shafts 16 and provided at the top and bottom with recesses, sprocket wheels mounted on the shafts 16 and arranged at the bottoms of the hinged frames 20, different diameters of gears connected to the vehicle wheels, sprocket chains connecting the sprocket wheels together and with said gears, the stays hingedly connected with the frame 20, and to the axle of the

vehicle, and means for connecting the shafts 16 with the engine, substantially as described.

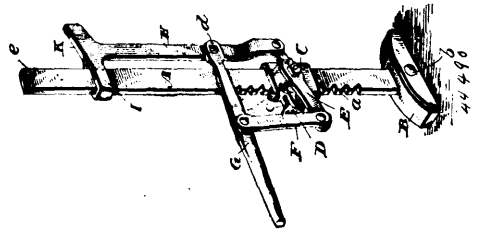
No. 44,489. Clothes Pin. (*Epingle à linge.*)



John H. Hamilton, Eureka Springs, Arkansas, U.S.A., 16th October, 1893; 6 years.

Claim.—A clothes pin or holder constructed of a single piece of wire and consisting of central coils forming an eye adapted to loosely receive a line wire, horizontally disposed loops forming a continuation of the coils and having their outer ends bent upward slightly and their opposite sides spaced apart, so as to slightly embrace the line wire, and the vertical handle loops arranged at an angle to and at the inner ends of the arm loops and forming continuations of the same, substantially as described.

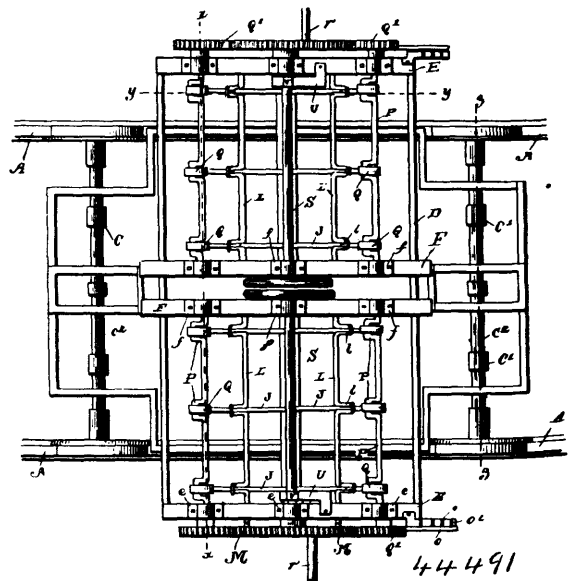
No. 44,490. Lifting Jack. (*Cric.*)



Jacob B. Delong, Blanchard, Pennsylvania, U.S.A., 16th October, 1893; 6 years.

Claim.—A lifting jack, consisting of a suitable toothed standard, a sleeve having a weighted pawl pivoted thereto, an operating lever, and a lever having at its upper end a support and a guide loop at an angle thereto, and a pivoted link connection between the levers, and also pivoted to the sleeve, substantially as and for the purpose set forth.

No. 44,491. Railway Track Surfacing and Tamping Machine. (*Machine pour donner une surface et bourrer les voies de chemin de fer.*)



Nathan A. Evans, Spartanburg, South Carolina, U.S.A., 17th October, 1893; 6 years.

Claim.—1st. In a machine of the class described, a truck frame, parallel multiple crank shafts journaled on the top of the frame, gearing for said crank shafts, and separate sets of surfacing and

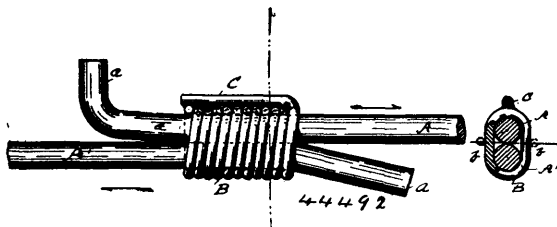
tamping shovels guided to move at an angle within the frame and connected at their upper ends with said multiple crank shafts, substantially as set forth. 2nd. In a machine of the class described, a truck frame, opposite pairs of multiple crank shafts journaled on top of the frame, separate gearing for each pair of crank shafts, suitably arranged guides disposed within the frame under the crank shafts, and opposite independent sets of reciprocating and vibrating surfacing and tamping shovels mounted to move within said guides and connected with the cranks of said crank shafts, substantially as set forth. 3rd. In a machine of the class described, the wheel axles having reduced portions, a laterally adjustable truck frame supported on said axles and adapted to have a lateral play in said reduced portions, a supplemental transverse frame supported on the truck frame between the wheels, opposite sets of surfacing and tamping shovels, and separate operating devices arranged on the transverse frame and connected with the opposite sets of shovels to reciprocate the same, substantially as set forth. 4th. In a machine of the class described, a truck frame, a supplemental transverse frame supported on and extended beyond the opposite sides of the truck frame, opposite vertical pairs of guides arranged at opposite sides of the centre of the transverse frame, reciprocating lifting rods having their ends moving in said guides, shovels connected to the lifting rods, and means for reciprocating each opposite pair of lifting rods, substantially as set forth. 5th. In a machine of the class described, the laterally adjustable truck frame, a transverse frame secured on the truck frame between the wheels and extended beyond the sides thereof, vertical guides arranged on the transverse frame, vertically reciprocating lifting rods, having headed ends moving in said guides, shovel stems attached to said rods and having surfacing and tamping shovels at one end, adjustable angularly set shovel guides arranged on the transverse frame and embracing said shovel stems, and means for reciprocating said rods, substantially as set forth. 6th. In a machine of the class described, a movable frame, guides arranged on the frame, a vertically reciprocating lifting rod, having its ends moving in said stationary guides, reciprocating and vibrating surfacing and tamping shovels, having stems or handles loosely attached to the lifting rod, a multiple crank shaft suitably supported and driven, and links connecting the cranks of said shaft to the lifting rod, substantially as set forth. 7th. In a machine of the class described, the truck frame, a transverse frame supported on the truck frame and having upright extension frames at its opposite extremities, intermediate adjacent bearing bars disposed between the upright extensions, opposite vertical pairs of stationary guides arranged on the upright extensions and said bearing bars, opposite pairs of vertical reciprocating lifting rods having their ends moving in said guides, sets of reciprocating and vibrating shovels attached to each lifting rod, adjustable shovel guides suitably arranged to dispose the shovels at an angle, opposite pairs of multiple crank shafts journaled on top of the upright extensions and the central bearing bars, links connecting the cranks of each crank shaft with the lifting rod directly thereunder, and gearing for each pair of crank shafts, substantially as set forth. 8th. In a machine of the class described, the truck frame, vertically reciprocating lifting rods guided for movement on the frame, shovel stems having forked bearings at one end loosely embracing said lifting rods and carrying at their other ends detachable shovels or tempers, angularly set shovel guides loosely attached at their inner ends to the frames, and terminating at their other ends in guide eyes embracing the shovel stems to dispose the same at an angle, means for adjusting the angle or pitch of said shovel guides, separate pairs of multiple crank shafts journaled on the frame, and links attached to the cranks of said crank shaft and to the lifting rods between the forked bearing of each shovel stem, substantially as set forth. 9th. In a machine of the class described, the truck frame, the reciprocating vibratory shovel carrying stems or handles, angularly set guide arms embracing said stem and loosely secured at one end of the frame, separate adjusting rock shafts journaled over the guide arms and having rock arms loosely connected to said guide arms and terminating at their outer extremities in cranks, adjustable levers arranged at opposite sides of the truck frame, and adjusting arms connected at one end to said levers and at the other ends to the cranks of rock shafts, substantially as set forth. 10th. In a machine of the class described, the truck frame, a supplemental transverse frame mounted on the truck frame between the wheels, vertically reciprocating lifting rods guided in the frame, angularly moving sets of surfacing and tamping shovels attached to the lifting rods, separate pairs of multiple crank shafts journaled on the transverse frame and connected to the lifting rods, said shafts carrying cog wheels at their outer ends, separate drive shafts intermediately mounted on the frame and carrying at one extremity drive spur wheels arranged between and meshing with each opposite pair of cog wheels, and at their other inner adjacent extremities balance wheels, substantially as set forth. 11th. The combination with a drive shaft having a squared portion, and a lock bar pivoted at one end to a suitable point of attachment, and having a squared loop adapted to engage the squared portion of the drive shaft, substantially as set forth.

No. 44,492. Wire Coupling. (Joint pour fils électrique.)

William E. Banta, Springfield, Ohio, U.S.A., 17th October, 1893; 6 years.

Claim.—1st. In a wire coupling, the combination, with the ends of the line wires bent outwardly, of a connector or coupling compos-

ed of encircling coiled wires joined together and adapted to bite on to said line wires under the coupling strain. 2nd. The combination,



with the ends of the line wires bent outwardly, of a coupling consisting of surrounding portions and a longitudinal portion integral with and connecting together the said surrounding portions, whereby the said surrounding portions bite upon and grip the line wires under the coupling strains. 3rd. In a wire coupling, the combination with the ends of the line wires bent outwardly, of a connector composed of encircling coiled wires embracing said line wires and a connecting bar or piece secured to said encircling coiled wires substantially in line with the axis of the same, whereby all the encircling wires move in one direction at the part to which said connection is connected and move in the opposite direction at the diametrical part when the coupled line wires are put under strain, whereby a gripping action is secured. 4th. As an improved article of manufacture, a wire coupling composed of encircling coiled wires and a longitudinal connection joining the encircling portions of said wire, whereby one part of each encircling portion is adapted to move in one direction and the diametrically opposite part in the opposite direction under the coupling strain, thereby gripping the enclosed line wires.

No. 44,493. Boiler. (Chaudière.)

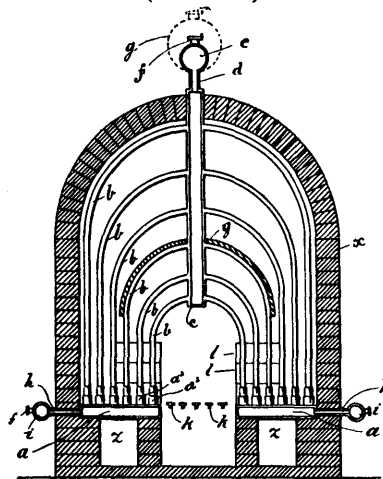


Fig. 1

James Charles Orr, Winnipeg, Manitoba, Canada, 17th October, 1893; 6 years.

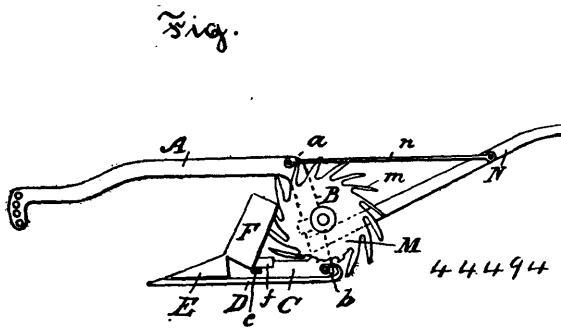
Claim.—1st. A boiler available for hot water or steam heating composed of sections having the single horizontal headers A, A, the right and left nipples b^1, b^1 , the verticle tubes b, b, b , curved toward the centre, the vertical header c , with connecting tubes d, d , and h, h , substantially as and for the purpose above set forth. 2nd. A boiler available for hot water or steam heating composed of sections having the horizontal headers a, a , right and left nipples b^1, b^1 , vertical tubes b, b, b , curved toward the centre vertical header C , connecting tubes d, d , and h, h , with distributing header e or drum g , return headers i, i , with the usual flange connections f, f , the apron y , and ordinary grate bars k, k , substantially as and for the purpose above set forth. 3rd. A boiler available for hot water or steam heating composed of sections having the horizontal headers a, a , right and left nipples b^1, b^1 , vertical tubes b, b, b , curved toward the centre vertical header C , connecting tubes d, d , and h, h , distributing header e , or drum g , return headers i, i , with the usual flange connections, the apron y , grate bars k, k , fire brick divisions l, l , fire brick backing m with ordinary brick casing x , the flues n, o and p , dampers q, q, q , the front r with the usual clean out doors s, s, s, s , fire door t , clinker door u , soot doors v, v , and ash door w , substantially as and for the purpose above set forth.

No. 44,494. Potato Digger. (Arrache-patates.)

William A. Martin, Milltown, Prince Edward Island, Canada, 17th October, 1893; 6 years.

Claim.—1st. In a potato digger, the combination with the beams A, B, C, the plow share E, and mould board F, of the revolving

mould boards M, having tangential arms m, the ends of said arms being twisted so as to present a broad surface to the soil, the



said mould boards being journalled on the arms H, of the collar G, substantially as set forth. 2nd. In a potato digger, the combination in a plow having revolving mould boards of the extension of the beam C, carrying the long shoe D, share E, mould board F, wings f, and braces e, substantially as set forth.

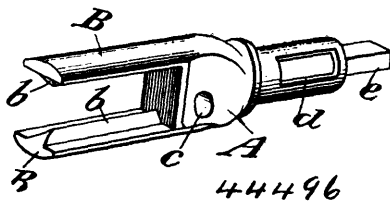
No. 44,495. Driving Rein and Tail Holder.
(Guide de harnais et porte-queue.)



Burdine Blake, London, Ohio, U.S.A., 17th October, 1893; 18 years.

Claim.—1st. The saddle shaped body A, provided with a front tongue b, for connecting with the back strap, side tongues c, c, for the breech strap, and the broad curved guard surface a, a, at its rear end, substantially as and for the purpose described. 2nd. The combined driving rein and tail holder, consisting of the body part A, with front tongue b, for connecting with the back strap, side tongues c, c, for the breech straps, the elevated rein holder d, and the broad curved guard surface a, a, substantially as and for the purpose described.

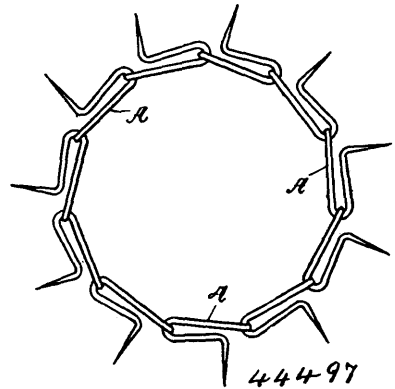
No. 44,496. Spring for Shade Rollers.
(Appareil de commandes pour bâtons de rideaux.)



Edmund F. Hartshorn, Newark, New Jersey, U.S.A., 17th October, 1893; 6 years.

Claim.—1st. In a spindle for shade rollers, the end piece A, cast in one piece, having the forked ends B, B, provided with the ribs b, b, whereby the end piece is secured to the spindle without extra fastening, substantially as described. 2nd. In a spindle for shade rollers, the end piece A, cast in one piece, having the flat end e, notch d, hole c, and forked end B, B, provided with the ribs b, b, substantially as described. 3rd. In a spindle for shade rollers, in combination, the shaft s, and cast end piece A, having the forked ends B, B, and ribs b, b, by which the end piece is attached to the outside of the spindle without other fastening, substantially as described.

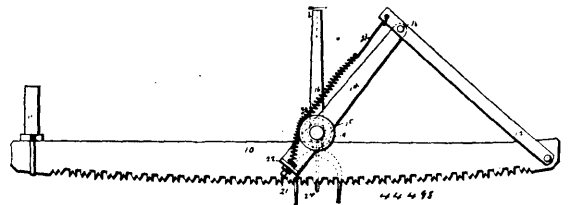
No. 44,497. Animal Collar. (Collier d'animaux.)



John W. Hull, Dublin, Indiana, U.S.A., 17th October, 1893; 6 years.

Claim.—The herein described collar for the purposes specified, consisting of a series of links, each made of a single piece of metal bent to form an end bar a, slightly converging side bars b, b, loop portion h, return bars c c above said bars b, and the sharpened projections d, extending from the ends of said bars c and at an angle thereto, said links being removably engaged with each other, in substantially the same manner described.

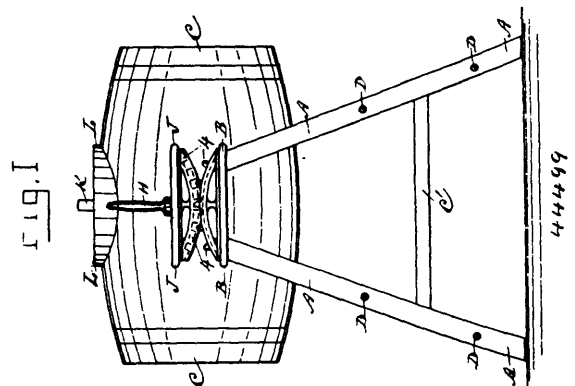
No. 44,498. Saw Attachment. (Attache pour scies.)



Henry C. Webb, Russiaville, Indiana, U.S.A., 17th October, 1893; 6 years.

Claim.—The combination with the saw and the supporting post of a lever pivoted to one end of the saw and pivoted near its free end to another lever, the latter being pivoted near one end to the post, a pulley mounted on one side of the post lever, and a spring bearing upon the pulley and connecting the short ends of the two levers, substantially as described.

No. 44,499. Oscillatory Churn.
(Baratte oscillante.)



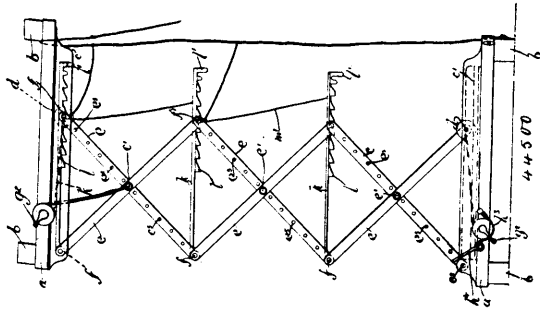
Joseph R. Semmens and William Semmens, both of Hamilton, Ontario, Canada, 17th October, 1893; 6 years.

Claim.—1st. In an oscillatory churn, the framework A as described, provided with the toothed side segments E, having semi-circular grooves 2, in combination with the barrel C, having cover K, with apertures N and O, toothed segments F, having semi-circular tongue 3 to conform to said groove and secured to the side projections J, substantially as and for the purposes hereinbefore set forth. 2nd. The combination in an oscillatory churn of the barrel C, provided with circular cover K, to fit in circular projection L, and provided with apertures N and O, the vertical slatted partition, the side projections J, having segments F secured thereto, and the

segments E, securing to rigid frame A, substantially as and for the purpose hereinbefore set forth. 3rd. The upper and lower toothed segments provided with semi-circular tongue and groove to conform with each other in combination with the churn and frame, substantially as described and set forth

No. 44,500. Extensible Structure.

(Construction extensible.)

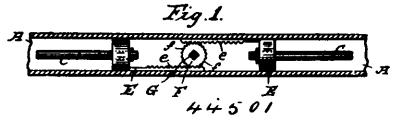


James Omar Oakley, Montreal, Quebec, Canada, 17th October, 1893; 6 years.

Claim.—1st. An extensible structure having foot sections or platforms changeable from a position transversely of said structure to a position lengthwise of same for the purpose set forth. 2nd. An extensible lazy tong structure having pivoted foot sections or platforms changeable from a position transversely of said structure to a position lengthwise of same for the purpose set forth. 3rd. An extensible structure having foot sections or platforms arranged and movable longitudinally of said structure for the purpose set forth. 4th. An extensible lazy tong structure having pivoted foot sections or platforms arranged and movable longitudinally of said structure for the purpose set forth. 5th. An extensible structure having side frames formed of lazy tong sections connected by two rows of cross rods as f, f^1 , and foot sections or platforms pivotally connected at one end with the cross rods f and adapted, when the structure is extended in a vertical direction to rest with their opposite ends upon the rods f^1 , and when the structure is extended in a horizontal direction each to rest with its opposite end upon the supporting cross rods f of another section or upon such section as set forth. 6th. An extensible structure comprising side frames formed of lazy tong sections connection by two rows of cross rods f, f^1 , rigid end pieces or frames, one bar of each side section at both ends of the structure having a stationary pivotal connection with the end pieces and the other bar of such sections having a travelling pivotal connection therewith, foot sections or platforms pivotally connected at one end with the cross rods f , and adapted, when the structure is extended in a vertical direction, to rest with their opposite ends upon the rods f^1 , and when the structure is extended in a horizontal direction, each to rest with its opposite end upon the supporting cross rod f of another section, or upon such section as set forth. 7th. An extensible structure having side frames formed of lazy tong sections connected by two rows of cross rods as f, f^1 , and foot sections or platforms with locking teeth or projections on their under sides and pivotally connected at one end with the cross rods f and adapted, when the structure is extended in a vertical direction, to rest with their opposite ends upon the rods f^1 , and when the structure is extended in a horizontal direction, each to rest with its opposite end upon the supporting cross rod f of another section and means for raising said opposite ends of such sections out of contact with said rods f , for the purposes set forth. 8th. An extensible structure comprising side frames formed of lazy tong sections connected by two rows of cross rods as f, f^1 , rigid end pieces or frames, one bar of each side section at both ends of the structure having a stationary pivotal connection with the end pieces, and the other bar of such sections having a travelling pivotal connection therewith, means for moving the bars having the travelling connection with the end pieces toward the ends of the bars having the stationary pivotal connection therewith, and suitable brake mechanism to prevent the too rapid return of such bars to their normal position, foot sections or platforms pivotally connected at one end with the cross rods f and adapted, when the structure is extended in a vertical direction, to rest with their opposite ends upon the rods f^1 and when the structure is extended in a horizontal direction, each to rest with its opposite end upon the supporting cross rod f of another section or upon such section as set forth. 9th. An extensible structure comprising side frames formed of centrally pivoted lazy tong sections connected by two rows of cross rods f, f^1 , rigid end pieces or frames, one bar of each side section at both ends of the structure having a stationary pivotal connection with the end pieces, and the other bar of such sections having a travelling pivotal connection therewith, means at opposite ends of the structure, for respectively moving the bars having the travelling connections with the end pieces, toward and away from the ends of the bars having the stationary pivotal connection therewith, and suitable brake mechanism to prevent the too rapid return of such bars to their normal position, foot sections

or platforms with ratchet teeth l and projection l^1 on their under sides and pivotally connected at one end with the cross rods f and adapted, when the structure is extended in a vertical direction, to rest with their opposite ends upon the rods f^1 , and when the structure is extended in a horizontal direction each to rest with said projection l^1 between another rod f^1 and the adjacent edge of the section pivoted to same or upon such section, and suitable guy ropes and connections for raising said foot sections, all substantially as and for the purposes set forth.

No. 44,501. Holding Mechanism for Spring Actuated Shades. (*Mécanisme d'arrêt pour ressort de persiennes.*)

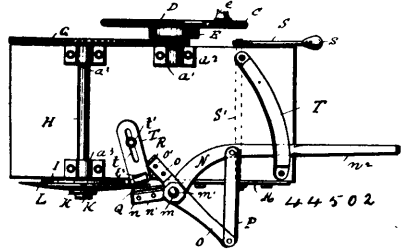


Edward T. Burrows, Portland, Maine, U.S.A., 17th October, 1893; 6 years.

Claim.—1st. The combination with the spring actuated rods of the longitudinally and rotatively movable heads permanently secured thereto, and the auxiliary springs for holding said heads normally extended upon said rods. 2nd. The combination with a shade stick, the outer end of which is hollow and provided with a stop, of a longitudinally movable rod in the stick, the outer ends of which is provided with a head longitudinally movable thereon, and the inner end is provided with means for moving the rod longitudinally, a stop on the rod between the stop and the stick and the head on the rod, a spring on the rod between the two stops, and an auxiliary spring on the rod between the stop on the rod and the head. 3rd. The combination with a shade stick, the outer end of which is provided with a longitudinally movable hollow stem, the bottom or inner end of which is perforated, and the outer end is provided with a friction head, of a longitudinally movable rod within the stick, the outer end of which is passed through the perforation in the stem and enlarged and fitted in the hollow of the stem, a stop on the rod to limit the inward movement of the head, and a spring on the rod adapted to engage with the bottom of the stem and force it outward, and means for moving the rod within the stick. 4th. The combination with a shade stick, each end of which is provided with a friction head, rods in the stick, the outer ends of which each engages loosely with the head at that end, said head being longitudinally movable relatively to the rod, a stop on each rod, a spring on each rod, one end of which engages with the stop and the other end engages with the head, and means for moving the rods.

No. 44,502. Disc Sharpener.

(*Appareil pour affûter les disques.*)

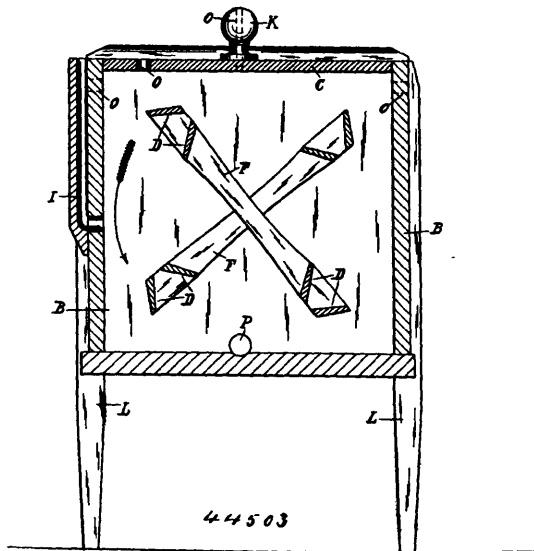


Hezekiah Casey, Birmingham, Illinois, U.S.A., 17th October, 1893; 6 years.

Claim.—1st. In a disc sharpener, the combination with a supporting frame, and a rotary disc carrying shaft mounted thereon, of a slide also mounted on said frame and movable toward and from said shaft in a direction transverse to the longitudinal axis thereof, and one or more sharpening appliances pivotally mounted on said slide and movable toward and from the edge or edges of the rotating disc to be sharpened. 2nd. In a disc sharpener, the combination with a disc carrying shaft and means for rotating the same, of a movable sharpening device to be pressed against one side of the disc to be sharpened, and a gage secured to the table of the machine and arranged to bear against the other side of the edge of the disc. 3rd. In a disc sharpener, the combination with a supporting frame and a rotary disc carrying shaft mounted thereon, of two levers provided with sharpening devices arranged to be brought into contact with the opposite sides of the edge of a disc carried by said shaft. 4th. In a disc sharpener, the combination with a supporting frame and a rotary disc carrying shaft mounted thereon, of two connected levers mounted on a common pivot and having their shorter arms provided with sharpening devices arranged to be alternately brought into contact with the opposite edges of the disc to be sharpened. 5th. In a disc sharpener, the combination with a supporting frame and a rotary disc carrying shaft mounted thereon, of two levers sustained by said supporting frame and having their shorter arms provided with sharpening devices, and a rigid link or cross bar con-

necting the longer arms of said levers, whereby the said sharpening devices are held separated from each other but are adapted to be alternately brought into contact with the opposite sides of the disc to be sharpened. 6th. In a disc sharpener, a slide carrying a double lever provided with knives, in combination with a shaft carrying a clamp for holding a disc, and means for rotating said shaft, substantially as and for the purpose described. 7th. In a disc sharpener, a double lever mechanism, the short lever arm thereof provided with knives and supported on a slide, in combination with a rotary shaft carrying a disc clamp, substantially as and for the purpose described. 8th. In a disc sharpener, the combination with a supporting frame and a rotary disc carrying shaft mounted thereon, of a slide also mounted on said supporting frame and movable in a plane transverse to the longitudinal axis of said shaft, a lever handle for advancing and retracting said slide, and one or more levers pivotally mounted on said slide and provided at their forward ends with sharpening devices. 9th. In a disc sharpener, the combination with the table A, of the disc carrying shaft H mounted thereon, a driving shaft geared to said shaft H, the slide M movable toward and from said shaft H, and the sharpening appliances carried by said slide. 10th. In a disc sharpener, the combination with the table A, of the disc carrying shaft H mounted thereon, a driving shaft geared to said shaft H, the slide M, movable toward and from disc carrying shaft, the sharpening appliances carried by said slide, and the disc gage T, adjustably attached to said table.

No. 44,503. Rotary Churn. (Baratte rotatoire.)



Thomas D. Brock, London, Ontario, Canada, 17th October, 1893; 6 years.

Claim.—1st. As a new article of manufacture, a churn having a body B, formed with the tubular air inlets I, substantially as set forth. 2nd. A body B, formed with the tubular air inlets I, in combination with a rotary dasher frame F, formed with the cup or funnel-shaped dashers D, and means for supporting and operating said dasher frame, substantially as set forth. 3rd. A body B, formed with the tubular air inlets I, and suitable air outlets O, in combination with a rotary dasher frame F, formed with the cup or funnel-shaped dashers D, and means for supporting and operating said dasher frame, substantially as set forth. 4th. A body B, formed with the tubular air inlets I, with suitable air outlets O, and bearings A, A, in combination with a rotary dasher frame F, formed with the cup or funnel-shaped dashers D, D, and provided with the trunnions T, T, and means for operating said dasher frame, substantially as set forth. 5th. A body B, formed with the tubular air inlets I, with suitable air outlet openings O, and bearing A, A, in combination with a dasher frame F, formed with the cup or funnel-shaped dashers D, D, and trunnions T, T, and the shaft S, boxing E, fly wheel W, and crank G, substantially as set forth.

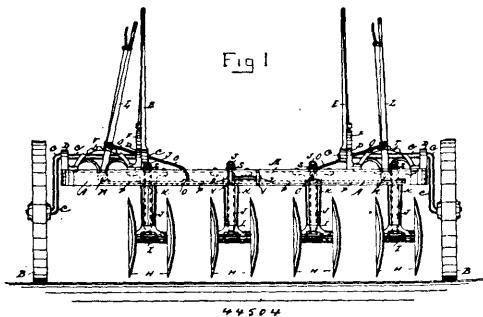
No. 44,504. Double Disc Harrow.

(Disque de herse double.)

Hervey Tallman, Beamsville, Ontario, Canada, 17th October, 1893; 6 years.

Claim.—1st. In a harrow, the combination of frame A, provided with bearings D, the crank shafts C, having ground wheels B, levers E, segmental ratchet F, and the tongue supports V, substantially as and for the purpose hereinbefore set forth. 2nd. The combination in a disc harrow, of a frame A, provided with levers L, pivoted at n, of ratchets T, connecting rods O, horizontal bars P, series of

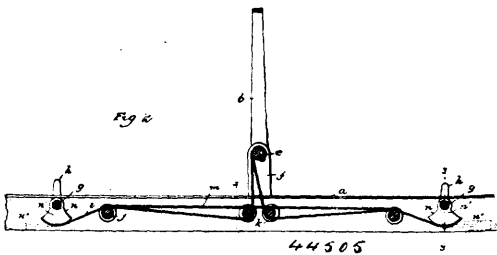
arms S and S, vertical tubes J, rigid standards K, disc bearings I, having lower caps, discs H, and the tongue supports V, with pivot



2, substantially as and for the purpose hereinbefore set forth. 3rd. In a disc harrow, the frame A, provided with bearings D, crank shafts C, wheels B, levers E, and ratchets F, in combination with levers L, pivoted at n, of ratchets T, connecting rods O, horizontal bars P, series of arms S and S, vertical tubes J, rigid standards K, disc bearings I, having under caps, the series of double discs H, and the tongue supports V, with pivot 2, substantially as and for the purpose hereinbefore set forth. 4th. The combination in a disc harrow of the frame A, levers L, ratchets T, connecting rods O, horizontal bars P, series of arms S, standards K, vertical tubes J, connected to disc bearings I, and the double discs H, substantially as and for the purposes hereinbefore set forth.

No. 44,505. Railroad Gate.

(Barrière de chemin de fer.)



James H. Fitzgerald, Winston, North Carolina, U.S.A., 17th October, 1893; 6 years.

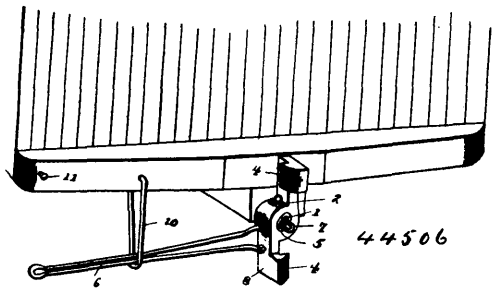
Claim.—1st. The swinging mast gate provided with the loosely arranged flexible hangers, substantially as described. 2nd. The combination, with the shafts having the upwardly extending arms and the segments of the mast gates mounted on shafts having pulleys and the flexible connection passing from said segments to said pulleys, as and for the purpose set forth. 3rd. The combination of the gate, the shafts having the arm to be engaged by the wheel, flexible connections from said shafts to said gates to swing the gates with the shafts, and flexible connections uniting the two shafts so that they swing together. 4th. The combination of a mast gate mounted on a horizontal shaft, supports for said shafts, a pulley on said shaft, a horizontal rock shaft mounted beneath the track, having an upwardly extending arm and the outwardly extending segment and a flexible connection secured on said segment and wound on said pulley of the gate shaft. 5th. The combination of a mast gate, provided with a shaft mounted in suitable bearings, a shaft mounted beneath the track arranged to be rocked by passing trains, and having a downwardly extending segment connected by a flexible connection with the segment of the mast gate, substantially as described.

No. 44,506. Car Coupler. (Attelage de chars.)

Joseph R. Stauffer, assignee of John Fischer, both of Scottsdale, Pennsylvania, U.S.A., 18th October, 1893; 6 years.

Claim.—1st. In a car coupling, the combination of a rotary tubular draw bar adapted for the storage of coupling links and provided at its front end with transversely aligned perforations, a twin jaw draw-head provided with a central opening fitted upon the draw bar and having perforations which register with those in the draw bar, a coupling pin engaging said registering perforations and also adapted for the engagement of a coupling link, and a torsional actuating spring operatively connected to the draw bar to hold the draw-head in its engaging position, substantially as specified. 2nd. In a car coupling, the combination of a rotary draw bar provided with a torsional actuating spring, a twin jaw draw-head having a central opening which is fitted upon the front of said draw bar, and a coupling pin engaging registering perforations in the draw-head and draw bar whereby the former is fixed to the latter for rotation therewith and is detachable therefrom upon the disengagement of

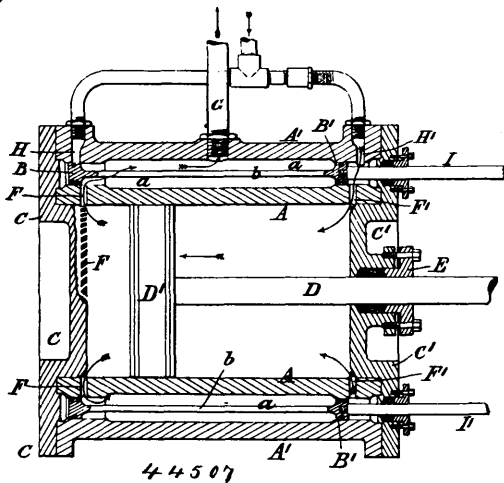
said coupling pin, substantially as specified. 3rd. In a car coupling, the combination of a rotary draw bar, a draw-head fixed to the front



end of the draw bar, an actuating spring connected to the draw bar to hold the draw-head normally in its operative position, an uncoupling lever fixed at one end to the draw-head, whereby the latter may be rotated against the tension of said spring, and a fixed keeper in which the free end of the lever swings, and which serves to limit the rotation of the draw-head when not in engagement with an opposing draw-head, substantially as specified.

No. 44,507. Steam and air Motor.

(Moteur à air et vapeur.)



Alfred Holmgren, New York City, New York, John Draper, Wilmington, Delaware and John Barnes, Brooklyn, New York, all in the U.S.A., 18th October, 1893; 6 years.

Claim.—1st. The combination, with motor cylinders formed with double walls and an annular space between such walls, of ports formed through the inner wall of such cylinders and controlled by annular valves which are caused to reciprocate in the space between such walls, substantially as specified. 2nd. The combination, with motor cylinders formed with double walls and an annular space between such walls, of ports formed through the inner wall of such cylinders and controlled by annular valves which are caused to reciprocate in the space between such walls, the valves at the opposite ends of the cylinder being connected together by an annular shell dividing the space between the walls of the cylinder into two parts, the inner one of which serves as a steam jacket, while the outer one is by means of passages through each valve placed alternately into communication with the opposite ends of the inside of the cylinder.

No. 44,508. Riding Attachment for Ploughs.

(Charrue à siège.)

William E. Stafford and Wesley A Stafford, Shedden, Ontario, Canada, 18th October, 1893; 6 years.

Claim.—1st. The combination of an ordinary plough, with a frame having adjustable carrying and guide wheels, substantially as and for the purpose hereinbefore set forth. 2nd. The combination in riding attachments for ploughs of a rectangular-shaped metal frame, with adjustable clips or clamps, for securing the frame to the plough, substantially as and for the purpose specified. 3rd. The combination of a rectangular metal frame with an adjustable wheel which performs the dual functions of a guide or gage wheel and a turning or caster wheel, substantially as and for the purpose hereinbefore set forth. 4th. The combination of a rectangular-shaped frame, with a sliding sleeve carrying a guide or gage wheel for controlling the width of the furrow, substantially as and for the purpose herein-

before set forth. 5th. The combination of a rectangular frame with a carrying wheel, having a sliding arm and a grooved guide, for

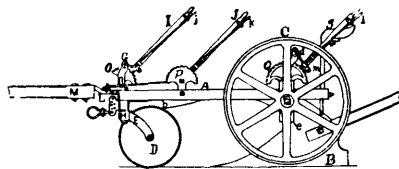
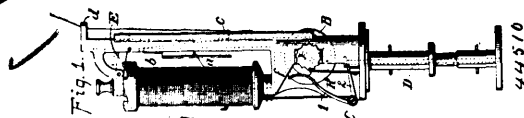


Fig. 1. 44508

vertically adjusting the wheel, substantially as and for the purpose hereinbefore set forth. 6th. The combination in riding attachments for ploughs, of the frame with a tongue iron made adjustable in width and so constructed as to be placed on either the frame or plough, substantially as and for the purpose hereinbefore set forth.

No. 44,509. Stop Mechanism for Spool Carriers.

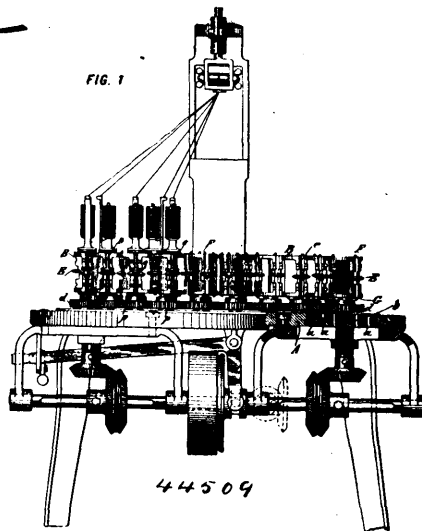
(Mécánisme d'arrêt pour porte-bobines.)



Loius Raffloer, Berlin, Germany, and Charles H. Schott, Brooklyn, New York, U.S.A., assignees of Adolph Bayler, Brooklyn, New York, U.S.A., 18th October, 1893; 6 years.

Claim.—1st. In a stop mechanism for spool carriers, the combination of a device for holding the thread under tension sliding pin *g*, means substantially as described, for automatically dropping said pin when tension is relieved, substantially as and for the purpose described. 2nd. In a stop mechanism for spool carriers, the combination of the drum *B*, cam *f* operated by said drum, pin *g*, and means for connecting said cam and pin, substantially as and for the purposes specified. 3rd. The combination of the tension drum *B*, cam *f* carried by said drum, pin *g*, and lever *C*, all arranged so that when tension is relieved from the drum *B*, the pin *g* will be released, substantially as described and for the purposes specified. 4th. A vertically sliding pin, a tension slide *c* for the thread, a support for a spool, a tension, drum connected with said tension slide, and mechanism connecting said drum with said pin, all combined and arranged to hold the pin raised whenever the drum is under tension, and to allow said pin to drop when the drum is not under tension, as specified.

No. 44,510. Braiding Machine. (Machine à lacets.)



44509

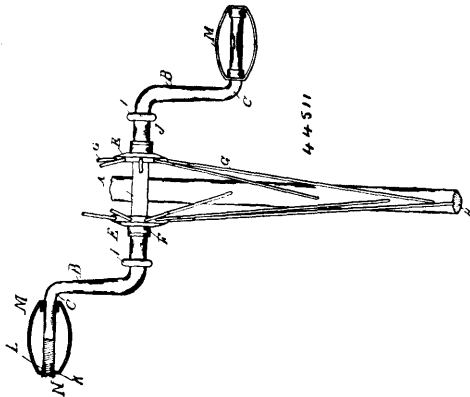
Louis Raffloer, Berlin, Germany, and Charles H. Schott, assignees of Adolph Bayler, both of Brooklyn, New York, U.S.A., 18th October, 1893; 6 years.

Claim.—1st. The combination of the carrier *B*, having two or more grooves *c*, with the pivoted latches *E, E*, and with the bolts *F, G*, controlled by said latches, all arranged so that the latch pertaining to one groove or set of grooves of the carrier shall be slightly higher than the latch pertaining to the remaining groove or set of grooves, and so that the latches of empty

grooves meeting one another may pass over one another without stopping the rotation of the carriers, substantially as described. 2nd. In a braiding machine, the carrier B, having upright grooves *e*, for the reception of the shanks of the spool holders, and shoulders *l* on each side of said grooves, the shoulders *l* pertaining to one groove or set of grooves, being higher than the shoulders *l* pertaining to the adjoining groove or set of grooves, substantially as and for the purpose specified. 3rd. In a braiding machine, the series of carriers B, B, intergeared so as to turn in alternate opposite directions, each of said carriers having upright grooves *e*, a set of bolts F, G for each groove, and a pivoted latch E connected with said bolts in each groove, the latches in the alternating grooves being held by the bolt springs in slightly different normal elevations, in combination with the shanks D, of the spool holders, said shanks having locking discs *o*, *p*, and latch depressing disc *q*, all the parts being arranged as described, namely, so that every latch which is depressed by a disc *q*, of the shank D, shall thereby stand lower than every latch which is not so depressed, as set forth. 4th. In a braiding machine, the combination of the carrier B, with the latch E pivoted therein, said latch having perforated shank *f*, and with the bolt F, having hook *i*, and bolt G, having hook *j*, the contact edges *m* of the latch with the hooks of the bolts being substantially knife edges, as and for the purpose specified, so that the latch may swing on its pivot without straining the bolts laterally. 5th. In a braiding machine, the carrier B, combined with mechanism substantially as described for rotating it, and with adjoining carriers and mechanism for rotating them in opposite directions, and with spool holding shanks D, having discs *o*, *p*, that straddle the carriers, and means substantially as described for locking these discs to the carriers, all as specified. 6th. The spool carrying shank D, having projecting discs *o*, *p*, each disc being adapted to receive a locking bolt at two opposite places, and having intermediate of said discs a projecting disc or shoulder *q*, for combination with a series of grooved carriers B, having latches E, E, that control the locking bolts, substantially as and for the purpose specified. 7th. The spool carrier D, having locking shoulders *o*, *p*, adapted to straddle the carriers and to receive bolts on diametrically opposite sides, and having intermediate shoulder or disc *q*, and guide pins *r*, combined with the carrier B, having upright groove *e*, recesses for the guide pins *r*, a latch adapted to enter beneath the disc *q*, and bolts controlled by said latch, as set forth.

No. 44,511. Velocipede Drive Wheel.

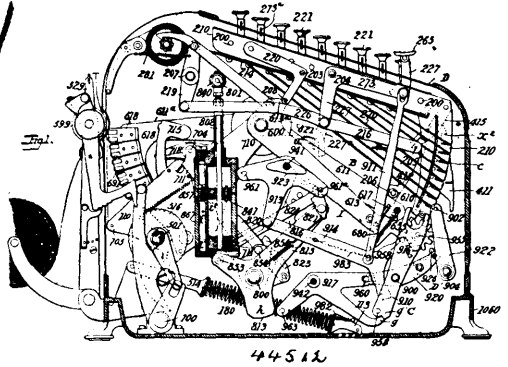
(Roue de commande pour velocipèdes.)



The Gendron Manufacturing Company, Toronto, Ontario, Canada, assignee of Peter Gendron, Toledo, Ohio, U.S.A., 19th October, 1893; 6 years.

Claim.—1st. A drive wheel for velocipedes composed of a crank shaft, cranks integral with the shaft, hob discs secured directly on the shaft, fixed keys interposed between the disc and shaft, and the spokes and rim supported in the discs, substantially as described. 2nd. A drive wheel for velocipedes composed of a crank shaft, keys fixed on said shaft, hub discs secured upon said keys and the spokes and rim, substantially as described. 3rd. A drive wheel for velocipedes composed of a crank shaft, tapering keys formed integral with the shaft, hub discs forced on the keys, and the spokes and rim, substantially as described. 4th. A drive wheel for velocipedes composed of a crank shaft, hub discs E having collars F, keys D on the shaft with which the discs are engaged, the spokes and rim, the collars I pressed upon the straight portion of the shaft to form journals J, substantially as described. 5th. In a drive wheel for velocipedes, the combination of the crank having the reduced end portion K, of the pedals M having the flanges L engaging such reduced portion, and the flanges or lugs N on the end of the shaft turned over against the end of the pedal, substantially as described. 6th. In a velocipede, the combination with a drive wheel, of an integral crank shaft on which the wheel is rigidly secured and integral cranks on the shaft, substantially as described. 7th. A drive wheel for velocipedes composed of a shaft, keys formed integral with the shaft, hub discs forced on the keys and the spokes and rim, substantially as described.

No. 44,512. Calculating Machine. (Calculateur.)



The American Arithmometer Company, assignee of William S. Burroughs, all of St. Louis, Missouri, U.S.A., 19th October, 1893; 6 years.

Claim.—1st. The combination in a calculating machine, of a key plate, a number of series of vertically movable keys extending through said plate and arranged side by side, each key having a slot, and cross rods extending beneath the plate and passing through the slots of the keys which lie in the same transverse line, substantially as described. 2nd. The combination of the operating keys, the stops operated thereby, the crank levers 217 upon which the keys rest, and which are connected with the stops, side bearings for said levers, and springs bearing against the levers and pressing them frictionally against the said bearings, substantially as described. 3rd. The combination of the series of levers B, and a rack connected to each lever to move longitudinally independent of said lever to a limited extent, and connecting springs to lift the racks with respect to said levers when the latter have been brought to the limit of their upward movement, substantially as described. 4th. The combination of the levers B, racks movably connected therewith to slide independently thereof to a slight extent, series of pinions 916, a cam carried by each pinion, a detent as 412, arranged to make contact with a stop, as 651, upon each rack, and intermediate devices between the cams and the detents for moving each detent as the pinion gearing with the adjacent rack completes a revolution, substantially as set forth. 5th. The combination, with the lever B, a rack movably connected with each lever and provided with a stop, a detent bearing against said stop, a striker arranged to operate said detent, and pinions each provided with a cam and a movable lever 413, having a bearing for the striker and another for the cam, substantially as set forth. 6th. The combination of the series of strikers, a series of levers arranged to make contact with bearings upon the strikers, means for shifting the levers to release the strikers, and a cross bar 902, and independent supports carrying said cross bar for swinging the latter to carry back all of the strikers, substantially as set forth. 7th. The combination, with the series of keys and with the series of bars 214, operated thereby, of a movable locking bar 203, and contact pieces upon the bars 214, substantially as set forth. 8th. The combination, in a calculating machine, of the keys and stops connected to be set thereby, an operating handle and devices connected therewith for operating the different parts of the machine, a locking bar for locking the keys in their different positions, and connections between the locking bar and the operating handle for shifting the bar to lock the keys as the handle begins its movement, substantially as set forth. 9th. The combination, with the series of keys, the series of levers 217, and slide bars 214, and the bearings for said levers, of a cross bar 202, and means for automatically swinging said cross bar to bring the same against said slide bars, substantially as set forth. 10th. The combination, with the keys, registering mechanism, intervening connections and operating handle, of a main shaft carrying the main actuating devices of the machine and a handle rock shaft connected with the main shaft and intervening connections between the main shaft and the handle rock shaft, substantially as set forth. 11th. The combination of the handle rock shaft 300, connected with the operating handle and parallel main shaft 800, of an arm connected with the handle shaft and a yielding connection between the arm and the main shaft, substantially as described. 12th. The combination of the parallel shafts 300 and 800, provided with arms and with a shaft 100, provided with arms of reciprocating connections between the arms, of the shafts 300 and 100, and a spring 880 connecting the arms of the shafts 100 and 800, substantially as set forth. 13th. The combination of the shafts 100 and 800, of a lever 811 having a stud, a forked rod embracing said stud and an arm upon the shaft 100, substantially as set forth. 14th. The combination, with the shaft 800 and lever 811 of a stud connected movably with said lever, a spring buffer bearing upon the stud, and a forked rod 119 receiving said stud, substantially as set forth. 15th. The combination of the shafts 300 and 100, the main shaft 800, and intermediate yielding reciprocating connections and a dash pot, and an arm connected with said shaft 800, and with the dash pot, substantially as described. 16th. The combination of the

shafts 300 and 100, the main shaft 800, and intermediate yielding connections between said shafts, and a dash pot, an arm connected with said shaft 800 and with the dash pot, the said dash pot being constructed of the main cylinder having a side chamber, and provided with a diaphragm having a valve and upper and lower openings leading from the main cylinder into the side chamber, substantially as described. 17th. The combination, with the operating shaft connected with the handle, the parts moved thereby and springs 180 for effecting the return movement of said parts, of a catch lever 527, and an arm connected with said spring arranged to engage with said catch lever and connections between the said catch lever and an operating part of the machine for releasing said catch lever, as said part reaches the limit of its movement, substantially as set forth. 18th. The combination, with the arm 116, catch lever 527, and shaft 800, of a catch 714, striker plate 713, and connections between the catch 714 and the shaft 800 arranged to swing the said catch as the shaft terminates its movement, substantially as set forth. 19th. The combination, with the arm 116, connected with the spring for imparting the return movements to the parts of a calculating machine, of a catch lever 527, and a striker plate as 713 for operating said catch and means for releasing the said striker plate, substantially as described. 20th. The combination with the lifter frame I, of the series of rack levers B, and operating handle connected with the shaft 300, a main shaft 800, and yielding connections between the shafts 300 and 800 and connections between the shaft 800 and the lifter frame, substantially as set forth. 21st. The combination of the lifter frame I, shaft 800, toggle levers 816, 817, lever 815 carrying the pin 859 and slotted connecting rod 824 and spring 884, the slot of which receives a pin on lever 815, substantially as set forth. 22nd. The combination with the strikers 411, the means by which the same are actuated, and the vibrating curved rack 311, of the cross bar 902, supported intermediate of said strikers, and actuating devices, cam lever 918, for moving said cross bar, a spring for moving the cam lever in one direction and a stud upon the rack to make contact with said lever to move it in the opposite direction, substantially as described. 23rd. The combination with the frame carrying the pinions 916, of a vibrating lever 913, a connecting rod 914 and means for shifting the connecting rod to bearings upon opposite sides of the pivot of said frame, substantially as set forth. 24th. The combination with the frame C, and pinions 916 carried thereby, connecting rod and means for shifting the same to bearings on opposite sides of the pivot of the frame, lever 913 to which the connecting rod is pivoted, and a shaft carrying an arm provided with a reversible pawl arranged to engage bearings upon the lever 913, substantially as set forth. 25th. The combination with the lever 913, frame C, forked connecting rod having notches for engaging studs upon opposite sides of the pivot of said frame and pendant link 911, connected movably to the connecting rod, and means for setting the link in position, substantially as set forth. 26th. The combination of the frame C, and the pinions carried thereby, the forked connecting rod, key 265, lever 227, and means connecting said lever and forked connecting rod, substantially as described. 27th. The combination with the key 265 and intermediate connections, racks and retainers 415 for the racks, and cross bar 209 contacting with the retainers and connected to be operated by said key, substantially as set forth. 28th. The combination of the lever 227 and lever 227^a, the locking arm 621 therefor, and the rack frame 311 carrying a stud for making contact with said arms to lift the same, substantially as and for the purposes set forth. 29th. The combination with the series of pinions 916, of retainers for holding the same while out of gear, and means for swinging the retainers to engage the pinions as the latter are swung in either directions, substantially as set forth. 30th. The combination with the series of pinions 916, carried by a frame, a series of teeth carried by arms or levers pivoted to the shaft of said frame, a lever 917, for operating the frame, and having a bevelled end engaging a bevelled edge upon said frame, substantially as set forth. 31st. The combination with the frame C, and its operating devices, spring controlled lever 917, engaging the frame when at the limit of its movement in either direction, an automatic locking device for holding said lever after the frame reaches either position, substantially as set forth. 32nd. The combination with the keys, the cross bar 202, and connections for restoring the position of the keys, the key 265, and connections between said key and the cross bar, substantially as set forth. 33rd. The combination with the bar 202, vibrating arm 219 supporting the same, and one provided with a stud, rock shaft 600 supporting an arm, and a spring pawl upon said arm arranged to engage said stud, substantially as set forth. 34th. The combination with the main operating keys, the cross bars 202, and connections for restoring the positions of the keys, of the keys 265, the frame C, and its locking devices, and connections between such devices and said key, 265, substantially as described. 35th. The combination of the handle lever formed or provided on its hub with teeth r , bevelled on one side and provided with an abrupt shoulder on the other, said lever being provided with a slotted conical pintle, the shaft 300, having reverse teeth r^1 , and the spring actuated stud provided with a lip for entering the notch of the pintle, substantially as shown and for the purpose described. 36th. The combination with a series of keys and parts shifted thereby, and lugs arranged upon said parts, of a movable locking bar 203 arranged to occupy a position on either side of said lugs when at the limit of their different positions, substantially as set forth. 37th. The combination of a platen, a series of type carriers movable

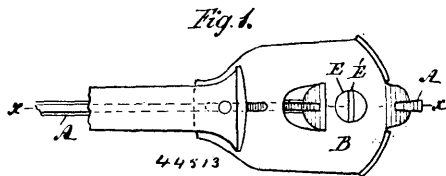
opposite said platen, and a series of drivers each arranged to operate upon the type between it and the platen to bring the two together, substantially as set forth. 38th. The combination, with the series of type carriers, of a platen opposite said carriers, and a series of drivers arranged to move type toward the platen, substantially as set forth. 39th. The combination of a platen, series of movable type carriers and series of drivers, springs for moving the same toward the type, and detents for holding the drivers in a retracted position, substantially as described. 40th. The combination, with the series of type carriers and series of drivers and springs for moving the drivers percussively against the type, of detents for holding the drivers retracted and means for successively releasing the detents, substantially as set forth. 41st. The combination of a platen, a series of carriers arranged side by side, and a series of type each movably supported upon a carrier and drivers for acting upon the movable type, substantially as set forth. 42nd. The combination of the platen, carriers, type and drivers, and levers provided with projections for making contact with bearings on the drivers and arranged to hold the latter in the forward position to which they are thrown and springs for actuating the levers, substantially as set forth. 43rd. The combination, with the drivers, having inclined bearings w , and levers having studs or projections 741, and springs for actuating the levers, substantially as set forth. 44th. The combination, with the drivers and their actuating devices, of detents for holding the parts out of action, pawls for actuating the detents and carriers, having shoulders arranged to control the action of the pawls, substantially as set forth. 45th. The combination, with the type drivers, of actuating devices and carriers, having shoulders arranged to be struck by parts of said actuating devices to throw the same out of operative position, substantially as set forth. 46th. The combination, with the type drivers, of a series of detents or triggers arranged to hold the drivers in a retracted position, a series of operating pawls and shoulders upon the triggers, and pawls arranged each in advance of the next shoulder to secure the release of the triggers in succession, substantially as set forth. 47th. The combination, with the series of drivers, of a series of triggers and a series of pawls, carried by a reciprocating shaft 704, substantially as set forth. 48th. The combination, with the series of drivers, of a series of triggers or detents each having an arm extended to make contact with and operate the succeeding trigger after and limited movement of the actuating trigger, substantially as set forth. 49th. The combination in a calculating machine, of a series of keys, registering devices, and intermediate connections between said keys and registering devices, so arranged as to register and add any amount of sterling currency at each setting of the keys, substantially as described. 50th. A calculating machine, provided with a key board having a series of rows of keys containing nine keys each, a row containing two keys for the additional pence, and a single key for the tens of shillings, substantially as described. 51st. In a circulating machine, the combination with a series of keys, a series of registering devices and connections between the keys and registering devices, the series being arranged to indicate a decimal notation, of one or more sets of keys, registers, and corresponding connections adapted to indicate other than a decimal series, substantially as described. 52nd. In a calculating machine, the combination, with a series of keys, of a register, and connections between the keys and register, said register being arranged to register 11 units and to carry on the addition of the twelfth, substantially as described. 53rd. In a calculating machine, the combination, with a key of a register therefor, connections between the key and register, the register arranged to carry on the accumulation of two units, substantially as described. 54th. In a calculating machine, the combination, with a series of keys, of a series of stops operated thereby, a register controlled by the stops, and a partial series of keys having stops connected to control the same register, substantially as described. 55th. In a calculating machine, the combination, with a series of keys, and a partial series arranged at the side thereof, of a sliding bar arranged to be operated by the series of keys and partial series of keys, substantially as described. 56th. In a calculating machine, the combination, with a series of keys, and a partial series of keys, of a sliding bar arranged to be operated by any of the keys, the bar being provided with a lateral projection, substantially as described. 57th. In a calculating machine, the combination, with the rack, the stop plate and stop controlling the rack, of a register comprising a pinion engaging the rack, and a cam secured to the pinion having multiple arms, substantially as described. 58th. In a calculating machine, a recording device comprising an arm carrying a number of sliding blocks supporting type, one of the blocks carrying type arranged side by side, substantially as described.

No. 44,513. Skate. (Patn.)

Richard Daine and Benson Gladwin, both of Halifax, Nova Scotia, Canada, 19th October, 1893; 6 years.

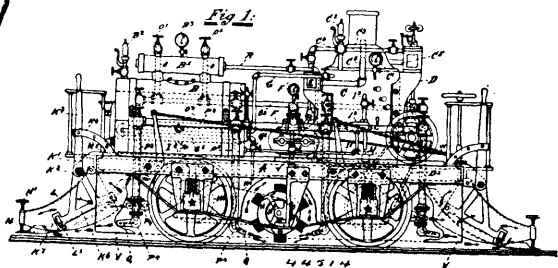
Claim.—1st. The combination with the skate blade or runner A, having an inverted T-shaped slot A¹, and a heel plate B, provided with a hole coinciding with said slot, of the nut D, provided with a groove D¹, in the impinging face and inserted in said slot, and the screw bolt E, inserted in the hole in the heel plate and passing through the vertical portion of said slot A¹, and entering said nut,

as set forth, for the purpose described. 2nd. A screw bolt E, having a head provided with a groove E¹, and a nut D, provided with a



groove D¹, intersecting the bolt hole and screwing on said bolt, as set forth.

No. 44,514. Device for Melting Snow on Railway Tracks. (*Appareil pour fondre la neige sur les voies de chemin de fer.*)



Richard A. Healy, Edward D. Cundell and John Hinchliffe, all of Paterson, New Jersey, U.S.A., 19th October, 1893; 6 years.

Claim.—1st. A device for melting snow on railway tracks, composed of a vehicle, gas burners below the vehicle and pilot shoe at the one or both ends of the vehicle, the burners being adjacent to the pilot shoe. 2nd. In a machine for melting snow on railway tracks, the combination with a vehicle of a pilot shoe at one end of both ends of the same, a rotary brush below the vehicle body and gas burners adjacent to the pilot shoe and to the brush. 3rd. In a machine for melting snow on railway tracks, the combination with a vehicle of a gas generator on the same, an air compressor on the vehicle and sets of burners for a mixture of gas and compressed air arranged below the vehicle. 4th. In a machine for melting snow on railway tracks, the combination with a vehicle of a rotary metal brush below the same, a hood over the brush and gas mixture burners adjacent to said brush. 5th. In a machine for melting snow on railway tracks, the combination with a vehicle of a gas generator on the same, an air compressor on the vehicle, a pilot shoe having a curved bottom and pivoted on the end of the car, means for adjusting said shoe in different positions and burners below and behind the pilot shoe. 6th. In a machine for melting snow on railway tracks, the combination with a vehicle of a gas generator and air compressor on the same, a pilot shoe pivoted to the end of the same and composed of a curved grated bottom, side wings and a top plate, and gas and air burners at said shoe. 7th. In a machine for melting snow on railway tracks, the combination with a vehicle of a gas generator and an air compressor on the same, a pilot shoe composed of a curved grated bottom, side wings, and a top plate uniting the side wings and means for adjusting the front edge of the top plate a greater or less distance from the front of the shoe.

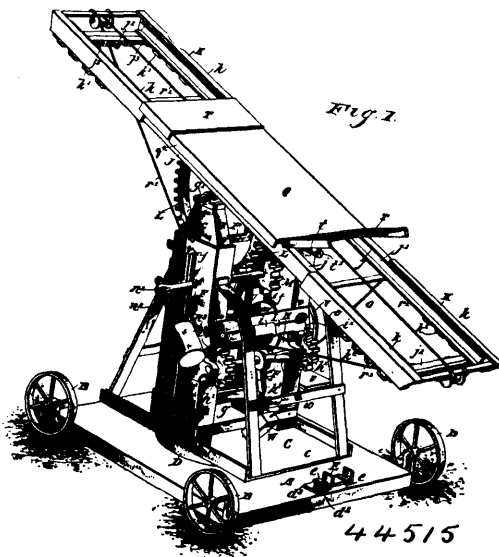
No. 44,515. Loading and Unloading Apparatus.

(*Appareil pour charger et décharger.*)

Emilio Cardarelli and George W. Dick, both of Sumter, South Carolina, U.S.A., 19th October, 1893; 6 years.

Claim.—1st. In a portable loading and unloading apparatus, a wheeled platform truck, a vertically adjustable support revolvably mounted on said truck, means for holding said support stationary in any turned position, an extensible track pivotally mounted on said support, and a flat conveyer car adapted to slide over said track back and forth between the ends thereof, substantially as set forth. 2nd. The combination with a wheeled platform, of a revoluble hollow standard frame bolted to said platform, and provided with anti-friction rollers moving thereon, and a cog ring, a sliding cog lock plate arranged inside of said ring and adapted to engage the same at any point, means for locking said cog plate in and out of engagement with said cog ring, a vertically adjustable frame mounted in the standard frame, an extensible track pivoted to the vertically adjustable frame, a conveyer car adapted to slide on said track, substantially as set forth. 3rd. The combination with the wheeled

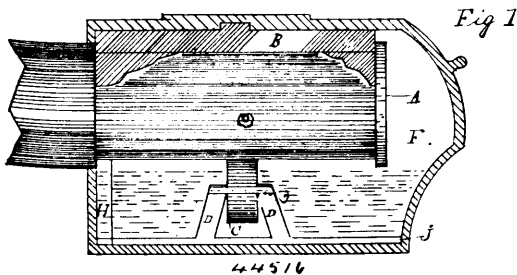
platform, of a revoluble standard frame bolted to the platform and having a lower base plate provided with anti-friction supporting rollers and a cog ring, a sliding cog lock plate mounted on the platform and arranged within the cog ring to engage the same at any point and provided with unturned tongue at one end, a locking bolt for the cog lock plate adapted to slide in front of said unturned tongue, an adjustable frame mounted within the standard frame, the pivoted track and the conveyer car adapted to move over the track back



and forth between its ends, substantially as set forth. 4th. In an apparatus of the class described, the combination of a revoluble standard frame having opposite tubular guide standards, means for holding the frame in any set position, opposite connected rack bars mounted in said tubular standards, a hand operated shaft mounted at one side of the standard frame, and carrying pinions or cog wheels adapted to mesh with the teeth of the rack bars, a lock for said pinions or cog wheels, the extensible track pivoted to the upper ends of the rack bars, and the conveyer car adapted to move over the track, substantially as set forth. 5th. The combination with a wheeled platform, of a revoluble standard frame mounted for adjustment on the wheeled platform and having the opposite tubular guide standards, a vertically adjustable rack bar frame moving in said guide standards, means for adjusting said rack bar frame, a track pivoted at its centre to the upper end of said vertically adjustable rack bar frame, counterbalancing devices for the track, and a conveyer car adapted to move over the track, substantially as set forth. 6th. The combination with a wheeled platform, of a vertically adjustable revoluble support mounted on the platform, an extensible track pivoted or fulcrumed on said support and provided with toothed adjustment segments, a counterbalanced shaft mounted in said support and carrying pinions or cog wheels meshing with said segments, and the conveyer car on the track, substantially as set forth. 7th. The combination of a revoluble standard frame, vertically adjustable supports mounted within said frame, a track pivoted on said supports and provided with toothed segments secured to the under side of the same between the supports, an operating shaft journaled in said supports and carried thereby and provided at one end with a threaded nut or block, pinions or cog wheels mounted on the shaft to mesh with the toothed segments, a counter and over balancing weight having a threaded stem engaging said nut or block, and the car on the track, substantially as set forth. 8th. The combination with a suitable support, of a track pivoted to said support and having toothed segments, an operating shaft journaled on said support and having pinions meshing with said segments and a threaded end, a counter and overbalancing weight provided with a threaded stem engaging the threaded end of shaft and adapted to counter and overbalance the track, and a conveyer car adapted to move over the track, substantially as set forth. 9th. The combination with a wheeled platform, of a revoluble standard frame mounted on the platform, a vertically adjustable frame mounted in the standard frame, a track pivoted at its centre to the upper end of said vertically adjustable frame, counter and overbalancing operating devices for tilting the track, means for holding the track in any tilted position, and the car adapted to move over the track, substantially as set forth. 10th. The combination of an adjustable support, the tilting track pivoted on said support, means for adjusting the track, stay hooks arranged at each side of the support, a retaining rope or wire connected at its ends to opposite portions of the track on each side of the pivot or fulcrum and adapted to be looped on either or both of the stay hooks, and the car, substantially as set forth. 11th. The combination with a wheeled platform, of an adjustable support

mounted on said platform, a fixed track section pivoted at its centre on said support, and comprising opposite connected rails having inner face grooves or channels, opposite extension sections arranged to slide over each end of the pivoted section, means for holding the extension sections in any adjusted position, means for tilting the pivoted section, and the car, substantially as set forth. 12th. The combination with a wheeled platform, of an adjustable support mounted on said platform, a fixed track section pivoted at its centre to said support, and comprising opposite inner rails having inner face grooves or channels, opposite extension sections arranged to slide over each end of the pivoted track section and having duplicated rails and keepers or sockets under each rail, oppositely working locking bolts arranged at each end of the pivoted track section and adapted to engage the keepers of the extension sections, means for tilting the pivoted track section, and the car having opposite guide rollers or wheels working in the face grooves or channels of the rails and opposite retaining flanges overlapping the sides of the rails, substantially as set forth. 13. The combination with a track, the rails of which have inner face grooves or channels, of a flat car mounted to run over the track and provided with under guide rollers or wheels working in said face grooves or channels, and opposite retaining flanges overlapping the sides of the rails, threaded blocks arranged at each end of the car and on the under side thereof, end boards hinged or pivoted to the ends of the car body and provided on their under sides with angularly disposed loops or eyes, and supporting screws adapted to work through said loops or eyes and engage said threaded blocks to support the end boards above the track, substantially as set forth. 14th. The combination with a suitable support, of a double drum or windlass journaled within the support, a track pivoted on the support and having guide pulleys or rollers at both ends, a flat car arranged to move over the track, adjustable rollers journaled under the car, means for holding the rollers stationary, and the car operating wires connected at one end to a roller, passing over the end guide pulleys or rollers of the track and connected at their other end to the double windlass or drum, substantially as set forth. 15th. The combination with an adjustable support, of a double drum or windlass journaled within the support, a tilting track pivoted on the support and having guide pulleys or rollers at both ends, a flat car arranged to move over the track, bearing lugs projecting from the bottom of the car, one of said lugs in each pair being provided with a series of retaining notches at one side, winding and unwinding rollers journaled in said bearing lugs, and having a lateral play there between, one of the journal ends of each roller being provided with a right angularly disposed locking portion which is adapted to engage and disengage said notches, locking screws or pins mounted at each end of the car body, and adapted to plug the space between the roller ends and the bearing lugs with notches to hold the rollers stationary, and the operating wires wound at one end on said rollers under the car, passing over the guide wheels at the ends of the track and wound at their outer ends on separate portions of the double windlass or drums, substantially as set forth.

No. 44,516. Journal Lubricator.
(*Graisseur pour coussinets.*)



William H. Howell, Thorold, and William G. Mallett, Dundas, both in Ontario, Canada, 19th October, 1893; 6 years.

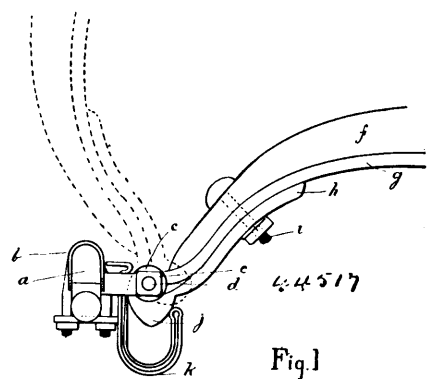
Claim.—1st. The combination of a rotary shaft or axle A, with a revolving roller C, an oil well or tank F, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of a rotary shaft or axle A, with a revolving roller C, and springs D, D, and H, and an oil well or tank F, substantially as and for the purpose hereinbefore set forth.

No. 44,517. Shaft Holder.
(*Tuteur de limonière.*)

James Hill and Daniel Hamilton, both of Neepawa, Manitoba, Canada, 19th October, 1893; 6 years.

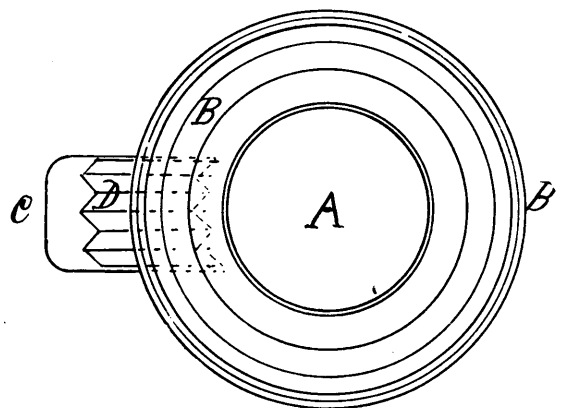
Claim.—1st. A curved plate of iron having a raised part at one end in the shape of an ellipse with the end projecting slightly from a slot in said plate for the purpose of fastening and adjusting the

lower side of shaft, substantially as described. 2nd. A double steel spring in elliptical-shape having one side longer than the other the end of said longer side being turned out at right angles to the



ellipse. 3rd. A combination of said plate and spring when fastened to the shafts and axle of a buggy that will support the shafts, substantially as described.

No. 44,518. Wash Bowl. (*Vase à savonner.*)



Samuel McIlvanie, Portage La Prairie, Manitoba, Canada, 19th October, 1893; 6 years.

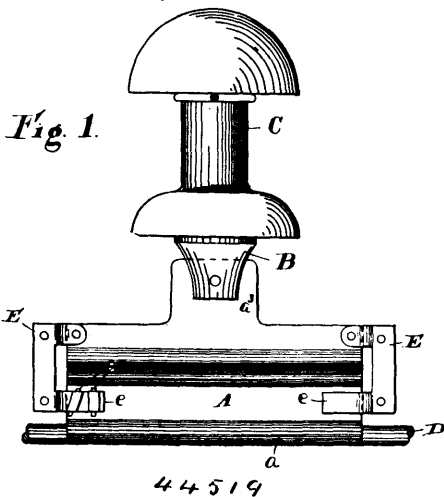
Claim.—1st. The combination with the wash bowl A, of the soap holder C, substantially as shown and described for the purpose specified. 2nd. The combination with the wash bowl A, and soap holder C, of the movable corrugated bottom D, substantially as shown and described for the purpose specified.

No. 44,519. Hanger for Trolley Wires.
(*Porte-fil de trollees.*)

George H. Ricke, and Michael A. McGuire, both of Cincinnati, Ohio, U.S.A., 19th October, 1893; 6 years.

Claim.—1st. A hanger for trolley wires consisting of plates A, rigidly connected at their top edge and terminating respectively in a jaw a, and a suitable clamping device, as E, adapted to grasp and clamp said plates at a point immediately above said jaws, substantially as set forth. 2nd. A hanger for trolley wires consisting of two plates A, connected at their top edge, said plates terminating in jaws a, in combination with bifurcated clamps e, for grasping said plates near their end portions, for the purposes specified. 3rd. A hanger for trolley wires consisting of two plates A, connected at their top edges, each plate terminating in a jaw a, in combination with bifurcated clamps, as E, pivotally connected to said plates, substantially as set forth. 4th. A hanger for trolley wires consisting of plates A, connected together at their top edge, each plate terminating in a jaw a, in combination with the bifurcated clamps E, pivotally connected to said plates near their top edge, and near the ends thereof, the arms e, of said clamps being adapted to grasp and compress said plates, and a suitable device for locking said clamps on said plates, substantially as set forth. 5th. A hanger for trolley wires, consisting of two plates, A, rigidly connected at their top edge, each plate terminating in a jaw, and a rib a² on one side of said plates,

in combination with clamps E pivotally connected to said plates, one arm e of each clamp having a groove e² therein, substantially as



and for the purposes set forth. 6th. A hanger for trolley wires, consisting of plates A, connected together at their top edge, said plates having the upwardly projecting ears a² and lower terminating jaws a, in combination with screw cap B having a transverse slot b therein, within which the ears a² are pivoted, and means for connecting said cap to the insulator C, as set forth. 7th. A hanger for trolley wires consisting of the two plates A, stamped from sheet metal and connected together at their top edge, said plates each having a jaw a, in combination with suitable clamps E, for compressing and locking said jaws against the trolley wire, as set forth. 8th. A hanger for trolley wires consisting of the two plates A, connected at their top edge, each plate terminating in a lower jaw, in combination with the bifurcated clamps, one arm e of each clamp being bent outward at an angle near its point to permit of a slight expansion of said jaws when said clamps are moved, substantially as set forth.

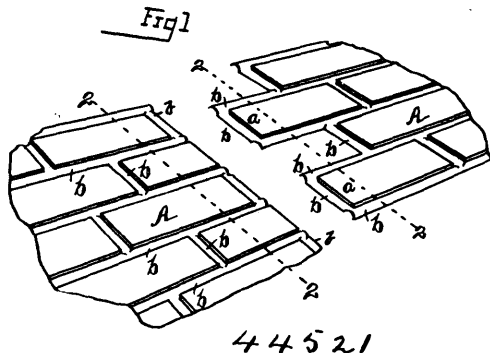
No. 44,520. Ointment. (Onguent.)

Ovide Destrampes, Berthier, Quebec, Canada, 20ème jour d'octobre 1893; 6 ans.

Résumé.—Une composition de matière consistant de gomme de pin, graisse, blanc d'Espagne, alun, jaune d'œufs et de l'eau de chaux, le tout composé et mélangé dans les proportions décrites pour les fins mentionnées.

No. 44,521. Metallic Facing for Buildings.

(Façade métallique pour bâtisses.)

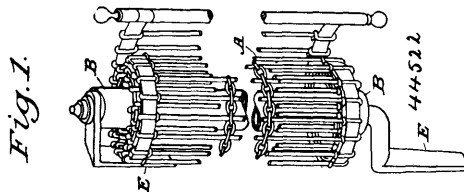


Longley L. Sagendorph, Philadelphia, Pennsylvania, U.S.A., 22nd October, 1893; 6 years.

Claim.—1st. A metallic facing plate, having at one end thereof the projecting portions a, the latter being adapted to overlap the adjacent plate at one end thereof, substantially as set forth. 2nd. A metallic facing plate, having longitudinal grooves and alternating cross grooves, one end of each plate being cut away along the base of said latter grooves, leaving the projecting portions a, substantially as set forth. 3rd. A metallic facing plate, having longitudinal and alternating cross grooves, each groove having therein the central convex bead b, one end of said plate having portions cut away along the base of said beads, the latter being adapted to overlap corresponding beads on the adjacent plate, substantially as and for the purposes set forth.

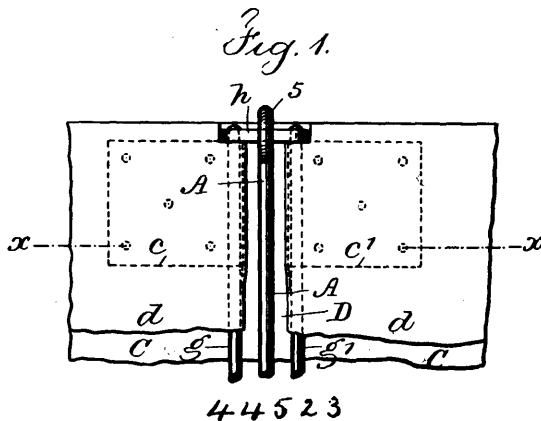
No. 44,522. Fire Guard. (Garde-feu.)

Robert W. Wyett, Yarram, Victoria, Australia, 22nd October, 1893; 6 years.



Claim.—1st. In a fire guard, an improved sheet or web, consisting of a flexible wire work or other material adapted to be rolled up when required, substantially as and for the purposes set forth. 2nd. In a fire guard, the improved device for rolling up the same, consisting of the combination, with the web of a roller or side, and a spring or springs, substantially as described and illustrated. 3rd. In a fire guard, in combination, with a flexible sheet, an edge to such sheet, consisting of a spirally coiled wire, substantially as described and shown. 4th. In a flexible fire guard, the improved device for adjusting the same in position before a fire consisting of parts as eyes, brackets or hooks attached to each end of such guard and adapted to engage into socket pins, or corresponding catches affixed to the fire-place whereby the guard may also be retained by the side of the fire in rolled up form, substantially as set forth. 5th. In a flexible portable fire guard, the combination, with side barrel, as B, of an internal rod, as D, said rod being provided with brackets, as E, E, substantially as and for the purpose set forth. 6th. The general arrangement and combination of parts of my "Improved Fire Guard," substantially as described and illustrated in the drawings.

No. 44,523. Binder. (Lieuse.)

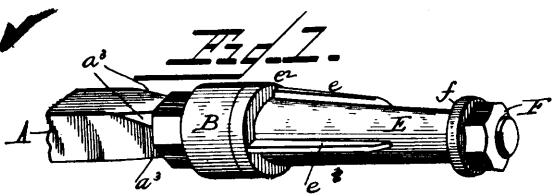


Richard R. Vernon, Brooklyn, New York, U.S.A., 22nd October, 1893; 6 years.

Claim.—1st. The combination in a binder, of the tubes or rods, and link pieces forming a frame adapted to receive the sheets or leaves, and a movable rod or tube adapted to pass within the fold of the leaves or sheets, and to pass through and be secured to the said link end pieces, substantially as set forth. 2nd. The combination in a binder, with the covers and back, of rods permanently connected to the back edges of the covers, link end pieces connecting the respective ends of said rods across the top and bottom of the back, and a movable rod passing through and secured to such link end pieces and adapted to receive the folds of the removable sheets, substantially as specified. 3rd. The combination in a binder, with the covers and flexible back, of rods or tubes permanently connected to the back edges of the covers, link end pieces connecting the respective ends of said rods across the top and bottom of the back, and a movable tube or rod having an eye 5 at one end, and threaded, and having a tapering head at the other end, and adapted to pass within the folds of the sheets or leaves and through said link end pieces, there being a hole in one link and a countersunk notch in the other link to receive and engage said rod at its respective ends, substantially as set forth. 4th. The combination in a binder, with the covers and flexible back, of the rods g, g', the link end pieces connecting the ends of such rods together, the straps or hinge pieces c, c', passing around and securing the said rods to the covers, and the movable rod A, adapted to pass within the fold of the removable leaves or sheets and to pass through and be secured to the said link end pieces, substantially as set forth. 5th. The combination in a binder, of the end frames and connecting devices therefor and adapted to receive the sheets or leaves, and a movable rod or tube adapted to pass within the fold of the leaves or sheets at the back,

and having an eye at one end and a hook shaped portion at the other end to engage the respective end frames, substantially as set forth. 6th. The combination in a binder, with the covers and back, of tubes permanently connected to the back edges of the covers, end frames made of spring wire adapted to yield under pressure, and having parallel legs adapted to enter and telescope in the said tubes, and a movable rod or tube adapted to pass within the fold of the leaves or sheets at the back, and having an eye at one end and a hook shaped portion at the other end to engage the respective end frames, substantially as set forth. 7th. The combination in a binder with the covers and back, of tubes permanently connected to the back edges of the covers, end frames made of spring wire with eyes or bends capable of yielding under pressure, and having parallel legs adapted to enter and slide or telescope in the said tubes, and a movable rod adapted to pass within the fold of the leaves or sheets at the back, and having an eye at one end engaged or interlocked with the eye of one end frame, and a hook shaped bend at the other end to engage the eye of the other end frame, substantially as and for the purposes set forth. 8th. The combination in a binder, with the covers and back, of tubes permanently connected to the back edges of the covers, end frames made of spring wire eyes or bends, and having parallel legs adapted to enter and slide or telescope in the said tubes, and a movable rod adapted to be engaged or connected to the leaves or sheets at the back, and having an eye at one end engaged or interlocked with the eye of one end frame, and a hook shaped bend at the other end to engage the eye of the other end frame, substantially as and for the purposes set forth.

No. 44,524. Axle Box. (Boîte à graisse.)

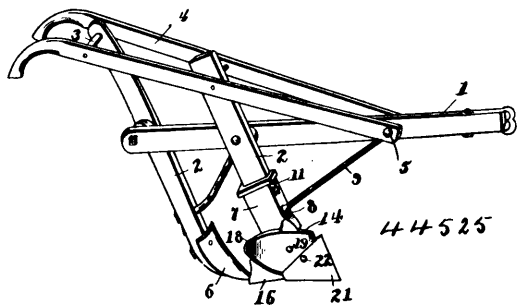


44524

Webster L. Mills, Condit, Ohio, U.S.A., 22nd October, 1893; 6 years.

Claim.—The axle A having set screw channel a^1 , thread a^2 , and the axle box B, in combination with the sliding cap C, the nut collar C screwing thereon, and the screw D, working through the flanges of said cap and axle box into the channel a^1 , as shown and described.

No. 44,525. Plough. (Charrue.)



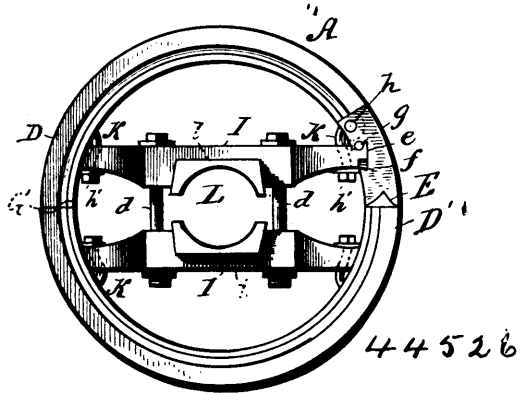
44525

Almeron S. Seeley, Croton, Michigan, U.S.A., 22nd October, 1893; 6 years.

Claim.—1st. In a plough, the combination with the standard receiving socket terminating at its lower end in a depending web provided at one side with a wing, of a landside secured to one side of the web, a mould-board secured to the wing, a point secured to the wing under the mould-board and having its upper side provided with a tenon engaging with the mortise formed in the mould-board, and its rear edge recessed to receive the front end of the landside and extending below the same, substantially as specified. 2nd. In a plough, the combination with the standard receiving socket having a lower web or extension provided at one side with a wing, of a mould-board secured to the wing and having its upper edge abutting against the under side of the socket, its front end overlapping the front edge of the web and provided upon its under side with a mortise, a point below the mould-board secured to the wing, and having its front edge extending in advance of the same, and provided upon its upper side with a tenon engaging the mortise, and at its inner side near its lower edge with a recess, a recess formed in the landside of the web, and a recessed landside secured in the recess, and having a front extension taking into the rear recess of the point, substantially as specified. 3rd. The combination with a hollow

socket having at its lower end the centrally located depending recessed web provided at one side with a wing, of the landside bolted in the recess and likewise recessed to receive the web and provided with a front extension, the mould-board bolted to the wing and having its front end thickened to take over the front edge of the web, and provided upon its under side with a mortise, and the point bolted to the wing below the mould-board, and provided upon its upper side with a tenon engaging the mortise, in rear of its extreme front end with a recess receiving the extension of the landside, and upon its inner face near its lower bevelled edge, with a rib receiving the under side of the wing, substantially as specified. 4th. In a plough, the combination with the standard receiving socket terminating at its lower end in a depending web provided at one side with a wing, of a landside secured to one side of the web, a mould-board secured to the wing under the mould-board and having its upper side provided with a tenon engaging with the mortise formed in the mould-board, substantially as specified.

No. 44,526. Pulley. (Poulie.)

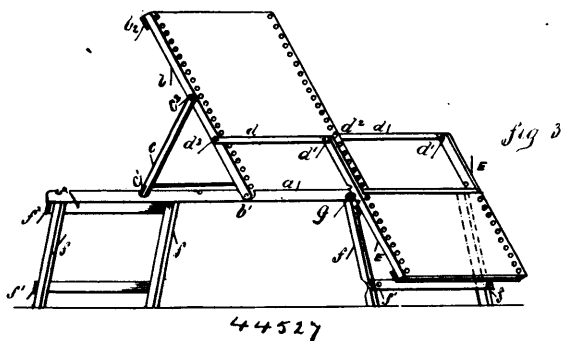


44526

David A. Sprinkle, Pennsborough, West Virginia, U.S.A., 22nd October, 1893; 6 years.

Claim.—The herein described split pulley, consisting of a rim A, made of a series of sectional rings and divided transversely to form the sections D, D¹, one end of one of said sections having a pointed tongue E, formed with concave sides, and its other end formed with a curved tongue and a recess beside said tongue, and one end of the other of said sections having a recess formed with convex inclined sides to receive said tongue E, and its other end formed with a curved tongue and a recess adapted to engage the recess and tongue, respectively, of the adjacent end of said first mentioned section, the bolts I, located within the inner rings only of said sections, the arms I, the anchor rods, each having one end threaded and extending through an end of one of said arms and its other end formed with an eye engaging one of said bolts, nuts on the threaded ends of said rods, and a hub carried by said arms.

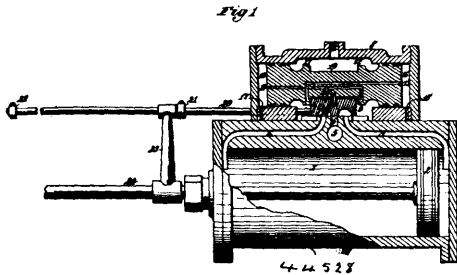
No. 44,527. Chair. (Chaise.)



44527

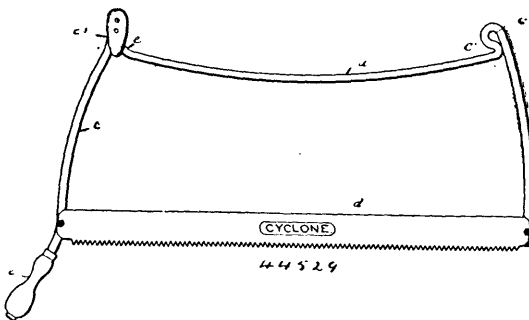
Colin Campbell McPhee and Ivor Edmund Brock, both of Chatham, Ontario, Canada, 22nd October, 1893; 6 years.

Claim.—1st. The combination of frame a, a , having legs or supports f, f , with head rest E, E , with frame b, b , the frame b, b , and E, E , being connected by bars d, d , which are hinged or pivoted at each end of these frames, the whole forming a cot with head rest, substantially as and for the purpose herein set forth. 2nd. The combination of chair back b, b , with support frame C, C , with connecting arms d, d , meeting and hinging with extended arms E, E , of leg rest, with platform A, A , substantially as and for the purpose hereinbefore set forth. 3rd. The combination of a swinging frame E, E , having covering used as head rest in cot and leg rest in chair, with hinging bars used as stays for head rest in cot and for arm rests in chair, substantially as and for the purpose herein set forth.

No. 44,528. Steam Actuated Valve.*(Soupape actionnée par la vapeur.)*

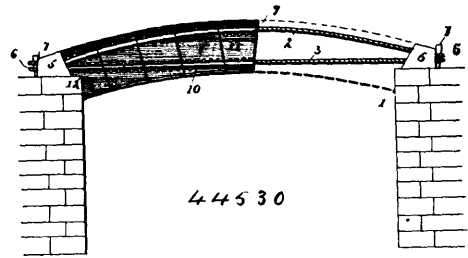
Thomas George Laney, Lima, Ohio, U.S.A., 22nd October, 1893; 6 years.

Claim.—1st. The combination, with a steam cylinder and its piston, having a piston rod provided with an arm, of a steam chest having cylinder ports controlled by a main slide valve and exhaust ports controlled by an exhaust valve, having a valve rod provided with collars arranged to be alternately struck by the arm on the main piston rod, a valve piston arranged in the steam chest and having collars or shoulders to engage and actuate the main slide valve and provided with steam admission ports that lead through said valve piston to its opposite ends, and a pin that is secured to the valve piston and loosely engaged with the main slide valve to prevent the valve piston from turning on its axis, substantially as described. 2nd. The combination of the steam cylinder 1, having ports 3 and 4, the steam chest 8, having ports 17 and 18, the main exhaust port 5, having connecting ports or passages 6 and 7, the main slide valve 9, for controlling the cylinder ports, the exhaust valve 19, for controlling the ports 17 and 18, means for actuating said exhaust valve from the main piston, the valve piston 10, having collars or shoulders 11 and 12, to actuate the main slide valve, and provided with steam admission ports 13 and 14, that lead through said valve piston to opposite ends of the steam chest, said ports being controlled by contact of said shoulders or collars, with the opposite ends of the main slide valve, and a pin 25, for preventing said piston valve from turning on its axis, substantially as described. 3rd. The combination of the cylinder 1, having ports 3 and 4, the piston 2, having a piston rod provided with an arm 23, the steam chest 8, having ports 17 and 18, the main exhaust port 5, the main slide valve 9, the valve piston 10, provided with shoulders 11 and 12, and ports 13 and 14, the exhaust valve 19, having a valve rod 20, provided with collars 21 and 22, and the pin 25, connecting the main slide valve and valve piston, substantially as described.

No. 44,529. Framesaw. (Cadre de scie.)

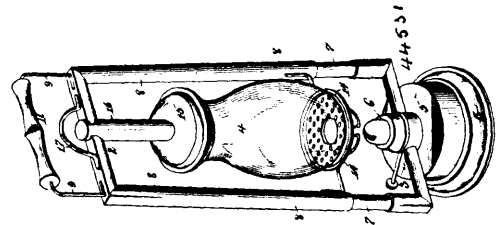
Norman Slocum Snell, Newton, Massachusetts, U.S.A., 22nd October, 1893; 6 years.

Claim.—1st. A framesaw, having a frame composed of a single metal bar which is doubled at one corner, the doubled portion projecting outward substantially at right angles to the back, as and for the purpose described. 2nd. A framesaw, having a frame composed of a single metal bar which is doubled at one corner, the doubled portion projecting outward substantially at right angles to the back, and the side of the frame which extends from said corner projecting beyond the saw blade to form a handle. 3rd. A framesaw, having a frame composed of a single metal bar which is doubled into the form of a loop at the corner diagonally opposite the handle of the saw and projecting outward from the back, one side of the loop forming a sharp angle with the back, as and for the purpose described. 4th. A framesaw, having a frame composed of a single metal bar doubled at one corner to form a handle, and the side of the frame which extends from said corner projecting beyond the saw blade to form a handle, and curved or bowed outward, as described.

No. 44,530. Cable Arch Support.*(Support pour arches en cable.)*

Samuel David Stephens, West Shoals, Indiana, U.S.A., 22nd October, 1893; 6 years.

Claim.—1st. In an arch, girder, or stringer, the combination with an upwardly arched cable, and a subjacently located horizontal cable, of opposite perforated binding blocks in which the ends of the cables are secured, and a series of intermediate plates arranged in pairs at opposite sides of the cables and clamping the same, and rivets for securing the plates together, substantially as specified. 2nd. In an arch, girder, or stringer, the combination with an upwardly arched cable and a subjacent horizontal cable, of opposite abutments, perforated binding blocks arranged thereon, and in rear of their edges said cables being provided with eyes beyond the blocks, keys passing through the eyes, and a series of plates interposed between the blocks, recessed to fit over the corners of the abutments, and provided with offsets for the reception of the cables, and rivetted above and below such cables, substantially as specified. 3rd. In an arch, girder, or stringer, the combination with a pair of cables, of opposite supports, and a series of pairs of plates having offsets coincident with each other and receiving and clamping the cables, rivets passed through the plates above and below the cables, and securing devices for the ends of the cables, substantially as specified.

No. 44,531. Lantern. (Lanterne.)

Edson O'Keef, Lawrence, Massachusetts, U.S.A., 22nd October, 1893; 6 years.

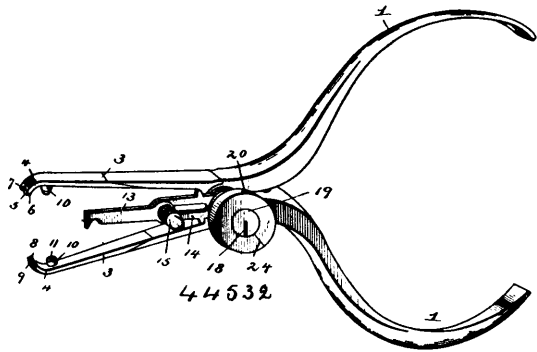
Claim.—1st. In a tubular lantern, the combination of a tubular main frame composed of telescoping upper and lower portions slidingly mounted on each other, a reservoir supporting the lower portion and having a burner, a globe carried by the upper portion, vertical rods extending upward from the lower portion of the tubular main frame through the upper portion above the same, a handle connected to the upper ends of the rods, and spiral springs disposed on the rods and arranged within the upper portion of the tubular main frame, and having their upper ends connected with the upper portion of the main frame, and their lower ends connected with the lower portion of the frame, substantially as and for the purpose described. 2nd. In a tubular lantern, the combination of a tubular main frame composed of telescoping upper and lower portions slidingly mounted on each other, the upper portions being provided at the top with a handle, vertical rods secured to the lower portion and extending through the upper portion, and having their upper ends bent inward to form journals, a handle receiving the journals, and connecting the upper ends of the rods, and spiral springs disposed on the rods and having their ends connected with the upper and lower portions of the main frame, substantially as described. 3rd. In a tubular lantern, the combination of a tubular main frame composed of telescoping upper and lower portions slidingly mounted on each other, the upper portion being provided at the top with a handle, vertical rods arranged within, secured to, and extending upward from the sides of the lower portion of the tubular main frame and extending through the upper portion, a handle connecting the upper ends of the rods, and spiral springs disposed on the rods and having their lower ends connected with the lower portion of the tubular main frame, and their upper ends passed through and secured to the top of the upper portion of the main frame, substantially as described.

No. 44,532. Watchmaker's Tool. (Outil d'horloger.)

George W. Cameron, Poplar Bluff, Missouri, U.S.A., 22nd October, 1893; 6 years.

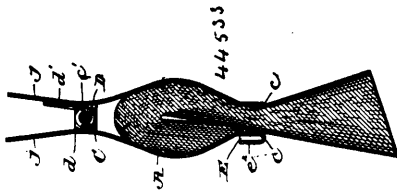
Claim.—1st. In a watchmaker's tool of the class described, the combination of a pair of pivoted jaws with outer curved ends, one

of which has a convex face and the other a concave face, and each of said faces formed with a transverse slot, and cones opposingly



situated on the inner sides of said jaws in rear of the said engaging faces, substantially as described. 2nd. In a watchmaker's tool, the combination of pivoted jaws having outer inturned curved ends, one of which has a convex and the other a concave engaging face, and each face formed with a transverse slot, one of said faces having a slot longitudinally intersecting its transverse slot, and a cone on the inner side of each of said jaws in rear of the outer inturned ends and formed with cavities having jewels therein, substantially as described. 3rd. In a watchmaker's tool, the combination with suitable jaws, of a beat block or indicator consisting of a stud having an opening and a slot in the outer end thereof, and a head adjustably mounted on said stud and provided with a line thereon, said head being secured in position by a set screw, and the head and stud forming a thumb screw for securing parts of the tool, substantially as described. 4th. In a watchmaker's tool, the combination of pivoted jaws having outer inturned curved ends, one of which has a convex and the other a concave engaging face, and each face formed with a transverse slot, one of said faces having a slot longitudinally intersecting its transverse slot, substantially as described. 5th. In a watchmaker's tool, the combination with suitable jaws, of a beat block or indicator consisting of a stud having an opening, and a slot in the outer end thereof, and a head adjustably mounted on said stud and provided with a line thereon, said head being secured in position by a set screw, substantially as described.

No. 44,533. Bag Holder. (*Porte-sac*)

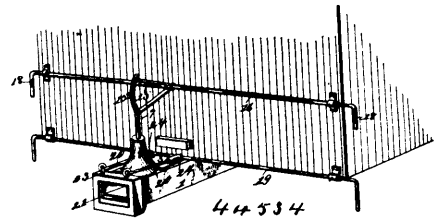


Everett H. Ketchum, Jamestown, New York, U.S.A., 22nd October, 1893; 6 years.

Claim.—1st. A bag holder, substantially as described, comprising the pivoted jaws or members, having the curved or bulged portions between their meeting ends and the pivot, as set forth. 2nd. A bag holder, substantially as described, comprising the spring pressed between the jaws or members having the curved or bulged portions and the roughened opposing faces, as set forth. 3rd. A bag holder, substantially as described, comprising the spring pressed jaws pivoted together and having the bulged or curved portions and the longitudinal reinforcing ribs, as set forth. 4th. A bag holder, comprising the pivoted jaws or members, having the bulged or curved portions adapted to receive and hold the folded edge of paper, one of the jaws having on its outer face a label-receiving pocket located at or near one end of said jaw, substantially as described. 5th. A bag holder, comprising the jaws or members, one of which has a slotted label holder on its outer face, as set forth. 6th. A bag holder, comprising the jaws or members provided with the curved or bulged portions, one of said jaws having one end doubled or folded upon itself and forming an open pocket adapted to receive a label, substantially as described. 7th. In a bag holder or rack, the standard and cross arm, having the hooks which have the upright prongs on opposite sides of the standard and arm, as described. 8th. In a bag holder or rack, the upright post and cross arm, the double hooks thereon and the backing plates rigid with the cross arm below the hooks thereof and between the vertical prongs of the same, substantially as described. 9th. A bag holder, having a pocket on its outer side and a folded label having numerals or characters on its folds and adapted to fit within said pocket to expose the numeral or character on its outer face, as and for the purpose described. 10th.

A bag holder, having the slotted pocket on its outer side and the foldable label consisting of a series of members connected together and designed to fold upon transverse creases or lines, so as to lie flat upon each other, each fold having on its faces numerals or characters indicating the sizes of bags, substantially as described.

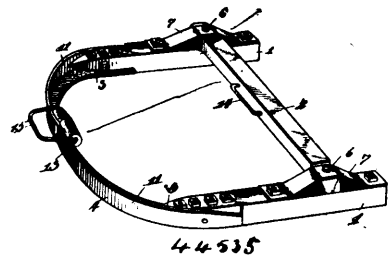
No. 44,534. Car Coupler. (*Attelage de chars*.)



(George W. Roberson, Shushan, New York, U.S.A., 22nd October, 1893; 6 years.

Claim.—1st. In a car coupling, the combination of a draw-head provided in its top with a longitudinal and a transverse slot, a head rising from the draw-head and having a coupling pin perforation and having its lower face recessed, a top plate secured to the draw-head and covering the slots and having its lower face recessed to form a way, a pin support comprising a plate arranged in said way and having a depending flange located in the longitudinal slot and provided at its front with a depending transverse disc, a spiral spring arranged within the draw-head and engaging the pin support, and a plate located in the transverse slot and forming a bearing for the rear end of the spring, substantially as described. 2nd. In a car coupling, the combination with a car and a draw-head, of a link lifting frame vertically movable in the draw-head and extending through the top of the same, a rock shaft mounted on the car and provided at opposite sides of the draw-head with eyes, and the adjustable arms having their rear ends arranged in said eyes and their front ends connected to the link lifting frame, substantially as described. 3rd. In a car coupling, the combination with a car and a draw-head, of a coupling pin, an upper rock shaft 16 provided with a segmental arm, a chain connecting the coupling pin with the segmental arm, a link lifting frame vertically movable in the draw-head and extending through the top thereof, a lower rock shaft 19 provided at opposite sides of the draw-head with elongated eyes, and the adjustable arms having their inner ends slidingly mounted in said eyes and their outer ends connected to the link lifting frame, substantially as described.

No. 44,535. Log Dray. (*Chariot pour billots*.)

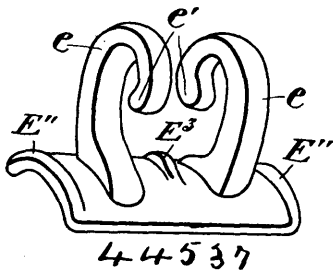


Charles W. Reichert and George J. Reichert, both of Kenman, Wisconsin, U.S.A., 22nd October, 1893; 6 years.

Claim.—1st. In a log dray, the combination of a bunk or bolster, opposite runners loosely connected with the ends of the bunk or bolster and adapted to rock, and a nose composed of two sections having their rear ends secured to the front ends of the runners and having their front adjacent ends pivotally connected together, substantially as described. 2nd. In a log dray, the combination of a bunk or bolster, opposite runners loosely connected to the ends of the bunk or bolster and adapted to rock, and a nose composed of two sections L-shaped in cross section and secured to the runners and provided at their front ends with opposed perforated lugs, and a pivot pin passing through the perforations of the lugs and pivotally connecting the sections of the nose together, substantially as described. 3rd. In a log dray, the combination of opposite runners having their front ends tapered and provided near their rear ends with vertical pins, a bunk or bolster having enlarged openings receiving the pins to permit the runners to have a yielding or rocking movement, braces arched over the ends of the bunk or bolster and securing the latter to the runners, the nose composed of two sections L-shaped in cross section and receiving the tapered ends of the runners and secured to the same and provided at their front ends with opposed perforated lugs, a pivot pin passing through the lugs and an approximately U-shaped guide provided at its ends with eyes receiving the pivot pin, substantially as described.

No. 44,536. Stay Traveller.

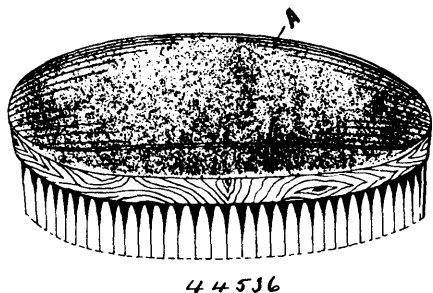
(*Draille pour états de voiles.*)



Kelly Evans, Toronto, Ontario, Canada, 23rd October, 1893; 6 years.

Claim.—1st. The combination with a sail of a traveller, comprised of two reversely turned hooks set in alignment and designed to clasp the stay, and supported parallelly from the top to the base bar by which it is suitably secured to the bolt rope of the sail, as and for the purpose specified. 2nd. A traveller for stays, comprised of two reversely turned hooks set in alignment parallelly arranged and extending outwardly from a base bar, as and for the purpose specified. 3rd. A traveller for stays, comprised of two reversely turned hooks parallelly arranged and attached to or forming part of a base bar, the distance between the hooks equalling the distance between the ends of the hooks and the bar, as and for the purpose specified. 4th. A traveller for stays, comprised of two reversely turned hooks parallelly arranged and attached to or forming part of a base bar, the distance between the hooks equalling the distance between the ends of the hooks and the base bar, and the hooks being formed with enlarged ends e^1 , as and for the purpose specified. 5th. A traveller for stays, comprised of two reversely turned hooks parallelly arranged and attached to or forming part of the base bar, the distance between the hooks equalling the distance between the ends of the hooks and the base bar, and a rib E^3 , formed between the hooks on the base bar, as and for the purpose specified. 6th. A traveller for stays, comprised of two reversely turned hooks parallelly arranged and attached to or forming part of a base bar, the distance between the ends of the hooks equalling the distance between the ends of the hooks and the base bar, and ribs E^{11} , formed on the ends of the base bar, as and for the purpose specified. 7th. A traveller for stays, comprised of two reversely turned hooks parallelly arranged and attached to or forming part of a base bar E^1 , the concave groove formed at the bottom of the base bar, as and for the purpose specified. 8th. A traveller for stays, comprised of two reversely turned hooks parallelly arranged and attached to or forming part of a base bar E^1 , and the concave groove formed at the bottom of the base bar E^1 , which has loops E^5 , extending downwardly from the ends, and arranged as and for the purpose specified. 9th. A traveller for stays, composed of two reversely turned hooks parallelly arranged and attached to or forming part of a base bar E^1 , elongated loops e^{11} , being formed so as to extend beyond the base bar, the distance between the hook, the diameter of the loops e^{11} , and the distance between the ends of the hooks and the base bar being all substantially equal, as and for the purpose specified.

No. 44,537. Brush. (*Brosse.*)



Wilson M. Whitford, Islington, Middlesex, and Samuel Cohen, London, all in England, 22nd October, 1893; 6 years.

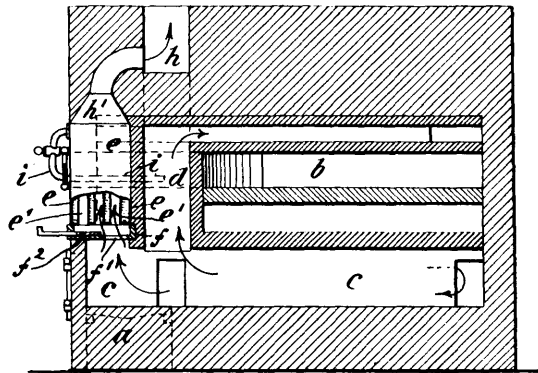
Claim.—A brush having an attachment of pumice or other suitable stone, substantially as described.

No. 44,538. Baker's Oven. (*Four.*)

Fritz Dührkop, New York City, New York, U.S.A., 23rd October, 1893; 6 years.

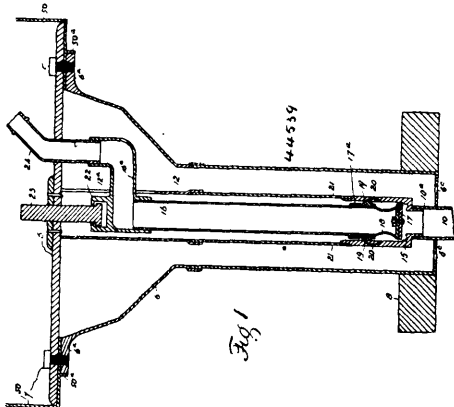
Claim.—The combination in a baker's oven of a fire chamber, a

series of communicating flues, a chamber connected with one of the



flues, a boiler placed in the chamber, and with a damper between the flues and the chamber, substantially as specified.

No. 44,539. Hydrant. (*Borne-fontaine.*)



Robert A. Brooks, Cheyenne, Wyoming, U.S.A., 23rd October, 1893; 6 years.

Claim.—1st. In a hydrant, the combination of the stationary outer casing, the bottom to which it is made fast, the supply pipe or conduit, the removable top plate secured to the casing, the vertically movable valve pipe 16, and the intermediate pipe 12 carrying the valve seat, its lower portion being shouldered to rest upon the top of the supply pipe, and terminating in a depending portion adapted to slip into the top of the supply conduit forming a water tight joint, while the upper extremity engages the top plate in such a manner as to prevent both vertical and lateral displacement, substantially as described. 2nd. In a hydrant, the combination of the stationary outer casing, the bottom plate to which it is made fast, the supply pipe or conduit, the removable top plate secured to the casing, the vertically movable valve pipe 16, and the intermediate pipe 12 carrying the valve seat, its lower portion being shouldered to rest horizontally to rest upon the top of the supply pipe and terminating in a vertical depending portion adapted to slip into the top of the supply conduit, forming a water tight joint, while its upper extremity engages the top plate which is grooved to receive it, substantially as described.

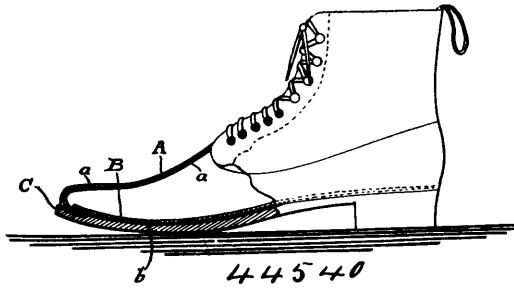
No. 44,540. Waterproof Shoe.

(*Chaussure imperméable.*)

Edward Roche, Providence, Rhode Island, U.S.A., 23rd October, 1893; 6 years.

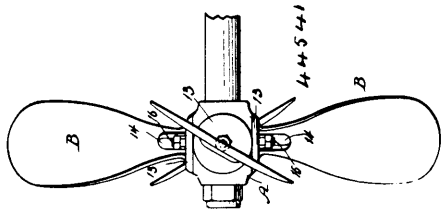
Claim.—1st. The shoe herein described, consisting of the upper, the insole, and the waterproof covering of the size of the inner sole and cemented to the lower or outer surface thereof, the upper being turned over upon the outer surface of the inner sole and its waterproof covering, the outer sole being applied over all, and the parts united in the usual way, as set forth. 2nd. The shoe herein described, having the waterproof covering of the size of and applied to the outer surface of the inner sole, the upper, and a waterproof layer of the size and form thereof applied between said upper and

the lining, the upper, lining, and waterproof layer turned over upon the outer surface of the inner sole and its covering, and the outer



sole applied over all and the parts united in the usual way, as set forth.

No. 44,541. Propeller. (Propulseur.)

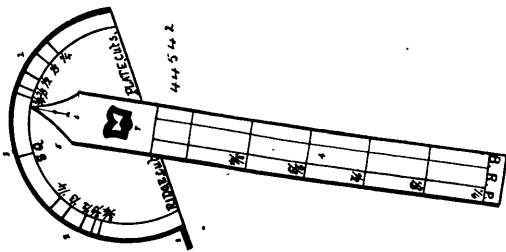


Martin Davis, Jersey City, New Jersey, U.S.A., 23rd October, 1893; 6 years.

Claim.—1st. The combination with the hub having radial bores which are countersunk on the inner side, and propeller blades having a perforated base, of screw bolts whose heads are fitted in the countersinks their shanks projecting outward through the hub and bases of the blades, as shown and described. 2nd. The combination with the hub having radial bores which are countersunk on the inner side and recesses on the outer side which are provided with feathers and the blades having bosses 15, and recesses to receive said feathers, of the screw bolts whose heads are fitted in the countersinks and their shanks extending outward through the hub bores and bases of the blades, and nuts applied to said shanks, as shown and specified.

No. 44,542. Rafter and Bevel Scale.

(*Echelle-équerre pour chevrons.*)



Philip Williams, Huntsville, Ontario, Canada, 23rd October, 1893; 6 years.

Claim.—1st. The combination of a rafter pitch scale giving plate and ridge cuts and square, in combination with a length scale giving the length of rafter required for any width building given on said length scale at a given pitch, as and for the purpose herein set forth. 2nd. The combination of the pitch scale and square 1, 2, 3 and the length scale 4, combined with the plate 5, the arm 6, and the set screw 7, all substantially as and for the purpose herein set forth.

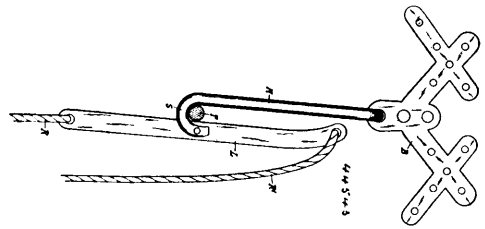
No. 44,543. Support for Carrier Rods.

(*Support pour bielles de transport.*)

Mitchell T. Buchanan, Ingersoll, Ontario, Canada, 23rd October, 1893; 6 years.

Claim.—1st. A pivotal hanger H, formed with a curved or recessed end S, and means for supporting the same, in combination with an arm L pivotally secured to said hanger, and means for

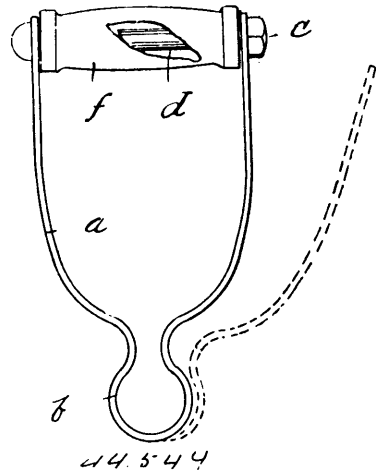
operating the latter, substantially as set forth. 2nd. A pivotal hanger H, formed with a curved or recessed end S, and a bracket



B, in combination with the arm L pivotally secured to said hanger, and the ropes R, R', substantially as set forth.

No. 44,544. Attachment for Shovels.

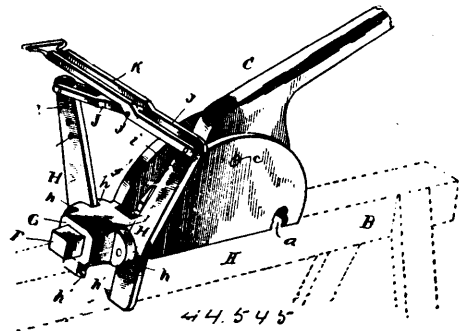
(*Attache pour pelles.*)



Thomas Walsh, Montreal, Quebec, Canada, 23rd October, 1893; 6 years.

Claim.—The combination of the spring metal clamp a, having annular reduction b, with the bolt d, and nut e, or other ordinary attachment, having handle or grip f, in combination with the handle of a spade or similar implement, substantially as and for the purpose set forth.

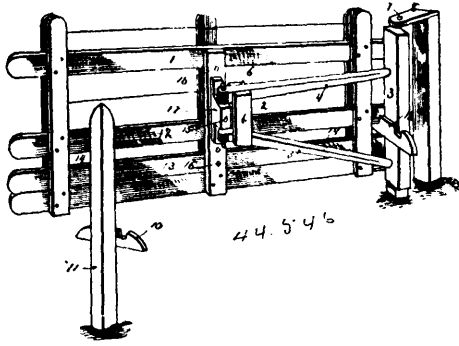
No. 44,545. Clamp. (Agrafe.)



James Franklin Harvey, Greenbrier, Arkansas, U.S.A., 23rd October, 1893; 6 years.

Claim.—1st. The combination of the bed plate, having the longitudinal groove a, and upwardly extending separated ears, a socket piece formed with said bed plate, having outwardly extending ears, a sliding bar having a stem mounted in the socket piece and having its inner head located between the ears of the bed plate and provided with an inclined surface, a lever pivotally held between the ears of the bed plate and provided with a cam head, a link connecting said head with the slide bar, the arms H, pivoted in the ears of the socket piece and provided at one end with points and at the other end with a series of holes, and the arms J, pivotally connected at their outer ends with the arms H, and at their inner portions with each other, substantially as herein described.

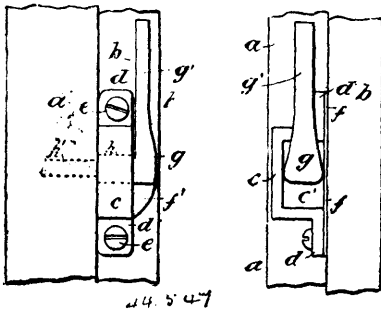
No. 44,546. Gate. (Barrière.)



Andrew J. Russell, Edgerton, Ohio, U.S.A., 23rd October, 1893; 6 years.

Claim.—1st. The combination of a hanger, having a vertical pivot post, a gate centrally hinged to the outer end of the hanger and having a rigid latch bar, a latch post, double keepers secured to the latch and pivot posts and projecting from opposite sides thereof and adapted to be engaged by the latch bar of the gate, and a locking bar slidably mounted on the gate and arranged below the keepers and adapted to engage the lower edges of the same to prevent the latch bar being lifted out of engagement with them, substantially as described. 2nd. The combination of a hanger, having a vertical pivot post, a gate centrally hinged to the outer end of the hanger and provided with a rigid latch bar projecting from its ends, a latch post, the double keepers secured to the latch and pivot posts and provided at their upper edges with recesses and having bevelled ends and adapted to be engaged by the projecting ends of the latch bar, and a locking bar slidably mounted on the gate and adapted to engage the lower edges of the keepers, and having handles forming stops, substantially as described.

No. 44,547. Sash Fastener. (Arrête-croisée.)



John Edward Dolber, Manchester, New Hampshire, U.S.A., 23rd October, 1893; 6 years.

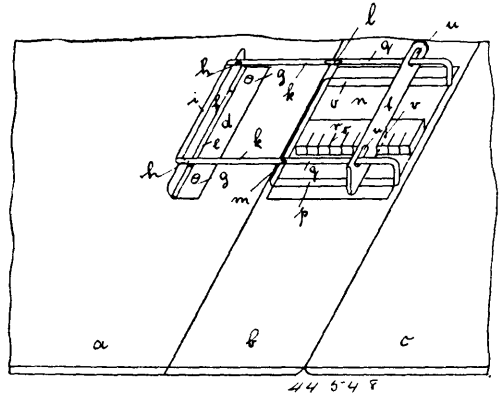
Claim.—1st. A fastening device comprising a bracket secured to a movable object, a locking lever having a handle, a pin for engaging a socket in a stationary object, and a cam between said pin and handle adapted to engage the bracket. 2nd. A fastening device comprising a bracket and a wearing plate secured to a movable object, a locking lever having a handle, a pin for engaging a socket in a stationary object, and a cam between said pin and handle adapted to engage the bracket and wearing plate.

No. 44,548. Portfolio. (Portefeuille.)

Paul Küssner, Berlin, Prussia, Germany, 23rd October, 1893; 6 years.

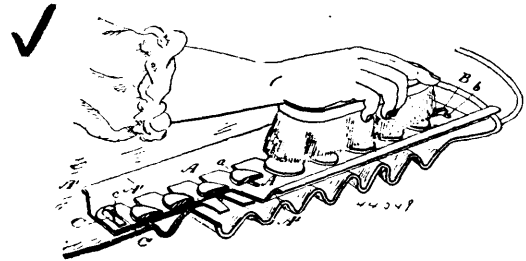
Claim.—1st. A portfolio having in its back a plate *n*, with a slotted binder *r*, said plate being provided with wires *q*, in combination with a plate *t*, hung on said wires and provided with a shoulder blade to fit any of the slits of the binder, substantially as set forth. 2nd. A portfolio having in its back a plate *n*, with a slotted binder *r*, said plate being provided with wires *q*, adapted to slide in dovetail grooves, in combination with a plate *t*, hung on said wires and provided with a shoulder blade to fit any of the slits of the binder, substantially as set forth. 3rd. A portfolio having in its back a plate *n*, with a slotted binder *r*, said plate being provided with wires *q*, one end of which is bevelled, and the other having an offset, in combination with a paper perforator composed of two hinged plates

provided with pins and corresponding holes, and having hinged to one plate thereof two wires, one with a bevelled end and the other



with an offset corresponding to the bevel and offset of wires *q*, substantially as described and shown in the drawing.

No. 44,549. Button. (Bouton.)



Edmund A. J. Meredith, Toronto, Ontario, Canada, 23rd October, 1893; 6 years.

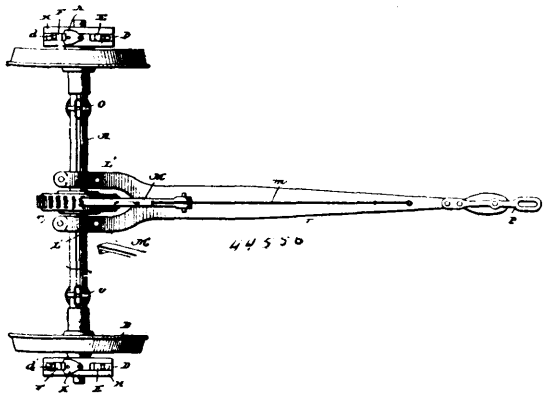
Claim.—1st. A holding device for cleaning buttons, consisting of two strips provided with a series of notches made in one edge of each strip, which notches correspond in number, size and position on the edges of the strips which are brought together one above the other to enclose the shanks of the buttons between the inner ends of the notches, as and for the purpose specified. 2nd. The combination with the strips *A, A*, provided with notches made in their inner edges corresponding in number, size and position, and having their outer edges formed with an upwardly and laterally extending bead, of means for fastening the notched edges of the strips together one above the other, as and for the purpose specified. 3rd. The combination with the strips *A, A*, having the notches *a, a*, cut in their inner edges, of the T-shaped rivet *B*, secured in the end of one strip, and extending through the slot *b* in the other so as to form a hinge, as and for the purpose specified. 4th. The combination with the strips *A, A*, having the notches *a, a*, cut in their inner edges, of the T-shaped rivet *B*, secured in the end of one strip and extending through the slot *b* in the other, so as to form a hinge, and the hook *C* designed to clasp the pins *c*, when the strips are brought together, as and for the purpose specified. 5th. The combination with the strips *A, A*, having the notches *a, a*, cut in their inner edges, of the T-shaped rivet *B* secured in the end of one strip and extending through the slot *b* in the other so as to form a hinge, and the hook *C* pivoted on one strip and designed to clasp the pins *c*, secured to the other strip and projecting through the slot *C'* in the upper strip, as and for the purpose specified. 6th. The combination with the strips *A, A*, provided with notches *a, a*, cut in their inner edges corresponding in number, size and position, of the hooks or catches *C* pivoted at each end on one strip and designed to clasp the pins *c*, located in the other strip and projecting through slots *C'*, in the upper strip, as and for the purpose specified.

No. 44,550. Railroad Track Lifter. (Levier de lisses de chemin de fer.)

James H. Whitfield, assignee of William L. Whitfield, both of Ocala, Florida, U.S.A., 24th October, 1893; 6 years.

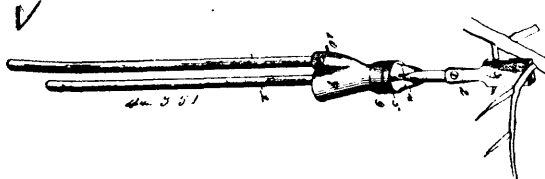
Claim.—1st. An improved track lifter, comprising an axle, truck wheels loosely mounted thereon, a toothed wheel fixedly held on such axle, an operating lever loosely journaled on the axle and engaging the toothed wheel, rack bars arranged in pairs and connections between such bars and the axle, substantially as shown, whereby a reciprocating movement is imparted to such bars by the rotary movement of the axle, as and for the purpose described. 2nd. The combination with the axle *A*, the truck-wheels loosely journaled thereon, the toothed wheel *C* fixedly secured to such axle, and the

lever and pawl for operating such wheel C, of a guide frame held on the axle, rack bars held therein, one to each side of the axle, one of such bars having a foot portion and the other a lifting arm, a cog-



wheel on the axle engaging such rack bars, all substantially as and for the purpose described. 3rd. The combination with the truck wheels B, the axle A loosely journaled therein, its ends projecting beyond the same and having fixed cog-wheels G and the toothed wheel C fixedly held thereon, of the frames D loosely held on the projecting portions of the axle, the rack bars E and F guided therein and engaging the cog-wheels G, one of said bars having a foot portion and the other a lifting member, the lever M loosely hung on the axle and having a dog engaging the wheel C, all substantially as and for the purpose described.

No. 44,551. Pruning Implement. (Séateur.)

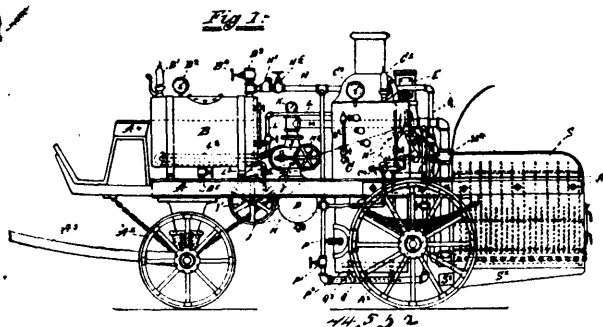


Israel B. Beekly and Eli Miller, both of Carleton, Nebraska, U.S.A., 24th October, 1893; 6 years.

Claim.—1st. The combination with a rod, a chisel at the lower end thereof, and the stop located above the chisel on the rod, of a bored bumper casting mounted loosely upon the rod, and a handle secured to the casting, substantially as specified. 2nd. The combination with the rod terminating at one end in a chisel, and the opposite clamping sections enlarged at their upper ends to form heads, and constituting a stop, said sections being mounted upon and secured to the rod, of the bumper casting having a tapered bore, mounted loosely on the rod and provided at one side with a socket, and with a handle secured in the socket, substantially as specified.

No. 44,552. Snow Melting Machine.

(Appareil pour fondre la neige.)

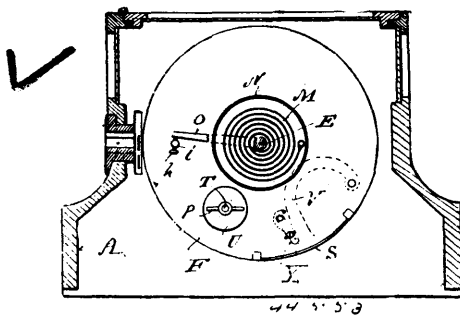


Richard A. Healy, Edward D. Cundell and John Hinchliffe, all of Paterson, New Jersey, U.S.A., 24th October, 1893; 6 years.

Claim.—1st. A snow melting machine composed of a vehicle frame, a gas generator mounted on said frame, a fan blower also mounted on said frame, a steam motor mounted on said frame, a steam boiler on said frame for providing steam for the steam motor and the gas generator and a melting chamber or compartment supported on the rear end of said frame, substantially as herein shown and described and for the purposes set forth. 2nd. The combination with a vehicle frame of a gas generator on the same, an air com-

pressor on said frame, a melting chamber or compartment supported by said frame beyond the rear end of the same, and tubes for conducting gas and compressed air to said melting chamber or compartment, substantially as herein shown and described and for the purpose set forth. 3rd. The combination with a vehicle frame, of a gas generator on the same, an air compressor on said frame, bracket bars projecting beyond the rear end of said frame, a melting chamber or compartment supported by the projecting ends of said bracket bars and tubes for conducting gas and compressed air to said melting chamber or compartment, substantially as herein shown and described and for the purpose set forth. 4th. The combination with a vehicle frame or a gas generator on the same, a steam boiler on said frame, a steam engine on said frame, a fan blower on said frame and operated by the engine, a melting chamber or compartment supported on said frame beyond the rear end of the same, and pipes for conducting gas and compressed air to said melting chamber or compartment and to the fire box of the boiler, substantially as herein shown and described and for the purpose set forth. 5th. The combination with a vehicle frame, of a gas generator on the same, a steam boiler mounted on the frame, a steam engine on the frame, a fan blower on the frame and driven from the engine, a melting chamber or compartment supported by the frame at the rear end of the same, a pipe for conducting steam from the boiler to the gas generator, pipes for conducting gas and compressed air to the melting chamber or compartment and to the fire box of the boiler and valves for controlling the supply or flow of steam, gas and compressed air, substantially as herein shown and described and for the purpose set forth. 6th. The combination with a vehicle frame, of a gas generator on the same, a steam boiler mounted on the frame, a steam engine on the frame, a fan blower on the frame, and driven from the engine, a melting chamber or compartment supported by the frame at the rear end of the same, a pipe for conducting steam from the boiler to the gas generator, pipes for conducting gas and compressed air to the melting chamber or compartment and to the fire box of the boiler and valves for controlling the supply or flow of steam, gas and compressed air, substantially as herein shown and described and for the purpose set forth. 7th. In a snow melting machine, a melting chamber in combination with bars inclined toward each other and a series of burners located below said bars in said chamber, substantially as shown. 8th. In a snow melting machine, a melting chamber in combination with a series of crossed bars in the same, horizontal bars below the crossed bars and burners located in the lower part of said chamber, substantially as set forth.

No. 44,533. Time Recorder. (Régistre horaire.)



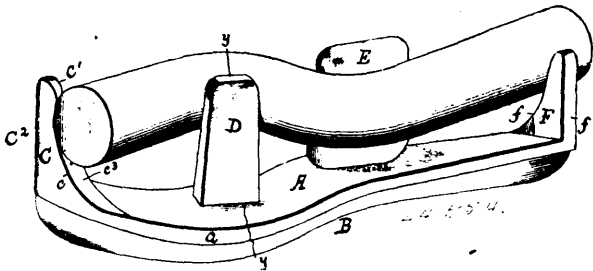
The National Time Recorder Company, assignee of Frank H. Bolte and Edward D. King, all of Milwaukee, Wisconsin, U.S.A., 24th October, 1893; 6 years.

Claim.—1st. The combination of a clock, a shaft having a clutch controlled gear connection with the minute hand arbour of the clock, a drum loose on the shaft, a coil spring connecting the drum and shaft, a stop on the drum, an arm on the shaft in the path of the stop, a covering of paper on said drum, a series of guides parallel to the aforesaid drum, printing keys for insertion in the guides, and an ink ribbon interposed between said guides and paper, substantially as set forth. 2nd. The combination of a clock, a shaft having a clutch controlled gear connection with the minute hand arbour of the clock, a drum loose on the shaft, a coil spring connecting the drum and shaft, a stop on the drum, an arm on the shaft in the path of the stop, a covering of paper on said drum, a series of guides parallel to the aforesaid drum, printing keys for insertion in the guides, ink ribbons of contrasting colours, and suitable means for bringing either ribbon between said guides and paper, substantially as set forth. 3rd. The combination of a clock, a shaft having a clutch controlled gear connection with the minute hand arbour of the clock, a movable spring controlled step for the shaft, contact points opposed to said shaft, a source of electricity and an audible signal wired to the contact points, a drum loose on the shaft, a coil spring connecting the drum and shaft, a stop on the drum, an arm on the aforesaid shaft in the path of the stop, a covering of paper on said drum, a series of guides parallel to the aforesaid drum, printing keys for insertion in the guides, and an ink ribbon interposed between said guides and paper, substantially as set forth. 4th. The

combination of a clock having its minute hand arbour provided with a pinion, a shaft provided with a loose crown wheel in mesh with the pinion, and having a clutch hub, a spring and lever controlled clutch collar splined on the shaft to come in and out of engagement with said hub, a drum rotative with said shaft, a covering of paper on the drum, a series of guides parallel to said drum, printing keys insertible in the guides, and an ink ribbon interposed between said guides and paper, substantially as set forth. 5th. The combination of a clock having its minute hand arbour provided with a pinion, a shaft provided with a loose crown wheel in mesh with the pinion and having clutch hub, a spring supported clutch collar splined to the shaft to engage with said hub, a pivoted spanner controlling the clutch collar, a lever linked to the spanner, a pivotal cam disc opposed to the lever, a drum rotative with the shaft, a covering of paper on the drum, a series of guides, printing keys insertible in the guides, and an ink ribbon between said guides and paper, substantially as set forth. 6th. The combination of a clock, a rotative drum controlled by the clock, and having a portion thereof in the form of a gate, a roll of paper journaled in the drum, but having a portion thereof arranged upon the outside of the same and held in place by the gate, an ink ribbon opposed to the paper on the drum, guides opposing the ink ribbon, and printing keys insertible in the guides, substantially as set forth. 7th. The combination of a rotative drum, having a portion thereof in the form of a gate, retaining devices on the inner side of the gate, a conical stud on one head of the drum, a roller engaging the stud, a shouldered pin having a blade engaging the other end of the roller, a nut loose on the pin and engaging the other head of the drum, and a web of paper on said roller, substantially as set forth. 9th. The combination of a rotative drum, having a portion thereof in the form of a gate, curved brackets constituting hinges for the gate, a spring catch for engagement with a notch in one of the brackets, spring clamps upon the inner side of the gate, a roll of paper within the drum, and suitable means for locking the roll against rotation on its axis, substantially as set forth. 10th. The combination of a rotative paper covered drum, a pair of rack bars at right angles to the drum, a plurality of spools carried on each rack bar, a lever controlled rod carrying toothed quadrants that engage the rack bars, ink ribbons of contrasting colour connecting the spools on one rack bar with those on the other, a series of guides parallel to the drum, and printing keys insertible in the guides against either ribbon brought opposite the same, substantially as set forth. 11th. The combination of a pair of simultaneously adjustable bars, a suitable case fast to each bar, a pair of independently rotative spools arranged in each case, ink ribbons connecting the spools in one case with those in the other, and suitable means for preventing free rotation of said spools, substantially as set forth. 12th. The web of record paper, having vertical rows of perforations in pairs at certain intervals, the distance between the rows in each pair being equal to the width of a predetermined fold, and the distance between the inner row of one pair and the outer row of the succeeding pair being equal to the circumference of a drum of predetermined diameter, said paper being ruled to represent hours and fractional divisions of the same, substantially as set forth.

No. 44,554. Form for Holding Shovel Handles.

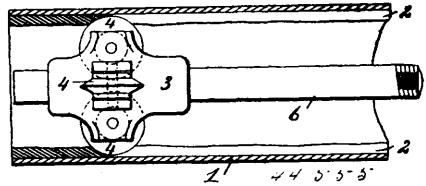
(*Forme pour tenir les manches de pelles.*)



William H. Johnson, Veidersburgh, Indiana, U.S.A., 24th October, 1893; 6 years.

Claim.—1st. In a form for holding shovel handles while being dried, the combination with a base or bed piece having a longitudinal stiffening backbone or rib under it, of the standards at the ends and between the ends, each curved and shaped and arranged relative to the others, in the manner and for the purposes set forth. 2nd. In a handle drying form, the combination of the end standards C, and F, curved and shaped substantially alike but placed oppositely to each other and combined with the intermediate standards D, and E, in the manner for the purposes set forth. 3rd. In a handle drying form, the combination of the bed or base having flanges a, and a', and the backbone B, with the end standards C, and F, and the standards D, and E, intermediate between them, each of said standards shaped substantially as described.

No. 44,555. Tube Cleaner. (*Nettoyeur de tubes.*)

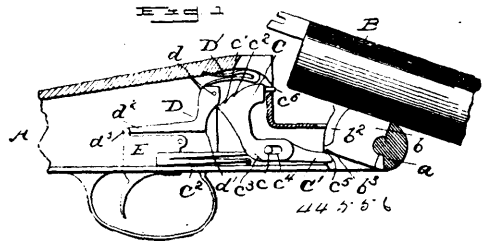


William F. Bradbury and Charles A. Harper, both of Kansas City Missouri, U.S.A., 24th October, 1893; 6 years.

Claim.—In a tube cleaner, the combination of a rigid head, with cutting rollers unyieldingly journaled therein, and each adapted to serve as a rigid abutment for the others while removing scale from a tube, substantially as set forth.

No. 44,556. Breech-loading Firearms.

(*Arme à feu chargeant par la culasse.*)



The Syracuse Arms Company, assignee of Frank Abraham Hollenbeck, all of Syracuse, New York, U.S.A., 24th October, 1893; 6 years.

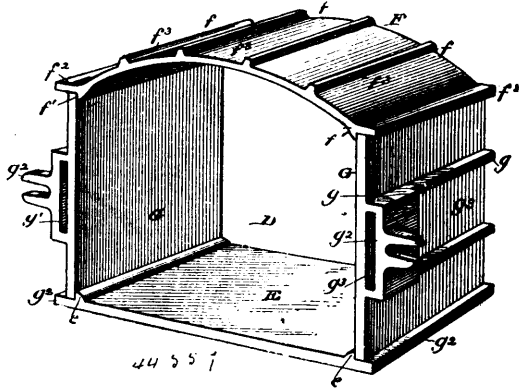
Claim.—1st. In a breech-loading break down gun, a hammer, a cocking lever connected therewith and operated by the barrel lug, and a cam device throwing the lug and cocking lever into operative connection in the act of assembling the parts, substantially as described. 2nd. In a firearm the combination with the barrel, provided with a cocking shoulder, of a hammer provided with a forwardly extending cocking arm movable longitudinally of the fire arm and having a cam face adapted to be engaged by said shoulder, substantially as described. 3rd. In a firearm the combination with the barrel, having a cocking shoulder, of a hammer mounted on a support, one of said parts being slotted and the other being provided with a part engaging said slot, said hammer having a portion provided with a cam face adapted to be engaged by the cocking shoulder of the barrel, substantially as described. 4th. In a firearm the combination with the barrel, having cocking shoulders, of the hammers provided with slotted portions engaging their supporting bolt, springs engaging said hammers and holding them in fixed relation with said bolt, said hammers having parts provided with cam faces adapted to be engaged by said cocking shoulders, substantially as described. 5th. In a firearm the combination with the barrel having a cocking shoulder, of the hammer provided with a slotted portion engaging its supporting bolt, the main spring engaging a cam face on said hammer and holding it normally in fixed relation with said bolt and a cocking arm connected with said hammer and having a cam face for engaging the said shoulder, substantially as described. 6th. In a firearm a cocking arm moving with the hammer in both directions in combination with a sear for retaining the hammer in a cocked position and a sear notch in position to be engaged by the sear when the barrel or barrels are in position to be removed and thereby retain the cocking lever in position to permit the removal and return of the barrel or barrels, substantially as described.

No. 44,557. Furnace Door. (*Porte de fournaise.*)

Charles William Reneau and John A. Lewis, both of Meridian, Mississippi, U.S.A., 24th October, 1893; 6 years.

Claim.—1st. In combination, with the furnace opening and a lining having transverse ribs on its sides whereby air spaces are formed between such sides and the wall of the opening, of a door or shutter having an air inlet, and an air space opening into the air spaces at the sides of the lining, and a shield adapted to cover the interior opening of the lining, all substantially as and for the purpose described. 2nd. The combination, with the furnace opening, the liner plates E, F and G, the plates G having transverse ribs g, on their outer face such ribs connected at their front end as at g', and formed with bifurcated ears g², the door H, having an inlet H¹, the

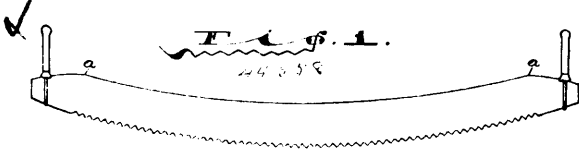
shield J, secured to the door, and held apart whereby an air space K is formed, and means for securing the door to the bifurcated ears



44 557

g², all arranged substantially in the manner and for the purposes described.

No. 44,558. Cross Cut Saw. (Scie de travers.)

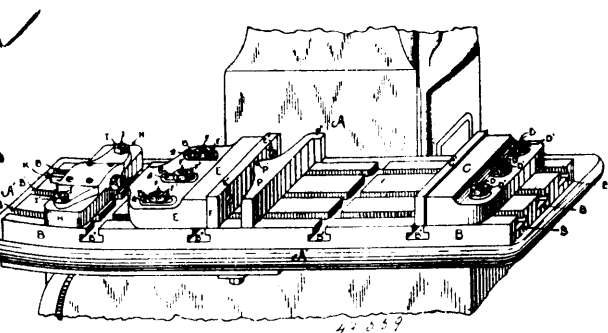


Benjamin Franklin Moss, Reading, Michigan, and Elias Cornelius Atkins, Indianapolis, Indiana, both in U.S.A., 24th October, 1893; 6 years.

Claim.—A saw formed with a convex cutting edge, and a corresponding back, the general line of direction of the back terminating at a point near each end, from which points the blade is diminished acutely in relation to a straight line drawn through the two points which mark the termination of said curve in the back, thus producing ends of less width at the points where the handles are attached than if the back were cut straight, substantially as shown and described.

No. 44,559. Vise for Milling Machines, Planers, etc.

(Etau pour machine à cordonner, raboter, etc.)

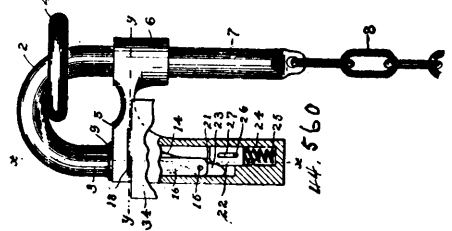


James A. Knowlton, assignee of Volney W. Mason, both of Hyde Park, Massachusetts, U.S.A., 24th October, 1893; 6 years.

Claim.—1st. A vise for milling and other machines, comprising a table or bed, a jaw or clamp C, sliding on said bed and adjustably secured thereto, a block H, sliding on said bed and adjustably secured thereto, and a jaw or clamp E, sliding on said bed and adjustably secured thereto, placed between said jaw C, and block H, and adjustably secured to the latter, whereby it has a sliding movement relative thereto, substantially as set forth. 2nd. The herein described improved vise for milling and other machines, consisting essentially of the bed provided with the grooves B¹, the jaw clamp C, sliding on said bed and adjustably secured in said grooves, the block H, sliding on said bed and adjustably secured in said grooves, the jaw or clamp E, sliding on said bed and adjustably secured in said grooves and placed between said jaw C, and block H, and the bolt K, K¹, provided with the shoulder K¹¹, and head K¹¹¹, extending from said block into the jaw E, whereby the jaw is moved horizontally with relation to the block by said bolt, substantially as

described. 3rd. In a vise, the combination of the jaw E, provided with the vertical groove R, and the swinging holder or supplemental jaw P, provided with the knuckle P¹, for resting in said groove, substantially as set forth.

No. 44,560. Seal Lock. (Serrure à cachet.)



Daniel F. MacCarthy and Charles E. Lazier, both of St. Paul, Minnesota, U.S.A., 24th October, 1893; 6 years.

Claim.—1st. In a seal lock, the combination of the securing pin, the seal holder having a socket to receive said pin, and a transverse slot intersecting said socket, a seal strip adapted to be inserted into said slot having a notch to receive said pin, and a spring controlled dog pivoted near the point of said pin, and adapted to be carried by said pin over and past said strip, and to abut against said strip and lock said pin in said socket, substantially as described. 2nd. In a seal lock, the combination with the securing pin and a seal holder having a socket to receive said pin, and a transverse slot intersecting said socket, of a seal strip adapted to fit into said slot having a head wider than the length of slot, and a notch next to said head of less length than the diameter of the seal holder to permit the pin to pass by said strip, and a spring controlled stop upon said pin adapted to be carried past said strip into the socket, and to abut against the strip so as to lock the pin therein, substantially as described. 3rd. In a seal lock, the combination of the securing pin, the seal holder slidably secured thereto, provided with a socket to receive said pin, and a transverse opening to receive a seal strip, a spring actuated dog carried by said pin adapted to be brought into engagement with a seal strip in the holder to lock the pin therein, and means arranged in said socket for automatically locking said dog in engagement with said strip, substantially as described. 4th. The combination of the securing pin having a reduced point with a longitudinal groove on its reduced side, the seal holder socketed to receive said pin, and having a transverse seal opening, a dog pivoted to said pin point and lying in said groove, a spring for turning said dog out from said groove, so as to engage said seal, a spring controlled block in the bottom of said socket adapted to yield to allow said dog to pass over the seal, but locking the same in engagement with said seal, substantially as described.

No. 44,561. Combined Cap, Pillow and Life Preserver. (Bonnet, traversin et appareil de sauvetage combinés.)

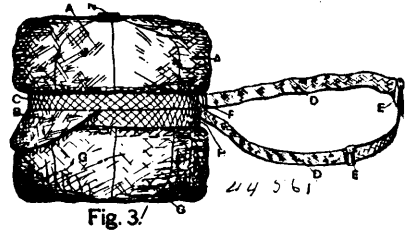


Fig. 3/

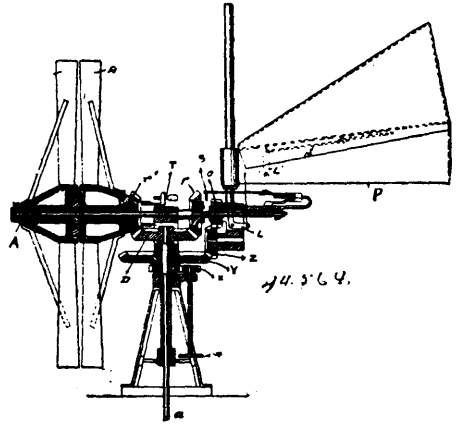
François Frank, Chicago, Illinois, U.S.A., 25th October, 1893; 6 years.

Claim.—1st. An article of wearing apparel in the form of a cap which is adapted to conversion into a pillow and life preserver, consisting of an outer crown section, and an inner lining section which is adapted to fold into and out of said crown section, said sections connected to form an air tight bag, and means for the inlet and outlet of air attached to one of said sections, substantially as described. 2nd. An article of wearing apparel in the form of a cap which is adapted to conversion into a pillow and life preserver, consisting of an outer crown section, and an inner lining section which is adapted to fold into and out of said crown section, said sections connected to form an air tight bag with a circumferential depression midway the length thereof, substantially as shown and described. 3rd. In an article of wearing apparel in the form of a cap having a crown section and an inner lining attached thereto, which, with the crown section, is adapted to be inflated and form a bag with a circumferential depression midway the length thereof, the visor of the cap attached to the band of the outer crown section thereof, and adapted to lie within said depression in contact with the inflated lining of said cap, substantially as shown and described. 4th. In an article of wearing apparel in the form of a cap, which is adapted to be con-

verted into a pillow and life preserver, the guard strap D, attached to the rear portion of said cap, and serving the double purpose of a guard strap for the cap and as a means of attaching the article as a pillow or life preserver to the body of the wearer, substantially as described. 5th. In an article of wearing apparel in the form of a cap which is adapted to conversion into a pillow and life preserver, consisting of an outer crown section, and an inner lining section which is adapted to fold into and out of said crown section, said sections connected to form an air tight bag by means of circumferential bands, the inner one of said bands having corrugations projecting inwardly which are formed in the manner and for the purpose described. 6th. In an article of wearing apparel in the form of a cap, which is adapted to conversion into a pillow and life preserver, and consists of an outer crown section, and an inner lining section adapted to fold into and out of said crown section, said sections connected to form an air tight bag, the combination therewith of a means for the inlet and outlet of air, consisting of a hollow cylindrical casing removably attached to said bag, an air passage into said bag through one end of said cylinder, an outwardly opening disc valve guarding said passageway, a stem of the valve projecting outward through the passageway, and terminating in a perforated disc fitted to move loosely within the casing, and a helical spring between the perforated disc and the bottom of the cylinder serving for the purpose described.

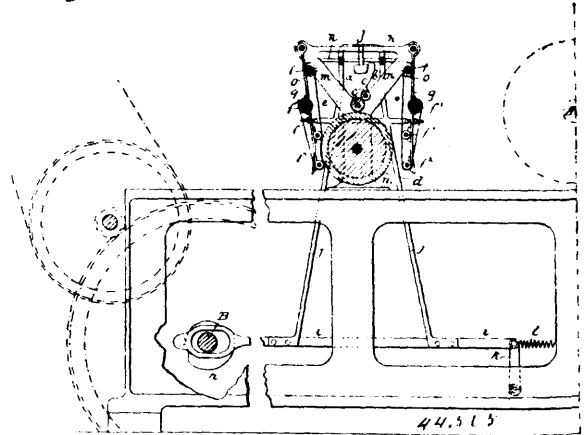
buttons, consisting of a sheet metal disc A of greater diameter than the head of the button to be formed, said disc having wings B and prongs C projecting from said wings, substantially as set forth.

No. 44,564. Wind Mill. (Moulin à Vent.)



Jean Boisclair, Montréal, Québec, Canada, 25 Octobre, 1893 ; 6 ans.
Résumé.—1°. La combinaison des roues motrices R, R¹, montées sur l'arbre A et pourvues des roues r r¹, actionnant le pignon D, la table tournante T. 2°. Le gouvernail maintenu en position par le pivot F autour duquel il peut tourner, et composé des planches P, P¹, de l'oreille K, des leviers coulés L L¹, des roues O, O¹, et de la vis V, le tout tel que décrit et pour les fins indiquées.

No. 44,565. Machine for Printing in Colours. (Machine pour imprimer en couleurs.)



John Lacey Davis, Chipstead, Surrey, England, 25th October, 1893
 6 years.

Claim.—1st. In a machine for printing from a colour block on a travelling reciprocating bed, a roller called a solvent roller over and in intermittent contact with the colour block, in combination with a vessel for supply of turpentine or other colour solvent, a flannel dipping therein and conveying turpentine therefrom by capillary action and a roller which is moistened by the flannel and is in contact with the solvent roller whereby the latter conveys turpentine in a suitable even manner to the colour block at each run of the machine, a cloth on each side of the solvent roller, means for bringing them alternately in contact with said roller for wiping its sides, means for shifting the cloths intermittently so as to present a fresh wiping surface each time, and means for automatically raising the colour block at each run of the machine to the extent of the thin layer of colour removed by each printing operation, substantially as set forth. 2nd. In machines for printing from a colour block on a travelling reciprocating bed, a solvent roller *d* over and in intermittent contact with the colour block, in combination with a turpentine supply vessel *a*, a roller *c*, a flannel dipping in the vessel *a* and conveying turpentine by capillary action to the roller *c*, a roller *e* in contact therewith and with the solvent roller *d*, cloths *e* one on each side of the latter, rollers *f*, *f*¹, *f*², *f*³ for supporting said cloths, means for supporting said rollers, means for bringing the rollers *f*¹, *f*², with the part of the cloths between them alternately up against and away from the sides of the solvent roller *d*, pawl gear for shifting such parts of the cloths at each run, mechanism for operatin

No. 44,562. Device for Cutting Cards, etc. (Appareil pour découper des cartes, etc.)

Fig. 1

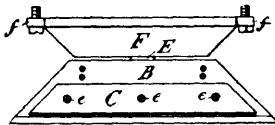
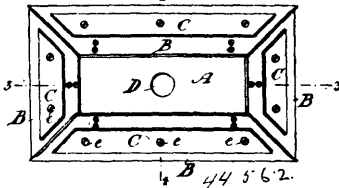


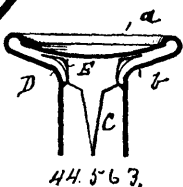
Fig. 2.



Bernard McHugh, Ottawa, Ontario, Canada, 25th October, 1893 ; 6 years.

Claim.—1st. A device for cutting cards with bevelled edges, consisting of a die of a truncated pyramidal shape carrying, slidingly, on its sloping face, spring retracted knives, the upper edges of the said knives projecting above the upper face of the said die, a block, shaped like an inverted truncated pyramid, secured loosely by means of a screw to the said die, the head of the said screw being free to slide in the said block, the sloping edges of the said block impinging on and pressing down the said knives, when pressure is applied to the said block, substantially as set forth. 2nd. In a device for cutting cards with bevelled edges the combination with a die of a truncated pyramidal shape having recesses formed on its sides to receive springs, of the springs in the said recesses, knives slidingly on the sloping sides of the said die, projections on the said knives on which the said springs abut, and means for securing the said knives to the said die, substantially as set forth. 3rd. In a device for cutting cards with bevelled edges, the combination with the die A, carrying spring retracted knives on its sloping sides, of the block F, having lugs *f*, the cylindrical bore G, the screw E, screwed into the said die A, the head E² sliding in said bore G, the annular plate H at the bottom of the said bore G, the piece I having projecting edges secured in the groove in the head E² of the screw E, and the grooves J cut in the opposite sides of the bore G, substantially as set forth.

No. 44,563. Button. (Bouton.)



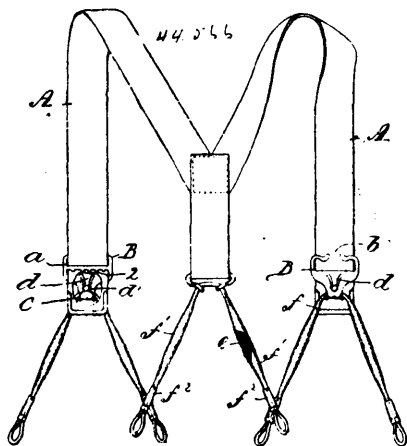
Albert Hall, Brooklyn, New York, U.S.A.,
 25th October, 1893 ; 6 years.

Claim.—1st. As an improved article of manufacture, the herein described button made of a single piece of sheet metal, the same comprising a face *a*, a back *b* consisting of the under turned extension of the face and of the broad wings B extending therefrom, a shank D consisting of the downturned ends of said wings, which wings abut at their corners, and prongs C projecting from the ends of the wings, said wings having shoulders at both sides of the prongs, substantially as set forth. 2nd. A blank for making

wings abut at their corners, and prongs C projecting from the ends of the wings, said wings having shoulders at both sides of the prongs, substantially as set forth. 2nd. A blank for making

such gear from a working part of the machine, and means for automatically raising the colour block, at each run, to the required extent, substantially as set forth. 3rd. In machines for printing from a colour block on a travelling reciprocating bed, the solvent roller *d*, in combination with means for supplying its upper part with turpentine by capillary feed action, the plummer block *m*, the rollers *f*, *f*² mounted thereon with pawl wheels and pawls *n* and rods *n*¹ and suitable mechanism for intermittently actuating them from a moving part of the machine, the cloths *e*, the slide *j*² with cloth stretching rollers *f*¹, *f*², mounted therein, a slot in the plummer block *m* for the slide to work in, means for bringing the rollers *f*¹, *f*², with the part of the cloths *e* between them alternately up against and away from the sides of the solvent roller, and means for automatically raising the colour block, at each run, to the required extent, substantially as set forth. 4th. In machines for printing from a colour block, the travelling reciprocating bed, a plate adapted for supporting the colour block and provided with sloping faces on its underside, slides provided with corresponding sloping faces and operating between the plate and the travelling bed, screws for shifting the slides so that the slopes on the plate mount on the slopes on the slides, worm wheels on the screws, worms gearing therewith, a pawl wheel on the worm spindle, and a pawl lever which in the travel of the bed strikes against a bar on the machine passing and thus receives motion to turn the worm spindle, substantially as set forth.

No. 44,566. Suspender Buckle. (*Boucle pour bretelles.*)



Alfred May Ziegler, Boston, Massachusetts, U.S.A., 25th October, 1893; 6 years.

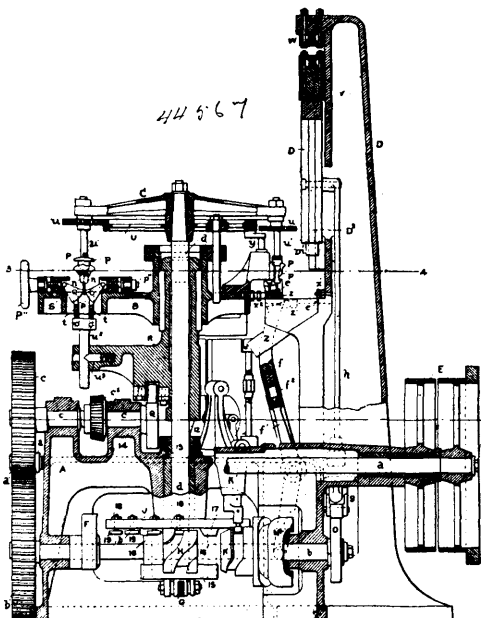
Claim.—1st. The herein described buckle composed of a metallic frame provided with a cross-bar having teeth at its under side, the frame of the buckle above the cross-bar having a space with an open mouth into and out from which the web may be passed when the buckle is to be shifted, the said frame having at its lower end an upturned hook adapted to support a suitable end piece having button engaging loops, substantially as described. 2nd. The herein described buckle composed of a metallic frame, provided with a cross-bar having teeth at its underside, the frame of the buckle above the cross-bar having a web receiving space, said frame having at its lower end an upturned hook adapted to support a suitable end piece having button engaging loops, and also provided with a yielding semispherical teat, substantially as described. 3rd. The herein described buckle composed of a metallic frame, provided with a cross-bar having teeth at its under side, the frame of the buckle above the cross-bar having a space with an open mouth into and out from which the web may be passed when the buckle is to be shifted, substantially as described.

No. 44,567. Machine for Forging and Shaping Metal Articles. (*Machine pour forger et façonner des articles de métal.*)

Joseph J. B. E. Genez, Lavallois, Perret, France, 25th October, 1893; 6 years.

Claim.—1st. In a machine for forging and shaping small metal articles, the cutting mechanism adapted to sever the blanks from a heated bar of metal, the rolling, stamping and cutting tools, a series of grippers, each of which is adapted to grasp a blank as it is severed from the bar and present the same successively to said tools, and the hammer, substantially as described. 2nd. In a machine for forging and shaping small metal articles, the combination with mechanism adapted to sever a blank from a heated bar of metal, the rolling, stamping, and cutting tools, of a series of grippers adapted to grasp the blanks and present them successively to the forming tools, and means, substantially as described, for transferring the blank as it is severed from the bar into position to be grasped by the gripper, as set forth. 3rd. In a machine for forging

and shaping metal articles, a table having a series of rolling tools arranged thereon, and a movable plate above said table carrying a



series of grippers adapted to receive the metal blanks and present them successively to the rolling tools to be acted on thereby, substantially as described. 4th. In a machine for forging and shaping small metal articles, a table having a series of rolling tools arranged thereon, a movable plate above said table carrying a series of grippers adapted to receive the metal blanks and present them successively to the rolling tools to be acted on thereby, and means for partially rotating said grippers and blanks as they are presented to the tools, substantially as described. 5th. In a machine for forging and shaping small metal articles, a stationary table having a series of rolling tools arranged thereon, a movable plate above said table, a series of depending grippers carried by said plate and adapted to receive the metal blanks, and means for revolving said plate to cause the grippers to advance and present the blanks successively to each forming tool, substantially as described. 6th. In a machine for forging and shaping small metal articles, a stationary table having a series of rolling tools arranged thereon, a movable plate above said table carrying a series of grippers adapted to receive the metal blanks and present them successively to the forming tools, and mechanism for stamping and cutting the points of the blanks after they have passed through the rolling tools, substantially as described. 7th. In a machine for forging and shaping small metal articles, a stationary table having a series of rolling tools arranged thereon, a movable plate above said table, a series of grippers carried by the plate and adapted to receive the metal blanks, and means for partially rotating each blank and presenting the same to each of said series of rolling tools in succession, substantially as described. 8th. In a machine for forging and shaping small metal articles, the combination with a stationary table having a series of openings therein, a series of rolling tools arranged on said table, each tool comprising a pair of adjustable blocks secured oppositely on the table, the segments of the rolling tools pivoted to said blocks and adapted to operate in the openings in the table, a vertically movable rod arranged below each rolling tool and having link connections with the segments thereof, and means for moving said rods vertically to operate the tools, substantially as described. 9th. In a machine for forging and shaping small metal articles, a stationary table having a series of rolling tools thereon, each tool comprising a pair of adjustable blocks arranged oppositely on the table, and the segments of the rolling tools pivoted to said blocks and operating in openings in the table, substantially as described. 10th. In a machine for forging and shaping small metal articles, a movable plate carrying a series of grippers adapted to receive and hold the metal blanks while being rolled, a stationary table, a series of rolling tools arranged on said table, each tool comprising a pair of pivoted segments adapted to receive the suspended blank between them and means substantially as described, for operating said segments to roll the metal blank, as and for the purpose set forth. 11th. In a machine for forging and shaping small metal articles, the rolling tools, each comprising a pair of segments adapted to grasp the blank, a movable rod *u*², the links connecting said rod and segments, and means for moving the rod vertically and operating the segments, substantially as described. 12th. In a machine for forging and shaping small metal articles, the rolling tools, each comprising a pair of segments, a vertically movable plate arranged below said tools, the rods carried by said plate and having link con-

nections with the segments, and means for moving said plate vertically to operate the segments, substantially as described. 13th. In a machine for forging and shaping small metal articles, the combination with a stationary table having a series of rolling tools arranged thereon, of a vertically movable plate below said table, and suitable connections between said plate and rolling tools whereby the latter are operated when the plate is moved vertically, substantially as described. 14th. In a machine for forging and shaping small metal articles, the rolling tools comprising a pair of segments, the pinions rigid with said segments, the toothed wheels supported beneath said pinions and arranged in engagement therewith, and means for operating the wheels and pinions, substantially as and for the purpose set forth. 15th. In a machine for forging and shaping small metal articles, the rolling tools comprising a pair of segments, the pinions rigid with said segments, the toothed wheels arranged beneath the pinions and in engagement therewith, the rod u^2 , and links connecting said rod and the wheels, and means for moving said rod vertically, substantially as and for the purpose set forth. 16th. In a machine for forging and shaping small metal articles, the rolling tools, each comprising a pair of segments, a vertically movable plate arranged below the tools and means for operating the same, the rods carried by said plate, the links connecting the rods to the segments, and spring controlled bolts arranged in the plate and adapted to release the rods when excessive pressure is produced between the segments, substantially as and for the purpose set forth. 17th. In a machine for forging and shaping small metal articles, a stationary table having a series of rolling tools arranged thereon, a movable plate above the table and a series of depending grippers carried by said plate and adapted to receive the blanks and present them successively to the rolling tools, substantially as described. 18th. In a machine for forging and shaping small metal articles, a gripper comprising a tube or stem, a support arranged in the lower end of said tube, the jaws pivoted to said support and having free upper ends, and a sliding block arranged on the tube and adapted to engage with the faces of the upper ends of the jaws when they are close to the tube and hold the jaws open in a position to receive the blank, or clamp the jaws rigidly on the blank by entering between the tube and the upper ends of the jaws and forcing the latter away from the tube, as described. 19th. In a machine for forging and shaping small metal articles, a series of grippers each comprising a tube or stem, a support arranged in the lower end of the tube, the jaws pivoted on said support, a sliding block arranged on said tube and adapted to clamp the jaws upon the blank throughout the rolling operation, and the stops X arranged to engage the block and release the jaws, substantially as and for the purpose described. 20th. In a machine for forging and shaping small metal articles, a stationary table, a series of rolling tools arranged on the table, and a movable plate above said table carrying a series of depending grippers, said plate partaking of a vertical motion to adapt the grippers to grasp the blanks and present them to the rolling tools, and also a rotary motion to advance the grippers successively to the several tools, substantially as described. 21st. In a machine for forging and shaping small metal articles, the table having a series of rolls thereon, a plate arranged above the table, the grippers depending from said plate and carrying pinions, the vertical shaft supporting said plate and a gear wheel secured on said shaft and gearing with the pinions to partially rotate the grippers as they advance from one set of rolling tools to another, substantially as described. 22nd. In a machine for forging and shaping small metal articles, the table having a series of rolling tools arranged thereon, a movable plate above the table carrying a series of grippers, in combination with a pin wheel J , and cam H , for the purpose of imparting an intermittent rotary motion to the plate and grippers holding the blanks, thereby enabling the blanks to be transferred from one tool to another and allowing each tool sufficient time to act upon the blank, substantially as described. 23rd. In a machine for forging and shaping small metal articles, the combination of the rolling tools, the stamping and cutting mechanism comprising the matrices secured on the table B , the dies, the eccentrics l , supported on the shafts l^1 , and adapted to operate the dies, and means for actuating said shafts, substantially as described. 24th. In a machine for forging and shaping small metal articles, a table supporting the rolling tools, a movable carriage arranged beneath the table and having knives adapted to receive and cut the metal blanks, and mechanism, substantially as described, for automatically operating said carriage and knives. 25th. In a machine for forging and shaping small metal articles, a table having a series of rolling tools thereon, the grippers supported above said table, a movable carriage arranged beneath the table and carrying knives adapted to engage a metal rod and sever a blank therefrom, and a cup I , adapted to receive the blank and carry it into position to be grasped by the gripper, substantially as described. 26th. In a machine for forging and shaping small metal articles, a table having a series of rolling tools thereon, the grippers supported above the table, a movable carriage arranged beneath the table, a fixed knife carried by said carriage and adapted to receive a metal bar, means for advancing said knife, to grasp the bar, and a movable knife adapted to sever a blank from said bar, substantially as described. 27th. In a machine for forging and shaping small metal articles, a table having a series of rolling tools thereon, the grippers supported above the table, a movable carriage arranged beneath the table, the knives adapted to grasp a metal bar and sever a blank therefrom, a rock shaft, a cup secured on said rock shaft and adapted to receive the blank and carry it up

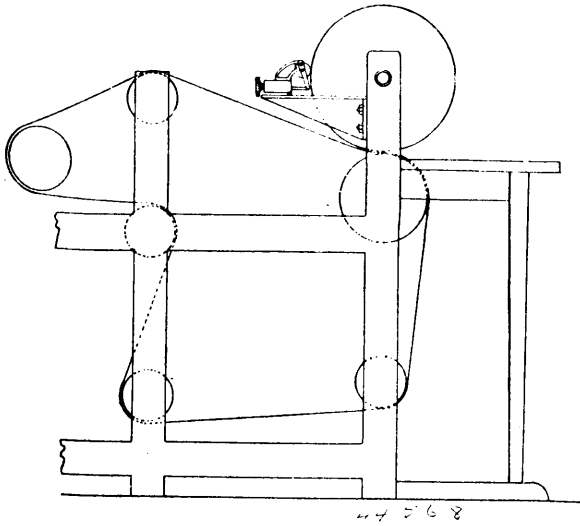
in position to be grasped by one of the grippers, and means for operating said shaft and cup, substantially as described. 28th. In a machine for forging and shaping small metal articles, the combination with the table carrying the rolling tools, and the grippers of a movable carriage arranged beneath the table, a fixed knife supported in said carriage, a movable knife, and the cams S , T , adapted to actuate said carriage and knife, substantially as and for the purpose described. 29th. In a machine for forging and shaping small metal articles, the combination of a stationary table, a series of rolling tools arranged thereon, the stamping and cutting mechanism, a series of grippers adapted to grasp the blanks and present them successively to said tools and the stamping and cutting mechanism, and a hammer arranged at one side of said table and adapted to form a head on the blank and complete the article, substantially as described. 30th. In a machine for forging and shaping small metal articles, the combination of a series of rolling tools, the stamping and cutting mechanism, and a series of depending grippers adapted to receive the blanks and having an intermittent advancing movement and a limited vertical movement to adapt them to present the blanks successively to said tools and mechanism, substantially as described. 31st. In a machine for forging and shaping small metal articles, the combination with the rolling, stamping and cutting mechanism, of a hammer for forming a head on the blank, a matrix adapted to receive the blank and carry it into position under the hammer, and mechanism for operating the hammer and automatically discharging the finished article, substantially as described. 32nd. In a machine for forging and shaping small metal articles, the combination with the rolling, stamping and cutting tools, and means for successively presenting a blank thereto, of a hammer adapted to form a head on the articles, and means for carrying the blank from the cutting to the hammer, comprising a lever, a matrix pivoted on said lever and having openings to receive the blanks, and suitable actuating mechanism, substantially as described. 33rd. In a machine for forging and shaping small metal articles, the mechanism for carrying the blank from the cutting tool to the hammer for forming the head, comprising a lever, a matrix pivoted at the upper end of the lever and having openings to receive the blanks, and the ratchets keyed on the matrix and adapted to engage with teeth z^1 to turn the matrix, substantially as and for the purpose described. 34th. In a machine for forging and shaping small metal articles, the combination with the matrix having openings to receive the blanks after having been rolled, stamped and cut, the gripper adapted to discharge the blank into one opening, and an arm having a yielding projection w^1 arranged to drive a completed article from the other opening, substantially as described. 35th. In a machine for forging and shaping small metal articles, the combination of a horizontal shaft having a forked lever f thereon, the matrix pivotally secured on said lever and having openings to receive the blanks, means for discharging the finished article from the matrix, a segment f^1 keyed on said shaft, and a spring bolt f^2 arranged in said forked lever and adapted to operate on the segment, substantially as described. 36th. In a machine for forging and shaping small metal articles, the combination of the grippers, the matrix e having openings therein, and the fixed stops x having inclined inner edges adapted to engage the pivoted jaws of the grippers to open the same and release the blanks, substantially as described. 37th. In a machine for forging and shaping small metal articles, the combination of a forked lever f secured on a horizontal shaft and carrying a matrix e , a segment f^1 keyed on said shaft and having a notch in its free end, and a spring pressed bolt f^2 arranged in the lever f , and engaged with said notch in the segment, substantially as described. 38th. In a machine for forging and shaping small metal articles, the frame, a horizontal power shaft journaled in said frame, a vertical shaft supporting a plate C , the grippers carried by said plate, a cam rigid on the power shaft, and a pin wheel or disc secured at the lower end of the vertical shaft, and having a series of rollers adapted to engage with said cam and impart a rotary movement to the pin wheel and vertical shaft, substantially as and for the purpose set forth. 39th. In a machine for forging and shaping small metal articles, the frame, the shafts b , c , journaled in the frame and geared together, a table rigid on the frame, the rolling tools arranged on said table, a movable plate beneath the table carrying rods connected with the rolling tool, and a cam rigid on the shaft c , and adapted to move said plate vertically to operate the rolling tools, substantially as described. 40th. In a machine for forging and shaping small metal articles, the combination with a main frame, the horizontal shafts b , c , suitably geared together, a vertical shaft and means for revolving and imparting a limited vertical movement thereto, of a stationary table supported on the frame and having the rolling tools arranged thereon, a plate secured on the vertical shaft above the table and carrying a series of grippers, another plate arranged below the table, the rods carried by said plate and connected with the rolling tools, and a cam rigid on the shaft c adapted to elevate said table and cause the rolling tools to operate on the blanks held by said grippers, substantially as described.

No. 44,568. Thickness Gauge for Paper Making Machines. (*Jauge d'épaisseur pour machines à fabriquer le papier.*)

Otto Wilhelm Theodor am Ende, Bad Harzburg, Brunswick, Germany, 25th October, 1893; 6 years.

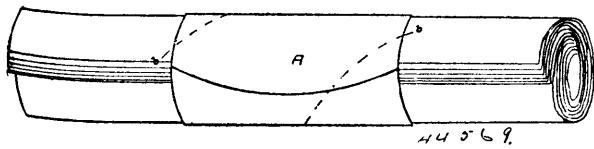
Claim.—A thickness gauge for paper making machines wherein a

graduated slide A is urged forward in a casing by springs *d*, and is adjustable by a micrometer screw, this slide having two copper



wires *a*, connected with an electric bell, and a roller B, mounted on lever arms D, carrying an insulated plate *b*, which by pressure on the roller D, is made to touch and connect the wires *a*, substantially as and for the purpose set forth.

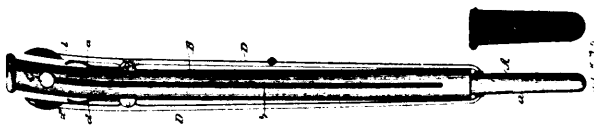
No. 44,569. Wrapper. (*Couverture pour paquets.*)



John J. Cochran, Chicago, Illinois, U.S.A., 25th October, 1893; 6 years.

Claim.—1st. A wrapper, provided with a flexible tearing device, secured diagonally thereto, whereby the tearing device will encompass the article in a spiral manner, substantially as set forth. 2nd. A wrapper, provided with a cord secured diagonally to one side, being upon the inside of the wrapper or embodied in the paper and encompassing the article in a spiral manner and when placed upon an article, substantially as set forth. 3rd. A wrapper, provided with an adhesive substance across one end and provided with a cord secured diagonally across the inner surface of the wrapper, one end of the cord projecting beyond the edge of the wrapper, as before stated adjacent to the adhesive substance, substantially as set forth.

No. 44,570. Surgical Dilator. (*Dilatateur chirurgical.*)



Arthur Beavis, Aspen, Colorado, U.S.A., 25th October, 1893; 6 years.

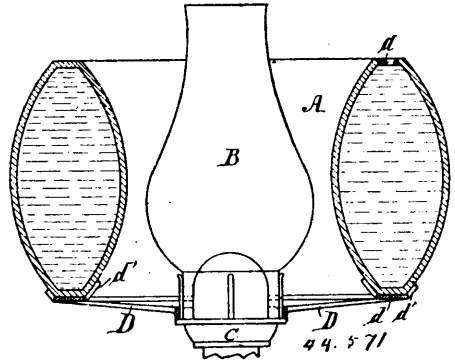
Claim.—1st. In an instrument for the purpose described, the combination of the cylinder B, the rod or sound A, adjustably held therein, the spring forceps D, and the removable rubber cap C, all arranged as and for the purpose described. 2nd. In an instrument for the purpose described, the combination of the cylinder B, slotted as at *b*, the sound or rod A, movably held in such cylinder and provided with a set screw held to pass through the slotted cylinder, the removable rubber cap C, and the spring forceps D, pivoted on the cylinder and having their ends projected inward over the upper end of such cylinder, all substantially as and for the purpose described.

No. 44,571. Illuminating Lens.

(*Lentille illuminative.*)



Fig. 2.

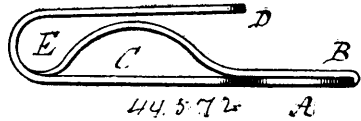


Milo Jackson Althouse, Waupun, Wisconsin, U.S.A., assignee of Harman Bunker, Barrie, Ontario, Canada, 26th October, 1893; 6 years.

Claim.—As an improved article of manufacture, a hollow annular lens, adapted to receive liquids and to surround a lamp, or other illuminating medium, substantially as set forth.

No. 44,572. Sheet Metal Hook.

(*Crochet de métal en feuille.*)



Eleazer Kempshall and Webster R. Walkley, both of Brooklyn, New York, U.S.A., 26th October, 1893; 6 years.

Claim.—1st. A sheet metal hook having the end B turned back against the flat inner surface of the shank and provided with an intermediate raised bend C forming the inward and outward inclines beneath the bill D, substantially as and for the purpose specified. 2nd. A sheet metal hook having the end B turned back against the flat inner surface of the shank and provided with an intermediate raised bend C forming the inward and outward inclines beneath the end D, the extreme end of the end B resting against the flat inner surface of the shank at a point adjacent to the bend forming the hook, substantially as and for the purpose specified. 3rd. A sheet metal hook in which the end B is turned back against the flat inner surface of the shank and provided with a raised bend C beneath the spring end D, said spring end being provided with the corrugated strengthening rib F, substantially as described. 4th. A sheet metal hook in which the end B is turned back against the inner surface of the shank and provided with the raised bend C, and a re-enforcing hook bend E, adjacent to and bearing against the inner surface of the bend forming the hook proper, substantially as described.

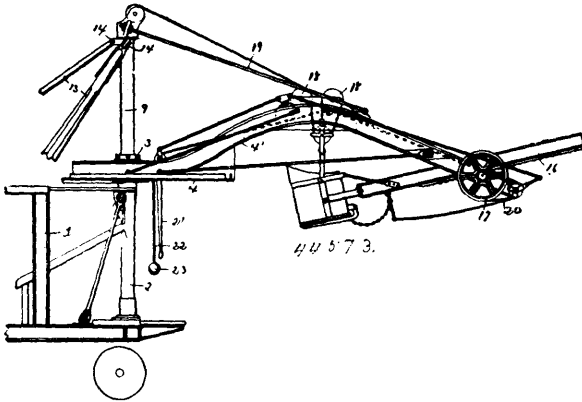
No. 44,573. Steam Shovel and Excavator.

(*Pelle et excavateur à vapeur.*)

The Vulcan Iron Works Company, assignee of John Baptist Webber, all of Toledo, Ohio, U.S.A., 26th October, 1893; 6 years.

Claim.—1st. In a steam shovel or excavator, a crane, a shovel or dipper secured therein, and mechanism for lowering the same from the excavator and raising the shovel or dipper towards the excavator in filling. 2nd. In a steam shovel or excavator, a swinging crane, a shovel or dipper handle movably secured in the outer end, and a hoisting rope or chain secured to the shovel or dipper and passed over sheaves journaled in the crane intermediately its length, whereby when power is applied at the opposite end the shovel or dipper will be drawn towards the excavator in filling. 3rd. In a steam shovel or excavator, a swinging crane comprising channel bars secured to the trunnion and having an upwardly curved portion, sheaves journaled in the curved portion, a shovel or dipper handle movably secured at the outer end, and a hoisting rope or cable secured to the shovel or dipper and passed over the sheaves, whereby the shovel or dipper may swing from the excavator in low-

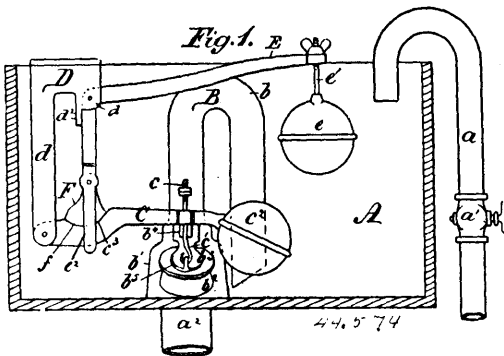
ering, and be drawn toward the excavator in filling, and into the curved portion in swinging. 4th. In a steam shovel or excavator,



the mast, the swinging circle secured therein, a crane secured to the circle trunnion, a supplemental mast supported centrally of the circle having braces secured at the top and excavator frame, and braces secured to the supplemental mast and crane. 5th. In a steam shovel or excavator, the excavator frame, a sectional mast supported thereon, a crane journalled upon the mast intermediate its length, braces extending from the excavator frame to the top of the mast, and braces from the top of the mast to the crane. 6th. In a steam shovel, a mast formed with a conical upper end and a shouldered bearing a circle wheel trunnion upon the shoulder having an annular bearing to fit the end of the mast, whereby the two bearings may telescope and rest upon the shoulders.

No. 44,574. Flushing Tank. (Citerne de lavage.)

FIG 2



The Firm of Thomas McAavity & Sons, assignee of William McShane, all of St. John, New Brunswick, Canada, 26th October, 1893; 6 years.

Claim.—1st. In a flushing tank, a syphon ejector and its valve, a float lever connected with said valve, and a second lever for locking said first named lever, substantially as shown and described. 2nd. In a flushing tank, the combination with a syphon ejector and its valve, of a lever provided with a float and connected with said valve, of an elbow lever pivoted above the first named lever provided with a float at one end and carrying a locking cam adapted to bear upon the lower lever, substantially as shown and described. 3rd. In a flushing tank, the combination with a syphon ejector and its valve, of the upper lever, the locking cam pivoted thereto, the lower lever connected with the valve and formed with a seat to receive the locking cam, substantially as shown and described. 4th. In a flushing tank, the combination with a syphon ejector and its valve, of the upper elbow lever having its vertical member slotted, the locking cam hinged therein, the lower lever having a seat and connected with the valve, substantially as shown and described. 5th. In a flushing tank, the combination with a casting piece having the upper and lower post and stop plate, of the upper and lower levers pivoted to said casting, the locking cam, floats, connecting rods, the syphon ejector and valve, all arranged substantially as shown and described.

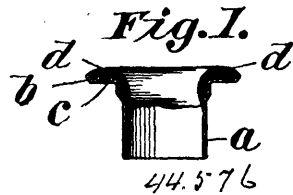


No. 44,575. Spindle Shaped Ocean Steamer. (Navire océanique en forme de fuseau.)

William Louis Winans, London, England, 27th October, 1893; 18 years.

Claim.—The herein described spindle shaped hull for ocean going, self propelled, surface navigating vessels, having a length from extreme point to point of not less than 600 feet, in conjunction with a beam or extreme diameter of not more than one-fifteenth of the length and not less than 40 feet, substantially as described.

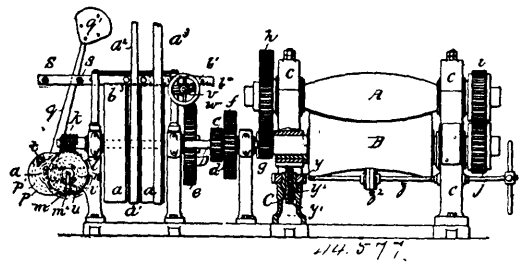
No. 44,576. Eyelet. (Eillet.)



Arthur Matheson, Springfield, Massachusetts, U.S.A., 27th October, 1893; 6 years.

Claim.—1st. An eyelet consisting of a central metallic tube and a concave head, a ring of plastic material in the concavity of the head, and anchoring devices projecting from the metal of the head and entering the plastic ring but concealed by the face of said ring, all substantially as described. 2nd. An eyelet consisting of the usual tubular shank, and having a concave or dish shaped rim on which are several upwardly projecting tubular anchors, and having a ring of plastic material applied to said concave rim with which said anchors engage, and portions of which extend through the anchors and are engaged with the under side of the rim, substantially as set forth.

No. 44,577. Process of and Apparatus for Producing Metal Barrel Bodies. (Procédé et appareil pour produire des corps de barils métalliques.)



Thomas Critchley Barraclough and Thomas Tannett Heaton, both of London, England, 27th October, 1893; 6 years.

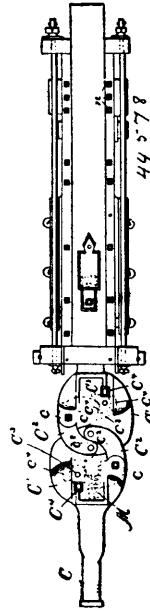
Claim.—1st. The process or method hereinbefore described of simultaneously bending and curving a metal sheet or blank into the form of a barrel body or other articles of longitudinally bent form, which consists in submitting a sheet or blank of appropriate dimensions to the action of a pair of rollers, one of which is convex and the other concave, the curve or contour of one of said rollers corresponding approximately with the curve, contour or belly

required in the article to be produced and the curve or contour of the other of said rollers differing from that of the first described roller and being relatively such that the space between the adjacent portions of the peripheries of said rollers is less near the middle, whereby when the sheet passes between the rollers it is nipped only at and near the middle of its width and adapts itself for the remainder of its width to the form of the roller, which has a curve or contour corresponding approximately with that required in the article to be produced, substantially as set forth. 2nd. The process or method hereinbefore described of simultaneously bending and curving a metal sheet or blank into the form of a barrel body or other article of longitudinally bent form, which consists in rolling a sheet or blank of approximate dimensions first backward and forward, and then (when the sheet has become sufficiently bent to allow of it) continuously between a pair of rollers, one of which is convex and the other concave, the curve or contour of one of said rollers, corresponding approximately with the curve, contour or belly required in the article to be produced and the curve or contour of the other of said rollers differing from that of the first described roller, and being relatively such that the space between the adjacent portions of the peripheries of said rollers is less near the middle, whereby when the sheet passes between the rollers it is nipped only at and near the middle of its width, substantially as set forth. 3rd. In a machine for simultaneously bending and curving a metal sheet or blank into the form of a barrel body or other article of longitudinally bent form, a convex roller and a concave roller adapted to roll the sheet or blank between them, one of said rollers having a curve or contour corresponding approximately with the curve, contour or belly required in the article to be produced while the curve or contour of the other roller is different from that of the first and relatively such that the space between the adjacent portions of the peripheries of said rollers is less near the middle, whereby the rollers will press or nip the sheet or blank only at and near the middle of its width, and the remainder of the width of the sheet will adapt itself to the form of the roller which has a contour corresponding approximately with that required in the article to be produced, substantially as set forth and shown. 4th. In a machine for simultaneously bending and curving a metal sheet or blank into the form of a barrel body article of longitudinally bent form, the combination, with a convex roller and a concave roller adapted to roll the sheet or blank between them and gearing for driving said rollers, the relative curves or contours of said rollers being such that they will press or nip the sheet or blank only at a point of its width as described, of an automatic reversing motion, whereby the rollers are caused to rotate in the two directions alternately, and the sheet is alternately passed from end to end between rollers, and back again, substantially as set forth. 5th. In a machine for simultaneously bending and curving a metal sheet or blank into the form of a barrel body or other article of longitudinally bent form, the combination with a convex roller and a concave roller adapted to roll the sheet or blank between them, and gearing for driving said rollers, the relative curves or contours of said rollers being such that they will press or nip the sheet or blank only at a part of its width as described, of an automatic reversing motion whereby the rollers are caused to rotate in the two directions alternately, and means for putting said reversing motion out of action, and thereby enable the rollers to roll continuously without reversing, substantially as and for the purpose set forth. 6th. In a machine for simultaneously bending and curving a metal sheet or blank into the form of a barrel body or other article of longitudinally bent form, the combination with a convex roller and a concave roller adapted to roll the sheet or blank between them, and gearing for driving said rollers, the relative curves or contours of said rollers being such that they will press or nip the sheet or blank only at a part of its width as described, and an automatic reversing motion whereby the rollers are caused to rotate in the two directions alternately, means for putting said reversing motion out of action, and a reversing motion adapted to be operated by hand, all substantially as and for the purpose set forth. 7th. In a machine for simultaneously bending and curving a metal sheet or blank into the form of a barrel body or other article of longitudinally bent form, the combination with a convex roller and a concave roller adapted to roll the sheet or blank between them, the relative contours or curves of said rollers being such that they will press or nip the sheet or blank only at a part of its width as described, of gearing for driving said rollers as required at either of two speeds relatively to the speed of the pulley shaft, an automatic reversing motion whereby the rollers are caused to rotate in the two directions alternately, means for putting said reversing motion out of action to allow the machine to run continuously, and a reversing motion

adapted to be operated by hand, all substantially as and for the purpose set forth.

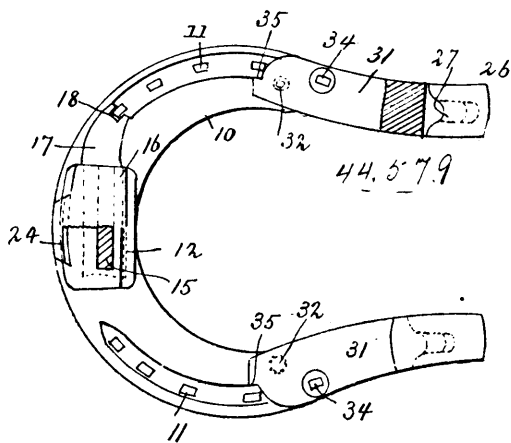
No. 44,578. Car Coupler. (Attelage de chars.)

John A. Markley, Clifton Forge, Virginia, U.S.A.,
27th October, 1893; 6 years.



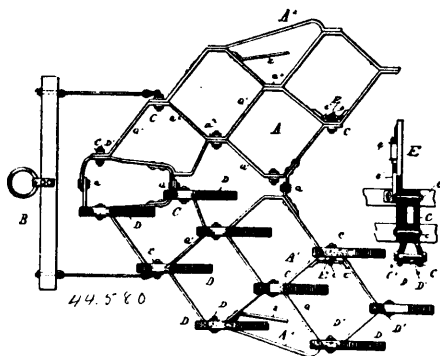
Claim.—1st. In a car coupling, the combination of the draw bar having the transversely recessed head provided at one side of said recess with a short forward extension or guiding arm, the rotating hook pivoted intermediate its ends at the opposite sides of said recess and having an outer hooked arm and an inner notched arm, the latter adapted to swing into said recess transversely of the head, the rotating eccentric block or catch adapted to automatically engage said notch arm and the locking pin for holding said arm and catch engaged, substantially as described. 2nd. In combination, with the transversely recessed head, the rotating substantially U-shaped hook pivoted at one side of said head to the main portion thereof, and provided with a notched inner arm adapted to swing into said recess transversely of the head, the eccentric block or catch within said recess at the opposite side of the head adapted to automatically engage said notch arm, and the locking gravity pin adapted to hold said catch and arm engaged, substantially as described. 3rd. In combination, with the transversely recessed head, the rotating hook pivoted to main portion of the head at one side thereof, and provided with a notched inner arm adapted to swing into said recess transversely of the head, the eccentric block or catch within said recess at the side of the head opposite, the pivoted connection of the hook adapted to automatically engage said notched arm, and the locking gravity pin adapted to hold said

catch and arm engaged, said catch having a projection or lip thereon adapted to be thrown across the path of movement of the pin when the latter is raised so as to sustain the pin in position to drop and automatically lock the catch when the latter is locking the hook, substantially as described. 4th. In combination, with the draw bars, the centre plate having the lateral extension with longitudinal groove or key-ways therein and the removable key having the tongue thereon fitting in said groove, said key being detachably secured and adapted to hold up the rear ends of the draft timbers, substantially as described. 5th. In combination, with the draw-head, the safety device comprising the longitudinally sliding support carrying the plate extending transversely underneath the head, and the spring adapted to normally sustain said plate in position to support the coupling hook or casting in the event of breakage of the parts, substantially as described. 6th. In combination, with the draft beams, the stay pieces fixed thereto, the key pieces extending transversely through said stay pieces, the independent movable locks fitted on said key pieces and provided with the interposed spring, the draft bar, and the yoke enclosing said blocks and secured to said draft bars, substantially as described. 7th. In combination with the draft beams, the stay pieces fixed thereto, the key pieces extending transversely through said stay pieces, the independent movable blocks fitted on said key pieces and provided with the interposed spring, the draft bar, the yoke enclosing said blocks and secured to said draft bars, the safety rods, and the safety key connecting said draft bar with said safety rods through elongated slots in the draft beams, substantially as described. 8th. In combination with the draft bar, the independently movable blocks, the spring interposed between the blocks, and the yoke having the arms between which said blocks work, said yoke being formed in two parts which are rigidly connected together at one end and attached to the draft bar at the opposite end, substantially as described. 9th. A draw-head and rigging for attachment to railroad cars, comprising a draft bar, a yoke secured thereto, independently movable blocks arranged to work between the arms of said yoke, a spring interposed between said blocks, transverse bars or key pieces secured intermediate their ends to said blocks and draft bar adapted to engage elongated slots in the draft beams at either side of the draft bar, and safety rods having elongated slots to receive the projecting ends of said key pieces, substantially as described. 10th. In combination with the draft beams, the stay pieces having elongated slots therein, the key pieces fitted in said slots, the blocks fitted on said key pieces, the spring interposed between said blocks, the yoke embracing said blocks and secured to said draft bar, the safety rods having elongated slots secured on said key pieces, and the safety key secured to said draft bar and having its ends projecting through elongated slots in said draft beams, and safety rods at either side of the draft bar, substantially as described. 11th. In combination with the draft beams, the stay pieces let into said beams, the straps for securing said stay pieces, the draft bar, the transverse key pieces extending through slots in said stay pieces, devices connecting said key pieces and draft bar, and the safety rods and key pieces connecting the aforesaid key pieces with said draft bar through elongated slots in said draft beams, substantially as described.

No. 44,579. Horse-shoe. (Fer à cheval.)

Charles B. Hulbert, Ironia, New Jersey, U.S.A., 27th October, 1893; 6 years.

Claim.—1st. As an improved article of manufacture, a horse-shoe having a recessed toe and recessed heels and detachable calks having tongues to fit the recesses of the toe and heels and having prolonged ends with holes therein adapted to register with the nail holes of the shoe, substantially as described. 2nd. The combination with the shoe having a thickened toe with a dove-tail groove or recess therein, of a toe calk having a tongue adapted to slide into the recess and having a notch in the outer end of the tongue, which notch is adapted to register with a nail hole of the shoe, substantially as described. 3rd. As an improved article of manufacture, a horse-shoe having a dove-tail vertically tapering recess in its toe, a detachable toe piece adapted to fit in the said recess, and a removable toe calk adapted to overlap the under side of the recess and toe piece, substantially as described. 4th. The combination with the horse-shoe having thickened heels with forwardly opening recesses therein, of the detachable heel calks having rearwardly extending tongues to enter the heel recesses and having forwardly extending ends with studs thereon adapted to enter recesses in the body of the shoe, said forwardly extending ends having nail holes therein to register with the shoe nail holes, substantially as described. 5th. The combination with the shoe having thickened heels with forwardly opening recesses therein and recesses in its under side and in front of the heels, of the detachable calks having rearwardly extending tongues to enter the heel recesses and forwardly extending portions adapted to fit against the bottom of the shoe, said forwardly extending portions having studs thereon to enter the shoe recesses, holes therein to register with the nail holes of the shoe, and notched front ends arranged adjacent to the nail holes of the shoe, substantially as described.

No. 44,580. Harrow. (Herse.)

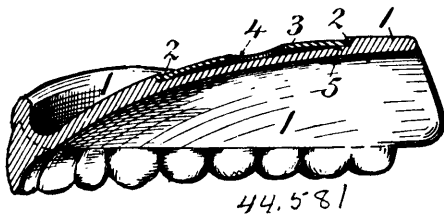
Charles La Dow, Albany, New York, U.S.A., 27th October, 1893; 6 years.

Claim.—1st. In a harrow, a frame having openings substantially wedge shaped at their rear portions, in combination with devices moving simultaneously at the will of the operator relatively to the wedge shaped openings, whereby rubbish may be dislodged from several of said openings simultaneously. 2nd. In a harrow, a frame whose bars form openings, substantially diamond shaped between them, C-shaped teeth distributed over the frame, substantially as described, and hinged at near the forward ends of said openings, and having their front bow portions located in advance of the points of juncture of the frame bar, and operatively connected

together so that several teeth may be moved simultaneously, in combination with means for adjusting the pitch of the teeth. 3rd. A harrow frame having bars arranged to form openings, substantially such as described, teeth shaped substantially as described and having their front bow portions arranged in advance of the rearward parts of said openings, and devices operatively connecting several of the teeth whereby their front bow portions may be simultaneously varied relatively to the obliquely inclined sides of said openings, so that said movement of the teeth may act on and dislodge rubbish that may be centralized at or near said bow portions of the teeth by said obliquely inclined bars, during the progress of the harrow. 4th. In a float harrow, a frame and C-shaped teeth hinged thereto so as to be simultaneously adjustable and arranged in such relative proximity to each other that when the front portions of some teeth are moved by their operating devices in opposite direction from the rear portions of adjacent teeth, said front portions assist in disengaging rubbish from the rear portions of other teeth. 5th. In a float harrow, a frame and C-shaped teeth independently hinged thereto and arranged in stepped series across the line of draft, with front bow portions of teeth in one series arranged adjacent to the rear soil working portions of teeth in another series, in combination with devices operatively connected with the teeth, whereby the front bow portions of one series may be moved downwardly at the same time that the rear soil working portions of its adjacent series are moved upwardly, adapting the front bows of one series to disengage rubbish from the rear portion of its fellow series when simultaneously operated. 6th. In a float harrow, a frame and C-shaped teeth hinged thereto and so arranged relatively to each other that when the front bow portions of some teeth are rocked simultaneously with the rear soil working portions of adjacent teeth (but in opposite directions therefrom), said bow portions step on or rock on rubbish clinging to said soil working portions, and thus assist in disengaging said rubbish. 7th. In a harrow, a frame and C-shaped teeth hinged thereto, and so arranged relatively to each other that the front bow portions of some teeth may be rocked simultaneously with but in an opposite direction from the rear portions of other teeth in the same series, and that said front and rear portions of different teeth may when rocked intersect a line transverse to the path of the harrow, thus adapting teeth in the same series to assist in disengaging rubbish from each other when operated in concert. 8th. In a harrow frame, and C-shaped teeth adapted to be simultaneously rocked relatively thereto, and arranged in obliquely inclined stepped series across the line of draft substantially as shown, the teeth in each series being so arranged relatively to each other that the rear soil working portion of one tooth may, when rocked, move at a different speed, that the front bow portion of an adjacent tooth in the same series the unequal speed of said adjacent moving parts adapting them to assist in loosening or disengaging rubbish from each other when simultaneously operated. 9th. In a harrow, a draft frame and C-shaped teeth adapted to be simultaneously rocked relatively thereto, the teeth being so arranged relatively to each other that the rear soil working portion of one tooth may operate in a plane substantially transversely opposite to the front bow portion of another tooth in the same obliquely inclined series, whereby the front portion of said tooth is adapted to be moved forwardly and downwardly while the rear portion of its adjacent fellow is being moved upwardly, the unequal movement of said teeth facilitating the discharge of rubbish therefrom. 10th. A harrow having its frame, or a section made up of series of bars rigidly connected together with openings substantially diamond shaped between the bars, and with teeth moving on separate centres and mounted at or near the angles of the bars and simultaneously adjustable as to pitch, whereby teeth in different series may be adjusted at one time. 11th. A harrow having its frame, or a section thereof, made up of zigzag bars united at their contiguous portions, and simultaneously adjustable harrow teeth mounted at the contiguous portions and braced by the diagonal parts of the frame. 12th. In a harrow, two sections, each composed of zigzag bars rigidly secured together at their contiguous portions and a series of simultaneously adjustable harrow teeth carried by each section. 13th. A main harrow frame having curved teeth secured thereto in zigzag lines, each rocking on a separate center, a lever for simultaneously adjusting the pitch of the teeth, and bars shaped substantially the same as the main frame for connecting the lever and teeth. 14th. In a harrow, zigzag frame bars having longitudinal portions, plates or bars pivoted thereto, and teeth supported by these plates, in combination with means for rocking the plates, whereby the pitch of several teeth is simultaneously adjusted. 15th. A harrow having zigzag frame bars with their longitudinal portions bolted or riveted in direct contact, in combination with teeth mounted on said longitudinal portions. 16th. The combination of a harrow frame, or a section thereof, individually adjustable harrow teeth secured thereto in zigzag lines and moving about separate centres and means for simultaneously adjusting the pitch of several teeth on a section. 17th. In a harrow, a frame whose bars form openings between them and a circular tooth adapted to dig the ground in each of said openings, in combination with means adapted to simultaneously move two or more of said teeth upwardly and downwardly within said openings whereby the frame around each tooth acts as a stripper therefor. 18th. In a harrow circular teeth, and a frame having openings substantially diamond-shaped in which teeth operate in combination with mechanism for simultaneously adjusting the pitch of the teeth, said mechanism occupying substantially parallel planes

with the frame, so as not to obstruct the diamond-shaped openings, not to prevent the backward and forward or upward and downward movement of the working ends of the teeth within said openings. 19th. In a harrow upper and lower bars, circular teeth hinged thereto by an upper and a lower pivot for each tooth, in combination with a ratchet and lever by which said circles of the teeth may be simultaneously set more or less in advance of their hinges and adapted to shield the hinges from rubbish. 20th. In a harrow frame a zigzag or wavy bars set up edgewise vertically and joined into a rigid section, and circular teeth attached at various points to said section and individually braced thereby, in combination with means for simultaneously rocking several of the teeth upwardly and downwardly relatively to the frame bars, the vertical thinness of said bars affording the greatest possible space in which to simultaneously adjust circular teeth which are individually braced during their rocking movements. 21st. As a new article of manufacture, a harrow frame having obliquely inclined bars, curved teeth having trailing ends, and means for rocking the teeth simultaneously and for holding the front and rear portions of each tooth squarely in line with the draft during their rocking movements. 22nd. In a harrow, a frame, curved teeth hinged thereto by two hinges for each tooth, in a combination with means whereby the front bow portion of two or more teeth can be simultaneously rocked forward below their hinge connections, and the points of said teeth elevated above said hinge connections. 23rd. In a harrow non-revolving bars, circular teeth thereon, and mechanism located within the circle formed by each overhanging tooth for adjusting the pitch thereof, in combination with devices for connecting said mechanism with a lever whereby several teeth may be simultaneously adjusted. 24th. In a harrow, a frame and C-shaped teeth, each separately pivoted at a point between its front and rear portions so as to have the weight of its front part balance against the weight of its rear part (so as to be easily moved backwardly and forwardly), in combination with means for simultaneously adjusting several of said teeth. 25th. The combination of a C-shaped tooth with a swinging arm dividing the space between the soil working end and the front bow portion of the tooth, whereby rubbish is prevented from working forward into said front bow portion and the tooth is adjusted as to pitch. 26th. In a harrow, a frame having two sections, circular teeth hinged loosely relatively to the frame and arranged in three diagonal series on each section, upper bars hinged to the front and rear teeth and deflected sidewise so as to be hinged to teeth located between the front and rear series, but in a different draft line, the said intermediate hinge being adapted to prevent the deflected bars from buckling, in combination with means operatively connected with the bars, adapted to impart a backward and forward movement to the teeth. 27th. In a harrow circular spring teeth, a frame attached thereto, and then diverging therefrom, in combination with backwardly and forwardly moving rods, links, or other bars also attached to the teeth or to devices moving with the teeth and then diverging therefrom for the purpose of simultaneously varying their pitch without contact therewith except at the points of attachment thereto. 28th. A float harrow frame having separately hinged teeth, in combination with devices operatively connected to and moving with the teeth in such manner that the pitch of several teeth may be simultaneously adjusted, said devices, at their junction with the teeth, being encircled thereby to such extent that they are guarded by the encircling teeth. 29th. In a harrow, a draft frame, two or more series of teeth hinged thereto, arms supporting the teeth, and a lever for moving teeth in different series simultaneously, in combination with zigzag bars operatively connecting the lever with arms of different draft lines, and braced at their deflected portion by said arms.

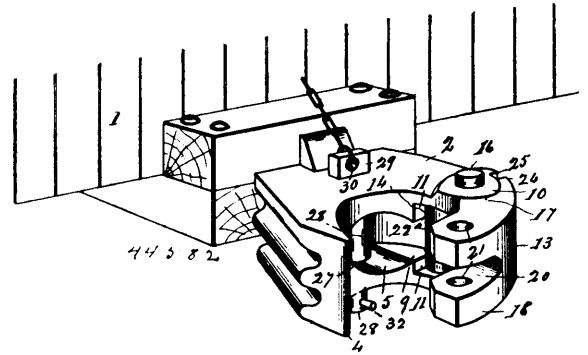
No. 44,581. Dental Set. (Ratier.)



Thomas H. Graham, Toronto, Ontario, Canada, 27th October, 1893; 6 years.

Claim.—1st. A dental upper set having a plate of flexible rubber attached as an integral part thereof, at its margin within the air or vacuum chamber, the central portion of said plate being free from said set. 2nd. A dental upper set having a plate of flexible rubber attached as an integral part thereof at its margin within the air or vacuum chamber, and having a hole through the centre of said flexible plate to communicate with the free and unattached central portion thereof beneath.

No. 44,582. Car Coupler. (Atelage de chars.)

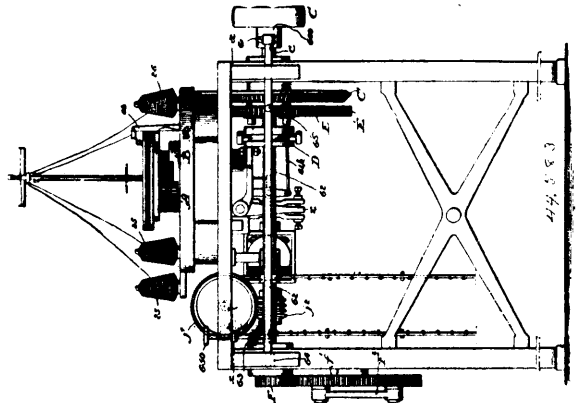


Earle W. Seitz, Kansas City, Missouri, U.S.A., 27th October, 1893; 6 years.

Claim.—1st. A car coupling comprising a draw-head having recesses in its front wall, and a locking jaw pivoted thereto, and having a supporting leg projecting rearwardly therefrom, and a coupling pin having a large upper portion and a smaller lower portion, and a shoulder formed at the junction of said upper and lower portions, said shoulder being adapted to rest upon the supporting leg of the locking jaw, substantially as described. 2nd. In a car coupling, the combination with a pivotal locking jaw, of a coupling pin having an annular shoulder adapted to rest upon said swinging jaw when the device is uncoupled, substantially as set forth. 3rd. In a car coupling, the combination with a swinging jaw of a coupling pin having an annular shoulder, adapted to rest upon the said swinging jaw, and a cylindrical portion below said annular shoulder, and adapted to have frictional contact with the periphery of the said swinging jaw, substantially as and for the purpose set forth. 4th. In a car coupling, the combination with a pivoted locking jaw, provided with a horizontal leg, having a curved periphery concentric to the pivotal point of said jaw, of a coupling pin having an annular shoulder adapted to rest upon said horizontal leg and a cylinder portion below said annular shoulder, adapted to have frictional contact with the curved periphery of said leg, substantially as set forth. 5th. In a car coupling, the combination with a pivotal locking jaw, provided with a horizontal supporting leg having a curved periphery and an abrupt vertical face 22^a, with a coupling pin, having an annular shoulder 26, a large upper portion 27 and a smaller lower portion 28, the abrupt vertical face 22^a, of the supporting leg being adapted to come in contact with the large portion 27 of the coupling pin, when the coupling is locked, substantially as set forth. 6th. In a car coupling, the combination with a draw-head, having a longitudinally extending cylindrical recess 5, the recess 9 at one side of and communicating with the cylindrical recess 5, and forwardly projecting segmental shoulders 10, with a pivotal locking jaw having a cylindrical hub 14, pivoted to move laterally between the shoulders 10, of the draw-head and the forwardly and inwardly extending hooked end 18, and the rearwardly and horizontally extending supporting leg 22, adapted to engage the coupling pin and the recess 9 of the draw-head, substantially as set forth.

No. 44,583. Circular Knitting Machine.

(Machine à tricôt circulaire.)



Harry A. Houseman, Philadelphia, Pennsylvania, U.S.A., 27th October, 1893; 6 years.

Claim.—1st. In combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch upon said

shaft, a gear-wheel adapted to be engaged by said clutch upon the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, connection between said gear-wheels and knitting cylinder, a clutch lever common to both clutches, a connecting rod connected to said lever and intermediate connection between the oscillating shaft and connecting rod, whereby the clutches are operated from the movement of the oscillating shaft. 2nd. In combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch upon said shaft, a gear-wheel adapted to be engaged by said clutch upon the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, connection between said gear-wheels and knitting cylinder, a clutch lever common to both clutches, a connecting rod connected to said lever, a gear upon said oscillating shaft, a gear-wheel loose upon its shaft with which said last gear meshes, a clutch upon said shaft, means, substantially as described, to operate said clutch, and intermediate connection between said clutch, and connecting rod of clutch lever whereby when said shaft is operated the connecting rod is moved. 3rd. In combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch upon said shaft, a gear-wheel adapted to be engaged by said clutch upon the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, connection between said gear-wheels and knitting cylinder, a clutch lever common to both clutches, a connecting rod connected to said lever and said connecting rod being provided with a frame portion as h^1 , a clutch roller as f^o , which said frame surrounds, a shaft for said clutch roller, a clutch upon said shaft, a gear-wheel loose on said shaft, a gear-wheel upon the oscillating shaft in engagement with said last mentioned gear-wheel, and mechanism, substantially as described, to operate said clutch. 4th. In combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch upon said shaft, a gear-wheel adapted to be engaged by said clutch upon the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, connection between said gear-wheels and knitting cylinder, a clutch lever common to both clutches, a connecting rod connected to said lever, a gear upon said oscillating shaft, a gear-wheel loose upon its shaft with which said last gear meshes, a clutch upon said shaft, intermediate connection between said clutch and connecting rod, a pattern chain operated by the rotating shaft, lugs upon said chain, and lugs upon the clutch mechanism adapted to be struck by the lugs on the pattern chain. 5th. In combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch upon said shaft, a gear-wheel adapted to be engaged by said clutch upon the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, connection between said gear-wheels and knitting cylinder, a clutch lever common to both clutches, a connecting rod connected to said lever and said connecting rod being provided with a frame portion as h^1 , a clutch roller as f^o , which said frame surrounds, a shaft to which said clutch roller is secured, a clutch upon said shaft, a gear-wheel loose on said shaft, a gear-wheel upon the oscillating shaft in engagement with said last mentioned gear-wheel, a pattern chain operated by the rotating shaft, lugs upon said chain, and lugs upon the clutch mechanism adapted to be struck by the lugs on the pattern chain. 6th. In combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch upon said shaft, a gear-wheel adapted to be engaged by said clutch upon the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, connection between said gear-wheels and knitting cylinder, a clutch lever common to both clutches, a connecting rod connected to said lever and said connection rod being provided with a frame portion as h^1 , a clutch roller as f^o , which said frame surrounds, spring seated pins in said clutch roller, a gear-wheel loose on said shaft, a pin connected to said gear, a segmental shield, as f^o , between said clutch roller and gear-wheel, a gear upon said oscillating shaft, which meshes with said last mentioned gear, lugs upon said clutch roller, a pattern chain operated by the rotary shaft and lugs upon said chain adapted to strike the lugs upon the clutch roller. 7th. In a knitting machine, in combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch on said shaft, a gear-wheel adapted to be engaged by the clutch on the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, a clutch lever common to both clutches, an arm connected to the clutch lever, a rock shaft, an arm from said rock shaft to which the arm connected to clutch lever is connected, a rod supported so as to be adapted to move vertically, an arm connected to said rock shaft in line of movement of said rod, a plunger connected to said rod, a tube in which said plunger moves, said plunger being provided with a slot, and the walls of said tube having a slot through which the thread is adapted to pass. 8th. In a knitting machine, in combination, a thread spool, a tube the walls of which are provided with slots, a plunger adapted to move in said tube, said plunger being provided with a slot, the thread being adapted to pass through said slots, and means, substantially as described, to give said plunger a movement independent of the movement of the thread. 9th. In a knitting machine, in combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, oscillating shaft, a clutch on said shaft, a gear-wheel adapted to be engaged by the clutch on the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, a clutch lever common to both clutches, a thread spool, a tube, a plunger adapted to move

in said tube, said plunger being provided with a slot, and the walls of said tube having slots through which the thread passes, and intermediate mechanism between said clutch lever and plunger whereby when the clutch lever is moved the plunger moves up or down. 10th. In a knitting machine, in combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch on said shaft, a gear-wheel adapted to be engaged by the clutch on the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, a clutch lever common to both clutches, an arm connected to clutch lever, a rock shaft, an arm from said rock shaft to which the arm connected to clutch lever is connected, a rod supported so as to be adapted to move vertically, an arm connected to said shaft in line of movement of said rod, a forked arm connected to said rod, a segmental gear provided with a pin which rests in the forked end of said arm, a bevel gear meshing in said segmental gear, a frame on the shaft of said bevel gear, said frame being provided with slots through which a thread is adapted to pass. 11th. In a knitting machine, in combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch on said shaft, a gear-wheel adapted to be engaged by the clutch on the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, a clutch lever common to both clutches, an arm connected to clutch lever, a rock shaft, an arm from said rock shaft to which the arm connected to clutch lever is connected, a rod supported so as to be adapted to move vertically, an arm connected to said rock shaft in line of movement of said rod, a plunger connected to said rod, a tube in which said plunger moves, said plunger and tube being provided with transverse slots, uprights attached to said frame, said uprights being provided with slots through which the thread is adapted to pass. 12th. In a knitting machine, in combination, a thread spool, a frame secured so as to be rotated horizontally, said frame being provided with slots through which thread is adapted to pass. 13th. In a knitting machine, in combination, a thread spool, a frame secured so as to be rotatable, said frame being provided with slots through which the thread is adapted to pass, and means, substantially as described to rotate said frame independent of the movement of the thread. 14th. In a knitting machine, in combination, a frame secured so as to be rotatable horizontally, uprights attached to said frame, said uprights being provided with slots through which the thread is adapted to pass. 15th. In a knitting machine, in combination, a frame secured so as to be rotatable, uprights attached to said frame, said uprights being provided with slots through which the thread is adapted to pass, and means, substantially as described, independent of the thread to rotate said frame. 16th. In a knitting machine, in combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch upon said shaft, a gear-wheel adapted to be engaged by the clutch on the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, a clutch lever common to both clutches, a frame secured so as to be rotatable, said frame being provided with slots through which the thread is adapted to pass, and intermediate mechanism, substantially as described, between the frame and clutch lever, whereby when the clutch lever is moved the frame is revolved. 17th. In a knitting machine, in combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch on said shaft, a gear-wheel adapted to be engaged by the clutch on the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, a clutch lever common to both clutches, a frame secured so as to be rotated, uprights attached to said frame, said uprights being provided with slots through which the thread is adapted to pass, and intermediate mechanism, substantially as described, between the frame and clutch lever, whereby when the clutch lever is moved the frame is revolved. 18th. In a knitting machine, in combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch on said shaft, a gear-wheel adapted to be engaged by the clutch on the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, a clutch lever common to both clutches, an arm connected to clutch lever, a rock shaft, an arm from said rock shaft to which the arm connected to clutch lever is connected, a rod supported so as to be adapted to move vertically, an arm connected to said rock shaft in line of movement of said rod, an arm, as 47, connected to said rod, a spring arm, as 48, in line of movement of said arm 47, a thread guide, as 49, in line of movement of end of said spring, whereby when said rod is elevated the spring acts on the thread guide increasing the tension on the thread. 19th. In a knitting machine, in combination, a knitting cylinder, a rotary shaft, a clutch upon said shaft, an oscillating shaft, a clutch on said shaft, a gear-wheel adapted to be engaged by the clutch on the rotary shaft, a gear-wheel adapted to be engaged by the clutch on the oscillating shaft, a clutch lever common to both clutches, a thread guide, a spring arm, and intermediate connection between said spring arm and the clutch lever, whereby the movement of the clutch lever in one direction renders the spring arm active against said thread guide, and in the other direction allows said spring arm to become inactive. 20th. In a knitting machine, in combination, a sinker cam formed of two parts, one part formed with an inset and said parts overlapping each other at the point of juncture. 21st. In a knitting machine, in combination, a sinker cam formed in two parts, one part formed with an inset, the part formed with the inset being adjustably secured to the sinker cam plate.

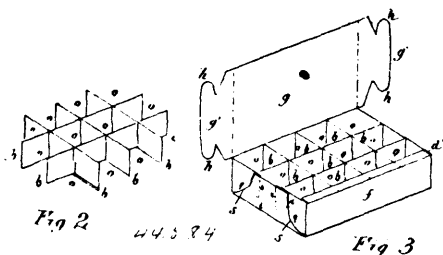
22nd. In a knitting machine, in combination, a sinker cam formed in two parts, one part formed with an inset, a cam plate provided with slots, through which slots the inset part of the sinker cam is secured to the cam plate, the other part being fixedly connected to said cam plate. 23rd. In a knitting machine, in combination a main shaft, a driving pulley or wheel loose on said shaft, a clutch on said shaft adapted to engage said pulley, a clutch rod to operate said clutch, the frame of the machine being provided with a slot, and a spring, one end attached to said rod the other end to the frame of the machine above the slot, whereby said spring holds said clutch rod fixed in the slots, or against the frame of the machine. 24th. In a knitting machine, in combination, a main shaft, a driving pulley or wheel loose on said shaft, a clutch on said shaft adapted to engage said pulley, a clutch rod to operate said clutch, the frame of the machine being provided with a slot and a spring one end attached to said rod, the other end to the frame of the machine above the slot, a rod in line with said clutch rod projecting through the bed of the machine, and a handle connected to said clutch rod. 25th. In a knitting machine, in combination, a needle cylinder provided with slots, pivoted levers provided with jaws adapted to hold the shanks of said needles, needle shifting cams in line of travel of the tails of said levers, racks by which said cams were carried, pivoted double pawls adapted to work in said racks, means, substantially as described, to operate said pawls, springs adapted to press against said pawls one at each end, a rock shaft, projecting through the frame of the machine, a rod attached to said shaft, pins upon said rod adjacent to each of said springs, a depending rod from said rock shaft, and lugs attached to said rack plates whereby when the shaft is rocked one of the springs of each pawl is rendered inactive and the other active, and the corresponding ends of the pawl rendered active or inactive. 26th. In a knitting machine, in combination, a main driving shaft, a segmental gear, intermediate connection, substantially as described, between said shaft and segmental gear, a shaft adapted to oscillate, a clutch upon said shaft, a gear wheel, a clutch lever adapted to operate said clutch, a connecting rod as I, a sprocket-wheel, intermediate connection between said wheel and the driving shaft, lugs upon said sprocket chain adapted to act upon said lever and force said clutch into engagement with said gear-wheel. 27th. In a knitting machine, in combination, a main driving shaft, a segmental gear, intermediate connection, substantially as described, between said shaft and segmental gear, a shaft adapted to oscillate, a clutch upon said shaft, a gear-wheel, a clutch lever adapted to operate said clutch, a connecting rod as I, a sprocket-wheel, intermediate connection between said wheel and the driving shaft, a sprocket chain upon said wheel, lug upon said sprocket chain, adapted to act upon said lever and force said clutch into engagement with said gear-wheel, and means to retain said rod in position after being acted upon by the lug. 28th. In a knitting machine, in combination, a main driving shaft, a segmental gear, intermediate connection, substantially as described, between said shaft and segmental gear, a shaft adapted to oscillate, a clutch upon said shaft, a gear-wheel, a clutch lever adapted to operate said clutch, a connecting rod, as I, a sprocket-wheel, intermediate connection between said wheel and the driving shaft, a sprocket chain upon said wheel, lug upon said sprocket chain adapted to act upon said lever and force said clutch into engagement with said gear-wheel, means to retain said lever in position after being acted upon by the lug, and means, substantially as described, to release said rod. 29th. In a knitting machine, in combination, a main driving shaft, a clutch, as D, upon said shaft, a bevel gear adapted to be connected with said clutch, a knitting cylinder, a rack upon said cylinder operated by said bevel gear, a segmental gear, intermediate connection between the shaft and segmental gear, a shaft adapted to oscillate, intermediate connection between said shaft and the segmental gear, a clutch, as G, upon said shaft, a gear-wheel, as E', adapted to be connected with said clutch, and intermediate connection between said gear and the bevel gear, a clutch lever pivoted in the centre and adapted to operate upon both of said clutches, and mechanism, substantially as described, to operate said lever whereby when one clutch is thrown into action the other is released. 30th. In a knitting machine, in combination, a main driving shaft, a clutch, as D, upon said shaft, a bevel gear adapted to be connected with said clutch, a knitting cylinder, a rack upon said cylinder operated by said bevel gear, a segmental gear, intermediate connection between the shaft and segmental gear, a shaft adapted to oscillate, intermediate connection between said shaft and the segmental gear, a clutch, as G, upon said shaft, a gear wheel, as E', adapted to be connected with said clutch, and intermediate connection between said gear and the bevel gear, a clutch lever pivoted in the centre and adapted to operate upon both of said clutches, a sprocket-wheel, means to rotate said wheels, a sprocket chain carried by said wheel, a connecting rod connected to said clutch lever, a lug connected to said connecting rod, and a lug on the sprocket chain in line with said lug connected to the connecting rod whereby when the lug is struck the connecting rod is moved and clutch G engaged and clutch D disengaged, and means to retain and release said connecting rod I. 31st. In a knitting machine, in combination, a main driving shaft, a clutch, as D, upon said shaft, a bevel gear adapted to be connected with said clutch, a knitting cylinder, a rack upon said cylinder operated by said bevel gear, a segmental gear, intermediate connection between the shaft and segmental gear, a shaft adapted to oscillate, intermediate connection between said shaft and the segmental gear, a clutch as G upon said

shaft, a gear-wheel as E', adapted to be connected with said clutch, and intermediate connection between said gear and bevel gear, a clutch lever pivoted in the centre and adapted to operate upon both of said clutches, a sprocket-wheel, means to rotate said wheel, a sprocket chain carried by said wheel, a connecting rod connected to said clutch lever, a lug connected to said connecting rod, and a lug on the sprocket chain in line with said lug connected to the connecting rod, whereby when the lug is struck the connecting rod is moved, and clutch G engaged and clutch D disengaged, a notch rest adapted to secure end of connecting rod, and a lug on the sprocket chain in line with said notch rest. 32nd. In a knitting machine, in combination, a needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws integral therewith adapted to hold the shank of said needles, and concentric cams for operating the levers, the needles and levers being so combined that when the tail piece of any lever is elevated the needle corresponding to said lever is moved in the slot out of action, substantially as described. 33rd. In a knitting machine, the combination of needles, needle cams, a pivoted needle shifting lever adapted when rocked to operate directly upon the needle and bring it in out of action of the knitting cams, and means, substantially as described, to rock said lever. 34th. In a knitting machine, a pivoted needle shifting lever adapted when rocked to operate directly upon the needle and bring it in and out of action of the knitting cams, and means, substantially as described, to rock said lever. 35th. In a knitting machine, in combination, a needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws adapted to hold the shanks of said needles, and means, substantially as described, to simultaneously rock the tails of the levers corresponding to the needle in the front half of the needle cylinders. 36th. In a knitting machine, in combination, a needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws adapted to hold the shanks of said needles, a plate upon which the tails of said levers corresponding to the needles in the front half of said needle cylinder rest, and means, substantially as described, to elevate said plate. 37th. In a knitting machine, in combination, a needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws adapted to hold the shanks of said needles, a plate upon which the tails of said levers corresponding to the needles in the front half of said needle cylinder rest, pins connected to said plate, a rock shaft and intermediate connection between said shaft and said pins, and means, substantially as described, to operate said shaft when the knitting cylinder reciprocating motion is thrown into action. 38th. In a knitting machine, in combination, a needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws adapted to hold the shanks of said needles, a plate upon which the tails of said levers corresponding to the needles in the front half of said needle cylinder rest, pins connected to said plate, a rock shaft and intermediate connection between said rock shaft and said pins, the clutch connecting rod I, mechanism substantially as described to operate said rod, and intermediate connection between said rod and the rock shaft, whereby when the rod is moved the rock shaft is rocked. 39th. In a knitting machine, in combination, a needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws adapted to hold the shanks of said needles, a plate upon which the tails of said levers corresponding to the needles in the front half of said needle cylinder rest, pins connected to said plate, a rock shaft and intermediate connection between said rock shaft and said pins, the clutch connecting rod I, mechanism substantially as described, to operate said rod, a lever on said rock shaft, a stand connected to said connecting rod, and set screws passing through said stand one on each side of said lever in line with said lever whereby when said rod is operated one of said screws strikes said shaft rocking it. 40th. In a circular knitting machine, in combination, a knitting cylinder, a rack in said cylinder, a gear-wheel adapted to operate said rack, a main driving shaft, a clutch upon said shaft adapted to be connected with said gear-wheel, an oscillating shaft, a clutch upon said shaft, a gear-wheel adapted to be engaged by said clutch, connection between said gear-wheel and the knitting cylinder rack gear-wheel, a clutch lever common to both clutches, a connecting rod connected to said clutch lever, a lug connected to said connecting rod, a sprocket-wheel, a sprocket chain driven by said sprocket-wheel, and a lug upon said sprocket chain in line of travel of said lug connected to the rod. 42nd. In a circular knitting machine, in combination, a knitting cylinder, a rack on said cylinder, a gear-wheel adapted to operate said rack, a main driving shaft, a clutch upon said shaft adapted to be connected with said gear-wheel, an oscillating shaft, a clutch upon said shaft, a gear-wheel adapted to be engaged by said clutch, connection between said gear-wheel and the knitting cylinder rack gear-wheel, a clutch lever common to both clutches, a connecting rod connected to said clutch lever, a lug connected to said connecting rod, a sprocket-wheel, a sprocket chain driven by said sprocket-wheel, a lug upon said sprocket chain in line of travel of said lug connected to the rod

and means to lock said rod when moved by the lugs striking. 43rd. In a circular knitting machine, in combination, a knitting cylinder, a rack on said cylinder, a gear-wheel adapted to operate said rack, a main driving shaft, a clutch upon said shaft adapted to be connected with said gear-wheel, an oscillating shaft, a clutch upon said shaft, a gear-wheel adapted to be engaged by said clutch, connection between said gear-wheel and the knitting cylinder rack gear-wheel, a clutch lever common to both clutches, a connecting rod connected to said clutch lever, a lug connected to said connecting rod, a sprocket-wheel, a sprocket chain driven by said sprocket-wheel, a lug upon said sprocket chain in line of travel of said lug connected to the rod, means to lock said rod when moved by the lugs striking, and means substantially as described to release said rod. 44th. In a knitting machine, in combination, a needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws integral therewith adapted to receive and hold the shanks of said needles, concentric needle shifting cams in line of travel of the tails of said levers, and means substantially as described to operate said cams whereby when the cams are moved the lever is rotated and needle corresponding thrown out of action. 45th. In a knitting machine, in combination, needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws adapted to hold the shanks of said needles, needle shifting cams in line of travel of the tails of said levers, needle cylinder, mechanism substantially as described to reciprocate said knitting cylinder and intermediate connection between said cams and needle cylinder reciprocating motor. 46th. In a knitting machine, in combination, a needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws adapted to hold the shanks of said needles, needle shifting cams in line of travel of the tails of said levers, racks by which said cams are carried, pivoted pawls adapted to work in said racks, a pivoted lever to which said pawls are connected, a clutch upon said shaft, a reciprocating shaft, a clutch upon said shaft, a clutch lever common to both clutches, a lever pivoted to said clutch lever, connection between said pivoted lever and lever pivoted to the clutch lever, lugs upon the lever pivoted to clutch lever, a gear-wheel adapted to be connected with the clutch on the reciprocating shaft, lugs upon said gear-wheel in line with said lugs on the lever pivoted to clutch lever when clutch is in connection with gear-wheel but out of line when said clutch is out of connection with said gear-wheel. 47th. In a knitting machine, in combination, a needle cylinder provided with slots, needles in said slots, pivoted levers provided with jaws adapted to hold the shanks of said needles, needle shifting cams in line of travel of the tails of said levers, racks by which said cams are carried, pivoted pawls adapted to work in said racks, a pivoted lever to which said pawls are connected, a main driving shaft, a clutch upon said shaft, a reciprocating shaft, a clutch upon said shaft, a clutch lever common to both clutches, a lever pivoted to said clutch lever, connection between said pivoted lever and lever pivoted to the clutch lever, lugs upon the lever pivoted to clutch lever, a gear-wheel adapted to be connected with the clutch on the reciprocating shaft, lugs upon said gear-wheel in line with said lugs on the lever pivoted to clutch lever when clutch is in connection with gear-wheel but out of line when said clutch is out of connection with said gear-wheel, and guards to limit the movement of said pivoted lever. 48th. In combination, a knitting cylinder, a rotary shaft, a clutch on said shaft, an oscillating shaft, a clutch on said shaft, a gear-wheel adapted to be engaged by the clutch on the rotary shaft, and a gear-wheel adapted to be engaged by the oscillating shaft clutch, connection between said gear-wheels and knitting cylinder, a clutch lever common to both clutches, and means, substantially as described, to operate said clutch lever whereby one clutch is released and the other brought into action.

No. 44,584. Paper Box for Eggs.

(Boîte de papier pour les œufs.)

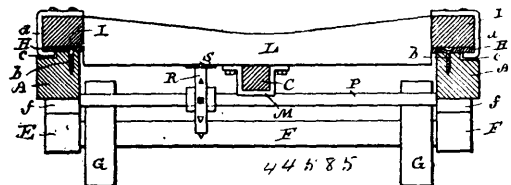


Arthur Leared Reeves, junr., Hamilton, Ontario, Canada, 27th October, 1893; 6 years.

Claim.—1st. A paper box for the packing and transportation of eggs, of a blank, cut and scored for the box proper, and its interior partitions, forming five slotted pieces separated by perforated lines, the bottom of the box having slotted ends, the sides having end projections, which, when bent at right angles to the sides and bottom, form projections to catch in the slots of the bottom ends and projections on the ends of the cover to catch into pockets formed by the intersection of the side ends and bottom ends, substantially as described. 2nd. A paper box blank A for the package of eggs, and its interior partitions b cut from one piece, the said partitions having

slots a, and separated by perforated lines c, the box portion having scored lines 2, 3, 4, 5, 6 and 7, the sides having projections 8, and curved portions 9, the bottom ends c having slots 16 cut therein from the outer margin and the ends g¹, cut on the angular lines 10, and projections h, h, on each of the said ends to enter pockets s formed by the curved lines 9 of the sides when folded, substantially as specified. 3rd. In a paper box the combination of the partitions b separated by perforated lines c, and provided with slots a, and the blank A, scored and formed as shown, for the package and carriage of eggs, substantially as specified.

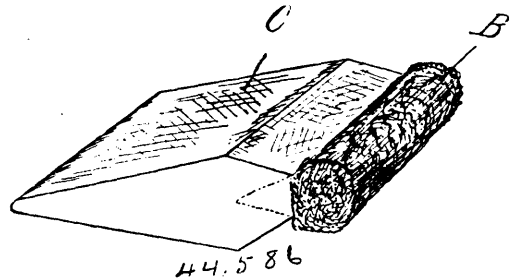
No. 44,585. Hand Truck. (Camion.)



Nelson Albert Week and Hans Jakob Moen, both of Stevens Point, Wisconsin, U.S.A., 27th October, 1893; 6 years.

Claim.—1st. A hand truck comprising a main frame, a load carriage longitudinally adjustable on the main frame, brackets that depend from the load carriage, a bar loose in the brackets, and a hook pivoted to the rear end of the bar. 2nd. A hand truck comprising a main frame, a load carriage loose thereon in a longitudinal direction, a link belt gear connecting the main frame and load carriage, and a lever controlled pawl and ratchet mechanism for actuating said gear. 3rd. A hand truck comprising a main frame, transverse shafts having their bearings in the frame, a sprocket-wheel on each shaft, a link belt arranged on the sprocket-wheels, suitable means for imparting motion to one of the shafts, and a load carriage that rests on said frame and is fast to the link belt.

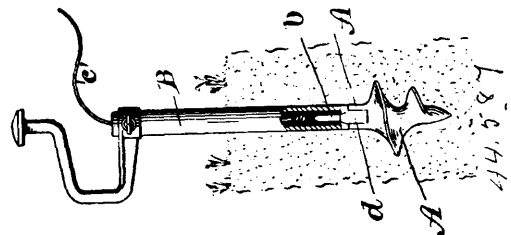
No. 44,586. Slate Cleaner. (Nettoyeur d'ardoise.)



William Murphy, St. John, New Brunswick, Canada, 27th October, 1893; 6 years.

Claim.—1st. A combined slate washer and dryer, consisting of a block having a cloth cover, and a piece of water absorbing material secured at one end, substantially as shown and described. 2nd. A combined slate washer and dryer, comprising a wedge shaped block, a piece of absorbent material at one end and a cloth cover, substantially as shown and described. 3rd. A combined slate washer and dryer, consisting of a wedge shaped block having a recess at its broad end, a piece of absorbent material secured in said recess and a covering of cloth, substantially as shown and described. 4th. A combined slate washer and dryer, consisting of a wedge shaped block, having a recess at its broad end and transverse grooves in its faces, a piece of absorbent material in the recess, and a covering for the faces, substantially as and described.

No. 44,587. Land Anchor. (Ancre pour terre ferme.)

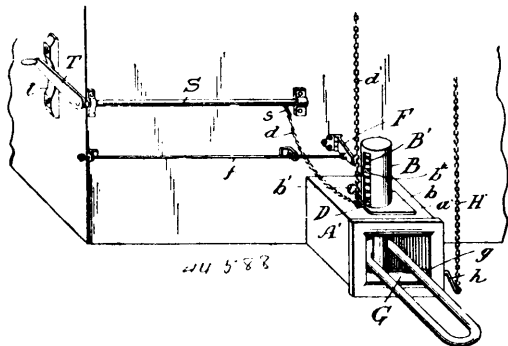


John Stombaugh, Briceton, Ohio, U.S.A., 28th October, 1893; 6 years.

Claim.—In a land anchor, the combination of a base portion A, having an upwardly projecting stem with notches a, and a portion

b, of less diameter than the stem, provided with an eye through which the flexible connection is adapted to pass, and a tube having depending portions *d*, and means for turning the same, said tube being adapted to fit over the upper end of the stem and into the recess *a*, substantially as shown and for the purpose set forth.

No. 44,588. Car Coupling. (*Attelage de chars.*)



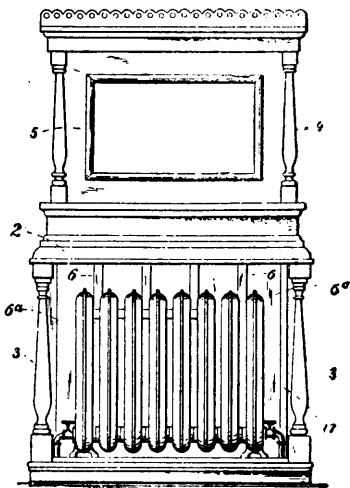
44 588

John B. Riddle, Morganfield, Kentucky, U.S.A., 28th October, 1893; 6 years.

Claim.—1st. In a car coupling, the combination of a draw-head having a tube or housing attached thereto, said housing having a slot with a catch formed in one of its side walls, a coupling pin having an arm which is adapted to engage with said catch, together with a plate or projection carried by the car body, said plate being adapted to contact with the arm of the coupling pin, substantially as shown and for the purpose set forth. 2nd. In a car coupling, the combination of a draw-head having the usual chamber and pin apertures, a tube or housing attached to the draw-head above the pin aperture, and having a slot with a catch, a coupling pin located within the housing and provided with an outwardly projecting arm which adapted to move in the slot and engage the catch, a spring located in the housing above the coupling pin, together with a plate carried by the car body, which is adapted to disengage the coupling pin from the catch, substantially as set forth. 3rd. In a car coupling, the combination, with the draw-head of a slotted tube closed at its upper end and provided with a base plate, said plate being pivotally attached to the draw-head, a coupling pin having an outwardly projecting arm which is adapted to engage a notch or catch formed to one side of the slot in the tube to maintain the pin in an elevated position, a helical spring located within the housing and bearing upon the head of the coupling pin, together with a plate hinged to the car body on a line with the arm of the coupling pin, substantially as shown and for the purpose set forth. 4th. In a car coupling, the combination of a link guide, constructed substantially as shown, having a handle *h* screwed into the said guide and the chain *H* for operating the said guide, substantially as set forth.

No. 44,589. Radiator Case. (*Entourage de calorifère.*)

Fig. 1



44 589

Henry H. Welker, Attica, New York, U.S.A., 28th October, 1893; 6 years.

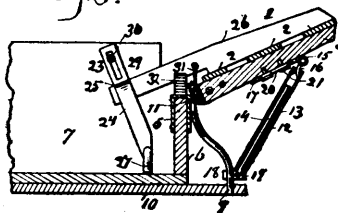
Claim.—1st. A case for a radiator, consisting of a supporting frame having in the inner sides of the top and bottom, a groove extending

around near the edge of the face of the same so that its ends overlap each other at the back of the case, in combination with two flexible shutters composed of a series of slats secured together by yielding connecting cords or cables and adapted to slide in said groove to open and close the case and thereby enclose or expose the radiator, substantially as described. 2nd. A radiator case, consisting of a supporting frame having in the inner sides of the top and bottom, a groove extending around near the edge of the face of the same so that its ends overlap each other at the back of the case, in combination with two flexible shutters composed of a series of slats, cord cables for securing said slats together, and springs for giving them a yielding action, as and for the purposes described. 3rd. In a radiator case, a flexible shutter composed of a series of slats each having a concave face at one narrow side and a rounded face at the opposite narrow side and holes extending through from the concave side to the rounded side, and a means substantially as above described for securing the slats together with a yielding force, the rounded side of one slat extending around each side far enough to allow the concave face of another slat to be turned around on it to a right angle or substantially so for the purposes described.

No. 44,590. Hay and Stock Rack.

(*Ratelier à foin et bétail.*)

Fig. 3.

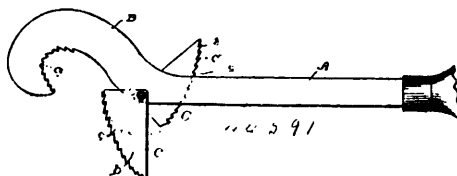


44 590

George Edward Schairer, Saline, Michigan, U.S.A., 28th October, 1893; 6 years.

Claim.—1st. The combination with a wagon body, and a rack hinged to the body at the upper edge thereof, of a telescopic brace hingedly connected at its lower end with the body at the bottom thereof, and having its upper end adjustably secured to the rack, said brace having its sections loosely sliding on each other, whereby the rack may be readily lifted to a vertical position, and when lowered will automatically assume its proper inclined position, substantially as described. 2nd. The combination with a wagon body, and a rack hinged to the body at the upper edge thereof, of an adjustable plate provided with a longitudinal slot, and having an eye and arranged on the rack, a screw adjustably securing the plate to the rack, and a telescoping brace hingedly connected at its lower end with the bottom of the body, and having its upper end hinged to the eye of said plate, said brace having its sections loosely sliding on each other, whereby the rack may be raised to a vertical position and will automatically assume its proper inclined position, substantially as described. 3rd. The combination with a body, and a rack hinged at the upper edge thereof, of a stationary inclined brace, an adjustable plate arranged on the rack, and provided with a longitudinal slot and having an eye at its outer end, a screw adjustably securing the plate to the rack and arranged in said slot, a lug fixed to the inclined brace near the lower end thereof, and a telescoping brace hinged at its lower end to said lug, and having its upper end hinged to the eye of the adjustable plate, and having its sections loosely sliding on each other, whereby the rack may be raised to a vertical position, and when lowered will automatically assume its proper inclined position, substantially as described. 4th. The combination of a wagon body, an adjustable stop and keeper arranged at one end of the same and comprising a plate having an angular bend to form a stop, and provided with a threaded shank passing through the bottom of the body, a nut arranged on the threaded shank, a bolt arranged in a longitudinal slot on the upper end of the plate, and a rack hinged to the body, and provided with an end bar having its inner end arranged in the keeper, substantially as described.

No. 44,591. Pipe Wrench. (*Cle à tuyau.*)



44 591

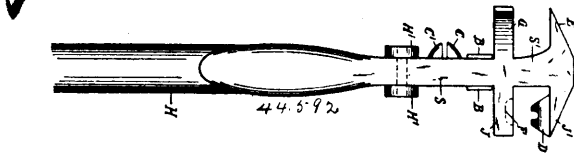
James A. Smith, Cleavesville, Missouri, U.S.A., 28th October, 1893; 6 years.

Claim.—A pipe wrench, substantially as described, consisting essentially of the lever or handle bar, the fixed curvilinear jaw B,

formed at one end of the lever or handle bar and having its inner side toothed and the loose or movable jaw C^1 , comprising the independent, acute angle shaped, movable sections C , having convex toothed engaging faces, the said sections C , being independently connected to the lever or handle bar by a bolt or rivet which takes through the sections at a point adjacent to the apex of the angle formed by the straight edges thereof, substantially as and for the purpose set forth.

No. 44,592. Metal Fabric Tool.

(*Outil pour tissus métalliques.*)



Selden S. Casey, London, Ontario, Canada, 28th October, 1893; 6 years.

Claim.—1st. The stationary standard S , provided with the jaw J , in the upper face of which the concave F , is formed, and the straps B, B , in combination with the adjustable standard S^1 , provided with the jaw J^1 , formed with the die D , and the handles H, H^1 , the latter of which is pivotally secured to the standard S , and formed with a slot K , through which and the standard S^1 , the pivot bolt L , extends, substantially as and for the purpose set forth. 2nd. The stationary standard S , provided with the jaw J , in the upper face of which the concave F , is formed, the cutter C , and the straps B, B , in combination with the adjustable standard S^1 , provided with the jaw J^1 , formed with the die D , the cutter C^1 , and the handles H, H^1 , the latter of which is pivotally secured to the standard S , and formed with a slot K , through which and the standard S^1 , the pivot bolt L , extends, substantially as and for the purpose set forth. 3rd. The stationary standard S , provided with the jaw J , in the upper face of which the concave F , is formed, and the straps B, B , in combination with the adjustable standard S^1 , provided with the jaw J^1 , formed with the die D , the staple puller E , and the handles H, H^1 , the latter of which is pivotally secured to the standard S , and formed with a slot K , through which and the standard S^1 , the pivot bolt L , extends, substantially as and for the purpose set forth. 4th. The stationary standard S , provided with the jaw J , in the upper face of which the concave F , is formed, the cold chisel G , and the straps B, B , in combination with the adjustable standard S^1 , provided with the jaw J^1 , formed with the die D , and the handles H, H^1 , the latter of which is pivotally secured to the standard S , and formed with a slot K , through which and the standard S^1 , the pivot bolt L , extends, substantially as and for the purpose set forth. 5th. The stationary standard S , provided with the jaw J , in the upper face of which the concave F , is formed the cutter C , the cold chisel G , and the straps B, B , in combination with the adjustable standard S^1 , provided with the jaw J^1 , formed with the die D , the cutter C^1 , the staple puller E , and the handles H, H^1 , the latter of which is pivotally secured to the standard S , and formed with a slot K , through which and the standard S^1 , the pivot bolt L , extends, substantially as and for the purpose set forth.

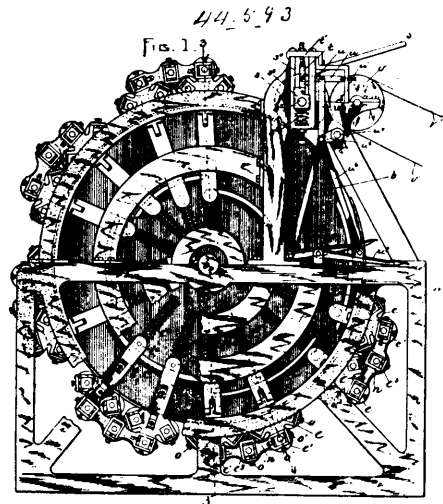
No. 44,593. Colour Printing Press.

(*Presse à imprimer en couleurs.*)

Henry Edward Grandy, Somerville, Massachusetts, U.S.A., 30th October, 1893; 6 years.

Claim.—1st. In a colour printing press, a cylinder having a series of segmental printing plates on its periphery, and a corresponding series of segmental ribs on its ends, said ribs having cam-shaped ends, and being located at different distances from the axis of the cylinder and in a uniform plane at a right angle to said axis, and each occupying the same segment of the circle that the corresponding printing plate occupies, combined with a series of inking mechanisms corresponding in number to the printing plates and rib cams, each inking mechanism being adapted to be operated by one and only one of said rib cams, as set forth. 2nd. In a colour printing press, a cylinder having a series of segmental printing plates on its periphery, and a corresponding series of segmental ribs on its ends, said ribs having cam-shaped ends, and being located at different distances from the axis of the cylinder and in a uniform plane at a right angle to the said axis, and each occupying the same segment of the circle that the corresponding printing plate occupies, combined with a series of inking mechanism corresponding in number to the printing plates and rib cams, each inking mechanism including a roll or rolls adapted to apply ink to the periphery of the cylinder and normally held out of contact therewith, and radially movable slides or arms, each having a projection arranged to co-operate with one and only one of said rib cams, as set forth. 3rd. In a colour printing press, a cylinder having a series of segmental printing plates, on its periphery, and a corresponding series of segmental ribs on its ends, said ribs having cam-shaped ends, and being located at different distances from the axis of the cylinder and in a uniform plane at a right angle to said axis, and each occupying the same segment of the circle that the corresponding printing plate occupies, combined with the series of inking mechanisms,

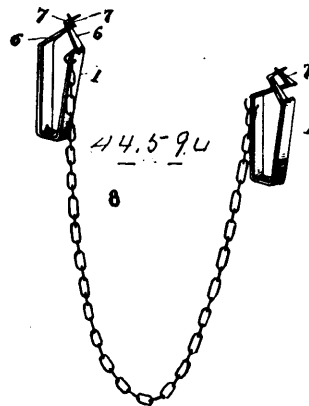
each including the slides i, i , having rolls at their inner ends arranged to co-operate with one of the rib cams, guides to direct the



movement of said slides, the inking rolls journalled in boxes at the outer ends of said slides, and the springs arranged to force said slides and rolls outwardly, as set forth. 4th. The combination with the cylinder and its rib cams and printing plates, of the slides i, i , having the rolls i^1, i^1 , the boxes h, h , movable in diagonal guides in the outer portions of said slides, the boxes m movable lengthwise of the slides, the inking rolls c, c , journalled in the boxes h, h , the rolls c^1 , journalled in the boxes m , said rolls c, c , being adjustable at an angle to the adjustment of the rolls c^1 , and the adjusting screws for adjusting said rolls, as set forth. 5th. The combination of the rolls c, c , and c^1 , the slides i , supporting the boxes of said rolls, the boxes m^3 , supported by the shafts of the rolls c^1 , the yoke n , supported by the boxes m^3 , and the roll e^3 , journalled in boxes supported by the yoke n , as set forth. 6th. The combination of the printing cylinder, a fixed ink box having an ink roll e^2 , suitable ink rolls arranged to receive ink from the roll e^2 , and a flexible shaft arranged to communicate motion from the shaft of the cylinder to the roll e^2 , as set forth. 7th. The combination with the cylinder b , and the impression cylinder s , mounted in spring supported boxes, of the toggle links t, t , engaged with said boxes, the toggle links u, u , engaged with the links t, t , the treadles u^4, u^4 , and the rods connecting said treadles with the links u, u , as set forth.

No. 44,594. Napkin and Paper Holder.

(*Porte-serviette et papier.*)



Christopher C. Scott, Celina, Ohio, U.S.A., 30th October, 1893; 6 years.

Claim.—1st. The herein described napkin holder consisting of a loop-shaped body formed of a spring metal, said body having its terminals pointed and offset from each other and adapted to be sprung past each other to engage a napkin or the like and to lock the same in position by their tendency of expansion, and a suspension device therefor, substantially as specified. 2nd. The holder for the purpose specified, consisting of two yielding bodies having reversely arranged shoulders and tapered fingers convergingly extended inward and past each other and bent outwardly adjacent their ends, and a chain connecting the two bodies, substantially as specified.

CERTIFICATES OF THE PAYMENT OF FEES FOR FURTHER TERMS HAVE BEEN ATTACHED TO THE FOLLOWING PATENTS.

3110. THE WORTMAN & WARD MANUFACTURING CO. (assignees), 3rd five years of No. 18,139, from the 21st day of November, 1893. Improvements in Harpoon Hay Forks, 2nd October 1893.
3111. THOMAS AHEARN, 3rd five years of No. 18,042, from the 10th day of November, 1893. Improvements in Watchman's Detectors, 5th October, 1893.
3112. EGERTON DE CEW and A. E. CARPENTER, 2nd five years of No. 29,983, from the 12th day of October, 1893. Improvements in machines for Soldering Caps on Fruit Cans, 5th October, 1893.
3113. E. E. ROBERTS, 2nd five years of No. 30,056, from the 29th day of October, 1893. Improvement in Steam Generators, 6th October, 1893.
3114. SAMUEL CUTLER, 2nd five years of No. 30,362, from the 10th day of December, 1893. Improvements in apparatus for supplying steam or fluid to the Cups of Telescopic Gas Holders, 6th October, 1893.
3115. W. J. DONALD, 2nd five years of No. 29,971, from the 10th day of October, 1893. Improvements in Crutch Attachments, 9th October, 1893.
3116. D. G. WYETH, 2nd five years of No. 29,980, from the 12th day of October, 1893. Improvements in Sleigh Runner Attachments for wheeled vehicles, 9th October, 1893.
3117. J. O. WISNER, W. S. WISNER and E. L. GOOLD, 3rd five years of No. 17,963, from the 24th day of October, 1893. Improvements in Combined Seeding and Drilling Machines, 9th October, 1893.
3118. R. S. SMYTH, 2nd five years of No. 29,964, from the 10th day of October, 1893. Improvements in Wagon Springs, 9th October, 1893.
3119. THE ROYAL ELECTRIC COMPANY (assignees), 3rd five years of No. 18,051, from the 10th day of November, 1893. Improvements on Electric Arc Lights, 10th October, 1893.
3120. THE ROYAL ELECTRIC COMPANY (assignees), 2nd five years of No. 18,052, from the 10th day of November, 1893. Improvements on Regulation of Electric Currents, 10th October, 1893.
3121. DAVID AIKMAN, 2nd five years of No. 29,979, from the 12th day of October, 1893. Improvement in Peat Fuel, 11th October, 1893.
3122. E. W. VANDUZEN, 3rd five years of No. 17,959, from the 24th day of October, 1893. Improvements in Steam Water Elevators, 13th October, 1893.
3123. A. F. WARD, 2nd five years of No. 30,019, from the 20th day of October, 1893. Improvements in Hoof Cutting Machines, 16th October, 1893.
3124. FRANK H. DURELL, 2nd five years of No. 30,016, from the 20th day of October, 1893. Improvements in Boom Sticks, 18th October, 1893.
3125. CHARLES E. PARKS, 2nd five years of No. 30,035, from the 22nd day of October, 1893. Improvements in Boxes or Crates, 18th October, 1893.
3126. THOMAS A. EDISON, 2nd five years of No. 30,013, from the 19th day of October, 1893. Improvements in Phonogram Blanks, 18th October, 1893.
3127. THOMAS A. EDISON, 2nd five years of No. 30,014, from the 19th day of October, 1893. Improvements in Phonographs, 18th October, 1893.
3128. THE SMEAD DOWD WARMING AND VENTILATING COMPANY (assignees), 2nd five years of No. 30,029, from the 22nd day of October, 1893. Improvements on Dry Closets, 19th October, 1893.
3129. EDWARD G. T. COLLES, 2nd five years of No. 30,018, from the 20th day of October, 1893. Improvements in Feed Water Heaters, 20th October, 1893.
3130. STEWART GRAFTON, 2nd five years of No. 30,051, from 26th day of October, 1893. Improvements in Spring Bed Bottoms, 20th October, 1893.
3131. H. S. BLACKMORE, 2nd five years of No. 30,100, from the 3rd day of November, 1893. Improvements in process for the manufacture of Sodium, 25th October, 1893.
3132. MILO COVEL, 2nd five years of No. 30,067, from the 30th day of October, 1893. Improvements in Saw Sharpening Machines, 25th October, 1893.
3133. MILO COVEL, 2nd five years of No. 30,116, from the 6th day of November 1893. Improvements in Saw Sharpening Machines, 25th October, 1893.
3134. JOEL BENNITT, 2nd five years of No. 30,039, from the 25th day of October, 1893. Improvements in Sad Irons, 25th October, 1893.
3135. W. A. NICHOLS, 2nd five years of No. 30,263, from the 22nd day of November, 1893. Improvements in Bridges, 28th October, 1893.
3136. EPHRAIM LATHAM and ETHAN A. SAWYERS, 2nd five years of No. 30,068, from the 30th day of October, 1893. Improvements in Metallic Strap Fasteners, 28th October, 1893.
3137. WILLIAM O. COOKE, 2nd five years of No. 30,055, from the 29th day of October, 1893. Improvements in Portable Frogs or Car Replacers, 28th October, 1893.
- 3137½. SAMUEL VESSOT, 2nd five years of No. 30,066, from the 30th day of October, 1893. Improvements in Car Axle Lubricating Apparatus, 30th October, 1893.

TRADE MARKS

Registered during the month of October, 1893, at the Department of Agriculture—
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4757. THE CRAVENETTE COMPANY, LIMITED, of Booth Street, Bradford, England. Waterproof Textile Fabrics, 2nd October, 1893.
4758. } J. H. MACFARLANE & J. C. MACFARLANE, of Montreal, Que., trading
4759. } as J. C. MACFARLANE & COMPANY. Cigars, 2nd October, 1893.
4760. M. B. FOSTER & SONS, LIMITED, of 27 and 29 Brook Street, Bond Street, London, England. Beer, Spirits, Wines, Liqueurs and Cordials (alcoholic), Cider and Perry, 3rd October, 1893.
4761. ZEPHIRIN ARCAND ET WILFRID ARCAND, faisant affaires sous la raison sociale de ARCAND ET FRERES, de Montréal, Qué. Café Hygiénique, 4 octobre, 1893.
4762. JAMES HARPER, of Montreal, Que. Pork, Hams, Bacon and Lard, and Compounds such as Head Cheese, 4th October, 1893.
4763. M. J. PENNINGTON, of Montreal, Que. Cigars and Cigarettes, 7th October, 1893.
4764. PH. VRAU ET COMPAGNIE, de Lille, Département du Nord, France. Fils à Coudre, 10 octobre, 1893.
4765. ARTHUR L. WORDEN, of Detroit, Michigan, U.S.A. Medicine, 11th October, 1893.
4766. H. N. BATE & SONS, of Ottawa, Ont. General Trade Mark, 12th October, 1893.
4767. GEROLSTEINER SPRUDEL W. CASTENDYCK, of Gerolstein, near Cologne, Germany. Mineral Waters, 18th October, 1893.
4768. S. HYMAN, of Montreal, Que. Cigars and Tobaccos, 10th October, 1893.
4769. ORMOND HIGMAN, of Ottawa, Ont. Plumbing Appliances, 23rd, October, 1893.
4770. THE EMERSON DRUG COMPANY, of Baltimore, Maryland, U.S.A. Granular Effervescent Salt, 23rd October, 1893.
4771. DE ROUBAIX, OEDENKOVEN & COMPANY, of Borgerhout, near Antwerp, Belgium. Candles of all kinds, Stearine and all the various products of Stearine, 26th October, 1893.
4772. JAMES PATERSON, of Warton, Ont. Rose Coloured Wafer or Lentiform Pill for Anæmia and Nervous Debility, 27th October, 1893.

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7068. SPARKS FOR YOUR TINDER. By Rev. G. R. White, B.A. With an Introduction by Rev. D. A. Steele, M.A. Wm Drysdale & Co., Montreal, Que., 2nd October, 1893.
7069. HAPPY HOURS. Polka Caprice (for piano). By J. A. Tupper-Noble. I. Suckling & Sons, Toronto, Ont., 2nd October, 1893.
7070. MA CHARMANTE. Polka de Salon (pour piano), par V. A. A. Mason. I. Suckling & Sons, Toronto, Ont., 2nd October, 1893.
7071. PUBLIC SCHOOL PHYSIOLOGY AND TEMPERANCE. By William Nattress, M.D., M.R.C.S. Eng. William Briggs (Book Steward of the Methodist Book and Publishing House), 2nd October, 1893.
7072. THE FISHERMAN. Duet. Words by Charles Santley. Music by Gabussi. Boosey & Co., London, England, 5th October, 1893.
7073. WILL O' THE WISP (Feu Follet), by W. Kuhe. Boosey & Co., London, England, 5th October, 1893.
7074. THE TROLLEY CAR ACCIDENT POLICY OF THE CANADA ACCIDENT ASSURANCE COMPANY (form). Thomas G. Hand, Toronto, Ont., 5th October, 1893.
7075. STORIES FROM CANADIAN HISTORY, based upon "Stories of New France." By Miss Machar and T. G. Marquis. The Copp, Clark Co., Ltd., Toronto, Ont., 6th October, 1893.
7076. LITTLE MAGGIE MONEHAN. Waltz Song. Words and Music by Walter Hawley. Whaley, Royce & Co., Toronto, Ont., 6th October, 1893.
7077. THE NIAGARA FALLS PARK AND RIVER RAILWAY (picture). The Niagara Falls Park and River Railway Co., Niagara Falls, Ont., 7th October, 1893.
7078. WELCOME QUADRILLE. Dedicated to Lady Aberdeen. Charlotte St. Amour, épouse de Louis Lefebvre, Montréal, Que., 7 octobre, 1893.
7079. THE WHITE CITY IONIC. A New Round Dance, by Prof. J. F. Davis, Toronto, Ont., 7th October, 1893.
7080. CROWE'S POCKET PARLIAMENTARY POINTER. Harry Slater, Windsor, Ont., 7th October, 1893.
7081. TRADER'S, INVESTMENT, PREMIUM, SYSTEM (book). Elijah Kitchen Barnsdale, Stratford, Ont., 11th October, 1893.
7082. HISTORY OF BRITISH COLUMBIA. By O. H. Cogswell, B.A., Victoria, B.C., 17th October, 1893.
7083. SIR GEORGE ETIENNE CARTIER (gravure sur acier). Eusébe Senécal & fils, Montréal, Que., 18 octobre, 1893.
7084. DANS LE CAMP ENNEMI, par Z. Lacasse, O.M.I., Montréal, Que., 18 octobre, 1893.
7085. THE FRENCH TEACHER. A New Method of Teaching and Learning the French Language. First Part. By Louis Tesson, Montreal, Que., 18 octobre, 1893.
7086. THE BIRKBECK INVESTMENT, SECURITY AND SAVINGS COMPANY OF TORONTO (circular D). The Birkbeck Investment Security and Savings Co., Toronto, Ont., 20th October, 1893.
7087. THE ANGELS' SONG. Transcription of "La Serenata de Braga" by Theodore Martens. Op. 12. I. Suckling & Sons, Toronto, Ont., 21st October, 1893.
7088. MASS OF THE BLESSED VIRGIN MARY (in E Flat) by Prof. J. A. Fowler. I. Suckling & Sons, Toronto, Ont., 21st October, 1893.
7089. GRANT, WE BESEECH THEE, MERCIFUL LORD. Collect for the 21st Sunday after Trinity. Music by J. E. P. Aldous, Hamilton Ont., 25th October, 1893.
7090. TWILIGHT. Fantasia for the Guitar, by R. Arnold Reade. The Anglo-Canadian Music Publishers' Association, Ltd., London, England, 25th October, 1893.

7091. A THIRD PERSON. By Mrs. B. M. Croker, William Bryce, Toronto, Ont., 25th October, 1893.
7092. SWEET LILLIAN. Song. Words and Music by Walter Hawley. Whaley, Royce & Co., Toronto, Ont., 25th October, 1893.
7093. PAINES CELERY COMPOUND RECORD AND REGISTER. The Wells & Richardson Co., Montreal, Que., 25th October, 1893.
7094. TIME BOOK FOR STREET RAILROAD EMPLOYEES. Maria E. Allen, Toronto, Ont., 26th October, 1893.
7095. GAGE'S BOOK-KEEPING BLANK FOR PRIMARY EXAMINATION AND COMMERCIAL CERTIFICATES. By R. H. Eldon. W. J. Gage, Toronto, Ont., 27th October, 1893.
7096. JACK'S GOOD-BYE. Words and Music by Jeanette Wilkes, Montreal, Que., 27th October, 1893.
7097. ABERDEEN JERSEY. By A. E. Linton, Ottawa, Ont., 27th October, 1893.
7098. SOUVENIR MEDAL OF STEAMER "BEAVER"; ALSO COMMEMORATIVE OF AMERICA'S FOUR HUNDREDTH ANNIVERSARY. Charles Wesley McCain, Vancouver, B.C., 28th October, 1893.
7099. RAPPORTS JUDICIAIRES REVISÉS DE LA PROVINCE DE QUEBEC, par l'Hon. M. Mathieu. Tome VII. Wilfrid John Wilson, Montréal, Que., 28 octobre, 1893.
7100. LOCAL TIME TABLE PRINCE EDWARD ISLAND RAILWAY AND STEAMERS, 1893. Horace Haszard, Charlottetown, P.E.I., 30th October, 1893.
7101. THE BELL TELEPHONE COMPANY OF CANADA (LIMITED) QUEBEC SUBSCRIBERS' DIRECTORY, OCTOBER, 1893. The Bell Telephone Company of Canada, Ltd., Montreal, Que., 30th October, 1893.
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