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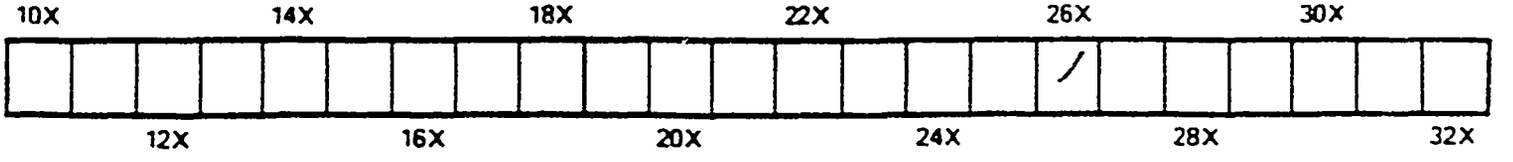

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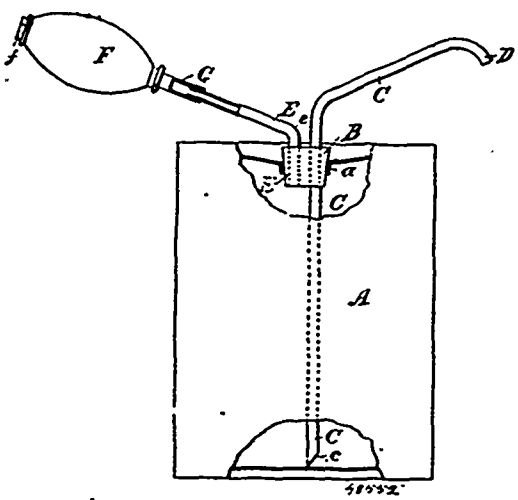
No. 48,552. Oil Can. (*Bidon à huile.*)

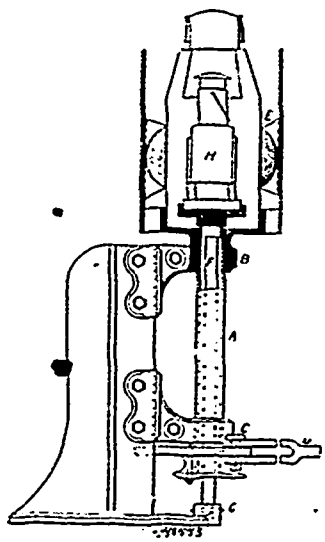


William Henry Hay and Joseph Robert Cameron, both of Ottawa, Ontario, Canada, 1st April, 1895; 6 years.

Claim.—1st. In a device for drawing off the contents of a vessel consisting of a plug or stopper placed in an aperture in the upper part of the said vessel, two tubes passing through the said plug, one of the said tubes reaching down to or near the bottom of the said vessel and having its upper end above the plug bent and finishing with a downturned end, the other tube passing through the said plug but finishing above the level of the liquid, that may be contained in the said vessel, the upper end of the said tube being provided with a flexible bulb having a valve and adapted to force air into the said vessel, substantially as set forth. 2nd. In a device for drawing off liquids from vessels, the combination with the plug B adapted to fit in an aperture in the upper part of a vessel, the tube C passing through said plug and having its lower end bevelled off, the upper end of the said tube being downturned, of the tube E passing through the said plug, the lower end of the said tube finishing above the surface of the liquid contained in the said vessel, a flexible bulb F, having a valve *f* detachably secured to the upper end of the said tube E, substantially as set forth.

No. 48,553. Switch Indicator Signal.

(*Signal d'indicateur d'aiguille de chemin de fer.*)

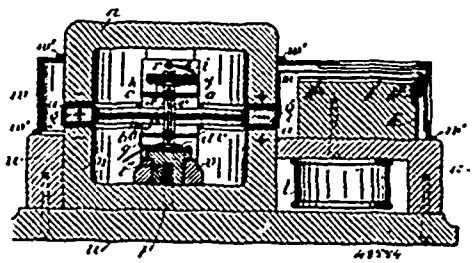


The Canada Switch Manufacturing Company, Montreal, Quebec, Canada, assignee of Charles Hodgson, Canterbury Road, England, 1st April, 1895; 6 years.

Claim.—A railway switch indicator constructed with its lamp fixed on a stationary central rod or tube, and the lantern inclosing the lamp fixed on an internal rotating tube, substantially as described.

No. 48,554. Ammeter and Voltmeter.

(*Ammètre et voltmètre.*)



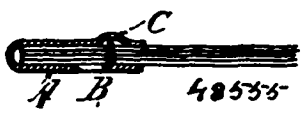
Edward W. Jewell and William Zimmerman, both of Chicago, Illinois, U.S.A., 1st April, 1895; 6 years.

Claim.—1st. The combination with bell-shaped magnets and annular armature between their poles, of a counteracted conductor surrounding said armature, an index, and a scale, substantially as specified. 2nd. The combination with permanent and similarly

magnetic fields with a fixed armature and a scale, of an index and a looped conductor surrounding said armature and mechanism to counteract said conductor, substantially as specified. 3rd. The combination with permanent magnetic fields with armature of substantially like radial area, of a pivoted conductor surrounding said armature, impelled in said field, and mechanism to return it to its starting point, substantially as specified. 4th. The combination with permanent and similar magnetic fields with armature and a scale, of an index and a looped conductor surrounding said armature and means to counteract said conductor, substantially as specified. 5th. The combination with a permanent positive and negative pole with armature of substantially like radial area as said field, of a resisting couple and deflecting conductor on coincident centres, substantially as specified. 6th. The combination with a magnetic field and armature, scale and mirror of a deflecting coil surrounding said armature, with index to said scale on said coil, substantially as specified. 7th. The combination with a magnetic field having an armature, scales at or near right-angle to each other, of a deflecting coil surrounding said armature, with index for both of said scales, substantially as specified. 8th. The combination with circular permanent and similar magnetic fields and armature therefor and a scale, of a movable looped conductor surrounding said armature centered in said field, an index to said scale and means to counteract said conductors, substantially as specified. 9th. The combination with a scale, circular, permanent, and similarly magnetic fields and armature therefor with same axial centres, of movable diametrically opposed looped conductors surrounding said armature, on said centre, and index to said scale on said conductor and means to counteract said conductors, substantially as specified. 10th. The combination with a series of scales placed at different angles to each other, circular, permanent, and similarly magnetic fields facing each other and armature therefor with same axial centres, of movable, looped, diametrically opposed conductors surrounding said armature on said centre, an index to said scales on said conductor and means to counteract said conductor, substantially as specified. 11th. The combination with one or more scales and mirror acting therewith, circular, permanent and similarly magnetic fields and armature therefor with same axial centres, of movable, diametrically opposed, looped, conductors surrounding said armature, on the same centre, an index to said scales, on said conductor, and means to counteract said conductors, substantially as specified. 12th. The combination with permanent magnetic fields with a fixed armature and movable looped and counteracted conductors surrounding said armature with index thereon, and scale, of a resistance coil in circuit with said parts, substantially as specified. 13th. The combination with permanent similarly magnetic and opposite fields with a fixed armature surrounded by a moving looped counteracted conductor, an index, on said conductor, of a resistance coil and scale, substantially as specified. 14th. The combination with an armature and a pivoted deflecting coil thereon, of a concentrically pivoted index-adjusting support, substantially as specified. 15th. The combination with magnetic field and superimposed armature, of substantially like radial area whereby said armature receives its magnetic flux from its sides instead of its edges, of a pivoted and looped conductor moving on said armature and mechanism to return it to its starting point, substantially as specified.

No. 48,555. Paper Fastener and Suspender.

(*Œillet à papier.*)

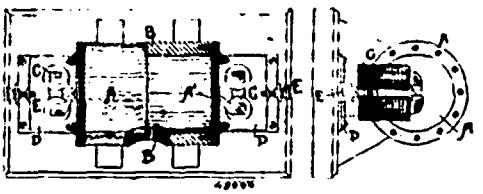


Samuel Henry Crocker, London, England, 1st April, 1895, 6 years.

Claim.—1st. An improved paper fastener or suspender consisting of a strip of thin sheet metal bent or doubled over to form two arms, one of which is provided with a spike projecting towards the other arm and this second arm is provided with a depression, formed by bulging or bending out the metal, into which the point of the spike can enter, substantially as described and for the purposes specified. 2nd. An improved paper fastener or suspender formed from a blank of thin sheet metal, the middle portion of which is reduced in width, bent or doubled over at that portion and formed on one side with a projecting spike, and on the other with a depression into which the spike can enter when applied to the papers, substantially as and for the purposes specified. 3rd. An improved paper fastener or suspender stamped from a metal blank doubled over at the middle, and formed with a depression on one side and a spike stamped from the other a short distance from the extremity, substantially as described and shown. 4th. In an improved paper fastener or suspender of the kind heretofore described, having a depression in one arm, the spike B^1, formed at the extremity of the other arm as shown in the drawings. 5th. An improved paper fastener and suspender formed from a metal blank by cutting and bending over the middle portion of one end upon the other forming a loop for purposes of suspension, and two arms for holding the paper, one with a small spike projecting towards the other arm, and the other with a recess to receive the spike, substantially as described and shown.

No. 48,556. Synchronism Indicator.

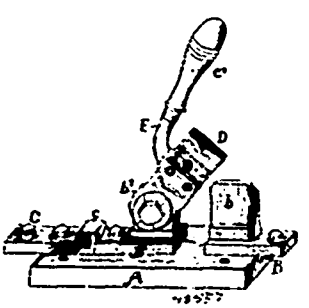
(*Indicateur synchronisme.*)



The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Louis Bell, Chicago, Illinois, U.S.A., 1st April, 1895; 6 years.

Claim.—1st. The method of indicating synchronism or lack of synchronism between two or more machines of the alternating current type, which consists in setting up sound waves corresponding in periodicity with the current waves of the respective machines, which sound waves are free to interfere with one another and give rise to beats if of unequal periodicity so that the resulting sound beats indicate inequality in speed of the machines, as set forth. 2nd. The method of indicating synchronism or lack of synchronism between two or more electric machines of the alternating current type, which consists in setting up by the magnetic effects of the currents of such machines distinctive series of sound waves corresponding respectively in periodicity with the current waves of such different machines, which sound waves by their interference, if unequal in period, give rise to beats, and thereby indicate audibly the presence or absence of synchronism, as described. 3rd. An indicator for indicating synchronism between two or more alternating current electric machines consisting of diaphragms or vibrators in an acoustic medium, and means whereby each machine imparts to a corresponding diaphragm or vibrator, vibrations corresponding in periodicity to the current waves of such machines, for the purpose described. 4th. An indicator for indicating synchronism or lack of synchronism between two or more alternating current machines which consists of separate magnets responding respectively to the current waves of the different machines, and a magnetic diaphragm in intimate magnetic relation to each such magnet, whereby equality or inequality in the periods of the sound waves caused by the diaphragms may be detected by the ear to indicate synchronism of the machines. 5th. An indicator for indicating synchronism between two or more alternating current machines consisting of magnetic diaphragm placed opposite one another in a more or less confined sounding chamber, a magnet in intimate magnetic relation to each diaphragm, and circuit connections from the different machines whereby the magnet impulses in the magnets respond accurately to the current waves of the respective machines. 6th. The combination in an indicator for the purpose described, of transformers the primaries of which respectively are in circuit with the machines, and magnets connected respectively in the secondary circuits thereof, with means for indicating audibly synchronism of the machines, comprising vibrators whose vibrations are caused by and keep time with the magnetic impulses produced in said magnets by reason of their connections with the machines.

No. 48,557. Electric Switch. (*Aiguille électrique.*)

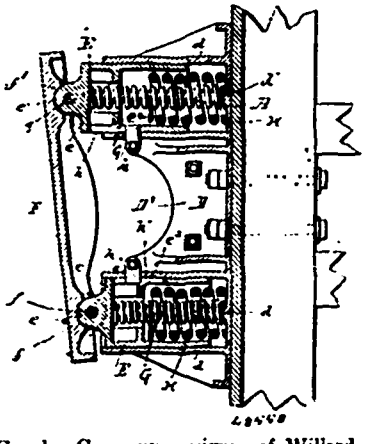


The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Albert B. Herrick, Schenectady, New York, U.S.A., 1st April, 1895; 6 years.

Claim.—1st. A switch comprising an insulated base, a pair of terminal metal plates fastened thereto and formed with integral contact lugs projecting from them, the opposite sides of said lugs being finished in parallel planes in line with one another, a pair of flat elastic metal blades arranged to embrace the respective lugs between them flatwise to close the switch, and a block interposed between said blades, fastened to them, and by which they are moved. 2nd. A switch comprising an insulated base, a pair of terminal metal plates fastened thereto and formed with integral contact lugs projecting from them, the opposite sides of said lugs being finished in parallel planes in line with one another, a pair of flat elastic metal blades arranged to embrace the respective lugs between them flatwise

to close the switch, said blades being pivoted to one lug and movable around it to bring their free ends into or out of contact with the opposite lug, a block interposed between said blades and fastened to them, and a handle projecting from said block by which to swing the blades. 3rd. A switch comprising an insulating base, a pair of terminal plates fastened thereto and formed with respective contact lugs projecting from them, the opposite sides of said lugs being finished in parallel planes in line with one another, a pair of elastic blades adapted to embrace the respective lugs between them to close the switch, and a block interposed between said blades to which they are fastened and by which they are moved, the opposite faces of said block being finished in parallel planes coincident with those of the lugs. 4th. A snap-switch comprising a movable member adapted to form a bridge between the stationary terminal plates, one of said plates having a projecting shoulder combined with a spring-pressed snap-tongue carried by said movable member, and adapted during the opening movement of the switch to engage and be restrained by said projecting shoulder until by the movement of said movable member it is drawn out of engagement with said shoulder, whereupon it overtakes the movable member by a quick snap action adapted to break any arc that may form at the points of separation. 5th. A snap-switch comprising two stationary terminals, one of said terminals having a projecting shoulder, and a movable member adapted to constitute a conducting bridge between them, combined with a snap-tongue carried by said movable member drawn toward it by spring pressure, and arranged to engage said projecting shoulder and be restrained thereby during the opening movement of the switch until after said movable member has itself parted contact with said terminal, after which by the continued movement of said movable member said tongue is disengaged from said shoulder and springs toward the movable member, whereby the arc resulting from the breaking of the circuit is formed between said tongue and shoulder, and the normal contact surfaces between the terminal and movable members are preserved from oxidation. 6th. A snap-switch consisting of two stationary lugs constituting the respective terminals, a pair of elastic blades adapted to embrace the lugs between them and constituting the movable member, and a snap-tongue pivotally connected to said blades in conductive contact therewith, pressed toward them by spring pressure, and a projecting shoulder formed on one of the terminal lugs adapted to engage the free part of said tongue during the opening movement of the switch and restrain it until the blades have parted contact with said lug, after which by the continued movement of the blades, the tongue disengages itself from said shoulder and flies toward the blades. 7th. A snap-switch comprising stationary lug constituting one terminal, a pair of elastic blades pivoted thereto, a stationary lug constituting the other terminal, and formed with a projecting shoulder, an operating lever or carrier connected to said blades by which they are moved to open or close the switch and a spring-pressed tongue carried by said blades and having its free end arranged to be engaged by said shoulder and restrained thereby during part of the opening movement of the switch. 8th. The combination to form a snap-switch of the terminals B B^1, one of them formed with projecting shoulder b^{11}, elastic blades D, D, handle E, and spring-pressed snap-tongue G, pivoted between said blades and having its free end arranged to engage said shoulder. 9th. The combination to form a snap-switch of terminal plates B, B^1, one of them formed with projecting shoulder b^{11}, and inclined face b^{12}, elastic blades D, D, pivoted to the opposite terminal, handle E, snap-tongue G, provided with slotted pivotal connection h, i, at one end, by which it is joined to said blades, and a spring s, for drawing said tongue toward the blades.

No. 48,558. Car Buffer. (*Tampon de chars.*)

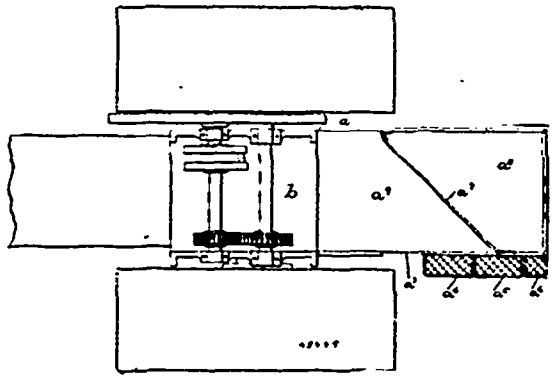


The Gould Coupler Company, assignee of Willard F. Richards, Buffalo, both of New York, U.S.A., 1st April, 1895; 6 years.

Claim.—1st. The combination with two sockets arranged on the outer side of the end sill of the car, of tubular followers guided in said sockets, light extension springs bearing with their front and rear ends respectively against the front portions of the followers and the bare portions of the sockets, short, heavy buffer springs arranged in the sockets and adapted to receive the followers against their front ends when the light springs have been partially compressed, and a buffer plate pivoted with its end portions to the front ends of the followers, substantially as set forth. 2nd. The combination with a bracket or base plate secured to the end of the car and having a forwardly projecting socket, of a tubular follower guided in said socket, open at its rear end and closed at its front end, a light extension spring arranged in said follower and socket and bearing at its outer end against the closed front end of said follower, a heavy buffer spring adapted to bear at its front end against the follower when the light spring has been partially compressed, and a buffer carried by said follower, substantially as set forth.

No. 48,559. Tender for Road Engines.

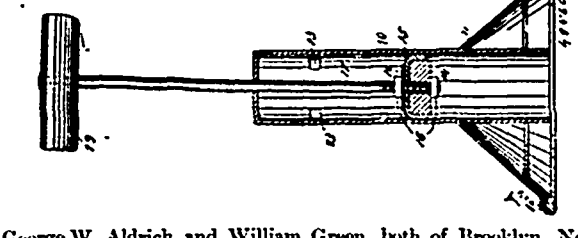
(*Tender pour locomotives de routes sans rails.*)



The O. S. Kelly Company, assignee of Edward T. Wright, both of Springfield, Ohio, U.S.A., 1st April, 1895; 6 years.

Claim.—1st. A tender for road engines consisting essentially of a rectangular casing having a horizontal partition, with a water tank in the bottom thereof, and an open-top projecting portion having a side opening above said partition, and a diagonally-arranged partition to form a combined fuel bunker and foot board above said tank, substantially as specified. 2nd. In a tender for road engines, a water tank superimposed compartment having a side opening, and a diagonal partition extended across said compartment to form a foot board and fuel bunker, respectively, and laterally projecting steps leading to said opening, substantially as specified.

No. 48,560. Force Pump. (*Pompe foulante.*)



George W. Aldrich, and William Green, both of Brooklyn, New York, U.S.A., 1st April, 1895; 6 years.

Claim.—1st. In a pump, the combination of a barrel having one end open and provided with a port at the other end, a piston arranged in the barrel and adapted to be raised above the port at the upper end of the barrel, a cone secured to the open end of the barrel, a coned ring secured to said cone, with its edge spaced apart from the edge thereof, whereby an annular socket is formed, and a packing ring located in said socket, substantially as specified. 2nd. A pump, comprising a barrel open at its lower end and provided with ports near the top, a hollow cone encircling the barrel and secured thereto, a packing ring at the lower edge of the cone, a piston slidable in the barrel and adapted to be raised above the ports thereof, and a handle for the piston, substantially as specified.

No. 48,561. Pass Book. (*Livre de comptes.*)

The Eureka Cash and Credit Register Company, assignee of Warren F. Beek, and Uriah G. Beek, all of Elmira, New York, U.S.A., 1st April, 1895; 6 years.

Claim.—1st. A pass-book having a series of pass-leaves or sheets,

each provided at its outer longitudinal edge with a series of detachable coupons marked to indicate monetary values increasing in amount from top to bottom of the sheet, and separated from the pass-leaves by a vertical line of perforations, said pass-leaves being secured at their inner vertical edges to the book and having spaces

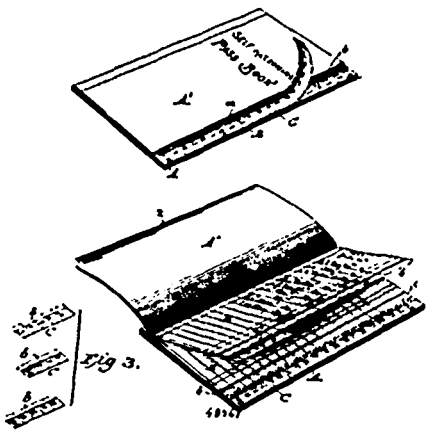
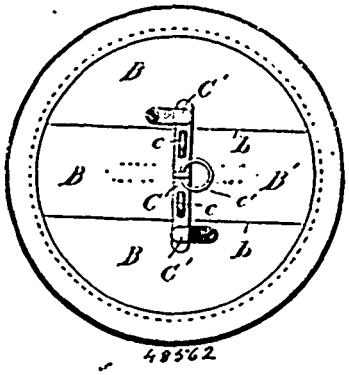


Fig 3.

for itemized entries of the purchases, and for totalling each purchases to indicate the number of coupons to be detached. 2nd. A pass-book having a series of leaves or sheets, each provided with a series of detachable coupons at its outer edge, in combination with a cover, the front of which registers with the inner edges of the coupons. 3rd. A pass-book having a series of leaves or sheets, each provided with a series of detachable coupons at its outer edge, separated from each other by perforations, and from the sheet by perforations, in combination with a cover, the front of which has its outer edge arranged to register with the perforations which separate the coupons from the sheet. 4th. A pass-book having a series of sheets each provided with a series of detachable coupons marked to indicate monetary values increasing in amount from top to bottom of the sheet, said coupons having spaces left at the right of the numbers for the entry of other numbers and the pass-leavers or sheets having blank spaces for itemized entries of the purchases and for totalling each purchase to indicate the number of coupons to be detached. 5th. A pass-book comprising a series of sheets or leaves, each having detachable coupons at its outer edge marked to indicate values increasing in amount from top to bottom of the sheet, and each coupon being also marked to indicate the value of all the coupons in the book remaining after the preceding coupons have been detached, the pass-leaves having spaces for itemized enteries of the purchases and for totalling each purchase to indicate the number of coupons to be detached.

No. 48,562. Removable Barrel and Pail Head.

(*Couvercle mobile de baril et seau.*)

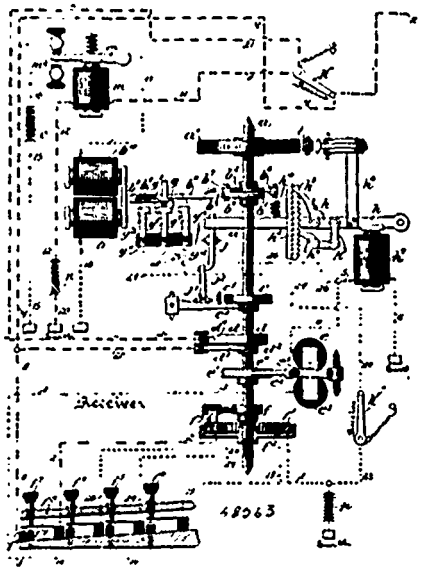


48562

The E. B. Eddy Company, assignee of George Henry Millen, both of Hull, Quebec, Canada, 1st April, 1895; 6 years.

Claim.—1st. The combination in a removable head of a barrel or similar receptacle, of two side pieces and a central piece bevel jointed so as to be wedge shaped in cross section as ' forming together a complete head, the central piece made in two lengths joined together by a rule joint, a swivel secured to one of the centre pieces adapted to extend over its edges and two catches secured to the side pieces, substantially as set forth. 2nd. The combination of two side pieces and a centre strip in two lengths together forming a complete head for a barrel or similar receptacle, the transverse joint of the centre piece rule jointed, a swivel secured to one of the centre pieces and two catches secured to the side pieces, substantially as set forth.

No. 48,563. Printing Telegraph. (*Télégraphe imprimant.*)



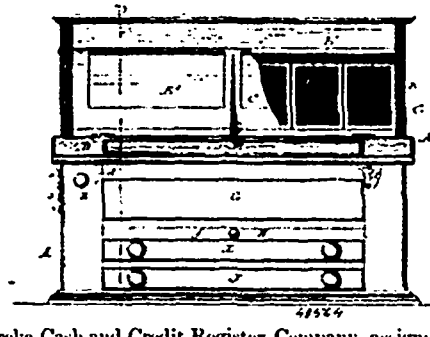
48563

Robert Ashworth Fowden, Philadelphia, Pennsylvania, U.S.A., 1st April, 1895; 6 years.

Claim.—1st. In a printing telegraph system, a printing circuit, an electric motor, and a vibrating mechanical and centrifugal acting circuit closer and breaker operating to close and interrupt said circuit, substantially as and for the purposes set forth. 2nd. In a printing telegraph system, a circuit, an electric motor included therein and connected with a shaft controlling a type-wheel, and a vibrating mechanical and centrifugal acting circuit closer and breaker operating to close and interrupt said circuit, substantially as and for the purposes set forth. 3rd. In a printing telegraph system, a circuit, an electric motor included therein and connected with a shaft controlling a type-wheel, and a spring controlled vibrating mechanical and centrifugal acting circuit closer and breaker operating to close said circuit and to interrupt the same by the centrifugal action thereof, substantially as and for the purposes set forth 4th. A printing telegraph system, comprising a generator and line circuit, an electric motor included in a local circuit and controlling a shaft provided with a type-wheel, and a spring controlled and centrifugal acting circuit closer and breaker operating to effect printing from said type-wheel by the closing and interrupting of said line circuit, substantially as and for the purposes set forth. 5th. A printing telegraph system, comprising a receiver and a transmitter normally operated by motors and local circuits controlled by relay electro-magnets responding to makes and breaks produced in line by a circuit interrupter on the type-wheel shaft of the transmitter, a local printing circuit, a spring controlled mechanical and centrifugal acting circuit breaker and closer operating by the depression of a key at the transmitter to effect an impression and arrest the type-wheel shaft before the completion of the stroke of the motor thereat and before the circuit interrupter makes and breaks the line circuit, whereby the relay electro-magnet through the spring controlled armature lever causes the motor to arrest the receiver type-wheel shaft, and whereby the motors of both instruments are permitted to again start upon the release of said key at the transmitter and by the completion of the partial stroke of the motor thereat, substantially as and for the purposes set forth. 6th. A printing telegraph system, comprising a transmitter and a receiver each having a relay electro-magnet responding to makes and breaks in the normal line circuit produced by an interrupter on the type wheel shaft of the transmitter, a motor operating the driving shaft and controlled by the armature-lever of said relay electro-magnet through circuit connections, a vibrating spring controlled mechanical and centrifugal acting circuit closer and breaker, and a unison-latch adapted to arrest its type-wheel shaft with the retracting spring of the motor in tension and with the circuit interrupter in position for breaking the normal line circuit, whereby the motors are permitted to start under the influence of their retracting springs and by the release of the type-wheel shafts, substantially as and for the purposes set forth. 7th. A printing telegraph system, comprising a transmitter and a receiver and each provided with a motor responding to makes and breaks in a line circuit and adapted to drive the type-wheel shaft, a vibrating spring controlled mechanical and centrifugal acting circuit closer and breaker, a unison device for locking the type-wheel shaft in such position that the retracting spring of the motor tends to start it, a detent locking said shaft, electro-magnets for operating said unison-latch and detent, a double contact unison key at the transmitter for controlling the local printing circuit to release said unison device and lock and unlock the transmitter type-wheel

shaft and for controlling the unison line circuit to release said unison device and lock and unlock the receiver type-wheel shaft through the intervention of a relay electro-magnet and a local circuit, substantially as and for the purposes set forth. 8th. A printing telegraph system, comprising a single line conductor adapted to be included in a unison line circuit, a transmitter and receiver normally operated by motors responding to makes and breaks in said circuit and provided with means for automatically closing the same at the unison position and at other positions, local motor circuits at each instrument, a local printing circuit, a spring controlled vibrating mechanical and centrifugal acting circuit closer and breaker controlled by a key at the transmitter and a local printing circuit controlled by the motor electro-magnet of the receiver, a local unison circuit and devices controlled by a unison-key at the transmitter and a local unison circuit and devices controlled by a relay and its spring controlled armature-lever at the receiver, substantially as and for the purposes set forth. 9th. A printing telegraph system, comprising a single line conductor, combined transmitters and receivers normally operated through relay electro-magnets controlling the local circuits of motors and responding to makes and breaks in said line circuit and provided respectively with two sets of local unison and printing circuits, a spring controlled mechanical and centrifugal acting circuit closer and breaker adapted to include one set of local circuits at unison position and the other set at the other positions, and manual-switches for changing the circuits to cause the instruments to operate as transmitters and receivers, substantially as and for the purposes set forth. 10th. A printing telegraph system, comprising a receiver and transmitter having printing and locking electro-magnets and devices, relay electro-magnets, a mechanical and centrifugal acting circuit closer and breaker at the receiver adapted to control a local unison circuit through the armature-lever of said relay electro-magnet and the coils of the printing electro-magnet of the receiver, a double contact unison key adapted to close a local unison circuit through the coils of said printing and locking electro-magnets of the transmitter and to close a unison line circuit through the coils of the relay electro-magnet at the receiver, substantially as and for the purposes set forth. 11th. In a printing telegraph system, comprising a receiver, and a transmitter having printing and locking electro-magnets and devices, a relay electro-magnet at the receiver adapted to control a local unison circuit through its armature-lever and the coils of said printing electro-magnet at the receiver, a mechanical circuit closer and centrifugal acting breaker, a double contact unison key adapted to close one branch of said circuit through the coils of the printing and locking electro-magnets of the transmitter and to close the other branch through a resistance and the coils of the relay electro-magnet at the receiver, substantially as and for the purposes set forth. 12th. In a printing telegraph system, a receiver provided with a unison electro-magnet, a local circuit through the coils of said magnet and adapted to be made and broken by the armature-lever, of a relay magnet responding to makes and breaks in line, a motor, a vibrating mechanical circuit closer and breaker controlled thereby and adapted to close said local circuit through the unison magnet only at unison position, substantially as and for the purposes set forth. 13th. In a printing telegraph system, a transmitter provided with a local printing circuit independent of the line circuit, keys and a type-wheel shaft locking magnet interposed in said local circuit, a receiver provided with a local printing circuit and its accessories, a motor, a vibrating and centrifugal acting aircuit closer and breaker adapted to automatically permit of the printing upon the arrest of the receiver type-wheel shaft, electrical and mechanical devices and circuits independent of the local circuits and keys operating upon the arrest of the type-wheel shaft, of the transmitter to stop said motor of the receiver, substantially as and for the purpose set forth. 14th. In a printing telegraph system, the combination of a revoluble shaft provided with a type-wheel having characters and blank spaces, means for arresting said shaft with the divisions of the type-wheel in the printing position, mechanical and electrical devices, a local printing circuit, a motor, a mechanical swinging circuit closer and centrifugal acting interrupter, a wheel on said shaft provided with recesses, in alignment with the characters on the type-wheel and the blank spaces thereof, substantially as and for the purposes set forth. 15th. In a printing telegraph system, an armature lever provided with printing, feeding and unison latch actuating devices and having an electro-magnet and local circuit connections independent of the line circuit and controlled by keys at the transmitter and by a mechanical swinging circuit closer and centrifugal acting interrupter at the receiver, substantially as and for the purposes set forth. 16th. In a printing telegraph system, a spring controlled unison-latch, a system of levers for operating said latch, a printing and paper feeding armature-lever provided with a wedge in sliding engagement with one of said levers, a mechanical swinging circuit closer and breaker, and an electro-magnet and circuit connections for actuating the same, substantially as and for the purposes set forth. 17th. In a printing telegraph system, a unison latch, levers for operating said latch, an armature lever actuating printing devices in sliding engagement with one of said levers, a mechanical vibrating and centrifugal acting circuit closer and breaker, and an electro-magnet and circuit connections for controlling said circuit closer and breaker, substantially as and for the purposes set forth. 18th. In a printing telegraph system, a spring controlled unison latch, a system of levers for operating said latch, a pivotal printing hammer, an armature-lever provided with an arm having a projection in range of a rod on the printing hammer and with a wedge for operating the system of levers, of vibrating circuit closer and centrifugal acting breaker, and an electro-magnet and circuit connections for controlling said circuit closer and breaker, substantially as and for the purposes set forth. 19th. In a printing telegraph system, a unison latch, levers for operating said latch, a printing hammer, an armature-lever provided with pawl-and-ratchet connections for feeding a paper-carriage and operating said levers, a projection on said armature-lever disposed in range of a rod on the printing-hammer, a mechanical vibrating and centrifugal acting circuit closer and breaker, and an electro-magnet for actuating said armature-lever, substantially as and for the purposes set forth. 20th. In a printing telegraph system, a printing mechanism, a paper-carriage, a type-wheel shaft provided with a unison spiral and with ratchet and stop-wheel, a reciprocating-bar provided with pawls and detents co-operating with said ratchet and stop-wheels, a spring controlled armature-lever connected with said bar, a motor electro-magnet interposed in a local motor circuit controlled by the armature-lever of a relay electro-magnet responding to makes and breaks in line, a printing and unison electro-magnet and circuit connections having an armature-lever provided with devices for actuating the unison latch, printing mechanism and paper-carriage, and a mechanical vibrating circuit closer and breaker included in said local motor circuit, substantially as and for the purposes set forth. 21st. A printing telegraph system, comprising a double contact unison key, circuit connections, a type-wheel and a type-wheel shaft, a relay electro-magnet and its circuit connections, a motor, and a mechanical swinging circuit closer and centrifugal acting breaker adapted to synchronously release the type-wheel shaft through said relay and circuit connections, substantially as and for the purposes set forth. 22nd. In a printing telegraph system, transmitting and receiving instruments, relay electro-magnets for controlling said instruments, a line through the coils of said relay electro-magnets, circuit interrupters on the type-wheel shaft of each instrument, a manual-switch at each instrument for controlling line and local circuits and for permitting an instrument being used either as a transmitter or receiver, a mechanical swinging and centrifugal acting circuit maker and breaker, and mechanical and electrical devices adapted to effect impressions upon the arrest of one of the instruments on makes and breaks of current at the transmitting and receiving instruments, substantially as set forth. 23rd. A printing telegraph system, comprising a transmitter and a receiver each having an electro-magnet to reciprocate a spring controlled bar provided with pawls and detents co-operating with ratchet and stop wheels mounted on type-wheel shafts of both instruments, a line circuit formed out of a local circuit at the transmitter, a relay electro-magnet included in said line circuit and adapted to close the local motor circuit at the receiver and to partially move said motor bar without actuating said type-wheel shaft of the receiver and at the same time to move a mechanical vibrating and centrifugal acting circuit closer and breaker out of unison position so as to close a local printing circuit through the coils of said printing electro-magnet at the receiver, whereby the unison latch of the unison spiral device is liberated and the type-wheel shaft of the receiver is simultaneously released with the type-wheel shaft of the transmitter and permitted to operate in unison with each other upon the release of a unison key at the transmitting instrument, substantially as and for the purposes set forth.

No. 48,564. Cabinet. (*Cabinet.*)

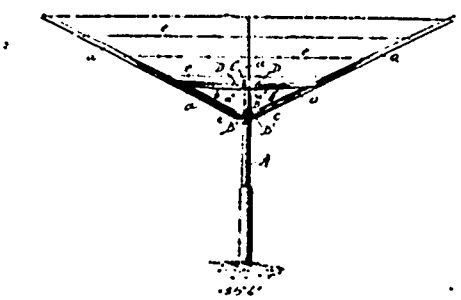


The Eureka Cash and Credit Register Company, assignee of Warren F. Beck and Uriah G. Beck, all of Elmira, New York, U. S.A., 1st April, 1895; 6 years.

Claim.—1st. A cabinet provided with a hinged lid having locking devices on the inside, a money drawer below the hinged lid, means for opening and closing the money drawer, a solid bottom *f* below the money drawer, one or more drawers having compartments for coupons and provided with indexed lids, and a slide below the solid bottom provided with an index to the compartments. 2nd. A cabinet provided with one or more drawers having a series of rows of compartments for holding coupons, and each compartment having a lid suitably indexed, a slide provided with an index to the com-

partments, and a receptacle at the top of the cabinet for holding *pass-books*. 3rd. *A cabinet provided at its upper front portion* with a hinged lid provided with a receptacle for a pad of register sheets, locking devices inside the cabinet for securing the lid in position, a receptacle for holding the pass-books in rear of the register sheet and above them, a money drawer immediately below the hinged lid, and one or more drawers divided into a series of rows of compartments for holding coupons. 4th. The combination of a cabinet-case, a money drawer, means for moving the money drawer outwardly, devices for locking the drawer, a rod for operating the drawer-locking devices, a lever or arm engaging with the rod, and an inkstand arranged in the cabinet below an opening therein through which a pen extends that limits the movement of the arm, for the purpose specified. 5th. The combination of a cabinet-case and money drawer, means for moving the money drawer outwardly, devices for locking the drawer, a rod for operating the drawer-locking devices, a lever or arm engaging with the rod, and an opening in the case through which a pen or locking device may be inserted into position in front of the arm. 6th. The lid herein described, made of a single piece of sheet metal having the lugs k^8 at opposite sides turned forward and inward to hold a strip of paper, lugs or projections k^9, k^{10} turned forward and inward towards each other to hold a card, other projections k^{11} turned backward and inward to hold another card, and spring tongues K^1 to hold another slip of paper or card. 7th. The combination of a case, a money drawer, devices for locking the drawer, a push rod for operating the drawer-locking devices, a pivoted lever or arm engaging the rod, and devices for locking the lever or arm, for the purpose specified. 8th. A cabinet or case provided with one or more drawers, each having a series of rows of compartments for holding coupons, and each compartment having a lid suitably indexed and numbered, substantially as described.

No. 48,565. Clothes Drier. (*Séchoir à linge.*)

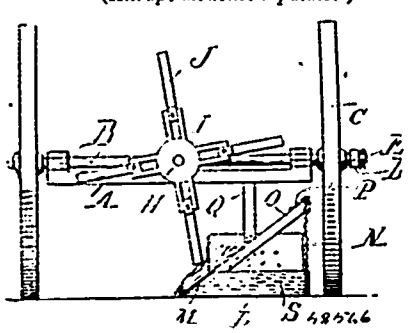


Joseph Phillips Hill, Worcester, Massachusetts, U.S.A.,, 1st April, 1895; 6 years.

Claim.—The combination with an upright post or support, having a projecting flange at its upper end, of the clothes drier, mounted and adapted to revolve on said post, with its extending arms adapted to engage the flange on the post, and stretcher rods pivotally connected with said arms at their outer ends, and pivotally supported at their inner ends so as to extend in a plane below the outer ends thereof, to lock the arms in their expanded position, substantially as shown and described.

No. 48,566. Potato Bug Catcher.

(*Attrape-mouches à patates.*)

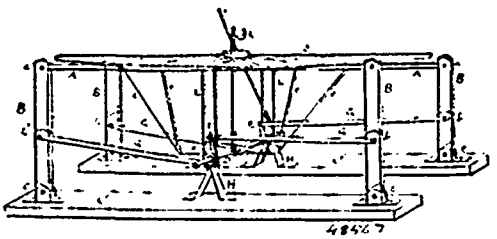


Roberts, Trop & Co., assignee of James Donovan, both of Three Rivers, Michigan, U.S.A., 1st April, 1895; 6 years.

Claim.—1st. In a potato bug collector, the combination of a wheeled frame, a longitudinal shaft driven from the ground wheels, a series of beater blades thereon, and a receptacle pivotally supported at its forward end, beside the beater and having a means for guiding it laterally at the rear end, substantially as described. 2nd. The combination of a wheeled frame, a longitudinal shaft driven from the ground wheels, and arranged in rear thereof, a receptacle, an arm pivoted to the frame beside the longitudinal shaft to which said receptacle is secured, and a handle at the rear of *the receptacle for swinging it laterally, substantially as described.* 3rd. The combination of the wheeled frame, the driven axle, a central gear-wheel on the axle, a longitudinal stub shaft having a pinion meshing with the gear-wheel, a spider on the stub shaft, radially adjustable frames in the arms of the spider, a fabric stretched across the frame and forming the body of the beater blade, and a receptacle beside and below the beater, substantially as described. 4th. The combination of the wheeled frame, the driven axle, the beater shaft driven therefrom, a beater formed of a series of radially adjustable beater blades, and a receptacle besides and below the beater, substantially as described. 5th. In a potato bug collector, the combination of the receptacle, of a beater having blades formed of the U-shaped frame J, and the fabric K, stretched across the frame, substantially as described. 6th. In a potato bug collector, the combination of the beater, means for driving it from the ground wheels of the frame, a liquid holding receptacle pivotally connected with the frame at its forward end, and having guiding means at the rear end, the inclined wall M, on the front side of the receptacle and the extension N, on the rear side thereof, substantially as described.

No. 48,567. Tire Setting and Cooling Machine.

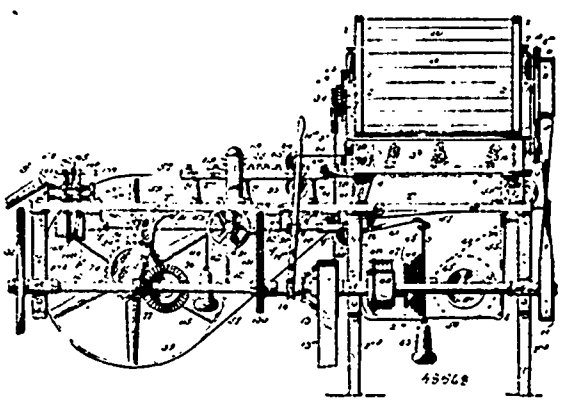
(*Machine à poser et refroidir les bandages de roue.*)



John Kerr and John Edward Smith, both of Petrolia, Ontario, Canada, 2nd April, 1895; 6 years.

Claim.—1st. The combination of the frame A having jointed legs B, B, B, B, with arms G, G, G, G, cranks E, E, shaft D, and lever I, substantially as and for the purpose hereinbefore set forth. 2nd. The combination of the frame A, with the circular platform J, and screw winch K, substantially as and for the purpose hereinbefore set forth.

No. 48,568. Cigarette Machine. (*Machine à cigarette.*)

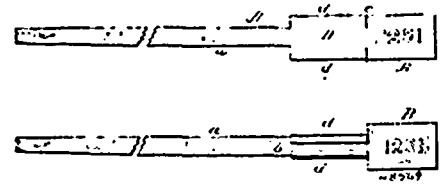


William Cyrus Briggs, Winston, North Carolina, U.S.A., 2nd April, 1895; 6 years.

Claim.—1st. In a cigarette machine, the combination with the cylindrical casing and interior carding cylinder, of the front roller, the traveling feed apron passing over said roller and leading to said carding cylinder, a toothed feed roller above said apron and front roller and adjacent to and co-operating with said carding cylinder, a guide hopper and filler carrier tape below the carding cylinder, substantially as described. 2nd. In a cigarette machine, the combination with the cylindrical casing, interior carding cylinder and a guide hopper, of the feed apron, a feed roller above said apron and a transverse bridge bar between said apron and upper roller for guiding tobacco from the feed roller and apron to the carding cylinder, substantially as described. 3rd. In combination with the cylindrical casing, the interior carding cylinder, a guide hopper and a filler carrying tape, below said cylinder, a revolving brush, having its surface closely set with bristles and its enclosing cylindrical casing fitting closely thereto and having an opening adjacent to the carding cylinder and its casing, and means for feeding tobacco to carding cylinder, substantially as described. 4th. The revolving brush having its surface closely set with bristles, a close fitting cylindrical

casing therefor, and having an opening at one side, in combination with the carding cylinder, a cylindrical casing enclosing the same and having an opening for said brush and a guide hopper below said cylinder, whereby tobacco may be removed from the carding cylinder and discharged into the guide hopper, substantially as described. 5th. The cylindrical casing and interior carding cylinder, *in combination with a guide hopper below said cylinder, guide channel 4, at the bottom of the hopper, having lateral recesses, a filler carrier tape with its edges in said recesses of the guide channel*, a removable side strip *b*[4], for inserting the tape, and means for feeding tobacco stock to the carding cylinder, substantially as described. 6th. The combination with the feed apron and yielding feed roller above the same, of the governing mechanism connecting with said roller and also with a belt shifter, intermeshing cone gearing, a multiple disc pulley, connections intermediate of each disc and its corresponding gear, a separate pulley on the power shaft, a belt on said pulleys, a shifter engaging said belt, and connecting gearing for operating said feed apron and roller, and regulating the speed thereof, substantially as described. 7th. In a cigarette machine having a carding cylinder and enclosing casing, the combination with the feed apron on rollers and a vertically movable feed roller above said apron, of belt shifting mechanism consisting of levers pivoted to the frame of the machine and connecting with said feed roller, a pivoted right angle lever and connecting links, a shifting-bar connecting the latter lever with the belt on the pulleys, of the operating gearing, and suitable cone gearing, pulleys co-operating therewith, belts and gearing connecting the power shaft with one of the rollers carrying the feed apron and said feed roller for controlling the speed thereof, substantially as described. 8th. The combination, with the carding cylinder and casing of a revolving brush adjacent thereto, the discs 18 set in the side frame and having eccentric openings in which are inserted the axles of the brush, and means for securing the discs in place for adjusting the brush with relation to the carding cylinder, substantially as described. 9th. The combination, with the guide channel 4, the carrier tape therein and means for supplying tobacco thereto, of the tapering trough 78 having inwardly turned edges for carving the tape and wrapper, the folding channel and a guard device 94, set into the trough and folding channel, substantially as described. 10th. The combination, with the tapering trough 78, having inwardly turned edges and the carrier tape therein of the folding channel and a guard device 94, the latter having side plates located in said trough and channel for retaining the tobacco stock therein, substantially as described. 11th. The combination, with the folding channel, having a slot or opening through its bottom, of the upper grooved compressing roller, projecting into the channel, a filler carrier tape in the channel, and the lower grooved compressing roller projecting into the opening at the bottom of the channel, and having a groove wider than the upper roller and receiving the filler carrier tape, substantially as described. 12th. The combination with the folding channel, having a slot or opening in its bottom, of the lower grooved compressing roller, projecting into such opening, the filler carrier tape in the channel and groove of said roller, the lateral guard plates 96, in the channel on each side, for protecting the edges of said tape and the upper compressing roller between said guard plates, and entering the lower roller, substantially as described. 13th. The combination with the slotted folding channel, of the lower and upper grooved compressing rollers, working therein, and into each other, the filler carrier tape in the channel and lower roller, and the scraper 97 in the channel, bearing in the groove of the upper roller for detaching tobacco therefrom, substantially as described. 14th. The combination with the guide channel 4, the tapering trough 78, folding channel 95, and carrier tape of the compressing roller 79, above the trough, the upper and lower grooved compressing rollers working in the folding channel and the operating gearing for turning the upper compressing rollers, substantially as described. 15th. The combination with the slotted folding channel, the lower grooved compressing roller and carrier tape therein, of the grooved compressing roller 84, above the channel and having a shaft and pinion, the vertical shaft 87, having a bevelled gear-wheel at its upper end, meshing with said pinion, and also having at its lower end a worm-wheel, and a worm on a countershaft meshing with said worm-wheel for operating said compressing roller, substantially as described. 16th. The combination with the folding channel and carrier tape therein, of the longitudinal compressing finger 98, the guard plate 100, for holding up one edge of the tape and wrapper, the deflector 101, for turning down the opposite edge of the tape and wrapper, the paste wheel for supplying paste to the standing edge of the wrapper, the separator 103, for separating the tape from the wrapper, the guard plate 105, serving to hold up the separated edge of the tape, and the deflector 106, for turning down the left hand edge of the tape and pasted edge of the wrapper upon the previously turned down right hand edge of the wrapper, for enclosing the filler-rod, substantially as described. 17th. The combination with the vertical paste can, having a longitudinal slotted lip, near its upper end, the horizontal paste wheel working therein and secured to the vertical shaft, a bevelled gear-wheel on said shaft, the vertical paste wheel 128, bearing upon the edge of the horizontal paste wheel and having connected with its hub a bevelled pinion meshing with said bevelled gear-wheel, and mechanism for turning the shaft of the horizontal paste wheel. 18th. The combination with the paste can and the horizontal and vertical paste wheels having bevelled edges beating one upon the other, of the intermeshing bevelled gear-wheel and pinion on the shafts of said wheels, and suitable gearing for turning the vertical shaft of the horizontal paste wheel, substantially as described. 19th. In a cigarette machine a reciprocating carriage mounted to slide on guide rods, a curved bar on said carriage, having a cigarette holder at its upper end and engaging at its lower end with a cam groove, a laterally oscillating lever pivoted to the carriage and carrying at its upper end a cutter disc and bearing at its lower end on a cam in combination with the cams for operating the carriage and cutter disk, and means for turning said disk, substantially as described. 20th. In a cigarette machine, the cutting mechanism constructed with a pair of longitudinal guide rods, one above the other, sliding sleeves on said rods, a curved bar 139, mounted upon and connecting said sleeves and having at its upper end a cigarette holder or guide opening and extending at its lower end into a cam groove, the lateral oscillating lever 141, pivotally connected to the lower sleeve and carrying at its upper end a stud shaft having a cutter disc and pulley thereon, and bearing at its lower end upon a cam to give it oscillating motion, all in combination with a cam for sliding said sleeves upon the guide rods, a cam for oscillating the lever carrying the cutter disc and a pulley connecting by a belt with the pulley on said stud shaft which carries the cutter for turning said disc, substantially as described.

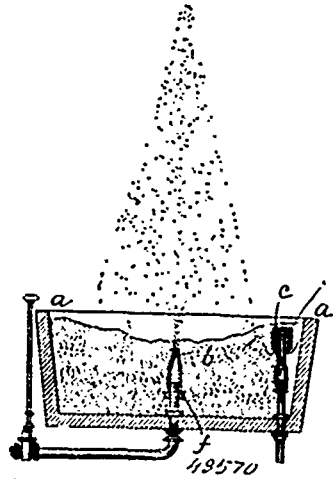
No. 48,569. Car Seal and Tag. (*Sceau et étiquette de chars.*)



Frank Aldrich, Detroit, Michigan, U.S.A., 2nd April, 1895; 6 years.

Claim.—1st. A car seal consisting of a strip of metal bulging in width in its longitudinal centre to receive its consecutive tag number, and having turned-over lips near one end forming a loop for the reception of the other end of the strip to form a joint, said joint portion being bent in a U-shaped form to lock the parts together, as and for the purpose set forth. 2nd. A car seal consisting of a strip of metal having, near one end, turned over lips for the reception of the other end of the strip to form a joint, said joined portions being bent in a U-shaped form and having a hole punched through the different layers of metal at the bottom of the U-shaped portion to bar the underside thereof, whereby the joined portions are securely locked together, as and for the purpose set forth.

No. 48,570. Fountain. (*Fontaine.*)

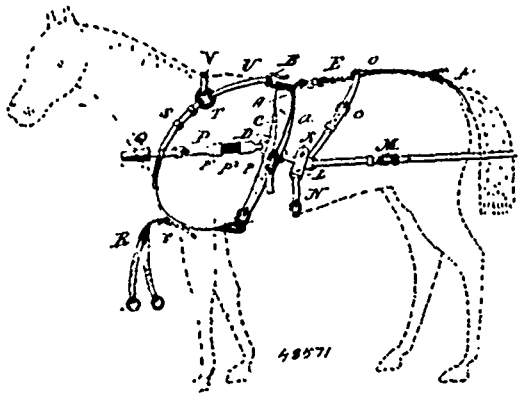


Edwin D. Brainard, Great Barrington, Massachusetts, U.S.A., 2nd April, 1895; 6 years.

Claim.—1st. The method of producing a fountain with a pulsating stream which consists in introducing into an uncovered body of liquid an upwardly directed continuous jet of liquid at a point below the surface thereof, substantially as described. 2nd. In a fountain, *the combination with an open vessel of an upwardly directed inlet* jet pipe terminating therein and having its orifice placed at a lower level than the lowest point from which liquid can escape from said vessel, and in unobstructed communication with the main body of the contents of the vessel, whereby the vessel is adapted to contain a body of water freely submerging said orifice, and a source of liquid supply adapted to force a jet from said jet pipe under sufficient pressure to rise above the level of liquid in the vessel notwith.

standing the resistance of the body of water above the orifice, whereby a pulsating fountain may be produced, substantially as described.

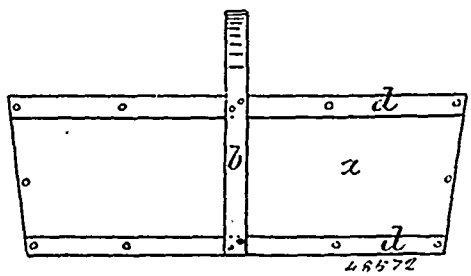
No. 48,571. Harness. (*Harnais.*)



John E. Clark, Farmer City, Illinois, U.S.A., 2nd April, 1895; 6 years.

Claim.—1st. In a harness, the combination with the saddle and girth, the shoulder straps and martingales, and the short straps leading from the shoulder strap to the terret or hook on the saddle. 2nd. In a harness, the combination of the saddle, the shoulder straps and martingale connected to the forward portion of the saddle, the back strap carrying the crupper, the plates having the hinge connection with the saddle, the traces, back strap and girth strap connected to said plates on one side, and the hold backs connected to the other side of said plates. 3rd. In a harness, the combination of the saddle having the girth strap, the shoulder straps connected to the saddle and girth strap and carrying the martingales, the plates secured to the saddle and consisting of the hinged and stationary sections, the hold backs connected to the stationary sections, and the back strap, girth and trace straps connected to the hinged sections. 4th In a harness, the combination of a saddle, the plate connected to the saddle at the centre and having the hook at one end and the eye at the opposite end, the shoulder straps connected to the hook, the back strap carrying the crupper connected to the eye, the plates connected to the side of the saddle and extending on each side thereof, the hold backs connected to one side of the plates, and the girth, traces and back straps connected to the other side of said plates. 5th. In a harness, the combination with the saddle and back strap, of the plate G, rigidly connected to the saddle and projecting on opposite sides thereof, the hold backs, provided with the intermediate elastic section, connected to one end of said plates and adapted to engage with the tips of the shafts of a vehicle, the trace carriers K, connected by a hinged joint to the other ends of the plates G, and the strap O extending through a guide on the back strap and connected to the trace carriers.

No. 48,572. Fruit Basket. (*Panier à fruits.*)



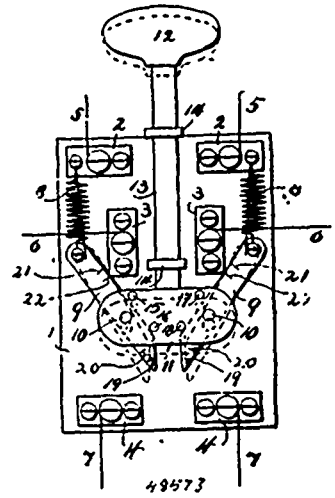
George H. Williams, Thorold, Ontario, Canada, 2nd April, 1895; 6 years.

Claim.—The design and construction of baskets having a veneer bottom supported by stripes or cleats fastened to the sides of the baskets which forms the supports for the bottom, with the ends of the baskets made of sawn lumber, substantially as and for the purposes hereinbefore set forth.

No. 48,573. Electric Switch. (*Aiguille électrique.*)

Carl Friedrick Wilhelm Hofer, Berlin, Germany, 2nd April, 1895; 6 years.

Claim.—1st. A circuit closing key, comprising opposing pairs of contacts, a reciprocating plunger or part, and switch levers or devices pivoted to the plunger and having sliding or rubbing action on the contacts, substantially as described. 2nd. A circuit closing key, comprising opposing pairs of contacts, a reciprocating plunger or part having stops, and switch levers or devices pivoted to the plunger and adapted to the stops and having sliding or rubbing action on the contacts, substantially as described. 3rd. A circuit



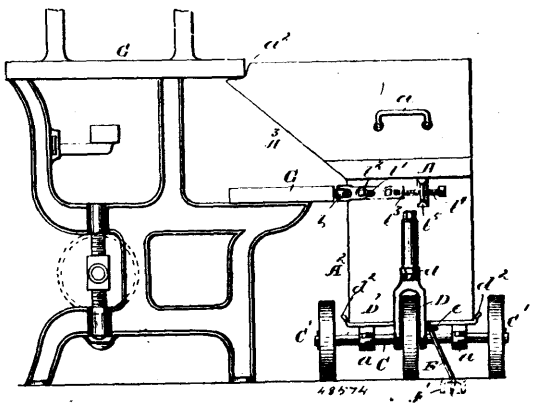
closing key, comprising opposing pairs of contacts presenting angular or comparatively sharp corners or parts, a reciprocating plunger or part, and switch levers or devices pivoted to the plunger and having sliding or rubbing action on the contacts, substantially as described. 4th. A circuit closing key, comprising opposing contacts presenting angular or comparatively sharp corners or parts, a plunger having stops and carrying pivoted switch levers or devices adapted to the stops and having sliding or rubbing action on the contacts, substantially as described. 5th. A circuit closing key, comprising opposing pairs of contacts, a reciprocating plunger or part, and elastically held switch levers or devices pivoted to the plunger and adapted to the contacts, substantially as described. 6th. A circuit closing key, comprising opposing pairs of contacts presenting angular or comparatively sharp corners or parts, a reciprocating plunger or part, and elastically held switch levers or devices pivoted to the plunger and adapted to the contacts, substantially as described. 7th. A circuit closing key, comprising opposing pairs of contacts, a reciprocating plunger or part having stops, and elastically held switch levers or devices pivoted to the plunger and adapted to the contacts and stops, substantially as described. 8th. A circuit closing key, comprising opposing pairs of contacts presenting angular or comparatively sharp corners or parts, a reciprocating plunger or part having stops, and elastically held switch levers or devices pivoted to the plunger and adapted to the contacts and stops, substantially as described. 9th. A circuit closing key, comprising opposing pairs of contacts, a plunger, switch levers pivoted to the plunger, and springs connecting the levers with a third pair of contacts, substantially as described. 10th. A circuit closing key, comprising pairs of contacts, a plunger having pairs of stops or detents, switch levers pivoted to the plunger and limited in movement by the stops and springs connecting the levers with a third pair of contacts, substantially as described. 11th. A circuit closing key, comprising opposing pairs of contacts presenting angular or comparatively sharp corners or parts, a plunger having pairs of stops, switch levers pivoted to the plunger and limited in movement by the stops, and springs connecting the levers with a third pair of contacts, substantially as described. 12th. The combination in a circuit closing key, of a base 1, pairs of contacts 2, 2, 3, 3 and 4, 4, thereon, a plunger 12 having stops 15, 16, 17, 18, and pivoted levers 9, 9, and spiral springs 8, 8, connecting the levers with the contacts 2, 2, substantially as described, for the purposes set forth.

No. 48,574. Car for Collecting and Conveying the Turnings from Screw Making Machines. (*Char pour recueillir et transporter les rebuts provenant des machines à fileter les vis.*)

Jason Allen Bidwell, Cleveland, Ohio, U.S.A., 2nd April, 1895; 6 years.

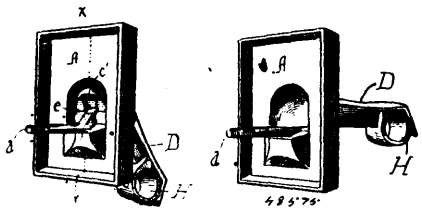
Claim.—1st. A car for collecting and conveying the turnings from screw making machines, having a box formed with an outwardly flared side which forms a chute adapted to have its edge project under the edge of the table of the screw making machine upon which the turnings are delivered, substantially as set forth. 2nd. A car for collecting and conveying the turnings from the screw making machines, having a box formed with an outwardly flared side and with a forwardly inclined end, said side forming a chute the edge of which may extend under the edge of the table of the screw making machine, and said end admitting of the contents of

the box being emptied by tilting the box, substantially as set forth. 3rd. A car for collecting and conveying the turnings from screw making machines, said car having a box formed with one vertical side and one vertical end, with one side having the lower portion vertical and the upper portion outwardly flared to form a chute adapted to project under the edge of the table of the screw making



machine, and with one end forwardly inclined to admit of the contents of the box being emptied by tilting the box, substantially as set forth. 4th. A car for collecting and conveying the turnings from screw making machines, said car consisting of a wheeled truck, a box secured upon said truck to be tilted and having an outwardly flared side adapted to project under the table of the screw making machine upon which the turnings are delivered, and a gage upon said side of the box and adapted to bear against the edge of the lower table of the screw machine, substantially as set forth. 5th. In a car for collecting and conveying the turnings from screw making machines, the combination of a wheeled truck, a box upon said truck and constructed to be tilted, and a gage adjustably secured to project at one side of the box to bear against the edge of the table of the screw machine, substantially as set forth. 6th. In a car for collecting and conveying the turnings from screw making machines, the combination of a wheeled truck, a box upon said truck, slotted brackets having rallers at their ends, screw bolts through the slots in the brackets and securing the latter to the ends of the box, lugs upon the ends of the box, and screws through said lugs and bearing against the inner ends of the brackets, substantially as set forth. 7th. In a car for collecting and conveying turnings from screw making machines, the combination of a truck having a transverse axle provided with wheels and a swivelled caster wheel at the opposite end, and a box formed with a flared chute side and an inclined end, and provided with journal bearings upon its bottom, near the inclined end, which bearings turn upon the axle of the truck, substantially as set forth. 8th. In a car for collecting and conveying turnings from screw making machines, the combination of a truck having a transverse axle provided with wheels, a cross-bar, and a swivelled caster wheel, with a box formed with a vertical side and rear end, with a side having a vertical lower portion and a laterally flared upper portion, and with an outwardly inclined end, and provided with journal bearings upon its bottom, near the inclined end, which bearings turn upon the axle of the truck, substantially as set forth.

No. 48,575. Casket Handle. (*Poignée de cercueil.*)

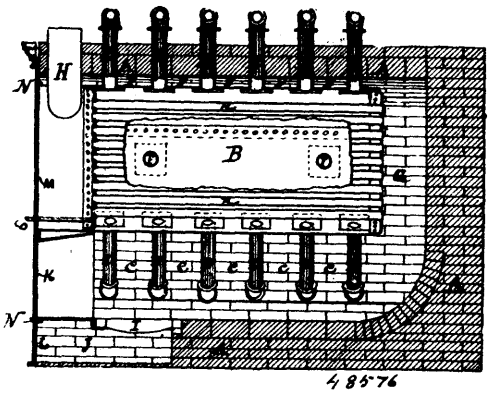


Louis H. Bannister, Pasadena, California, U.S.A., 2nd April, 1895; 6 years.

Claim.—1st. In a casket handle as set forth, the combination with the arm pivoted to the lug, and arranged to clamp the bolt head, when the same is in the recess and the handle is elevated. 2nd. In a casket handle as set forth, the combination of the bolt having its head provided with a hook arranged to enter the recess *c*, and provided with the nut *s*, all for the purpose herein specified. 3rd. In a casket handle such as described, the combination of the bolt having a flanged head provided with the hook arranged to enter the recess *c*, and the arm provided with a recess to allow the upper flange of the bolt head to enter therein when the handle is in place and the arm is elevated. 4th. In a casket handle, the combination with the lug and arm provided respectively with recesses engaging the bolt head, the arm having the shoulder *o* bearing upon the shoulder and brace o^1 *g*, and the bolt provided with the nut *s*, all substantially as described and for the purpose herein specified.

No. 48,576. Hot Water Furnace.

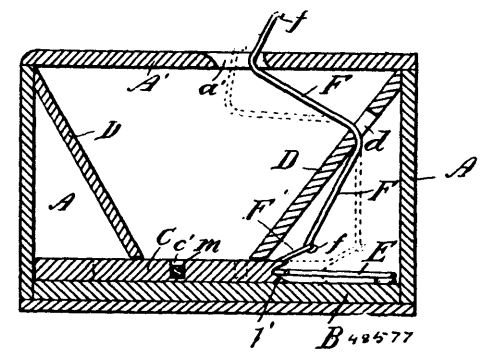
(*Fournaise à eau chaude.*)



Anselme Hippolyte Larochelle, Levis, Québec, Canada, 2 Avril, 1895; 6 ans.

Résumé—1o. La combinaison du foyer C, des espaces libres P, avec les surfaces chauffées des tuyaux de retour D, de la chaudière B, des tuyaux fournisseurs E, et des tuyaux supports F, absorbant par le fait la chaleur dégagée dans le foyer pour la transmettre à l'eau génératrice, tel que décrit et pour les fins indiquées. 2o. La combinaison de la chaudière B, avec les tuyaux de retour D, placés obliquement en deux séries aux flancs de la chaudière, une à droite et l'autre à gauche, et les tuyaux fournisseurs E, placés sur le sommet de la chaudière, assurant à l'eau génératrice une circulation prompte, continue et efficace, tel que ci-dessus décrit et pour les fins indiquées. 3o. La combinaison de la chaudière B, avec les tuyaux supports F, placés horizontalement de chaque côté de la chaudière, et l'embriquetage du foyer, assurant de cette manière, à la chaudière, des supports sûrs, efficaces, tout en évitant qu'ils soient détruits par l'intensité du foyer, vu que l'eau génératrice circule librement dans leurs intérieurs, tel que ci-dessus décrit et pour les fins indiquées.

No. 48,577. Match Safe. (*Boîte de sûreté pour allumettes.*)

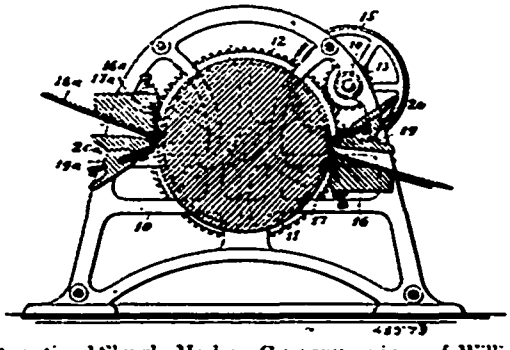


Charles Berkeley Powell, and Frederick William Carling, assignees of Joseph Coyle, all of Ottawa, Ontario, Canada, 2nd April, 1895; 6 years.

Claim.—1st. In a match safe, the combination of a box having a width equal to the length of a match, a longitudinal groove *b* in the bottom at one side so that the side of the box forms one side of the groove, a flat spring secured in said groove at one end and having an upward projecting head or plate at the other tending to press towards the bottom side of the groove and having the heel of said plate bent towards the inner side of the box, a bottom adapted to slide longitudinally and provided with a transverse groove in its upper face adapted to hold a match freely and having a rebated lower edge forming an upward contiuation of the groove *b*, to form a passage-way for the head of the spring aforementioned, a spring deflector placed obliquely in said rebate secured to said sliding bottom, and adapted to engage deflect and pass the head of said spring so as to allow it to strike towards the bottom side of said rebate in the end of its transverse groove, a perforation in the opposite side of the box opposite said spring head, a spring pressing said sliding bottom towards one end of the box and a lever adapted to draw it towards the other end against the pressure of said spring, substantially as set forth. 2nd. In a match safe, the combination of a box A, having inside sloping ends D, and provided with a cover adapted to be locked, a sliding bottom C, having a transverse groove c^1, and a longitudinal rebate *c*, a groove *b*, forming a down-

ward continuation of said relate in the bottom of said box, a spring G, secured in said groove and having an upward projecting head or plate g, an oblique deflecting plate H in the relate c, a perforation a^{11}, in the side of the box opposite said spring head, a spring E pressing said sliding bottom towards one end, and a projecting lever F, adapted to draw it in the opposite direction, substantially as set forth. 3rd. In a match safe, the combination of a box A, adapted to be locked, a perforation a^{11}, at one side of said box near the bottom, a platform A^{11} upon which said box is secured, a butt A^{111} upon said platform opposite said perforation and means to eject a match from said box through said perforation at will, substantially as set forth. 4th. In a match safe, the combination of a box A, adapted to be locked, a longitudinal sliding bottom in said box, sloping ends inside said box extending to said sliding bottom, a perforation a^1 in the top, a perforation d in one of the sloping ends, a lever F passing through said perforations and bent at a right angle at a point at which it passes through the sloping end forming a support in said perforation and bent at a right angle at the point at which it passes through the top and engaging said sliding bottom at the lower end by a clevis F^1, substantially as set forth. 5th. In a match safe, the combination of a rectangular box, a groove b in the bottom adjoining one side, a bottom adapted to slide with its edges against the sides and having a relate c above said groove, a flat spring secured to the side of the box in said groove, a plate or head at one end of said spring projecting upwardly in said relate tending to press against the bottom side of said groove and edge of the relate, and a deflecting spring plate H, projecting obliquely across said relate and adapted to engage deflect and pass said spring head when said sliding bottom is moved in one direction and passing between said head and the box side when moving in the other direction, substantially as set forth. 6th. In a match safe, the combination of a box, a bottom adapted to slide longitudinally therein and carrying a match transversely in a groove, a spring drawing said sliding bottom to one end of the box and a lever adapted to draw it towards the other end against the pressure of said spring, substantially as set forth.

No. 48,378. Method of and Machine for Making Shingles (*Méthode et machine pour fabriquer le bardeau.*)



The International Shingle Machine Company, assignee of William F. Hutchinson, all of New York, State of New York, U.S.A., 2nd April, 1895; 6 years.

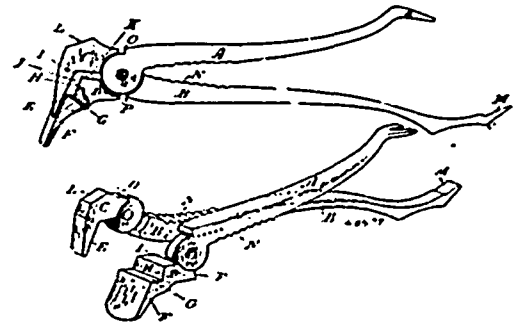
Claim.—1st. A method of making shingles, which consists in turning from a log a strip of veneer bevelled from edge to edge, and then splitting the strip transversely to form the shingles. 2nd. The herein described method of turning veneer for shingles, which consists of feeding against a rotating log, knives having opposite pitch whereby two bevelled veneer strips are turned, with the thick edge of one strip opposite the thin edge of the other. 3rd. The herein described method of making shingles, which consists in cutting a strip of veneer, thick on one edge and thin on the other, and of a width equal to the length of the shingles, and then splitting the strip transversely into shingles. 4th. A veneer cutting machine, having the usual means for rotating a log, and knives of opposite pitch adapted to be fed against the different sections of the log, substantially as described. 5th. A rotary veneer cutting machine, comprising the usual means of clamping and rotating a log, and also the customary means of feeding the knives, and a pair of knives arranged on opposite sides of the machine, the knives having opposite pitch and being adapted to feed simultaneously towards the log, substantially as described. 6th. As an improved article of manufacture, a rotary veneer machine, having on opposite sides veneer cutting knives with the usual feed and of opposite horizontal pitch, the edge of one knife projecting upward and of the other knife downward, substantially as described.

No. 48,379. Implement for Lifting Pans.

(*Appareil pour soulever les casseroles.*)

James T. Watkins and James Shanon Bradley, assignees of William C. Bayless, all of Mossy Creek, Tennessee, U.S.A., 2nd April, 1895; 6 years.

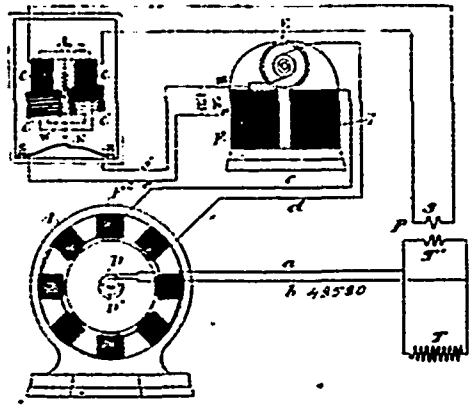
Claim.—The herein described implement, comprising two handles pivoted together, and formed with an upper narrow jaw and a lower broader jaw, said lower jaw provided at its lower end with a gripping



part F, and immediately above said gripping part with a horizontal ledge or seat G having a vertical rear wall H communicating with a horizontal ledge or seat I, substantially as described.

No. 48,380. Regulator for Electric Generators.

(*Régulateur de générateur électrique.*)

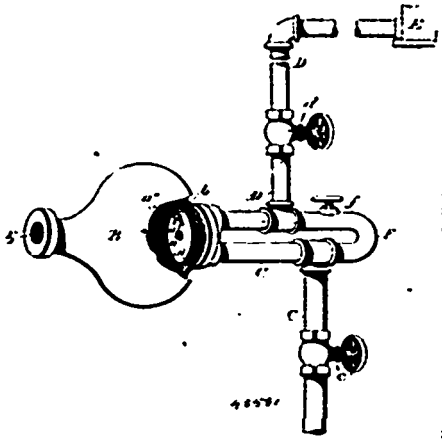


The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Elihu Thomson, Swampscott, Massachusetts, U.S.A., 2nd April, 1895; 6 years.

Claim.—1st. The combination of a dynamo with a separate exciter therefor, and an electric circuit controlling the potential of the exciter, a switch adapted to close or break said circuit, and an electro-magnetic device responsive to changes in the potential of the main circuit and controlling said switch in the regulating circuit, as set forth. 2nd. The combination of a dynamo with a separate exciter therefor, means for regulating the potential of said exciter, and an electro-magnetic device controlling said regulating means, said device comprising an electro-magnet arranged to respond to changes of potential in the main circuit, and a closed coil or circuit movable under the influence of said magnet. 3rd. The combination, with a dynamo, of a separate exciter, and means, substantially as described, whereby a portion of the field winding of the exciter is rendered operative or inoperative by the change in potential of the main circuit. 4th. The combination, with a dynamo of a separate exciter, having a portion of its field winding included in a shunt, said shunt being controlled by the varying potential of the main circuit, substantially as set forth. 5th. The combination, with a dynamo of a separate exciter, having a portion of its field magnet included in a shunt, and an electro-magnet arranged to open and close said shunt, said magnet being controlled by a change in potential of the main circuit, substantially as set forth. 6th. The combination, with a dynamo of a separate series-wound exciter, having a portion of its field magnet included in a shunt, an electro-magnet controlling said shunt, said magnet being in turn controlled by a change in potential of the main circuit substantially as described. 7th. The combination, with a dynamo of a separate exciter, having a portion of its field winding included in a shunt, an electro-magnet arranged to respond to changes in the potential of the main circuit, and an axially movable helix concentric with said magnet, and adapted to close and open said shunt, substantially as described. 8th. The combination, with a dynamo of a separate exciter, having a portion of its field winding included in a shunt of no resistance, an electro-magnet responsive to variation in the potential of the main circuit, an axially movable helix concentric with said electro-magnet, and controlling the said shunt, and means for adjusting the movement of the helix, substantially as set forth. 9th. The combination, with an exciter E, F, F^1, having the shunt c, f, provided with the con-

tact K, of an electro-magnet C, C, responsive to variations in the main circuit, and the axially movable helics C^1, C^1, supported by the adjustable spring Z, and arranged to close the contact K, when the magnets C, C are excited to a predetermined degree, substantially as set forth. 10th. he combination of the coil, as C, a second coil as C^2 adapted to respond to variations of potential in the main circuit of a dynamo, and a third coil as C^1, repelled by the coils C and C^2, and arranged to close a shunting switch, whereby an increase of load acts to increase the potential of the delivered current.

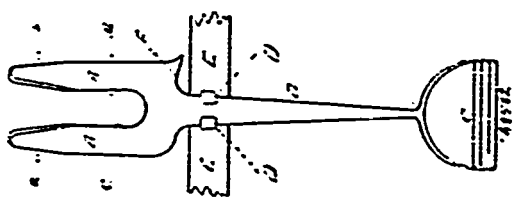
No. 48,381. Oil or Gas Burner. (*Brûleur d'huile et gaz.*)



Colin William Claybourne, Indianapolis, Indiana, U.S.A., 2nd April, 1895; 6 years.

Claim.—1st. A burner for oil or gas, having a suitable body with the small passage, the deflector extending inward and forward at an angle across the path of a jet issuing from such passage, the second passage, and the bulb with its interior expanding *forward from* around the mouths of the two passages, and then tapering forward, and a discharge mouth on the forward end of the tapering part of the bulb, substantially as and for the purpose set forth. 2nd. In a burner for hydro-carbon, in combination with a suitable body having the steam-passage, a smaller oil-passage, and the deflector extending forward and inward at an angle to a jet issuing from the oil-passage, the bulb on the body having the chamber within it expanding forward from around the place, where the steam and oil-passages enter, and then reduced forward to a discharge mouth larger than the mouth of the steam-passage, means for feeding the oil through its passage under pressure, and a source of supply of steam connected with the steam-passage, so that the steam will enter the bulb at a rate that will cause the discharge from the burner to be at a low pressure, substantially as and for the purpose described. 3rd. In a burner for hydro-carbon, in combination with a suitable body provided with the large central passage, the smaller passage to one side of the other, and the deflector extending forward and inward, at an angle to a jet issuing from the smaller passage, the bulb attached to the body, having its interior suddenly expanding forward from around the mouths of the passages, and then contracted, and having on its forward end a discharge mouth or nozzle, and source of supply of steam and the hydro-carbon, under pressure, one connected with one passage, and the other, with the other, substantially as and for the purpose specified. 4th. As an improvement in oil burners, in combination with a mixing chamber, an opening for the admission of a fluid under pressure, an opening for the admission of oil, and a curved surface in front of the oil opening to be impinged upon by the oil, and the same thereby radiated into the steam issuing out of the steam opening, substantially as and for the purpose described. 5th. As an improvement in oil burners, in combination with a mixing chamber, an opening for the admission of a fluid under pressure, an opening for the admission of oil, a plate extending into the chamber adjacent to the oil opening, and a spherically curved lug upon such plate, in line with the oil opening, substantially as and for the purpose specified. 6th. An oil burner having a detachable tip, whereby the discharge mouth of the burner may be varied in size, substantially as and for the purpose shown.

No. 48,382. Car Coupler. (*Attelage de chars.*)

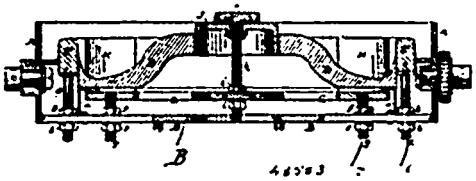


Aldus Mowry, Peterboro', Ontario, Canada, 2nd April, 1895; 6 years.

Claim.—A device for coupling cars comprising jaws A, shaft B, spade handle C, and shoulder F, all formed as and for the purpose herein before set forth.

No. 48,383. Pattern for Car-wheel Moulds.

(*Patron pour moules de roues de chars.*)

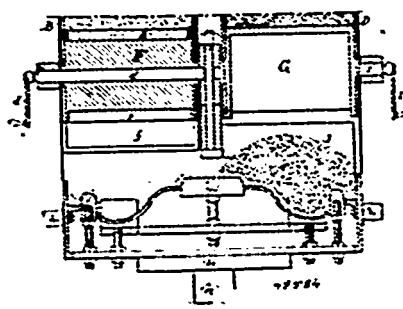


The Wilkes-Barré Moulding Machine Company, assignee of Joseph J. Carr, both of Wilkes-Barré, Pennsylvania, U.S.A., 2nd April, 1895; 6 years.

Claim.—1st. The combination of the mould box, with a pattern consisting of the web or plate pattern, the tread ring surrounding the same, the series of rib prints and the hub print projecting through openings in said web pattern, and means for mounting said parts of the pattern whereby the vertical relation of either in respect to each of the others may be altered, substantially as specified. 2nd. A box or frame having fixedly mounted thereon a pattern for the web or plate of the wheel, in combination with a tread ring surrounding said pattern and a series of rib prints and a hub print projecting through the same said thread, rib and hub prints being independently adjustable, so that they can be caused to project more or less in respect to the said web pattern, substantially as specified. 3rd. The combination in a mould box for moulding car-wheels of a box or frame having a pattern for the web or plate of the wheel rigidly mounted thereon, a tread ring carried by adjustable studs, a secondary frame also carried by adjustable studs and provided with a series of rib prints, and a hub print adjustably mounted on said *secondary frame, substantially* as specified.

No. 48,384. Mould for Casting Car-wheels.

(*Moule pour roues de chars.*)

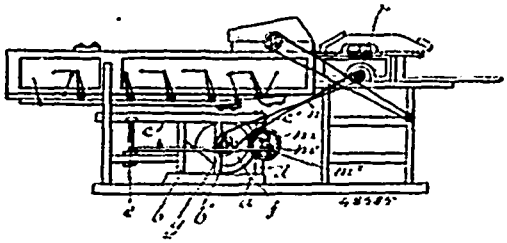


The Wilkes-Barre Moulding Machine Company, assignee of Joseph J. Carr, both of Wilkes-Barré, Pennsylvania, U.S.A., 3rd April, 1895; 6 years.

Claim.—1st. The mode herein described of preparing moulds for casting car-wheels, said mode consisting in distributing sand over the face of a preliminary pattern, shaping the upper or back face of the sand so as to cause it to accord approximately with the face of the said pattern, applying to said shaped face of the sand a flask conforming thereto, withdrawing the preliminary pattern and forcing a final pattern into the impression formed by said preliminary pattern, substantially as specified. 2nd. The mode herein described of forming moulds for casting car-wheels, said mode consisting in distributing the sand over the face of a pattern, shaping the upper or back surface of the sand so as to accord approximately with the face of the pattern, applying to said shaped face of the sand a flask conforming thereto, reversing the flask and mould so as to bring said flask uppermost, and then forcing a pattern into the sand so as to press it downward within or against said flask, substantially as specified. 3rd. The mode herein described of forming a mould for casting car-wheels, said mode consisting in distributing the sand over the face of a preliminary pattern, shaping the upper or back surface of the sand so as to cause it to accord approximately with the face of the pattern, applying to said shaped face of the sand a flask conforming thereto, reversing the flask and mould so as to said flask uppermost, removing the preliminary pattern and forcing a final pattern into the impression formed by said preliminary pattern, so as to compress the same within or against the flask, substantially as specified. 4th. The mode herein described of forming a mould for casting car-wheels, said mode consisting in rotating the pattern, and while the same is so rotated, delivering in a thin stream onto the face of the same a layer of fine sand or facing material, filling in behind the same a mass of moulding sand, shaping the upper or back face of said moulding sand to accord approximately with the face of the pattern, applying to said shaped face of the moulding sand a flask conforming thereto, and impressing a pattern into the sand so as to

compress it within or against said flask, substantially as specified. 5th. The mode herein described of forming moulds for casting car-wheels, said mode consisting in measuring the proper quantity of sand to form the mould, dumping said sand onto the face of a pattern, rotating the pattern with the sand dumped thereon, and causing a sweep or shaper bar to distribute the sand evenly over the face of the pattern, and to impart to the upper or back face of the sand a shape approximating to that of the pattern, applying to said shaped face of the sand a flask conforming thereto, and impressing a pattern into the sand so as to compress the latter within or against said flask, substantially as specified.

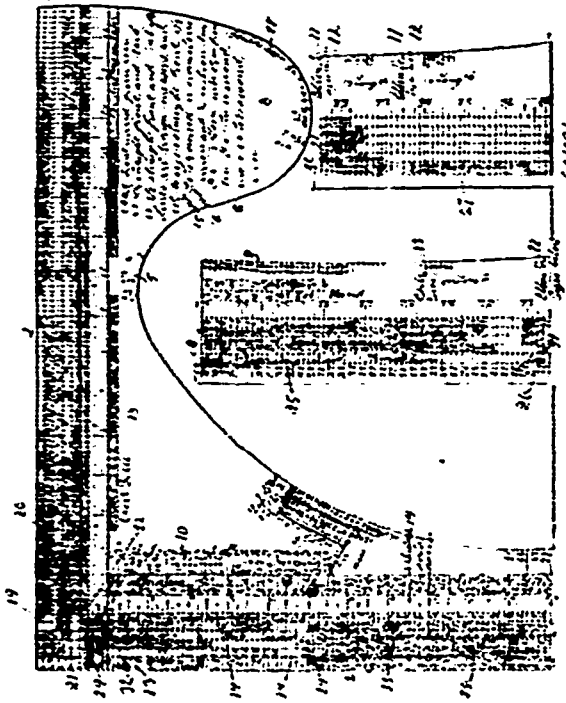
No. 48,385. Threshing-machine. (*Machine à battre.*)



The Firm of Matthew Moody & Son, assignee of Melasippe Forget, both of Terrebonne, Quebec, Canada, 3rd April, 1895; 6 years.

Claim.—1st. In a threshing-machine, having a blower variable as to the speed of its operation. 2nd. In a threshing-machine having a blower and agitator, with their operating mechanism, and the agitator actuated through the blower operating parts, the blower being variable as to the speed of its operation without alteration of the working speed of the agitator, as set forth. 3rd. In a threshing-machine having a blower and agitator with operating pullies and band for the former, and actuating pitman for the latter, an additional pulley driven by the blower operating band and to which said pitman is connected, for the purpose set forth. 4th. In a threshing-machine having a blower and agitator with operating pullies and band for the former and actuating pitman for the latter, an additional pulley to which said pitman is connected and which is driven from the cylinder operating shaft, for the purpose set forth. 5th. In a threshing-machine, the combination, with the blower and agitator operating parts, such as the pulley *q*, and band *n* for the former and pitman for the latter, of a second or additional pulley *u* suitably mounted and driven by said band and to which said pitman is connected, as described and for the purpose set forth.

No. 48,386. Dress Chart. (*Patron pour vêtements.*)

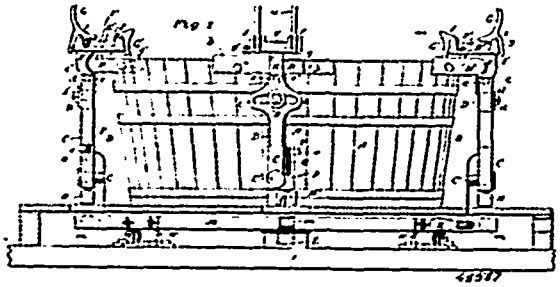


Libbie Ann Call, Oshkosh, Wisconsin, U.S.A., 3rd April, 1895; 6 years.

Claim.—1st. The herein described dress chart, having angularly disposed arms, one of which is provided with a rounded lobe 8, having the convex curve 5, 6, 7 designed for laying off the neck, arms, eye, &c., substantially as specified. 2nd. The herein described dress chart, having angularly disposed arms whose outer edges are at a right angle to each other, and whose inner edges are curved, as shown at 4, 3, 5, 6, 7, substantially as specified. 3rd. The herein described chart or form, having angularly disposed arms provided with proportionate scales relative to given bust measurements, such scales being arranged in columns parallel with the edges of the arms, the inner sides of the arm being provided with a curved edge 4, 3, 5, and a rounded lobe 8, substantially as specified.

No. 48,387. Washing-machine.

(*Machine à laver les barils et tonneaux.*)



Charles Leibman Kline, New York, State of New York, U.S.A., 3rd April, 1895; 6 years.

Claim.—1st. In a barrel or keg washing-machine, the combination with a cleansing vat containing water and adapted to hold a barrel or keg to be washed, a carrier or holder for a keg or barrel, parts of which are adapted to elevate a keg or barrel from the vat and mechanism for imparting a four-way movement to the said carrier, as and for the purpose described. 2nd. In a barrel or keg washing-machine, the combination with one or more barrel holding devices, a reciprocating wheel, intermediate mechanism for transmitting motion from the reciprocating wheel to the barrel holding mechanism, and devices for throwing the intermediate mechanism into and out of connection with the reciprocating wheel, substantially as described. 3rd. In a barrel and keg washing-machine, the combination of one or more barrel holding devices, a wheel having a circumferential reciprocation, intermediate mechanism through which motion is transmitted from the wheel to the barrel holding mechanism, and a yoked locking device for connecting said wheel and intermediate mechanism together, substantially as and for the purpose described. 4th. The combination with a wheel having a circumferential reciprocation, of barrel holding devices, pivoted levers connected respectively to each of the barrel holding devices, and locking devices in said pivoted levers engaging with said wheel, the said locking devices having moving portions which are substantially parallel to the axis of the wheel, whereby each of the pivoted levers may be separately and independently thrown into and out of operative connection with the said reciprocating wheel, as and for the purpose set forth. 5th. The combination with a vat adapted to be partly filled with water and to hold a keg or barrel to be washed, of a carrier above the edge of the said vat, for receiving the keg or barrel from the vat and having two pairs of curved arms, one of which is pivoted to the carrier and adapted to be turned down into the vat, as and for the purpose set forth. 6th. The combination of a carrier for kegs or barrels, loosely pivoted at the top of a vertical lever, and provided with a pin extending downward into a curved slit in the support of said lever, as and for the purpose set forth. 7th. The combination with a barrel holding device of a vertical shaking lever connected thereto and pivoted near its bottom, mechanism for reciprocating the same, and a yoke or key attached to the said lever and adapted to be moved in and out, for the purpose of throwing said lever into and out of operative connection with the said reciprocating mechanism, substantially as described. 8th. The combination with a vat, partly filled with water, of a carrier above the edge of the vat, the said carrier being adapted to contain a keg or barrel, and having a sluceway for leading water from the keg or barrel back into the vat, as and for the purpose set forth.

No. 48,388. Telephone. (*Téléphone.*)

The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Wilton Lancaster Richards, Malden, Massachusetts, U.S.A., 3rd April, 1895; 6 years.

Claim. 1st. In a telephone transmitter a hollow block of slate forming the casing and side walls of the resistance containing chamber, said block containing a fixed electrode at the rear of said chamber, a vibratory electrode mounted and adapted to vibrate within the front opening of said chamber, and finely divided conducting material placed within said chamber and between said electrodes, substantially as described. 2nd. In a variable resistance button for a transmitting telephone, the combination of a hollow block of slate forming the casing and side wall of the resistance containing chamber, a fixed electrode secured within said chamber and forming its

rear wall or floor, a vibratory electrode mounted and adapted to vibrate within the front opening of said chamber, a finely divided conducting material placed within said chamber and between said electrodes, and a disc of fine wire gauze supporting the said vibratory electrode secured to the front of the casing and closing the said containing chamber, substantially as specified. 3rd. The combination,

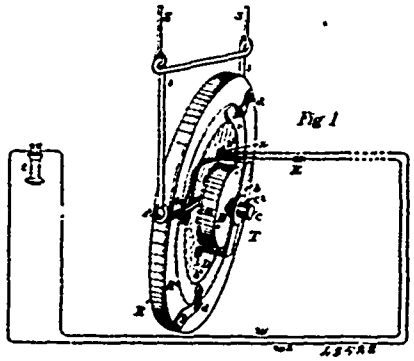


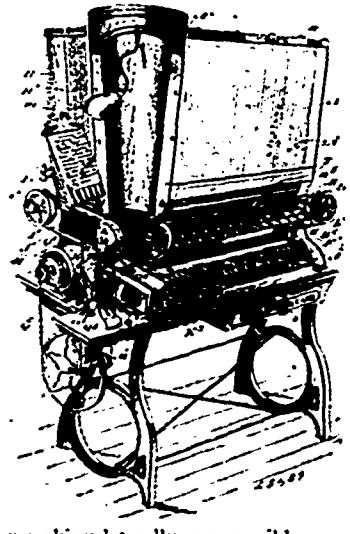
Fig 1

in a telephone transmitter of a diaphragm, a variable resistance button mounted wholly upon the said diaphragm, and a light back support also mounted on said diaphragm and delicately holding said button in place, substantially as described. 4th. The combination, in a telephone transmitter, of a wooden diaphragm, a chambered button having front and back disc electrodes, a slate casing and side wall, and finely divided conducting material contained therein mounted as a whole on said diaphragm and having its front electrode attached to the centre thereof, and a support also mounted wholly on said diaphragm, and engaging delicately with the rear of the said button and adapted to hold it in place, substantially as specified. 5th. In a telephone transmitter a diaphragm of wood held in place by spring pressure only, combined with a hollow button mounted thereon, the said button comprising a block of slate forming the casing and side wall of a containing chamber, a carbon disc secured therein and serving as the fixed electrode, a vibratory electrode secured to a flexible disc of wire gauze clamped to the front of said containing chamber, the said electrode being attached also to the centre of the said wooden diaphragm and adapted to participate in the vibrations thereof, granular conducting material inclosed in said chamber, and a rear support for said button, substantially as described. 6th. The combination in a telephone transmitter with the diaphragm, of a compound variable resistance button comprising a mass of finely divided conducting material in a loose or free state and a containing chamber therefor, having a fixed back electrode, a slate side wall and a vibratory electrode or front plate mounted on a flexible disc or fine wire gauze, and attached to the diaphragm centre so as to vibrate therewith, and a support holding the said compound button in place, and itself mounted on the diaphragm, substantially as described. 7th. The combination in a telephone transmitter with a diaphragm of wood held in place by spring pressure only, of a compound variable resistance button comprising a mass of finely divided conducting material in a loose or free state, and a containing chamber therefor, having a fixed back electrode, a slate side wall, and a vibratory electrode or front plate mounted on a flexible disc of fine wire gauze, and attached to the diaphragm centre so as to vibrate therewith, and a support holding the said compound button in place, and itself mounted on the diaphragm, substantially as described. 8th. A granular carbon transmitting telephone comprising a frame or ring seat, a diaphragm, a chambered button containing granulated carbon mounted on said diaphragm and having a casing and side wall of slate for the said chamber, a rear wall of carbon constituting the fixed electrode and a front wall of carbon secured to a flexible disc of fine wire gauze forming the vibrating front electrode, the said gauze being clamped to the slate side wall, and the said front electrode being secured to the diaphragm centre to vibrate therewith, and a light bridge also mounted on the diaphragm and delicately supporting the same, substantially as described. 9th. A granular carbon transmitting telephone comprising a frame or ring seat of wood, a diaphragm of wood held in the said seat by spring pressure, a chambered button containing granular carbon mounted on said diaphragm and having a casing and side wall of slate for the said chamber, a rear wall of carbon constituting the fixed back electrode and a front wall of carbon secured to a flexible disc of fine wire gauze forming the vibratory front electrode, the said gauze being clamped to the slate side wall, and the said front electrode being secured to the diaphragm centre to vibrate therewith, and a light bridge also mounted on the diaphragm and spanning the said button and delicately supporting the same, substantially as described.

No. 48,389. Type Setter. (*Machine & composer.*)

The Cox Type Setting Machine Company, Chicago, Illinois, assignee of Paul Flemming Cox, Battle Creek, Michigan, U.S.A., 3rd April, 1895; 6 years.

Claim.—1st. The combination with mechanism for composing type and spaces in line, of mechanism for forming laterally compressible spaces and delivering them as needed to the composing devices during the setting operation whereby the line may be subsequently mechanically justified by lineal compression, substantially as set forth. 2nd. The combination in a type setting machine of



mechanism for making laterally compressible spaces as needed to space the words during the setting operation and mechanism for lineally compressing the line when completed, thereby mechanically justifying the line by the yielding of the spaces, substantially as described. 3rd. The combination in a type setting machine of mechanism for composing type characters and laterally compressible spaces, and mechanism for making such spaces, and for laterally compressing the line when completed, thereby mechanically justifying the line by the compression of the spaces, and mechanism whereby the justified line may be moved out of the way of the next succeeding line, substantially as described. 4th. In a type-setting machine, the combination of the type setting mechanism, with mechanism for making spaces and delivering them to the setting mechanism as needed during the setting up of a line, substantially as described. 5th. In a type-setting machine, the combination with type setting mechanism, of a mechanism for making yielding compressible spaces at the will of the operator, and delivering them to the setting mechanism as needed during the setting up of a line, substantially as described. 6th. The combination in a type-setting machine, of the receiving galley, the plunger and rule therein, between which the composed types are moved in line, with mechanism whereby when the line is completed the plunger and the rule can be moved lengthwise of the galley so as to set the line of type out of the way, and mechanism whereby the rule is automatically shifted from front to rear of the line of type, substantially as described. 7th. The combination of the galley, the plunger therein the rule attached to the plunger, the devices for automatically raising and lowering the rule as the plunger is reciprocated in the galley, and means for directing a line of type into the galley, between the plunger and rule, substantially as described. 8th. The combination in a type-setting machine of the galley, mechanism for setting and aligning type and directing the same into the galley, a plunger and rule between which the incoming line of type is received, and mechanism for moving the line when completed forward in the galley, and simultaneously shifting the rule from front to rear thereof, substantially as described. 9th. In a type-setting machine, the combination with type setting mechanism, of a mechanism for making yielding spaces at the will of the operator, and delivering them to the setting mechanism, and means for lineally compressing the line of type when completed whereby the line is automatically justified by the yielding of the spaces, substantially as specified. 10th. The combination of the feed rolls, the driving gear thereof, mounted on a rock-shaft and carrying a ratchet, the jawl mounted on said rock-shaft engaging said ratchet, and the key lever and connections for rocking said shaft, with the shear plate, the spring-controlled latch thereon, and the finger on the rock-shaft engaging said latch, substantially as described. 11th. The combination in a type-setting machine, of the type setting devices, with a space strip feeder, and mechanism for corrugating and severing spaces from said strip and delivering them to the setting mechanism at the will of the operator, substantially as described. 12th. The combination in a type-setting machine, of mechanism for setting type, a key and mechanism for making spaces from a ribbon, whereby upon the depression of said key a space is severed and delivered to the setting mechanism, substantially as and for the purpose set forth. 13th. In a type-setting machine, the combination of mechanism for delivering type to a race-way, a galley for receiving the type from the race-way, a setter for forcing the type into the galley, and a mechanism for making and delivering yielding spaces to the setting

mechanism as required in the composition of matter, with mechanism for linearly compressing the line of type when completed thereby mechanically justifying it by reason of the yielding of the spaces and mechanism for moving the justified line out of the way, substantially as and for the purpose set forth. 14th. The combination, with mechanism for composing type, of a pair of rolls, and a shearing device, a key lever and connections whereby upon the depression of said lever, the shear and rolls are operated to sever a space, and means for delivering such space to the composing device, substantially as set forth. 15th. In combination with the composing mechanism of a type-setting machine, of a space making mechanism consisting of means for feeding a space ribbon and means for severing it into suitable lengths for spaces, a key, and connections whereby upon the depression of a key, a space is severed and delivered to the composing devices, substantially as described. 16th. The combination of the feed rolls, the driving gear thereof, its ratchet, the rock-shaft carrying a pawl engaging said ratchet, and means for rocking said shaft, with a shear blade, and means for operating it from the rock-shaft, at the initial movement of the latter, and for retracting the blade immediately after it has operated, substantially as described. 17th. In a combined type and logotype-setting machine, the combination with distinct sets of holders respectively for font types and three or more letter logotypes, independent ejectors for each holder, and independent carriers for conveying the ejected type and logotype characters to a common assembling race-way, and a device for pushing the type and logotypes therein, all constructed substantially as described so that types and logotypes can be independently but correctly brought into position at will to be composed in a line in said race-way by said pusher, substantially as described. 18th. In a combined type and logotype-setting machine, the combination of separate type and logotype holders standing at angles to each other, mechanism for ejecting the type or logotype one at a time, and separate endless belt carriers beside and running parallel with each holder, for conveying the types into a common race-way, whereby said types and logotypes are automatically brought together in the composed matter, substantially as described. 19th. In a combined type and logotype-setting machine, the combination of a pair of stationary channelled type holders, mechanism for ejecting separate type or logotypes, from the respective holders, mechanism for conveying the ejected type or logotype to a common race-way, a device for partially rotating the logotype on their way to the race-way, and mechanism for aligning and forwarding them therein, substantially as described. 20th. In a combined type and logotype-setting machine, the combination of separate receptacles for the type and the logotype characters arranged at angles to each other, and each consisting of a series of parallel diagonal channels, keys and connections whereby upon the depression of a key the corresponding type or logotype is ejected from its chanel, a common race-way or composing channel, and separate means for directing the ejected types and logotypes into said channel, substantially as described. 21st. In a combined type and logotype-setting machine, the combination of separate receptacles for the type and the logotype characters arranged at angles to each other, and each consisting of a series of parallel diagonal channels, keys and connections whereby upon the depression of a key the corresponding type or logotype is ejected from its channel, a common race-way or composing channel, and separate means for directing the ejected types and logotypes into said channel, and means for partially rotating said logotypes on their way to the channel, substantially as described. 22nd. In a type setting machine, the combination of two series of type channels standing substantially at right angles to and opening away from each other, a single race-way or assembling channel, at the proximate point of said series, and independent mechanism whereby type from either channel is directed into the said race-way, substantially as described. 23rd. The combination of two series of type holding channels, arranged at angles to each other, a separate type carrier for each series, moving parallel therewith, a race-way at the junction of said series of channels, and mechanism whereby the types are directed from the carriers into said assembling race, substantially as described. 24th. The combination of two series of type channels, and an endless belt type carrier for each series, arranged at angles to each other, a single assembling race-way at the proximate point of said belts, and mechanism for diverting the type from both belts into the said race-way, and a single pusher for moving type into said race-way, substantially as described. 25th. In a type-setting machine the combination of two series of diagonal parallel type channels arranged at angles to each other, a carrier belt for each series, said belts running at angles to each other and toward a common race-way, and chutes and switches for directing the type from each belt into said race-way, and a device for pushing the types through the race-way, substantially as described. 26th. The combination of two series of type holding channels, and an independent carrier for each series, a common race-way, and means for directing the types from said carriers into said race-way, and means for partially rotating the type from one series of channels, substantially as described. 27th. In a combined type and logotype-setting machine, the combination of receptacles for each type and logotype character arranged at angles to each other, mechanism for ejecting the separate type and logotypes at the will of the operator from their respective holders, and independent type carriers moving toward, but lying at angles to, each other for conveying the ejected type or logotype to a common race-way at the meeting point of the carrier, substantially as specified. 28th. In a combined type and logotype-setting machine, the combination of a receptacle for each type or logotype character, mechanism for ejecting the separate type or logotypes at the will of the operator from their respective holders, and mechanism for conveying the ejected type or logotype to a common race-way, and means for turning the logotype so that it will align with the type, substantially as described. 29th. A type reservoir having a series of parallel type channels, and formed of top and bottom diagonally grooved bars, and vertical strips a^2, secured in the grooves of said bars, having thin longitudinal portions a^3 at rear, and tapered at one end as at a^4, substantially as described. 30th. The combination of two type reservoirs arranged at angles to each other, and an endless belt carrier for each reservoir, means for driving one of said belts from the other, and mechanism for ejecting type from either reservoir directly upon its belt, and a common receiver into which the types from either belt are directed, substantially as described. 31st. The combination in a type-setting machine, of type reservoirs, a single assembling race-way, means for conducting type thereto from the reservoirs, and means for rotating the type from one reservoir, substantially as described, prior to its assembling in the race-way, substantially as specified. 32nd. The combination of two type reservoirs, a single race-way, means for conducting type from both reservoirs to said race-way, and means for partially rotating the type from one reservoir prior to its entering the race-way, and means for pushing the type successively into said race-way, substantially as described. 33rd. In a type-setting machine, the combination of two series of type channels standing at substantially right angles to each other and both opening outwardly, means for ejecting type from any channel in either series, an endless belt carrier running beside each series, and each at an angle to the other belt, a single race-way, means for directing types from either belt into the common race-way, a vibrating setter for pushing type into said race-way, the gearing between the belt driving wheels, and the devices for operating said setter from one of the belt wheels, all constructed and arranged to operate substantially as and for the purpose set forth. 34th. In a combined type and logotype-setting machine, the combination of an ordinary type reservoir for holding type with their nicks vertical, and a word logotype reservoir for holding the logotype with nicks horizontal and uppermost, with devices for ejecting separate types or logotypes at will, and separate movable carriers for respectively conveying the types and logotypes when ejected to a common race-way or composing channel, and a common setter for aligning them in the said race-way, substantially as described. 35th. In a combined type and logotype-setting machine, the combination of a pair of stationary receptacles for type and logotype characters respectively, arranged substantially at right angles to each other, keys and connections whereby upon depression of a key the corresponding type or logotype is ejected from its holder, a common type channel or race-way, into which the ejected types or logotypes are delivered, and an endless belt carrier beside the lower end of each receptacle for conveying the ejected types and logotypes separately to said race-way, and means whereby the types are successively moved into said race-way, substantially as described. 36th. The combination of a series of type channels, an endless belt extending parallel with the series, and close to the lower ends thereof, keys and connections for ejecting the type upon the belt at will of the operator, a race-way, into which the types are delivered, and a vibrating spring controlled pusher for moving the types into said race-way, a pitman for vibrating said pusher, operated in one direction by a cam on one of the belt driving wheels and in the opposite direction by a spring, all constructed and arranged, substantially as described. 37th. The combination, with the type holding and delivering mechanism, and race-way, of the vibrating pusher or setter O, mounted on a rock shaft O^1, a pitman rod o for rocking said shaft, a spring o^2 on said rod adapted to cause it to force said setter yieldingly in one direction, to set the type, and a rotating cam P engaging said rod to move it in the opposite direction and draw the setter outward against the action of the spring, substantially as described.

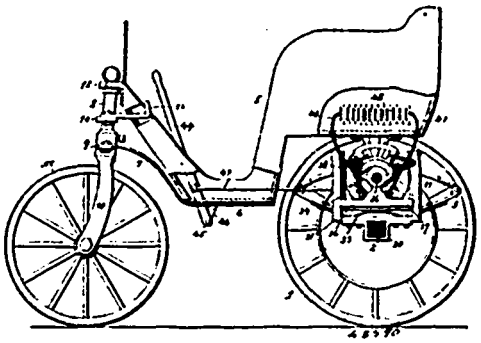
No. 48,390. Electrically Propelled Vehicle.

(*Voiture électrique.*)

Henry C. Baker, Kansas City, Missouri, and Heber Stone, Brenham, Texas, assignees of John R. Elberg, Kansas City, Missouri, all of the U.S.A., 3rd April, 1885; 6 years.

Claim.—1st. An electrically propelled vehicle, comprising a wheeled frame, a battery carried thereby, a motor electrically connected to said battery, friction discs mounted upon and rotating with the motor-shaft, and friction discs mounted to rotate with certain wheels of the vehicle, and engaged by the first-mentioned friction discs, substantially as set forth. 2nd. An electrically propelled vehicle, comprising a wheeled frame, a motor carried thereby, a bracket carried by the rear axle of said frame, a spring carried by said bracket, a motor yieldingly supported upon said spring, and electrically connected to the battery, small friction discs mounted upon the motor-shaft, and large friction discs carried rigidly by the wheels of the frame journalled loosely upon the said axle, substantially as set forth. 3rd. An electrically propelled vehicle, comprising a wheeled frame, a bracket carried by the rear axle of said wheeled frame, a spring carried by said bracket, a battery located in the body of the vehicle, a motor mounted upon said spring and

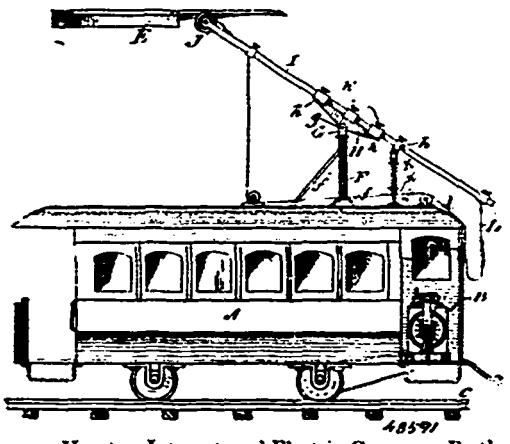
between the arms of said bracket, and electrically connected to said battery, friction discs mounted upon the shaft of the motor, and friction discs carried by the wheels of said axle, screw-threaded



standards supported upon said axle, lift-screws engaging the same, bearing-boxes carried by said lift-screws and engaging the motor-shaft near its opposite ends, arms mounted rigidly upon said lift-screws, and means to operate the same so that the motor-shaft will be raised or lowered, substantially as set forth.

No. 48,591. Trolley Contact and Switch.

(*Contact de trollée et aiguille.*)



The Thomson-Houston International Electric Company, Portland, Maine, assignee of Charles A. Coffin, Boston, Massachusetts, and Albert Wahl, Chicago, Illinois, all in the U.S.A., executors of Charles J. Van Depoele, late of Lynn, Massachusetts, deceased, 3rd April, 1895; 6 years.

Claim.- 1st. In electric railways the combination of a supply conductor suspended along the line of travel, a car or other vehicle having a support extending upward from the upper part thereof, and an arm hinged and pivoted to swing freely upon the support and carrying a contact adapted to engage the suspended conductor, substantially as described. 2nd. In electric railways the combination of a car, a supply conductor suspended along the line of travel of the car, a post or support, upon the upper portion of the car, an arm carrying a contact adapted to engage the suspended conductor, said arm being hinged and pivoted upon the post or support upon the car whereby said arm may freely swing vertically and laterally with respect to the top of the car and be turned entirely around upon its pivot to operate from either direction, substantially as described. 3rd. In electric railways the combination of a car, a supply conductor suspended along the line of travel, of the car, a post or support along the upper portion of the car, an arm carrying a contact adapted to engage the suspended conductor, said arm being hinged and pivoted upon the post or support upon the car whereby said arm may freely swing vertically and laterally with respect to the top of the car and be rotated upon its pivot to operate from either direction, and a tension spring for pressing said arm upward and maintaining said contact, substantially as described. 4th. In an electric railway the combination of a vehicle a support mounted thereon, a contact carrying arm hinged and pivoted to swing freely upon said support and a rope or other flexible connection secured to the contact carrying devices and to the said pivoted support and arranged upon the exterior of the vehicle whereby the contact carrying arm can be lowered and the pivoted support and arm be moved into any desired position, substantially as described. 5th. The combination with a car, of a post or standard mounted thereon, a sleeve pivotally supported upon the post and having laterally extending arms, a contact carrying arm hinged in the upper portion of the sleeve, a tension spring or springs secured to one of the arms and to the lower part of the contact carrying arm for maintaining an upward tension at its outer extremity, and a cord passing through the other arm for manipulating the rotatable contact arm carrying frame, substantially as described. 6th. The combination of a car, an overhead conductor, a contact device making underneath contact with the conductor, a standard on the roof of the car, an arm carrying a contact device pivoted on the standard and also on a transverse axis and free to swing thereon, a spring connected to the arm for pressing the contact device upward against the conductor, and a line or lines connected with the arm for moving the same. 7th. In an electric railway, the combination of a car, an overhead conductor situated above the car, a standard on the car, an arm carrying a contact device at its free extremity, said arm being pivoted upon the standard and also upon a transverse axis and adapted to swing freely thereon to permit the contact device carried by its free extremity to follow the line of the conductor, and a line connected with the arm for moving the same. 8th. In an electric railway, the combination of a car, an overhead conductor, a standard on the car, an inclined pole carried by a transverse axis upon said standard and free to swing around said standard, and a grooved or flanged contact device carried by said pole and engaging said conductor at its lower side, substantially as described. 9th. In an electric railway, the combination of a car, an overhead conductor situated directly above said car, a contact device making underneath contact with said conductor, and a pole carried by the car and carrying said contact device and pivoted so as to swing freely around a vertical axis, substantially as described. 10th. In an electric railway, the combination of a car, an overhead conductor above the car, an arm carrying a contact device at its outer end said arm mounted on a transverse axis, a spring connected to the arm for pressing the contact upward against the conductor, a line for moving the arm, having a stop for limiting the upward movement of the arm. 11th. In an electric railway, the combination of a car, an overhead conductor, a standard on the car, a rotating support thereon, an inclined contact carrying arm hinged upon said support, and a tension spring secured so as to rotate with the support and acting upon the said arm for holding the contact device in position. 12th. In an electric railway, the combination with a car, of a standard on the car, a rotating support thereon, an arm hinged upon said support and provided with a grooved or flanged contact device for engaging with a suspended conductor, and a tension spring secured so as to rotate with the support and acting upon the said arm for holding the contact device in position. 13th. A reversible contact device for an electric railway vehicle, consisting of a standard, a rotating support thereon, a contact carrying arm hinged upon said support, and a tension spring secured so as to rotate with the support and acting upon the contact carrying arm for holding the contact device in position. 14th. The combination with a hinged contact carrying arm for an electric railway vehicle pivotally mounted upon a support, of a plurality of tension springs acting on the contact carrying arm for maintaining the upward tension at its outer extremity. 15th. The combination with a hinged contact arm for an electric railway vehicle pivotally mounted on a support, of a plurality of tension springs secured to a clamp attached to the said arm. 16th. In an electric railway, the combination with an overhead conductor, a contact device making underneath contact with the conductor, and a switch plate attached to the conductor and provided with means for depressing the contact device. 17th. In an electric railway, the combination with an overhead conductor for receiving underneath contact, of a switch plate attached thereto and provided at its extremities with means for depressing the contact device. 18th. A switch for suspended electric railway conductors, comprising a box suspended from the conductor and formed with two or more branching compartments leading therethrough, the outer extremities of each compartment sloping upward toward the conductor, substantially as described. 19th. A switching device for electric railways, consisting of an open bottom metallic box or frame secured to and depending from the under side of a suspended conductor and formed with upwardly inclined outer extremities.

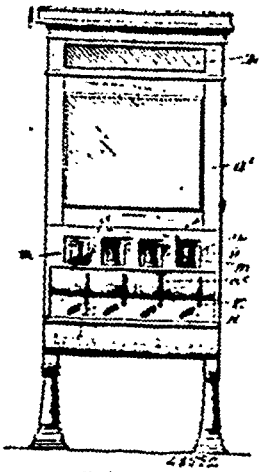
No. 48,592. Coin Actuated Vending Machine.

(*Appareil de vente actionné par une pièce de monnaie.*)

Joseph P. Beretta, Chicago, Illinois, U.S.A., 3rd. April, 1895; 6 years.

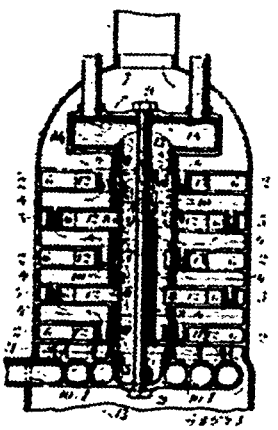
Claim. 1st. In a device of the class described, the combination, with a suitable casing containing the necessary auxiliary devices, of mechanism for delivering a definite quantity of merchandise from the interior of the casing, a coin chute, an operating handle adapted to be grasped by the hand and a coin-operated pawl adapted to engage the delivering mechanism and pivoted to the handle above the coin chute in position to be raised by said coin and thereby engaged with the delivering mechanism, substantially as described. 2nd. In a coin actuated vending machine, the combination, with a suitable casing containing a receptacle for merchandise and suitable delivering mechanism, of a pivoted operating handle extending within the casing, a block pivoted upon said handle and bearing a pawl adapted when in the proper position to engage and operate the delivering mechanism, a coin chute having a bottom eccentric with relation to the handle pivot and a lug upon the block extending over the chute and having a cam surface oppositely arranged to the

eccentric bottom of said chute, containing a shoulder adapted to engage the proper coin between it and the eccentric bottom of the chute and thereby throw the pawl upon the pivoted block into engagement with the delivering mechanism, and a surface adjacent to said shoulder adapted to roll along the top of the coin, and retain



said pawl in engagement until the action of the delivering mechanism is completed, substantially as described. 3rd. In a device of the class described, the combination, with the casing having suitable coin actuated delivering devices and an operating handle, of a coin chute and a by-pass, said coin chute having a movable portion provided with a spring adapted to put it into register with the by-pass, and means connected with the operating handle for forcing said movable portion into register with the remainder of the chute when said operating handle is in proper position for the insertion of a coin in the machine, substantially as described. 4th. The combination in a coin actuated vending machine with a suitable casing containing a receptacle for merchandise, a coin chute, an operating handle and coin actuated delivering mechanism adapted to be engaged with said handle by the passage of the proper coin, of a by-pass for smaller coins, and a switch adapted to divert said smaller coins into said by-pass, said switch being connected with the operating handle, whereby it may be removed from its working position by the movement of the handle, substantially as described. 5th. In a coin actuated vending machine, the combination, with a suitable casing containing a merchandise receptacle and coin actuated mechanism for delivering said merchandise, of a movable advertising surface, a bell adjacent thereto, a hammer adapted to strike the same, connecting devices between said advertising surface and said delivering mechanism adapted to move said advertising surface, and connecting devices between said delivering mechanism and said hammer adapted to operate the latter as each package of merchandise is discharged from the casing, substantially as described.

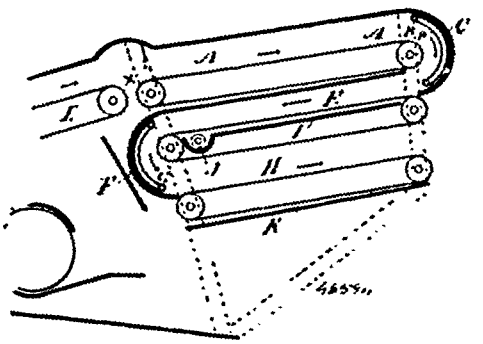
No. 48,592. Hot Water Heater. (*Calorifère à eau.*)



Thomas Stubbs Bayles, Toronto, Ontario, Canada, 3rd April, 1895; 6 years.

Claim.—1st. In a water heater, a hollow section having an opening at its centre and flanges on both sides at said centre and at the periphery, and having flues extending through the section and walls and ports within, substantially as shown and described. 2nd. In a water heater, a section composed of a spiral pipe and having a well at centre into which the inner end of said pipe discharges, substantially as shown and described. 3rd. In a water heater, the combination of a spiral hollow section having a well at its centre, with a hollow flanged section having a central opening therein, flues through the section as specified and ports and walls therein, substantially as and for the purpose set forth. 4th. In a water heater, the combination of a spiral hollow section having a well at its centre, a flanged hollow section adapted to fit in close contact with said spiral section and having a well at centre and having a cross-wall therein and flues, ports, and walls as specified, and a distributing section as specified adapted to receive a number of pipes therein, substantially as shown and described. 5th. In a water heater, the combination of a spiral hollow section having a well at its centre, a series of flanged hollow sections secured in close contact on one another at the flanges near their centre and periphery, said hollow sections having flues through them, and ports and walls as specified within them, a distributing hollow section secured above said series of hollow sections, and a bolt securing all said sections together, substantially as and for the purpose set forth.

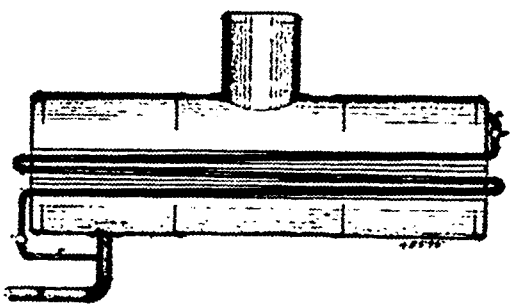
No. 48,594. Grain Separator. (*Séparateur à grain.*)



Hezekiah Baily, and William Lorenzo Gilson, both of Sheriden, Oregon, U.S.A., 3rd April, 1895; 6 years.

Claim.—In a grain separator, the combination of the forwardly moving endless carrier A, H, one below the other, the concave casings C, F, the concave-faced endless carriers D, G, and the intervening backwardly-moving endless carrier E, substantially as set forth.

No. 48,595. Steam-Boiler. (*Chaudière à vapeur.*)



Henry Calcutt, Ashburnham, Ontario, Canada, 3rd April, 1895; 6 years.

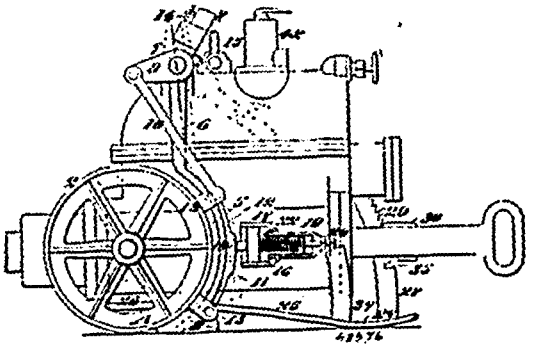
Claim.—1st. An improvement in steam-boilers which consist of a combination of water tubes laid through the flues and connected to the boiler, substantially for the purpose hereinbefore set forth. 2nd. An improvement in steam-boilers which consists of a combination of water tubes H, H, H, laid through the flues and connected together by return heads and branch heads C, C, and D, D, branch head C, C, being connected to boiler by pipe F, in connection with boiler supply pipe E, branch head D, D, being connected to boiler by the pipe G, substantially as and for the purpose hereinbefore set forth.

No. 48,596. Mining Machine. (*Machine de mine.*)

Benhard Yoch, Belleville, Illinois, U.S.A., 3rd April, 1895; 6 years.

Claim.—1st. In a mining machine, a shoe adapted to operate as a friction brake against a wheel of the machine, or as a wedge brake between the wheel and the support of the machine, in combination with means for raising and lowering the shoe, and means for applying pressure to the shoe, substantially as set forth. 2nd. In a mining machine, a shoe adapted to operate as a friction brake against a wheel of the machine, or as a wedge brake between the wheel and the support of the machine, in combination with means for applying pressure to the shoe, and means for raising and lowering the shoe, consisting of a shaft, a lever on the shaft, and a rod and arm connection between the shoe and the lever, substantially as set forth.

3rd. In a mining machine, having wheels resting upon a support, a fixed and a movable brake-shoe connected to the lower ends of hangers, a shaft to which the hangers are secured, a lever on the shaft, provided with a pawl adapted to engage with a lug on one of said hangers, an arm connecting with said lever, a rod connecting the arm to said movable shoe, and means for applying pressure to the shoes, substantially as set forth. 4th. In a mining machine,



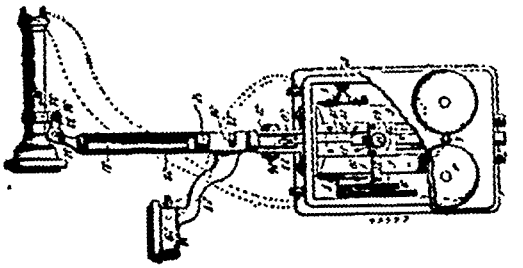
having wheels and a brake-shoe, an auxiliary cylinder and piston for applying pressure to said shoe to cause the shoe to bear on one of said wheels, said auxiliary cylinder communicating with the main cylinder of the machine or its supply port, so that as the tool advances the brake-shoes will be applied, substantially as set forth. 5th. In a mining machine, having wheels and a brake-shoe, an auxiliary cylinder and piston for applying pressure to said shoe to cause the shoe to bear on one of said wheels, and a spring located behind said piston, substantially as and for the purpose set forth. 6th. In a mining machine, having wheels resting on a support, a fixed and a movable brake-shoe supported on hangers connected together by a shaft or rod, means for raising and lowering said movable shoe, and an auxiliary cylinder and piston for applying pressure to said shoes, said piston bearing against said movable shoe, substantially as and for the purpose set forth. 7th. In combination with a mining machine having a single pair of supporting wheels, a shoe for forming a third support for the machine, substantially as set forth. 8th. In combination with a mining machine having a single pair of supporting wheels, a spring shoe secured to the body of the machine and forming a third support back of said wheels, substantially as set forth. 9th. In combination, with a mining machine having a single pair of supporting wheels, a support back of said wheels, and an adjustable connection between said support and the body of the machine, substantially as set forth. 10th. In combination, with a mining machine having a single pair of supporting wheels, a support back of said wheels, and a pawl and ratchet connection between the body of the machine and said support, substantially as and for the purpose set forth. 11th. In combination, with a mining machine having a single pair of supporting wheels, a spring shoe secured to the body of the machine and extending back of said wheels, a ratchet-bar secured to the free end of said shoe, and a movable dog mounted on one of the handles of the machine and adapted to engage said ratchet-bar, substantially as set forth. 12th. In combination, with a mining machine having a single pair of supporting wheels, a shoe secured to the body of the machine and extending back of said wheels, and an adjustable connection between the free end of said shoe and the body of the machine, substantially as set forth. 13th. In a mining machine having a single pair of supporting wheels, the combination of a spring plate secured to the body of the machine, a ratchet-bar secured to said plate and having an elongated notch 17, and a dog secured to one of the handles of the machine, and adapted to engage said ratchet bar and said notch, substantially as and for the purpose set forth. 14th. In combination with a mining machine having a single pair of supporting wheels, a shoe secured to the body of the machine, a ratchet-bar secured to the free end of the shoe, a guide plate 37 secured to the shoe, and a dog secured to one of the handles of the machine and adapted to engage said ratchet-bar, substantially as set forth. 15th. In a mining machine, the combination of a valve 41, housing 42, stem 44, having a head 45, spring 46, nut 47, means for keeping the nut from turning, and a stem engaging said nut and provided with means by which it may be turned, substantially as set forth.

No. 48,597. Telephonic Apparatus.

(*Appareil téléphonique.*)

Norval Landon Burchell, Washington City, Columbia, U.S.A., 3rd April, 1895; 6 years.

Claim.—1st. In a telephone, a pivoted arm adapted to vibrate in a vertical plane and provided with a supporting-arm extended in the same axial line, and having a lateral bracket-arm carrying the transmitter, and a support for the receiver at or near the end of the supporting-arm, the latter being capable of a limited rotary or swivelling movement upon its own axis, to shift the transmitter to either side of the supporting arm and to give a corresponding adjustment to the receiver, whereby the latter may be applied to either ear, substantially as described. 2nd. In a telephone, the combination with an arm pivoted to vibrate in a vertical plane, of a supporting-arm extended in the same axial line and pro-



vided with a lateral bracket-arm carrying the transmitter, and an extension-arm capable of prolongation and substantially in the axial line of the supporting-arm, and having an attachment for the receiver, the said supporting-arm having a limited rotary, or swivelling movement upon its own axis, to shift the transmitter to either side of the same and to give a corresponding adjustment to the receiver, whereby the latter may be applied to either ear, substantially as described. 3rd. In a telephone, the combination with a pivoted arm adapted to vibrate in a vertical plane, of a supporting-arm having its axis coinciding with that of the pivoted arm which enters its end, said supporting-arm having a transverse slot to receive a pin rigidly set in the pivoted arm to allow a limited rotary adjustment in the common axial line, a transmitter mounted on a rigid arm projecting laterally from the supporting-arm, and a receiver at or near the end of the same, whereby the receiver may be adjusted to either ear and the transmitter brought upon either side of the arm, substantially as described. 4th. In a telephone, the combination with a pivoted arm of a supporting-arm capable of a limited rotary adjustment thereon and having a lateral arm supporting the transmitter, a receiver on the end of said supporting-arm, and a magneto mechanism the armature of which is revolved by the vibration of said pivoted arm, substantially as described. 5th. In a telephone, the combination with a pivoted arm supporting a transmitter and a receiver, of a magneto mechanism operated by said arm and supporting the same at different angles by the resistance to rotation of its armature, substantially as described. 6th. In a telephone, the combination, with a pivoted arm supporting one or more of the parts of the telephone of a magneto mechanism operated by said arm and supporting the latter at different angles by the resistance which the armature offers to rotation due to its cutting the lines of force of the magnetic field, substantially as described. 7th. In a telephone, the combination, with a pivoted arm carrying a receiver and transmitter of a magneto mechanism, a multiplying train of gears operating the armature, a toothed-bar engaging the initial gear of the train and pivotally connected to the pivoted arm, an electric circuit for the magneto including the bell-coils, receiving and transmitting circuits, a short circuit for the magneto, brushes operated by the pivoted arm to cut the magneto-call out and the receiver and transmitter into circuit with the line, and a circuit-controller which normally completes the short circuit of the magneto, and *vice versa*, substantially as described. 8th. In a telephone, the combination, with a pivoted arm supporting a receiver and transmitter of a magneto mechanism means for operating the armature thereof by said arm, a bell circuit, a short circuit for the magneto, a transmitter and a receiver circuit and a circuit controller to cut out the short circuit, substantially as described. 9th. In a telephone, the combination, with a pivoted arm carrying a transmitter and receiver, of a magneto mechanism, bell-coils excited thereby, means for operating the armature of the magneto by the vibration of the pivoted arm, circuits for the bell, and for the magneto, a short circuit for the magneto, transmitter and receiver circuits, a circuit controller having a push button and spindle carrying a conducting washer which makes and breaks the short circuit, parallel contact-strips one thereof being divided into two parts, one part connected in the transmitter circuit and the other in the short circuit of the magneto, and a bridge-contact having brushes sweeping the parallel strips as the pivoted arm vibrates, substantially as described. 10th. In a telephone, the combination, with a pivoted arm carrying the transmitter and receiver, of a sliding switch operated by said arm, circuits for the transmitter and receiver and for the generator supplying current to the bell-coils, a short circuit for said generator, and parallel contact strips on which the sliding switch moves, said strips being connected in the separate circuits and one of said strips having a break to enable the switch to cut the bell-coils, out and the receiver and transmitter in, and *vice versa*, substantially as described.

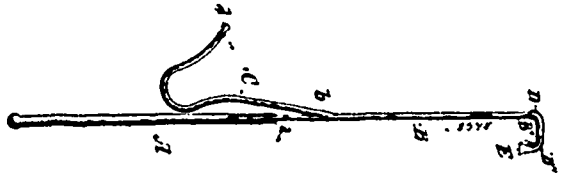
No. 48,598. Candle Extinguisher.

(*Eteignoir de chandelles.*)

Daniel Curran, Indianapolis, Indiana, U.S.A., 3rd April, 1895; 6 years.

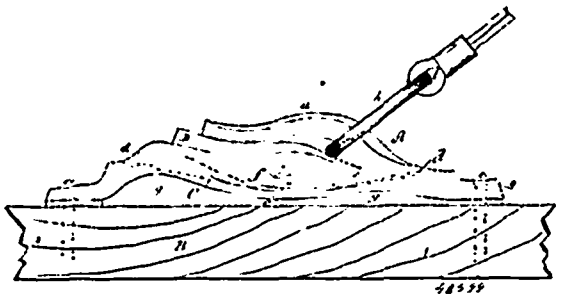
Claim.—1st. In a candle extinguisher, the handle A provided

with the opening *a*, extending a short distance in the end thereof and having the groove *c*, in the side thereof, connected with the opening *a*, by means of an inclined opening *f*, said opening *a*, being adapted to receive the end of a metal tube and the inclined opening



f, and groove *c*, being adapted to receive and hold a flexible tube, as shown and described. 2nd. In a candle extinguisher, the handle A, having the opening *a*, the inclined opening *f*, the groove *c*, and the movable angular shaped air outlet E, for the purpose shown and described. 3rd. In a candle extinguisher, the combination of the handle A, having the opening *a*, and the movable angular shaped air outlet E, with the air tube B, having the short tube *b*, projecting downward therefrom, substantially as shown and described.

No. 48,599. Holdback for Thills. (*Ragot de limonière.*)

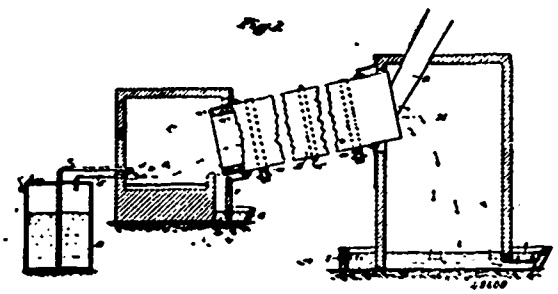


Peter Spohn Van Wagner and Henry P. Van Wagner, both o Stoney Creek, Ontario, Canada, 4th April, 1895; 6 years.

Claim.—1st. In a holdback for thills, a hollow frame provided with a hook, an opening under the hook, and an oscillating latch operating in said opening having side projections held in recessed lugs on the inside of the frame, by which it oscillates, and a spring made to impinge against the said latch and press it up to the under side of the hook so as to hold the breeching ring, all constructed substantially as and for the purpose specified. 2nd. In a holdback for thills, the hollow frame A, having a hook *a*, and recessed lugs *f*, *f*, and openings *d*, *d*, a double curved latch D having side projections *c*, *c*, made to oscillate in the recessed lugs *f*, *f*, and a flat spring C made to press upward against the latch D to close the space between the hook and the top of the frame and press the breeching ring *h* and hold it at the rear end of the hook *a*, substantially as and for the purpose specified.

No. 48,600. Ore Roasting Furnace.

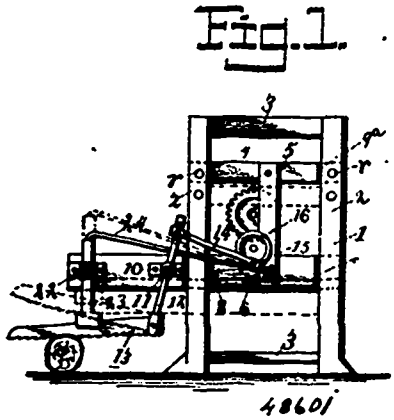
(*Fourneau pour le grillage des minerais.*)



Henry Lawson Chapman, Oakland, California, U.S.A., and Robert Stevenson, British Columbia, Canada, 4th April, 1895; 6 years.

Claim.—1st. An ore roasting furnace consisting of an inclined rotating retort, communicating at its upper end with a supply hopper, a fire chamber or furnace communicating with the lower end of said retort, and a closed chamber with which said lower end communicates, and adapted to receive the roasted ore therefrom, said closed chamber having a water seal in its bottom. 2nd. An ore roasting furnace consisting of an inclined rotating retort communicating at its upper end with a supply hopper, a fire chamber or furnace communicating with the lower end of said retort, a closed chamber with which said lower end communicates and adapted to receive the roasted ore therefrom, said closed chamber having a water seal in its bottom, and a tight vessel with which the upper end of the retort communicates, said vessel having a water seal at its bottom to condense the escaping products of combustion and volatile vapours. 3rd. An ore roasting furnace consisting of an inclined rotating retort, communicating at its lower end with a fire chamber or furnace, and at its upper end with a supply hopper and a tight vessel with which said upper end communicates, said vessel having a water seal at its bottom adapted to condense the escaping products of combustion and volatile vapours. 4th. An ore roasting furnace comprising an inclined rotating retort having a communication at its upper end with a supply hopper, a fire chamber communicating with the lower end of the retort, a liquid hydrocarbon burner and means for supplying it, operating in said fire chamber, and a closed chamber with which the lower end of the retort communicates and adapted to receive the ore therefrom, said chamber having a water seal in its bottom. 5th. An ore roasting furnace comprising an inclined rotating retort having a communication at its upper end with a supply hopper, a fire chamber communicating with the lower end of the retort, a liquid hydrocarbon burner and means for supplying it, operating in said fire chamber, a closed chamber with which the lower end of the retort communicates, and adapted to receive the ore therefrom, said chamber having a water seal in its bottom, and a closed vessel at the upper end of the retort and communicating therewith, said vessel having a water seal at its bottom to condense the escaping products of combustion and volatile vapours. 6th. An ore roasting furnace comprising an inclined rotating retort having a supply hopper communicating with its upper end and a closed vessel with water seal communicating with said end, a fire chamber communicating with the lower end of the retort, a closed chamber communicating therewith and having a water seal in its bottom, an oil vessel having an oil pipe extending into the fire chamber, a hydrocarbon burner in said fire chamber adapted to receive the oil, a means for supplying the burner with air to vapourize the oil, and means for providing an air pressure on top of the oil in the vessel, to force it into the burner.

No. 48,601. Drag-Saw. (*Scie traînante.*)



James H. Blackman, Hartsville, Illinois, U.S.A., 4th April, 1895; 6 years.

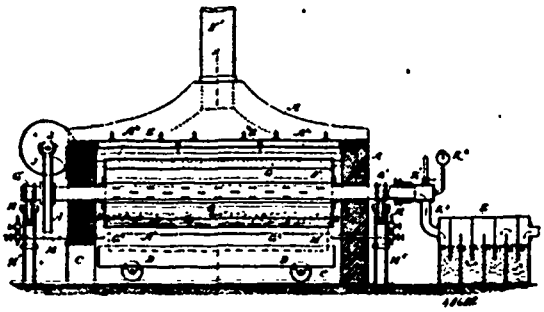
Claim.—In a drag-saw machine, the combination, with the main frame, of the vertically adjustable frame having an end extension provided with vertical and horizontal guide-holders, the detachable guide or shoe adapted to operate in either of said holders, the detachable saw-operating lever, the fulcrum pins, whereby said lever may be fulcrumed vertically or horizontally to said extension, and the gearing for actuating the lever and saw, substantially as specified.

No. 48,602. Apparatus for Burning Materials used in the Manufacture for Cement, Etc. (*Appareil pour brûler des matières en usage dans la fabrication du ciment, etc.*)

José Francisco de Navarro, New York, State of New York, U.S.A., 4th April, 1895; 6 years.

Claim.—1st. The combination of a horizontal combustion chamber having suitable charging and discharging openings, a cylindrical retort, a hollow axle provided with slits or openings and on which the retort is fixed, means for giving a slow rotary motion to said axle, means for heating the retort externally, and purifiers in connection with the hollow axle, for purifying the gas passing away from the retort through the hollow axle, as shown and described, the whole constituting an apparatus for calcining, cement making and like materials, and for recovering and purifying the carbonic acid gas produced during such calcining process. 2nd. The combination with a horizontal combustion chamber, of a rotating retort consisting of a cylinder provided with doors and internal longitudinal fins, and having outlets for steam, air, and gases, means for rotating the said cylinder, and means for heating the same externally, as shown and described, the whole constituting an apparatus for burning or calcining, cement making and similar materials. 3rd.

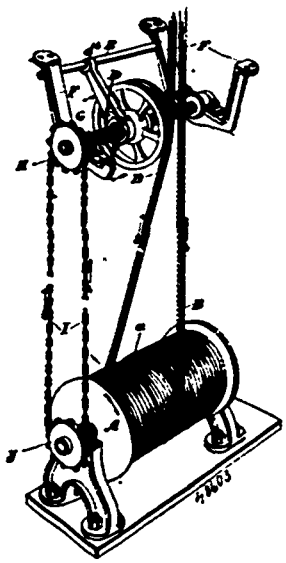
The combination with a brick-work setting containg a horizontal combustion chamber, having a charging opening at top closed by covers, and a flue opening parallel therewith, and a discharging opening at bottom, and also an archway or passage into which a



truck or trolley may be run below the discharging opening of a rotating retort to contain materials to be burned or calcined, and means for externally heating the retort, as shown and described. 4th. The combination with a rotating retort to contain cement making or similar materials to be calcined, of means for carrying off the carbonic acid gas evolved during the calcining operation, means for heating the retort externally, and purifiers for purifying the gas, all substantially as and for the purpose set forth. 5th. The combination with a horizontal externally heated rotating retort for calcining, cement making and similar materials provided with doors and means for carrying from the retort steam, air and gas, of a chamber containing an outlet cock for steam and air, a valved gas outlet, and a pyrometer, all substantially as and for the purposes set forth.

No. 48,603. Guide-Sheave for Elevators.

(*Guide de rouet pour élévateurs.*)

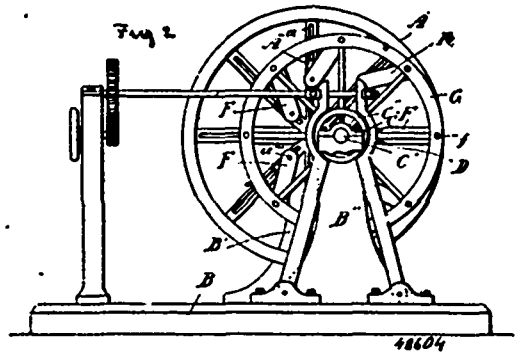


John Fenson, Toronto, Ontario, Canada, 4th April, 1895; 6 years.

Claim.—1st. The combination with the winding drum of a rotatable screw spindle, a sleeve secured from rotating on said spindle, a guide-sheaf journalled on said sleeve and arranged to receive the cable passing from the drum and means for causing the spindle to rotate with the drum as and for the purpose specified. 2nd. The combination with the winding drum of a rotatable screw spindle a sleeve having an outwardly extending arm secured to it, means for holding such arm rigid, a guide-sheaf journalled on said sleeve and arranged to receive the cable passing from the drum and means connecting the drum with the spindle to cause such spindle to rotate in unison with the drum as and for the purpose specified. 3rd. The combination with the winding drum having peripheral grooves of the same width as the diameter of the separate portions of the cable, of a rotatable screw spindle having the pitch corresponding to the entire diameter of the cable, a sleeve having an outwardly extending arm secured to it, means for holding such arm rigid, a guide-sheaf journalled on said sleeve and arranged to receive the cable passing from the drum and means connecting the drum with the spindle to rotate in unison with the drum as and for the purpose specified. 4th. The combination with the winding drum of a rotatable screw spindle, a sleeve having a flange at one end and an arm keyed to the opposite end and held rigidly at its outer end as specified, a guide-sheaf journalled on said sleeve between the flange and arm and means connecting the drum with the spindle to cause such spindle to rotate in unison with the drum as and for the purpose specified. 5th. The combination with the winding drum of a rotatable screw spindle a sleeve secured from rotating on said spindle, a guide-sheaf journalled on said sleeve and arranged to receive the cable passing from the drum, a sprocket-wheel on the end of the screw spindle, a sprocket-wheel on the end of the drum shaft and a sprocket-chain connecting them as and for the purpose specified.

No. 48,604. Mechanical Movement.

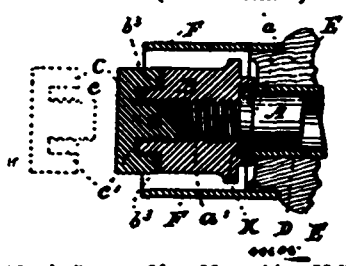
(*Mouvement mécanique.*)



Jeremiah Jacklin, Ottawa, Ontario, Canada, 4th April, 1895; 6 years.

Claim.—The combination of two wheels of different diameter facing each other and each secured upon a horizontal shaft journalled so that their prolonged centre lines are parallel in a horizontal plane, connecting gear secured upon the ends of the shafts projecting beyond the opposite faces of the wheels and of such description as to cause both wheels to rotate uniformly together in the same direction, radial slide-ways on the large wheel, slides adapted to travel radially on said slide-ways each having a pin projecting towards the face of the small wheel, a series of weights corresponding to the series of slides each pivoted at one side of its centre of gravity to the inner face of the small wheel, and to or near its rim and supported at the other side of its centre of gravity by the pin projecting from the corresponding slide, substantially as set forth.

No. 48,605. Axle Nut. (*Ecrou d'essieu.*)



Orin Bagley, North Sutton, New Hampshire, U.S.A., 4th April, 1895; 6 years.

Claim.—A wagon-axle nut composed of two parts, the larger having a threaded opening from end to end, and provided at its outer end with a reduced cylindrical portion, and the other having an annular recess for the reception of said cylindrical portion of the larger section, and a threaded plug or projection formed concentric within said recess and adapted to fit and enter the threaded opening of said larger section.

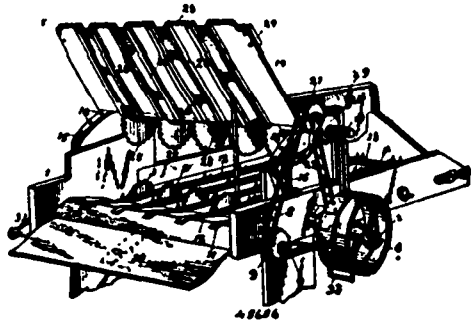
No. 48,606. Band-Cutter and Feeder.

(*Coupe-hart et alimentateur.*)

Edward Turnell, Elm Creek, Nebraska, U.S.A., 4th April, 1894; 6 years.

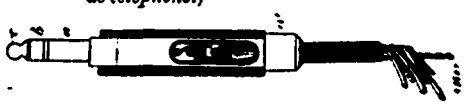
Claim.—1st. The combination, with a frame work having a table, feed chains, band-cutters and means for operating the same, of a pivotal pressure platform, stationary segmental brackets 15 carried by the frame-work, bearings adjustably bolted to said brackets, and a shaft mounted in said bearings and carrying the pressure platform, substantially as specified. 2nd. The combination, with a frame-work having a table, band-cutters 3, feed-chains 12 and means for operating the same, of a transverse shaft 19 arranged above the plane of the feed-chains and operatively connected to the same, agitator-discs 28 carried by said shaft and arranged respectively above said feed-chains, a pressure platform fulcrumed upon said

shaft, and agitator belts carried by said platform and operatively connected to the shaft, substantially as specified. 3rd. The combination, with a frame-work having a feed-table, of spaced feed chains, band cutters arranged in the intervals between the feed chains, means for operating said chains and cutters, a shaft 19 operatively connected to the feed-chains, spaced agitator discs carried by the



shaft and arranged respectively above the feed-chains, a pressure platform fulcrumed upon said shaft, and agitator-belts carried by the platform, arranged respectively above the band-cutters, and operatively connected to the shaft, substantially as specified. 4th. The combination, with a frame-work, alternately arranged band-cutters and feed-chains, and means for operating the same, of a shaft arranged above the plane of the feed-chains and operatively connected thereto, agitator-discs fixed to said shaft, a pressure platform fulcrumed upon the shaft and comprising spaced longitudinal plates 23, provided with depending side guiding-flanges and cross-pieces 24, and agitator-belts arranged between said flanged plates and operatively connected to the shaft, substantially as specified.

No. 48,607. Plug and Cord for Telephone Switch Boards. (*Clef et cordon d'appareil d'échange de télephone.*)



The Bell Telephone Company of Canada, Montreal, Quebec, Canada, assignee of Frank Robert McBerty, Chicago, Illinois, U.S.A., 4th April, 1895; 6 years.

Claim.- 1st. The combination with a conducting cord having a suitable covering, of a sleeve within the covering, and means for clamping upon the covering outside of the sleeve, substantially as described. 2nd. The combination with a connecting plug, of a cord having a covering, a sleeve within the covering, and a device in the body of the plug adapted to grasp the covering outside the sleeve to compress the same against the sleeve, substantially as described. 3rd. The combination with a connecting plug, of a cord having a braided covering, a sleeve within the covering, a tapered opening in the plug, means for forcing the sleeve together with the surrounding covering into the tapered opening, and means for attaching the conductors within the plug, substantially as described. 4th. The combination with a connecting plug, of a conducting cord having a suitable covering, means for attaching the covering of the cord to the plug independently of the enclosed conductors, and means for attaching the conductors of the cord within the plug, the conducting strands being wound in spiral form to permit of longitudinal extension of the conductors, substantially as described. 5th. The combination with a connecting plug, of a cord having a covering with its end introduced within the plug and distended, and a clamping or hold-fast device for engaging such distended end, for the purpose set forth. 6th. The combination with a connecting plug, of a cord having a covering with its end introduced within the plug and distended by an internal sleeve acting as a filling and a clamping device for engaging such distended end, for the purpose set forth. 7th. The combination with a central cord, of several conducting strands wound in a close spiral about the cord, the turns of the different conductors being separated by interposed cords of insulating material. 8th. In combination, in a switch board cord, a central cord of insulating material, several flexible conducting strands, and interposed cords of insulating material, separating the conducting strands from one another, the different strands being wound in a close spiral about said central core, as described. 9th. The combination in a switch board cord, of several strands of conducting material, strands of insulating material interposed between said conducting strands, said strands being wound in close spirals, and a flexible envelop of insulating material, as described.

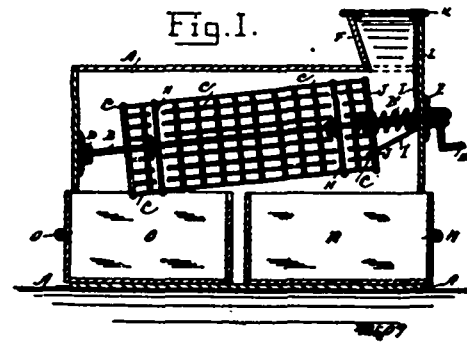
No. 48,608. Manufacture of Flake Mica for Covering Boilers, Etc. (*Fabrication de parcelles de mica pour couvrir les chaudières. etc.*)

Henry Colbeck Michell, Toronto, Ontario, Canada, 4th April, 1895; 6 years.

Claim.--1st. The herein described method or process of reducing block mica, crystals or refuse sheets or pieces of mica into flake mica consisting in first opening the edges of the laminae of the pieces, and then subjecting edgewise to the action of a blast, as and for the purpose specified. 2nd. The herein described process of reducing refuse sheets or pieces of mica into flake mica consisting in first corrugating the refuse sheet mica and then subjecting edgewise to the action of a blast, as and for the purpose specified. 3rd. The herein described process of reducing refuse sheets or pieces of mica into flake mica consisting in first corrugating the refuse sheet mica, next in applying heat to such refuse sheets or pieces of mica, and then subjecting edgewise to the action of a blast, as and for the purpose specified. 4th. The herein described process consisting in first corrugating the refuse sheet mica then passing it edgewise beneath a blast and finally corrugating the flakes, as and for the purpose specified. 5th. As a new article of manufacture flake mica reduced into corrugated form, as and for the purpose specified.

No. 48,609. Cinder Sifter. (*Tamis à cendres.*)

Fig. I.

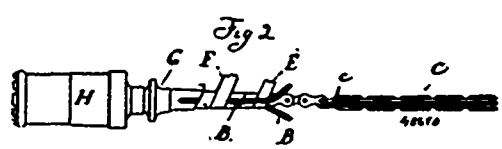


Jacob Young, Hamilton, Ontario, Canada, 4th April, 1895; 6 years.

Claim.—1st. In a machine for sifting cinders, the combination of the cylindrical wire sifter C, the lower end of which is entirely open and the upper end provided with an annular flange J, sufficiently deep to retain the cinders and ashes, and secured on the through angle shaft B, by means of arms or spokes H, said shaft provided with worm B, and journalled at its lower end in the bearing D, secured to end wall of receptacle A, and the upper end of shaft journalled in bearing E, and provided with operating crank M, at hopper end of said receptacle, said hopper provided with interior angled guide I, which forms the lower part of said hopper and receptacle, the lower end inserted in opening of upper end of sifter to guide and convey the cinders and ashes therein, and the slide drawer O for cinders, and the slide drawer N for ashes, substantially as described and for the purpose hereinbefore set forth. 2nd. The combination of a closed receptacle A, having a hopper and lower guide I, and provided with a revolving cylindrical wire sifter C, on the shaft B, journalled to revolve in said receptacle, said shaft provided with a worm B^1, substantially as described and for the purpose hereinbefore set forth. 3rd. The combination, in a cinder sifter of the elongated cylindrical formed wire sifter C, on shaft B, having worm B^1, said sifter supported by arms H, and journalled at an angle in a receptacle the lower end of said sifter being open and its upper end provided with an annular flange J, substantially as described and for the purpose hereinbefore set forth.

No. 48,610. Bracket for Incandescent Electric Lights. (*Console pour lampes électriques à incandescence.*)

Fig 2.

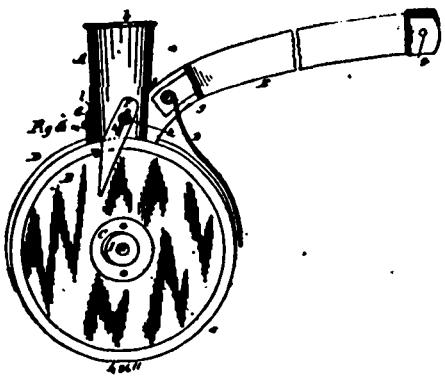


Wilbur R. Hitchcock, Cornwall, Ontario, Canada, 4th April, 1895; 6 years.

Claim.—1st. A flexible bracket for an incandescent electric light consisting of a chain secured to the wall plate at one end, and to the lamp socket at the other, and a flexible covering embracing the said chain and the wires supplying the current to the said lamp socket, substantially as set forth. 2nd. In a flexible bracket for an incandescent electric light the combination with the plate A and socket *a*, the bell-shaped cap D secured to the said plate, of the chain C wrapped with insulating material, the wires B also wrapped with the chain in another layer of insulating material, the said chain being secured at one end in the said socket *a*, a nipple G secured on the other end of the chain to which the lamp socket is secured, and a flexible covering J covering the said chain and wires, substantially as set forth. 3rd. In a flexible bracket for an incandescent electric light, the combination with the chain C twisted at c and secured at

one end to a wall plate and at the other to the lamp socket of the flexible covering J, substantially as set forth.

No. 48,611. Seed-Drill. (*Semoir en lignes.*)

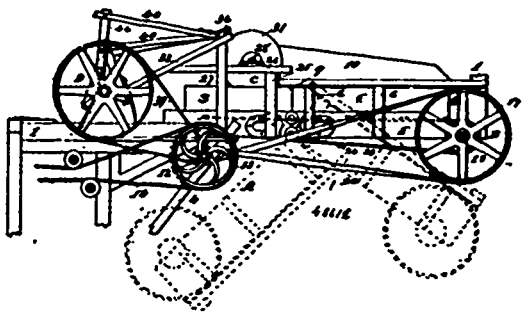


William Stephenson, Morris, Manitoba, Canada, 4th April, 1895; 6 years.

Claim.—1st. In a seed-drill, the combination of a grain conveyor and oil channel and oil reservoir, substantially as and for the purpose specified. 2nd. In a seed-drill, the combination of a grain conveyor, oil channel and oil reservoir, and hollow tapering axles, substantially as and for the purpose specified. 3rd. In a seed-drill, the combination of a grain conveyor, oil channel and reservoir, tapering axles, and two circular cutting discs made to come together at an angle of 45 degrees from the centre of the axle, substantially as and for the purpose specified. 4th. In a seed-drill, the combination with the grain conveyor, of a curved draw-bar, and the same attached to the conveyor above the discs as in figure 4, substantially as and for the purpose specified. 5th. In a seed-drill, revolving disc, shoe side scrapers attached thereto, for keeping the discs clean as they revolve against the said side scrapers, and a central scraper made to pass between the discs to clean the inner side of discs. 6th. In a seed-drill, the caps I provided with an annular flange and an annular rim o around the bolt hole for preventing sand from getting between the hubs and axles, substantially as and for the purpose specified. 7th. In combination with the hollow tapering axles c, c, of the oil openings *f*, *f*, to admit oil from the oil reservoir 3, substantially as specified. 8th. In a seed-drill, a shield D suspended over the opening between the discs in front, substantially as and for the purpose specified.

No. 48,612. Band-Cutter and Feeder.

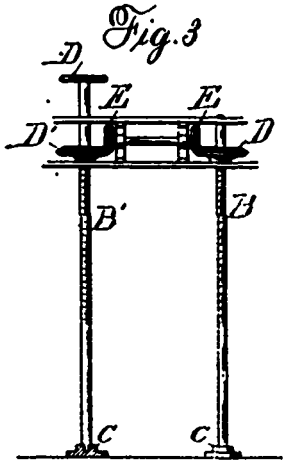
(*Coupe-hart et alimentateur.*)



Hanry Wappalhorst, St. Charles, Missouri, U.S.A., 4th April, 1895; 6 years.

Claim.—1st. A combined band-cutter and feeder, comprising a frame-work fixed to one end of the thresher, a frame-work hinged to the first mentioned frame-work, an endless carrier passing over the floors of said frame-works, a series of band-cutters transversely positioned above one end of said endless carrier, and a series of forks carried by the ends of hinged bars operating directly in front of the endless carrier, and suitable operating mechanism for said endless carrier, band-cutters and forks. 2nd. A combined band-cutter and feeder, comprising a suitable frame-work hinged to a frame-work that is fixed to the end of the thresher, an endless carrier operating in said frame-works, a series of circular band cutters, the edges of which are sharpened and provided with serrations or saw-teeth, said band-cutters being mounted upon a shaft positioned transversely above the endless carrier, a series of forks carried by hinged bars operating directly in front of the endless carrier, and suitable operating mechanism for the endless carrier, band-cutters and forks. 3rd. A band-cutter and feeder, comprising a suitable frame-work, a portion of which is fixed to one end of a thresher, an endless carrier operating in said frame-work, rotary band-cutters operating above said endless carrier, a shaft mounted in suitable bearings directly in front of the endless carrier, said shaft being provided with equidistant radially arranged cranks or bends, bars carrying forks, said bars having their lower ends connected to the cranks or bends in the transverse shaft, a second set of bars having their forward ends bifurcated and hinged by means of bolts to the upper ends of the fork-carrying bars, the rear ends of said second set of bars being hinged to a part of the frame-work, and suitable operating mechanism for the endless carrier, rotary band-cutters and the shaft upon which the forks are mounted.

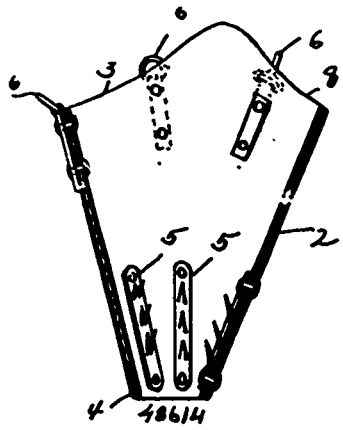
No. 48,613. Stock Car. (*Char à bestiaux.*)



John Mock, Detroit, Michigan, U.S.A., 4th April, 1895; 6 years.

Claim.—1st. In a stock car, the vertically moving deck, combined with the rods *a*, which are passed through the timbers of the deck laterally and clamped thereto by nuts on each side as shown and having enlarged screw threaded ends, and the screws B^1, B^1, B^2, B^2, stepped in bearings C, C, at the bottom of the car by means of which the deck is raised and lowered, substantially as shown. 2nd. The vertically moving deck, having projections extending from its lower edges, and the supporting timbers secured to the sides of the car and provided with holes to receive the projections, combined with the rods *a* having enlarged heads, and the screws by which the deck is raised and lowered, substantially as described. 3rd. The deck having projections on its under side, the timbers secured to the sides of the car and having recesses to receive the projections, and the guide rods combined with the guides secured to the deck and catching over the rods, the rods *a* passing through the timbers of the deck and having enlarged ends, and the screws by which the deck is raised and lowered, substantially as set forth. 4th. The rack combined with the loop at its upper end, and the hook and latch to which the hook is pivoted, the upper end of the rack being adjustable in the loop, substantially as specified.

No. 48,614. Stallion Shield. (*Targe à étalon.*)

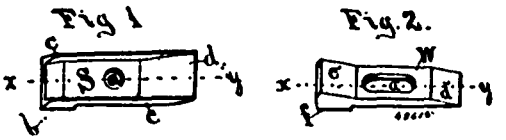


Daniel Gile Tenney, Newburyport, Massachusetts, U.S.A., 4th April, 1895; 6 years.

Claim.—1st. A flexible shield for the sheath of a horse, constructed and applied, substantially as set forth. 2nd. A hollow flexible and reversible shield, adapted to be applied to the sheath of a horse, being substantially conical in shape, and having the apex, which is directed downward, cut away to admit of the escape of water, sub-

stantially as shown and described. 3rd. A flexible shield adapted to be applied to the sheath of a horse, substantially conical in shape and having its apex which is directed downward, cut away to admit of the escape of water, and the inner lower part being provided with a number of vertically arranged metal plates, each of which is provided with inwardly and upwardly extending spurs or teeth, substantially as shown and described. 4th. A flexible and reversible shield of soft material and substantially conical in shape, and adapted to be applied to the sheath of a horse, and having its apex, which is directed downward, cut away to admit of the escape of water, and the inner lower part being provided with vertically arranged metal plates provided with sharp teeth or spurs, in communication with a harness for securing the shield to the horse, substantially as shown and described.

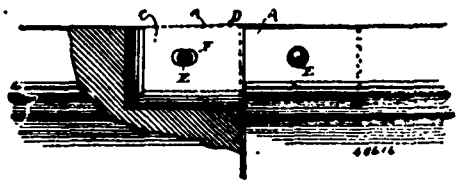
No. 48,615. Casing Button. (*Fermeture à bouton.*)



George B. Shepard, and Adrian D. Pope, both of Ogdensburg, New York, U.S.A., 4th April, 1895; 6 years.

Claim.—1st. As a new article of manufacture, a casing button, comprising a shoe-piece with longitudinal retaining rib and inclined plane rising towards its forward end, and a slotted wedge-piece with inclined surface bearing against the inclined plane on said shoe-piece, and means for fastening said pieces on a casing, substantially as shown and described. 2nd. In a casing button, the combination of a shoe-piece having a vertically inclined plane, a wedge-piece with inclined surface bearing against the inclined plane of said shoe-piece, and means for fastening said pieces rotatably on a casing. 3rd. As a new article of manufacture, a casing button, comprising a shoe-piece, means for fastening the same rotatably upon a casing, and means for locking the same upon said casing.

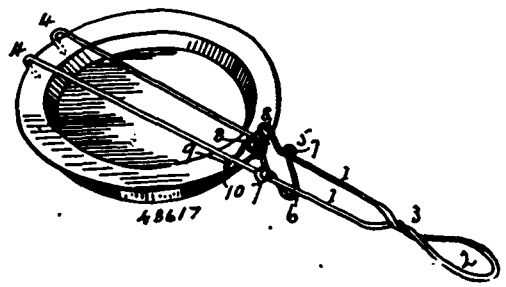
No. 48,616. Railway Joint Bridge.
(*Joint de ponceau de chemin de fer.*)



Charles Corwin Wells, San Francisco, California, U.S.A., 5th April, 1895; 6 years.

Claim.—1st. A bridge for the joints formed by the abutting ends of railway rails, consisting of a rectangular bridge bar having the upper side made convex, and the lower portions of the ends and lower edges rounded, and a single elongated slot in each end, open-ended correspondingly-shaped channels in the top of each rail end, into which the bridge bar loosely fits with its central convex portion slightly above the surfaces of the rail ends, and a bolt passing transversely through the single slot in each rail end, and the corresponding slot in each end of the bar whereby a loosely hinged and movable joint is formed. 2nd. A bridge for the joints formed by the meeting ends of railway rails, consisting of a rectangular bridge bar, having a single elongated slot in each end, open-ended correspondingly shaped channels in the top of each rail end, into which the bridge bar loosely fits, and a single bolt passing through each rail end and the corresponding slot in each end of the bar whereby a loosely hinged and movable joint is formed, substantially as herein described.

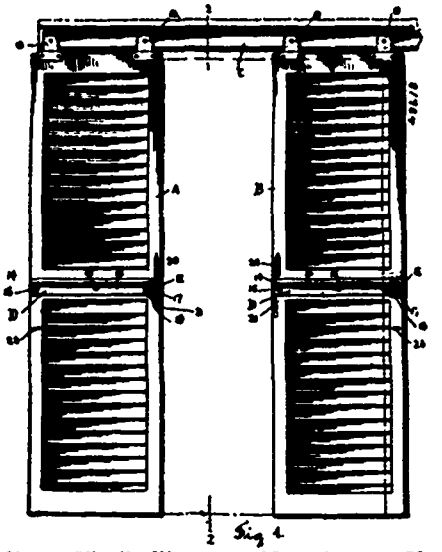
No. 48,617. Plate Lifter. (*Levier pour assiettes.*)



George W. Best, Morristown, Vermont, U.S.A., 5th April, 1895; 6 years.

Claim.—In a plate lifter, the combination with a body having side pieces each provided with a hooked extremity to engage the plate on one side thereof, of a slide consisting of a piece of spring wire having loops bent at its opposite sides said loops being adapted to engage the side pieces of the body, the central portion of said slide between said loops being bent down below the said side pieces, and the ends of said slide being bent up between the side pieces above the plane thereof, and having their extremities bent down between said side pieces and provided with hooks below the same, said hooks being adapted to engage the opposite side of the plate, substantially as set forth.

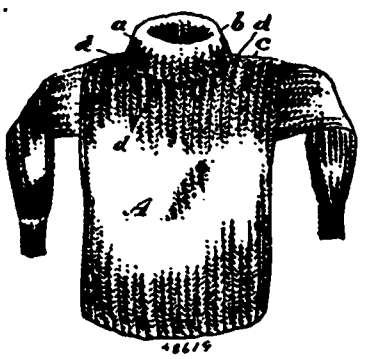
No. 48,618. Window Blind. (*Persiennes.*)



William Henry Elwell, Worcester, Massachusetts, U.S.A., 5th April, 1895; 6 years.

Claim.—1st. The combination of a blind, a track or way upon which the blind may slide and swing, an actuating mechanism for moving said blind, said actuating mechanism being arranged so that the same may be disconnected and the blind swung outwardly to form an awning, substantially as described. 2nd. The combination of a blind, a track or way upon which the blind may slide and turn outwardly, a rack carried by said blind, and a gear engaging the rack, said rack and gear arranged so that the same may be disconnected and the blind swung outwardly, substantially as described. 3rd. The combination of an over-head track, a blind mounted upon and adapted to turn outwardly about said track, a pivoted rack carried by said blind, and an actuating gear or pinion engaging said rack, substantially as described. 4th. The combination of an over-head track, a blind having rollers adapted to travel and turn about said track, an over-hanging rack carried by said blind, and an actuating gear or pinion having a projecting flange which is adapted to engage behind said rack, and normally hold said blind, said gear and rack being arranged so that they may be disconnected, substantially as described. 5th. The combination of a blind having grooved rollers 10, mounted upon an over-head track C, a guide-plate 11 for holding the rollers upon the track, an over-hanging, pivoted rack D carried by said blind, and an actuating pinion E engaging said rack, substantially as described.

No. 48,619. Manufacture of Sweaters, Shirts, Etc.
(*Fabrication de chemises, etc.*)



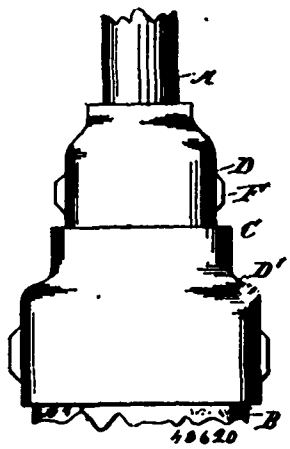
Daniel Haggart McKay, Toronto, Ontario, Canada, 5th April, 1895; 6 years.

Claim.—1st. The method herein described of cutting the blanks

for forming the neck portions of sweaters, jerseys and similar articles consisting in cutting a circular web of determinate length, when flat, across so that the cut will form a central tongue in one portion to fit into a recess of the same size in the other portion, the outlying tongues being in the flat approximately half the width of the central tongue, as and for the purpose specified. 2nd. As a new article of manufacture a sweater, jersey or similar article having the collar formed of tongue integral with the body portion of the web, the tongues being suitably fastened together at the side edges, as and for the purpose specified. 3rd. As a new article of manufacture a sweater, jersey or similar article having a collar formed of tongues integral with the body portion of the web, the tongues being concavely cut and fastened together at the side edges, as and for the purpose specified. 4th. As a new article of manufacture a sweater, jersey or similar article having a collar formed of tongues integral with the body portion of the web, the tongues being suitably fastened together at the side edges and turned over so that the seams are to the inside, as and for the purpose specified. 5th. As a new article of manufacture a sweater, jersey or similar article having the collar formed of tongues integral with the body portion of the web, the tongues being suitably fastened together at the side edges and turned over so that the seams are to the inside and tacks at the outer edge of the collar for securing it to the body, as and for the purpose specified.

No. 48,620. Method of Preserving Timber.

(*Méthode de préserver le bois de construction.*)



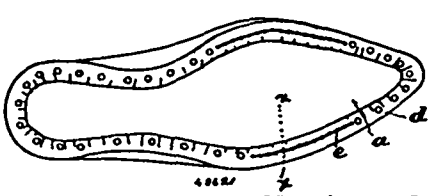
48620

John Simpson George, Newport, Oregon, U.S.A., 5th April, 1895; 6 years.

Claim.—The herein described process for preserving timber, which consists in forcing a solution of iron sulphate, zinc sulphate and copper sulphate into the pores of the timber and afterward passing a current of electricity through said timber, substantially as described and for the purpose set forth.

No. 48,621. Manufacture of Boots and Shoes.

(*Fabrication de chaussures.*)



48621

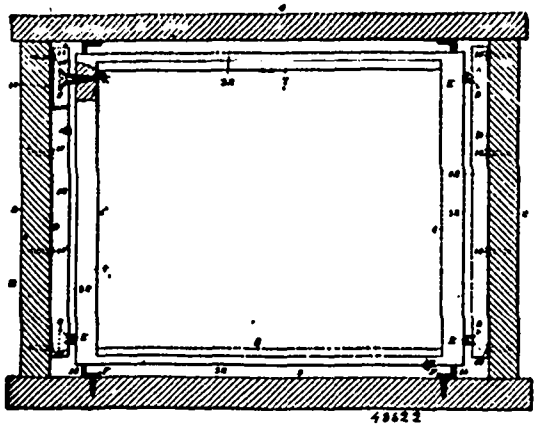
Justus Wilberforce French, Boston, Massachusetts, U.S.A., 5th April, 1895; 6 years.

Claim.—In the manufacture of boots and shoes, the combination of the inner sole *a*, provided all around and at a proper distance from its edge with a line of stitches *b*, the upper *c*, the edges of which are drawn over upon the inner sole and secured around the heel, shank and toe portions, by tacks *d*, and connected with the inner sole along the ball portion by stitches *e*, which pass through the overturned edge of the upper, and through the loops or threads of the stitches *b*, thereby giving flexibility to the boot or shoe at the ball, and ensuring rigidity around the heel, shank, and toe portions, substantially as described.

No. 48,622. Bee-Hive. (*Ruche.*)

Eugene E. Wander, Hartford, Connecticut, U.S.A., 4th April, 1895; 6 years.

Claim.—1st. In a hive, the combination with the two opposite side walls of the casing thereof, of two oppositely-disposed slide-ways, secured in alignment, one to each side wall, and having inclined, resilient side walls, and a reversible sliding-frame, having remotely-disposed headed pins at opposite sides thereof, the heads of which pins are entirely enclosed within, and impinged by the walls of the slide-ways, substantially as described and for the purpose set



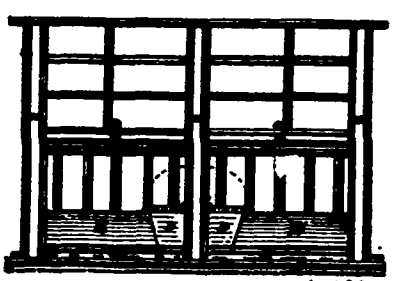
49622

forth. 2nd. In a hive, the combination with the adjacent faces of the two opposite side walls thereof, of two oppositely-disposed U-shaped sheet-metal slide-ways, secured in alignment, one to each side wall, having resilient side walls inclined toward each other at their outer ends, to form a V-shaped channel, and a reversible sliding-frame, having remotely-disposed headed pins at opposite sides thereof, the heads of which are entirely enclosed by, and impinged between, the resilient walls of the slide-ways, substantially as described and for the purpose set forth. 3rd. In a hive, the combination with the adjacent faces of the two opposite side walls and the adjacent faces of the top and bottom walls thereof, of two oppositely-disposed slide-ways, secured in alignment, one to each side wall, a reversible sliding-frame, having remotely-disposed projecting pins, or points, at opposite sides, thereof, movably held between the side walls of the slide-ways, so as to leave a bee-space between said slide-ways and frame, and transverse oppositely-disposed risers, secured to the upper and lower walls, and bearing against the upper and lower edges of the frame, to support said frame, with its upper and bottom walls, substantially as described and for the purpose set forth.

No. 48,623. Cattle Stall, Feed Rack and Water-Tank.

(*Stalle pour bestiaux, râtelier et cuvette.*)

Fig 1.



49623

Daniel Murphy and Charles Tighe, both of Mount Forest, Ontario, Canada, 5th April, 1895; 6 years.

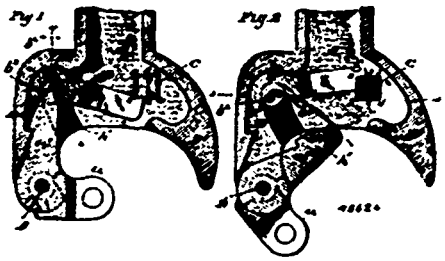
Claim.—1st. The combination of the pivoted movable feed rack B in A, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with water-tanks D and stalls A, substantially as and for the purpose hereinbefore set forth.

No. 48,624. Car-Coupler. (*Attelage de chars.*)

Thomas Gaskins, Arcadia, Florida, U.S.A., 5th April, 1895; 18 years.

Claim.—1st. In a car-coupler, the combination with the knuckle, of a locking lever for the rear arm of the knuckle having at the top and bottom axial bearings composed of projecting bosses with a seat between them for the rear arm of the knuckle extending practically into the axial line of the bosses, and an adjustable pin or locking device for holding the outer end of the lever, substantially as and for the purpose described. 2nd. In a car-coupling, the combination with the knuckle, of a locking lever for the rear arm of the knuckle having at the top and bottom axial bosses with a seat between them

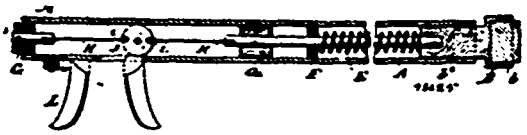
for the rear end of the knuckle extending practically into the axial line of the losses, and adjustable locking pin for the outer end of the lever, and the draw-head having channels in its throat to give passage to the losses of the lever, and a hole at the end of the lower channel for the reception of the lower loss and the retention of the



lever in place, substantially as and for the purpose described. 3rd. The combination, with the draw-head and its hinged knuckle, of the locking lever b, having seat b^2, b^3 for the rear arm of the knuckle, and a vertically adjustable locking pin C made larger at its upper end than at its lower end, and having a shoulder s adapted to rest upon the free end of lever b or drop behind it, substantially as and for the purpose described. 4th. The combination, with the coupling knuckle, and the draw-head having channels h, h in the top and bottom walls of its throat, of the locking lever b, having losses b^2, b^3 around its axial hole, and a detachable axial pin b^4, substantially as and for the purpose described.

No. 48,625. Shade Holding Device.

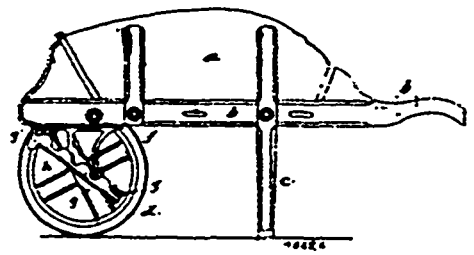
(*Porte-bâton de rideaux.*)



Edward Thomas Burrowes, Portland, Maine, U.S.A., 5th April, 1895; 6 years.

Claim.—In a device for holding and permitting vertical adjustment of flexible curtains, the combination with a hollow curtain stick, of a plurality of spring-actuated spindles arranged longitudinally in the stick, friction tips at the outer ends of the spindles, a lever journalled in the stick, and to which the inner ends of the spindles are connected, an actuating handle connected to the lever for moving the same, and a stationary handle on the stick in proximity to said other handle and between the same, and end of the stick, substantially as described.

No. 48,626. Wheel-barrow. (*Brouette.*)



Henry Hoskisworth, jr., York, England, 5th April, 1895; 6 years.

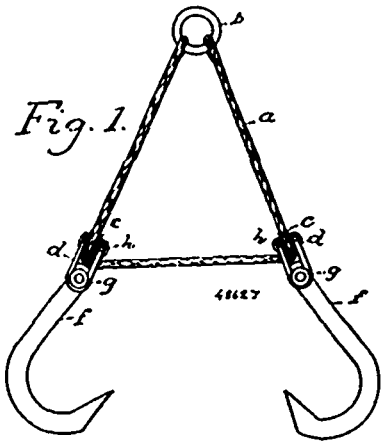
Claim.—1st. The combination with a wheel-barrow, of bearings formed so that the wheel of same may be adjusted in several positions, substantially as specified. 2nd. The combination in a wheel barrow of detachable bearings having several openings or holes for the reception of the wheel's axle, and said wheel, substantially as herein set forth and described. 3rd. In a wheel-barrow, the combination of bearings for the wheel formed so that the position of said wheel relatively with the handles and body part of the wheel-barrow may be altered, said wheel and its axle, and the body part and frame-work of said wheel barrow, substantially as specified.

No. 48,627. Logging Hooks.

(*Crochet de chaînes pour billots.*)

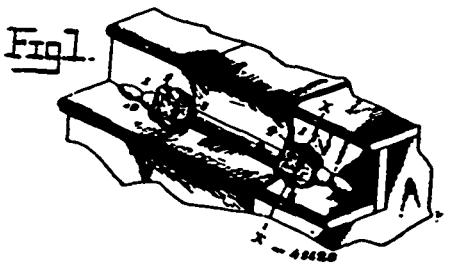
John M. Stewart, Vancouver, British Columbia, Canada, 5th April, 1895; 6 years.

Claim. 1st. In logging hooks, the combination of the cable or chain A, with its two ends securely fastened to the ring B, and passing over pulleys C, mounted in block D, and made to operate, substantially as specified. 2nd. In logging-hooks, the combination



of the cable A, the ring B, connected by said cable A, to blocks D, and the hooks F, pivoted thereon as and for the purposes set forth.

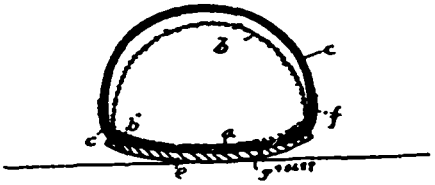
No. 48,628. Stair Rod. (*Baguette d'escaliers.*)



Helen H. McBride, Grand Island, Nebraska, U.S.A., 5th April, 1895; 6 years.

Claim.—The herein described adjustable stair-rod consisting of a pair of triangular clips with outer open sides and oppositely disposed grooves, a triangular stair-rod having slots therein fitting over said clips and button plates carrying a set screw adapted to be slid inward or outward from the said grooves of the clips over the said rod, substantially as described.

No. 48,629. Foot Wear. (*Chaussure.*)

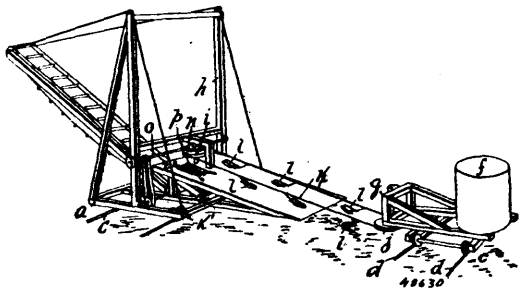


James Henry McKechnie, Granby, Quebec, Canada, 5th April, 1895; 6 years.

Claim.—1st. In the manufacture of foot wear of the class described first placing the insole upon the last, lasting the edges of the leg portion thereto, attaching the edges of the lining of the rubber top to such insole and edges of the leg portion, and then securing such rubber top to said lining and the rubber sole to such top. 2nd. In the manufacture of foot wear of the class described first placing the insole upon the last, lasting the edges of the leg portion thereto, attaching the edges of the lining of the rubber top to such insole, and the edges and back of the heel or counter of the leg portion and and then securing such rubber top to said lining and the rubber sole to such top. 3rd. A cardigan overshoe having a textile leg portion *and rubber foot portion connected therewith, the top of the latter* being free or disconnected from the leg portion for the purpose set forth. 4th. In foot wear having a textile leg portion and a rubber foot portion, the textile leg portion connected to the sole only, of the rubber foot portion thereof, for the purpose set forth. 5th. In foot wear having a textile leg portion and a rubber foot portion, the textile leg portion connected to the rubber foot portion only, at the sole or heel or counter portion thereof, for the purpose set forth. 6th. In foot wear having a textile leg portion, and a rubber foot portion, the edges of the textile leg portion attached or held between the insole and outsole of the rubber foot portion for the purpose set

forth. 7th. In foot wear having a textile leg portion and a rubber foot portion, the edges of the textile leg portion attached or held between the insole or outsole of the rubber foot portion and at the heel or counter portion thereof, for the purpose set forth. 8th. In foot wear having a textile leg portion b and a rubber foot portion, the edges b^1, of the textile leg portion held between the insole and outsole of the rubber foot portion and attached at the rear d of the heel or counter portion thereof, for the purpose set forth.

No. 48,630. Excavator. (*Excavateur.*)



John Oie, Marshall, Texas, U.S.A., 5th April, 1895; 6 years.

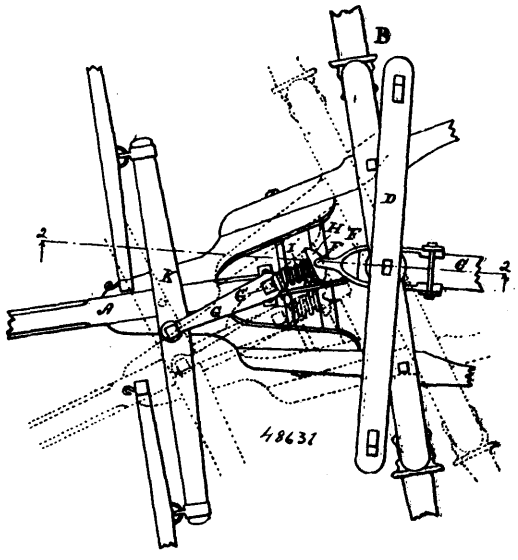
Claim.—1st. The herein described excavating apparatus comprising the movable truck a, carrying the horizontally arranged return pulley, a movable platform provided with an upward incline, a drive shaft vertically arranged provided with a pulley, the endless cable extending between said pulleys and provided with excavating means arranged to slide up said incline, and a conveyer arranged beneath the incline into which the contents of said excavating means are dumped, when on the incline, substantially as described. 2nd. In an excavating apparatus, the combination of a movable truck provided with a counterweight on one end and an over hanging frame at the other end provided with a horizontally arranged pulley, a movable truck provided with an upright shaft carrying a horizontally arranged pulley, means for driving said shaft, and the endless cable passing around said pulleys and provided with excavating means, substantially as described. 3rd. In an excavating apparatus, the combination of a support, the inclined platform carried thereby extending upwardly above the same and provided with an opening on the side having a grating, the endless conveyer arranged beneath said opening, the vertical shaft provided with a pulley and arranged above said incline, and the cable provided with excavating means and carried by said pulley and provided with the support on the opposite side of the field and means for driving said pulley. 4th. In an excavating apparatus, the movable truck provided with the incline patform extending upwardly from the earth at a distance to one side of the platform to a point above the platform and having the opening, the conveyer arranged beneath said opening, the upright frame carried by said platform, the vertically movable conveyer having one end arranged beneath said first-mentioned conveyer and its opposite end supported by cable passing over said frame and attached at their opposite ends to the truck, and the vertical shaft provided with the pulley above said incline and supporting the cable to which the scrapers are attached, said cable being supported at the opposite end of the ground by another pulley. 5th. In the excavating apparatus, the combination of a platform, the inclined platform, the vertical frame, a vertical shaft supported therein having a horizontal pulley, a horizontal worm-wheel on said shaft, the horizontally arranged drive shaft mounted in the frame and provided with a worm engaging said worm-wheel, and a cable driven by said pulley, as and for the purpose set forth.

No. 48,631. Draft Attachment for Vehicles.

(*Appareil de tirage pour voitures.*)

Garland Brainard St. John, assignee of Henry B. St. John, both of Kalamazoo, Michigan, U.S.A., 8th April, 1895; 6 years.

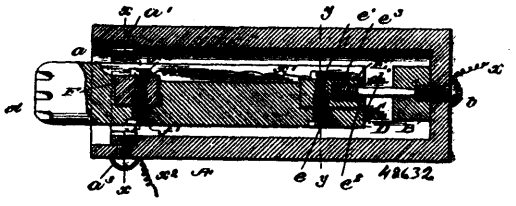
Claim.—1st. In a draft attachment for vehicles, the combination with the reach C, of the forwardly projecting arm F, the downwardly projecting pin F^1, at the front thereof, the tongue A, the draw-irons G, pivoted thereto at G^1, the rearwardly projecting lever I, integral with said draw-irons, the sleeve H^1, bearing the cam H, rounded off from all directions and containing notch H, at its centre adapted to engage the pin F^1, and bring the pin in contact with said cam H, all co-acting together, substantially as described for the purpose specified. 2nd. In a draft attachment for vehicles, the combination with the rigid rear portion of the vehicle, of a projecting arm F, downwardly projecting pin F^1 thereon, draw-iron G, pivoted to the front turning portion of the vehicle, the lever I, integral with said drawn iron, a depressible cam H, on said lever I, a notch H^2, in said cam H, at its centre adapted to engage a pin F^1, all co-acting together for the purpose specified. 3rd. In a draft attachment for vehicles, the draw-iron pivoted to the front turning portion of the vehicle to act as a lever, suitable connection at the rear end of said lever with the rigid non-turning portion of said vehicle to serve to shift the line of draft, for the purpose specified. 4th. In a draft attachment for vehicles, a draw-iron, pivoted to the front turning portion of the vehicle to act as a lever, a depressible block cam portion on the rear end of said lever, a pin on the rigid



non-turning portion of said vehicle to engage with the depressible cam to serve to shift the line of draft, for the purpose specified. 5th. In a draft attachment for vehicles, the draw-iron pivoted to the front turning portion of the vehicle to act as a lever, a depressible block cam portion on the rear of said lever, a pin on the rigid non-turning portion of said vehicle to engage in a notch in the depressible cam to shift the line of draft when obstructions are encountered and to break the connection when the waggon is turning, for the purpose specified. 6th. The combination, in a vehicle, of draw-iron G, pivoted at G^1, the bolster D, the cam-bar L, attached thereto with a curved notch L^1, at its centre portion adapted to normally engage the rear end M, of the draw-iron G, a spring I^1, connecting the bolster and draw-iron together to hold them in constant engagement, substantially as described for the purpose specified.

No. 48,632. Electrical Fuse-Box.

(*Boîte à fusée électrique.*)

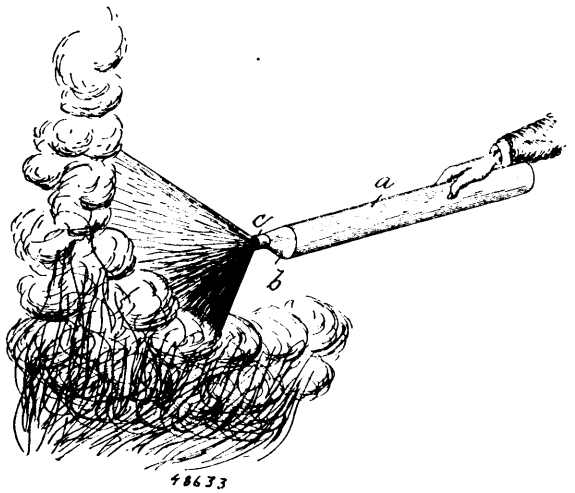


James Ward Packard, Warren, Ohio, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. A hollow fuse-box and a core of non-conducting material in which contact is maintained by a longitudinal spring pressure, as set forth. 2nd. An electrical contact making device in which contact is maintained by a longituninal yielding pressure, as set forth. 3rd. A fuse-box of non-conducting material provided with electrical connections at its ends, a central core of non-conducting material carrying the fuse-wire, and a spring for holding said core in place, substantially as set forth. 4th. A fuse-box provided with electrical connections at its ends, a central core having blocks at its ends to which the fuse-wire is connected, and a spring for holding said core in place exerting a longitudinal pressure thereon, substantially as set forth. 5th. A fuse-box having electrical connections at its ends, the core having blocks at its ends, one of said blocks having electrical contact with the forward one of said connections, and the spring connecting the other block of said core to the other end of said connections, substantially as set forth. 6th. The combination with the box having electrical conductors at its ends and the binding screws in engagement therewith, of the core located in said box and having conductors at its ends, the fuse-wire connecting said latter conductors, and the spring connection between one of said conductors of the core and one of said conductors of the box, substantially as set forth. 7th. The combination with the box having a block at one end and a conducting ring or block at the other, and binding screws therefor, of the core having blocks at its ends one of which is in contact with said ring or block, and the other in contact with said block of the box, the spring, and the fuse-wire

connected to said blocks of said core, substantially as set forth. 8th. The combination with the box having the ring at one end provided with opposite slots, the block having a central hole, and the screws holding said block and ring, of the core having a block at each end, one of said blocks being provided with lateral arms designed to be inserted through said slots, the bent plate impact spring in contact with one of said blocks of said core, and the fuse-wire, substantially as set forth.

No. 48,633. Fire Extinguisher. (*Extincteur d'incendie.*)



Samuel M. Stevens, Manchester, New Hampshire, U.S.A., 8th April, 1895; 6 years.

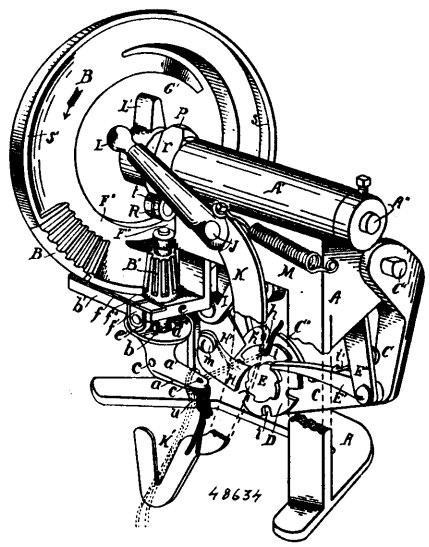
Claim.—1st. A fire extinguisher consisting of the elongated hand tube closed at one end its opposite end being provided with the tapered discharge nozzle straight on one side in continuation of the surface of the tube proper, as described. 2nd. A fire extinguisher comprising the tube, having an inclined discharge nozzle, and a series of spiral blades or webs on the interior of the discharge nozzle for the purpose set forth. 3rd. A fire extinguisher tube provided with the inclined discharge nozzle, the spiral webs or blades and a perforated plate within said nozzle of the tube. 4th. The herein described fire extinguisher consisting of the tube having a discharge end flat on one side, a series of blades or webs within said discharge end, a perforated plate in front of said blades and a stopper provided with an extractor, for the purpose set forth. 5th. A fire extinguisher comprising the tube having a discharge end, a series of spiral blades within said discharge end, a perforated plate in front of said spiral blade, a stopper for the discharge opening provided with suspending and extracting means as described and lugs for retaining the stopper, substantially as described. 6th. A fire extinguisher composed of the tube having the nozzle secured thereto with its inner end turned in and formed with liquid spraying teeth. 7th. The fire extinguisher tube having a stopper and a wire around the nozzle looped inwardly over the stopper. 8th. A hand fire extinguisher composed of an elongated tube having the inclined discharge nozzle provided with a stopper having extracting means. 9th. The hand fire extinguisher composed of the elongated tube having a reduced discharge end, liquid dividing projections therein, and stopper retaining means.

No. 48,634. Knotter Mechanism for Grain Binders.

(*Mécanisme à nouer pour lieuses à grain.*)

Manford F. Fairbank, Joseph R. Meach and Thomas Measures, all of Ogden Centre, Michigan, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. The knotter bill consisting of the fixed jaw on a revoluble spindle, the movable jaw pivoted thereto and having the circular table through which said stem passes freely, said table having an inclined plane, and the roller adjacent to said table. 2nd. In a knotter mechanism, the knotter bill consisting of the fixed jaw on a revoluble spindle and having an extending tooth, the movable jaw pivoted thereto provided with a recess to receive said tooth and having a circular table surrounding said spindle which passes freely therethrough, a portion of the surface of said table extending above the plane thereof, and the roller adjacent to said table. 3rd. In a knot-tying mechanism, the bill consisting of the fixed jaw on a revoluble spindle, the movable jaw pivoted thereto and having a circular table, a portion of whose surface is raised above the plane thereof and which surrounds said spindle, and the depending spring restrained roller standing contiguous to the surface of said table. 4th. In a knot-tying mechanism, the combination, with the knotter bill, of the revoluble twine gripping disc working in a seat and having a stem journalled in the frame and carrying a spring that holds said disc with tension against its seat. 5th. In a knot-tying mechanism, the combination of the revoluble gripper disc having notches in the edge thereof, the plate against which said disc is seated having a notch that registers with the notches of the disc, the stem extending from said disc journalled in the frame and carrying a spring that retains said disc against its seat, the ratchet on said disc, and the pawl for imparting an intermittent rotation of said



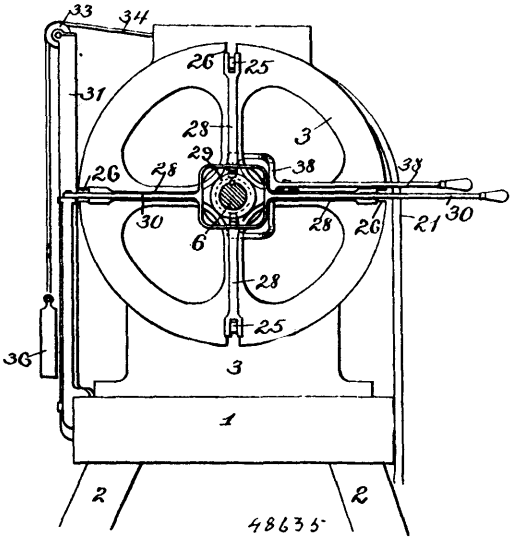
ratchet. 6th. In a knot-tying mechanism, the combination, with the driving wheel, of the gripper disc, the plate forming a seat in which said disc works, the stem extending from said disc and journalled in the frame and carrying a spring which retains said disc against its seat, the ratchet on said disc, the pawl engaging said ratchet, the horizontally movable shaft adapted to be actuated by the driving wheel, the lever pivoted to said shaft and to said pawl whereby motion of the shaft is transmitted to the pawl, to rotate said disc. 7th. In a knot-tying mechanism, the combination, with the driving wheel, of the horizontally movable shaft, the adjustable head secured by a gib thereon, the gripper disc working in a seat and retained in place by spring tension, the ratchet on said disc, the pawl engaging said ratchet, the fulcrumed lever pivoted at one end to said head on said shaft, and at the other end to said pawl. 8th. In a knot-tying mechanism, the combination of the gripper disc seated against a plate having an overhanging flange that embraces the periphery of said disc, the stem upon which said disc is mounted journalled in the frame and carrying a spring on its outer end which holds said disc with tension against its seat. 9th. In a knot-tying mechanism, the combination of the rotative gripper disc seated against a plate between which and said disc the twine is confined, the fixed and movable knives adjacent to the outer face of said disc between which the twine is carried by said disc and severed by said movable knife. 10th. The combination, with the driving wheel, the curved guard arm adapted to be actuated by said wheel, the rock-shaft on which said arm is mounted, the crank depending from said shaft, the twine gripping disc, the fixed and pivoted knives adjacent thereto and the link coupling said pivoted knife to said crank, substantially as set forth. 11th. In a knotter, the combination of the swinging frame carrying the twine gripping mechanism and a fixed and pivoted knife, the revoluble knotter bill, the driving wheel having a cam on the hub thereof which causes said frame to swing inward toward the knotter bill as the twine winds thereon, and having an incline on its face that actuates the pivoted knife to sever the twine, substantially as set forth.

No. 48,635. Barrel Machine. (*Machine à baril.*)

Franklin Joy Morton, assignee of Walter H. Harrison, assignee of Henry Campbell, all of Baltimore, Maryland, U.S.A., 8th April, 1895; 6 years.

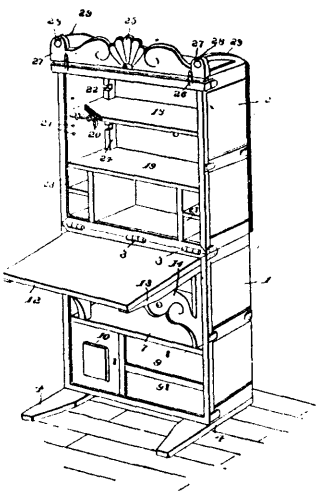
Claim.—1st. In a barrel machine, the combination of means for holding and rotating the barrel heads, and a longitudinally movable supporting ring or bracket for temporarily supporting the ends of the staves at one end of the machine, substantially as set forth. 2nd. In a barrel machine, the combination of means for supporting and rotating the barrel heads, and windlassing ropes for holding the staves as they are applied to the heads, substantially as set forth. 3rd. In a barrel machine, the combination of means for supporting and rotating the barrel heads, means for holding a hoop in proper relation to the end of the barrel, rods for moving said hoop inwards, and a windlassing rope for holding the staves as they are applied to the heads, substantially as set forth. 4th. In a barrel machine, the combination of means for supporting and rotating the barrel heads, supports for the staves, rotating means, a holding for a hoop at the end of the barrel, devices for forcing the same over the ends of the staves, and windlassing rope for holding the staves as they are applied to the heads, substantially as set forth. 5th. In a barrel

machine, the combination of means for holding the barrel heads, shafts supporting said holding means, discs on said shafts provided with ratchets and hooks or pawls for simultaneously operating the latter, and a windlassing rope for holding the staves as they are applied to the heads, substantially as set forth. 6th. In a barrel making machine, the combination of rotary shafts provided with



means for holding the barrel heads, discs mounted on said shafts provided with a recess for a hoop and having means for supporting the ends of the staves, rods for forcing the hoops over the ends of the staves, windlassing ropes for holding the latter as they are applied to the barrel head and to said supporting means, and mechanism for rotating said shafts, substantially as set forth. 7th. In a barrel machine, the combination of frames provided with bearing in line with each other, shafts mounted in said bearings and adapted to carry the barrel heads, a disc mounted on one of the shafts, longitudinally movable adapted to temporarily support the ends of the staves away from the head and having a recess for a hoop, and rods or pushers mounted in one of said frames and adapted to engage the hoop to force the latter over the staves after the latter have been applied to the barrel heads, substantially as set forth. 8th. The machine for combining the head or heads and the staves of barrels, kegs or similar receptacles, when said machine is constructed, as described and illustrated in the accompanying drawing.

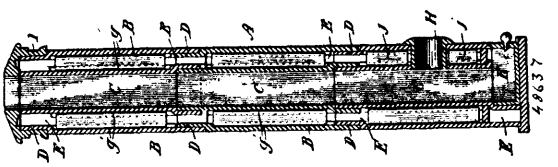
No. 48,636. Combination Trunk, Book Case and Writing Desk. (*Coffre, bibliothèque et pupitre combinés.*)



John James Holm and George Henry Gohlke, both of Madison, Wisconsion, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. In a device of the class described, the combination with the upper and lower hinged sections, the latter having upon its upper side dowel-openings, of a transversely disposed crown piece hinged to the upper wall of the upper section and adapted to fold within the latter, wings hinged to the ends of said crown piece and adapted to fold over the edges of said section, notches formed in the upper edges of the wings, and locking-cleats having heads at their front ends for engaging the notches, and dowel-pins in their under sides for engaging the dowel-openings in the sections, substantially as specified. 2nd. In a device of the class described, the combination with the upper and lower rectangular sections, hinged together at the upper front edge of the lower section the latter being subdivided forming an upper compartment, of a desk top hinged to the upper edge of said section, adapted to fold within the compartment, and having opposite cleats at its edges upon its under side, the vertically disposed swivelled brackets arranged with the compartments and set some distance from the side-walls thereof so as to combine to form spaces for the cleats, said brackets being adapted to fold into the compartments or outward against the cleats under the desk-top, substantially as specified. 3rd. In a device of the class described, the combination with the upper and lower hinged-sections, of the rigid transverse cleats 4 arranged on the under side of the bottom section and extending forward from the rear edge and projecting beyond the front edge so as to embrace or overlap the lower sections when the two sections are folded, and to provide a broad base when the sections are extended to form a book case and the casters arranged in the under sides of the cleats 4, at the ends thereof, substantially as specified. 4th. In a device of the class described, the combination with the folding sections, of the textile curtain connected to the upper edge of the upper section and adapted to fold over the same and form a tight joint between said sections when they are folded, substantially as specified.

No. 48,637. Sectional Chimney. (*Cheminée en section.*)



William Rollin Wilson, and Merton James Bell, assignees of William James Culnan, all of Brule, Wisconsin, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. In a sectional chimney, the combination of two or more jointed sections, each section comprising an outer casing and a concentrically arranged inner flue, vertical guiding and holding beads, and removable spacing and holding ribs inserted in the air-space between the inner and the outer casing, one end of the outer casing being provided with a joint shoulder and reduced to enter the air-space formed between the inner flue and the outer casing of an adjoining section, and the outer casing also provided on its inner surface near its reduced end with a shoulder which prevents the inner cassing from being pushed in too far, substantially as described. 2nd. In a sectional chimney, the combination of two or more jointed sections, each section comprising an outer casing and a concentrically arranged inner flue, vertical guiding holding beads and removable spacing and holding ribs inserted into the air-space between the inner and outer casing one end of the outer casing being provided with a joint shoulder and reduced to enter the air-space formed between the inner flue, and the outer casing of an adjoining section and the outer casing provided on its inner surface near its reduced end with a shoulder which prevents the inner casing from being pushed in too far, and one end of the inner flue being formed with a joint shoulder and enlarged to receive the smaller end of the inner flue, whereby, when one or more sections of the chimney are united, continuous gas tight joints are formed between the adjoining ends of the sections of the inner flue and the connecting ends of the sections of the outer casing, substantially as described.

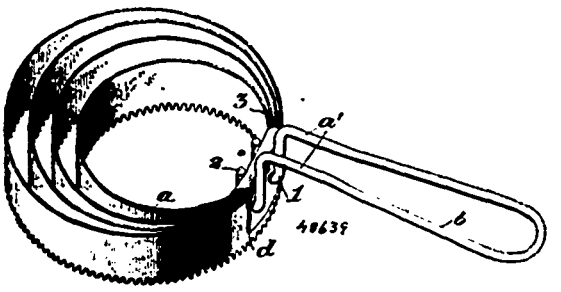
No. 48,638. Edible Compound Fat.

(*Composé de graisse comestible.*)

Frederick C. Laird, Milton L. Thackberry, Josephine A. Winter and William H. Lee, assignees of Alexander W. Winter, all of Chicago, Illinois, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. An edible compound fat, composed of refined mineral oil and fatty substance, in the proportions to form a stiff compound, substantially as described. 2nd. An edible compound fat, composed of refined mineral oil, animal fat, and vegetable fat, in the proportions to form a stiff compound, substantially as described. 3rd. An edible compound fat, composed of refined mineral oil, oleo-stearine, tallow, and vegetable fat of the cotton seed, substantially as described. 4th. An edible compound fat, composed of substantially sixty (60) per cent of refined mineral oil, and forty (40) per cent fatty substance, substantially as described. 5th. An edible compound fat, composed of substantially sixty (60) per cent of refined mineral oil, thirty (30) per cent animal fat, and ten (10) per cent vegetable fat, substantially as described. 6th. An edible compound fat, composed of substantially sixty (60) per cent refined mineral oil, fifteen (15) per cent oleo-stearine, fifteen (15) per cent tallow, and ten (10) per cent of cotton seed oil, substantially as described.

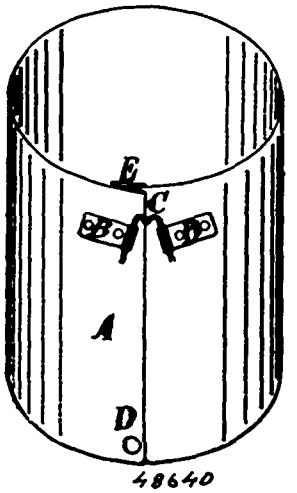
No. 48,639. Curry Comb. (*Etrille.*)



The Spring Curry Comb Company, assignee of Charles H. Bartlett, both of South Bend, Indiana, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. In combination with the coils or loops of a curry comb, arranged one with the other, a wire shank or handle passing through holes in the said loops or coils, and secured to hold the parts together, substantially as described. 2nd. In combination with the coils or loops of a curry comb, arranged one within the other, a wire shank or handle passing through holes in the said loops and through a piece bent over said loops or coils. 3rd. In combination with the loops or coils a reinforcing piece formed with corrugations interposed between the coils, and a shank passing through the loops or coils and reinforcing pieces and bent to clamp and hold the same, substantially as described.

No. 48,640. Stove-Pipe. (*Tuyau de poêle*)



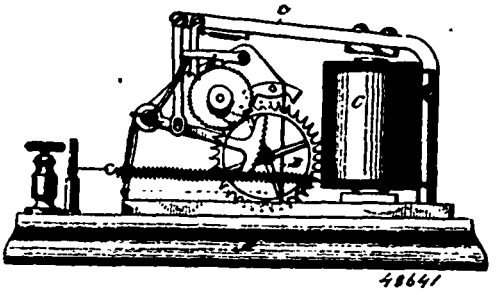
George Brown Barclay, Joliet, Illinois, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. A pipe section provided with one folded or doubled edge with which the opposite edge is adapted to engage to form a close seam or joint, in combination with the sockets B, B, secured to the pipe section near its opposite edges, and the fastening piece c, having diverging legs which have bearing in the said sockets, substantially as set forth. 2nd. In combination with a pipe section the edges of which are adapted to be brought together to form a close or tight joint or seam, the sockets B, B, secured to the pipe section near its opposite edges, and the fastening piece c, having the diverging legs c^1, c^1, adapted to engage with the said sockets, and the cross connecting piece between the legs provided with an outward extended folding portion c^2, which serves as a handle for manipulating the fastening, in order to increase or diminish the circumference of the pipe, substantially as and for the purpose hereinbefore set forth.

No. 48,641. Electrical Selector. (*Sélecteur électrique.*)

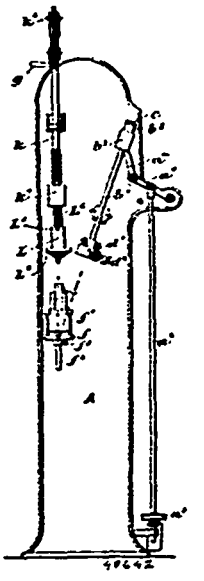
The Electric Selector & Signal Company, New York, State of New York, assignee of Samuel Stockton Bogart, Schraalnberg, New Jersey, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. In an electric selecting instrument a movable device actuated by the armature of an electro-magnet to the end of its phase in response to impulses from a transmitter, means for retarding the backward throw of the armature between the impulses, thereby preventing it from completing its backward throw, and means for returning the selector to zero actuated by the same armature in completing its backward throw when the actuating impulses cease. 2nd. In an electric selecting instrument two wheels mounted upon a single shaft having cut upon their respective peripheries a mechanical representation of a fixed combination of electrical impulses, an electro-magnet and single armature lever provided with pawls co-operating with the wheels, and means for working out the combination actuated by electrical impulses representing the combination, transmitted through the coils of the magnet. 3rd. In an electric selecting instrument a movable device actuated by an electro-magnet



responding to electrical impulses transmitted through its coils, an armature lever having a downward movement and two backward movements for working out the combination of the selector, one movement to return and catch the next succeeding tooth of the wheel and the other to return and catch the next but one of the teeth, said movements governed by the duration of the pauses between the electric impulses. 4th. In an electric selecting instrument two wheels mounted upon a single shaft and cut upon their peripheries with notches and spaces forming a mechanical representation of a fixed combination of electrical impulses, and means operated by a single magnet to impel the wheels and work out the combination in response to the transmitted impulses. 5th. In an electric selecting instrument a movable device responding to a fixed combination of electrical impulses transmitted through the coils of an electro-magnet, an armature lever and mechanical connections whereby the phase of the selector is worked out, and means for restoring the instrument to zero actuated by the downward throw of the armature lever and also by the backward throw of said lever.

No. 48,642. Bottling and Stoppering Machine for Beer, Etc. (*Machine à mettre en bouteilles et boucher la bière, etc*)



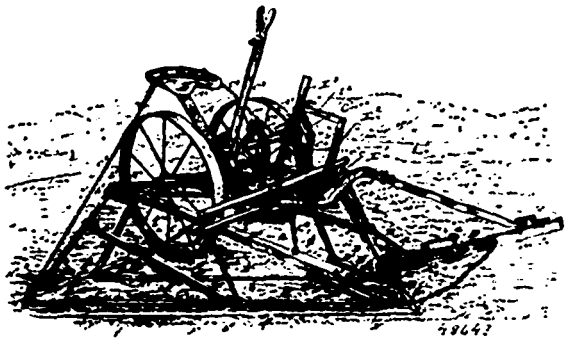
Ryder & Co., assignee of Tom Sutcliffe, both of London, England, 8th April, 1895; 6 years.

Claim.—1st. The construction of an apparatus for holding the bottle to be filled with an arrangement for imparting thereto a rocking motion as and for the purposes described. 2nd. The combination of a lever with a quick threaded-screw with or without a slide on the end of the spindle to take up the travel of the quick screw operating, as and for the purposes described. 3rd. A chuck for holding screw stoppers with movable cam or cams as herein described holding the stopper firmly in position when in the act of screwing and releasing it on the upward motion of the screw when the stopper is firmly fixed. 4th. A filling tube with ball valve at the bottom raised automatically when the filling tube approaches the bottom of the bottle and closing automatically at the commencement of the return motion, substantially as and for the purpose

described. 5th. The combination of a filling tube fitted with a valve at its end and an external collar so arranged as to come in contact with a stud and open the said valve when the filling tube is near the bottom of the bottle.

No. 48,643. Sulky Harrow and Cultivator.

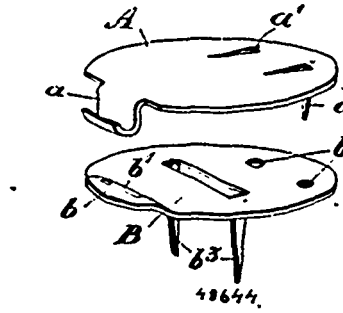
(*Herse et scarificateur.*)



Thomas Jefferson Hubbell, Santa Cruz, California, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. The combination with the sulky having a forwardly extending arm or reach, of a longitudinally extending central beam or bar beneath and adjustably suspended between its ends from the sulky, tooth-carrying frame sections hinged to said beam or bar and forming an open frame enclosing said sulky, and a tongue hinged to the forward end of the said arm or reach, and also hinged in rear thereof to the forward end of the said beam or bar, substantially as set forth. 2nd. The combination with the sulky having a forwardly extending arm or reach, the longitudinal bar or beam B^2, having apertured plates at its forward end and hinged tooth-carrying frame sections at its opposite sides, the suspension and adjusting mechanism mounted on the sulky and connected with said bar or beam, and hinged frame sections, and a tongue pivoted at its rear extremity between said apertured plates and in advance thereof, pivotally connected with the front end of said arm or reach, substantially as set forth. 3rd. The combination with the sulky, of the open frame B, enclosing the sulky, and formed of the bar B^2, and tooth-carrying sections provided with interchangeable teeth, for the purposes described, and with shoes or runners of the character set forth, the longitudinal beam or bar B^2 to which the frame-sections are hinged, the suspension and adjusting mechanism on the sulky and connected with said beam or bar and frame-sections, and the tongue hinged at its rear end to the front end of the beam or bar in advance thereof, hinged to the front end of the arm or reach A^5, substantially as set forth. 4th. The combination, with the sulky, the hinged tooth-carrying sections B^1, and beam or bar B^2, arm or reach A^5, and tongue E, of the cutter F, secured to the forward sides of the sections B^1, and spaced therefrom to form a V-shaped cutter, substantially as set forth. 5th. The combination, with the sulky and the harrow frame B therebelow, comprising the longitudinal central beam B^2, adjustably suspended between its ends from the sulky, and the frame sections B^1 hinged at their inner edges to the said beam, and carrying detachable weed-cutting blades below and the full length of their front bars, the inner ends of the cutters extending in front of the forward end of the said beam to form together a V-shaped cutter, harrow teeth on the rear bars of said frame-sections, shoes on the said sections and the beam, and a tongue connected at its rear end to the forward end of the beam and connected in advance thereof with the forward arm or reach of the sulky, substantially as set forth. 6th. The combination, with a sulky harrow or cultivator, of a weighting or tension mechanism for holding the harrow or cultivator down to its work, substantially as set forth. 7th. The combination, with the sulky and the harrow or cultivator suspended therefrom, of a rock-shaft on the sulky provided with depending spring arms engaging the said frame, substantially as set forth. 8th. The combination, with the sulky and the longitudinal central bar suspended therefrom, and provided at opposite sides with vertically swinging harrow or cultivator sections, of a transverse rock-shaft on the sulky and having downwardly and rearwardly extending arms bearing on said sections, substantially as herein described. 9th. The combination, with the sulky having transverse rock-shafts thereon provided with operating levers, and chains depending from one of said shafts, of a sectional harrow or cultivator frame, suspended from said chains, and spring arms extending down from the other rock-shaft and bearing on said frame sections, substantially as herein described. 10th. A weighting or tension mechanism for harrows or cultivators comprising a rock-shaft, spring arms projecting therefrom, and having flanged lower ends, and mechanism for rocking the shaft, substantially as herein described. 11th. A harrow frame divided longitudinally and transversely into four hinged sections B^1, and a central bar B^2, forming the longitudinal axis of said sections, and formed of two sections hinged in alignment with the transverse hinging points of said frame-sections, substantially as herein described. 12th. The combination, with the sulky having a forwardly extending reach A^5, and a tongue E pivoted thereto near its rear end, of a central longitudinal round bar B^2 pivoted at its forward end to the rear end of the tongue, frame sections B^1 having eyes passed upon the bar, stop pins on the bar to prevent rearward movement of the eyes, and mechanism on the sulky for raising and lowering the bar and sections hinged thereon, substantially as herein described. 13th. The combination, with the sulky having a reach A^5, and a tongue E pivoted thereto near its rear end, of a central longitudinal bar B^2 hinged in two sections and pivoted at its front end to the rear end of the tongue, transversely divided, frame-sections B^1 having eyes at their opposite ends through which the bar B^2 freely passes, stops to prevent longitudinal movement of said eyes, the members of said frame-sections B^1, being hinged at their abutting ends in alignment with the hinges of the said bar and mechanism on the said sulky for raising and lowering the said bar and frame sections, substantially as herein described. 14th. A sulky harrow provided with a sectional hinged cultivator or harrow frame B B^1 having a central longitudinal bar B^2, mechanism for raising and lowering the bar and sectional frame, cultivator or harrow teeth mounted on the frame and three double furrow or marking ploughs extending below said teeth and mounted respectively on said central bar and frame-sections, substantially as herein described. 15th. A sulky harrow or cultivator of the class described provided with vertically adjustable shoes or runners, substantially as set forth.

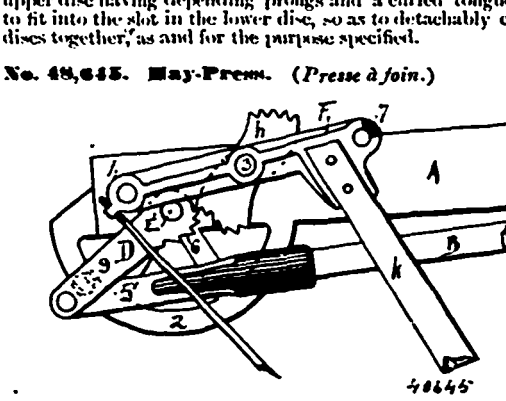
No. 48,644. Rug Fastener. (*Attache pour paillassons.*)



Grace Hearn De Grassi Harris, Toronto, Ontario, Canada, 8th April, 1895; 6 years.

Claim.—1st. A rug fastener comprising a lower disc with prongs to secure it to the floor, an upper disc with prongs to extend into the rug and flexible means for holding the discs together, as and for the purpose specified. 2nd. In a rug fastener the combination with the lower disc having depending prongs and the the upper disc detachably hinged to the lower disc, the prongs on the upper disc extending into correspondingly located holes in the lower disc, as and for the purpose specified. 3rd. The combination with the lower disc having depending prongs and a raised lip having a slot made therein, of the upper disc having depending prongs and a curled tongue designed to fit into the slot in the lower disc, so as to detachably connect the discs together, as and for the purpose specified.

No. 48,645. Hay-Press. (*Presse à foin.*)



Moses C. Nixon, Omaha, Nebraska, U.S.A., 8th April, 1895; 6 years.

Claim.—1st. In a hay-press, the combination with a supporting standard, of a plunger head and bar, a sliding load plate movably secured to the plunger head, adapted to open and close the hopper opening of said press, in combination with suitable operating mechanism, all substantially as and for the purpose set forth. 2nd. In a hay-press, the combination with a supporting standard, of a plunger head and bar, an anchor block provided with a projecting ear and semi-circular track, a serrated toggle arm secured to said plunger bar, and movably held upon said anchor block, a vertical shaft mounted adjoining said toggle arm, and provided with a power bar, said bar having a serrated oval head and two terminal rolls, said serrated head being adapted to engage the serrated toggle

arm in carrying said arm in one direction and said rolls engaging said toggle arm in carrying said arm in the opposite direction, all substantially as and for the purpose set forth. 3rd. In a hay-press, the combination with the standard A, of the plunger head A^{11}, the plunger bar B connected to said head, the anchor block E, provided with the ear bar E^1 and the track 2, the serrated toggle arm D, working between said bar E^1, and connected to said bar B, the power bar F, provided with the serrated head *h* meshing with the arm D, and provided with the rolls 1 and 2, and the power shaft 3, all arranged to operate substantially as and for the purpose set forth. 4th. The combination with a supporting standard of an operating shaft provided with a rack plate, said rack plate being provided with teeth upon each end, and a toggle arm mounted adjoining said rack plate, and provided with a serrated head adapted to coincide with the serrations of said plate to operate a plunger bar, all substantially as and for the purpose set forth. 5th. In a hay-press, the combination with a supporting standard and operating shaft, of a return mechanism, comprising the arrangement of the following instrumentalities, to wit: a revolving power bar provided with a serrated head, a pivoted arm provided with the teeth d^1 adapted to engage said serrated head, each succeeding tooth and serration of said bar and head being a greater distance from their respective pivot point than the preceding one, so that said plate and arm can work away from each other without interference, all substantially as and for the purpose set forth.

No. 40,646. Corset. (*Corset.*)

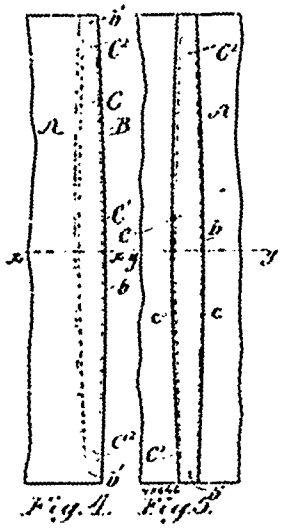


Fig. 4. Fig. 5.

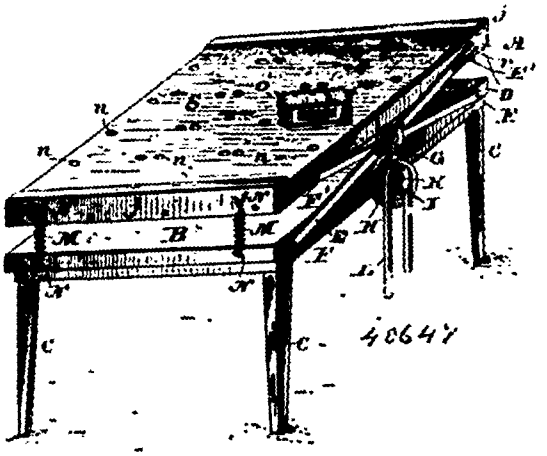
James Joseph Melmerne, Brooklyn, New York, U.S.A., 9th April, 1885; 6 years.

Claim. 1st. A corset or other garment, formed in one or two main pieces, and folded and stitched at intervals to form integral pleats of varying width, to reduce the diameter of the garment at the wider points of said pleat, substantially as shown and described. 2nd. A corset or other garment, formed in one or two main pieces and longitudinally folded and stitched at intervals to form pleats tapering in width from the centre toward each end thereof, and bound to said garment by longitudinal stitching inserted through said pleat and the garment-fabric at each side, substantially as shown and described. 3rd. A corset or other garment, having a plurality of integral vertical pleats formed therein at intervals by means of a seam extending through the doubled fabric, said pleats being flattened to project beyond each side of said seam and bound to the fabric by longitudinal seams extending within each edge of the pleat through both folds thereof and the fabric, substantially as shown and described. 4th. The combination, with a corset or other garment having integral or other pleats or the like adapted to receive stiffening material, of a plurality of strips of such material tapered from the centre toward each end whereby they are retained in the corset without other fastenings, substantially as shown and described. 5th. A corset formed of one or two main pieces, folded vertically at intervals and stitched together by a curved seam, to form hollow pleats overlapping the seam at each side and tapering from the centre thereof to each end, steels in each of said pleats, conforming in shape thereto, and longitudinal seams along the edges of said pleats inserted through both folds thereof and through the fabric of the garment, substantially as shown and described.

No. 40,647. Method of and Machinery for Making Brushes. (*Méthode et machine pour fabriquer les brosses.*)

Maurice Hellwig, Brooklyn, New York, U.S.A., 9th April, 1885; 6 years.

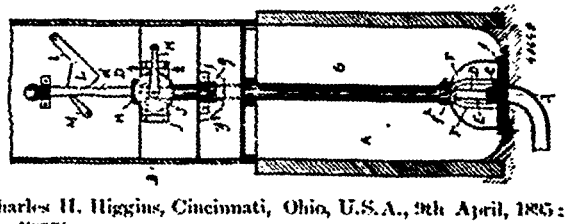
Claim. 1st. The combination, in a brush machine, of one or more receptacles adapted to hold a supply of hair or bristles, means for holding brush backs with perforations in line with the hair or bristles in each of such receptacles, and jolting mechanism with means for driving it, for jolting the bristles into the holes in said brush backs. 2nd. The combination, in a brush machine, of a receptacle adapted to hold a supply of hair or bristles, means for holding a brush back with perforations in line with the said hair or bristles in such receptacle, mechanism for jolting the bristles into the holes in the brush back, and means for limiting the distance



which the bristles can project through the brush back. 3rd. The combination, in a brush making machine, of a plurality of receptacles adapted to hold a supply of hair or bristles, means for holding brush backs with perforations in line with the bristles in said receptacles, and a jolting mechanism common to said receptacles for simultaneously jolting bristles into the perforations of the several backs. 4th. The combination, in a brush making machine, of a receptacle adapted to hold a supply of bristles, a cover adapted to prevent the bristles moving away from the brush back, means for holding a perforated brush back in line with the bristles in such receptacle, and a jolting mechanism for jolting the bristles into the perforations of said back. 5th. In a brush machine, the combination with a receptacle for holding the hair or bristles, a gauge for limiting the protrusion of the hair or bristles through the brush back, of means for detachably securing the said parts together, and means for vertically reciprocating the same onto a solid base, whereby the parts are jolted and the bristles caused to propel themselves longitudinally through the apertures in the brush back. 6th. In a brush machine, the combination with an adjustable receptacle for holding the hair or bristles which admits of the size of the receptacle and the degree of compactness of the bristles being regulated, a gauge for limiting the protrusion of the hair or bristles through the brush back, of means for detachably securing the parts together, comprising guide-ways secured to opposite ends of the receptacle and gauge, and in vertical alignment with each other, metal rods or bolts headed at one end and screw threaded at the other passing through said guide-ways, and nuts passing over the screw threaded ends of the said rods or bolts and retaining the parts when in situ, and means for vertically reciprocating the same onto a solid base, whereby the parts are jolted and the bristles caused to propel themselves longitudinally through the apertures in the brush back. 7th. In a brush machine, the combination with an adjustable receptacle for holding the hair or bristles, a gauge for limiting the protrusion of the hair or bristles through the brush back, and means for detachably securing the said parts together, of a variably reciprocating jolting platform, means for detachably securing the filling device to the said jolting platform, and means for imparting motion to the platform. 8th. In a brush machine, the combination of an adjustable receptacle for holding the bristles or hair, a gauge for limiting the protrusion of the hair or bristles through the brush back, of a removable plate and means for detachably securing the several parts of the filling device and the plate together, a jolting platform, means for removably attaching the removable plate to the platform, and means for imparting motion to the jolting platform. 9th. In a brush machine the combination with an adjustable receptacle for holding the hair or bristles, a gauge for limiting the protrusion of the hair or bristles through the perforations in the brush back, a removable plate and means for detachably securing the filling device and the plate together, of a jolting platform, angle plates secured to the opposite ends of the jolting platform for guideways for the reception of the said removeable plate, and means for imparting motion to the jolting platform. 10th. In a brush machine, the combination with an adjustable receptacle for holding the hair or bristles, a gauge for limiting the protrusion of the hair or bristles through the perforations in the brush back, of a removeable plate provided with numerous series of transverse perforations, whereby a large number of filling devices may be secured to the same, rods or bolts passing through said plate and screw threaded at their upper ends guide-ways on the ends of the receptacle and gauge through which said rods pass and nuts on the

upper ends of the rods for securing the plate and filling device together, a jolting platform provided with means for retaining the removable plate and means for imparting motion to the jolting platform. 11th. In a machine for the manufacture of brushes, the combination with an adjustable receptacle for holding the hair or bristles, a gauge for limiting the protrusion of the hair through the brush back, a removable plate provided with numerous series of transverse perforations, whereby a large number of filling devices may be secured to the said plate, rods or bolts passing through the said perforations screw threaded at their upper ends, of vertical conductors rigidly secured to opposite ends of the receptacle and gauge forming guide-ways and keepers for the said rods, nuts on the upper ends of the rods for securing the plate and filling devices together, a jolting platform provided with angle bars at opposite ends thereof forming guideways for receiving and retaining the removable plate and means for imparting motion to the said jolting platform. 12th. In a brush machine, a filling device for inserting the bristles into the brush backs comprising a receptacle for holding the bristles, a gauge for limiting the protrusion of the same through the brush back, means for securing the several parts together with the brush back intervening, and means for reciprocating the filling device onto a fixed base or resistance. 13th. In a brush back filling device, the combination with an adjustable receptacle for holding the bristles, whereby the same is capable of expansion for receiving the bristles and then contracting for producing greater compactness of the said bristles, a gauge for limiting the bristles through the brush back, means for detachably securing the several parts together with the brush back intervening and means for reciprocating the filling device onto a fixed base or resistance. 14th. In a filling device for inserting bristles into brush backs, the combination with an adjustable receptacle for holding the bristles, a gauge for limiting the protrusion of the bristles through said back, of means for detachably securing the several parts together with the brush back intervening comprising rods headed at one end and screw threaded at the other guide-ways at opposite ends of the said receptacle and of the gauge for receiving the rods, thumb nuts for the upper ends of said rods, means for reciprocating the filling device against a fixed base or resistance. 15th. In a filling device for inserting bristles into brush backs, the combination with a receptacle for holding the bristles formed of two U-shaped telescoping sections, of graduated means for securing the two sections together at different points of contraction, a gauge for limiting the protrusion of the bristles, means for securing the several parts together with the brush back intervening, consisting of two rods headed at one end and screw threaded at the other, tubular sections on opposite ends of the receptacle and gauge, respectively, and in vertical alignment, and thumb nuts for locking the assembled parts. 16th. In a filling device for inserting the bristles into brush backs, the combination with the receptacle for holding the bristles of two U shaped sections adapted to telescope each other, the outer section being longitudinally slotted at its sides, of lugs on the outer ends of the inner section projection through the said slots and working therein, the tubular sections secured at their middle to lugs and having their ends extending beyond the edges of the slots, whereby the sections are held against separation but are free to move upon each other longitudinally, suitable means for locking the parts at various degrees of contraction, a gauge for limiting the protrusion of the bristles through the said brush back, and means for detachably securing the assembled parts together. 17th. In a filling device for inserting bristles into brush backs, the combination with an adjustable receptacle formed of the two U-shaped sections, the one adapted to telescope within the other, said sections being secured together with their opening ends facing, the outer one formed with a slot on each of its sides longitudinally thereof, the inner one having lugs near its ends which project through said openings, tubes secured to said lugs and extending beyond the edges of the openings, strips extending laterally from the outer section above and below, perforations through said strips in alignment with each other, and with which the tube is adapted to register, and a pin or other device passing through said aligned openings for temporarily locking them together, a gauge and means for securing the assembled parts together with the brush back intervening. 18th. In a brush machine, a filling device comprising in combination, the U-shaped telescoping sections secured together as described and shown, the inner U-shaped sections a^{11}, b^{11}, secured at their closed ends, respectively, to the inner side of the closed ends of the outer sections thus forming an annular space or compartment between the inner and outer sections, said inner sections held together at their open end, against separation but adapted to slide upon each other, means for adjustably securing the outer sections together, a gauge for limiting the protrusion of the bristles through the brush back, studs or U-shaped sections s and r extending outward from one end of the receptacle and the gauge forming conjoint, a vertical guideway, U-shaped and attached to the opposite ends of the receptacle and gauge, respectively, but opening laterally or at right angles to the first, rods m headed at one and screw threaded at the other adapted to fit into said guide-ways, and thumb nuts adapted to be screwed onto the rods and secure the assembled parts together with the brush back intervening. 19th. In a brush machine, the combination with the brush back filling device, the removable plate S, and means for detachably securing the former to the latter, the jolting platform A, having flanges j, forming guide-ways for the receiving plate S, the table or base B, upon which the platform terminates its flight, screens for vertically reciprocating the jolting platform comprising the transverse rod or shaft K, carrying a fixed cam wheel H at each end, said cam terminating in an abrupt shoulder, friction-wheels C riding over said cam-wheel, connections between the friction-wheels and the platform, means for maintaining the platform in vertical alignment with the base, and means for operating the said shaft K, whereby the cam-wheel is rotated and the platform elevated and then suddenly dropped by the friction-wheels riding over the cam-wheels and dropping behind the shoulder thereon, and the jolting platform precipitated onto the base. 20th. In a brush machine, the combination with the jolting platform A, the guide-ways j thereon, the removable plate S fitting in said guide-ways, the brush back filling devices removably secured to the plate S, the table or base B, the transverse shaft K carrying the cam pulleys H and the symmetrical pulleys I on its opposite ends, the belt L communicating with the source of power, the friction pulleys C riding over the cam-wheels, of the connecting cross-bars E on opposite sides, said cross-bars loosely pivoted at one end near the opposite ends of the base, having their other ends slotted and working over pins or studs near the diagonally opposite ends of the platform A, a pin or stud secured to the outer face of the inner bar E near or at its middle and projecting through a longitudinal slot in the outer bar, said pin or stud carrying the friction-wheel C on its outer end, whereby the platform is permitted to reciprocate freely, but at the same time is maintained in exact vertical alignment with the base, the coil spring M at opposite ends connecting the platform and the base together for facilitating the return of the former, and means for rotating the shaft K. 21st. In a machine for inserting the bristles into brush backs, the combination with a receptacle O for holding the hair or bristles, a gauge R for limiting the protrusion of the hair or bristles through the perforations in the brush back, of a cover O^{11} for the receptacle, longitudinal projections on one end of the receptacle cover and gauge, respectively, forming a guide-way, the hooked projections on the opposite ends of the said parts forming a laterally opening guide-way, bolts headed at one end and threaded at the other, passing through such guide-ways, and nuts fitting on the bolts for securing the assembled parts together with the brush back intervening, and means for reciprocating the device onto a base or resisting body, thereby propelling the bristles through the brush back by their inertia. 22nd. The combination of a brush back having suitable perforations, tufts therein, said back having a rabbet on its outer edge, a groove at the angle of the rabbet, a cover for the back, the edges of which are moulded into said rabbet and groove, whereby said parts are firmly locked together. 23rd. The combination of a brush back, having holes with bristles in them, a cap on the part of the brush back liable to be struck against articles brushed, extending over some of the holes of the back, and tufts of the brush passing through such holes. 24th. The combination of a brush back having suitable perforations, tufts therein, a cover for the back, a cap of yielding material on the part of the brush liable to be struck against articles being brushed, the said cap extending over the edge of the brush and over some of the holes of the back, and having corresponding holes through which the tufts project. 25th. The improvement in the method of filling perforated brush backs which consists in working the hair or bristles into the holes from the front so that the tufts project from the rear of the back, applying adhesive material to the said projecting ends, and then forcing the tufts forward in the reverse direction to that of the entrance, bringing the adhesive ends into the holes. 26th. The improvement in the method in filling brushes which consists in forming conical holes in a brush back, inserting tufts through said holes from the smaller ends thereof, enlarging the ends of the tufts and making them adhesive by working cement into the ends of the tufts, and then forcing the tufts in the reverse direction to that in which they enter, bringing the enlarged ends into the conical holes. 27th. The improvement in the method of filling brushes which consists in forming backs with conical holes therein, supporting such backs with the smaller ends of the holes upward, with bristles above the same, and jolting the bristles into said holes.

No. 18,648. Catch Basin. (*Bassin d'attrape*)



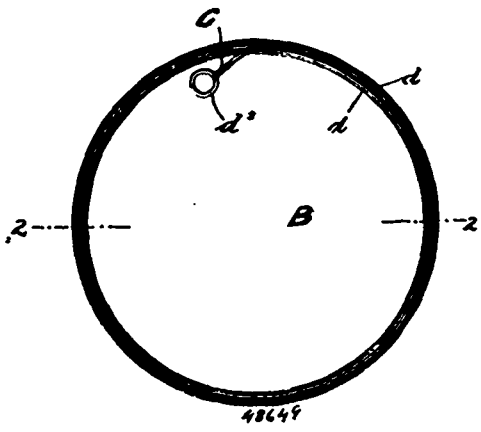
Charles H. Higgins, Cincinnati, Ohio, U.S.A., 9th April, 1885: 6 years.

Claim.—1st. In a catch basin, the combination of a stationary ribbed shield E having a bearing e^2, outer shield F, tube G, valve C and rod D, said shield F being connected to said tube which latter is rotatably connected to said bearing, the valve being connected to said rod, which latter passes up through the tube G, and suitable operative mechanism for rotating said tube and for elevating said rod, substantially as set forth. 2nd. In a catch basin, the station-

ary shield consisting of plate c having ribs E attached thereto the top of said ribs terminating in a bearing c^2, an outer shield overlapping said inner shield, said outer shield being attached to a tube G, the latter being revolubly mounted upon said bearing, valve C and rod D to which latter said valve is attached, said rod passing through said tube, and suitably geared mechanism for rotating the latter, for the purposes set forth. 3rd. In a catch basin constructed, substantially as set forth, with a stationary shield, and an outer revoluble shield, the valve C, rod D having teeth d thereon near its top portion, and a toothed segment L adapted to engage with said teeth, and suitable operative mechanism for revolving said outer shield, substantially as specified. 4th. In a catch basin, the stationary ribbed shield E terminating at top in a bearing c^2, valve C, rod D, tube G and an outer shield, the latter consisting of ribs F turned inward at top and connected to a sleeve f^2 which latter is attached to the lower end of said tube, said tube engaging said bearing, the valve being attached to said rod the latter passing through said tube, and suitable operative mechanism for rotating the latter and for elevating the rod, substantially as specified.

No. 48,649. Method of Closing Cans.

(*Méthode de fermeture de boîte métallique.*)

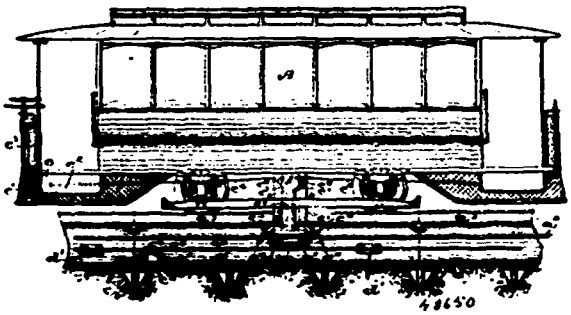


John Banbury, Auckland, New Zealand, 9th April, 1895; 6 years.

Claim.—The method of closing cans, which consists in placing a wire between the inner surface of the can body and a marginal up-turned flange of the cover, and the applying pressure to bring the said flange and the adjacent surface of the can body nearer to each other and thereby firmly hold the wire between them, substantially as described.

No. 48,650. Cable Stop Mechanism.

(*Mécanisme d'arrêt pour cables.*)

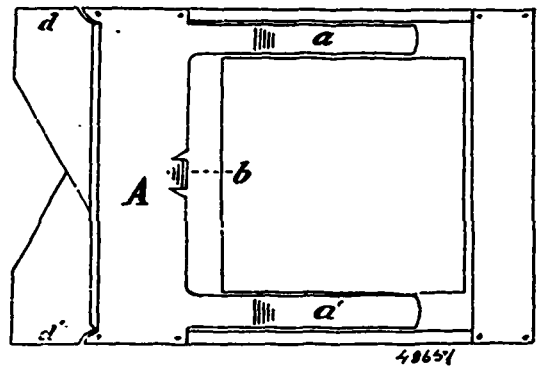


Edwin Neil, Newark, New Jersey, U.S.A., 9th April, 1895; 6 years.

Claim.—1st. In an appliance for controlling the operation of the working cable of cable cars, the combination, with said working cable, of an extra or idle cable in the conduit with said working cable, said extra or idle cable being connected at the power station with means for shutting off the power from the working cable, substantially as and for the purposes set forth. 2nd. In an appliance for controlling the operation of the working cable of cable cars, the combination, with said working cable of an extra or idle cable in the conduit with said working cable, and mechanism connected with the car body and operated therefrom, to be engaged with said extra or idle cable to cause the same to move with the car body and shut off the power driving the working cable, substantially as and for the purposes set forth. 3rd. In an appliance for controlling the operation of the working cable of cable cars, the combination, with said working cable, of an extra or idle cable in the conduit with said working cable, chocks or blocks on said extra or idle cable, a clutch fork on the car body, and mechanism for throwing said fork in holding engagement with one of said chocks or blocks on said extra or idle cable, to cause the same to move with the car body and shut off the power driving the working cable, substantially as and for the purposes set forth. 4th. In an appliance for controlling the operation of the working cable of cable cars, the combination, with the working cable, of an extra or idle cable in the conduit with said working cable, movable supports or carriers for said extra or idle cable, chocks or blocks on said extra or idle cable, a clutch fork on the car body, and mechanism for throwing said fork in holding engagement with one of said chocks or blocks on said extra or idle cable, to cause the same to move with the car body and shut off the power driving the working cable, substantially as and for the purposes set forth. 5th. In an appliance for controlling the operation of the working cable of cable cars, the combination, with said working cable, of an extra or idle cable in the conduit with said working cable, supports or carriers for said extra or idle cable, each support comprising therein a suitable base, a spring-actuated post pivotally arranged on said base, and means connected therewith for retaining said post in its upright position, chocks or blocks on said extra or idle cable, a clutch fork on the car body, and mechanism for throwing said fork in holding engagement with one of said chocks or blocks on said extra or idle cable, to cause the same to move with the car body and shut off the power driving the cable, substantially as and for the purposes set forth. 6th. In an appliance for controlling the operation of the working cable of cable cars, the combination, with said working cable, supports or carriers for said extra or idle cable, each support comprising therein a suitable base, spring-actuated post pivotally arranged on said base, and means connected therewith for retaining said post in its upright position, chocks or blocks on said extra or idle cable, a clutch fork on the car body, and mechanism for throwing said fork in holding engagement with one of said chocks or blocks on the idle cable, to cause the same to move with the car body and shut off the power driving the cable, said mechanism consisting essentially, of an operating lever c^3, bell-crank c, connecting rod c^4, bell-crank c^5, and rod c^6, connecting said bell-crank c^5, with said clutch fork, substantially as and for the purposes set forth. 7th. In an appliance for controlling the operation of the working cable of cable cars, the combination, with the working cable, of an extra or idle cable in the conduit with said working cable, chocks or blocks on said extra or idle cable, a clutch fork on the car body, and mechanism for throwing said fork in holding engagement with one of said chocks or blocks on said extra or idle cable, to cause the same to move with the car body and shut off the power driving the working cable, said mechanism consisting essentially, of an operating lever c^3, bell-crank c, connecting rod c^4, bell-crank c^5, and rod c^6, connecting said bell-crank c^5 with said clutch fork, substantially as and for the purposes set forth.

No. 48,651. Slide Holder for Optical Lanterns.

(*Porte-tiroir pour lanternes optiques.*)



Ashcleigh Thorp, London, England, 9th April, 1895; 6 years.

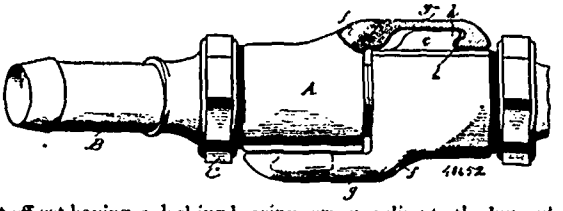
Claim.—1st. The construction and arrangement of a carrier for use with a magic or optical lantern, substantially described as a dissolving slide-carrier, consisting of a frame and two detached slide-holders, the frame capable of holding at the same time the two holders side by side. 2nd. The carrier-frame fitted with the springs a, a^1, and b, substantially as and for the purpose hereinbefore set forth.

No. 48,652. Hose-Coupling. (*Joint de boyau.*)

The Consolidated Car Heating Company, assignee of James Finney McElroy, both of Albany, New York, U.S.A., 11th April, 1895; 6 years.

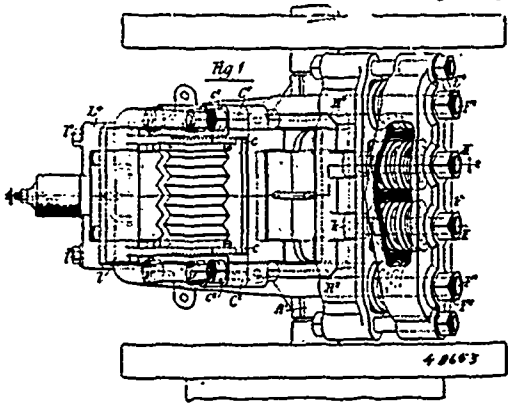
Claim.—1st. In a coupler of the kind described, a coupler head having a flat face on one side, the locking lug on that face, of an off-set at the forward end of the opposite side of the head, and a forwardly extending arm from that off-set having a locking bearing

corresponding to the bearing on the lug, substantially as described. 2nd. In a hose-coupler of the kind described, a coupling head comprising a cylindrical body portion having the flat panel *b* on one side, the locking lug *c* centrally of that panel, an off set at the forward end of the opposite side and an arm forwardly projecting from



that off-set having a locking bearing corresponding to the lug, substantially as described. 3rd. In a hose-coupler of the kind described, a coupler head having a locking lug at one side and a forwardly projecting arm on the other side, provided with a corresponding undercut locking bearing, substantially as described. 4th. In a hose-coupler of the kind described, the combination of the coupler head having a flat face at one side, the locking lug on that face, the forward projecting arm on the opposite side with a locking bearing corresponding to the locking lug, and a flange *k*, forming a covering for the interlocking parts in their coupled position, substantially as described.

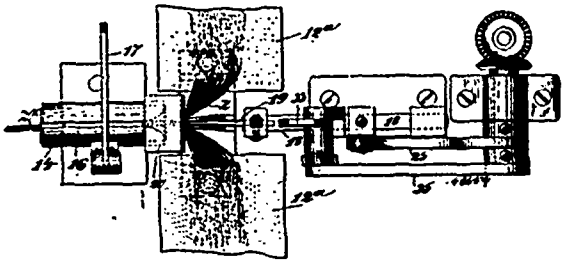
No. 48,653. Stone Crusher. (*Machine à broyer la pierre.*)



The Gates Iron Works, assignee of Philetus Warren Gates, Ryerson Dudley Gates, and Charles Lewis Carman, all of Chicago, Illinois, U.S.A., 11th April, 1895; 6 years.

Claim.—1st. In rock and ore crushers, the combination of a reciprocating jaw adapted to be pivoted at either end, means for vibrating such jaw, and a stationary crushing jaw arranged opposite to the reciprocating jaw so that material may be crushed between the jaws during the vibration of the reciprocating jaws, substantially as described. 2nd. In rock and ore crushers, the combination of a reciprocating jaw adapted to be pivoted at either end, a frame upon which it is pivoted, means for actuating such jaw so constructed and arranged that the machine may be converted from a fine ir to a coarse crusher as desired, and a second jaw opposite the reciprocating jaw so arranged that the material is crushed between its jaws during the vibration of the reciprocating jaw, substantially as described. 3rd. In stone crushers, the combination of a stationary crushing jaw, a reciprocating crushing jaw opposite the stationary crushing jaw arranged to have an equal or variable motion at each end thereof, means for actuating the reciprocating jaw, and means for adjusting the actuating mechanism, to impart an equal or variable motion to each end of the reciprocating jaw so that the position of the pivot upon which the reciprocating jaw swings may be changed with the adjustment of the actuating mechanism, substantially as described. 4th. In stone crushers, the combination of a stationary crushing jaw, a reciprocating crushing jaw opposite the stationary jaw arranged to have an equal or variable motion at each end thereof, toggle lever mechanism arranged to actuate the reciprocating jaw, and means for adjusting the position of the toggle to impart an equal or variable motion to each end of the reciprocating jaw so that the position of the pivot upon which the reciprocating jaw swings may be changed with each adjustment of toggle, substantially as described. 5th. In stone crushers, the combination of a stationary crushing jaw provided with a series of toggle bearing grooves arranged on the arc of a circle for the reception of one end of a toggle plate, a reciprocating crushing jaw arranged to have an equal or variable motion at each end thereof, means for actuating the reciprocating crushing jaw, and a toggle plate adapted to have one end seated in any one of the series of toggle bearing grooves and its opposite end engaging with the actuating mechanism of the reciprocating jaw to impart an equal or variable motion to each end of the reciprocating jaw so that the position of the pivot upon which the reciprocating jaw swings may be changed as the toggle is changed from one toggle bearing groove to another, substantially as described. 6th. In stone crushers, the combination of a stationary crushing jaw, a reciprocating crushing jaw arranged to have an equal or variable motion at each end thereof, a frame portion to support the mechanism and provided with a series of toggle bearing grooves arranged on the arc of a circle for the reception of one bearing end of a toggle plate, means for actuating the reciprocating crushing jaw, and a toggle plate arranged to have one end seated in one of the series of toggle bearing grooves and its other end engaging with the actuating mechanism on the reciprocating jaw to impart an equal or variable motion to each end of the reciprocating jaw and regulate the position of the pivot upon which the reciprocating jaw swings, so that the position may be changed as the toggle is changed from one toggle bearing groove to another, substantially as described. 7th. In stone crushers, the combination of a stationary crushing jaw, a reciprocating crushing jaw opposite the stationary jaw so that between such jaws material may be crushed, means for actuating the reciprocating jaw, tension bars connected with the lower end of the reciprocating crushing jaw and its actuating mechanism to impart a reciprocating motion to the crushing jaw, and a series of springs interposed between the actuating mechanism and the tension bar to which may be given an initial compression permitting yielding to strains beyond a predetermined amount, substantially as described. 8th. In stone crushers, the combination of a stationary jaw, a reciprocating crushing jaw opposite the stationary jaw and between which material may be crushed, a pivot for the reciprocating jaw upon which it may be vibrated and reciprocated and which prevents a motion in the plane of the face, and means for actuating the reciprocating jaw, substantially as described. 9th. In stone crushers, the combination of a stationary crushing jaw, a reciprocating crushing jaw mounted upon a laterally movable pivot and arranged to have an equal or variable motion at each end of the reciprocating jaw, and means for actuating the reciprocating jaw, substantially as described.

No. 48,654. Sliver Forming and Spinning Mechanism. (*Mécanisme à former les écheveltes et filer.*)



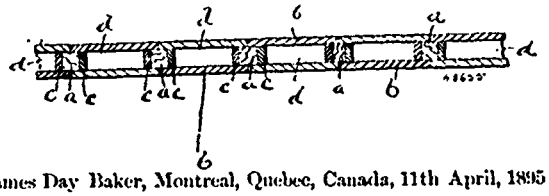
James Neale, and William Oscar Shadbolt, both of Brooklyn, New York, U.S.A., 11th April, 1895; 6 years.

Claim.—1st. A sliver-forming mechanism comprising a tubular silver-guide, a vibrating fibre-feeder, the path of which is aligned with said guide and terminates in the mouth of the same, means for imparting vibrations to said feeder and means for drawing the sliver through its guide in proportion as increment of fibre are added thereto, whereby a continuous sliver is formed, as set forth. 2nd. In a sliver-forming and spinning mechanism, the mechanism for forming the sliver, compressing a sliver-guide, a tension device for the sliver in the guide, means for drawing the sliver longitudinally through the guide as formed by increments of fibre added thereto, a vibrating fibre-feeder having its path aligned with the sliver-guide and terminating at the mouth of said guide, and mechanism for imparting movement to said feeder, substantially as set forth. 3rd. In a sliver-forming and spinning mechanism, the mechanism for forming the sliver, comprising a sliver-guide, a tension device for the sliver in the guide, means for drawing the sliver through the guide as formed by increments of fiber added thereto, a reciprocating needle-bar, a needle 19, carried by the bar and having a fork or recess at its front end, said needle being aligned with the axis of the sliver-guide, and means for feeding the fibre in small portions in front of said needle, whereby the bight of the portion of the fiber is carried into the core or heart of the sliver in the guide. 4th. In a sliver-forming and spinning mechanism, the mechanism for forming the sliver, comprising a sliver-guide, a tension device for the sliver in the guide, means for drawing the sliver through the guide as formed, a reciprocating needle-bar, a needle carried by said bar, said needle being aligned with the axis of the sliver-guide and provided with a fork or recess in its tip, a needle-guide, a forked shield 20 through which the needle plays, a tension device and holder for retaining the fibre in position transversely of the path of the needle, and means for feeding the fibre in small quantities into the path of the needle, substantially as set forth. 5th. In a sliver-forming and spinning mechanism, the mechanism for forming the sliver, comprising a sliver-guide, a tension device for the sliver, means for drawing the sliver through the guide as it is formed, a reciprocating pusher aligned with the sliver-guide and adapted to push the bight, of an increment of fibre into the mouth of the guide, a tension device for the fibre arranged to hold the latter

in position transversely of the path of the pusher, said device comprising a backing beset with numerous, teeth, and means for feeding said fibre, thus held in small quantities across the path of the pusher, substantially as set forth. 6th. In a sliver-forming and spinning mechanism, the combination with a sliver-guide and a reciprocating pusher for pushing the bight of an increment of fiber into the mouth of the said guide, of the drums 12, studded with teeth to hold and put a tension on the fiber, the axes of the drums being transversely to the path of the pusher, and said drums being arranged at opposite sides of the pusher, and means for rotating said drums whereby the fibre is brought in front of the pusher, substantially as set forth. 7th. The combination with the spaced drums 12, provided with closely set-teeth, the travelling apron 9, to receive the fiber, and the roller 10 and conductor 11, arranged to transfer the fiber from the apron to said drums, of the sliver-guide, of the needle 19, the reciprocating needle-bar 18, carrying the needle and arranged between the drums, and mechanism, substantially as described, intermediate said needle-bar and said drums, whereby the said bar imparts intermittent rotary motion to the drums at each backward movement of the needle, substantially as set forth. 8th. In a sliver-forming mechanism, the combination with a sliver-guide, and a reciprocating pusher aligned with said guide, of a tension device or holder for the fiber comprising two sections arranged on opposite sides of the needle and each consisting of a backing arranged transversely to the path of the pusher, the surfaces of said backing being studded with numerous teeth to receive the fiber, and means for feeding the fibre so held by the tension device, in small quantities into the path of the pusher, substantially as set forth. 9th. In a sliver-forming mechanism, the combination with the block having in it the sliver-guide 15, of the tension plate 16, occupying a slot in said block, said plate having a groove in its lower edge, substantially as set forth.

No. 48,655. Fire Resisting Material.

(*Matières à l'épreuve du feu.*)

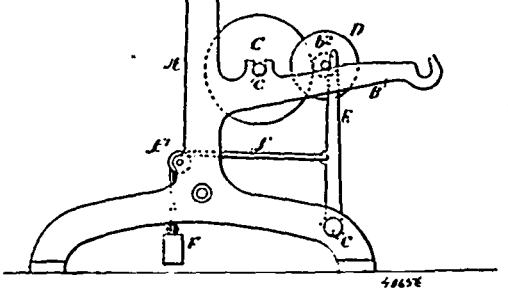


James Day Baker, Montreal, Quebec, Canada, 11th April, 1895; 6 years.

Claim.—1st. As a means for preventing the spread of fire through buildings, the combination with the studding of the hollow walls thereof, of lengths of fire resisting material applied to the inside faces of such studding. 2nd. As a means for preventing the spread of fire through buildings having hollow walls, sections or lengths of fire resisting material disposed transversely of the hollow spaces in such walls to obstruct the passage of fire through same. 3rd. As a means for preventing the spread of fire through buildings, the combination with the vertical studding of the hollow walls thereof, of vertical lengths of fire resisting material applied to the inside faces of such vertical studding, and transverse lengths of the same material extending between the vertical studs, for the purpose set forth. 4th. As a means for preventing the spread of fire through buildings having hollow walls, the combination with the combustible vertical studding thereof, of the vertical lengths *c* and the transverse lengths *d* of fire resisting material arranged, substantially as described. 5th. As a means for preventing the spread of fire through buildings having hollow walls, the combination with the combustible vertical studding thereof, of the vertical lengths *c* and the transverse lengths *d* of fire resisting matertial with their meeting edges formed to interlock, for the purpose set forth.

No. 48,656. Spool Support for Spinning Mules.

(*Support de bobines pour mule-jenny à filer*)

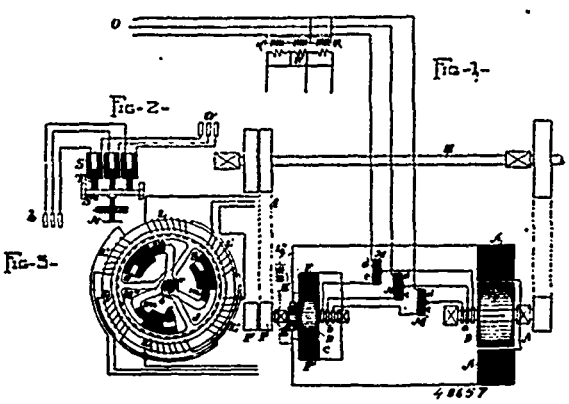


The Dill Spool Support Company, Camden and Philadelphia, assignee of Thomas Clark Dill, Philadelphia, all in Pennsylvania, U.S.A., 11th April, 1895; 6 years.

Claim.—1st. The combination of the drum, bearings therefor, a spool adapted to rest against the drum and to be turned thereby, and an eccentrically curved bearing surface for the spool, the incline of said bearing surface being greater as it nears the drum, substantially as specified. 2nd. In a spool support the frame having substantially horizontally extending arm, a drum mounted in fixed bearings on said frame, with a spool having journals by which it is suspended between the arms, whereby the arms take the major portion of the weight of the spool, with means for pressing the spool against the drum so that the pressure will be uniform, substantially as described and for the purpose specified. 3rd. The combination of the frame, the driving drum adapted to bearings thereon, horizontal arms projecting from the side of said frame, a journalled spool supported by said arms at the side of the drum, pivoted levers bearing against the journals of the spool and weights secured to the levers, substantially as specified.

No. 48,657. Regulator for Dynamo Electric Machines.

(*Régulateur pour machines dynamo électriques.*)



The Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Louis Bell, Chicago, Illinois, U.S.A., 11th April, 1895; 6 years.

Claim.—1st. The combination of a dynamo electric machine of the alternating or multiphase type, with a rotary transformer coupled in circuit so as to be driven by alternating or multiphase current received from the main machine, and supplying a commuted or rectified current which excites the field of the main machine, as set forth. 2nd. The combination of a dynamo electric machine, with a rotary transformer driven by alternating or multiphase impressed currents received from the main machine, and delivering a direct current which excites the field of the main machine, and inductive or reactive means for regulating the current driving the transformers, as set forth. 3rd. The combination of a dynamo of the alternating or multiphase type, with a rotary transformer exciting the field of such main machine, and driven by current therefrom, and regulating mechanism responsive automatically to the current passing to the main circuit for governing the supply of current to the transformer. 4th. The combination of a dynamo electric machine, a rotary transformer serving as an exciter for the main machine and driven by alternating or multiphase currents received therefrom, and one or more reversely wound reactive coils whose branches are included respectively in the main circuit, and in the driving circuit of the transformer, whereby desired compounding or over-compounding effects at the main machine are secured. 5th. The combination of an electric generator of the multiphase type having a separately excited field, with a rotary transformer driven by impressed currents from the main generator, and exciting the field of the main machine with direct currents, and regulating mechanism for varying the excitation so produced, as set forth.

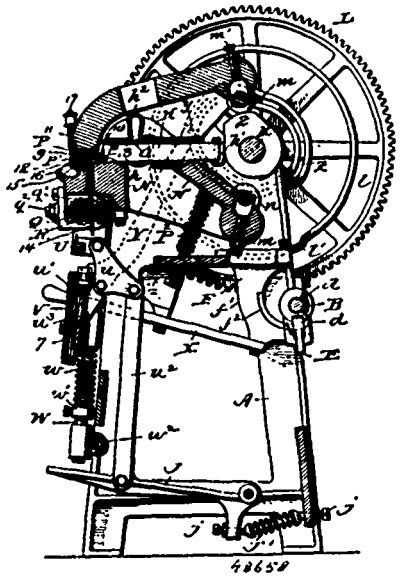
No. 48,658. Hoop Making Machine.

(*Machine à faire les cercles.*)

The Pleukharp Barrel Machine Company, assignee of James Pleukharp and William K. Liggett, all of Columbus, Ohio, U.S.A., 11th April, 1895; 6 years.

Claim.—1st. In a hoop forming machine, the combination, with jaws provided with the punching and riveting mechanism, of a former to receive the hoop iron, and mechanism for moving said former to carry the overlapping ends of the hoop iron between the jaws to be successively operated upon by the punching, and the riveting mechanism, substantially as set forth. 2nd. In a hoop forming machine, the combination with jaws carrying the punching, riveting and rivet feeding mechanism of a former adapted to receive the hoop iron, and mechanism for moving said former to carry the overlapping ends of the hoop iron between said jaws to be successively punched, receive the rivets, and have the ends of the rivets upset, substantially as set forth. 3rd. In a hoop forming machine, the

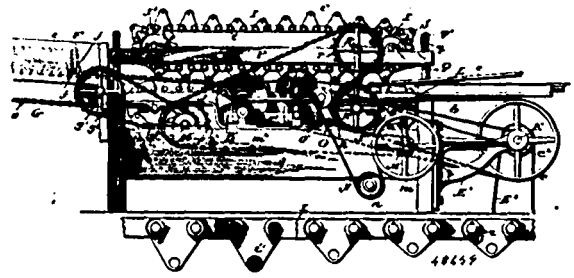
combination, with the jaws carrying the punching and riveting mechanism and a wheel as L, having a cam Z having portions at different radii, of a former having an arm projected therefrom, and having a portion of said arm engaging with the cam Z whereby said former is moved backward and forward to carry the hoop iron between said jaws to be successively operated upon by the punching and riveting mechanism, substantially as set forth. 4th. In a hoop



forming machine, the combination, with the jaws carrying the punching and riveting mechanism and a wheel L having a groove cam Z having portions at different radii, of a pivoted former to receive the hoop iron having an arm projected therefrom and provided with a portion to engage with said grooved cam, whereby said former is rocked on its pivotal support, substantially as described and for the purpose set forth. 5th. In a hoop forming machine, the combination, with the jaws carrying the punching and riveting mechanism, and the wire feeding mechanism, of a slide constructed to sever portions from the wire to form the rivet, and mechanism for actuating the said slide and the wire feeding mechanism, substantially as set forth. 6th. In a hoop forming machine, the combination, with the jaws M having elongated opening 10, and the jaw N having an opening to permit of the passage of the rivet forming wire, and having shoulder p, of a slide constructed to sever portions from said wire to form the rivet and clasp said rivet between said shoulder p and the end of the slide, substantially as set forth. 7th. In a hoop forming machine, the combination, with the jaws provided with the punching and riveting mechanism, and an actuating cam, of a slide for cutting the rivets provided with an adjustable end piece to ride upon said cam, substantially as set forth. 8th. In a hoop forming machine, the combination with the jaws carrying the punching and riveting mechanism, a shaft provided with cams for actuating said jaws and the wire feeding mechanism, and a wheel L mounted on said shaft and having a rim l which is provided with a depressed portion l^1 of a drive shaft, a drive pulley loosely mounted on said drive shaft, a pawl E carried by said drive shaft and adapted to engage with said drive pulley, a trip adapted to have one to travel on the rim l and having its other portion provided with a cam f^2, and a lever under the control of the operator to move said trip and project the cam portion f^2 within the path of a portion of the pawl E, substantially as and for the purpose set forth. 9th. In a hoop forming machine, the combination, with the jaws carrying the punching and riveting mechanism, feed rollers Q and R, and a shaft provided with a series of independent cams for actuating said jaws and the feed rollers, of a ratchet wheel S on the journal of one of said rollers, lever T loosely mounted on the journal and provided in one end with a socket, a spring actuated pawl located in the said socket to engage with said ratchet wheel, lever T^2 pivoted between its ends, one end being constructed to engage with one of the said cams, and having the other end connected with the lever T, and a spring t^1, for maintaining the free end of the lever T^2, in engagement with the actuating cam, substantially as set forth. 10th. In a hoop forming machine, the combination, with the jaws carrying the punching and riveting mechanism, of wire feeding rollers located in one of said jaws, adjustable bearings for one of said rollers, and set screws for adjusting said bearings to vary the distance between said rollers, substantially as set forth. 11th. In a hoop forming machine, the combination of the jaws M and N carrying the punching mechanism, the jaw N having receptacle 16 projected forwardly therefrom and communicating with the opening through which the cuttings escape, to receive the said cuttings and the lubricant, and a lubricator to automatically supply oil to the punching mechanism, substantially as described.

No. 48,659. Stave Jointing Machine.

(*Machine à joindre les douves.*)

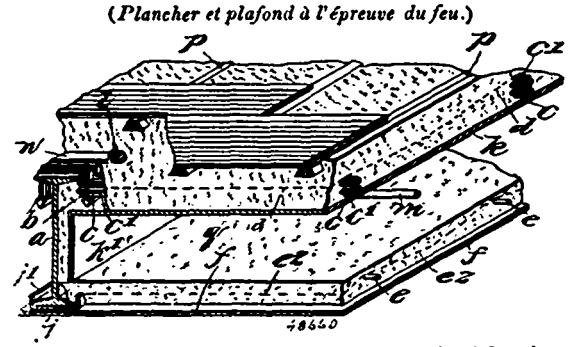


The Pleukharp Barrel Machine Company, assignee of James Pleukharp and William K. Liggett, all of Columbus, Ohio, U.S.A., 11th April, 1895; 6 years.

Claim.—1st. In a stave jointing machine the combination of complementary endless chain formers, each former of the lower chain having a continuous convex outline, and having a projection j, the links composing the upper chain formers being connected by pins which have their ends projected beyond the sides of the links, rollers mounted on the projecting ends of the said pins, and beds to support the opposing portions of the chain formers against the tension of the blanks, the upper bed having portions to embrace the sides of the upper chain former and receive the stress of the said rollers, substantially as described. 2nd. In a stave jointing machine the combination of endless formers, and jointing cutters, of a bed j^1, located between the side bars of the links comprising the lower former, and a bed comprising side bars P, to embrace the upper former, substantially as described. 3rd. In a stave jointing machine the combination with the jointing cutters, of endless chain formers to shape the stave blanks and carry them between the jointing cutters, a frame carrying one of the formers, standards for supporting the said frame and provided with stops to limit the movement of the said frame in one direction, springs to hold the frame yieldingly against the said stops, and nuts for adjusting the tension of the said springs, substantially as set forth.

No. 48,660. Fireproof Floor and Ceiling.

(*Plancher et plafond à l'épreuve du feu.*)



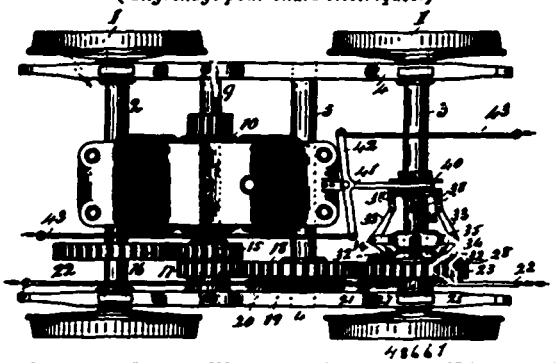
Charles A. Balph and Elisha P. S. Wright, both of Pittsburgh, Pennsylvania, U.S.A., 13th April, 1895; 6 years.

Claim. 1st. In a floor or ceiling, the combination with the beams, of metal bars connecting said beams, an open-work covering extending over said bars, and concrete completely embedding said bars and open work covering, substantially as and for the purposes set forth. 2nd. In a floor or ceiling, the combination with the beams, of metal bars connecting said beams, said bars being supported by hangers on said beams, an open-work covering extending over said bars, and concrete completely embedding said bars and open-work covering, substantially as and for the purposes set forth. 3rd. In a floor or ceiling, the combination with the beams, of hangers straddling said beams, metal bars supported thereby, an open-work covering extending over said bars and concrete completely embedding said bars and open-work covering, substantially as and for the purposes set forth. 4th. In a floor or ceiling, the combination with the beams, of metal bars connecting said beams, said bars being supported on their edges, an open-work covering extending over said bars, and concrete completely embedding said bars and open-work covering, substantially as and for the purposes set forth. 5th. In a floor or ceiling, the combination with the beams, of bars having longitudinal ribs formed thereon connecting said beams, said bars being supported on their edges, an open-work covering extending over said bars, and concrete embedding said bars and open-work covering, substantially as and for the purposes set forth. 6th. In the floor or ceiling construction, the combination with the beams, of a centering suspended therefrom said centering having side pieces, substantially as and for the purposes set forth. 7th. The combination with the beams, of bars

connecting the upper portions of said beams, an open-work covering extending over said bars, concrete embedding said bars and open-work covering, bars connecting the lower portions of said beams, an open-work covering extending over said bars, and concrete embedding said bars and open-work, substantially as and for the purposes set forth. 8th. The combination with the main supporting beams, of solid metal supporting bars of length corresponding substantially to the space between the beams and extending transversely of and connected to the beams, said bars being supported on their edges, and a filling of concrete completely surrounding said bars and supported thereby, substantially as and for the purposes set forth. 9th. The combination with the main supporting beams, of solid metal supporting bars of length corresponding substantially to the space between the beams and extending transversely of and connected to the beams, said bars being supported on their edges and having longitudinal ribs on their side faces, and a filling of concrete completely surrounding said bars supported thereby, substantially as and for the purposes set forth.

No. 48,661. Gearing for Electric Cars.

(*Engrenage pour chars électriques.*)



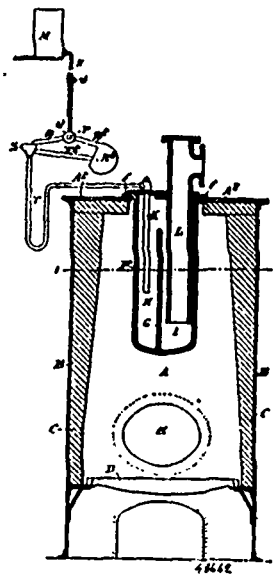
John Cummings Henry, Westfield, New Jersey, U.S.A., 13th April, 1895; 6 years.

Claim.—1st. The combination of car wheels and axles, a motor having variable connections with one axle, and means, adapted to be manually operated, connected with the other axle for varying the positiveness of connection with the first axle. 2nd. The combination of a pair of axles, a motor, fast and loose connection between the shaft of said motor and one of said axles, means for varying said fast and loose connections, secondary transmitting mechanism driven by the first, and means for connecting such secondary transmitting mechanism to the other axle. 3rd. The combination of a pair of axles, a differential gear having fast and loose connection with one axle, mechanism for arresting one element of said gear, secondary transmitting mechanism connected with said element, and means of connecting said secondary transmitting mechanism to the other car axle. 4th. The combination of a pair of axles, a motor, differential gear having fast and loose connection with one axle, secondary transmitting mechanism connected to said differential gear, and a clutch for connecting said secondary transmitting mechanism to the other axle. 5th. The combination of a pair of axles, a motor, differential transmitting mechanism having fast and loose connection with the shaft of said motor and one axle, means for controlling said fast and loose connections direct, secondary transmitting mechanism, means for connecting said secondary transmitting mechanism to an axle, and the staff or lever connected both to the means of direct control of the differential transmitting mechanism, and to the means of connecting the secondary transmitting mechanism to the other axle, whereby a movement of said staff or lever in one or the other direction will couple the motor-shaft to one or both axles. 6th. The combination of a pair of axles, a motor, differential gear connected to one axle, and comprising an internally geared cog-wheel 17, and driving pinions 11, 12, an idle cog-wheel 18, in gear with said wheel 17, a brake-wheel 19, connected to said cog-wheel 18, and means of breaking said wheel 19. 7th. The combination of a pair of axles, a motor having shaft 9, differential driving gear 11, 12, 17 connected to one axle, idle cog-wheel 18, brake and brake-wheel 20, 19, cog-wheel 23 on the other axle, and a clutch for connecting cog-wheel 23 to said axle.

No. 48,662. Apparatus for the Manufacture of Gas from Liquid Hydrocarbons. (*Appareil pour la fabrication de gaz de liquide hydrocarboné.*)

Charles William Pinkney, and Tangyes, Soho, both of England, 13th April, 1895; 6 years.

Claim.—1st. The combination and arrangement of parts constituting apparatus for the manufacture of gas from liquid hydrocarbons, substantially as hereinbefore described, and illustrated by the accompanying drawing. 2nd. In apparatus for manufacturing gas from liquid hydrocarbons a retort divided in the interior by a partition or partitions into two or more compartments through which the gas is caused to pass before leaving the retort, substantially as hereinbefore described. 3rd. In apparatus for the manufacture of gas from liquid hydrocarbons, a retort divided in the interior by means of a partition or partitions into two or more compartments through which the gas is caused to pass in a circuitous direction the hydrocarbon to be gasified being fed into the first compartment of the



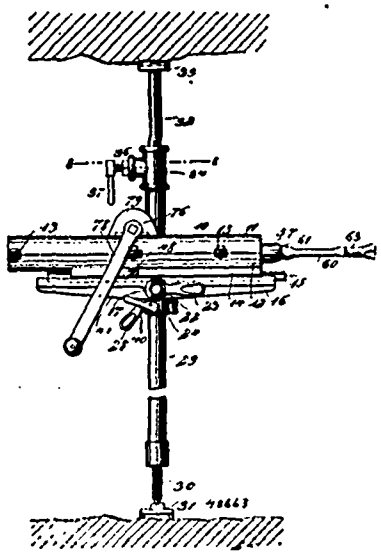
series and the outlet pipe for the gas being inserted in the last compartment of the series, substantially as and for the purpose hereinbefore described. 4th. In connection with apparatus for the manufacture of gas from liquid hydrocarbons, the combination of parts constituting the safety device for feeding the hydrocarbon to the retort and for cutting off the supply should the passages from the retort be stopped or clogged, substantially as hereinbefore described. 5th. In apparatus for the manufacture of gas from liquid hydrocarbons, the combination with a reservoir to contain the hydrocarbons to be gasified, of a discharge pipe or passage from the reservoir provided with a plug having a passage therethrough for hydrocarbon, a double armed lever fitted to turn on the plug, one arm of the said lever being hollow and communicating with the passage in the plug and through which arm the hydrocarbon is conducted to a feed pipe leading to the interior of the retort, and the other arm of the said lever being provided with a chamber or receptacle into which overflow hydrocarbon from the feed pipe passes and causes the lever to turn on the plug so as to cut off the supply of hydrocarbon to the retort, substantially as herembefore described. 6th. The combination, with the safety and cut off device of an electrical or mechanical audible signalling device brought into operation by the double armed lever when moved or being moved into position to cut off the supply of hydrocarbon to the retort, substantially as hereinbefore described.

No. 48,663. Rock Drill. (*Barre à mine.*)

George Belle Jones, Henry Bramblet Gillespie, and Byron Erastus Shear, assignees of Harvey Pierce Jones and George Belle Jones, all of Denver, Colorado, U.S.A., 13th April, 1895; 6 years.

Claim.—1st. A rock drill, comprising a supporting standard, a bed adjustably secured to the standard, a longitudinally movable track on the bed, a fastening device to hold the track to the bed, a drill frame arranged to slide on the track, a ratchet connection between the drill frame and the track, and drill mechanism carried by the frame, substantially as described. 2nd. The combination, of the bed having ratchet teeth thereon, the track supported on the bed and provided with ratchet teeth, the drill frame carrying drilling mechanism, the pawls in the drill frame to engage the teeth of the track, and the spring-pressed slides on the sides of the drill frame having arms to engage the teeth of the bed, substantially as described. 3rd. In a rock drill, in combination, a supporting bed having ratchet teeth 49 and having a track-way, a drill frame longitudinally movable thereon, and spring-pressed slides 51 on the drill frame having arms 50 adapted to move into engagement with such teeth, substantially as shown and for the purposes described. 4th. The combination, with the bed having at opposite sides the ratchet portions, the teeth of which incline in reverse directions, the track supported on the bed and provided with ratchet teeth, the drill frame carrying drilling mechanism, the pawls in the drill frame to engage the teeth of the rack, and swinging slides secured on the opposite sides of the drill frame, spring-pressed in opposite directions, said slides having arms adapted to be moved into engagement with the teeth on the bed, all arranged substantially as shown and

for the purposes described. 5th. The combination, with the bed frame, the drill frame comprising a casing longitudinally movable on the bed and the drill holder carried thereby having at a point within the casing a ratchet-wheel, of the spring-pressed hammer held within the casing having a ratchet portion, the revoluble mutilated gear-wheel held to engage such rack portion, said gear

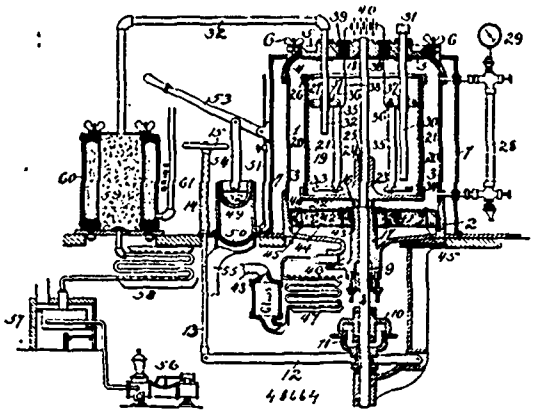


having a cam at one side, and an oscillating lever pivoted in the casing having one end held to engage the ratchet-wheel and the other in engagement with the cam on the gear-wheel, all substantially as shown and described. 6th. The combination, with the drill frame casing, the revoluble drill holder therein having a ratchet wheel, and the spring-pressed hammer having a rack portion, of the mutilated gear journalled within the casing, adapted to engage the said rack portion, said gear having cams at one side, the pivoted lever 8^2 held in the casing, having one end held in engagement with the cam, and a spring actuated pawl held in the opposite end of the lever and adapted to engage the ratchet wheel, all substantially as shown and described. 7th. A rock drill, comprising a supporting standard, a bed clamped to the standard, a track longitudinally adjustable on the bed, a drill frame carried by the track, drilling mechanism mounted in the drill frame, and ratchet devices to feed the drill frame forward by the recoil of the drill, substantially as described. 8th. In a rock drill, the combination with the drill frame and its support, of the reciprocating drill in the frame, a cushion for the drill and hammer, and mechanism for feeding the frame forward by the recoil of the drill, substantially as described. 9th. The combination, with the drill frame and its support, of the drill holder in the frame, the drill mounted in the holder, the reciprocating hammer to strike the drill, the arms on the hammer, and cushions arranged in the paths of the arms, substantially as described. 10th. The combination, with the drill frame, the revoluble drill holder therein, the ratchet wheel on the drill holder and the spring pressed reciprocating hammer, of the mutilated gear wheel to move the hammer against its spring, the cams on the side of the gear wheel, the tilting lever mounted in the frame and actuated by the cams, and a pawl carried by the lever to engage the ratchet wheel of the drill holder, substantially as described. 11th. In a rock drill, the combination with the revoluble drill holder, of the drill having a notch in its shank, the key extending through the drill holder and the notch in the drill shank, and the spring pin to hold the key, substantially as described.

No. 48,664. Method of and Apparatus for Purifying Liquids. (*Méthode et appareil pour purifier les liquides*)

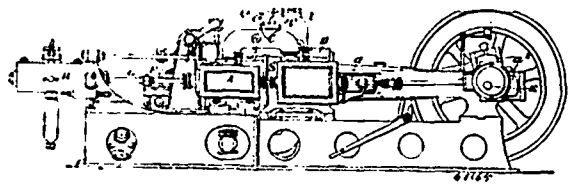
Louis Wagner and John Marr, assignees of Henry Campbell, all of Baltimore, Maryland, U.S.A., 13th April, 1895; 6 years.

Claim.—1st. The herein described process for the purification of liquids which consists in subjecting the liquid to the simultaneous actions of centrifugal and electrical forces, and filtering the liquid by the aid of the said centrifugal force, substantially as set forth. 2nd. The herein described process for the purification of beer or other beverages, consisting in filtering the same by centrifugal force, while under the action of electrolytic force and under air or gas pressure, substantially as set forth. 3rd. In an apparatus for the purification of liquids, the combination of a rotary perforated or straining vessel adapted to hold the liquid, electrodes therein and means for rotating the vessel, substantially as set forth. 4th. The combination of a rotary vessel adapted to hold the liquid, electrodes therein means for filtering the liquid, and mechanism for rotating the vessel, substantially as set forth. 5th. The combination of a casing, a rotary vessel therein, electrodes extending through said casing into the vessel, mechanism for rotating said vessel, and filtering or straining devices substantially as set forth. 6th. The combination of a casing, a rotary vessel therein having straining or filter



ing means, electrodes in the vessel, a strainer or filter at the bottom of the casing, and mechanism for rotating the vessel, substantially as set forth. 7th. The combination of an air tight casing, electrodes and a rotary filtering or straining vessel therein, means for supplying air or gas pressure to the surface of the liquid in the casing or vessel, and mechanism for rotating the latter, substantially as set forth. 8th. As a means for washing filtering material, the combination of the vessel 49 having the water supply and the perforated or equivalent bottom 50, and the plunger 52, substantially as set forth.

No. 48,665. Apparatus for Producing Cold. (*Appareil réfrigératif.*)



I. and E. Hall, assignees of Everard Hesketh and Alexander Marcet, all of London, England, 13th April, 1895; 6 years.

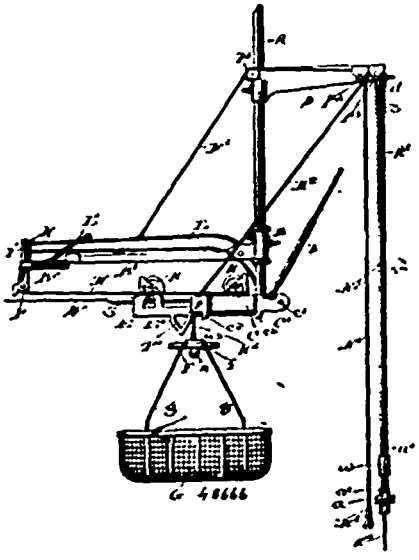
Claim. In machinery or apparatus for producing cold by the employment of carbonic anhydride or the like, cylinders arranged for triple expansion and having passages for the steam provided with branches to which connections can be made so that one or other or more than one of the said cylinders can be thrown out of work, substantially as hereinbefore described and illustrated.

No. 48,666. Package Carrier. (*Chien de magasin.*)

Emanuel Clarence Gipe, Freeport, Illinois, U.S.A., 13th April, 1895; 6 years.

Claim. 1st. In a package-carrying system, the combination with a suitably supported standard, a track-wire fastened thereto, and a carriage moving thereon, of a movable catch mounted on the carriage, a plate adapted to engage said catch and a basket supported by the plate, suitably supported pulleys, cords passing over said pulleys and adapted to receive and engage said plate when the carriage reaches a given position in its movement along the wire, and means for detaching the plate from the carriage after such engagement is completed, whereby the weight of the plate and basket may be transferred from the carriage to the cords, substantially as shown and described. 2nd. The combination with the suitably supported track wire W, carriage E, moving thereon, and provided with a movable catch, the plate F, adapted to engage said catch and formed with the notches F^2, F^2, of the cords K^2, K^2, passing over suitably arranged pulleys and having ends provided with the balls k, k, and located in the line of movement of the notches F^2, F^2, and means substantially as shown and described for operating the catch on the carriage and disconnecting the plate therefrom when the notches in the plate have come into engagement with the cords, whereby the weight of the plate may be transferred from the carriage to the balls k, k, and cords K^2, K^2. 3rd. In a package-carrying system, the combination with a suitably supported track-wire, and a carriage adapted to move thereon, of a plate detachably connected with the carriage and supporting a basket, cords passing over suitable pulleys and having ends provided with balls and hanging in the path of motion of the plate and adapted to enter notches therein, a weight attached to the ends of said cords opposite said balls and

counterbalancing the same, a stop limiting the downward movement of the weight and holding said balls normally in a plane below the level of the plate, and means for disconnecting the plate from the carriage after it comes into engagement with the ends of said cords, whereby, when the plate is disengaged from the carriage, it may drop upon said balls and bring its weight upon said cords. 4th. The



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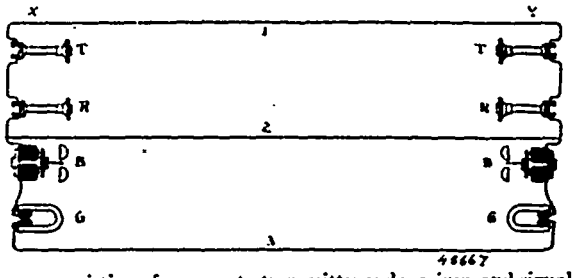
combination with the track-wire W, and carriage E, moving thereon, of the plate F, detachably fastened to the lower face of the carriage and supporting a suitable basket, the pulleys P^3, P^4, the cords K^2, K^2, passing over said pulleys and provided at one end with the ball k, k, and at the opposite end with the weight, w, adapted to overbalance the weight of the balls, the suitably supported block a, adapted to limit the upward and downward movement of the weight and thereby to limit the movement of the balls k, k, and means for detaching the plate from the carriage, the ends of the cords K^2, K^2, on which the balls are placed being in the path of movement of notches formed in the plate F, whereby, as the carriage moves along the track, said notches may embrace said cords, and the plate may rest upon said balls when detached from the carriage. 5th. The combination with the standard A, and track-wire W, of the castings C, D, fastened to the standard, the pulleys P^3, P^4, supported by said castings, the cords K^2, K^2, passing over said pulleys and provided at one end with balls k, k, and at the opposite end with the weight w, and yoke k^1, the vertical rod A^1, and the block a, attached to the lower end of said rod, and forming a stop to limit the downward movement of the weight w, and the upward movement of the yoke k^1, the carriage adapted to move upon the track-wire and provided with a dependent catch, the plate F, supporting a basket and adapted to engage the catch on the carriage, and means, substantially as shown and described, for disengaging the catch from the plate after the notches in the plate embrace the cords K^2, K^2, the yoke k^1, when lying beneath the block a, being adapted to hold the plate F, in a position slightly below the bottom of the carriage, substantially as shown and described. 6th. The combination with the standard A, and track-wire W, of the carriage moving on the wire, the rod E^2, mounted in the carriage and sliding longitudinally therein, the dependent catch E^3, mounted rigidly on the rod and moving therewith, a spring adapted to press the catch and rod toward the standard and the detachable plate F, adapted to engage the catch and be supported by it in proximity to the carriage, the movement of the rod E^2, against the force of said spring being adapted to release the plate F, and disengage it wholly from the carriage, substantially as shown and described. 7th. The combination with the carriage E, having the dependent guide E^1, of the movable dependent catch E^3, and the plate F, formed with a slot F^1, adapted to embrace the guide and catch and to be engaged and held in place by the catch when in its normal position, substantially as shown and described. 8th. The combination with the standard A, track-wire W, castings C, D, and rod A^1, of the pulleys P^3, P^4, mounted in the castings, the cords K^2, K^2 passing over said pulleys, the tubes w^1, w^1, fastened on the cords and having heads w^2, w^2, at their lower ends, the weight w, sliding on the rod A^1, and tubes w^1, w^1, and the block a, mounted on the rod A^1, and limiting the downward movement of the weight, substantially as shown and described.

No. 48,667. Telephone System. (*Système de téléphone.*)

James F. Gilliland, Adrian, Michigan, U.S.A., 16th April, 1895; 6 years.

Claim.—1st. A telephone set comprising a telephone transmitter and receiver and signalling apparatus, in combination with a 3-wire circuit, the branches of which are permanently connected together, one of such branches including the telephone transmitter and receiver, another branch including the signalling apparatus, and the third branch being without either telephone or signalling apparatus, substantially as set forth. 2nd. A telephone set comprising tele-



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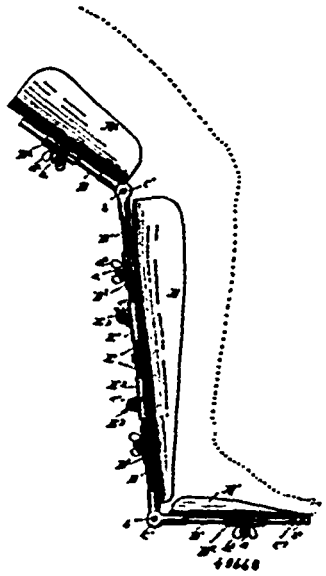
phones consisting of a magneto transmitter and receiver, and signalling apparatus consisting of a magneto electric generator and polarized call-bell, in combination with a 3-wire circuit, one branch of which includes the telephones, another branch the signalling apparatus, and the third branch being without either telephone or signalling apparatus, all said branches being permanently connected together, substantially as set forth.

No. 48,668. Surgical Splint. (*Eclisse de chirurgie.*)



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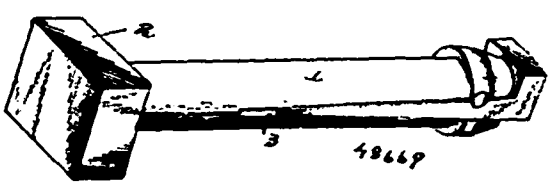
Reinhold Hoppe, San Francisco, California, U.S.A., 15th April, 1895; 6 years.

Claim.—1st. In a surgical splint, the combination with the hinged supporting rods, a locking device adapted to be moved into locked engagement with the hinged joint of the supporting rods, whereby the rods may be readily locked at any angle, or unlocked at will, and the splint or supporting plates secured to the supporting rods, said plates having a slidable and rotatable movement upon the said rods. 2nd. In a surgical splint, the combination with the hinged supporting rods, a locking device for said rods, which holds the rods locked at any desired angle, the splint or supporting plates, spring clamps fitted upon the supporting rods, and the set screws for removably securing the plates to the spring clamps and locking the clamps to the said rods. 3rd. In a surgical splint, the combination with the supporting rods hinged together, one of said rods being tubular and terminating in ears, the other terminating in a ratchet-wheel which fits between the ears of the tubular rod, a longitudinally movable lock rod fitted within the tubular rod, which moves in or out of engagement with the ratchet-wheel so as to lock or unlock the supporting rods, a screw rod movably connected to the lock rod for forcing the said rod in or out of engagement with the ratchet-wheel, and the splint or supporting plates connected to the supporting rods so as to have a longitudinal or rotatable movement upon the supporting rods. 4th. A surgical splint consisting of the hinged supporting rods, adapted to fit over an inside or outside joint, lock mechanism carried by the rods for holding same locked at any angle, and supporting plates so connected to the connecting rods as to permit any desired pronation to be obtained. 5th. In a surgical splint, the combination with the hinged supporting rods, having a lock mechanism carried thereby, the supporting plates connected thereto so as to have a slidable and rotatable movement, a spring clamp for securing the plates to the supporting rods, said clamps having a longitudinal slot cut therein, and the set screws for

securing the plates to the clamps and clamps to the rods. 6th. In a surgical splint, the combination with the hinged supporting rods, a lock mechanism carried by said rods in order that the same may be locked at any desired angle, spring clamps secured upon the rods, supporting plates removably connected to the clamps, a device connected to the clamps for forcing the supporting rods apart in order to break an ankylose or give movement to a joint, said device consisting of a screw-threaded rod and a tubular rod within which the screw-threaded rod works, a screw nut movably secured to the tubular rod for forcing the screw rod in or out, the outer end of the rods being hinged to an ear swivelled to a plate which is connected to the clamps. 7th. In a surgical splint for the leg, the combination, with the hinged supporting rods connected to a series of supporting or splint plates, said plates having an independent slidable and rotatable movement, lock mechanism for the hinged rods, whereby they may be held locked at any desired position, and a coupling device for connecting the two inner supporting rods, said device consisting of a right and left handed screw-threaded rod, coupling sleeves within which said screw-threaded rod works, and device for connecting said sleeves to the ends of the inner supporting rods. 8th. In a surgical splint for the leg, the combination with a series of supporting plates, the hinged supporting rods to which the plates are connected so as to have slidable and rotatable movement independent of each other, the hinged rods being capable of being flexed for an inside or outside joint, a lock device for securing the supporting rods at any desired angle, and an adjustable coupling device for connecting the inner hinged rods together. 9th. In a surgical splint, the combination, with the hinged supporting rods, a locking device carried thereby for securing the rods at any desired angle, the supporting plates removably secured to the supporting rods, and a device for forcing the supporting rods apart in order to break an ankylose, said device being fastened to the rods by swivel connections, whereby the rods may be forced apart with the supporting plates at any position of pronation.

No. 48,669. Bolt. (*Boulon.*)



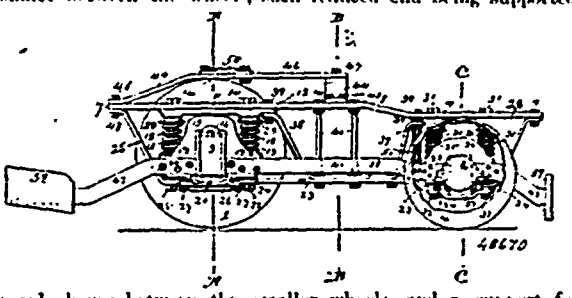
Jacob Dinkelacker, jr., Milnesville, Pennsylvania, U.S.A., 16th April, 1895; 6 years.

Claim.—1st. The combination, with a slotted or split bolt having an enlarged shouldered terminal, of a tapered spreading-key adapted to fit in the slot or kerf of the bolt and provided at its outer end with a lateral ear or projection to limit the insertion of the key and facilitate the withdrawal thereof, and a removable pin for locking the key, temporarily, in said slot or kerf, substantially as specified. 2nd. The combination of a slotted or split bolt having an enlarged shouldered terminal, a tapered spreading-key adapted to fit in the slot or kerf of the bolt, and a bent locking-pin engaging a transverse seat in contiguous faces of the key and bolt, substantially as specified. 3rd. The combination of a slotted or split bolt having an enlarged shouldered terminal, a tapered spreading-key adapted to fit in the slot or kerf of the bolt, contiguous faces of the key and bolt being provided with registering transverse grooves which vary, inversely, in depth from their centres toward their extremities, and a locking-pin to fit in said registering grooves and bent to conform to the shape thereof, substantially as specified. 4th. The combination of a slotted or split bolt, tapered exteriorly toward one end, and terminating in an enlargement which is approximately equal in diameter, when the bolt is contracted, with the body-portion of the bolt, said enlargement terminating at its inner side in an abrupt shoulder and being tapered or bevelled at its outer side, a tapered spreading-key adapted to fit in the slot or kerf in the bolt to expand the slotted or split portion of the latter, and means to lock the key in engagement with the bolt, substantially as specified.

No. 48,670. Motor Truck. (*Châssis de moteur.*)

John A. Brill, Philadelphia, Pennsylvania, U.S.A., 16th April, 1895; 6 years.

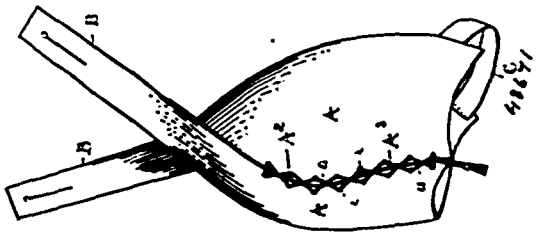
Claim.—1st. In a motor truck, the combination of a truck frame, axles and wheels of different diameters, a frame supported on the running gear independently of the truck frame, the said frames being at one end of less diameter between their side members than the distance between the wheels, such reduced ends being supported on the running gear between the smaller wheels, both frames following substantially the same outline, and a support for a motor secured to the reduced end of the independent frame between the parallel vertical planes which are common tangents to the smaller wheels, substantially as described. 2nd. In a motor truck, the combination, with the wheels, axles, axle-boxes, axle-box saddles and a truck frame, of a frame resiliently supported from the axle-boxes and forming an axle-box frame independent of the truck frame, a motor and a support for one end of the motor secured to the independent frame within the parallel vertical planes which are common tangents to one set of wheels, substantially as described. 3rd. In a motor truck, the combination of a truck frame, axles-boxes, and carrying wheels of different diameters, a frame supported on the axle-boxes independently of the truck frame, the independent frame being at one end of less diameter between its side members than the distance between the wheels, such reduced end being supported



on axle boxes between the smaller wheels, and a support for the motor secured to the reduced end of the independent frame between the parallel vertical planes which are common tangents to the smaller wheels, substantially as described. 4th. A truck having a frame proper, large and small wheels, axle boxes on the axles without the large and within the small wheels, and an additional frame supported independently of the truck frame, both frames being supported on the running gear without the large and within the small wheels, substantially as described. 5th. In a motor truck, the combination with driving and trailing wheels, of two frames forming the truck body, having a resilient connection between them, whereby their vertical movements are independent of each other, each of said frames having supports on each axle fore and aft of that axle, one of said frames supporting the car body, and the other carrying a motor support, which lies between the parallel vertical planes which are common tangents to one set of the wheels, substantially as described. 6th. In a motor truck, the combination, with driving and trailing wheels, of two frames forming the truck body, having a resilient connection between them, whereby their vertical movements are independent of each other, said frames following substantially the same outline, one of said frames supporting the car body, and the other carrying a motor support which lies between the parallel vertical planes which are common tangents to one set of the wheels, substantially as described. 7th. A pivotal truck having wheels, a frame comprising an element for sustaining the pivotal devices, a supplemental element below the first-named between which two the car springs extend, the pivotal devices permitting the truck to have a greater arc of movement at one end than at the other, the frame being so conformed that a portion of the end of the same, including both elements, at which there is the larger arc of movement, will have a lateral vibration within two outer limits more restricted than have the wheels at that end, substantially as described. 8th. A pivotal truck having a frame comprising a pivot-plate element and a supplemental element below the first-named, between which two the car springs extend, both elements being wider than the distance between the wheels at one portion and narrower than that distance at another portion, both frames extending between the forward and rear axles with the car springs about the axle boxes at both ends, the pivot plate being within the widest portion of the frame, substantially as described. 9th. In a car truck, the combination of a continuous upper chord, having side members inclined inwardly from front to rear a lower chord, of similar construction an arched brace 38 depending from the upper chord, and uniting it with the lower chord, and posts 40 uniting the upper chord with the arched brace, substantially as described. 10th. In a car truck, the combination of a continuous upper chord, having side members inwardly from front to rear a lower chord, of similar construction terminal and braces uniting the upper and lower chords, an intermediate arched brace uniting the same, and vertical struts or posts uniting the same, within the arched braces, substantially as described. 11th. A motor truck having axles boxes without the wheels at one end and within the wheels at the other, a continuous upper chord, axle box saddles, and lower braces for them, ears on the saddles and springs between the ears and upper chord, one end of the upper chord being narrower than the other, the narrow end, and its springs and bracing being supported on the inside axle box saddles entirely between the wheels, substantially as described. 12th. A motor truck having wheels of different diameters, the larger wheels being at one end, and the smaller at the opposing end, axles boxes without the larger wheels, and within the smaller wheels, and a truck frame comprising a continuous upper chord and lower bracing therefor, axle box saddles, and springs between the axle box saddles and upper chord, one end of the upper chord being narrower than the other, the narrow end and its springs and bracing being supported on the inside axle box saddles entirely within the wheels, substantially as described. 13th. In a truck, the combination, with a frame comprising a continuous upper member or chord and bracing secured to and continuous with the sides of the upper chord and depending therefrom, the said bracing following the contour of the said upper chord, one end of said frame

being reduced in width to clear the wheels, of running gear and springs between said upper chord and bracing, substantially as described. 14th. In a car truck, the combination with the upper chord, of the arched and transverse bolster beam 44 resting upon the upper chord, and the semi-arched beams 46, 49 secured at one end to the beam 44, and to the said chord at the other, and the centre bearing 50 on the beam 46, substantially as described. 15th. In a motor truck, having driving and trailing wheels, the combination, with the running gear, of an axle box frame uniting the axle boxes and having a support for the motor, and an upper frame, having a motion independent of the motor supporting frame, and receiving the weight of the car body, and transmitting it directly to the driving wheels at points without those wheels, and to the trailing wheels at points within those wheels, substantially as described. 16th. The combination, with a car, of a truck having large wheels at one end and smaller wheels at the other, the truck and car being pivotally united so as to secure a greater radial movement between the car and truck at one end than at the other, the sides of the car having secured thereto steps projecting outwardly at a height below the top of the larger wheels, and above the top of the smaller wheels, substantially as described.

No. 48,671. Garment Protector. (*Protecteur de vêtement.*)



Annable C. Bull, Peoria, Illinois, U.S.A., 16th April, 1895; 6 years.

Claim. 1st. A garment protector consisting of two sections suitably joined together, one edge of each section being joined to the other section and elongated at their upper extremities for attachment and provided with an elastic band connecting the two outside edges, all substantially as described and shown. 2nd. In a garment protector, two sections provided with matching edges, cut a portion of the way straight and the balance of the way curved, the two edges being suitably joined together and with the upper ends thereof, elongated for attachment above, and provided with an elastic band for connecting their outer edges, all substantially as described and shown. 3rd. In a garment protector, the combination of the sections A, A, having the elongated extremities B, B, the two parts laced together and elongated parts crossing, all substantially as described and shown. 4th. In a garment protector, the combination of the two sections as A, A, having matching edges cut a portion of the way straight as A^2, and a portion of the way curved as A^3, each section provided with a line of perforations as *c*, the two sections being laced together by cord *a*, the upper portion of the sections being elongated as at B, B and crossed, all substantially as described and shown.

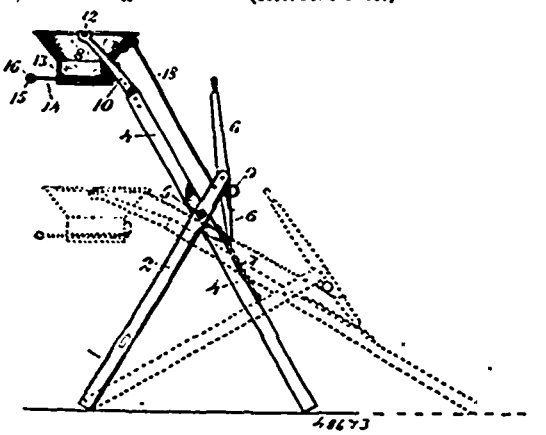
No. 48,672. Method of Enamelling Metal Ware.

(*Méthode d'émailler le métal.*)

Hubert Claus, Thale-am-Harz, Germany, 16th April, 1895; 6 years.

Claim—1. As a new article of manufacture, a steel or homogeneous iron article having one coat of mottled enamel. 2. As a new article of manufacture, a steel or homogeneous iron article having one enamel coat having therein a preponderance of alkaline constituents. 3. As a new article of manufacture, a steel or homogeneous iron article having a single enamel coat of an intensely alkaline nature. 4. As a new article of manufacture, a metallic article having a coat of enamel of an intensely alkaline nature permeated by metallic oxides, substantially as described. 5. As a new article of manufacture, a steel or homogeneous iron article having a single coat of mottled enamel on a partly oxydized metallic surface, substantially as described. 6. As a new article of manufacture, a metallic article having a mottled coat of alkline enamel and within said enamel metallic oxides extending from the outer surface of the enamel inwardly, substantially as described. 7. As a new article of manufacture, a steel or homogeneous iron article, having a mottled coat on a partly oxydized metallic surface and having metallic oxides extending from the outer surface of the enamel inwardly, substantially as described. 8. An enamel for surfaces having therein a preponderance of alkaline constituents together with metallic oxides, substantially as described. 9. The process of enameling which consists in coating an article with an alkaline enamel and in applying thereto while still moist, a metallic salt or salts, substantially as described. 10. The process of enameling which consists in coating an article with an alkaline enamel, and in applying thereto while still moist, sulphate of iron and sulphate of copper, substantially as described. 11. The process of enamelling which consists in coating an article with an alkaline enamel, and in applying thereto, while still moist, sulphate of iron, substantially as described. 12. The process of enamelling which consists in coating an article with an alkaline enamel and in applying thereto, while still moist, sulphate of copper, substantially as described. 13. The process of enamelling which consists in coating an article with an alkaline enamel and in applying thereto, while still moist, sulphate of iron, sulphate of copper and super manganate of kali, substantially as described.

No. 48,673. Bag Holder. (*Accroche-sacs.*)



John Huber Thamer, Roseville, Ontario, Canada, 16th April, 1895; 6 years.

Claim.—1st. In an adjustable bag-holder, the tripod composed of a pair of legs secured together as specified, and having the third leg jointed between the upper ends of said pair of legs to swing to and from the same, substantially as shown and described. 2nd. In an adjustable bag-holder, the tripod composed of the pair of legs and a third leg jointed together at their upper ends as specified, a lever jointed between the ends of said pair of legs and above said third leg, a spring secured to said pair of legs to actuate the lever, and means as specified on said third leg to engage the lower end of said lever, substantially as shown and described. 3rd. In an adjustable bag holder, the tripod having its three legs jointed together as specified, a lever carried by the pair of legs in the tripod and engaging means on the third leg to secure the legs fixed, a spring to actuate the lever to engage said means on the third leg as specified, a bifurcated support on the extended upper end of said third leg and adapted to support a hopper thereon, and the hopper carried by said third leg and having a means described to secure the mouth of a bag against the lower portion of the hopper, substantially as and for the purpose set forth. 4th. In an adjustable bag-holder, the tripod having the legs jointed together as specified, a lever carried by said legs and providing means whereby the legs are held at different relative positions, a spring to actuate said lever to engage means of security on the third leg of the tripod, a bifurcated support on the upper and extended end of the third leg of the tripod, a hopper carried by said bifurcated support, a groove in the lower portion of the hopper, and the semi-circular clamps on said hopper to secure the mouth of the bag into said groove, substantially as shown and described. 5th. In an adjustable bag-holder, a hopper having a conical upper portion and a cylindrical lower portion and having a groove in said lower portion and two semi-circular shaped clamps jointed on said lower portion to secure a bag in said groove, substantially as shown and described. 6th. In an adjustable bag-holder, the combination of a tripod composed of three legs jointed as specified, and having the third leg extended upward above the other two legs, a bifurcated support on said extended end of the third leg of the tripod, a hopper carried by said support, and a rod connecting the said hopper to the upper ends of the other two legs of said tripod, so as to maintain said hopper to stand vertically irrespective of the relative positions of the legs of the tripod to one another, substantially as and for the purpose set forth. 7th. In an adjustable bag-holder, the combination of a tripod jointed as specified, and having the upper ends of its legs extended above the joint, a hand lever carried between the upper ends of the pair of legs as described, a spring on said pair of legs of the tripod and bearing on said hand lever, a bifurcated support on the extended end of the third leg of said tripod, a hopper carried in said bifurcated support, and a rod connecting said hopper to the upper ends of the pair of legs of the tripod, so as to maintain said hopper to stand vertically irrespective of the relative positions of the legs of the tripod to one another, substantially as shown and described.

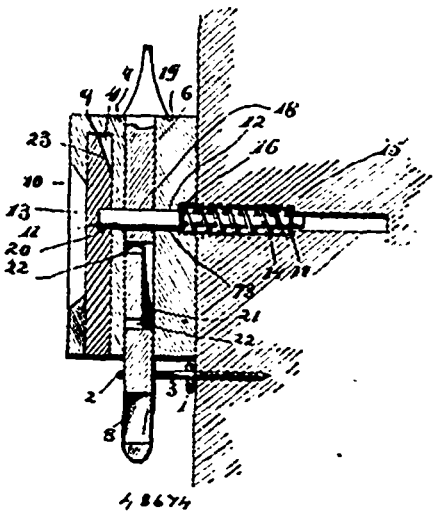
No. 48,674. Car Seal and Lock.

(*Sceau et serrure de chars.*)

William L. Sebring and William K Edgar, both of Colorado Springs, Colorado, U.S.A., 16th April, 1895; 6 years.

Claim.- 1st. In a seal lock, the combination of a casing provided

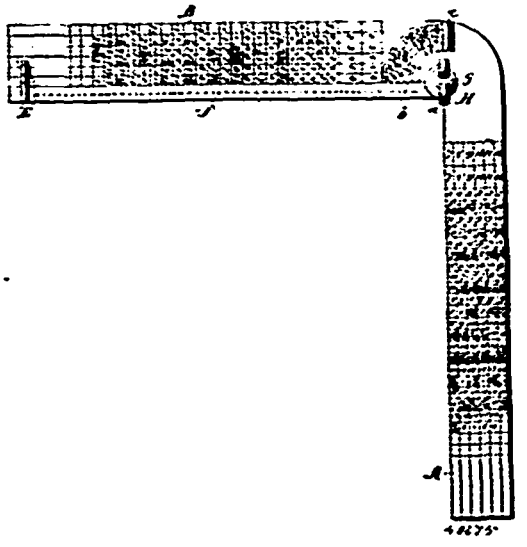
with a longitudinal bolt-guide, a parallel seat, and a transverse perforation intersecting said guide and seat, a bolt mounted to slide in the guide and having a transverse perforation to register with that in the casing, a seal fitting in the seat and provided in its rear side with a socket adapted to register with said transverse perforation,



4,867½

and a spring-actuated locking-pin fitting in the perforation in the casing, extending through the perforation in the bolt and engaging the socket in the seal, whereby the seal is locked in place solely by the pin which secures the bolt, substantially as described. 2nd. In a seal lock the combination of a casing provided with a longitudinal bolt-guide, a parallel seat, and a transverse perforation intersecting said guide and seat, a bolt mounted to slide in the guide and provided with a transverse perforation to register with that in the casing and also with a longitudinal groove terminating in transverse openings which extend through the bolt, a seal fitting in the seat and provided in its rear side with a socket adapted to register with the transverse perforation in the casing, and a spring-actuated locking-pin fitting in the perforation in the casing and adapted to extend through the perforation in the bolt and engage the socket in the seal, and also to engage the longitudinal groove in the bolt to limit the longitudinal movement of the latter, substantially as described.

No. 48,675. Bevel and Square. (*Equerre.*)



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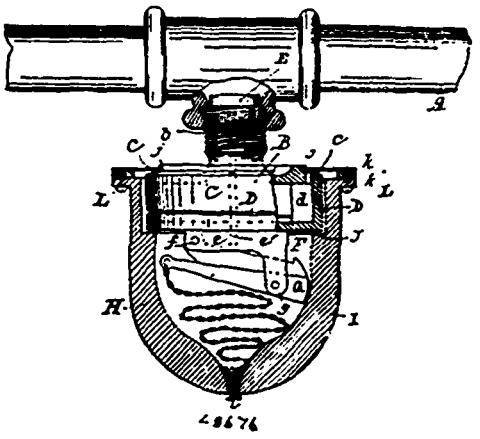
Timothy Fabey and James G. Echenauer, both of Spokane, State of Washington, U.S.A., 17th April, 1895; 6 years.

Claim.—1st. A combined square and bevel composed of two blades, one blade having a marginal edge and a concentric series of semi-circles differently graduated, the other blade having a semi-circular projection, and a beveled edge in the rear of the said projection to co-operate with the aforesaid semi-circular graduations, and a pivot connecting the blades, substantially as described. 2nd. A combined square and bevel composed of two blades, one blade having a marginal edge and a concentric series of semi-circular graduations, the other blade having a semi-circular projection and a beveled edge in the rear of the said projection, a pivot connecting the blades, a keeper at the free end of one of the blades, and a flange or base projected laterally from the marginal edge of the said blade, substantially as described. 3rd. The herein described combined square, bevel and reckoner composed of two blades having a corresponding series of longitudinal and transverse graduations, one blade having at the pivoted end a concentric series of semi-circular graduations, and having a marginal edge portion, the other blade having a semi-circular projection and a rear beveled edge portion, a clamp pivotal connection for securing the blades together, a keeper at the free ends of the blades, and a flange or base projected laterally from one of the blades, substantially as described, for the purpose specified.

No. 48,676. Fire Extinguisher. (*Extincteur d'incendie.*)



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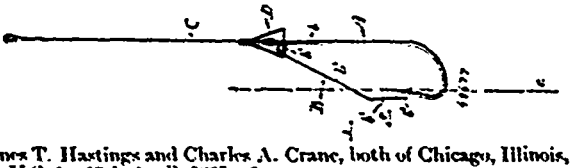
George Thomas McLauthlin, assignee of James Kaylor, both of Boston, Massachusetts, U.S.A., 16th April, 1895; 6 years.

Claim.—1st. In a fire extinguisher the combination with the segmental fusible supports composed of the parts k and k^1, the parts k^1 being screw threaded, of the case I and the distributer as shown and described. 2nd. In a fire extinguisher the distributer B, having the valve E located at its inlet, and provided with an extending stem through said distributer in combination with the case and connecting mechanism to raise said valve and stem as herein set forth. 3rd. *The combination with the valve and the extending stem through the* distributer, of the lever F, provided with a hooked end and pivoted to the distributer, and mechanism connecting it to the case, and said case, for the purpose of stopping the flow of water as herein set forth. 4th. The combination with the distributer having the annular groove j, the segmental fusible connections K, K, K, K, and case I of the valve and connecting mechanism thereto from said case as herein set forth. 5th. In an automatic fire extinguisher the combination with the valve, distributer and mechanism to force open said valve; of the case, and the chain connecting said case to said mechanism, as herein set forth. 6th. In an automatic fire extinguisher, the case and chain held to the distributer by connections which part at an abnormal heat; in combination with the valve operatively connected to said chain as herein set forth. 7th. In an automatic fire extinguisher a supported valve held closed independent of the fusible parts, and means to force same open, consisting of a case adapted to fall, the chain and connecting mechanism; in combination with the fusible supports for holding the case to the distributer as herein set forth. 8th. In an automatic fire extinguisher the combination with a case adapted to fall, and a chain of limited length; of a supported valve provided with mechanism to open same, and connected to said chain as herein set forth.

No. 48,677. Fish-hook. (*Hameçon.*)

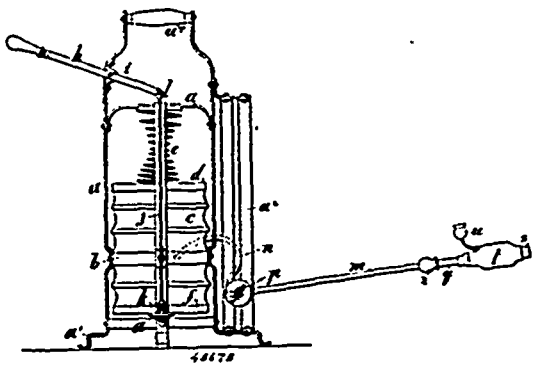


James T. Hastings and Charles A. Crane, both of Chicago, Illinois, U.S.A., 17th April, 1895; 6 years.

Claim.—1st. The combination, with a fish-hook, of a weed-guard consisting of a spring secured to the stem of the hook, said spring extending toward the joint of the hook and crossing in advance of the joint, the path to be travelled thereby, as the hook is drawn through the water, the guard being at all times out of contact with the joint, substantially as set forth. 2nd. The combination, with a fish-hook, of a weed-guard consisting of a spring secured to the stem of the hook, said spring extending toward and beyond the joint of the hook, and crossing in advance of the joint, the path to be travelled thereby as the hook is drawn through the water, the

guard being at all times out of contact with the point, substantially as set forth. 3rd. The combination, with a fish-hook, of a weed-guard consisting of a spring secured to the stem of the hook and extending toward the point thereof said guard being in advance of the point and crossing two intersecting planes which cut the path to be travelled by said point of the hook as it is drawn through the water, the guard being at all times out of contact with the point, substantially as set forth. 4th. The combination, with a fish-hook, of a weed-guard consisting of a spring secured to the stem of the hook, said spring being in advance of the point and extending toward the point thereof and crossing the path to be travelled by said point as the hook is drawn through the water, said spring being at all times out of contact with the point and having a coiled portion, substantially as set forth

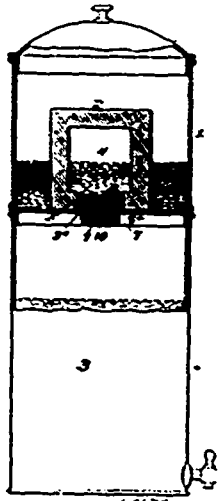
No. 48,678. Fire Igniter. (*Allumoir.*)



John William Wailes, Ponteland, England, 17th April, 1895; 6 years.

Claim.—1st. In a fire igniter, the combination of a bellows or air propeller with a blow pipe and lamp or burner, substantially as set forth. 2nd. In a fire igniter, the combination of a bellows or air propeller and wind chest with a blow pipe and lamp or burner, substantially as set forth. 3rd. In a fire igniter, the combination of a bellows or air propeller with adjustable blow pipe and burner or lamp, substantially as set forth. 4th. In a fire igniter, the combination of the frame *a*, with a foundation plate *b*, wind chest *c*, *d*, spring or weight *e*, bellows *f*, blowpipe tube *u*, adjustable in guides a^3, flexible connection *n*, and lamp or burner *q*, *s*, *t* and *u*. 5th. In a fire igniter, a lamp or burner consisting of a blow pipe tube *m*, nozzle m^1, sleeve *q*, tube *s*, with perforations s^1, chamber *t* containing absorbent material and supply funnel and pipe *u*, substantially as set forth.

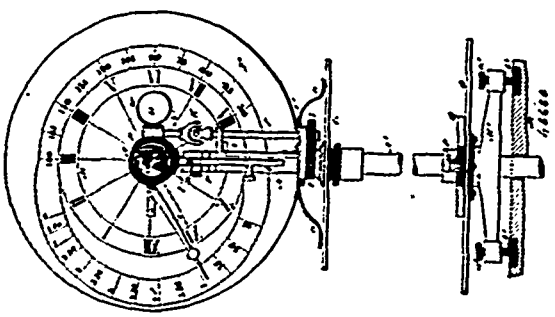
No. 48,679. Water Filter. (*Filtre.*)



Thomas T. Luscombe, Carthage, Missouri, U.S.A., 17th April, 1895; 6 years.

Claim.—1st. In a water filter, the combination of a vessel having a perforated bottom, a hollow filtering block of tripoli or natural stone having an opening in its lower end larger than the opening in the bottom of the vessel, and a plug or cork formed in one piece perforated throughout its length and having a large diameter fitting within the perforation or opening in the filtering block, and a smaller diameter fitting within the perforation in the bottom of the vessel, substantially as and for the purpose set forth. 2nd. In a water filter, the combination of a vessel having a perforated bottom, a hollow filtering block, composed of tripoli or natural stone, and having a large opening in its bottom, and a rubber plug or cork formed in one piece perforated throughout its length and having a large portion fitting within the filtering block, and a smaller, tapering portion fitting in the perforation in the bottom of the vessel, substantially as and for the purpose set forth. 3rd. A water filter comprising a tank, a vessel fitting over the tank, having an opening 7, a filtering block 2, formed with a chamber 4, and an opening 5, larger than the opening in the vessel, and the plug or cork 6, formed, in one piece, with a large portion 8, fitting in the opening in the block, a smaller portion 9, fitting in the opening in the vessel, and a perforation extending therethrough, the block being connected with the vessel by means of the plug or cork, substantially as described. 4th. A water filter comprising a tank 3, a vessel 1, fitting over the tank, having a tapering opening 7 in the bottom thereof, a filtering block 2, formed with a chamber 4, and a opening 5, larger than the opening in the bottom of the vessel, and the plug or cork 6, formed in one piece, with a large portion 8, fitting in the opening of the block, a shoulder 8^a seating on the bottom of the vessel, a small tapering portion 9, fitting in the opening in the bottom of the vessel, and a perforation 10 extending therethrough, the block being held in position and connected with the vessel solely by the plug or cork, substantially as described.

No. 48,680. Optometers. (*Optomètre.*)



Homer Austin Huntington and Angus G. McKenzie, both of Boston, Massachusetts, U.S.A., 17th April, 1895; 6 years.

Claim.—1st. An optometer, comprising a suitable lens support, and a lens which is pivoted therein on a diametric axis, i.e., on an axis at right angles to its peripheral optical axis, whereby it is adapted to be tilted and placed at different inclinations or angles to the line of vision corresponding to the existing abnormal refraction, and means for indicating the lenticular astigmatic correction required, as specified. 2nd. In an instrument for determining and correcting astigmatism, the combination, with a suitable lens support, of a lens which is rotatable about its peripheral axis, and also pivoted on a diametric axis or axis at right angles to the said principal optical axis, substantially as specified. 3rd. In an improved optometer, a suitable lens support, a lens arranged to turn on an axis coincident with its principal optical axis and rotatable on a diametric axis or one which is at right angles to said principal optical axis, and two scales arranged as shown, one for indicating the angle formed by the plane of the lens with the line of vision, the other scale being for indicating the angular displacement of the lens in a vertical plane, as and for the purpose specified. 4th. The improved optometer, comprising a two-part telescope tube, an object glass, and a lens which is rotatable on an axis coincident with its principal optical axis and also rotatable on a diametric axis, or an axis which is at right angles to the principal optical axis, substantially as specified. 5th. In an optometer, the combination with the focusing mechanism of the telescope, of one or more scales, and an index for measuring the amount of hypermetropia, as specified. 6th. In an optometer, the combination with the telescope constructed to swing on vertical and horizontal pivots, of two scales for indicating the angle of the vertical and horizontal displacement of the telescope in making disequilibrium tests, as specified.

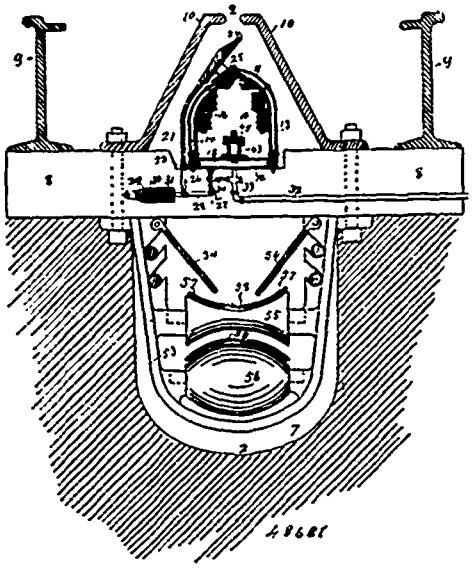
No. 48,681. Underground Conduit for Electric Roads.

(*Conduit souterrain pour chemins de fer électriques.*)

Ezra A. Matters, Roneoville, Illinois, U.S.A., 17th April, 1895; 6 years.

Claim.—1st. The combination with a slotted conduit having double sides forming air spaces opening into the slot on each side, of a flexible plug fitting the slot in said conduit and adapted to be lifted for a portion of its length from said slot by the passage through said slot of a trolley bar, and to close behind said trolley bar as it passes, pipes adapted to convey compressed air and communicating with said air spaces, and mechanism operated by the lifting of said plug to permit the compressed air to flow from said pipes into said air spaces as said plug is lifted, substantially as

described. 2nd. The combination with a slotted conduit having double sides forming air spaces opening into the slot on each side, of plates pivoted at one side of said slotted conduit, a flexable plug mounted upon said plates, extending throughout the whole length of said conduit and adapted to fit into and close said slot, a trolley bar extending downward through said slot and adapted to bear against said plates successively in its passage through said slot and to raise them successively, whereby said plug is lifted from said slot

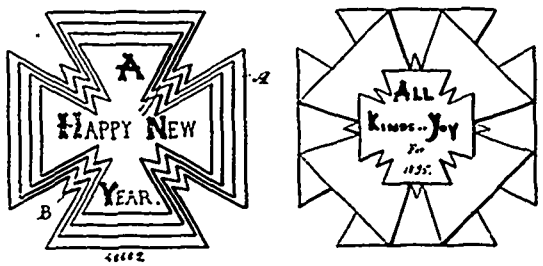


for a portion of its length by the passage of said trolley bar, said plates being adapted when relieved from the pressure of said trolley bar to fall back and force said plug again into said slot, pipes adapted to convey compressed air and communicating with said air spaces, and mechanism operated by the lifting of said plug to permit compressed air to flow through said pipes into said air spaces as said plates are lifted, and to shut off the passage of such compressed air when said plates fall again into place, substantially as described. 3rd. The combination with a slotted conduit having double sides forming air spaces opening into the slot on each side thereof, plates pivoted at one side of said slotted conduit, a flexible plug mounted on said plates and adapted to fit into the slot in said conduit throughout its length, and a flexible bearing plate mounted on said plates, of a trolley bar adapted to pass downward through said slot in said conduit, conical rollers mounted upon said trolley bar and adapted to bear against said flexible plate, whereby said plates may be successively raised and said flexible plug lifted from said conduit throughout a portion of its length by the passage of said trolley bar, mechanism adapted to throw said plates and plug back as said trolley bar passes, pipes adapted to convey compressed air and connecting with said air spaces, and mechanism operated by the passage of said trolley bar to permit compressed air to flow through said pipes into said air spaces as said plug is lifted by the passage of the trolley bar, substantially as described. 4th. The combination with an outer slotted conduit, an inner slotted conduit having double sides forming air spaces opening into the slot of said inner conduit on each side, plates pivoted upon one side of said inner conduit, a flexible plug mounted upon said plates, extending the length of said conduit and adapted to fit into and close the slot therein, and a trolley bar adapted to pass through said slot into said inner conduit, and to bear against said plates successively as it passes along said conduits, whereby said flexible plug is lifted for a portion of its length from said slot, of air chambers in said inner conduit opening into said air space between the side thereof, pipes adapted to convey compressed air and opening into said air chambers, valves in said pipes, and mechanism connecting said valves with said plates, whereby said valves are opened to permit the passage of air into said air chambers as said plates are raised, and closed as said plates fall back, substantially as described. 5th. The combination with a conduit adapted to contain electrical conductors and wires, of a trench below said conduit, supports mounted below said conduit in said trench, rollers journaled in said supports, a belt carried upon said rollers, and mechanism for moving said belt, substantially as described. 6th. The combination with a conduit adapted to contain electrical conductors and wires, of a trench below said conduit, supports mounted below said conduit in said trench, rollers journalled in said supports, a belt carried upon said rollers and having open network in the middle thereof extending throughout its entire length, and mechanism for moving said belt, substantially as described. 7th. The combination with a conduit adapted to contain electrical conductors and wires, of a trench below said conduit, supports mounted below said conduit in said trench, pairs of rollers mounted one above the other, the upper rollers being concave and the lower rollers being convex, a belt carried upon said rollers and having open network in the middle thereof extending throughout its entire length, mechanism for moving said belt and deflecting plates mounted in said trench above said belt and adapted to throw dirt or other matter falling into said conduit upon said belt, substantially as described.

No. 48,682. Ornamental Cards, Etc., of Mica.

(*Ornements pour cartes, etc., en mica.*)

Fig. 1 *Fig. 2.*

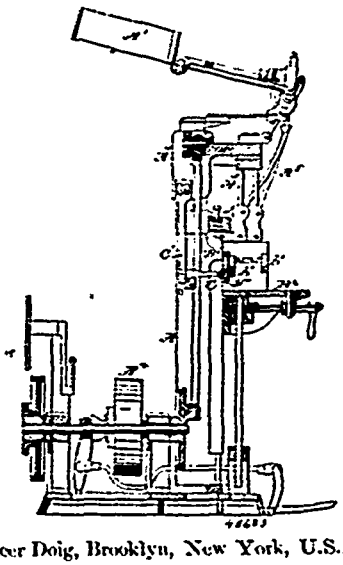


Wilbur Rubin Hitchcock, Cornwall, Ontario, Canada, 17th April, 1895; 6 years.

Claim.—1st. As a new article of manufacture, cards and the like made from one or more sheets of mica, substantially as set forth. 2nd. A card or similar device consisting of one or more sheets of mica, either singly or superimposed, the superimposed sheets being caused to adhere to the sheets below by means of glue or the like, and the said sheets being engraved or not, substantially as set forth.

No. 48,683. Box Nailing Machine.

(*Machine à clouer les boîtes.*)



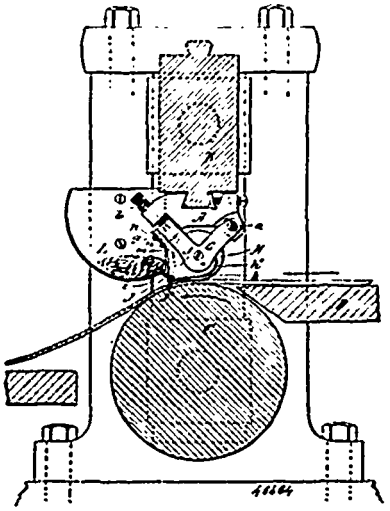
William Spencer Doig, Brooklyn, New York, U.S.A., 18th April, 1895; 6 years.

Claim.—1st. The combination with a box nailing machine of a clinching device supported on the table thereof and comprising a box material support, an anvil and mechanism for causing a relative vertical movement between said support and anvil, substantially as specified. 2nd. The combination with a box nailing machine of a clinching device supported on the table thereof and comprising a box material support, an anvil and mechanism operated from the cross-head of the machine for causing a relative vertical movement between the support and anvil, substantially as specified. 3rd. The combination with a box nailing machine, of a clinching device supported on the table thereof and comprising a fixed anvil, a vertically movable box material support and mechanism operated from the cross-head of the machine for causing the vertical movements of said supports, substantially as specified. 4th. The combination with a box nailing machine, of a clinching device supported on the table thereof comprising an anvil bar and a box material support, cam shafts for causing a relative movement between said bar and support, a rack bar engaging with pinions on said shafts, a fulcrumed lever bar engaging at one end with said rack bar, and a cam plate carried by the cross-head of the machine and engaging with the other end of said lever, substantially as specified. 5th. The combination with a box nailing machine of the clinching anvil, the

box material support, the cam shafts, the pinions thereon, the reciprocating rack-bar, the oscillating lever and the vertically adjustable cam plate carried by the cross-head of the machine, substantially as specified. 6th. The combination with a box nailing machine comprising nail punches of an anvil, a box material support and mechanism for causing a relative vertical movement between the support and anvil after a nail shall have been forced into position and projected through the box material by a punch, substantially as specified.

No. 48,684. Machine for Scoring Paper Boards.

(*Machine pour entailler les cartons*)



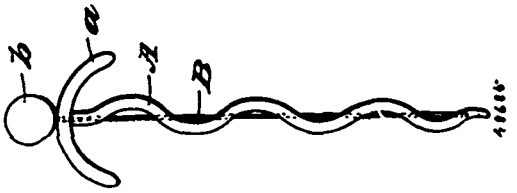
Chauncey Wolcott Gay, West Springfield, Massachusetts, U.S.A., 18th April, 1895; 6 years.

Claim.—1st. In a scoring machine, the combination with the double-edged scoring wheel, of a shoe supported in proximity thereto, to bear upon the paper substantially as described, and having its foot bifurcated so as to lie at either side of the scoring wheel and having the heel, *i*, transversely uniting the bifurcated members of the foot and having the socket i^2, and the clearer-blade *j*, set in and extended from said socket angularly to the under surface of the foot, substantially as described. 2nd. In a scoring machine, the combination with a shoe, substantially as described having the upwardly extended bar-shank *g*, the foot which is bifurcated forming the two members with the curved under surface and the rearwardly upturned toes h^2, h^2, and the traverse uniting heel *i*, substantially as described and shown. 3rd. In a scoring machine, the combination with a hanger G, and double-edged scoring wheel mounted thereon, of the shoe J, having the bar-shank *g*, provided with the slots *k*, *k*, and having the bifurcated foot substantially as described, and the doctor-blade *n*, having the slot in its shank n^2, and the screw *u*, *v* for adjustably holding the shoe to the hanger, and the doctor-blade to the shoe, substantially as described. 4th. In a scoring machine, the combination with the double-edged scoring wheel, of a shoe mounted near, and in advance of, the wheel and formed with an aperture therethrough from front to rear, one or more clearers supported within this aperture for clearing and directing the waste stock which is excavated from the scored board forwardly through the throath formed by said aperture in the shoe, and a receptacle in advance of the wheel and clearer for receiving such waste, substantially as described. 5th. In a scoring machine, the combination with the roll C, and the scoring wheel, of a shoe above the support roll adjustably mounted independently of the scoring wheel, and having portions which are adapted to lie closely to the paper-board, and a clearer-blade supported by the shoe and having its working edge extended below the lower surface of the shoe, and arranged in advance, and in a plane parallel with the rotation, of the scoring-wheel and between the circular knife edges thereof, substantially as described. 6th. In a scoring machine, the combination with a supporting and guiding roll C, the double-edged scoring wheel, and a hanger on which said wheel is adjustably mounted, of a shoe adjustably supported on the hanger independently of the wheel to be moved from and towards the roll C, and having foot portions which are adapted to lie closely to the paper-board and having the clearer-blade *j*, adjustably supported thereon and the doctor-blade *u*, which is adjustable longitudinally of its length, substantially as described.

No. 48,685. Hair Pin. (*Epingle à cheveux.*)

Morrill Nathaniel Packard, Baltimore, Maryland, U.S.A., 18th April, 1895; 6 years.

Claim.—1st. A hair pin comprising a sinuous sheath having a series of perforations arranged in a longitudinal line, and a pin adapted to pass through said perforations in the sheath. 2nd. A hair pin comprising a headed sinuous sheath having a series of axial



perforations, the head of the sheath having in its outer side a groove or channel across the perforation, and a headed pin adapted to pass through said perforations in the sheath.

No. 48,686. Flame Regulator for Lamps.

(*Appareil à contrôler la flamme pour lampes.*)

Fig. 1.

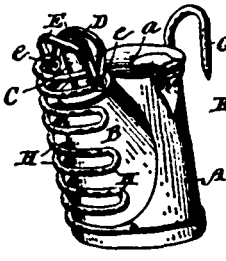
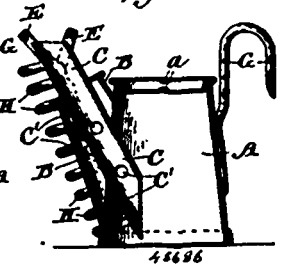


Fig. 2.

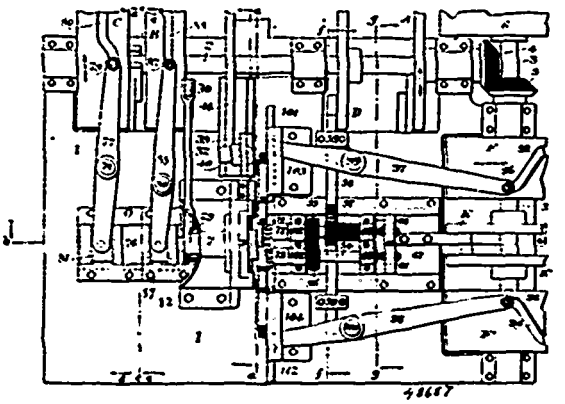


William M. Harrison, Williamsport, Pennsylvania, U.S.A., 18th April, 1895; 6 years.

Claim.—1st. A lamp provided with a flame controlling device, consisting of separate parts adapted to be adjusted into position against opposite sides of the flame, thereby compressing and flattening the latter, while leaving free and unobstructed access of air to the edges of the flame, substantially as set forth. 2nd. A lamp provided with a flame controlling device, consisting of a pair of pivoted bells arranged to be turned up against opposite sides of the flame, thereby compressing and flattening the latter while leaving free and unobstructed access of air to the edges of the flame, substantially as set forth. 3rd. A lamp provided with a flame controlling device consisting of separate parts adapted to be adjusted into position against opposite sides of the flame, thereby compressing and flattening the latter while leaving free access of air to the edges of the flame, the said flame controlling device being connected to the said lamp solely by a long bent wire H or equivalent support whereby the heat of the flame is prevented from reaching the body of the lamp, substantially as described.

No. 48,687. Machine for Making Wire Chains.

(*Machine pour faire les chaines en fil de fer.*)

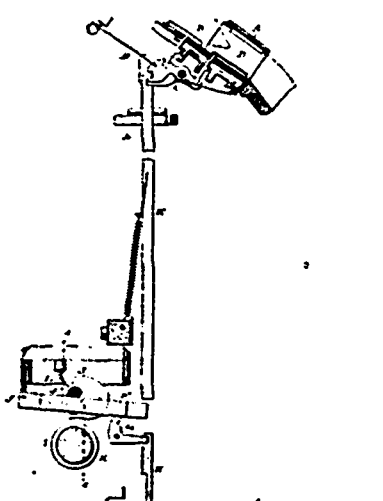


Charles F. Smith, Bridgeport, Connecticut, U.S.A., 18th April, 1895; 6 years.

Claim.—1st. The combination of means for feeding the wire, the upper press gate carrying the tools for performing the first bending operation and means for cutting off the wire, the lower press gate carrying the mandrel and the bending studs, and means for operating said gates, whereby the first bending operation is performed, substantially as set forth. 2nd. The combination of the means for

performing the first bending operation, with the rotary shafts capable of a sliding movement, the longitudinally movable clamping rods concentric within said shafts, means for operating said rods independent of said shafts, the notched bending tools carried eccentrically by said shafts, and means for moving said shafts forward and for subsequently revolving them whereby the side walls of said notched bending tools are forced against the wire blank to perform the second bending operation, substantially as set forth. 3rd. The combination of means for performing the first bending operation, the notched bending tools carried by rotary shafts capable of a sliding movement, means for revolving said shafts after they have been partially projected whereby the second bending operation is performed, and means for still farther projecting the said shafts after the second bending operation, whereby said tools are caused to perform the third bending operation, substantially as set forth. 4th. The combination of the means for performing the first bending operation, with the rotary shafts capable of a sliding movement, the longitudinally movable clamping rods concentric within said shafts, means for operating said rods independent of said shafts, the notched bending tools carried eccentrically by said shafts, means for moving said shafts forward and for subsequently revolving them whereby the side wells of said notched bending tools are forced against the wire blank to perform the second bending operation, and means for still farther advancing said shafts after said operation, whereby the rear walls of said notched bending tools are forced against the extremities of the wires to perform the third bending operation, substantially as set forth. 5th. The combination of means for feeding the wire, the upper press gate carrying the tools for performing the first bending operation and means for cutting off the wire, the lower press gate carrying the mandrel and the bending studs, means for operating said gates whereby the first bending operation is performed, the notched bending tools carried by rotatory and sliding shafts whereby the second and third bending operations are performed, and the bending tools carried by the upper press gate whereby the fourth bending operating is performed, substantially as set forth. 6th. The combination of the lower and upper press gates carrying respectively the mandrel and bending studs and the instrumentalities for performing the first and fourth bending operations, means for performing the second and third bending operations, the anvils depending from the upper press gate, means for operating the latter to bring said anvils in front of said studs after the fourth bending operation, and the reciprocatory slide for performing the fifth bending operation, substantially as set forth. 7th. The combination of the lower and upper press gates, carrying respectively the mandrel and bending studs and the instrumentalities for performing the first and fourth bending operations, means for performing the second and third bending operations, the anvils depending from the upper press gate, means for operating the latter to bring said anvils in front of said studs after the fourth bending operation, the reciprocatory slide for performing the fifth bending operation, means for elevating the upper press gate after the fifth bending operation, the reciprocatory slide and means for driving the same against the wire blank, whereby the latter is bent into U-shape around the mandrel and the sixth bending operation performed, substantially as set forth. 8th. In a machine for automatically making wire chain, the links of which latter comprise loops at one end and registering eyes at the other end, the extremities of the wire being curled around the side wires of the loop at the bases of the eyes, the combination with means for feeding, bending and forming the wire into a link, of a pair of slide compressor dies recessed to accommodate said curled extremities, and means for forcing said dies laterally against the side wires of the loop on each side of said curled extremities, whereby an abrupt locking bend is formed to contain said extremities and the eyes thereby brought into parallelism, substantially as set forth. 9th. The combination of the rotary cams B, C, the press gate 9 carrying the bending devices 12, 13 and 15, and anvils 16, the gate 14 carrying the mandrel and bending studs 17, and connections between said cams and gates whereby the latter are operated, substantially as set forth. 10th. In a machine for automatically making wire chain, the combination of the upper and lower press gates supported by the bed of the machine and capable of vertical reciprocation toward and away from each other, means carried by the upper gate for cutting off the wire, bending devices carried by said gate and co-operating with bending studs carried by the lower gate for imparting the initial bend to the wire blank, bending tools carried upon rotary and sliding shafts and eccentric thereto, means for carrying these tools across the ends of the partially bent blank and for revolving said tools whereby eyes are formed at the ends of the blank, means for subsequently forcing said tools forward against the extremities of the wire whereby the latter is bent at right angles to the eyes and across the bases thereof, means carried by the upper press gate for bending said extremities at right angles to the position last mentioned, anvils carried by the upper press gate, bending tools capable of sliding, means for forcing said tools against the extremities of the wire and for finally bending the same completely around the blank, the mandrel carried by the lower press gate and means for bending the blank into U-shape around said mandrel, and instrumentalities for finally shaping the link, substantially as set forth. 11th. The herein described improvement in the art of automatically making chain from wire blanks of predetermined length, which consists in first bending the extremities of said blanks to form eyes and curling said extremities completely around said blanks at the bases of said eyes, and subsequently bending said blanks into U-shape to form the loops with said eyes in parallelism, and finally shaping the loops and compressing said eyes together and forming a short locking bend in the side wires of the loop and at the bases of said eyes within which bend the curled extremities are disposed so that said eyes will be parallel, substantially as set forth. 12th. In a machine for automatically making chain from blanks of wire, the combination of instrumentalities for forming the eyes and bending the blanks into U-shape to form the loops of the links, with means for forming short locking bends in the side wires of the loops of the completed links at the basis of the eyes, substantially as set forth. 13th. The combination of the head block 39, capable of sliding in suitable horizontally disposed ways in the bed and provided with vertical guide ways, the bar 40, capable of sliding freely within said ways, the rock-shaft journalled within said block, eccentric connection between said shaft and bar whereby the rocking of the former will cause vertical reciprocation of the latter, and means for rocking said shaft, substantially as set forth, 14th. The combination of the head block 38, capable of sliding in suitable horizontally disposed ways in the bed and provided with vertical guide ways, the bar 40, capable of sliding freely within said ways, the rock-shaft journalled within said block block, eccentric connection between said shaft and bar whereby the rocking of the former will cause the vertical reciprocation of the latter, the crank 42 secured to said shaft, the lever 43*a* pivoted to the frame of the machine, the lever 45 connecting said lever and crank, the rock-shaft 47 journalled in the frame of the machine and carrying the crank 48, the link 49 connecting the crank 48 and level 43*a*, the crank 50 secured on the shaft 47 and carrying at its extremity a roll 51, and the rotatory cam A having a groove 52 within which said roll projects, substantially as set forth. 15th. In a machine for automatically making wire chain, the combination of the bed, the upright rising therefrom and having guide ways, the gate within said ways and having a slot and capable of a vertical reciprocation, the rock-shaft journalled in said upright, means for rocking said shaft, the block within said slot and having a free movement therein, and the disc rigid on the inner end of said shaft and having a crank stud projecting therefrom loosely within said block, substantially as set forth.

No. 48,688. Linotype Machine. (*Machine linotype.*)

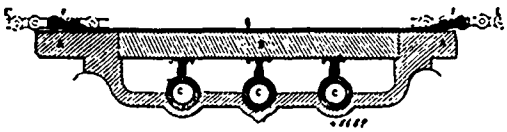


The Mergenthaler Linotype Company, New York, State of New York, assignee of Philip Tell Dodge, Washington, Columbia, both in the U.S.A., 18th April, 1895; 6 years.

Claim.—1st. In a type discharging mechanism, the combination of a constantly driven roller, a lever, a cam carried by said lever, and provided with a stationery shoulder, adapted to engage with the roller, a detenting mechanism to prevent the advance of the lever and cam towards the roller, and a stationery stop to arrest the rotation of the cam. 2nd. In combination with the escapement and its actuating rod, the lever F, its cam having a stationery stop or shoulder, a constantly driven roller to actuate the cam, a stationery stop to arrest the rotation of the cam, and a finger-key mechanism controlling the movement of the cam carrying lever. 3rd. In a type discharging mechanism, and in combination with a constantly driven roller, a lever, a cam mounted on the lever, and provided with a stationery shoulder within the line of its periphery, a detenting mechanism to prevent the advance of the lever and cam toward the roller, and a stop to engage the shoulder of the cam and arrest its rotation.

No. 48,689. Method of Soldering Tin Vessels.

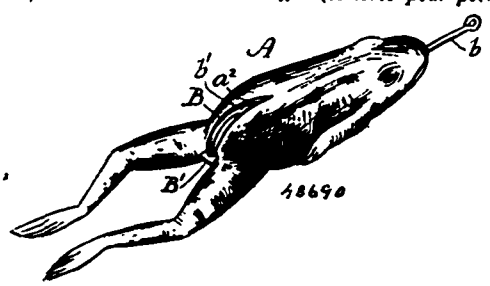
(*Méthode de souder les vaisseaux en fer-blanc.*)



Otto Asche, Paris, France, 18th April, 1895; 6 years.

Claim.—1st. The hereindescribed process of soldering tin boxes, cans, and other tin receptacles, consisting in tinning the edges of the receptacle and its cover by any suitable process, then passing them from a cold table or plate on to a hot table where the melting of the solder takes place, and thence onto another cold table where the cooling is effected, substantially as set forth. 2nd. For carrying out the above claimed process, a soldering machine consisting of a cold table, a hot table, a cooling table, and means for conveying the boxes along the tables, said means consisting of two parallel endless chains actuated by manual or other power and connected together at certain distances apart by nippers or clips which carry thin blades of non-solderable metal for supporting the weighted boxes to be soldered, substantially as hereindescribed and for the purposes indicated.

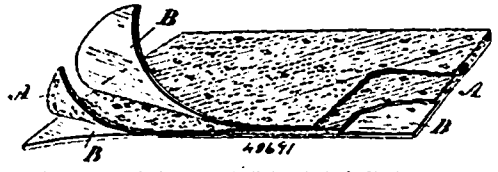
No. 48,690. Bait for Fishing. (*Amorce pour pêcher*)



James T. Hastings and Charles A. Crane, both of Chicago, Illinois, U.S.A., 18th April, 1895; 6 years.

Claim.—1st. The combination, with a fish-hook, of an artificial bait secured thereto and having a depression for receiving the beard of the hook, the portion of the bait in immediate proximity to the point being yielding, substantially as set forth. 2nd. The combination, with a fish-hook, of an artificial bait secured thereto and having depressions for receiving the stem and point of the hook, that portion of the bait lying beneath the point of the hook being yielding, substantially as set forth. 3rd. The combination, with a fish-hook, of an artificial bait secured thereto and having a hollow compressible portion located between the stem and point of the hook, substantially as set forth. 4th. The combination, with a fish-hook, of an artificial bait made in the form of a frog and secured thereto, the hook being disposed with its stem along the belly of frog and with its point extending over the back and toward the head of the frog, that portion of the frog which lies beneath the point of the hook being hollow and compressible, substantially as set forth.

No. 48,691. Manufacture of Waterproof Shirt Collars, Etc. (*Fabrication de col de chemise à l'épreuve de l'eau.*)

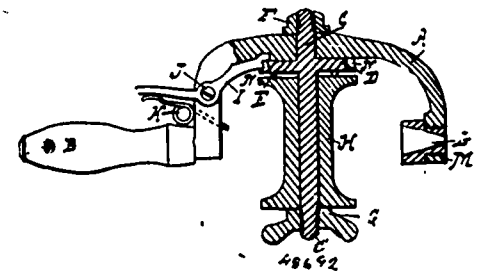


William Donald Mitchell and John Mitchell, both of Toronto, Ontario, Canada, 18th April, 1895; 6 years.

Claim. 1st. As a new article of manufacture a waterproof material for shirting comprising a layer of pattern goods having superimposed upon both sides a transparent waterproof film, the whole being inseparably united together, for the purpose set forth. 2nd. As a new article of manufacture, a waterproof material for shirting comprising a layer of pattern goods having superimposed upon the right side a film of transparent celluloid and having at the back of the pattern goods a layer or sheet of opaque celluloid, the parts being inseparably united, for the purpose set forth. 3rd. As a new article of manufacture, a waterproof material comprising a central layer of opaque celluloid layers of pattern goods to each side of the opaque celluloid with the pattern side outermost and transparent film of celluloid superimposed upon the pattern goods, the whole being inseparably united together, as set forth.

No. 48,692. Tool for Wire Working.

(*Outil pour travailler le fil de fer.*)

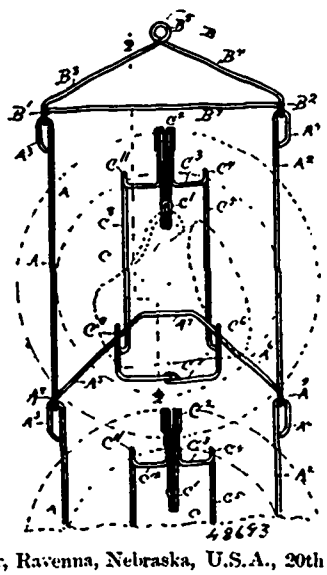


George D. Lockwood, Ypsilanti, Michigan, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. A wire working tool consisting of a yoke provided at one end with a handle, and at other end with a wire guide, an intermediate rotary spool holding shaft, and a locking device for holding the said shaft against rotation in its bearing, substantially as shown and described. 2nd. A wire working tool consisting of a yoke A provided with handle B and bushing M, a spool holding shaft C provided with disc D having lug E and grooves N, and a pivoted spring pawl I adapted to engage with the disc D, substantially as shown and described. 3rd. A wire working device consisting of a yoke A having a suitable handle B at one end, a removable bushing M having a conical aperture therethrough at the other end, and an intermediate rotary spool holding shaft C provided with disc D having slots M therein, and a lug E, thumb nut G, pivoted spring pawl I and spool H, substantially as shown and described.

No. 48,693. Cup and Saucer Holder.

(*Porte-tasse et soucoupe.*)

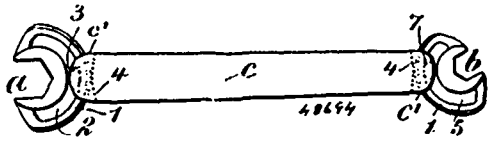


Oscar L. Miller, Ravenna, Nebraska, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. A device of the class described, comprising a hanger, a plate holder having a pivotal connection with the hanger and provided with side arms extending vertically downward, inclined arms extending upwardly, inwardly and rearwardly from the lower ends of the vertical arms, and a connecting arm for the said inclined arms, and a cup and saucer holder extending in front of the plate holder and provided with vertical arms formed with loops near their lower ends to engage the inclined arms of the plate holder, substantially as shown and described. 2nd. A device of the class described, provided with a plate holder, comprising a hanger B formed with loops B^1, B^2, and provided with the eyes B^3, B^4, registering with each other and a holder proper, comprising vertical side arms A^1, A^2, bent outwardly and downwardly at their upper ends to form eyes A^3, A^4, engaging the said hanger loops, said arms A^1, A^2, extending vertically downward to their lower ends, then extending upwardly, inwardly and rearwardly forming the bends A^5, A^5, and the inclined arms A^6, A^6, and the connecting arm A^7, for the said arms A^3, A^4, substantially as shown and described. 3rd. A device of the class described provided with a saucer and cup holder, comprising side arms formed with double loops near their lower ends, the upper ends of said side arms being bent inwardly toward each other, a hook

extending from the upper part of the holder and arranged between the side arms and having a coil of wire forming a spring, substantially as shown and described. 4th. A device of the class described provided with a saucer and cup holder comprising the side arms C^5, C^8, formed near their lower ends with the loops C^9, C^{10}, and at their upper ends with eyes C^4, C^{11}, the arm C^7 connecting the lower ends of the side arms, the arms C^3, C^{12} extending from the eyes at the upper ends of the side arms inwardly, the hook C^1 and the wire coil C^2, substantially as shown and described.

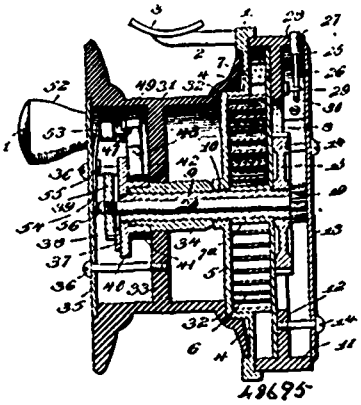
No. 48,694. Wrench. (*Clé à écrou.*)



Johannes Theodor Pedersen, New York, State of New York, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. The jaw having a segmental ribbed base and segmental groove or mortise, in combination with the handle having a slotted end to freely receive the said segmental ribbed base and an inwardly projecting lug or pin moving in said groove or mortise, the surface 4 at the base of the slot being part of and rigid in relation to the handle itself, and bearing against the segment to produce a gripping action upon the opposite faces of the segmental ribbed base as the handle is actuated, substantially as specified. 2nd. The jaw having a segmental ribbed base and segmental groove or mortise, in combination with the handle having a slotted end to freely receive said segmental ribbed base and having a lug or pin with a curved surface and a convex surface at 4, whereby the jaw is normally free to be turned and a gripping action is produced upon the rocking of the handle, substantially as set forth. 3rd. The jaw having a segmental ribbed base and segmental grooves in its opposite faces, in combination with the handle having a slotted end to freely receive the segmental ribbed base and having two inwardly projecting lugs in said grooves, said lugs having curved surfaces and the end of the handle at the base of the slot being convex, substantially as and for the purposes set forth.

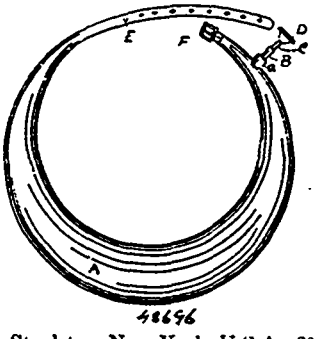
No. 48,695. Fishing Reel. (*Dévidoir de pêche.*)



Granville Eustace Medley, Hopkinsville, Kentucky, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. In a fishing reel, a stationary reel plate provided with an offstanding circular spring recess or pocket, a stationary bearing sleeve fitted to said plate and projecting to both sides thereof, a revolving winding drum mounted on the sleeve at one side of the reel plate, a spring seated within said spring recess or pocket and connected at one end to the reel plate and at its other end to the winding drum, a line spool mounted to revolve on the sleeve at one side of the reel plate, and provided with a countersunk side flange loosely embracing the offstanding recess or pocket portion of the reel plate, a reel shaft arranged within said sleeve, an automatic clutch connection between one end of the reel shaft and the spool, a gearing connection between the opposite end of the shaft and the drum, and an automatic gear catch for said gear connection, substantially as set forth. 2nd. In a fishing reel, a stationary reel plate carrying a stationary bearing sleeve projecting to both sides of the same, a revolving winding drum provided with a central bearing hub turning on one end of said sleeve, a spring arranged between the drum and the reel plate and connected at one end to said plate, and at its other end to the drum, a reel shaft turning within said bearing sleeve, a rotating spool loosely mounted on the bearing sleeve, an automatic clutch connection between one end of the reel shaft and the spool, a gearing connection between the opposite end of the shaft and the drum, and an automatic gear catch for said gear connection, substantially as set forth. 3rd. In a fishing reel, a stationary reel plate carrying an oppositely projecting stationary bearing sleeve, a winding drum mounted on the sleeve at one side of the reel plate, an actuating spring connected to the reel plate and to the winding drum, a line-spool loosely mounted on the sleeve at one side of the reel plate and carrying a series af spaced stod screws or pins, a rotating reel shaft arranged in said sleeve, an eccentrically arranged clutch plate connected with one end of said shaft and adapted to engage with the spool, a stationary plate mounted on one end of the bearing sleeve at one side of the clutch plate, a spring arranged to bear normally against one end of the shaft to hold the clutch plate against the plate at one side of the same to prevent displacement of the clutch plate, gearing connections between one end of the shaft and the drum, and an automatic gear catch for said gear connections, substantially as set forth. 4th. In a fishing reel, a stationary reel plate having an oppositely projecting stationary bearing sleeve, a spring actuated winding drum loosely mounted on the sleeve at one side of the plate, a line-spool loosely moated on the sleeve, a rotating reel shaft arranged on said sleeve, an eccentrically arranged clutch plate connected with one end of said shaft, gearing connections between the opposite end of the shaft and the drum, an automatic gear catch for said gear connections, and means for normally holding the clutch plate out of engagement with the spool to allow the same to freely rotate in either direction, substantially as set forth. 5th. A stationary reel plate having an oppositely projecting stationary bearing sleeve, a spring actuated winding drum loosely mounted on said sleeve and provided with an opening in the rim thereof, a reel shaft mounted in said bearing sleeve, a line spool loosely mounted on said sleeve and having a clutch connection with one end of said shaft, cog gearing between the opposite end of said shaft and the winding drum, one of the parts of the gearing being an idler cog, a catch pawl pivotally secured to the winding drum and adapted to engage with the teeth of said idler cog, a movable pawl adjusting pin arranged within the drum and provided at one end with a push head working in the opening in the rim of the drum and with an inner angled end working against the inner side of said pawl, and a leaf spring arranged within the drum and having its free end bearing on top of the pawl, said spring being arranged to bear at an intermediate point under the push head of the adjusting pin to normally adjust the same against the pawl, substantially as set forth. 6th. In a fishing reel, the combination with a stationary bearing spindle and the spool mounted to revolve thereon; of a toothed click wheel fitted to said stationary bearing spindle, a spring actuated click dog arranged within said spool and normally engaging with the teeth of said click wheel, and means for disengaging the dog from the wheel by the act of turning the spool, substantially as set forth. 7th. In a fishing reel, the combination with a stationary bearing spindle and the spool mounted to revolve thereon; of a toothed click wheel fitted to the stationary bearing spindle, a spring actuated click dog arranged within said spool and normally engaging with the tooth of said wheel, and the crank handle attached to the spool and having an adjusting spindle adapted to be engaged with and disengaged from said click dog by the act of rotating the spool, substantially as set forth. 8th. In a fishing reel, the combination with a stationary bearing spindle and the spool mounted thereon; of a toothed click wheel fitted to said spindle, a spring actuated T-shaped click dog pivotally supported within the spool to normally engage said wheel, a tubular crank handle fitted to one end of the spool, an L-shaped adjusting spindle supported at one end of the spool and having at its outer end a rounded friction head registering within the crank handle, and a spring connected with said spindle to hold the herd normally in frictional engagement with said crank handle, substantially as set forth.

No. 48,696. Life Preserver. (*Appareil de sauvetage.*)



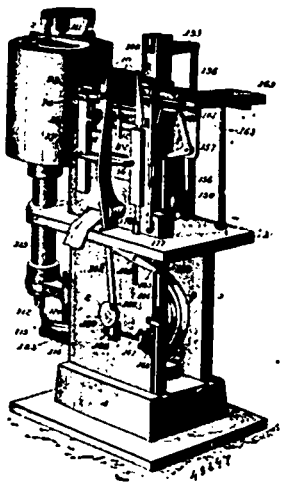
Peter Hohmann, Stapleton, New York, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. A life preserver, consisting of an inflated body, substantially U-shaped, having means for connecting the ends thereof, as the strap E and the buckle F, and having a neck *a*, of a tube communicating with the interior of the said body, the said tube being threaded at its outer end and provided with an interior transverse wall, having a perforation, of a perforated disc in contact with the outer surface of said wall, and so adjusted that its perforation

will coincide with said wall perforation, and of a threaded cylinder, flaring at its outer end and having a perforated head at its inner end, said cylinder being adapted to enter the threaded end of said tube so that when seated therein, its head perforation will be closed by said disc, substantially as herein described. 2nd. The combination, with a body A, having the strap E, the buckle F, and the neck *a*, of the tube B, inserted and secured in said neck, said tube being threaded at its outer end, and provided with the transverse interior wall *d*, having the portion *c*, the threaded cylinder C, adapted to *enter the threaded end of said tube, said cylinder being provided* with the flaring portion D at its outer end, and the head *g* at its inner end, the latter having the perforation *h*, and the disc *f* disposed between the cylinder head *g*, and the transverse wall *d*, and having a perforation coinciding with that of the wall *d*, said cylinder being adapted to close the perforation *h* upon the cylinder C, being seated in the threaded end of the tube B, all substantially as described and for the purposes set forth.

No. 48,697. Type Casting and Composing Machine.

(*Machine pour couler les caractères et composer.*)



The Tachytype Manufacturing Company, Minneapolis, Minnesota, assignee of Frank Amos Johnson, Philadelphia, all in the U.S. A., 20th April, 1895; 6 years.

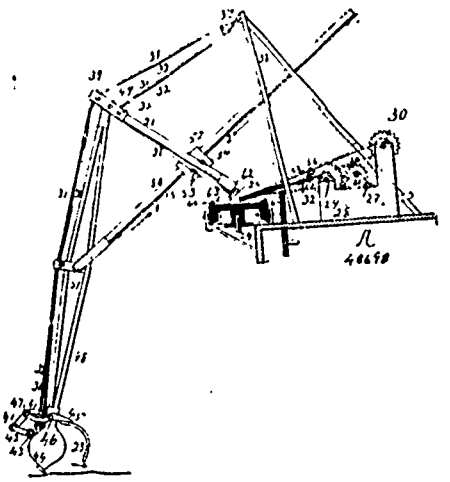
Claim.—1st. A selecting device consisting of a rocking carrier, a series of selecting pins arranged in the carrier and movable therein in the direction of its axis and a part adjacent to the carrier and adapted to be moved by projected pins of the carrier when the latter is rocked, substantially as described. 2nd. The combination, with a movable die-carrier provided with a series of dies, of means for controlling its movement consisting of carriers provided with selecting pins, and connections of the die-carrier disposed adjacent to said pin-carriers and adapted to be moved by means of the pins, when said carriers are actuated, substantially as described. 3rd The combination, with a movable die-carrier or part, of means for controlling its movements consisting of a pair of rocking carriers, each provided with a transverse row of selecting pins, said pins being movable in the direction of the axes of the pin carriers, and connections of the die-carrier adjacent to the selecting pin-carriers and adapted to be moved by projected pins when the carriers are rocked, substantially as described. 4th. The combination, with a group of dies and a die-carrier movable in two directions to centre selected dies, of two rocking selecting pin-carriers provided with rows of selecting pins, means for projecting the pins and for rocking their carriers, and connections of the die-carrier arranged adjacent to the pin-carriers and adapted to be moved by projected pins when the latter carriers are rocked, substantially as described. 5th. The combination with a die-carrier movable in certain directions to centre selected dies, of a movable selecting pin-carrier provided with selecting pins and a slide connected with the die-carrier and adapted to be moved by projected selecting pins, substantially as described. 6th. The combination with the die carrier movable in two directions to center selected dies, of rocking selecting pin-carriers provided with diametrical rows of selecting pins, a pair of slides adjacent to the pin-carriers and adapted to be moved by projected pins when the carriers are actuated, and the connections between said slides and the die carrier, substantially as described. 7th. The combination with a slide having a yoke extending at right angles thereto, of a die carrier movable in the yoke, a pair of slides provided with slots, one of said slides being connected with the yoke slide and the other connected with the die carrier through suitable mechanism, rocking selecting pin-carriers arranged adjacent to said slides and each provided with a row of pins, and means for projecting the pins into the slots of the slides whereby the latter are moved when the pin-carriers are actuated, substantially as described. 8th. The combination with a rocking carrier having a series of selecting pins movable therein in the direction of its axis, of a controller and means for projecting the pins, said means being governed by the controller, substantially as described. 9th. The combination with a rocking carrier having a transverse row of pins movable therein in the direction of the axis of the carrier, of a controller, feelers arranged to be rendered operative by the controller, and means for projecting the pins corresponding with the operative feelers, substantially as described. 10th. In a composing machine, the combination with a controller, of a feeler frame, a series of movable feelers thereon, means for periodically apply the feelers to the controller, strikers connected with the feelers, said strikers being adapted to be rendered operative by the action of the controller upon the feelers, and means for moving the operative striker, substantially as described. 11th. The combination of a movable feeler frame, a series of feelers mounted in the frame, mechanism for applying the feelers to a controller strip periodically, strikers connected with the feelers, said strikers being carried by the frame and being movable therein to operative positions when their respective feelers enter perforations in the strip, and means for moving the frame, substantially as described. 12th. The combination of a frame adapted to rock upon an axis coincident with its lower edge, feelers carried by the frame and having their lower ends in line with the axis, strikers movably mounted in said frame and connected with the feelers, means for periodically lowering and raising the feelers, and means for rocking the frame upon its axis, substantially as described. 13th. The combination of the rocking selecting pin carriers, each provided with a row of movable pins, of a feeler frame arranged adjacent to the carriers, a series of feelers adapted to be rendered operative by a controller strip, and a series of strikers carried by the frame and connected with the feelers, said strikers being movable to engage the selecting pins when their respective feelers are rendered operative by the controller strip, substantially as described. 14th. The combination with a group of dies and a die carrier movable in two directions to centre selected dies, of a pair of rocking selecting pin carriers, each provided with a row of pins individually movable in the direction of its axis, parts connected with the die carrier and arranged to be engaged by the pins of the pin carrier, a feeler frame arranged on the opposite side of the pin carriers, movable feelers and strikers mounted in the feeler frame, said strikers being moved opposite the pins of the pin carriers when their respective feelers are rendered operative, and means for moving the strikers against the pins, substantially as described. 15th. In a composing machine, the combination with a rocking selecting pin carrier, having a row of pins adapted to be projected individually in the direction of its axis, of a feeler frame in the rear of the carrier, a set of feelers mounted therein, and a set of strikers connected with the feelers and adapted to be moved opposite the selecting pins to drive them forward and render them operative, a restoring bar in front of the pins for returning them to their inoperative positions, and means for moving the strikers and restoring bar alternately to and from the carrier, substantially as described. 16th. The combination with a sectional mould, a movable rod, and connections between the rod and mould to vary the opening of the latter, of a controller, a series of feelers adapted to be rendered operative by the controller, and stepped connections between the feelers and the rod, substantially as described. 17th. The combination with the mould having sections which are relatively movable to vary the mould opening of a lever operatively connected to a movable section, means for adjusting said lever to vary the mould opening, and means for moving said section across the mould to eject the type, substantially as described. 18th. The combination with a mould having sections which are relatively movable to vary the mould opening, of a lever having its shorter arm engaging a movable section, means for moving the longer arm of the lever to vary the mould opening, and a stepped stop for variably limiting said movement, whereby the mould opening may be varied to cast type of different widths, substantially as described. 19th. In a composing machine, a mould having its sides closed respectively by a vertically and a horizontally sliding section, a runway for the type in line with the horizontally sliding section, means for moving the vertical section to open and close one side of the mould, means for adjusting the horizontal section and holding it while the mould is closed by the vertical section, and means for moving the horizontal section to eject the type while the mould is opened by the movement of the vertical section, substantially as described. 20th. The combination with the mould having horizontally and vertically moving sections adapted to close its sides, said vertical section being also movable to open the mould, a runway in line with the horizontally moving section, an elevating leaf in line with the said runway, a galley in the rear of the leaf, means for moving the type through the runway onto the leaf, and means for periodically elevating the leaf to transfer the completed lines to the galley, substantially as described. 21st. In a type casting and composing machine, the combination, with the mould and means for varying the mould opening, of a runway in line with the mould, an elevating leaf in line with the runway, a galley, a hook arranged to draw lines of type onto the leaf, and means rendered operative on the completion of each line for operating the leaf and transferring the lines to the galley, substantially as described. 22nd. In a type casting and composing machine, the elevating leaf for transferring lines of type to the galley, a power shaft,, mechanism for moving the leaf to transfer the type to

the galley, and devices for imparting movement from the power shaft to said mechanism at the completion of each line, substantially as described. 23rd. In a type casting and composing machine, the elevator for transferring lines of type to the galley, in combination with a slowly moving ratchet or part, and mechanism constructed to engage the elevator with the ratchet or part at the completion of each line, whereby a slow movement is imparted to the former by the latter, substantially as described. 24th. The combination, with *a mould and a die adapted to be seated against the mould, of a* plunger or impression pin for seating the die, the engaging ends of said die and pin having freedom to yield laterally, substantially as described. 25th. The combination, with a mould of a die plate, dies carried by said plate, a movable part and an impression pin carried by said part for pressing the dies to the mould, said dies and impression pin being mounted with freedom to yield laterally at their engaging ends, whereby the faces of the dies may be accurately seated upon the mould, substantially as described. 26th. The combination, with a mould, of a die-plate, dies carried by said plate, a directrix, and an impression pin, said dies and pin having freedom to yield laterally at their engaging ends, whereby the dies may be accurately aligned and seated upon the mould, substantially as described. 27th. The combination, with a two-part mould, of an aligning plate in front of the mould, dies and an impression pin for seating said dies upon the front of the mould, means for clamping the mould sections together, a melting pot having a nipple, and means for moving the melting pot to close the rear end of the mould, substantially as described. 28th. In a type casting and composing machine, a mould, the upper and lower sections of which are connected with sufficient freedom for slight relative movement, the sliding section arranged between said upper and lower sections, and means for clamping the upper and lower sections on the sliding section, substantially as described. 29th. In a type casting and composing machine, the mould having upper and lower sections arranged for slight relative movement, a horizontally sliding section between said sections and adjustable to vary the mould opening, a vertically sliding section arranged to open and close one side of the mould, levers pivoted on the main frame and arranged to bear upon the mould sections to clamp all of said sections, a power shaft and connections from the power shaft for operating said clamping levers, substantially as described. 30th. In a type casting machine, the combination with the mould, and a die and nipple movable toward and from opposite ends of said mould, of levers adapted to bear respectively upon the die and nipple to close the mould, connections between said levers whereby the pressures upon the die and nipple are equalized, and means for operating said connections, substantially as described. 31st. In a type casting machine, the combination with the mould, and a die and melting pot movable toward and from opposite ends of said mould, of levers adapted to bear respectively upon the die and melting pot to close the mould, toggle arms connecting said levers, and means for operating the toggle arms whereby the pressures upon the front and rear of the mould are equalized, substantially as described. 32nd. In a type casting machine, the melting pot and pump, and the pump operating rod, in combination with a pawl for engaging the pump rod to move it in one direction, means for moving it in the opposite direction, and means for releasing the rod from the pawl at a determined point in the travel of the pawl, substantially as described. 33rd. In a type casting machine, the melting pot and pump, and the pump operating rod, in combination with a power shaft, a lever operated by the shaft, a pawl carried by the lever and arranged to raise the pump rod, a rod extending from the pawl to the power shaft, and means for engaging said rod with the shaft at a determined point in the movement of the pump rod whereby the pawl is disengaged from said pump rod, substantially as described. 34th. In a type casting machine, the melting pot revoluble upon a hollow standard and having its pump operating rod extending through said standard whereby the nipple may be thrown back from the mould without disconnecting the pump rod from its operating mechanism.

No. 48,698. Dredging Apparatus. (*Appareil de dragage.*)

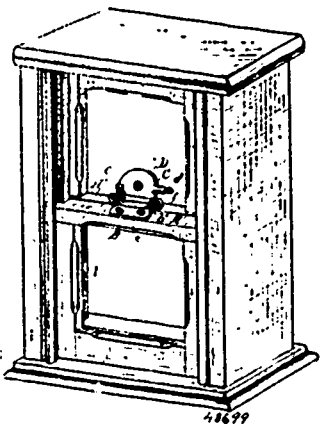
Christopher Gullmann, New York, State of New York, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. The combination with the suction-pipe 18, of an oscillating scraper for moving the material to the entrance of the suction-pipe, and mechanism for oscillating the scraper to and from the suction-pipe, substantially as described. 2nd. The combination with a suction pipe 18 of a scraper and a grapple, and mechanism for imparting to the scraper and grapple a reciprocating and a rising and falling motion, substantially as described. 3rd. In a dredging apparatus, the combination with a suction-pipe, of a pivoted swinging crane, mechanism for swinging the crane vertically, a shank pivotally connected with the crane, carrying a scraper and a grapple and movable to and from the suction-pipe for causing the scraper to move the material to the entrance of the suction-pipe, and means for moving the shank and operating the grapple, substantially as described. 4th. In a dredging apparatus, the combination of a pivoted swinging crane, mechanism for swinging the crane vertically and also laterally, a shank pivoted to the crane and carrying at its lower end a scraper and a grapple, a slide pivoted to the shank and having a sliding engagement with the crane, and means for operating the grapple, substantially as described. 5th. The combination with a suction-pipe 18, of a pivoted swinging crane, a shank connected with the crane and provided at its lower end with a scraper 22 for moving the material to the entrance of the



suction-pipe, and means for swinging the crane and oscillating the shank, substantially as described.

No. 48,699. Sash Fastener. (*Arrête-croisée.*)



James Burgess Morgan, Davenport, Iowa, U.S.A., 20th April, 1895; 6 years.

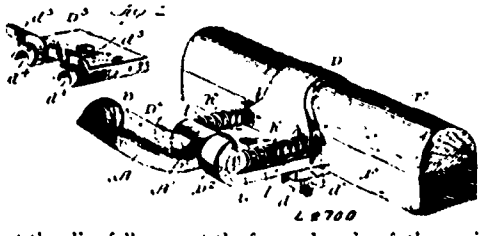
Claim.—1st. In a sash fastener, the combination, with the plate B, provided with an upwardly-projecting flange having a convex front face, of the rearwardly inclined plate C, and a catch pivoted to the plate C, and adapted to engage with the said flange, whereby the sash rails are drawn together, substantially as set forth. 2nd. In a sash fastener, the combination, with the plate B, provided with an upwardly-projecting flange having a convex face, of the rearwardly-inclined plate C, and a catch pivoted to the plate C and provided with a projecting thumb piece for operating it and a can-shaped curved flange for engaging with the flange on the plate B, substantially as set forth. 3rd. In a sash fastener, the combination, with the plate B, provided with an upwardly-projecting flange b^1, having a convex face, of the rearwardly-inclined plate C, provided with the forwardly-projecting hook c^1, and the catch pivoted to the plate C, and provided with the hook-shaped flange engaging with the flange b^1, and the hook *f* engaging with the plate C, substantially as set forth.

No. 48,700. Thill-coupling. (*Armon de limonière.*)

James C. Walker, Alpena, Michigan, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. In a thill-coupling, the axle clip provided on its forward side with a lug having a pair of half bearings to receive the head of the thill iron, a cover or cap resting on the upper face of the lug, and also having half bearings registering with those on the clip and provided on its lower face with longitudinal grooves or channels, springs within said grooves, followers at the forward ends of the springs to engage the head of the thill iron, and means for securing the cover to the lug, substantially as set forth. 2nd. In a thill-coupling, the axle clip formed with a forwardly projecting lug having a pair of upwardly extending half bearings at its front end to receive the head of a thill iron, a cover or cap resting on the

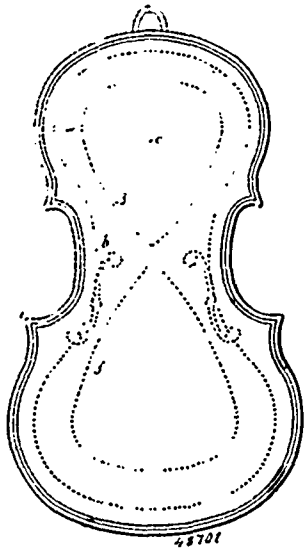
upper face of the lug, provided at its outer end with half bearings registering with those of the lug and formed in its lower face with grooves extending from said half bearings to its rear end, spiral or other springs mounted in said grooves with their rear ends resting



against the clip, followers at the forward ends of the springs, and pressed thereby against the rear end of the thill iron, and means for securing the cap or cover to the lug, substantially as set forth. 3rd. A thill-coupling, consisting in the thill iron having a cylindrical cross-head, an axle clip provided with a forwardly extending lug having a pair of upwardly projecting half bearings receiving said cross-head, a cap or cover resting on the upper face of the lug and formed with half bearings registering with those on the lug, longitudinal grooves being formed between the adjacent faces of the cap and lug in line with said bearings, spiral springs in said grooves, followers having stems entering the forward ends of said springs and a bolt securing the cap and lug together, substantially as set forth.

No. 48,701. Stringed Instrument.

(*Instruments de musique à cordes.*)

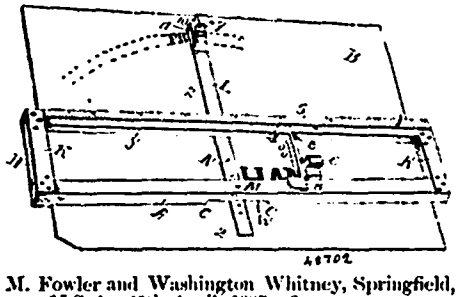


William Hill Howe, Watertown, Massachusetts, U.S.A., 20th April, 1895; 6 years.

Claim.—The top or back of a violin, or other instrument of the viol family, graduated radially from two established centres, one at or near the centre of the upper bouts or lobe, and the other at or near the centre of the lower bouts or lobe, substantially as described.

No. 48,702. Hand Printing Device.

(*Appareil à imprimer à main.*)

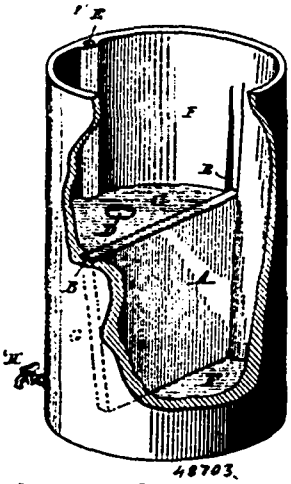


Charles M. Fowler and Washington Whitney, Springfield, Massachusetts, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. A printing device for use with hand-printing types, consisting essentially of a rectangular frame, one of the side-bars thereof being provided with an index, and a swinging type-holder and spacer pivoted to the opposite bar and extending across the index bar, substantially as described. 2nd. A printing device for use with hand-printing type, consisting of a rectangular frame having side-bars, one of which normally rests upon the paper printed upon, while the opposing side-bar is elevated normally above the surface of said paper, combined with a type-guide and spacer having its sides at a right angle to the side-bar of said frame extending between said side-bars and having a sliding movement therein whereby the types held thereagainst are spaced, the edge of said type-guide adjacent to the paper printed upon being normally above the surface thereof, substantially as set forth. 3rd. A printing device for use with hand-printing type, consisting of a rectangular frame, a graduated rule on the upper surface of one of the side-bars of said frame, having one of its bars normally above the plane of the paper on which it rests combined with a type-guide and spacer extending between the side-bars, and having at its sides at a right angle thereto having a sliding movement therein, whereby the types are spaced, and having spaces for supporting type which are at right angles to the line of movement thereof in said frame, substantially as set forth. 4th. A printing device for use with hand-printing type, consisting of a rectangular frame having side-bars, one of which normally rests upon the paper printed upon, while the opposite side-bar is elevated normally above the surface of said paper and a guide-strip at the end of said frame to bear against the edge of said paper, combined with a type-guide and spacer extending between said side-bars and having a sliding movement therein whereby the types held thereagainst are spaced, the edge of said type-guide adjacent to the paper printed upon being normally above the surface thereof, substantially as set forth. 5th. A printing device for use with hand-printing type for printing parallel straight lines, consisting of a rectangular frame having side-bars, A and Y, the bar A, normally resting upon the paper printed upon, while the opposite side-bar Y, is elevated normally above the surface of said paper, combined with a type-guide and spacer extending between said side-bars having a sliding movement therein whereby the type are guided in straight lines and spaced, and a swinging type-holder and spacer L, for printing in curved lines, pivotally engaging with said frame and having on its free end a type-holding socket 10, substantially as set forth. 6th. A printing device for use with hand-printing type, consisting of a rectangular frame, a type-guide and spacer extending between the side-bars of said frame, having a sliding movement therein, whereby the type are spaced, and having faces for supporting type which are at right angles to the line of movement thereof in said frame, the end 7, of said type-guide being bevelled and extended beyond that of the opposite end of the guide, and having the letter-spacing lines x, thereon, combined and operating substantially as set forth.

No. 48,703. Water Cooler and Filter.

(*Fontaine et filtre.*)



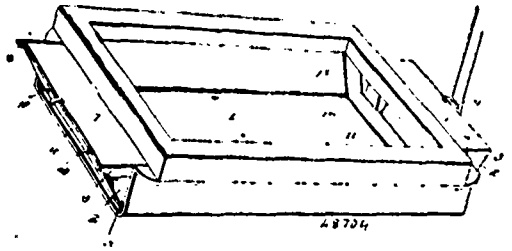
Joseph Jackson, Davenport, Kansas City, Missouri, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. A combined water cooler and filter having separate storage compartments in one of which is placed the ice and unfiltered water, and in the other is gathered the cooled, filtered water, and a vertically arranged mass of filtering material which forms, in whole or in part, the separation between the compartments. 2nd. A combined cooler and filter having separate storage compartments, in one of which is placed the ice and unfiltered water, and in the other is gathered the cooled, filtered water, and a vertically arranged mass of filtering material which forms, in whole or in part, the separation between the compartments and an ice-supporting shelf in the first of said compartments to hold the ice. 3rd. A combined cooler and filter having separate storage compartments, in one of which is placed the ice and unfiltered water, and in the other is gathered the

cooled, filtered water, and a vertically arranged slab of filtering stone forming in whole or in part the separation between the compartments and having a smooth, vertical side facing the compartment containing the unfiltered water, whereby sediment collecting on the side of the stone readily falls therefrom to the bottom of the vessel.

No. 48,704. Ventilator for Locomotive Ash-Pans.

(*Ventilateur pour cendriers de locomotives.*)

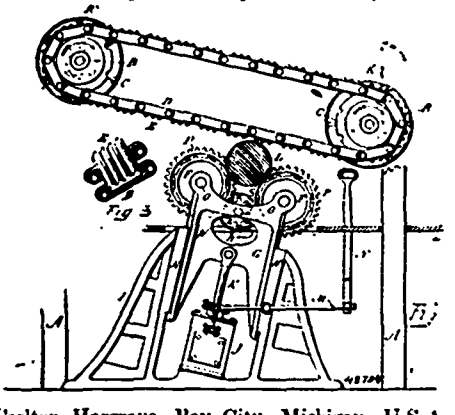


Ellis Hamer Marshall, Fort Madison, Iowa, U. S. A., 20th April, 1895; 6 years.

Claim.—1st. The combination with an ash-pan of a hood fitting in the open end thereof and having an imperforate front or outer side adapted to rest at its lower edge upon the floor of said pan, and having a perforate upper side, and a pivotal cap or cover arranged to close said perforate side of the hood, substantially as specified. 2nd. The combination with an ash-pan, of a hood pivoted in the open end thereof and having a perforate and an imperforate side, a pivotal cap or cover to close the perforate side of the hood, and a pivot-pin forming the common pivot of said hood and cap or cover, substantially as specified. 3rd. The combination of an ash-pan provided adjacent to its open end with bevelled stops, a hood having triangular end-plates arranged contiguous to the side-walls of the ash-pan, an imperforate front plate and a wire-gauze guard, a pivot-pin extending through the side-walls of the ash-pan and the inner angles of the said end-plates, and a cap or cover provided with terminal depending ears fulcrumed upon said pivot-pin between the end-plates and the side-walls of the pan, said cap or cover and hood being provided with lugs, substantially as specified.

No. 48,705. Rossing Machine.

(*Machine pour décortiquer les billots.*)



Edward Carlton Hargrave, Bay City, Michigan, U.S.A., 20th April, 1895; 6 years.

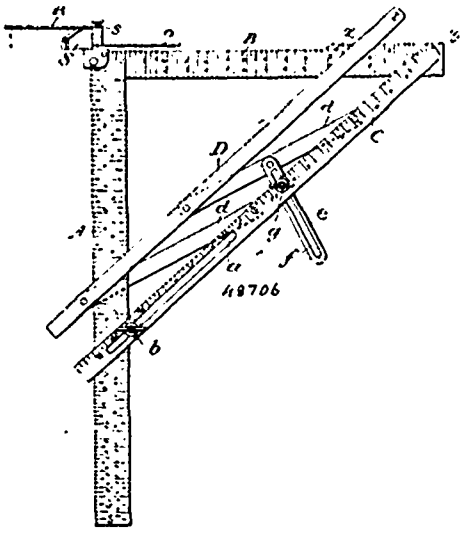
Claim.—1st. In a rossing machine, the combination with a series of endless chains carrying blunt scraping or grinding teeth and means for imparting motion to said chains, of means for supporting a log in contact with said chains, substantially as shown and described. 2nd. In a machine for removing bark from logs, the combination with a series of endless chains carrying blunt scraping or grinding teeth, of means for rotating said chains alternately, and means for supporting a log in contact with said chains, substantially as shown and described. 3rd. In a rossing machine, the combination with a series of endless chains carrying blunt scraping or grinding teeth, and means for imparting motion to said chains, of means for supporting a log in contact with said chains, and means substantially as described for rotating the log while in contact with said chains, substantially as described.

No. 48,706. Roof Framing Tool.

(*Outil pour la construction des toitures.*)

John Parkhill, Rochester, Minnesota, U.S.A., 20th April, 1895; 6 years.

Claim.—1st. A device for ascertaining the side cut of rafters comprising a rule or bar adapted to have its edge placed on the plumb cut of the said rafter, and a swinging finger pivotally attached in line with the edge thereof, to swing in a plane parallel with the length of the said rule or bar and at an angle to the width thereof,



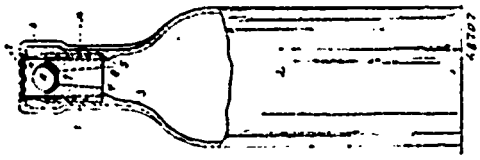
substantially as and for the purpose set forth. 2nd. A device for ascertaining the side cut of rafters comprising a rule or bar to be placed on a plumb cut of said rafters, a finger pivotally connected with the said bar at substantially its edge, and swinging in a plane parallel with the length of the said bar and at an angle to the width thereof, and an indicator plate connected with the said finger, substantially as set forth. 3rd. A device for indicating the side cut of rafters comprising a rule or bar which is placed on the plumb cut thereof, an indicator plate pivoted in a line with the edge of said bar and adapted to swing at right angles to its length, and a finger pivotally connected with the said indicator plate to swing at right angles to the swing of said indicator plate, substantially as set forth. 4th. A device for indicating the side cut of rafters comprising a rule or bar adapted to have its edge placed on the plumb cut of the rafter, an indicator plate pivoted to the said bar, to swing at right angles to its length, the said plate having indicating lines marked from a common centre thereof, and fingers pivotally connected with the said plate at opposite sides of the pivotal point and adapted to swing in a plane at right angles to the said plate, substantially as described. 5th. A roofing tool, comprising a square, a blade having one end pivoted to one part of the said square and adapted to be adjustably connected with the other part of the said square to indicate the pitch of the roof, and a side bevel marker pivoted to the said square at the junction of the two parts thereof, and substantially in a line with the edge of one of said parts, substantially as shown and described. 6th. A roofing tool, comprising a square, a blade having one end pivotally connected to one part of the square and its opposite end adapted to be adjustably connected with the other parts of the square, a device for indicating a side cut of the rafters pivoted to the square at the junction of the two parts, and in a line with one edge of one part, and swinging in planes at angles to the length of the said square, substantially as specified. 7th. A roofing tool, comprising a square, a blade having one end pivoted to one part of the square, a bar adjustably held parallel with the said blade, and a device for indicating the side cut of the rafter pivoted at the junction of the two parts of the square and in a line with the edge of one part, the said device swinging in planes at angles to the face of the said square, substantially as specified. 8th. A roofing tool, comprising an L-shaped rule one part thereof having an inner and an outer pivotal point, the distance of the inner pivotal point from the apex of the square or rule being equal to the side of the square of which the distance of the outer pivotal point to the apex is equal to the diagonal of each square and a blade or bar pivoted at one of said points and figured and described as shown.

No. 48,707. Bottle. (*Bouteille.*)

Emil Gustav Hermann Stein, and Charles Foster, both of New York, State of New York, U.S.A., 20th April, 1895; 6 years.

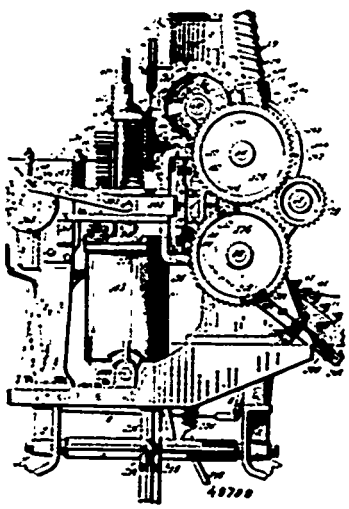
Claim.—1st. A bottle provided with an annular groove or recess, a tubular section securely held in said groove, the upper extremity of the bore of said section being provided with a valve seat, a valve adapted to be seated thereon, a plate inserted in said section to approximately close the bottle mouth, and means for permitting the discharge of the fluid contained in said bottle without removing said plate, substantially as shown and described. 2nd. A bottle having a plurality of exterior corrugations or grooves, and provided with an automatic valve in the neck thereof, a non-removable plate

which prevents the removal of said valve, and means for permitting the discharge of the contents of the bottle without removing the plate, substantially as shown and described. 3rd. A bottle having an annular recess formed in its neck and provided with a cylindrical tubular section located in said neck thereof, and held in position by a coating or casing of cork fitting in said recess, the bore of said tubular section being provided at the top thereof with a valve seat,



a valve adapted to be seated thereon, and a plate having prongs thereon inserted in the tubular section above the valve, substantially as shown and described. 4th. The combination, with the neck of a bottle, of a tubular section located therein, and held in position by a casing of cork, consisting of two semi-circular sections, the central bore of the tubular section being provided with a valve seat at the top thereof, a valve adapted to be seated thereon, and a stopper or cover by which the movement of said valve is limited, and means for permitting the outflow of the contents of the bottle around said stopper, substantially as shown and described. 5th. The combination of a bottle, the neck of which is provided with an annular chamber located therein, and the upper inner surface of the discharge orifice with corrugations or grooves, of a tubular section held in position by a casing of cork fitting within said chamber, a valve adapted to be seated on a valve seat formed in the upper end of said tubular section, and a plate provided with downwardly depending prongs having serrated edges adapted to be forced into or in contact with the cork casing or covering, substantially as shown and described. 6th. A bottle having a tubular section located in the neck thereof, and provided with a valve seat at the upper end of its central bore, a valve adapted to be seated on said seat, a stopper or covering by which the movement of the valve is limited means for permitting the discharge of the liquid contents of the bottle around said stopper, and the neck of the bottle being provided with vertical or longitudinal corrugations or grooves, substantially as shown and described. 7th. A bottle provided with a valve and valve seat in the neck thereof, a stopper or cover for limiting the movement of said valve, and means for permitting the discharge of the liquid contents of the bottle around said stopper or cover, substantially as shown and described.

No. 48,706. Machine for Producing Type High Printing-Bars. (*Machine pour fabriquer les barres de caractères à imprimer.*)

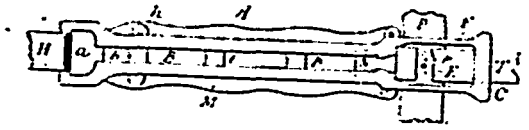


The Fowler Composing and Type Setting Company, Chicago, Illinois, assignee of Joseph Charles Fowler, New York, State of New York, all in the U.S.A., 20th April, 1895; 6 years.

Claim.—1st. The method herein described of preparing matrix material to produce cast printing-bars, which consists in shaving the matrix material to form a smooth impression surface and impressing the type-characters thereinto. 2nd. The combination of a matrix-holder, and means for impressing a line of assembled type-characters into the matrix material, with a shaving-knife for shaving the matrix material to form a smooth impression surface, substantially as described. 3rd. The combination of a matrix-block holder, means for advancing the matrix-block, lock-up devices for holding the matrix block stationary on the holder, means for operating the lock-up devices, and a knife for shaving the matrix-block to form a smooth impression surface, substantially as described. 4th. The combination of a matrix-block holder, a lock-up jaw for the matrix-block, means for operating the lock-up jaw, means for intermittently advancing the matrix-block, and a knife for intermittently shaving the outer end of the matrix-block, substantially as described. 5th. The combination in an organized machine for producing type-bars from impressed lines of matrices, of a magazine having separate cells for circulating type-plates, a carrier or holder having a line-assembling channel or space, key mechanism for individually releasing the circulating type-plates from the magazine cells, a carrier or holder for matrix material, means for causing the line of type-plates to indent the matrix material to form a line of matrices, casting mechanism for casting a type-bar from the said matrices, and mechanism in operative connection with the line-assembling channel or space for removing the type-plates therefrom and returning them to their proper cells in the magazine, substantially as described. 6th. The combination, with a drum or holder for holding a bar of soft metal or other material, of a rotatable carrier for carrying a line of cameo-type which is rolled against the said bar to impress the letters or characters of the cameo-type thereinto to form matrices, and casting mechanism arranged in operative connection with the said drum or holder for casting a type-bar from or on the said matrices, substantially as described. 7th. The combination, with a drum or holder having a chamber for containing a bar of soft metal or other material, of a carrier having a line-channel containing a line of cameo-type which impress or indent the soft metal or other bar by a rolling action to form matrices, and casting mechanism for casting a type-bar from or on said matrices, substantially as described. 8th. The combination of a rotary matrix block-holder, lock-up devices for holding and releasing a matrix-block mounted on the holder, means for advancing the matrix-block on the holder, a knife for shaving the outer end of the matrix-block, and a rotatable line carrier adapted to carry a line of cameo-type which is rolled against the shaved face of the matrix-block to impress the letters or characters of the type thereinto and form a line of matrices, substantially as described. 9th. The combination of a matrix-block holder, lock-up devices for holding and releasing a matrix-block mounted on the holder, mechanism for advancing the matrix-block at intervals on the holder, means for operating the lock-up devices, a knife for shaving the outer end of the matrix-block, a line-carrier adapted to carry a line of cameo-type which is impressed into the shaved face of the matrix-block to form a line of matrices, and casting mechanism arranged in operative relation to the matrix-block holder for casting a type-bar from or by the said line of matrices, substantially as described. 10th. The combination of a matrix-block holder, lock-up devices for holding and releasing a matrix-block mounted on the holder, means for operating the lock-up devices, mechanism for intermittently feeding the matrix-block, means for shaving the outer end of the matrix-block, a line-carrier, mechanism for assembling type in the line-carrier, and casting mechanism for casting a type-bar from or by a line of matrices impressed into the shaved face of the matrix-block, substantially as described. 11th. In a machine for producing type-bars, the combination with a magazine for containing type-plates, of a rotating carrier having assembling channels adapted to receive and retain a series of said type-plates, one of the carrier-heads being provided with entrance-chutes leading to one end of said channels and the other carrier-head having exit-channels leading from the other end of the assembling channels, substantially as described. 12th. In a machine for producing type-bars, the combination with a magazine for containing type-plates, of a rotary-carrier having assembling channels adapted to receive and retain a series of said type-plates, a matrix-blank holder, mechanism for intermittently rotating said carrier and matrix-blank holder in unison, and means for releasing the type-plates from the cells of the magazine, substantially as described. 13th. In a machine for producing type-bars, the combination with a revoluble carrier having entrance chutes in one head or end exit-channels in the other end and provided with longitudinal channells which communicate at one end with said chutes and at the other end with said exit-channels, of a magazine, means for delivering the type-plates therefrom into one of said entrance chutes from which said type-plates pass into one of the longitudinal channels, distributing mechanism for removing the type-plates from the longitudinal channel, and means for intermittently revolving said carrier to bring each of the longitudinal channels alternately into position for receiving and for discharging said type-plates, substantially as described. 14th. In a machine for producing type-bars, the combination with a magazine for storing type-plates, of a carrier capable of intermittent revolution and having one of its heads provided with entrance-chutes and the other with exit-channels which communicate with the opposite ends respectively, of longitudinal channels adapted to receive a series of type-plates, a composing-stick, means for releasing the type-plates from the magazine into one of the entrance chutes, a distribution disc to withdraw the type-plates through one of the exit-channels, and mechanism for giving a partial revolution to said carrier in order to bring its longitudinal channels into position to receive type-plates in one, while a line of said plates is withdrawn from the other channel, substantially as described. 15th. In a machine for producing type-bars, the combination with a magazine for containing type-plates, of means for releasing the latter in the required order, a carrier having in one head entrance-chutes adapted to receive and guide said type-plates to one end of longitudinal line-channels in said carrier, type-plate feeding devices, a composing-

stick for each line-channel, and a distribution-disc having pins, or fingers, which engage the type-plates successively and withdraw them from one of said line-channels through exit-channels in the other head of the carrier, substantially as described. 16th. A type-distributing magazine, consisting of a plurality of removable and replaceable type-cases or channels, each of which is composed of a plate 21 having vertical ribs 22 provided with two grooves located at opposite sides of said plate, whereby each type-case is adapted to carry two distinct or separate sets of type-characters, substantially as described. 17th. In a type-distributing mechanism, the combination of a permutation-bar, with a movable-carrier having a series of sets of oscillatory hooks adapted to engage and suspend types and to be acted on by parts of the permutation-bar to release the types over the proper type cases or channels. 18th. In a type-distributing mechanism, the combination of a bar having pins or projections the linear arrangement of which is varied to produce a permutation-bar, with a rotary carrier having a series of sets of type-suspending devices adapted to engage and suspend types and to be acted on by the permutation pins or projections to release the types over the proper type-cases or channels. 19th. In a type-distributing mechanism, the combination of a bar having pins or projections the linear arrangement of which is varied to produce a permutation-bar, with a rotary-carrier having a series of sets of oscillatory hooks, and types having slotted ends with which the hooks are adapted to engage to suspend the types, substantially as and for the purpose described. 20th. The combination of a rotary matrix-block holder, lock-up devices for holding and releasing a matrix-block mounted on the holder, means for intermittently advancing the matrix block, means for shaving the outer end of the matrix-block, a rotatable line-carrier adapted to carry a line of cameo-type which is rolled against the shaved face of the matrix-block to impress the letters or characters of the type thereinto and form a line of matrices, and casting mechanism arranged in operative connection with the matrix-block holder for casting a type-bar from or by said line of matrices, substantially as described. 21st. The combination of a matrix-block holder, lock-up devices for holding and releasing a matrix-block mounted on the holder, mechanism for advancing the matrix-block at intervals on the holder, means for operating the lock-up devices, a knife for shaving the outer end of the matrix-block, and a line-carrier adapted to carry a line of cameo-type which is impressed into the shaved face of the matrix-block to form a line of matrices, substantially as described.

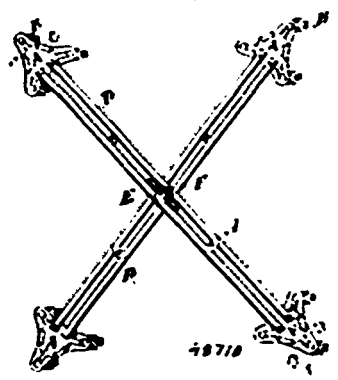
No. 48,709. Trace Buckle for Harness.
(*Boucle de trait.*)



William Hogie Smith, Dresden, Ontario, Canada, 22nd April, 1895; 6 years.

Claim.—In a trace buckle, the combination with the plate A adapted to be secured to the hame tug, having a series of slots B, bars *b* separating the said slots, shoulders D, formed on the back of the said plate, of a T-shaped metal N, secured to the end of the trace and adapted to pass through one of the said slots in the said plate and be engaged by one of the said shoulders D, substantially as set forth. 2nd. In a trace buckle, the combination with the slotted plate A, having loops *a*, and lugs *b*, of a depressed portion having raised slotted sides F, a pin E, and loop L, substantially as set forth.

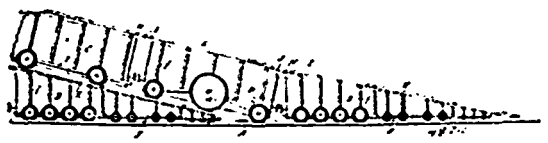
No. 48,710. Truck. (*Camion.*)



Charles Kynoch, St. Ignace, Michigan, U.S.A., 22nd April, 1895; 6 years.

Claim. A truck, consisting of four independent feet, each mounted on a roller U-shaped bars each having its outer open end rigidly attached to one of the feet, and a single clamping bolt passing through all the U-shaped bars, substantially as and for the purposes described.

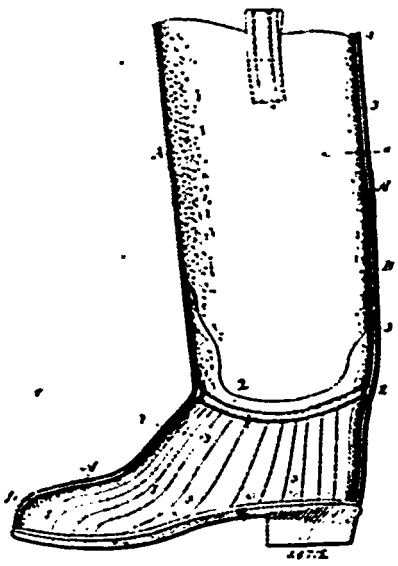
No. 48,711. Railroad Train. (*Train de chemin de fer.*)



Henry L. Simmons, Wickes, Montana, U.S.A., 22nd April, 1895; 6 years.

Claim. 1st. A railroad train provided with rails supported above the train and having inclined end portions, said rails being of the same guage as the main rails and provided with vertically and horizontally vibrating joints and longitudinally-sliding joints, substantially as and for the purpose set forth. 2nd. An end car for a railroad train provided with a supporting framework carried by the axles and consisting of rigid bars and springs, and inclined rails, of the same guage as the main rails, carried by the said framework, and provided with vertically-vibrating joints, substantially as and for the purpose set forth. 3rd. An end car for a railroad train provided with a supporting frame work carried by the axles and consisting of rigid bars and springs, inclined rails carried by the said frame-work, and means for adjusting the inclination of the portions of the said inclined rails which are carried by the said springs, substantially as set forth. 4th. The combination, with the stationary main rails A, of two trains provided with rails E, of the same guage as the main rails, supported above the trains and having inclined front and rear end portions and means for adjusting the height of the said end portions above the rails A, whereby one train may raise and pass over the other, substantially as set forth.

No. 48,712. Boot and Shoe. (*Chaussure.*)



Samuel Annenberg, Naugatuck, Connecticut, U.S.A., 22nd April, 1895; 6 years.

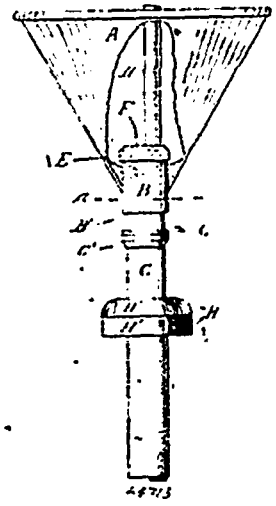
Claim.—A boot or shoe formed of rubber or other suitable material and consisting of an upper and a lining, the two stitched or suitably united together, forming between said upper and lining a circular compartment around the ankle portion of said boot, a series of compartments connected with and extending from said circular compartment to the sole of the boot, a supply tube connected with and extending from the circular compartment to the top of the boot and provided with a covering, the whole arranged to permit of the boot being inflated with air or suitable head retaining liquid.

No. 48,713. Funnel. (*Entonnoir.*)

Harvey Isaiah Keiner, Wilkesbarre, Pennsylvania, U.S.A., 22nd April, 1895; 6 years.

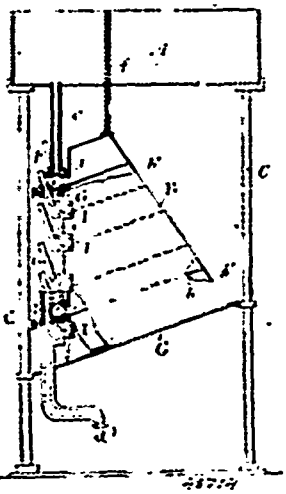
Claim.—1st. A funnel consisting of a bowl, a tubular valve sliding therein and adapted to close the bottom of the bowl, an air-tube secured within the tubular valve, and a flat elastic stopper frictionally and adjustably secured upon the outside of the said valve, substantially as shown and described. 2nd. A funnel consisting of a bowl, a tubular valve sliding therein and adapted to close the bottom of the bowl, an air-tube within the valve, a flat elastic stopper upon

the outside of the valve adapted to rest upon the neck of a bottle, and adjustable thereon and a collar and gasket above the stopper to limit the movement of the valve, substantially as shown and described. 3rd. In combination with a funnel, a movable tube sliding vertically upon the body thereof, and having an elastic stopper with a flat under surface frictionally and adjustably secured and adapted



to fit the mouth of the bottle, substantially as described. 4th. In combination with a funnel, a tubular valve, having a collar and gasket thereon adapted to limit its movement, and a stopper beneath the same to make an air-tight connection between the funnel and a bottle, substantially as described. 5th. A funnel consisting of a body having a sleeve, a tubular valve loosely fitted to the sleeve and provided with openings for the passage of the liquid, a collar and gasket upon the valve tube adapted to limit its movement within the sleeve, an air-tube within the valve tube and extending therethrough and an elastic stopper adjustably and frictionally secured upon the tube, substantially as described. 6th. In combination with a funnel having a tube, an elastic stopper comprising a lower section of soft rubber adapted to seal a bottle, and an upper section of harder rubber, substantially as described.

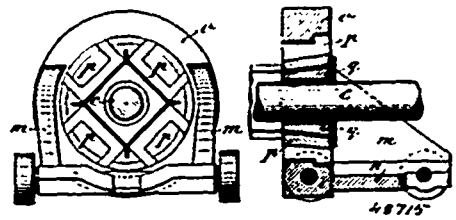
No. 48,714. Liquid Measure. (*Mesure pour liquides.*)



Fred E. Lovejoy, Portland, Maine, U.S.A., 22nd April, 1895; 6 years.

Claim.—1st. The herein described automatic liquid measure consisting of a supply tank, a measuring tank having inclined diaphragms dividing it into chambers one above the other, a vertical pipe G, adjacent to the measuring tank and a discharge pipe D, extending along side of the pipe G, the said pipe G being provided with openings extending laterally through it, each connecting with one of said chambers and said discharge pipe D, a three-way cock at each of said openings except the top one for controlling the same, and the vertical openings in the pipe G, a straight-way cock at the outlet of the upper chamber, a supply pipe connecting the upper end of the pipe G with the supply tank and means for venting said chamber. 2nd. The herein described automatic liquid measure consisting of a supply tank, a measuring tank having inclined diaphragms dividing it into chambers one above the other, a vertical pipe G, adjacent to the measuring tank and a discharge pipe D extending along side of the pipe G, the said pipe G being provided with openings extending laterally through it, each connecting with one of said chambers and said discharge pipe D, a three-way cock at each of said openings except the top one for controlling the same and the vertical openings in the pipe G, a straight-way cock at the outlet of the upper chamber, a supply pipe connecting the upper end of the pipe G with the supply tank, *a vent pipe connected with the highest* point of said measuring tank and venting openings in the tops of each of said chambers.

No. 48,715. Process and apparatus for Making Seamless Hollow or Tubular Bodies with Ribs or Flanges. (*Procédé et appareil pour fabriquer des objets sans coutures.*)

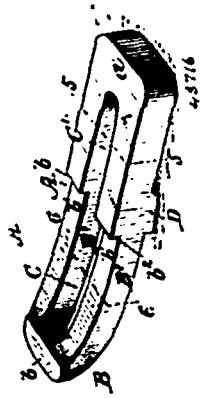


Oscar Fridrich and Wilhelm Schulte, both of Duisburger Eisen and Stahlwerke, Duisburg, Rhine Province, Prussia, in the Empire of Germany, 22nd April, 1895; 12 years.

Claim.—1st. The combined process of making seamless box-shaped beams, bearers and columns, with longitudinal strengthening and stiffening ribs or flanges, consisting of, first, preparing a hollow body of malleable metal with rudimentary longitudinal projections to form the strengthening ribs or flanges; second, flattening and extending lengthwise the said hollow body by rolling, or under a steam hammer; third, opening out the end of such flattened and extended hollow body; fourth, fixing such opened out end in a travelling carriage running on a draw-bench; and fifth, opening out, shaping, compressing and smoothing the article by drawing the same simultaneously over a fixed mandrel and through a fixed draw plate, substantially as herein set forth. 2nd. In making seamless box-shaped beams, bearers and columns, by the process herein described, a draw-bench having a fixed mandrel, a fixed draw plate, and a travelling carriage, to which latter one end of the work is fixed, such mandrel head being pointed at its front end so as to open the flattened hollow body, and both mandrel head and draw plate being of such forms as to bring the material to the desired shape by first distributing it sideways and then finally compressing and smoothing the same, substantially as herein set forth. 3rd. The manufacture of seamless box-shaped beams, bearers and columns, by the process herein described, in a draw-bench having a draw plate consisting of a solid outer frame provided with trunnions mounted in bearings in the draw-bench, and having a conical aperture, draw-plate sections fitting such conical aperture, and spaces between the sections to form the longitudinal strengthening flanges or ribs, such sections being fixed securely in position by simply tightening the draw chain on the work, substantially as herein set forth. 4th. In a draw-bench employed in conducting the process herein described, a device for fixing and holding the work consisting of a frame connected to a carriage, internally coned clamping pieces inserted in such frame and fitting around the conical enlargement of the work, and a divided conical ring fitted inside said enlargement, the work and said conical parts being securely held in position in the carriage on motion being given to the latter, substantially as herein set forth. 5th. In a draw-bench employed in conducting the process herein described, the combination of a draw plate constructed as herein described, with a device for fixing and holding the work consisting of a divided pedestal, a divided ring fitting within such divided pedestal and surrounding the opened end of the piece to be drawn, a ring inserted within the latter, and means for pressing the divided outer ring towards the inner ring, so as to grip firmly the work between them, substantially as herein set forth. 6th. In a draw-bench employed in conducting the process herein described, the combination of a draw plate constructed as herein described, with a mandrel head consisting of a fixed opening joint, a fixed collar at the rear of such fixed joint, a loose circular anvil passed over the joint and fitting against such collar, and loose expander sections fitting around the neck of the head between the joint and the anvil, whereby the form of the mandrel head can be varied, substantially as herein set forth. 7th. In a draw-bench employed in conducting the process herein described, the peculiar construction of mandrel head and draw plate, each being formed with curved ribs parallel with the axis of the work and with plain finishing surfaces, the said ribs being gradually widened and flattened from front to rear, where they die off into the plain finishing surfaces, substantially as herein set forth and for the purpose stated.

No. 48,716. Car Coupling Link.

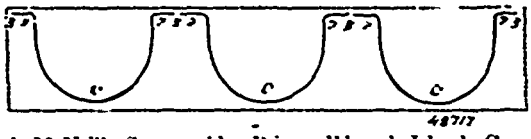
(*Maille pour attelage de chars.*)



John Clark Yeiser and William Thiele, Austin, Texas, U.S.A., 22nd April, 1895; 6 years.

Claim.—An improved coupling link comprising a body portion A, having foot members D on its under face, outwardly and upwardly extending side portions B^1, B^1, cut away as at b^7 to form handle members, said portions B^1, B^1 terminating in a draw portion at a point above the draw end of the body portion, substantially as and for the purposes described.

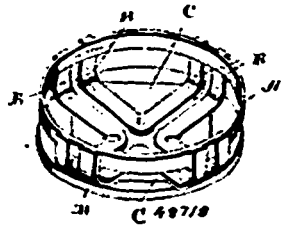
No. 48,717. Hat Rest. (*Porte-chapeau.*)



Joseph McNeill, Summerside, Prince Edward Island, Canada, 22nd April, 1895; 6 years.

Claim.—1st. In a hat rest, the combination of the rest B, D, C, with the back piece A, substantially as and for the purposes set forth. 2nd. In a hat rest, the combination of the standard B, the shoulder D, and the support C, substantially as and for the purposes set forth.

No. 48,718. Ice Creeper. (*Crampon de chaussure.*)



Herman Mayer, Bradford, Pennsylvania, U.S.A., 22nd April, 1895; 6 years.

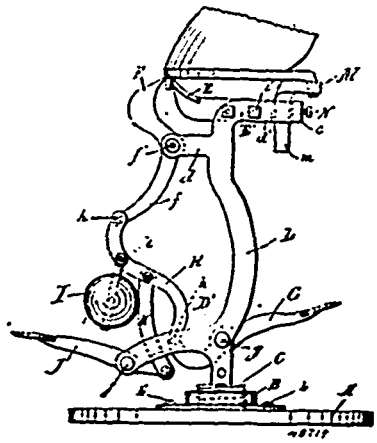
Claim.—1st. An improved ice creeper, comprising a securing device, a wearing surface sectioned by radial cuts, an elastic connection between the sections and a flexible connection between said surface and securing device, substantially as shown and described. 2nd. In an ice creeper, the combination of the securing band, radial strips B extended in pairs to the securing band, cross strips C secured centrally to the strips B and so arranged that the angular spaces formed by their ends intersect the strip pairs as shown, and a wearing surface secured to strip C, and cut radially to break with the spaces between the strips B, substantially as shown and described.

No. 48,719. Device for Shoeing Horses, Etc.

(*Appareil pour ferrer les chevaux, etc.*)

David Menard, St. Paul d'Abbotsford, Quebec, Canada, 22nd April, 1895; 6 years.

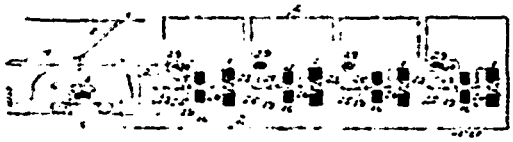
Claim.—1st. The combination, with the base plate, and the vertical frame supported thereby and provided with a stationary jaw at its upper part, of a pivoted jaw and a foot lever operatively connected together and carried by the said frame, and adapted to grip the toe calk of a horse shoe, and a support for the heel of the shoe carried by the said frame, substantially as set forth. 2nd. The combination, with the base plate, and the vertical frame supported thereby and provided with a stationary jaw at its upper part, of a pivoted jaw carried by the said frame and operating to grip the toe calk of a horse-shoe, two pivoted levers projecting in opposite directions,



and links pivotally connecting the said foot levers and pivoted jaw, substantially as set forth. 3rd. The combination, with the frame provided with a jaw and a socket behind the jaw, of a pivoted jaw for gripping the toe calk of a horse-shoe, and removable supporting devices for the heel of the shoe provided with shanks adapted to be dropped into the said socket, substantially as set forth.

No. 48,720. Electric Railway System.

(*Système de chemin de fer électrique.*)



John Cummings Henry, Westfield, New Jersey, U.S.A., 22nd April, 1895; 6 years.

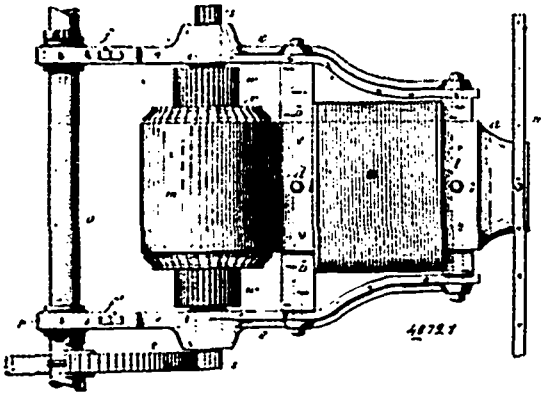
Claim.—1st. In an electric railway system having a stationary source of electricity and line conductors connected therewith, a train of cars having on one car means for effecting travelling contact with said conductors, a high-speed motor-generator thereon, having its motor shunt-wound and individual slow-speed series wound-motors on the several cars of the train, each adapted to be connected to its car's axles and all coupled in series with the generator of said motor generator, substantially as set forth. 2nd. In an electric railway system, in combination with a source of electricity, a train having on one car a motor generator connected with said source and having its motor shunt-wound, a separate series-wound motor on each car electrically connected in series with the generator armature of the motor generator, and adapted to be mechanically coupled with its car's axle, and manually operated means for varying the electro-motive force and quantity of current supplied by said generator, substantially as set forth. 3rd. In an electric railway system having a stationary source of electricity and line conductors connected therewith, a train of cars having on one car means for effecting travelling contact with said conductors, a constant high-speed motor generator having its field magnet coils common to both motor and generator and wound in shunt with its motor armature, and a train circuit including in series the generator armature, individual series-wound motors on the cars, (each adapted to be connected mechanically to its car's axle), and means for regulating the electro-motive force and quantity of current in said train circuit, substantially as set forth. 4th. In an electric system, the combination with a source of electricity, a plurality of motors connected therewith and an electric cut-out for one or more of said motors, comprising an electro-magnetic switch adapted to be operated by a variation of current between the motor terminals to open and leave open the circuit of the motor, substantially as set forth. 5th. In an electric railway system, the combination with a source of electricity, a plurality of motors connected therewith and an electric cut-out for one or more of said motors, comprising an electro magnetic switch adapted to be operated by a variation of current between the motor terminals and when open to close the circuit around the motor and open and leave open the circuit of the motor, substantially as set forth.

No. 48,721. Electric Motor. (*Moteur électrique.*)

John Cummings Henry, Westfield, New Jersey, U.S.A., 22nd April, 1895; 6 years.

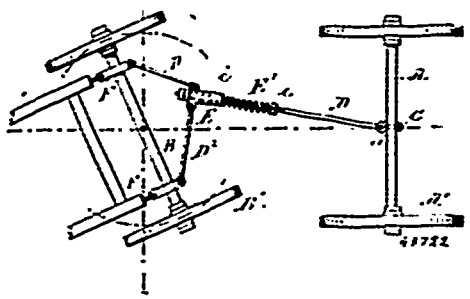
Claim.—1st. In combination with two complete motor circuits, a

switch having stationary contacts to which are attached the independent terminals of the armature and field coils, and connections movable with said switch and so arranged within such switch that each of the motor circuits can be placed in parallel or in series with the other or that one of them may be dropped from or added to the circuit. 2nd. A motor having two complete field and armature winds in combination with a switch so constructed as to cause one



armature winding to revolve under the influence of current in both field windings or to couple the complete motor windings in series or in parallel. 3rd. An ing having two complete field and armature windings in combination v. a single switch capable of placing both of the armature coils under the influence of current in a single field winding or of connecting said complete windings in series or in parallel. 4th. In a motor, the integrally formed field core and pole pieces, in combination with cross-bars dove-tailed into the same, substantially as set forth. 5th. The combination of the integrally formed field cores and pole-pieces and the supporting block dove-tailed to the same at the neutral point, substantially as set forth. 6th. The combination in a motor of the pole pieces *b*, the cross-bar or yoke *a*, at the neutral point having suitable suspending devices, side bars *c*, *c* hung on said yoke at one end and adapted to be hung on a car axle at the other, cross beam *b* for supporting the motor from said side bars, and an armature journalled in said side bars, substantially as set forth. 7th. The combination of the motor, its supporting side bars, having bearing for the armature shaft, and the cross-beam of non-magnetic material separating and supporting the magnet limbs from the side bars. 8th. In an electric railway the combination of a motor or motors mounted on a car having the field magnets and armature wound with separate parallel wires, suitable terminal connections, and a single switch capable of connecting said conductors in series or in parallel or for connecting or disconnecting any of them to or from the circuit.

No. 48,722. Anti-Cramp Device for Vehicles.
(*Appareil anti-frotteur pour voitures.*)

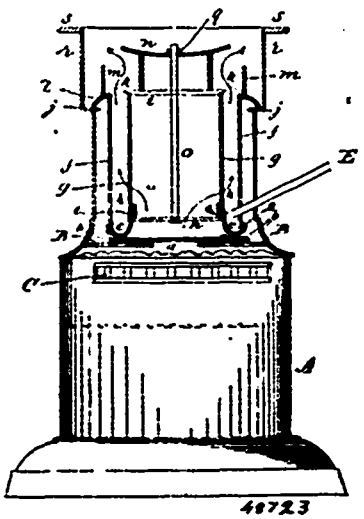


Luther Jerome Ewell, San Francisco, California, U.S.A., 22nd April, 1895; 6 years.

Claim.—1st. The combination with the axles, of the supplemental reach or coupling pole, and of the arms movably secured to the front axle and supplemental pole, said arms being located at an angle to said reach pole. 2nd. The combination with the front and rear axles, of the reach having one end pivotally connected with the rear axle at the centre of the same, and the divergent arms having their front ends pivotally connected with the front axle and their rear ends movably mounted on the reach. 3rd. The combination with the axles, of the reach having its rear end pivotally connected to the rear axle at the centre of the same the sleeve movably mounted on the front end of the reach, and the divergent arms having their front ends pivotally connected to the front axle and their rear ends pivoted to the said sleeve. 4th. The combination with the axles, of the reach pivoted to the rear axle at the centre of the same, the sleeve mounted on the reach, a stop on the front end of the reach to limit the forward movement of the sleeve, a spring secured to the sleeve and the reach to retract the sleeve, and divergent arms having their front ends pivoted to the front axle and their rear ends pivoted to the sleeve.

No. 48,723. Coal Oil Stove. (*Poêle à huile.*)

Fig 1.



Girdlestone Bond Izzard, Hamilton, Ontario, Canada, 22nd April, 1895; 6 years.

Claim. 1st. In a coal oil stove burner without wicks, a vapourizing pan formed with an annular groove for oil, and an annular ledge, and an inner and outer sheet metal perforated cylinder fitted thereon, an annular top having marginal openings, a ring for concentrating the flame, attached firmly or loosely to the said top, and a spreader for spreading the flame around the top portion of the drum, substantially as and for the purpose set forth. 2nd. In a coal oil stove without wicks, a burner consisting of the combination of a vapourizing pan D, outer perforated cylinder *f*, inner perforated cylinder *g*, top *i*, having its centre closed and marginal openings *k*, annular ring *m*, and flame spreader *n*, on the top *i*, with regulating draft damper C, all constructed substantially as and for the purpose specified. 3rd. In a coal oil burner without wicks, the combination of the disc *b*, *b*, vapourizing pan D, outer perforated cylinder *f*, inner perforated cylinder *g*, top *i*, provided with marginal openings *k*, annular ring *m*, spreader *n*, and slide damper C, so constructed as to allow the air to pass in at the said slide damper C, thence through the opening *a*, and up in the centre of the burner and out through the perforated cylinders to the spreader *n*, substantially as and for the purpose set forth.

No. 48,724. Rubber Garment. (*Vêtement de caoutchouc.*)

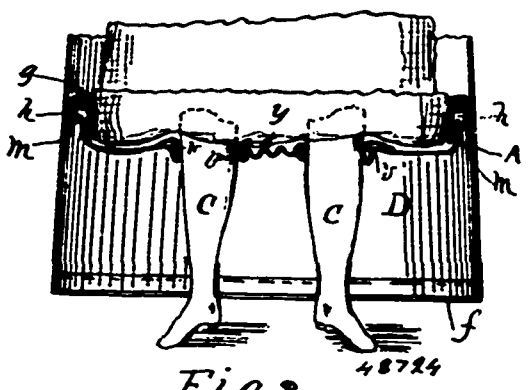
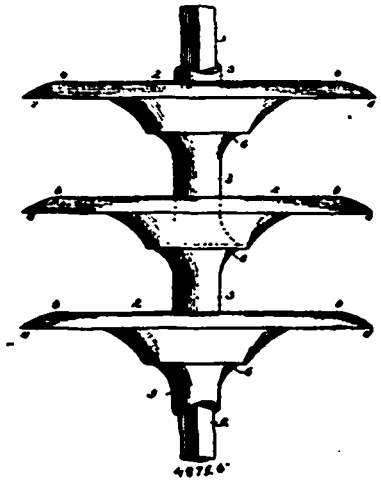


Fig. 2.

Napoleon P. Beau, Stoneham, Massachusetts, U.S.A., 23rd April, 1895; 6 years.

Claim. The garment A, provided with a band *a*, on its inner face in combination with the protector D, comprising a diaphragm provided with the leg openings *b*, having elastic gathers *c*, the diametrically arranged stay *e*, slurred between said openings the elastic cord *g*, in said slurring and hooks and eyes for detachably securing the diaphragm to said band, substantially as described.

No. 48,725. Cultivator Disc. (*Disque de cultivateur.*)



John Rankin Newton, Carthage, Illinois, U.S.A., 23rd April, 1895; 6 years.

Claim.—1st. A disc having a concave working face which recedes from the cutting edge to form an annular depression and which advances from the bottom of said depression to a point beyond the plane of the cutting edge to form a central conical projection, whereby the portion of the working face of the disc between the bottom of the annular depression and the extremity of said central projection exerts a lateral pressure upon the soil and causes the latter to scour said surface, substantially as set forth. 2nd. A disc having a concave working face which recedes from its cutting edge to form an annular depression and then approaches and passes the plane of the cutting edge to form a central projection which extends beyond the cutting edge, the surface of the disc between the cutting edge and a point adjacent to the bottom of said annular depression being slightly curved, and the portion of the surface between the extremity of the central projection and a point adjacent to the bottom of said depression being abruptly curved, the said slightly and abruptly curved portions of the surface being connected by a more abruptly curved surface which forms the bottom of the depression, substantially as specified. 3rd. A disc constructed of even thickness throughout, having a concave working face which recedes from the cutting edge to form an annular depression, and which advances from the bottom of said depression to a point beyond the plane of the cutting edge to form a central conical projection, the extremity of said projection being formed by a flat surface parallel with the plane of the cutting edge of the disc, substantially as specified.

No. 48,726. Trousers and Overalls.
(*Pantalon pour ouvriers.*)

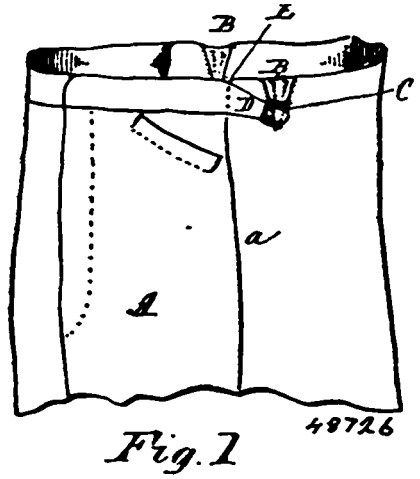
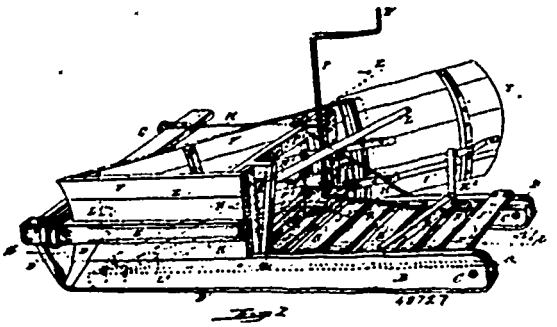


Fig. 1

George William Bartman, Hamilton, Ontario, Canada, 23rd April, 1895; 6 years.

Claim.—1st. In combination with trousers or overalls, a gusset or puff formed at each side at the waist, and two straps formed by an elongated waistband, one at each side over the hips, and two buckles affixed to the trousers at the lower portion of the said gussets to receive the straps, and two slits at the top of the side seams, all constructed substantially as and for the purpose specified. 2nd. In combination with trousers or overalls, two gussets or puffs B, B, formed one at each side respectively of the waistband in rear of the side seams, two open slits E, E, made at the top of each side seam *a*, two straps D, D at the sides over the top portion of the trousers, two buckles C, C, attached at or about one side of the gussets B, B to receive the said straps, all constructed substantially as and for the purpose specified.

No. 48,727. Snow Plough. (*Charrue à neige.*)



Warren Foster Wheeler, Stoneham, Massachusetts, U.S.A., 23rd April, 1895; 6 years.

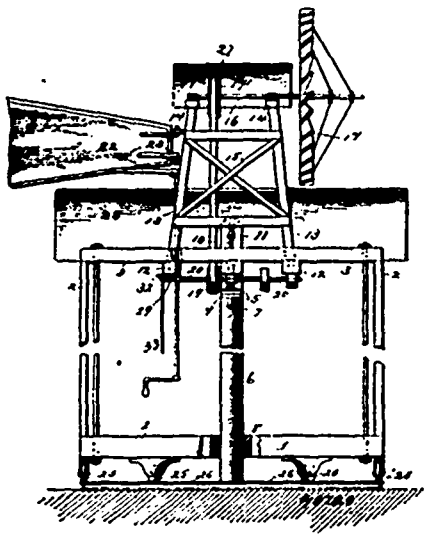
Claim.—1st. A snow-plough comprising a sled B, a plough mounted thereon consisting of an upright side F, an oblique, overhanging side F^1, a wing I, hinged to side F^1, a share D, into which said sides converge, and a shoe D^1, upon which said share is seated, an auxiliary sled A, the runners of which are interposed between and pivoted to the runners of sled B at their rear ends, and the platform of which is beneath the platform of sled B, and mechanism mounted upon sled A, whereby sled B, and its plough may be raised, and supported on sled A, as and for the purposes specified. 2nd. A snow plough comprising sleds A and B pivoted together as described, a body composed of an upright side F, and an oblique overhanging side F^1, united at their front ends, and mounted on sled B, a wing I, hinged to side F^1, and to sled B, and mechanism supported upon sled B, by which said wing may be spread into line with side F^1, substantially as and for the purposes specified. 3rd. A snow-plough embodying, the combination of sleds A and B pivoted to each other as described, a body composed of convergent sides F and F^1, mounted upon sled B, wing I, hinged to side F^1, and to sled B, crank F^1, mounted on sled B, and connected by cord R to hinge R^1, the transverse lever M, pivoted to the frame of the plough, a fulcrum block M^2, seated on the platform of sled A, and upon which lever M acts, the longitudinal lever L, pivoted to side F, and arranged so that in its movement downward it acts on lever M, a fulcrum block seated on the platform of sled A, and on which lever L acts, whereby the plough is raised and wing I swung outwardly as and for the purposes specified. 4th. A snow-plough comprising a body composed of parts F and F^1, and wing I, mounted upon a sled B, and provided with overhanging scrapers F^2, and I^1, an auxiliary sled A, arranged beneath and connected with sled B, to support the plough and upper sled when raised from the ground, and means for raising the plough from the ground and securing it in such position, all substantially as and for the purposes specified. 5th. The combination of sleds A and B pivoted together at their rear ends and loosely chained together at their front ends, a plough composed of converging sides F and F^1, meeting in a share D, and resting in common shoe D^1 on sled B, means for raising sled B, and its plough and supporting it on sled A, and a draw-bar G, attached to the front of the plough, substantially as and for the purposes specified.

No. 48,728. Wind-mill. (*Moulin à vent.*)

William A. Blank, La Porte, Indiana, U.S.A., 23rd April, 1895; 6 years.

Claim.—1st. In a wind-mill, the combination of a central shaft, an upper frame work carried by a lower frame work, said upper and lower frame work being supported on the central shaft by means of a cross-beam, a block mounted on said cross-beam and truss rods connected to said block and cross-beam, substantially as shown and described. 2nd. In a wind-mill, the combination of the lower frame centrally mounted on a vertical shaft, a block on said shaft and having truss rods passing over the same and connected at their ends to the frame, suitable shafting and pulleys journalled in the lower frame, the upper or supplemental frame rigidly secured on the lower frame, the wind-wheel and wind-wheel shaft journalled in the upper frame, a pulley keyed on said shaft, belting passing over the pulleys in the upper and lower frames, and the vane hinged to said supplemental frame and provided with the operating rod and handle for turning the vane in the direction of the wind, substantially as shown and described. 3rd. In a wind-mill, the combination of a central shaft, and upper frame work carried by a lower frame work, said upper and lower frame works being supported on and carried

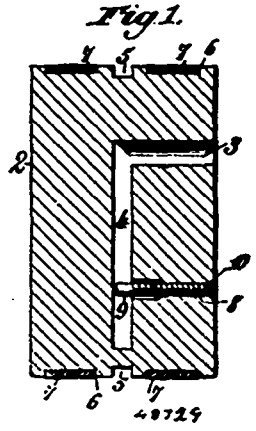
by the central shaft by means of a cross-beam secured to the lower frame work, a block on the cross-beam, truss rods connected to said block and cross-beams to support the sides of the lower frame work,



suitable shafting and pulleys mounted in the upper and lower frame works, a wind-wheel carried by the upper frame work, and a vane pivotally connected to the upper frame work, and adapted to be turned in the direction of the wind and held in its adjusted position for throwing the wind-wheel in the wind, substantially as shown and described.

No. 48,729. Lubricator. (*Graisseur.*)

Fig 1.

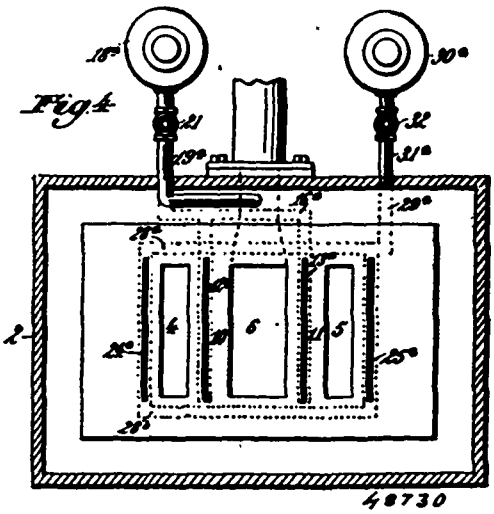


Norman Rutherford Weaver, Selma, Alabama, U.S.A., 23rd April, 1895; 6 years.

Claim.—1st. In a piston lubricator, the combination with the cylinder, of a piston having a circumferential groove, and an internal reservoir communicating with said groove and with the steam space of the cylinder, substantially as described. 2nd. In a piston lubricator, the combination with the cylinder, of a piston having a circumferential groove and formed with an internal reservoir communicating with said groove and with the steam space of the cylinder, and an adjustable valve for controlling the communication between said reservoir and groove, substantially as described. 3rd. In a piston lubricator, the combination with the cylinder of a piston having a circumferential groove formed intermediate its ends and provided upon the opposite sides of said groove with packing rings, an internal reservoir formed in said piston and communicating with said groove and with the steam space of the cylinder, substantially as described. 4th. In a piston lubricator, the combination with the cylinder, of a piston having a circumferential groove, and provided with an internal spiral channel communicating at one end with said groove and provided at its other end with a port communicating with the steam space of the cylinder, substantially as described. 5th. In a piston lubricator, the combination with the cylinder of a piston having a circumferential groove and an internal reservoir communicating with said groove and provided with a port opening into the steam space of the cylinder head adapted to register with said port, and a removable plug for closing said orifice steam tight, substantially as described and for the purpose specified. 6th. In a piston lubricator, the combination with the cylinder, of a piston having a circumferential groove and internal reservoir communicating with said groove and provided with a port communicating with the steam space of the cylinder, an adjustable valve for controlling the communication between said groove and reservoir and having an adjustable stem accessible from the face of the piston, an orifice formed in the piston head and registering with said stem and a removable plug for closing said orifice steam tight, substantially as described and for the purpose specified.

No. 48,730. Lubricator. (*Graisseur.*)

Fig 4.



Norman Rutherford Weaver, Selma, Alabama, U.S.A., 23rd April, 1895; 6 years.

Claim.—1st. In a steam engine valve lubricator, the combination with the cylinder, steam chest and shifting valve, of feed ducts adapted to alternately communicate with the working face of the valve a reservoir for the lubricant, and passages connecting said reservoir with said feed ducts and the steam space of the valve chest, respectively, substantially as described. 2nd. In a steam engine valve lubricator, the combination with the cylinder, steam chest and shifting valve, of feed ducts adapted to alternately communicate with the working face of the valve and with the exhaust port of the cylinder of a reservoir for the lubricant, and passages connecting said reservoir with said feed ducts and with the exhaust port respectively, substantially as described. 3rd. In a steam engine valve lubricator, the combination with the cylinder, steam chest and shifting valve, of feed ducts adapted to alternately communicate with the working face of the valve and with the steam space of the steam chest, a reservoir for lubricant passages connecting said reservoir with said feed ducts and with the steam space of the steam chest, feed ducts adapted to alternately communicate with the working face of the valve and with the exhaust port, and passages connecting said reservoir with said feed ducts and with the exhaust port respectively, substantially as described. 4th. In a steam valve lubricator, the combination with the cylinder, steam chest and shifting valve, of the food ducts 24, 25 arranged in the opposite ends of the valve seat and communicating at their upper ends with the interior of the valve chest, a passage 28 connecting said feed ducts, a reservoir 30 for the lubricant, a pipe 29 connecting the passage 28 with the lower end of said reservoir, and pipe 31 connecting the upper end thereof with the steam chest, substantially as described. 5th. In a steam engine valve lubricator, the combination with the cylinder having the steam ports 4 and 5 and the intermediate exhaust port 6, the channelled bridges 10 and 11 arranged intermediate the said steam ports and the exhaust port, said channels at their upper ends communicating with the working face of the valve controlling said ports, the valve 3 for alternately connecting the steam ports with the exhaust port, a passage 16 connecting said channels, a reservoir 18, for lubricant, a pipe 17 connecting the passage 16 with the lower end of said reservoir, and a pipe 19 connecting the upper end thereof with the steam port 6, substantially as described.

No. 48,731. Curd-cutting Machine.

(*Râpe à fromage.*)

Adam Edmond Bouchard, Victoriaville, Quebec, Canada, 23rd April, 1895; 6 years.

Claim.—1st. In a curd-cutting machine, a rotating hollow conical head centered on a horizontal shaft which is supported in bearings secured to a frame or table, a series of knives fixed in a spiral position in the sloping surface of said conical head, an inclined feed chute having its lower edge close to the edge of the knives when

they are passing it, and parallel to the plane of the machine-frame, and a hand crank by which the machine may be operated. 2nd. In a curd-cutting machine, the arrangement and combination of the

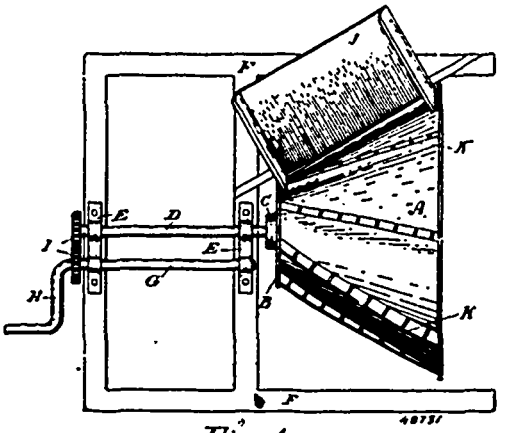
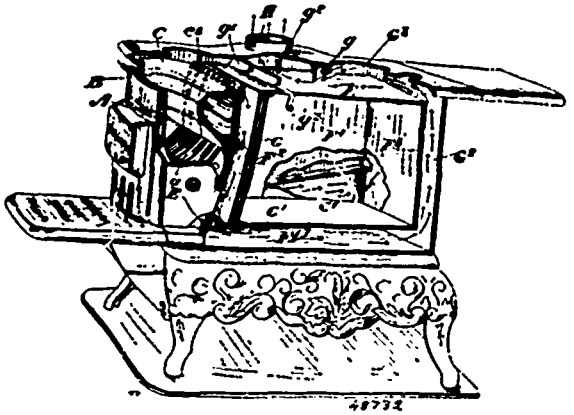


Fig. 1

hollow conical head A, having the spirally placed knives K, and centered on the shaft D, the shaft G, having the hand crank H, the spur gear-wheels I, the boxes E carrying the shafts D and G, the inclined feed chute J, and the frame F, all substantially as herein shown and described.

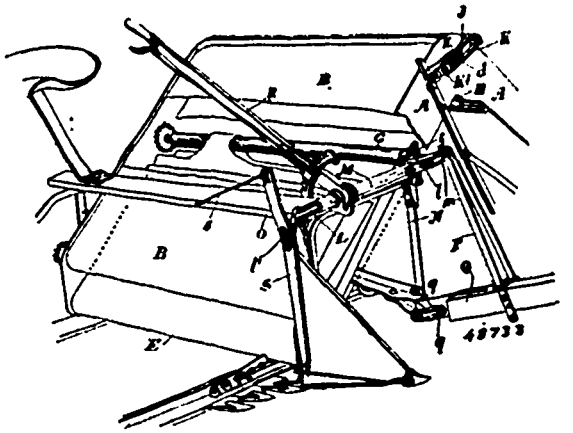
No. 48,732. Kitchen Range. (*Cuisinière.*)



Joseph Harkley, Toronto, Ontario, Canada, 23rd April, 1895; 6 years.

Claim.—1st. As a new article of manufacture, a fire pot for kitchen and other ranges having hollow lining walls of copper or its alloy provided with a circulating arrangement for water through said walls, as and for the purpose specified. 2nd. In a kitchen range, the combination, with the fire pot having a water front, of an independent water back and sides and the flow and return pipes leading from the same, as and for the purpose specified. 3rd. The combination, with the hollow water back and sides, of a passage-way to the rear of the water back and passing downwardly around the oven and to the flue, as and for the purpose specified. 4th. The combination, with the water back and passage-way to the rear of same as specified, of the fending lugs c^3, as and for the purpose specified. 5th. The combination, with the fire-pot of the passage-way G, G^1, G^2 and G^3, and the deflecting plate g arranged at the top of the oven, as and for the purpose specified. 6th. The combination, with the fire-pot of the passage-way G, G^1, G^2, G^3 and G^4, all arranged as and for the purpose specified. 7th. The combination, with the water back and sides and passage-way G, of the deflecting plate g^1, and damper g^2, arranged as and for the purpose specified. 8th. The combination, with the fire-pot and passage-way G, G^1, G^2 and G^3, and smoke flue, of the double wall F^2, provided with a bottom opening f^1, and top openings f, as and for the purpose specified. 9th. In a fire-pot for ranges, the combination, with the front of the hollow iron back and sides, having the bottom opening D^2, and top openings D^3, as shown and for the purpose specified. 10th. In a fire-pot for ranges, the combination, with the hollow iron front, of a hollow iron back and sides having the front ends of such sides open to connect with the openings in the inner side of the hollow front, and bottom openings D^2, and top openings D^3 in the hollow back and sides, as and for the purpose specified.

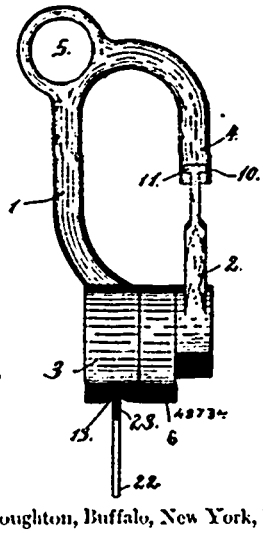
No. 48,733. Grain Binder. (*Lieuse à grain.*)



The Massey Harris Company, assignee of Lyman Melvin Jones, William F. Johnston, and William John Clokey, all of Toronto, Ontario, Canada, 23rd April, 1895; 6 years.

Claim.—1st. In a harvester elevator, in combination an endless apron supported and travelling upon the miner lower roller and major upper roller and slots in the side boards opposite the end spindles of the upper roller, and flexibly supported bearings located to the outside of the side boards to receive the spindles as and for the purpose specified. 2nd. In a harvester elevator, the combination with the lower endless apron suitably journalled on rollers in the side boards, of an upper endless apron supported and travelling upon the minor lower roller and major upper roller and slots in the side boards opposite the end spindles of the upper roller, and flexibly supported bearings located to the outside of the side boards to receive the spindles as and for the purpose specified. 3rd. In a harvester elevator, the combination with the lower endless apron suitably journalled on rollers in the side boards, of an upper endless apron supported and travelling upon the minor lower roller and major upper roller and slots in the side boards opposite the end spindles of the upper roller, the bearing blocks d, to receive the end of the spindles, the arc-shaped guide-ways K, sockets K^1, and spiral springs k, all arranged as and for the purpose specified. 4th. The combination with the bevel pinion journalled in front of the forward side board, of a cross spindle having a bevel pinion meshing with the aforesaid pinion and extending through a cross sleeve from which the tongue is hung and manipulated and driving means for connecting the opposite end of the cross spindle to the relief-rake as and for the purpose specified. 5th. The combination with the bevel pinion secured on the spindle at the forward end of the upper roller of the lower apron, which is journalled in the side boards as specified, of a cross spindle having a bevel pinion, meshing with the aforesaid pinion, and extending through a cross sleeve from which the tongue is hung and manipulated, and driving means for connecting the opposite end of the cross spindle to the relief-rake, as and for the purpose specified.

No. 48,734. Seal Lock. (*Serrure à cachet.*)

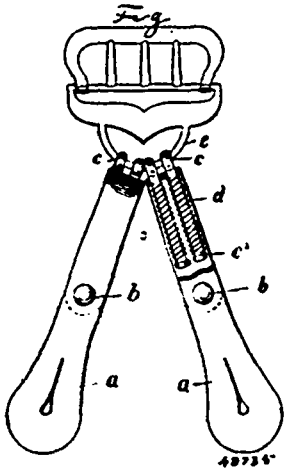


Claudius Victor Boughton, Buffalo, New York, U.S.A., 23rd April, 1895; 6 years.

Claim.—1st. A seal-lock consisting of two engaging members

which embrace the staple outside of the locking hasp, one of such members being pivoted to the other, its outer or free end being adapted for revolving engagement with a projecting arm upon the other member, means concealed within the joint for preventing a reverse movement of the revolving member at the point of engagement with the projecting arm of the other member, a recess in the revoluble hub of the pivoted member adapted for the locking reception of the projection upon the tag and a slot in the hub of the other member through which the projection upon the tag is passed into engagement with the revoluble recess. 2nd. A seal-lock consisting of two engaging members which embrace the staple outside of the locking hasp, one of such members being pivoted to the other, its outer, or free end being adapted for revolving engagement with a projecting arm upon the other member, means concealed within the joint for preventing a reverse movement of the revolving member at the point of engagement with the projecting arm of the other member a recess in the revoluble hub of the pivoted member adapted for the locking reception of the projection upon the tag a slot in the hub of the other member through which the projection upon the tag is passed into engagement with the revoluble recess and an inclined projection its highest point being nearest the slot in the wall for holding the projection on the tag, tight against the face of the pivoted member.

No. 48,735 Brace, Belt, etc. (*Bretelles, ceinture, etc.*)



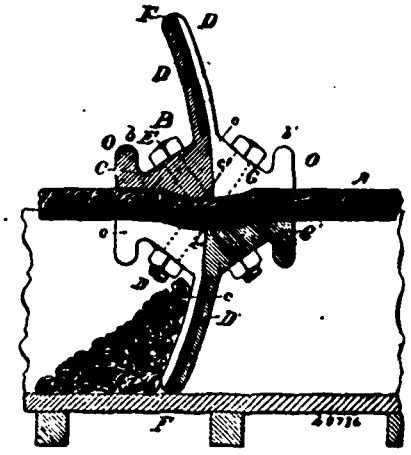
Thoms Barker, Todmorden, England, 23rd April, 1895; 6 years.

Claim.—1st. The combination with the straps of garment holders of separate headed wires and springs inserted into loops formed by folding over the strap ends, said wires passing through holes in the bends of the loops and being connected to another part of said garment holders, substantially as and for the purpose hereinbefore set forth. 2nd. The combination with the tabs of braces and straps of buckled garment holders of wires and springs inserted into loops of said tabs and straps and attached to the buckle substantially as hereinbefore described with reference to figures 1 and 2 of the drawings and for the purpose set forth. 3rd. The combination with a strap for holding garments divided in its length, of separate headed wires and springs inserted into loops formed by folding over and fastening the divided ends, the wires in each loop passing through holes in the bend thereof, and being connected to the wires of the other loop, substantially as hereinbefore described with reference to figures 3 and 4 of the drawing and for the purpose set forth.

No. 48,736. Cable Carrier. (*Cable à transport.*)

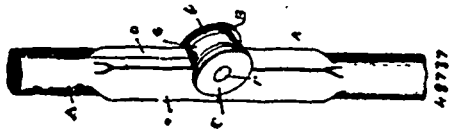
Henry H. Bliss, Washington, Columbia, U.S.A., 23rd April, 1895; 6 years.

Claim.—1st. The combination, with a cable, of a metallic scraper or flight devices in permanent contact with the scraper for deadening noise vibrations, and means for securing said devices against the scraper, the metallic part extending out from the cable to or beyond the edge of the noise deadening device, whereby the latter relieved from wear, substantially as described. 2nd. The combination, with the cable, the trough, and the metallic scraper adapted to rest on and in contact with the trough, of the device for deadening the vibrations of the scraper, and means for securing said device against the face of the scraper, substantially as set forth. 3rd. The combination, with a sprocket attachment for a cable or rope of a clamping bolt for securing it thereto, said bolt being situated on lines inclined to planes transverse to the cable, substantially as set forth. 4th. A scraper attachment or flight for a cable, it being formed in two overlapping sections, each section being provided with a slot or cable passage extending from the periphery inward toward the centre, and provided with clamping devices bearing directly against the cable, and bolts for drawing said clamping devices tightly against the cable, substantially as set forth. 5th. A scraper or flight for a cable formed in two overlapping sections each having a radially extending plate and a hub with a cable passage extending from the periphery to the axis, said sections being adapted to move relatively to each other across the longitudinal lines of the cable, and bolts situated as described to draw said



sections against the cable, as set forth. 6th. A scraper attachment or flight for a cable, it being formed in two sections, each section having a plate like portion extending out from the cable, and a hub surrounding the cable, the two hub parts extending longitudinally in opposite directions, and each section having a slot extending inward from the periphery, and clamping devices for securing said sections together, substantially as set forth. 7th. The herein described attachment for a cable it being adapted to be secured to said cable by bolts, and having a hub formed in two separable sections and terminating at each end in a disc like projection O, O, and having an enlargement or web N of metal formed integral with the parts O, O of one of the hub sections, and adjacent to the bolts, substantially as set forth. 8th. The combination, with a wire rope or cable having wheel engaging sprockets or attachments secured thereto, of a wheel having gaps or recesses, and a series of ropes guiding teeth or projections between each wheel gap and the next whereby the wheel can be kept clean and the cable held in place, substantially as set forth.

No. 48,737. Stump Joint for Carriages.
(*Joint de couverture de voitures.*)



Thomas R. Murdock, Auburn, New York, U.S.A., 23rd April, 1895; 6 years.

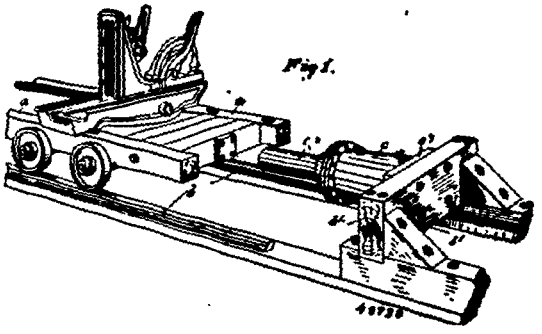
Claim.—1st. A stump joint for carriages, comprising a solid member having a centrally-projecting joint tongue at one end provided with recesses in both of its sides, and an opposing member provided at one end with integral ear-flanges parallel with each other and adapted to embrace said joint tongue and fit in the side recesses thereof, said opposing member consisting of duplicate halves brazed or welded together at their meeting edges to permanently join the ear-flanges onto the joint tongue, substantially as set forth. 2nd. A stump joint for carriages comprising opposite solid members, one of which is provided at one end with separated perforated ear-flanges having outer beveled edges, integral off-standing rivet or pintle heads at one side thereof and inwardly projecting convexed bearing bosses, and the other member being provided with a projecting perforated joint tongue adapted to be embraced between said ear-flanges and having opposite concaved bearing bosses, and the joint rivet or pintle passing through the aligned joint perforations, substantially as set forth. 3rd. A stump joint for carriages comprising opposite members, one of which is provided at one end with separated, perforated beveled ear-flanges having integral off-standing rivet or pintle heads at one side, and the other member being provided at one end with a projecting perforated joint tongue, and curved dove-tailed grooves adapted to receive and work over the beveled ear-flanges embracing said tongue, and the joint rivet or pintle, substantially as set forth.

No. 48,738. Log Carriage Cushion.
(*Coussinet de chassis pour blocs de sciage.*)

Frederick O. Kilgore, Minneapolis, Minnesota, U.S.A., 23rd April, 1895; 6 years.

Claim.—1st. An elastic fluid cushion, for log carriages, or other

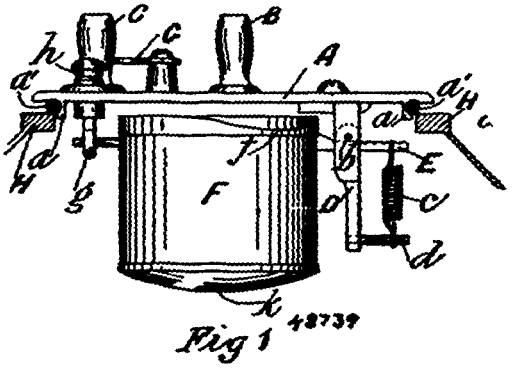
moving bodies, comprising a cylinder, a piston working therein, a bumper stem, and a check valve in operation to admit air to the cylinder under the out stroke of the piston and to confine the same therein under the instroke of the piston, whereby said piston is made to work against a confined volume of air in said cylinder, for cushioning the carriage or other moving body, in the bumping action.



2nd. An elastic fluid cushion for log carriages or other moving bodies, comprising a closed cylinder, fitted with a piston having a projecting bumper stem, and provided with an inwardly closing check-valve, at or near its forward end, and with an outwardly closing check-valve, at or near its rear end, whereby the confined fluid behind the piston and the vacuum in front of the piston are made to co-operate, for cushioning the carriage in the bumping action, substantially as described. 3rd. The combination with a cushion cylinder and piston, of a conical helix spring within said cylinder, applied with its base or large end bearing against the rear end of the cylinder and its tip or small end bearing against the back of the piston, whereby the spring may be compressed by the piston into a perfect coil, without crushing, breakage or undue strain on the spring, under the bumping action, substantially as described. 4th. The combination with the closed cylinder c, of the piston c^1 having the projecting bumper-stem c^2 working through the cylinder head with a close joint, the inwardly closing check-valve c^4, at or near the forward end of the cylinder, the outwardly closing check-valve c^5, at or near the rear end of the cylinder, the vent valve c^6, at or near the rear end of the cylinder, and the spring *d* in the form of a conical helix applied with its large end bearing against the rear end of the cylinder, and its tip or small end bearing against the back of the piston, all operating substantially as and for the purposes set forth. 5th. An elastic fluid cushion, for log carriages or other moving bodies, comprising a closed cylinder, a piston fitting said cylinder, a bumper stem co-operating with said piston, and check-valve mechanism arranged to make the piston operate against a confined body of air or other elastic fluid on one side thereof and against suction from a partial vacuum on the other side thereof, in the bumping action, substantially as described.

No. 48,739. Milking Machine.

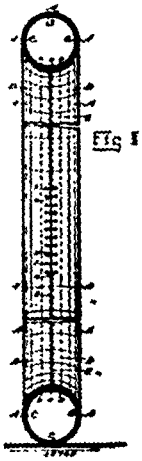
(*Machine à traire les vaches.*)



Reuben Withell, Brookside, Canterbury, New Zealand, 23rd April, 1895; 6 years.

Claim.—1st. The combination of a vacuum chamber having a milk and a suction tube, a relief valve, a bracket within the chamber, a pressure bar or lever, pivotally supported by the bracket and holding a bucket or vessel, an arm projecting from said pressure bar or lever and working beneath the suction tube, the end of pressure bar or lever operating the relief valve, substantially as described. 2nd. In an apparatus such as described, the combination of the vessel having the milk and suction tubes, the bracket within the vessel, the pivoted bar or lever supported by said bracket and the spring connected at one end with the bar or lever, and at its other end with the bracket, the bucket supported by the bar or lever, the relief valve and the arm *c*, substantially as described. 3rd. The combination of the vacuum chamber and its appurtenances, the suction pipe C, the bracket formed within said chamber, the pivoted bar or lever supported by the bracket, the bucket supported by the bar or lever, and the arm on said bar or lever with flexible pad, and the relief valve, substantially as described.

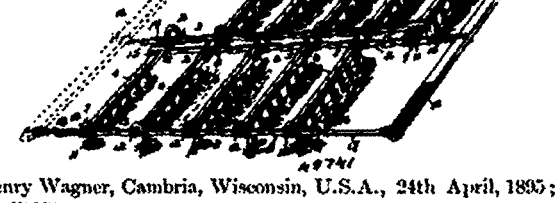
No. 48,740. Pneumatic Tire. (*Bandage pneumatique.*)



Henry Wood, Isaac Wood, both of Kingston, and Richard Russell, Hamilton, all of Ontario, Canada, 24th April, 1895; 6 years.

Claim.—1st. The combination of a leather or raw-hide tubular tire, provided with a canvas lining having folded double edges or otherwise for stability when sewen together as at D, said lining being set back a little from the edges of leather and both even when stitched together at E, to form tubular shape, having one or more openings to admit air tube, and provided with eyelets adjacent to the edges of said openings for closing and lacing purposes, each opening having independent lace, substantially as described and set forth. 2nd. In a tubular tire for cycle or other light wheels, the combination of a leather tubular tire having a canvass lining sewed thereto, adjacent to the edges thereof, said edges stitched or laced together excepting in one, two or three places, left as openings for insertion and adjustment of air tube, said openings provided with eyelets and independent laces for closing said openings, substantially as described and set forth.

No. 48,741. Harrow. (*Herse.*)



Henry Wagner, Cambria, Wisconsin, U.S.A., 24th April, 1895; 6 years.

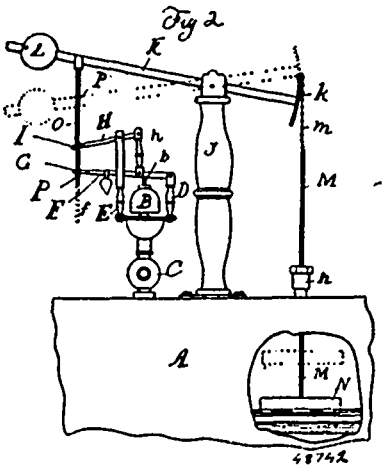
Claim.—1st. In a harrow, the combination of a plurality of parallel members, comprising inner and outer side-bars, interposed transverse tooth-bars pivotally connected at their extremities to the side-bars, segmental guiding-bars carried by the tooth-bars concentric with the pivotal points of connection of said bars, stop-lugs carried by the side-bars and engaging said segmental guiding-bars, and draft apparatus, and means for securing the same to either end of the side-bars, substantially as specified. 2nd. In a harrow, the combination of a plurality of members, each comprising an inner and an outer side-bar constructed of loosely connected sections of links, transverse tooth-bars pivotally connected at their extremities to said links, and means for limiting the swinging movement of the tooth-bars, terminal transverse bars connecting the outer side-bars of each member with the inner side-bars of the other member, and pivotally connected thereto, and to the inner side-bars of their respective members, draft apparatus and means for attaching the same to either end of the side-bars, substantially as specified.

No. 48,742. High and Low Water Alarm for Steam Boilers. (*Indicateur à sifflet du niveau d'eau pour chaudières à vapeur.*)

Gedeon Pierard and Victor Guinet, both of Montreal, Quebec, Canada, 24th April, 1895; 6 years.

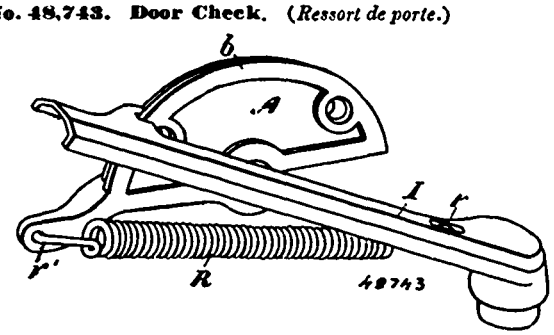
Claim.—1st. In a high and low water alarm for steam boilers,

the combination, with a whistle secured on and connected with a steam boiler, standards secured, one on one side and one on the other side of the said whistle, one shorter than the other, a lever pivoted by one end in the shorter of the said standards, a weight carried near the free end of the said lever, adapted to press the lever down on the valve stem of the steam whistle and close it, a



double lever pivoted in the longer of the said standards, a link connecting one end of the lever with the lower lever before mentioned, of means for raising the lower lever when the water in the said boiler is low or depressing the upper lever when the water is too high, substantially as set forth. 2nd. In a high and low water alarm for steam boilers, the combination, with the float N, having secured thereto the rod M, secured by a short chain to a grooved segment on a lever K, the lever K pivoted in a standard secured on a boiler, a weight L carried at or near the end of the said lever, a depending rod O pivoted near the weight L, two pins P secured in the said depending rod O, of the steam whistle having standards D and E one on either side, the lever F pivoted in the shorter standard D, a weight carried near the free end of the said lever, a loop G at its free end, the said lever passing over and pressing down the valve stem *b* of the whistle, when the said lever is in its normal position, the lever H carried in the standard E having a loop I at one end and a link *h* at the other, the link *h* connecting the lever H to the lever F, substantially as set forth. 3rd. In a high and low water alarm for steam boilers, the combination with the lever K, pivoted depending rod O, and pins P, of the loops G and I carried by the levers F and H and through which the said rod O passes, and the link *h* connecting the said levers F and H, substantially as set forth.

No. 48,743. Door Check. (*Ressort de porte.*)

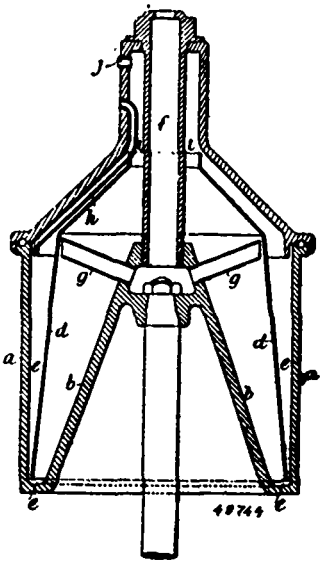


Henry T. Le Page, Toronto, Ontario, Canada, 24th April, 1895; 6 years.

Claim.—1st. A door check consisting of a pivotal plate, a lever having a pocket formed in one end to receive a cushioned plug, means for pivotally connecting the lever to the pivotal plate, and a spring connected to the lever and to the pivotal plate to hold the lever in a depressed position, substantially as specified. 2nd. A door check consisting of a pivotal plate, a lever, one end of which is arranged to be depressed into contact with the surface below the door, means for pivotally connecting the lever to the pivotal plate, a bar connected to the lever, a spring having a hook-shaped end arranged to hook on the said bar, and having its opposite end hook-shaped to hook into the pivotal plate, substantially as specified. 3rd. A door check consisting of a pivotal plate, a lever, one end of which is arranged to be depressed into contact with the surface below the door, means for pivotally connecting the lever to the pivotal plate, a bar connected to the lever, a spring having a hook-shaped end arranged to hook on the said bar, having its opposite end hook-shaped to hook into the pivotal plate, and a pocket in that end of the lever arranged to be depressed to receive a cushioned plug, substantially as specified. 4th. A door check consisting of a pivotal plate, the upper edge of which is arc-shaped, a bearing formed in the pivotal plate, a lever, a pivotal pin for the lever working in the said bearing, a pocket in one end of the said lever, a bar connected to the under side of the said lever at or near the said pocket, a guide connected to the said lever at or near its opposite end working on the upper edge of the said plate, a spring having a hook-shaped end encircling the said bar, the opposite end of the spring hook-shaped, and held by the said pivotal plate, substantially as specified.

No. 48,744. Cream Separator.

(*Machine pour séparer la crème.*)

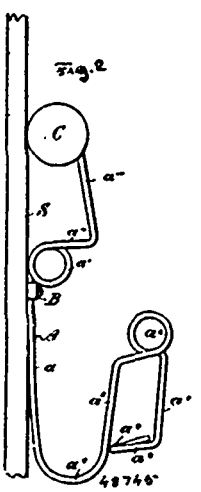


Albert Frank, Taipale, Varkhaus, Finland, 24th April, 1895; 6 years.

Claim.—A separating vessel having a plate or partition wall *d* arranged within it so that the whirls of the milk on the inner side of the wall before the milk has had time to settle cannot disturb the milk on the outside of the said wall, the milk inlet being arranged to deliver the milk onto the inside of the said partition wall, substantially as described.

No. 48,745. Folding Hat and Coat Holder.

(*Porte-chapeau et habit pliant.*)



Thomas Henry Folliott, Cavan, Ontario, Canada, 24th April, 1895; 6 years.

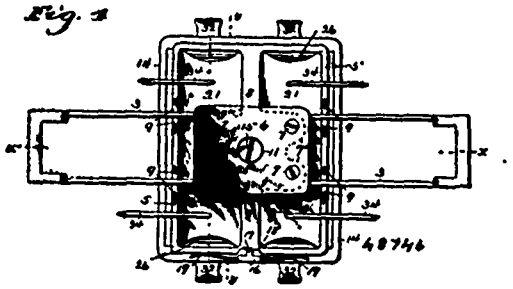
Claim.—1st. A hat and coat holder consisting of a pair of spring wires placed a distance apart and suitably connected at the top and adapted to be secured to the back of a chair or seat and each consisting of a straight shank having coils at one end adapted to press the upper end against the surface to which it is secured, the lower end of said shank being formed into a loop with upward and outward

continuation, coils at the upper end of said continuation and a shank turned downwards and having its bent end pressing against the loop shank, substantially as set forth. 2nd. In a spring for hat and coat holders, the combination of the shank a, coils a^1, hmb a^2, shank a^3, loop a^4, shank a^5, coils a^6, shank a^7, and bent ends a^8 and a^9, substantially as set forth. 3rd. The combination of a pair of springs A, cleats or clips B adapted to secure the main shank of said spring to the back of a chair or seat and the rod or roller C connecting the upper ends of said springs, substantially as set forth.

No. 48,746. Closed Conduit Electric Railway.

(*Conduit pour chemin du fer électrique.*)

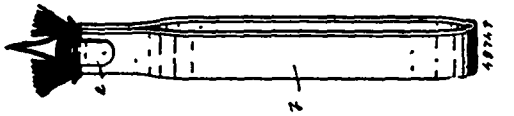
Fig. 1



James Francis McLaughlin, Philadelphia, Pennsylvania, U.S.A., 24th April, 1895; 6 years.

Claim.—1st. In an electric railway, electro-magnets hung from a motor car and pivoted to tilt in the direction of the line of travel and also at right angles thereto, substantially as described. 2nd. In an electric railway, electro-magnets hung from a motor car and free to tilt and swivel in a horizontal plane, substantially as described. 3rd. In an electric railway, a swivel-frame secured to a motor truck and one or more electro-magnets hung from the swivel-frame and free to tilt, substantially as described. 4th. In an electric railway, an electro-magnet provided with a mounting having slotted ears at each end, and rods secured to a motor car and passing through said ears for supporting the magnet pendulously, substantially as described.

No. 48,747. Thread Package. (*Enveloppe pour le fil.*)

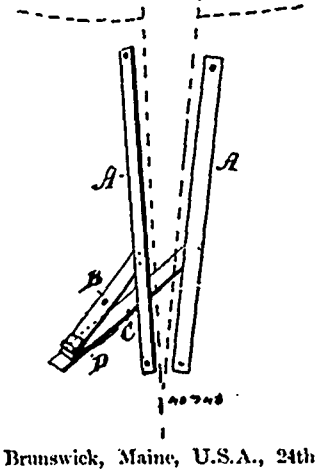


Benjamin L. Armstrong, New London, Connecticut, U.S.A., 24th April, 1895; 6 years.

Claim.—A thread package consisting of an envelope enclosing a skein, said envelope being doubled upon itself and having its ends secured together within the doubled portion of the skein.

No. 48,748. Fastener for Dress Plackets.

(*Agrafe pour ouverture de jupe de robe.*)

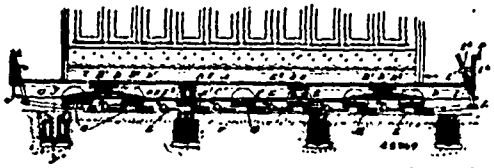


John Plutzer, Brunswick, Maine, U.S.A., 24th April, 1895; 6 years.

Claim.—1st. The herein described fastener for the plackets of dress skirts consisting of a pair of main ribs, each of which has a branch rib extending off at an acute angle with said main rib, the ends of said branch ribs being pivoted together with a spring connection which holds the two pairs of ribs normally together but allows them to be opened. 2nd. The herein described fastener for the plackets of dress skirts consisting of a pair of main ribs, each of which has a branch rib extending off at an acute angle from said main rib, one of said branch ribs C, being formed of spring metal and having a stirrup secured by its inner end near the outer end of said branch rib C, the end of the branch rib B being pivoted to the outer end of said stirrup, the pivoting point being back from the end and so allowing the extreme end of the rib to form an impinging surface to act against the surface of the rib C.

No. 48,749. Electric Propulsion Device for Cars.

(*Appareil de propulsion électrique pour chars.*)



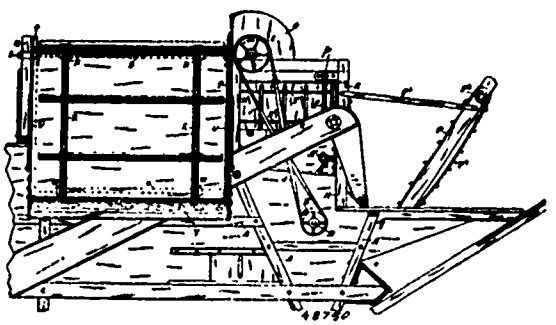
Archibald H. Brintnell, Toronto, Ontario, Canada, 24th April, 1895; 6 years.

Claim.—1st. A system for electrical propulsion of cars comprised of a motor, the armatures of which are secured to the frame of the car and located in proximity to the road-bed and the field magnets of which have their cores substantially flush with the road-bed and means whereby the current is thrown into the field magnets successively to exert a magnetic pull successively on the armatures of the car, as and for the purpose specified. 2nd. A system for the electrical propulsion of cars comprised of a series of pairs of armatures secured to the truck frames of the car and suitably supported in proximity to the road-bed and located equi-distant from each other, of a series of pairs of field magnets the tops of the cores of which are substantially flush with the road-bed in the paths of the armature and are equi-distant from each other and a commutator switch and a series of magnets attached to the bottom of the frame for operating upon such switch to close the main circuit through each pair of field magnets as the armatures approach them, as and for the purpose specified. 3rd. The combination with a series of armatures and trucks to support the armatures suitably attached to the bottom of the car, the armatures being arranged at equal distances apart as specified, and a stringer having a series of bunches of magnets of corresponding size supported on the stringer at equal distances apart and means for raising the stringer, of the field magnets, the cores of which extend upwardly from underneath the ground to the level of the road-bed and in the paths of the armatures, and a commutator switch designed to be actuated by the bunch of magnets on the stringer so as to throw in the field magnets to exert a pull upon the armatures, as and for the purpose specified. 4th. The combination with the armatures G, of equal length arranged in pairs and supported on the trucks of the car frame as specified, and the stringer L, provided with a series of bunches of magnets M, of the field magnets V, arranged in pairs and having cores r, extending to the surface of the road-bed and the commutator switch L, comprised of the lever S, having soft iron disc, a contact strip t, secured to the lever S, and insulated from it, a carbon contact bar U, secured on top of the standard U, and the wires v^1, v^2, v^3, v^4, connected to the standard U, binding post l^2, and to the coils and main circuit wires W, and X, as shown for the purpose specified. 5th. The combination with the armatures G, arranged in pairs and secured to the trucks of the car and the bunch of magnets M, secured to the stringer L, which is connected by the links L^1, to the lever l, as specified, of the field magnets V, arranged in pairs in the path of the armatures and the commutator switch constructed as specified and arranged to co-act with the magnets M, to throw in the circuit into the field magnets V, successively as the car travels along the track, as and for the purpose specified. 6th. In a system such as described, the combination with the car, of a stringer L, provided with a series of bunches of magnets M, a rod O, connected by the bell-cranks o, to the plates o^1, provided with friction rollers o^2, extending into the slot l^2, in the stringer and means for longitudinally adjusting the rod O, as and for the purpose specified. 7th. In a system such as described, the combination with the car, of a stringer L, provided with a series of bunches of magnets M, a rod O, connected by the bell-cranks o, to the plates o^1, provided with friction rollers o^2, extending into the slot l^2, in the stringer and the links O^1, connected to the ends of the rod O, having an upwardly extending rod P, provided with a crank handle p, as and for the purpose specified. 8th. In a system such as described the combination with the car, of a stringer L, provided with a series of bunches of magnets M, a rod O, connected by the bell-cranks o, to the plates o^1, provided with friction rollers o^2, extending into the slot l^2, in the stringer and the spring Q, connected to the rod O, and a bracket attached to the truck D, and means for longitudinally adjusting the rod O, as and for the purpose specified. 9th. In a system of the class described a

car provided with the four-wheel truck D, supporting the ends of the car and connected to the cross-beam by the king bolts B^1, the two-wheel trucks E, supporting the car by means of the roller E^2, journalled between and on top of the semi-elziptical springs E^1, and designed to support the car underneath their corresponding cross-beams B, as and for the purpose specified. 10th. The combination with the truck D and E, of the frame H, pivoted at *h*, to the truck D, bolted to the truck E, and the truck F, provided with an adjustable frame I, provided with a friction roller *i*, to run on the guide bar J, and pivotally connected by the bars K, to the frame H, inner end of the frame H, as shown and for the purpose specified.

No. 48,750. Band Cutter for Threshing-Machines.

(*Coupe-hart pour machines à battre.*)



Abel Kleinstiver and Benjamin S. Van Tuyl, both of Petrolia, Ontario, Canada, 24th April, 1895; 6 years.

Claim.—1st. A side frame T, and means for conveying the sheaves laterally to the machine in combination with the support U, substantially as set forth. 2nd. A pivotal side frame T, and means for conveying the sheaves laterally to the machine, in combination with a support U, substantially as set forth. 3rd. A side frame T, and means for conveying the sheaves laterally to the machine in combination a support U, and the stop board or chute Y, substantially as set forth. 4th. A side frame T, and means for conveying the sheaves laterally to the machine in combination with the stop board or chute Y, and the support U, substantially as set forth. 5th. A V-shaped frame *c*, inclined or curved from the sides towards the centre, and extending lengthwise of, and above the threshing-machine, in combination with means for conveying the sheaves thereon towards the cylinder, substantially as set forth. 6th. A V-shaped frame *c*, extending lengthwise of, and above the threshing-machine, in combination with endless slotted carriers and means for operating the latter, substantially as set forth. 7th. A V-shaped frame c extending lengthwise of and above the threshing-machine, and means for conveying the sheaves thereon towards the cylinder in combination with a revolving cutter or knife L, substantially as set forth. 8th. A V-shaped frame c extending lengthwise of and above the threshing-machine and means for conveying the sheaves towards the cylinder, in combination with revolving cutter or knife *g*, substantially as set forth. 9th. A V-shaped frame c extending lengthwise of and above the threshing-machine, and means for conveying the sheaves towards the cylinder, in combination with revolving cutters or knives L, *g*, substantially as set forth. 10th. The toothed spreaders E^1, in combination with means for oscillating said spreaders upwards and outwards from the centre towards both sides of the cylinder, substantially as set forth. 11th. The shafts D^1, provided with crank-arms D^2, and means for operating said shafts D^1, in combination with the toothed spreaders E^1, and the hangers E^2, substantially as set forth. 12th. The adjustable inclined frame F^1, and means for conveying the sheaf to the cylinder, in combination with the arm F^5, substantially as set forth. 13th. The adjustable inclined frame F^1, and means for conveying the sheaf to the cylinder, and the arm F^5, in combination with the spreaders E^1, hangers E^2, and means for supporting and operating said spreaders, substantially as set forth. 14th. The adjustable inclined frame F^1, and means for conveying the sheaf to the cylinder, and the arm F^5, in combination with the V-shaped frame *c*, and means for conveying the sheaf lengthwise on said frame, substantially as set forth. 15th. The adjustable inclined frame F^1, and means for conveying the sheaf to the cylinder, and the arm F^5, in combination with the V-shaped frame *c*, the slatted carriers S^1, the spreaders E^1, and means for operating said slatted carriers and said spreaders, substantially as set forth.

No. 48,751. Safety Bank-cheque.

(*Chèque de banque de sureté.*)

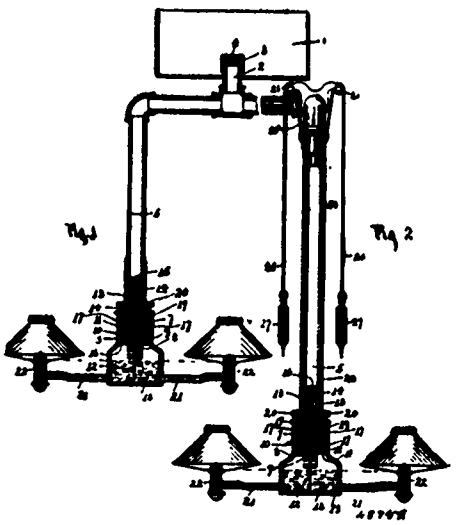
Isabel Anna Drew, Boston, assignee of Manning Augustus Drew, Lynn, both of Massachusetts, U.S.A., 24th April, 1895; 6 years.

Claim.—A cheque or other paper representing value comprising a body and stub connected by a sheet, numerals imprinted on said sheet and arranged in groups or blocks, each consisting of the nine

digits, said blocks being arranged diagonally of the sheet, substantially as described.

No. 48,752. Apparatus for Lighting Buildings.

(*Appareil pour éclairer les édifices.*)

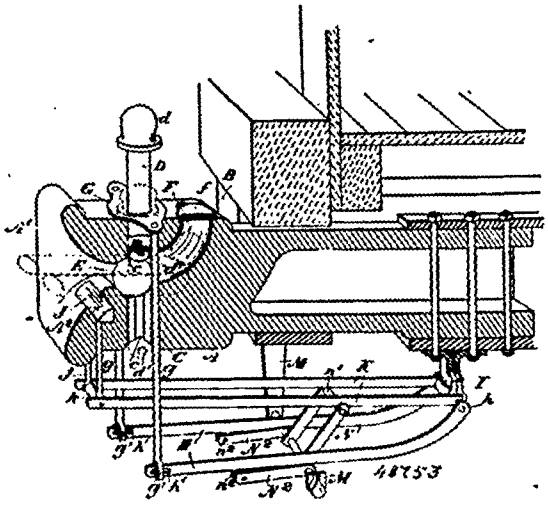


John Stanley Roblin, West Bay City, Michigan, U. S. A., 24th April, 1895; 6 years.

Claim.—1st. The combination of a lamp reservoir, the superimposed supply tank, a supply pipe leading from the tank and extending into said reservoir and provided with an upwardly facing valve seat, a valve upon the seat and provided with a guide pin extending below the pipe and in proximity to the bottom of said reservoir, and means for automatically lifting the reservoir to open the valve when the contents of the reservoir is reduced, and for lowering the same when the contents is replenished, substantially as set forth. 2nd. The combination of the lamp reservoir, the superimposed supply tank, a supply tank pipe leading from the tank and extending into the reservoir and provided on its lower end with an upwardly valve seat, a valve upon the seat and provided with an operating pin extending below the end of the pipe, and means as a spring for supporting the reservoir for automatically moving the reservoir to contact with the end of said guide pin to lift the valve when the oil supply is diminished, substantially as set forth. 3rd. The combination of a lamp reservoir, a supply tank above the reservoir, a supply pipe leading from the tank and with its vertical lower end passed into the reservoir and provided with an upwardly facing valve seat, a valve upon the seat and provided with a downwardly extending operating pin reaching below the ends of the pipe, a spring for lifting the reservoir to contact with the pin for opening the valve, and for permitting a downward movement of the same when the reservoir has received its oil supply, substantially as set forth. 4th. The combination of the superimposed open tank, a supply pipe leading from the tank and provided with a vertical lower portion having on its end an upwardly facing valve seat and a valve upon the seat and provided with an operating pin extending below the end of the pipe, with a lamp reservoir having its bottom in proximity to said operating pin and having on its upper portion an open neck passed over the end of the supply pipe, a spring carried by the supply pipe for supporting the reservoir and means for adusting the spring, for the purpose set forth, substantially as described. 5th. In an apparatus of the class described, the combination with an elevated tank and a depending supply tube provided with a valve for regulating the flow of oil through, of a lamp reservoir loosely supported on the supply tube and arranged to automatically open the valve as the supply of oil in said reservoir is reduced, substantially as described. 6th. In an apparatus of the class described, the combination with an elevated tank and depending supply tube provided with a valve for regulating the flow of oil therethrough, of a lamp reservoir loosely supported on said tube, and means for automatically moving the reservoir on the tube and opening the valve thereof as the supply of

oil in said reservoir in reduced, substantially as described. 7th The combination of an elevated tank and depending supply tube provided with an internal valve having a stem which projects beyond the lower end of the supply tube, of a lamp reservoir loosely supported on said tube near the lower end thereof, and communicating therewith, and means for automatically moving said reservoir longitudinally on the supply tube and into contact with the depending valve stem as the supply of oil in said reservoir is reduced, substantially as described. 8th. The combination with an elevated tank, and depending tube provided at its lower end with an annular flange or collar 16, of a lamp reservoir fitted around the lower end of the supply tube and having its upper end closed, a valve arranged within the supply tube and provided with an operating pin that extends into the lamp reservoir, and a coil spring fitted around the tube between the collar 16, thereon and the upper end of the lamp reservoir and adapted to move the reservoir longitudinally of the tube to open the valve therein as the supply of oil in said reservoir is reduced, substantially as described. 9th. The combination with an elevated tank and a depending supply tube, of a casing or shell 24, fitted loosely on the tube and adapted to move longitudinally thereof, a lamp reservoir carried by the casing 24 and communicating with the supply tube, a valve arranged within the supply tube and provided with an operating pin that extends into the lamp reservoir, and means attached to the casing 24, for automatically moving the same and the reservoir supported thereby longitudinally of the supply tube, to open the valve therein, as the supply of oil in said reservoir is reduced, substantially as described.

No. 48,753. Car-Coupler. (*Attelage de chars.*)

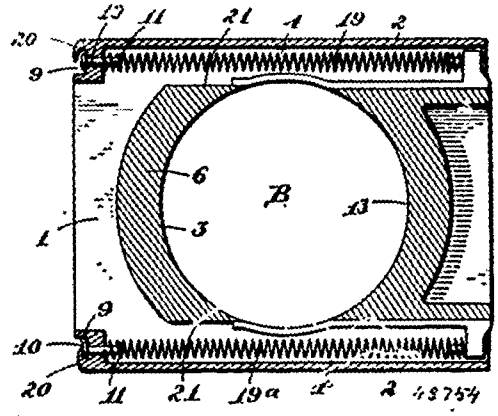


John Summerville, Milton, Ontario, Canada, 25th April, 1895; 6 years.

Claim.—1st. In a car-coupler, the combination with the draw-head having the open mouth and the pin hole, of a ball having its seat within the contracted inner end of the mouth, a coupling-pin, a small cross-pin extending through the bottom end of the coupling-pin into grooves in the side of the coupling-pin hole, and an arc-shaped passage-way, as and for the purpose specified. 2nd. In a car-coupler, the combination with the draw-head having the open mouth and pin hole, of a ball having its seat within the contracted inner end of the mouth, a coupling-pin, an arc-shaped passage-way, a cross-plate through which the coupling-pin passes and means for imparting a vertical movement to the cross plate, as and for the purpose specified. 3rd. In a car-coupler, the combination, with the draw-head having the open mouth and pin hole, of a ball having its seat within the contracted inner end of the mouth, a coupling-pin, an arc-shaped passage-way, a cross-plate extending laterally to each side of the draw-head, downwardly extending rods *g*, secured at the upper end of the cross-plate, the double lever H, and means for tilting the lever on its pivot, as and for the purpose specified. 4th. In a car-coupler, the combination with the draw-head having the open mouth and pin hole, of a ball, a coupling-pin, an arc-shaped passage-way, a cross-plate extending laterally to each side of the draw-head, downwardly extending rod *g*, secured at the upper end of the cross-plate, the double lever H, and a cross-rod L, arm *m*, rod m^1, arm *n*, and rod N, provided with arms N^2, having cross-bars n^2, all arranged as and for the purpose specified. 5th. The combination, with the draw-head having an open mouth for the reception of the link as specified, of a link lifter fitting in a recess in the lower lip of the draw-head, downwardly extending rods secured to the same and a double lever K, connected to the end of the downwardly extending rod and pivoted at *h*, and the rod L, arm *m*, rod m^1, arm *n*, rod N, double arms N^1, provided with a cross-bar n^1, all arranged as and for the purpose specified.

No. 48,754. Dust Guard for Car Axle Boxes.

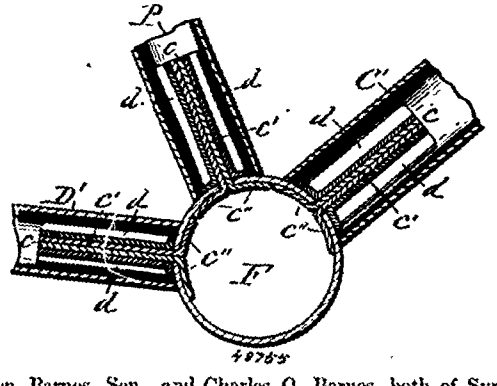
(*Garde-poussière pour boîtes à graisse.*)



William Hamilton Wright, Buffalo, New York, State of New York, U.S.A., 25th April, 1895; 6 years.

Claim.—1st. In a dust guard for car axle boxes, a slideway portion 1, having two hollow longitudinal slideways open on their inner sides directly opposite each other, a concave portion 3, adapted to encompass more than half of the periphery of the axle and having hollow parallel slideway portions, in combination with a sliding portion forming the other part of the packer and adapted to partly encompass the periphery of the axle, and having slideway tongues whose ends project forward and are adapted to move in the slide-ways of the portion 1, and springs wholly inclosed within the packer for drawing the two parts of the packer together, substantially as described. 2nd. A dust guard for car axle boxes, consisting of two parts, one adapted to slide in the slideways of the other, each part being covered on both sides with an oil proof yielding covering of woven or felted material, and springs wholly inclosed within the packer for holding the two slideway parts together, substantially as described. 3rd. A dust guard for car axle boxes, consisting of two parts one adapted to slide in the slideways of the other, and each provided with a series of projecting pins extending out from each side and a covering of oil proof woven or felted material, secured thereto by said pointed pieces as set forth, the two parts having circular openings between them adapted to embrace a car axle, and a means for drawing the two parts together, substantially as described. 4th. Dust guards for car axle boxes, consisting of two parts, one adapted to slide in the slideways of the other, each part being formed so as to leave a circular opening between them adapted to embrace a car axle, a covering of woven or felted material boiled in coal-tar secured to both sides of each part and rigidly fastened thereto by the bent portion 7 and 7^a, and springs for drawing the two parts together, substantially as described. 5th. A dust guard for car axle boxes, consisting of two parts, one part provided with slideways adapted to receive the other and both parts being formed so that the two together leave a circular opening between adapted to embrace a car axle, two spiral springs connected with the slideway part for holding the two together, the slideway portion being provided with two longitudinal fitting strips, substantially as and for the purposes described.

No. 48,755. Bicycle. (*Bicycle.*)

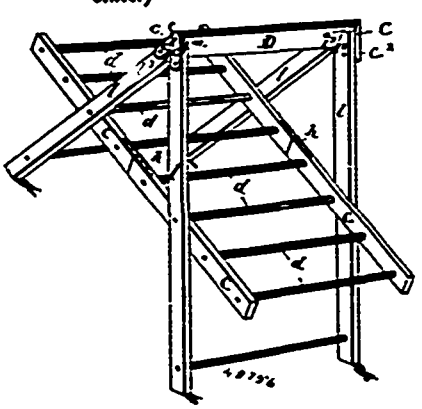


Lucien Barnes, Sen., and Charles O. Barnes, both of Syracuse New York, U.S.A., 25th April, 1895; 6 years.

Claim.—1st. The combination, with two metal tubes, one of which abuts with its end against the side of the other, of a metallic coupling consisting of a stem formed at one end with a segmental cross-

head projecting laterally in opposite directions from the end of the stem and secured contiguous to the inner peripheral surface of one of the tubes, the stem of the coupling passing through the side of said tube and into the abutting end of the adjacent tube, and angle-plates on opposite sides of the stem and brazed to the interior of the latter tube, as set forth. 2nd. The combination, with two metallic tubes, one of which abuts with its end against the side of the other, of a metallic coupling consisting of a stem formed of two plates fastened together side by side and passing through the side of one tube and into the abutting end of the adjacent tube, angle-plates on opposite sides of the jointed plates and brazed to the interior of the latter tube, the opposite end of the combined plates being spread apart and bent segmental shape to conform to the inner peripheral face of the first named tube and fastened thereto, as set forth and shown. 3rd. The combination, with two metallic tubes, one of which abuts with its end against the side of the other and both slotted longitudinally at their junctions, of a coupling consisting of a stem formed at one end with a segmental cross-head secured contiguous to the inner peripheral surface of one of said tubes, the stem passing through the slot in the side of said tube, and into the slots of the abutting end of the adjacent tube, angle-plates on opposite sides of the stem having longitudinal flanges seated on the interior of the latter tube and formed with end-wings lapping onto the exterior of the other tube inside of the abutting tubes, and brazings uniting all of said parts substantially as described and shown. 4th. In combination with the central post P, the clip-plates *c*, *c*, *c*, formed with segmental central portions embracing said post and each of said plates having its end portions extending radially from the post and contiguous to those of the adjacent clip-plate, the strut C and braces D, D, abutting against the exteriors of the aforesaid segmental portions and provided with longitudinal slots in their abutting ends and receiving in the slots the end portions of the clip-plates, and the angle-plates brazed to opposite sides of said end portions and to the interiors of the strut and braces as set forth and shown. 5th. The combination, with two metallic tubes, one of which abuts endwise against the side of the other, of a metallic coupling consisting of a stem passing through the side of one tube and formed at its inner end with a segmental cross-head conformed to and brazed to the interior of said tube, the outwardly projecting stem being inserted into the end of the abutting tube, and angle-plates brazed to opposite sides of the stem and formed with longitudinal flanges brazed to the interior of the abbutting tube and with end-flanges brazed to the side of the companion tube, substantially as set forth. 6th. The combination with the steering-post, of the fork B, formed of flattened tubes *f*, *f*, united by tie-plates *g*, *g*, passing through the inner sides of the tubes and across the interiors thereof, clip-plates *h*, *h*, brazed to the end portions of the tie-plates and to the interiors of the tubes, said tie-plates being formed in one piece folded upon itself and formed with the cylindrical portion *i*, along the line of folding and passing through corresponding slots and orifices in the base of the steering-post substantially as set forth and shown. 7th. The combination of the crank-sections formed with interlocking splices and perforated transversely, a sleeve embracing said sections and provided with corresponding perforations, and wedging keys inserted in said perforations as set forth and shown.

No. 48,756. Folding Wash Bench and Clothes Bar Combined. (*Banc à laver pliant et barre combiné.*)

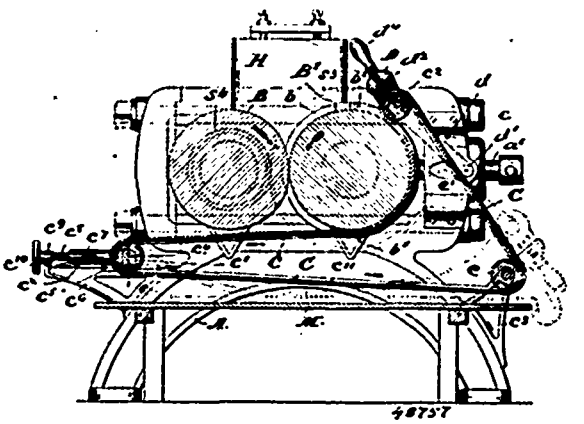


James Henry Connor, Ottawa, Ontario, Canada, Assignee of William H. Forrester, Syracuse, New York, U.S.A., 25th April, 1895; 6 years.

Claim.—1st. The metallic heads C, C, each formed with the divergent arms C^2, C^2, and the lugs *a*, *a*, having vertical parallel walls a^2, a^2, on their adjacent sides and inclined shoulders *b*, *b*, at their bases, the board D, inserted with its ends between the aforesaid lugs and fastened to the heads, C, C, in combination with the lugs 1, 1, pivoted to the free ends of the aforesaid arms and terminated at their upper ends with the abutments 12, 12 and chamfers 13, 13, the rails *c*, *c*, pivoted to the said legs and having vertical abutting ends hinged together at their tops, and rungs *d*, *d*, attached to said rails, all constructed and combined to allow the structure to be adjusted to the various positions hereinbefore described and shown.

No. 48,757. Rubber Mixing Mill.

(*Machine à mêler le caoutchouc.*)

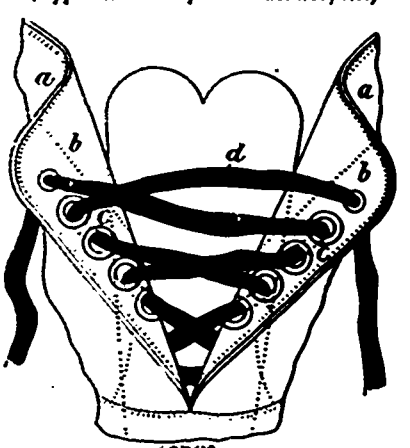


Edward Franklin Bragg, Boston, Massachusetts, U.S.A., 25th April, 1895; 6 years.

Claim.—1st. In a mixing mill for rubber and like material, two rolls, means to rotate the same in opposite directions, one at a higher speed than the other, whereby the material adheres to the latter, and an endless apron moving in contact with, and in the same direction as the slow moving roll or the material thereon to act upon said material, substantially as described. 2nd. In a mixing mill for rubber and the like, two rolls, means to rotate the same, an endless apron and movable and yielding rollers over which said apron is passed, the former movable towards and from one of said rolls and the latter yielding to permit such movement, substantially as described. 3rd. In a mixing mill for rubber and like material, two rolls, means to rotate the same, an endless apron adapted to travel in contact with one of said rolls or the layer of material thereupon, and two or more rollers over which said apron travels, and springs to retain one of said rollers in normal position whereby said roller may yield to accommodate changes in position of said apron, substantially as described. 4th. In a mixing mill for rubber and the like, two rolls, means to rotate the same, an endless apron, a yoke, a cam opening in which the fulcrum-thereof is movable, a roller carried by said yoke and over which said apron is passed, and a yielding roller, also for said apron whereby the said apron is enabled to change its position to permit said yoke to be moved from one to another side of its dead centre line, substantially as described. 5th. In a mixing mill for rubber and the like, a frame, two rolls and means to rotate the same, an endless apron, a pivoted yoke, a roller carried thereby, and a roller on said frame, over which said apron is passed, and one or more brushes on and movable with said yoke to sweep said apron, substantially as described.

No. 48,758. Lacing Device for Boots and Shoes, Etc.

(*Appareil à lacer pour chaussures, etc.*)

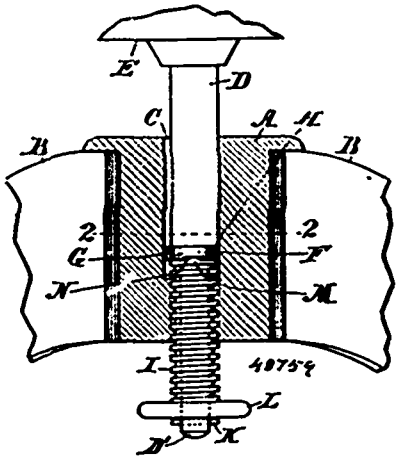


Thomas Laycock, Wallingborough, England, 25th April, 1895; 6 years.

Claim.—In boots, shoes, leggings and other garments or articles

in which laces are employed, fixing the eyes, loops or equivalent lacing devices, through or over which the laces are passed to an inside lining or facing upon the inner surfaces of such articles in such a manner that when in use such eyes, loops or other devices, as well as the laces, are concealed from view, and without the holes coming through to the outside, substantially as described.

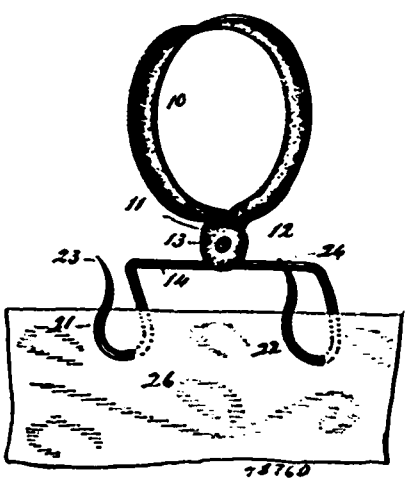
No. 48,759. Revolving Chair. (*Fauteuil tournant.*)



James M. Morgan, Port Washington, Wisconsin, U.S.A., 25th April, 1895; 6 years.

Claim.—1st. The combination, with a chair hub provided with a vertical screw threaded aperture, and a hollow screw adjustable vertically in the hub, of a seat spindle supported on and revoluble in and independently of the hollow screw, and a non-revoluble bearing plate resting on the screw and adjustable vertically thereby and supporting the spindle and its seat thereon, substantially as described. 2nd. In a revolving chair, the combination, with a hub having a vertical screw threaded aperture and a vertical groove or grooves, of a hollow screw adjustable vertically in the hub, a spindle supported on and revoluble in and independently of the hollow screw, a non-revoluble bearing plate resting on the screw and adjustable vertically thereby, and supporting the spindle and its seat thereon, and means on the plate in connection with the groove or grooves in the hub for preventing the revolution of the plate, substantially as described. 3rd. In a revolving chair, the combination, with a hub and a hollow adjusting screw turning therein, said screw being provided with a longitudinally projecting boss, of a seat spindle revoluble in and supported on the hollow screw, and a non-revoluble bearing ring or plate interposed between the end of the screw and a shoulder of the spindle, which ring is provided with a recess adapted to receive and its end walls to engage releasably the boss on the screw, substantially as described.

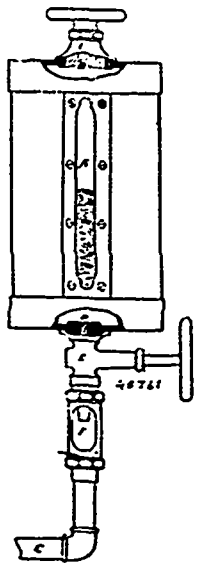
No. 48,760. Curtain Ring. (*Anneau de rideau.*)



Marie Gair, New York, State of New York, U.S.A., 25th April, 1895; 6 years.

Claim.—As an article of manufacture, a ring as 10, in combination with two hooks separated a distance from each other and separate from said ring, and a suitable fastening for securing both hooks to said ring, substantially as herein specified.

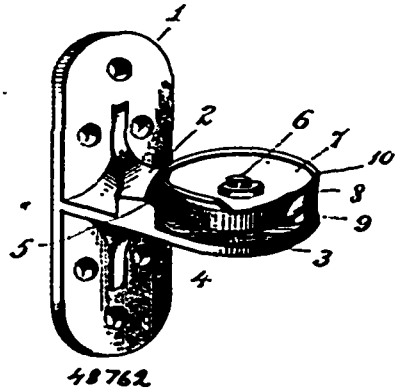
No. 48,761. Oil or Boiler Compound Feeder.
(*Alimentateur d'huile pour chaudières.*)



George A. Woodward, Petrolia, Ontario, Canada, 25th April, 1895; 6 years.

Claim. 1st. The combination in an oil or boiler compound feeder, of the combination of a chamber or receptacle, containing the liquid to be used, with an outlet in the bottom thereof, controlled by a valve, and a glass tube connected below said valve, for the liquid to to flow or drop into from said outlet, with a pipe connected to the lower end of said glass tube, and arranged so as to convey said liquid to the injector or suction-pump of the steam-boiler, when they are being operated, substantially as herein specified.

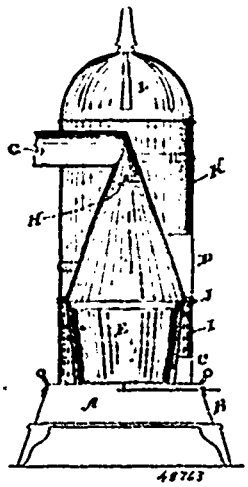
No. 48,762. Rope-Fastener. (*Attache de corde.*)



Alexander C. Warren, Chicago, Illinois, U.S.A., 25th April, 1895; 6 years.

Claim.—1st. *In a rope-fastener, the combination with a support* having a curved binding-shoulder, of a cam pivoted eccentrically to the support and provided with a radial stop-shoulder at its longest portion, a stop-lug arranged upon the support in the path of the stop-shoulder, and means for locking the cam in an open position during the adjustment of the rope, substantially as specified. 2nd. In a rope-fastener, the combination with a support having a curved binding-shoulder, of a cam pivoted eccentrically to the support and having a cut-away portion forming two shoulders, a lug on said support for engagement with one shoulder, and a catch pivoted on the support for engagement with the other shoulder to lock the cam against rotation, substantially as specified. 3rd. In a rope-fastener, the combination with a support having a curved binding-shoulder provided with a bevel at its upper side to facilitate the reception of the rope, of a cam pivoted eccentrically upon the support and with relation to the shoulder and provided with a radial stop-shoulder at its longest portion and having the upper portion of its binding periphery shaped to conform to that of the binding-shoulder, and a stop-lug arranged upon the support in the path of the stop-shoulder of the cam, substantially as specified.

No. 48,763. Portable Round Stove. (*Poêle portatif.*)

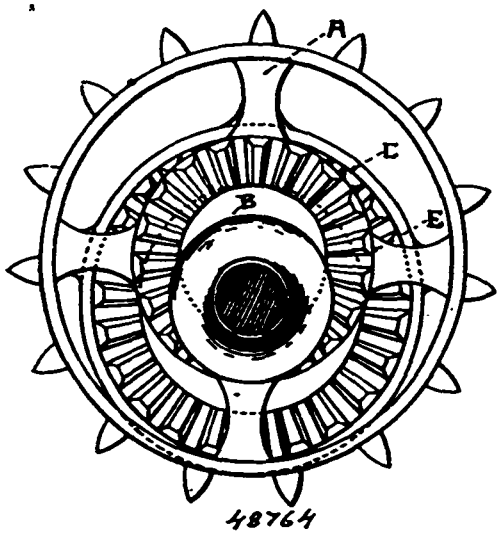


Andrew G. Gray, Saint John, New Brunswick, Canada, 25th April, 1895; 6 years.

Claim.—The combination of the perforated casing I, fire-pot F, marker F, plate H, ring J, casing K, and the perforated top L, substantially as and for the purpose hereinbefore set forth.

No. 48,764. Speed Changing Gear for Bicycles.

(*Engrenage pour changer la vitesse des bicycles.*)

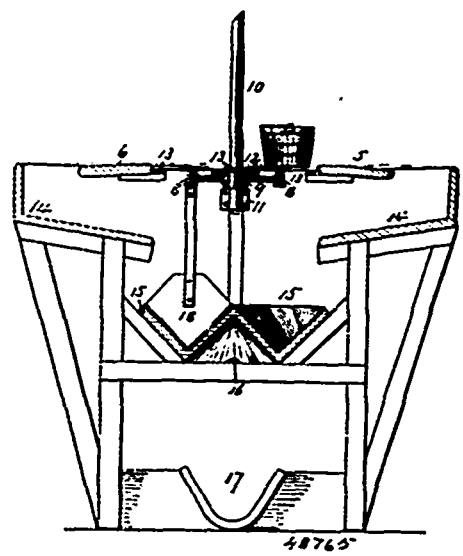


The Tygard Pollman Company, assignee of James W. Tygard, all in Pittsburgh, Pennsylvania, U.S.A., 25th April, 1895; 6 years.

Claim.—1st. The combination in a bicycle or other vehicle of an internal and external gear, carrying sprocket teeth on its exterior, revolving on an independant bearing, laterally movable, in which gear revolves an internal and external gear, whose bearings are stationary, and which gears are caused to engage and disengage from mesh with each other, by the rotation of a double sleeve, one part of which is movable and carries on one end the laterally movable bearing of said sprocket gear, and the other part of which sleeve is fastened to the frame of the machine, the parts of which double sleeve are screwed or threaded together, the movable part into the stationary part, substantially as set forth. 2nd. In a bicycle or other vehicle, the combination of two sets of internal and external bevel gears on parallel though independent bearings; and a double sleeve, threaded and carrying one of the bearings for one of the sets of internal and external bevel gears, and by the rotation of the movable part of which double sleeve upon the startionary part; the sleeve is unscrewed carrying the movable part of the sleeve laterally, and causing the double sets of internal and external bevel gears, one set of which gears are formed on the hub of the sprocket wheel to engage and disengage from mesh with each other, substantially as set forth. 3rd. A bicycle or other vehicle, having a fixed bearing for driving shaft combined with a double sleeve placed over or above the fixed bearing, one half of this sleeve attached to frame; the other half screwed into the fixed part and carrying a bearing at its outer end and an actuating lever on its inner end, which projects through an opening in the fixed part of sleeve and by the rotation of which lever the sleeve and bearing is moved laterally; a sprocket wheel having an internal and an external bevel gear formed on its hub and its bearing on the outer end of the double sleeve; together with a driving shaft whose fixed bearing is under the double sleeve and runs through the centre of the sprocket gear having keyed thereon an internal gear and an external gear; said gears being adapted to mesh with the gears carried by the sprocket gear, all substantially as and for purpose set forth. 4th. The combination, in a bicycle or other vehicle of an internal and an external gear, carrying sprocket teeth on its exterior, revolving on an independent bearing laterally movable, in the centre of which sprocket gear revolves a shaft having keyed thereon an internal gear and an external gear, said gears being adapted to mesh with the gears carried by the sprocket gear and which double set of gears are caused to engage and disengage from mesh with each other by the rotation of a double sleeve, one part of which is movable, and carries on one end the lateral movable bearing and sprocket gear and on the other end an actuating lever and which part of sleeve is screwed or threaded into the stationary part of the sleeve fastened to frame of machine, all substantially as and for the purpose described.

No. 48,765. Fruit Peeling Table.

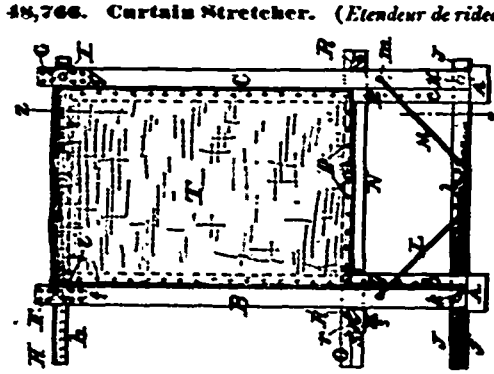
(*Table pour peler les fruits.*)



Frank M. Anderson, Kookuk, Iowa, U.S.A., 25th April, 1895; 6 years.

Claim.—The combination of a loop-shaped table, vertical shafts journalled at the ends of the loop and horizontal wheels fixed upon the shafts below the plane of the table, a chain mounted to travel around the wheels, cross-bars fixed upon the chain at the plane of the table within its loop and less than the width of a bucket apart, and rails fixed beneath the ends of the cross-bars throughout their path, substantially as described.

No. 48,766. Curtain Stretcher. (*Etendeur de rideau.*)

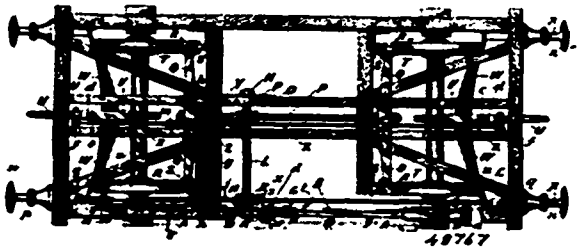


Phoebe M. Hartpence, Harrison, Ohio, U.S.A., 25th April, 1895; 6 years.

Claim. 1st. The combination, in a curtain-stretching frame, of the sill A, supporting a laterally-shiftable standard consisting of a pair of vertical stiles B, B¹, separated by an opening and united at

top by blocks F, *f*, the sill A^1, supporting a stationary standard consisting of a pair of stiles C, C^1, separated by an opening and united at top by blocks G, *g*, the top rail H inserted between said blocks F, *f*, G, *g*, and connected to said standards by a pin I, and thumb screw *i*, the bottom rail J, occupying the openings between said standards, and secured to them by a pin K, and thumb screw *k*, the hook L, pivoted to the stile B and having its free end engaged with either one of a series of holes *l* in said bottom-rail J, the hook M, pivoted to this rail, and having its free end engaged with a perforation *m*, of the stile C, and a stretcher bar N, vertically adjustable within the openings between the standards, and having devices that secure it in place, said standards, and the stretcher-bar, being provided with means for the ready attachment of a curtain, all as herein described.

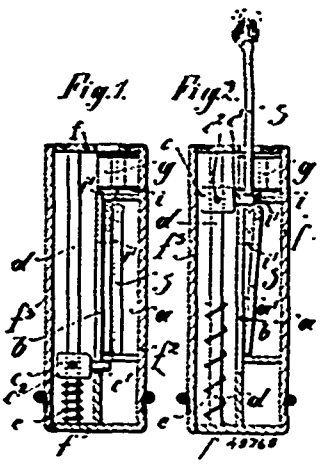
No. 48,767. Car-Brake. (*Frein de chars.*)



Luke Roberts, Cutler Heights, England, 25th April, 1895; 6 years.

Claim.—1st. The combination with a railway or other similar vehicle in which the brake is applied by the weight of the vehicle, of mechanism whereby the inward movement of the buffer withdraws the brake, substantially as herein shown and described. 2nd. In a railway or other vehicle, brake mechanism applied by the weight of the vehicle and adapted to be withdrawn by mechanism in connection with both the draw-bar and the buffers, substantially as herein shown and described. 3rd. In a railway or other vehicle fitted with brake mechanism applied by the weight of the vehicle mounting said brake mechanism upon a support carried by and connecting the axle boxes at one side of the vehicle, substantially as herein shown and described and illustrated in the accompanying drawing.

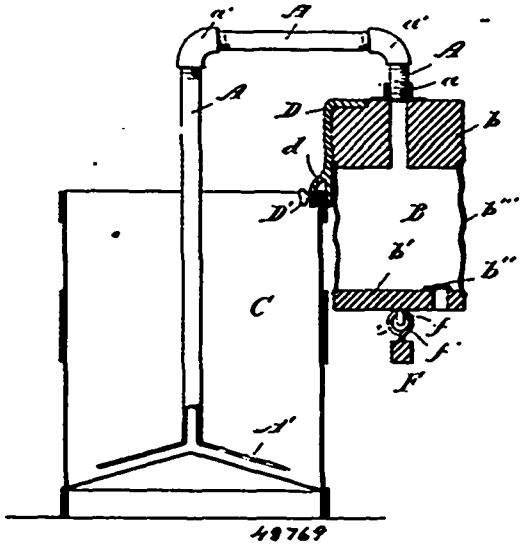
No. 48,768. Automatic Lighting and Ejecting Match-Box. (*Appareil automatique à allumer et repousser les allumettes*)



Jens Andreas Trendel, Berlin, Prussia, Germany, 26th April, 1895; 6 years.

Claim.—1st. In combination, the casing, the striking pin to engage the match having a connection extending to the outside of the case, the spring for engaging the striking pin and forcing the same outward and the channel for the match, substantially as described. 2nd. In combination, the casing, the striking pin, the guide-rod therefor, the extension to the outside of the case for the striking pin and the channel for the match, substantially as described. 3rd. In combination, the casing, the means for moving the match out, and the wearing plates carried removably by a movable support. 4th. In combination, the casing, the means for moving the matches therein, and the wear plates carried by supports extending longitudinally of the casing, substantially as described. 5th. Automatic apparatus for lighting and ejecting matches in which the striking pin is provided with prolonging pieces *m*, substantially as and for the purpose set forth. 6th. Automatic apparatus for lighting and ejecting matches in which both arms *h* and h^1, are supporting solid frictional material, leaving but one arm pressing by spring, substantially as and for the purpose set forth. 7th. Automatic apparatus for lighting and ejecting matches in which the channel for matches to be pushed out of is provided with an extension of width *o*, aside the heads of matches, substantially as and for the purpose set forth. 8th. Automatic apparatus for lighting and ejecting matches in which the space for matches to be pushed out of, is provided with a belly in reference to curved matches and straight matches, substantially as and for the purpose set forth. 9th. Automatic apparatus for lighting and ejecting matches in which the striking pin *c*, for pushing forwardly the match is provided with a paravent *k*, or elongation ascending forwardly, substantially as and for the purpose set forth. 10th. Automatic apparatus for lighting and ejecting matches, in which the striking pin is arrested in its initial position by means of a feathering stop *z*, substantially as and for the purpose set forth. 11th. Automatic apparatus for lighting and ejecting matches in which the arms h^1, h^2, are provided with the dove-tailed pieces h^3, for supporting the frictional pieces *g*, substantially as set forth and for the purpose specified.

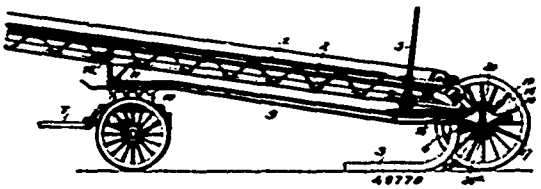
No. 48,769. Aerator and Cooler. (*Réfrigérateur.*)



Léandre Baril, Saint Elizabeth d'Auteuil, Quebec, Canada, 26th April, 1895; 6 years.

Claim.—1st. An aerator consisting of a bellows provided with bracket adapted for placing it upon the rim of a can or vessel and with thumb screw for securing it, a tuyere connected to the nozzle, and so bent as to extend down the vessel, and its end provided with a perforated diaphragm and a lever adapted to operate the lower head of said bellows and carried pivotally in a bracket adapted to be placed upon the edge of the same vessel and provided with thumb screws for securing it, substantially as set forth. 2nd. In an aerator, the combination of a bellows having a nozzle on its upper head, a tuyere connected with said nozzle, and bent down into a vessel to which it may be applied, a bracket on said upper head of the bellows adapted to secure the same upon the edge of a vessel, a lever hinged to the lower head of the bellows and a bracket adapted to be secured to the edge of a vessel and to which said lever is pivoted, substantially as set forth. 3rd. In an aerator, the combination with a vessel of a bracket adapted to be secured upon its edge, a bellows rigidly carried by said bracket, and a tuyere connected to the nozzle of said bellows and bent to extend down the vessel, substantially as set forth.

No. 48,770. Water-Tower. (*Tour à eau.*)

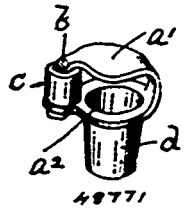


Ernst F. Steck, Chicago, Illinois, U.S.A., 26th April, 1895; 6 years.

Claim.—1st. In a water-tower, the combination, with a truck or carriage, of the tower proper hinged to the rear end of said truck or carriage and adapted to be reclined over the forward end of said truck or carriage, substantially as set forth. 2nd, In a water-tower,

the combination, with a truck or carriage, of the tower proper hinged to the rear end of said truck or carriage and adapted to be reclined over the forward end of said truck or carriage, and a rest or support for said tower proper, mounted on the forward end of said truck or carriage, substantially as set forth. 3rd. In a water-tower, the combination, with a truck or carriage having a frame, and springs or cushions supporting said frame upon said truck or carriage axle, of a tower proper supported upon said frame adjacent to the axle and means for supporting said frame upon said axle independently of said springs or cushions, substantially as set forth. 4th. *In a water-tower, the combination, with a truck* or carriage having a frame, and a tower proper supported upon said frame, of of lifting devices for raising the sides of said frame independently, supported upon the axle of the tower or carriage, substantially as set forth. 5th. In a water-tower, the combination, with a truck or carriage having a frame and a tower proper supported upon said frame, of independent lifting screws supporting said frame upon the axle independently of the truck or carriage springs, substantially as set forth. 6th. In a water-tower, the combination, with a truck or carriage having a frame and a tower proper supported upon said frame, of two screws arranged on each side of said frame and impinging the upper and lower sides of the carriage axle, substantially as set forth. 7th. In a water-tower, the combination of a tower proper, a truck or carriage having a frame provided with slotted portions 3, an axle passing through said slotted portions, and lifting screws secured to said frame and bearing upon said axle, substantially as set forth.

No. 48,771. Lace Holder. (*Porte-lacet.*)



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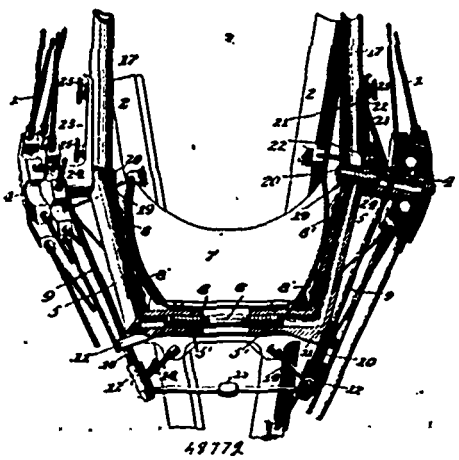
Edward Fredrick Haynes and Thomas Singlton Griesbach, both of Birmingham, England, 26th April, 1895; 6 years.

Claim.—1st. The herein described improved lace holder consisting of a pair of metal jaws, between which the lace can be threaded, said jaws having a cross-pin fixed thereto and carrying a pulley or roller between the jaws for the lace to run round, one of said jaws being formed for fixing to the boot, shoe, corset or other article with which the lace holder is to be used, substantially as herein set forth. 2nd. In a lace holder a pair of metal jaws between which the lace can be threaded, a cross-pin fixed to said jaws and carrying a pulley or roller between the jaws for the lace to run round, one of said jaws being made with an eyelet for fixing the lace holder to the boot, shoe, corset or other article with which the lace holder is to be used, substantially as herein set forth. 3rd. In a lace holder, a pair of metal jaws between which the lace can be threaded, a cross-pin fixed to said jaws and carrying a pulley or roller between the jaws for the lace to run round, one of the said jaws being made with legs for passing through and clenching over on the inside of the boot upper or other material with which the lace holder is to be used, substantially as herein set forth. 4th. In a lace holder, a pair of metal jaws between which the lace can be threaded, a cross-pin fixed to said jaws and carrying a pulley or roller between the jaws for the lace to run round, one of said jaws being made with a pillar or pin for fixing the lace holder to the boot, shoe, corset or other article with which the lace holder is to be used, substantially as herein set forth.

No. 48,772. Roller Skate. (*Patin à roulette.*)

Johan Albert Segerberg, Denver, Colorado, U.S.A., 26th April, 1895; 6 years.

Claim. 1st. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground. 2nd. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground, in combination with means for adjusting the distance between said wheels. 3rd. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground, and of an intermediate foot-support arranged below the axle. 4th. In a roller skate, the combination, with the axle having its opposite ends inclined downward, and having a depressed central portion, of the wheels mounted on the inclined ends of the axle outside of the depressed portion thereof, means for adjusting said wheels toward and from one another, and a foot support mounted on the depressed central portion of the axle. 5th. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground, and provided with two rubber tires so constructed as to be interchangeable. 6th. A roller skate consisting of two wheels set at angles to one another, their rims touching each other at their point of contact with the ground, and provided with two rubber tires so constructed as to be interchangeable, means for adjusting the distance between the wheels, and an intermediate foot-support arranged below the axle. 7th In a roller skate, the combination of the wheels, the axle formed in two sections each provided at its inner end with a depending portion provided with a screw-threaded bore, the tie-bar having oppositely screw-threaded ends fitting the respective screw-threaded bores, and the foot-support mounted on



48772

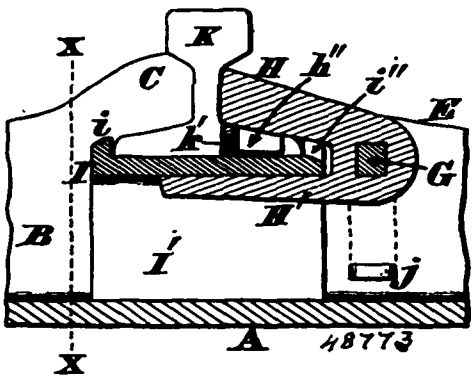
the depending portions of the axle. 8th. In a roller skate, the combination of the axle having a depressed central portion, the wheels mounted on the ends of the axle outside the depressed central portion thereof, the foot-support mounted on the depressed portion of the axle, a tie-rod extending down from each end of the axle outside the depressed portion thereof, screw-couplings mounted on the lower ends of said tie-rods below the depressed central portion of the axle and a tie-bar connecting the respective screw couplings. 9th. In a roller skate, the combination of the axle having a depressed central portion, the wheels mounted on the ends of the axle outside the depressed portion thereof, the foot-support mounted on the depressed portion of the axle, tie-rods secured to the ends of the axle outside the depressed portion thereof, screw-couplings mounted on the lower ends of said tie-rods below the depressed portion of the axle, brace rods extending from said screw-couplings to the toe and heel-portions of the foot-support, and a tie-bar connecting the respective screw-couplings. 10th. The combination of two wheels arranged to rotate in planes at angles to one another and tires mounted on said wheels and each provided with two plane surfaces arranged at angles to one another, the corresponding surfaces on the respective tires being arranged at corresponding angles, whereby when the tires are in position on the wheels, two of said surfaces will be in contact. 11th. The combination with the axle having downwardly inclined ends, of the wheels mounted on the inclined ends of the axle, the adjacent faces of the wheel rims being in contact, one of said rims having an annular concentric groove, and the other rim having an annular concentric rib engaging said groove. 12th. A roller skate comprising the foot-support 7, intermediate the wheels 1, and provided with the adjustable ankle braces 17, carrying the adjustable ankle pads 15, and pivotally supported by the ends 4 of the axle. 13th. In a roller skate, the combination of the axle, the wheels mounted thereon, sleeves collared on said axle between the wheels and provided with slotted tongues, the supporting rods having on their inner sides perforated lugs secured to the axle, and clamp screws for clamping said supporting rods to the slotted tongues on the sleeves. 14th. The combination with the wheels arranged to rotate in planes at angles to one another, and having grooved rims provided with contacting surfaces, one having a concentric groove, and the other having a concentric rib engaging said groove, of the tires mounted on the grooved rims and having in cross section a triangular form with plane inner contacting surfaces.

No. 48,773. Railway Track, (*Rail de chemin de fer.*)

William Robinson Smith, Covington, Kentucky, William Fredrick Kipp, Henry August Kipp and Oscar Shaw Barnett, Cincinnati, Ohio, all in the U.S.A., 26th April, 1895; 6 years.

Claim.—1st. The combination, in a railway-track, of a metallic cross-tie, having upturned side flanges, a chair fitted within said tie, a rail supported upon said chair, a non-circular bolt secured in said side-flanges, and a non-rotable cramp carried by said bolt, and grasping the chair and rail base, thereby dispensing with fish-plates, bolts and spikes, in the manner described. 2nd. A railway-track, consisting of rails secured to metallic cross-ties by a system of non-rotable cramps fastened between vertical flanges of said ties, and bell-crank keepers attached to the exteriors of said flanges, as herein described. 3rd. A railway-track, consisting of rails secured to metallic cross-ties by a system of non-rotable cramps fitted between vertical flanges of said ties, and keepers attached to said flanges, and engaging with notches in the rail bases, as herein described.

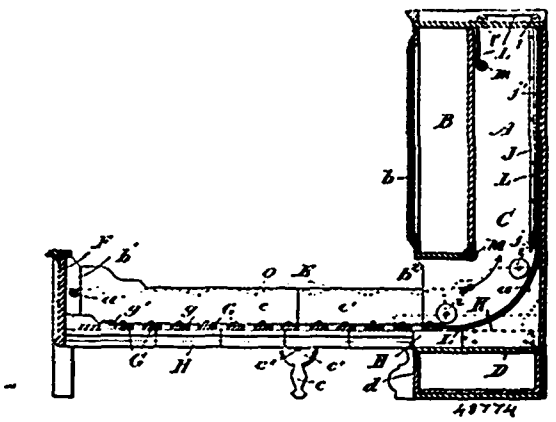
4th. A railway-track, consisting of the metallic cross ties A, having outer abutments C, C^1, D, D^1, inner lugs E, E^1, F, F^1, and perforated side flanges B, B^1, c, and rails K resting upon said flanges, in combination with a system of non-rotable cramps H, H^1 that grasp



the bases of said rails, all as herein described. 5th. The combination, in a railway-track, of the metallic cross-tie A, having side-flanges B, B^1, a rail K supported upon said flanges, and having its base notched at k^1, a non-circular bolt G secured to said flanges, and non-rotable cramp H, H^1, carried by said bolt and provided with a lug h^{11}, that engages with said notch k^1, for the purpose stated. 6th. A railway-track, consisting of the metallic cross-tie A, having side flanges B, B^1, a chair I, having upturned lips i, i^1, and downturned end flanges I^1, I^{11}, which flanges I^1, I^{11}, rest upon the base-plate of said tie, a rail K carried by said chair, and a non-rotable cramp H, H^1, fitted between the tie flanges B, B^1, and grasping said chair and the base of said rail, in the manner described, and for the purpose stated.

No. 48,774. Cabinet or Wardrobe Bed-stead.

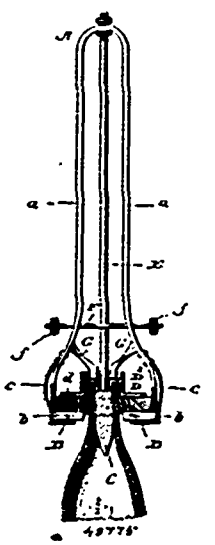
(*Garde-robe et cabinet de lit.*)



Hannah Elizabeth Young and Freda Nye, assignees of Frederick Walter Nye, all of Cincinnati, Ohio, U.S.A., 26th April, 1895; 6 years.

Claim.—1st. In a cabinet or wardrobe bed-stead, the combination with a permenatly-upright frame or casing having a suitable receptacle or chamber with a lower front opening or orifice leading thereto, of an extensible-bed-stead composed of a flexible, slatted-bottom, a pair of hinged side-rails, a foot-board hinged to said side-rails, and the latter swung or hinged to said casing, extension-bar supports H, having slide couplings H^1, for said slatted bottom, and suitable guides in said casing for said slatted-bottom, the said movable or extensible bed-stead being drawn into and from said casing, by means of any suitable device, for closing and opening positions, substantially as herein set forth. 2nd. In a cabinet or wardrobe bed-stead, the combination of a casing having a front wardrobe-compartment and a rear main-compartment, the latter having a lower fore-orifice under said wardrobe compartment, a drawer or locker compartment under said lower fore-orifice, a flexible slatted bottom or apron, a series of extension-slides or bars H, having slide couplings H^1, and projecting forward from said casing under said slatted bottom and thereby supporting the latter, suitable guides in the casing for the movement or passage, in either direction, of said slatted-bottom with its bed thereon to or from said main-compartment, a suitable foot-board at the outer end of said slatted-bottom, and folding side-rails pivotally connected at their inner ends to the casing, and likewise connected at their outer ends to said foot-board, and auxiliary legs or supports under the hinged folding-portions of both said side-rails, the whole being constructed and the bed-stead adapted to be drawn by means of any suitable mechanism into concealed confinment within the said receptacle or near chamber, and readily withdrawn therefrom for use, substantially as herein set forth. 3rd. In a cabinet or folding bed-stead, the combination of a casing or permanently-upright receptacle having an open lower orifice, a reciprocating foot-board, a pair of folding side-rails hinged at their opposite ends to the end walls of said casing and the opposite ends of said foot-board, respectively, and a suitably supported slatted-bottom or apron for receiving the mattress or bed, said side-rails, foot-boards, and slatted-bottom together with the bed, being adapted to be closed within said casing, substantially as and for the purpose herein set forth.

No. 48,775. Implement for Threading and Finishing Bottle Necks. (*Outil pour fileter et finir les goulots de bouteilles.*)



Robert Good, jr., Poughkeepsie, New York, U.S.A., 26th April, 1895; 6 years.

Claim.—1st. An implement for threading and finishing bottle necks comprising arms movable toward and from each other and terminating in opposed jaws provided with independently movable stops projecting beyond their adjacent faces, an internally threaded cap-like mould mounted between the said arms to turn freely, a plug or mandrel depending from the mould to enter the bottle neck, and means for locking the arms and mould together when the arms are in their outermost position, substantially as herein described. 2nd. An implement for threading and finishing bottle necks comprising arms movable toward and from each other terminating in opposed jaws each provided with a spring pressed stop, and internally threaded cap-like mould journalled between the arms to turn freely and provided with a depending plug or mandrel, and with a peripheral flange projecting over said jaws, and means for locking the mould to the arms when the latter are in their outermost position, substantially as described. 3rd. An implement for threading and finishing bottle necks which consists in a bow the outwardly springing arms of which terminate at their free ends in the opposed jaws, independently movable stops carried by said jaws, a freely rotating cap-like mould mounted between the said arms and having a depending plug or mandrel to enter the bottle neck, an annular toothed ring or ratchet on the upper side of the mould, and pawls on the arms to engage the said ring or ratchet when the arms are in their outermost position, substantially as herein described. 4th. An implement for threading and finishing bottle necks comprising the spring bow, the arms of which terminate at their free ends in the opposed jaws, a transverse centrally apertured bar connecting the said arms above the jaws and permitting free movement thereof, the ends of the bar having stops thereon, a stem swivelled in the bow and extending freely through the aperture in said bar, a depending internally threaded cap-like mould on the lower end of the stem and having a mandrel to enter the bottle neck, and a peripheral flange extending over the said jaws, and a pawl and ratchet mechanism for locking the said mould and arms together when the arms are in their outermost positions, substantially as herein described.

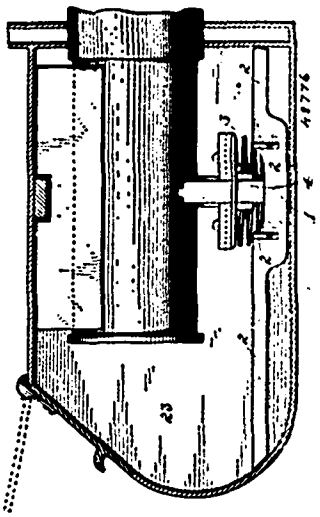
No. 48,776. Car-Axle Lubricator.

(*Boîte à graisse de chars.*)

William Hamilton Wright, Buffalo, New York, U.S.A., 26th April, 1895; 6 years.

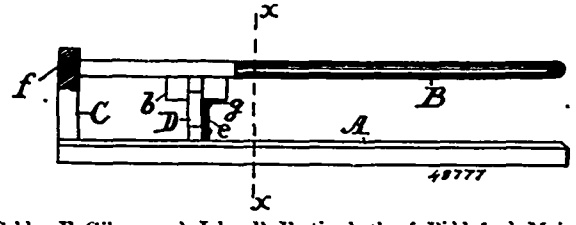
Claim.—1st. A car-axle lubricator supporting frame consisting of a stationary frame provided with a series of longitudinal and trans-

verse wings adapting it to be easily fitted to the axle-box and provided with two vertical bars each having an upward projection at the top adapted to be bent over the top of the slideways for holding it down against the force of the spring, the whole being formed in one piece of cast metal, substantially as described. 2nd. In a car-axle lubricator, the combination of a stationary frame provided with longitudinal and transverse wings thereby adapting it to be easily



fitted to a car-axle box, two vertical supporting bars forming part of said frame two transverse bars having cross-bars adapting them to be movable up or down on the vertical supporting bars, a slideway on each transverse bar and projecting portions on the vertical supporting bars adapted to be bent over the vertically sliding bars for limiting the upward movement of the horizontal slideways, a roller supporting frame adapted to fit and slide on the horizontal slideways so as to be capable of a lateral movement, a transfer roller mounted in boxes in the roller supporting frame, and a spring interposed between the base of the stationary frame and the roller supporting plate, substantially as and for the purposes described. 3rd. In a car-axle lubricator, the combination, with a supporting frame having two upright bars, two horizontal angle-bars having slideways slidable on the upright bars, a roller supporting plate mounted on said slideways, so as to be capable of a lateral movement thereon, a means consisting of the bent projections at the top of the vertical supporting bars for holding the several parts in place, a spring interposed between the roller plate and the bottom of the stationary frame, and a grooved transfer roller, mounted in boxes in the roller plate frame and having the two edges of its face rounded, substantially as described.

No. 48,777. Press Board. (*Ais à presser.*)



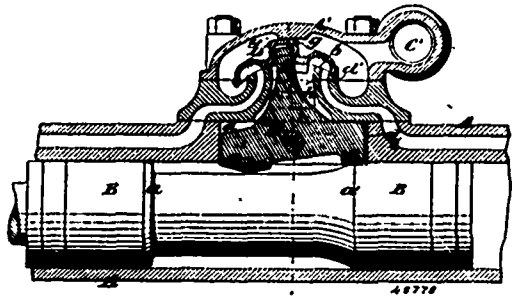
Selden F. Gilson and John B. Fortin, both of Biddeford, Maine, U.S.A., 26th April, 1895; 6 years.

Claim.—The herein described pressing board consisting of a base, a standard secured thereto having an opening through its upper end, a pressing arm one end of which has a stud fitting within said opening, the under side of said pressing arm being provided with a longitudinal flange or projection and a bridge secured to said base having a vertical slot or recess in its top adapted to receive the edge of said pressing arm and said flange or projection and to support said arm in two positions and a fastening device for fastening said flange and the edge of the said pressing arm to said bridge.

No. 48,778. Valve and Valve Gear for Direct Action Engines. (*Renvoi de mouvement de tiroir pour machines à vapeur.*)

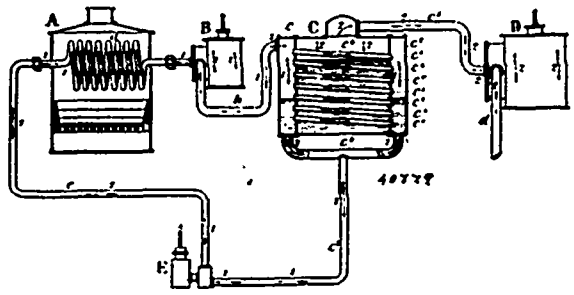
The Ingersoll Sergeant Drill Company, New York, State of New York, assignee of Henry Clark Sergeant, Westfield, New Jersey, U.S.A., 26th April, 1895; 6 years.

Claim.—The combination with an engine cylinder and a piston therein provided with tappet surfaces, of a valve-seat having a convex arc-formed profile, a valve having a corresponding concave profile and a three-armed oscillating lever having its axis of oscillation corresponding with the centre of the arc of the valve and seat,



one of the arms of said lever engaging with the valve and the other two constituting tappets to be acted upon by the tappet surfaces of the piston, substantially as herein set forth.

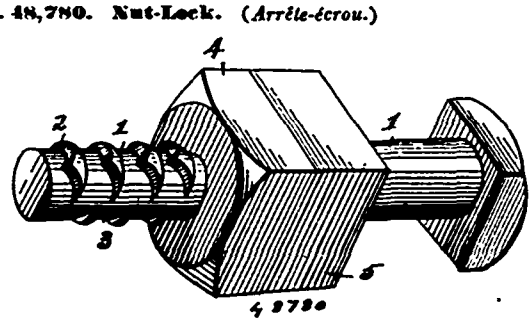
No. 48,779. Vapour Motor-Engine. (*Moteur à vapeur.*)



La Compagnie Internationale pour l'Exploitation des Procédés Adolphe Seigle, assignee of Adolphe Seigle, Lyons, France, 29th April, 1895; 6 years.

Claim.—1st. A combined vapour-engine working with heavy hydro-carbons as the principal liquid and water as the auxiliary liquid, substantially as herein described. 2nd. The combination of a generator in which the vapour of heavy hydro-carbon is formed, a first engine actuated by the said vapour, of a condenser with two chambers, one into which hydro-carbon vapours pass, and in which they condense, the other containing water which is vapourized by the hydro-carbon vapour, and a second engine actuated by the steam thus formed, and either coupled or not with the first-mentioned engine, substantially as described.

No. 48,780. Nut-Lock. (*Arrête-écrou.*)

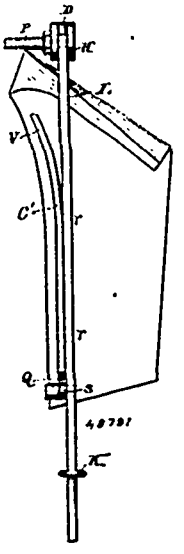


Thomas J. Byrns, Philadelphia, Pennsylvania, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. A nut and bolt lock comprising a bolt having a thread removed on longitudinal lines on diametrically opposite sides to provide longitudinal spaces, the ends of the thread sections bordering on the said spaces being respectively disposed opposite the spaces between the ends of the opposing thread sections, the said bolt being thereby adapted to receive a right and a left threaded nut, substantially as described. 2nd. A nut and bolt lock comprising a bolt adapted to receive a right and a left threaded nut, hav[illegible] a thread removed on longitudinal lines on diametrically oppos[illegible]ides, to provide longitudinal spaces, the ends of the thread sections bordering on the said spaces being respectively disposed opposite the space between the ends of the opposing thread sections, the latter tapering from the middle toward each end, substantially as described and for the purposes specified.

No. 48,781. Ploughshare Immersing Clamp.

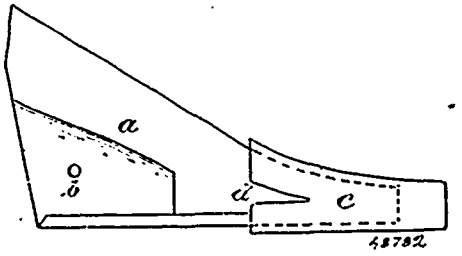
(*Tenaille pour tremper les socs de charrue.*)



Mrs. Mary A. O'Bryan, and Miss Trabella Lamont, assignees of Stafford O'Bryan, all of Madison, Wisconsin, U.S.A., 29th April, 1895; 6 years.

Claim.—A ploughshare clamp for smiths' use consisting of a pair of legs pivoted together at one end and provided with plates attached to them between said pivot and the handle ends of the said legs, the edges of the said plates projecting toward each other being equally curved outward near the end remote from the handles, in order that they may present inner edges adapted to fit on the sides of a ploughshare, substantially as set forth.

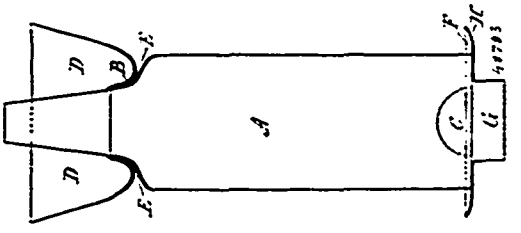
No. 48,782. Plough Point. (*Soc de charrue.*)



William Bailey, Norwood, Ontario, Canada, 29th April, 1895; 6 years.

Claim.—1st. A device, an adjustable steel socket point C, for passing over plough shears all formed, as and for the purpose hereinbefore set forth. 2nd. A device, an adjustable steel socket point C, for passing over plough shears having the part D, taken out all formes, as and for the purpose hereinbefore set forth.

No. 48,783. Refrigerator. (*Réfrigérateur.*)

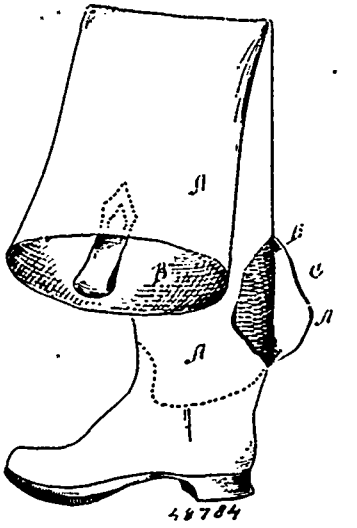


Bernhard Boggild, Copenhagen, Denmark, 29th April, 1895; 6 years.

Claim.—1st. An apparatus for ventilating and cooling off by air milk and other fluids, characterized by a cooling surface A, of arbitrary shape and a regulator D, arranged over or on its top and supplied with holes E, through which the milk, &c., may ooze down the cooling-surface thus being cooled off by the influence of the air, substantially as set forth. 2nd. To the apparatus for ventilating and cooling off milk and other fluids by air characterized under claim 1, a funnel-shaped tray F, whose diameter is larger than that of the cooling-surface and in whose centre a spout G is placed, while the outside edge H, of the tray is turned upwards so as to gather the fluid coming down the cooling-surface and to conduct it into a bucket or other container below the tray F, substantially as set forth.

No. 48,784. Rubber Boot and Shoe.

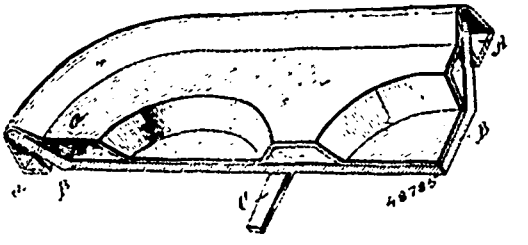
(*Chaussure de caoutchouc.*)



Ferdinand Ephraim, San Francisco, California, U. S. A., 29th April, 1895; 6 years.

Claim.—1st. As a new article of manufacture a rubber boot or shoe provided with an inner seamless lining of fabric material. 2nd. An improvement in the art of manufacturing rubber boots or shoes which consists of fitting a seamless lining over the last and thence rolling or moulding the rubber over the seamless lining whereby a seamless boot or shoe is produced. 3rd. As a new article of manufacture an upper for rubber boots or shoes provided with an inner seamless lining. 4th. As a new article of manufacture a boot or shoe having an inner seamless lining composed of a textile fabric and an outer seamless coating or covering of rubber molded or rolled upon the seamless lining, said rubber surface being applied while in a plastic condition whereby the material enters the interstices of the textile lining and forms a close union therewith.

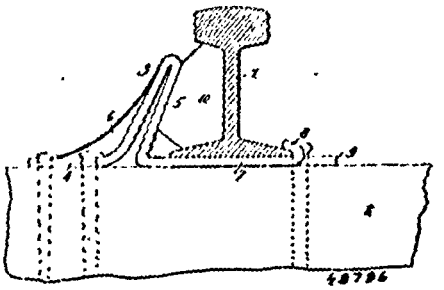
No. 48,785. Griddle. (*Moule à gâteau.*)



James F. Hamilton, Alamosa, Colorado, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. A griddle or like utensil, composed of a frame, a sheet metal body portion overlapping the upper face of the frame and secured thereto, and an exterior covering of fire proof material, substantially as described. 2nd. A griddle or like utensil composed of a frame, a sheet metal stretched over the upper face of the frame and secured thereto, and depressed between the sides of the frame, and a covering of asbestos exterior to the sheet and held in place between the frame and the edge portions of the sheet metal, substantially as described. 3rd. A griddle or like utensil composed of a frame, a sheet metal body having its edge portions bent around the sides of the frame and clinched, and a covering of asbestos exterior to the sheet metal body, substantially as described. 4th. A griddle or like utensil composed of a frame, a sheet metal body secured at its edges to the frame, an exterior covering of of asbestos or other fire proof material, and strips secured at their ends to the frame and arranged to support the covering substantially as set forth. 5th. A griddle or like utensil, composed of a frame, bevelled on its upper face from the outer to the inner side, a sheet metal body stretched over the frame, and asbestos covering, and strips secured at their ends to the frame and adapted to support the said covering, substantially as described.

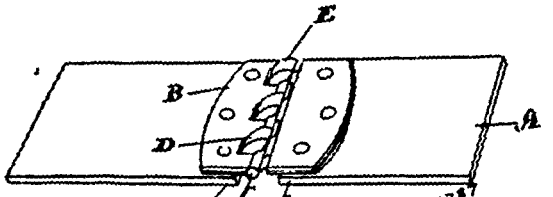
No. 48,786. Rail Brace. (*Tirant de rail.*)



Edward Carlos Carter, Chicago, Illinois, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. A rail brace, comprising the plate provided with hooks 8 to engage the rail, and a stiff upright portion having a yielding upright face. 2nd. A rail brace, comprising a plate metal upright 5 stiffened on its outer face and yielding on its inner face, in combination with a block interposed between said upright and the rail. 3rd. A rail brace, comprising a portion 1 to rest upon the tie, a portion 7 passing beneath the rail and provided with ears 8 to engage the flange of the rail, an upright portion 5 formed by bending the metal back upon itself, and a stiffening crimp or web 6 upon the outer member of the upright portion.

No. 48,787. Belt Coupler. (*Joint de courroie*)

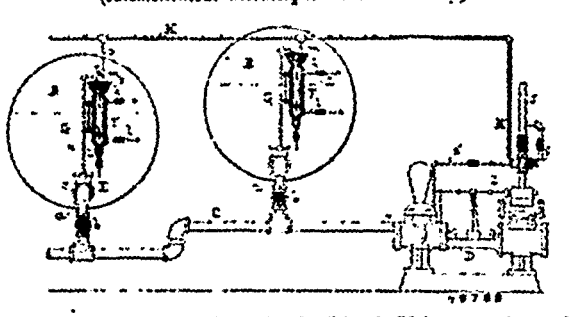


Henry S. Armfield, Preston, Ontario, Canada, 29th April, 1895; 6 years.

Claim.—1st. A belt coupler, consisting of a link plate having a pintle, a hinge-plate having a hook-shaped finger to engage with the pintle of the pintle plate, substantially as specified. 2nd. A belt coupler, consisting of a plate having one edge enlarged and rounded to form a pintle, a series of openings extending from the inner side of the pintle inwardly into the body of the plate, a finger plate having a series of hook-shaped fingers corresponding in number, size and location with the number, size and location of the said openings, the said fingers adapted to pass through the said openings and engage with the said pintle, substantially as specified. 3rd. A belt coupler, consisting of a metallic plate connected to each of the adjacent meeting edges of the belt, each of the said plates having a pintle formed along its outer or adjacent meeting edge, a series of openings extending inwardly from each of the said pintles into the body of their respective plates, a hinge-plate consisting of a bar and a series of hook-shaped fingers connected to the said bar, corresponding in number and location with the said openings and adapted to embrace the said pintles and flexibly couple the adjacent meeting edges of the belt, substantially as specified.

No. 48,788. Mechanical Boiler Feeder.

(*Alimentateur mécanique de chaudières.*)

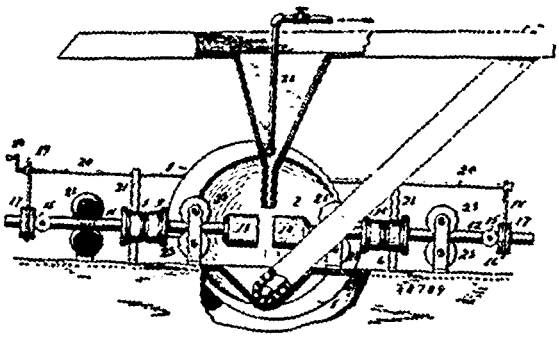


Nathan E. Nash, Westerley, Rhode Island, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. A governor valve adapted for application to a steam-pipe of a steam-pump, or to the feed pipe direct when no pump is employed, which consists essentially of a shell with a bridge having a valve opening and seat, a valve with a stem carrying three pistons of unequal diameters, cylinders for the said pistons, pipes to admit water to the outer face of one of the outer pistons and steam to the corresponding face of the other, and another pipe to convey steam to the space between the adjacent pistons, substantially as specified. 2nd. In combination with a steam-boiler, a steam feed pump and a feed water pipe which connects the pump and boiler, a governor or valve in the steam supply pipe of the said pump which consists of a shell, a puppet valve with a stem extending from both sides thereof, having on one stem a piston of a certain diameter and on the other, two pistons, the one next to the valve being larger than the first, cylinders for the said pistons, a pipe leading from the cylinders for the said pistons, a pipe leading from the cylinder of the first piston to the feed water under pressure, a second pipe leading from the cylinder of the smallest piston, to the steam supplying the pump, and a third pipe leading from the space between the two adjacent pistons to the steam space of the boiler, a valve to control this steam pipe, and a float supported by water in communication with that in the boiler, to control the said valve, substantially as specified.

No. 48,789. Machine for Pulverizing Ores, Etc.

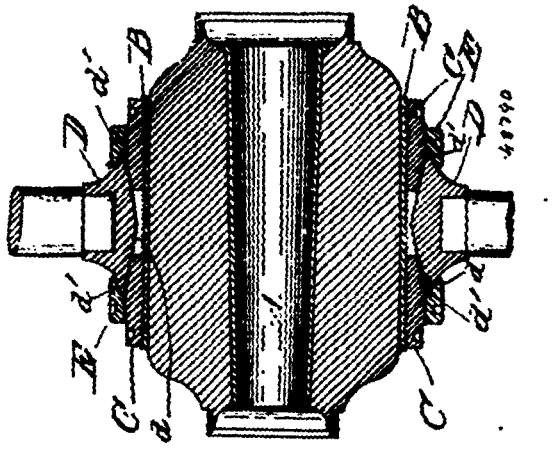
(*Machine à broyer le minerai.*)



Walter Ephraim Downe, Sutter Creek, California, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. In a machine of the character set forth, a pair of sliding oppositely rotatable shoes, substantially as described. 2nd. In a machine of the character set forth, a pair of inwardly sliding spring actuated shoes, having a rotary movement in opposite directions, substantially as described. 3rd. In a machine of the character set forth, the combination of a pair of inwardly impelled shoes, having an opposite rotary movement and a cam for separating the said shoes at intervals, substantially as described. 4th. In a device of the character set forth, a pair of impacting shoes, each of which has a sliding movement and an independent reverse rotary movement, said shoes being adapted to contact with each other and operate simultaneously, substantially as set forth. 5th. In a device of the character set forth, the combination of a pair of inwardly sliding shoes having stems with tappets thereon, springs for impelling said shoes towards each other, and a cam diametrically opposite shoulders for engaging said tappets to spread the shoes apart, substantially as described. 6th. In a device of the character set forth, the combination of inwardly moving, rotatable crushing and grinding shoes, a receptacle below said crushing and grinding shoes and an elevator extending from said receptacle back to the feeding-chute, substantially as described.

No. 48,790. Wheel-Hub. (*Moyeu de roue.*)

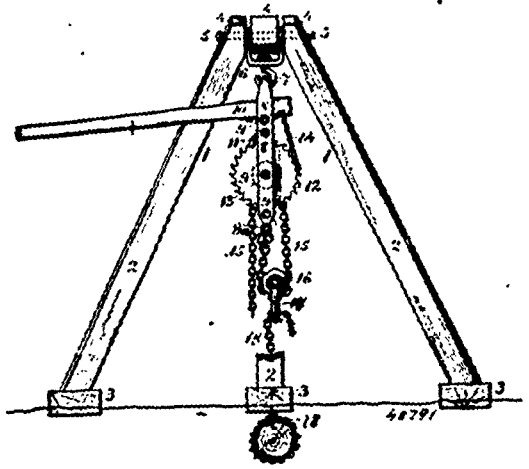


Thaddeus Sobiskie Fields, Atlanta, Georgia, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. In a wheel-hub, an exteriorly screw-threaded sleeve

secured on the hub proper, wedge rings having tapered inner ends and being screwed onto said sleeve, and a severed ring seated between said wedge rings resting upon the tapered end portions thereof, and being provided on its outer surface for the reception of the spoke tenons, substantially as and for the purpose specified. 2nd. In a wheel-hub, and exteriorly screw-threaded sleeve secured to the hub proper, wedge rings having tapered inner ends and being screwed onto said sleeve, and a severed ring, flared from its centre outwardly larger, provided with a cylindrical portion d^1 and seated upon said wedge rings and resting upon the tapered end portions thereof and being provided on its outer surface with sockets for the inner ends of the spokes, substantially as and for the purpose specified.

No. 48,791. Lifting Machine. (*Cric.*)

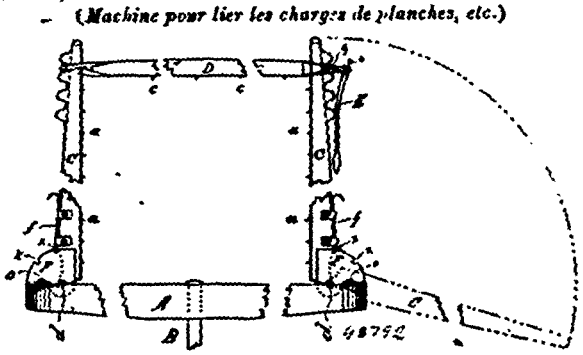


John George Walters, Toronto, Ontario, Canada, 29th April, 1895; 6 years.

Claim.—1st. In a lifting machine, the combination of the gies or tripod frame, the swivel-hook and clevis supported at the top of the frame, the mechanism frame supported by said swivel-hook, and the lever fulcrumed in said frame, substantially as shown and described. 2nd. In a lifting machine, the combination of the tripod frame, the swivel-hook and clevis supported by said frame, the mechanism frame carried by the swivel-hook, the lever fulcrumed in said mechanism frame and having a link to engage a ratchet-wheel carried by said mechanism frame, the ratchet-wheel carried in said mechanism frame, and a pawl to engage said ratchet-wheel, substantially as shown and described. 3rd. In a lifting machine, the combination of the tripod frame, the swivel-hook and clevis carried by said tripod frame, the mechanism frame carried by said swivel-hook, the lever fulcrumed adjustably in said mechanism frame and a link to engage a ratchet-wheel in said mechanism frame, the ratchet-wheel carried in said mechanism frame, a pawl to engage and secure said ratchet wheel, and a sprocket-wheel carried by said ratchet-wheel, substantially as shown and described. 4th. In a lifting machine, the combination of the tripod frame, and swivel-hook and clevis carried by said tripod frame, the mechanism frame carried by said swivel-hook, the lever fulcrumed in said mechanism frame and having means to engage a ratchet-wheel, the ratchet-wheel carried in said mechanism frame, a pawl to engage and secure said ratchet-wheel, a sprocket-wheel carried by said ratchet-wheel a chain secured to the lower end of said mechanism frame and carried over said sprocket-wheel, and a sprocket-wheel having a grip-clevis as specified and carried in the loop of said chain, substantially as shown and described.

No. 48,792. Machine for Binding Loads of Deals, Etc.

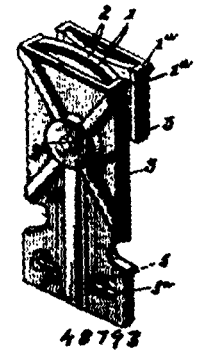
(*Machine pour lier les charges de planches, etc.*)



John S. Miller, Truro, Nova Scotia, Canada, 29th April, 1895; 6 years.

Claim.—1st. In a load binding machine, the stake sockets F, F, substantially as and for the purpose hereinbefore set forth. 2nd. In a load binding machine, the stakes C, C, substantially as and for the purpose hereinbefore set forth. 3rd. In a load binding machine, the binding rod D, substantially as and for the purpose hereinbefore set forth. 4th. The combination of the bank A and the stake sockets F, F, with the stakes C, C, substantially as and for the purpose hereinbefore set forth. 5th. The combination of the binding rod D, with the lock lever E, substantially as and for the purpose hereinbefore set forth. 6th. The combination with the bank A, the stake sockets F, F, and the stakes C, C, of the binding rod D, and the lock lever E, substantially as and for the purpose hereinbefore set forth.

No. 48,793. Band-Saw. (*Scie à ruban.*)

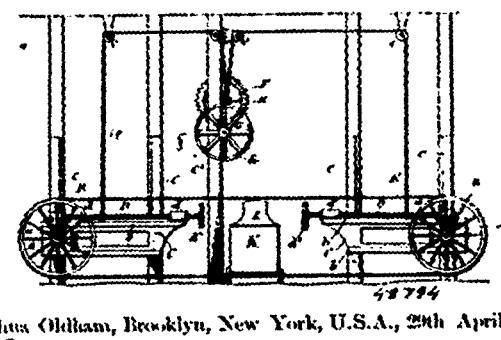


Joshua Oldham, Brooklyn, New York, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. In a band-saw, the combination of a metallic, semi-elliptic or convexed backing having a correspondingly shaped pad, and a holder or bracket therefor provided with a central adjusting screw engaging the concaved side of said backing, substantially as set forth. 2nd. In a band-saw, the combination of a metallic, semi-elliptic or convexed backing having a correspondingly shaped pad and a holder therefor provided with an adjusting screw engaging the concaved side of said backing, said holder or bracket also having laterally adjusting screws, substantially as set forth.

No. 48,794. Band-Saw Appliance.

(*Appareil de scie à ruban.*)

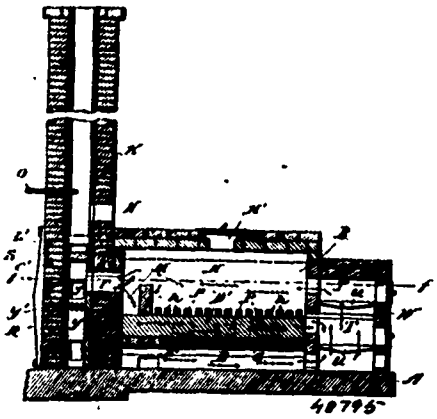


Joshua Oldham, Brooklyn, New York, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. In a saw-manipulating appliance, the combination of the carriage guides, carriages fitted to move therein and having means to provide for the straining of a band-saw thereon, and mechanism for bodily and simultaneously adjusting said carriage guides, with the carriages and saw, vertically, as set forth. 2nd. In a saw-manipulating appliance, the combination of the carriage-guides having longitudinal guide-ways, the carriages fitted to move in said guide-ways and bearing axles provided with pulleys or wheels, around which a band-saw may be strained, hand-screws bearing upon said carriage-guides and connected to said carriages, mechanism for effecting the simultaneous, verticle movement of said carriage-guides and vertical guide-ways for said carriage-guides, substantially as set forth. 3rd. The saw-manipulating appliance for hammering purposes comprising the carriages or plates having mandrels or axles bearing pulleys around which is adapted to be stretched a band-saw, means for effecting the to and fro movement or adjustment of said carriages, the vertically adjustable guides or frames supporting said carriages and means for adjusting said frames, whereby the saw can be manipulated so as to present its relatively inner and outer surfaces or sides to a movably mounted anvil sufficiently elevated to permit the saw to freely pass thereunder, substantially as set forth.

No. 48,795. Cremating Furnace.

(*Foyer de crémation*)



Samuel W. Dixon, Findlay, Ohio, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. In a cremation furnace, the combination with the outer walls of the furnace, of a longitudinal grate dividing the body of the furnace into two chambers H and G^1, one above the other, a transverse vertical retaining wall at the rear of the chamber H, and so disposed as to form a vertical passage between it and the stack wall, said passage communicating with the said chamber G^1, the stack wall having a combustion chamber J in its lower portion below the said passage through the stack wall, a series of bricks or bars of refractory material in the said chamber J, said bars or bricks having passages between them, and furnaces or fire-boxes at the opposite end portion of the furnaces arranged to project their flames into said chambers H and G^1, substantially as specified. 2nd. In a cremation furnace, the combination of the arch G, having between it and the bed of the furnace a longitudinal cold air flue D, said arch also supporting the floor of an evaporating chamber G^1, the fire-boxes E, E, at one end and to which said flue leads, a series of grate-bars over said chamber G^1, and forming the floor of a combustion chamber H, said fire-boxes having grates or burners for each of the chambers G^1, and H, and arranged to project their flames therein, the retaining walls I, and I^1, at the respective ends of said chamber H, the stack wall separated from the retaining wall I by a vertical passage M, communicating with the said chamber G^1, the stack wall having the opening therethrough, the stack having a combustion chamber in its lower portion, a grate or burner in said chamber below the said opening in the stack wall, and the refractory bricks or blocks in the stack above said opening, substantially as specified.

No. 48,796. Saw. (*Scie.*)

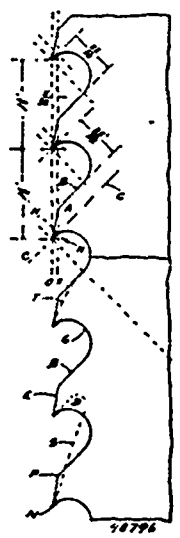


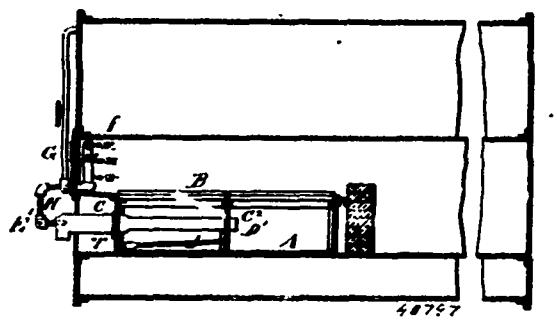
FIG 1.

FIG 2

Dexter Hazard, Marquette, Michigan, U.S.A., 29th April, 1895; 6 years.

Claim.—1st. An improved article of manufacture, a saw-blade having its teeth formed integrally therewith, the face and throat of said teeth being formed by semi-circle G, with the end of said semi-circle straightened as a chord of arc G, forming face line C, which face line C, is one-third the length of the radius of arc G, and drawn from the located point of the tooth on dotted line O, at an angle of forty-five degrees deflection therefrom, in connection with B, which is a continuation of arc line G, at a tangent to said arc G, as well as a tangent to the arc T, the diameter of semi-circle G, being at right angles to face line C, at the extreme point of the tooth, said tangent B, terminating in dotted line X, at a deflection of forty-five degrees from said line X, and united by line E, to face line C, forms the cutting point of the tooth, the radius of said arc T, being the distance between the cutting points of the teeth, and said arc passing through the extreme cutting point and the tangent point of B, at the place where arcs G, and T unite, substantially as shown and described. 2nd. An improved article of manufacture, a saw blade having its teeth formed integrally therewith, the face and throat of said teeth being formed by semi-circle G, with the end of said semi-circle straightened as a chord of arc G, forming face line C, which face line C, is one-third the length of the radius of arc G, and drawn from the located point of the tooth on dotted line O, at an angle of forty-five degrees deflection therefrom, in connection with B, which is a continuation of arc line G, at a tangent to said arc G, as well as at a tangent to the arc T, the diameter of semi-circle G, being at right angles to face line C, at the extreme point of the tooth, said tangent B, terminating in dotted line X, at a deflection of forty-five degrees from said line X, and united by line E, to face line C, forms the cutting point of the tooth, the radius of said arc T, being the distances between the cutting points of the teeth, and said arc passing through the extreme cutting point and the tangent point of B, at the place where arcs G and T unite, with straight line E, dressed on a concave from P to N, with projecting corners at the cutting points, substantially as shown and described.

No. 48,797. Boiler Furnace. (*Fournaise de chaudière.*)



Otto Friederici, London, England, 29th April, 1895; 6 years.

Claim.—1st. In boiler furnaces operating with forced draught, a closed air chamber beneath the furnace grate divided by one or more transverse partitions into two or more compartments in the direction of the length, each such compartment being provided with a separate forced air supply substantially as and for the purpose described. 2nd. In boiler furnaces, the combination of a closed air chamber A, beneath the furnace divided by a transverse partition C^2, into a front and a back compartment, a nozzle D with steam jet for supplying forced air to the front compartment and a second nozzle D^1, with steam jet passing through the front compartment for supplying air to the back compartment, substantially as described. 3rd. In combination with the nozzles D, D^1, and steam jets E, E^1, for supplying forced air to the air chambers of a furnace, an arched steam pipe or chamber F, within the furnace, supplied with steam from the boiler and connected to the nozzles E, E^1, for superheating the steam supply to the latter, substantially as described. 4th. The perforation of the superheating pipe F, with small holes substantially as and for the purpose set forth. 5th. In an air chamber below a furnace divided by partition into a front and a back compartment each of which receives a separate forced air supply, constructing the said partition with an opening which is closed by the blade of the rake that is used for removing the ashes from the air chamber, substantially as described.

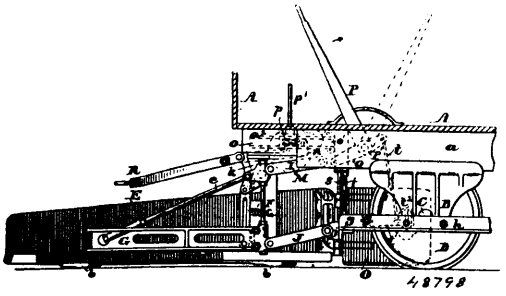
No. 48,798. Snow Plough for Street Railways.

(*Charrue à neige pour chemins de fer de rue.*)

The Taunton Locomotive Manufacturing Company, Taunton, assignee of Francis Winthrop Dean, Cambridge, and William Edwin Mathews, Boston all in Massachusetts, U.S.A., 29th April, 1895; 6 years.

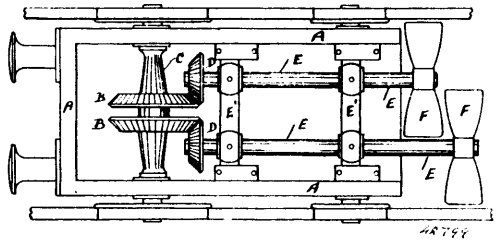
Claim.—1st. In combination with a car or vehicle fitted to, and adapted to be propelled upon the tracks of a street railway, a plow-share arranged obliquely across both rails of the track and in front of the wheels; a supporting frame comprising a longitudinal trussed beam and a transverse tie beam, both firmly secured to said plow-share and to each other; two pairs of radius arms connected at their movable ends to said frame and plow-share and means having provision for moving said radius arms about their axes of motion

and raising or lowering said plow-share and frame bodily. 2nd. In combination with a car or vehicle fitted to and adapted to be propelled upon the tracks of a street railway, a plow-share arranged in front of all the wheels of the car or vehicle and extending in a straight line obliquely across both rails of the track and having its front or operating face curved from top to bottom, a triangular frame carrying said plow-share, a system of radius arms or links connecting said frame and plow-share to the car or vehicle body, and



means having provision for raising or depressing said frame and plow-share bodily. 3rd. In combination with a car or vehicle fitted to and movable upon the tracks of a street railway, a plow-share extending in a straight line obliquely across both rails of the track, a triangular frame secured to the back of, and serving as a support for said plow-share, a system of radius arms or links connecting said frame and plow-share to the body of the car or vehicle, a pair of levers, a rocker shaft carrying said levers, a pair of links connecting said levers upon one side of said shaft to said triangular frame, a counterweight connected to and carried by said levers upon the other side of said shaft, and means for oscillating said rocker-shaft to raise or lower said frame and plow-share. 4th. In combination with a car or vehicle fitted to and movable upon the tracks of a street railway, two plow-shares arranged one at each end of the car or vehicle body and each extending in a straight line obliquely across both rails of the track in advance or outside of all of the wheels of said car or vehicle, a triangular frame secured to the inner face of each of said plow-shares, a system of radius arms or links connecting each of said frames and plow-shares, to the car or vehicle, and means having provision for raising and lowering said frames and plow-shares, substantially as described. 5th. In combination with a car or vehicle fitted to and movable upon the tracks of a street railway, a plow-share extending in a straight line obliquely across both rails of the track in advance of all of the wheels of the car or vehicle and having a greater height at its heel or rear end than at its forward end and its front face concaved, a triangular frame rigidly connected to and carrying said plow-share, a system of radius arms and links connecting said frame to the car or vehicle, and means for raising and depressing said frame and plow-share. 6th. In combination with a car or vehicle fitted to and movable upon the tracks of a street railway, a plow-share extending in a straight line obliquely across both rails of the track in advance of all the wheels of the car or vehicle, a triangular frame rigidly connected to and carrying said plow-share, two pairs of radius arms connected at their movable ends to said frame, the upper pair of said radius arms having a length somewhat less than the lower pair of said radius arms whereby when said plow-share is raised its nose or forward end will be lifted a greater distance than its heel or rear end, and means for raising and depressing said frame and plow-share by moving said radius arms about their pivotal connections to the car or vehicle. 7th. The combination of a car or vehicle fitted to and movable upon the track of a street railway, the plow-share E located in front of the wheels of the car or vehicle, and extending in a straight line obliquely across both rails of the track, the beams G and H and stand F, all secured to said plow-share, the standard c, block d, the brace rod e, the two pairs of radius arms I and J, the levers l and l^1, the links m, m^1 and n, the rack o, the pinion p, shaft p^1, and the hand wheel L. 8th. In combination with a car or vehicle fitted to and movable upon the tracks of a street railway, a plow-share arranged entirely in front of all of the wheels of the car, a system of links or radius arms connecting said plow-share to said car, a rocker shaft, a pair of levers on said rocker shaft, links connecting said levers to said plow-share on one side of said rocker shaft, a counter weight carried by said levers on the other side of said shaft, and means for oscillating said shaft to raise and lower said plow-share.

No. 48,799. Apparatus for Removing Snow on Railways. (*Appareil pour enlever la neige sur les chemins de fer.*)



The Very Rev. Thomas Hearn, P. P,, Kilmeaden, Ireland, 29th April, 1895; 6 years.

Claim.—1st. In apparatus for removing snow on railways, the combination with a lorry or carriage frame, of mechanism for operating fans in the manner, substantially as set forth. 2nd. In apparatus for removing snow on railways, the combination of bevil or crown and spur gear, and the rotating fans, arranged and operating in the manner substantially as specified. 3rd. In apparatus for removing snow from railways, the combination of parts, constructed, arranged and operating in the manner, substantially as herein set forth and illustrated.

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

3903. JOSEPH R. FRANCE AND FREDERICK C. COLBURN, 2nd five years of Patent No. 34,036, from the 2nd day of April, 1895. Improvements in Indelible Prints or Pictures, 1st April, 1895.

3904. FRANK LOOMIS PALMER, 3rd five years of Patent No. 21,545, from the 28th day of April, 1885. Machine for Sewing and Quilting Fabrics, 1st April, 1895.

3905. WILLIAM McGREGOR, 2nd five years of Patent No. 34,092, from the 12th day of April, 1895. Pump Valve, 3rd April, 1895.

3906. WILLIAM H. BAKER, SAMUEL W. SMITH AND SALMON S. MATTHEWS, 2nd five years of Patent No. 34,079, from the 9th day of April, 1895. Link or Lap Ring, 5th April, 1895.

3907. THE HARRIS METAL WHEEL CO., 2nd five years of Patent No. 34,301, from the 9th day of May, 1895. Vehicle Wheel, 9th April, 1895.

3908. JOSEPH THIBAULT, 2nd five years of Patent No. 34,083, from the 11th day of April 1895. Machine for Extracting Tree Stumps and Lifting Stones, 9th April, 1895.

3909. ARTHUR JAMES WELLS, 2nd five years of Patent No. 34,168, from the 22nd day of April, 1895. File, 9th April, 1895.

3910. GEORGE KREMENTZ, 3rd five years of Patent No. 21,503, from the 22nd day of April, 1895. Collar Button, 12th April, 1895.

3911. HENRY LANG, 2nd five years of Patent No. 34,088, from the 12th day of April, 1895. Separable Pocket Clamp Tool, 12th April, 1895.

3912. GEORGE MARTIN COLLINS, 2nd five years of Patent No. 34,083, from the 12th day of April, 1895. Stove Pipe Thimble, 12th April, 1895.

3913. ROBERT TORRANCE, (executor), 3rd five years of Patent No. 21,514, from the 23rd day of April, 1895. Carriage and Sleigh Bodies, 13th April, 1895.

3914. JAMES HENRY REINHARDT AND GEORGE SCHMALZRIED, 3rd five years of Patent No. 21,915, from the 17th day of June, 1895. Consecutive Numbering Machine, 17th April, 1895.

3915. ANTOINE RACICOT, 2nd five years of Patent No. 34,166, from the 22nd day of April, 1895. Medicine Called Racicotine, 17th April, 1895.

3916. ANDREW DEVINE, 3rd five years of Patent No. 34,400, from the 22nd day of May, 1895. Type Writing Machine, 17th April, 1895.

3917. GEORGE MEADE FORD, 2nd five years of Patent No. 34,131, from the 19th day of April, 1895. Drain Pipe Connections, 17th April, 1895.

3918. FREDERICK BERLIN, 2nd five years of Patent No. 34,158, from the 22nd day of April, 1895. Harrow Attachment for Ploughs, 22nd April, 1895.

3919. ALEXANDER FIELD WARD, 2nd five years of Patent No. 21,506, from the 22nd day of April, 1895. Hoop Planing Machine, 22nd April, 1895.

3920. GEORGE HARVEY, 2nd five years of Patent No. 34,432, from the 30th day of May, 1895. Stump Puller, 22nd April, 1895.

3921. GEORGE HARVEY, 2nd five years of Patent No. 34,526, from the 13th day of June, 1895. Draft Hook, 22nd April, 1895.

3922. GAYLORD LOGAN, 3rd five years of Patent No. 21,576 from the 30th day of April, 1895. Draw-bar for Locomotives, 22nd April, 1895.

3923. THE BELL TELEPHONE COMPANY OF CANADA, (assignee) 3rd five years of Patent No. 22,352, from the 2nd day of September, 1895. Telephone Circuit and Apparatus, 24th April, 1895.

3924. THE BELL TELEPHONE COMPANY OF CANADA, (assignee) 3rd five years of Patent No. 22,475, from the 17th day of September, 1895. Telephone Circuit, 24th April, 1895.

3925. THE BELL TELEPHONE COMPANY OF CANADA, (assignee) 3rd five years of Patent No. 22,491, from the 19th day of September, 1895. Metallic Circuit Telephone System, 24th day of April, 1895.

3926. THE BELL TELEPHONE COMPANY OF CANADA, (assignee) 3rd five years of Patent No. 22,492, from the 19th day of September, 1895. Multiple Circuit Changer, 24th day of April, 1895.

3927. EDWARD NASSAN HENEY, 2nd five years of Patent No. 34,278, from the 7th day of May, 1895. Vehicles, 24th April, 1895.

3928. WILLIAM THOMPSON MESSINGER, 2nd five years of Patent No. 38,790, from the 23rd day of April, 1897. Pipe Coupling and Valves, 24th April, 1895.

3929. THE CONSOLIDATED CAR HEATING COMPANY, (assignee) 2nd five years of Patent No. 34,320, from the 13th day of May, 1895. Heating System, 24th April, 1895.

3930. THE CONSOLIDATED CAR HEATING COMPANY, (assignee) 2nd five years of Patent No. 34,331, from the 14th day of May, 1895. Stop Cock, 24th April, 1895.

3931. THE CONSOLIDATED CAR HEATING COMPANY, (assignee) 2nd five years of Patent No. 34,442, from the 31st day of May, 1895. Train Pipe for Railway Cars, 24th April, 1895.

3932. MORITZ LINDNER, 3rd five years of Patent No. 21,635, from the 9th day of May, 1895. Toy, 25th April, 1895.

3933. HENRY ROBERTS, 2nd five years of Patent No. 34,249, from the 5th day of May, 1895. Apparatus for the Manufacture of Wire, Rods, Hoop Iron and Steel, 25th April, 1895.

3934. CADWALLADER MALLORY RAYMOND, 3rd five years of Patent No. 21,613, from the 7th day of May, 1895. Roller Skate, 25th April, 1895.

3935. JACOB BENSING, 2nd five years of Patent No. 34,187, from the 28th day of April, 1895. Tile or Brick Cutting Tablet, 27th April, 1895.

3936. ALEXANDER VINCENT and FRANK VINCENT 2nd five years of Patent No. 34,309, from the 12th day of May, 1890. Upper for Shoes, 27th April, 1895.

3937. EDWARD FIELD, 2nd five years of Patent No. 34,388, from the 22nd day of May, 1890. Construction and Method of Working Motor Engines with Hot Gases and Steam, 30th April, 1895.

3938. ABRAHAM S. CODY, MILTON P. ANDERSON, GEORGE B. STANFORD and DANIEL HINKSON, George W. Booth, 2nd five years of Patent No. 34,218, from the 1st day of May, 1895. Hydro-Carbon Lighting Device, 30th April, 1895.

TRADE-MARKS

Registered during the month of April, 1895, at the Department of Agriculture—Copyright and Trade-Mark Branch.

5247. G. A. McGOWAN, Kingston, Ont. Cigars, 1st April, 1895.

5248. PAUL PROT & COMPANY, Paris France. Perfumery, 3rd April, 1895.

5249. WILLIAM CASE HARVEY, CHARLES CRITTENDEN VAN NORMAN and JOHN HAWTHORNE TAYLOR, Toronto, Ont. Rubber Boots, Shoes and other rubber goods, 4th April, 1895.

5250. HARRIETT HAMMOND BULLOCK, Montreal, Que. Lacquers and Blacking, 4th April, 1895.

5251. BAGOTS, HUTTON & COMPANY, LIMITED, Dublin, Ireland. Irish Whisky, *5th April, 1895.*

5252. EDWARD JOHN LUSBY, London, England. Tobacco, Cigars, Cigarettes and Snuffs, 6th April, 1895.

5253. } THE GEO. E. TUCKETT & SON COMPANY, LIMITED, Hamilton,
5254. } Ont. Tobacco, Cigars and Cigarettes, 8th April, 1895.

5255. TASSÉ, WOOD & COMPANY, Montreal, Que. Cigars, 11th April, 1895.

5256. JOHN CARNRICK, New York, N.Y., U.S.A. A Pharmaceutical Preparation used particularly as an antitoxine and tissue builder, 13th April, 1895.

5257. DANIEL & ARTER. Globe Nevada Silver Works, Highgate Street, Birmingham, England. Knives, Forks, Spoons, Ladles, Cups, Dishes, Plates, Jugs, Coffee Pots, Tea Pots, Cruet Stands and other similar goods made of precious metals or their imitations, 16th April, 1895.

5258. LOCKERBY BROTHERS, Montreal, Que. Tea, 16th April, 1895.

5259. *PITTSBURGH CRUSHED STEEL COMPANY, LIMITED*, Pittsburgh, Pennsylvania, U.S.A., Material for cutting, grinding, polishing, sawing and abrasing granite, marble, onyx, brick, glass, metal and other like substances, 16th April, 1895.

5260. THE CANADA PAINT COMPANY, Montreal, Que. White Lead, Paints and Colours, 16th April, 1895.

5261. } CONSOLIDATED FASTENER COMPANY, Portland, Maine, U.S.A.
5262. } Spring Fasteners, 16th April, 1895.

5263. KEMP MANUFACTURING COMPANY, Toronto, Ont. Enamelled Ware. 17th April, 1895.

5264. THOMAS FANE & CHARLES F. LAVENDER, Toronto, Ont., trading as the COMET CYCLE COMPANY. Riding Cycles, 17th April, 1895.

5265. GEORGE ALSON SLATER & CHARLES ELLSWORTH SLATER, Montreal, Que., trading as GEO. T. SLATER & SONS. Boots, Shoes and Slippers of all kinds, 18th April, 1895.

5266. *JAMES BUCHANAN, 20 Bucklersbury, London, England*, trading as JAMES BUCHANAN & COMPANY. Scotch and Irish Whiskey, 19th April, 1895.

5267. McDOUGALL, BARRETT & COMPANY, Montreal, Que. Cloths, 19th April, 1895.

5268. FREDERICK W. STEPHAN, Berlin, Ont. Cigars, 20th April, 1895.

5269. THE AMMONOL CHEMICAL COMPANY, New York, U.S.A. Veterinary Medicines, 20th April, 1895.

5270. THOMAS J. FAIR, Brantford, Ont. Cigars, 22nd April, 1895.

5271. D. RITCHIE & COMPANY, Montreal, Que. Tobaccos and Cigarettes (excepting Cigars), 23rd April, 1895.

5272. HENRY DAUBENEY BRANDRETH, 18, Hamilton Square, Birkenhead, Cheshire, England. General Trade Mark, 23rd April, 1895.

5273. THOMAS ROBERTSON, Toronto, Ont. Confectionery, 24th April, 1895.

5274. FRANK D. FEARMAN, Hamilton, Ont. Washing Powders, 24th April, 1895.

5275.
5276.
5277. } SIR TITUS SALT, BART., SONS & COMPANY, LIMITED, Saltaire, England. Textile Goods, comprising cloths or stuffs, and yarns, of wool, worsted or hair, and cotton piece goods of all kinds, 25th April, 1895.

5278. THE JOHN GRIFFITHS CYCLE CORPORATION, LIMITED, Dublin, Ireland. Bicycles, Tricycles and the several parts thereof, 25th April, 1895.

5279. THE NUTROLACTIS COMPANY, New York, N.Y., U.S.A. Medicinal Preparations, 25th April, 1895.

5280. S. DAVIS & SONS, Montreal, Que. Cigars, Cigarettes and Tobaccos, 26th April, 1895.

5281. FILBERT MANUFACTURING COMPANY, Baltimore, Maryland, U.S.A. Shortening for Cake, Bread, Biscuit, Crackers and Pastry, 26th April, 1895.

5282. HYGIENIC CHEMICAL COMPANY, New York, N.Y., U.S.A. Acid Phosphate, 27th April, 1895.

5283.
5284. } A. SMITH & COMPANY, London, Ont. Cigars, 27th April, 1895.

5285. MANLIUS BULL, Winnipeg, Man. Soap, 27th April, 1895.

5286. DUSSAULT & BARRY, Québec, Que. Cigars, 29 avril, 1895.

5287. FRANK ASTON EDWARDS, London, England, trading as ASTON & OCMPANY, also as THE DULCEMONA TEA COMPANY. General Trade Mark, 29th April, 1895.

5288. GANONG BROTHERS, LIMITED, St. Stephen, N.B. Confectioneries, such as Cough Drops, Throat Tablets and Lozenges, 30th April, 1895.

5289. GANONG BROTHERS, LIMITED, St. Stephen, N.B. Confectioneries, 30th April, 1895.

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7845. JAPAN, THE LAND OF THE MORNING, by Rev. John W. Saunby, B.A. William Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 1st April, 1895.

7846. MOTLEY, VERSES GRAVE AND GAY, by J. W. Bengough. Illustrated. William Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 1st April, 1895.

7847. ST. ANTOINE DE PADOUE. Photo. L. N. C. De Beaumont, Québec, Qué., 1er avril, 1895.

7848. ST. CHRISTOPHE. Photo. L. N. C. De Beaumont, Québec, Qué., 1er avril, 1895.

7849. THOU ART THE MAN! Social Purity Addresses by Rev. Geo. Douglas, D. D., L.L.D. William Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 2nd April, 1895.

7850. GARLAND'S BANKS, BANKERS AND BANKING AND FINANCIAL DIRECTORY OF CANADA. Second Edition. N. Surrey Garland, Ottawa, Ont., 3rd April, 1895.

7851. THE DOCTRINE AND DISCIPLINE OF THE METHODIST CHURCH 1894. William Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 4th April, 1895.

7852. A MAID WHO WAS FLIRTING WITH ME. Words by Frank Lawson, Music by Belle McArthur. Henry J. Jones & Frank Lawson, London, Ont., 4th April, 1895.

7853. O. J. C. MARCH. For Piano. By L. Fred. Clarry. The Anglo-Canadian Music Publishers' Association, Limited, London, England, 4th April, 1895.

7854. THE ONTARIO DOCKET. Volume II. Number 1, March, 1895. Arthur Henry O'Brien, Toronto, Ont., 5th April, 1895.

7855. HIDDEN MINES AND HOW TO FIND THEM. By W. Thos. Newman. M. Rogers Newman, Toronto, Ont., 6th April, 1895.

7856. ONE HUNDRED AND FIFTY YEARS, BEING A CORRECT CALENDAR FROM 1801 TO 1951. W. Barclay Stephens, Montreal, Que., 8th April, 1895.

7857. THE ONTARIO REPORTS. Volume XXV. The Law Society of Upper Canada, Toronto, Ont., 8th April, 1895.

7858. NEW LIGHT ON THE OLD PRAYER. A Brief Exposition of The Lord's Prayer. By John Campbell, LL.D., F.R.S.C., etc., Montreal, Que., 9th April, 1895.

7859. REVUE CANADIENNE, AVRIL, 1895. C. O. Beauchemin et fils, Montréal, Qué., 9 avril, 1895.

7860. CONCERT OVERTURE. For the Organ. By J. Humfrey Anger. Whaley, Royce & Co., Toronto, Ont., 10th April, 1895.

7861. FAR FROM MY HEAVENLY HOME. Sacred Song. Words by Lyte. Music by Angelo M. Read. Whaley, Royce & Co., Toronto, Ont., 10th April, 1895.

7862. TRILBY. A Novel. By George du Maurier. Harper & Brothers, New York, N.Y., U.S.A., 13th April, 1895.

7863. LE CODE CATHOLIQUE, OU COMMENTAIRE DU CATÉCHISME DES PROVINCES ECCLÉSIASTIQUES DE QUÉBEC, MONTRÉAL ET OTTAWA. Par l'Abbé David Guerlin, T. R., Cap Santé, Qué., 13 avril, 1895.

7864. GOLD ELSIES RIDE. Story which is now being preliminarily published in separate articles in the FARMERS ADVOCATE AND HOME MAGAZINE, at London, Ont. Mrs. E. M. Jones, Brockville, Ont., 13th April, 1895.

7865. HISTORY OF THE NORTH-WEST. Volumes II and III. By Alexander Begg, Winnipeg, Man., 13th April, 1895.

7866. CANADA SHALL YET BE FREE. Words and Music by John Marchant Whyte, Toronto, Ont., 16th April, 1895.

7867. TORONTO THE GOOD. Words and Music by John Marchant Whyte, Toronto, Ont., 16th April, 1895.

7868. MARCH OF THE ROYAL GUARDS. By Wm. C. G. Wright. B. J. Walker, Windsor, Ont., 16th April, 1895.

7869. WARD'S SUNDAY SCHOOL SECRETARY'S PERPETUAL CLASS RECORD. Frederick Charles Ward, Toronto, Ont., 16th April, 1895.

7870. SCAIFE'S SYNOPTICAL CHART OF ENGLISH HISTORY. Arthur Hodgkin Scaife, Victoria, B. C., 17th April, 1895.

7871. THE LION'S GATE AND OTHER VERSES. By Lily Alice Lefebvre. The Province Publishing Co., Victoria, B.C., 17th April, 1895.

7872. THE LAST WALTZ. Song. Words and Music by Geo. A. Grigg. Whitney Marvin Music Co., Detroit, Michigan, U.S.A., 17th April, 1895.

7873. HOW DARE YOU SIR. Song. Words by G. D. Bouton. Music by Thos. H. Chilvers. Whitney Marvin Music Co., Detroit, Michigan, U.S.A., 17th April, 1895.

7874. THE BIBLE AND THE PRAYER BOOK. Mistranslations, Mutilations and Errors, with References to Paganism. By B. Homer Dixon, K.N.L., Toronto, Ont., 17th April, 1895.

7875. THE TRILBY RIPPLE OR YORKE. For Piano, by Giovane. J.L. Orme & Son, Ottawa, Ont., 18th April, 1895.

7876. THE ENCORE. Two Step. By Albert Nordheimer. A. & S. Nordheimer, Toronto, Ont., 19th April, 1895.

7877. ABIDE WITH ME. Sacred Song. Music by C. J. Dixon. Whaley, Royce & Co., Toronto, Ont., 20th April, 1895.

7878. THE DOMINION LEGAL CHART, 1895-96. Henry Ryerson Hardy, Toronto, Ont., 22nd April, 1895.

7879. ILLUSTRATED CATALOGUE OF THE METALLIC ROOFING COMPANY OF CANADA, LIMITED. The Metallic Roofing Company of Canada, Limited, Toronto, Ont., 25th April, 1895.

7880. CAPRICE. Song. Words by Edw. B. Marks. Music by George Rosey. Whaley, Royce & Co., Toronto, Ont., 27th April, 1895.

7881. THE SIDEWALKS OF NEW YORK. Song and Chorus. Words and Music by Chas. B. Lawlor and James W. Blake. Arranged by Chas. Miller. Whaley, Royce & Co., Toronto, Ont., 27th April, 1895.

7882. BIRD'S EYE VIEW OF MONTREAL. Engraving. George Christopher Huttemeyer, Montreal, Que., 27th April, 1895.

7883. MANUAL OF THE SCHOOL LAW AND REGULATIONS OF THE PROVINCE OF QUEBEC. Revised Edition. Prepared by Rev. Elson I. Rexford, B.A. E. M. Renouf, Montreal, Que., 27th April, 1895.

7884. MY TRILBY. Waltz Song. Words by Maurice Armstrong. Music by Sydney R. Smith. John H. Parker, Montreal, Que., 30th April, 1895.

7885. GRAFTON'S EXERCISES IN ARITHMETIC. F. E. *Grafton and Sons*, Montreal, Que., 30th April, 1895.

7886. MAP OF THE CITY OF MONTREAL. Scale about 1200 feet to an inch. The Royal Electric Co., Montreal, Que., 30th April, 1895.