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INVENTIONS PATENTED.

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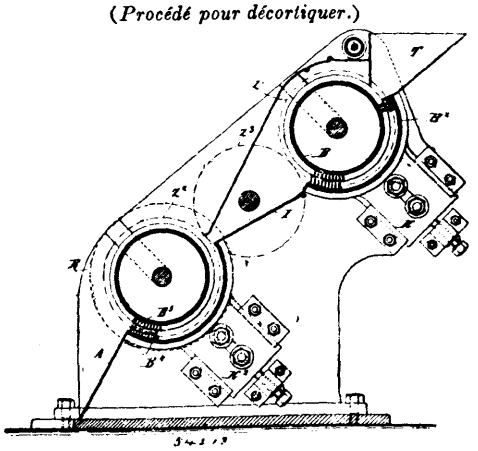
No. 54,213. Decorticating Process.

(*Procédé pour décortiquer.*)

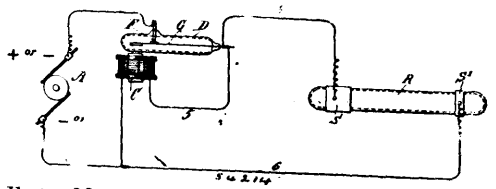


Ernest de Moerloose, Brussels, Belgium, 1st December, 1896; 6 years. (Filed 12th September, 1895.)

Claim.—1st. An improved chemical process for the decortication of grain, consisting of first soaking the grain in a dilution of a suitable acid in water, preferably hydrochloric acid, say in a proportion of 0·5 to 3 per cent of acid of the quantity of water, to which acid solution may be advantageously added a suitable oxydizing agent such as bichromate, permanganate, oxygenated water or the like in a proportion of from 2 to 4 grammes per 100 litres of the acid solution—in this instance the oxydizing agent is bichromate of potassium—the bath so prepared being brought to a temperature of 30 to 50 Centigrade and the grain held immersed therein from 6 to 48 hours, after which it is collected from the bath by decantation and received simultaneously with a current of pure water into the funnel of a brushing machine, by running through which the husks or dregs are separated from the grain and its albuminous and mineral substances extracted by the water, the solid matter so treated being then received in a tub with washing water in which the grains are finally separated from the husks by gravity and after collection finally dried in any suitable and well-known manner. 2nd. A brushing machine for separating the husks or dregs and germs from grain treated after the before described method, consisting substantially of one or several pairs of brushes, the one of which is a convex cylindrical brush rotating in a corresponding semi-cylindrical fixed hollow or concave brush, both of which are fitted with alternately projecting and receding rows of bristles slightly touching each other, the said rows of bristles being preferably arranged spirally and the whole inserted into an inclined channel of sheet metal for running the grain through the machine with a water current received in a funnel at the top of the channel above the first pair of brushes.

No. 54,214. Phosphorescent Electric Lighting.

(*Eclairage électrique phosphorescent.*)



Daniel McFarlan Moore, Newark, New Jersey, U.S.A., 1st December, 1896; 6 years. (Filed 11th December, 1895.)

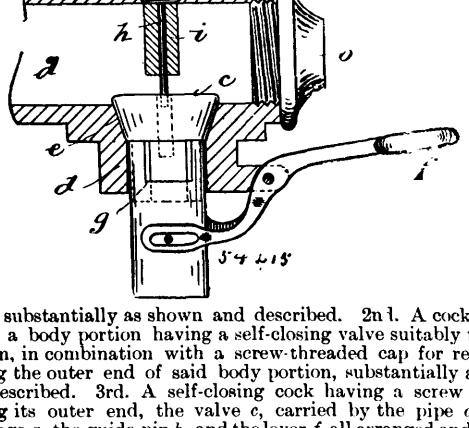
Claim.—1st. The herein described improvement in producing light by electricity, consisting in causing repeated absolute interruptions of a circuit of induction by sudden interpositions of an infinite resistance substantially such as described and utilizing the electric waves or disturbances so generated to produce luminous effects. 2nd. The herein described improvement in the art of electric lighting, consisting in setting up electric waves or pulsations by repeatedly interrupting electrically or mechanically a circuit of induction in a high as contradistinguished from a partial vacuum, as described, and utilizing the electric energy so generated to produce luminous effects. 3rd. As a means for developing electric energy suitable for producing luminous effects, a circuit interrupter connected with a source of electricity and operating in a vacuous space exhausted as described beyond the degree at which the contained body of rarefied air or gas may be rendered luminous. 4th. The combination with a self-inductive coil, of a circuit interrupter therefor either of a rotary or vibrating sort working in a high vacuum, and a shunt to said coil leading to translating devices such as lamps containing a rarefied gas or vapour. 5th. The combination of a circuit of induction containing a current generator and interrupter working in a high vacuum, and a lamp consisting of a receiver containing a rarefied gas or vapour and provided with electrodes external to such receiver or both internal and consisting, one of a convoluted conductor and the other of a ring encircling the base of the convoluted conductor. 6th. The combination with a number of electric lamps each consisting essentially of a rarefied receiver adapted to be rendered luminous by electric undulations or disturbances, of a generator in a circuit common to such lamps, a shunt or branch of self-induction around each lamp, and means for rapidly interrupting the current of said generator, as and for the purpose described. 7th. The method of producing luminous effects, consisting in converting a current of low potential into one of high potential by rapidly and repeatedly interrupting the low potential circuit in its passage through a self-inductive resistance, and passing the former current through a Geissler tube thereby producing light within the tube.

No. 54,215. Cock. (*Robinet.*)

Wilhelm Schäfer, Hamburg, Germany, 1st December, 1896; 6 years. (Filed 27th February, 1896.)

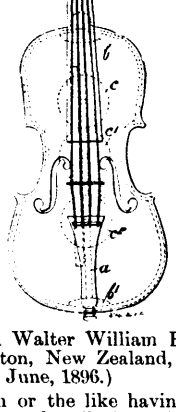
Claim.—1st. A self-closing cock provided with a screw-threaded cap adapted to removably close its outer end, in combination with a

valve seat and valve therefor, the latter being normally closed by the pressure of the liquid behind it, and means for opening the said



valve, substantially as shown and described. 2nd. A cock consisting of a body portion having a self-closing valve suitably mounted therein, in combination with a screw-threaded cap for removably closing the outer end of said body portion, substantially as shown and described. 3rd. A self-closing cock having a screw cap *b* for closing its outer end, the valve *c*, carried by the pipe *d* having openings *g*, the guide-pin *h*, and the lever *f*, all arranged and adapted to operate substantially as described.

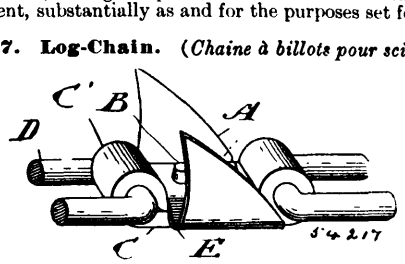
No. 54,216. Violin and the like. (*Violon.*)



William McKenzie and Walter William Rising, both of 54 Lambton Quay, Wellington, New Zealand, 1st December, 1896; 6 years. (Filed 16th June, 1896.)

Claim.—1st. A violin or the like having glass discs supported within it, substantially as described herein and illustrated. 2nd. A violin or the like having discs or plates of any suitable material supported within it, substantially as and for the purposes described herein and illustrated on the accompanying drawings. 3rd. A violin or the like having discs or plates of any suitable material, size, and number, arranged upon a bar or bars within the body of the instrument, substantially as and for the purposes set forth.

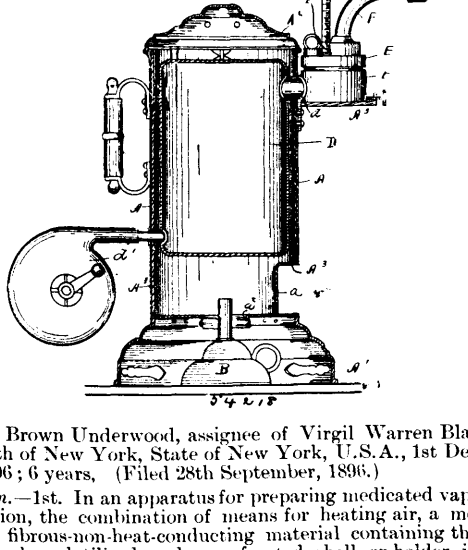
No. 54,217. Log-Chain. (*Chaine à billots pour scieries.*)



Peter Payette, Penetanguishene, Ontario, Canada, 1st December, 1896; 6 years. (Filed 17th June, 1896.)

Claim.—1st. In a log-chain, the combination of the flat link C, provided with sleeve C^1; the bunk A, shaped as indicated, overlapping the flat link C, and provided with half circle E; and the rivets B, substantially as described and for the purpose specified. 2nd. In a log-chain, the combination of the flat link C, provided with rounded sleeve C^1; the round link D; the bunk A, shaped as indicated, overlapping the flat link C, and provided with downwardly projecting half circle E, and the rivets B, substantially as described and for the purpose specified.

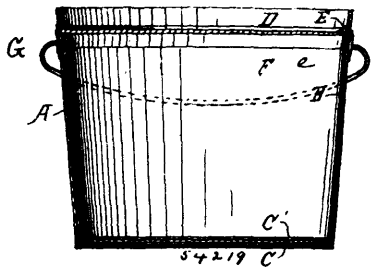
No. 54,218. Inhaler. (*Inhalateur.*)



George Brown Underwood, assignee of Virgil Warren Blanchard, both of New York, State of New York, U.S.A., 1st December, 1896; 6 years, (Filed 28th September, 1896.)

Claim.—1st. In an apparatus for preparing medicated vapours for inhalation, the combination of means for heating air, a moistened wad of fibrous-non-heat-conducting material containing the medicines to be volatilized, and a perforated shell or holder inclosing said wad placed in the path of the air currents between the air heater and the inhaling tube, the air currents circulating around but not in said holder, substantially as described. 2nd. In an apparatus for administering medicated vapours, the combination of means for heating air, and a tube for conducting air to the mouth or nostrils; and a closed chamber interposed between the tube and air heater; with a wad of non-heat-conducting absorbent material in which the medicament is placed, a perforated shell or inclosure containing said wad, said shell being placed in said chamber, so that the air currents circulate around but not directly in said shell whereby the medicament is indirectly exposed to the heated air current and volatilization thereof gradually effected, substantially as and for the purpose specified. 3rd. In an inhaler the combination of an air heater, the inhaling tube, and a hot air chamber interposed between the heater and said tube, with a perforated shell for holding medicines suspended in said chamber, so that the medicines are vaporized by the heat instead of contact with air currents, substantially as described. 4th. In an inhaler the combination of an air heater, the inhaling tube, and a hot air chamber interposed between the heater and said tube, with a perforated shell for holding medicines suspended in said chamber, and a wad of fibrous non-heat-conducting packing in said shell, whereby the medicines are vaporized by heat instead of contact with air, substantially as described. 5th. In an inhaler the combination of an air heater, the inhaling tube, and a hot air chamber interposed between the heater and said tube, with a perforated shell for holding medicines suspended in said chamber, and a tube suspended in said shell, substantially as described. 6th. In an inhaler the combination of an air heater, the inhaling tube, and a hot air chamber interposed between the heater and said tube, with a perforated shell for holding medicines suspended in said chamber, and a wad of fibrous non-heat-conducting packing in said shell, and a tube in the shell above the wad, substantially as described. 7th. In an inhaler the combination of an air heater, the inhaling tube, and a hot air chamber interposed between the heater and said tube, with a perforated shell for holding medicines suspended in said chamber, whereby the medicines are vaporized by heat instead of contact with air and a gas mixer in said chamber, substantially as described. 8th. In an inhaler the combination of the casing, the heating drum suspended therein, means for heating said drum, a chamber attached to the casing communicating with the upper end of the said drum, the inhaling tube connected to said chamber, and the vaporizer I consisting of shell I, tube *i*, and wad J, all substantially as described. 9th. The perforated shell I in combination with the fibrous wad J and the tube *i*, substantially as and for the purposes specified. 10th. The air heating drum D, the inclosing non-conducting heat layer and casing, in combination with the chamber E, the removable perforated shell I and its cap substantially as and for the purposes set forth. 11th. In an inhaler the combination of the casing, the heating drum suspended therein, means for heating said drum, a chamber attached to the casing communicating with the upper end of said drum; the inhaling tube connected to said chamber and the vaporizer I consisting of shell I, tube *i* and wad J, substantially as described, and the screens H, in said chamber all substantially as described. 12th. In an inhaler the combination of the casing, the heating drum suspended therein, means for heating said drum, a chamber attached to the casing communicating with the upper end of said drum, the inhaling tube connected to said chamber and the vaporizer I constructed substantially as described, and the screens H, in said chamber, and a device for forcing air into said drum and the thermometer in said chamber, substantially as described.

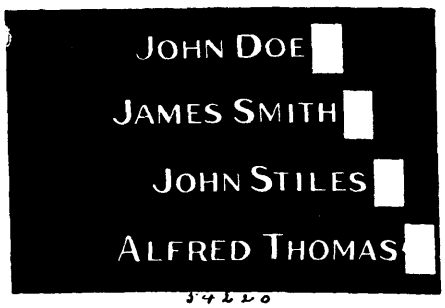
No. 54,219. Package for the Storage and Shipment of Lard, etc. (*Vaisseau pour l'emmagasinage et chargement du saindoux, etc.*)



Adna J. Fogg, assignee of Eugene Klein, both of Grand Rapids, Michigan, U.S.A., 1st December, 1896; 6 years. (Filed 19th August, 1896.)

Claim.—In a lard pail or package, a flaring body built up of two or more layers of fabric solidly cemented together over their entire surfaces, a bottom having its edges turned up and cemented between the layers of the body, a lining cemented to the inner surface of the bottom, a shoulder formed around the inside of the package near the top, a flat cover to fit in the top of the package on said shoulder, to receive a body of wax around the edge of said cover to hermetically seal the same, the body, bottom and cover covered inside and outside with an antiseptic varnish, substantially as and for the purpose set forth.

No. 54,220. Ballot Paper. (*Bulletin.*)

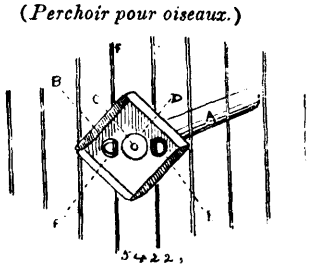


Herbert Edward Irwin and Frederick Duncan Mercer, both of Toronto, Ontario, Canada, 1st December, 1896; 6 years. (Filed 19th August, 1896.)

Claim.—1st. As a ballot paper a slip having the names of the candidates appearing thereon on a dark background and provided opposite the candidates' names with light coloured spaces for the voter's mark arranged diagonally, so that no space may be superimposed on another when the ballot is folded substantially as and for the purpose specified. 2nd. As a ballot paper a slip having the names of the candidates appearing thereon in a light colour on a dark background, and provided opposite the candidates' names with light coloured spaces for the voter's mark arranged diagonally, so that no space may be superimposed on another when the ballot is folded, substantially as and for the purpose specified. 3rd. As a ballot paper a slip having the names of the candidates printed thereon and provided opposite the candidates' names with spaces for the voter's mark arranged diagonally, so that no space may be superimposed on another when the ballot is folded, substantially as and for the purpose specified.

No. 54,221. Perch for Birds.

(*Perchoir pour oiseaux.*)

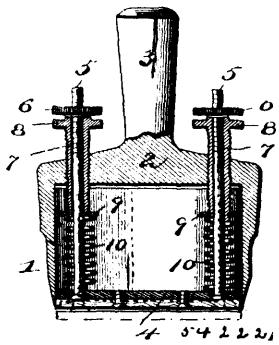


Bartholomew Cottam, London, Ontario, Canada, 1st December, 1896; 6 years. (Filed 14th September, 1896.)

Claim.—1st. The combination with a perch for birds of the holder B, substantially as and for the purpose hereinbefore set forth. 2nd. The combination with a perch for birds and a perch holder B, of ugs E, E, substantially as and for the purpose hereinbefore set forth. 3rd. The combination with a perch for birds and holder B, of interchangeable telescopic trays or covers G, H, substantially as and for the purpose hereinbefore set forth.

No. 54,222. Letter-Cutting Die.

(*Appareil à tailler le cuir.*)

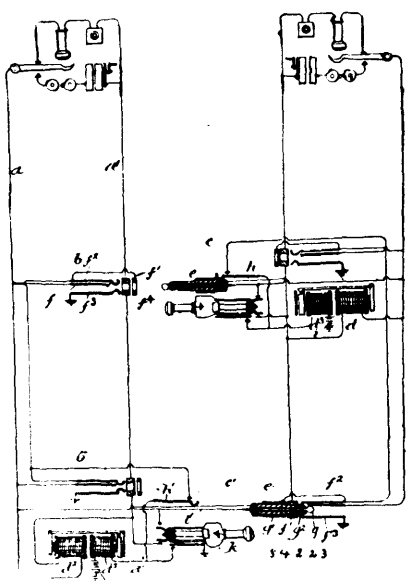


Seth Ward, sr., Princeton, Indiana, U.S.A., 1st December, 1896; 6 years. (Filed 1st October, 1896.)

Claim.—The combination of a hollow die formed with a cutting edge, a cross-bar on its upper edge and provided with a handle or stop, a discharger fitting within the cutting edge, a pair of rods rising from the discharger and passing through openings in the cross-bar and threaded at their upper ends, a sleeve 7 surrounding each rod and threaded into the opening in the cross-bar, and provided with a head or nut at its upper end, a spring between each of said sleeves and the discharger, and a nut on each of the rods adapted to bear upon the upper end of the sleeve, substantially as described.

No. 54,223. Multiple Switchboard System.

(*Système de tableau d'aiguille multiple.*)



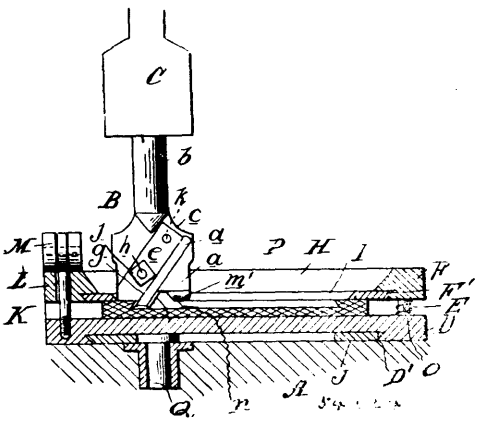
The Bell Telephone Co. of Canada, Montreal, Quebec, Canada, assignee of Oro Allen Bell, New York, State of New York, U.S.A., 1st December, 1896; 6 years. (Filed 27th May, 1896.)

Claim.—1st. The combination with a telephone line connected with spring-jacks upon different switchboards and terminating in a connecting plug at one of the switchboards, of a test circuit independent of the line circuit extending to the different spring-jacks and connected with test contacts near the same, and a cord switch for the said terminal plug adapted to alter the connection of the test circuit with a source of electricity to change the electrical condition of the test contacts, when the plug is removed from its socket, substantially as described. 2nd. The combination with a telephone line extending to the central station, of an annunciator thereat having an actuating coil in the telephone circuit and a retaining coil included with a source of electricity in a local circuit, means for closing said local circuit when connection is made with said line as the line of a called subscriber to thereby render said annunciator irresponsive to clearing out currents, and means for making connection between said line as the line of a calling subscriber and a second telephone line without closing said local circuit to thereby include the annunciator in the telephone circuit to re-

spond to clearing out currents, substantially as described. 3rd. The combination with two telephone lines extending to the central station, of an annunciator thereat for each of said lines, said annunciators each comprising an actuating coil included in the telephone circuit, and a retaining coil included with a source of electricity in a local circuit, and means for connecting said telephone lines together at the central station and adapted to close the local circuit of one of said annunciators to render said annunciator irresponsive to clearing out currents, but to leave the local circuit of the other annunciator open, whereby the latter annunciator remains in circuit to respond to clearing out currents, substantially as described. 4th. The combination with a telephone line extending to switches at the several boards of an exchange, and terminating in a plug at one of said boards, of an annunciator at the central station having an actuating coil in the telephone circuit and a retaining coil included with a source of electricity in a local circuit, means for closing said local circuit when a plug is inserted in one of the switches of the line to loop the line in circuit with another line, and means for maintaining said local circuit open when the terminal plug is inserted in the switch of a second telephone line, substantially as described.

No. 54,224. Machine for Recessing Leather.

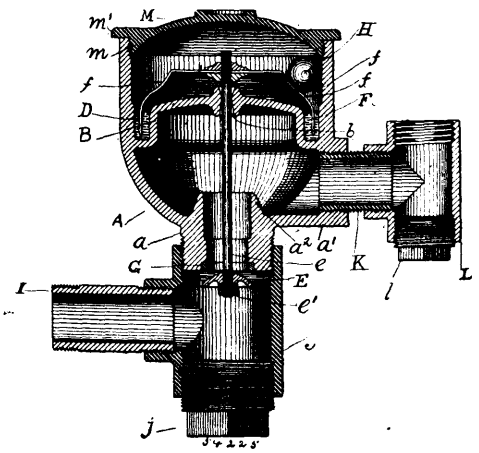
(*Machine pour incruster le cuire.*)



The McKay Neverslip Sole Company, assignee of Robert McKay, both of Detroit, Michigan, U.S.A., 1st December, 1896; 6 years. (Filed 16th November, 1896.)

Claim.—1st. A rotary tool for recessing surfaces, provided with an under-cutting edge and a work bearing surface above said edge. 2nd. In a rotary recessing tool, the combination with a head, of a knife bar inclined to the axis of said head and longitudinally adjustably secured thereto, the lower projecting end of said bar forming an under-cutting edge, and a work bearing surface on said head above said under-cutting edge. 3rd. In a rotary recessing tool, the combination with head, of knife bars oppositely inclined to the axis of said head and longitudinally adjustably secured on opposite sides thereof, the lower projecting ends of said bars forming under-cutting edges, and a work bearing surface on said head above each of said under-cutting edges. 4th. In a rotary recessing tool, the combination with the head *a*, provided with the inclined recess *c* having the overhanging sides *f* of the clamping plate *e* in said recess, the inclined edge *g*, the knife bar *d* of wedge shape cross section between said clamping plate and the overhanging side *f*, the screw-threaded stud *h* secured to the head and projecting through an aperture in said clamping plate, and the nut *j* on said stud. 5th. In a rotary recessing tool, the combination with the head *a*, provided with the inclined recess *c* having the overhanging side *f* of a knife bar of wedge shape cross section, and the clamping plate *e* in said recess, the screw-threaded stud *h* projecting from said head through an aperture in the clamping plate, the nut *j* thereon and the flange *m* on the lower end of the clamping plate, the lower face of which forms a work bearing surface over the inclined under-cutting edge *n* on the projecting edge of the knife bar. 6th. In a rotary recessing tool, the combination with a head, of a knife bar secured to the head and having a cutting head inclined to the axis of said head and a cutting edge at its end, and a work bearing surface on said head above said inclined cutting edge. 7th. The combination with a rotary recessing cutter, a table below the same and means for moving said cutter and table toward or from each other, of a guide pin projecting from said table in axial line with said cutter, and a work holding clamp having its upper member cut away for the tool to work in, and its lower member provided with a recessed pattern on its lower face adapted to engage with said guide pin. 8th. The combination with a rotary recessing tool, a table below the same having a projecting guide pin in axial line with said cutter and means for moving said table and cutter toward or from each other, of a work holder comprising an upper and a lower clamping plate; the upper plate being apertured for the cutter to work in, a bearing plate and a pattern plate detachably secured respectively to said upper and lower clamping plates on the under face thereof, said plates being correspondingly apertured. 9th. A work holder comprising the plate D, the apertured plates F, the bifurcated clamping lever N and the correspondingly apertured plates I and J detachably secured respectively to the lower faces of the plates F and D, substantially as and for the purpose described.

No. 54,225. Gas Governor. (*Gouverneur à gaz.*)

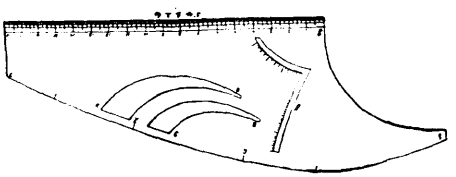


George Edwin Ford and Mrs. Elizabeth Ford, both of Golden Gate, California, U.S.A., 1st December, 1896; 6 years. (Filed 28th October, 1896.)

Claim.—1st. A gas governor provided with a valve-controlling float and spheres on the outer edge thereof, the said spheres contacting with the wall of the governor, substantially as described. 2nd. A gas governor comprising a float having a depression or groove at the edge, spheres in said depression or groove contacting with the body of the governor, and means for confining said spheres, substantially as described. 3rd. A gas governor comprising a float having a depression or groove around its edge and spheres lodged between the wall of the governor and the float therein within said depression or groove, substantially as described. 4th. In a gas governor, the combination of a casing, a valve-controlling float therein, and spheres or balls bearing partly on the edge of the float and partly on the inner side of the casing, substantially as described.

No. 54,226. Dress Cutting System.

(*Système de tailler les vêtements.*)

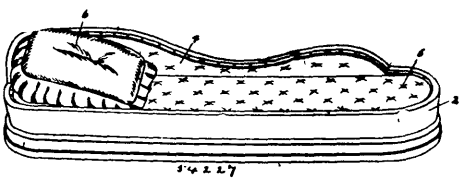


Michael Maurer, Elmira, Ontario, Canada, 1st December, 1896; 6 years. (Filed 17th October, 1896.)

Claim.—A dress cutting or drafting guide, consisting of a metallic plate, having the edges curved and shaped as shown in the drawing, and having the openings 8, 9 and 11, and in all substantially as hereinbefore set forth.

No. 54,227. Combined Couch and Burial Casket.

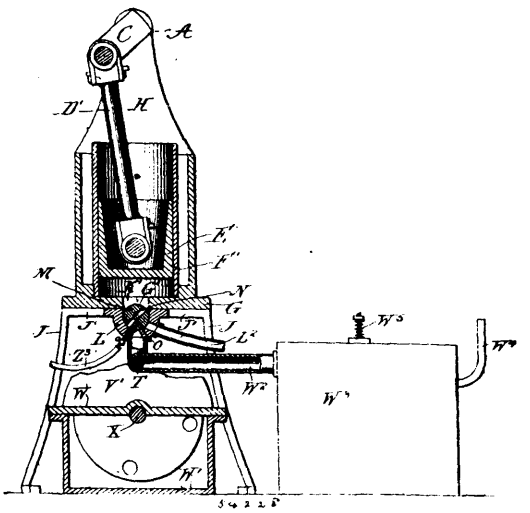
(*Canapé et cercueil combinés.*)



Robert Watson, London, Ontario, Canada, 1st December, 1896; 6 years. (Filed 20th October, 1896.)

Claim.—1st. As a new article of manufacture, a burial casket, having a body formed or provided with a back or upwardly projecting side portion, substantially as and for the purpose set forth. 2nd. In a burial casket, a body formed or provided with a back or upwardly projecting side portion, and provided with a cover, substantially as and for the purpose set forth. 3rd. In a burial casket, a body formed or provided with a back or upwardly projecting side portion, in combination with a cover formed with an opening, and provided with a transparent plate, and a removable panel, substantially as and for the purpose set forth.

No. 54,228. Gas Engine. (*Machine à gaz.*)



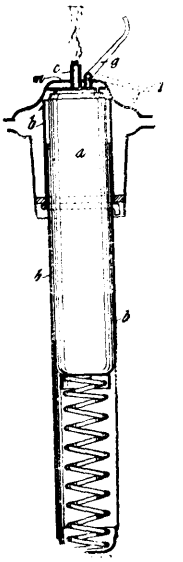
Charles Franklin Goddard, Chicago, Illinois, U.S.A., 1st December, 1896; 6 years. (Filed 28th October, 1896.)

Claim.—1st. In a gas engine, the combination of a cylinder with a conduit leading thereto and a rotary valve interrupting the connection between the conduit and cylinder and provided with an opening to periodically connect the cylinder and conduit, and driving connections to the valve from the part driven by the engine, so that the speed of rotation and hence the duration of connection between the conduit and cylinder is responsive to the speed of the engine, and a second valve located in the conduit leading to the cylinder and provided with storing pockets containing the charging material, said pockets adapted to be brought periodically in connection with said conduit, substantially as described. 2nd. In a gas engine, the combination of a cylinder and a conduit with a rotary valve interrupting their connections, said valve provided with a hole which periodically connects them, a reciprocating slide to vary the size of said hole, said slide rotating with said valve and connected with a governor responsive to variations in the speed of the engine. 3rd. In a gas engine, the combination of a cylinder and a conduit with a rotary valve interrupting their connection and provided with a hole which periodically connects them, and a governor to vary the size of said hole responsive to variation in the speed of the engine, said governor connected with a rod rotating with said valve but free to move longitudinally with relation thereto, said rod connected to a slide adapted to vary the size of the hole in the relay valve when moved. 4th. In a gas engine, the combination of a cylinder and conduit with a rotary valve interrupting their connection and provided with a hole which periodically connects them, and a governor to vary the size of said hole responsive to variations in the speed of the engine, said governor consisting of a slide moving in such hole, said slide connected with a pair of centrifugal balls which are connected with the engine shaft so as to be rotated thereby. 5th. In a gas engine, the combination of a series of cylinders and pistons with a single rotary controlling valve which successively admits the gas to the respective cylinders, and a shaft to which the pistons of said cylinders are attached, each at a different angular position so that one is always effectively operating, said rotary valve consisting of a continuous shaft having transverse holes so as to admit gas into the cylinders, a rod extending through said rotary valve and provided with slides associated with each of said holes and a pair of centrifugal balls connected with said rod so as to vary its position as the speed of the engine varies, thereby simultaneously varying the size of the admission ports of each cylinder, said rotary valve being operatively connected to the engine shaft, substantially as described. 6th. The combination of a gas engine with a conduit leading thereto, and a mixing device consisting of a rotating part, which in its rotations passes through the conduit and through a gasoline reservoir, the rotating part normally projecting into said conduit and gasoline reservoir at all times, and acting as a valve to close said conduit during a part of its revolution, said mixing device provided with pockets which are adapted to carry a quantity of gasoline, said pockets so situated that they periodically register with said conduit, substantially as described.

No. 54,229. Wick Adjusting Device for Oil Carriage Lamps. (*Appareil à ajuster les mèches de lampes de voitures.*)

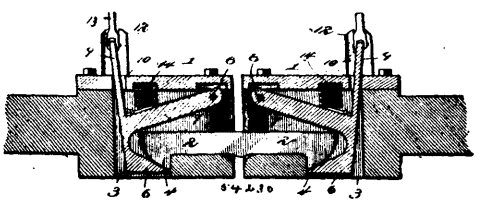
Alfred Billens, Canterbury, New Zealand, 1st December, 1896; 6 years. (Filed 28th October, 1896.)

Claims.—1st. The wick adjusting device for oil carriage lamps consisting of the combination with the lamp *a*, of the wick tube *c*, the carrier *e*, the adjusting stem *f*, having a hinged handle *g*, substantially as and for the purposes herein specified. 2nd. The hinged handle upon the wick adjusting stem which can be turned up to



allow the lamp to be placed within a carriage lamp socket and then turned down to be away from the wick and for adjusting purposes, substantially as specified.

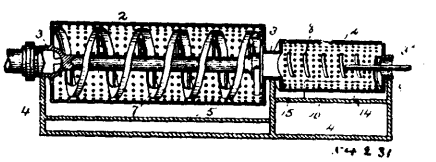
No. 54,230. Car Coupler. (*Attelage de chars.*)



George Edward Smith and Henry Clay Johnson, both of Shiloh, Lousiania, U.S.A., 2nd December, 1896; 6 years. (Filed 9th October 1896.)

Claim.—In a car coupler, a draw-head having a longitudinal cavity and provided with an opening in its bottom, in combination with a trifurcated link-lifter comprising a lip working in said opening in the draw-head, an intermediate arm inclining upward and forward and fulcrumed adjacent to the mouth of the draw-head, and an arm extending upward through an opening in the top of the draw-head, a spring for holding the link-lifter normally depressed, and levers fulcrumed at each side of the draw-head and having pivotal connection with the upwardly extending arm of the lifter, all arranged for joint operation, substantially as described.

No. 54,231. Wood Pulp Separator. (*Separateur de pulpe.*)

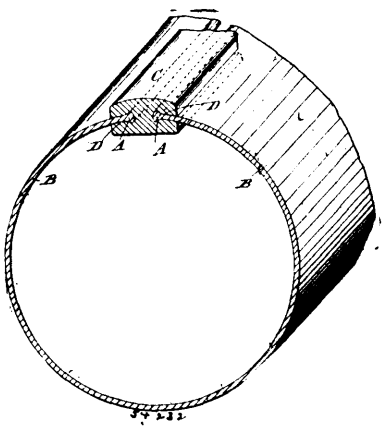


Edward Ferris Millard, Jackson, Michigan, U.S.A., 2nd December, 1896; 6 years. (Filed 29th October, 1896.)

Claim.—1st. In wood pulp separators, the combination with a revoluble screen, having central supply and discharge orifices, and a vat in which the screen is in part submerged, of a shelf or partition extending horizontally beneath the screen and affixed to three sides of the vat, and a dam which extends from the tail of the vat in part along the unattached edge of the shelf, substantially as stated. 2nd. In combination with a rotary and partially submerged screen, axially located inlet and outlet openings, a plurality of peripheral ribs interiorly of the screen, and a lifting device to co-operate with the outlet openings, a vat in which the screen is mounted, a shelf horizontally beneath the screen and affixed to three sides of the vat to form an opening 10^1, and a dam by which the liquid level in the screen is controlled, said dam to extend from the tail of the vat in part along the unattached side of the shelf and above the bottom of the cylinder to create an opening 15, substantially as explained. 3rd. In wood pulp refining apparatus, the combination with a rotary

screen having tubular journals, central inlet and outlet openings, a conveyer rotating interiorly of but non-contiguous to the screen, a vat for the screen and dams in said vat, of a secondary rotary screen, a vat therefor, a shelf beneath the screen fixed to three sides of the vat, and an upraised lip or dam in part along the unattached edge of said shelf to control the liquid level in said screen, substantially as set forth. 4th. In wood pulp refining apparatus, a revoluble screen with inlet and outlet openings, a vat to contain said screen, and a conveyer rotating with but non-contiguous to said screen, combined with a second screen revolving in unison with the first, a plurality of peripheral ribs interiorly attached to said screen, a lifting device at the tail end of said screen, a shelf attached to three sides of the vat and horizontally beneath said second screen, a dam or vertical lip extending from the tail end of the vat in part along the unattached edge of said shelf, dams in the first vat to control the liquid level in the primary screen, and a shower pipe in the second screen, substantially as explained.

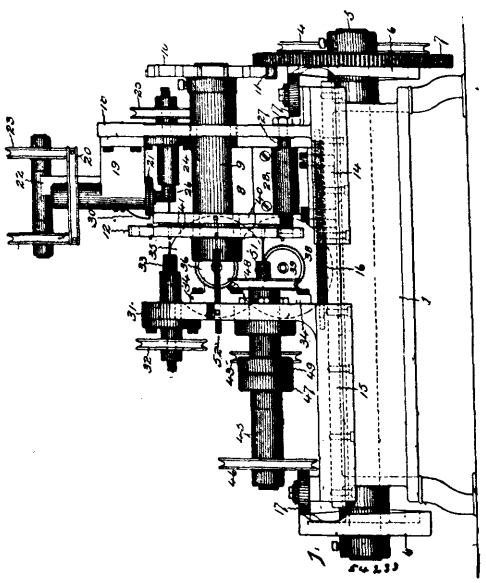
No. 54,232. Means for Joining Metal Plates. (*Moyen d'unir des plaques métalliques.*)



Mephan Ferguson, Melbourne, Victoria, Australia, 2nd December, 1896; 6 years. (Filed 20th October, 1896.)

Claim.—The herein described means for joining the edges of metal plates or sheets to each other, consisting essentially in forming an enlargement on each edge of the plates or sheets to be joined together and in a metal bar or strip having a deep groove or recess on each side to receive the enlarged edges of said plates or sheets, substantially as herein described and explained and as illustrated in the accompanying drawing.

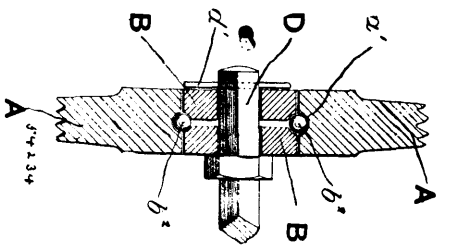
No. 54,233. Machine for Forming Nipples. (*Machine pour faire des mamelons.*)



The Pope Manufacturing Co., Portland, Maine, assignee, of Arthur J. Jacobs, Hartford, Connecticut, both in the U.S.A., 2nd December, 1896; 6 years. (Filed 27th October, 1896.)

Claim.—1st. In a machine for forming nipples, in combination, a blank-carrier rotarily supported upon the bed, mechanisms for imparting to the carrier an intermittent rotary movement, carriages movable upon the bed toward and from each side of the carrier, mechanisms for moving the carriages, operating tools mounted upon the carriages, and means for rotating the tools, substantially as specified. 2nd. In a machine for forming nipples, in combination, a blank-carrier rotarily supported upon the bed, mechanisms for imparting to the carrier an intermittent rotary movement, carriages movable upon the bed toward and from each side of the carrier, mechanisms for moving the carriages, cutting, boring and threading tools mounted upon the carriages, mechanisms for rotating the tools, and a part borne by one of the carriages and adapted to engage with and lock the carrier when the carriages are moving up and disengage from and unlock the carrier when the carriages are moving away, substantially as specified. 3rd. In a machine for forming nipples, in combination, a blank-carrier rotarily supported upon the bed, mechanisms for imparting to the carrier an intermittent rotary movement, carriages movable upon the bed toward and from each side of the carrier, mechanisms for moving the carriages, cutting, boring and threading tools mounted upon the carriages, means for rotating the tools, and a part borne by one of the carriages and adapted to eject a finished nipple from the carrier when the carriages move up, substantially as specified. 4th. In a machine for forming nipples, in combination, a blank-carrier rotarily supported upon the bed, mechanisms for imparting to the carrier an intermittent rotary movement, a carriage movable upon the bed toward and from the carrier, mechanisms for moving the carriage, milling cutters arranged on the carriage so as to operate when the carriage is moved up, in one part of the path of travel of the blanks, milling cutters arranged on the carriage so as to operate when the carriage is moved up, in another part of the path of travel of the blanks, whereby the blanks are given a partial revolution while passing from one set of mills to the other, and means for rotating the mills, substantially as specified. 5th. In a machine for forming nipples, in combination, a blank-carrier rotarily supported upon the bed, mechanisms for imparting to the carrier an intermittent rotary movement, a carriage movable upon the bed toward and from the carrier, mechanisms for moving the carriage, milling cutters arranged on the carriage so as to operate when the carriage is moved up, in one part of the path of travel of the blanks, milling cutters arranged on the carriage so as to operate when the carriage is moved up, in another part of the path of travel of the blanks, whereby the blanks are given a partial revolution while passing from one set of mills to the other, means for rotating the mills, and a projecting guide connected with the bed and adapted to engage the ends of the blanks and prevent them from rotating in the holding perforations while they are making the partial revolution from one set of the mills to the other, substantially as specified. 6th. In a machine for forming nipples, in combination, a blank-carrier rotarily supported upon the bed, mechanisms for imparting to the carrier an intermittent rotary movement, a carriage movable upon the bed toward and from the carrier, mechanisms for moving the carriage, and a saw, drill and locking rod borne by the carriage, substantially as specified. 7th. In a machine for forming nipples, in combination, a blank-carrier rotarily supported upon the bed, mechanisms for imparting to the carrier an intermittent rotary movement, a carriage movable upon the bed toward and from the carrier, mechanisms for moving the carriage, and two sets of slabbing mills, a tap and an ejecting rod borne by the carriage, substantially as specified. 8th. In a machine for forming nipples, in combination, a disk with transverse perforations rotarily supported upon the bed, a star wheel connected with the disk, mechanisms adapted to intermittently rotate the star wheel, carriages movable back and forth upon ways on the bed on each side of the disk, cams for moving the carriage backward, one of said carriages bearing a saw, a drill and a locking rod and the other of said carriages bearing two sets of mills, two drills, a tap and an ejecting rod, said forming tools being connected with means for rotating them as they move with the carriages up to the blank-carrier disk, substantially as specified.

No. 54,234. Wheel Bearing. (*Coussinet de roue.*)

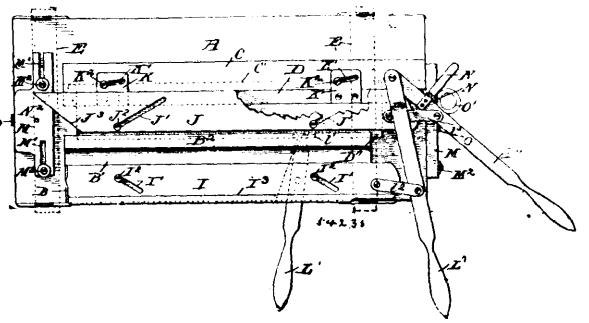


David Roper and Benjamin Crowther, both of West Bromwich, Stafford, England, 2nd December, 1896; 6 years. (Filed 18th November, 1896.)

Claim.—The improvements in the bearings of wheels consisting of the supplemental centre piece or pieces, with suitable provision such as the square hole for attachment to a spindle with provision for one or more rows of balls, substantially as hereinbefore described and shown on the accompanying sheets of drawings.

No. 54,235. Curtain Stick Forming Machine.

(Machine pour faire les bâtons de rideaux,)

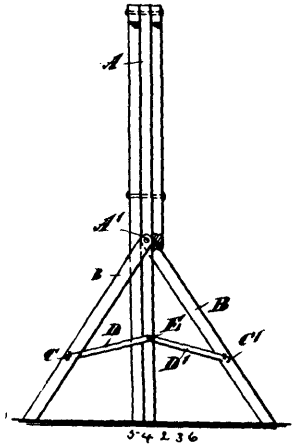


William H. Ramsey, Fred M. Booth and Joseph O. Dobson, all of Sioux Falls, South Dakota, U.S.A., 2nd December, 1896; 6 years. (Filed 7th November, 1896.)

Claim.—1st. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess, and finishing mechanism co-operating with said groove, of a curtain stick adapted to fit in said recess and of slightly wedge-shaped section, a folding plate sliding on the inclined upper face of the bed and over said recess, and means for moving this plate, as and for the purpose set forth. 2nd. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess, and finishing mechanism co-operating with said groove, of a curtain stick adapted to fit in said recess and of slightly wedge-shaped section, a folding plate resting on the inclined upper face of the bed with one edge adapted to stand over said recess, the body of the plate being provided with oblique slots, headed studs rising from the bed and engaging said slots, and a lever for imparting longitudinal motion to the plate, as and for the purpose set forth. 3rd. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess and having a horizontal bottom, a two-part stick each of which parts is slightly wedge-shaped in section and one of which is adapted to fit in said recess, and a folding plate sliding upon the inclined upper face of the bed, of a clamp for holding the other part of the stick in said groove, and a finishing plate sliding over said clamp, as and for the purpose set forth. 4th. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess and having a horizontal bottom, a two-part stick each of whose parts is slightly wedge-shaped in section and one of which is adapted to fit said recess, and a folding plate sliding upon the inclined upper face of the bed, of a clamp for holding the other part of the stick in said groove, a finishing plate sliding upon the horizontal upper face of the clamp, the body of said plate being provided with oblique slots, headed studs in the clamp engaging said slots, and a lever for imparting longitudinal motion to this plate, as and for the purpose set forth. 5th. In a machine for forming a curtain stick fastening, the combination with a bed having an inclined upper face, an adjacent depressed recess whose bottom stands in a plane parallel with said upper face, a groove adjacent the recess having a horizontal bottom, a two-part stick each of whose parts is slightly wedge-shaped in section and one of which is adapted to fit in said recess, and a folding plate sliding upon the inclined upper face of the bed, of a clamp for holding the other part of the stick in said groove, ears projecting rearwardly from said clamp and provided with oblique slots, a cleat secured to the base and over which said ears pass, headed studs in the cleat engaging said slots in the ears, and a lever for imparting longitudinal motion to the clamp, as and for the purpose set forth. 6th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick, one of whose parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp one part in the recess, of a cleat on the base, a clamp sliding on the base toward the bed and adapted to clamp the other part of the stick in the groove, a finishing plate supported by the clamp, and means for moving this plate over the clamp so as to pass its front edge over the groove, as and for the purpose set forth. 7th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick, one of whose parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp one part in the recess, of a cleat on the base, a clamp sliding on the base toward the bed and adapted to clamp the other part of the stick in the groove, a finishing plate supported by the clamp and having oblique slots in its body, headed studs rising from the clamp and engaging said slots, and a lever for imparting longitudinal motion to this plate, as and for the purpose set forth. 8th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick, one of whose parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp one part in the recess, of a cleat on the base, a clamp sliding on the base toward the bed and adapted to clamp the other part of the stick in the groove, ears on the clamp moving over the cleat and provided with oblique slots, studs rising from the cleat and engaging said slots, a lever for imparting longitudinal motion to the clamp, and a finishing plate sliding over the clamp, as and for the purpose set forth. 9th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick, one of whose parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp one part in the recess, of a cleat on the base, a clamp sliding on the base toward the bed and adapted to clamp the other part of the stick in the groove, ears on the clamp moving over the cleat and provided with oblique slots, studs rising from the cleat and engaging the slots, a lever for imparting longitudinal motion to the clamp, a finishing plate sliding upon the clamp, the body of this plate having oblique slots, headed studs rising from the clamp and engaging said slots, and an independent lever for imparting longitudinal motion to this plate, as and for the purpose set forth. 10th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a two-part stick, one of whose parts fits the recess and both of which fit the groove, and a folding plate adapted to clamp any part in the recess, of a clamp for holding the second part of the stick in said groove, and a vertically movable presser bar supported above the base and adapted to depress the sticks when in the groove, as and for the purpose set forth. 11th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess in its upper face, a wedge-shaped stick adapted to fit said recess, and a plate sliding upon the upper face of the bed and over the recess and adapted to clamp the stick therein, of a presser-bar movable above the bed and adapted to bear vertically on the portion of the stick not engaged by the plate, as and for the purpose set forth. 12th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a folding plate, a clamp, and a finishing plate, all mounted on a base, of standards supported above the base at right angles to the above members, a bar sliding in said standards transversely over the base, a pressure-bar, links pivotally connecting the presser-bar with the sliding bar, and a lever connected with the presser-bar for depressing it when desired, as and for the purpose set forth. 13th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a folding plate, a clamp, and a finishing plate, all mounted on a base, of standards supported above the base at right angles to the above members, a bar sliding in said standards transversely over the base, a presser-bar supported by the sliding bar, means for depressing the presser-bar at will, and catches carried by the standards and adapted to check the forward movement of the presser-bar at a point over said groove, as and for the purpose set forth. 14th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a folding plate, a clamp, and a finishing plate, all mounted on a base, of standards supported above the base at right angles to the above members and having grooves in their inner faces, a bar having feet sliding in said grooves, a presser-bar supported by the sliding bar, and means for depressing the presser-bar at will, the presser bar standing above the recess when said feet rest in the front ends of said grooves, as and for the purpose set forth. 15th. In a machine for forming a curtain stick fastening, the combination with a bed having a recess and a groove, a folding plate, a clamp, and a finishing plate, all mounted on a base, of standards supported above the base at right angles to the above members and having grooves in their inner faces, a bar having feet sliding in said grooves, a presser-bar supported by the sliding bar, means for depressing the presser-bar at will, the latter standing above said recess when said feet rest in the front ends of said grooves, and catches pivoted to the standards and having hooked front ends adapted when depressed to check the sliding bar at a point to hold the presser-bar above said groove, as and for the purpose set forth. 16th. In a machine for forming a curtain stick fastening, the combination with a base, a bed, a clamp, a finishing plate having oblique slots in its body, headed studs on the clamp engaging said slots, a lever connected with one end of the plate for moving it longitudinally, its opposite end being bevelled, and an arm projecting from said lever, of cord-carriers mounted on the base near its ends and movable transversely thereover, and studs rising from said cord-carriers, one of which studs contacts with the bevelled end of the plate and the other of which is moved by said arm, as and for the purpose set forth. 17th. In a machine for forming a curtain stick fastening, the combination with a base, a bed, a clamp, a finishing plate moving longitudinally over said clamp and having one end bevelled, and a lever connected to the other end of said plate and having a projecting arm, of cord-carriers mounted on the base near the ends thereof for transverse movement thereover, each carrier having a slotted body, studs in the base over which the slots slide, and studs rising from the carriers, one of which engages said bevelled end of the plate and the other of which is moved by said arm, as and for the purpose set forth. 18th. In a machine for forming a curtain stick fastening, the combination with a base, and a bed and clamp supported longitudinally thereof, of cord-carriers mounted on the base at the ends

thereof and moving transversely thereover in suitable guides, studs rising from the cord-carriers, mechanism for engaging these studs to impart simultaneous forward movement to the carriers, a cord clamp on each carrier, and a cord-ball-cup on one carrier, as and for the purpose set forth. 19th. In a curtain stick fastening, the combination with a two-part stick, of a shade passing first down between the parts of the stick, then bent up and passing completely around both parts with its end carried upward around said bend and standing between one stick and its outer fold, a fastening plate extending along the outer face of said stick under the fold which covers it, and fastening devices passing through both sticks and one outer and three inner folds of the shade, with their inner ends resting against said plate, substantially as described. 20th. In a curtain stick fastening, the combination with a two-part stick, of a shade passing first down between the members of the stick, then bent up and passing completely around both parts with its end carried upward around said bend and standing between one stick and its outer fold, a fastening-plate extending along one face of one stick under the adjacent fold of the shade, and a nail passing through the outer and three inner folds of the shade and both parts of the stick with its end resting against the inner face of the plate and clinched into the adjacent face of the stick, as and for the purpose set forth. 21st. In a curtain stick fastening, the combination with a two-part stick, and a cord, of a shade passing first between the parts of the stick, then around the cord, then between the parts and over the upper edge of the second part, then down the outer face of this part and under both parts and the cord, then up the outer face of the first part and over its upper edge, then down between the parts, then again around the cord, and finally up between said second part and its outer fold, and nails for holding the parts together, substantially as described. 22nd. In a curtain stick fastening, the combination with a two-part stick whose parts have flat adjacent inner faces, bevels at their lower corners and rounded lower edges and outer faces, and a cord standing within the angle formed by the bevels, of a shade passing first between the parts of the stick, then around the cord, then between the parts and over the upper edge of the second part, then down the outer face of this part and under both parts and the cord, then up the outer face of the first part and over its upper edge, then down between the parts, then again around the cord, and finally up between said second part and its outer fold, and means for holding the parts together, substantially as described.

No. 54,236. Folding Trestles. (*Tréteaux pliants.*)



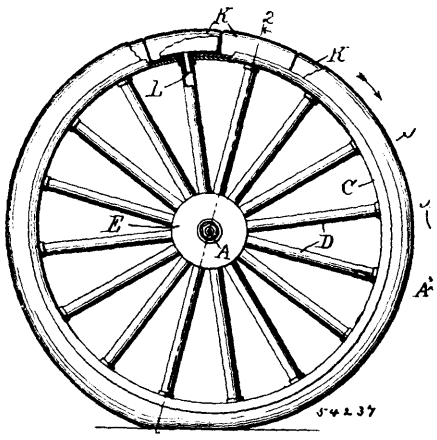
Thomas Adam Clarke, Portland, Oregon, U.S.A., 2nd December, 1896; 6 years. (Filed 18th November, 1896.)

Claim.—1st. A trestle having a post, the lower portion of which is formed with two oppositely arranged recesses, a leg pivotally mounted in each recess, the legs moving on aligned axes, the two leg braces also pivotally mounted on the post and having axes at right angles to the axes of the first legs, the lower ends of the leg-braces forming legs proper and the upper ends forming braces, and two arms pivotally connected to the upper end of the post, the arms extending outwardly and oppositely and being respectively supported by the upper ends of the leg-braces, substantially as described. 2nd. A folding trestle having a post, the lower portion of which is formed with two recesses, two legs respectively pivoted within the recesses, and two leg-braces pivoted to the post and having axes at angles to the axes of the legs, the lower ends of the leg-braces forming legs proper, and the upper ends of the leg-braces being extended toward the level of the upper end of the post so as to form braces proper, substantially as described.

No. 54,237. Motor-Wheel. (*Moteur.*)

Charles F. Goddard, Chicago, Illinois, U.S.A., 2nd December, 1896; 6 years. (Filed 22nd October, 1896.)

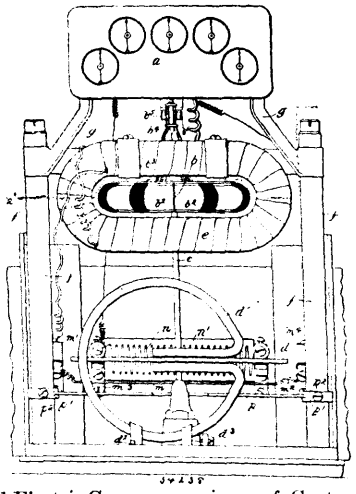
Claim.—1st. In a motor, the combination of a wheel-like body with a flexible tire and means for successively expanding and contracting the tire in sections, so as to vary the distance of the periphery of said tire from the centre of said wheel. 2nd. In a motor, the combination of a wheel-like body with a flexible tire consisting



of separate and independent sections, and means for successively expanding said sections. 3rd. In a motor, the combination of a wheel-like body with a tire consisting of a series of unconnected hollow flexible sections, and means for successively introducing fluid under pressure from a common source into said sections. 4th. In a motor, a wheel-like body provided with a tire capable of being expanded in sections radially, and means for successively expanding said sections at a predetermined point. 5th. A motor device comprising a wheel with a tire consisting of a series of hollow unconnected flexible sections, a source of fluid supply, and means of successively connecting said hollow flexible sections with said source of fluid supply. 6th. A motor device comprising a wheel with a tire consisting of a series of hollow unconnected flexible sections, a source of fluid supply, and a connection from said source of fluid supply to said wheel, said connection so constructed that the flexible sections of the tire may be successively charged with fluid from said source of fluid supply, and means of exhausting the fluid from such flexible sections at a predetermined point. 7th. A motor device consisting of a wheel having a tire consisting of a series of hollow unconnected flexible sections, a source of fluid supply with which said flexible sections are successively connected, and a series of exhaust openings with which said flexible sections are connected after being connected with the source of fluid supply. 8th. A motor device consisting of a wheel having a rim provided with a series of hollows or indentations, and a tire having a series of hollow unconnected flexible sections, a source of fluid supply with which said flexible sections are successively connected, and a series of exhaust openings with which said flexible sections are connected after being connected with the source of fluid supply. 9th. A motor device consisting of a wheel having a tire consisting of a series of hollow unconnected flexible sections, a source of fluid supply with which said flexible sections are successively connected, and a series of exhaust openings with which said flexible sections are connected after being connected with the source of fluid supply, and a controlling device for said exhaust openings by which their size may be varied, whereby a gradual but incomplete exhaust is obtained substantially as described. 10th. A motor device consisting of a wheel having a rim provided with a series of hollows or indentations, and a tire having a series of hollow unconnected flexible sections, a source of fluid supply with which said flexible sections are successively connected, and a series of exhaust openings with which said flexible sections are connected after being connected with the source of fluid supply, and a controlling device for said exhaust openings by which their size may be varied whereby a gradual but incomplete exhaust is obtained, substantially as described. 11th. A wheel comprising a rim provided with a series of hollows or indentations, a series of hollow flexible bulbs fitting into said hollows or indentations and connected with the rim of the wheel, a passageway in communication with said bulbs and leading to the hollow hub of the wheel, an axle upon which said wheel is mounted provided with exhaust and admission compartments separate from each other, the admission compartment adapted to be connected with a source of fluid supply and the exhaust compartment adapted to be connected with the external air, said admission compartment provided with an opening adapted to successively register with the passageways leading to the bulbs as the wheel is rotated, said exhaust compartment provided with a series of openings with which each passageway is adapted to successively register. 12th. A wheel comprising a rim provided with a series of hollows or indentations, a series of hollow flexible bulbs fitting into said hollows or indentations and connected with the rim of the wheel, passage ways in communication with said bulbs and leading to the hollow hub of the wheel, an axle upon which said wheel is mounted provided with exhaust and admission compartments separate from each other, the admission compartment adapted to be connected with a source of fluid supply, and the exhaust compartment adapted to be connected with the external air, said admission compartment provided with an opening adapted to successively

register with the passage ways leading to the bulbs as the wheel is rotated, said exhaust compartment provided with a series of openings with which each passage way is adapted to successively register, and a controlling device by which their size may be varied. 13th. A wheel comprising a rim provided with a series of hollows or indentations, a series of hollow flexible bulbs fitting into said hollows or indentations and connected with the rim of the wheel, passageways in communication with said bulbs and leading to the hollow hub of the wheel, an axle upon which said wheel is mounted provided with exhaust and admission compartments separate from each other, the admission compartment adapted to be connected with a source of fluid supply, and the exhaust compartment adapted to be connected with the external air, said admission compartment provided with an opening adapted to successfully register with the passageways leading to the bulbs as the wheel is rotated, said exhaust compartment provided with a series of openings with which each passageway is adapted to successfully register, a movable plate associated with said exhaust openings and adapted to be moved so as to vary their size, and a controlling device for said plate by which its position may be varied. 14th. A motor device consisting of a wheel having a series of radially movable parts associated with its periphery, said parts adapted to be moved so as to be radially extended by means of a fluid under pressure, a source of fluid supply with which said movable devices are successively operatively connected, a series of exhaust openings adapted to be placed in communication with said movable parts, and a controlling device for said exhaust openings by which their size may be varied and a gradual but incomplete exhaust may be obtained, substantially as described.

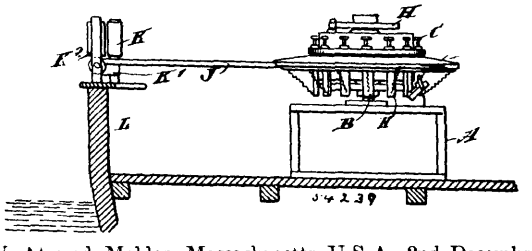
No. 54,238. Electric Meter. (*Electromètre.*)



The Diamond Electric Company, assignee of Gustave A. Scheeffer, all of Peoria, Illinois, U.S.A., 2nd December, 1896; 6 years. (Filed 18th May, 1896.)

Claim.—1st. In an electric meter, the combination with field coils connected with the circuit to be measured, of an armature adapted to be actuated thereby which is connected with said circuit and with the field coils to receive current passing through said coils sufficient to supply a torque thereto adapted to overcome the initial friction of the rotating parts, substantially as described. 2nd. In a direct-current electric meter, the combination with an armature and an adjusted resistance, of field coils connected in a branch across the mains of the measured circuit in series with said armature and resistance as multiple branches, and a second resistance cut into one of the mains of the said measured circuit between the points at which the armature and adjusted resistance are connected, substantially as described. 3rd. The combination in an electric meter with the field coils c connected in a branch across the mains of the circuit to receive measurement of the armature b, and resistance o connected as multiple branches in series with the field coils, said resistance being adjusted to divert to the armature a sufficient amount of the current flowing through the fields to supply a torque adapted to overcome the initial friction of the meter parts, and a light resistance n cut into one of the mains of the measured circuits between the points at which the armature and the adjusted resistance are connected, substantially as described. 4th. In an electric meter, the combination with the armature, of commutator segments formed of German silver alloy electrically connected with the armature coils, and brushes engaging therewith faced with platinum, substantially as described. 5th. In an electric meter, the combination with the armature b, of commutator segments b^4 constructed of German silver alloy, and brushes b^5 provided with bearing faces of platinum, substantially as described. 6th. In an electric meter, the combination with a sectional armature core constructed of wood or other light material, of an aluminium disc or plate to which the said sections are secured, substantially as described. 7th. In an electric meter, the combination with the wooden armature core constructed in sections b^2, of the aluminium disc b^3 to which the said sections of the armature are fastened, substantially as described. 8th. In an electric meter, the combination with a vertical shaft whereon the rotating parts are mounted, of a laterally-extending bar or strip adapted to be adjustably secured at such a height as to support the weight of the shaft and mounting, substantially as described. 9th. In an electric meter, the combination with the shaft c whereon the armature b and disc d are mounted, of the bar p provided with collars p^1, encircling the uprights f, the said bar being adapted to be raised and lift the said shaft from its lower bearing or jewel and be secured in position by the screws p^2 provided in the said collars, substantially as described. 10th. In an electric meter, the combination with a disc mounted upon a driving shaft of the registering train, of permanent damping magnets between the poles of which said disc rotates, and guides or ways extending in planes parallel to a diameter of the disc wherein the said magnets are laterally adjustable in the plane of rotation of the said disc and adapted thereby to include portions of the disc partially or entirely in the fields of the damping magnets, substantially as described. 11th. In a damping device of an electric meter, the combination with an aluminium disc mounted upon and rotating with the driving shaft of the registering train, of permanent magnets between the poles of which the said disc is adapted to rotate, and ways or guides extending in planes parallel to a diameter of the disc wherein the said magnets are mounted, permitting a lateral adjustment of the magnets to include portions of the disc partially or entirely in their magnetic fields and vary the damping effect of the device, substantially as described. 12th. In an electric meter, the combination with the aluminium disc d mounted upon the vertical shaft c, of permanent damping magnets d^1, between the poles of which the said disc is adapted to rotate, ways or guides d^2 wherein the said magnets are laterally adjustable in the plane of rotation of the said disc to secure the regulation of the damping effect of the device, and means for securing the said magnets in their adjusted positions, substantially as described.

No. 54,239. Net-lifting Apparatus.
(*Appareil pour haler les filets.*)



John W. Atwood, Malden, Massachusetts, U.S.A., 2nd December, 1896; 6 years. (Filed 24th October, 1896.)

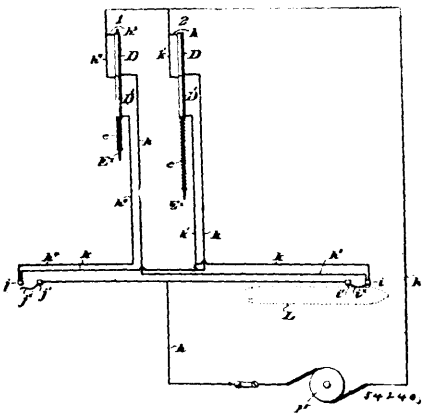
Claim.—1st. An apparatus of the class described, provided with a revoluble drum, clamps arranged on the periphery thereof, each clamp comprising an elastic block, a guideway for the same, an adjustable plate engaging the top of the block, a movable block directly opposite the said elastic block, a lever pivoted on the drum and adapted to actuate with said movable block, a link for connecting said lever with said movable block, a stationary cam capable of moving the lever, and a spring pressing the lever, substantially as described. 2nd. An apparatus of the class described, provided with a revoluble drum, clamps arranged on the periphery thereof, each clamp comprising an elastic block, a guideway for the same, an adjustable plate engaging the top of the block, a movable block directly opposite the said elastic block, a lever pivoted on the drum and adapted to actuate the said movable block, the adjacent ends of the said movable block and lever being bevelled, a cam capable of turning the lever, and a spring pressing the lever, substantially as described. 3rd. The combination with the frame, of a vertical shaft revolubly mounted thereon, a drum fixed to the shaft, a series of stationary blocks carried by the drum, a movable block for each stationary block and carried by the drum, and capable of sliding toward and from the respective stationary blocks, levers fulcrumed on the drum, links respectiyely connecting the levers and the movable blocks, a table outrunning from the drum and moving therewith, retractile springs respectively connected to the levers and to the table, and a cam fixed to the frame and capable of being engaged by the levers, the cam being engaged to move the levers against the tendencies of the springs, substantially as described. 4th. The combination with a frame, of a vertical shaft revolubly mounted therein, a drum carried by the shaft, stationary blocks carried on the drum, movable blocks respectively sliding towards and from the stationary blocks, levers fulcrumed to the drum, links respectively connecting the lever and movable block, springs pressing the levers, and a cam for moving the levers against the tensions of the spring, substantially as described.

No. 54,240. Loom. (*Métier.*)

Elmer Gates, Chevy Chase, Maryland, U.S.A., 2nd December, 1896; 6 years. (Filed 12th November, 1896.)

Claim.—1st. In a loom, in combination, a pair of solenoids, an electric circuit, means for throwing said solenoids alternately into

and out of circuit, a core or magnetizable device, a warp thread eye, and devices connective of said eye and said core, substantially as set

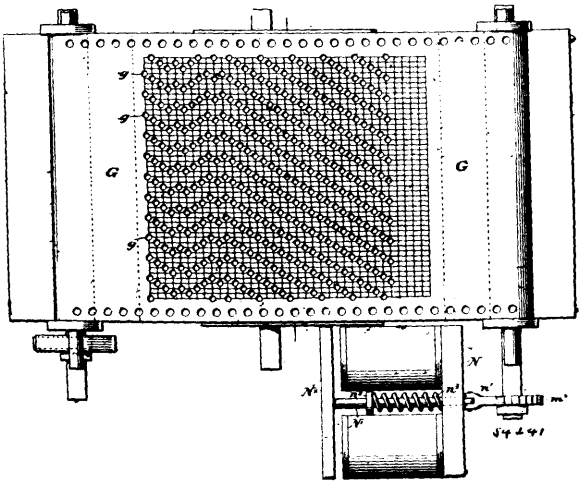


forth. 2nd. In a loom, a warp thread eye, a magnetizable core and a solenoid or magnetic coil, one of said last mentioned devices being fixed and the other movable, a connection between the movable device and the eye, and means, tripped or controlled by a moving part of the loom, for varying or changing the condition of the solenoid to occasion the movement of the warp thread eye, substantially as set forth. 3rd. In a loom, in combination, a pair of solenoids having hollow bores and disposed in axial alignment, an electric circuit, means actuated by a moving part of the loom for throwing said solenoids alternately into and out of circuit, a core disposed within said solenoids, a warp thread eye, and devices connective of said eye and said core, substantially as set forth. 4th. In a loom, in combination, a pair of solenoids having hollow bores and disposed in axial alignment, an electric circuit, means actuated by a moving part of the loom for throwing said solenoids alternately into and out of circuit, a core disposed within said solenoids, a spring for normally maintaining the core in balance midway between the solenoids, a warp thread eye, and devices connective of said eye and said core, substantially as set forth. 5th. In a loom, in combination, a pair of solenoids mounted in multiple circuit, normally open switches mounted in the multiple circuits and disposed in the path of a moving part of the loom, a warp thread eye, a magnetizable core, and means connective of said eye and said core, substantially as set forth. 6th. In a loom, in combination, a pair of solenoids having hollow bores and disposed in axial alignment and mounted in multiple, normally open switches mounted in the multiple circuits and disposed at the respective ends of the shuttle race, a warp thread eye, and means connective of said eye and said core, substantially as set forth. 7th. In a loom, in combination, a series of sets of solenoids, each set consisting of two solenoids having hollow bores and disposed in axial alignment, a main circuit connected with a dynamo or other source of supply, one division of the main circuit having branches in circuit with the respective solenoids, the two solenoids of each set being arranged in multiple circuit, and the several sets being mounted in multiple circuit, conductors from different sets terminating in a common terminal, other conductors from the different sets terminating in another common terminal, and means for switching said terminals alternately into circuit with the main line, magnetizable cores corresponding in number to the number of sets of solenoids, one employed in connection with each set, eyes or similar devices for engaging the warp thread, and suitable connections between said cores and said eyes, substantially as set forth. 8th. In combination with a dynamo or source of energy, two sets of solenoids, each set provided with a core connected to a warp thread eye, a conductor leading from said dynamo having branches in circuit respectively with each of the solenoids, the branch connected with the upper solenoid of the first set and the branch connected with the lower solenoid of the second set leading from said solenoids to a common terminal, and the branch connected with the lower solenoid of the first set and the branch connected with the upper solenoid of the second set leading from said solenoids to a common terminal, a second branch conductor leading from said dynamo, one branch of the same being provided with a terminal in the vicinity of the first terminal mentioned, with which it is adapted to be connected by a switch, and the other branch being provided with a terminal in the vicinity of the second terminal mentioned, with which it is adapted to be connected by a switch, and means for automatically moving said switches, substantially as set forth.

No. 54,241. Loom. (*Métier.*)

Elmer Gates, Chevy Chase, Maryland, 2nd December, 1896; 6 years. (Filed 12th November, 1896.)

Claim.—1st. In a loom, in combination, a series of warp thread eyes, a series of electrically-actuated devices connected with said eyes, a dynamo or source of electric energy having a main conductor, one division of which is provided with branches in circuit with said electrically-actuated devices, and the other of which is provided with a common terminal, terminals in circuit with said branches adapted to make contact with the common terminal, a



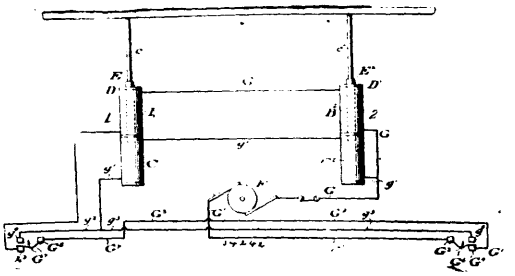
sheet of non-conducting material, provided with conducting spaces interposed between said terminals and the common terminal, an electrically-actuated means controlled by a moving part of the loom, for occasioning the travel of said sheet, substantially as set forth. 2nd. In a loom, in combination, a pattern sheet embodying conducting spaces or openings, a roll in contact with said sheet, electrically-actuated mechanism adapted to occasion the rotation of said roll, a conducting wire leading to said mechanism and equipped with a switch adapted to be thrown by a moving part of the loom, substantially as set forth. 3rd. In a loom, in combination, a sheet adapted to be moved longitudinally, rolls upon which said sheet travels, a drum adapted to positively engage with said sheet, a magnet provided with an armature, mechanism connective of said armature and drum, a dynamo, wires leading from said dynamo to said magnet, a switch mounted on said wire and arranged in the path of, so as to be operated by a moving member of the loom, substantially as set forth. 4th. In a loom, in combination, a sheet adapted to be moved longitudinally, rolls upon which said sheet travels, a drum adapted to positively engage said sheets, a magnet provided with an armature, a dynamo, wires leading from said dynamo to said magnet, a switch mounted on said wire and arranged in the path of, so as to be operated by a moving member of the loom, a toothed wheel mounted on said drum, a pin connected to said armature, a pawl connected to said pin and engaging said toothed wheel, and a spring which tends to carry the armature away from the toothed wheel, substantially as set forth. 5th. In a loom, in combination, a sheet adapted to be moved longitudinally, rolls upon which said sheet travels, a drum adapted to positively engage with said sheet, a magnet provided with an armature, mechanism connective of said armature and drum, a dynamo, wires leading from said dynamo to said magnet, a normally open switch mounted on said wires and arranged in the path of, so as to be encountered by the shuttle, substantially as set forth. 6th. In a loom, in combination, a dynamo, two main conductors leading from said dynamo, a series of sets of solenoids, each set consisting of two, a series of branches from one of the main conductors, two of which branches lead to and are so connected with each set of solenoids as to place the individual solenoids of each set in multiple circuit, terminals mounted upon each of said branches, which terminals are located in proximity to and adapted to make contact with the other of the main conductors, a sheet of non-conducting material, provided with conducting spaces, interposed between said terminals and said second branch, cores adapted to be reciprocated by said solenoids, and heddle eyes connected with said cores, substantially as set forth. 7th. In a loom, in combination, a dynamo, two main conductors leading from said dynamo, a series of sets of solenoids, each set consisting of two, a series of branches leading from one of the main conductors, two of which lead to and are so connected with each set of solenoids as to place the individual solenoids of each set in multiple circuit, terminals mounted upon each of said branches, which terminals are located in proximity to and adapted to make contact with the other branch of the main conductor, a sheet of non-conducting material provided with conducting spaces interposed between said terminals and said second branch, cores adapted to be reciprocated by said solenoids, heddle eyes connected with said cores, and electrically-actuated mechanism for occasioning the movement of the sheet, substantially as set forth.

No. 54,242. Loom. (*Métier.*)

Elmer Gates, Chevy Chase, Maryland, U.S.A., 2nd December, 1896; 6 years. (Filed 12th November, 1896.)

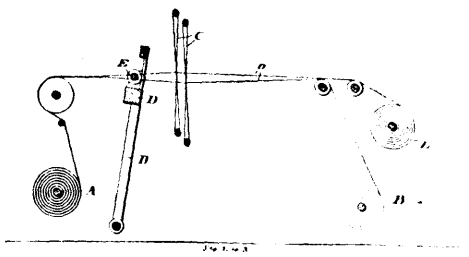
Claim,—1st. In a loom, in combination with a reed frame, a coil or solenoid, a magnetizable device, one of said devices being fixed and the other movable, the movable device being connected to said

reed frame, an electric circuit, and means for throwing said coil into and out of circuit, substantially as set forth. 2nd. In a loom,



in combination, a reed frame, a coil or solenoid, and a magnetizable device connected to said reed frame, an electric circuit, and a switch mounted in said circuit and arranged to be shifted by a moving part of the loom, substantially as set forth. 3rd. In a loom, in combination, a reed frame, a pair of coils or solenoids, a magnetizable device or core connected with the reed frame, an electric generator, conductors by which said coils may be connected in multiple with said generator, and means for alternately opening and closing the multiple circuits, substantially as set forth. 4th. In a loom, in combination, a reed frame, a pair of coils or solenoids, a magnetizable device or core connected with the reed frame, an electric generator, conductors by which said coils are connected in multiple with said generator, a switch by which one of said multiple circuits is maintained normally closed, said switch being arranged in such position as to be encountered by a moving part of the machine and moved to close the other of said circuits, substantially as set forth. 5th. In a loom, in combination, a reed frame, a pair of coils or solenoids, a magnetizable device or core connected to the reed frame, an electric generator, a first conductor leading from the generator and provided with two branches in circuit respectively with respective coils, a second conductor leading from the generator, a switch by which said second conductor is maintained normally in circuit with one of the branches of the first conductor, and means for throwing said switch to place said second conductor in circuit with the other branch of the first conductor, substantially as set forth. 6th. In a loom, in combination, a reed frame, a pair of coils or solenoids, a magnetizable device or core connected to said reed frame, an electric generator, a first conductor leading from the generator and provided with two branches one of which is in circuit with one coil beyond which it ends in a terminal h^3, the other of which branches is in circuit with the other coil beyond which it is provided with the terminals g^4 g^5, a second conductor leading from the generator and provided with the terminal G^2, a connecting conductor leading from the vicinity of the terminals g^4, h^3, which are at one end of the shuttle race, to the vicinity of the terminals G^2, g^5, which are at the other end of the shuttle race, and provided at its respective ends with terminals G^5 and G^4, a switch tongue connected to the terminal G^5 normally extending across the shuttle race and in contact with the terminal h^4, but adapted to be deflected into contact with the terminal g^4, and a switch tongue connected with the terminal G^2 normally extending across the shuttle race and in contact with the terminal G^4 but adapted to be deflected into contact with the terminal g^5, substantially as set forth. 7th. In a loom, in combination, a reed frame consisting of a plate having a series of fingers extending at right angles to its body, a coil or solenoid provided with a core or magnetizable device connected with said reed frame, and means for throwing said coil into or out of circuit, substantially as set forth.

No. 54,243. Loom. (*Métier.*)

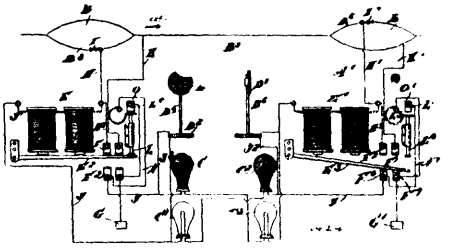


Elmer Gates, Chevy Chase, Maryland, U.S.A., 2nd December, 1896; 6 years. (Filed 12th November, 1896.)

Claim.—1st. In a loom, a shuttle formed as an armature, and means for throwing said shuttle consisting of a pair of coils or solenoids mounted at the respective ends of the shuttle race, an electric generator in circuit with said coils or solenoids, switches adapted to be opened to throw said coils out of circuit and placed in the path of said shuttle so as to be operated by it, substantially as set forth. 2nd. In a loom, a shuttle formed as an armature, and means for throwing said shuttle, consisting of a pair of coils situated in axial alignment at the respective ends of the shuttle race, an electric generator, circuit wires leading from said coils to the electric generator and provided with switches normally closed, one located in proximity to each coil, and each adapted when open to throw the adjacent coil out of circuit, said switches being arranged in the path of said shuttle so as to be operated by it, substantially as set forth. 3rd. In a loom, a shuttle formed as an armature, and means for throwing said shuttle, consisting of a pair of solenoids, an electric generator, said coils being connected in series, line wires leading from the electric generator to the respective solenoids, switches mounted in connection with the respective line wires and each adapted to make contact alternately with the adjacent coil to place said coil in circuit or with the wire connecting the two coils to cut said coil out of circuit, said switches being normally in position to maintain said coils in circuit and placed in the path of said shuttle so as to be operated by it, substantially as set forth. 4th. In a loom, a shuttle formed as an armature, and means for throwing said shuttle, consisting of a pair of solenoids located at opposite sides of the loom and connected in series, an electric generator, line wires leading from said generator to the vicinity of the respective solenoids, a switch adapted to connect the first line wire alternately with the coil of the first solenoid and the conductor connecting the two solenoids, and a switch adapted to connect the second line wire alternately with the coil of the second solenoid and the conductor connecting the two solenoids, substantially as set forth. 5th. In a loom, a shuttle formed as an armature, and means for throwing said shuttle, consisting of a pair of solenoids located at opposite sides of the loom and connected in series, an electric generator, line wires leading from said generator to the vicinity of the respective solenoids, a switch adapted to connect the first line wire alternately with the coil of the first solenoid and the conductor connecting the two solenoids, and a switch adapted to connect the second line wire alternately with the coil of the second solenoid and the conductor connecting the two solenoids, said switches being mounted in the path of so as to be thrown by a moving part of the loom, substantially as set forth. 6th. In a loom, a shuttle formed as an armature, and means for throwing said shuttle, consisting of a pair of solenoids located at opposite sides of the loom and connected in series, an electric generator, line wires leading from said generator to the vicinity of the respective solenoids, a switch adapted to connect the first line wire alternately with the coil of the first solenoid and the conductor connecting the two solenoids, and a switch adapted to connect the second line wire alternately with the coil of the second solenoid and the conductor connecting the two solenoids, said switches being mounted in the path of said shuttle so as to be operated by it, substantially as set forth. 7th. In a loom, in combination, a pair of solenoids mounted on hollow spools located at opposite sides of the loom, an electric generator, line wires leading from the generator to the vicinity of the respective solenoids, and each of which is in circuit with a conducting pivotal latch bar extending across the mouth or bore of the adjacent spool, the free or front ends of which latch bars normally rest in plates or sockets which constitute the terminals of the respective coils or solenoids, a pair of plates or sockets, independent of the plates or sockets first named, located respectively a short distance from said respective sockets first named, and adapted to be encountered by the latch bar when said bar is moved away from said plates or sockets first named, and a conductor by which the two solenoids are connected in series, said conductor being connected with both of the second-named plates or sockets, and a shuttle, formed as an armature, which, in its travel, passes beneath said latch bars and elevates them into contact respectively with the second named plates or sockets, substantially as set forth.

No. 54,244. Electric Signalling Apparatus.

(*Appareil de signal électrique.*)

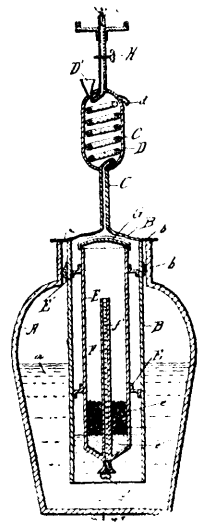


John Oehler, assignee of Adolph Garing, both of Carlstadt, New Jersey, U.S.A., 2nd December, 1896; 6 years. (Filed 28th October, 1896.)

Claim,—1st. An electric signalling apparatus, comprising an electromagnet and its armature at each end of the section, and an independent signal carrying circuit-wire leading from each electromagnet to the other end of the section, and connected with a ground contact-point adapted to be closed by the armature of the electromagnet at this other end of the section, the current passing through the said circuit-wire containing the signals, being controlled by a part carried by the car, substantially as shown and described. 2nd, An electric signalling apparatus, comprising an electromagnet and its armature at each end of the section, an independent circuit-wire leading from each electromagnet to the other end of the section and

connected with a ground contact-point adapted to be closed by the armature of the electromagnet at this other end of the section, a danger signal and a safety signal in each circuit wire, the one signal being located at one end of the section, and the other signal being located at the other end of the section, substantially as shown and described. 3rd. An electric signalling apparatus, comprising an electromagnet and its armature at each end of the section, an independent circuit wire leading from each electromagnet to the other end of the section, and connected with a ground contact point adapted to be closed by the armature of the electromagnet at this other end of the section, a danger signal and a safety signal in each circuit wire, the one signal being located at one end of the section and the other signal being located at the other end of the section, and means, substantially as described, for sending a momentary current to the electromagnet by a part carried by the car, as set forth. 4th. An electric signalling apparatus, comprising an electromagnet and its armature at each end of the section, an independent circuit wire leading from each electromagnet to the other end of the section and connected with a ground contact point adapted to be closed by the armature of the electromagnet at this other end of the section, a danger signal and a safety signal in each circuit wire, the one signal being located at one end of the section and the other signal being located at the other end of the section, means, substantially as described, for sending a momentary current to the electromagnet by a part carried by the car, and means, substantially as described, controlled by the armature of the said electromagnet for sending a live current through the said electromagnet and the respective circuit wire whenever the corresponding armature is attracted, as set forth. 5th. An electric signalling apparatus, comprising an electromagnet and its armature at each end of the section, an independent circuit wire leading from each electromagnet to the other end of the section and connected with a ground contact point adapted to be closed by the armature of the electromagnet at this other end of the section, a danger signal and a safety signal in each circuit wire, the one signal being located at one end of the section and the other signal being located at the other end of the section, and live wires connected with contact points adapted to be engaged by the armatures of the electromagnets when said armatures are attracted to send a live current of electricity through the respective circuit wire, to set a safety signal at one end of the section, and a danger signal at the other end of the section, substantially as shown and described. 6th. An electric signalling apparatus, comprising hangers at the end of the section and adapted to be momentarily engaged by the trolley wheel of the car entering the section, an electromagnet and its armature at each end of the section and connected with said hanger so that a momentary current can pass from the hanger to the electromagnet at the time the trolley wheel is in engagement with the said hanger, a circuit wire leading from each electromagnet to the other end of the section and connected with a ground contact point adapted to be closed by the armature of the electromagnet at this other end of the section, a danger signal and a safety signal in each circuit wire, the one signal being located at one end of the section and the other signal being located at the other end of the section, substantially as shown and described. 7th. An electric signalling apparatus, comprising hangers at the ends of the section and adapted to be momentarily engaged by the trolley wheel of the car entering the section, an electromagnet and its armature at each end of the section and connected with said hanger so that a momentary current can pass from the hanger to the electromagnet at the time the trolley wheel is in engagement with said hanger, a circuit wire leading from each electromagnet to the other end of the section and connected with a ground contact point adapted to be closed by the armature of the electromagnet at this other end of the section, a danger signal and a safety signal in each circuit wire, the one signal being located at one end of the section and the other signal being located at the other end of the section, and live wires connected with contact points adapted to be engaged by the armatures of the electromagnets when the said armatures are attracted, to send a live current of electricity to the respective current wire to set a safety signal at one end of the section and a danger signal at the other end of the section, substantially as shown and described. 8th. An electric signalling apparatus, comprising hangers at the ends of the section and adapted to be momentarily engaged by the trolley wheel of the car entering the section, an electromagnet and its armature at each end of the section and connected with said hanger, so that a momentary current can pass from the hanger to the electromagnet at the time the trolley wheel is in engagement with said hanger, a circuit wire leading from each electromagnet to the other end of the section and connected with a ground contact point adapted to be closed by the armature of the electromagnet at this other end of the section, a danger signal and a safety signal in each circuit wire, the one signal being located at one end of the section and the other signal being located at the other end of the section, and a grounding connection for each circuit wire and controlled from the armature of the other electromagnet to ground the circuit wire when this armature is retracted, substantially as shown and described. 9th. An electric signalling apparatus, comprising two hangers at the end of each section, one hanger being adapted to be engaged by the trolley wheel of the car entering the section, and the other by the trolley wheel of the car leaving this end of the section, two electromagnets and their armatures at each end of the section and connected by wires with said hangers at this end of the section, so that a momentary current can pass from the respective hanger to the corresponding electromagnet to energize the same, a circuit wire leading from the electromagnets at one end of the section to a ground contact controlled by the armature of one of the electromagnets at the other end of the section, a safety signal and a danger signal in each circuit wire, the one being at one end of the section and the second signal being located at the other end of the section, substantially as shown and described.

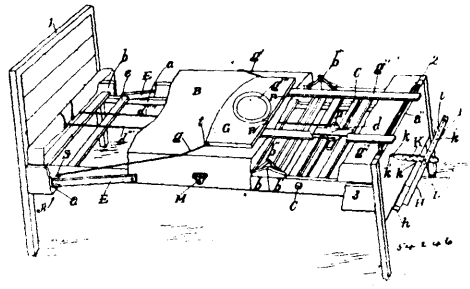
No. 54,245. Lamp for Dentists' Use.
(*Lampe pour dentistes.*)



Henri Edmond Casgrain, Quebec, Province of Quebec, Canada, 2nd December, 1896; 6 years. (Filed 15th May, 1896.)

Claim.—1st. In a lamp, the combination with an outer vessel for holding water, of a cylinder open at the bottom and provided with means for regulating the passage of gas from its upper part, said cylinder being supported in the said vessel, and a vessel for holding carbide of calcium supported in the said cylinder and provided with an upwardly projecting perforated pipe having a valve at its lower part for permitting the water to enter in pre-arranged quantity to act upon the carbide, substantially as set forth. 2nd. In a lamp, the combination, with a vessel in which acetylene gas is generated, of a gas pipe provided with a coil and projecting from the said vessel and a drip catcher supported under the gas pipe inside of the said vessel and operating to prevent any water formed in the gas pipe from falling on the carbide of calcium, substantially as set forth. 3rd. In a lamp, the combination with an outer vessel for holding water, of a cylinder provided with a cover and a gas pipe at its upper end and supported in the said outer vessel, a vessel for holding carbide of calcium supported above the open bottom of the said cylinder and provided with an upwardly projecting perforated pipe, and a regulating screw provided with a wedge-shape groove and controlling the passage of the water to the carbide, substantially as set forth.

No. 54,246. Bed for Invalids. (*Lit pour invalides.*)

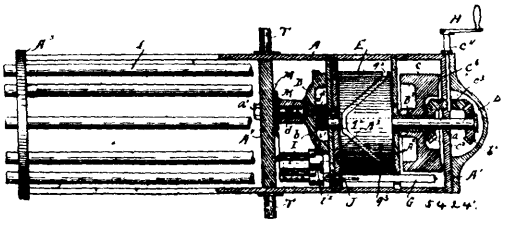


Jackson Beers Young, Pasadena, and David Joseph Kennelly Santa Monica, both in California, U.S.A., 2nd December, 1896; 6 years. (Filed 13th November, 1896.)

Claim.—1st. In a bed, the combination of the mattress frame pivoted at its middle to a support, and formed of a long main section and a short foot section hinged together to fold upward but not downward, a separate and independent seat-board arranged to rest on the mattress and extending from the middle thereof toward the foot section, and seat-board supporting means arranged to hold the seat-board in an approximately horizonal position when the mattress frame is tilted. 2nd. In a bedstead, the combination of the support, the mattress frame pivoted at its middle to the support

and formed of a long main section and a short foot section hinged together to fold upward but not downward, a separate and independent seat-board arranged to rest on the mattress, the suspending cords fastened to the main section of the mattress frame and to opposite ends of the seat-board, and the rigid seat-board supports fastened to the seat-board and arranged to rest upon the foot-board of the supporting frame, substantially as set forth. 3rd. The combination of the mattress frame formed of a long main section pivoted to a support and a short foot section hinged to the main section to fold upward but not downward, means for supporting the upper end of the main section, two laterally-reciprocating bolts connected with the foot section, supporting shoulders arranged to catch the reciprocating bolts when shot outward, and means for operating such bolts. 4th. In a bedstead, the combination of the supporting frame provided with an anti-friction roller on its foot-board, the mattress frame pivoted to the supporting frame, the independent seat-board arranged to rest upon the mattress and provided with the support arms arranged to rest upon the roller, and the cords fastened to the opposite ends of the seat-board and to the upper end of the mattress frame, substantially as set forth. 5th. In a bed, the combination of the supporting frame, a mattress frame pivoted to such supporting frame, an independent seat-board arranged to rest upon the mattress when in its horizontal position, means for supporting the seat-board in an approximately horizontal position when the mattress is tilted, the mattress supporting braces pivoted to the mattress and arranged to engage the supporting frame to hold the mattress in its tilted position, and the cross-bar connecting the lower ends of the braces together and arranged to extend across under the mattress frame to form a rest for the upper end of the mattress frame when in its horizontal position, substantially as set forth. 6th. A surgical bed, having in combination substantially as set forth, a pivoted mattress frame and an independent seat-board arranged to rest upon the mattress when in its horizontal position, suspending cords attached to the seat-board and to the upper end of the mattress frame, support bars fastened to the seat-board and arranged to rest upon the bedstead, preferably the foot-board of the bedstead, and a pulley support pivoted to the foot of the bedstead and adapted and arranged to carry the tension cord, 7th. In an invalid bed having a tilting mattress and an independent seat-board, with means for supporting the same, the combination of the seat-board provided with the leg rest eye, the leg rest provided with a hook to hook in such eye and arranged to rest upon the foot of the bedstead, the cord-support sustaining eyes fastened to the lower part of the foot-board, the cord-support brace pivoted to the upper part of the foot-board, the cord-support provided at itf upper end with a cord-sustaining pulley, and its lower end with the hooks arranged to hook into the cord-support eyes, and the pin for limiting the movement of the cord-support arranged in the brace to hold the cord-support, substantially as and for the purpose set forth. 8th. In an invalid bed, the seat-board provided with a hole and with the pivoted mug-clasps curved and channelled in their edges to receive the rim of the mug, substantially as set forth. 9th. The combination of the board provided with the hole, the stop fixed to the under side of the board and having one edge curved and channelled to receive the rim of the mug, and means for locking one of the pivoted latches in the closed position substantially as set forth. 10th. In an invalid bed, a bedstead, in combination with a mattress frame pivoted in the bedstead at or near the centre of its length, and a seat-board connected to the mattress frame by cords extending towards the head of the mattress frame and provided with one or more arms reaching to and resting upon the bedstead, preferably on the foot-board, to retain the seat in approximately a horizontal position when the mattress is tilted, and removable supports for the foot end of said mattress frame. 11th. A bedstead in combination with a bed bottom constructed in two sections of unequal length, removably pivoted in said bedstead at or near the centre of its length, the shorter section provided with rollers, and the longer section provided with braces to support it in an upright position when tilted, said sections hinged together to fold upward only, and so that the longer section may while continuing to rest in its pivotal bearings, be raised to an upright position, all in combination with a removable seat flexibly suspended to the head end of the mattress frame, and extending to and resting on the bedstead and arranged to hold the seat in practically a horizontal position. 12th. In an invalid bed, the combination of a bedstead, a mattress frame pivotally connected at its sides to the bedstead at or near the centre of its length, and constructed in two sections of unequal length, hinged together to fold upward only, a removable seat provided with flexible means of supporting it in, approximately, a horizontal position when the mattress is tilted, reciprocating bolts and means for extending and retracting them, mattress supporting braces, one pivoted on each side of the mattress frame, and connected together for simultaneous movement, and so as to be operated from either side of the bed. 13th. A removable seat provided with a hole and with clasps on its under side, one on each side of the opening, adapted to clasp and hold a chamber mug, said seat arranged to rest horizontally on the mattress when the mattress is in a horizontal position, in combination with a bedstead, and a bed bottom made in two sections of unequal length, hinged together to fold upward only, said bed bottom pivoted at or near its centre, in said bedstead, so as to permit the head end of said bed bottom to be raised to an upright position, and flexible means for supporting the seat in a horizontal position at the pivotal line of the mattress when the mattress is tilted. 14th. The combination of a common bedstead, a bed bottom made in sections of unequal length hinged together so as to fold upward only, said bed bottom pivoted to the side-rails of the bedstead, at or near the centre of its length, so as to permit the longer section to be raised to an upright position, reciprocating bars pivotally connected to each other and to the bed bottom, and means for extending or retracting both bars simultaneously, braces, one on each side of said bottom, and connected together so as to be operated together from either side of the bed. 15th. In an invalid bed, the combination of a bedstead, a bed bottom having two sections of unequal length hinged together so as to fold upward only, said bed bottom pivotally connected at its sides to the bedstead at or near the centre of its length, reciprocating bolts and means for extending or withdrawing them, a removable seat and means for holding it in, approximately, a horizontal position against and at the pivotal line of the mattress when the bed bottom is raised to an upright position. 16th. The combination of the pivoted sectional mattress frame and woven wire mattress thereon, the pivots of the sections of the frame being in the plane of the woven wire, a rod passed through a coil of the woven wire co-axial with said pivots, cords connecting the rod with one section of the frame and cords connecting the rod with the other section of the frame.

No. 54,247. Machine Gun. (*Mitrailleuse.*)

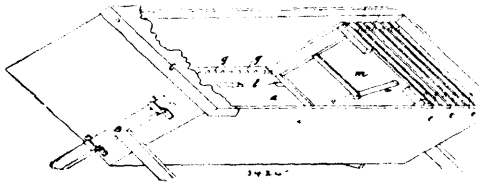


Lauretta Wilder, Cambridge, Massachusetts, U.S.A., (administratrix of the estate of Elihu Wilder,) 2nd December, 1896; 6 years. (Filed 26th September, 1896.)

Claim.—1st. In a machine-gun, the combination of a main or driving-shaft, a mutilated gear-wheel journalled eccentrically to said shaft, gearing connecting the shaft and wheel, rotary cartridge carriers having mutilated gears to mesh with said wheel, and gun-barrels in the arc of a circle concentric with the driving-shaft. 2nd. In a machine-gun, the combination with a series of barrels arranged circularly, plungers to charge the barrels, and means for advancing and retracting the plungers, of a series of rotary cartridge carriers each having a number of cartridge-holding recesses through which the plungers pass, and means for turning said carriers successively step by step to bring the cartridges in line with the barrels and the plungers. 3rd. In a machine-gun, the combination of a driving-shaft journalled in the gun-frame and carrying a bevel-gear at the outer end, a tubular shaft around the driving-shaft and carrying a bevel-gear in juxtarelation to that on the latter, an operating crank-shaft carrying a bevel-gear in mesh with the bevel-gears on the two shafts, charging and firing devices operatively connected with the tubular shaft, and cartridge-carriers operatively connected with the driving-shaft. 4th. In a machine-gun, the combination with a mutilated gear-wheel and means for continuously turning the same, the said wheel having smooth peripheral portions at the height of the teeth, of rotary cartridge-carriers arranged in the arc of a circle around the said wheel and each having a plurality of cog-sections for engagement with those of the wheel, and concave blank-spaces between the cog-sections for engagement of the high peripheral portions of the wheel for locking purposes, substantially as described. 5th. In a machine-gun, the combination with the gun-barrel, the rotary cartridge-receivers, and means for intermittently turning the latter, of closure for the cartridge-holding chambers of the receivers, and means for moving said closures into and out of closing position, substantially as and for the purpose described. 6th. In a machine-gun, the combination with the gun-barrels, the rotary cartridge-carriers, and means for intermittently turning the latter, of levers interposed between the carriers and the barrels, and devices connected with the carrier turning means, for vibrating said levers to close and open communication between the carriers and the barrels, substantially as and for the purpose described. 7th. In a machine-gun, the combination with the gun-barrels, the rotary cartridge-carriers having mutilated gears, and a mutilated gear-wheel arranged to engage the carrier-gears, of a set of levers interposed between the carriers and the barrels and having divergent arms at their inner ends, and cam-discs on the mutilated gear-wheel and co-acting with said levers to vibrate the same, for the purpose described. 8th. In a machine-gun, the combination of a plunger for charging the barrel, spring-tongues fastened at one end to said plunger and having catches at the opposite end adapted to take over the flange of the cartridge and bevelled on the outer side, said tongues having inner bevels extending oppositely to the catch-bevels, and fixed abutments located between the tongues and the plunger for said inner bevels to encounter when the plunger is retracted. 9th. In a machine-gun, the combination with a suitably formed feed-case or hopper, of means for feeding the cartridges therein, said means comprising a ratchet-bar, a pair of slides thereon, pawls on

the slide, one to engage the ratchet-teeth and the other to engage the cartridges, and a spring between the slides. 10th. In a machine-gun, the combination with a suitable support, and a gun-frame journalled therein, of an internally screw-threaded sleeve journalled in a bearing pivotally connected with the gun-frame, and a rod pivotally connected with the gun-support and having a screw-like section passing through the sleeve and movable into and out of engagement with the screw-threads thereof. 11th. In a machine-gun, the combination with a suitable support and gun-frame journalled therein, of a rod jointed to the support and longitudinally grooved, a bar fitting said groove and having a screw-cut outer edge, radius links connecting said bar with the rod, springs pressing the bar outward, and an internally-screw-threaded sleeve pivotally connected with the gun-frame and embracing the rod and bar. 12th. The combination with the gun-frame mounted to swing horizontally, and the crank-handle of the firing mechanism, of the lever on the gun-frame having an adjustable pivot and engaged at one end with a fixed support, and connections between the said lever and the firing-crank whereby the lever is moved during the firing and the gun thereby caused to swing laterally, substantially as described. 13th. The combination of the gun-frame mounted to swing horizontally, and the crank-handle of the firing mechanism, of a lever of the gun-frame and engaged at one end with a fixed support, and connections between said lever and the said firing-crank whereby the latter is moved during the firing and the gun thereby caused to swing laterally, substantially as described. 14th. In a machine-gun, the combination with a gun-frame mounted on a transit-plate and a crank for operating the firing apparatus of the gun, of a fixed arm extending radially of the transit-frame, a lever engaged with the outer end of said arm, a slide connected with said lever, and a train of gearing connected with the operating-crank and having associated with a cam in engagement with the said slide, for the purpose described.

No. 54,248. Beehive. (*Ruche.*)

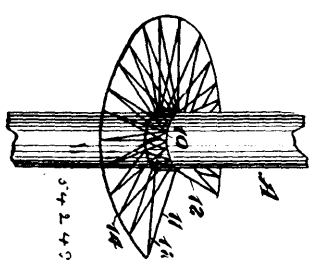


Karel De Kesel, Brussels, Belgium, 2nd December, 1896; 6 years. (Filed 16th November, 1896.)

Claim.—1st. A beehive provided with removable frames of rectangular section resting diagonally on suitable supports and capable of being constructed to accommodate any number of swarms of bees, in which hive the frames which are slidden diagonally downward are retained in place by separators which admit of the said frames being oscillated laterally upon the side resting on the lower rear wall of the hive, each of the frames being capable of being withdrawn from and returned to its place without disturbing the neighbouring frames. 2nd, In a beehive of rectangular section resting diagonally on supports, means for guiding the frames to their place and there maintaining them while permitting them to be laterally oscillated, consisting in making in the lower front wall of the hive a series of shallow grooves extending from the bottom of the hive to near the front of the said wall in securing near the bottom and near the top of the lower rear wall of the hive two series of separators arranged in such a manner as to correspond to the spaces between the said grooves, and in fixing on the sides of the frames screws, pins or other projecting pieces, as hereinbefore described and for the purpose specified. 3rd. A beehive with movable frames of rectangular section resting diagonally on suitable supports and divided in the direction of its height into superposed compartments into which the frames are slidden diagonally downward and retained in place by suitable separators, substantially as hereinbefore described.

No. 54,249. Stove-Pipe Shelf.

(*Tablette pour tuyaux de poêles.*)

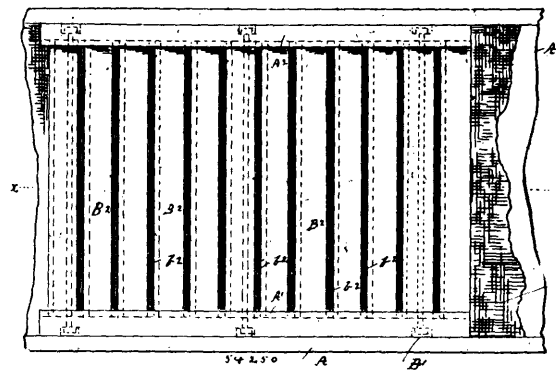


Abram Howard Smith, Vancouver, British Columbia, Canada, 2nd December, 1896; 6 years. (Filed 11th November, 1896.)

Claim.—A stove-pipe shelf, comprising a sheet metal band, radial arms and braces therefor projecting from the band, and a securing device of the band, consisting of a locking staple adapted to engage its limbs in different perforations of the band near one end of said band, a hook formation on the other end of the band adapted to hook upon the cross bar of the locking staple, and a clasp slidable over the hook and staple to keep them in a locked condition, substantially as described.

No. 54,250. Riffle Grating or Ore Concentrator.

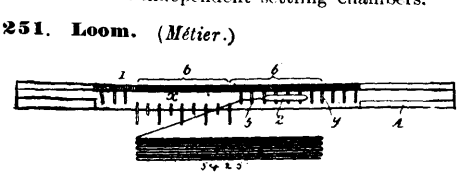
(*Grille réfloir pour minerais.*)



George H. Evans, Orville, California, U.S.A., 2nd December, 1896; 6 years. (Filed 8th October, 1895.)

Claim.—1st. As a new article of manufacture, a riffle grating constructed so as to provide a series of independent settling chambers when inserted within the sluice box or flume. 2nd. In a riffle grating, the combination with the side or frame pieces, of a series of riffle bars removably secured between the side or frame pieces, each riffle bar designed to form an independent settling chamber when the riffle grating is secured within the sluice box or flume. 3rd. In a riffle grating, the combination with the side or frame pieces, of the riffle bars secured therebetween a given distance apart, and of the angular extension projecting from each riffle bar to within a distance of its opposing bar so as to leave a water passageway therebetween, the riffle bars designed to form when the grating is secured within the sluice box or flume independent settling chambers, of which chambers the angular extension of the riffle bars serves as a cover. 4th. In a riffle grating, the combination with the side or frame pieces having a longitudinal channel cut in the inner face thereof, said channel being intersected by a series of vertical channels, of the riffle bars fitted within the vertical channels, the right angular extending head projecting from the riffle bars fitting within the longitudinal channel of the side or frame pieces, and of devices for locking the said riffle bars between the side or frame pieces. 5th. The combination with the side or frame pieces, of a series of angle riffle bars secured between the said side or frame pieces so as to leave a passageway between each riffle bar. 6th. The com' ination with a sluice box or flume, of the riffle grating secured with the sluice box or flume, and of a flexible blanket or matting interposed between the rifle grating and the floor of the sluice box or flume. 7th. The combination with a sluice box or flume, of the rifle grating located therein, the bars of which form a series of independent settling chambers, and of a flexible blanket or matting upon which the riffle grating rests interposed between the said grating and floor of the sluice box or flume. 8th. In a riffle grating, the combination with the side or frame pieces, of the riffle bars secured therebetween so as to form a series of independent settling chambers.

No. 54,251. Loom. (*Métier.*)

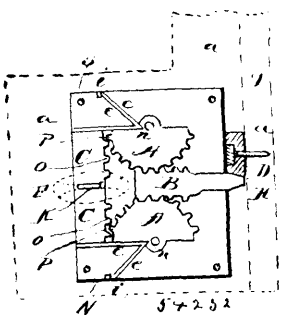


The Weaver Jacquard and Electric Shuttle Co., assignee of William Weaver, all of Norwalk, Connecticut, U.S.A., 2nd December, 1896; 6 years. (Filed 6th May, 1896.)

Claim.—1st. The combination in a loom, of the lathe, a movable race consisting of a series of parallel blades supported movably upon the lathe, and means for shifting the same, and a roll 30 bearing upon the fabric, and means for depressing the roll to carry the fabric out of the way of the blades, substantially as set forth. 2nd. In a loom, the combination with the lathe provided at each end with two shuttle boxes, of suitable shuttle actuating means, a shuttle-race consisting of blades or bars supported in sections, means for automatically, positively and successively moving the sections into and out of position between opposite shuttle boxes, and means for fully opening the warp to either or both shuttle-races, substantially in the manner hereinbefore set forth. 3rd. In a loom, the combi-

nation with the lathe provided at each end with two shuttle-boxes, of suitable shuttle actuating means, a shuttle-race between the shuttle-boxes, consisting of stationary sections and intermediate movable sections each of which is formed of blades or bars, and means for automatically and positively moving the movable sections, substantially as described. 4th. In a loom, the combination with the lathe provided at each end with two shuttle-boxes, suitable shuttle actuating means, a shuttle-race between the shuttle-boxes consisting of stationary sections and intermediate movable sections each of which is formed of blades or bars, means for connecting one or more of the stationary sections to the movable sections, and means for automatically and positively moving the movable sections, substantially as described. 5th. In a loom, the combination with the lathe provided at each end with two shuttle-boxes, suitable shuttle actuating means, a double shuttle-race between the shuttle-boxes, consisting of parallel blades or bars provided with two series of fingers in different planes, the fingers of the upper series constituting a support for the upper shuttle, and those of the lower series forming a support for the lower shuttle, substantially as described.

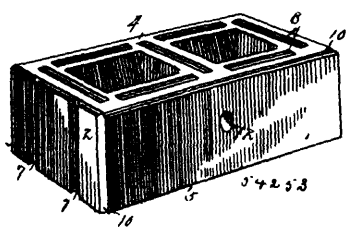
No. 54,252. Sash Lock and Lift. (*Arrête-croissée, etc*)



Alfred H. Parslow, Yampa, Florida, U.S.A., 3rd December, 1896; 6 years. (Filed 29th April, 1895.)

Claim.—The combination in a sash fastener of the operating knob, the sliding rack plate, the springs engaging said rack plate, the half wheels, the sliding belt provided with teeth with which said half wheels intermesh, and the fastening blocks secured to the step of the window frame, substantially as specified.

No. 54,253. Building Block. (*Blocs de construction.*)

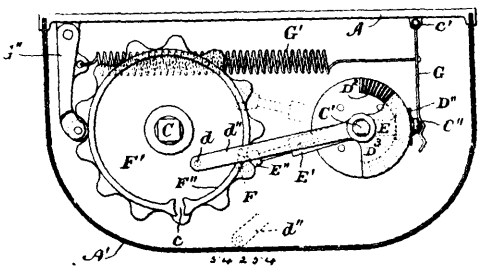


John Lee, Sr., Sterling, Ohio, U.S.A., 3rd December, 1896; 6 years. (Filed 15th June, 1896.)

Claim.—1st. A hollow building block, with a central vertically-disposed partition flush with the top of the block and extending part way through the same, and projections 6 supplemental of the said partition to the bottom of the block, substantially as described. 2nd. A hollow building block with a central vertically-disposed partition extending part way through the said block, a rectangularly disposed series of bonding grooves upon its top, and an endless bonding groove upon its bottom, substantially as described. 3rd. A hollow building block with a central vertically-disposed partition flush with the top of the block and extending part way through the same, projections 6 supplemental of the said partition to the bottom of the block, and walls whose inner faces converge toward the interior of the block. 4th. A hollow building block, with a central vertically-disposed partition flush with the top of the block and extending part way through the same, projections 6 supplemental of the said partition to the bottom of the block, and walls with face-form of rough-hewn or spalled stone. 5th. A hollow building block, with central vertically-disposed partition, and wedging recesses 12 and 13 in the face of the block, said recesses extending into the body of the said partition. 6th. A hollow building block, with central vertically-disposed partition flush with the top of the block and extending part way through the same, projections 6 supplemental of the said partition to the bottom of the block, and a rabbet or rectangular recess 14 to receive a flooring joist, substantially as described. 7th. A hollow building block, with a central vertically-disposed partition flush with the top of the block and extending part way through the same, projections 6 supplemental of the said partition, walls whose inner faces converge toward the interior of the block, and open vertical recesses or channels in the ends of the said block, such channels having a rectangular section and being for the purpose of containing window or door-framing, or nailing strips therefor, substantially as has been described.

No. 54,254. Electric Motor Control System.

(*Système de controlleur électrique pour moteurs.*)



Elmer A. Sperry, Cleveland, Ohio, U.S.A., 3rd December, 1896; 6 years. (Filed 25th August, 1896.)

Claim.—1st. In an electric controller, a moving element, a motor or motors connected thereto, a reversing switch, power and brake circuits for the motor or motors, the moving element organized to change the connections of the motor or motors from one to another of the circuits, mechanism for operating the reversing switch at the time of making the change, in combination with means for changing the relatively reversed condition of the motor or motors when connected with one or another of the circuits. 2nd. In an electric controller, a moving element, a motor or motors connected thereto, a reversing switch, power and brake circuits for the motor or motors, the moving elements organized to change the connections of the motor or motors from one to another of the circuits, mechanism for operating the reversing switch at the time of making the change, means for changing the relatively reversed condition of the motor or motors when connected to one or another of the exterior circuits, in combination with a mechanical coupling between the means and the operating handle. 3rd. In an electric controller, a moving element, a motor or motors connected thereto, a reversing switch, power and brake circuits for the motor or motors, the moving element organized to change the connections of the motor or motors from one to another of the circuits, mechanism for operating the reversing switch at the time of making the change, in combination with means for changing the relatively reversed condition of the motor or motors when connected to one or another of the circuits, and a locking device for the said means. 4th. In an electric controller, a moving element, a motor or motors connected thereto, a reversing switch, power and brake circuits for the motor or motors, the moving element organized to change the connections of the motor or motors from one to another of the circuits, mechanism for operating the reversing switch at the time of making such change, in combination with means for changing the relatively reversed condition of the motor or motors when connected with one or another of the circuits, and a locking device for the means, operative when the moving element of the controller is in certain only of its positions. 5th. In an electric controller, a moving element, a motor or motors connected thereto, a reversing switch, power and brake circuits for the motor or motors, the moving element organized to change the connections of the motor or motors from one to another of the circuits, mechanism for operating the reversing switch at the time of making the change, in combination with means for changing the relatively reversed condition of the motor or motors when connected to one or another of the circuits, and a locking device for the means, operative when the main moving element of the controller is so moved that one of the circuits is coupled with the motor or motors. 6th. In an electric controller, a main moving element, a motor or motors connected thereto, a reversing switch, power and brake circuits for the motor or motors, the main moving element organized to change the connections of the motor or motors from one to another of the circuits, mechanism for operating the reversing switch at the time of making the change, in combination with means for changing the relatively reversed condition of the motor or motors when connected to one or another of the circuits, and a locking device for the main moving element of the controller operated by the said means. 7th. In an electric controller, a moving element, a motor or motors connected thereto, a reversing switch, power and brake circuits for the motor or motors, the moving element organized to change the connections of the motor or motors from one to another of the outside circuits, a removable operating handle for operating the reversing switch at the time of making the change, means for changing the relatively reversed condition of the motor or motors when connected one or another of the circuits, in combination with a device for retaining the handle of the reversing switch when in certain of its positions. 8th. In an electric controller, a moving element, a motor or motors connected thereto, a reversing switch, power and brake circuits for the motor or motors, the moving element organized to change the connections of the motor or motors from one to another of the circuits, mechanism for operating the reversing switch at the time of making the change, in combination with means for changing the relatively reversed con-

dition of the motor or motors when connected to one or another of the circuits, and a retaining device for the said means. 9th. In a controller for an electric machine or machines, power and brake circuits adapted to be connected to the electric machine or machines, a sectional resistance leading to the controller, in combination with means for rendering a portion of the sections inoperative whenever the machine or machines are coupled to one of the circuits. 10th. In an electric controller, a moving element, a motor or motors connected thereto, a reversing switch, power and brake circuits for the motor or motors, the moving element organized to change the connections of the motor or motors from one to another of the circuits, mechanism for operating the reversing switch at the time of making the change, in combination with means for changing the relative reversed condition of the motor or motors when connected to one or another of the circuits, and a retaining device for the said means, a sectional resistance, and means for rendering all the sections operative when coupled with one of the circuits. 11th. In a controller for an electric machine or machines, three or more sets of co-operating contacts mounted for relative movement and for successive engagement, a sectional resistance leading to such contacts, in combination with means for rendering a portion of said sections inoperative whenever one of said sets is so engaged. 12th. In a controller for an electric machine or machines, three or more sets of co-operating contacts mounted for relative movement and for successive engagement, a sectional resistance leading to such contacts, in combination with means for rendering a portion of said sections inoperative whenever one of said sets is so engaged, and means for rendering all of such sections operative when another of said sets is engaged. 13th. In a controller for an electric machine or machines, a moving element, moving and stationary co-operating contacts, electrical resistance in sections coupled to the stationary contacts, in combination with a separate resistance section or sections mounted upon the said moving element of the controller and circuit connections therefrom to the contacts. 14th. In a controller for an electric machine or machines, exterior circuit connections leading to said controller, a sectional resistance also leading to the controller for connection with the said electric machine or machines, means whereby said resistance is coupled to such machine or machines when certain combinations of exterior circuits exist, in combination with a separate resistance carried by the controller cylinder, and means whereby such separate resistance is connected to such machine or machines when other combinations of exterior circuits exist. 15th. In an electric controller, a plurality of electric machines, power and brake circuits adapted to be connected to the electric machines, a sectional resistance leading to the controller, in combination with means for rendering a portion of the sections inoperative whenever the machines are coupled to the power side of the system. 16th. In an electric controller, a plurality of electric machines, power and brake circuits adapted to be connected with the electric machines, means connected with the controller whereby each of the circuits is connected to one or more of the electric machines in successive steps, a sectional resistance leading to the controller, contacts within the controller for the resistance sections, in combination with a dissimilar number of co-operating steps for the resistance contacts when coupled to the power and brake circuits. 17th. In an electric controller, a plurality of electric machines connected therewith, power and brake circuits co-operating with separate sets of controller contacts, in combination with a series-parallel arrangement of the contacts or sets of contacts engaging with one of the circuits. 18th. In an electric controller, a plurality of electric machines connected therewith, power and brake circuits co-operating with separate sets of controller contacts, in combination with a series-parallel arrangement of the contacts or sets of contacts of one of the circuits, and a continuous circuit relation of the contacts of the other. 19th. In an electric controller, a plurality of electric machines connected therewith, power and brake circuits co operating with separate sets of controller contacts, a series-parallel arrangement of the contacts or sets of contacts of one of the circuits, a sectional resistance leading to the controller, in combination with means for rendering a portion of the sections inoperative whenever the series-parallel set of contacts is coupled to the machines. 20th. In an electric controller, two sets of contacts, a plurality of electric machines connected therewith, an equalizing connection as g leading from the machines, in combination with means whereby the said equalizing circuit is normally open-circuited, while one of the said sets of contacts is coupled with the machines. 21st. In an electric controller, a plurality of sets of contacts, one of said sets being in series-parallel arrangement, a plurality of electric machines connected therewith, an equalizing connection as g leading from the machines, in combination with means whereby the said equalizing circuit is normally open-circuited, while the said series-parallel set of contacts is coupled with the machines. 22nd. In an electric controller, the combination of power and brake circuits extending therefrom, resistance included in the circuits, and a second resistance carried by the controller cylinder and inserted in the circuit at a predetermined time. 23rd. In an electric controller, the combination of contacts and brushes for establishing various circuit relations of a dynamo electric machine used for propelling and braking a vehicle, with a resistance carried by the actuating member of the controller and inserted in the brake side of the system. 24th. In an electric controller, the combination of contacts and brushes for establishing various circuit relations of a dynamo electric machine, resistance carried by the cylinder of the controller, connections between the contact plates of the cylinder and the resistance, and brushes for inserting the resistance in the brake circuit when desired. 25th. In a controller for regulating a dynamo electric machine, the combination of contacts for regulating the supply of energy to the machines when propelling a car, other contacts for regulating the supply of energy of the brake magnets, and a resistance carried by the cylinder adapted to be included in one side of the system only. 26th. In a controller for regulating dynamo electric machines, the combination of a row of brushes, contacts on either side thereof, one set for controlling the machines when propelling a car, the second set for controlling the machines when supplying energy to the electric brakes, a resistance carried by the actuating member of the controller and inserted in the brake circuit at predetermined intervals. 27th. In a controller, the combination of a main or commutating switch, a reversing switch, handles for operating the same, and means for operating the reversing switch independent of the reversing switch handle. 28th. In a controller, the combination of main and reversing switch cylinders, handles for operating them, and means actuated by a rotary movement of the main cylinder for establishing a new circuit relation of the motors at the reversing switch contacts. 29th. In a controller, the combination of a main or commutating switch, a reversing switch, handles for operating the same, and means actuated by the main cylinder for operating the reversing switch independent of the operating handle of the said switch, 30th. In a controller, the combination of a main cylinder, a reversing switch cylinder, handles for each of the cylinders, and means for rotating the reversing switch cylinder independent of its switch handle at an interval when the main circuit is broken. 31st. In a controller for regulating dynamo electric machines, used for propelling and braking a vehicle, the combination of a main cylinder, a reversing switch cylinder operated by a suitable handle, means controlled by the main cylinder for rotating the reversing switch cylinder independent of the switch handle at the interval between the braking of the power circuit and the establishment of the brake circuit. 32nd. In a reversing switch for a controller, the combination of a handle for operating the same, the handle regulating the direction in which the car will travel, and gearing for actuating the switch independent of the handle. 33rd. In a reversing switch for a controller, the combination of a handle for operating the same, the handle regulating the direction in which the car will travel, gearing for operating the switch independent of the handle, and means controlled by the main cylinder for operating the gearing. 34th. In a reversing switch for a controller, the combination of a handle and segmental gear carried by the controller cover, a cylinder provided with a circular rack, a bearing for the cylinder shaft made in the hub of the gear, and an actuating member sleeved on the cylinder shaft and carrying a pinion gear to engage with the rack and segmental gear. 35th. In an electric controller, the combination of main and reversing switch cylinders, a handle for operating the reversing switch, a segmental gear and arm operated by the handle, a rack mounted on the switch cylinder, and a pinion gear engaging with the segmental gear and the rack for operating the cylinder. 36th. In a reversing switch for a controller, the combination of a segmental gear and arm operated by a switch handle, a rack on the switch cylinder, a pinion gear engaging with the segmental gear and rack, an arm pivoted on the shaft of the cylinder for operating the pinion, and means for operating the arm carried by the main cylinder. 37th. In an electric controller, the combination of a main cylinder adapted to reciprocate to and fro from the off position, a reversing switch, an operating handle outside of the controller case, and an operating device inside of the case for a further actuation of the reversing switch. 38th. In an electric controller, the combination of main and reversing switch cylinders, a handle for the reversing switch for establishing connections which regulate the direction in which the car will travel, and a lever operated by the main cylinder for again reversing the relation of the field and armature of the motor. 39th. In an electric controller, the combination of main and reversing switch cylinders, rows of contacts mounted on the reversing switch, a handle for adjusting the reversing switch, and means controlled by the main cylinder for oscillating two rows of contacts into and out of engagement with the stationary brushes. 40th. In a controller, the combination of a main cylinder actuated by a handle, a reversing switch cylinder controlled by a handle, a segmental gear having an arm extending therefrom and formed integral with the main shaft of the switch, and a device on the end of the arm for preventing the movement of the switch except in a predetermined position of the main cylinder. 41st. In an electric controller, the combination of main and reversing switch cylinders, a plurality of contacts on the reversing switch cylinder, brushes engaging therewith, means for determining with which contacts the brushes shall engage, and means independent of the reversing switch handle for shifting the connection of the brushes from one to another of the sets of contacts on the cylinder. 42nd. In an electric controller, the combination of main and reversing switch cylinders, separate means for insuring a step-by-step movement of each of the cylinders, and a common spring for the said means. 43rd. In an electric controller, the combination of a plurality of switch cylinders, a pawl for each cylinder to regulate its step-by-step movement, and a common spring for the pawls permitting their independent or simultaneous operation. 44th. In an electric controller, the combination of contacts for regulating the supply of energy to the motors, contacts for regulating the supply of energy to the brake magnets, certain of the latter mentioned contacts

weakening one of the motors. 45th. In an electric controller, the combination of contacts for regulating the supply of energy of the motors, contacts for regulating the supply of energy to the brake magnets, certain of the contacts on the brake side affecting only one motor, and contacts on the power side affect both motors. 46th. In an electric controller, the combination of contacts for regulating the supply of energy to the motors and the brake magnets, contacts for weakening the field of one of the motors when they are used for braking the car, and other contacts for weakening the field of both motors when it is desirable to increase the speed of the car.

No. 54,255. Art of Making Enamelled Ware.

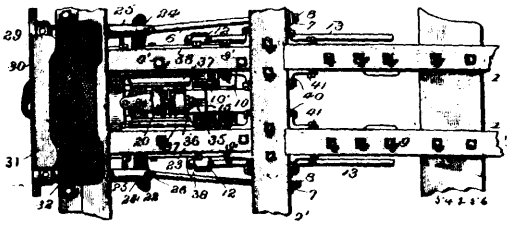
(*Art d'émailler.*)

Alexander Niedringhaus, St. Louis, Missouri, U.S.A., 3rd December, 1896; 6 years. (Filed 5th October, 1896.)

Claim.—1st. The herein described process of preparing steel for enamelling, which consists in placing the steel and saltpetre in the annealing pot and subjecting the same to the ordinary annealing heat, substantially as described. 2nd. The herein described process of prepairing steel for enamelling, which consists in placing the steel, a chloride, and saltpetre in the annealing pot and subjecting the same to the ordinary annealing heat, substantially as described. 3rd. The herein described process of making enamelled ware, which consists in placing the metal base in an annealing pot, placing saltpetre in said pot with the base, applying the annealing heat, and then applying the enamel to the base and fusing the same thereon, substantially as described. 4th. The herein described process of making enamelled ware, which consists in placing the metal base in an annealing pot, placing a chloride and saltpetre in said pot with the base in about the proportions set forth, applying the annealing heat, and then enamelling the base, substantially as described.

No. 54,256. Draft and Buffer Device.

(*Appareil de tirage et tampon.*)



Perry Brown, Wilmington, Delaware, U.S.A., 3rd December, 1896; 6 years. (Filed 28th October, 1896.)

Claim.—1st. The combination with a draw-bar, of a bracket rigidly connected thereto and moving in the same direction, a follower, a spring between said bracket and follower constantly acting on said bracket, a buffing-plate and connections between said buffing-plate and the follower, substantially as described. 2nd. The combination with a draw-bar, of a bracket connected thereto and moving in the same direction, a follower, a spring between said bracket and follower, an equalizing lever connected to said follower and a buffer-plate connected with the equalizer, substantially as described. 3rd. The combination with a draw-bar, of a bracket rigidly connected therewith, a follower, a spring between said bracket and follower, an equalizing lever connected to said follower, rods connected with the opposite ends of said equalizing lever, and a buffer-plate having its opposite ends connected to said rods, substantially as described. 4th. The combination with a draw-bar, of a bracket 15 rigidly secured thereto and having its upper end cupped, a follower 28 having ears 21, an equalizing lever 22 set in said ears, a buffer-plate 30, rods 25 connected to the buffer-plate and equalizing bar, and a spring 19 set between the follower and bracket, substantially as described. 5th. In combination with a draw-bar, a buffing mechanism provided with a follower, a buffing-spring acting against said follower, and a bracket rigidly mounted upon said draw-bar, and continuously bearing against the buffing-spring, whereby the pressure on the buffing-plate remains unaffected by the position of the draw-bar, substantially as described. 6th. The combination in a draw-bar and a buffing-mechanism, of a follower 20 having ears 21, a curved projection 33 between said ears, an equalizing lever recessed to receive said projection, and a buffing-plate yieldingly connected to the opposite ends of said equalizing lever, substantially as described. 7th. The combination with the slotted timbers of a car, of slotted check-plates let into said timbers, a follower acting against a spring set between said check-plates, and a follower having a bearing for said spring and arms integral with said follower and projecting through said check-plates and timbers substantially in line with the bearing for the spring, as set forth. 8th. The combination with a draw-bar 14 and breast-timbers 23, of guides 37, the bracket 15 and follower 20 working in said guides, a spring 19 set between said bracket and follower, guide-straps 38, an equalizing lever 22 attached to the follower 20 and working between the guides 37 and straps 38, and a buffer-plate connected with the follower, substantially as described. 9th. In a buffing mechanism, the combination with the draw-bar 14, the bracket 15 rigidly mounted thereon and always moving therewith, the spring 19 set in front of said bracket and continually acting thereon, the follower 20 set in front of the spring, and the equalizing lever 22 attached directly to said follower, of rods 25 connected to said equalizer, the buffing-plate 3 having projections forming sockets for said rods, and guides 39 set in the sill to form supports for the rods and having recesses to receive the projections on the buffing-plate, substantially as described and shown.

No. 54,257. Electric Accumulator.

(*Accumulateur électrique.*)

Fig. 1.

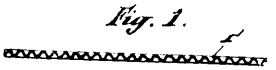
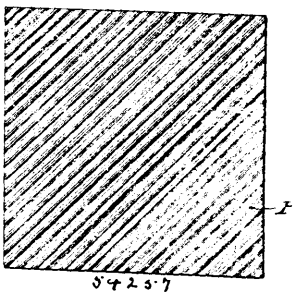


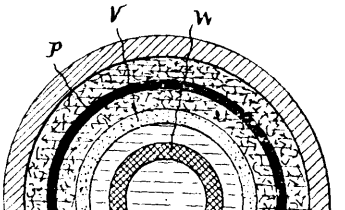
Fig. 2



Jules Julien, Brussels, Belgium, 3rd December, 1896; 6 years. (Filed 10th November, 1896.)

Claim.—1st. In a Planté accumulator, a positive electrode formed by the horizontal superposition of an indefinite series of finely grooved or corrugated rolled sheets of lead or lead alloys having any suitable contours, with or without a fine coating of active material applied to assist the formation, and electrically connected together and with the terminal by bands of lead enclosing the block of superposed plates, substantially as set forth. 2nd. In a Planté accumulator, a negative electrode consisting of cylinders or moulded prisms of litharge or other suitable plombiferous compound perforated through their axes and strung on conducting rods so as to form unalterable electrodes for accumulators of great power, substantially as set forth. 3rd. In a Planté accumulator, the assembling of the electrodes in a single body by providing the positive electrode with a series of vertical channels or passages, and inserting in the latter a corresponding number of pencils of negative material connected in a group, with the object of reducing to a minimum the space occupied by the battery and the quantity of electrolyte in which it is immersed, substantially as set forth.

No. 54,258. Storage Battery. (*Batterie secondaire.*)



Jules Julien, Brussels, Belgium, 3rd December, 1896; 6 years. (Filed 10th November, 1896.)

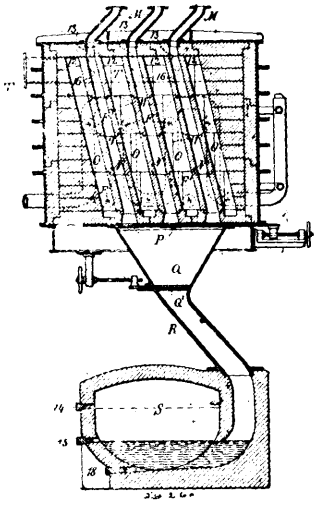
Claim.—1st. A secondary battery characterized by the arrangement of its electrodes of the two names, whether they are of the same nature or of a different nature, in such a manner that those of the same name dip into a different liquid from those of the opposite name so as to thus form a secondary battery with two liquids for the purpose of augmenting the work at the negative pole and consequently the electromotive force of the element. 2nd. For the secondary battery set forth in the first claim a constructional form by way of example, characterized by the constitution of the negative pole as a strip of lead surrounded by peroxide of lead dipping into dilute sulphuric acid, and of the negative pole as a strip of zinc dipping into an aqueous solution of caustic soda, the two liquids being separated by a porous diaphragm or vessel.

No. 54,259. Metal Electrode. (*Electrode métallique.*)

Jules Julien, Brussels, Belgium, 3rd December, 1896; 6 years. (Filed 10th November, 1896.)

Claim.—1st. The process of construction of electrodes of soluble metal for accumulators by means of galvanoplastic deposits upon any suitable supports characterized by the mercurial amalgamation of the supports before the electrolization for the deposition for the purpose of rendering the said supports resistant to the action of the accumulator bath in open circuit. 2nd. In the construction of the electrodes described, the modification characterized by the galvanoplastic deposition upon the support of a layer of the metal of which it is composed previously to the amalgamation and applying thereto after amalgamation of the galvanoplastic layer the deposition of soluble metal. 3rd. The application of the processes set forth to the electrolization of a plate of copper as a support of the electrode in order to obtain the galvanoplastic and adherent deposit of zinc, cadmium and the like upon copper and the use of this metal in electrodes in view of its various advantages.

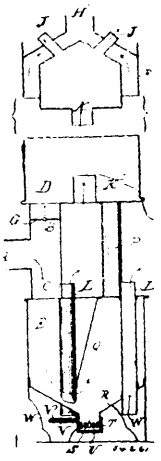
No. 54,260. Deoxidizing Furnace.
(*Fournaise désoxydante.*)



Henry Anwyl Jones, Brooklyn, New York, U.S.A., 3rd December, 1896; 6 years. (Filed 16th November, 1896.)

Claim.—1st. In a deoxidizing furnace a series of retorts each formed of sections of earthen-ware material set together and having projecting flanges that meet at their edges to form intervening heating flues, in combination with brick-work surrounding and supporting such earthen-ware sections, substantially as set forth. 2nd. In a deoxidizing furnace a series of retorts each formed of sections of earthen-ware material set together and having projecting flanges that meet at their edges to form intervening heating flues, in combination with brick-work surrounding and supporting such earthen-ware sections, burners passing through openings in the side walls of the furnace and into the heating flues, each burner having a supply pipe and cock for liquid or gaseous fluid and a supply pipe for air, substantially as set forth. 3rd. In a deoxidizing furnace a series of retorts each formed of sections of earthen-ware material set together and having projecting flanges that meet at their edges to form intervening heating flues, in combination with brick-work surrounding and supporting such earthen-ware sections, air heating pipes within the brick-work and between the retorts and burners for supplying liquid or gaseous fluid and connections from the air heating pipes for supplying the air to the burners, substantially as set forth. 4th. The combination in a deoxidizing furnace, of a range of substantially vertical retorts having a zigzag conformation and intervening heating flues, burners for supplying the material consumed, a hopper for the granular ore and carbon, a rotary mixer, tubes leading from the same to the respective retorts and slides for regulating the admission of the ore and carbon to the mixer, substantially as set forth. 5th. The combination in a deoxidizing furnace, of a range of substantially vertical retorts having a zigzag conformation and intervening heating flues, burners for supplying the material consumed, a hopper for the granular ore and carbon, a rotary mixer, tubes leading from the same to the respective retorts and slides for regulating the admission of the ore and carbon to the mixer, a range of secondary retorts and connections thereto from the first retorts and slides for regulating the passage of the granular material from one set of retorts to the other, substantially as set forth. 6th. The combination in a deoxidizing furnace, of a range of substantially vertical retorts having a zigzag conformation and intervening heating flues, burners for supplying the material consumed, a hopper for the granular ore and carbon, a rotary mixer, tubes leading from the same to the respective retorts and slides for regulating the admission of the ore and carbon to the mixer, a range of secondary retorts and connections thereto from the first retorts and slides for regulating the passage of the granular material from one set of retorts to the other, there being openings for the discharge of the gases from the respective retorts, and openings from the flues for the discharge of the products of combustion, substantially as set forth. 7th. The combination in a deoxidizing furnace, of a range of substantially vertical retorts having a zigzag conformation and intervening heating flues, burners for supplying the material consumed, a hopper for the granular ore and carbon, a rotary mixer, tubes leading from the same to the respective retorts and slides for regulating the admission of the ore and carbon to the mixer, a range of secondary retorts and connections thereto from the first retorts, and slides for regulating the passage of the granular material from one set of retorts to the other, a furnace for melting the ore and tubular connections and slides from the retorts to such furnace for allowing the ore to pass directly into the melting furnace, substantially as set forth.

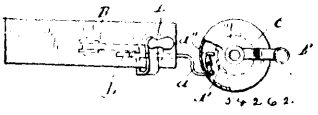
No. 54,261. Heating Drum. (*Poêle sourd.*)



Arthur W. Brock, Alma, Michigan, U.S.A., 3rd December, 1896; 6 years. (Filed 16th November, 1896.)

Claim.—1st. In a heating and ventilating drum, the combination of an upper direct smoke chamber D, and a lower indirect smoke chamber E, having a conical bottom, the main inlet flue A having direct and indirect branches B and C, respectively, leading into said chambers, the regulating damper G, in the direct branch, and the conical bottom R containing a ventilating register. 2nd. In a heating and ventilating drum, the combination of an upper direct smoke chamber D, and a lower indirect smoke chamber E, the main inlet flue A having direct and indirect branches B and C, respectively, leading into said chambers, the regulating damper G in the direct branch, the air heating chamber in the upper smoke chamber provided with air inlet and outlet flues, and the air heating flues passing through the lower chamber and extending below and above the same. 3rd. In a heating and ventilating drum, the combination of an upper direct smoke chamber D formed with a removable hood F, and with a heating chamber I enclosed therein, the lower indirect smoke chamber E provided with the partition Q, the smoke flue A having direct and indirect branches B, C, the regulating damper G and its adjusting devices, the indirect smoke flues P, and the removable cap T forming a ventilating register.

No. 54,262. Motor Controller. (*Moteur à contrôle.*)

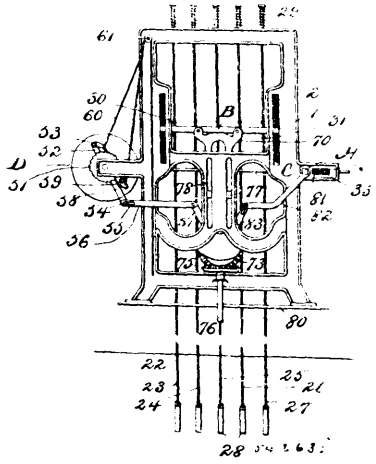


The General Electric Company, Schenectady, New York, U.S.A., assignee of Elmer Ambrose Sperry, Cleveland, Ohio, U.S.A., 3rd December, 1896; 6 years. (Filed 14th February, 1896.)

Claim.—1st. The combination, with an electric motor, of two current intensity controlling switches therefor, a separate operating handle for each switch, and interlocking devices between the handles. 2nd. The combination, with two or more controller operating handles, of interlocking devices consisting in a notched portion connected with each handle, a moving connecting link co-operating with such notches in such a manner that when the link is inserted in one of the notches the movement of the other handle prevents it from being forced out of engagement with such notch. 3rd. In combination with an electric machine or machines, an electric circuit, an operating handle, means connected with such operating handle for varying the electric conductivity of such circuit, another and separate operating handle, means also connected with it for varying the conductivity of an electric circuit, each handle having a zone or position known as its critical position, the

arrangement being such that by manipulation of either handle to or from such critical position the conductivity is gradually increased or decreased, in combination with interlocking devices between the handles whereby either is locked when the other is out of said critical position. 4th. The combination, with two or more controller operating handles, of interlocking devices consisting in an abutment and a latch connected with one handle, a latch for locking the other handle, and a connecting portion for dissimultaneous operation of the latches. 5th. The combination, with two or more controller operating handles, of interlocking devices consisting in an abutment and a latch connected with one handle, a latch for locking the other handle, and a connector for the latches whereby one is thrown out of engagement while the other is being thrown into engagement. 6th. In combination, with two or more controller operating handles having certain critical positions, of interlocking devices consisting in an abutment and a latch connected with one handle, and a device connected with each handle for preventing the unlocking of the other when the said handle stands in any other than the said critical position. 7th. The combination, with two or more controller operating handles having certain critical positions, of interlocking devices connecting them, a latch for locking each handle, connection between the latches for preventing unlocking of the other when the said handle stands in any other than the said critical position, and an additional device connected with one of the handles for actuating the lock while said handle is being moved into said critical position. 8th. A motor controller handle of a car having a certain critical position, a separate brake handle, and means for locking the brake handle when the controller handle is in other than its said critical position. 9th. A brake handle of a car having a certain critical position, a separate motor controller handle, and means for locking the latter when the brake handle is in other than its said critical position.

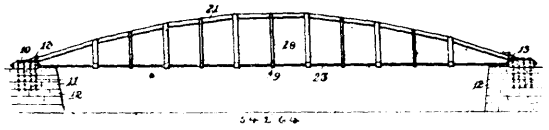
No. 54,263. Loom Jacquard Mechanism.
(*Mécanisme Jacquard pour métiers.*)



The Weaver Jacquard and Electric Shuttle Company, assignee of William Weaver, all of Norwalk, Connecticut, U.S.A., 3rd December, 1896; 6 years. (Filed 9th October, 1895.)

Claim.—1st. In Jacquard mechanism for looms, the combination of suitable warp-supporting devices, a lifting and depressing board and means for moving the lifting and depressing board above and below its normal position respectively, substantially as described. 2nd. In Jacquard mechanism for looms, the combination of the shifting needles, pattern devices provided with recesses adapted to be engaged by the shifting needles, means for positively withdrawing the shifting needles from engagement with the recesses of the pattern devices and adjusting devices within said recesses, whereby the extent of the engagement of the recesses by the shifting needles is regulated, substantially as described. 3rd. In Jacquard mechanism for looms, the combination of the warp-supporting devices, a suitable lifting and depressing device adapted to move above and below its normal position, means for operating the lifting and depressing device and pattern controlled mechanism for moving the warp-supporting devices into engagement with the lifting and depressing device, substantially as described. 4th. In Jacquard mechanism for looms, the combination of suitable lifting and depressing mechanism, warp-supporting devices each provided with engaging portions arranged above and below the lifting and depressing mechanism, and means for shifting the warp-supporting devices into engagement with the lifting and depressing mechanism, substantially as described. 5th. In Jacquard mechanism for looms, the combination of the warp-supporting devices, suitable lifting and depressing mechanism, means for alternately elevating and lowering the same from its normal position, and pattern controlled devices adapted to shift the warp-supporting devices into engagement with the lifting and depressing mechanism previous to the elevation or depression thereof, substantially as described. 6th. A pattern device for forming two separate and distinct patterns, said pattern device being provided with recesses arranged in transverse series, each alternate series of recesses being formed in accordance with one pattern, while the intermediate series are formed in accordance with the second pattern, and adjusting devices within the recesses, substantially as described. 7th. A pattern device provided with recesses and an adjusting device in each recess, whereby the extent to which said recesses may be engaged is regulated, substantially as described. 9th. A pattern device provided with recesses, a screw within each of said recesses, the upper end of said screw being of substantially the same diameter as the recesses, substantially as described. 9th. In Jacquard mechanism for looms, the combination of the shifting needles, a pattern device provided with recesses adapted to be engaged by the shifting needles, and adjusting devices within the recesses of the pattern device, whereby the extent of the engagement of the recesses by the shifting needles is regulated, substantially as described. 10th. In Jacquard mechanism for looms, the combination of suitable warp-supporting devices, lifting and depressing mechanism, and means for elevating and lowering the lifting and depressing mechanism above and below its normal position and for permitting it to dwell at the terminal of its upward and downward movement, substantially as described, 11th. In Jacquard mechanism for looms, the combination of suitable warp-supporting devices, lifting and depressing mechanism adapted to move above and below its normal position, the shifting needles for moving the warp-supporting devices into engagement with the lifting and depressing mechanism, and a pattern device for controlling the shifting needles, substantially as described.

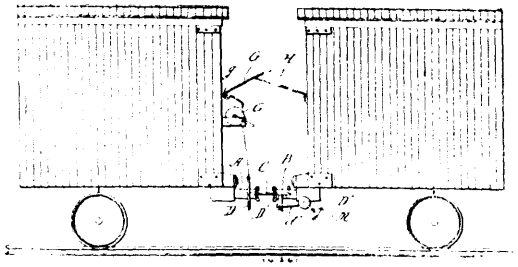
No. 54,264. Bridge. (*Pont.*)



Philias Beaudoin, Scott Station, Quebec, Canada, 3rd December, 1896; 6 years. (Filed 11th September, 1896.)

Claim.—1st. In an arch or bow-string bridge the combination with the girders forming the arch, and the cable forming the chord of the arch, of a skewback or shoe bolted to the abutment of the bridge, the said skewback having a chair for the reception of the end of the said girder, and a sliding block in which the end of the cable is secured, sliding in a chamber in the said skewback, and means for adjusting the said sliding block, substantially as herein described and for the purposes set forth. 2nd. In a device for securing the ends of cables of bridges, the combination with a skewback or shoe having a chamber open at the bridge side and closed at the land side, of a sliding block in which the end of the cable is secured, sliding in said chamber, bolts secured in said block, the said bolts passing through apertures in the closed end of the said chamber, and nuts fitting the said bolts, substantially as described and set forth. 3rd. In a device for securing the ends of the cables of bridges, the combination with the skewback or shoe 10, having a chamber 14 formed therein, V-shaped grooves formed in the sides of the said chamber, said chamber being opened on the bridge end and closed on the land end, the closed end having apertures 17 for the free passage of bolts, of the sliding block 18, fitting and sliding in the V-shaped grooves, threaded bolts 19 secured in the said block and passing through the said apertures 17, nuts 20 adapted to be screwed on the ends of the said bolts, and a cylindrical bore 24 formed in the said block, having its inner end formed into a conical chamber 25, substantially as described and set forth.

No. 54,265. Car Coupler. (*Attelage de chars.*)

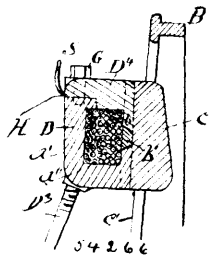


Thérence Potvin, Roberval, Québec, Canada, 3 décembre 1896; 6 ans. (Déposé le 14 novembre 1896.)

1° Dans un attelage de char comprenant deux "drawheads," une maille et une cheville ordinaires, la combinaison d'une maille de forme spéciale D suspendue à une poulie d^1 fixe sur une tige horizontale E terminée par des manivelles E^1 à ses extrémités et pourvue d'une roue dentée G, avec un levier coudé G^1 articulé au bout du char en g et dont l'extrémité inférieure accroche dans les dents de la roue et par suite maintient la cheville D à une hauteur convenable pour permettre l'entrée de la maille C dans le "drawhead" A. 2° Dans un accouplage, comprenant deux "drawheads,

une maille et une cheville ordinaires, la combinaison d'un levier D^1, coudé à l'intérieur du "drawhead" B et relié à un rouleau D^{11} pourvu de manivelles M à ses extrémités, avec une barre oblique H disposée sur le bout du char pour faire lâcher prise au levier G^1 et par suite laisser tomber à sa place la cheville D lorsque les chars viennent en contact.

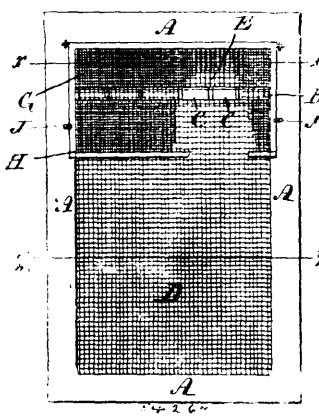
No. 54,266. Electric Brake. (*Frein électrique.*)



The General Electric Company, Schenectady, New York, U.S.A., assignee of Elmer A. Sperry, Cleveland, Ohio, U.S.A., 3rd December, 1896; 6 years. (Filed 14th February, 1896.)

Claim.—1st. In a brake for a car, an axle, a portion upon said axle organized to be gripped, a gripping mechanism for such rotating portion mounted upon the axle, stationary portions as a truck part supported by the car axle, projections provided on the gripping mechanism for arresting its movement protruding from such mechanism at substantially opposite points and engaging with said stationary portions by upward abutment caused by the rotation of the axle. 2nd. In a brake for a car, a rotating axle, a portion upon such axle presenting a surface organized to be gripped, a stationary gripping mechanism for such rotating portion having a co-operating surface, a groove in one of the surfaces, and a lubricant in said groove. 3rd. In a brake for a car, a rotating axle, a portion upon such axle presenting a surface organized to be gripped, a stationary gripping mechanism for such rotating portion having a co-operating surface, a groove in one of the surfaces, and a solid lubricant in said groove. 4th. In a brake for a car, a rotating axle, a portion upon such axle presenting a surface organized to be gripped, a stationary gripping mechanism for such rotating portion having a co-operating surface, a groove in one of the surfaces, a solid lubricant in said groove, and a metal or metal-like filling or lining between the walls of the groove and the lubricant. 5th. In a brake for a car, a rotating axle, a portion upon such axle presenting a surface organized to be gripped, a stationary gripping mechanism for such rotating portion having a co-operating surface, a groove in one of the surfaces at a substantial angle to the direction of relative movement between the surfaces, and a lubricant in said groove. 6th. In a brake for a car, a rotating axle, a portion upon such axle presenting a surface organized to be gripped, a stationary gripping mechanism for such rotating portion having a co-operating surface, a groove in one of the surfaces, and an electro-conducting lubricant in said groove. 7th. In a brake for a car, a rotating axle, a portion upon such axle presenting a circular face organized to be gripped, a stationary gripping electro-magnet for such rotating portion having a co-operating face, a groove or depression in one of the faces extending circumferentially along such face, and at one or more points also crosswise or at a substantial angle to such circumferential groove and an electro-conducting filling within such grooves. 8th. In an electric retarding device, a moving mechanism, a surfaced mass of magnetic material and a circular electro-magnet having a co-operating face, the two being mounted for relative movements, a groove or depression in said magnet, a suitable electric conductor in the deeper portion of said groove or depression, a portion of the groove next the surface not occupied by said conductor, in combination with an electro-conductor filling in the said last named portion and next the surface. 9th. In an electric retarding device, a moving mechanism, a surfaced mass of magnetic material and a circular electro-magnet having a co-operating face, the two being mounted for relative movement, a groove or depression in said magnet, a suitable electric conductor in the deeper portion of said groove or depression, a portion of the groove next the surface not occupied by said conductor, the walls of this portion approaching each other toward the outer surface, in combination with an electro-conducting filling in said last named portion and next the surface. 10th. In an electric retarding device, a moving mechanism, a surfaced mass of magnetic material and a circular electro-magnet having a co-operating face, the two being mounted for relative movement, a groove or depression in said magnet being comparatively small at its face and recessed or widened at points deeper or further removed from such face, presenting thereby enlarged magnetic faces or poles, a suitable electric conductor located in the deeper portion of such depression or recess, a portion of said recess next the surface not occupied by such conductor, in combination with an electro-conducting filling in the contracted portion of the groove above said conductor. 11th. In a brake for an electric car, a rotating axle, a portion upon such axle organized to be gripped, a stationary gripping mechanism for such rotating portion, a portion supported from the car axles, projections provided on the gripping mechanism for arresting its movement, in combination with co-operating abutments on the stationary portion located each side of the axle above said projection. 12th. In an electric brake for a car, a rotating axle, a portion upon such axle organized for the action of the brake, an electro-magnetic brake co-operating with such portion, a portion supported from the car axles, abutments provided on the magnet for arresting its movement, in combination with co-operating abutments on the stationary portion located each side of the axle above said magnet abutments. 13th. In an electric retarding device, a moving mechanism, a surfaced mass of magnetic material and a circular electro-magnet having a co-operating face, the two being mounted for relative movement, a groove or depression in said magnet being comparatively small at its face and recessed or widened at points deeper or further removed from such face, presenting thereby enlarged magnetic faces or poles, the magnet being formed of different members, which are secured to each other for purposes of forming such recess and of inserting the conductor, a suitable electric conductor located in the deeper portion of such depression or recess, a portion of such recess next the surface not occupied by such conductor, in combination with an electro-conducting filling in the contracted portion of the groove above said conductor. 14th. In a brake for an electric car, a rotating axle, a portion upon such axle organized to be gripped, a gripping mechanism for such rotating portion, a stationary portion supported from the car axles, a projection provided on the gripping mechanism for arresting its movement, in combination with a cushion between the projection and the stationary portion.

No. 54,267. Window Screen and Fly-Trap Combined.
(*Store de fenêtre et attrape-mouches combinés.*)



George Elmes, Farnham, Quebec, and Thomas J. Watters, Ottawa, Ont., all in Canada, 3rd December, 1896; 6 years. (Filed 13th December, 1894.)

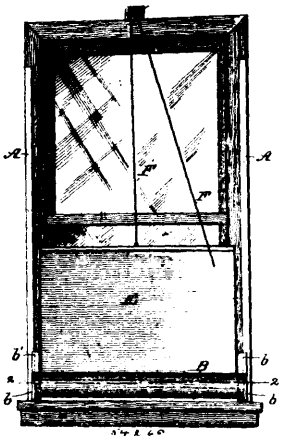
Claim.—1st. The combination with the frame A, of two sections D, E, of wire cloth secured thereto and offset one from the other, a trough B, connecting said sections intermediately at the parallel overlapping edges, said trough having notches C, C^1, for passage of flies, a cage G, formed by the upper portion of frame A, wire cloth section E, trough B, and door H, closing the front of the cage, as set forth. 2nd. A combined window screen and fly-trap, comprising a frame A, two sections of wire cloth offset from one another and overlapping at the parallel edges and secured to said frame from opposite ends, a trough B, connecting said sections at the overlap and adapted to hold an insecticide, a cage G, above said trough and a door H, closing said cage, as set forth. 3rd. A combined screen and fly-trap, comprising a frame A, wire cloth sections D, E, attached to said frame from opposite ends, a trough B, provided with fly passages C, C^1, at the edges and intervening said sections, and a door H, hung to the frame to close against said trough whereby a cage G, is formed by the upper part of the screen, the trough and the door, as set forth.

No. 54,268. Curtain Fixture. (*Porte-rideau.*)

Emsley L. Slight, Alexander and Edward Wilkins, all of Ennis, Texas, U.S.A., 4th December, 1896; 6 years. (Filed 16th November, 1896.)

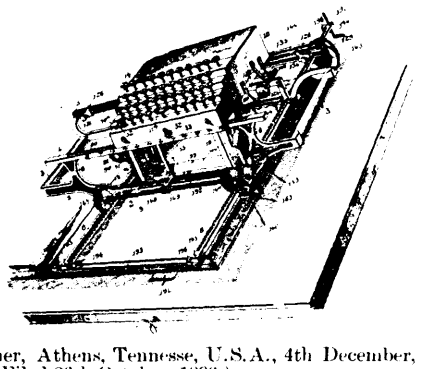
Claim. 1st. The spring-roller curtain with vertically adjustable sliding head carrying the journals of the same and having grooved runners at its end, in combination with guide strips on the window frame, and a pinching cam pulley, and cord extending from the pulley to the curtain and holding the same against the tension of the spring roller, and means for holding the sliding head to its varying adjustments against its tendency to roll on to the curtain from the tension of its spring roller, substantially as shown and described. 2nd. The combination of a spring-roller curtain, a sliding head extending across the window and formed with a curved housing enclosing the roller, and slotted ends retaining the journals and provided with runner extensions, a pinching cam-pulley and cord

extending from the pulley to the curtain and holding the latter against the tension of the spring roller, guide strips on the window



frame adjustably retaining the sliding head and friction springs for holding the latter to its position, substantially as and for the purpose described. 3rd. The combination with the guide strips on the window frame, of a sliding head having grooves in its ends to receive the journals of the spring roller and runners for its guiding strips, in combination with plugs fitting in said grooves and retaining the journals, and flat springs fastened to the ends of the head between the latter and the window frame to provide a frictional lock for the sliding head and also to retain the plugs, substantially as and for the purpose described.

No. 54,269. Typewriting Machine. (*Clavigraphe.*)



Robert J. Fisher, Athens, Tennesse, U.S.A., 4th December, 1896; 6 years. (Filed 26th October, 1896.)

Claim.—1st. In a typewriting machine, the combination of a framework having elevated front and rear carriage-guides parallel with the line of writing, the front guide being supported solely at its extremities whereby the view under the intermediate portion thereof is unobstructed, a carriage mounted upon said guides and having a pendant type-bar supporting-ring of crescent shape in plan with its open side to the front, printing mechanism, including type-bars mounted upon said supporting-ring and having their common printing point contiguous to the plane of the front guide, whereby the line of vision of an operator passes under the front carriage-guide and embraces the line of writing, the keyboard being arranged above the horizontal plane of the carriage-guides and between the vertical planes of the same, substantially as specified. 2nd. In a typewriting machine, the combination of tracks adapted to rest upon the page of a book, a movable faame mounted upon the tracks and carrying printing mechanism, vertical supporting-pins adjustably mounted upon the extremities of said tracks, and means for securing the pins at the desired adjustment, substantially as specified. 3rd. In a typewriting machine, the combination with a frame mounted for movement transverse to the line of writing, of a follower-plate adapted to rest upon the page or sheet to receive the impression and engaged by a contiguous portion of the frame to receive motion therefrom, substantially as specified. 4th. In a typewriting machine, the combination with tracks, a frame mounted upon the tracks, line-spacing mechanism including a ratchet-wheel, and an operating lever having a pawl to engage the ratchet-wheel, of a locking-pawl normally in engagement with the ratchet-wheel, a fixed projection on the frame, and a spring-pressed locking-pin carried by the pawl for engagement with the projection, substantially as specified. 5th. In a typewriting machine, the combination with a type-bar supporting-ring, of upper and lower type-bar bearing-clips secured, respectively, to the upper and lower surfaces of the supporting-ring, the upper bearing-clips having lateral upstruck flanges terminating at their outer ends in bearing-eyes and the lower bearing-clips being provided beyond the outer edge of the supporting-ring with the upturned bearing-eyes terminating approximately in the plane of the bearing-eyes on the upper clips, and type-bars mounted in said bearing-eyes, substantially as specified. 6th. In a typewriting machine, the combination with a type-bar supporting-ring, of type-bar bearing-clips arranged alternately above and below the plane of the supporting-ring and provided respectively with longitudinal slots, and set-screws fitted in openings in the supporting-ring and engaging said slots, the heads of all of the screws being arranged at the under side of the supporting-ring, and the screws which engage the slots in the upper clips being engaged above said clips with nuts, substantially as specified. 7th. In a typewriting machine, the combination with a type-bar supporting-ring, of type-bar bearing-clips having bearing-eyes, type-bars having their trunnions mounted in the bearings of said eyes and provided with hubs bearing against the inner surfaces thereof, and transverse compensating screws connecting the bearing-eyes, whereby the latter may be adjusted to take up lost motion, substantially as specified. 8th. In a typewriting machine, the combination with a carriage, of feed-pinions fixed to a common shaft mounted transversely on the carriage, fixed racks arranged parallel with the path of the carriage and simultaneously engaged by the pinions, and feed-mechanism connected with said shaft, substantially as specified. 9th. In a typewriting machine, a carriage-feeding mechanism having a ratchet wheel, co-axial operating and holding-dogs arranged in operative relation with the ratchet-wheel, the holding-dog being capable of movement independently of the operating-dog and held in its normal position by spring tension, means connected with an arm of the operating-pawl for communicating simultaneous oscillatory movement to the dogs, and a trip-lever having a pin arranged in operative relation with a cam on the holding-dog for communicating motion to the latter, substantially as specified. 10th. In a typewriting machine, the combination with a carriage, of a line-stop having a face-plate, a guiding-web fitting in the throat of a cross-sectionally T-shaped channel in one of the carriage-guides, a clamping-block fitting in the enlarged portion of said channel, and a thumb-screw for adjusting the clamping-block, substantially as specified. 11th. In a typewriting machine, the combination with a carriage and printing mechanism, of a ribbon-spool, means for imparting axial movement to the spool to feed the ribbon transversely, and a pivotal arm having a fixed pivot on the carriage and adapted to swing parallel with the axis of the spool, the free end of the arm being held by gravity in permanent engagement with a ratchet fixed to the spindle of the spool and being provided with a lateral ear or projection in contact with the side of the ratchet to prevent disengagement, substantially as specified. 12th. In a typewriting machine, the combination with a carriage and feeding mechanism, of ribbon-spool spindles, means for feeding said spindles longitudinally, ribbon-spools slidably and removably fitted upon the spindles, means for imparting rotary movement to the spindles and through the same to the spools, and ribbon shields or guides having arms fitted slidably upon the ribbon-spool spindles, and removable with the spools, substantially as specified. 13th. In a typewriting machine, the combination with a carriage and feeding mechanism, of ribbon-spool spindles having one end free, ribbon-spools removably fitted upon the free ends of the spindles, means for imparting longitudinal and rotary movement to the spindles, removable stops attached to the free ends of the spindles, yielding means to hold the spools normally in contact with the stops, and ribbon-shields or guides fitted to slide upon the spindles and removable therefrom with the spools, substantially as specified. 14th. In a typewriting machine, the combination with a carriage and feeding mechanism, of ribbon-spool spindles, ribbon-spools removably attached to said spindles, means for imparting a rotary movement to the spindles, ribbon-shields or guides depending from the ribbon-spool spindles, and keepers, having open front ends, to engage the lower ends of the ribbon-shields or guides, substantially as specified. 15th. In a typewriting machine, the combination with printing mechanism including a type-bar supporting-ring, of ribbon-spools mounted for axial movement transverse to the line of writing, ribbon-guides mounted for movement with the ribbon-spools and extending to a point below the plane of the type-bar supporting-ring, a ribbon-shifting key, and connections between the shifting-key and said ribbon-guide whereby the latter may be moved transversely to the line of writing to expose the same, substantially as specified. 16th. In a typewriting machine, the combination with a type-bar supporting-ring, of ribbon-spools mounted for axial movement above the plane of the supporting-ring and transverse to the line of writing, ribbon-guides mounted for movement with the ribbon-spools and having horizontal inturned lower extremities, and guide-strips carried by the type-bar supporting-ring transverse to the line of writing and having an interlocking sliding connection with the ribbon-guides, substantially as specified. 17th. In a typewriting machine, the combination with a carriage and an axially-movable ribbon-spool, of a threaded stem mounted for movement parallel with and connected to the spindle of said spool, a rotary nut engaging said stem and held from axial displacement, and means for communicating rotary motion to said nut during the movement of the carriage parallel with the line of writing, substantially as specified. 18th. In a typewriting machine, the combination with a carriage and axially-movable ribbon-spool mounted thereon, of a worm mounted for movement parallel with and connected to the ribbon-spool spindles, a worm-gear mounted for rotary and held

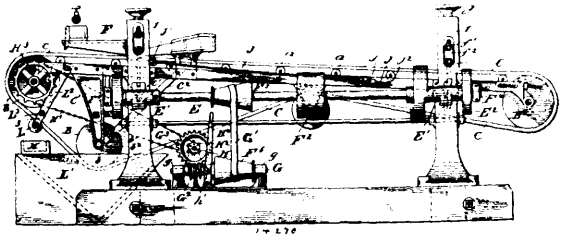
from axial movement and having an elongated hub or sleeve through which the worm extends, an adjustable pin or feather carried by said hub to engage the worm, and means for communicating rotary motion to the worm-gear, substantially as specified. 19th. In a typewriting machine, a carriage having a casing constructed of sheet-metal and having front and rear sides and ends, a slotted bottom or floor, a keyboard closing the front portion of the top of the casing, and a removable plate closing the rear portion of the same, key-levers arranged within the casing, and draw-wires, for connection with type-bars, extending through the slots in the bottom or floor, substantially as specified. 20th. In a typewriting machine, the combination with pivotal type-bars and key-levers, of rods connecting said parts and provided with tension devices including an adjusting-nut threaded upon one member and swivelled upon the other member of the connection, and a clamp for engaging said nut and securing it at the desired adjustment, substantially as specified. 21st. In a typewriting machine, the combination with a type-bar, a key-lever and a rod connecting said parts, of a tension device including a nut threaded upon said rod and provided with a reduced portion of the nut, and a set-screw for tightening the band upon the nut to prevent rotation of the latter, substantially as specified. 22nd. A sectional type-head having relatively adjustable cheeks, type-faces having stems arranged between the planes of said cheeks, and means for adjusting the cheeks to clamp said stems therebetween, substantially as specified. 23rd. A sectional type-head having relatively adjustable cheeks provided in their contiguous faces with registering grooves combining to form sockets, type-faces having round stems of even thickness throughout fitting in said sockets, and means for adjusting the cheeks to clamp the stems therebetween, substantially as specified. 24th. In a typewriting machine, the combination with a pivotal type-bar, of a type-head or carrier movably supported thereon, the same being yieldingly held in its normal position and being movable to its adjusted position by centrifugal force, a locking device carried by the type-bar for holding the type-head or carrier in its normal position, and a key-actuated trip for disengaging said locking device, substantially as specified. 25th. In a typewriting machine, the combination with a pivotal type-bar, of a type-head or carrier movably supported thereon, the same being yieldingly held in its normal position and adapted to be moved to the other position by centrifugal force, a locking device carried by the type-bar for securing the type-head or carrier in its normal position, and fixed and movable trips for co-operating with a trip-arm forming a part of said locking device, the fixed trip being permanently arranged in the path of the trip-arm, and the movable trip being capable of adjustment into and out of the path of the trip-arm, substantially as specified. 26th. In a typewriting machine, the combination with a pivotal type-bar, of a type-head or carrier movably supported thereon, the same being yieldingly held in one position and being adapted to be moved to the other position by centrifugal force, a pivotal trigger carried by the trip-bar to maintain the type-head or carrier in its normal position and having a trip-arm, a brake-spring arranged in contact with a friction surface of the trigger to hold the latter in either its operative or inoperative position, and fixed and movable trips for co-operation with said trip-arm, the latter being adjustable into and out of operative position, substantially as specified. 27th. In a typewriting machine, the combination with a frame carrying printing mechanism and adapted for movement transverse to the line of writing, of a sheet-holding attachment having parallel transverse guides or tracks upon which said frame is mounted, a roller platen terminally mounted in said guides or tracks, line-spacing mechanism for operating said platen, and means for holding the machine in its operative position with relation to the platen, and adapted to yield to allow the frame to be moved to expose the platen, substantially as specified. 28th. In a typewriting machine, the combination with a frame carrying printing mechanism, of a sheet-holding attachment having a roller platen, a spring-actuated pressure roll in operative relation with the platen, a longitudinal gauge having spring-actuated pivotal arms adapted to engage and repress said roll, and line-spacing mechanism operatively connected with the platen, substantially as specified. 29th. In a typewriting machine, the combination with parallel tracks adapted to be arranged upon a page of a book, and a frame mounted upon the tracks for movement parallel therewith, of a table having countersunk vertically-adjustable supporting-strips, an elevating spring arranged under each supporting-strip, and a shouldered locking-arm threaded in a fixed guide and extending through a slotted arm on the supporting-strip with its shoulder in contact with said arm, the locking-arm extending to and beyond the front of the table and terminating in means whereby it may be rotated to secure the strip at the desired vertical adjustment, substantially as specified.

No. 54,270. Ore Concentrator.

(*Concentrateur de minerai*)

Willis G. Dodd, San Francisco, California, U.S.A., 4th December, 1896; 6 years. (Filed 5th May, 1896.)

Claim.—1st. In an ore concentrator, the combination with the swinging or shaking frame, of the endless belt arranged to travel thereover, mechanism for imparting continuous forward travel to said belt, adjustable mechanism for imparting a side shake to the swinging frame, the supporting links for the swinging frame, devices for giving vertical adjustment to said links, and devices for imparting lateral adjustment to said links in order to vary the movement



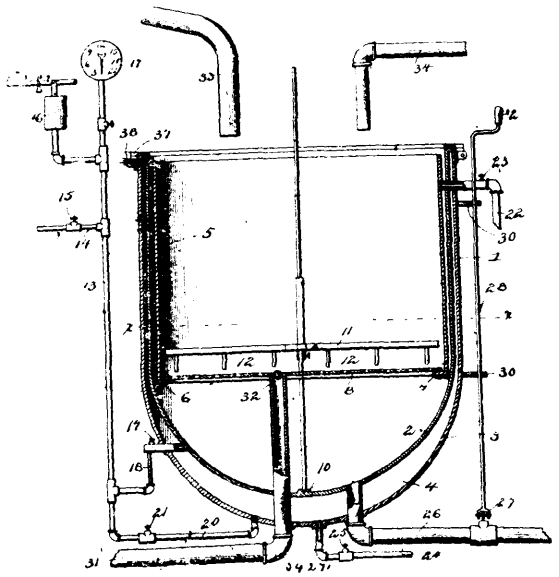
of the swinging frame. 2nd. In an ore concentrator, the combination with the base, of the box standards secured to and extending above the base, the swinging frame arranged between said standards, the endless belt arranged to travel over said frame, mechanism for imparting continuous forward travel to said belt, adjustable mechanism for imparting a lateral shake to the swinging frame, the slide blocks secured within the box standards, devices for raising or lowering the slide blocks, the supporting links for the swinging frame pivoted at one end to the slide blocks and of the laterally adjustable devices connected to the swinging frame, to which the opposite end of the supporting links is pivoted. 3rd. In an ore concentrator, the combination with the base, of the box standards secured to and extending above the said base, the swinging frame arranged between the standards, the adjustable slide blocks connected to the said standards, the supporting links for the swinging frame pivoted at one end to the adjustable slide blocks, the laterally adjustable devices connected to the swinging frame, to which the opposite end of the supporting links is pivoted, and the thrust rods yieldingly connected to the swinging frame and the forward standards. 4th. In a concentrator, the combination with the standards, of the swinging frame arranged between the standards, the supporting links for sustaining the frame, the laterally adjustable devices connected to the swinging frame and to which the lower end of the supporting links is pivoted, the slide blocks connected to the standards and to which the opposite end of the said links is pivoted, devices for raising or lowering the slide blocks and means for imparting a side shake to the swinging frame. 5th. In a concentrator, the combination with the swinging frame, of the rolls secured at each end thereof, the brackets depending from the forward end of the frame, the roll secured therebetween, the endless belt arranged to travel over said rolls, the adjustable brace rod forming connection between the frame and the depending brackets, mechanism for imparting a side shake to the swinging frame and continuous forward travel to the endless belt, the supporting links for sustaining the swinging frame and of mechanism for imparting a vertical and lateral adjustment to the supporting links. 6th. In a concentrator, the combination with the swinging frame, of means for imparting a side shake to the said frame, the supporting links for sustaining the swinging frame, of means for imparting a vertical adjustment to the supporting links and laterally adjustable connections between the lower ends of the link and the frame. 7th. In a concentrator, the combination with the endless travelling concentrating belt, of a device connected with the frame of the concentrator and in advance of the concentrating belt for removing the concentrates therefrom prior to being conveyed into the settling tank or box. 8th. In a concentrator, the combination with the endless travelling concentrating belt, of an adjustable device arranged in advance of the endless concentrating belt for removing the concentrates therefrom prior to being conveyed to the settling tank or box. 9th. In a concentrator, the combination with the laterally shaking or movable frame, of the endless travelling concentrating belt, and of the device connected with the movable frame so as to move in unison therewith and adjustably arranged in advance of the endless concentrating belt so as to remove the concentrates therefrom prior to being conveyed to the settling tank or box. 10th. In a concentrator, the combination with the movable frame thereof, of the endless concentrating belt, the brackets secured to and projecting forwardly from the movable frame in advance of the endless concentrating belt, and of a separating roll secured to the forwardly projecting brackets and arranged to bear against the endless concentrating belt so as to remove the concentrates therefrom prior to being conveyed to the settling tank or box.

No. 54,271. Apparatus for Hulling and Cooking Cereals. (*Appareil à décortiquer et cuire les céréales.*)

Kirk Hopkins, Springville, New York, U.S.A., 4th December, 1896; 6 years. (Filed 9th April, 1896.)

Claim.—1st. The herein described process of treating cereals, which consists of subjecting the cereal to be treated to the action of a lye bath and steam, and then agitating the mass, and at the same time subjecting it to a stream of scalding water, substantially as and for the purpose set forth. 2nd. The herein described method of treating cereals, consisting of subjecting the cereal to be treated to a bath of lye, and simultaneously applying steam, then agitating the mass in the presence of a flowing stream of scalding water, and lastly, enclosing the mass so as to shut off atmospheric influences

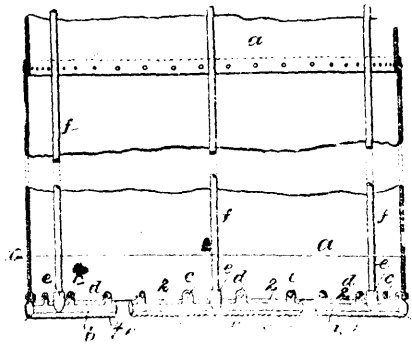
and applying heat to cook the cereal, substantially as and for the purpose set forth. 3rd. The herein described method of preparing



cereals, which consists in subjecting the cereal to be treated in a vessel to the combined action of a lye bath and steam, then simultaneously agitating and running a stream of scalding water upon the mass without removing it from said vessel, whereby the loosened hulls and all traces of the lye bath are removed, finally enclosing the cereal in the said vessel and subjecting it to the action of steam, whereby it is cooked, substantially as specified. 4th. In an apparatus for treating cereals, the combination of a vessel or caldron comprising an inner and an outer shell enclosing a steam-space, a receptacle supported within the upper portion of the caldron and having a perforate bottom, a valved pipe extending through the lower portion of the caldron and communicating with the said perforate bottom, an agitator operating within the receptacle immediately above its perforate bottom, a steam-pipe having communication with the steam-space of the caldron and with the inner shell thereof, exhaust-pipes communicating with the upper portion of the inner receptacle and with the bottom portion of the said steam-space, and a waste-pipe making connection with the bottom portion of the inner shell of the caldron, substantially as set forth. 5th. The herein described apparatus for treating cereals, consisting of a vessel or caldron comprising an inner and an outer shell enclosing a steam-space, a steam-pipe communicating with the said steam-space and the interior of the vessel, steam-exhaust pipes leading into the steam-space and the upper portion of the vessel, an inner receptacle supported within the upper portion of the vessel and having a perforate bottom, a valved pipe communicating with the said perforate bottom, a waste-pipe having communi ation with the bottom portion of the vessel, an agitator arranged to operate immediately above the said perforate bottom, means for supplying the cereal and hot water to the vessel, and a cover adapted to be positively secured to the open end of the vessel and provided with a heat-indicator, substantially as and for the purpose set forth.

No. 54,272. Caissons Sinking Apparatus.

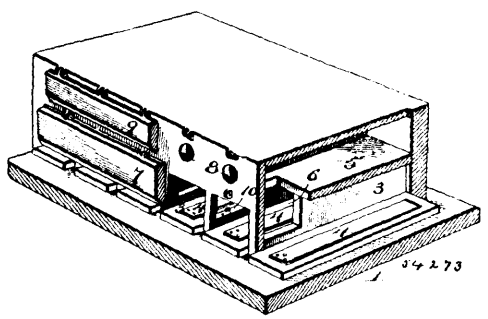
(*Appareil pour enfoncer les caissons*)



William D'H. Washington, New York, State of New York, U.S.A., 4th December, 1896; 6 years. (Filed 24th August, 1896.)

Claim.—1st. The herein described method of sinking caissons, sheet piling, etc., which consists in digging a narrow well by water jets at the lower edge of the caisson or piling and simultaneously lowering the same into such well. 2nd. The herein described method of sinking caissons, sheet piling, etc., which consists in digging a narrow well by fluid jets at the lower edge of the caisson or piling, simultaneously forcing the same into such well, and carrying the debris out through the well by the escaping fluid. 3rd. The herein described method of sinking caissons, sheet piling, etc., which consists in digging a narrow well by water jets at the lower edge of the caisson or sheet piling, simultaneously forcing the same into such well, and directing its downward movement by localizing the action of the water. 4th. The herein described method of sinking caissons, sheet piling, etc., which consists in forming a narrow well by jetting water at the lower end of the casing, applying downward pressure thereon simultaneously and directing the movement by applying the jets and pressure proportionately to the resistance at various points in the well during the progress of sinking. 5th. In the art of building pier foundations the herein described method of sinking a hollow caisson, which consists in first sinking the caisson into an annular well formed by jetting out the soil with water discharged from the lower edge of the caisson, then sealing it by the use of fluid cement in lieu of water and then excavating the interior core, substantially as described. 6th. In an apparatus for sinking caissons, the combination with a caisson or sheet piling, of a hollow shoe at the lower edge thereof, which is provided with imperforate sides and with jet holes from the interior hollow space downward in line with the walls thereof, and water supply connections extending up the wall to the top of the wall, substantially as described. 7th. In an apparatus for sinking a tubular caisson, the combination with the caisson of a hollow shoe attached to the lower edge thereof and composed of independent segments, each provided with a perforated cutting edge, and a vertical supply pipe connecting each section with a source of water supply, substantially as described. 8th. In an apparatus for sinking tubular caissons, a shoe composed of hollow segments *b* each provided with a serrated cutting edge, means for attaching each segment to the lower edge of the caisson, and the branch *e* for connecting each segment independently to a source of water supply, substantially as described. 9th. In an apparatus for sinking tubular caissons, the combination of a caisson provided with a hollow shoe, having downwardly opening fluid jet apertures adapted for jetting out the soil below the walls of the caisson, of a series of weights suspended by hoists from the top of the caisson at different points of the circumference, substantially as and for the purpose described. 10th. In an apparatus for sinking caissons, sheet piling, etc., provided with means for attaching it to the lower edge, having an interior chamber, connections therewith from a supply of fluid under pressure, said shoe being provided with an independent lower cutting edge and jets in the indentations and away from the cutting edge. 11th. In an apparatus for sinking caissons, sheet piling, etc., the combination with a caisson or sheeting of a shoe attached to the lower edge thereof provided with a cutting edge and having an interior chamber, connections between said chamber and the fluid supply under pressure, such shoe having imperforate side walls, and perforations adapted to jet the water directly below the shoe, substantially as described. 12th. In an apparatus for sinking caissons, the combination with a tubular caisson, of a hollow shoe at the lower edge thereof, connections between the interior of the shoe and a fluid supply under pressure, the shoe being provided with jet apertures adapted to dig an annular well in which the caisson may sink or be forced, substantially as described.

No. 54,273. Reed Organ. (*Harmonium.*)

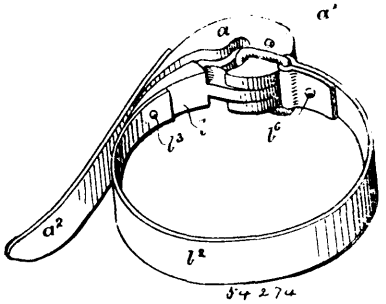


William Seybold, Chicago, Illinois, U.S.A., 4th December, 1896; 6 years. (Filed 27th August, 1896.)

Claim.—1st. An organ provided with main or reed-cells having exterior openings, auxiliary or sounding-cells provided with exterior openings, each auxiliary or sounding-cell being permanently in communication with two contiguous main or reed-cells, reeds arranged in the main or reed-cells, and independent valves for controlling the exterior openings of the cells, substantially as specified. 2nd. An organ provided with parallel tiers of reed-cells and sounding-cells, each sounding-cell being in communication with a reed-cell at a point contiguous to one end of the latter, and each cell being provided with an exterior opening, reeds arranged in the reed-cells with the heels of their tongues under the points of communication of the

sounding-cells with the reed-cells, an I independent mutes for closing the exterior openings of the sounding and reed-cells, substantially as specified. 3rd. An organ provided with parallel tiers of reed-cells and sounding-cells having exterior openings, each sounding-cell being equal in area to two contiguous subjacent reed-cells and each sounding-cell being in communication with said two contiguous reed-cells, reeds arranged in the reed-cells, and independent mutes controlling the openings of said reed and sounding-cells, substantially as specified.

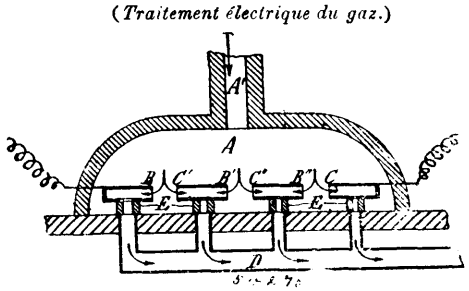
No. 54,274. Bag Fastener. (*Fermeture de sacs.*)



Alfred Arkell, Headingly, Manitoba, 4th December, 1896; 6 years. (Filed 27th October, 1896.)

Claim.—In a fastener for bags and the like, the double hook a, with the pin a^1, and an ordinary strap a^2, secured to the butt end of double hook a, by rivet a^3, or other suitable manner, the single hook b, perforated to receive the pin a^1, and working in the space between the prongs of the double hook a, the strap b^2 and loop or link b^1, with the rivets or other suitable fastenings b^5 and b^6, with or without the staple b^4 and the slot a^4, substantially as and for the purpose above set forth.

No. 54,275. Electrical Treatment of Gas.
(*Traitement électrique du gaz.*)



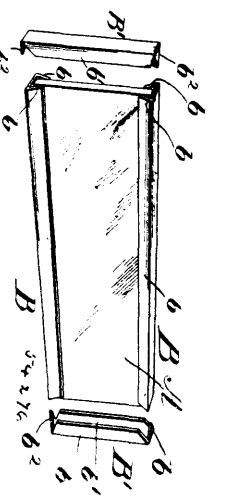
Aloys Naville, Philippe Guye and Charles Eugène Guye, all of Geneva, Switzerland, December, 1896; 6 years. (Filed 11th July, 1896.)

Claim.—1st. An apparatus for electrical gas-reactions, intended to treat any kind of gases by means of any kind of electric current, comprising tubes through which the gases to be treated are caused to pass, combined with two electrodes connected to a source of electricity and disposed so as to have the whole mass of the said gases compelled to pass in immediate proximity to the spark produced between the said two electrodes, substantially as and for the purpose specified. 2nd. In an apparatus for the purposes above specified, a glass tube for the passing of the gases to be treated, provided with a contracted part or balk, and electrodes connected to a source of electricity and arranged so as to produce electric sparks near said balk of the tube, substantially as shown and described. 3rd. In an apparatus for the purposes above specified, a tubular electrode arranged for the passage therethrough of the gases to be treated, substantially as shown and described. 4th. In an apparatus for the purposes above specified, a branched tubular electrode substantially as shown and described. 5th. In an apparatus for the purposes above specified, the combination of tubular branched electrodes with a tubular collector and with insulating tubes whereby they are connected to said collector, substantially as shown and described. 6th. In an apparatus for the purposes above specified, the combination of a tubular electrode with a solid electrode, substantially as shown and described.

No. 54,276. Show Case. (*Caisse d'étalage.*)

Joseph Theodore Robin, New York, State of New York, U.S.A., 4th December, 1896; 6 years. (Filed 25th September, 1896.)

Claim.—1st. A show case comprising a series of transparent walls, a sheet metal bottom having flanges formed thereon and an opaque back door, which door is hinged to a loop formed integrally with the said bottom and is maintained in a closed position by means of spiral springs, the said transparent walls of the show case comprising sheets of glass which are bound upon their four edges by strips of sheet metal and soldered to each other and to the flanges of the said bottom, the metal binding of the said panels comprising



four pieces for each respective panel, two of which pieces are provided with inwardly projecting flanges which are clamped upon parallel edges of the panels, the other two being provided with flanges and tongues which engage with the remaining two parallel edges of the panel and which are soldered to the other two strips at the corners thereof, substantially as shown and described. 2nd. In a show case, the combination of the transparent walls which are soldered to each other and which are bound upon their four edges by flanged and tongued strips which are soldered to each other at their points of intersection, with the sheet metal flanged bottom having a loop formed integrally therewith, legs nailed thereon and a door hinged thereto, said door being hinged by means of a rod and other loops, which loops are secured respectively to the door and to the two end walls of the show case, the door being maintained in a normally closed position by means of spiral springs which are coiled around the said rod, substantially as shown and described. 3rd. A panel or wall for show cases comprising a sheet of transparent glass having its four edges bound by strips of sheet metal, two of which strips are in engagement with parallel edges of the said glass sheet and are clamped thereon by means of inwardly projecting flanges, the other two being provided with parallel flanges, which flanges engage with the other two parallel edges of the said plates, and tongues which engage at the corners with the above mentioned strips, all of the strips being soldered together at their corners or points of juncture, substantially as shown and described.

No. 54,277. Medicinal Compound.
(*Composition médicinale.*)

Henry Edwards, Lobo, Ontario, Canada, 4th December, 1896; 6 years. (Filed 5th September, 1896.)

Claim.—A compound consisting of sanginarian, tartar emetic, arsenic, corrosive sublimate, chloride of zinc and water, in about the proportions specified, substantially as described and for the purposes set forth.

No. 54,278. Process of Treating Gypsum Rock to Imitate Marble. (*Procédé pour le traitement de pierre à plâtre pour imiter le marble.*)

George Washington Parker, Battle Creek, Michigan, U.S.A., and D. Willis Mason, Windsor, Ontario, Canada, 4th December, 1896; 6 years. (Filed 19th September, 1896.)

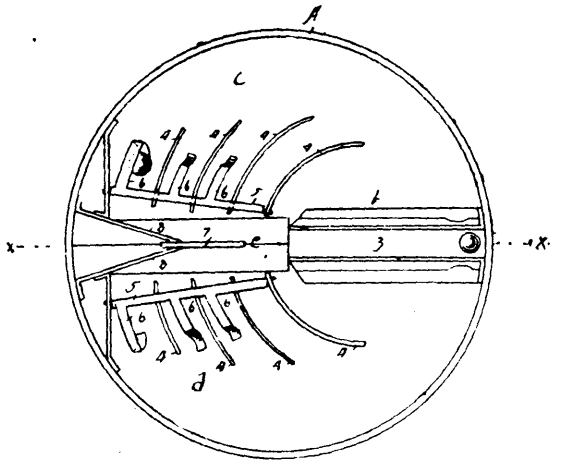
Claim.—The process of treating gypsum rock, which process consists in first dehydrating the rock by the action of hot air, next allowing the now porous rock to absorb a solution of sulphate of iron, nitric acid, and potassium sulpho-cyanite, after which, immersing in a solution of aluminium sulphate (A^{12} So^4) 3 for 15 hours more or less, next exposing to open air, and then polishing, substantially as set forth.

No. 54,279. Game. (*Jeu.*)

Frank L. Decker, Lestershire, New York, U.S.A., 4th December, 1896; 6 years. (Filed 14th September, 1896.)

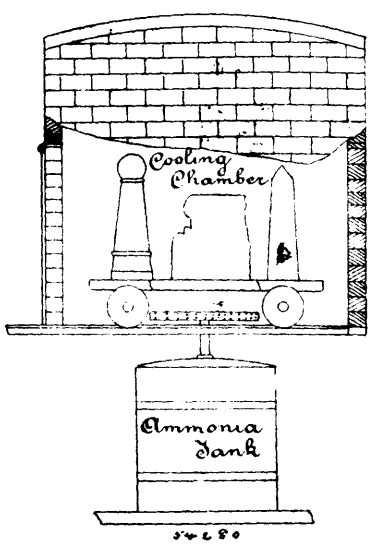
Claim.—1st. In a game apparatus, the combination with the box, the sloping partition, and the ball-trough, of the forwardly and downwardly sloping curved guides at opposite sides of said partition, the pivoted bars at the inner ends of said guides, provided with laterally-extending straight fingers, and at the rear end provided with hooked fingers, substantially as and for the purpose specified. 2nd. In a game apparatus, the combination with the box, having an opening in its rim, the forwardly and sidewise sloping partition, the central slip having its sides inclined downwardly from the centre to the rear, the sides at the front end of said strip forming a

ball-trough and extending downward and secured to the sloping partition and formed with ball-openings, of the forward and down-



ward extending curved guides at each side of said strip, the bars pivoted to the inner ends thereof, and provided with straight and hooked fingers, substantially as described. 3rd. In a game apparatus, the combination of the box having an opening in its rim, the forward and sidewise sloping partition, the central strip having its sides inclined downward from the centre to the rear, the sides at the front end of said strip forming a ball-trough and extending downward and secured to said partition and formed with ball-openings, of the forward and downward extending curved guides, the pivoted bars having straight and hooked fingers, the staple and the inclined wings secured to the rear upper side of said strip, substantially as described.

No. 54,280. Process of Treating Gypsum Rock.
(*Procédé pour le traitement de pierre à plâtre.*)



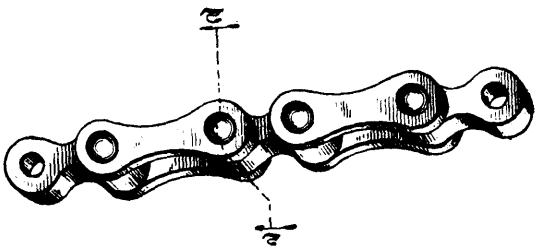
George Washington Parker, San Francisco, California, U.S.A., 5th December, 1896; 6 years. (Filed 17th November, 1896.)

Claim.—The method or process of treating native gypsum rock which consists, essentially, in eliminating the moisture from the rock by the action of hot air, then removing the resultant hot calcium sulphate into a closed compartment charged with the fumes of ammonia, and then immediately subjecting the cool rock to immersion in a warm solution of aluminium sulphate until the pores are filled, substantially as and for the purpose set forth.

No. 54,281. Rivet Making Process.
(*Procédé pour faire des rivets.*)

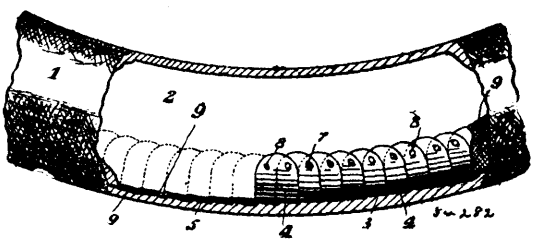
The Indianapolis Chain and Stamping Company, assignee of Charles Edward Test, Woodruff Place, Indiana, U.S.A., 7th December, 1896; 6 years. (Filed 24th August, 1896.)

Claim.—The process of forming rivets having hardened centres and softer ends, which consists in first forming the rivet of metal of substantially the degree of hardness which it is desired the ends shall have, then covering said ends with closely-fitting caps of material adapted to protect them from the action of the hardening



process, then charging with carbon the exposed central portion by heating and then immersing in a hardening liquid or compound, and then removing said caps, all substantially as set forth.

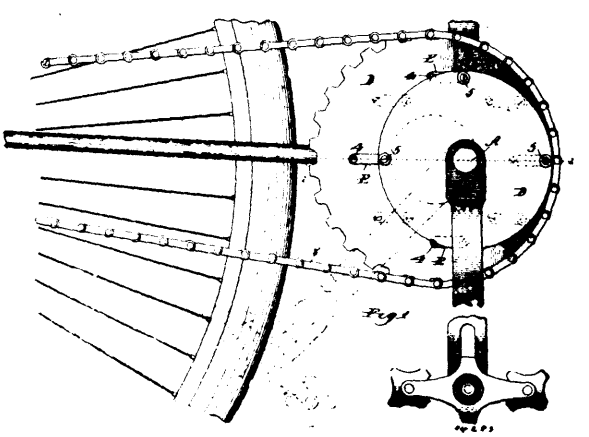
No. 54,282. Pneumatic Tire. (*Bandage pneumatique.*)



Harry Clinton Dean, Astoria, New York, U.S.A., 7th December, 1896; 6 years. (Filed 16th April, 1896.)

Claim.—1st. A guard or shield for pneumatic tires, formed of a series of plates or sheets each having at opposite ends slots and rivets, the rivets of one plate working in the slots of an adjacent plate, substantially as set forth. 2nd. A guard or shield for pneumatic tires, formed of a series of plates or sheets of spring metal, each having at opposite ends inclined slots and rivets, the rivets of one plate working in the slots of an adjacent plate, substantially as set forth. 3rd. A guard or shield for pneumatic tires, formed of a series of plates or sheets of spring metal, each having at opposite ends inclined slots and rivets, the rivets of one plate working in the slots of an adjacent plate, said plate having transverse bends formed in them and fitting together to form a projecting central bend extending around the the tread of the tire, substantially as set forth.

No. 54,283. Gearing. (*Engrenage.*)

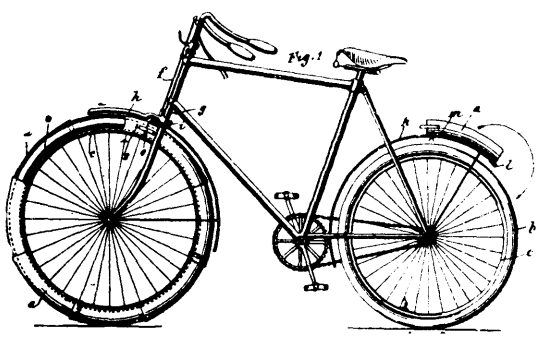


George E. Schrader, Chicago, Illinois, U.S.A., 7th December, 1896; 6 years. (Filed 20th July, 1896.)

Claim.—1st. A gearing comprising a power shaft having a disk mounted thereon, a pulley or sprocket whe l loosely mounted adjacent said disk and eccentric thereto, and eccentric connections between said disk and said pulley or sprocket wheel. 2nd. A gearing comprising a power shaft having two discs mounted thereon, a pulley or sprocket wheel loosely mounted between said disks and eccentric thereto, and connection between said disks and said pulley or sprocket wheel to cause the latter to revolve on its centre equally with said disks. 3rd. A gearing, comprising a power shaft having two disks mounted thereon, a pulley or sprocket wheel loosely mounted between said disks and eccentric thereto, and eccentric connections between said disks and said pulley or sprocket wheel to cause the latter to revolve equally with said disks. 4th. A gearing

comprising a power shaft having two disks mounted thereon, a pulley or sprocket wheel of larger diameter than said disks loosely mounted between said disks and eccentric thereto, and connection between said disks and said pulley or sprocket wheel to cause the latter to revolve on its centre equally with said disks. 5th. A gearing comprising rotating devices mounted upon a shaft, a wheel loosely and eccentrically mounted upon said shaft adjacent said rotating devices, and connection between said rotating devices and said wheel for causing the latter to rotate equally with said rotating devices. 6th. A gearing comprising rotating devices mounted upon a shaft, a wheel loosely and eccentrically mounted upon said shaft adjacent said rotating devices, and eccentric connection between said rotating devices and said wheel for causing the latter to rotate equally with said rotating devices. 7th. A gearing comprising a disk mounted upon said shaft, a wheel loosely mounted upon said shaft adjacent said disk, and eccentric thereto, and crank arms revolubly mounted in said disk and said wheel and adapted to transmit the motion of said disk to said wheel. 8th. A gearing comprising a disk mounted upon a shaft, a wheel loosely mounted upon said shaft adjacent said disk and eccentric thereto, and crank arms corresponding in length with the distance between the centres of said disk and said wheel, revolubly mounted at opposite ends in said disk and said wheel, and adapted to transmit the motion of said disk to said wheel. 9th. A gearing comprising a disk or wheel mounted upon a shaft, a wheel loosely and eccentrically mounted upon said shaft adjacent said disk or wheel, and eccentric connections between said disk and said eccentric wheel corresponding in throw with the throw of said eccentric wheel. 10th. A gearing, comprising a disk or wheel mounted upon a shaft, a wheel loosely and eccentrically mounted upon said shaft adjacent said disk or wheel, and eccentric connections between said disk and said eccentric wheel at regular intervals and corresponding in throw with the throw of said eccentric wheel. 11th. A gearing comprising a disk mounted upon a shaft, a wheel loosely mounted upon said shaft adjacent said disk and eccentric thereto, and crank arms connecting said disk and wheel mounted at one end in bearings in said disk situated equidistant from the centre thereof, and mounted at their other ends in bearings in said wheel situated equidistant from the centre thereof, said distances between the centres of said wheel and disk and the centres of the bearings therein being respectively coincident. 12th. A gearing comprising a disk mounted upon a shaft, a wheel loosely mounted upon said shaft adjacent said disk and eccentric thereto, and crank arms connecting said disk and wheel mounted at one end in bearings in said disk situated equidistant from the centre thereof, and mounted at their other ends in bearings in said wheel situated equidistant from the centre thereof, said distances between the centres of said wheel and disk and the centres of the bearings therein being respectively coincident, and the lengths of said crank arms between centres being equal to the distance between the centres of said wheel and disk.

No. 54,284. Elastic Tire. (*Bandage élastique.*)



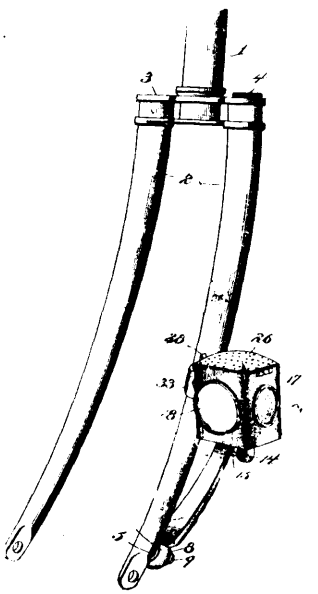
Erich Liskow, Pasewalk, Germany, 7th December, 1896; 6 years. (Filed 21st September, 1896.)

Claim.—1st. The combination with a wheel, of a covering for the tire thereof, comprising a series of sections united substantially as described, so as to be capable of extension to enclose the wheel rim, or when not in use, to be folded into small compass, substantially as and for the purpose set forth. 2nd. The combination with a wheel, of a collapsible or foldable rim covering or protecting device, consisting of a series of sections each adapted to embrace a portion of the wheel rim, and means for locking the sections when extended, all substantially as and for the purpose set forth. 3rd. The herein described wheel tire protecting device or covering, consisting of a foldable and extensible case formed of a series of curved tele-copic sections each section being shaped so as to embrace a segment of the tire when extended, combined with means for locking the sections when extended, all substantially as and for the purpose set forth.

No. 54,285. Bicycle Lamp. (*Lampe de bicycles.*)

David Ricketts Reynolds, Philadelphia, Pennsylvania, U.S.A., 7th December, 1896; 6 years. (Filed 1st October, 1896.)

Claim.—1st. The combination with a hollow bar of a cycle frame adapted to receive a supply of oil, of a lamp case removably attached to the frame, and an oil conducting tube interposed between and in communication with said frame bar and lamp case, provision being



made whereby said tube may be folded close to the frame when the lamp is removed, substantially as described. 2nd. A fork arm or end constituting an oil reservoir, in combination with a lamp case removably mounted thereon, and a swinging oil conducting arm having a hinged connection with and being in communication with said reservoir and having its swinging end arranged within the lamp case when in operative position, and adapted to be folded up against the fork when not in use, substantially as described. 3rd. The combination with a fork arm on end constituting an oil reservoir, of a lamp case detachably mounted thereon and having an aperture in its bottom, and an adjustable hollow wick arm carrying a wick and wick adjuster and hinged to the fork arm and in communication therewith, said wick arm being provided with a collar underlying the bottom of the lamp case for obstructing too free draft, substantially as described. 4th. The combination with a hollow frame bar of a cycle constituting an oil reservoir, of a wick tube having a valve connection therewith, the valve comprising a plug having an aperture, a sleeve on the wick tube having a corresponding aperture opening into the bore of said tube, said apertures being so disposed that they will register only at an intermediate point in the swing of the wick tube, and a holding device on the frame for engaging and retaining said tube when moved inward, substantially as described. 5th. A collapsible lamp case, comprising four sides connected to each other by hinged joints, a perforated top hinged to the upper edge of one of the sides and engaging a catch on the opposing side, and a bottom hinged to one of the sides and also engaging a catch on the opposing side, the hinges of the top and bottom being disposed at a right angle to each other, substantially as described. 6th. A lamp case having four sides connected by hinged joints for adapting the same to be folded, a hinged top and a hinged bottom adapted to fold against the sides when closed, and a clip on one of the lamp sides, said clip comprising two sections made adjustable relatively to each other, substantially as and for the purpose described. 7th. The combination with the frame of a bicycle, and a lamp case removably attached to said frame, of an oil conducting arm or receptacle independently hinged to said frame and adapted to be folded close to the fork when not in use, substantially as described. 8th. The combination with the frame of a bicycle, and a lamp case detachably connected thereto, of an oil conducting arm or receptacle having an independent hinged connection with said frame whereby said receptacle may be folded when the lamp case is removed, substantially as described. 9th. The combination with a cycle frame, of an oil receptacle connected directly thereto and capable of being folded against said frame and means on said frame for holding said receptacle when it is folded against said frame, substantially as described. 10th. The hollow cylindrical or disc-shaped wick cap, in combination with the clip by means of which said cap is removably attached to the machine, substantially as described.

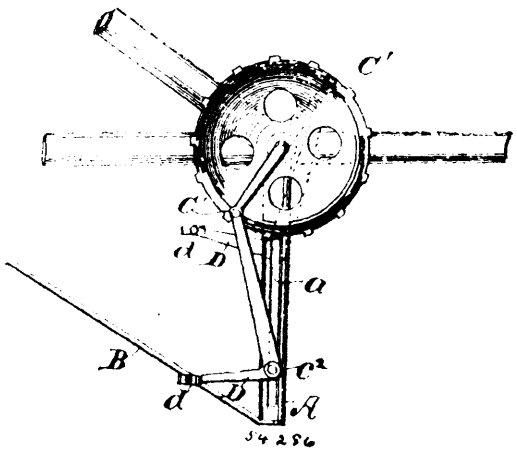
No. 54,286. Mechanical Movement.

(*Mouvement mécanique.*)

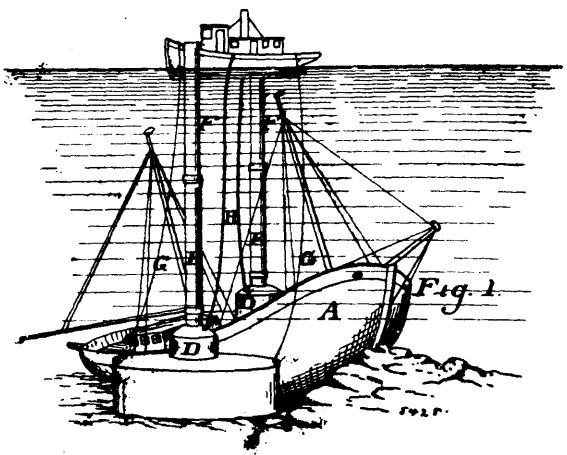
Mack Theophilus Smith and John Jex Woods, both of Vancouver, British Columbia, 7th December, 1896; 6 years. (Filed 2nd October, 1896.)

Claim.—1st. In a mechanical movement, the combination of parallel tubes secured within a casing, the said tubes and casing having

slots at opposite sides, plungers within the tubes, having shafts projecting through the slots of the tubes *a*, drive rods pivoted or fulcrumed to the extreme ends of the said shafts, the said drive rods branching at right angles from their engagement with the shafts, the ends of their vertical portions being pivoted to cranks upon a rotatable shaft, and their horizontal ends having pedals, substantially as specified. 2nd. In a mechanical movement, the combination of a casing having guideways for plungers, plungers working therein, reciprocating drive rods connected to the said plungers in line with the mechanism rotated, and the means of propulsion applied at a distance from and at right angles to their points of engagement with the said plungers, the upper ends of the drive rods pivotally connected to a mechanism to be rotated thereby, substantially as and for the purposes set forth.



No. 54,287. Apparatus for Raising Sunken Vessels.
(*Appareil pour mettre à flot les vaisseaux coulés.*)



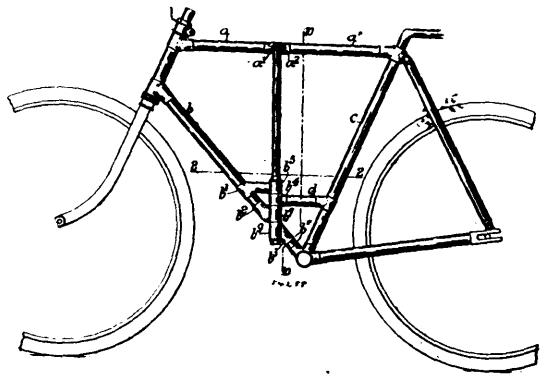
Albert Horace Wolf and Nicholas Joseph Boylan, both of Cleveland, Ohio, U.S.A., 7th December, 1896; 6 years. (Filed 3rd October, 1896.)

Claim.—The pontoon B, having dome D on its middle top part, and the chamber C located in its interior middle part, the stand pipe E on the top of said chamber C and extending upward out through the dome, and the hose H connected with the top of the dome, all constructed and combined as and for the purpose set forth.

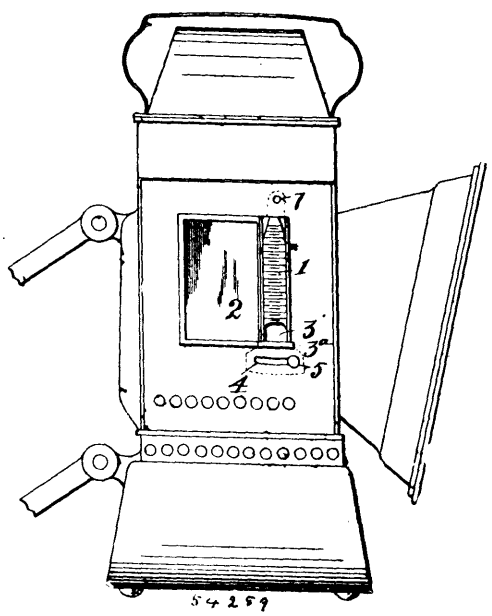
No. 54,288. Folding Bicycle. (*Bicycle pliant.*)

William Henry Percival and Lewis Peter Ford, both of London, England, 7th December, 1896; 6 years. (Filed 28th October, 1896.)

Claim.—1st. In a folding bicycle, dividing the frame and the steering handle and fitting the same with hinges and locking sockets, permanent hinge pins and removable locking pins, substantially as herein shown and described and for the purpose stated. 2nd. A folding bicycle provided with hinges and locking sockets arranged at right angles to the direction of the frame and connected together by a hinge pin or tube and a locking pin or tube, substantially as herein shown and described. 3rd. In a folding bicycle, the combination with hinges provided with sockets for attachment to the frame, of a permanent pivot common to both hinges and adapted to t rengthen the divided frame, substantially as herein shown and described. 4th. In a folding bicycle, having hinges provided with a permanent common hinge pin or tube and locking sockets, the combination therewith of a hinged locking bar, substantially as herein shown and described and for the purpose stated. 5th. In a folding bicycle, the peculiar construction of hinge and locking means consisting of sockets b^1 b^2 b^3 b^4, each provided with two short tubes b^5b^6, b^7b^8, b^9b^{10}, $b^{11}b^{12}$ connected together by webs or plates b^{13} and provided with a permanent hinge pin and a removable locking bar, substantially as herein shown and described. 6th. In a folding bicycle, the peculiar construction of a hinge for the upper tube consisting of sockets a^1 a^2 having leaves a^3 a^4 provided with perforations for a permanent hinge pin and open-ended slots a^6 for a removable locking bar, substantially as herein shown and described. 7th. In a folding bicycle, a handle bar having each half hinged to the steering tube and provided with an additional tube to receive a locking bolt, substantially as herein shown and described. 8th. The improvements in folding bicycles, substantially as herein shown and described.



No. 54,289. Bicycle Lamp. (*Lampe de bicycle.*)



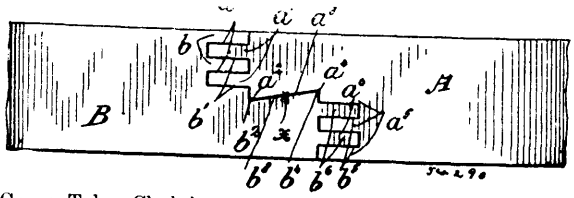
Joseph Henry Iredale, Liverpool, Lancaster, assignee of Alexander Douglas Prangley, of Bebington, Chester, England, 7th December, 1896; 6 years. (Filed 28th October, 1896.)

Claim.—1st. A cycle or other like lamp having a roughened surface at its exterior and at one end of such surface a match hole extending through the casing and located approximately opposite to the lamp wick, substantially as described and for the purpose specified. 2nd. A lamp having an external roughened surface, a match hole located at one end thereof and extending through the lamp case and an outwardly projecting extension or abutment located immediately at the lower or forward side of the hole, substantially as described. 3rd. A lamp having a roughened surface at its exterior, a match hole located at one end of such surface and extending through the lamp case and a movable cap whereby said hole can be normally kept closed, substantially as described. 4th. A lamp having at its exterior, a grooved part 1 the surface of which is roughened, a hole 3 located at the lower end of said groove and extending through the amp case, an outwardly projecting lip 3^a at the lower side of said

hole, and a pivoted plate 6 pivoted within the lamp case, adapted to close said hole and provided with a pin or handle 5 extending through a slot in the lamp case to the exterior thereof, substantially as described for the purposes specified.

No. 54,290. Joint for Wooden Fellies.

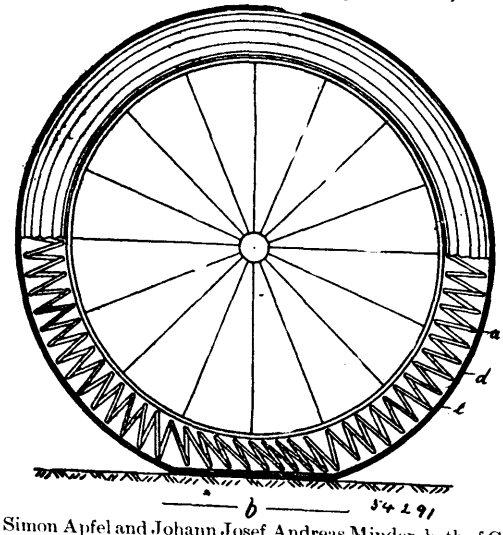
(*Joint pour jantes en bois.*)



George Tyler, Clarksburg, Ontario, Canada, 7th December, 1896; 6 years. (Filed 31st September, 1896.)

Claim.—In a joint for the wooden fellies of vehicle wheels, the combination of the grooves A and grooves A^6 in one end of same, of the corresponding tongues C and C^6 in the other end, of the two locking portions A^3 and C^3, and of the tongues A^1 and A^5 and the corresponding grooves C^1 and C^5, all arranged and put together in substantially the manner specified.

No. 54,291. Spring Tire. (*Bandage à ressort.*)

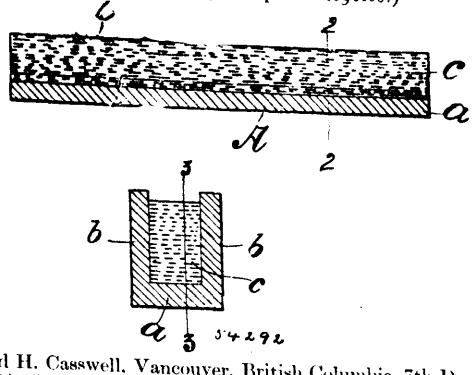


Dr. Simon Apfel and Johann Josef Andreas Minder, both of Cologne, Germany, 7th December, 1896; 6 years. (Filed 2nd November, 1896.)

Claim.—1st. A spring tire for cycles to replace the pneumatic tire, characterized by the arrangement of a somewhat flattened spiral spring clothed in a mantel, the rings of the spring being bent aside by the weight of the rider giving the elastic effect. 2nd. A form of executing the invention characterized in the first claim, consisting of the arrangement with two spiral springs placed one in another, the rings of which are bent in opposite directions.

No. 54,292. Lubricant for Bicycles.

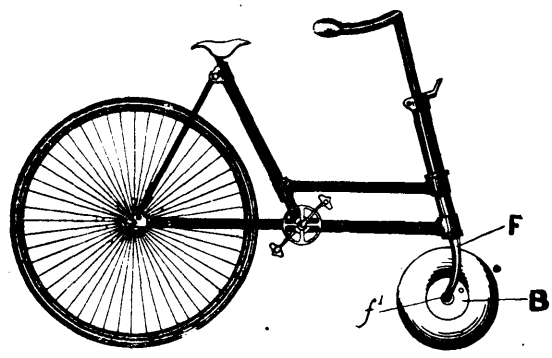
(*Lubrificant pour bicycles.*)



Richard H. Casswell, Vancouver, British Columbia, 7th December, 1896; 6 years. (Filed 4th November, 1896.)

Claim.—1st. In a lubricant for bicycle chain-drive-gear, the combination of the ingredients in the proportions as set forth, arranged within a U-shaped case, substantially as specified. 2nd. In a lubricant for bicycle chain-drive-gear, the combination of tale, mutton, tallow and paraffine wax in the proportions set forth, the said ingredients being incased in an elongaged U-shaped case open at each end, substantially as and for the purposes hereinbefore set forth.

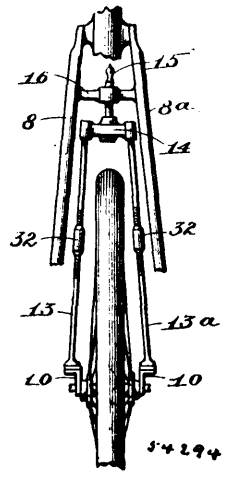
No. 54,293. Velocipede. (*Vélocipède.*)



James Edgar Hatch, West Bromwick, Stafford, England, 7th December, 1896; 6 years. (Filed 5th November, 1896.)

Claim.—1st. In a velocipede forming the front or steering wheel, having an air chamber, hub or nave with a pneumatic tire secured to its periphery and having a communication between the two in the manner and for the purpose substantially as hereinbefore described and shown at figures 1 and 2. 2nd. Forming the centre portion or hubs of wheels, of an hermetically sealed air chamber with the axle and bearing passing through the centre of such chamber, and having a tube communicating between the ordinary pneumatic tire and the hub or central air chamber, in the manner and for the purpose substantially as hereinbefore described and shown on the accompanying drawings at figures 4 and 5. 3rd. Forming and mounting the front forks of velocipedes in the manner hereinbefore described, so that the centre of the steering or front wheel is behind the centre of the steering head, and as shown on the accompanying drawings.

No. 54,294. Bicycle. (*Bicycle.*)

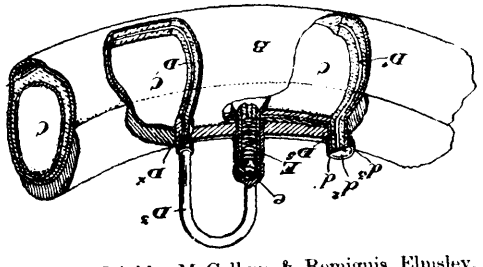


Augustus F. Letson and Albert E. Fox, both of Buffalo, New York, U.S.A., 7th December, 1896; 6 years. (Filed 5th November, 1896.)

Claim.—1st. In a bicycle, the combination with the fork bars and frame, of two springs secured thereto and to supporting pieces on the bearings in which the front wheel axle is mounted and turns, and means for keeping the wheel in its true position between said fork bars, substantially as described. 2nd. In a bicycle, the combination with the fork bars and supporting frame, of two springs secured thereto and to supporting pieces on the bearing case in which the front wheel axle is mounted and turns, and two upward inclining bars having their lower ends secured to the supports carrying said wheel, and their upper ends secured to a cross-bar having an upward extending bar mounted in a vertical slideway, thereby allowing a free action to the spring and at the same time holding the wheel in its true position, substantially as described. 3rd. In a bicycle, the combination with the fork bars and supporting frame, of two springs secured to said fork bars and to supporting pieces on the bearing case in which the front wheel axle is mounted and

turns, the front portion of the fork pieces extending down through slots in said springs to prevent lateral movement while allowing a free up and down movement, and means for adjusting said wheel and keeping it in its true position, substantially as described. 4th. In a bicycle, the combination with the fork bars and supporting frame, of two double curved springs, one spring being secured at both ends to each side of the bicycle fork, and having their base portions secured to supports carrying the wheel axle, the front ends of each spring being secured by a pin passing through a substantially horizontal slot in the lower front ends of the fork bars, and means for keeping the wheel in its true position between the fork bars, substantially as described. 5th. In a bicycle, the combination with the supporting frame, of curved springs having their curved portions pivoted to the rear frame bars, and their base portions bolted to supporting pieces carrying the rear wheel axle bearing, and their forward ends bolted to the crank shaft case, and means for adjusting the rear wheel vertically and horizontally and for holding it in its true position when adjusted and at the same time allowing a free up and down movement due to the action of the action spring, substantially as described. 6th. In a bicycle, the combination with a bicycle wheel and axle, of upright bars provided with turn buckles for lengthening or shortening them, their lower ends being rigidly secured to the axle bearing cases, one at each side of the bicycle wheel, a cross-bar connecting their upper ends, a holding bar rigidly connected to said cross-bar, and a slideway in which it is freely movable up or down, whereby the wheel is made easily adjustable, is held rigidly in its true position, and it has an easy up and down movement to allow a free action to the spring, substantially as described.

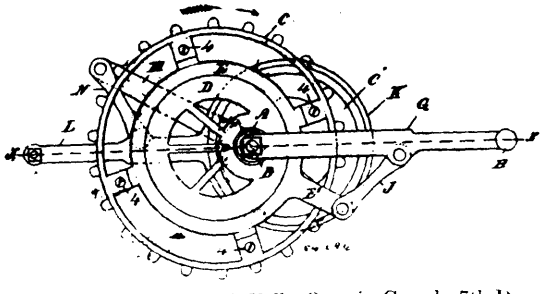
No. 54,295. Air Pump. (*Pompe à air.*)



James Harry Keighly McCollum & Remiguis Elmsley, both of Toronto, Ontario, Canada, 7th December, 1896; 6 years. (Filed 5th November, 1896.)

Claim.—1st. In a pneumatic tire for bicycle and other wheels, an automatic air pump comprising an air passageway located in the tire open at one end and provided with a valve at the other, which connects with the ordinary air tube and so arranged that upon each revolution of the wheel the passageway is continuously collapsibly compressed from the open end towards the inner end communicating with the air tube, as and for the purpose specified. 2nd. In a pneumatic tire for bicycle and other wheels, in combination the tire the air tube, the air passageway located in the outer periphery of the tire, branch passageway extending from one end into the open air and a branch passageway connecting the opposite end of the air passageway with the air valve communicating with the air tube as and for the purpose specified. 3rd. In a pneumatic tire for bicycle and other wheels, in combination the tire, the air tube, the air passageway located in the outer periphery of the tire, branch passageway extending from one end into the open air and a branch passageway connecting the opposite end of the air passageway with the air valve communicating with the air tube, and a protective strip of non-puncturable material situated to the outside of the air passageway and suitably secured to the periphery of the tire, as and for the purpose specified.

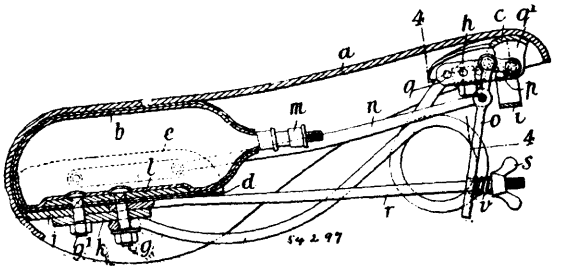
No. 54,296. Bicycle Driving Gear.
(*Engrenage conducteur pour bicycles.*)



Isaac Philip Patton, Smith's Falls, Ontario, Canada, 7th December, 1896; 6 years. (Filed 5th November, 1896.)

Claim.—1st. In a bicycle gear, the bracket or shell A having on one end a circular disc eccentrically secured thereto, the longer radius rearwardly of the bracket, and a like circular disc secured eccentrically on the opposite end of the bracket, the longer radius forwardly of the bracket, as and for the purpose set forth. 2nd. The combination with the axle or driving shaft B, and supporting bracket A, having on each end a circular stationary disc eccentrically secured thereto, the longer radius of one disc horizontal and rearward of the bracket, and the longer radius of the other disc horizontal and forward of the bracket, a sprocket wheel or ring mounted circumferentially on one of said discs and provided with a lever extending radially therefrom, and connected to a pedal lever keyed on the corresponding end of the axle, as set forth. 3rd. The combination with the axle or driving shaft B, and its supporting bracket or shell A carried by the bicycle frame and having a circular disc secured eccentrically on the ends of said bracket, the longer radius of one disc rearwardly of the bracket, a sprocket wheel or a ring and sprocket wheel supported circumferentially on said disc and having an arm or lever extending radially from the circumference and movably connected to a pedal lever keyed on the corresponding end of the axle, and a crank lever keyed to the opposite end of the axle and connected pivotally or movably to a pedal lever secured at one end to a ring circumferentially supported by the circular disc on the corresponding end of the bracket, whereby the pedals carried by the pedal levers will, at the downward motion, be farther away from the sprocket wheel than when ascending, for the purpose set forth. 4th. The combination in a bicycle driving gear, of the bracket A having at opposite ends a circular disc eccentrically secured thereto, the longer radius of one disc rearward and the other forward of the bracket, a ring rotatively mounted on the periphery of said discs, each ring having a radial arm or lever extending from the circumference, an axle passing through said bracket and having at the ends a lever connected to said radial levers to rotate the rings by the rotation of the axle by pedal power, and a sprocket wheel connected to one of said rings to drive a sprocket chain, as set forth.

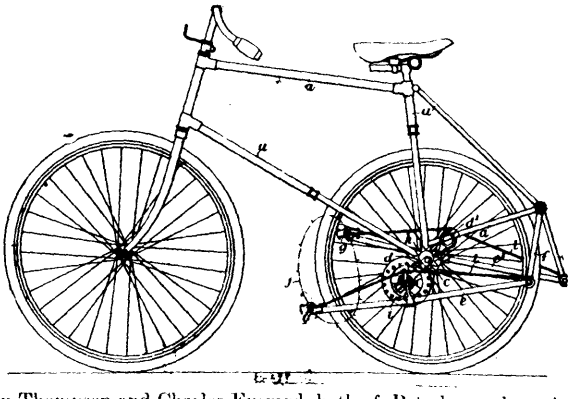
No. 54,297. Velocipede Saddle. (*Selle de vélocipède.*)



Robert Crossman and Joseph Powell, both of King's Lynn, England, 7th December, 1896; 6 years. (Filed 5th November, 1896.)

Claim.—1st. A saddle for cyclists and others wherein the frame end or nose of the saddle is directly supported by an air cushion, substantially as described. 2nd. A saddle for cyclists and others having an inflatable bag or chamber at the nose or front portion and connected at its rear end to a bar which can slide in guides against the pressure of a spring or springs, substantially as described. 3rd. In a saddle having the front portion distended by means of an air-bag, a bracket such as *d* having flanges for confining the bag laterally during inflation, substantially as and for the purposes described.

No. 54,298. Bicycle. (*Bicycle.*)

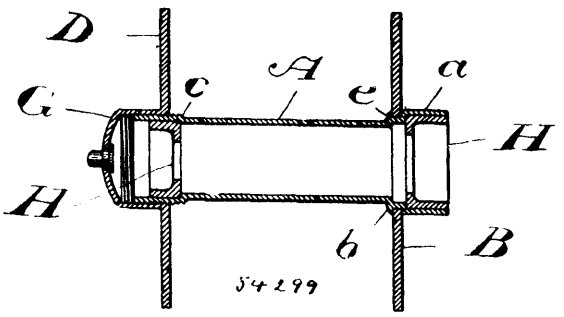


John Thompson and Charles Everard, both of Peterborough, assignee of John Harrison Stanford, and James Dodd, Nottingham, all in England, 7th December, 1896; 6 years. (Filed 5th November, 1896.)

Claim.—1st. In a velocipede the combination with the cranks of pedal-bars mounted upon the said cranks and connected at their

rear ends to links depending from the frame and at their front ends carrying the pedals, one or both of the said pedal-bars carrying an elliptical planet wheel engaging with an elliptical or eccentric sun wheel on the hub of the driving wheel whereby as the cranks are rotated the said pedals will be caused to move at an approximately uniform speed in an approximately elliptical path, substantially as described. 2nd. In a velocipede the employment of elliptical gear-wheels for transmitting the motion of the cranks to the hub of the driving wheel, the planet wheel of the said gearing being provided with a boss extending through one of the crank-arms and serving as a crank-pin for supporting one of the treadle-bars, which bars at their rear ends are connected to links depending from the frame and at their front ends carry pedals, substantially as described. 3rd. The manufacture and use of bicycles having driving mechanism arranged and operating substantially as hereinbefore described and illustrated in the accompanying drawings.

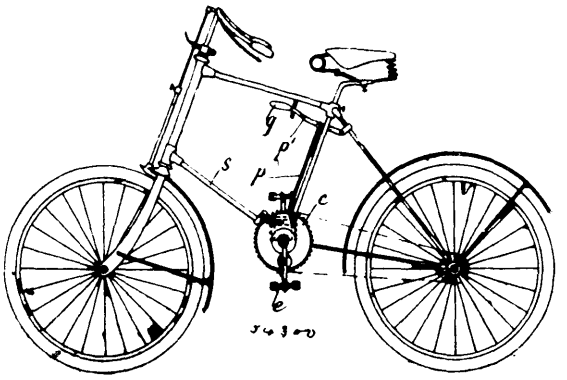
No. 54,299. Pedal. (*Pédale.*)



The Diamond Machine and Tool Company, assignee of Frank S. Jackson, all of Toronto, Ontario, Canada, 7th December, 1896; 6 years. (Filed 7th November, 1896.)

Claim.—1st. In a pedal, a barrel composed of a soft steel tube with expanded ends and turned tempered steel cups fitted into the said ends, substantially as and for the purpose specified. 2nd. In a pedal, the combination of a cross bar having a notched or indented hole formed therein, with a soft steel bar passing through the said hole and expanded into the notches or indentations, substantially as and for the purpose specified. 3rd. In a pedal, the combination of a soft steel tube with expanded ends, turned tempered steel cups fitted into the said ends, and a cross bar having a notched or indented hole formed therein, into which the metal of the tube has been expanded, substantially as and for the purpose specified. 4th. In a pedal, the combination of a soft steel tube with expanded ends, turned tempered steel cups fitted into the said ends, and a cross bar having a notched or indented hole formed therein, into which the metal of the tube has been expanded, and a cross bar having a screw-threaded hole formed therein adapted to fit one of the enlarged ends of the tube which is similarly threaded to receive it, substantially as and for the purpose specified. 5th. In a pedal, the combination of a cross bar having a notched or indented hole therein, with a soft steel barrel passing through the said hole and expanded into the notches or indentations, and having ridges expanded on each side of the cross bar and in contact therewith, substantially as and for the purpose specified. 6th. The process of forming a barrel for pedals, which consists in expanding the ends of a soft steel tube and inserting therein turned tempered steel cups, substantially as and for the purpose specified. 7th. The process of forming a barrel for pedals, etc., which consists in stamping a cross bar or flange with a notched or indented hole therein, and then in expanding a soft steel tube to fill the said hole, substantially as and for the purpose specified. 8th. The process of forming a barrel for pedals, etc., which consists in expanding the end of a soft steel tube to form an enlargement *a*, then by the action of another die forming the enlargement *b*, then in forcing a cross bar or flange having a notched or indented hole therein over the enlargement *b* and expanding this enlargement still further to fill the hole, substantially as and for the purpose specified. 9th. The process of forming a barrel for pedals, etc., which consists in expanding the end of a soft steel tube to form an enlargement *a*, then by the action of another die forming the enlargement *b*, then in forcing a cross bar or flange having a notched or indented hole therein over the enlargement *b* and expanding this enlargement still further to fill the hole, at the same time enlarging the other end of the tube, substantially as and for the purpose specified. 10th. The process of forming a barrel for pedals, etc., which consists in stamping a cross bar or flange with a hole therein having notches or indentations forming at its edges, and then in expanding a soft steel tube under end pressure to fill the said hole and force up the metal of the tube to form a bead against the side of the said cross bar, substantially as and for the purpose specified. 11th. The process of forming a barrel for pedals, etc., which consists in expanding the end of a soft steel tube under end pressure to form an enlargement *a*, then by the action of another die forming the enlargement *b*, then in forcing a cross bar or flange having a hole therein with notches or indentations formed at its edges over the enlargement *b* and expanding this enlargement still further to fill the hole, at the same time forcing up the metal of the tube to form a bead against the side of the said cross bar, substantially as and for the purpose specified. 12th. The combination with the serrated frame of a pedal, of auxiliary plates connected thereto, the serrations of which "break joint" with the serrations of the pedal frame, substantially as and for the purpose specified.

No. 54,300. Bicycle Gearing. (*Engrenage de bicycle.*)

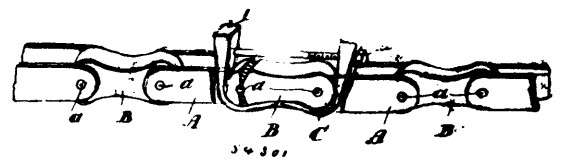


Fritz Hermann Vagt, Vaudsbeck, Germany, 7th December, 1896; 6 years. (Filed 7th November, 1896.)

Claim.—1st. The improved driving gear for cycles in which the proportion or ratio of the driving gear connected with the crank shaft to the driven gear connected with the hind or driving-road-wheel of the cycle can be changed by means of an internally toothed wheel *a*, connected to the chain driving a^1, and arranged to be moved radially on the crank shaft, so that it can be put into or out of gear with a toothed wheel *b* secured on the crank shaft, or into or out of gear with the crank arm *c*, constructed and arranged substantially as hereinbefore described. 2nd. In driving gear for cycles of the kind forming the subject of the first claiming clause hereof, the mechanism which consists of a toothed wheel *a*, arranged to be moved radially with reference to the crank shaft means of levers *o*, *p*, and a link *q*, in combination with a recess *i*, connected with the wheel *a*, with which recess *a* spring-urged slide or bolt *k*, arranged on the crank arm *c*, engages when the wheel *a* is moved out of gear with the fixed wheel *b*, so that the wheel *a* is then carried directly by the said crank arm *e*, constructed and arranged substantially as hereinbefore described.

No. 54,301. Link for Bicycle Drive Chains.

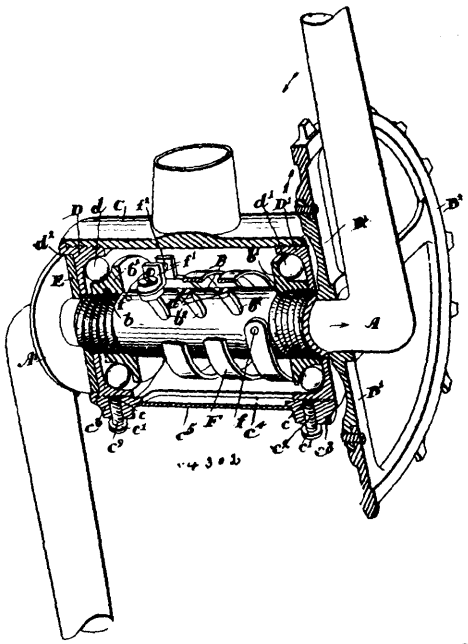
(*Anneau pour chaînes de bicycle.*)



John Peddie Browning, Alexander David Hardy and Frederick G. Hawkes, all of Brantford, Ontario, Canada, 7th December, 1896; 6 years. (Filed 7th November, 1896.)

Claim.—1st. As an auxiliary link for joining broken and disconnected links in a bicycle chain, a U-shaped reach adapted to fit snugly around the inner side and ends of the solid link and a detachable connecting device for securely bracing the outer ends of the U-shaped reach together, as and for the purpose specified. 2nd. As an auxiliary link for joining broken and disconnected links in a bicycle chain, a U-shaped reach adapted to fit snugly around the inner side and ends of the solid link and a bolt designed to be passed through the enlarged thickened outer ends of the U-shaped reach, as and for the purpose specified. 3rd. As auxiliary links for joining broken and disconnected links in a bicycle chain, two U-shaped reaches adapted to fit snugly around the inner sides and ends of the adjacent disconnected links, a connecting device extending between the outer ends of each U shaped reach and a flexible connection between the auxiliary links, as and for the purpose specified. 4th. As auxiliary links for joining broken and disconnected links in a bicycle chain, two U-shaped reaches adapted to fit snugly around the inner sides and ends of the adjacent disconnected links, a connecting device extending between the outer ends of each U-shaped reach, bolts extending through the outer ends of the U-shaped reaches, a jaw-head on the end of one bolt and a flat head on the opposite bolt between the auxiliary links and a pin extending through the jaw-head and flat head to form a hinge, as and for the purpose specified.

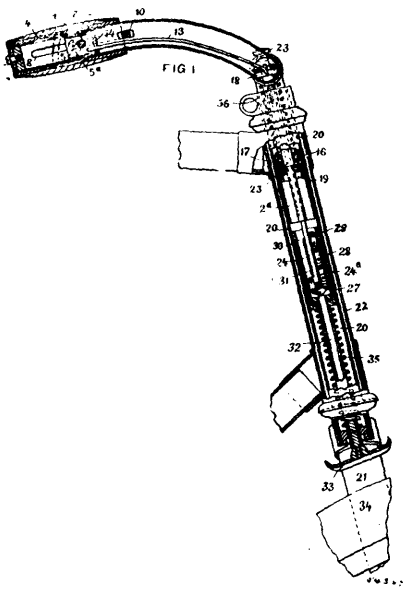
No. 54,302. Bicycle Brake. (*Frein de bicycles.*)



Edgar Descum Misner, Toronto, Ontario, Canada, 7th December, 1896; 6 years. (Filed 7th November, 1896.)

Claim.—1st. In a bicycle brake, the combination with the journal bracket and bearings formed in the ends thereof, of the sprocket wheel, the sleeve attached to or forming part of the same and securely held from lateral displacement in its bearings, and the pedal crank axle extending through such sleeve, as and for the purpose specified. 2nd. In a bicycle brake, the combination with the journal bracket and bearings formed in the ends thereof, of the sprocket wheel, the sleeve attached to or forming part of the same and securely held from lateral displacement in its bearings, and the pedal crank axle extending through such sleeve, and an adjustable frictional connection between the sleeve and a stationary portion of the journal bracket whereby upon back pedalling such fractional connection is thrown in, as and for the purpose specified. 3rd. In a bicycle brake, the combination with the journal bracket and bearings formed in the ends thereof, of the sprocket wheel, the sleeve attached to or forming part of the same and securely held from laternal displacement in its bearings, and the pedal crank axle extending through such sleeve, a friction disc at the opposite end of the sleeve to the sprocket wheel and a ring flange on the pedal axle adjacent to such friction disc, and means for normally holding such flange out of engagement with the friction disc and yet permit it being brought into engagement by back pedalling, as and for the purpose specified. 4th. In a bicycle brake, the combination with the journal bracket and bearings formed in the ends thereof, of the sprocket wheel, the sleeve attached to or forming part of the same and securely held from lateral displacement in its bearings, and the pedal crank axle extending through such sleeve, a friction disc at the opposite end of the sleeve to the sprocket wheel, a ring flange on the pedal axle adjacent to such friction disc, oblique slots in the sleeve, pins secured in the pedal crank axle and extending into the slots, and means for normally holding the pins against the ends of the slots nearer the friction disc, as and for the purpose specified. 5th. In a bicycle brake, the combination with the journal bracket and bearings formed in the ends thereof, of the sprocket wheel, the sleeve attached to and forming part of the same and securely held from lateral displacement in its bearings, and the pedal crank axle extending through such sleeve, a friction disc at the opposite end of the sleeve to the sprocket wheel, a ring flange on the pedal axle adjacent to such friction disc, oblique slots in the sleeve, pins secured in the pedal crank axle and extending into the slots, and a spiral spring secured at one end of the sleeve and at the opposite end a pin extending through the oblique slot at the opposite end of the sleeve, as and for the purpose specified. 6th. In a bicycle brake, the combination with the journal bracket and bearings formed in the ends thereof, of the sprocket wheel, the sleeve attached to or forming part of the same and securely held from lateral displacement in its bearings and the pedal crank axle extending through such sleeve, a friction disc at the opposite end of the sleeve to the sprocket wheel, a ring flange on the pedal axle adjacent to such friction disc, oblique slots in the sleeve, pins secured in the pedal crank axle and extending into the slots, a spiral spring secured at one end of the sleeve and having the other end bent, a bracket secured on the top of the pin extending through the slot at the opposite side of the sleeve, and a set screw extending through such bracket and the turned end of the spring, as and for the purpose specified. 7th. In combination, the journal bracket, the end cups, the sprocket wheel, the sleeve attached to or forming part thereof and having threaded ends, the cones screwed on to the ends, the balls between the cones and the cups, the recess in the outer end of one cup, the friction disc inserted therein, the pedal crank axle having a ring flange located adjacent to the friction disc, oblique slots in the sleeve, pins secured in the pedal crank axle and extending into the slots, and the spiral spring secured at one end of the sleeve and at the opposite end to a pin extending through the slot nearest the friction disc, as and for the purpose specified.

No. 54,303. Brake. (*Frein*)



Edward Spencer Hall, New York, State of New York, U.S.A., 7th December, 1896; 6 years. (Filed 9th November, 1896.)

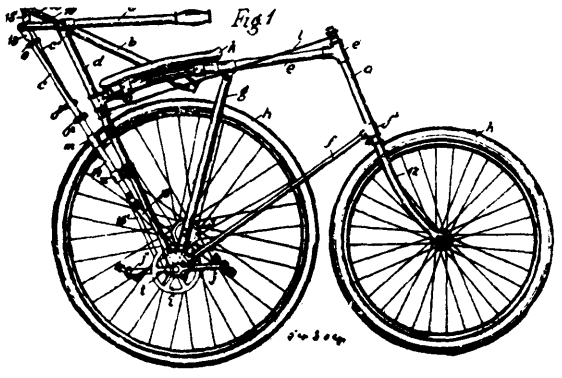
Claim.—1st. Brake-operating devices comprising a revoluble handle provided with a screw having an initial quick-pitch and a following slow-pitch of thread, a movable part actuated by the screw, and connections from said movable part to the brake device. 2nd. Combined steering and brake-operating devices, comprising a steering bar coupled with the vehicle wheel, a handle fitted revolubly on the steering bar and provided with a screw having an initial quick-pitch and a following slow-pitch of thread, a movable part actuated by the screw, and connections from said movable part to the brake device. 3rd. Brake-operating devices, comprising a tube, a handle fitted revolubly thereon and provided with an interior indented screw having an initial quick-pitch and a following slow-pitch of thread, a movable part within the tube and having a projection entering the indented screw of the handle, and connections from said movable part to the brake device. 4th. Combined steering and brake-operating devices, comprising a tubular steering bar coupled with the vehicle wheel, a handle fitted revolubly on the steering bar and provided with an indented screw having an initial quick-pitch and a following slow-pitch of thread, a movable part within the steering bar and having a projection entering the indented screw of the handle, and connections from said movable part to the brake device. 5th. Brake-operating devices, comprising a revoluble handle provided with an interior indented screw and a slot leading from the end of the handle to said screw and providing a lateral shoulder at the beginning of the screw, a movable part having a projection adapted to both the leading slot and the screw, and connections from said movable part to the brake device, substantially as described, whereby the leading slot guides the projection of the movable part to the screw and permits turning of the handle only in direction to cause said projection to enter the screw and operate the brake. 6th. Brake-operating devices, comprising a brake, and means actuating it from a handle bar, including an intermediate connection, comprising draft devices leading from the brake and its operating means and a telescoping screw coupling loosely supported at its upper part by the draft devices of the operating means, and connected at its lower part to the brake-actuating draft devices. 7th. Brake-operating devices, comprising a brake, and means actuating it from a handle bar, including an intermediate connection, comprising draft devices leading from the brake and its operating means and a telescoping screw coupling loosely supported at its detachable upper part by the draft devices of the operating means and connected at its lower part to the brake-actuating draft devices, said upper part of the coupling being visible and thereby indicating the movement of the brake device. 8th. Brake-operating devices, comprising a brake, and means actuating it from a handle bar consisting of flexible connections within the handle bar and

the vehicle frame, a sliding block within the handle bar stem and an extensible or telescoping coupling within the handle bar stem, and comprising a shouldered upper part resting loosely by its shoulder on the sliding block and a lower part adjustable on said shouldered upper part and coupled to the brake-operating draft device. 9th. In brake-operating devices, the combination with the brake device and its slide or plunger, of a fixed part in the plunger guide, and a flexible connection leading from the brake-operating device and passing in a bight under or around said fixed part and connected to the plunger, substantially as described, whereby as the main draft portion of the flexible connection moves in one direction the plunger and the brake will be moved in the other direction to apply and release the brake. 10th. Brake-operating devices comprising operating means on a handle bar, a flexible connection to said operating means and having two branches 16, 17, entering the handle bar stem, a sliding block 19 in the stem and connected to the parts 16, 17, a coupling comprising an interiorly threaded upper tube 23 having a lower end loosely passing through the block 19, and a shoulder 23^a resting on the block, and a lower rod 24 having screw threads adapted to the threads of the tube 23, and a draft connection between the rod 24 and the brake device, substantially as described. 11th. Brake-operating devices having an intermediate connection between the brake and its operating means which includes draft connections having parts transferring the draft strain from the inside to the outside of the steering wheel fork stem at a point distant from the fork head, substantially as described. 12th. Combined brake-operating and steering devices having an intermediate connection between the brake and its operating means which includes draft connections partly within and partly outside the fork stem, and parts transferring the draft strain from the inside to the outside of the fork stem through an opening in the stem at a point removed from the fork head thereby avoiding weakening of the fork. 13th. The combination, with a vehicle frame, a steering wheel, and a brake acting on another wheel of the vehicle, of means operating the brake including draft connections having parts within the steering wheel fork stem and other parts transferring the draft strain from the inside to the outside of the fork stem at a point distant from the fork head. 14th. Brake-operating devices having an intermediate connection between the brake and its operating means which includes draft connections within and without the steering wheel fork stem and a swivel loose outside the fork stem and having an annular shoulder resting on a projection of the upper draft devices which passes through the fork stem at a point distant from the fork head, the lower draft devices being coupled to the swivel and to the brake. 15th. Brake-operating devices having an intermediate connection between the brake and its operating means which includes draft connections within and without the steering wheel fork and a swivel loose outside the fork stem and having an annular shoulder resting on a projection of the upper draft devices which passes through the fork stem at a point distant from the fork head, the lower draft devices being coupled to the swivel and to the brake, and a spring normally moving the swivel downward. 16th. The combination, with the vehicle frame, a steering wheel, a handle bar thereon, and a brake device, of draft connections operating the brake from the handle bar and including intermediate parts comprising an extensible coupling adapted to vertically adjust the handle bar and loosely supported by the upper draft connections and having at its lower part a projection passing through a slot in the fork stem, a swivel outside the fork stem and having an annular shoulder resting on said projection, and lower draft connections from the swivel to the brake device. 17th. The combination, with the vehicle frame, a steering wheel, a handle bar thereon, and a brake device, of draft connections operating the brake from the handle bar and including intermediate parts comprising an extensible coupling adapted to vertically adjust the handle bar and loosely supported by the upper draft connections and having at its lower part a projection passing through a slot in the fork stem, a swivel outside the fork stem and having an annular shoulder resting on said projection, a spring normally moving the swivel downward, and lower draft connections from the swivel to the brake device. 18th. The combination, with the tubular parts 22, 48^a, of a vehicle frame, a brake device and means operating the brake, of the steering wheel fork 21, having a stem 20^a entering part 22, a swivel 37, 38, 39, 40, on the stem 20^a, a part 43 coupled with the brake-operating device and having a projection 42, passing through a slot 44, of the fork stem and engaging below a shoulder 41 of the swivel, a spring 51, on the fork stem above the swivel, and connections from the swivel to the brake device, substantially as described. 19th. The combination, with the tubular frame parts 22, 48^a, a brake acting on the rear wheel of a vehicle, a handle bar, and means operating the brake from the handle bar, of the front steering wheel fork 21, having a stem 20^a, entering the frame tube 22, a swivel on the stem 20^a, a sliding block 19, upper draft connections from said block to the brake-operating means, an adjustable coupling 23, 24^b, loosely sustained by the block 19, and carrying a pin 42 passing through a slot 44, of the fork stem and engaging below a shoulder 41 of the swivel, and lower draft connections passing through the frame bar 48^a, from the swivel to the rear wheel brake, substantially as described.

No. 54,304. Velocipede. (*Vélocipède.*)

Stanislav Züngel, Prague, Bohemia, Austria, 7th December, 1896; 6 years. (Filed 16th November, 1896.)

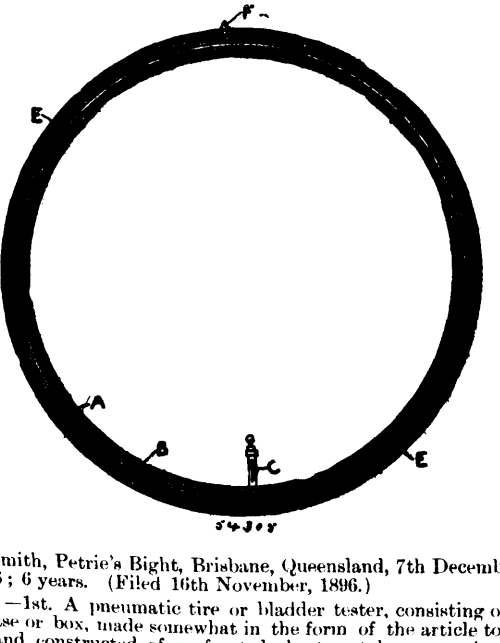
Claim.—1st. In a cycle, the combination with the leading wheel *h*, gear-wheels *i*, i^1 geared to drive said wheel *h*, pedal-cranks on the



axles of said wheels *i*, i^1, an oscillatory transverse guide-rod 9, hand levers *b*, b^1 pivoted on said guide-rod, and rods coupling said hand levers directly to the wheels *i*, i^1, for the purpose set forth. 2nd. In a cycle, the combination with the frame of the leading wheel *h* journalled to revolve in a fixed plane in said frame, a trailing wheel h^1, forks 12, 12^1, and pillar *a* for said trailing wheel, a guide-bar *d* having a cross-head 9, said pillar *a* and guide-bar *d* being rotarily movable in said frame, arms on said pillar and guide-bar, rods connecting said arms, wheels *i*, i^1 geared to the leading wheel *h*, pedal-cranks on the axles of wheels *i*, i^1, hand-levers pivoted on the cross-head 9, and rods with rotary connections for coupling said hand levers directly to the wheels *i*, i^1, for the purpose set forth. 3rd. The combination with a hollow wheel-fork spindle, of an air pump arranged therein, and a nozzle 3 in the fork crown with a connecting tube adapted for connection with the tire-valve. 4th. A hollow velocipede wheel fork having above an inflation valve, and below an outlet valve, the whole serving as a lubricating cup, substantially as set forth. 5th. In a front driving cycle, the combination with the cycle frame, of a saddle placed above the front wheel thereof and extended in the plane of the frame to enable the centre of gravity of the rider to assume the same relation to the front wheel under varying inclinations of road.

No. 54,305. Pneumatic Tire Tester.

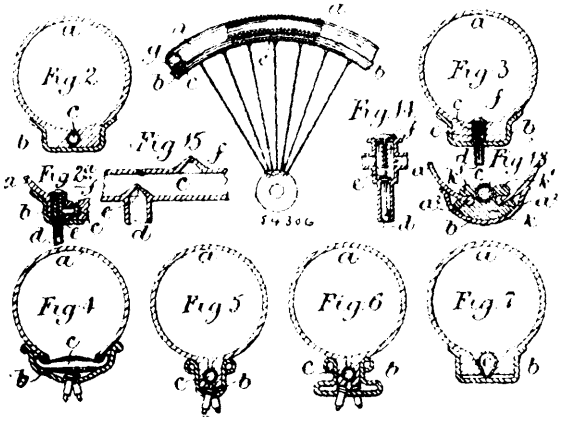
(*Appareil pour faire l'épreuve des bandages pneumatiques.*)



James Smith, Petrie's Bight, Brisbane, Queensland, 7th December, 1896; 6 years. (Filed 16th November, 1896.)

Claim—1st. A pneumatic tire or bladder tester, consisting of a metal case or box, made somewhat in the form of the article to be tested, and constructed of perforated sheet metal, woven wire, or other suitably apertured material. 2nd. For testing the inner or air tube of a pneumatic tire, a case or box made in two pieces, such as A, E, the outer part being securely fastened when in place round the inner part, substantially as herein described. 3rd. In combination with a box or case for testing a pneumatic tire or bladder, a pressure indicator operated by the pressure of the air tube on a saddle piece such as D, for the purpose of indicating the pressure on the tube under test.

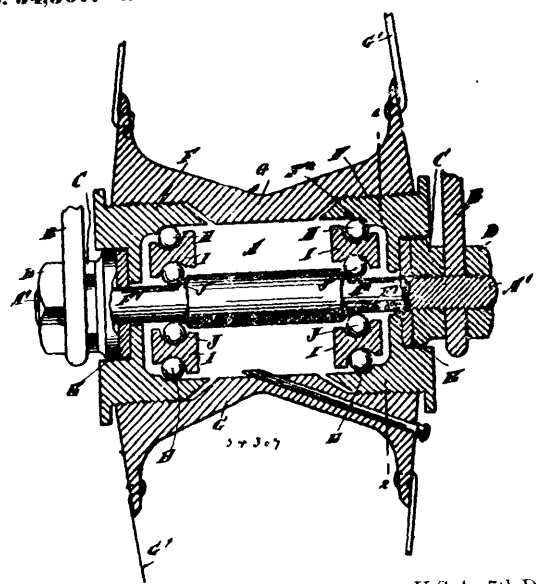
No. 54,306. Pneumatic Tire. (*Bandage pneumatique.*)



Henry Pattman Trueman, Handsworth, England, 7th December, 1896; 6 years. (Filed 16th November, 1896.)

Claim.—1st. The combination of a wheel rim *u*, a pneumatic tire *a*, and one or more small tubes *c*, substantially as and for the purposes described. 2nd. The combination of a small tube *c*, a pneumatic tire *a*, and a pair of valves *e*, *f*, substantially as and for the purposes described. 3rd. The pneumatic tire *a*, formed with inner film a^6, and inflation inlet *h*, substantially as and for the purposes described.

No. 54,307. Ball Bearing. (*Coussinet à roulettes.*)



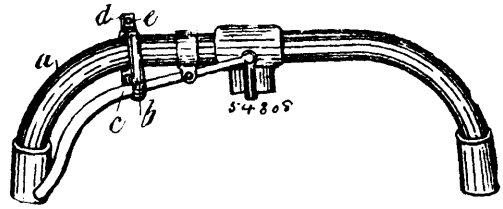
Harry Alexander Stephens, Missoula, Montana, U.S.A., 7th December, 1896; 6 years. (Filed 18th November, 1896.)

Claim.—The combination of a hub, an annular bearing secured in each end of the hub, each bearing having an inwardly extending flange axially orificed and each bearing also having an inwardly facing shoulder located inward of the respective flanges and forming ball seats, an axle having reduced ends respectively passed through the orifices of the flanges, the axle having at the inner terminal of each reduced portion an outwardly facing shoulder forming ball seats, a fork in which the terminals of the axle are mounted, a nut on each terminal against which nuts the outer sides of the flanges respectively bear, two rings contained within the hub and respectively located adjacent to the flanges of the bearings, each ring having a peripheral groove and an internal groove, one wall of each groove being of increased height to oppose the corresponding shoulders respectively on the bearings, and the axle, and anti-friction balls distributed throughout the grooves of the rings and respectively bearing on the seats formed by the shoulders of the axle and bearings, substantially as described.

No. 54,308. Bicycle Brake. (*Frein de bicycle.*)

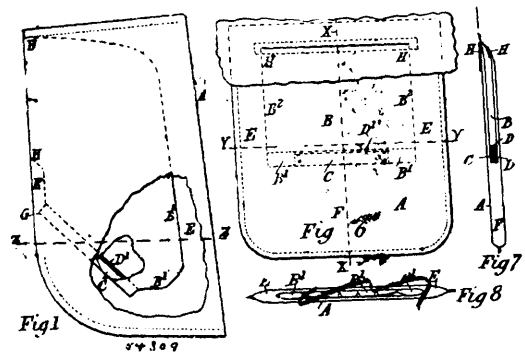
Edwin Robert Standfield and Thomas DeRenzy Harman, both of Canterbury, New Zealand, 7th December, 1896; 6 years. (Filed 25th November, 1896.)

Claim.—1st. A device for holding the brake lever of a cycle to keep the brake applied to the wheel consisting of a loop or collar covered with india-rubber sliding upon the handle bar and also embracing the brake lever, substantially as herein described. 2nd.



In combination the handle bar of a cycle, a loop thereon and a hook made integral with the loop into which the brake lever may be slipped when the brake is operated, substantially as and for the purposes specified.

No. 54,309. Garment Pocket. (*Poche de vêtement.*)



Edward James Curran, Bathurst, New South Wales, Australia, 10th December, 1896; 6 years. (Filed 2nd December, 1895.)

Claim.—1st. In a garment pocket, the combination of an enclosing pocket A, an enclosed pocket B hanging freely within A, and having an openable part leading to A, said part normally closed by spring steels C, D, substantially as described and illustrated and for the purposes set forth. 2nd. In a garment pocket, the combination of an enclosing pocket A, an enclosed pocket B hanging freely within A, and having an openable part leading to A, said part normally closed by spring steels C, D, one of said steels having a lip D^1, substantially as described and illustrated and for the purposes set forth. 3rd. In a garment pocket, the combination of an enclosing pocket A, an enclosed free hanging pocket B having an openable part normally closed by spring steels (or a spring steel and an elastic material), and a base part D^1 or B^5 not openable, substantially as and for the purposes described and as illustrated. 4th. In a garment pocket, the combination with an outer pocket A, of an inner pocket B, having springs C and D, lip D^1, arranged to project towards the outer side of the garment, slots D^2, and apertures D^3 and C^3, all substantially as and for the purpose set forth.

No. 54,310. Method of Making Gum.

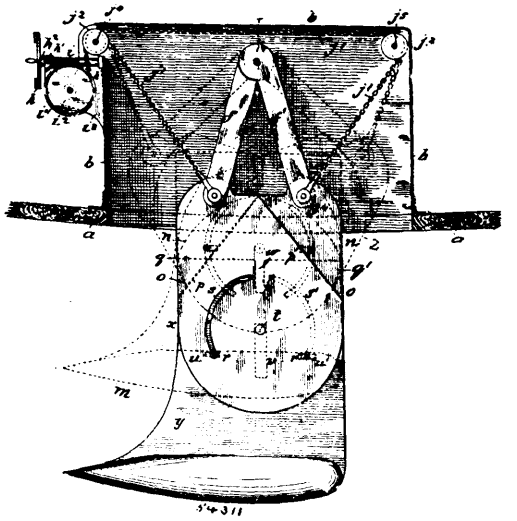
(*Méthode de faire de la gomme.*)

Peter Cameron Douglas Castle, Liverpool, Lancaster, England, 10th December, 1896; 6 years. (Filed 8th April, 1896.)

Claim.—1st. The improvement in the process of obtaining a manufacturers' gum from the seeds of the locust tree (*Ceratonia Siliqua*), which consists in the prolonged soaking of the cotyledons in water between 71° and 82° centigrade with occasional stirring but without allowing the material to boil, then separating the liquid from the solid ingredients. 2nd. The improvement in the process of obtaining a manufacturers' gum from the seeds of the locust tree (*Ceratonia Siliqua*), which consists in steeping the kernels in water maintained at a temperature not exceeding 82° centigrade with occasional agitation as described, separating the gum from the solid matter and adding farina, substantially as described. 3rd. The improvement in the process of obtaining a manufacturers' gum from the seed of the locust tree (*Ceratonia Siliqua*), which consists in steeping the kernels in water maintained at a temperature not exceeding 82° centigrade with occasional agitation as described, separating the gum from the solid matter and adding farnia and hydrochloric acid, substantially as described. 4th. The improvement in the process of obtaining a manufacturers' gum from the seeds of the locust tree (*Ceratonia Siliqua*), which consists in steeping the kernels in water maintained at a temperature not exceeding 82° centigrade with occasional agitation as described, separating the gum from the solid matter and adding farina and hydrochloric acid and thoroughly incorporating therewith mineral loading material. 5th. The improvement in the process of obtaining a manufacturers' gum from the seeds of the locust tree (*Ceratonia*

Siliqua), which consists in adding to the gum made from the beans of the locust beans known in commerce as gum tragasol, carbolic acid. 6th. As a new article of manufacture, a composition formed of gum tragasol, being the gummy aqueous extract of the kernels of the *Ceratonia Siliqua*, or locust bean, combined with farina. 7th. As a new article of manufacture, a composition formed of gum tragasol, being the gummy aqueous extract of the kernels of the *Ceratonia Siliqua*, or locust bean, combined with farina and carbolic acid, substantially as described.

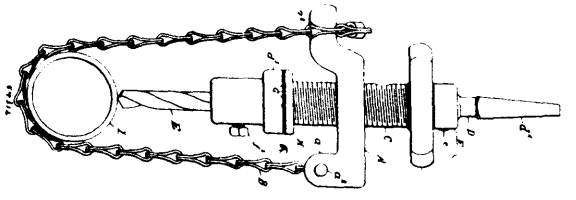
No. 54,311. Keel. (*Quille.*)



Herbert Wynne Fairbrass, London, England, 10th December, 1896; 6 years. (Filed 27th April, 1896.)

Claim.—1st. The combination of drop keel, gear for housing and lowering it, and mechanism for working the said gear, as set forth. 2nd. The combination of 2-part drop keel, with gear for housing and lowering it, and mechanism for working the said gear, as set forth. 3rd. The combination of 2-part drop keel and cover for the same, with gear for housing and lowering them, and mechanism for working the said gear, as set forth. 4th. The combination of levers or plates pivoted together and thereby adapted to form a centre board, gear for housing and lowering the said centre board, and mechaniam for working the said gear, as set forth. 5th. The combination of levers or plates pivoted together and thereby adapted to form a lee board, gear for housing and lowering the said lee board, and mechanism for working the said gear, as set forth. 6th. The combination of drop keel, centre board, gear for raising and lowering them, and mechanism for working the said gear, as set forth.

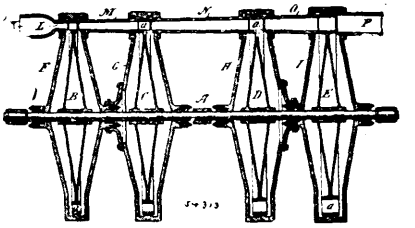
No. 54,312. Drill. (*Foret.*)



James R. Duff, Lowell, Massachusetts, U.S.A., 10th December, 1896; 6 years. (Filed 22nd September, 1896.)

Claim.—1st. The combination of the clamp-bar, having a screw-threaded hole, a flexible connection, adapted to pass around the work and to connect the ends of said clamp-bar, an externally-threaded sleeve, arranged in said hole, and a spindle, rotary in said sleeve and movable longitudinally therewith, said spindle having at one end a socket to receive a bit or drill and having its other end adapted to be grasped by a bit-stock or wrench, as and for the purpose specified. 2nd. The combination of the clamp-bar, having a screw-threaded hole, a flexible connection, adapted to pass around the work and to connect the ends of said clamp-bar, an externally-threaded sleeve, arranged in said hole, a hand-wheel secured to said sleeve, and a spindle, rotary in said sleeve and movable longitudinally therewith, said spindle having at one end a socket to receive a bit or drill and having its other end adapted to be grasped by a bit-stock or wrench, as and for the purpose specified. 3rd. The combination of the clamp-bar, having a screw-threaded hole, a flexible connection adapted to pass around the work and to connect the ends of said clamp-bar, an externally-threaded sleeve, arranged in said hole, a spindle, rotary in said sleeve and movable longitudinally therewith, said spindle having at one end a socket to receive a bit or drill and having at its other end adapted to be grasped by a bit-stock or wrench, and anti-friction balls, arranged between the lower end of said sleeve and an annular shoulder, with which said spindle is provided, as and for the purpose specified. 4th. The combination of the clamp-bar, having a screw-threaded hole, a flexible connection adapted to pass around the work and to connect the ends of said clamp-bar, an externally-threaded sleeve, arranged in said hole, a spindle, rotary in said sleeve and movable longitudinally therewith, said spindle having at one end a socket to receive a bit or drill, and having its other end adapted to be grasped by a bit-stock or wrench, anti-friction balls, arranged between the lower end of said sleeve and an annular shoulder with which said spindle is provided, and a washer surrounding said spindle and arranged between said sleeve and said anti-friction balls, as and for the purpose specified.

No. 54,313. Turbine. (*Turbine*)



Charles G. Curtis, New York, State of New York, U.S.A., 10th December, 1896; 6 years. (Filed 5th October, 1896.)

Claim.—1st. In an elastic-fluid turbine, the combination with an expansion-nozzle, of movable vanes, and means for causing the fluid to act upon such vanes two or more times in succession, whereby the high velocity developed in the fluid by expansion in the nozzle is fractionally abstracted by the movable vanes, substantially as set forth. 2nd. In an elastic-fluid turbine, the combination with an expansion-nozzle, of two or more sets of rotating vanes, and one or more stationary intermediate passages connecting the sets of vanes, for causing the fluid to act on the vanes successively, whereby a high velocity is developed in the fluid by expansion in the nozzle and is fractionally abstracted by the rotating vanes, substantially as set forth. 3rd. In an electric-fluid turbine, the combination with an expansion-nozzle, of a working passage expanding in the direction of the flow of the fluid, substantially as set forth. 4th. In an elastic-fluid turbine, the combination with an expansion-nozzle, of a working passage comprising movable vanes and means for causing the fluid to act upon such vanes two or more times in succession, said working passage expanding in the direction of the flow of the fluid, substantially as set forth. 5th. In an elastic-fluid turbine comprising a nozzle and a working passage comprising movable vanes to which the fluid is delivered two or more times in succession, a gradually enlarging or expanding passage-way for the fluid, part of the enlargement taking place in the nozzle and part in the working passage, substantially as set forth. 6th. In an elastic-fluid turbine, the combination with an expansion-nozzle delivering the fluid at a pressure above that of the exhaust, of a working passage expanding to such an extent that the pressure at the end of the working passage is the same as the pressure in the exhaust, substantially as set forth. 7th. In an elastic-fluid turbine, the combination with an expansion-nozzle adapted to convert the pressure of the fluid into velocity while retaining a pressure in the fluid above that of the exhaust, of an expanding working-passage leading through a succession of revolving vanes, such passage having increasing cross-sectional areas sufficient only to conduct the required volume of the fluid at the maximum attainable velocity and yet not so contracted as to impede the flow, whereby the fluid is delivered to each successive set of vanes at as high a velocity as practicable, substantially as set forth. 8th. In an elastic-fluid turbine, the combination with an expansion-nozzle adapted to convert the pressure of the fluid into velocity while retaining a pressure in the fluid above that of the exhaust, of a working passage enlarged or expanded in the direction of flow of the fluid, such enlargement being sufficient to convert the remaining available pressure of the fluid into velocity before delivering it to the exhaust, substantially as set forth. 9th. In an elastic-fluid turbine, the combination with an expansion-nozzle adapted to convert the pressure of the fluid into velocity while retaining a pressure in the fluid above that of the exhaust, of a working passage comprising two or more sets of rotating vanes and one or more intermediate stationary passages, such working passage expanding in the direction of the flow of the fluid so as to deliver the fluid to each set of rotating vanes at the maximum velocities obtainable at each passage therethrough, substantially as set forth. 10th. In an elastic-fluid turbine, the combination of an expansion delivery-nozzle placed obliquely, with two or more sets of rotating passages and one or more intermediate stationary passages, each of said passages having curved side walls having a less angle at the discharging end than at the receiving end of the passage, and with top and bottom walls diverging toward the discharging end of the passage to such an extent as to provide at the discharging end of each movable and stationary passage a cross-section greater than that at the discharging end of the preceding stationary or movable passage, sub-

stantially as set forth. 11th. In an elastic-fluid-jet turbine, the combination of two or more sets of rotating vanes and one or more connecting stationary intermediate passages for delivering the fluid-jet to the successive sets of rotating vanes after the first, such stationary intermediate passages being set at their receiving ends at the same angle as that at which the fluid-jet is discharged from the rotating vane passage, whereby the cross-sectional area provided for the jet in the stationary passage at its receiving end is substantially the same as the cross-sectional area of the fluid-jet as it is discharged from the respective rotating passages, substantially as set forth. 12th. In an elastic-fluid turbine, the combination with two or more sets of rotating vanes, of a nozzle delivering a fluid-jet continuously to a portion of the vanes of one set, and one or more intermediate stationary passages connecting the rotating vanes, said intermediate stationary passage or passages having a lead or leads proportional to the diminished velocity of the fluid-jet, substantially as set forth.

No. 54,314. Turbine. (*Turbine.*)

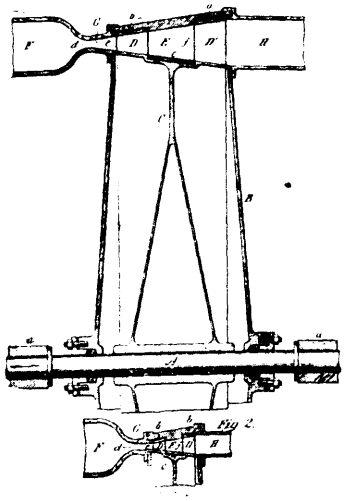


Fig. 2.

Charles G. Curtis, New York, State of New York, U.S.A., 10th December, 1896; 6 years. (Filed 5th October, 1896.)

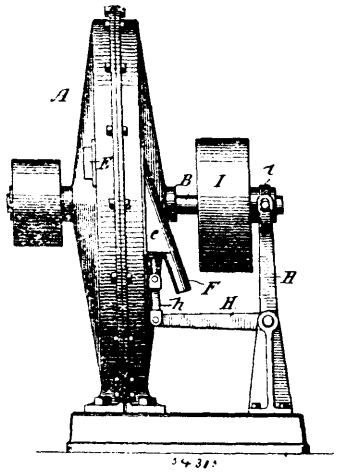
Claim.—1st. In an elastic-fluid turbine, the combination with movable vanes, of a series of passages delivering the fluid to the vanes two or more times in succession, said passages being adapted to convert in successive operations or stages different portions of the pressure of the fluid into *vis viva*, and said vanes being adapted to abstract at each passage therethrough substantially all or the principal portion of the *vis viva* developed at the preceding stage, whereby the pressure will be alternately converted into *vis viva* and abstracted in stages, substantially as set forth. 2nd. In an elastic-fluid turbine, the combination with movable vanes, of a series of expansion passages delivering the fluid to the vanes two or more times in succession, said expansion-passages being adapted to convert in successive operations or stages different portions of the pressure of the fluid into *vis viva*, and said vanes being adapted to abstract at each passage therethrough substantially all or the principal portion of the *vis viva* developed at the preceding stage, whereby the pressure will be alternately converted into *vis viva* and abstracted in stages, substantially as set forth. 3rd. In an elastic-fluid turbine, the combination with movable vanes to which the fluid is delivered two or more times in succession, of an expansion-nozzle and one or more intermediate expansion-passages, said expansion-nozzle and one or more intermediate expansion-passages being adapted to convert in successive operations or stages different portions of the pressure of the fluid into *vis viva*, and said vanes being adapted to abstract at each passage therethrough substantially all or the principal portion of the *vis viva* developed at the preceding stage, whereby the pressure will be alternately converted into *vis viva* and abstracted in stages, substantially as set forth. 4th. In an elastic-fluid turbine, the combination with two or more sets of rotating vanes (each set being single or compound), of a series of passages delivering the fluid to the sets of vanes in succession, each of the said passages being adapted to convert in successive operations or stages different portions of the pressure of the fluid into *vis viva*, and said vanes being adapted to abstract at each passage therethrough substantially all or the principal portion of the *vis viva* developed at the preceding stage, whereby the pressure will be alternately converted into *vis viva* and abstracted in stages, substantially as set forth. 5th. In an elastic-fluid turbine, the combination with two or more sets of rotating vanes (each set comprising movable vanes, through which the fluid-jet is passed two or more times in succession), of an expansion-nozzle and one or more stationary intermediate expansion-passages, substantially as set forth. 6th. In an elastic-fluid turbine, the combination with two or more sets of rotating vanes, each set composed of two or more series of vanes and one or more intermediate stationary passages, the vanes and passages of each set being constructed to extract the *vis viva* from the fluid without materially decreasing its pressure, of an expansion-nozzle delivering a fluid-jet to a part of the vanes of the first set and constructed to convert a part only of the pressure into *vis viva*, and one or more intermediate stationary expansion-passages connecting the sets of vanes and constructed each to convert a definite portion of the pressure into *vis viva*, substantially as set forth. 7th. In an elastic-fluid turbine, the combination with two or more sets of rotating vanes, each set being single or compound, and two or more fluid-tight shells or casings enclosing the said sets of vanes (one or more within each shell), of a nozzle delivering a fluid-jet to a portion of the vanes within the first shell, and one or more intermediate passages connecting the different shells together and delivering the fluid-jet to a portion of the vanes of the different sets in succession, whereby different pressures will be maintained in the shells approximating those at the clearances, and any leakage into any other shell than the last will be returned to the working passages, substantially as set forth. 8th. In an elastic-fluid turbine, the combination with two or more sets of rotating vanes, each set being single or compound, and two or more fluid-tight shells or casings enclosing the said sets of vanes (one or more within each shell), of a series of passages delivering the fluid to the two or more sets of rotating vanes in succession, each of the said passages being adapted to convert substantially such a definite portion of the pressure into velocity as the vanes to which it delivers the fluid are capable of abstracting, whereby the pressure will be alternately converted into *vis viva* and abstracted in stages and whereby different pressures will be maintained in the shells approximating those at the clearances, and any leakage into any shell other than the last will be returned to the working passages, substantially as set forth. 9th. In an elastic-fluid turbine, the combination with two or more sets of rotating vanes, each set being single or compound, and two or more shells or casings enclosing the said sets of vanes (one or more within each shell), of an expansion-nozzle, and one or more expansion intermediate passages delivering the fluid to the sets of rotating vanes in succession, whereby the pressure will be converted into *vis viva* and abstracted in stages and whereby different pressures will be maintained in the shells approximating those at the clearances, and any leakage into any shell other than the last will be returned to the working passages, substantially as set forth. 10th. In an elastic-fluid turbine, the combination with two or more sets of rotating vanes, each set composed of two or more series of such vanes, and two or more independent fluid-tight shells for enclosing the vanes, of a nozzle entering the first shell, and one or more intermediate stationary passages connecting the different shells, said nozzle and passages delivering fluid to a part of the vanes only of each set, whereby different pressures will be maintained in the shells approximating those at the clearances, and any leakage into any shell other than the last will be returned to the working passages, substantially as set forth. 11th. The combination of a series of separate fluid-tight shells, each enclosing a set of rotating vanes, and a series of expansion-nozzles or passages converting pressure into velocity and delivering the fluid to the sets of rotating vanes in succession, each succeeding expansion-nozzle or passage having an increased cross-sectional area adapted to convey the quantity of fluid received from the previous shell, but at a diminished pressure, and each having a ratio of expansion adapted to convert the desired amount of pressure into *vis viva*, substantially as set forth. 12th. In an elastic-fluid turbine, the combination with two or more rotating elements enclosed in two separate fluid-tight shells, of a delivery nozzle, an intermediate stationary expansion-passage and a vacuum exhaust, the nozzle, rotating elements and stationary passage being so proportioned that the pressure in the first shell will be approximately atmospheric pressure, and that in the second shell will be the vacuum-exhaust pressure, substantially as set forth. 13th. In an elastic-fluid turbine, wherein the pressure is alternately converted into *vis viva*, and abstracted by stages, the combination with two or more rotating elements having different rates of peripheral speed and constructed with diameters proportional to such different speeds, of a nozzle, and one or more intermediate stationary passages having the capacity to convert the pressure into different percentages of *vis viva*, substantially as set forth. 14th. In an elastic-fluid turbine, the combination with two or more rotating elements and two or more separate fluid-tight shells enclosing said elements, of a series of stationary expansion-passases delivering the fluid to the rotating elements in succession, and two or more shafts upon which the different rotating elements are mounted, substantially as set forth.

No. 54,315. Turbine Governor. (*Gouverneur de turbine.*)

Charles G. Curtis, New York, State of New York, U.S.A., 10th December, 1896; 6 years. (Filed 5th October, 1896.)

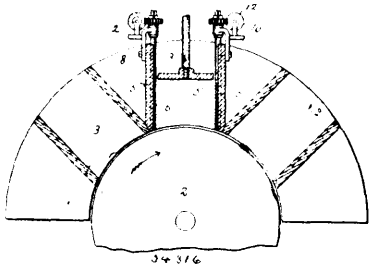
Claim.—1st. In an elastic-fluid turbine, a governing or regulating mechanism causing variations in the volume of the fluid jet unaccompanied by substantial variations in its velocity at the point or points where it acts upon the moving parts to develop mechanical power, substantially as set forth. 2nd. In an elastic-fluid turbine, the combination with one or more sets of moving vanes, and a passage delivering a fluid jet to such vanes, of means for varying the volume of the fluid jet without substantial variation of its velocity at the point or points where it acts on the vanes, substantially as set forth. 3rd. In an elastic-fluid turbine, the combination with one or more sets of moving vanes, and an expansion passage

converting pressure into velocity and delivering a fluid jet to such vanes, of means for varying the volume of the fluid jet without substantial variation of its velocity at the point or points where it acts on the vanes, substantially as set forth. 4th. In an elastic-fluid turbine, the combination with a set of rotating vanes, of an expansion nozzle or stationary passage delivering a fluid jet to a part of the vanes and acting to convert pressure into velocity, such nozzle or passage being adjustable to vary the volume of the fluid jet while maintaining approximately the relations between its receiving and discharging ends, substantially as set forth. 5th. In an elastic-fluid turbine, the combination with a set of rotating vanes, of an expansion nozzle or passage delivering a fluid jet to a part of the vanes and acting to convert pressure into velocity, and an adjustable part forming one of the sides of the expansion nozzle at both its receiving and discharging ends, whereby the cross-sectional areas of the nozzle at its receiving and discharging ends may be varied while maintaining approximately the relation between such cross-sectional areas, substantially as set forth. 6th. In an elastic-fluid turbine, an expansion delivery nozzle or passage, adjustable simultaneously at its receiving and discharging ends, substantially as set forth. 7th. In an elastic-fluid turbine, an expansion delivery nozzle or passage, adjustable simultaneously at its receiving and discharging ends with a rate of variation proportional to the cross-sectional areas at such ends, substantially as set forth. 8th. In an elastic-fluid turbine, the combination with a set of rotating vanes, of an expansion nozzle or stationary passage delivering a fluid jet to a part of the vanes and acting to convert pressure into velocity, such expansion nozzle or passage being simultaneously adjustable at its receiving and discharging ends with a rate of variation proportional to the cross-sectional areas of such ends, substantially as and for the purpose set forth. 9th. In an elastic-fluid turbine, the combination with a set of rotating vanes and an expansion nozzle or passage delivering a fluid jet to a portion of the vanes and acting to convert pressure into velocity, of an adjustable part for varying the cross-sectional areas of the expansion nozzle or passage simultaneously at its receiving and discharging ends thereof, which adjustable part has a different rate of variation at the two ends towards and away from the other side of the nozzle, such different rates of variation being proportional to the cross-sectional areas at the two ends of the expansion nozzle or passage, substantially as set forth. 10th. In a compound elastic-fluid turbine, the combination with movable vanes and means for delivering the elastic fluid to the vanes two or more times in succession, of a governing or regulating mechanism causing variations in the volume of the elastic fluid unaccompanied by substantial variations in its velocity throughout the fluid passage of the turbine, substantially as set forth. 11th. In a compound elastic-fluid turbine, the combination with two or more sets of rotating vanes, of a nozzle and one or more intermediate stationary passages, whereby a fluid jet is presented to a part only of the vanes of the sets in succession, said nozzle and intermediate passage or passages being simultaneously and proportionately adjustable in their cross-sectional areas, substantially as set forth. 12th. In a compound elastic-fluid turbine, the combination with two or more sets of rotating vanes, of an expansion nozzle delivering a fluid jet to a part of the vanes of the first set, and one or more stationary intermediate passages conveying the fluid jet from one set of rotating vanes to another, the area of the expansion nozzle and of the intermediate passage or passages being simultaneously and proportionately adjustable, substantially as set forth. 13th. In a compound elastic-fluid turbine, the combination of a series (two or more) of adjustable expansion nozzles or passages, receiving the fluid jet successively and converting pressure into velocity, and two or more sets of rotating vanes to which the fluid jet is delivered successively by such nozzles or passages, substantially as set forth. 14th. In a compound elastic-fluid turbine, the combination with two or more sets of rotating vanes, of an adjustable expansion nozzle, one or more intermediate stationary passages having adjustable expansion discharging ends, and a connection between the adjusting devices of the nozzle and intermediate passages, whereby the adjustment of the nozzle and of the one or more intermediate passages will be effected simultaneously and proportionately, substantially as set forth. 15th. In an elastic-fluid turbine, a governing or regulating mechanism acting to vary automatically according to changes in load or speed the volume of the fluid unaccompanied by substantial variations in its velocity at the point or points where it acts upon the moving parts to develop mechanical power, substantially as set forth. 16th. In an elastic-fluid turbine, an expansion delivery nozzle or passage adjustable simultaneously at its receiving and discharging ends, in combination with speed-governing mechanism controlling the adjustable element of such nozzle or passage and effecting such adjustment automatically, substantially as set forth.



No. 54,316. Wood Grinding Machine.

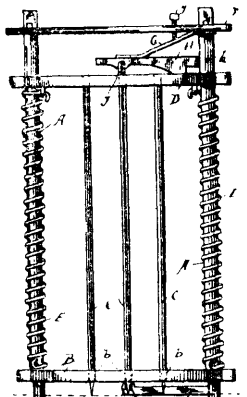
(*Machine à broyer le bois.*)



Edward Ferris Milard, Jackson, Michigan, U.S.A., 10th December, 1896; 6 years. (Filed 5th October, 1896.)

Claim.—1st. In wood grinding apparatus, a hopper to contain the wood blocks in process of reduction, provided with one or more moving feed surfaces upon which said block is made to rest and travel, said feed surfaces being fixed relatively with respect to the hopper, substantially as stated. 2nd. In wood grinding apparatus, a hopper for wood blocks, a back plate, and a moving feed surface as a part of said back plate to support said blocks, and mechanism to move the feed surface to obviate friction produced by the forward travel of the block, substantially as explained. 3rd. In grinding apparatus, a revoluble grinder, a hopper co-operating with said grinder, a back plate to support the wooden block against the thrust of the grinder, combined with a follower to push the block towards the grinder, and a feed device forming a surface portion of the back plate and movable with the block, substantially as described. 4th. The combination with a revoluble grinder, one or more hoppers circumferentially of the grinder, a follower for each hopper, mechanism for actuating said follower, and a movable hopper surface, comprising one or more stationary screws for rotation, a sleeve post to prevent endwise movement of the screw, and mechanism for producing rotation of the screws, substantially as set forth.

No. 54,317. Animal Trap. (*Piège.*)

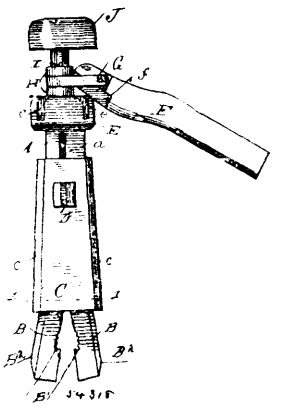


James William Jones, Park, Texas, U.S.A., 10th December, 1896; 6 years. (Filed 17th October, 1896.)

Claim.—1st. The combination with the uprights and the lower ring, of the upper ring carrying spikes and slidingly mounted on the uprights, springs encircling said uprights and acting on the upper ring to force it downward, a trigger to hold the upper ring upward, a means for disengaging the trigger, and a spring acting

on said trigger, substantially as and for the purpose specified. 2nd. The combination with the uprights and the lower ring, of the upper ring slidingly mounted on the uprights, springs acting on the upper ring to force it downward, a trigger to hold the upper ring upward, a means for disengaging the trigger, a spring acting on said trigger, and means for adjusting the faces of said spring, substantially as and for the purposes specified. 3rd. The combination with the uprights, the lower fixed ring having openings, the upper ring mounted to slide on the uprights, and provided with spikes working through openings in the lower ring, springs acting on the upper ring, the latter being formed with a notch, a trigger pivoted on one of the uprights and adapted to engage said notch, a spring acting on said trigger, a set-screw acting on said spring, a trip-bar pivotally mounted upon one of said uprights beneath the lower ring, and a connection between the same and the trigger, substantially as and for the purposes specified.

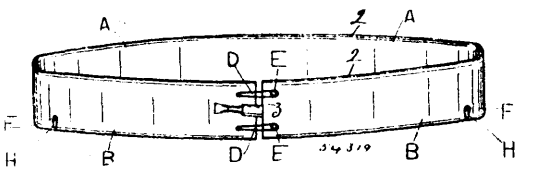
No. 54,318. Wrench. (*Clé à écrou.*)



James M. Flower, Potts Station, Arkansas, U.S.A., 10th December, 1896; 6 years. (Filed 5th October, 1896.)

Claim.—1st. The combination with the shaft and the jaws hinged thereto and made tapering, of a case or cage adapted to slide upon said post and to tighten the jaws, and a set-screw held in the case or cage and engaging the post to hold the cage or case in its adjusted position, substantially as shown and described. 2nd. The combination with the post having a longitudinal slot deeper at one end than at the other, jaws hinged to said post and having ribs upon their outer faces, a cage or case adapted to slide upon said post and having grooves to engage said ribs, and a set-screw carried by the case to engage in the slot of the groove or post, substantially as shown and described. 3rd. The combination with the post, the hinged jaws and the case sliding on the post to tighten the jaws of a notched ring fast on the post and an operating lever pivotally mounted to swivel on the post and having a portion to engage the notches of the ring, substantially as shown and described. 4th. The combination with the post, the hinged jaws and the case sliding on the post to tighten the jaws, of a notched ring fast on the post, and an operating lever pivotally mounted to swivel on the post and having a portion to engage the notches of the ring and a knob on the outer end of the shaft, substantially as shown and described. 5th. The wrench described, comprising a shaft having longitudinal slots, jaws hinged to one end of said shaft, a tapered case sliding on the shaft and carrying a set-screw, a notched ring fast on the shaft, a knob on the outer end of the shaft, and a lever pivotally mounted to swivel on the shaft and having a portion to engage the notches of the ring, substantially as shown and described.

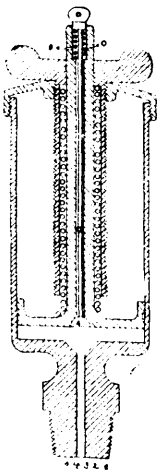
No. 54,319. Life-Belt. (*Appareil de sauvetage.*)



John William F. G. Alde, Hamilton, Ontario, Canada, 10th December, 1896; 6 years. (Filed 28th October, 1896.)

Claim.—1st. In a life-belt, composed of inner and outer walls closed at each end, the lower part provided with belt adjusting fastenings, the upper part being capable of folding, or overlapping the said lower part, and capable of opening out by inflation, substantially as described. 2nd. The herein described life-belt, the upper part being adapted to fold over the lower part, in combination with belt adjusting fastenings attached to the ends of said lower part, and capable of expansion and opening out by inflation, substantially as described. 3rd. The herein described life-belt, the upper part being adapted to fold over the lower part, in combination with adjusting fastenings attached to the ends of the lower part, a pocket for coiled air tube on the front of said lower part, the belt capable of opening out by inflation by means of said air tube, having air valve, and an air outlet in lower part of belt, substantially as described. 4th. The combination in the herein described life-belt, of the adjusting fastenings on the ends thereof, a pocket for air tube, and outlet for air in said belt, and the upper part adapted to fold over the said lower part, from the folding line 2, the ball buttons and suitable loops on the ends of overlap for fastening together a series of ball buttons around the lower part of said overlap, and suitable loop fastenings on lower part of inner belt, said whole belt being capable of opening out by inflation by means of air tube, having valve attached to the inner part of belt and inside of air tube pocket, substantially as described.

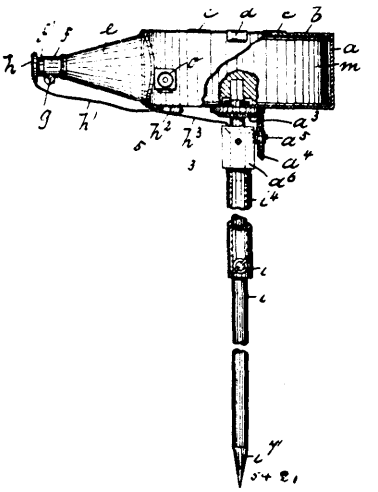
No. 54,320. Compression Grease Cup. (*Graisseur.*)



William Herbert Johnston, Midland, Ontario, Canada, 10th December, 1896; 6 years. (Filed 12th November, 1896.)

Claim.—1st. The combination, with a compression grease cup of whatever kind, of an air-vent as shown in drawing at B, A, O, substantially as and for the purposes hereinbefore set forth. 2nd. The combination, with a compression grease cup of whatever kind, of the improvement consisting of, any mode of letting air in under the piston for the purposes hereinbefore set forth.

No. 54,321. Camera. (*Camera.*)

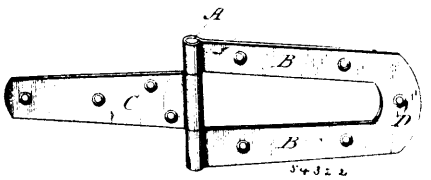


Emil Paul Schoenfelder and Emil Kehle, both of Newark, New Jersey, U.S.A., 10th December, 1896; 6 years. (Filed 3rd November, 1896.)

Claim.—1st. The combination with a support, of a cylindrical film holder on said support, a cylindrical casing surrounding said film holder and loosely mounted on said support and provided with a vertically arranged slot, a lens carrying funnel surrounding said slot and projecting horizontally from the casing, a shutter carried by said funnel, and means for revolving the casing, all said parts substantially as and for the purposes described. 2nd. The combination with a support, of a cylindrical film holder on said support, a cylindrical casing surrounding said film holder and loosely mounted on said support and provided with a vertically arranged slot, a funnel surrounding the slot and projecting horizontally from the

casing, a tube projecting from said funnel, a lens holder adjustably arranged in said tube, a shutter carried by said lens holder, means for revolving the casing, and means for simultaneously controlling the shutter and the casing revolving means, all said parts substantially as and for the purposes described. 3rd. The combination with a support, of a cylindrical film holder on said support, a cylindrical casing surrounding said film holder and loosely mounted on said support and provided with a vertically arranged slot, a lens carrying funnel surrounding the slot and projecting horizontally from the casing, a spring motor on the support and adapted to revolve the casing, a horizontally arranged wheel connected with and operated by said spring motor and provided with an opening, a pin adapted to engage said opening, a flat spring carrying said pin and secured to the casing, an elastic ball between the casing and said spring and adapted to be controlled thereby, and the pneumatic shutter carried by the funnel and controlled by said elastic ball, all said parts substantially as and for the purposes described. 4th. The combination with a support, of a cylindrical film holder on said support, a cylindrical casing surrounding said film holder and loosely mounted on said support and provided with a vertically arranged slot, a lens carrying funnel surrounding the slot and projecting from the casing, a spring motor on the support, a horizontally arranged shaft operated by said spring motor, a bevelled gear mounted on said shaft, a bevelled gear, in engagement therewith, arranged on the casing, a wheel arranged horizontally and connected with and operated by the spring motor and provided with an opening, a pin adapted to engage said opening, a flat spring carrying said pin and secured to the casing, a pneumatic shutter carried by the funnel, and an elastic ball controlling said shutter and arranged between the casing and the flat spring, all said parts substantially as and for the purposes described.

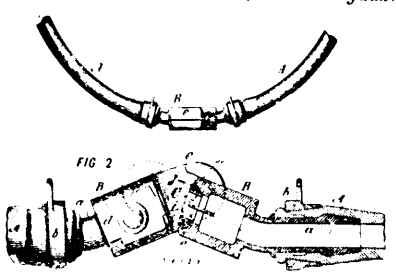
No. 54,322. Hinge. (*Penture longue.*)



John H. Lawrence, Sterling, Illinois, U.S.A., 10th December, 1896; 6 years. (Filed 24th November, 1896.)

Claim.—1st. In a strap hinge, the combination, with the substantially U shaped leaf, each arm of which is perforated and has its end coiled into an eye, of a leaf of a less length than said first-named leaf, and adapted to fit within the same, the entire width of said second-mentioned leaf being coiled at one end into an eye, the length of which eye is equal to the distance between the eyes of the other leaf, and a pintle through all of said eyes, substantially as set forth. 2nd. The combination of the leaf B, provided with a closed end D, and an interior opening formed by the cutting therefrom of the leaf C the open ends of said leaf B being coiled, a pintle A, having its outer end seated in said coils and the leaf C, having one end coiled around said pintle between said coils of leaf B, substantially as shown and for the purpose described. 3rd. In a strap hinge, the herein described method of manufacturing the same, consisting in cutting transversely and reversely substantially U-shaped blanks from a strip of material of a width equal to the desired length of said blanks, then cutting the central portion out of the blank from the wider end nearly to the opposite end, then bending the wider end of the cut out portion and the ends of the remaining portion, each into an eye, and then securing the parts together by inserting the wider end of the cut out portion between the eye of the other and passing a pintle through all of said eyes, substantially as set forth and for the purpose hereinbefore described.

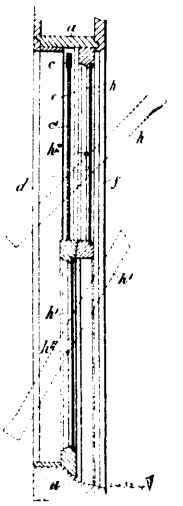
No. 54,323. Hose Coupling. (*Joint de boyaux.*)



Edward Ethel Gold, New York, State of New York, U.S.A., 10th December, 1896; 6 years. (Filed 24th November, 1896.)

Claim.—1st. In a hose coupler having locking devices, and a spherical recess receiving an annular seat or gasket having universal motion, the said gasket constructed with a metal shell on its front side, ground to a flat face, and extending as a sleeve within it, and a yielding composition on its rear spherical side, whereby the gasket presents a hard metal face to the corresponding face on the companion coupler, and a yielding surface where it fits into said spherical recess. 2nd. A compensating seat or gasket for a hose coupler, consisting of a metal shell *g*, comprising a flat front face *j*, and a tubular sleeve *i*, and a yielding composition *h*, appearing on the spherical rear face of the gasket. 3rd. A compensating seat or gasket for a hose coupler, consisting of a metal shell *g*, comprising a flat front face *j*, a tubular sleeve *i*, and an inner flange *k*, and a yielding composition appearing on the spherical rear face of the gasket.

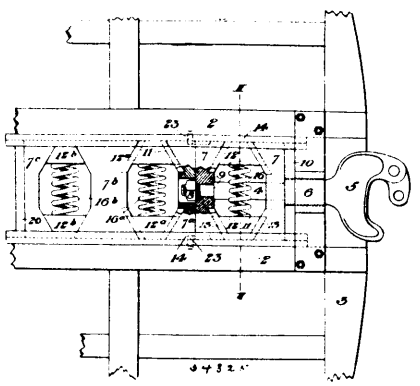
No. 54,324. Window Sash and Frame.
(*Cadre de chassis et croisées.*)



Frederick de Jersey Clere, Lambton Quay, Wellington, New Zealand, 10th December, 1896; 6 years. (Filed 25th November, 1896.)

Claim.—1st. The combination of a window frame with sashes having V-shaped grooves and pivoted to sliding blocks having corresponding V-shaped faces, substantially as and for the purposes set forth herein. 2nd. The combination of a window frame with sliding blocks having V-shaped faces pressed by springs into V-shaped grooves in the sashes, substantially as and for the purposes set forth herein. 3rd. The combination of a window frame having metal strips in its grooves, with sliding blocks having V-shaped faces pressed by springs into V-shaped grooves in the sashes, substantially as and for the purposes set forth herein. 4th. The combination of a window frame with sashes having V-shaped grooves and grooves for carrying away water, and pivoted to sliding blocks having corresponding V-shaped faces, substantially as and for the purposes set forth herein. 5th. In combination, a window frame having metal strips, sliding blocks to which the sash cords are attached and having V-shaped faces, springs, and sashes pivotted at or near their centres to the sliding blocks and having V-shaped grooves and grooves for carrying away water, substantially as and for the purposes set forth herein.

No. 54,325. Draft Rigging. (*Agrès de tirage.*)

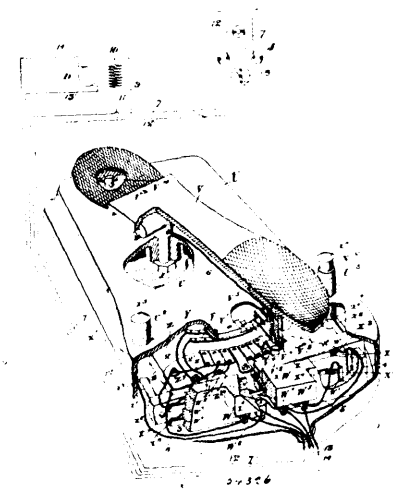


William Morgan Piper, Allegheny, Pennsylvania, U.S.A., 10th December, 1896; 6 years. (Filed 25th November, 1896.)

Claim.—1st. The combination with a longitudinally-movable bar, of a block arranged transversely of the same and actuated thereby, said block having oppositely-directed inclines, guides for the block, wedges contacting with the inclines, and a spring bearing upon the wedges and arranged to resist their movement along the inclines,

substantially as described. 2nd. The combination with a longitudinally-movable bar, of a block arranged transversely of the same and actuated thereby, said block having oppositely-directed inclines, guides for the block, wedges contacting with the inclines, and a transverse spring extending between the wedges and arranged to force them apart, substantially as described. 3rd. A drift-rigging, comprising a coupler having a draw-bar secure to at least one of two or more blocks, at least one of said blocks having oppositely-directed inclines, wedges movable upon said inclines, and means for exerting a yielding pressure upon said wedges, substantially as described. 4th. The combination with two sets of sliding blocks, each set having at least one block provided with opposite inclines, wedges supported between said blocks and movable upon the inclines, and springs between the wedges and bearings thereon, one of said springs being stronger than the other, substantially as described. 5th. The combination with a longitudinally-movable bar, of two or more blocks extending transversely of the same, at least one of the blocks being secured to the bar and having oppositely-directed inclines, wedges movable upon the inclines, and a spring arranged to bear upon the wedges, substantially as described.

No. 54,326. Electric Stop-motion for Dental Motors. (*Mécanisme d'arrêt électrique pour moteurs dentaires.*)



Henry Pery R. Temple, assignee of Francis Napier Denison, both of Toronto, Ontario, Canada, 11th December, 1896; 6 years. (Filed 29th June, 1896.)

Claim.—1st. The combination with a motor having a shunt field and circuit completed through a foot switch as specified and the foot switch pedal pivoted and swivelled as specified and having a plug of insulating material extending downwardly from the toe portion through which runs the main circuit wire to the spring contact plate designed to be movable upon the plates of a resistance coil, so as to vary the amount of current through the main circuit and consequently the rate of speed of the motor, of two arc-shaped contact plates insulated from each other and each connected to the poles of the armature and a spring contact plate secured near the bottom of the toe plug of the pedal, insulated from the spring contact plate movable upon the plates of the resistance coil, and so arranged that when the heel of the pedal is pressed down such contact spring will be brought into sliding contact with the arc-shaped plates so as to bridge them as and for the purpose specified. 2nd. In combination with the motor having a shunt field and a circuit, a foot switch interposed in said circuit and comprising a hollow base plate having a rheostat beneath the same, the series of contacts connecting therewith, the arc-shaped contact plates connected with the poles of the armature, and the foot lever pivoted to swing both vertically and laterally, and having a contact arm for engaging the said series of contacts as the pedal is swung laterally, and a second contact arm for connecting the two arc-shaped plates as the pedal is swung vertically, substantially as described. 3rd. The combination with a motor and two contact plates connected to the positive and negative wires of the main circuit respectively and a contact plate to join these contact plates, so as to throw the current into the poles of the armature and a shunt field constantly in circuit, of two contact plates insulated from each other and connected by separate wires to the poles of the armature and a spring contact plate designed to be brought into engagement so as to bridge the two latter plates and form a sliding contact between them immediately the contact plate joining the plates completing the main circuit is removed, so as to thereby establish a short circuit through the armature and convert the motor into a dynamo, as and for the purpose specified. 4th. The combination with a motor and two contact plates connected to the positive and negative wires of the main circuit respectively through a series of resistance coils provided with contact plates, and a sliding spring contact plate designed to be brought over one or the other of these plates, of a spring contact plate insulated from the spring contact plates movable over the resistance coil plates and designed to bridge the two contact plates connected to the poles of the armature immediately upon the contact plate of the resistance coil being removed from one or the other of the resistance coil plates, so as to thereby establish a short circuit through the armature and convert the motor into a dynamo, as and for the purpose specified.

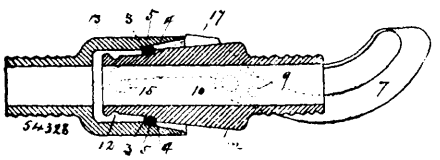
No. 54,327. Paving Composition.

(*Composition pour pavage.*)

The Asphaltina Company of America, assignee of John Augustus Just, both of Syracuse, New York, U.S.A., 11th December, 1896; 6 years. (Filed 27th May, 1896.)

Claim.—1st. The herein described method of producing a composition of matter resembling natural asphalt which consists in heating rosin and sulphur until the rosin has been thoroughly changed by the action of the sulphur and then adding a heavy hydrocarbon and sulphur and heating the mixture, substantially as set forth. 2nd. The herein described method of producing a composition of matter resembling natural asphalt which consists in sulphurizing rosin by heating the rosin and sulphur substantially in the proportions set forth to a temperature of about 480° 500° Fahr., then adding to the melted sulphurized rosin a heavy hydrocarbon and sulphur substantially in the proportion specified and heating the mixture to about 350° 500° Fahr., substantially as set forth.

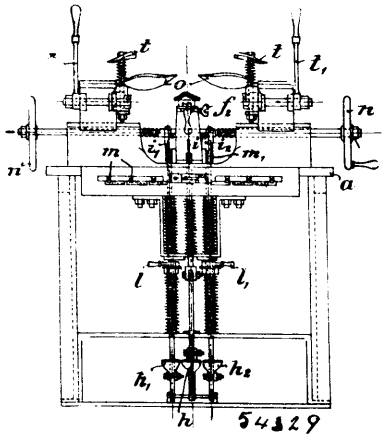
No. 54,328. Hose Coupler. (*Joint de boyaux*)



Leon J. Houze, Hartford, and Jean B. Lasus, Fort Wayne, both in Indiana, U.S.A., 11th December, 1896; 6 years. (Filed 22nd July, 1896.)

Claim.—1st. A hose coupler consisting of two metal tube parts, one provided with a shoulder on the inside and its inner walls flaring outwardly from the shoulder, the other provided with a shoulder upon its outside periphery, and a portion beyond the shoulder chamferred inwardly, and also provided at the end of the chamfer with a circular groove adapted to hold an elastic packing ring in place so that it will not fall off, the two shoulders adapted, when brought together, to engage and hold firmly a packing ring between them, an elastic packing ring, and means to draw the two tube parts together to make a tight joint and interlock them together. 2nd. In a hose coupler an entrance part or tube provided with a shoulder and chamferred inwardly from thence a short distance, a circular groove at the end of the chamfer adapted to hold a packing ring, in combination with a receiving part or tube having a flaring entrance and provided with a shoulder at the inner end of the flaring part and adapted to receive the entrance part of the tube, so that a packing ring may be compressed between the two shoulders to form a tight joint, a rubber packing ring, and an interlocking device consisting of the lever 7 attached pivotally to one of the two connecting parts, the arm 8 pivotally attached to the lever, and lugs 15 attached to the other connecting part, adapted to engage the ends 11 of said arms, the whole being adapted to interlock the two parts together and tightly compress the rubber packing ring when the lever is forced down upon the tube. 3rd. In a hose or pipe coupler consisting of two metal tube parts, which are adapted to be drawn together to form a tight joint with intervening packing, a lever provided with two arms, the ends of which are pivoted or fulcrumed on opposite sides of one of the tube parts, a projection or projections on the other tube part, arms provided at their ends with means to engage said projection or projections, and pivoted at their other ends to the said two arms of the lever, respectively, at a short distance above the fulcrumed points and also provided with a cross-bar to hold the engaging parts in place, the whole adapted to draw the tube parts together and interlock them when the handle of the lever is forced down on the tube. 4th. A hose coupler consisting of two metallic tube parts adapted to enter each other a short distance and provided respectively with shoulders, the one on the inside and the other on the outside, adapted to compress a packing-ring placed between them, an interlocking device consisting of a lever provided with two bent arms the ends of which are attached pivotally and fulcrumed on the opposite side of one of the tube parts, a projection or projections attached to the other tube part, arms provided with hooks adapted to engage said projection or projections, their other ends being pivoted to the arms of said lever respectively, and adapted to interlock the two parts together and tightly compress a rubber packing ring placed between said shoulders and hold them in place, when the lever is forced down upon the coupler or hose to which it is attached.

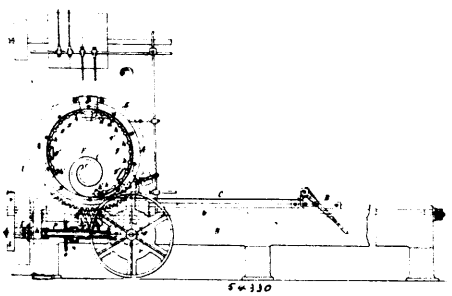
No. 54,329. Machine for Making Shoes.
(*Machine pour faire des chaussures.*)



Schindler Brothers, assignee of Christian Eisenberg, Berlin, Prussia, Germany, 11th December, 1896; 6 years. (Filed 9th October, 1896.)

Claim.—1st. A machine for manufacturing shoes, comprising a last-holder, stretching clamps, devices for drawing down said clamps, frames corresponding in shape to the sides of the sole, and devices for bringing said frames up to said sole, and pin-driving devices mounted in said frames and adapted to drive pins through the inner sole, and upper indirections substantially parallel to the bottom of the shoe. 2nd. The combination in a shoe pulling-over and fastening machine, of two stretching clamps, bars connected thereto, a pedal, and a bar connected to said pedal, and an arm connected to the pedal bar and engaging with either of the stretching-clamp bars. 3rd. The combination in a shoe-fastening machine, of a pin-holder, a driving device operating in a plane substantially parallel to the bottom of the shoe and working beneath said pin-holder, and means for feeding the pins to said device. 4th. The combination in a shoe-fastening machine, of pin-holders, pin-driving devices operating in substantial parallelism to the bottom of the shoe, and a frame engaging with a number of said devices and driving the same simultaneously. 5th. The combination in a shoe-fastening machine, of a sole-plate having rounded recesses in its side, and pin-drivers operating to drive pins against the sides of said sole-plate and into said recesses. 6th. The combination in a shoe-fastening machine, of a pin-driving device for driving pins in substantial parallelism to the bottom of the shoe, and adjusting devices for said pin-driving devices, whereby the same can be adjusted vertically and longitudinally.

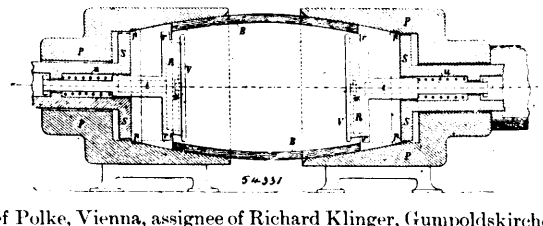
No. 54,330. Method and Means of Unbending Wooden Spirals. (*Méthode et moyen de plier les serpentins en bois.*)



Josef Polke, Vienna, assignee of Richard Klinger, Gumpoldskirchen, both in Austria, 11th December, 1896; 6 years. (Filed 11th November, 1896.)

Claim.—1st. An improved method of unbending wooden spirals into cylindrical form, consisting in placing a metal band around the previously steamed or otherwise softened wooden spiral and attaching one end of said metal band to the inner end of the wooden spiral, placing said spiral into a stationary drum of approximately the diameter of the cylinder to be formed, unbending the wooden spiral by exerting a traction upon the free end of the metal band passed to the outside of the drum, and, at the same time, producing a compression of the wood by causing the free end of the spiral to abut against an obstruction in the drum, adapted to yield to the unbending movement, at a speed slower than that of the unbending movement caused by the traction of said metal band, substantially as described. 2nd. An apparatus for carrying into practice the herein described method of unbending wooden spirals into cylindrical form, formed by the combination with a stationary drum A adapted to receive the wooden spiral, of a metal band C adapted to be attached to the inner end of the wooden spiral, to be passed with its other end to the outside of the drum A and to exert a traction upon the inner end of the wooden spiral, and of a bar d forming an abutment for the other end of the spiral and adapted to be moved around the inside of the drum A, substantially as set forth. 3rd. In apparatus of the kind herein described for unbending wooden spirals into cylindrical form, the combination with the drum A, the metal band C and the bar d of two cog collars E, E, carrying the bar d and adapted to be rotated upon the drum A, and of means for exerting a traction upon the metal band C, substantially as described. 4th. In apparatus of the kind herein described for unbending wooden spirals into cylindrical form, the combination with the drum A and the metal band C of a bar d having a projection or a lip d^1 adapted to hold the wood against the interior surface of the drum A, substantially as described. 5th. In apparatus for unbending wooden spirals into cylindrical form, the combination with the drum A adapted to receive the wooden spiral, of the metal band C adapted to exert a traction upon the spiral, of means for presenting a yielding obstruction to the unbending of the spiral, and of double hoop segments g, g^1, adapted to be inserted and held in the ends of the drum A and to receive between them the edges of the wood as it is bent into cylindrical form, substantially as set forth. 6th. In apparatus of the kind herein described for unbending wooden spirals into cylindrical form, the combination with the drum A and the metal band C of a slide B^1 adapted to grip the free end of the metal band C, and of a screw spindle b for operating said gripping slide B^1, substantially as described. 7th. In apparatus of the kind herein described for unbending wooden spirals, the combination with the drum A, the metal band C and the bar d of a friction wheel m adjustable upon its shaft, a second friction wheel r adapted to be driven by the wheel m, and of an intermediate train of gearing for rotating the cog collars E, E, upon the drum A from the said wheel r, substantially as described.

No. 54,331. Barrel. (*Baril*)



Josef Polke, Vienna, assignee of Richard Klinger, Gumpoldskirchen, both in Austria, 11th December, 1896; 6 years. (Filed 11th November, 1896.)

Claim.—1st. In the manufacture of wooden bulging barrels, the method for producing such barrels from cylindrical blanks, by compression, with the simultaneous forming of the chimbs or grooves for the helds, consisting in pressing the cylindrical blanks, containing a disc or discs, the circumferential form of which corresponds to the form of the barrel head, into a conical die or form and thereby pressing the edge of the disc contained in the blank into the wood of the latter for forming the chimb or groove for the head, substantially as set forth. 2nd. In apparatus for carrying into practice the herein described method of making wooden bulging barrels from cylindrical blanks, the combination with a conical die P of a disc V adapted to be pressed into the wood of the barrel body while being compressed in the die P, substantially as and for the purpose set forth. 3rd. In apparatus for carrying into practice the herein described method of making wooden bulging barrels from cylindrical blanks, the combination with a conical die P of a disc V, a spring actuated plate B for holding the disc V in position, and provided with flange r, and a follower S, substantially as set forth. 4th. In apparatus for carrying into practice the herein described method of making wooden bulging barrels from cylindrical blanks, the combination with a conical die P of a disc V and of a hoop p adapted to be placed in die P and to remain upon the end of the barrel body when the pressing is completed, substantially as set forth.

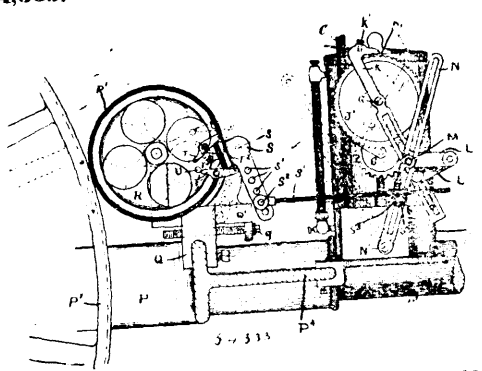
No. 54,332. Wood Seasoning System.
(*Système de secher le bois.*)

Josef Polke, Vienna, assignee of Richard Klinger, Gumpoldskirchen, both in Austria, 11th December, 1896; 6 years. (Filed 11th November, 1896.)

Claim.—1st. An improved method for quickly drying and seasoning wood and wooden articles without their cracking or splitting, consisting in subjecting the wood to the influence of heat and in simultaneously exerting a pressure upon the wood in such directions and of just such force that, without any compression of the wood being caused, the tension in the wood produced by the heating and subsequent shrinkage are counteracted, substantially as set forth. 2nd. For carrying into practice the herein described method for quickly drying and seasoning wood, an apparatus for treating conical articles, consisting of two hollow heaters or forms A, A^1, adapted to be heated, the interior of which forms presents the shape and size of the finished articles, in combination with means for approaching

said forms A, A¹, to each other with a force sufficient to counteract the tensions produced in the wood by its shrinkage, but not so great as to cause a compression of the wood, substantially as set forth. 3rd. In apparatus for carrying into practice the herein described method for quickly drying and seasoning wood the combination with two forms A, A¹, adapted to receive the article to be treated, of the hollow spaces *n*, *n*, arranged in the walls of the said forms A, A¹, and adapted to receive the heating medium, and of means for approaching said forms A, A¹, to each other with a force sufficient to counteract the tensions produced in the wood by its shrinking, but not so great as to cause a compression of the wood, substantially as set forth. 4th. In apparatus for carrying into practice the herein described method for quickly drying and seasoning wood, the combination with two forms A, A¹, provided with the ducts or passages *h*, and adapted to receive the article to be treate', of the hollow spaces *n*, *n*, arranged in the walls of the said forms A, A¹, and adapted to receive the heating medium, of two hollow mantles *p* and *r* provided with draft apertures and enclosing the said forms A, A¹, so as to permit their moving towards each other, and of means for approaching said forms A, A¹, to each other with a force sufficient to counteract the tensions produced in the wood by its shrinking, but not so great as to cause a compression of the wood, substantially as set forth. 5th. For carrying into practice the herein described method for quickly drying and seasoning wood, a modified apparatus for treating cut lumber, consisting of an upright E, a heater F, adapted to be heated from the inside, a second heater or counterplate L, adapted to be pressed sideways against the lumber resting against the heater F, and of means for exerting a pressure upon the lumber at right angles to the pressure exerted by the part L, substantially as set forth. 6th. In apparatus for treating cut lumber according to the herein described method, the combination with an upright E, of a heater F, a counterplate or heater L, having an inclined surface adapted to form a converging space with another surface in the apparatus, of a wedge K, adapted to be forced into the space thus formed for exerting a lateral pressure upon the lumber, and of a follower or bar e^1, adapted to exert a vertical pressure upon the lumber, substantially as described. 7th. In apparatus for heating lumber according to the herein described method, the combination with an upright E, of a heater F, a counterplate or heater L, provided on one side with ribs *m* adapted to form ducts or channels when resting against the wood to be treated and having its other side inclined, adapted to form a converging space with another surface in the apparatus, of a wedge K, adapted to be forced into the space thus formed for exerting a lateral pressure upon the lumber, and of means for exerting a vertical pressure upon the lumber, substantially as and for the purpose described.

No. 54,333. Lubricator. (*Graisseur.*)

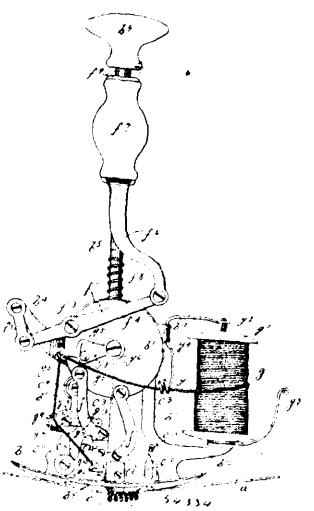


The Rochester Automatic Lubricator Company, assignee of Maguler Butler, both of Rochester, New York, U.S.A., 11th December, 1896; 6 years. (Filed 18th November, 1896.)

Claim.—1st. In a lubricator, the combination with the lubricant receptacle, the cylinder, and valves and passages substantially as described, of the lubricant piston, the yoke and the projections on the yoke engaging the receptacle, the wheel having the cam operating in the yoke, and means for rotating said wheel, as set forth. 2nd. In a lubricator, the combination with the lubricant receptacle, the cylinder, the passages and the valves therein, and the reciprocating piston having the yoke, of the intermittently operating wheel having the cam, and the ratchet for operating it, the rock-arm carrying the pawl, the actuating rock-arm and connections between said arms adjustable relative to the pivots of both arms, whereby the amount of movement of the ratchet-wheel can be adjusted, substantially as described. 3rd. In a lubricator, the combination with the lubricant receptacle, the cylinder, the piston operating therein, and valves and passages, of the ratchet-wheel connected mediately with the piston for actuating it, the rock-arm, the pawl thereon, the second rock-arm, the links pivoted together and adjustably connected to the rock-arms, substantially as described. 4th. In a lubricator embodying a pump and as a means for operating the piston, a ratchet-wheel connected mediately to the piston, the stud on which it is mounted, the rock-arm on the stud having the pawl, a second rock-arm, the links pivoted together at one end, one of said links being pivotally and adjustably connected to one rock-arm, and the other link rigidly and adjustably connected to the other rock-arm, substantially as described. 5th. In a lubricator, the combination with the lubricant receptacle, the cylinder, the piston operating therein, the ratchet-wheel and connections between it and the piston, of the stud on which the ratchet wheel is supported, the rock-arm pivoted on the stud, and the pawl carried thereby, the rock-arm pivoted on the receptacle, the links pivoted together and adjustably connected to the two rock-arms, and an actuating rod adjustably connected to the last-mentioned rock-arm, substantially as described. 6th. The combination with the lubricant receptacle, the cylinder, the piston operating therein, and valves and passages, substantially as described, of the ratchet-wheel connected mediately with and operating the piston, the slotted rock-arm having the pawl, the links L, L¹, the slotted rock arm N, the sleeve S^2 having the screw S^4, and the actuating rod S^1, as set forth. 7th. The combination with a lubricator embodying a pump and having a reciprocating actuating rod as S^1 for operating it, of the lever S connected to said rod, the two spring pawls thereon, and a wheel R having the pin U co-operating with said pawls, substantially as described. 8th. The combination with a machine having parts relatively movable in opposite directions alternately, of a lubricator for supplying a lubricant to moving parts embodying a pump, a driving mechanism for the lubricator embodying a ratchet-wheel, a rock-arm carrying a pawl and a reciprocating rod connected to said rock-arm, and a wheel for actuating the rod, mounted upon one of the machine parts and adapted to be alternately rotated in opposite directions by the movement of the parts relatively, substantially as described. 9th. The combination with the cylinder of a hydraulic engine, a piston operating therein, the sheave connected to and carried by the piston and the cable, of a lubricator for supplying lubricant to the piston carried by the piston and embodying a pump, a ratchet-wheel, and a rock-arm carrying a pawl, a rod connected to the pawl, a wheel in frictional engagement with the sheave, and connections between the wheel and rod for moving the latter in opposite directions alternately as the engine piston reciprocates, substantially as described.

No. 54,334. Fabric Turfing Machine.

(*Machine à tapisserie.*)

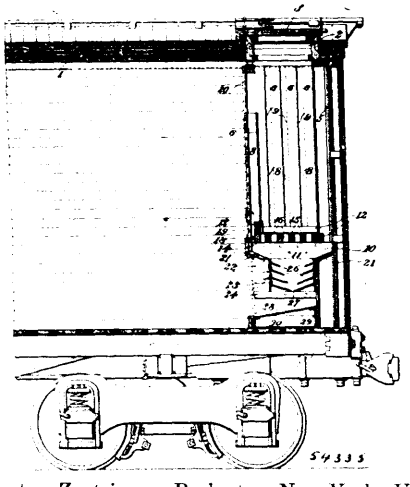


William Craig, Duluth, assignee of Murdock Cameron, Minneapolis, both in Minnesota, U.S.A., 11th December, 1896; 6 years. (Filed 20th November, 1896.)

Claim.—1st. A fabric turfing machine, wherein the turfing mechanism is carried by a support movable over the fabric and is operated by a reciprocating hand grip guided by a fixed rod or other part rising from said support and serving as a handle to the machine, substantially as described. 2nd. The combination with the support and the reversely reciprocating needle and loop-holder arms having a step-by-step advancing or feed movement in respect to each other, of a fixed rod or other grip guide rising from said support, a hand grip reciprocating on said guide rod and connections for reversely reciprocating said arms under the hand motion on said grip, substantially as described. 3rd. The combination with the support and the reversely reciprocating needle and loop-holder arms, of the oscillating disc or lever having connections to said arms, a guide rod rising from said support, a hand grip movable on said guide rod, and a transfer lever pivoted to said disc and having one end connected to said hand grip and its other end connected to the fixed frame, substantially as described. 4th. The combination with the frame *b*, b^1, having the guide rod b^5, of the needle and loop-holder arms e^3, mounted as described, the oscillating disc f^1, the links *f* connecting said disc to said arms, the transfer lever f^4 pivotally connected to said disc, the fulcrum link f^5 and the hand grip f^7 mounted on said rod, and having arms f^6 connected to

the upper arm of said transfer lever, substantially as described. 5th. The combination with the reversely reciprocating needle and loop-holder carrying arms, having a step-by-step advancing movement with respect to each other, of a spring tension device operating to yieldingly clamp the yarn to the needle, substantially as and for the purposes set forth. 6th. The combination with the reversely reciprocating needle and loop holder carrying arms, having a step-by-step advancing movement with respect to each other, of a spring tension device carried by said needle arm, involving a pivoted spring held arm provided, at its free end, with a tension foot or piece operating to yieldingly clamp the yarn to the needle, substantially as and for the purposes set forth. 7th. The combination with a support movable over the fabric, of reversely reciprocating needle and loop-holder carrying arms, mounted on said support for a step-by-step advancing movement, means for reciprocating said arms, and co-operating stop surfaces on said support and said loop-holder carrying arm, for preventing movement of the machine until after the needle has penetrated the fabric, substantially as described. 8th. The combination with the support and the reversely reciprocating needle and loop-holder arms, having a step-by-step advancing movement in respect to each other, and means for operating the same, of a slack adjuster, operative, on the upstroke of the needle arm, to draw enough slack yarn for the loop to be made, on the down stroke of the needle, substantially as described. 9th. The combination with a support and the needle and loop-holder arms, mounted as described, of the oscillating disc or lever, with connections to said arms for reversely reciprocating the same, and a slack adjuster carried by said oscillating disc or lever and spring mounted for a limited yielding movement thereon, substantially as and for the purposes set forth.

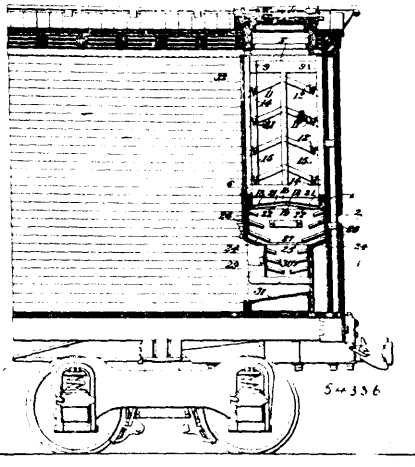
No. 54,335. Refrigerator. (*Réfrigérateur.*)



George Barton Zantzinger, Rochester, New York, U.S.A., 11th December, 1896; 18 years. (Filed 30th March, 1896.)

Claim.—1st. In combination with an inclosed ice chamber having a constricted air passage below the same and a throat adapted to discharge air currents therefrom, of air flues in the walls of the ice chamber open on one side to the mass of ice contained therein, and delivering to said air passage, substantially as described. 2nd. The combination with an inclosed ice chamber having a constricted air passage below the same, and air flues in the walls of the ice chamber opening on one side to the mass of ice contained therein, and delivering to said passage, of means for multiplying the superficial area of the constricted air passage, said means being adapted to receive the water of liquefaction and expose it to the descending currents of air, and having a clear and unobstructed passage-way through part of the constricted air passage, substantially as set forth. 3rd. The combination with an inclosed ice chamber having a constricted air passage below the same and air flues in the walls of the ice chamber, open on one side to the mass of ice contained therein, and delivering to said air passage, of means for multiplying the superficial area of the interior of the constricted air passage, said means being located at the side of and defining the otherwise unobstructed air passage through the same, substantially as set forth. 4th. The combination with an inclosed ice chamber, having a constricted air passage below the same, and air flues in the walls of the ice chamber open on one side to the mass of ice contained therein, and delivering to said air passage, of perforated baffling plates located in said constricted air passage, substantially as set forth. 5th. The combination with an inclosed ice chamber, having a constricted air passage below the same, and air flues in the walls of the ice chamber open on one side to the mass of ice contained therein, and delivering to said air passage, of baffling plates located in the side of said constricted air passage, and defining between them a free passage for the air currents, substantially as set forth. 6th. The combination with an inclosed ice chamber, having a constricted air passage below the same, and air flues in the walls of the ice chamber open on one side to the mass of ice contained therein, and delivering to said air passage, of inclined, perforated, transverse baffling plates within said constricted air passage, and an otherwise unobstructed air passage between the same through said constricted air passage, substantially as set forth. 7th. The combination with an inclosed ice chamber, having a constricted air passage below the same, and air flues in the walls of the ice chamber open on one side to the mass of ice contained therein, and delivering to said air passage, of an inclosed drip box underneath the ice chamber constituting the constricted air passage aforementioned, baffling plates within the drip box and an otherwise unobstructed air passage, substantially as set forth. 8th. The combination within a refrigerator compartment, of a separate ice chamber therein, vertical flues in the ice chamber, forming a tight joint at its juncture with the ice chamber, inclined baffling plates within the same, and openings at the top of the ice chamber and below the drip box, substantially as and for the purpose specified. 9th. The combination within a refrigerator compartment, of a separate ice chamber therein, and vertical flues in the ice chamber, with a sliding grid, inclined ledges supporting the same, a drip box below the grid, baffling plates within the drip box, tight joints between the grid, the chamber and the drip box, the front inclined ledge being horizontally bevelled, and openings at the top of the chamber, and below the drip box, substantially as set forth. 10th. The combination within a refrigerator compartment, of a separate ice chamber and vertical flues in the ice chamber, with a sliding removable drip box below the grid, inclined baffling plates within the drip box, the grid forming a close joint with the ice chamber and with the drip box, and openings at the top of the ice chamber and underneath the drip box, substantially as set forth.

No. 54,336. Refrigerator. (*Réfrigérateur.*)

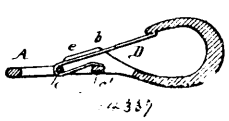


George Barton Zantzinger, Rochester, New York, U.S.A., 11th December, 1896; 6 years. (Filed 20th November, 1896.)

Claim.—1st. The combination with the side walls of an ice retaining chamber or receptacle, of a system of drainage troughs carried within the circumference of said walls so as to be in contact with the ice within the chamber, and adapted to continuously and unobstructedly promote the discharge of water of liquefaction from the receptacle, by receiving it from the sides of the melting ice, instead of permitting it to percolate through the body of a mass of ice, substantially as set forth. 2nd. The combination with the side walls of an ice retaining chamber or receptacle, of a system of drainage troughs carried within the circumference of said walls, so as to come in contact with the sides of the ice within the chamber, and a drainage system in the bottom thereof with which the said troughs communicate, the two being adapted thereby to discharge all the water of liquefaction at one point, substantially as set forth. 3rd. The combination with the walls of an ice chamber, of a succession of drainage troughs communicating successively from top to bottom, and carried within the circumference of the walls of the ice chamber, with their edges arranged to come into contact with the ice contained in the chamber, when the chamber is filled, substantially as set forth 4th. In a refrigerating chamber, the combination with the walls thereof, of a succession of drainage troughs carried within the circumference of said walls, and having their edges in contact with the ice contained in the chamber, when filled, each of said troughs communicating with the common drainage system, substantially as set forth. 5th. In a refrigerating chamber, the combination with the walls thereof, of a succession of perforated drainage troughs in vertical alignment adapted to come into contact with the ice in the chamber, and to carry off the water of liquefaction therefrom, substantially as set forth. 6th. In a refrigerating chamber, the combination with the walls thereof, and flue defining studs, of a drainage trough, supported upon the studs within the flues, substantially as set forth. 7th. In a refrigerating chamber, the combination with the walls thereof, and flue defining studs, of a succession of communicating troughs supported by the

studs within the flues, substantially as and for the purpose specified. 8th. In a refrigerating chamber, the combination with the walls thereof, of flue defining studs, and a succession of troughs, supported by the studs within the flues, and having perforations in the bottoms thereof, substantially as set forth. 9th. In a refrigerating chamber, the combination with the walls thereof, and flue defining studs, of a trough carried in the studs, whose inner edges are substantially flush with the inner edges of the studs, and are, therefore, adapted to come into contact with the ice contained in the chamber, substantially as set forth. 10th. In a refrigerating chamber, the combination with the walls thereof, and flue defining studs, of a succession of communicating troughs secured, respectively, in the studs, and each having its inner edge flush with the inner edge of the studs which carry it, substantially as set forth. 11th. In a refrigerating chamber, the combination with the walls thereof, and flue defining studs, of a succession of troughs secured, respectively, to the inner edges of the studs and adapted to come into contact with the ice contained in the chamber, said troughs draining from one to the other, substantially as set forth. 12th. In a refrigerating chamber, the combination with the walls thereof, and flue defining studs, of a succession of perforated troughs secured, respectively, to the studs so that the inner edges are substantially flush with the inner edges of the studs in vertical alignment and adapted to come into contact with the ice contained in the chamber, substantially as set forth. 13th. In a refrigerating chamber, the combination with a removable crib, of lateral and terminal systems of drainage, troughs carried therein so as to come in contact with the sides of a mass of ice contained therein, substantially as set forth. 14th. In a refrigerating chamber, the combination with a removable crib, including flue defining studs, of drainage troughs carried on said studs, and having their inner edges flush with the inner edges of said studs, substantially as set forth. 15th. In a refrigerating chamber, the combination with the removable crib, including flue defining studs, of successively communicating troughs, carried in the studs, and means of communication between the troughs through the studs, substantially as set forth. 16th. In a refrigerating chamber, the combination with the walls thereof, and flue defining studs, of successively communicating troughs, and means of communication between the troughs through the studs, substantially as set forth. 17th. In a refrigerating chamber, the combination with a removable crib, including flue defining studs, of drainage troughs secured to the studs, and discharge outlets, the said troughs adapted to discharge clear of the studs, substantially as set forth. 18th. In a refrigerating chamber, the combination with the walls thereof, and drip ledges underneath the chamber, of drainage troughs adapted to drain from the chamber upon the drip ledges, substantially as set forth. 19th. In a refrigerating chamber, the combination with the walls thereof, and flue defining studs, of lateral and terminal drainage systems, adapted to establish a constant flow of the water of liquefaction from the chamber, and drip ledges underneath the chamber adapted to receive and discharge all water from the drainage systems, substantially as set forth. 20th. In a refrigerating chamber, the combination with the walls thereof, and flue defining studs, of lateral and terminal drainage systems adapted to separately discharge portions of the water of liquefaction, and drip ledges underneath the chamber adapted to receive the discharged water of liquefaction, substantially as set forth. 21st. In a refrigerating chamber, the combination with the walls thereof, and drainage troughs carried therein, of a grid, drain gutters underneath the same, and drip ledges underneath the drainage troughs, and the gutters, adapted to receive therefrom all the water of liquefaction from the chamber, substantially as set forth. 22nd. In a refrigerating chamber, the combination with its walls, and drainage troughs carried in the sides thereof so as to come in contact with the sides of a mass of ice contained therein, of a grid and inclined gutters secured thereto, a drip ledge box, and drip ledges therein, underneath the drainage troughs, and the gutters adapted to receive therefrom all the water of liquefaction from the chamber, said box forming a tight joint with the refrigerating chamber, and all combined together to form a closed chamber for the passage of air from top to bottom, substantially as set forth.

No. 54,337. Snap-Hook. (*Crochet à ressort.*)

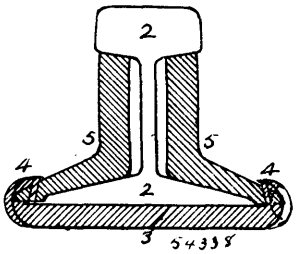


54337

Reuben Cadwell Eldridge, Niagara Falls, Ontario, Canada, 12th December, 1896; 6 years. (Filed 25th April, 1896.)

Claim.—A snap-hook having a bifurcated shank provided with raised parallel side flanges, inner and outer cross bars connecting the jaws of the bifurcated shank and a tongue-spring doubled around the outer cross bar with its lower branch bearing against said inner cross bar and with its upper branch against the nose of the hook, said side flanges being smoothed on their inner sides and pressed laterally to closely fit the tongue-spring confined between said flanges, substantially as set forth.

No. 54,338. Rail-Joint. (*Joint de rail.*)



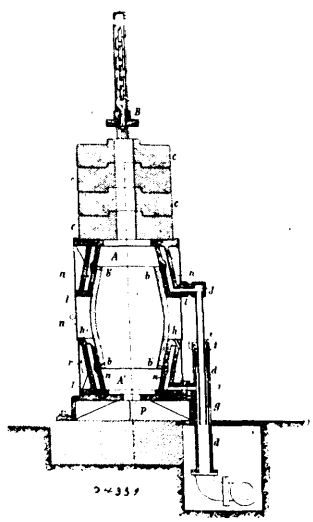
54338

John Lang Pope, Cleveland, Ohio, U.S.A., 12th December, 1896; 6 years. (Filed 27th October, 1896.)

Claim.—1st. In a rail-joint, a plate or chair extending beneath the rails having flanges projecting upwardly and inwardly on the outer sides of the rails, and angle-plates having the bearing portion of their outer edges formed at an angle longitudinally to the body of the plates, the same surfaces being bevelled vertically to correspond with the inner faces of the flanges of the under plates upon which they bear. 2nd. In a rail-joint, a plate extending beneath the rails, between the ties, having flanges projecting upwardly on the outer side of the rails, their inner surfaces which bear only against the outer edges of the angle plates being formed at an acute vertical angle to the plate, their top portions being far enough apart to allow the plate to be placed in position after the rails are laid, and angle-plates extending over the ties (but not resting thereon) having the bearing portion of the outer edges of their horizontal parts formed at an angle longitudinally to the body of the plates, the same surfaces being bevelled vertically to correspond with the inner faces of the flanges of the under plate upon which they bear. 3rd. In a rail-joint, a plate extending beneath the rails, between the ties, having flanges projecting upwardly on the outer side of the rails, their inner surfaces which bear only against the outer edges of the angle-plates being formed at an acute vertical angle to the plate, their top portions being far enough apart to allow the plate to be placed in position after the rails are laid, and angle-plates extending over the ties (but not resting thereon) having the centre of the outer edges of their horizontal parts formed at an angle longitudinally to the body of the plates, the same surfaces being bevelled vertically to correspond to the inner faces of the flanges of the under plate upon which they bear, the end portions of said plate, at a distance from the under plate, extending laterally over the joint-ties.

No. 54,339. Ore Extraction System.

(*Système pour extraire les minerais.*)



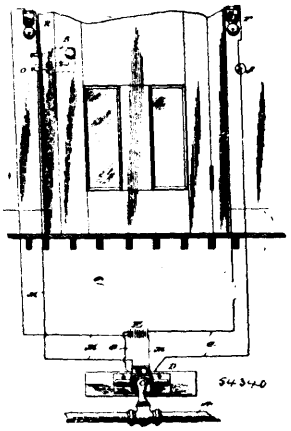
54339

Henry Livingston Sulman and Frank Litherland Teed, both of London, England, 12th December, 1896; 6 years. (Filed 28th January, 1895.)

Claim.—1st. As a solvent for precious metals, a solution of cyanide of potassium or other suitable cyanide of the alkalies or alkaline earths in combination with a haloid salt of cyanogen, such as the chloride, bromide or iodine, substantially as and for the purpose specified. 2nd. The process of extracting precious metals from their ores, which consists in treating the pulverized ore with a solution containing cyanide of potassium or other suitable cyanide of the alkalies or alkaline earths, and a haloid salt of cyanogen, substantially in the proportions described and for the purpose specified. 3rd. The process of extracting precious metals from their ores, which consists in treating the pulverized ore with a solution containing cyanide of potassium or other suitable cyanide of the

alkalies or alkaline earths, and a haloid salt of cyanogen, and then in treating the resulting solution with zinc dust, substantially in the proportions of and for the purpose specified. 4th. The process of precipitating precious me als from their cyanide solutions, such as obtained by the use of a solvent containing cyanide of potassium, a haloid compound of cyanogen, which consists in adding thereto zinc or other suitable metal dust, such as obtained by condensing the vapours of the said metals, substantially in the proportions and for the purpose specified. 5th. The process of precipitating precious metals from their cyanide solutions, such as obtained by the use of a solvent containing cyanide of potassium, and a haloid compound of cyanogen, which consists in adding thereto zinc or other metal dust with or without the exclusion of air, substantially as and for the purpose specified. 6th. In the precipitation of precious metals from their cyanide solutions, the employment of zinc or other metal or alloy in an extremely fine state of division, obtained by condensing the vapours of the said metal or alloy. 7th. In the recovery of precious metals from their ores, the combination with the halogen compounds of cyanogen in a solvent of zinc dust as a precipitant. 8th. In the recovery of precious metals from their ores, the combination with cyanide of potassium or other cyanide or of the alkalies or alkaline earths, and of the chlorides, bromides or iodides of cyanogen in or as a solvent of zinc dust as a precipitant.

No. 54,340. Stop-Cock Lock. (*Serrure pour robinets.*)

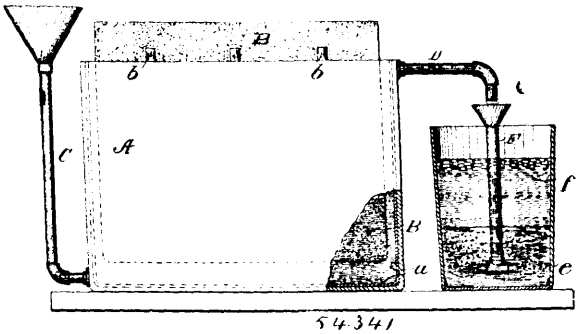


Charles Heyman, New York, State of New York, U.S.A., 12th December, 1896; 6 years. (Filed 22nd November, 1895.)

Claim.—1st. A circuit closer consisting of a metal tube in electric connection with one pole of a battery, a spring-pressed metal button mounted in the said tube and in contact therewith, a metal cap or nut secured to one end of the said tube and insulated therefrom, the said cap or nut in electric connection with the opposite pole of the said battery, an opening in the said cap or nut, and a metal rod secured to the aforesaid spring-pressed metal button and extending rearwardly through the opening in the cap or nut without contact, the said rod having its outer end enlarged and adapted, normally, to rest upon and be in electrical contact with the said cap or nut, making the circuit, and to break the circuit whenever the aforesaid spring-pressed button is pushed into the tube. 2nd. A circuit closer consisting of a metal tube k, having a flange in electric connection with one pole of a battery, a spring-pressed metal button k^1 mounted in the said tube and in contact therewith, a metal cap or nut k^2 secured to one end of the said tube and insulated therefrom, the same being in electric connection with the opposite pole of said battery and having an opening through its length, and a metal rod k^3 secured to the aforesaid button k^1, extending through the opening in the cap or nut k^2, and having upon its outer end an enlargement adapted normally to close the circuit through the said cap or nut k^2 and to break the circuit when the button k^1 is pushed into the tube, all substantially as and for the purpose set forth. 3rd. The combination with stop-cock lock having a base D^1 and lock-casings D^2, D^3, hinged thereto, of the spring-pressed pins g, g^1, mounted in the casings D^2, D^3, and adapted to touch each other when the casings D^2, D^3, are closed together, electric buttons, spring-pressed pins or contact devices H mounted in the bed-portion D^1, between the casings D^2, D^3, insulated from each other and in circuit with an alarm N and an electric key O, and contact plates h^1 suitably mounted in the casings D^2, D^3, in electric connection with the spring-pressed pins g, g^1, the said contact plates h^1 bearing upon and being in electric contact with the pins H when the casings D^2, D^3 are closed, all substantially as and for the purpose set forth. 4th. The combination with the metal stop cock handle having an insulating annulus c^1, of the stop-cock lock D, a battery, an electric circuit c, and the electric circuit M, the stop-cock lock D being provided with the metal spring tongues d^1 and the contact devices d^2, and the spring-pressed pins g, g^1, the contact plates h^1 electrically connected with the pins g, g^1, and the contact devices H united to the electric circuit M, all substantially as and for the purposes described. 5th. The combination with a metal stop cock handle having an insulating annulus c^1, of the stop-cock lock D, a battery, an electric circuit c, and the electric circuit M, the stop-cock lock D being provided with the metal spring tongues d^1 and the contact devices d^2, and the spring-pressed pins g, g^1, the contact plates h^1 electrically connected with the pins g, g^1, and the contact devices H united to the electric circuit M, and the circuit closer K also united to the electric circuit M, all substantially as and for the purposes described. 6th. The combination with a stop-cock having a metal handle provided with an insulating annulus, of a stop-cock lock provided with contact devices arranged to bear upon the said annulus, an electric circuit uniting the said contact devices with the poles of a battery and an alarm placed in the said circuit, as set forth. 7th. The combination with a stop-cock having a metal handle provided with an insulating annulus, and a stop-cock lock, of a battery, systems of electric circuit connected with the said battery, alarms governed by switches, keys and the like, interposed in the said electric circuit, circuit closers and contact devices mounted in the stop-cock lock, whereby when one circuit is closed the other will be open.

No. 54,341. Process of Refining Oil.

(*Procédé pour raffiner l'huile.*)

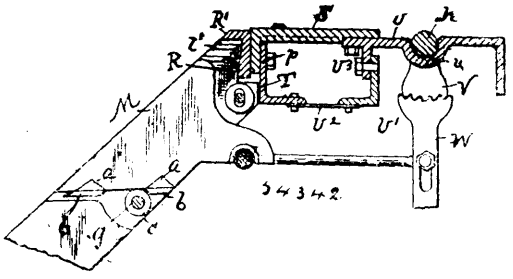


Carlos A. Smith, Cleveland, Ohio, U.S.A., 12th December, 1896; 6 years. (Filed 1st April, 1896.)

Claim.—1st. In the process of refining sulphur-petroleums, the improvement consisting in exposing the crude distillate of such sulphur-petroleum to the influence of an active plate or element, such as lead, and an inactive plate or element, such as carbon, and then treating with an acid in the usual way, substantially as described. 2nd. In the process of refining oils containing sulphur us impurities, the improvement consisting in first distilling the oil, then bringing the distillate into contact with metallic lead and carbon, and then treating with an acid in the usual way, substantially as described. 3rd. The process of refining oils such as specified consisting in distilling the oil, then causing it to flow slowly over carbon and lead surfaces and subsequently treating with an acid in the usual way, substantially as described. 4th. The process of refining oils containing sulphurous impurities, said process consisting in exposing the crude distillate in thin strata to the influence of carbon and lead plates, until it changes colour, as specified, and then treating with an acid, substantially as described. 5th. The process of refining oils of the specified character, by causing the distillate to flow over carbon and lead surfaces and discharging it into a receiver containing a water bottom, substantially as described.

No. 54,342. Self-Feeding Furnace.

(*Fournaise à alimentation automatique.*)

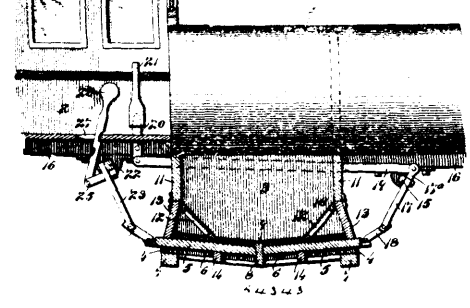


Thomas Murphy, Detroit, Michigan, U.S.A., 12th December 1896; 6 years. (Filed 16th November, 1896.)

Claim.—1st. In a furnace, the combination substantially as set forth, of a hollow grate bearer provided with a series of discharge openings adjacent to the space in which clinkers tend to collect, and means for supplying steam thereto. 2nd. In a furnace, the combination as set forth, of a grate bearer having a longitudinal passage in each of its sides, openings for discharging steam from each of said passages in the direction of the longitudinal central plane of the furnace and adjacent to the space in which clinkers tend to collect therein, and means for supplying water or steam to each of said

passages. 3rd. In a furnace, the combination, substantially as set forth, of a grate bearer composed of two longitudinal bars, each formed with a passage, a series of discharge openings from each of said passages into the space between the bars, and a clinker bar located in said space. 4th. In a furnace, the combination, substantially as set forth, of a grate bearer composed of two longitudinal bars each formed with a passage, discharge openings from said passages upon the opposite sides of each of said bars, and means for supplying steam or water thereto for cooling the grate bearer and rendering the clinker brittle. 5th. In a furnace, a clinker bar formed with a longitudinal passage leading into a direct draft connection into the chimney or exit flue. 6th. In a furnace, the combination of an open ended tubular clinker bar and an air passage connecting the rear end of said clinker bar with the exit or chimney flue of the furnace. 7th. In a furnace, substantially as set forth, the combination of a grate bearer formed with a central opening, a clinker bar supported in bearings in said openings and provided with projecting teeth and corresponding teeth projecting from the approximate edges of the grate bearer. 8th. In a furnace, substantially as set forth, the combination of a grate bearer having a central longitudinal slot, a toothed clinker bar supported in bearings in said slot, longitudinal passages formed in the sides of the grate bearer bar and provided with discharge openings into the space adjacent to the clinker bar, and to opposite sides underneath the grates. 9th. In a furnace, substantially as set forth, the combination of a grate bearer having a central longitudinal slot provided upon its approximate edges with teeth projecting into the slot, a toothed clinker bar supported in bearings in said slot, and steam passages in the sides of the grate bearer having discharge openings into the space around the clinker bar and adjacent thereto and means for discharging steam into said space. 10th. In a furnace, the combination of a grate bearer having a central longitudinal slot, a clinker bar supported in said slot and removable bearing blocks secured in said slot from the underside of said grate bearer to support the clinker bar. 11th. In a furnace, the combination of a grate bearer composed of two longitudinal bars united at intervals by yokes, a clinker bar and removable bearing blocks bolted in from below said yokes and forming in connection with the yokes bearings to hold the clinker bar in position. 12th. In a furnace provided with a V-shaped grate formed of inclined banks of grate bars, the combination of a grate bearer provided with a central opening or slot, a clinker bar supported in said opening, and grate bars supported at their lower ends upon the sides of the grate bearer and projecting over the opening in the grate bearer. 13th. In a furnace, a bank of grate bars composed of alternately fixed and movable grate bars, the latter being arranged in independently movable tiers. 14th. In a furnace, a V-shaped grate formed of two oppositely inclined banks of grate bars, each bank composed of alternately fixed and movable grate bars, the fixed grate bars extending the whole width of the bank and the movable bars composed of one or more independently movable tiers. 15th. In a furnace, a V-shaped grate formed of two oppositely inclined banks of grate bars, each bank composed of alternately fixed and movable grate bars, the movable grate bars forming independently movable tiers, each comprising one or more independently movable groups. 16th. In a self-feeding furnace, a V-shaped grate formed of two oppositely inclined banks of grate bars, each bank composed of alternating fixed grate bars and movable grate bars arranged in tiers at different heights, and means for synchronously imparting a differential feed motion to the tiers of movable bars according to the requirements of the grate in different parts of the furnace. 17th. In a self-feeding furnace, the combination with the fuel magazine located in the sides of the furnace, and the V-shaped grate communicating therewith, of differentiating fuel-feeding devices applied to said magazine and grate. 18th. In a self-feeding furnace, the combination of a V-shaped grate composed of alternating fixed and movable grate bars and with the movable grate bars arranged in separate tiers, each composed of one or more independently movable groups, fuel magazines located in the sides of the furnaces and communicating with the grates, fuel pushers in each magazine corresponding with the groups of movable grate bars, and actuating devices whereby the fuel pushers and groups of movable grate bars are differentially actuated to feed the fuel. 19th. In a self-feeding furnace, the combination of an inclined series of grate bars, one or more series of shorter movable grate bars arranged in tiers one above the other between said fixed bars and alternating therewith, a rock shaft and separate actuating connections between said rock shaft and movable grate bars in each tier, said actuating connections imparting a differential feed. 20th. In a self-feeding furnace, an inclined grate composed of alternate fixed and movable grate bars, the movable grate bars being arranged in separate tiers, one above the other and each comprising one or more independently movable groups, a fuel magazine having separate fuel pushers corresponding to the groups of movable grate bars, a rock shaft, separate actuating connections between said rock shaft and the groups of movable grate bars, said actuating connections imparting a differential motion. 21st. In a self-feeding furnace, the combination of the fixed grate bars, the movable grate bars provided with rearwardly extending hooks, the swing bars engaging with the hooks of the movable bars and connecting them in separate groups, the fuel magazine provided with fuel pushers corresponding to the groups of movable grate bars, the rock shaft having differential actuating connection therewith, and separate connections from said rock shaft with each group of movable grate bars for imparting differential movement to said groups. 22nd. In a self-feeding furnace, the combination of the fuel magazines supported on bed plates in the side walls of the furnace, the rock shafts supported in bearings in said bed plate, reciprocating coal pushers provided with actuating differential gear connections with the rock shaft, the grate composed of fixed grate bars and movable bars arranged in tiers, the vibrating levers below the bed plates having differential gear connections with the rock shafts and connecting rods for said levers with the tiers of movable grate bars arranged to impart a differential reciprocating motion to said movable bars. 23rd. In a self-feeding furnace, the combination with the fuel magazines in the side walls and the coal pushers for feeding the fuel, of the coking plates constructed in independent sections and forming the top of an air flue extending back of the fuel magazine and into the air-feeding devices of the furnace. 24th. In a self-feeding furnace, the combination of a fuel magazine located in one side of the furnace and provided with reciprocating coal pushers for feeding the fuel into the furnace, a grate composed of fixed and movable grate bars and actuating devices for said coal pushers and movable grate bars, said actuating devices being arranged to impart a differential motion to said coal pushers and grate bars. 25th. In a coal-feeding furnace grate composed of an inclined row of alternating fixed and movable grate bars, the combination of the movable grate bars formed with rearwardly projecting hooks and with a sliding foot or base at the lower end, anti-friction rollers mounted between the stationary grate bars and supporting the foot of the movable grate bars, one or more swinging bars suspended from the stationary grate bars and with which the hook of the movable bar engages, and actuating connections for reciprocating the swinging bar or bars. 26th. In a self-feeding furnace enclosed in brick walls, said having side feeding fuel magazines and a V-shaped grate between the same, of fuel magazines supported longitudinally in the sides of the furnace free and clear of the brickwork to form an open space beneath the magazines for the access of the air and for the removal of the coking plate, the latter being constructed in removable sections. 27th. In a self-feeding furnace, the combination with the fuel magazine and coking plate, of an inclined grate composed of alternating stationary and movable grate bars, said stationary grate bars being provided for a portion of their length with flanges or steps projecting into the interstices between the stationary and movable grate bars, and constituting a variable extension of the coking surface. 28th. In a self-feeding furnace, the combination with the stationary inclined grate bars supported at the lower end by a grate bearer, of the compensating plate R forming a vertically self-adjusting abutment for the support of the upper end of said grate bars. 29th. In a self-feeding furnace, the combination with a V-shaped grate composed of alternating fixed and movable grate bars and the grate bearer supporting the lower ends of the fixed grate bars, of fuel magazines supported in the sides of the furnace and provided with coking plates extending into the furnace and the compensating plates interposed between the coking plates and the upper end of the grate bars and having a lip projecting over the upper edges of the grate.

No. 54,343. Ash-Pan. (*Cendrier.*)

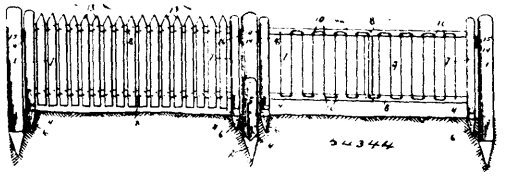


Summer Field Cummings, Del Rio, Texas, U.S.A., 12th December, 1896; 6 years. (Filed 21st Novembr, 1896.)

Claim.—1st. In a locomotive ash-pan, the combination of a bottom composed of sections inclining upwardly in opposite directions from an intermediate point, means for operating the sectional bottom, and a cross-bar forming a stop for the inner ends of the bottom sections and having a cap to extend thereover, substantially as set forth. 2nd. In a locomotive ash-pan, the combination of a movable bottom, actuating mechanism for sliding the movable bottom, and a pivoted frame normally inclining from the perpendicular and having its lower edge resting upon the top side of the movable bottom and serving as a scraper, substantially in the manner set forth. 3rd. In a locomotive ash-pan, the combination of a bottom slidably mounted, a cross-bar limiting the inner movement of the said bottom, rollers for supporting the bottom and relieving the friction incident to its sliding movements, a frame protected by wire fabric and pivoted at its upper edge and normally inclining from the perpendicular, and having its lower edge resting upon the slidable bottom, and a door closing an opening in the end of the

ash-pan directly opposite the pivoted frame, substantially as described. 4th. In a locomotive ash-pan, the combination of bottom sections including upwardly in opposite directions from an intermediate point, independent actuating mechanism for each section, a cross bar forming a stop to limit the inner movement of the said sections and having a cap to extend thereover, pivoted frames oppositely inclining and having their openings protected by wire fabric, and doors closing openings in the ends of the ash-pan directly opposite the pivoted frames, substantially as shown and described. 5th. In a locomotive ash-pan, the combination of movable bottom sections, independent actuating mechanism for sliding the said bottom sections, oppositely-inclining frames pivotally supported and having their lower edges resting upon the respective bottom sections and forming scrapers, and having their openings protected by wire fabric, and doors closing openings in the ends of the ash-pan directly opposite the said pivoted frames, substantially as shown for the purpose described.

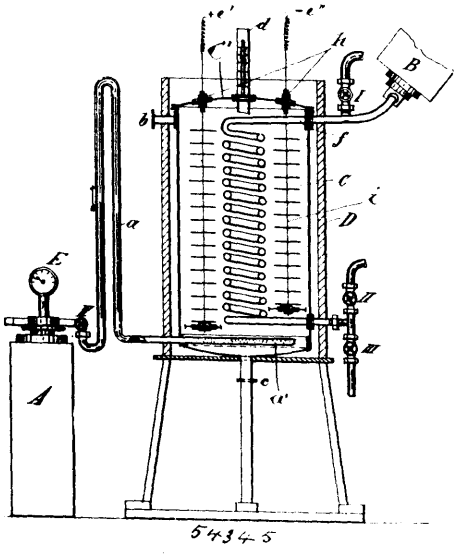
No. 54,344. Flood Fence. (*Cloture.*)



Willis Chandler, Ridgewood, Missouri, U.S.A., 12th December, 1896; 6 years. (Filed 23rd November, 1896.

Claim.—A flood fence, comprising the rigid pointed posts 1, 1, provided with staples as set forth, the pivoted base-piece 2, provided with the stationary stay-plate 5, and the post 3 secured to said base plate 2 by a hinge 4 on the side opposite the stay-plate, and provided with the staples 14 and the wire rods 16, in combination with the intermediate hinged posts 7 having staples 14^1, top and bottom rails 88, substantially as shown and described.

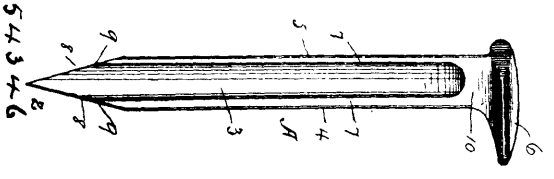
No. 54,345. Alcohol Ageing System.
(*Système de vieillir l'alcool.*)



George Robert Besser, assignee of Heinrich Deininger, both of Berlin, Germany, 12th December, 1896; 6 years. (Filed 4th November, 1895.)

Claim.—1st. A process for ageing alcohol-containing liquids, characterized by first saturating or impregnating with oxygen the liquid to be aged and then setting up molecular oscillations or changes in its constitution, substantially as described. 2nd. A process for ageing alcohol-containing liquids, characterized by first saturating or impregnating with oxygen the liquid to be aged and then setting up molecular oscillations or changes in its constitution by the action of electric currents from an inductorium, substantially as described. 3rd. A process for ageing alcohol-containing liquids, characterized by first saturating or impregnating with oxygen the liquid to be aged and then setting up molecular oscillations or changes in its constitution and maintaining the temperature of the liquid between fifteen and twenty degrees centigrade, substantially as described. 4th. A process for ageing alcohol-containing liquids, characterized by first saturating or impregnating with oxygen the liquid to be aged and then setting up molecular changes in its constitution by the action of alternating electric currents and by keeping the liquid cool by the evaporation of liquid carbonic acid, ammonia and the like, substantially as described. 5th. In an apparatus for carrying out the process for ageing alcohol-containing liquids, the combination with the receptacle C, of the communicating pipe *a* provided with perforations a^1, and the oxygen flask or receptacle A, substantially as described. 6th. In an apparatus for carrying out the process for ageing alcohol-containing liquids, the combination with the receptacle C, of the communicating pipe *a*, provided with perforations a^1, the valve IV, the reducer E, and the oxygen flask A, substantially as described. 7th. In an apparatus for carrying out the process for ageing alcohol-containing liquids, the combination with the receptacle C, of the communicating pipe *a*, provided with perforations a^1, the oxygen flask A, means for controlling the flow and pressure of the oxygen, and the conductors of electrodes *i*, connected to an inductorium or source of supply, substantially as described. 8th. In an apparatus for carrying out the process for ageing alcohol-containing liquids, the combination of the hermetically closed receptacle C, the oxygen flask A, reducer E, valve IV, communicating pipe *a* provided with perforation a^1, the inlet pipe *b*, outlet pipe *c*, worm *f*, bottle B, charged as specified, valve I, valve II, valve III, jacket D, thermometer *d*, conducting wires e^1, e^{11}, insulators *h*, conductors or electrodoes *i*, substantially as described, and for the purpose specified.

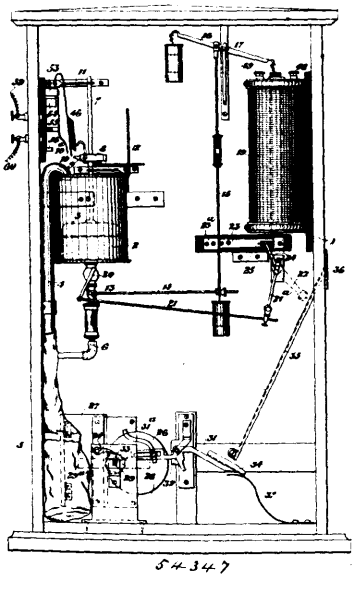
No. 54,346. Railroad Spike. (*Chevillette de chemin de fer.*)



Lorenzo Joseph Markoe, assignee of John Aloysious Markoe, both of White Bear, Minnesota, U.S.A., 12th December, 1896; 6 years. (Filed 21st November, 1896.)

Claim.—A railway spike having a head and a wearing surface 10, immediately below said head, a stem provided with plain front and rear surfaces and having semi-circular grooves in its sides extending from the wearing surface throughout the entire length of the stem to the lowermost portion thereof, the lower front and rear surfaces of said stem being bevelled to form a first-entering cutting edge 2, said bevels intercepting projections 7 formed at the sides of said grooves and also the edges of said grooves to form continuous side cutting-edges 9, which extend upward along the edges of the stem and meet the projections 7, substantially as described and for the purposes set forth.

No. 54,347. Coin Controlled Meter for Electricity.
(*Mètre électrique actionné par une pièce de monnaie.*)

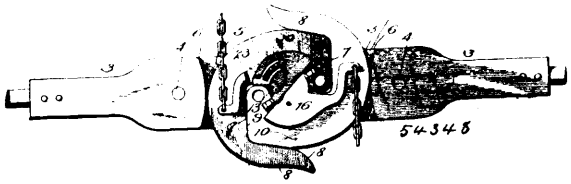


George Knight and George Ellis, both of Southsea, Hants, and Jacob Atherton Mayfield, Hayton, Lancaster, all in England, 12th December, 1896; 6 years. (Filed 16th November, 1896.)

Claim.—1st. In a coin-freed electric meter, the combination of coin-freed mechanism, with a solenoid through which the current of a definite fraction thereof passes, and which regulates the total quantity of electricity supplied to the lamp or other ap, aratus, by controlling the escape of a confined quantity of liquid or gas, so as

to give a predetermined quantity of electricity for a predetermined payment. 2nd. The combination in a coin-freed electric meter, of a coin-freed lever 31, a spindle, eccentric and handle released by 31, a reservoir 2 and receiver 5, a solenoid 19 operating tap 13, and the requisite terminals and wires all operating substantially as described and illustrated in the accompanying drawings. 3rd. In a coin-freed electric meter, the combination of two connected vessels (a reservoir and receiver) of a cut-off switch for closing the connection between the vessels, preventing the flow of liquid from one vessel to the other and breaking down the electric circuit at the same time, enabling the unused quantity of current for which prepayment has been made to be used, by reversing said switch to normal position, without further prepayment, substantially as described and illustrated in the accompanying drawings.

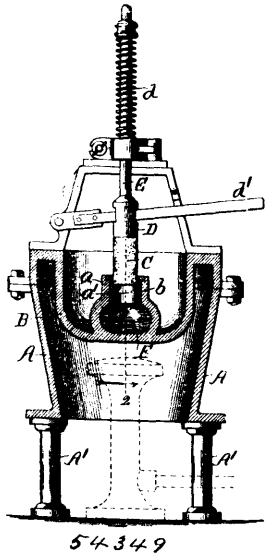
No. 54,348. Car Coupler. (*Attelage de chars.*)



Michael I. Welch, Cordele, and William H. Barnett, Atlanta, both in Georgia, U.S.A., 12th December, 1896; 6 years. (Filed 13th November, 1896.)

Claim.—1st. In a car coupler, the combination with a pivoted drawhead, of a semi-cylindrical locking section secured to rock therein and provided with flanges, concentric guide lugs on the head under the flanges, a righting spring in one of the lugs, and having one end in engagement with the locking section and the other with the drawhead, substantially as described 2nd. In a car coupler, the combination with a drawhead having a concaved socket, of a semi-cylindrical locking section secured to rock therein, means for retaining the section in place on the head, and a righting spring disposed longitudinally in an arc concentric with that in which the section turns, substantially as described. 3rd. In a car coupler, a drawhead having a concaved socket, in combination with a semi-cylindrical locking section entirely filling said socket and movable therein, and provided with a vertical concavity extending across its flat face, and a righting spring, substantially as described. 4th. In a car coupler, the combination with a pivoted drawhead having a concaved socket, a semi-cylindrical locking section movable therein, lateral flanges on the section which overlap the top and bottom edges of the socket, guide bosses for retaining and guiding the movements of the section, and a righting spring having its extremities in connection with the section and head respectively, and being covered by one of the flanges, all arranged and adapted to operate in the manner and for the purpose set forth. 5th. In a car coupler, the combination with a pivoted drawhead having forwardly projecting jaws one of which is provided with an inturned arm and link and pin openings, of a semi-cylindrical locking section secured to turn within one of the jaws, means for holding and guiding said section during its movement, and a righting spring disposed longitudinally in an arc concentric with that in which the locking section turns, with its ends in engagement with the jaw portion and the section, substantially as described. 6th. In a car coupler, the combination with a drawhead having the usual forwardly projecting jaws, of a semi-cylindrical locking section secured to turn in one of the jaws segmental guide bosses on the head at the top and bottom edges of the socket, laterally extending flanges on the top and bottom of the locking section to overlap and engage the guide bosses, a compressible spiral spring located within a groove in one of the bosses, and having its opposite ends in engagement with the head and section portions, as and for the purposes set forth. 7th. In a car coupler provided with the usual forwardly projecting jaws, the combination with the semi-cylindrical locking section movable in one of the jaws and having laterally extending flanges projecting over the top and bottom faces of the jaw, guide bosses on the jaw adapted to engage the flanges, one of said bosses being provided with the longitudinal groove, a compressible righting spring within a groove, and a removable plug in the end of the groove, substantially as described. 8th. In a car coupler provided with the usual forwardly projecting jaws, one of which is provided with a concaved socket, a movable semi-cylindrical locking section adapted to fit within the socket, means for retaining the section on the jaw, a concentrically disposed righting spring confined within a corresponding groove in the drawhead portion, and a plug at the end of the groove by means of which the latter is opened and closed for the insertion and removal of the spring, substantially as described. 9th. In a car coupler having the usual forwardly projecting jaws, a movable semi-cylindrical locking section retained on one of the jaws, in combination with a righting spring located within a concentric groove, said groove being provided with an enlargement at one end, and a removable plug closing the end of the groove near the enlargement, substantially as described. 18th. In a car coupler of the character described, a jaw provided with a semi-cylindrical looking section, and a righting spring located within the groove having an enlargement in its side near one end, and a wedge-shaped plug closing the end of the groove, and arranged and adapted to be held therein by the pressure of the spring, and to be removed and inserted through said enlargement, substantially as described. 11th. In a car coupler of the character described, a semi-cylindrical locking section, in combination with a righting spring located in a groove in one of the jaws of the coupler, said groove being closed at the end by a wedge-shaped plug placed base inward and being provided with an inward projection adapted to enter the coils of the spring, substantially as described. 12th. In a car coupler, a coupling head provided with the usual forwardly projecting jaws, one of which has a concaved socket, in combination with a semi-cylindrical locking section provided with a safety catch, consisting of a downwardly projecting arm on the lower end of said section and a laterally projecting shelf on the arm arranged and adapted to overlap the opposite drawhead member, substantially as described. 13th. In a car coupler, the herein described locking section provided with a downwardly projecting arm cast integral with the section and having on its lower end an outwardly extending shelf arranged and adapted to overlap the opposite member to catch the same in the event of one of the couplers accidentally pulling out, substantially as described.

No. 54,349. Type Casting Pump.
(*Pompe pour le coulage de caractères.*)



John West, Chicago, Illinois, U.S.A., 14th December, 1896; 6 years. (Filed 20th May, 1895.)

Claim. 1st. A pump-plunger for type-casting machines, composed of carbon or other non-metallic substance of a similar character, substantially as described. 2nd. A type-founder's pump, having a well-chamber, a contracted neck-passage, provided with a lining consisting of a carbon composition or equivalent non-metallic substance, and opening into said well-chamber, and a plunger, composed of a similar carbon substance and working through said passage for the purpose of ejecting the molten metal into the casting-moulds, substantially as described. 3rd. A type-founder's pump, having a well-chamber and a plunger-passage communicating therewith, said passage being provided with a lining composed of a carbon composition or equivalent non-metallic substance, substantially as described. 4th. The combination in a type-founder's pump, of a plunger, composed of a carbon composition or equivalent non-metallic substance, and a well-chamber, having a plunger-passage communicating therewith that is lined with a similar material entering into the composition of the plunger working therethrough, substantially as described.

No. 54,350. Type Metal. (*Métal pour caractères*)

John West, Chicago, Illinois, U.S.A., 14th December, 1896; 6 years. (Filed 20th May, 1895.)

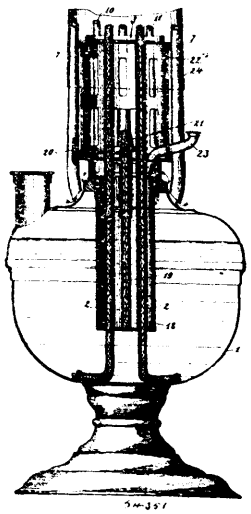
Claim.—A metal composition or alloy, consisting of zinc, aluminum and copper in about the proportions herein set forth.

No. 54,351. Petroleum Lamp. (*Lampe à pétrole.*)

Casimir Wurster, London, England, 14th December, 1896; 6 years. (Filed 15th January, 1896.)

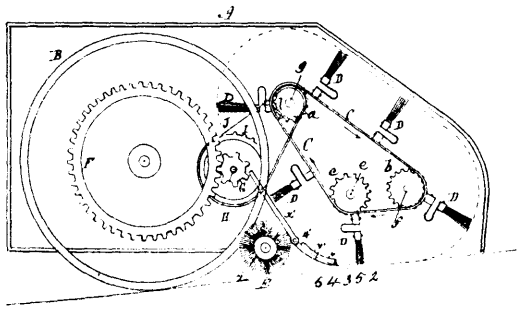
Claim.—1st. A petroleum incandescent lamp provided with a burner adapted to consume non-sooting liquid fuel and so located as to continuously gasify the petroleum, substantially as herein shown and described. 2nd. In a petroleum incandescent lamp, the combination of a petroleum gasifying chamber, means for supplying the petroleum thereto, and a burner for heating the gasifyer adapted to burn non-smoking liquid fuel, substantially as set forth. 3rd. In a petroleum incandescent lamp, the combination of a gas burner, a petroleum gasifying chamber communicating with the burner, means

for supplying petroleum to the gasifying chamber, and a burner for heating the gasifyer adapted to burn non-smoking liquid fuel, sub-



stantially as set forth. 4th. A petroleum incandescent lamp having a main front or reservoir, a gasifyer for gasifying petroleum supplied from the font, an independent adjustable gasifying burner, and an independent receiver for the liquid fuel for the gasifying burner, substantially as herein shown and described.. 5th. A petroleum incandescent lamp having a gasifying burner, crown 9, hood 14 and tubes 7, 10, 11 and 13 for conducting air to the crown 9 and hood 14, which tubes extend to points beyond the gasifying burner, substantially as herein shown and described. 6th. A petroleum incandescent lamp having a font, a burner, and tubes for conveying air to the burner, which tubes have their open lower ends directed toward the top of the font for the purpose of cooling the latter by the air drawn into said tubes, substantially as herein shown and described. 7th. In an incandescent petroleum lamp, a petroleum gas burner composed of a series of Bunsen burners 6, a tube 5 surrounding them and provided with air inlets, and an ejector-shaped cap 8, into which the upper ends of the tubes of the Bunsen burners lead for the purpose of conveying air to the petroleum vapours, substantially as herein shown and described. 8th. In an incandescent petroleum lamp, a chimney having its central part 16 provided with air inlets and its upper part 15 shaped as an ejector for the purpose of drawing fresh air to the upper part of the incandescent hood in said chimney, substantially as herein shown and described. 9th. In an incandescent petroleum lamp, a tube 24 open at the top and surrounding a gasifyer 3, and adapted to conduct the products of combustion of a gasifying flame around the gasifyer into the incandescent burner for the purpose of utilizing the heat of such products of combustion for heating the gasifyer, substantially as set forth. 10th. A burning fluid for incandescent petroleum lamps composed of a petroleum to which have been added soluble bodies having an oxydizing action for increasing the energy of combustion.

No. 54,352. Street Cleaner. (*Nettoyeur de rue*)

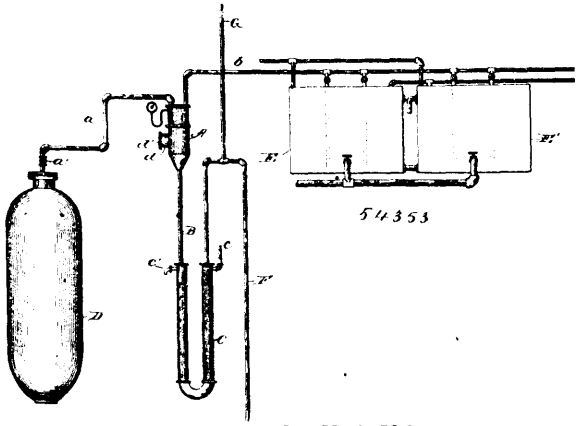


Samuel Stephens, Hamilton, Ontario, Canada, 14th December, 1896; 6 years. (Filed 5th August, 1896.)

Claim.—1st. In combination with a street-cleaning machine, a series of brooms and brushes attached to endless chains, made to run on sprocket wheels in a triangular-shaped form, the same being set in a frame which can be movable and adjusted in the box to regulate the slack of the elevator chains, substantially as and for the purpose specified. 2nd. In a street-cleaning machine, the diaphragm constructed in two main parts, the upper wood one rigid, and the lower metal one movable and hinged thereto, and formed in sections having their extreme bottom ends constructed with shaped openings, and flanges on the outside ones, substantially as and for the purpose specified. 3rd. In a street-cleaning machine, an auxiliary brush or broom journalized behind the diaphragm in combination with the main brooms or brushes, substantially as and for the purpose specified. 4th. In a street-cleaning machine, the devices for raising the end of the same when out of gear, consisting of a vertical rod made to move perpendicularly at two rear corners of the machine, each provided with a small wheel at the bottom, two eccentrics fastened to plates on the corners of the machine, and made to impinge on the said vertical rods respectively, and operated to raise the box, by means of a hand lever at the opposite end of the machine, and having a connecting rod from the said lever to the eccentrics, substantially as and for the purpose specified. 5th. In a street-cleaning machine a slotted guard-plate made adjustable to the side of the machine opposite the auxiliary brush, for the purpose of keeping the dust, substantially as specified.

No. 54,353. Gas Separating Process.

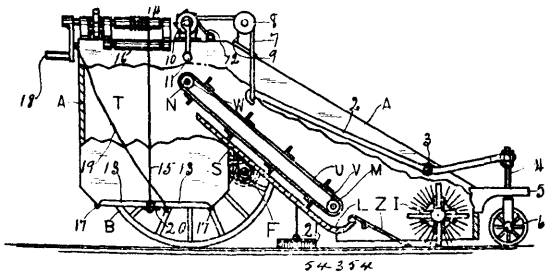
(*Procédé pour séparer le gaz.*)



Viggo Drewsen, Fort Edward, New York, U.S.A., 14th December, 1896; 6 years. (Filed 3rd August, 1896.)

Claim.—1st. The process herein described of separating gases from liquids under pressure, which consists in separating the liquid under pressure by gravity from the gases which carry it along, then forcing said liquid through a fluid column of greater pressure than the pressure of the gases, and subjecting the liquid to a cooling action in its passage through the fluid-column so as to keep it and the fluid-column below the boiling temperature, substantially as set forth. 2nd. The combination of a separator for separating a gas and liquid, and a U-shaped pressure tube having one leg connected with said separator and adapted to contain a column of liquid, the weight of which maintains the desired pressure in the separator, a down-turned discharge pipe connected with said pressure-tube, and a vent pipe, substantially as set forth. 3rd. The combination of a separator for separating a gas and a liquid, a U-shaped pressure tube one leg of which is connected with said separator, said pressure tube being adapted to contain a column of liquid for maintaing the pressure in the desired pressure in the separator, a down-turned discharge pipe said separator, and a cooler for said separator for maintaining the liquid in a liquid state, substantially as set forth. 4th. The combination of a pulp digester, a separator for separating a gas and a liquid, a pipe connecting said digester with said separator, means for carrying off the gas from said separator, a U-shaped pressure tube, one leg of which is connected to separator, for containing a column of liquid, and a cooler for said separator for maintaining the liquid in liquid form, substantially as set forth. 5th. The combination of a pulp digester, a separator for separating a gas and a liquid, a pipe connecting said digester with said separator, means for carrying off the gas from said separator, and a U-shaped pressure tube, one leg of which is connected to said separator, for containing a column of liquid, substantially as set forth.

No. 54,354. Street Cleaner. (*Nettoyeur de rue.*)



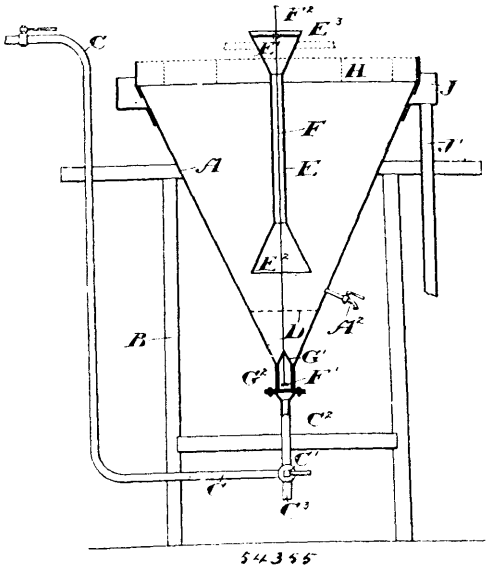
Russell G. Olmsted, Hamilton, Ontario, Canada, 14th December, 1896; 6 years. (Filed 10th August, 1896.)

Claim.—1st. The combination of the framework A, of the machine supported by ground wheels B, the spur wheel rims D,

secured thereto, the pinions E, on their transverse shaft F, and provided with universal clutches, the sprocket wheels H, the sprocket chains, the sprocket wheels K, on transverse shaft J, provided with scraper and fan brush I, constructed with rubber or leather blades and suitable brush material, substantially as described and for the purpose herein set forth. 2nd. The herein described framework, having soil-box and rearwardly inclined plane provided with trough and hinged guard, in combination with the scraper and fan-brush I, the elevator composed of side sprocket chain having a series of transverse angle slats secured thereto and supported by and engaging with the upper sprocket wheels, and the lower sprocket wheels, on their respective transverse shafts M, and N, substantially as described and set forth. 3rd. The herein described framework having inclined plane with trough and hinged guard and soil-box provided with lower hinged doors, in combination with the door controlling mechanism consisting of the roller 14, in bearings on machine, the crank-handle, cable connected to door, side rollers 16, with cable 15, connected to rear door, the mechanism for revolving the scraper and fan brush, and the soil elevator, substantially as described and for the purpose herein set forth. 4th. The herein described framework having inclined plane, with trough and hinged guard, the soil receptacle, the scraper and fan-brush, with soil elevator as driven, in combination with the rear ground wheels connected to their vertical rods in bearings, the bent levers 2, pivoted at 3, the cables 7, cable pulley 8, in bearings 9, the ratchet-pulleys 10, with dogs and crank-handle H, substantially as described and for the purpose herein set forth.

No. 54,355. Precious Metal Recovering Process.

(*Procédé pour faire revenir les métaux précieux.*)



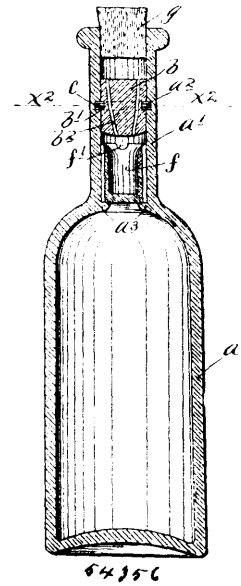
54355

Henry Livingstone Sulman, London, England, 14th December, 1896; 6 years. (Filed 13th November, 1896.)

Claim.—1st. In precipitation apparatus, a vessel whose cross-sectional area increases from the lower end upwards, in combination with means for introducing the liquor or solution into the smaller end of the vessel, substantially as and for the purpose specified. 2nd. In precipitation apparatus, a vessel whose cross-sectional area increases from the lower end upwards, in combination with a perforated distributing cone located at the smaller end of the vessel and an inlet pipe for the liquor or solution below the distributing cone, substantially as and for the purpose specified. 3rd. In precipitation apparatus, a vessel whose cross-sectional area increases from the lower end upwards, in combination with an inlet pipe for the liquor or solution at the lower end of the vessel, and a spreading device located above the inlet and adapted to cause the whole upward flow to pass through an annular space between the said device and the wall of the vessel, substantially as and for the purpose specified. 4th. In precipitation apparatus, a vessel whose cross-sectional area increases from the lower end upwards, in combination with an inlet pipe for the liquor or solution at the lower end of the vessel, and a smaller inverted cone or chamber located near the bottom of the vessel, so as to form a mixing chamber, with an annular outflow space between it and the walls of the vessel, substantially as and for the purpose specified. 5th. In precipitation apparatus, a vessel whose cross-sectional area increases from the lower end upwards, in combination with means for introducing the liquor or solution into the smaller end of the vessel, and a filter screen surrounding the top of the vessel, substantially as and for the purpose specified. 6th. In precipitation apparatus, a vessel whose cross-sectional area increases from the lower end upwards, in combination with an inlet pipe for the liquor or solution at the lower end of the vessel, a smaller inverted cone or chamber located near the bottom of the vessel, so as to form a mixing chamber, with an annular outflow space between it and the walls of the vessel, and a pipe connected with said inverted cone for the introduction of the precipitant, substantially as and for the purpose specified. 7th. In precipitation apparatus, a vessel whose cross-sectional area increases from the lower end upwards, in combination with an inlet pipe for the liquor or solution at the lower end of the vessel, a smaller inverted cone or chamber located near the bottom of the vessel, so as to form a mixing chamber, with an annular outflow space between it and the walls of the vessel, and a pipe connected with said inverted cone for the introduction of the precipitant, and a valve located within the inlet pipe, the stem of which extends to the top of the vessel, substantially as and for the purpose specified. 8th. In precipitation apparatus, a vessel whose cross-sectional area increases from the lower end upwards, in combination with an inlet pipe for the liquor or solution at the lower end of the vessel, a smaller inverted cone or chamber located near the bottom of the vessel, so as to form a mixing chamber, with an annular outflow space between it and the walls of the vessel, a pipe connected with said inverted cone for the introduction of the precipitant, a valve located within the inlet pipe, the stem of which extends to the top of the vessel, and a perforated cap located at the lower end of the vessel above the inlet pipe, substantially as and for the purpose specified.

No. 54,356. Non-Refillable Bottle.

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



54356

Frederick T. Vanstrum and John P. Vanstrum, both of Minneapolis, Minnesota, U.S.A., 14th December, 1896; 6 years. (Filed 20th November, 1896.)

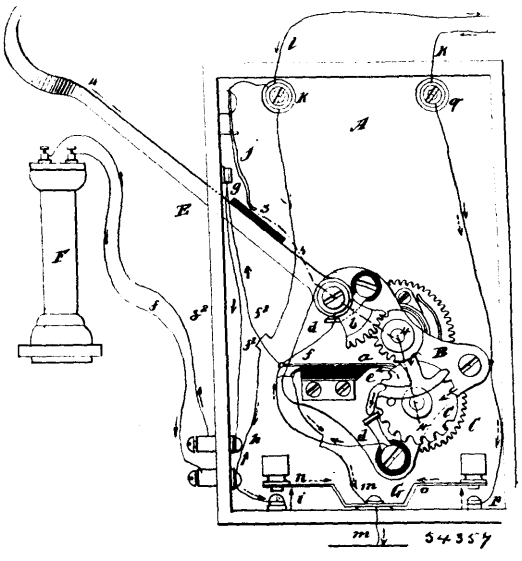
Claim.—The combination with a bottle having the annular ledge or valve seat a^3 in its neck, of the gravity actuated cup-shaped sealing valve *f* having the walls of its mouth bevelled or sharpened outward to a knife edged rim and provided on its exterior with the longitudinal grooves f^1 extending its entire length, and cut through the said rim, and the lock-stopper *b* having the passages b^2 extending therethrough and arranged to discharge into the mouth of the sealing valve or cup *f*, substantially as described.

No. 54,357. Combined District Telegraph and Telephone System. (*Système de téléphone et de télégraphe.*)

Edgar Ellsworth Salisbury and Albert Earl Dean, both of Tacoma, Washington, U.S.A., 14th December, 1896; 6 years. (Filed 13th August, 1896.)

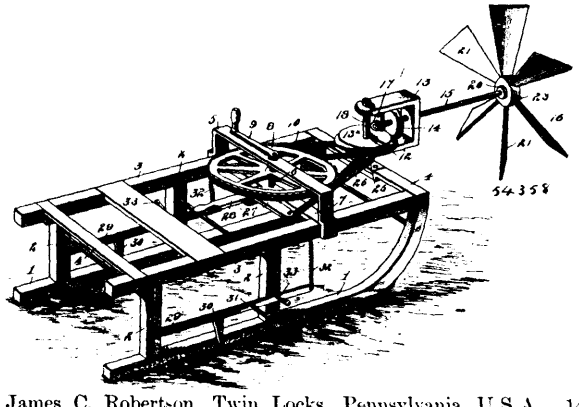
Claim.—1st. The combination of a signalling mechanism comprising a spring, a break-wheel and contact springs for the break-wheel, and swinging arm actuated by the signalling mechanism, contacts arranged in position to be engaged by and forming stops for the arm when in its extreme positions, a telephone circuit connected to the said contacts and also to the contact springs of the signalling mechanism, and a movable telephone support connected to and adapted to actuate the signalling mechanism, substantially as set forth. 2nd. The combination of a signaling mechanism comprising a break-wheel and contact points adapted when the break-wheel is rotated to contact therewith, a signalling arm actuated by said swinging mechanism, a contact adapted to be engaged by and forming a stop for the arm when the said arm is in one position, a telephone circuit having one terminal connected to the said contact and also to the signalling mechanism, and a movable telephone support adapted to actuate the signalling mechanism, said swinging arm of

the signalling mechanism being adapted when the telephone is arranged on the movable support, to be moved out of engagement



with said contact, to break the telephone circuit, substantially as set forth. 3rd. The combination of a signalling mechanism comprising a break-wheel, contact points adapted when the break-wheel is rotated to contact therewith, a swinging arm adapted to be actuated by the signalling device, insulated contacts arranged in position to be engaged by and forming stops for the swinging arm when in its extreme positions, a telephone circuit having one terminal connected to both of said contacts and having its other terminal connected to the signalling mechanisms, and a movable telephone support connected to and adapted to actuate the signalling mechanism when moved, said telephone circuit being adapted to be broken whenever the signalling mechanism is actuated and the swinging arm moved out of contact with either of the said contacts, substantially as set forth.

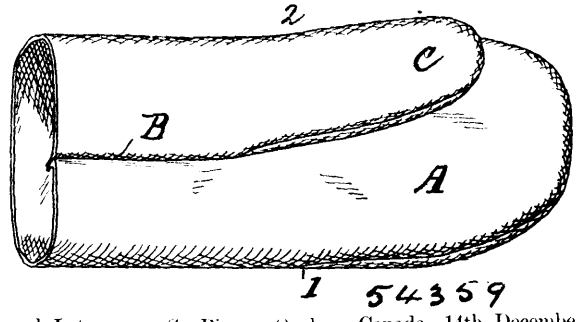
No. 54,358. Sled Propeller. (*Propulseur de traineau.*)



James C. Robertson, Twin Locks, Pennsylvania, U.S.A., 14th December, 1896; 6 years. (Filed 23rd November, 1896.)

Claim.—1st. The combination with a sled, of an actuating propeller wheel mounted on a longitudinal shaft, a frame mounted on a vertical axis on said sled and adapted to swing in a horizontal plane and having the propeller shaft journalled therein, mechanism for actuating said propeller, and means for rocking said frame and changing the angle of the propeller, substantially as and for the purpose described. 2nd. The combination with a sled, of a frame journalled on a substantially vertical axis thereon, a screw propeller mounted on a shaft journalled in said frame, a hand power wheel operatively connected to said propeller shaft for imparting rotary motion thereto, a steering bar or handle arranged within reach of the operator, and connections between the same and said bearing frame whereby the latter may be swung about its axis, substantially as and for the purpose described. 3rd. The combination with a sled, of a propeller, mechanism for actuating the same, brake levers arranged on opposite sides of the sled and having pointed extensions adapted to be projected below the plane of the runners, foot rests on said brake levers whereby they may be depressed, springs for uplifting said levers, and stationary foot rests located at each side of the sled and acting as stops for the brake levers, substantially as described.

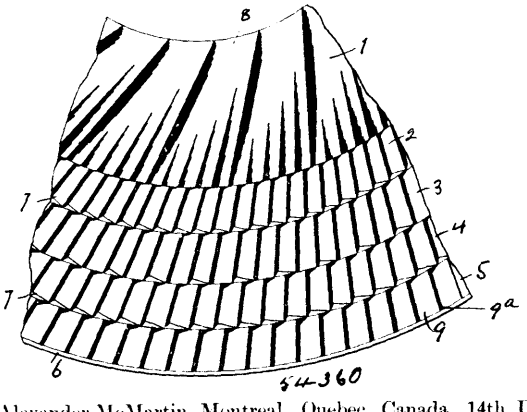
No. 54,359. Mitten. (*Mitaine.*)



Joseph Letourneau, St. Pierre, Quebec, Canada, 14th December, 1896; 6 years. (Filed 18th November, 1896.)

Claim.—As a new article of manufacture, a mitten having only one continuous seam B, extending from the wrist to the point 1, substantially as herein shown and described.

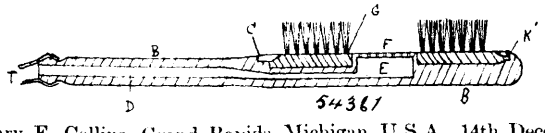
No. 54,360. Grinding Disc. (*Disque à moudre.*)



John Alexander McMartin, Montreal, Quebec, Canada, 14th December, 1896; 6 years. (Filed 27th August, 1896.)

Claim.—1st. The method of making a grinding disc consisting of a cutting pattern disc with radiating ridges into concentric rings and arranging said rings as described. 2nd. A grinding disc having radiating ridges, of which concentric rings are adjusted to alternate. 3rd. In a grinding disc the combination of the deep inside grooves and the alternate concentric rings of radiating ridges. 4th. In a grinding disc the combination of the deep inside grooves tapering outwards, the alternate concentric rings of radiating ridges and the outer corners formed by such rings filled up as described. 5th. In a grinding disc the combination of the deep inside grooves tapering outwards, the alternate concentric rings of radiating ridges, the outer corners formed by the concentric rings filled up, and the outer band around the circumference.

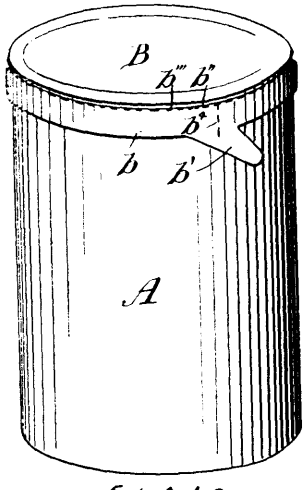
No. 54,361. Bath Brush. (*Brosse pour bains.*)



Mary E. Collins, Grand Rapids, Michigan, U.S.A., 14th December, 1896; 6 years. (Filed 27th November, 1896.)

Claim.—In a fountain bath brush, the combination with a recessed brush body provided with a hollow handle projecting from the brush body and in a plane therewith, a perforated reservoir projecting upward into the recessed body and having communication with the hollow handle, a brush block adapted to be detachably connected to the recessed brush body, said brush block being provided with an aperture through which the upwardly extending reservoir passes, and a hose attaching nipple at the end of the handle, substantially as described. 2nd. In a fountain bath brush, the combination with a recessed brush body provided with a hollow handle projecting from the brush block in a plane substantially on a line with the latter, a perforated reservoir in the brush block and projecting upward within the said recess and having communication with the hollow handle, a brush block seated within the recess in the brush head and having an orifice therein through which the upwardly projecting reservoir extends, a projection on the edge of the brush block which registers with a depression in the brush body, a fastener carried by the latter and adapted to act upon the brush block, and a projection on the end of the handle for attachment of a hose, substantially as described.

No. 54,362. Metal Can. (*Boîte métallique.*)

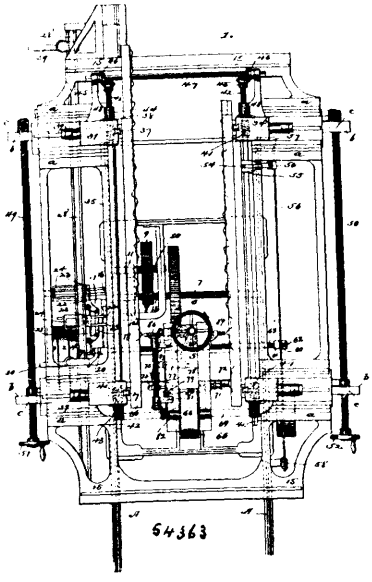


54362

Edwin Boyd McDougall, St. John, Margaret Cleribew, Toronto, Stephen Sweden De Forest, and Edward Thankful Sturdee, both of St. John's, New Brunswick, all of Canada, 14th December, 1896; 6 years. (Filed 30th May, 1896.)

Claim.—1st. A hermetically sealed sheet metal can, consisting of a body of any desired shape or cross section and an end having a crimped rim or flange, the rim of the flat portion of the end bevelled slightly upwards, an inward bead just below the angle or line at which the rim is bent down from the flat, and the lower side of said bead projecting a little more outwardly than the upper projects inwardly, a tangential projection or lug on said rim, a weakening line on the inner convex surface of the bead and a weakening line on the outer concave part of the bead, and a weakening line extending vertically from said other weakening line into said lug, substantially as set forth. 2nd. A hermetically sealed sheet metal can, having an end or top with crimped rim or flange provided with a lug, an inward bead in said rim immediately below the angle at which it is turned down from the flat, and weakening lines on the inner and outer face of said bead almost but not quite opposite each other, and a short vertical weakening line extending from said weakening lines referred to into the tangential lug, substantially as set forth.

No. 54,363. Duplicating Machine.
(*Machine à reproduction double.*)

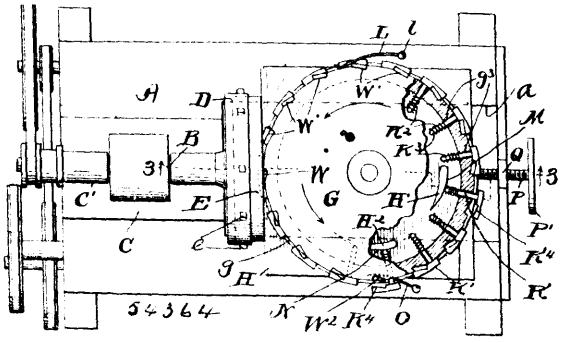


The American Carving and Manufacturing Co., assignee of Robert Morgenlier, all of Winona, Minnesota, U.S.A., 16th December, 1896; 6 years. (Filed 17th November, 1894.)

Claim.—1st. In a duplicating machine, the combination with pattern and material holders arranged parallel to and facing each other, of cutting and guiding mechanisms operating conjointly therewith, means for automatically moving said pattern and material holders longitudinally and vertically, whereby to progressively present the surfaces of the pattern and material to the guiding and cutting mechanism and said pattern and material holders being also manually adjustable in a plane transverse to the line of movement of the cutting and guiding mechanisms whereby to present new or additional surfaces of the same pattern and material to the action of the cutting and guiding mechanisms, substantially as described. 2nd. In a duplicating machine, the combination with longitudinally and vertically reciprocating pattern and material holders arranged parallel to and facing each other and adjustable to and from each other, of cutting and guiding mechanism operating conjointly therewith, said pattern and material holders being also adjustable in relation to said cutting and guiding mechanism, substantially as described. 3rd. In a duplicating machine, the combination with a revoluble and reciprocal cutter, of a reciprocal and gyratory guide finger, substantially as described. 4th In a duplicating machine, the combination with longitudinally and vertically reciprocating and variably adjustable material and pattern holders, of a series of revoluble and reciprocal cutters and reciprocal and independently gyratory guide fingers connected with the cutters, substantially as described. 5th. In a duplicating machine, the combination with a revoluble and reciprocal cutter, of a reciprocal and independently gyratory guide finger and a pivoted adjustable lever forming a connection between said cutter and finger, substantially as described. 6th. In a duplicating machine, the combination with a series of revoluble and reciprocal cutters, of a series of reciprocal and independently gyratory guide fingers and pivoted adjustable levers connecting the cutters and fingers, substantially as described. 7th. In a duplicating machine, the combination with cutters and guide fingers connected by pivoted adjustable levers, of mechanism for adjusting said levers whereby to change the leverage upon said cutters and fingers, substantially as described. 8th. A duplicating machine having an independently gyratory and reciprocal series of guide fingers and a series of revoluble cutters connected therewith and controlled thereby, substantially as described. 9th. In a duplicating machine, the combination with a series of revoluble and reciprocal cutter spindles, of rollers through which such spindles may slide and be revolved thereby, a series of pressure rollers arranged opposite thereof and a driving belt held by the pressure rollers in driving contact with the spindle rollers, substantially as described. 10th. In a duplicating machine, the combination with revoluble and reciprocal cutter spindles, of reciprocal guide fingers, tubes forming part of such fingers, lipped collars on the cutter spindles and finger tubes, and levers having slot and pin connections with said collars, substantially as described. 11th. In a duplicating machine, the combination with cutter spindles and guide finger tubes, of lipped collars having pins, a lever slotted at its ends and fitting between the lips on said collars and the pins of said lips engaging the slots of said lever and providing points of leverage, substantially as described. 12th. In a duplicating machine, the combination with cutter spindles and guide finger tubes, of lipped collars held thereon, connecting levers movably held between such lips and arms whereon such levers are pivoted, substantially as described. 13th. In a duplicating machine, the combination with cutter spindles and guide finger tubes, of connecting levers between said spindles and tubes, arms to which said levers are pivoted, said arms being also pivoted and adjusting rods pivoted to said arms, substantially as described. 14th. In a duplicating machine, the combination with cutter spindles and guide finger tubes, of pivoted levers connecting said spindles and tubes, arms to which said levers are pivoted, rods pivoted to such arms, collars on said rods, spiral springs having a bearing on the collars and adjusting nuts, substantially as described. 15th. In a duplicating machine, the combination with a cutter, of a guide finger connected therewith and adapted to control the movements thereof, and a spring arranged in connection therewith and adapted to constantly project said guide finger and thereby the cutter, substantially as described. 16th. In a duplicating machine, the combination with a cutter, of a guide finger connected therewith and adapted to control the projection thereof into contact with the work, a spring arranged in connection with the guide finger to constantly project the latter, and means for adjusting the pressure of said spring, substantially as described. 17th. In a duplicating machine, the combination with a reciprocating and rotating cutter, of a reciprocating guide finger connected therewith and adapted to control the movements thereof, and a spring arranged in connection with the guide finger to constantly project said finger, means for adjusting the tension of said spring and means for retracting the guide finger, substantially as described. 18th. In a duplicating machine, the combination with a reciprocating and rotating cutter, of a reciprocating guide finger connected therewith and adapted to control the movements thereof, a spring arranged in connection with the guide finger and adapted to constantly project the same, and flexible bearings for said guide finger whereby it is permitted a gyrating motion, substantially as described. 19th. In a duplicating machine, the combination with a guide finger and tube to which said finger is connected, a spiral spring arranged in said tube and having a bearing thereon and a rod passing through the axis of the spring and having a sliding bearing in the tube, said rod being adjustable whereby to tension the spring, substantially as described. 20th. In a duplicating machine, the combination with gyratory guide fingers, of flexible bearings for said fingers, springs for projecting the guide fingres

and traction rolls for drawing back such fingers after the gyratory motion sets in, substantially as described. 21st. In a duplicating machine, the combination with a reciprocating carriage for the pattern and material holders, of mechanism for reciprocating the carriage, and shifting mechanism for changing the direction of travel of such carriage, substantially as described. 22nd. In a duplicating machine, the combination of a reciprocating carriage, mechanism for reciprocating the same, stops for limiting the travel of the carriage and a pivoted canting lever for operating the shifting devices of such carriage, substantially as described. 23rd. In a duplicating machine, the combination with a reciprocating carriage and driving belts, a shifting mechanism for said belts, stops for operating said shifting mechanism, said stops being carried by and adjustable on such carriage, substantially as described. 24th. In a duplicating machine, the combination with a reciprocating carriage, of sliding and adjustable standards thereon carrying pattern and material holders and means for sliding and adjusting such standards, substantially as described. 25th. In a duplicating machine, the combination with a reciprocating carriage, of adjustable and sliding standards, and adjustable clamping pieces for said standards, substantially as described. 26th. In a duplicating machine, the combination with sliding standards, carrying pattern and material holders, cams on which said standards rest and means for rotating said cams whereby to move said standards, substantially as described. 27th. In a duplicating machine, the combination with adjustable and sliding standards, of cams for moving the standards and worm gearing for moving the cams, substantially as described. 28th. In a duplicating machine, the combination with the reciprocating carriage, of gearing for moving the carriage, shifting mechanism for the gearing, sliding standards carrying pattern and material holders, cams for moving the standards and means controlled by the shifting mechanism for operating said cams at the end of each reciprocation of the carriage, substantially as described. 29th. In a duplicating machine, the combination with a reciprocating carriage, of driving mechanism therefor, a shifting device for the driving mechanism, vertically movable pattern and material holders and means controlled by the shifting mechanism for moving the pattern and material holders, substantially as described. 30th. In a duplicating machine, the combination with a revoluble shaft, of a ratchet wheel, swinging pawl, and a canting bar provided with projecting lug, substantially as described. 31st. In a duplicating machine, the combination with a revoluble shaft, of a ratchet wheel, swinging pawl, canting bar and lug, and a pivoted swinging arm provided with a lug to encounter the lug on said canting bar, substantially as described. 32nd. In a duplicating machine, the combination with a revoluble cam, of X-shaped bars bearing on said cams and grooved standards in which said bars slide, substantially as described. 33rd. In a duplicating machine, the combination with revoluble cams, of X-shaped bars resting with one end against the periphery of said cams, and a table or holder sliding upon such bars and adjustable thereon, substantially as described.

No. 54,364. Grinding Machine. (*Machine à aiguiser.*)



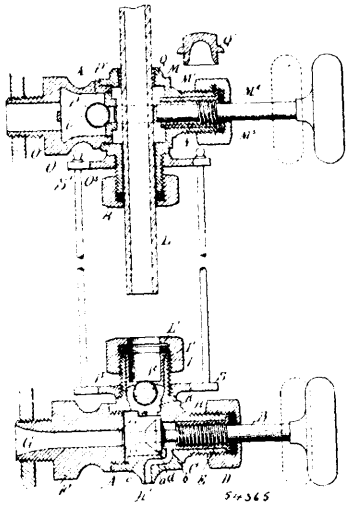
Horace Stephen Buckland, Tremont, Ohio, U.S.A., 16th December, 1896; 6 years. (Filed 18th March, 1895.)

Claim.—1st. In a grinding machine, a suitably supported revoluble ring of grinding substance and a rotating work-holder provided with pockets for receiving the work to be ground, the arrangement of parts being such that the work shall be ground upon the exposed annular face of the grinding-ring, substantially as set forth. 2nd. In a grinding machine, the combination with a suitably rotated work-holder provided with pockets for receiving the work to be ground, of a suitably rotated disc or plate provided with an annular flange or rim projecting laterally in the direction of the work-holder and a ring of grinding substance adjustably secured within said annular flange or rim, substantially as set forth. 3rd In a grinding machine, a suitably rotated grinding surface and rwork-holder arranged at right angles to each other, the work-holde having pockets for receiving the work, and suitable means for adjusting the work-holder relative to the grinding-surface, substantially as set forth. 4th. In a grinding machine, the combination of a suitably supported revoluble grinding surface and a suitably supported work-holder provided with pockets for receiving the work to be ground, suitable means for retaining the work within the pockets between the place at which the work is introduced and the point at which the work is ground, and suitable means for automatically effecting the discharge of the work after the grinding operation, substantially as set forth. 5th. In a grinding machine, the combination with a suitably supported rotary grinding surface and a suitably supported work-holder for conducting the work to the grinding surface and provided with pockets for holding the work, of a longitudinally movable bar adjacent to each work-holding-pocket, said bar being provided with a head adapted to engage the outer side of the work and retain the latter in place within the respective work-holding pocket, a spring acting to retain said head in its operative position, and suitable means for actuating said bar outwardly at the place at which the work is introduced, substantially as and for the purpose set forth. 6th. In a grinding machine, the combination with a suitably supported rotary grinding surface and a suitably actuated work-holder provided with pockets for receiving the work to be ground and adapted to conduct the work to the grinding surface, of a longitudinally movable bar adjacent to each work-holding-pocket, said bar being provided with a head adapted to engage the outer side of the work and retain the latter in place within the respective work-holding-pocket, suitable means acting to retain said head in its operative position, and a suitably supported spring located at any suitable point between the place at which the work is introduced into the work-holding-pocket and the point at which the grinding operation takes place, said spring being adapted to bear upon the work as the latter is revolved past the spring and thereby positively and firmly seat the work in the respective work-holding-pocket preparatory to the grinding operation, substantially as set forth. 7th. In a grinding machine, the combination with a suitably actuated grinding surface, and a suitably actuated work-holder provided with pockets for receiving the work to be ground and adapted to conduct the work to the grinding surface, of a longitudinally movable bar adjacent to each work-holding-pocket, said bar being provided with a head adapted to engage the outer side of the work and retain the latter in place within the respective work-holding pocket, suitable means acting to retain said head in its operative position, a relatively stationary incline M located adjacent the point at which the work is introduced into the work-holding-pocket, the location and trend of said incline being such that the aforesaid headed bar shall, during the movement of the work-holder, engage said incline and be actuated outwardly thereby preparatory to the delivery of the work to the work-holder, substantially as and for the purpose set forth. 8th. In a grinding machine, the combination of a suitably supported rotary grinding surface and a suitably supported rotary work holder provided with an annular rim or ring g having, upon its external periphery and at suitable intervals, recesses or pockets for receiving the work to be ground, means for engaging the outer side of the work and holding the latter to its seat in the respective work-holding pocket preparatory to its engagement with the grinding surface, and means for automatically effecting the discharge of the work after the grinding operation, substantially as set forth. 9th. In a grinding machine, the combination with a suitably actuated grinding surface and a suitably actuated work-holder provided with pockets for receiving the work to be ground and adapted to convey the work to the grinding surface, of a longitudinally movable bar adjacent to each work-holding-pocket, said bar being provided with a head adapted to engage the outer side of the work and retain the latter in place within the respective work-holding-pocket, suitable means acting to retain said head in its operative position, a suitably located finger or suitable device for engaging the back side of the work and automatically discharging the work from the respective pocket after the grinding-operation and a relatively stationary incline N having such location relative to said discharging device and path of travel of the aforesaid headed bar and having such trend that it shall be engaged by said bar and thereby actuate the latter outwardly preparatory to the operation of the aforesaid discharging device, substantially as and for the purpose set forth. 10th. In a grinding machine, the combination of a suitably supported rotary grinding surface; a suitably supported rotary work-holder provided with an annular ring or rim g having upon its external periphery recesses or pockets g^1 for receiving the work to be ground and the annular recess g^2 at one end of said pockets, said annular recess having a greater depth than the work-holding pockets; means for engaging the outer side of the work and holding the latter to its seat in the respective work-holding pocket preparatory to its engagement with the grinding surface; a finger or suitably device extending into said annular recess at the inner side of the path of travel of the work during the revolution of the latter from the grinding surface and adapted to eject the work from the work-holder, and suitable means for causing the aforesaid work-holding means to release the work after the grinding operation to enable the aforesaid ejecting device to perform its function, substantially as set forth. 11th. In a grinding machine, the combination of the supporting-frame, a suitably rotated grinding surface, a work-holder bearing-slide or carriage movable toward and from the grinding surface, a nut rigid with the supporting-frame a screw engaging said nut and operatively connected with the aforesaid slide or carriage, and suitable means for turning the screw, substantially as shown, for the purpose specified. 12th. In a grinding-machine, the combination with the driving-shaft B bearing the holder of the grinding substance or material, of the work-holder bearing-shaft G provided with a worm-wheel and

another shaft provided with a worm engaging said worm-wheel and operatively connected with the driving-shaft, all arranged substantially as shown and described.

No. 54,365. Gauge-Glass.

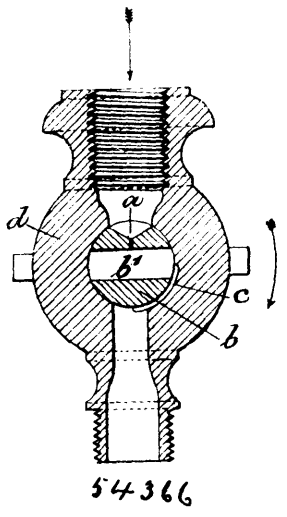
(*Tube indicateur du niveau d'eau*)



The Penberthy Injector Co., assignee of William A. Downes, both of Detroit, Michigan, U.S.A., 16th December, 1896; 6 years. (Filed 4th March, 1895.)

Claim.—1st. In a gauge glass, the upper valve casing, a transverse valve stem therein adapted to be retracted out of the line of the gauge-glass, a removable cap or plug controlling an apparatus in the top of the casing in line with the gauge-glass, and an automatic check-valve in the boiler connection, substantially as described. 2nd. In a gauge-glass, the lower valve casing having a valve chamber, a valve supporting nipple on the outer side thereof, a valve stem on said nipple having its disc within the chamber provided with two opposite seats, a boiler connecting nipple opposite the valve stem, adapted to be closed by the inner seat on the disc, and a drip or try-port communicating into a chamber in the casing opposite the boiler nipple, adapted to be closed by the outer face on said disc, substantially as described. 3rd. In a gauge-glass, the lower valve casing, the nipple J on the top, a cross-bar at the lower end thereof, a ball-valve thereon, the gland I^1, in the upper end of the nipple, having a seat at its lower end for the ball valve, substantially as described.

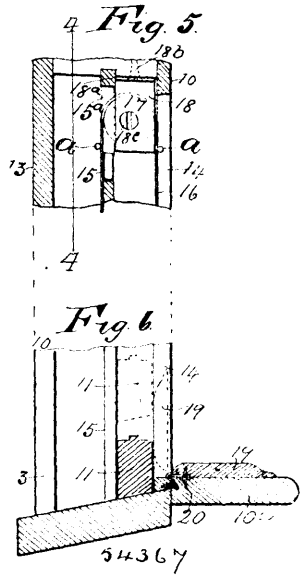
No. 54,366. Gas-Tap. (*Robinet à gaz.*)



George Gatton Melhuist, Hardingham, London, England, 16th December, 1896; 6 years. (Filed 6th August, 1896.)

Claim.—The improved by-pass gas-tap constructed substantially as described, and having a chase or passage formed in the plug and a chase formed in the shield. 2nd. The improved by-pass gas-tap constructed substantially as herein described, and having a chase or passage formed on one side of the plug and a chase formed on one side of the cavity in the shell, the opposite sides, or those which are together when the tap is in the "off" position, being unmutilated. 3rd. By-pass gas-taps constructed substantially as herein described, and provided with means for clearly distinguishing the "low" from the "off" position of the plug.

No. 54,367. Window. (*Fenêtre.*)



Lorenzo A. Murphy and Alexander H. Milne, both of Wellington, British Columbia, Canada, 16th December, 1896; 6 years. (Filed 31st October, 1896.)

Claim.—1st. The combination of a window-casing having vertical guideways, sashes movably mounted in the guideways, flat bands of steel or other material arranged to pass over pulleys placed transverse to the said sashes, the said pulleys being pivoted in right and left-angled brackets near the top of the said casing, the ends of the said bands being secured to either side near opposite top corners of the sash, substantially as specified. 2nd. In a window casing having vertical guideways, the combination of pulleys pivotally secured in right and left angle triangles, bands passing over the pulleys and made to support bottom and top sashes in a window-casing and small pulleys arranged to engage the outer vertical sides of said bands approximate to their supports, substantially as specified. 3rd. The combination of a window-casing having vertical guideways, a sash movably mounted in the guideways and a closing strip hinged at its inner edge to the inner part of the sill of the casing, and adapted to lie flat against said sill when folded outwardly, said strip having a width greater than the distance between its hinge pivots and the front face of the sash, and being adapted to be folded in an inclined position against the front face of the sash, substantially as set forth.

No. 54,368. Photography. (*Photographie.*)

George Jones Atkins, Stanford Hall, Middlesex, England, 16th December, 1896; 6 years. (Filed 28th October, 1896.)

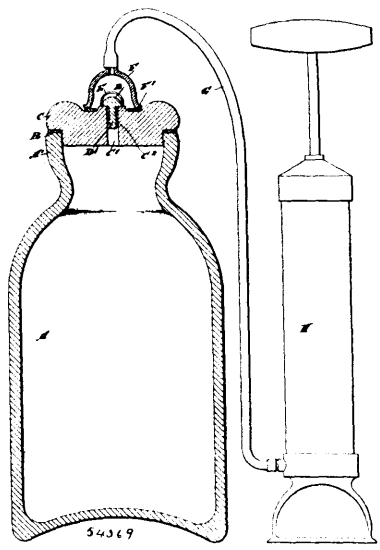
Claim.—1st. The herein described method of rendering mineral and enamel colours suitable for photography by treating them with chromic compounds sufficient to saturate their metallic components before mixing them with the gelatine or other colloid substance for forming the sensitive films. 2nd. As a new article of manufacture for use in photography, mineral or enamel colours the metallic components of which are saturated with chromic compounds before they are mixed with the gelatine or other colloid substances for forming the sensitive films.

No. 54,369. Storing Vessel. (*Vaisseau d'emmagasinage.*)

Otto Henry Michaelson, Charleston, West Virginia, U.S.A., 16th December, 1896; 6 years. (Filed 9th October, 1896.)

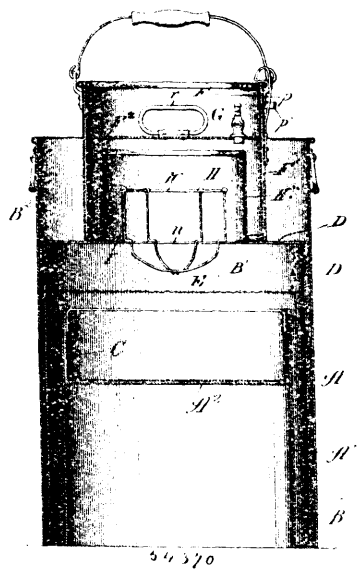
Claim.—1st. The herein described method for preserving the contents of storing vessels and for holding the cover in place on the vessel, consisting in producing a vacuum in the non-filled part of the vessel after the cover is in place, so as to hold the cover in position on its seat by atmospheric pressure, substantially as shown and described. 2nd. A storing vessel provided with a cover adapted to be seated on the mouth of the vessel, and having a check valve to permit of drawing the air out of the vessel to produce a vacuum therein and hold the cover to its seat by atmospheric pressure, substantially as shown and described. 3rd. The combination with a suction bell connected with an air pump, of a storing vessel, a cover seated on the mouth of the said vessel and forming a seat for the said suction bell, and a check valve held on the said cover and adapted to be

enclosed within the said suction bell, substantially as shown and described. 4th. The combination with a suction bell connected



with an air pump, of a storing vessel, a cover seated on the mouth of the said vessel and forming a seat for the said suction bell, a check valve held on the said cover and adapted to be enclosed within the said suction bell, and a cage for the said valve, substantially as shown and described.

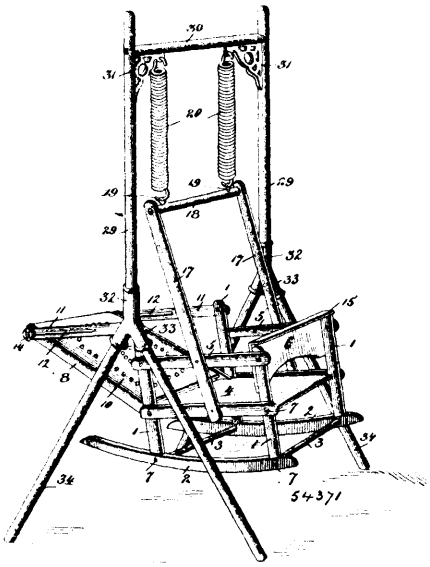
No. 55,370. Gas Generator. (*Générateur à gaz.*)



Pettibone, Mulliken & Co., assignee of Henry Frederick Fuller, both of Chicago, Illinois, U.S.A., 16th December, 1896; 6 years. (Filed 16th October, 1896.)

Claim. 1st. In a gas generator for evolving gas by contact of a liquid with a solid material, the combination of an outer tank, an inner tank seated in said outer tank and containing a seat for the solid material, a gas-holder rising from and opening into said inner tank, and an expansion chamber B^2 formed between said holder and the outer tank, substantially as described. 2nd. In a gas generator for evolving gas by contact of a liquid with a solid material, the combination of the outer tank having a raised bottom forming the reduced circumferential liquid chamber B, the inner movable tank in said chamber, a seat for the solid material in said inner tank, a gas-holder rising from and opening into said inner tank, and an expanded extension B^2 of said chamber B formed between said holder and the outer tank, substantially as and for the purpose set forth. 3rd. In a gas generator for evolving gas by contact of a liquid with a solid material, the combination of an outer tank, an inner tank movably supported in said outer tank and containing a perforated seat for the solid material, a gas-holder surmounting and opening into said inner tank, and a shelf at the opening between said holder and inner tank and projecting over said perforated seat, substantially as and for the purpose set forth. 4th. In a gas generator for evolving gas by contact of a liquid with a solid material, the combination of an outer tank, an inner tank movably supported in said outer tank and containing a perforated seat for the solid material, a gas-holder surmounting and opening into said inner tank, a shelf at the opening between said holder and inner tank and projecting over said perforated seat, and a basket for said solid material removably seated in said opening, substantially as and for the purpose set forth. 5th. In a gas generator for evolving gas by contact of a liquid with a solid material, the combination of an outer tank, an inner tank movably supported in said outer tank and containing a grating E, and provided with a cover D^1 having an opening *n*, a shell F^1 rising from said cover, a portion of said cover affording a shelf I projecting over said grating about said opening, and a gas-holder F removably fitting the shell F^1 and provided with a cover F^2 and an outlet, substantially as and for the purpose set forth. 6th. In a gas generator for evolving gas by contact of a liquid with a solid material, the combination of an outer tank, an inner tank movably supported in said outer tank and containing a grating E and provided with a cover D^1 having an opening *n*, a shell F^1 rising from said cover, and a shell E^1 rising therefrom inside the shell F^1 and forming the chamber E, with a portion of said cover affording at its base a shelf I projecting over said grating about said opening, and a gas-holder F removably fitting the shell F^1 and provided with an outlet, substantially as and for the purpose set forth. 7th. In a gas generator for evolving gas by contact of a liquid with a solid material, comprising, in combination, the tank A having the raised bottom A^2 affording a support for a pan C and forming the liquid chamber E, the tank D in said chamber provided with a cover D^1 containing an opening *n*, a grating E in the tank D below said cover, a shell F^1 rising from said cover and forming with the tank A an expansion B^2 of said chamber, a shell B^1 rising from said cover inside the shell F^1 and forming the chamber H with a portion of said bottom for its base projecting as a shelf I over said grating, and a gas-holder F fitting within the shell F^1 and provided with a cover F^2 having an outlet G, substantially as and for the purpose set forth.

No. 54,371. Baby Jumper and Rocking Chair Combined. (*Chariot escarpolette d'enfant et fauteuil à basculé combinés.*)

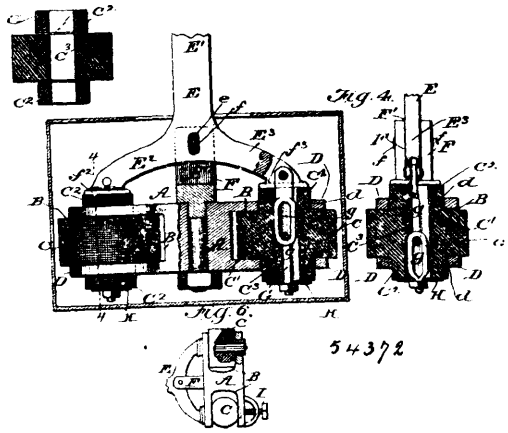


Charles O. and John W. Glascock, Muncie, assignee of Arthur M. Babcock, Indianapolis, both in Indiana, U.S.A., 18th December, 1896; 6 years. (Filed 23rd November, 1896.)

Claim.—1st. The combination with the chair frame, comprising the horizontal longitudinal braces forming the arms of the chair, of spaced cleats secured to the inner surfaces of said braces or arms, and a tray having its ends removably fitted between said cleats and provided with a guard the ends of which are normally interposed between the front ends of said cleats and the front standards of the frame, the said tray being adapted to be removed and replaced by springing said braces or arms apart, substantially as described. 2nd. A combined baby-jumper and chair, consisting of a chair frame having rear standards extended above the seat, the back pivotally connected to the chair frame at or near the plane of the seat braces pivoted to the upper end of the rear standard and provided with longitudinal slots, clamping devices connected to the chair back and working in said slots, whereby the angle of the chair back may be changed, uprights attached to the sides of the chair frame and having an upper cross-bar, springs connected to the cross-bar and to a suitable support, substantially as described. 3rd. A supporting frame for baby-jumpers, comprising spaced standards connected at their upper ends by a cross-bar, a three-way or Y-

coupling for each standard, consisting of a vertical sleeve portion into which the lower end of the standard is fitted, and two diverging sleeves or thimbles into which the upper ends of the downwardly-diverging legs or braces are fitted, said legs or braces and the standard all meeting at a common point in the coupling to form stops for each other, and all the sleeves of the coupling being in the same vertical plane, substantially as described.

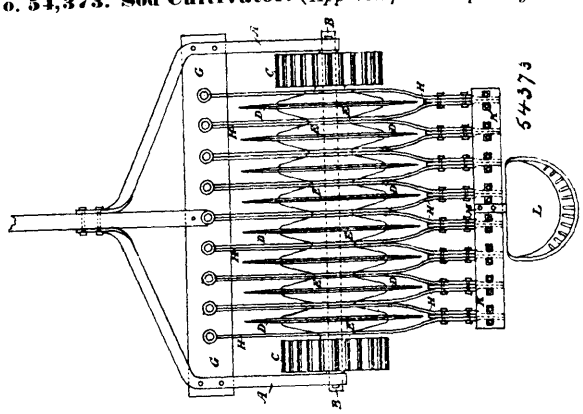
No. 54,372. Spring. (*Ressort.*)



Enoch Leeds Conover and Walter Ray Conover, both of Honeoe, assignee of Alexander Culbertson Bell, New Alexandria, all in Pennsylvania, U.S.A., 16th December, 1896; 6 years. (Filed 21st November, 1896.)

Claim.—1st. In a spring substantially as described, the combination with the support and the springs proper held thereto and spaced apart of the lever jointed to the support between the springs proper, and having rigid arms extending over the springs and a link connecting one of said arms with its respective spring, substantially as set forth. 2nd. The combination of the support, the springs held thereto and spaced apart, the lever jointed to the support between the spring and having rigid arms extending thereover, and links connected with said arms and extended through and held at the opposite ends of the springs, substantially as set forth. 3rd. The spring herein described, consisting of the support, the springs proper held to said support, the lever having a sliding connection with said support and provided with rigid arms extending over the springs, and links connected with the lever arms and extended thence through the springs proper, and held substantially as and for the purposes set forth. 4th. A spring substantially as described, comprising the support having opposite fixed portions held rigidly together and provided between them with a space for the springs and having in such fixed portion openings, and the springs fitted between said fixed portions and having tenon-like ends entering the same, substantially as shown and described.

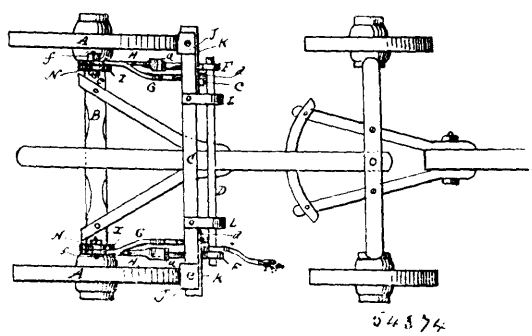
No. 54,373. Sod Cultivator. (*Appareil pour couper le gazon.*)



William Maloney, Calgary, North-west Territories, Canada, 16th December, 1896; 6 years. (Filed 23rd November, 1896.)

Claim.—1st. In a sod cultivator, a series of revolving cutters, fitted on an axle and provided with a drum on each side to gauge the depth of the cuttings. 2nd. In a sod cultivator, the formation of each revolving cutter in sections to admit of removal, the fixing of these cutters into slots in the circumference of the wheel, and securing them by the coupling plates. 3rd. In a sod cultivator, a series of revolving circular cutters, a pair of gauge drums with cogs on circumference, and a coulter, at a re-enterant angle, closely in rear of each cutter, as shewn and described and for the purpose set forth. 4th. In a sod cultivator, a series of re-enterant angled coulters, closely in rear of each revolving cutter, and provided with the usual means of fastening, as shewn and described and for the purposes set forth. 5th. In a sod cultivator, a series of revolving circular cutters, a pair of concentrically revolving gauge drums on each side, a series of re-enterant angled coulters, a frame, shafts and a seat, as shewn and described, and for the purposes set forth. 6th. In a sod cultivator, a series of circular revolving cutters, a gauge drum or drums and a re-enterant angled coulter, as shewn and described and for the purposes set forth. 7th. In a sod cultivator, a centre piece for each revolving cutter, having an eye for the axle and a circumferential groove to receive the cutter sections, as shewn and described and for the purposes set forth.

No. 54,374. Brake for Vehicles. (*Frein de voiture.*)



John Wesley York, Nolensville, Tennessee, U.S.A., 17th December, 1896; 6 years. (Filed 30th November, 1896.)

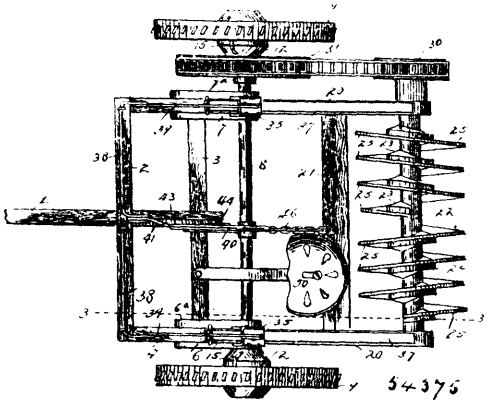
Claim.—1st. In an eccentrically acting brake for vehicles, the combination with the wheels and their axle, of two clip-saddles or brackets rigidly secured to said axle and projecting forward on the inside of the wheels, a brake-beam having two springs and supported on said brackets by the springs, connecting-rods pivoted in said brackets or saddles, at a point above the axle and movably connected to the brake-beam, and a cam-shaft having an operating or hand-lever journalled in said rods and operating in conjunction with the brake-beam, substantially as described. 2nd. In an eccentrically acting brake for vehicles, the combination with the wheels and the axle of the same, of two brackets rigidly connected to said axle, a brake-beam having two springs supporting the beam on said brackets, connecting-rods passing transversely and loosely through said beam and having their rear ends pivoted into said brackets at a point above the axle, a cam-shaft having a hand-lever and journalled in the forward end of said connecting rods, and means connecting the cams of said shaft with the brake-beam and cause said brake to operate, substantially as described. 3rd. In an eccentrically acting brake for vehicles, the combination with the wheels and the axle of said wheels, of two brackets secured to said axle next to the inside of said wheels and projecting forward beyond the wheels, a brake-beam supported on said brackets on yielding devices, two rods having compensating devices and passing transversely through said brake-beam and pivotally connected to said brackets at a point above the axle, and a brake operating shaft provided with cams operating in conjunction with said beam and alternately move the beam to and from the said wheels as said shaft is vibrated, substantially as described. 4th. In an eccentrically acting brake for vehicles, the combination with the wheels and the axle for the same, of two brackets secured to said axle, a brake-beam yieldingly mounted on said brackets, two rods connected to said beam and having their rear ends pivoted into said brackets at a point above the axle, a cam-shaft having a hand-lever for vibrating it, cams on said shaft, and means connecting said cams and shaft with said connecting-rods and the brake-beam whereby said beam is with its shoes thrown in and out of contact with said wheels, as said shaft is vibrated, and compensating means connected with said rods, whereby they may be shortened as the brake-shoes wear down, all substantially as described. 5th. The combination with the axle and the wheels of the same, of two clip-saddles I, supporting brackets G, secured to said saddles and said axle, a brake-beam C, having the brake-shoes J, the wear-plates K, with the stops *k*, the cam-plates L, and the supporting springs M, two compensating rods H, movably connected with said brake-beam and pivoted in said saddles or brackets at a point above said axle, a vibrating shaft D having a hand-lever E, journalled into said rods in front of said brake-beam cams *d* and *j* on said shaft, and operating in conjunction with said cams as said shaft is vibrated, substantially as shown and described.

No. 54,375. Harrow. (*Herse.*)

John M. Patterson, La Fayette, Georgia, U.S.A., 16th December, 1896; 6 years. (Filed 23rd November, 1896.)

Claim.—1st. In a harrow and pulverizer, the combination of a sulky-frame, a rotatable pulverizer screw suitably supported from the sulky-frame, suitable means for rotating the screw from the axle of the sulky-frame, the supporting wheels loosely journalled upon the

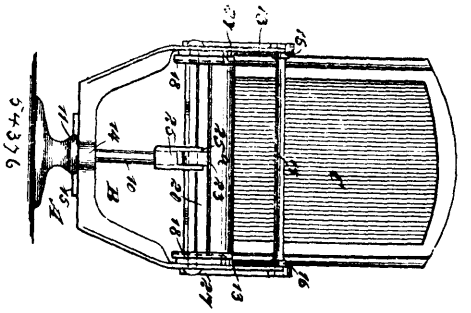
axle and formed with ratchet-teeth in the hub, separate hub sections keyed to the axle close up against the supporting wheels, spring



54375

pawls carried by said separate hub-sections and adapted to engage the ratchet-teeth of the supporting wheels, and suitable catches for holding the pawls out of operative position, substantially as set forth. 2nd. In a harrow or pulverizer, the combination of the sulky-frame having a rotatable axle and loosely-journalled supporting wheels, a rotatable pulverizer screw suitably supported from the sulky-frame, suitable means for rotating the screw from the rotatable axle, and ratchet clutches between the supporting wheels and axle, each comprising ratchet-teeth on the supporting wheel, a separate hub-section keyed to the axle, a pivoted pawl carried by the separate hub-section and adapted to engage the ratchet-teeth, a spring adapted to hold the pawl to its work, a hook on the spring adapted to hold the pawl out of operation, and an arm extending from the pawl through a slot in the separate hub-section by means of which the pawl can be pushed back into engagement with the hook, substantially as set forth. 3rd. The combination of a suitable frame or carriage having a rotatable supporting axle and loosely-journalled supporting wheels, with a clutch between the axle and wheels comprising suitable ratchet-teeth, a pivoted pawl adapted to engage the ratchet-teeth, a shoulder formed on the pawl, a spring engaging the pawl and formed with a hook end and adapted to engage the shoulder of the pawl, and an arm by which the pawl can be moved, substantially as set forth. 4th. In a harrow or pulverizer, the combination of a suitable supporting frame, with a rotatable spiral cutter or screw constructed of a rotatable shaft having a spiral rib extending around it, and a series of spirally-set sections or flights formed with radial arms which are secured to the spiral rib and having their meeting ends secured together by tongue-and-groove and overlapping securing-plates riveted to the sections, substantially as set forth. 5th. The combination of the sulky-frame, the pulverizer mounted in a suitable frame pivoted to the sulky-frame, upwardly curved leaf-springs connected at one end to the sulky-frame and bearing at the other end upon the pulverizer-frame, and a pressure device adapted to bear on the curve of the spring for regulating the pressure of the springs, substantially as and for the purpose set forth. 6th. The combination of the sulky-frame, the pulverizer-frame pivoted thereto and carrying the pulverizer leaf-springs secured to the sulky-frame and extending over and engaging the pulverizing frame, pivoted standards embracing the springs and carrying rollers which engage the springs, and means for moving the standards for imparting more or less pressure through the spring to the pulverizer, as set forth. 7th. The combination of the sulky-frame, the pulverizer-frame pivoted thereto and carrying the pulverizer leaf-springs secured at their ends to the sulky-frame and extending over and engaging the pulverizer-frame, pivoted standards embracing the springs and carrying rollers which bear upon the springs and hold them to their work, a hand-lever having a pawl and rack, and suitable lever connections between the standards and hand lever, substantially as set forth. 8th. The combination of the sulky-frame, the pulverizer-frame pivoted thereto and carrying the pulverizer, leaf-springs secured at their ends to the sulky-frame and extending over into engagement with the pulverizer-frame, bifurcated standards pivoted to the supporting axle and embracing the leaf-springs and carrying rollers which bear upon the springs and hold them to their work, crank-lever journalled upon the cross-bar of the sulky-frame and having suitable link connections with the standards, a hand-lever, and suitable connections between the hand-lever and the crank-lever, substantially as set forth. 9th. The combination of the sulky frame, the pulverizer-frame pivoted on an axle and carrying the pulverizer, an arm pivoted upon the said axle, a chain connecting the pulverizer-frame to said arm, a hand-lever, pawl and rack, and a link connecting the pivoted arm to the hand levers, substantially as set forth. 10th. The combination with the sulky-frame, the pulverizer-frame pivotally connected thereto and carrying the pulverizer, leaf-springs secured to the sulky-frame and extending over into engagement with the pulverizer-frame, means controlled by a hand-lever for applying pressure to and removing pressure from said springs, and independent connection between the pulverizer-frame and hand-lever, whereby the pulverizer-frame can be lifted when the pressure is removed from the springs, and vice versa, substantially as set forth.

No. 54,376. Folding Chair. (*Fauteuil pliant.*)

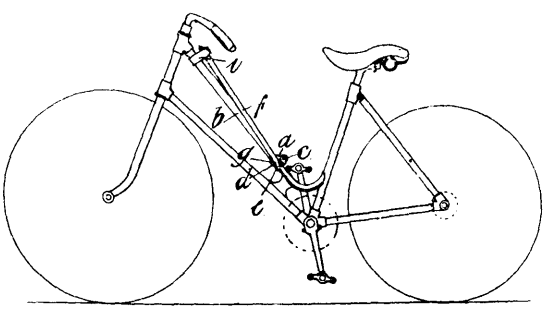


54376

Harrison Owens, Montesano, Washington, U.S.A., 17th December, 1896; 6 years. (Filed 23rd November, 1896.)

Claim.—1st. The combination, with a base, of a folding chair having pivotal support on the said base, lugs attached to the chair, being adapted to enter openings in the base, and a cam connected with the seat of the chair, operating on the base to raise the chair when the seat is carried to the upper position and permitting the chair to drop when the said seat is lowered, as and for the purpose set forth. 2nd. In a folding chair, a substantially U-shaped frame, a back pivotally connected with the said frame, a seat likewise pivotally connected to the frame, arms carried by the frame and having sliding connection with the seat, and a crank connection between the rear of the seat and the lower portion of the back of the chair, as and for the purpose specified. 3rd. In a chair, the combination of a frame, a base on which the frame is vertically movable, the frame having a lug capable of dropping into a recess on the base, a seat pivotally mounted on the frame, and a cam carried by the seat, the cam engaging the base, substantially as described. 4th. In a chair, the combination of a base, a frame movable on the base and capable of being locked with the same, a seat connected with the frame, and a cam mounted upon and actuated by the seat and capable of engaging the base to move the frame on the base, substantially as described. 5th. In a chair, the combination of a base having a standard arising therefrom, the base having a recess, a frame vertically movable on the standard and having a lug capable of fitting into the recess, a rod carried by the frame, a seat pivotally mounted on the rod, a sleeve pivotally attached to the rod and receiving the upper end of the standard, and a cam fixed to the seat and engaging the upper end of the standard, substantially as described. 6th. In a chair, the combination of a base having a vertical standard, a frame vertically movable on the standard and capable of locking with the base, a back pivotally mounted on the frame and having a projection formed with a groove, a seat also pivotally mounted on the frame, a crank arm carried by the seat and having a part moving in the groove of the projection, and a cam fixed to the seat and engaging the standard, substantially as described. 7th. In a chair, the combination of a base, a frame vertically movable on the base, a seat having movement on the frame, and means actuated by the movement of the seat, by which means the frame may be moved on the base, substantially as described.

No. 54,377. Bicycle. (*Bicycle.*)



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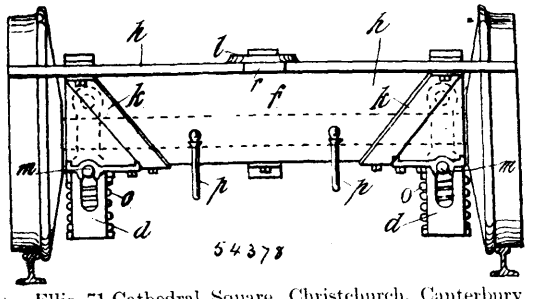
Edwin Robert Stanfield and Thomas DeRenzy Harman, both of 71 Cathedral Square, Christchurch, Canterbury, New Zealand, 16th December, 1896; 6 years. (Filed 25th October, 1896.)

Claim.—1st. A strut hinged or pivoted to the frame of a bicycle so as to be foldable alongside the member to which it is connected when out of use and capable of being turned down so that its end comes in contact with the ground when required to support the machine substantially as herein described. 2nd. In combination with the frame of a safety bicycle a gland clamped thereto, a strut pivoted upon the gland to length of such strut being adjustable by

sliding one portion thereof telescopically within the other, substantially as herein described. 3rd. A gland clamped upon the frame of a bicycle provided with a socket receiving the spherical end of a strut, the socket having recesses to receive the strut when turned down to support the cycle and when folded out of use, substantially as herein described. 4th. In combination a gland clamped upon the frame of a cycle, a strut pivoted to a pin journalled in the gland ears upon which the strut when turned into operative position, substantially as herein described.

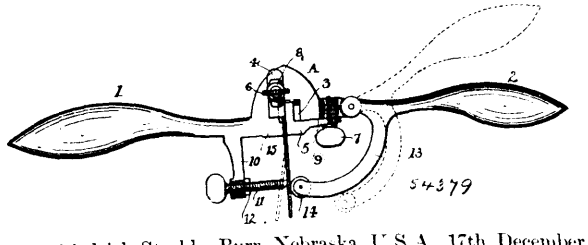
No. 54,378. Truck Gear. (*Train de voiture.*)



Peter Ellis, 71 Cathedral Square, Christchurch, Canterbury, New Zealand, 16th December, 1896; 6 years. (Filed 25th November, 1896.)

Claim.—1st. A bogie truck having two wheels upon a single axle, the weight of the vehicle being supported in swing link hangers depending from an axle box which extends from wheel to wheel longitudinally with the axle, the vehicle being pivoted to the bogie directly over the centre of the axle, substantially as and for the purposes herein described. 2nd. The combination with a two-wheeled bogie truck to which the vehicle is pivoted directly over the centre of the axle, a bogie frame steered by a draw-bar made integral therewith and crossed connecting rods, connecting such frame with the frame of a similar bogie at the opposite end of the vehicle, substantially as and for the purposes herein described.

No. 54,379. Saw-Set. (*Outil à contourner.*)



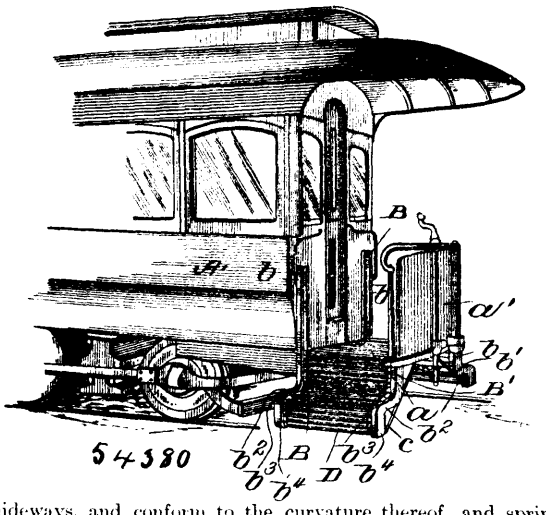
Jacob Friedrich Strahle, Burr, Nebraska, U.S.A., 17th December, 1896; 6 years. (Filed 1st December, 1896.)

Claim.—A saw-set having a body portion A, a recess 3 in said body portion, adjusting blocks 4 and 5 adjustably secured to said body portion and provided with projections which enter said recess 3, a handle 1 permanently secured to said body portion and provided with an arm 10 carrying a set screw 11 at its end to abut against the saw blade to limit the extent to which the tooth is bent, and a handle 2 pivotally secured to said body portion and provided with a bent arm 13, carrying a roller 14 at its end to abut against the opposite side of the saw blade to hold same firmly against bending, substantially as described.

No. 54,380. Platform Guard. (*Défense de plate-forme.*)

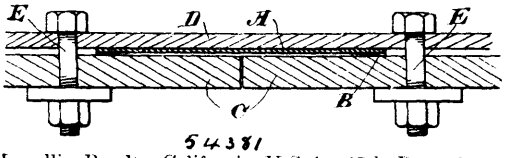
Dwight R. Wing, Little Rock, Arkansas, U.S.A., 17th December, 1896; 6 years. (Filed 1st December, 1896.)

Claim.—The herein described combined car step and platform guard, comprising channels or guideways, and a flexible member adapted to slide in said channels or guideways, substantially as set forth. 2nd. The herein described combined car-step and platform guard, comprising channels or guideways curved at their lower ends to conform to the contour of a car-step, and a flexible member adapted to slide in said channels or guideways and conform to the curvature thereof, substantially as set forth. 3rd. The herein described combined car-step and platform guard, comprising channels or guideways, curved at their lower ends to conform to the contour of a car-step, a flexible member adapted to slide in said channels or guideways and conform to the curvature thereof, and means for limiting the downward movement of said flexible member, substantially as set forth. 4th. The herein described combined car-step and platform guard, comprising channels or guideways curved at their lower ends to conform to the contour of a car-step, a flexible member adapted to slide in said channels or guideways and conform to the curvature thereof, and means for holding said member in an elevated position, substantially as set forth. 5th. The herein described combined car-step and platform guard, comprising channels or guideways curved at their lower ends to conform to the contour of a car-step and closed at their lower ends, a flexible member adapted to slide in said channels or



guideways, and conform to the curvature thereof, and spring or other retaining devices in the upper ends of said channels or guideways adapted to hold said flexible member in an elevated position, substantially as set forth. 6th. The herein described car-step and platform guard, comprising channels or guideways curved at their lower ends to conform to the contour of a car-step and closed at their lower ends, tubes or slats flexibly connected together and adapted to slide in said channels or guideways and conform to the curvature thereof, and spring or other retaining devices in the upper ends of said channels or guideways adapted to hold said tubes or slats in an elevated position, substantially as set forth. 7th. The herein described combined car-step and platform guard, comprising channels or guideways curved at their lower ends to conform to the contour of a car-step and closed at their lower ends, tubes or slats adapted to slide in said channels or guideways, a flexible cord or belt connecting said tubes or slats, and spring-retaining devices in the upper ends of said channels or guideways adapted to hold said tubes or slats in an elevated position, substantially as set forth.

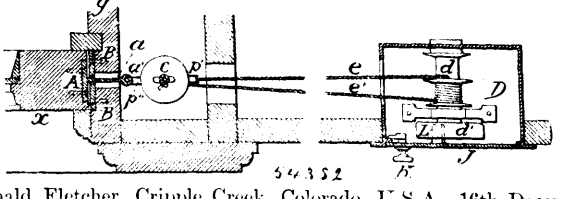
No. 54,381. Electric Railway Rail Connection.
(*Joint de rail de chemin de fer électrique.*)



Ford Marsellis, Peralta, California, U.S.A., 17th December, 1896; 6 years. (Filed 1st December, 1896.)

Claim.—1st. A device for electrically connecting the ends of railway rails, consisting of a conducting plate having contact edges, and means for securing the plate to the adjacent ends of abutting rails. 2nd. A device for electrically connecting the ends of railway rails, consisting of curved segmental conducting plates adapted to span the space between the rails and form contact with the rail webs, and superposed fish-plates with holding bolts whereby the conducting plates are forced into contact with the rail webs. 3rd. A device for electrically connecting the ends of abutting railway rails, consisting of curved segmental conducting plates extending across the space between the rails, said plates having angular projections contacting with the rail webs, and concavo-convex superposed fish-plates with securing bolts whereby the conducting plates are curved and the angles forced into intimate contact with the rails.

No. 54,382. Window Mechanism.
(*Mécanisme de croisée de fenêtre.*)

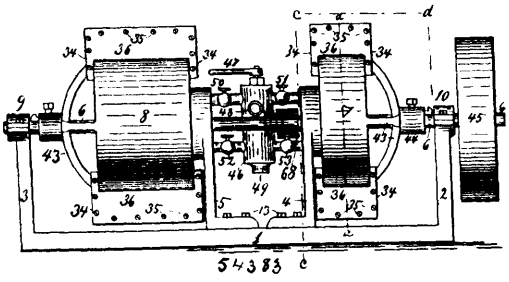


Donald Fletcher, Cripple Creek, Colorado, U.S.A., 16th December, 1896; 6 years. (Filed 21st November, 1896.)

Claim.—1st. In a sash lifting, lowering, and locking mechanism, the combination of the lid J, having locking leg L with the drum *d*,

handle wheel d^1 and cords c, c^1, the said cords being connected to a window sash. 2nd. A receptacle having winding mechanism contained therein and a lid provided with means for locking said mechanism when said lid is closed, the sash or other article or structure which is to be lifted or lowered and locked being connected by cords to the said winding mechanism.

No. 54,383. Rotary Engine. (*Machine rotatoire.*)

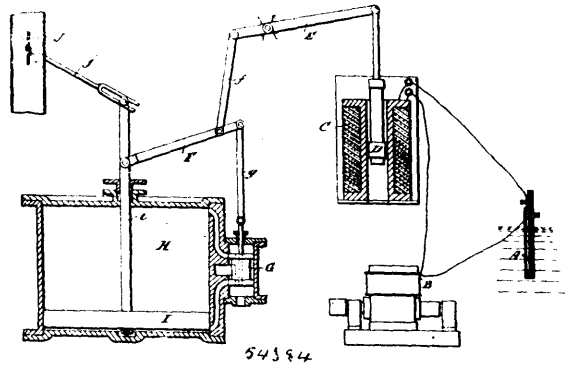


54383

Petter August Larson, Garfield, Minnesota, U.S.A., 18th December, 1896; 6 years. (Filed 14th November, 1896.)

Claim.—In a rotary engine, the combination of a bed plate, two stands secured thereon, one of which has an overhanging eliptical head or piston, as 15, with the steam ducts 17 and 18 entering the flat side of the piston, running radially and opening into the cylinder through the face of the piston, one near each side of the point of contact between the cylinder and the piston, said piston having the grooves 24 and 25 in its face extending from said ducts to the points 26 and 27, substantially diametrically opposite each other on the piston, the side grooves 40, a central hole for the shaft of the engine to pass through, and the packing 22 touching the cylinder, the shaft 6 passing through the piston and being journalled in the stands, a spider rigidly secured on the shaft, a diametrically split cylinder secured to the spider and having annular bottoms with packing rings and packing at their edges, fitting against the flat sides of the piston, and two oppositely situated radial abutment chambers and slides contained therein, said slides being guided in radial grooves in the cylinder covers, and having yokes, as 39, with hooks engaging the grooves 40 in the piston and springs, as 41, interposed between the yokes and the outer ends of the slides, and means for starting, stopping and reversing the engine, and means for transmitting its power to other machinery, substantially as set forth.

No. 54,384. Electric Stop-motion for Marine Engines.
(*Motion électrique d'arrêt pour machines marine.*)

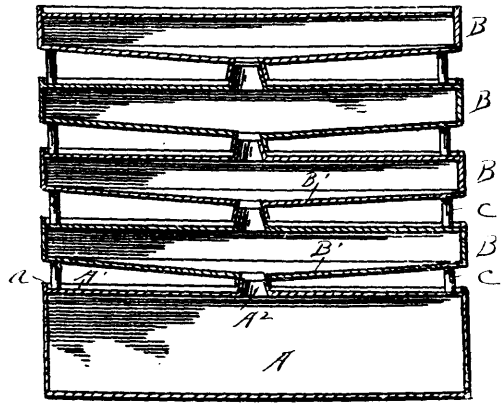


54384

The Folk-Ellis Patent Marine Governor and Safety Cut-off Company, of Melbourne, assignee of Samuel Mark Folk and David Solomon Ellis, both of East St. Kilda, all in the Colony of Victoria, 18th December, 1896; 6 years. (Filed 3rd August, 1896.)

Claim.—1st. The herein described method of automatically cutting off the steam from, and thus preventing the "racing" of marine engines, by supporting two or more insulated metallic plates or contact pieces at the stern of the vessel so that normally they will be in the water, and by connecting them up to a solenoid or electro-magnet adapted to actuate the throttle valve or the link motion of the main engines or a valve in the eduction or exhaust pipe of the engine, substantially as and for the purpose specified. 2nd. The herein described electrical apparatus for automatically cutting off the steam from and thus preventing the "racing" of marine engines, consisting essentially of a pair of metallic plates or contact pieces in circuit with a solenoid and electric generator, said solenoid being coupled up to the valve of a small auxiliary engine adapted to actuate the throttle valve or the link motion or a valve in the eduction or exhaust pipe of the marine engine, substantially as and for the purpose specified.

No. 54,385. Fruit Evaporator. (*Evaporateur pour fruits.*)

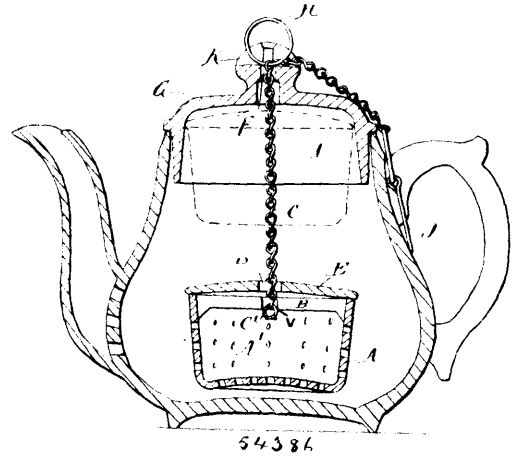


54385

Harry M. Amos, Rainsburg, and William W. McDaniel, Everett, Pennsylvania, U.S.A., 18th December, 1896; 6 years. (Filed 13th July, 1896.)

Claim.—An apparatus for drying fruit, consisting of a closed tank A, having a central frustro-conical tube A^2 surrounding an aperture in the upper wall of said tank, combined with a series of independent inclosed steam trays, each tray having a central aperture in its upper and lower walls, frustro-conical tubes secured about each aperture adapted to register with one another when the trays are superimposed, and the legs C, all substantially as shown and described.

No. 54,386. Tea-Pot. (*Théière.*)



54386

Eva Matilda Falkenberg, Quebec, Province of Quebec, Canada, assignee of James Mackintosh, Glasgow, Scotland, 18th December, 1896. (Filed 6th November, 1896.)

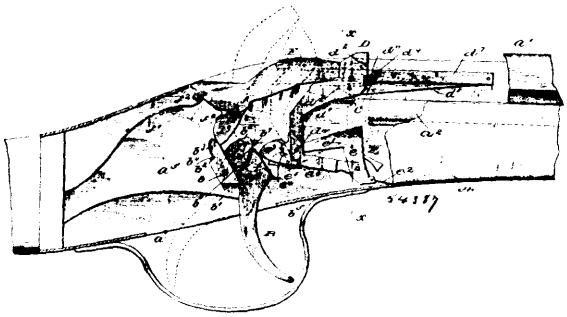
Claim.—1st. A tea-pot having an adjustable tea-carrier, for the purpose set forth. 2nd. A tea-pot having an enclosed tea-carrier of perforated cup-like form adjustable to and from the bottom of the tea-pot, and means for adjusting said tea-carrier, for the purpose set forth. 3rd. In combination with a tea-pot, a tea-carrier of perforated cup-like form, a cover for said tea-carrier, a length of chain, or the like, connected at one end to said carrier and having its other end passed through an opening in the cover of the tea-pot and provided with a ring, substantially as described and for the purpose set forth. 4th. In combination with a tea-pot, a tea-carrier of perforated cup-like form, a cover for said tea-carrier, a length of chain, or the like, connected at one end to said carrier, and having its other end passed through an opening in the cover of the tea-pot and provided midway of its length with a ring and at its end with a pin, substantially as described and for the purpose set forth.

No. 54,387. Rifle. (*Carabine.*)

Albert G. Dougherty and Thomas B. Buskirk, both of Paole, Indiana, U.S.A., 18th December, 1896; 6 years. (Filed 23rd November, 1894.)

Claim.—1st. The herein described self-acting breech-loading rifle, comprising a pivoted breech block carrying the firing pin, a pivoted hammer, and a trigger whereby said breech block and said hammer are operated simultaneously, as set forth. 2nd. The herein described improved self-acting breech-loading rifle, comprising a spring-pressed pivoted breech block, a spring-pressed hammer, and a trigger having engagement with breech block and said hammer,

whereby they will both be raised or elevated and said hammer tripped slightly in advance of the breech block, being designed to

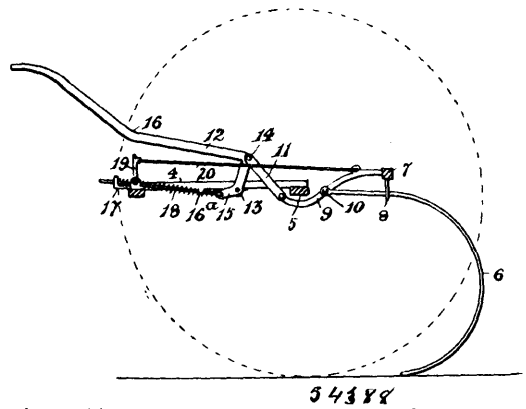


place the cartridge in the chamber of the rifle, substantially as set forth. 3rd. The herein described pivoted breech block, comprising a carrier for positioning the cartridges pivotally connected to said breech block, and a trigger in engagement with said breech block whereby the same is operated, as set forth. 4th. The herein described pivoted breech block, comprising a carrier for positioning the cartridges pivotally connected to said breech block, a pivoted hammer, and a trigger for operating said breech block, and the carrier and hammer, said breech block being designed to be tripped in advance of said hammer, substantially as set forth. 5th. The herein described pivoted breech block, comprising a carrier for the cartridges pivotally connected thereto, a guide or holder designed to engage the cartridge and to position the same, and an operating trigger, said breech block being designed to force the cartridge home previous to the operation of the hammer, substantially as set forth. 6th. The herein described pivoted breech block, comprising a carrier for the cartridges pivotally connected thereto, an extractor carried by said breech block having two arms provided with flanged ends for engaging the shell flange, and an operating trigger, said breech block being designed to force the cartridge home previous to the operation of the hammer, substantially as set forth. 7th. In a carrier for positioning the cartridge, the pivoted breech block, the extractor, and the operating trigger for operating the latter, as set forth. 8th. In a carrier for elevating the cartridage, the pivoted breech block, the hammer, the extractor pivotally connected to said breech block, and the operating trigger, substantially as set forth. 9th. In a pivoted breech block having a lower right-angular portion, a spring-held cam on said right angular portion, the trigger and a spring-held cam thereon, designed to engage the cam on said breech block whereby the latter is operated by said trigger, substantially as set forth. 10th. In a pivoted breech block, a lower right angular portion, and an upper enlarged portion, the spring-held carrier pivotally connected to said right angular portion, a spring-held cam also pivoted on said right angular portion, the trigger, and the spring-held cam on said trigger designed to engage the cam of said right angular portion, whereby said breech block and said carrier may be operated by said trigger, substantially as set forth. 11th. In a pivoted breech block having a lower right angular portion, and an upper enlarged portion, the extractor pivotally secured to the latter, and comprising two arms having flanged ends, the spring-held carrier pivoted on the right angular portion of said breech block, the spring-held cam also pivoted to said right angular portion, and the trigger having a spring-held cam pivoted thereon, designed to engage the cam on said right angular portion, whereby the parts may be operated by said trigger, substantially as set forth. 12th. In a pivoted breech block having a spring-held cam on its lower portion, the hammer also having a spring-held cam, and the trigger having two cams for respectively engaging the cams of said breech block, and said hammer, whereby the latter may be operated by moving the trigger, substantially as set forth. 13th. In a pivoted breech block having a lower right angular portion, the spring-held carrier pivoted on said right angular portion, a spring-held cam also pivoted on said right angular portion, the hammer also having a spring-held cam pivoted thereon, and the trigger having a spring-held cam and a rigid cam for engaging respectively the cam on said right angular portion of said breech block and the cam on said hammer, whereby the parts are operated by moving the trigger, substantially at set forth. 14th. The herein described pivoted breech block having a lower right angular portion and an upper enlarged portion carrying the firing pin, the extractor pivotally secured to said breech block, the spring-held carrier pivoted to said right angular portion, the spring-held cam also pivoted on said right angular portion, the hammer, the spring-held cam pivoted thereto, and the trigger having a spring-held cam and a rigid cam, for respectively engaging said spring-held cam of the breech block and of the spring-held cam of said hammer, whereby all of the parts are operated by pulling said trigger, substantially as set forth.

No. 54,388. Horse Rake. (*Râteau à cheval*)

Frank Whitcomb, Smith's Falls, Ontario, Canada, 18th December, 1896; 6 years. (Filed 30th November, 1896.)

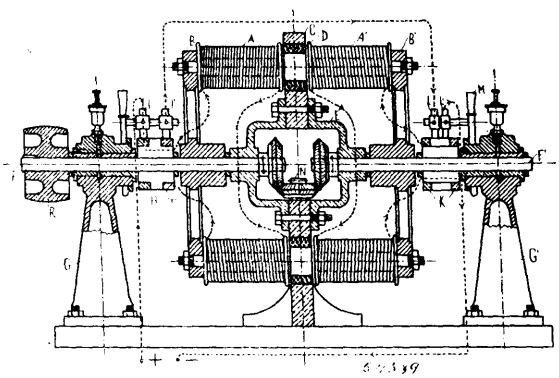
Claim. 1st. In a horse rake, the combination with the dumping bar 7, lever 9 secured to said bar, the link 11 connecting the said lever to the hand lever 12, of a spring assisting the manipulation of the said hand lever, substantially as set forth. 2nd. In a horse



54388

rake, the combination with the lever 9 operating the dumping bar 7, the link 11, connecting the said lever to the hand lever 12, the short arm 15 of the said hand lever bent at approximately or right angles to the portion to which the link 11 is pivoted, of the rod 16a pivoted to the end of the said short arm, the bracket 17 in which the free end of the said arm slides and a spring interposed between said bracket and the short arm, substantially as set forth. 3rd. In a horse rake the combination with the hand lever 12, the link 11 and the lever 9, of the rod 20 pivoted to the said lever 9 and the foot lever 19, to which the end of the said rod is secured, substantially as set forth.

No. 54,389. Dynamo Machine. (*Machine dynamo.*)



54389

Johann Joseph Andreas Minder, Cologne, Germany, 18th December, 1896; 6 years. (Filed 4th December, 1896.)

Claim. 1st. In a dynamo machine, the combination of a group of alternately right and left wound field magnets and a second group of such magnets, the poles of each group being directed inwardly, a stationary armature ring having coils as specified, situated between said field magnet groups, and means for rotating said magnet groups equally and in opposite directions, substantially as described. 2nd. The combination of a stationary armature ring having coils as specified, two groups of right and left wound field magnets, one group being arranged at each side of said stationary armature, means for rotating said groups of magnets in opposite directions at equal speed, said magnets having their poles turned inwardly and being so arranged with regard to said armature coils, that when two magnets are opposite each other a coil shall be between them, friction rings, and a commutator, substantially as described. 3rd. The combination of a stationary armature ring having coils as specified, a housing at the centre of said ring, two shafts arranged in alignment extending outwardly at opposite sides of said housing, bevel gearing to connect said shafts and rotate the same in opposite directions at uniform speed, a group of alternately right and left wound field magnets fast on the shaft and a similar group of alternately right and left wound field magnets on the other shaft, each group having its poles extending inwardly, at either side of the stationary armature ring, friction rings and a commutator, and means for driving one of the shafts in the manner and for the purpose substantially as described.

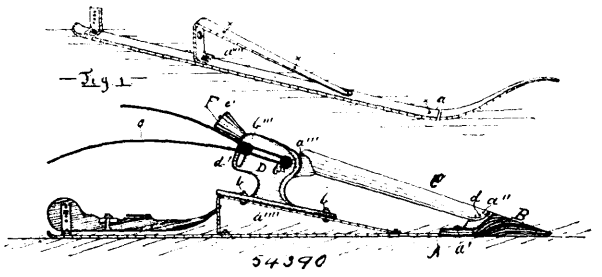
No. 54,390. Pea Harvester Shoe and Divider.

(*Semelle et diviseur pour moissonneuses à récolter les pois.*)

Thomas Ruddell, Eramosa, Ontario, Canada, 21st December, 1896; 6 years. (Filed 23rd November, 1896.)

Claim. 1st. The combination of the shoe point and knife-holder B, secured to the end of the shoe A, and having its under side adapted to run or slide over obstructions, substantially as set forth.

2nd. The combination of the shoe point and knife-holder B with shoe A, knife C having in its forward end several holes *d* and hinged

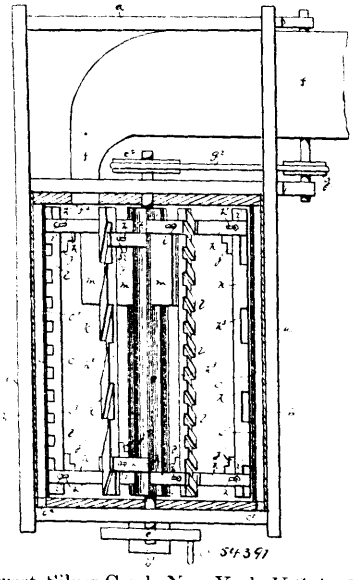


—Fig. 1.—

—Fig. 2.—

to the knife holder B by the belt *a*, substantially as set forth. 3rd. In combination with the shoe point B, the knife C, knife-holder D having a deep slanting groove a^{111} adapted to hold the rear end of knife C, substantially as set forth. 4th. The combination of the knife C, knife-holder D having the elongated holes b^1 secured to the shoe brace a^{1111} by bolts *b* and adapted to slide down or up the brace a^{1111}, substantially as and for the purposes described. 5th. In combination with the shoe brace a^{1111} the knife holder D, cone shaped cylinder F revolving on axle c^1 placed at any desired angle, rods *e* adapted to be raised or lowered, substantially as and for the purpose set forth and described.

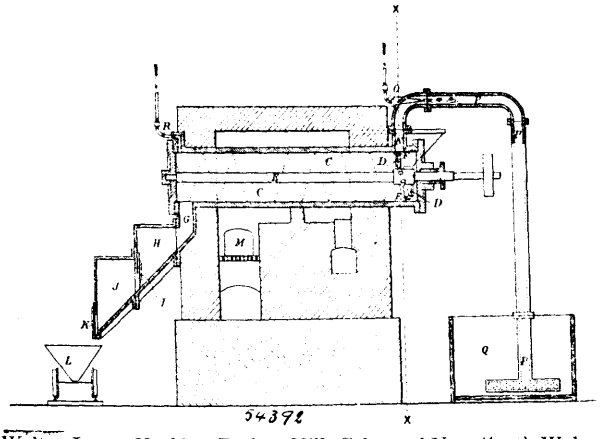
No. 54,391. Grain Cleaner. (*Nettoyeur de grain.*)



Orange M. Sweet, Silver Creek, New York, U.S.A., 21st December, 1896; 6 years. (Filed 7th December, 1896.)

Claim.—1st. The combination of a frame, a casing therein having end heads, a perforated cylinder lining within the casing and between the heads, air outlet openings in the rear head into the space between the casing and lining, a grain inlet through the upper part of the casing and lining at the front end thereof, an air forcer having a discharge nozzle through the front head within the circle of the lining and a rotary reel within the lining having conveyers to rub and move the grain over the surface of the lining and wings, such as *m*, beneath the grain inlet to scatter the grain across the incoming air-blast, substantially as described. 2nd. In a grains eparator, the combination of a casing having air outlets, having a cylindrical perforated lining therein and a top grain inlet, a blast fan having its discharge nozzle into the lining beneath the plane of the grain inlet, and a rotary reel within the lining formed to move the grain thereon and having wings arranged within the grain inlet to scatter the grain across the inrushing air-blast, substantially as described. 3rd. In a grain separator, the combination of a perforated casing, a rotary reel therein comprising radial arms, longitudinal end bars secured to said arms, clamping means, substantially as described securing said bars to the arms to permit adjustment of the bars toward and from the surface of the casing and securing of the bars in the desired position, each bar having a series of rigid inclined conveyer projections at its outer edge, all the projections of a bar inclined in the same direction, the projections of alternate bars being inclined in the opposite direction to those of the intervening bars, and the projections feeding towards the tail of the casing being greater in number than those feeding in the opposite direction, substantially as described. 4th. In a grain separator, the combination of a casing and a rotary reel therein having the radial arms bifurcated at their outer ends with the slots through the legs formed by the bifurcations, the longitudinal bars fitted and radially adjustable in said bifurcations, clamping bolts passing through the bars and said slots to lock the bars in the desired adjustment, gages to hold both ends of each bar in the proper position, and the inclined conveyer projections on the outer edges of the bars, substantially as described.

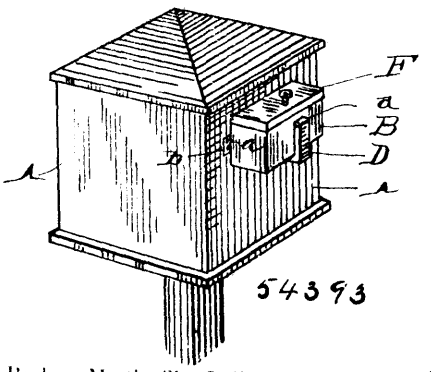
No. 54,392. Method of Preparing Zinc and Copper Ores. (*Méthode de préparer le zinc et les minerais de cuivre.*)



Walter Jaeger Koehler, Broken Hill, Colony of New South Wales, 21st December, 1896; 6 years. (Filed 4th December, 1896.)

Claim.—1st. In the treatment of ores, as herein mentioned, the conversion of the zinc and or copper oxides into sulphates of their respective metals by the action of sulphate and or sulphamate of ammonia. 2nd. In the treatment of ores, as herein mentioned, in which the zinc and or copper oxides have been converted into sulphates of their respective metals by the action of sulphate of ammonia and or sulphamate of ammonia, subsequently regenerating the ammonium sulphate by passing the ammonia gas produced during the first or sulphatizing portion of the process through a solution of sulphate of zinc, substantially as specified. 3rd. In the treatment of ores, as herein mentioned, in which the zinc and or copper oxides have been converted into sulphates of their respective metals by the action of sulphate of ammonia and or sulphamate of ammonia, subsequently precipitating the zinc from its solution in the form of zinc hydrate by passing through it ammonia gas produced during the first or sulphatizing portion of the process, substantially as specified. 4th. In the treatment of ores, as herein mentioned, the within described process consisting in the conversion of the zinc and or copper oxides into sulphates of their respective metals by the action of sulphate and or sulphamate of ammonia, ammonia gas being produced, then leaching by water the sulphates of zinc and or copper so obtained, and precipitating the copper, if any, and or iron, if any, by any usual means, subsequently passing the ammonia gas, produced during the sulphatizing operation, through the remaining solution of sulphate of zinc, whereby the zinc is precipitated as zinc hydrate, and sulphate of ammonia is regenerated for the treatment of fresh supplies of ore, substantially as specified.

No. 54,393. Bee Feeder. (*Appareil à nourrir les abeilles.*)

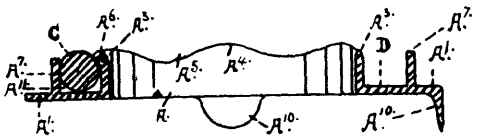


John S. Rooker, Martinville, Indiana, U.S.A., 21st December, 1896; 6 years. (Filed 2nd December, 1896.)

Claim.—1st. The combination, in a bee-feeder, of an outer casing secured to the side of the bee-hive, there being apertures in said side leading from said hive to said feeder, a lining for the sides of said feeder composed of perforated or reticulated material to serve as a

ladder for the bees, a floating false bottom in said feeder, a double top thereto consisting of a removable transparent cover and a rooflike imperforate cover above the same, and means for introducing the food supply, substantially as set forth. 2nd. In a bee-feeder, the combination, of the outer casing secured to the hive, there being apertures in the side of said hive leading to within said casing, a lining for the sides of the feeder of material adapted to serve as a ladder for the bees, a suitable cover, and a conduit on the outside of said feeder leading from a point near its top down its side and under its bottom, where it communicates therewith through the bottom of the feeder under the floating false bottom, the top of conduit being formed so that fluid may be conveniently poured therein, substantially as set forth.

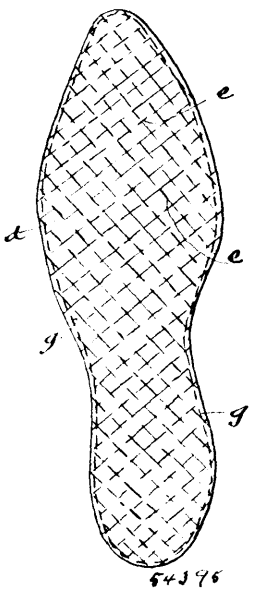
No. 54,394. Horseshoe. (*Fer à cheval.*)



Frederick William Hahn, New York, State of New York, U.S.A., 21st December, 1896; 6 years. (Filed 17th April, 1896.)

Claim.—1st. A horseshoe-frame having bands A^3 and A^7, a solid calk supported by and uniting the bands A^7, the said calk having a straight front edge and bevelled backward on its under side to form a sharp edge, in combination with the elastic packing, as and for the purpose described. 2nd. A horseshoe-frame having a band A^3 provided with elevations constructed to be bent over and retain the packing, bands A^7, a solid calk supported by and uniting the bands A^7, the said calk having a straight front edge and bevelled backward beneath to form a sharp edge, in combination with the elastic packing, as and for the purpose described. 3rd. A horseshoe having grooves formed by the band A^3 and A^7, the elevations on band A^3, calk and web B^1, the said web uniting the said bands forming the grooves and the calk, in combination with the elastic packing, as and for the purpose described. 4th. A horseshoe having grooves formed by the bands A^3 and A^7, the elevations on band A^3, calk having a straight front edge, and web B^1, the said web uniting the said bands forming the grooves and calk, in combination with the elastic packing, as and for the purpose described

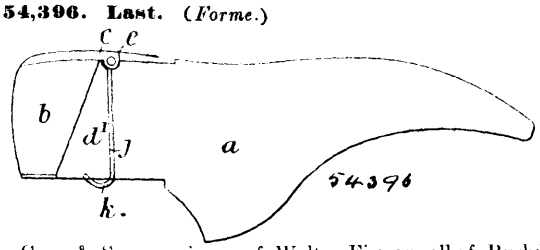
No. 54,395. Sole. (*Semelle.*)



Matthias Koch, Montreal, Quebec, Canada, 21st December, 1896; 6 years. (Filed 6th November, 1896.)

Claim.—1st. As a new article of manufacture, an insole composed of layers of different material connected together by quilting stitching equally distributed throughout same. 2nd. As a new article of manufacture, a sole consisting of a layer of non-cold-conducting material, and a layer of heat retaining material. 3rd. A sole consisting of a layer of paper and a layer of wadding. 4th. A sole consisting of a layer of cold-non-conducting material, a layer of heat retaining material, and a layer of stiffening material, all connected together by stitching. 5th. A sole consisting of a layer of cold-non-conducting material, a layer of heat retaining material, and a layer of stiffening material, all connected together by stitching and a layer of "fibre-chamois" or the like, the whole connected by a line of stitching extending around the sole adjacent to the edge thereof. 6th. A sole consisting of a layer of cold-non-conducting material, a layer of heat retaining material, and a layer of stiffening material, all connected together by stitching and a layer of water proof material, the whole connected together by a line of stitching extending around the sole adjacent to the edge thereof. 7th. A sole consisting of a layer of paper, a layer of wadding and a layer of "Wiggins," all connected together by a series of zig-zag lines of stitching, a layer of "fibre-chamois", the whole connected together by a line of stitching extending around the sole adjacent to the edge thereof, and said "fibre-chamois," having its outer face coated with an adhesive substantially as set forth.

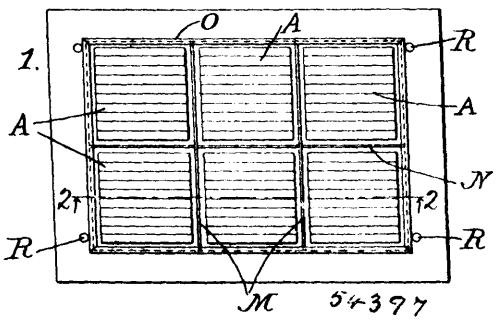
No. 54,396. Last. (*Forme.*)



John Cave & Sons, assignee of Walter Firman, all of Rushden, Northampton, England, 21st December, 1896; 6 years. (Filed 21st November, 1896.)

Claim.—1st. A boot last wherein the heel portion is divided from the fore portion on a line at or near the back of the waist, the two parts being connected by a hinge which will allow the heel part to be turned down against the fore part but will not allow the said heel part to move relatively with the fore part beyond the position which the two parts occupy when in use, the said two parts being held in this postion by a wedge or locking device, substantially as described. 2nd. In a last wherein the heel portion is separated from the main portion of the last on a line at the rear of the waist, and which two parts are connected together by a hinge fitting, having formed upon or attaching to that leaf of the hinge which is fixed to the fore part of the last, a socket for fitting the last support, substantially as described.

No. 54,397. Method of Securing Tiles.
(*Méthode d'assajetir les tuiles.*)



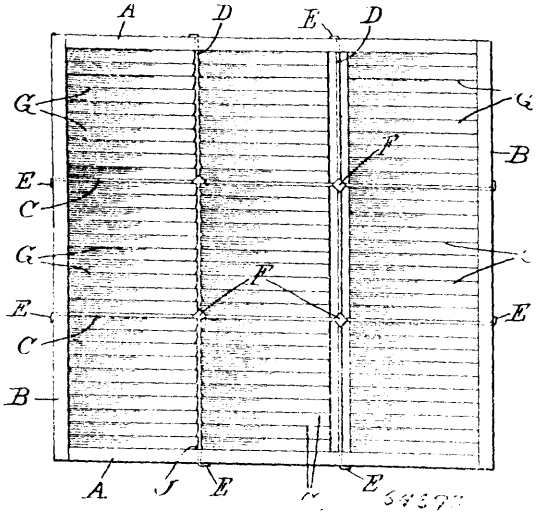
William Herman Winslow, Chicago, Illinois, U.S.A., 21st December, 1896; 6 years. (Filed 23rd December, 1896.)

Claim.—1st. The method of securing tile sections together in a metallic frame which consists in arranging them in proper relation edge to edge, inserting between their edges metal strips of relatively strong material, then exposing the metal to an electrolytic bath and then depositing a homogeneous mass of metal between the strips and the edges of the sections and along the edges of the strips and overhanging the sections so as thus to form the frame and make tight joints, between the metal and the tile sections. 2nd. The method of securing tile sections together in a metallic frame, which consists in arranging them in proper relation edge to edge within a suitable sash or frame, then inserting between their edges separate strips of relatively strong metal which engage each other at their crossings, then exposing the metal to an electrolytic bath and thus depositing a homogeneous mass of metal between the strips and the edges of the tile sections and along the edges of the strips and overhanging the sections and about the engaging points of the strips at their crossings, thus forming the frame, making tight joints between the metal and the tile sections, and securing the metal strips together at their crossings. 3rd. The method of securing tile sections together in a metal frame, which consists in arranging them in proper relation edge to edge, the opposed edges having grooves, inserting between their edges strips of relatively strong metal, then exposing the metal to an electrolytic bath and thus depositing a homogeneous mass of metal between the strips and the edges of the sections and in the grooves on the section edges and also along the edges of the strips, and overhanging the sections so as thus to form the frame and make tight joints between

the metal and the tile sections, and keep the sections in place by the metal filling the grooves. 4th. The method of securing tile sections together in a metal frame, which consists in arranging the sections, having ridges on their surfaces, in proper relation edge to edge, inserting between their edges strips of relatively strong metal, and then exposing the metal to an electrolytic bath and thus depositing a homogeneous mass of metal between the strips and the edges of the sections, and along the edges of the strips and in the angles between the grooves adjacent to the strips so as to thus form the frame, make tight joints between the metal and the tile sections, and hold the sections from tendency to move. 5th. The method of securing tile sections together in a metallic frame, which consists in arranging them in proper relation edge to edge, inserting between their edges metal strips of relatively strong material, filling the spaces between the metal and the sections so far as may be convenient with metal fillings, than exposing to an electrolytic bath and thus depositing a homogeneous mass of metal between the strips and the edges of the sections and along the edges of the strips and overhanging the sections so as thus to form the frame and make tight joints between the metal and the tile sections. 6th. The method of securing tile sections together, which consists in arranging them in proper relation edge to edge, inserting between their edges metal strips, then exposing such metal to the action of an electrolytic bath until a homogeneous mass of metal has been deposited between the strips and the opposed edges of the section so as to form tight joints between the metal and the tile sections.

No. 54,398. Method of Securing Tiles.

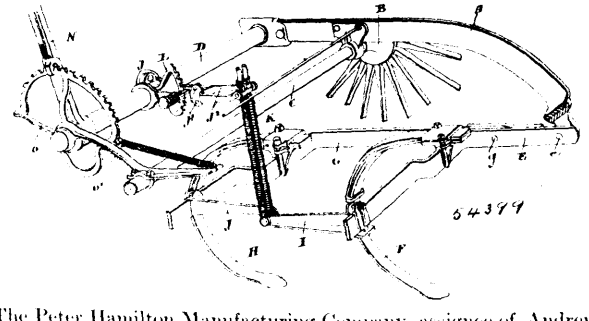
(*Méthode d'assujetir les tuiles.*)



William H. Winslow, Chicago, Illinois, U.S.A., 21st December, 1896; 6 years. (Filed 23rd November, 1896.)

Claim.—1st. The combination of a series of tile sections placed together edge to edge, with relatively strong, separately formed metallic strips between the edges of the sections, and electrically deposited metal in a homogeneous mass between the strips and the tile sections to secure them together. 2nd. The combination of a series of tile sections placed together edge to edge, with relatively strong, separately formed metallic strips between the edges of the sections, electrically deposited metal in a homogeneous mass between the strips and the tile sections to secure them together, and electrically deposited metal on the edges of the strips so as to overhang the edges of the tile sections. 3rd. The combination of a series of tile sections provided with prismatic ribs which are substantially as long as the width of the tile sections, placed together edge to edge, with metallic strips between the edges of the tile sections, and electrically deposited metal in a homogeneous mass between the strips and the tile sections to secure them together. 4th. The combination of a series of tile sections provided with prismatic ribs, which are substantially as long as the width of the tile sections, placed together edge to edge, with metallic strips between the edges of the tile sections, electrically deposited metal in a homogeneous mass between the strips and the tile sections to secure them together, and electrically deposited metal on the edges of the strips and within the angles between the prismatic ribs. 5th. The combination of a series of tile sections placed togther edge to edge, said edges grooved, with metallic strips between the edges of the tile sections, and electrically deposited metal in a homogeneous mass between the strips and the tile sections, and within the grooves to secure the parts together. 6th. The combination of a series of tile sections placed together edge to edge, said edges grooved, with metallic strips between the edges of the tile sections, electrically deposited metal in a homogeneous mass between the strips and the tile sections and within the groove to secure the parts together, and electrically deposited metal on the edges of the strips overhanging the edges of the tile sections. 7th. The combination of a series of tile sections placed together edge to edge, with metallic strips between the edges of the tile sections, some of said strips of relatively large cross section and projecting considerably beyond the surface of the tile sections on one side, and electrically deposited metal in a homogeneous mass between the strips and the tile sections to secure them together. 8th. The combination of a series of tile sections placed together edge to edge, with metallic strips between the edges of the tile sections, some of said strips of relatively large cross section and projecting considerably beyond the surface of the tile sections on one side, electrically deposited metal in a homogeneous mass between the strips and the tile sections to secure them together, and electrically deposited metal on the flush edges of the strips overhanging the edges of the tile sections, and on the edges of the strips which project beyond the tile sections so as to form ledges to support such tile sections. 9th. The combination of a series of tile sections placed together edge to edge, with metallic strips between the edges of the sections, metal filings between the strips and the sections, and electrically deposited metal between the strips and sections to secure them together. 10th. The combination of a series of tile sections placed together edge to edge, with metallic strips between the edges of the sections, metal filings between the strips and the sections, electrically deposited metal between the strips and sections to secure them together, and electrically deposited metal on the edges of the strips so as to overhang the edges of the tile sections. 11th. As a new article of manufacture, a window consisting of a surrounding sash and frame, a series of sections, a series of strips interposed between the sections and a homogeneous mass of deposited metal between the strips and the sections and along the edges of the strips overhanging the sections, substantially as shown and described. 12th. A compound window comprising a series of sections, strips interposed between such sections, and fastenings at the crossings of such metal strips. 13th. A compound window comprising a series of sections, strips interposed between such sections, fastenings at the crossings of such metal strips, and projecting plates or keys at such crossings to overhang the sections and keep them in position. 14th. A compound window comprising a series of sections, strips interposed between such sections, fastenings at the crossings of such metal strips, projecting plates or keys at such crossings to overhang the sections and keep them in position, and a homogeneous mass of metal in the interstices between the strips and the edges of the sections to make tight joints. 15th. The combination of a series of tile sections placed together edge to edge, with a series of strips placed between their edges, and fastenings at the crossings of such strips securing the strips together and overhanging the corners of the sections. 16th. The combination of a series of tile sections placed together edge to edge, with a series of strips placed between their edges, fastenings at the crossings of such strips securing them together and overhanging the corners of the sections, and a mass of electrically deposited metal between the strips and the edges of the tile sections to make a tight joint. 17th. The combination of a series of tile sections placed together edge to edge, with a series of strips placed between their edges, fastenings at the crossings of such strips securing the strips together and overhanging the corners of the sections, a mass of electrically deposited metal between the sections and the edges of the tile sections to make a tight joint, and a like mass of electrically deposited metal overhanging the sections so as to hold them securely in position. 18th. A compound window comprising a surrounding frame, a series of metal strips stretched tightly across such frame in each direction, a series of glass sections interposed in the spaces between the strips and securing devices for holding the sections in place.

No. 54,399. Cultivator. (*Cultivateur.*)

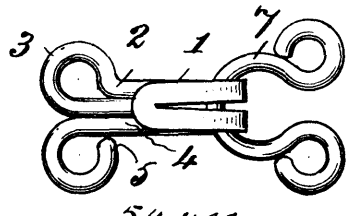


The Peter Hamilton Manufacturing Company, assignee of Andrew Johnston, all of Peterboro, Ontario, Canada, 21st December, 1896; 6 years. (Filed 27th December, 1895.)

Claim.—1st. In a cultivator, the combination with the independent sections, of an arm pivotally supported in the frame, connections between the arm and the sections, a quadrant or its equivalent and a co-acting pin supported on the arm and designed to be held in engagement with any desired notch in the quadrant, as and for the purpose specified. 2nd. In a cultivator, the combination with the independent sections, of an arm pivotally supported in the frame, connections between the arm and the sections, a quadrant

or its equivalent, and a co-acting spring-held pin designed to extend through a notch in the quadrant and holes in the arm, as shown and for the purpose specified.

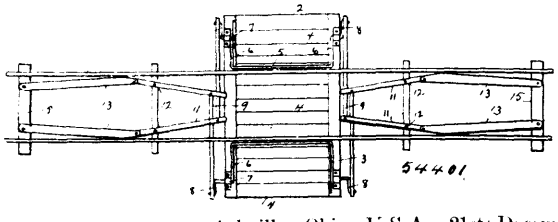
No. 54,400. Garment Hook. (*Agrafe de vêtement.*)



Edwin F. Smith and Frank A. Smith, both of Union City, Connecticut, U.S.A., 21st December, 1896; 6 years. (Filed 4th December, 1896.)

Claim.—1st. A garment hook provided between the sides of the base with a straight spring tongue having near its free end a knob formed by raising a portion of the metal of the body of the tongue near its free end, so that the bill may be short and low, and the eye will be retained in engagement therewith. 2nd. A garment hook provided between the sides of the base with a straight spring tongue having near its free end a knob formed by displacing the metal of the upper side of the tongue, which is left straight and full size on the under side, as and for the purpose set forth.

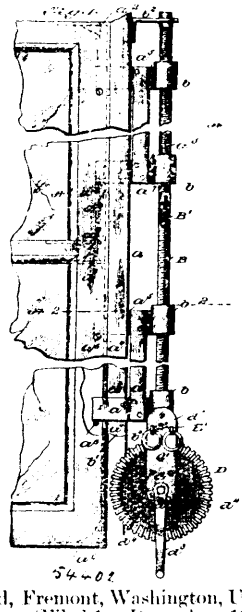
No. 54,401. Railway Gate. (*Barrière de chemin de fer.*)



Emmit E. Fraunfelter, Ashville, Ohio, U.S.A., 21st December, 1896; 6 years. (Filed 2nd December, 1896.)

Claim.—A railway crossing gate, comprising the inverted U-shaped bar 6 journalled in bearings 7 secured to the sides, and provided with the integral crank end 8, the connecting-rod 9, the outer end of which is pivoted to said crank-arm 8, a lever 11 fulcrumed in a recess 12 in one of the cross-ties, and having its longer arm pivoted to the inner end of said connecting-rod, in combination with the actuating bar 13, pivoted at one end to the tie 15, and its opposite end pivoted to the shorter arm of the lever 11, substantially as and for the purpose set forth.

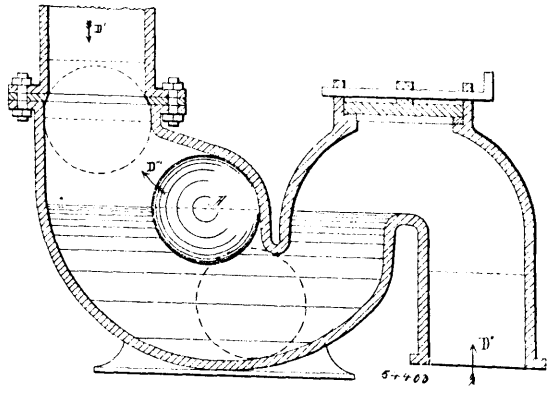
No. 54,402. Window Sash. (*Chadre de châssis.*)



Mortimer M. Canfield, Fremont, Washington, U.S.A., 21st December, 1896; 6 years. (Filed 1st December, 1896.)

Claim.—1st. The combination with a window sash having arms provided with interiorly threaded hubs or sleeves, a screw rod engaging said hubs or sleeves having a bevelled pinion on its lower end, a gear-wheel engaging said bevelled pinion, and an operating crank-shaft, substantially as set forth. 2nd. The combination with upper and lower window sashes having arms provided with interiorly threaded hubs or sleeves, of two screw-rods each engaging the hubs or sleeves of one of said sashes, bevelled pinions on the lower ends of said screw-rods, an operating gear-wheel with which said pinions are designed to intermesh, a crank-shaft, and means for disengaging said bevelled pinions from said gear-wheel, substantially as set forth. 3rd. The combination with upper and lower sashes having outwardly projecting arms provided with interiorly threaded hubs or sleeves, of two screw-rods each engaging the hubs or sleeves of one sash, bevelled pinions on the lower ends of said screw-rods, slotted bearing plates for said screw-rods, shifting arms connected to said screw-rod, and an operating gear-wheel with which said pinions are designed to engage, substantially as set forth. 4th. The combination with upper and lower window sashes having slotted plates attached to their longitudinal edges, of arms having their inner ends extended through the slots of said plates, and interiorly threaded hubs or sleeves on the outer ends of said arms, screw-rods engaging said hubs or sleeves, bevelled pinions on the lower ends of said screw-rods, a gear-wheel with which said pinions engage, and an operating crank-shaft, substantially as set forth. 5th. The combination with upper and lower window sashes having slotted plates attached to their longitudinal edges, of arms having their inner ends extended through the slots of said plates, interiorly threaded hubs or sleeves on the outer ends of said arms, screw-rods engaging said hubs or sleeves and having bevelled pinions on their lower ends, slotted bearing plates for said screw-rods, a bevelled gear-wheel with which said pinions are designed to engage, a plate having slots, and shifting arms secured at their inner ends to said screw-rods, and having grooves in their lower edges and extended through the slots of said plate, substantially as set forth. 6th. The combination with upper and lower window sashes having projecting arms, and interiorly threaded hubs or sleeves on the outer ends of said arms, of the screw-rods engaging said hubs or sleeves, the bevelled pinions on the lower ends of said screw-rods, the bearing plates for said screw-rods, the bevelled gear-wheel located between said bearing plates with which said pinions are designed to engage, the shaft supported by said plates, and having an outer squared portion, a plate through which said shaft projects provided with lugs on its outer face, and a crank-handle movable on said squared portion of said shaft designed to fit between said lugs, substantially as set forth. 7th. The combination with upper and lower sashes having slotted plates secured to their longitudinal edges, of outwardly projecting arms extended at their inner ends through the slots of said plates, breast-plates connecting said arms, interiorly thread hubs or sleeves on the outer ends of said arms, screw-rods, upper supporting plates therefor, lower angular slotted plates, bevelled pinions on the lower ends of said screw-rods, shifting arms connected to said screw-rods and having grooves in their lower edges, plates having slots therein through which said shifting arms project, a bevelled gear-wheel with which said pinions are designed to engage, a shaft supported by said lower angular plates and upon which said bevelled gear-wheel is secured, said shaft having an outer squared portion, a crank-handle movable on said squared portion, and lugs on the outer face of said plate between which said handle is designed to fit, substantially as set forth.

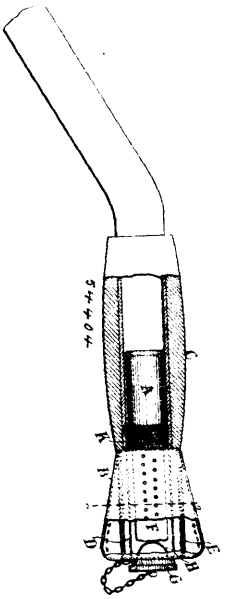
No. 54,403. Sewer Trap. (*Intercepteur des eaux d'égout.*)



George Alexandre François Romain Janin, Montréal, Québec, Canada, 21 décembre 1896; 6 ans. (Déposé 4 décembre 1896.)

Résumé.—Un intercepteur automatique des eaux d'égout à fermeture hydraulique constante, formant siphon et fonctionnant au moyen d'une sphère flottante intérieure et libre, le dit intercepteur pouvant s'adapter aux éviers, cuvettes de water-closets, baignoires, etc., le tout tel que décrit dans la spécification précédente et montré dans le dessin ci-annexé.

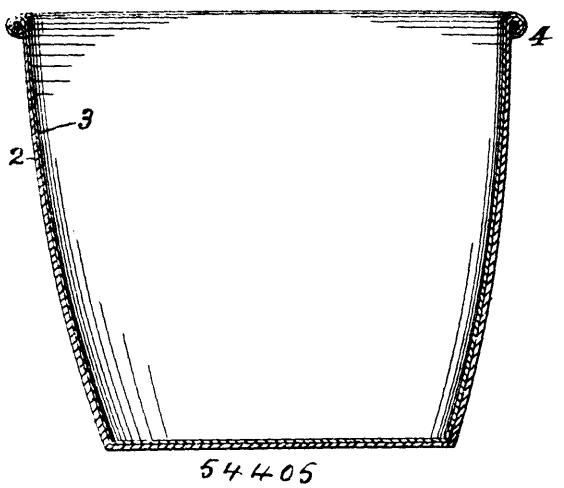
No. 54,404. Hand Warming Appliance.
(*Appareil à chauffer les mains*)



The Earl of Dundonald, 24 Portman Square, London, England, 21st December, 1896; 6 years. (Filed 1st December, 1896.)

Claim.—1st. A hand warming appliance consisting of a perforated metallic case having within it a rod of suitable fuel separated from the case by pervious screens, having also a hole and cap for introduction of the fuel and an extension of the case adapted to enter the interior of a tubular handle, substantially as described. 2nd. A hand warming appliance such as is above referred to and having a split socket adapted to hold a whip or other stem or handle, substantially as described.

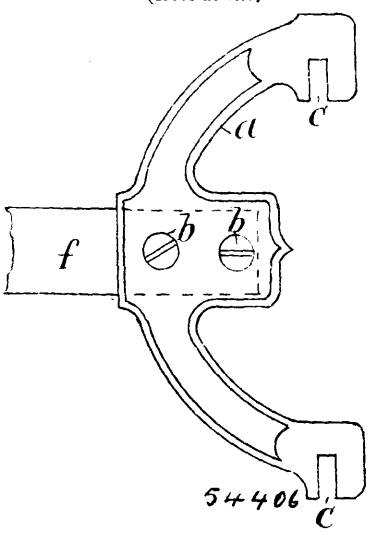
No. 54,405. Culinary Vessel. (*Ustensile de cuisine.*)



Romaine Clark Cole, Cleveland, Ohio, U.S.A., 21st December, 1896; 6 years. (Filed 28th November, 1896.)

Claim.—1st. As a new article of manufacture, a culinary vessel formed of two layers of metal, secured together without any vacant space between, the outer layer being a metal of low specific heat and low thermal conductivity, as iron or steel, and the inner layer an incorrodible metal of high thermal conductivity and high specific heat, as aluminum, substantially as described. 2nd. As a new article of manufacture, a culinary vessel formed of two layers of metal, the outer layer being a metal of low thermal conductivity and low specific heat, as iron or steel, and the inner layer an incorrodible metal of higher thermal conductivity and higher specific heat, as aluminum, the two metals being united in intimate contact by pressure, substantially as described. 3rd. In a culinary vessel composed of two layers of metal of opposite specific heat and opposite thermal conductivity but closely related electro-chemically, as iron and aluminum, the inner layer being of aluminum and the outer of iron, the layers being united in intimate contact by pressure, substantially as described. 4th. A culinary vessel composed of an outer layer of iron or steel and an inner layer of aluminum, the two layers being united in intimate contact by pressure, substantially as and for the purposes hereinafter set forth

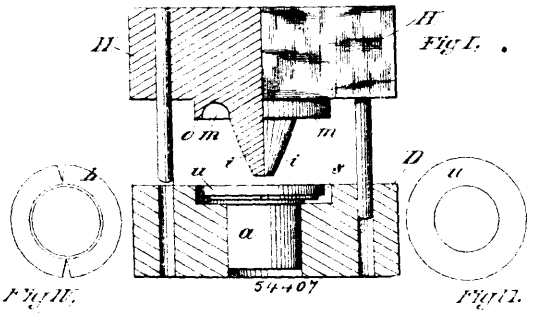
No. 54,406. Bedstead. (*Bois de lit.*)



Thomas J. Tear and Alexander McMillan, both of St Catharines, Ontario, Canada, 21st December, 1896; 6 years. (Filed 7th October, 1896.)

Claim.—The bedstead rail and port fastener in an article of manufacture, made in pairs, each part or half of special form and combined when in use, substantially as and for the purpose hereinbefore set forth.

No. 54,407. Eyelet. (*Œillet.*)



William Henry Force and Maxime Onesime Parenteau, both of Springfield, Massachusetts, U.S.A., 21st December, 1896; 6 years. (Filed 7th December, 1896.)

Claim.—1st. The eyelet, having a metallic body and a head covered by plastic material, the body having a crimp and a head closed over the flange and embracing the same, substantially as described. 2nd. The female die, having a cylindrical hole therein and a recess around the mouth thereof, and the male die, having a conical projection and a ring around the same and adapted to fit the female die, substantially as described. 3rd. The method of covering the heads of eyelets with plastic material, which consists in forming metallic eyelets and plastic washers separately, assembling them as described, and centering the washers and forming them on the heads of the eyelets by the action of a hot die, all substantially as stated.

No. 54,408. Signal for Railways.
(*Signal de chemin de fer.*)

Fig. I.

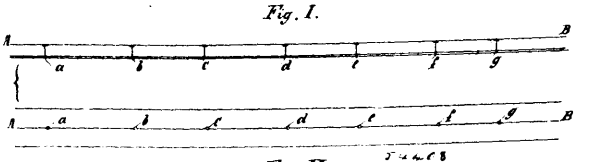


Fig. II.

Alexandre Lefebvre, Beersel Heyst-opden-Berg, Belgium, 21st December, 1896; 6 years. (Filed 29th November, 1896.)

Claim.—1st. In an alarm system for railways, the combination with the line of track and a conductor parallel with but insulated from the track rails and ground, of a vehicle carrying a trailing

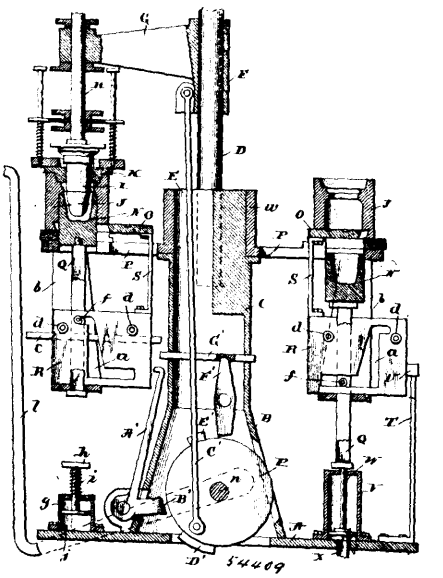
contact for the track conductor, said contact insulated from such vehicle, an electrically operated alarm, an electric generator operated by a moving element of the vehicle and conductive connections connecting one of the poles of the generator with the track rails through the alarm, and the other pole with the trailing contact, whereby when two such vehicles are on the same track a closed electric circuit will be established through their alarms, as and for the purpose specified. 2nd. In an alarm system for railways, the combination with the line of track and a conductor parallel with but insulated from the track rails and the ground, said conductor made in sections and arranged to leave a hiatus between each two sections, of a vehicle carrying a trailing contact for the track conductor, said contact insulated from such vehicle, an electrically operated alarm, an electric generator operated by a moving element of the vehicle, and conductive connections connecting one of the poles of the generator with the track rails through the alarm and the other pole with the trailing contact, whereby when two such vehicles are on the same track a closed electric circuit will be established through their alarms, as and for the purpose set forth. 3rd. In an alarm system for railways, the combination with the line of track and two independent conductors parallel with but insulated from the track rails and ground, said conductors composed of sections arranged to leave a hiatus between them so that a section of one conductor will overlap a section of the other, of a vehicle carrying an electrically operated alarm, an electric generator operated from a moving element of such vehicle, a trailing contact for each track conductor, and conductive connections connecting one of the poles of the generator with the track rails through the alarm and the other with the two trailing contacts, as and for the purpose specified. 4th. In an alarm system for railways, the combination with the line of track and a conductor parallel therewith but insulated therefrom, a locomotive carrying an electrically operated alarm, an electric generator operated by a moving element of the vehicle, and a trailing contact for the track conductor, said contact insulated from the track rails, and conducting connections connecting one of the poles of the generator with said rails through the alarm and the other with the trailing contact, of a second vehicle carrying a conductor electrically connected with the track rails and adapted to be brought into contact with the track conductor, as and for the purpose set forth. 5th. In an alarm system for railways, the combination with the line of track, two conductors parallel therewith but insulated therefrom, said conductors made in sections and arranged so as to leave a hiatus between each two sections and arranged so that a section of one will overlap a section of the other conductor, of a locomotive carrying an electrically operated alarm, an electric generator and a trailing contact for each track conductor, said generator operated from a moving element of the locomotive and said trailing contacts insulated from the latter, conductive connections connecting one pole of the generator with the track rails through the alarm and the other with the trailing contacts, and a car provided with contacts electrically connected with the track rails and adapted to be moved into and out of contact with the track conductors, as and for the purpose set forth. 6th. In an alarm system for railways, the combination with a main line, a branch line, two main conductors parallel with but insulated from the track rails, said conductors made of sections arranged so as to leave a hiatus between such sections and so that a section of one conductor will overlap a section of the other, and two branch conductors also made of sections arranged like those of the main conductors, the terminal sections of one of said branch conductors being directly connected with a section of one of the main conductors, of a vehicle equipped with appliances, substantially as described for the purposes set forth. 7th. In an alarm system for railways, the combination with a main line, a branch line, switching appliances, two main conductors parallel with but insulated from the main track rails, said conductors made of sections arranged so as to leave a hiatus between them and so that a section of one will overlap a section of the other conductor, two similarly arranged branch line conductors and an electric contact controlled by the switching appliances to electrically connect one of the branch line conductors with one of the main line conductors, of a vehicle equipped substantially as described for the purposes set forth. 8th. In an alarm system for railways, the combination with a track conductor as A B, of wooden supporting posts and a clamp composed of two jaws detachably secured together and provided in their proximate faces along their upper edge with a groove for the reception of the conductor, said grooves of such dimensions that the conductor will project therefrom, one of said clamping jaws being detachably secured to the post, substantially as and for the purpose set forth. 9th. In a alarm system for railways, the combination with a track conductor as A B made in sections, of a wooden supporting post, a T-shaped metallic plate detachably secured to such post and a metallic supporting plate provided in its upper edge with a groove for the reception of the ends of two conductor sections, said plate detachably secured to the web of the aforementioned T-shaped plate, substantially as and for the purpose specified.

No. 54,409. Glass Blowing Machine.

(*Machine à souffler le verre.*)

Charles Edwin Blue, Wheeling, West Virginia, U.S.A., 22nd December, 1896; 6 years. (Filed 22nd January, 1896.)

Claim.—1st. In a glass blowing machine, the combination of an endless carrier, a plurality of moulds carried thereby, primary or charging and secondary or blowing bottoms for each mould and carried by said carrier, controllers for the said bottoms carried by



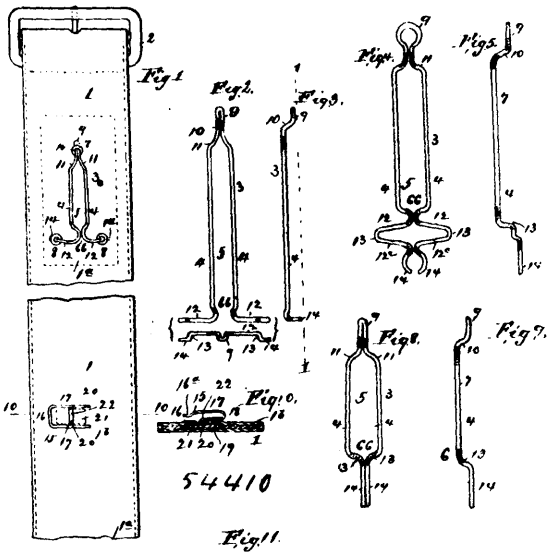
the carrier (one for each mould), and means for operating the controllers and bottoms. 2nd. In a glass blowing machine, the combination with an endless carrier carrying a plurality of moulds, of a pressing head and a blowing head, the two heads connected and moving together, and an operating means therefor. 3rd. In a glass blowing machine, the combination with an endless carrier having a plurality of moulds, a pressing and blowing head, a vertically movable support above the table and carrying both of said heads whereby they move together, and means for moving the support. 4th. In a glass blowing machine, the combination of an endless carrier carrying a plurality of moulds, a pressing head, a blowing head, means for operating said heads, an air supply having communication with said blowing head, and a valve controlling said air communication, said valve controlled by the pressing head whereby the blowing head is seated before the air is admitted thereto. 5th. In a glass blowing machine, the combination of an intermittingly moving endless carrier carrying a plurality of moulds, a vertically movable primary bottom for each mould, and a vertically movable actuating member for said bottom situated beneath and supported independent of the table and at a point below said moulds in advance of the pressing mould when the table is stationary, a horizontally movable secondary bottom for each mould, and an actuating member for each secondary bottom situated in advance of the vertically movable actuating member, substantially as described. 6th. In a glass blowing machine, the combination of an intermittently moving endless carrier carrying a plurality of moulds, a vertically movable primary bottom for each mould, and a vertically movable actuating member for said bottoms, situated beneath and supported independent of the table and at a point below one of said moulds in advance of the pressing mould when the table is stationary, a horizontally movable secondary bottom for each mould, and an actuating member for said secondary bottoms situated in advance of the vertically moving actuating member, and at a point to operate the secondary bottom by the movement of the table in advance of the vertical movement of the primary bottom. 7th. The combination of a rotatable table, a series of moulds carried thereby, a transversely movable device controlling the bottoms, and a spring fixed in relation to the rotation of the table, said spring engaging and through the movement of the table moving the transverse device, substantially as described.

No. 54,410. Waist Belt. (*Ceinturon.*)

Henry Jacques Gainsman, New York, State of New York, U.S.A., 22nd December, 1896; 6 years. (Filed 22nd June, 1896.)

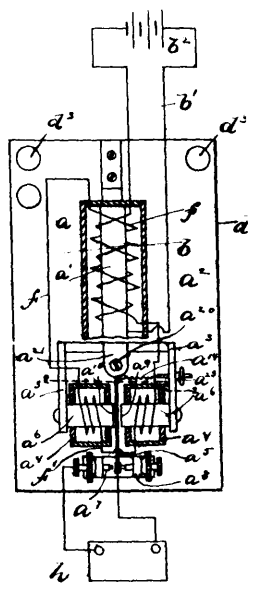
Claim.—1st. As a new article of manufacture, a flexible belt having secured thereto a series of fasteners, each provided with a horizontal slot open at one end, said fasteners being located on the inner face of the belt and being spaced apart. 2nd. As a new article of manufacture, a flexible belt having secured thereto a series of fasteners, each provided with a horizontal slot open at one end, the metal of said fasteners at the edges of said slots being raised from the face of said belt, said fasteners being located on the inner face of the belt and being spaced apart. 3rd. As a new article of manufacture, a flexible belt having secured thereto a series of fasteners each provided with a horizontal slot open at one end, said fasteners being located on the inner face of the belt and being spaced apart, and means located at the open end of said slot to prevent the spontaneous removal of the button through the open end of the slot under ordinary conditions of use, but arranged to allow the buttons

to be removed by a direct pull when required. 4th. A belt having on its inner face a holding device provided with a slot open at one



end and adapted to receive a button, and a spring located at the open end of said slot adapted to prevent spontaneous removal of the button through the open end of the slot, said spring when depressed permitting the button to pass through the open end of said slot. 5th. A belt having on its inner face a hooking device provided with a slot open at one end adapted to receive a button, the metal at the edges of said slot being raised, and a spring located at the open end of said slot adapted to prevent spontaneous removal of the button through the open end of the slot, said spring when depressed permitting the button to pass through the open end of said slot. 6th. As a new article of manufacture, a belt having a fastener to hold a button, consisting of two sides, forming a slot to receive a button shank or fastening threads, and prongs or bends at the ends of the fastener attached to the belt. 7th. As a new article of manufacture, a belt having a fastener to hold a button, consisting of two sides 4, forming a slot 5 to receive a button shank or fastening threads, one end of said slot being open, means at the open end of the slot to prevent spontaneous detachment of the button from the fastener, and prongs or bends at the ends of the fastener attached to the belt. 8th. As a new article of manufacture, a belt having a fastener, consisting of two sides 4, forming a slot 5 to receive a button shank or fastening threads, and prongs or bends at the ends of the fastener attached to the belt, said sides being raised from the plane of said prongs to permit the entrance of a button between the sides and the belt. 9th. The combination of a belt having eyelets with a fastener, having a slot to receive a button shank, and prongs at the ends of said fastener to enter said eyelets. 10th. The combination of a belt having eyelets with a fastener, consisting of sides 4, forming a slot 5 open at one end, and shoulders at the open end of said slot, said fastener being attached to the belt. 11th. The combination of a belt having eyelets, with a fastener composed of wire, having sides 4, forming a slot 5, a prong 9 at one end, a shoulder 6 at the open end of the slot, and outwardly extending prongs 12, the prongs 9 and 12 being connected with the eyelets on the belt. 12th. The combination with a belt having eyelets, of a fastener composed of wire bent to form a prong 9 at one end, and sides forming a slot 5 open at one end, the sides 4 being bent inwardly at 6 to form shoulders, the wire being also bent outwardly at 12 to form prongs, the prongs 9 and 12 being connected with the eyelets on the belt. 13th. The combination of a belt having eyelets with a fastener, composed of wire doubled to form a prong 9, bends 10 and 11, and sides 4, forming a slot 5, said sides being bent at 6 to form shoulders, the wires being bent sideways at 12 to form prongs and outwardly at 13 and sideways at 14, the parts 9 and 14 being located in said eyelets. 14th. The combination of a belt having eyelets with a fastener, having an end prong 9, sides 4, forming a slot 5, and prongs 12 bent outwardly in opposite directions from the slot to enter eyelets in said belt, the prong 9 also entering an eyelet in said belt. 15th. A fastener for connecting a belt to buttons, consisting of a wire bent to form sides 4, the latter forming a slot 5, and an end prong 9 at one end and two outwardly extending prongs at the opposite end. 16th. A fastener for connecting a belt to buttons, composed of sides 4 forming a slot, said sides being arranged to be pressed apart to permit the entrance of a button, and means for securing said fastener to a belt. 17th. The combination of a belt and means for attaching it to the buttons on a pair of trousers, with a hook or clip secured to said belt and arranged to engage the back strap of said trousers. 18th. The combination of a belt with a hook or clip secured thereto by a plate having an eye to hold said clip, said clip being arranged to hold the back strap of a pair of trousers. 19th. The combination of a belt with a hook or fastener secured thereto on the inner face and arranged to hold the back strap of a pair of trousers. 20th. The combination of a belt with a clip composed of a wire having a cross bar 10, sides 17, reverse bends 18, 19, and inward bends 20, with a plate having an eye or bend 22.

No. 54,411. Electrical Relay. (*Relais électrique.*)



Frank Ernest Chapman, Medford, Massachusetts, U.S.A., 22nd December, 1896; 6 years. (Filed 30th March, 1896.)

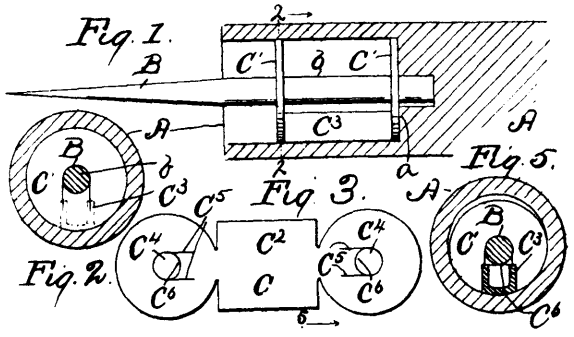
Claim.—1st. A relay, comprising in its construction, an induction coil, an armature, one winding of said coil being arranged to operate said armature, the other winding of said coil being arranged to control said armature. 2nd. A relay, comprising in its construction, an induction coil, an armature, a part to control said armature, one winding of said coil being arranged to operate said armature, the other winding of said coil being arranged to magnetize said part. 3rd. A relay, comprising in its construction, an induction coil, having windings in inductive relation, an armature, means whereby said armature is magnetized by one of the windings of said coil, and means whereby said armature is operated by another winding of said coil. 4th. A relay, comprising in its construction, an induction coil, two electro-magnets connected to one end of the core of said coil, and in circuit with one winding of said coil, an armature connected to the other end of said core and arranged to be operated by said electro-magnets, and to be magnetized by the other winding of said coil. 5th. An automatic relay, comprising in its construction, an induction coil, a shell connected to the core of said coil, two electro-magnets connected to the shell of said coil, an armature pivoted to the core of said coil, the main circuit connected to one winding of said coil, the other winding of said coil being continued to form the winding of said electro-magnets, and a local circuit controlled by said armature. 6th. An automatic relay, comprising in its construction, an induction coil, a shell connected to the core of said coil, two electro-magnets connected to the shell of said coil, an armature pivoted to the core of said coil, the main circuit connected to the primary winding of said coil, the secondary winding of said coil being continued to form the winding of said electro-magnets, a local circuit controlled by said armature, and a spring for holding said armature to one side when there is no current in the primary winding.

No. 54,412. Chuck. (*Mandrin.*)

Horace Stephen Buckland, Fremont, Ohio, U.S.A., 22nd December, 1896; 6 years. (Filed 18th March, 1895.)

Claim.—1st. A device for securing the working member of a tool within a ferrule, handle or holder, consisting of two securing-members located a suitable distance apart and embracing the working-member of the tool, said embracing and securing-members suitably fitting the ferrule, handle or holder internally and being provided with lips, teeth or projections for biting or clutchingly engaging the working-member of the tool, substantially as set forth. 2nd. A device for securing the working-member of a tool within a ferrule, handle or holder, consisting of two securing-members C^1, C^1, located a suitable distance apart, said securing-members being adapted to engage the holder or handle internally and being connected by a web, and said securing-members having lips, teeth or projections for biting or clutchingly engaging the working-member of the tool, substantially as set forth. 3rd. The combination with the working-member of a tool and the handle, ferrule or holder for

receiving said member, of a securing device consisting of two members C^1, C^1, arranged a suitable distance apart and tightly fitting the

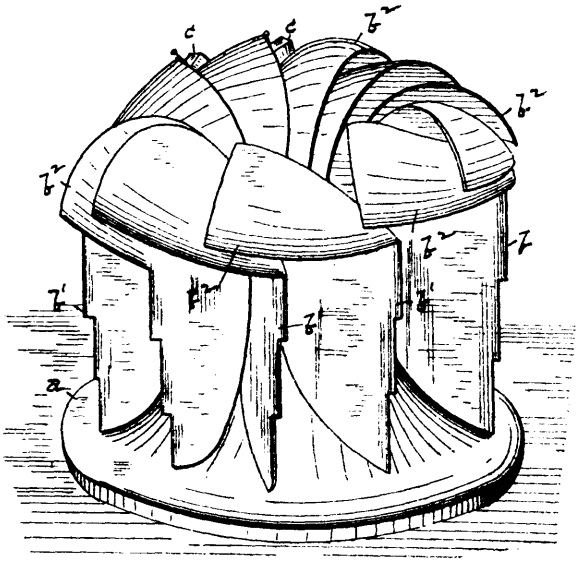


handle, ferrule or holder internally, and lips, teeth or projections formed upon said members and in biting or clutching engagement with the shank of the working-member of the tool, substantially as and for the purpose set forth. 4th. A securing device of the variety indicated, consisting of a single piece comprising two end-members C^1, C^1, and a central member C^2, with the end members bent and perforated substantially as indicated, the central member provided with one or more wings or steps C^3, and the end-members provided with lips, teeth or projections C^6 adapted to engage with the aforesaid wings or stops of the central member, substantially as and for the purpose set forth. 5th. A device for securing the working-member of a tool in a handle, ferrule or holder, consisting of two securing members C^1, C^1, located a suitable distance apart and one or more stops between said members to limit the movement of the latter towards each other, the securing-members being provided with teeth, lips or projections adapted to bite or frictionally engage the working member of the tool and adapted also to engage the aforesaid stops, substantially as set forth. 6th. The combination with the working-member of a tool, and the handle, ferrule or holder for receiving said member, of a securing-device consisting of two securing-members C^1, C^1, suitably fitting the handle or holder internally and located a suitable distance apart, and one or more stops between said securing-members for limiting the movement of the latter toward each other, the securing-members being provided with lips, teeth or projections adapted to bite or frictionally engage the working-member of the tool, and adapted also to engage the aforesaid stops, substantially as set forth. 7th. The combination with the working-member of a tool and the handle, ferrule or holder for receiving said member, of a securing-device consisting of two securing-members C^1, C^1, suitably fitting the handle or holder internally and located a suitable distance apart and one or more stops between said securing-members for limiting the movement of the latter toward each other, the securing-members being provided with lips, teeth or projections adapted to bite or frictionally engage the working-member of the tool, the working-member of the tool having a notch or recess for receiving one of the aforesaid lips, teeth or projections, substantially as set forth. 8th. The combination with the working-member of a tool and the handle, ferrule or holder for receiving said member, of two securing-members C^1, C^1, located a suitable distance apart and one or more stops between said members to limit the movement of the latter toward each other, the securing-members being adapted to frictionally engage the working-member of the tool and secure the latter in place, and an abutment for one of the securing-members, substantially as set forth.

No. 54,413. Turbine. (*Turbine.*)

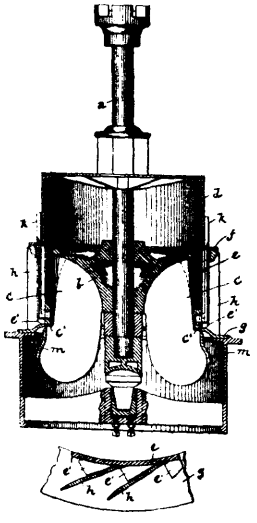
John Buchanan McCormick, Holyoke, Massachusetts, U.S.A., 22nd December, 1896; 6 years. (Filed 30th January, 1896.)

Claim.—1st. The apparatus for use in molding turbine wheels herein described, comprising a hub pattern having means for pivotally supporting thereon the series of wheel buckets, and a series of blocks or similar devices adapted to be inserted between the buckets and to be retained in position by the weight of the latter, for securing the desired distance between the outer edges of the buckets, substantially as set forth. 2nd. The molding apparatus for turbine wheels herein described comprising a pattern for the wheel hub and a series of interchangeable parts provided with means for supporting the wheel buckets, adapted to be detachably secured to said pattern, substantially as and for the purpose set forth. 3rd. In a molding apparatus for turbine wheels, the combination with a hub pattern of a series of rings having means for pivotally engaging the inner edges of the series of wheel buckets, and means whereby said rings can be interchangeably secured upon said hub pattern, substantially as and for the purpose set forth. 4th. In a molding apparatus for turbine wheels, a hub pattern having detachably secured thereto at or near each end thereof for pivotally engaging and supporting a series of wheel buckets, substantially as set forth. 5th. In a molding apparatus for turbine wheels, a hub pattern having at or near each end thereof an annular groove or recess, combined with a series of rings adapted to interchangeably occupy the grooves or recesses in said pattern, said rings being provided with varying numbers of devices for engaging and supporting the wheel buckets, whereby said hub pattern is adapted to be used for molding wheels having varying numbers of buckets, substantially as set



forth. 6th. In a molding apparatus for turbine wheels, the combination with hub pattern a having therein groove or recess a^5, located near the larger end thereof, and having shoulder a^6 at the smaller end thereof, of ring d adapted to occupy said groove or recess a^5, and ring e adapted to rest upon said shoulder a^6, said rings being provided with means for engaging and supporting a series of wheel buckets, substantially as set forth.

No. 54,414. Water Wheel. (*Roue hydraulique.*)



John Buchman McCormick, Holyoke, Massachusetts, U.S.A., 22nd December, 1896; 6 years. (Filed 30th January, 1896.)

Claim.—1st. A turbine water-wheel, the buckets of which have their outer edge cutaway adjacent to the upper edge of the wheel band to form a shoulder standing at substantially a right angle to the axis of said wheel, and have said outer edge inclined inwardly, or toward the wheel-shaft, from said shoulder to their upper end, substantially as set forth. 2nd. A turbine water-wheel, the buckets of which are provided in their outer edge with an inwardly extending shoulder located at or near the upper edge of the wheel-band and have said outer edge made to gradually approach the axis of the wheel from said shoulder to the upper end of the bucket, in combination with a cylinder gate for governing the supply of water to said wheel, and a series of tangentially disposed guides, said gate being provided at its lower end with a series of outwardly projecting lips, substantially as described. 3rd. A turbine water-wheel, the buckets of which discharge the water inwardly, downwardly and outwardly as described, said buckets having in their outer edge an inwardly extending shoulder at or near the plane of the upper edge of the wheel-band and being of a gradually decreasing width from said shoulder to their upper end, substantially as described. 4th.

A turbine water-wheel comprising the hub *b* and buckets *c*, with the band *m* shaped as described, said buckets being provided with the shoulder c^1 adjacent to the upper edge of said band and being of a gradually decreasing width from said shoulder to their upper end, substantially as and for the purpose described. 5th. The turbine-wheel comprising the hub *b*, buckets *c*, and band *m*, said buckets being provided with the shoulder c^1, and having their outer edge inclined toward the wheel-shaft from said shoulder to their upper end, in combination with the cylinder gate *e*, having the lips e^1, and the guides *h*, arranged and operating substantially as described.

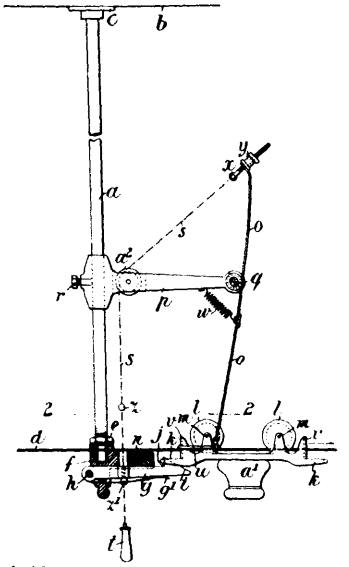
No. 54,415. Alimentary Product.

(*Produits alimentaires.*)

John Harvey Kellogg, Battle Creek, Michigan, U.S.A., 22nd December, 1896; 6 years. (Filed 30th March, 1896.)

Claim.—1st. The process herein described for the manufacture of an improved alimentary product, which consists first in soaking the grain in water for some hours, whereby it is subjected to a preliminary digestion with its contained cerealin, and at temperature which prevents actual fermentation; second, subjecting the previously soaked grain to heat for a time sufficient to completely cook the starch; third, drying the grain; fourth, rolling the grain between cold rollers; and fifth, baking the flakes until thoroughly dry and crisp, as specified. 2nd. The improved cooked alimentary product from grain such as wheat, hereinbefore described, which exists in the form of large attenuated, baked, crisp, and slightly brown flakes of practically uniform thickness, the same being readily soluble and containing dextrin, as specified.

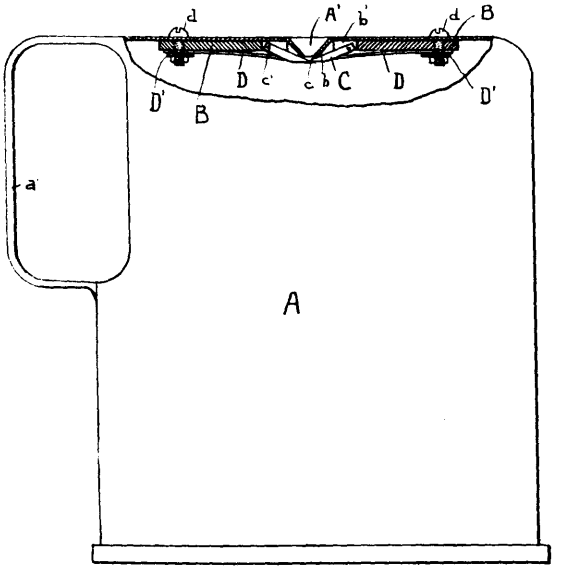
No. 54,416. Apparatus for Transporting Cash, Checks, etc. (*Chien de magasin.*)



Nehemiah Guthridge, Melbourne, Victoria, Australia, 22nd December, 1896; 6 years. (Filed 24th July, 1896.)

Claim.—1st. In an apparatus for transporting cash, checks, memoranda and other articles from one part of a shop or other building to another, the combination of a spring lever pivoted on an arm projecting from a tube attached to the ceiling and to a wire track, a chain or cord secured at its uppper end to a regulating screw on the said lever, adjustable stops on the said chain, a trigger arranged to be operated by means of such stops, and a loop hinged to the lower end of the spring lever, substantially as described. 2nd. In an apparatus for transporting cash, checks, memoranda and other articles from one part of a shop or other building to another, the combination of a spring lever pivoted on an arm projecting from a tube attached to the ceiling and to a wire track, the said lever embracing the said tube and being adapted to be operated by a chain or cord, adjustable stops on the said tube, and a trigger adapted to be actuated by the said lever, substantially as described. 3rd. In an apparatus for transporting cash, checks, memoranda and other articles from one part of a shop or other building to another, a spring lever consisting of a wire spring coiled at about the middle of its length aroud a pivot pin in an arm projecting from a tube fixed to the ceiling and to a wire track, substantially as described. 4th. In an apparatus for transporting cash, checks, memoranda and other articles from one part of a shop or other building to another, the combination of the tube *a*, a wire track *d* passing through the tube *a*, and connected to the tube by means of a nut *e*, substantially as described. 5th. In an apparatus for transporting cash, checks, memoranda and other articles from one part of a shop or other building to another, the combination of a tube, a wire track supported by the tube, a trigger pivotally connected to the tube having an inclined face, and a notch or shoulder adapted to receive looped projections on the end of the car, substantially as described. 6th. In an apparatus for transporting cash, checks, memoranda and other articles from one part of a shop or other building to another, the combination of a tube, a wire track supported by the tube, a trigger pivotally connected to the tube having an inclined face, a notch or shoulder, adapted to receive looped projections on the end of the car, and a buffer to break the impact of the incoming car, substantially as specified. 7th. In an apparatus for transporting cash, checks, memoranda and other articles from one part of a shop or other building to another, the combination of a tube, a wire track supported by the tube, a lever for propelling the car along the track, coiled at its middle around a pivot pin, an arm to which the coiled part of the spring lever is pivoted adjustably secured to the tube, and an operating chain to move the spring lever to disengage the trigger from the car, substantially as specified.

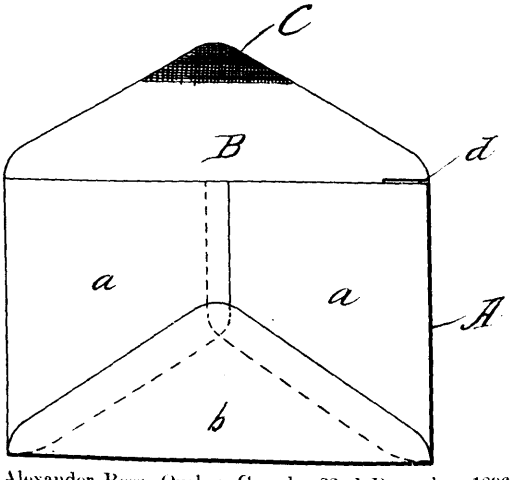
No. 54,417. Fare Box. (*Tronc pour billets.*)



James Quinn, Montreal, Quebec, Canada, 22nd December, 1896; 6 years. (Filed 22nd September, 1896.)

Claim.—1st. The combination with a coin, ballot and ticket receiver, provided with slot, of two series of spring-pressed teeth supported under the slot and operating automatically to grip anything inserted, substantially as set forth. 2nd. The combination with a fare box provided with a slot, having downwardly-projecting lips, of two plates provided with forked portions and secured one on each side of the said slot, two series of teeth pivoted in the said forked portions, and springs clamped to the said plates and pressing the points of the said teeth against the lips, substantially as set forth.

No. 54,418. Envelope. (*Enveloppe.*)

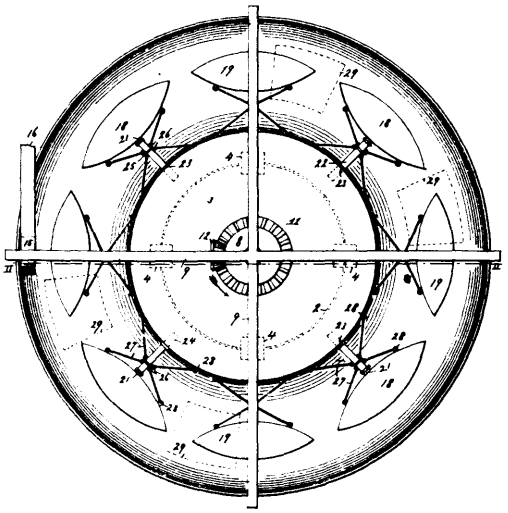


David Alexander Ross, Quebec, Canada, 22nd December, 1896; 6 years. (Filed 4th November, 1896.)

Claim.—1st. An envelope having side flaps of the same height as its front, and a sealing flap having adhesive material at its point, a

portion of the said sealing flap being cut away between the adhesive material and the top of the front, thereby permitting the sealing flap to be torn through with facility, substantially as set forth. 2nd. An envelope having side flaps of the same height as its front, and a sealing flap having adhesive material at its point, a notch being cut in one side of the said sealing flap close to the top of the front, substantially as set forth.

No. 54,419. Marine Merry-Go-Round. (*Carrousel.*)



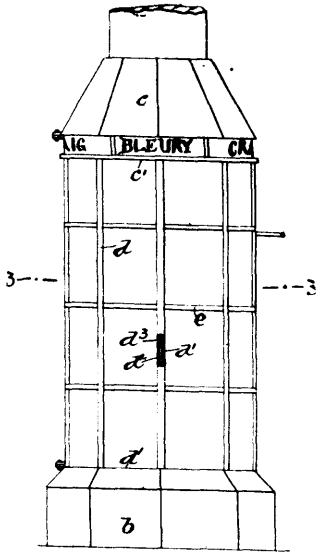
Arthur R. Newton and C. Bell, both of Kansas, Missouri, U.S.A., 22nd December, 1896; 6 years. (Filed 21st July, 1896.)

Claim.—1st. The combination with a circular canal or water-way, of a rotating shaft, boats or vessels upon said canal or water-way, and intermediate connections between said boats or vessels and said shafts, whereby the former are caused to travel upon the canal or water-way, substantially as set forth. 2nd. The combination with a canal or water-way, and travelling boats upon the same, of means below the surface of the water for causing said boats to rise and fall, or pitch and toss, during their progress, substantially as set forth. 3rd. The combination with a canal or water-way, and boats or vessels upon the same, of supports below the surface of the water provided with anti-friction rollers occupying different horizontal planes, whereby said boats will be caused to rise and fall as they progress upon said canal or water-way, substantially as described. 4th. The combination with a canal or water-way, and a series of anti-friction rollers arranged in different horizontal planes below the surface of the water, of boats travelling upon said canal or water-way and provided at the front or inner margins of their bottoms with strips to induce the boats to roll in one direction, and with similar strips at the rear and outer margins of the bottoms to induce them to roll in the opposite direction, substantially as described. 5th. The combination with a rotary platform, and a circular surrounding canal or water-way, of boats upon said water-way, transverse rods upon said boats at their middle, links hinged at their outer ends to said rods and at their inner ends to said platform, and brace-rods also hinged to said links and to said boats and platform, substantially as described. 6th. The combination with a rotary platform, and a circular surrounding canal or water-way, of boats upon said water-way, transverse rods journalled upon said boats at their middle, links hinged at their outer ends to said rods and at their inner ends to said platform, brace-rods also hinged to said links and to said boats and platform, and anti-friction rollers arranged in the path of said boats and submerged in the canal or water-way, substantially as described. 7th. The combination with a rotary platform, and a circular surrounding canal or water-way, of boats upon such water-way, transverse rods journalled upon said boats at their middle, links hinged at their ends to said rods and at their inner ends to said platform, brace-rods also hinged to said links and to said boats and platforms, anti-friction rollers arranged in the path of said boats and submerged in the canal or water-way, and strips secured to the front and inner, and rear and outer margins of the bottom of each boat, substantially as shown and described.

No. 54,420. Advertising Machine. (*Appareil d'annonce.*)

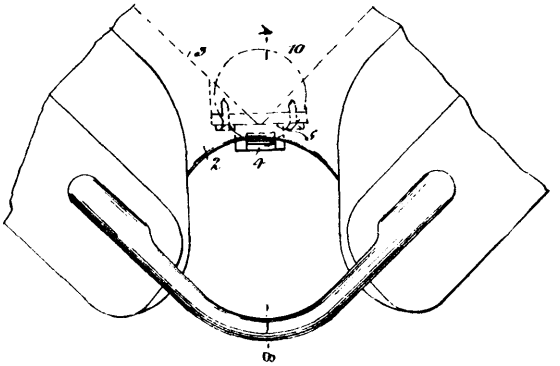
Henry Beaumont, Montreal, Quebec, Canada, 22nd December, 1896; 6 years. (Filed 3rd August, 1896.)

Claim.—1st. An advertising and informative medium adapted to be located in a public thoroughfare consisting of a series of frames connected together and affording advertising spaces, a series of informative spaces and a street indicator. 2nd. An advertising and informative medium consisting of a hollow base and a hollow top connected together by a series of vertical strips, said vertical strips being connected together by a series of horizontal strips forming a series of horizontally longitudinal spaces located in close proximity to and below said top, a series of vertically longitudinal spaces and



a series of spaces of equal size and the whole adapted to encircle a telegraph pole or the like, as and for the purpose set forth. 3rd. An advertising and informative medium consisting of a hollow base, and a hollow top connected together by a series of vertical strips, said vertical strips being connected together by a series of horizontal strips forming a series of horizontally longitudinal spaces located in close proximity to and below said top, a series of vertically longitudinal spaces and a series of spaces of equal size and the whole formed of two independent sections hinged together and adapted to encircle a telegraph pole or the like, as and for the purpose set forth. 4th. An advertising and informative medium consisting of a base, and a top connected together by a series of vertical strips, one or more of which have hinged foot rods provided with locking devices set therein, said vertical strips being connected together by a series of horizontal strips forming a series of horizontally longitudinal spaces located in close proximity to and below said top, a series of vertically longitudinal spaces and a series of spaces of equal size, as and for the purpose set forth. 5th. An advertising and informative medium consisting of a hollow base and a hollow top connected together by a series of vertical strips, one or more of which have hinged foot rods provided with locking devices set therein, said vertical strips being connected together by a series of horizontal strips forming a series of horizontally longitudinal spaces located in close proximity to and below said top, a series of vertically longitudinal spaces and a series of spaces of equal size and the whole formed in two independent sections hinged together and adapted to encircle a telegraph pole or the like, as and for the purpose set forth.

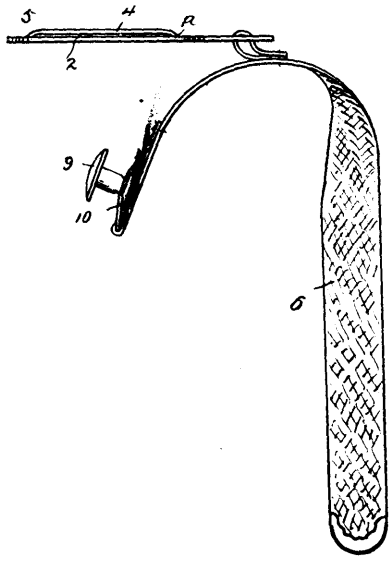
No. 54,421. Check on Billiard Markers and the like. (*Régistre pour compteurs de jeux de billiard, etc.*)



John George Dixon, Don Villa, Penistone, York, England, 22nd December, 1896; 6 years. (Filed 14th September, 1896.)

Claim.—Providing at all the pockets of a billiard table obstructions, any one of which, on being removed electrically indicates the time of such removal, but all of which obstructions must be again put up, obstructing the pockets, before the table is indicated as out of use, the whole arranged and operating substantially as described and illustrated in the drawings annexed.

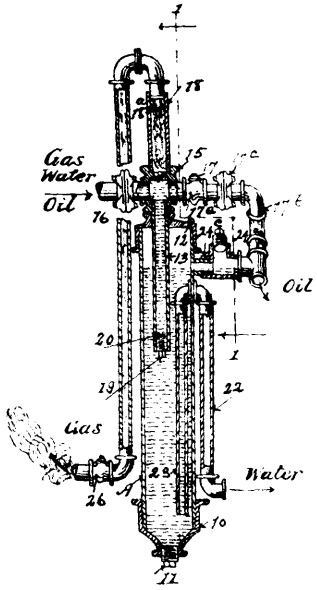
No. 54,422. Hose Supporter. (*Support de boyaux.*)



Isaac Henry Paul, jr., Bridgeport, Connecticut, U.S.A., 22nd December, 1896; 6 years. (Filed 20th November, 1896.)

Claim.—In a garment supporter of the character described, the combination, with a base piece having an elongated central eye, of a spring tongue separated from the base by well defined elongated side openings, a bridge connecting the forward end of said tongue also connected to such base, substantially as set forth. 2nd. In a garment supporter of the character described, the combination with a base having an elongated central eye adapted to receive a headed stud and a portion of the goods or fabric of a garment, of a spring tongue separated from the sides of the base, a bridge connecting the forward end of said tongue with said base, the opposite end of such tongue also connected with such base, said tongue normally elevated above the plane of the base. 3rd. In a garment supporter of the character described, the combination, with a base piece having an elongated central eye adapted to receive a headed stud covered with fabric, of elongated side openings in the sides of such base and running parallel with the central stud receiving eye, thus forming a narrow spring tongue, a bridge connecting the forward end of said tongue with said base, said tongue normally elevated above the plane of such base, and thus provide a vertical spring or movement to accommodate for different thickness of fabric.

No. 54,423. Gas Separator. (*Appareil pour séparer le gaz.*)

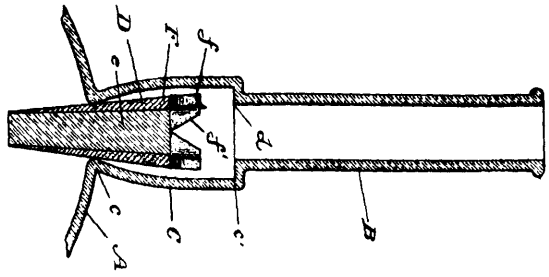


Benton Gilmore, Dearfield, J. Harry West, Grand Valley, and Bert Edward Border, Portage Creek, all in Pennsylvania, U.S.A., 22nd December, 1896; 6 years. (Filed 7th April, 1896.)

Claim.—1st. In a device for separating gas and water from oil, a main chamber provided with an outlet for oil and an outlet for water, a separating tube entering the said chamber and provided with openings within the same, the separating tube being adapted to receive oil and water conducting them to the said chamber, a source of oil supply, and a connection betwen the said source and the said separating tube, and a gas receiving pipe also in connection with the source of oil supply above the connection of the separating tube therewith, as and for the purpose specified. 2nd. In a device for separating gas and water from oil, a main chamber provided with an outlet for oil and an outlet for the water, a separating tube entering the said chamber and provided with openings near its lower end, the openings in the separating tube being below the outlets for the water and for the oil, the separating tube being adapted to receive water and oil and to conduct them into the said chamber, a connection between the separating tube and the source of oil supply, and a gas off-take pipe connected with the oil supply immediately above its entrance into the separating tube, as and for the purpose specified. 3rd. In a device for separating gas and water from oil, a main chamber provided with an outlet for oil and an outlet for water, a separating tube entering the said chamber and provided with openings near its lower end, the openings in the separating tube being below the outlets for the water and for the oil, the separating tube being adapted to receive oil and water, conducting them into the said chamber, a connection between the separating tube and the source of oil supply, and a gas off-take pipe connected with the oil supply immediately above its entrance into the separating tube, the said gas off-take pipe being provided with a gas receiving chamber immediately over the source of oil supply, and a section entering the said chamber and provided with a reduced nipple, as and for the purpose specified. 4th. In a device for separating gas and water from oil, a main chamber provided with an outlet for oil and an outlet for water, a separating tube entering the said chamber and provided with apertures at its lower end, the apertured portion of the tube being below the line of the oil and water outlets, a connection between the separating tube and a source of oil supply, and a valved pipe adapted to receive the oil supply direct, being in communication with the separating tube and with the oil outlet, and a gas off-take pipe also connected with the source of oil supply above its connection with the separating tube, as and for the purpose set forth. 5th. In a device for separating gas and water from oil, a separating chamber provided with an outlet for oil and an outlet for water, a stand-pipe connected with the water outlet and with the interior of the said chamber, a separating tube entering the said chamber at the top and having openings at its lower end, the said openings being below the line of the water outlet and the oil outlet from the said chamber, a connection between the source of oil supply and the separating tube, and a gas delivery or off-take pipe connected with the source of gas supply above its connection with the separating tube, as and for the purpose set forth. 6th. In a device for separating gas and water from oil, a chamber provided with an outlet for oil and an outlet for water, a stand-pipe connected with the water outlet and extending within said chamber to a point near the bottom, a separating tube entering the said chamber at the top having openings within said chamber below the oil and the water outlet, a source of oil supply, a connection between the said supply and the separating tube, a gas delivery pipe connected with the oil supply above its connection with the separating tube, means substantially as shown for emptying sediment from the said chamber, and a stopper normally closing the opening in the oil delivery, the stopper opening being in communication with the exit section of the said oil delivery, as and for the purpose specified. 7th. In a device for separating gas and water from oil, an oil exit, the same consisting of a trunk and branches at an angle to the trunk, the branches being open and normally closed by plugs, as and for the purpose specified.

No. 54,424. Unrefillable Bottle.

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

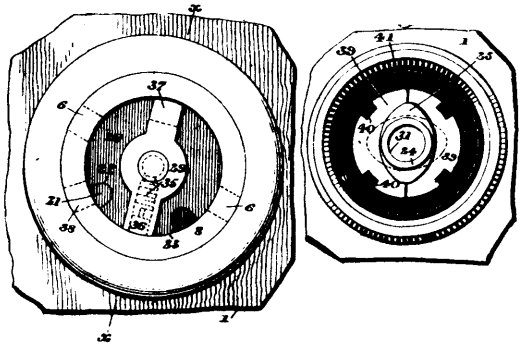


James Culley and William Austin Kavanghh, both of Toronto, Ontario, Canada, 22nd December, 1896; 6 years. (Filed 7th August, 1896.)

Claim.—1st. An unrefillable bottle consisting of a body, a neck integrally formed with the body, an enlargement in the neck openings from the enlargement into the neck and body, a stopper within the enlargement comprised of a weighted plug, and a compressible jacket enclosing the plug, substantially as specified. 2nd. An unrefillable bottle consisting of a body, a neck integrally formed with the body, an enlargement at the lower end of the neck of a greater

diameter than the diameter of the passage through the neck converging at its lower end to form a reduced passage into the body, a frustro-conical shaped stopper within the enlargement comprised of a glass plug and a compressible jacket of cork surrounding the plug, the head of the jacket being of a greater diameter than the diameter of the passage through the neck, and a series of grooves formed from the sides to the top of the said head, substantially as specified.

No. 54,425. Bung and Bushing. (*Dé et bondon.*)

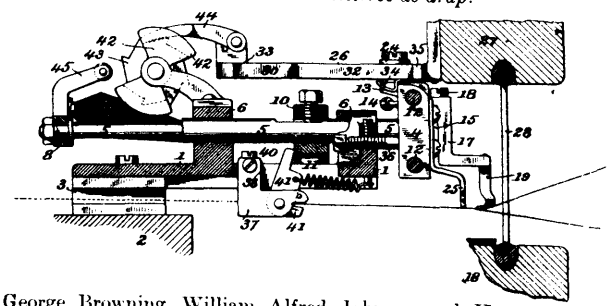


Frank L. Myers, assignee of Joseph Parish, both of Baumgartner, Philadelphia, Pennsylvania, U.S.A., 22nd December, 1896; 6 years. (Filed 6th August, 1896.)

Claim —1st. A bushing having a portion of its inner bore tapering, and another portion of uniform diameter, said latter portion being provided with recesses opposite each other, and adapted to be engaged by the lugs of a suitable bung, substantially as described. 2nd. A bung consisting of a cup portion, a hollow sleeve passing therethrough, and having cams thereon, cam plates, and rings with means for holding said rings in position substantially as described. 3rd. In a bung, a hollow sleeve, the same consisting of a shell having cams thereon, turned at an angle to each other, a flange or disk mounted on said shell, a lug on said disk, and means for rotating the latter, substantially as described. 4th. In a bung, a hollow sleeve, the same consisting of a shell having cams thereon, turned at an angle to each other, a flange or disk mounted on said shell, a lug on a side of said disk, the latter being provided with recesses therein, and a bar attached to said disk opposite said lug, and having one end cut away for the application of a wrench, substantially as described. 5th. In a bung, a hollow sleeve, the same consisting of a shell having cams thereon turned at an angle to each other, a flange or disk mounted on said shell, a lug on a side of said disk, the latter being provided with recesses therein, and a bar attached to said disk opposite said lug, and having one end cut away for the application of a suitable wrench, the other end of said bar being solid, and having a threaded hole therein, substantially as described. 6th. In a bung, a cup, consisting of a surrounding wall, a partition or diaphragm having a central hole therethrough, one face of said diaphragm having an arc-shaped recess therein, the walls of which serve as a stop, a curved slot extending through said diaphragm, the opposite face of the latter being adapted to contact with the rings of said bung, substantially as described. 7th. In a bung, a disk adapted to hold the rings of said bung in place, a stem attached to said disk, and having near its upper extremity a notch or groove, an expanding sleeve adapted to be mounted on said stem, and means for holding the above parts in assembled position, substantially as described. 8th. A bushing having a portion of its inner bore tapering, and another portion of uniform diameter, said latter portion being provided with recesses opposite each other, adapted to be engaged by the lugs of a suitable bung, said bushing being provided with a flange, and a bevel adjacent said flange, substantially as described. 9th. A bushing, a bung adapted to engage therewith, the same consisting of a stem, an expanding sleeve mounted on the latter, a ring or rings held in position upon said expanding sleeve, and means for expanding said rings without rotating either them or the bung, substantially as described. 10th. In a bung, the herein described locking device, consisting of the curved bar 20, the lug 21, on said bar, and means for supporting and actuating the same, substantially as described. 11th. A bushing, a bung, means for preventing the latter from rotating in said bushing, said bung having a cup, provided with the ribs 51 on its inner face, a ring 41 adapted to contact with said ribs, means for holding said ring in position and means for expanding the same, substantially as described. 12th. In a bung, the herein described cam plate 39, having curved faces, one of said faces being provided with the notches 40, substantially as described. 13th. A bung consisting of the cup 7, the sleeve 13 provided with cams, cam plates adapted to contact with the latter, the ring 41, the bushing 2, and means for locking and limiting the movement of said sleeve, substantially as described. 14th. A wrench having the head 44, the ring 45, the cut-out portions 46, the lip 48 attached to one of said rings, and the lugs 47 attached to each ring, substantially as described. 15th. The wrench 42^x having the head 44, the rings 45, the cut-out portions 46, the lip 48, the shoulder 48^x, and the lugs 47, on said rings, said parts being combined substantially as described. 16th. A bung having a hub 50 and a lip 51 attached thereto, in combination with a wrench 53, the same having a flat face, and provided with a recess 53 and 54, which are adapted to engage said lip 51, substantially as described. 17th. In a bung, the herein described locking device, consisting of a curved bar 55, having therein a depression 56, the latter being adapted to be engaged by a lug 57 which depends from the disc 16 of said bung, and means for holding said bar and disc in juxtaposition, substantially as described. 18th. In a bung, the herein described cam plates 58, the same having a suitable body portion and an extension 61, one extension being recessed on its under side, and the other being recessed on its top side, and each of said extensions being adapted to interlock with similarly recessed extensions of the contiguous cam, substantially as described.

No. 54,426. Selvage-weaving Machine.

(*Machine à tisser les lisières de drap.*



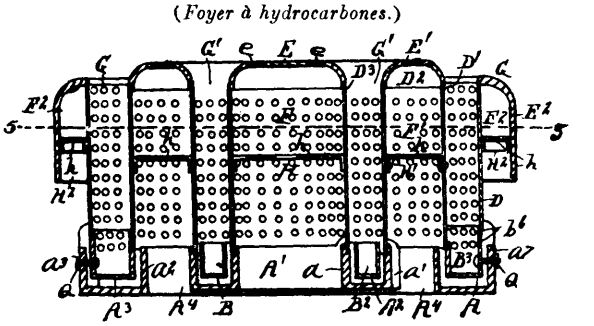
George Browning, William Alfred Johnson and Harry Francis Maydwell, all of Hinsdale, Illinois, U.S.A., 22nd December, 1896; 6 years. (Filed 23rd March, 1896.)

Claim.—1st. The herein described improvement in the art of weaving selvages, the same consisting in introducing a separate thread in the form of succeeding loops into the sheds along with the weft threads and beating the same into the cloth by means of a reed, substantially as set forth. 2nd. In a loop-forming mechanism for weaving selvages, the combination of a needle carriage having a compound lateral and longitudinal reciprocation, a loop-forming needle attached to such carriage and carrying a separate thread, and means for imparting the compound movements to said carriage, substantially as set forth. 3rd. In a loop-forming mechanism for weaving selvages, the combination of a pair of needle carriages having a compound lateral and longitudinal reciprocation, a pair of loop-forming needles attached to said carriages, one of which needles is set in advance of the other, and means for imparting the compound movements to said carriages, substantially as set forth. 4th. In a loop-forming mechanism for weaving selvages, the combination of a pair of needle carriages having a compound lateral and longitudinal reciprocation, a pair of loop-forming needles attached to said carriages, one of which needles is set in advance of the other, means for imparting the compound movements to the carriages, and a centrally arranged shears actuated by the movement of said carriages to nip the weft threads, substantially as set forth. 5th. In a loop-forming mechanism for weaving selvages, the combination of a pair of needle carriages having a compound lateral and longitudinal reciprocation, a pair of loop-forming needles attached to said carriages, one of the needles being set in advance of the other, means for imparting the compound movements to the carriages, and a cam having an intermittent movement and adapted to engage and hold the needle carriages in a dormant condition at regular intervals, substantially as set forth. 6th. In a loop-forming mechanism for weaving selvages, the combination of a stationary supporting frame, a longitudinally moving carrying frame, a pair of laterally moving needle carriages mounted thereon, stops 36 on the main frame, a pair of loop-forming needles upon said carriages, and a cam plate 26 on the reed cap for operating the mechanism, substantially as set forth. 7th. In a loop-forming mechanism for weaving selvages, the combination of a stationary supporting frame, a longitudinally moving carrying frame, a pair of laterally moving needle carriages mounted thereon, each consisting of a sliding head 13, laterally adjustable slide 15, and vertically adjustable brackets 17, a pair of loop-forming needles secured to said brackets, stops 36 on the main frame and a cam plate 26 on the reed cap for operating the mechanism, substantially as set forth. 8th. In a loop-forming mechanism for weaving selvages, the combination of a stationary supporting frame, a longitudinally moving carrying frame, a pair of laterally moving needle carriages thereon, stops 36 on the main frame, a pair of loop-forming needles upon said carriages, each needle being of a downwardly curved formation and provided with eyes 22 and 23, and a thread-protecting groove 21 at front, and a cam plate 26 on the reed cap for operating the mechanism, substantially as set forth. 9th. In a loop-forming mechanism for weaving selvages, the combination of a stationary supporting frame, a longitudinally moving carrying frame, a pair of laterally moving needle carriages mounted thereon, stops 36 on the main frame, a pair of loop-forming needles on said carriages, and a cam plate 26 on the reed cap for operating the mechanism, the same being formed with a pair of lateral lugs 35,

substantially as set forth. 10th. The loop-forming mechanism for weaving selvages, the combination of a stationary supporting frame, a longitudinally moving carrying frame, an adjustable stop 10 on said frame, a pair of laterally moving needle carriages mounted on said frame, stops 36 on the main frame, a pair of loop-forming needles upon said carriages, a cam plate 26 on the reed for operating the mechanism, and a spring dog 34 attached to the cam, substantially as set foath. 11th. In a loop-forming mechanism for weaving selvages, the combination of a needle carriage having a compound lateral and longitudinal reciprocation, a loop forming needle attached to such carriage and carrying a separate thread, a cloth positioning plate 25, and means for imparting the compound movements to said carriage, substantially as set forth. 12th. As an improved article of manufacture, a width of cloth having a selvage formed by a separate thread in the form of a series of loops woven into the cloth along with the weft threads, substantially as set forth.

No. 54,427. Hydrocarbon Burner.

(*Foyer à hydrocarbones.*)



Edwin G. Mummery, John Hutton, William G. Hastie and Newell S. Wright, all of Detroit, Michigan, U.S.A., 22nd December, 1896; 6 years. (Filed 7th December, 1896.)

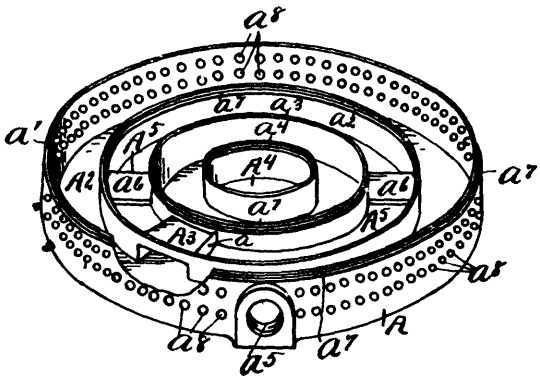
Claim.—1st. In a hydrocarbon burner, the combination of a cast metal holder provided with annular communicating channels A^2, A^3, a thin sheet metal vaporizer formed with similar communicating channels located within the corresponding channels of the holder and supported thereby, and a feed pipe leading into the channels of the vaporizer, for the purpose set forth. 2nd. In a hydrocarbon burner, the combination of a cast metal holder formed with interior and outer communicating channels A^2, A^3, a thin sheet metal vaporizer formed with analogous channels located within the corresponding channels of the holder and supported thereby, a feed pipe communicating with the channels of said vaporizer, an air inlet within the inner channels of the holder and vaporizer, and an air inlet between the inner and outer channels of the holder and vaporizer, for the purpose set forth. 3rd. In a hydrocarbon burner, the combination of a cast metal holder provided with communicating outer and inner concentric channels A^2, A^3, a thin sheet metal vaporizer formed with similar outer and inner concentric communicating channels located respectively within the said channels of the holder and supported thereby, foraminous walls supported at the sides of the channels of the vaporizer caps located upon said walls, a feded pipe leading into the outer channel of the vaporizer, an air inlet within the inner channels of the holder and vaporizer, and an air inlet between the inner and outer channels of the holder and vaporizer, said foraminous walls forming combustion chambers above the channels of the vaporizer, and air chambers above said air inlets, for the purpose set forth. 4th. In a hydrocarbon burner, the combination of inner and outer vaporizing channels formed with an air inlet within the inner channel, and an air inlet between said channels, foraminous walls located on each side of the channels of the vaporizer, forming air chambers above said air inlets and combustion chambers above said channels, horizontal perforated partitions engaged with said walls, intermediate their extremities extending across said air chambers, and a feed pipe leading into the vaporizer, for the purpose set forth. 5th. In a hydrocarbon burner, the combination of the holder provided with interior and outer channels, and a connecting channel A^5, a thin metal vaporizer formed with corresponding interior and outer channels supported in the channels of the holder and provided with a communicating channel B^5, and a removable cover over the channel B^5, substantially as set forth. 6th. In a hydrocarbon burner, the combination of the holder provided with interior and outer channels, and a connecting channel A^5, a thin metal vaporizer formed with corresponding interior and outer channels supported in the channels of the holder and provided with a communicating channel B^5, and a cover over the channel B^5, substantially as set forth.

No. 54,428. Hydrocarbon Generator.

(*Générateur à hydrocarbones.*)

Edwin G. Mummery, John Hutton, William G. Hastie and Newell S. Wright, all of Detroit, Michigan, U.S.A., 22nd December, 1896; 6 years. (Filed 7th December, 1896.)

Claim.—In a hydrocarbon generator, a cast-metal base constructed with a vaporizing trough, having an inner flange and a heat-conducting outer flange integral with the base, an air inlet within said trough opening through the base, and foraminous walls



located about said trough and extending upward above said flanges forming a combustion chamber above said trough, and an air chamber above said air inlet communicating through said foraminous walls with the combustion chamber, said integral outer flange provided round about said vaporizing trough with openings therethrough below the foraminous walls to admit air into the trough at the base of the combustion chamber, close to the bottom of the trough, substantially as and for the purpose described. 2nd. In a hydrocarbon generator, a cast-metal base constructed with a vaporizing trough, having a heat-conducting outer flange integral with the base, said outer flange provided round about said vaporizing trough with perforations or openings therethrough to admit air into said trough in proximity to the fuel in the bottom of the trough, substantially as and for the purpose described. 3rd. In a hydrocarbon generator, the combination of a cast metal base, formed with a vaporizing trough, an air inlet, opening through the base within said trough, foraminous walls located about said trough, forming a combustion chamber thereabove, and an air chamber above said air inlet, and a cap located over said air chamber, said cap provided with arms or partitions secured thereto projecting downward within said air chamber, for the purpose set forth. 4th. In a hydrocarbon generator, the combination of a cast-metal base constructed with an inner trough, an outer trough communicating with the inner trough, an air inlet within the inner trough opening through the base, an air inlet between said troughs opening through the base, perforated sheet metal walls located about said troughs forming combustion chambers there above, and air chambers above said air inlets, and caps located over said air chambers provided with arms or partitions secured thereto, projecting downward within said air chambers between the corresponding perforated walls, said caps and the partitions secured thereto, together with the perforated walls being removable from the base, for the purpose set forth. 5th. In a hydrocarbon generator, the combination of a base, foraminous walls located thereabove, forming combustion chambers therebetween, and air chambers communicating through said foraminous walls with said combustion chambers, and caps located over said air chambers provided with integral partitions extending downward adjacent to the corresponding foraminous walls, substantially as set forth. 6th. In a hydrocarbon generator, the combination of a base, foraminous walls located thereabove forming a combustion chamber therebetween, and an air chamber communicating through said foraminous walls with said combustion chamber, and a cap located over said air chamber provided with partitions secured thereto extending downward adjacent to the corresponding foraminous walls, said partitions being corrugated or cut away at intervals on their edges adjacent to said foraminous walls, substantially set forth. 7th. In a hydrocarbon generator, the combination of a base, foraminous walls located thereabove, forming combustion chambers therebetween, air chambers opening through said base, communicating through said foraminous walls with said combustion chambers, and cap located over said air chambers provided with partitions secured thereto extending downward adjacent to the corresponding foraminous walls, the outer cap provided with a downwardly projecting flange having openings therein, for the purpose set forth.

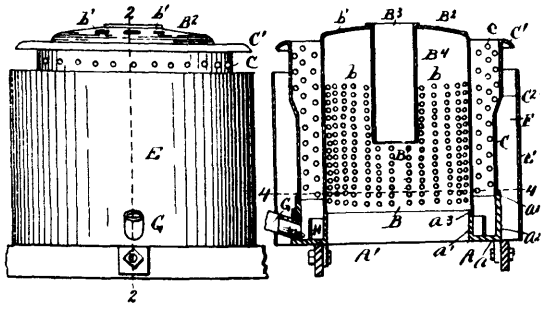
No. 54,429. Hydrocarbon Burner.

(*Foyer à hydrocarbones.*)

Edwin G. Mummery, John Hutton, William G. Hastie and Newell S. Wright, all of Detroit, Michigan, U.S.A., 22nd December, 1896; 6 years. (Filed 7th December, 1896.)

Claim.—1st. In a hydrocarbon burner, the combination of a base provided with a single vaporizing channel, and foraminous walls located above said channel forming a combustion chamber therebetween, said foraminous walls each constructed of seamless perforated sheet metal, substantially as described. 2nd. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, and foraminous walls located thereabove forming a combustion chamber therebetween, the inner foraminous wall constructed to admit more air into the combustion chamber than is

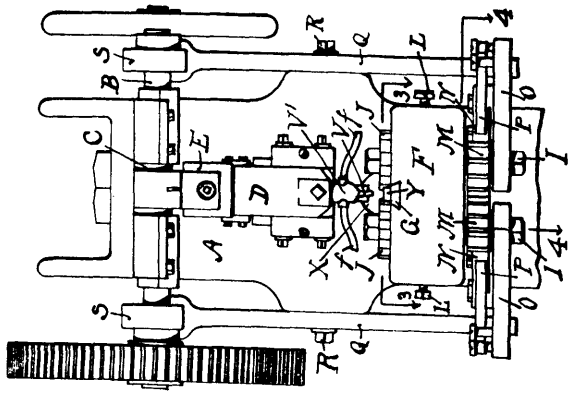
admissible through the outer foraminous wall, for the purpose set forth. 3rd. In a hydrocarbon burner, the combination of a base



provided with a vaporizing channel, foraminous walls located thereabove forming a combustion chamber therebetween, the inner foraminous wall formed with perforations spaced nearer the one to the other than the perforations in the outer wall, for the purpose set forth. 4th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, foraminous walls located thereabove forming a combustion chamber therebetween, the inner foraminious wall made imperforate toward its upper end, for the purpose set forth. 5th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, and foraminous walls located thereabove forming a combustion chamber therebetween, the outer wall formed with a laterally projecting stiffening flange, for the purpose set forth. 6th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, and foraminous walls located thereabove forming a combustion chamber therebetween, the outer wall formed with a laterally projecting stiffening flange, said wall with its flange constructed in a single integral piece, for the purpose set forth. 7th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, and foraminous walls located thereabove forming a combustion chamber therebetween, the outer wall formed with a laterally projecting stiffening flange, said outer wall made flaring toward its upper end, for the purpose set forth. 8th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, foraminous walls located thereabove forming a combustion chamber therebetween, and a shield located about the outer wall and spaced therefrom forming an air passage between the shield and the outer wall, said air passage open at the top and bottom thereof, for the purpose set forth. 9th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, foraminous walls located thereabove forming a combustion chamber therebetween, the inner wall provided with an inwardly projecting cap and with an air draft pipe depending from said cap and opening therethrough, for the purpose described. 10th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, foraminous walls located thereabove forming a combustion chamber therebetween, the inner wall provided with an inwardly projecting cap and with an air pipe depending from said cap and opening therethrough, said wall and cap formed in a single integral piece, for the purpose described. 11th. In a hydrocarbon burner, the combination with a base provided with a vaporizing channel, an inner and an outer foraminous wall located thereabove forming a combustion chamber therebetween, the inner wall forced with a cap having an air draft pipe opening therethrough, said inner wall with its cap and air draft pipe rigidly connected and removable in a single piece from the base, for the purpose set forth. 12th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel having inner and outer walls a^1 and a^2, and foraminous walls located upon the walls a^1, a^2, respectively, forming a combustion chamber therebetween, said inner wall formed with a cap having an air draft pipe rigidly connected, the foraminous walls resting upon the upper edges of the walls a^1, a^2, and freely removable therefrom, for the purpose set forth. 13th. In a hydrocarbon burner, the combination with a base provided with a vaporizing channel, foraminous walls located thereabove forming a combustion chamber therebetween, the inner wall formed with an inwardly projecting cap provided with an air draft pipe opening therethrough, and a shield surrounding the outer foraminous wall, said shield, the outer wall and the inner wall each made removable from the base, for the purpose set forth. 14th. In a hydrocarbon burner, the combination of a b se provided with a vaporizing channel, a feed pipe communicating therewith, foraminous walls located above said channel forming a combustion chamber therebetween, and a corrugated ring located within the vaporizing channel, substantially as and for the purpose described. 15th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, a feed pipe communicating therewith, foraminous walls located above said channel forming a combustion chamber therebetween, and asbestos fibre located in the lower end of the feed pipe, for the purpose described. 16th. In a hydrocarbon burner, the combination of a base provided with a vaporizing channel, the foraminous walls located thereabove forming a combustion chamber therebetween, the inner wall formed with perforations toward its lower end more closely spaced one from another than the perforations of the outer wall, the upper portion of said inner wall being imperforate, for the purpose described. 17th. In a hydrocarbon burner, a base provided with a vaporizing channel, and a ring located in said channel provided with a series of pockets or depressions, for the purpose set forth. 18th. In a hydrocarbon banner, the combination of a base provided with a vaporizing channel, and foraminous walls located thereabove forming a combustion chamber therebetween, said foraminous walls spaced a greater distance the one from the other at the top than at the bottom thereof, for the purpose set forth.

No. 54,430. Machine for Making Nut-Blanks.

(*Machine pour faire les blancs d'écroux.*)

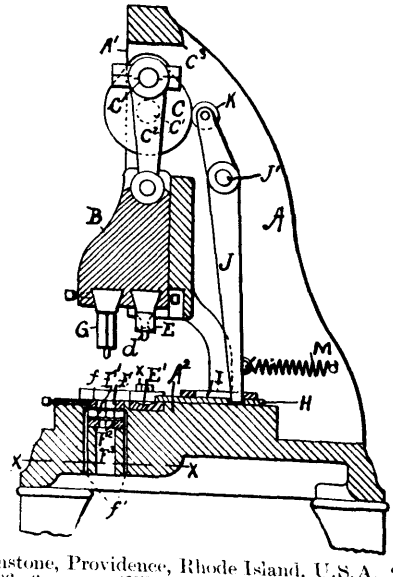


Samuel Vanstone, Providence, Rhode Island, U.S.A., 23rd December, 1896; 6 years. (Filed 14th October, 1896.)

Claim.—1st. A series of crowned hexagonal nut-blanks, formed in a continuous bar, the serrated edges of which conform to the opposite edges of the nut-blanks, and having the blanks punched to a thin web upon the crowned side of the blanks, substantially as described. 2nd. In a machine for making nut-blanks, the combination of the intermittently-operated recessed rolls, adapted to impart a serrated form to the opposite edges of the bar, and the solid crowning-die located in the plane of the axes of the recessed rolls, with the reciprocating punch having its axis located in the said plane, and adapted to punch the bar to a thin web at the crowned side, substantially as described. 3rd. In a machine for making nut-blanks, the combination of the intermittently-operated recessed rolls, adapted to impart a serrated form to the opposite edges of the bar, with the reciprocating punch having its axis located in the plane of the axes of the recessed rolls, and a swaging-face arranged to operate upon the bar behind the punch, substantially as described.

No. 54,431. Machine for Making Nuts, etc.

(*Machine pour faire des écroux, etc.*)



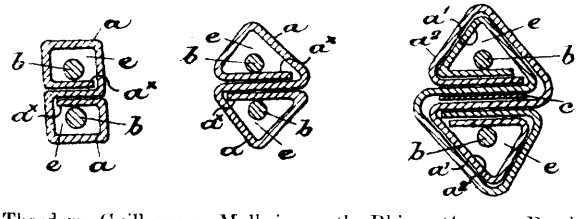
Samuel Vanstone, Providence, Rhode Island, U.S.A., 23rd December, 1896; 6 years. (Filed 14th October, 1896.)

Claim.—1st. In a machine for the purposes described, the combination with a broaching die consisting of two or more superposed dies or die parts having openings therethrough of progressively

increasing diameter, and provided with outwardly-extending grooves or passages which communicate with escape openings which are independent of the openings through the dies or die parts of a reciprocating punch or die arranged to force the blanks through the said dies or die parts, substantially as specified. 2nd. In a machine for the manufacture of nuts and other articles, the broaching die, consisting of a series of two or more superposed dies or die parts having openings therethrough of progressively decreasing diameters, said dies or die parts, with the exception of the lower one, having each a series of outwardly-extending radial grooves which communicate with channels in the die-supporting part, substantially as specified. 3rd The combination of a reciprocating punch and die-carrier having a perforating punch, a crowning and cutting die, and a forcing die or punch, of stationary dies or die plates which co-operate respectively with said perforating punch and with the crowning and cutting die, and a broaching die made up of two or more parts through which the blanks are designed to be forced by the forcing die or punch, the openings in said parts being of progressively decreasing diameters, together with means for actuating said punch and die carrier and for carrying the blanks from the crowning and cutting die to the broaching die, substantially as specified. 4th. A broaching die having two or more parts, the openings of which are of progressively decreasing size, and having also clearance openings or channels which communicate with the die openings, but are independent thereof, substantially as specified.

No. 54,432. Means for Insulating Electro-Conductors. (*Moyen d'isoler les conducteurs d'électrodes.*)

Fig. 2. *Fig. 3.* *Fig. 4.*



Theodore Guilleaume, Mulheina-on-the-Rhine, German Empire, 23rd December, 1896; 6 years. (Filed 28th October, 1895.)

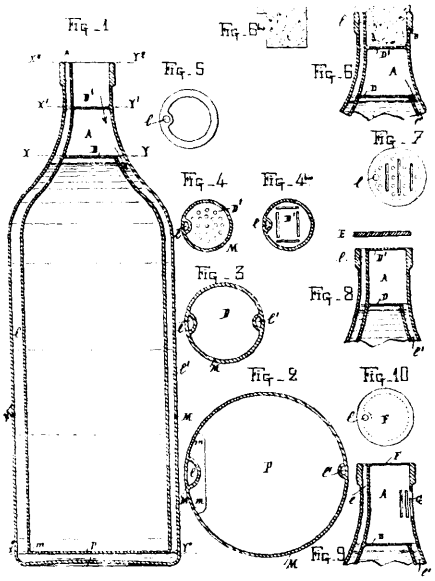
Claim.—1st. The herein described method of insulating electric conductors on the air-space system, consisting in enclosing two conductors in the two compartments of a duplex tube of non-conducting material produced from a single strip (in one or more thicknesses) arranged in such a manner that the edges of the strip constitute or form part of a central wall which separates the two conductors, the latter lying in spiral passages formed by twisting the duplex tube about its common axis. 2nd. In an electric cable, a duplex tube, produced from a single strip (in one or more thicknesses) of non-conducting material, arranged in such a manner that the edges of the strip are turned inwards and constitute or form part of a central partition dividing the tube into two compartments, the tube being, moreover, twisted about its axis so as to form spiral air-spaces within which the conductors are enclosed, substantially as herein described. 3rd. An electric cable comprising two conductors enclosed in the two compartments of a duplex tube produced from a single strip (in one or more thicknesses) of non conducting material, portions of the strip forming a wall to separate the two conductors, as also to insulate a metallic strip which is inserted in the thickness of the said wall, the whole being twisted about its common axis so as to convert the compartment within which the conductors are enclosed into spiral air-spaces, substantially as herein described. 4th. The combination with two naked electric conductors b, b, of a twisted duplex enclosing tube a or a^1, a^2, produced from a single strip (in one or more thicknesses) of non-conducting material, the edges a^x of the strip being turned inward to form a wall to separate the two conductors, substantially as set forth. 5th. In the manufacture of air-space cables, such as herein referred to, the employment substantially as herein described of forming and finishing tools arranged to rotate in unison, the forming tool having a straight slot at its entering end which gradually assumes an S-shape, a C-shape or a W-shape, and being provided on opposite sides with ears for guiding the conductors, the finishing tool having two circular compartments c, c^1, which gradually contract and assume a triangular or other form corresponding with that required for the finished product.

No. 54,433. Unrefillable Bottle.

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

Francis Rouland, Paris, France, 23rd December, 1896; 6 years. (Filed 14th October, 1896.)

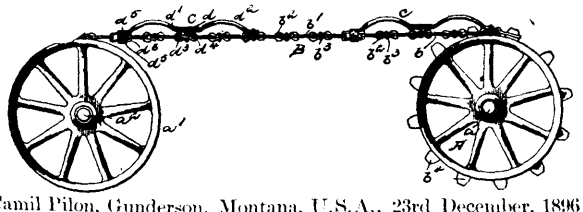
Claim.—1st. In non-refillable bottles and the like, two lateral passages of suitable dimensions in the interior of the container and forming part with its surface and designed one for the outflow of the liquid and the other for the inlet of air. 2nd. In non-refillable bottles and the like, a raised bottom forming part with the interior surface of the container, and creating in conjunction with the true bottom a free space connecting the two lateral passages and having



in front a part cut away giving the liquid continual access into the outflow channel. 3rd. In non-refillable bottles and the like, an air chamber into which opens the lateral air inlet passages confined below and above by two diaphragms formed during the manufacture or inserted afterwards, the lower one solid and the other one, in which is the air inlet, with or without a free space, for the insertion of an ordinary movable stopper. 4th. In non-refillable bottles and the like, an air inlet consisting of a system of capillary holes or slots situated in the upper part of the chamber or in the side of the neck. 5th. In non-refillable bottles and the like, a lateral inlet serving for the initial filling and intended to receive a fixed protected seal bearing marks of authenticity, and which there is no need to destroy in order to obtain the outflow of the liquid. 6th. In non-refillable bottles and the like, a closet float loaded vertically containing a liquid extremely volatile in ordinary temperatures, poisonous or non-poisonous, and the vapour of which bursts the surfaces containing it as soon as it is sought to exhaust the container. 7th. The improvements in safety receptacles for protection of genuineness of first mark spirits and other produces, substantially as described with reference to the drawings.

No. 54,434. Stirrer for Ore-Roasters.

(*Grattoir pour fourneaux à minerais.*)

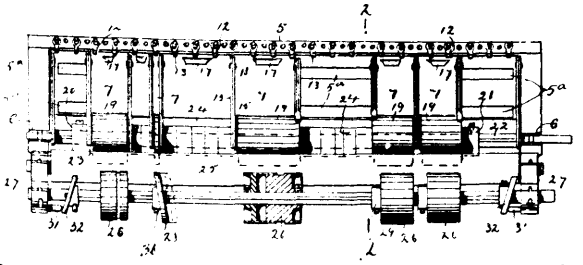


Camil Pilon, Gunderson, Montana, U.S.A., 23rd December, 1896; 6 years. (Filed 21st September, 1896.)

Claim.—1st. A stirrer for ore-roasters, comprising wheels, endless chains engaging said wheels, plows, and bars connected to said chains having each a pivoted member acting as a bearing for the plow-axle, as set forth. 2nd. A stirrer for ore-roasters, comprising wheels, endless chains engaging the same, plows, and bars connected each at one end fast to one of said chains, the other end being loosely secured thereto, as set forth. 3rd. A stirrer for ore-roasters, comprising wheels, endless chains engaging the same, plows, and bars connected to said chains consisting each of two arched members and a pivoted member uniting said former members and forming bearings for the plow-axle, substantially as set forth. 4th. A stirrer for ore-roasters, comprising wheels, endless chains engaging the same, plows, and bars consisting each of two arched members and a pivoted member forming bearings for the plow-axle, one of said bars being secured fast to said chain, the other one of said bars being loosely connected thereto, as set forth. 5th. In a stirrer for ore-roasters, the combination with the wheels, and the chains engaging the same having loops therein, of the bars having two arched members and pivoted members forming bearings for the plow-axle, one of said members of each of said bars being rigidly attached to its chain at one end, and the other member having flanges, and bolts passed through said flanges and said loops, substantially as set forth.

No. 54,435. Inking Mechanism for Printing Presses.

(*Appareil pour encrer les presses à imprimer.*)



Joseph McCallum, Montreal, Quebec, Canada. 23rd December, 1896; 6 years. (Filed 28th October, 1896.)

Claim.—1st. In inking mechanism for printing presses, a reciprocating distributing roll set at an angle to a plane passing at right angles through the axis of rotation thereof, and means for reciprocating such roll, for the purpose set forth. 2nd. In inking mechanism for printing presses, a reciprocating distributing roll set at an angle to a plane passing at right angles through the axis of rotation thereof, said angle of the roll being equal to the angle of the cam which reciprocates said roll and the ink distributing surface of such roll being parallel to the axis thereof, and means for reciprocating such roll, for the purpose set forth. 3rd. In inking mechanism for printing presses, an ink receiving roll carried in close proximity to a series of fountains each composed of a pair of dividing walls located one on each side of and connected to a vertically adjustable knife section, the side walls of each fountain being independent of the side walls of the fountain adjacent thereto, such series of fountains being carried by a common frame. 4th. In inking mechanism for printing presses, an ink receiving roll carried in close proximity to a series of fountains each composed of a pair of dividing walls located one on each side of and detachably connected to a vertically adjustable knife section, such series of fountains being carried by a common frame. 5th. In inking mechanism for printing presses, a collapsible roll, for the purposes set forth. 6th. In inking mechanism for printing presses, the combination with a carrying frame, of a shaft, a telescopic roll consisting of a part formed with one end recessed and a part having one end diminished and adapted to fit into said recessed end of the first-mentioned part, and means for securing said parts to said shaft, for the purpose set forth. 7th. In inking mechanism for printing presses, an ink receiving roll carried in close proximity to a series of fountains each composed of a pair of dividing walls located one on each side of and detachably connected to a vertically adjustable removable knife section, such series of fountains being carried by a common frame. 8th. In inking mechanism for printing presses, an ink receiving roll made up of a series of independent collar sections adapted to take over and be adjustably secured to a shaft carried in close proximity to a series of fountains each composed of a pair of dividing walls located one on each side of and detachably connected to a vertically adjustable removable knife section, such series of fountains being carried by a common frame. 9th. Inking mechanism for printing presses, consisting of a series of independently adjustable ink fountains, each fountain being formed of a pair of side walls provided with a guideway formed in the adjacent side of each, and a knife section carried in said guideways, said walls being adapted to rest at their rear ends upon a base plate and at their forward ends upon said knife section, and such forward end partially encircling a shaft carried adjacent to the forward ends of said fountain sections, a fountain roll, means for regulating the flow of ink from the fountains, a form roll, and a distributing roll carried removably by an independent frame, the form roll being adapted to receive the various coloured inks from the fountain roll, and the distributing roll being adapted to bear upon said form roll, for the purpose set forth. 10th. Inking mechanism for printing presses, consisting of a series of independently adjustable ink fountains, each fountain being formed of a pair of side walls, and a knife section connected to said walls, said walls being adapted to be supported at their rear ends by a base plate and at their forward ends by one or more vertically adjustable screws carried by blocks adjustable along a groove in said base plate near the forward end of said knife sections, and said screws being adapted to bear upon said fountains and thereby support said fountain sections, a fountain roll, a form roll and a distributing roll carried removably by an independent frame, the form roll being adapted to receive the various coloured inks from the fountain roll, and the distributing roll being adapted to bear upon said form roll, for the purpose set forth. 11th. Inking mechanism for printing presses, consisting of a series of independently adjustable ink fountains, each fountain being formed of a pair of side walls and a knife section carried between said walls, said walls being adapted to be supported at their rear ends by a base plate and at their forward ends by said knife section and such forward end partially encircling a shaft carried adjacent to the forward ends of said fountain sections, one or more vertically and horizontally adjustable screws carried by said base plate near the forward end of and adapted to bear upon said knife section and thereby support said fountain sections, a fountain roll, a form roll and a distributing roll carried removably by an independent frame, the form roll being adapted to receive the various coloured inks from the fountain roll, and the distributing roll being adapted to bear upon said form roll, for the purpose set forth. 12th. A dividing wall for ink fountains consisting of a web having a plate carried on either side thereof, and means for connecting the edges of knife sections to said plates, for the purpose set forth. 13th. A dividing wall for ink fountains consisting of a web having a vertically adjustable plate carried on either side thereof, means for adjusting said plates, and means for connecting the edges of knife sections to said plates, for the purpose set forth. 14th. A dividing wall for ink fountains consisting of a web having a vertically adjustable plate carried on either side thereof, means carried by the top of said web, for adjusting said plates, and means for connecting the edges of knife sections to said plates, for the purpose set forth. 15th. A dividing wall for ink fountains of a laterally adjustable web having a plate carried on either side thereof, and means for connecting the edges of knife sections to said plates, for the purpose set forth. 16th. Inking mechanism for printing presses, consisting of a series of independently adjustable ink fountains, each fountain being formed of a pair of side walls, and a knife section carried between said walls, said walls being adapted to be supported at their rear ends by a web section and at their forward ends by said knife section, the forward end of said web partially encircling a fountain roll carried adjacent to the forward ends of said fountain sections, one or more vertically and horizontally adjustable screws carried by said base plate near the forward end of and adapted to bear upon said knife section and thereby support said fountain sections, a fountain roll, a form roll and a distributing roll carried removably by an independent frame, the form roll being adapted to receive the various coloured inks from the fountain roll, and the distributing roll being adapted to bear upon said form roll, for the purpose set forth.

No. 54,436. Mouth-Piece for Cornets, etc.

(*Embouchure pour cornets, etc.*)

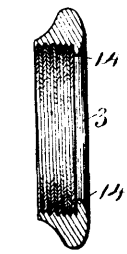


Fig. 1

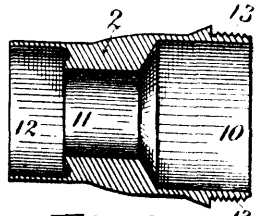
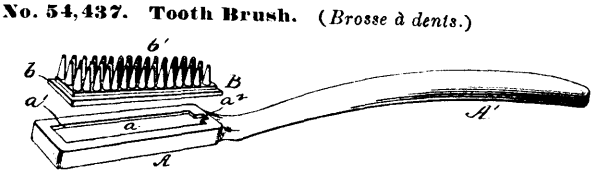


Fig. 2

Benjamin Witmer, Plattsville, Ontario, Canada, 23rd December, 1896; 6 years. (Filed 30th October, 1896.)

Claim.—1st. In a mouth-piece for cornets and kindred musical instruments, the combination of the shank-piece having an enlarged cylindro-conoid-shaped end, the moving sleeve fitted over the shank-piece and the lip-ring screwed on said moving sleeve and having a stop flange therein, substantially as shown and described. 2nd. In a mouth-piece for cornets and kindred musical instruments, the combination of a shank-piece having an enlarged cylindro-conoid-shaped end, the moving sleeve fitted to slide on the shank-piece, the lip-ring screwed on the said moving sleeve and having a stop-flange therein, and the spiral spring encircling the shank-piece and normally holding the moving sleeve extended over the end of said shank piece to full extent, substantially as shown and described. 3rd. In a mouth-piece for cornets and kindred musical instruments, the combination of the shank-piece having a cylindro-conoid-shaped end, the moving sleeve fitted over and sliding on the said shank-piece, the lip-ring screwed on said moving sleeve and having a stop flange within, the spiral spring encircling said shank piece and bearing against the moving sleeve, and the adjusting-ring screwed on the said shank piece to secure and shield said spiral spring, substantially as shown and described.

No. 54,437. Tooth Brush. (*Brosse à dents.*)



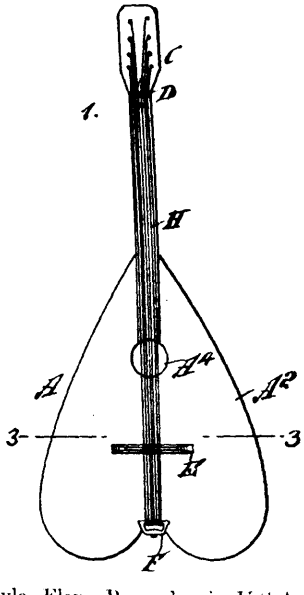
Frank D. Gould, Port Richmond, New York, U.S.A., 23rd December, 1896; 6 years. (Filed 30th October, 1896.)

Claim.—1st. An improved tooth brush, comprising the body of back provided with a recess, in combination with a removable member carrying the series of bristles or points and corresponding to and adapted to be seated and retained in said recess, substantially as and for the purpose set forth. 2nd. An improved tooth brush,

comprising the body or back provided with a recess, in combination with a removable elastic or pliable member carrying the series of projecting points or bristles and adapted to be sprung into position within said recess, substantially as and for the purpose set forth. 3rd. An improved tooth brush, comprising the body or back provided with a recess having retaining flanges or projections, in combination with a removable member carrying the series of projecting points or bristles and provided with flanges or projections adapted to engage the corresponding parts of the recess, whereby said removable member may be seated and retained in said recess, substantially as and for the purpose set forth. 4th. An improved tooth brush, comprising the body or back having a recess provided with inwardly projecting top edges or flanges, in combination with a removable pliable or elastic member carrying the series of projecting points or bristles and provided with projecting bottom edges or flanges, said removable member being adapted to be sprung into position within the recess and retained therein by said relatively projecting edges, substantially as and for the purpose set forth. 5th. An improved tooth brush, comprising the body or back provided with a longitudinal recess having an inwardly projecting flange or edge surrounding the mouth or opening of said recess, in combination with a removable elastic or pliable member carrying the series of projecting points or bristles and provided with a projecting surrounding flange or edge at its bottom, said removable member corresponding to said recess, whereby the elastic member may be sprung into position within the corresponding recess and retained therein by said relatively projecting edges or flanges, substantially as and for the purpose set forth. 6th. An improved tooth brush, comprising the body or back provided with a recess having an inwardly projecting flange or edge at its mouth or opening and provided with a notch or recess in said flange or edge, in combination with a removable pliable or elastic member carrying the projecting points or bristles and provided with a projecting flange or edge adapted to be seated under the flange of the recess, whereby said removable member may be sprung into position within the recess and may be disconnected therefrom by means of the point of an instrument inserted through said notch or recess in the retaining top flange of the recess seat, substantially as and for the purpose set forth. 7th. An improved tooth brush, comprising the body and handle, the former being provided with a longitudinal recess having the inwardly projecting flange or edge a^1 in which is formed the recess or notch a^2, in combination with the removable pliable or elastic member corresponding to the recess in the body of the brush and carrying the series of projecting points or bristles, said removable member having the projecting flange or edge at its bottom, whereby the removable member is adapted to be sprung into position within its recess seat or detached therefrom, substantially as set forth. 8th. As an improved article of manufacture, a tooth brush having a recessed body in which is seated a pliable or elastic detachable member carrying the projecting points or bristles, said pliable or elastic member being adapted to be sprung into or from its recess seat, substantially as and for the purpose set forth.

No. 54,438. Musical Instrument.

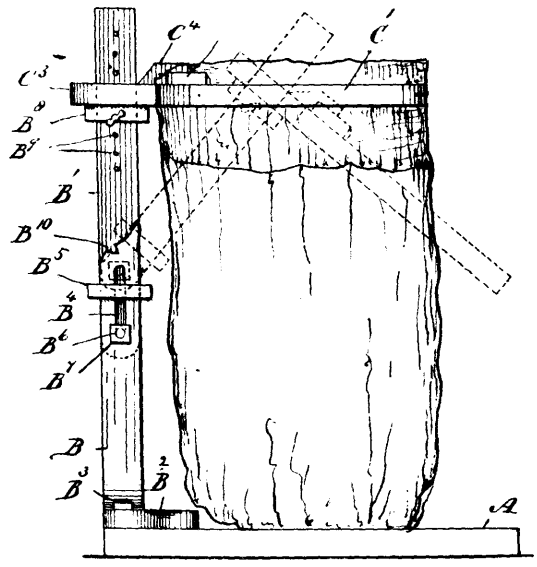
(*Instrument de musique.*)



Lewis Edwin Pyle, Elam, Pennsylvania, U.S.A., 23rd December, 1896; 6 years. (Filed 2nd November, 1896.)

Claim.—1st. In a musical instrument the combination with a body having two projecting portions at its base and a recess between the projecting portions, of a tail piece secured within the said recess, substantially as shown and described. 2nd. A musical instrument, comprising a body having two projecting portions at its base and a recess between the projecting portions, the said body being approximately heart-shaped, a neck secured in the apex of the body between the sounding board and back and with the ends of the sides resting on the sides of the neck, a head secured to the neck and provided with keys or pegs to which the strings are secured at their upper ends, and a tail piece secured in the recess at the base of the body and to which the lower ends of the strings are fastened, substantially as shown and described.

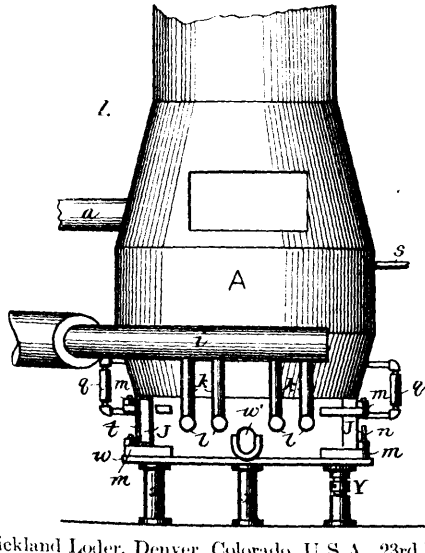
No. 54,439. Bag Holder. (*Accroche-sac.*)



Charles Sandford, Madoc, Ontario, Canada, 23rd December, 1896: 6 years. (Filed 9th December, 1896.)

Claim.—1st. A bag-holder comprising a base or platform A, a standard formed of two sections, B, B^1, adjustable vertically, and the upper section adjustable inclinedly, a circumferential frame consisting of two sections, C, C^1, pivoted together at the outer ends and the inner ends overlapping one section provided with V notches, and the other section having a heel perforated to fit slidingly on the standard, said heel provided with a stop-block, C^4, to engage the V notches, as set forth. 2nd. The standard, constructed in two sections, the upper section inclining forwardly to tilt the mouth of the bag, as set forth. 3rd. The circumferential frame, composed for two sections, pivoted together at one end, and the other ends overlapping and one section provided with notches, and the other with a heel and stop-block, as set forth.

No. 54,440. Smelting Furnace. (*Fourneau de fusion.*)

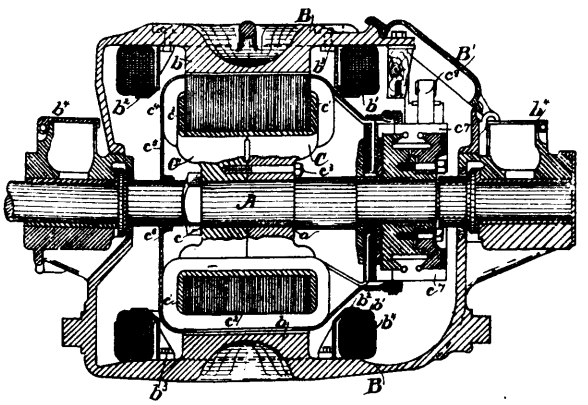


John Strickland Loder, Denver, Colorado, U.S.A., 23rd December, 1896; 6 years. (Filed 9th December, 1896.)

Claim.—1st. In a smelting furnace, the combination with the body portion, of a hood and flue mounted thereon, tuyeres entering at the base of the body portion, a bustle pipe, pipes leading from

the bustle pipe to the tuyeres, a casing surrounding the hood and flue, with an intermediate chamber, a pipe leading from the upper end of said chamber and connecting with the bustle pipe, and a heating chamber into which the products of combustion pass, the said chamber surrounding a portion of said connecting pipe and communicating with an exit flue, substantially as described. 2nd. A smelting furnace comprising superposed water jackets, the uppermost jacket having a water supply and an outlet emptying into the lowermost jacket, the latter having an outlet, a hood and flue supported by said uppermost jacket, a casing surrounding the hood and flue with a chamber intervening between the two, tuyeres entering the base of the furnace, a pipe communicating with the tuyeres and the chamber, and a heating chamber receiving the products of combustion, and enclosing a portion of said communicating pipe, substantially as described.

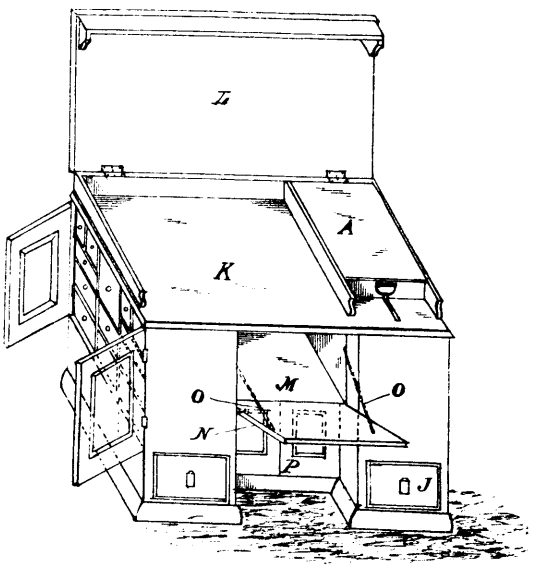
No. 54,441. Electric Motor. (*Moteur électrique.*)



Canadian General Electric Company, Toronto, Ontario, Canada, assignee of Norman C. Bassett, Lynn, Massachusetts, U.S.A., 26th December, 1896; 6 years. (Filed 21st October, 1896.)

Claim.—1st. The combination with an electric motor centred upon an axle of the vehicle, of trunnions upon the outside of the motor vertically in line with its centre of gravity, and longitudinal yokes supported by the wheel base of the vehicle to which yokes said trunnions are pivotally connected. 2nd. An electric motor centred on an axle of the vehicle and having a supplementary support at a point vertically in line with its centre of gravity, said support consisting of side bars supported at one end by a transverse cross bar and at the other end by links pivoted to a cross bar on the opposite side of the axle. 3rd. The combination with an electric motor centred on an axle of the vehicle, of a longitudinal supporting bar therefor carried at one end by the truck frame on one side of the axle and at the other end by a link pivoted to the truck frame on the opposite side of the axle, and a pivotal connection between the motor and the said longitudinal bar vertically in line with the centre of gravity of the motor. 4th. An electric railway motor sleeved upon a car axle, but mainly supported by a supplementary frame pivotally connected at one end to the main truck, and spring-supported at the other end upon a cross piece suspended from said main truck, as described. 5th. An electric motor supported by a supplementary frame consisting of yokes extending longitudinally along the sides of said motor and supported from the main truck frame, said motor being connected to said yokes at points below its centre of gravity and prevented from swinging around said points by extensions sleeved upon the car axle, as described. 6th. In an electric motor having an inclosing shell made of an upper and lower casing hinged and bolted together, trunnions on opposite sides of said lower casing, longitudinal extensions from said lower casing sleeved upon the car axle, and yokes suspended from the main truck adapted to support said trunnions but readily movable therefrom so that the motor can be allowed to swing beneath the axle and be suspended therefrom in an accessible position, and held by said longitudinal extensions, as described. 7th. A waterproof motor, comprising two casings hinged tegether at one end and sleeved upon a car axle at the other, trunnions upon opposite sides of said casings below the centre of gravity of said motor, yokes supporting said trunnions, said yokes being pivotally supported near the axle end of the motor and spring-supported near the free end thereof, as described. 8th. An electric railway motor, comprising a lower box-shaped casing sleeved at one end upon the car axle and supported by trunnions on its sides below the centre of gravity of the motor, said trunnions resting in spring-supported yokes, an upper box-shaped casing hinged to said lower casing at the end away from the car axle and bolted thereto near said axle, thereby forming a substantially watertight inclosing shell, an armature within said inclosing shell and journalled between said casings, and polar extensions upon the inner surface of said casings adapted to receive bobbins and form the field magnets of the motor, substantially as described. 9th. An electric motor geared to and centred upon a car axle and supported upon a supplementary frame pivotally connected at one end to the truck and spring-supported at the other end, as set forth. 10th. An electric motor pivotally connected at points in line with its centre of gravity to longitudinal yokes supported by the truck, and extensions from said motor sleeved upon the car axle, as and for the purpose described. 11th. An electric motor, comprising a lower casing sleeved upon an axle of the vehicle and flexibly supported by the truck, an upper casing hinged to said lower casing but not extending to the car axles, an armature journalled in the said casing, and extensions on the inner wall of said casing forming the field magnet poles of the motor, as set forth. 12th. An electric motor provided with a casing and extensions therefrom for centreing the motor upon an axle of the vehicle, supporting devices for the said casing vertically in line with the centre of gravity of the motor, and an additional supporting device on the end of the casing opposite the said extensions.

No. 54,442. Cook's Cabinet. (*Cabinet de cuisine.*)



William Maffey, Toronto, Ontario, Canada, 26th December, 1896; 6 years. (Filed 8th August, 1896.)

Claim.—1st. In a cook's cabinet, a flour bin provided at its lower end with a hopper in combination with a sieve movably supported below the hopper, and a flour receptacle below the sieve, substantially as and for the purpose specified. 2nd. In a cook's cabinet, the combination of a flour bin, a sieve movably supported, a loosely fitting hopper re-ting on the sieve and flexibly connected by a cloth to the sides of the bin, and a flour receptacle below the bin, substantially as and for the purpose specified. 3rd. In a cook's cabinet, the combination of a flour bin, a sieve movably supported a loosely fitting hopper resting on the sieve and flexibly connected by a cloth to the sides of the bin, a handle fulcrumed on the side of the bin, loosely connected to the sieve and extending upwards through a slot in the top of the bin, substantially as and for the purpose specified. 4th. In a cook's cabinet, the combination of a flour bin, a sieve movably supported, a loosely fitting hopper resting on the sieve and flexibly connected by a cloth to the sides of the bin, a handle fulcrumed in the side of the bin, loosely connected to the sieve, passing through a hole in the hopper and extending up through a slot in the top of the bin, substantially as and for the purpose specified. 5th. In a cook's cabinet, the combination of a flour bin, a sieve movably supported, a loosely fitting hopper resting on the sieve and flexibly connected by a cloth to the sides of the bin, inclined planes formed on the lower sides of the ends of the hopper, a handle fulcrumed on the side of the bin, loosely connected to the sieve passing through a hole in the hopper and extending up through a slot in the top of the bin, substantially as and for the purpose specified. 6th. In a cook's cabinet, the combination of the flour bin A, the paste-board K, and the hinged cover L, substantially as and for the purpose specified. 7th. In a cook's cabinet, the combination of the flour bin A, the paste-board K, the hinged cover L, the recess M, the hinged door N, the chains O, substantially as and for the purpose specified.

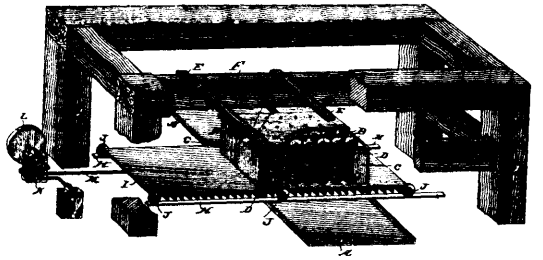
No. 54,443. Magnetic Separator.

(*Séparateur magnétique.*)

Frank J. Barnard, Seattle, Washington, U.S.A., 26th December, 1896; 6 years. (Filed 4th February, 1896.)

Claim.—In a magnetic separator, the combination of a sluice, a magnet located over said sluice, and a conveyer plate under said magnet and over the sluice, and suitable means in connection with the plate for reciprocating it, substantially as shown and described.

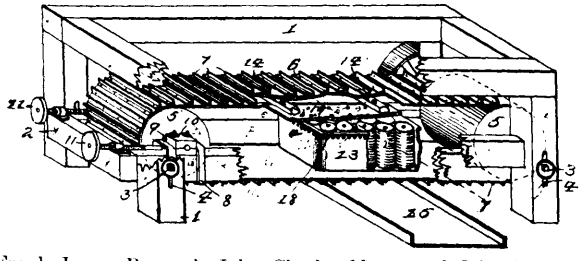
2nd. In a magnetic separator, the combination of a suitable frame, an adjustable frame secured in said frame, a magnet secured in



said adjustable frame, a conveyer plate located under said magnet and having means in connection therewith for reciprocating it, substantially as shown and described.

No. 54,444. Machine for Extracting Ores.

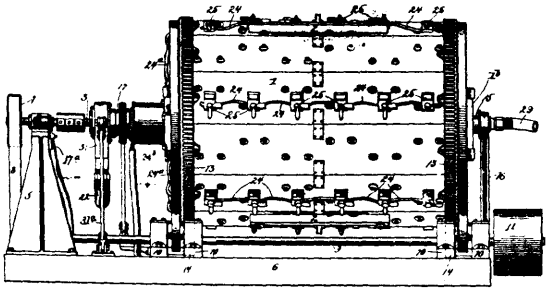
(*Machine pour extraire les minerais.*)



Frank James Barnard, John Charles Moore and John Detwiler Atkinson, all of Seattle, Washington, U.S.A., 26th December, 1896; 6 years. (Filed 4th February, 1896.)

Claim.—1st. A magnetic extracting and separating machine, consisting of a magnet or plurality of magnets enclosed in a shield or casing of non-magnetic material and extending over and across a channel or sluice, through which channel or sluice a stream of water or other liquid containing a mixed mass of magnetic and non-magnetic particles may be made to flow and thereby carry the said mixed mass of magnetic and non-magnetic particles under the magnets and within the magnetic field, substantially as described. 2nd. A magnetic extracting and separating machine, consisting of a magnet or plurality of magnets enclosed in a shield or casing of non-magnetic material and extending over and across a channel or sluice, through which channel or sluice a stream of water or other liquid containing a mixed mass of magnetic and non-magnetic particles may be made to flow and thereby carry the said mixed mass of magnetic and non-magnetic particles under the magnets D and within the magnetic field, in combination with a belt acting as a conveyer, and moving on drums, said belt passing beneath the magnet or magnets and above the channel or sluice I, substantially as described. 3rd. A magnetic extracting and separating machine, consisting of a magnet or plurality of magnets enclosed in a shield or casing of non-magnetic material, and extending over and across a channel or sluice, through which channel or sluice a stream of water or other liquid containing a mixed mass of magnetic and non-magnetic particles may be made to flow and thereby carry the said mixed mass of magnetic and non-magnetic particles under the magnets and within the magnetic field, and a belt acting as a conveyer, and moving on drums, and passing beneath the magnet or plurality of magnets and above the channel or sluice, said belt having fastened on its outer surface strips or cleats extending crosswise the width of the belt, which strips or cleats act as aids in conveying the magnetic particles attracted, substantially as described. 4th. A magnetic extracting and separating machine, consisting of a magnet or plurality of magnets, a belt, strips or cleats on said belt, in combination with drums C supported by an adjustable frame, substantially as described. 5th. A magnetic extracting and separating machine, consisting of a magnet or plurality of magnets, a belt, strips or cleats, and drums in combination with hand screws for regulating and adjusting the drums and belt, substantially as described. 6th. A magnetic extracting and separating machine, consisting of a magnet or plurality of magnets, a belt, strips or cleats, drums, hand screws, in combination with a channel or sluice which is placed under the belt, and by means of which and through which the water or other liquid containing the magnetic and non-magnetic particles is brought under the magnets and within the magnetic field, substantially as described. 7th. In a magnetic separator, the combination of the magnets, the conveyer, and the sluices arranged so that the first empties into the second and at that point immediately under the magnet, substantially as shown and described. 8th. In a magnetic separator, the combination of the magnet, the conveyer belt, a sluice arranged in line with the motion of the conveyor, and a second sluice at an angle thereto and into which the first sluice empties and arranged at that point immediately under the magnet, substantially as shown and described. 9th. The combination of a suitable frame adjustably mounted therein, a conveyer belt adjustably mounted on the second frame, a sluice located under the belt and in the direction of the belt, and a second sluice located directly under the magnets and at an angle or thereabout to the first sluice, substantially as shown and described. 10th. In a magnetic separator, the combination of a frame, a suitable non-magnetic casing having a suitable top by which the casing is secured to said frame, and a number of perforations in the casing for permitting a free circulation of air, a number of magnets secured to said top and projecting downwardly within the casing, substantially as and for the purpose set forth. 11th. The combination of a suitable sluice, a frame located over said sluice, and carrying a supplemental frame adjustable in a vertical and angular direction therein, a pair of drums mounted in said adjustable frame, one of which is adjustable in a horizontal direction, a conveyer belt passing around said drum, a non-magnetic casing provided with a cover, by which it is secured to the supplemental frame and between the belt, and a number of magnets secured to the cover and projecting down into the casing, substantially as shown and described.

No. 54,445. Ore Extractor. (*Extracteur de minerais.*)

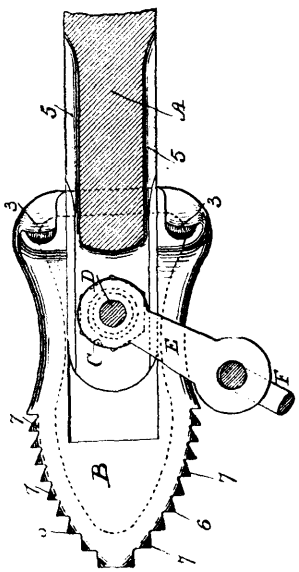


Frederic H. Long and Delos Car Skaden, both of Chicago, Illinois, U.S.A., 26th December, 1896; 6 years. (Filed 4th April, 1896.)

Claim.—1st. An apparatus for recovering precious metals, comprising a revoluble drum, a perforated metal tube opening from said drum and provided with a fabric jacket, and a series of plates secured to the inner surface of the drum and having inwardly extending blades or flanges, and electric connections to the plates and tube for rendering the same of opposite polarity, substantially as set forth. 2nd. An apparatus for recovering precious metals, comprising a revoluble drum, a perforated metal tube opening from said drum and provided with a fabric jacket, a series of plates secured to the inner surface of the drum and having inwardly extending blades or flanges, electric connections to the plates and tube for rendering the same of opposite polarity, and a rotatable conveyer located and working within said tube, substantially as described. 3rd. An apparatus for recovering precious metals, comprising a revoluble drum, a perforated metal tube opening from said drum and provided with a fabric jacket, a series of plates secured to the inner surface of the drum and having inwardly extending blades or flanges, electric connections to the plates and tubes for rendering the same of opposite polarity, a conveyer located and working in said tube and a receiving hopper connected with the outer end of said tube and provided with a discharging valve, substantially as described. 4th. In an apparatus for recovering precious metals, the combination of a revoluble drum, rollers supporting the same at the lower side thereof, a power shaft and a rack and pinion connection between said shaft and drum, of a perforated tube located axially in, and turning with, said drum and provided with a fabric jacket, a conveyer located and working in said tube, a receiving hopper at the outer end of said tube, and a slip joint between said hopper and the tube and a shaft of the conveyer, substantially as described. 5th. In an apparatus for recovering precious metals, a revoluble drum, rollers supporting the same at the lower side thereof, a power shaft and a rack and pinion connection between said shaft and drum, of a perforated tube extending axially within the drum from one end thereof and provided with a fabric jacket within the drum, a conveyer located and working in said tube, a receiving hopper at the outer end of said tube, a flanged collar secured to the outer end of said tube and fitting and working in an annular groove in an opening in one wall of said hopper of greater diameter than the tube and collar, and a bushing on the conveyer shaft fitting and working in a groove in an opening in the opposite wall of the hopper of greater diameter than the shaft and bushing, substantially as described. 6th. In an apparatus for recovering precious metals, the combination with a revoluble drum, rollers supporting the same at the lower side thereof, a power shaft and a rack and pinion connection between said shaft and drum, of a perforated tube extending axially into said drum from one end thereof and rotating with the drum, a conveyer located and working in said tube, the hopper 31, the flanged collar 30, the ring 33, the conveyer shaft 3, the bushing 38 and the ring 37, sub-

stantially as described. 7th. An apparatus for recovering precious metals, comprising a revoluble drum, a perforated metal tube opening from said drum and provided with a fabric jacket, a series of plates secured to the inner surface of the drum and having inwardly extending blades or flanges, electric connections to the plates and tube for rendering the same of opposite polarity, and a stationary vent pipe passing axially through the drum head and opening into the interior of the drum near the top thereof, substantially as and for the purpose described. 8th. An apparatus for recovering precious metals, comprising a revoluble drum, a perforated metal tube opening from said drum and provided with a fabric jacket, a series of plates secured to the inner surface of the drum and having inwardly extending blades or flanges, electric connections to the plates and tube for rendering the same of opposite polarity, a rotatable conveyer located and working in said tube, and a fixed vent pipe passing axially through the drum head and opening into the interior of the drum near the top thereof, substantially as described. 9th. In an apparatus for recovering precious metals, the combination with a revoluble drum, rollers supporting the same at the lower side thereof and means for rotating said drum upon the rollers, of a thimble extending axially through one head of said drum supporting and communicating with a vent pipe, said pipe opening within the drum near the top thereof, and a standard having a polygonal socket for the reception of the polygonal outer end of said thimble to support said thimble and prevent rotation thereof, substantially as described. 10th. In an apparatus for recovering precious metals, the combination with the revoluble drum, rollers supporting the same at the lower side thereof and means for rotating said drum, of a removable plug for a central opening in one head of the drum, a sleeve fitted in a central opening in said plug, a thimble extending through said sleeve and fitting closely therein, a vent pipe supported by, and communicating with, said thimble and opening within the drum near the top thereof and a standard having a polygonal socket for reception of the polygonal outer end of said thimble, substantially as described.

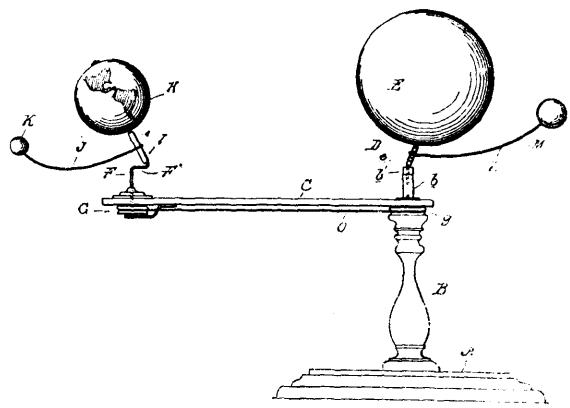
No. 54,446. Wrench. (*Clé à écrou.*)



J. H. Williams & Company, assignee of George Amborn, all of Brooklyn, New York, U.S.A., 26th December, 1896; 6 years. (Filed 2nd November, 1896.)

Claim.—1st. The combination with the forked handle and the jaws at the sides thereof, of screw bolts passing through the jaws and into the fork of the handle, such screw bolts being tubular, a cross-pin received within and supported by the tubular bolts, and a chain with an end link received between the forks of the handle and through the end of which link the cross-pin passes, substantially as set forth. 2nd. The combination in a chain wrench with the chain, of a handle and jaws at the ends of the handle and having serrated edges and rounding surfaces at the ends of the teeth, substantially as set forth. 3rd. The combination in a chain wrench, of a handle-bar forked at the end, and a cable chain fastened at one end of the fork, jaws connected at each side with the fork of the handle-bar and having teeth at both sides and recesses in the rear portions of each jaw adapted to receive the links of the cable chain, there being grooves in the surfaces of the handle-bar forming continuations of the fork for the links of the cable chain, substantially as set forth. 4th. The combination in a chain wrench, of a handle-bar forked at the end, jaws at the sides of the fork, tubular screws for connecting the jaws and fork, there being serrations upon the jaws with rounded corners to the teeth, a cross-pin and a cable link chain one end of which passes into the fork of the handle-bar, and a cross-pin passing through such end link and into the tubular screws, substantially as set forth. 5th. The combination in a pipe wrench with a forked handle and jaws at the sides thereof, of tubular screw bolts passing through the jaws and into the forked handle, and a cross-pin received within and supported by the tubular bolts, substantially as set forth. 6th. The combination in a pipe wrench, of a handle-bar forked at the end with jaws at the sides of the fork, tubular screw bolts for connecting the jaws and fork, there being serrations upon the jaws, with rounded corners to the teeth and a cross-pin received within and supported by the tubular bolts, substantially as set forth.

No. 54,447. Planetarium. (*Planétaire.*)



Gideon E. Henderson, Toronto, Ontario, Canada, 26th December, 1896; 6 years. (Filed 28th August, 1896.)

Claim.—In a planetarium, the combination with the pedestal B having secured to its upper end an inclined rod *e* supporting a globe F, of the horizontal arm C, journalled at one end on said pedestal and having rotatably mounted in its free end a rod F inclined at its upper end, and a globe H rotatably supported on said inclined end, substantially as described. 2nd. In a planetarium, the combination with the pedestal B having secured to its upper end an inclined rod *e* supporting a globe E, of the horizontal arm C journalled at one end on said pedestal, a rod F rotatably mounted in the free end of said arm and inclined at its upper end, a sleeve I journalled on said inclined portion and having attached thereto an arm J carrying a globe K, and a globe H rotatably supported on the upper inclined end of the rod F, substantially as described. 3rd. In a planetarium, the combination with the pedestal B having secured to its upper end an inclined rod *e*, of a globe E eccentrically mounted on said rod, a sleeve D journalled on the inclined portion of said rod, an arm I affixed at one end to said sleeve and supporting at its other end a globe M, a horizontal arm C journalled at one end on said pedestal, a rod F rotatably mounted in the free end of said arm and inclined at its upper end, a sleeve I journalled on said inclined portion and having attached thereto an arm J carrying a globe K, and a globe H rotatably supported on the upper inclined end of the rod F, substantially as described.

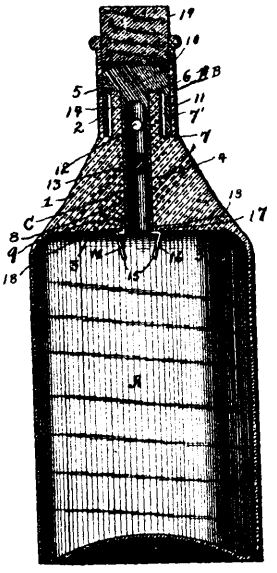
No. 54,448. Unrefillable Bottle.

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

David R. Saunders, Houston, Texas, U.S.A., 26th December, 1896; 6 years. (Filed 8th September, 1896.)

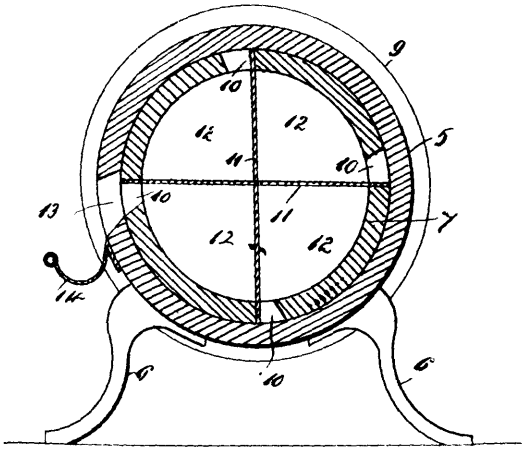
Claim.—1st. In a non-refillable bottle, the combination with a bottle neck provided with a vent or opening, of a valve adapted to open when the bottle is tilted and allow the fluid to flow out through the vent, but which closes when the bottle is restored to normal vertical position. 2nd. In a non-refillable bottle, the combination with a bottle neck provided with a longitudinally extending passage having a vent, of a ball valve movable in the passage and adapted to open the vent and allow the fluid to pass out therethrough when the bottle is tilted, but drops back to close the passage when the bottle is restored to normal position. 3rd. In a non-refillable bottle, the combination with a bottle neck having a fluid passage provided with a vent, a valve controlling said vent, and means for holding the auxiliary neck locked within the bottle neck. 4th. In a non-refillable bottle, the combination with a bottle neck, of an auxiliary neck provided with a longitudinally extending passage having a vent, a ball valve rollable in said passage and adapted to control the passage of the fluid therethrough, and a spring lock connected to the auxiliary neck, and adapted for engagement with the bottle to lock said neck in position. 5th. In a non-refillable bottle, the combination with a bottle neck provided with an opening or passage, of an auxiliary neck comprising a tube having a vent, and an inner shoulder located below said vent, said tube being adapted for reception in the passage or opening of the bottle neck, a ball valve rollable in the tube, and springs connected to the lower end of the tube and provided with outwardly extending portions which are adapted to lock with the bottle when the auxiliary neck is in position. 6th. In a non-refillable bottle, the combination with

a main bottle neck, having a shoulder at its lower end and provided with a passage extending thereto, of an auxiliary neck comprising



a tube having a head, said tube being provided with a vent near its upper end, and an inner annular shoulder near its lower end, and the tube being adapted for reception in the passage of the main neck so that the head will rest upon the neck, a ball valve rollable in the tube and normally resting on the annular shoulder, being adapted to unseat itself and pass by the vent to allow the fluid to pass out therethrough, springs connected to the tube and provided with shoulders and inclined portions, said springs being adapted to lock against the shoulders of the main neck when the auxiliary neck is in position. 7th. In a non-refillable bottle, the combination with a main neck comprising a lower section having a shoulder at its lower end, and a passage extending therethrough, and arms extending up into said section, and an upper section of the neck separated from the arms by an annular face, of an auxiliary neck comprising a tube having a vent, an inner shoulder and a head provided with an annular hood which protects the vent, a ball valve rollable in the tube, and locking springs connected to the lower end of the tube, said tube being adapted for reception in the passage of the main neck and the spring to lock against the shoulder of the latter, and the hood lying in the space between the opening and the upper section of the main neck, and a cork or stopper located on the main neck above the head of the tube.

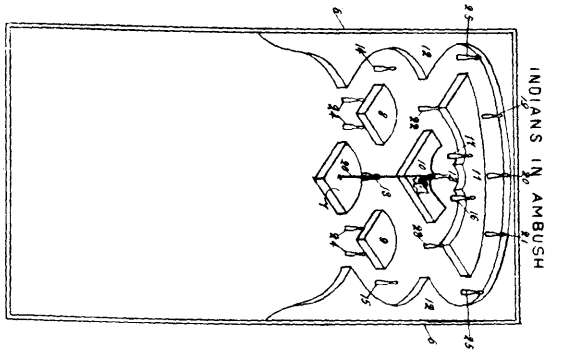
No. 54,449. Match-Safe. (*Boîte de sûreté pour allumettes.*)



Hugh Henry Brown, Crandall, Florida, U.S.A., 26th December, 1896; 6 years. (Filed 18th October, 1896.)

Claim.—1st. A match-safe consisting of an outer cylindrical casing, and an inner, supplemental, cylindrical casing, which is revolubly mounted therein, and which is provided at its sides with longitudinal slots, and said outer casing being provided at one side with a slot or opening, substantially as shown and described. 2nd. A match-safe consisting of an outer cylindrical casing, and an inner, supplemental, cylindrical casing which is revolubly mounted therein, and which is provided at its sides with longitudinal slots, and said outer casing being provided at one side with a slot or opening, and also with a receiver which is arranged below said slot or opening, substantially as shown and described. 3rd. A match-safe consisting of an outer cylindrical casing, and an inner, supplemental cylindrical casing which is revolubly mounted therein, and which is provided at its sides with longitudinal slots, and said outer casing being provided at one side with a slot or opening, and also with a receiver which is arranged below said slot or opening, and said inner casing being provided with longitudinal partition plates, by which the interior thereof is divided into separate compartments, in each of which is formed one of the longitudinal slots or openings, substantially as shown and described.

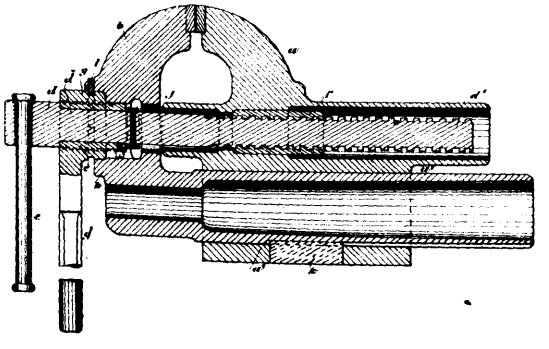
No. 54,450. Game. (*Jeu.*)



John Henry Stephens, Peterborough, Ontario, Canada, 26th December, 1896; 6 years. (Filed 29th October, 1896.)

Claim.—1st. A game device consisting of an oblong board, said board being designed at one end to represent a party of Indians in ambush or camp, and being provided with a number of embankments or clumps of bushes, which are surrounded by an embankment or body of bushes, said embankments being separated by lanes or passages, as herein described, and a plurality of pins which are designed to represent Indians, and to be arranged as herein described and for the purpose set forth. 2nd. The herein described game device which consists of an oblong box or board which is provided at one end with a plurality of elevated sections which represent embankments, and which are separated by lanes or passages, said elevated sections being enclosed by a similar elevated section on two sides, and at the rear, and said sections being all divided by lanes or passages which are of the form herein described, and a plurality of pins which are adapted to be placed in said lanes or passages, as and for the purpose set forth. 3rd. The herein described game device, which consists of a box or board which is provided near one end with a central triangular shaped elevation section or embankment at the rear of which are two similar elevated sections or embankments, behind which is a third central elevated section or embankment, at the rear of which is a fourth, said sections or embankments being all enclosed on the two sides, and at the rear by a similar elevated section or embankment, and all of said elevated sections or embankments being separated by lanes or passages of the form herein described, and a plurality of pins which are adapted to be arranged as and for the purposes set forth.

No. 54,451. Vise. (*Etau.*)

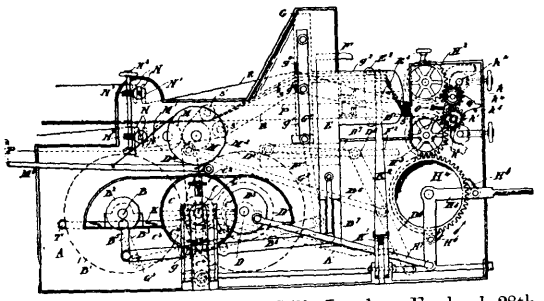


Samuel Harrison, Kirkgate, Ripon, England, 26th December, 1896; 6 years. (Filed 29th October, 1896.)

Claim.—In a vise, a gripping nut terminating in a handle, for the purpose of obtaining extra force and more securely fixing the jaws together, substantially as herein described and illustrated in the accompanying drawing.

No. 54,452. Weaving Machine.

(*Machine à tisser.*)



Albert Edward Holder, Forest Hill, London, England, 28th December, 1896; 6 years. (Filed 14th August, 1896.)

Claim.—1st. In combination with machinery for weaving coir yarn, hemp, or other like mats or fabrics, a row of healds, each heald having a projecting nose, for the purpose of bringing the thrum or pile warp threads almost vertically underneath or over the fabric, as and for the purpose hereinbefore described. 2nd. In combination with machinery for weaving coir yarn, hemp, or other like mats or fabrics, a double row of knives or blades having a reciprocating motion one over the other by means of suitable gear for the purpose of severing the woven mat or fabric substantially as described.

No. 54,453. Gold Leaf Gilding Process.

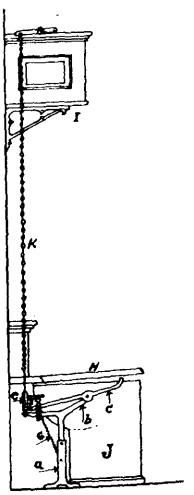
(*Procédé pour dorer avec de l'or en feuilles.*)

Hugo Paul Weisse, Dresden, Kingdom of Saxony, German Empire, 28th December, 1896; 6 years. (Filed 2nd November, 1896.)

Claim.—The improved process for gilding and silvering consisting of applying to the surface to be printed upon a solution of water, gelatine, and shellac, then drying the same to provide a foundation medium, then applying the leaf metal and pressing the same with a hot stamp of the required design or pattern, substantially as described.

No. 54,454. Automatic Syphon Tank Closet Flusher.

(*Siphon automatique pour le lavage des latrines.*)



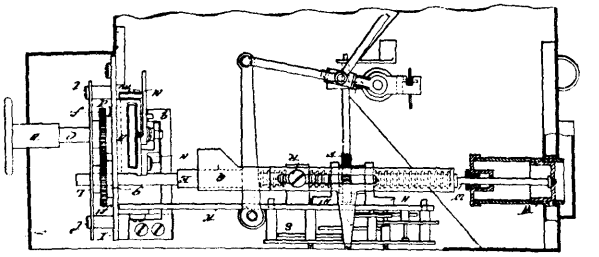
R. Ovens, Forest, assignee of John Francis Goodwin, Sarnia, both in Ontario, Canada, 28th December, 1896; 6 years. (Filed 2nd December, 1896.)

Claim.—The combination with the hinged seat H, of the lever C fulcrumed in the adjustable stand or foot B and A and spring G, the lock E, the trip D, and the rod F attached to the chain K, substantially as and for the purpose set forth.

No. 54,455. Gas Meter. (*Compteur à gaz.*)

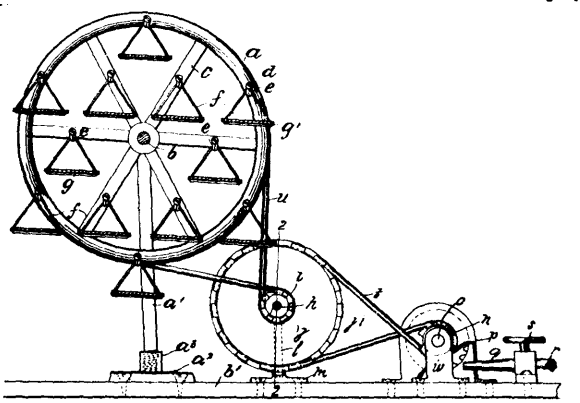
John Mesny Tourtel, London, England, 28th December, 1896; 6 years. (Filed 2nd November, 1896.)

Claim.—1st. The combination with a valve and means for removing same from its seat, of a rotary disc A for operating said means having a chamber adapted so to hold a coin that part of its periphery extends laterally from the disc in a plane parallel to the face of the disc, ratchet teeth around part of the periphery of said disc, a stop pin projecting from said disc, a lever adapted to be displaced by said coin on the rotation of said disc, and having a hook adapted to fall into the path of said pin, and a pawl for said ratchet teeth. 2nd. The combination with a valve and means for removing same



from its seat, of a rotary disc A for operating said means and having a chamber adapted to so hold a coin that part of its periphery extends laterally from the disc in a plane parallel to the face of the disc, ratchet teeth around part of the periphery of said disc, pins n and p on said disc, spring q, lever M having a hook m^1 and a projection m on said lever M constituting a pawl for said ratchet, and a dog for displacing the lever M by passage of the coin. 3rd. The combination with a meter train and a valve, of a slide Q adapted to remove said valve from and replace it on its seat, a screw-threaded spindle E connected to said slide, a rotary sleeve engaging with the threads of said spindle, means for limiting end movement of said sleeve, a worm wheel on said sleeve, a worm G connected to be revolved by the meter train, mechanism for revolving said spindle E by hand, and a coin-displaced detent for said mechanism.

No. 54,456. Display Mechanism. (*Mécanisme d'étalage.*)



Albert Ufford, Vancouver, British Columbia, 28th December, 1896; 6 years. (Filed 3rd November, 1896.)

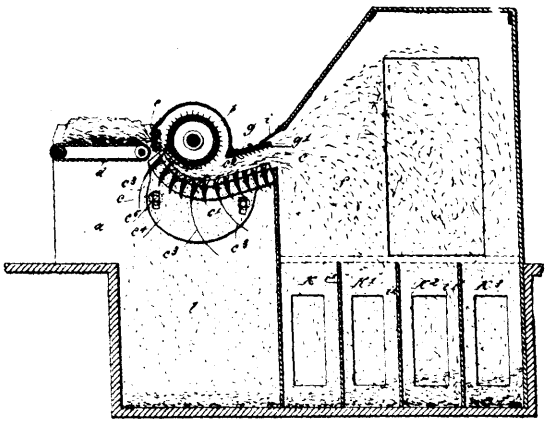
Claim.—1st. In a display mechanism, the combination of wheels rigidly fixed to a horizontal, rotatable shaft journalled in suitable supports at each end, the said wheels having outer rims of even periphery, of spokes dividing said wheels into sectors, screws secured to the inner sides of the said wheel rims at regular intervals, other screws placed at even radis upon the inner sides of the spokes of the said wheels, and loops upon the screws, having cords suspending trays between the parallel wheels, substantially as specified. 2nd. In a display mechanism, the combination of wheels fixed parallel to each other upon a rotatable shaft, mechanism arranged to support loosely hanging trays between the said wheels, and placed at equilateral triangles to each other, the whole being rotatable in supports rigidly secured to a platform, substantially as specified. 3rd. In a display mechanism, the combination of wheels rigidly fixed parallel to each other upon a rotatable shaft, having supports secured to a platform, of mechanism for imparting motion to the said shaft and of intermediate speed-reducing gear, substantially as specified. 4th. In a display mechanism, the combination of wheels fixed at a distance apart upon a rotatable shaft, the said shaft having vertical supports, of depending trays arranged in equilateral sets to each other around a common centre, and of mechanism for transmitting slow motion to the same, the wheels employed in the transmitting mechanism being formed from sheet metal, and having their edges cut towards the centre at regular intervals and the intermediate portions turned in opposite directions, and thus form grooved edges, substantially as and for the purposes hereinbefore set forth.

No. 54,457. Apparatus for Preparing Fibrous Material. (*Appareil pour préparer des matières fibreuses.*)

William Seward Archer, New York, State of New York, U.S.A., 28th December, 1896; 6 years. (Filed 3rd November, 1896.)

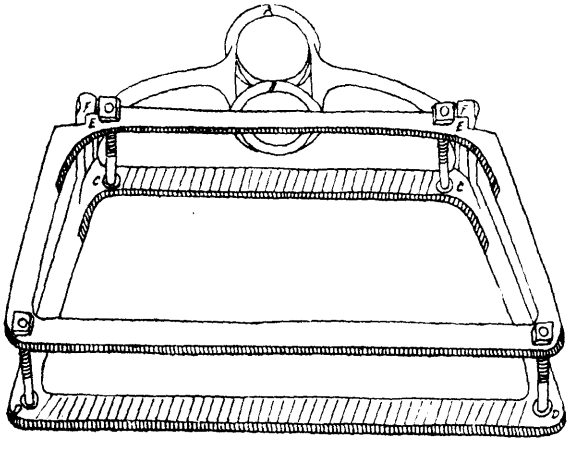
Claim.—1st. A machine or apparatus for cleaning, combing and assorting fibrous material consisting of one or more picker rollers b, and respective pinned or toothed grid bars c^1, and cover g, in com-

bination with an assorting chamber *f* formed with or without bins *k*, the said roller or rollers, grid bars, and cover, being adapted to



clean and free the fibrous material suitably fed, from foreign matter and the said chamber for the classification of the treated fibres, all substantially as set forth. 2nd. In a machine or apparatus, as specified in the preceding claim, the picker roller *b*, furnished with radially adjustable blades *h* acting as a fan, all substantially as herein specified. 3rd. A machine or apparatus for cleaning and combing fibrous material, comprising a picker roller *b*, and a series of grid bars c^1, arranged at gradually increasing distances from the lower side thereof, the first bar in such series being without pins, and the remainder provided therewith, adapted to permit the separating of any large masses at the beginning of the motion and of finer dirt at a later stage so as to clean and free the fibrous material from foreign matter without injury to the teeth, all substantially as herein specified. 4th. A machine or apparatus for cleaning, combing and assorting fibrous material, comprising a picker roller *b*, and toothed grid bars c^1, arranged at gradually increasing distances from the lower side thereof, adapted to clean and free the fibrous material from foreign matter, and a chamber into which the fibrous material, after being cleaned is driven, provided with partitions i^1, adapted to affect the classification of the treated fibres according to the difference in their buoyancy, all substantially as herein specified. 5th. In a machine for cleaning, combing and assorting fibrous material, the combination with proper feeding means *e*, and toothed grid bars c^1, of a spiked cylinder or picker roller *b* furnished with blades *h* acting as a fan, and with means as the bolts h^1 inserted in slots in the blades for allowing their positions to be adjusted so as to modify the current of air as required, substantially as herein specified. 6th. In a machine or apparatus for cleaning and combing fibrous material, the combination with a picker roller *b* having fan blades *h*, of a series of grid bars c^1, each having a curved cross-section, a knife edge top and a bevelled surface adjacent thereto provided with one or more rows of pins or teeth e^2 inclined in the direction of the motion of the fibre and adapted to act efficiently in deflecting the downward current of air and depositing the sand or other foreign matter quietly in the bottom, all substantially as herein specified.

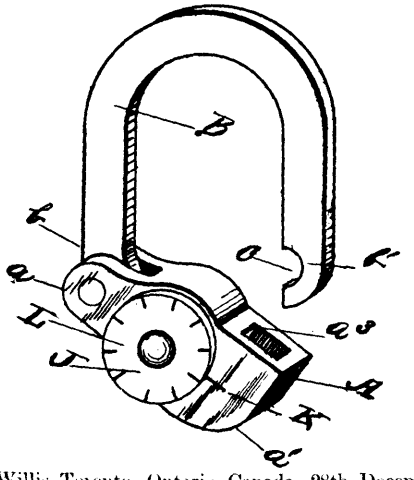
No. 54,458. Broom Holder. (*Porte-balai.*)



William Clark Ackerman and Edward Ackerman, both of Picton, Ontario, Canada, 28th December, 1896; 6 years. (Filed 20th November, 1896.)

Claim.—The bolts passing from C to E on each side and the teeth on the inside of the four jaws as hereinbefore described.

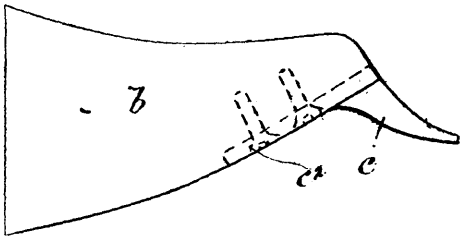
No. 54,459. Combination Lock.
(*Serrure à combinaison.*)



Matthew Willis, Toronto, Ontario, Canada, 28th December, 1896; 6 years. (Filed 23rd November, 1896.)

Claim.—1st. A combination lock consisting of a workscase, a cavity within the workscase, setting disks within the cavity, means for operating the setting disks, a raceway, and a moveable body within the raceway, controlled by the position of the setting disks, substantially as specified. 2nd. A combination lock, consisting of a workscase, a cavity within the workscase, a raceway communicating with the cavity, setting disks within the cavity, a recess in the edge of each of the setting disks, a dial to operate the setting disks, to allow of the recess being set opposite the raceway, and a moveable body within the raceway controlled by the position of the recess, substantially as specified. 3rd. A combination lock consisting of a workscase, a cavity within the workscase, setting disks within the cavity, a raceway, a movable body within the raceway, a recess communicating with the raceway, a hasp, one end of which is hinged to the workscase, and the other end of which enters the said recess, a movable body within the raceway, adapted to engage the end of the hasp within the recess, substantially as specified. 4th. A combination lock consisting of a workscase, a cavity within the workscase, a raceway communicating with the cavity, setting disks within the cavity having recesses cut in their edges, which are adapted to be brought opposite the adjacent end of the raceway, pins connected to the side faces of the setting disks, adapted to engage with each other to bring the recess opposite the said rac way, a dial, a pin passing through the dial, workscase, and setting disks, a pin on the side face of the dial engaging with a pin on the side face of the adjacent setting disk, an indicator on the workscase opposed to the edge of the dial, and a movable body within the raceway controlled by the position of the setting disks, substantially as specified. 5th. A combination lock consisting of a workscase, a cavity within the workscase, a raceway communicating with the cavity, setting disks within the cavity having recesses cut in their edges, which are adapted to be brought opposite the adjacent end of the raceway, pins connected to the side faces of the setting disks, adapted to engage with each other to bring the recess opposite the said raceway, a dial, a pin passing through the dial, workscase, and setting disks, a pin on the side face of the dial engaging with a pin on the side face of the adjacent setting disks, an indicator on the workscase opposed to the edge of the dial, a moveable body within the raceway controlled by the position of the setting disks, a hasp, one end of which is hinged to the workscase, and the opposite end of which enters a recess in the workscase communicating with the raceway, the said end engaging with the movable body, substantially as specified.

No. 54,460. Last. (*Forme.*)

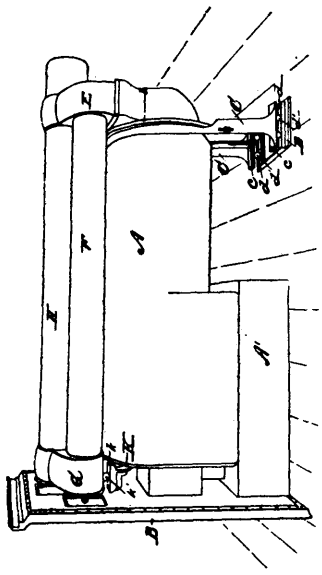


George Edward Baldwin, Granby, Quebec, Canada, 28th December, 1896; 6 years. (Filed 24th November, 1896.)

Claim.—1st. A last, the entire upper surface of the toe of which is lathe finished. 2nd. A last, the entire upper surface of the toe of which is lathe finished, and having a dog portion projecting only

from its bottom side. 3rd. A last model having a dog portion projecting only from the bottom side only of the toe portion thereof, for the purpose set forth. 4th. A last model having a dog portion projecting from a comparatively flat portion thereof, for the purpose set forth. 5th. In the manufacture of lasts first turning to a finish the entire upper surface thereof and the bottom side with a dog projection therefrom, and then removing such dog projection from the bottom to form a complete finished last, substantially as described.

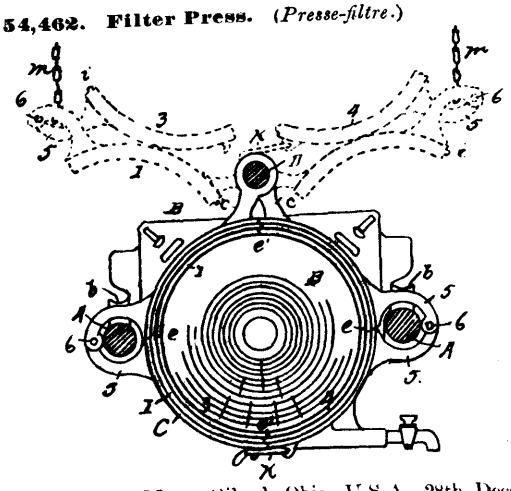
No. 54,461. Flue Support. (*Support de tubes.*)



Stephen Adelbert Griggs, Detroit, Michigan, U.S.A., 28th December, 1896; 6 years. (Filed 29th November, 1896.)

Claim.—1st. In a heating furnace, the combination of the body, having a movable support for the rear end of the body, return flues having a fixed support on the body, the support K, the flue head C, and the anti-friction bearing between the support K, and the head G, substantially as described. 2nd. In a heating furnace, the combination of a body A, having a fixed support on the ash pit, the supporting legs C, the floor pit D, and the ball d^1, d^1, substantially as described. 3rd. In a heating furnace, the combination of a body having a movable support for the rear end, and return flues having a fixed support on the rear end of the body, and movable supports for the forward ends of the flues, substantially as described. 4th. In a heating furnace, the combination of the flues, the head G, the support K, and the ball K^1, substantially as described.

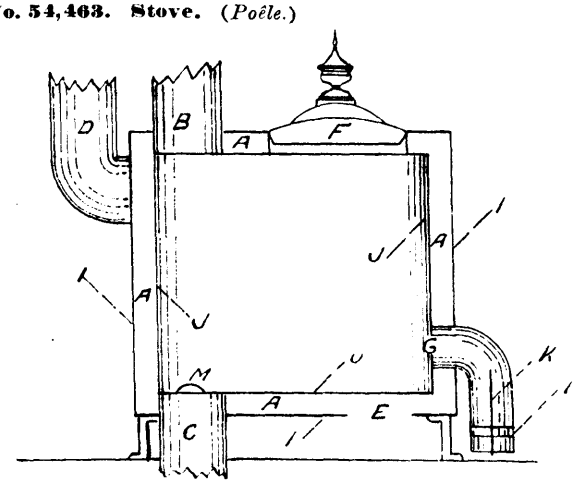
No. 54,462. Filter Press. (*Presse-filtre.*)



Oscar P. Bushnell, Mount Gilead, Ohio, U.S.A., 28th December, 1896; 6 years. (Filed 4th November, 1896.)

Claim.—1st. In a filter-press, the combination with the press-rods and pressing-plates having lateral projections movably mounted on said press rods, substantially as described, of the supplemental rod arranged along the press above and adjacent to said plates, and the distance-rings composed of separable ring-sections hinged and supported on said supplemental rod, independent of the press-rods, as set forth. 2nd. The ring for filter-presses formed of a number of segments adjacently hinged together, and a support rod having said rod supported thereon independent of the press-rod, whereby said segments are adapted for adjustment to the circle of the plates, or to be swung up out of the way, as set forth. 3rd. A ring for filter-presses, having its circular body composed of separable jointed segments, the upper segments having hinging ears adapted for embracing a rod, the supporting rod forming the pivot for the hinge and upholding the segments, and the lower segments connected to the upper segments with hinging ears that are adapted to extend around the exterior of the press-rods, for the purpose set forth. 4th. In combination with the plates and press-rods in a filter-press, of a top supporting bar, a distance-ring comprising a plurality of ring sections, one ring formed in four sections hinged together in pairs, the two upper sections hinged upon said support-rod, and the lower segments hinged to the upper segments around the press-rods without attachment thereto, and a clasp detachably connecting the adjacent ends of the lower segments. 5th. A ring for filter-presses, comprising a series of segments hinged together, and having a clasp forclosing the ring, said segments provided with packing-strips on their side faces and packing at the ends of the adjacent segments, as set forth. 6th. The combination with the plates in a filter-press, of the compound distance ring composed of a plurality of ring-sections disposed between the pairs of adjacent plates, one of which ring-sections is made in a series of segments having their ends hinged together and adapted for removal of said ring for swinging its segment out of range from between the other ring-sections and plates, thereby permitting further closure of the press, substantially as set forth. 7th. The combination with the press-rods, the plates supported to move on said press-rods and the filter-cloths facing said plates, of the supplemental support-rod, the distance-ring composed of the male-ring section and the jointed ring-section, said jointed ring-section composed of a series of segments, the upper sections hinged upon said support-rod, their free ends hinged to the adjoining segments by hinging joints disposed at the outer side of the press-rods, and a releasable connection joining the opposite ends of said ring-segments, substantially as and for the purposes set forth.

No. 54,463. Stove. (*Poêle.*)



William L. Mitchell, Peterborough, Ontario, Canada, 28th December, 1896; 6 years. (Filed 27th November, 1896.)

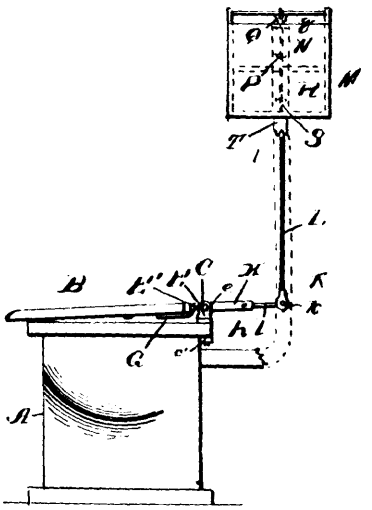
Claim.—1st. The combination in a sheet steel oval-shaped stove having the outer and inner lining I and J, smoke pipes C and B, hot air pipe D, openings E and H, fuel opening F, substantially as and for the purpose hereinbefore set forth. 2nd. The combination with the sheet steel oval-shaped stove having the outer and inner lining I and J, smoke pipes C and B, hot air pipe D, openings E and H, fuel opening F, of the draft pipe G, with upright division K and slid damper L, substantially as and for the purpose hereinbefore set forth.

No. 54,464. Hinge. (*Penture.*)

James Martin Young, Pittsburg, Pennsylvania, U.S.A., 28th December, 1896; 18 years. (Filed 29th November, 1896.)

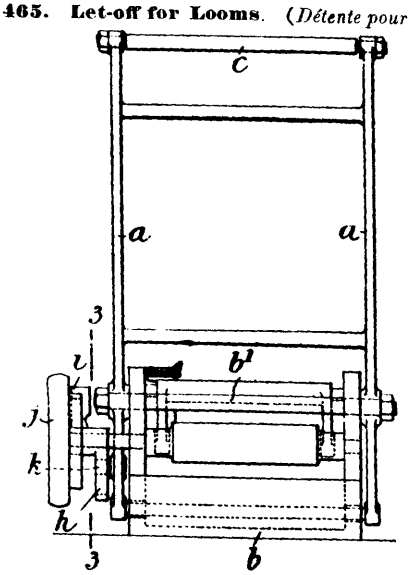
Claim.—1st. A hinge for water-closets, comprising a horizontally pivoted main portion, a lateral extension, arms hinged to said extension and adapted to be attached to the valve-operating mechanism of the closet, substantially as described. 2nd. A seat hinge for water-closets, comprising a horizontal body portion, standards adapted to pivotally secure said body portion to the bowl, a lateral extension of said body portion, an arm or arms hinged to said lateral extension and adapted for attachment to a seat, and a laterally extending arm, substantially as described. 3rd. In a hinge for water-closets, the combination of a horizontally pivoted hinged member, a lateral projection extending therefrom and provided with seat arms pivotally secured solely to said projection and constructed and adapted to be rigidly secured to a seat, and an arm extending from the hinge member and adapted to operate the valve mechanism of a closet, substantially as described. 4th. In a seat hinge for water

closets, the combination with the horizontally pivoted body portion E, lateral arm H, and wing E¹, of the arms G,G pivotally attached



solely to said wing and adapted for attachment to a seat, substantially as described. 5th. The combination with a seat depressible at the rear of a compound hinge having a laterally extending arm, a horizontal pintle and a lateral wing pivotally attached to the rear of the depressible seat, substantially as described. 6th. In a seat hinge for water-closets, the combination with a horizontal pivoted hinge member, a lateral wing projecting therefrom, arms pivoted to said wing and rigidly attached to a seat, of mechanism connecting said hinge with flushing devices, substantially as described. 7th. In a seat hinge for water-closets, the combination of a hinge member horizontally journalled on fixed bearings, mechanism connecting said member to flushing devices, with an arm or arms rigidly secured to the seat and pivotally attached to said hinge member out of alignment with its attachment to the fixed bearings, substantially as described.

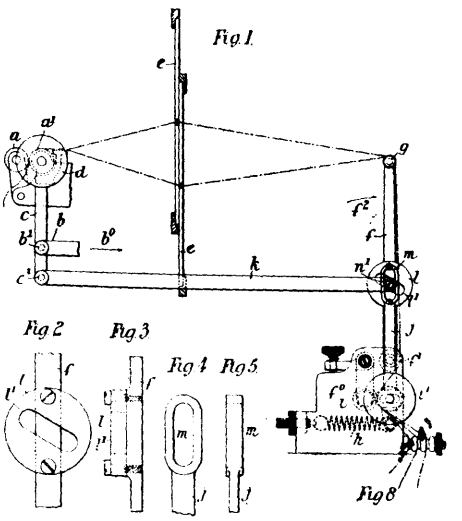
No. 54,465. Let-off for Looms. (*Détente pour métiers.*)



John Poyser, Wirksworth, and Francis Livingstone Ball, Birmingham, both in England, 28th December, 1896; 6 years. (Filed 30th November, 1896.)

Claim.—In a let-off for weaving looms wherein a vibrator is employed oscillated as aforesaid during the operation of the heddles to form the shed, and capable also of slight variations of movement due to variations in the length of warp between the fell of the fabric and the delivering point of the let-off, the utilization of the oscillations of the said vibrator for the purpose of positively operating the let-off roller or warp beam, substantially as described. 2nd. A let-off motion for looms wherein such a vibrator as aforesaid is directly connected with, or directly operates, step by step mechanism or the like for rotating the let-off roller or warp beam, substantially as described. 3rd. A let-off motion for looms wherein a vibrator operated by the heddles is mounted upon an axis different from the axis of the let-off roller or warp beam and wherein mechanism for rotating the let-off roller or warp beam is directly connected with and operated by vibrator, substantially as described 4th. The combination with a vibrator operated in one direction by the movement of the heddles and in the reverse direction by a spring, of ratchet mechanism or the like upon the feed roller or warp beam, the lever carrying the pawl of the said mechanism being connected with the said vibrator, so as to be oscillated thereby and having its axis independent of that of the vibrator, substantially as described. 5th. A let-off mechanism combined with and directly operated by a vibrator as aforesaid through the medium of gripping pawl mechanism or the like so situated relatively to the axis of the let-off roller or warp beam that the movement of the vibrator in one direction shall give to the let-off roller or warp beam a progressively increasing amount of rotation, substantially as described.

No. 54,466. Let-off for Looms. (*Détente pour métiers.*)



John Poyser, Wirksworth, England, 28th December, 1896; 6 years. (Filed 30th November, 1896.)

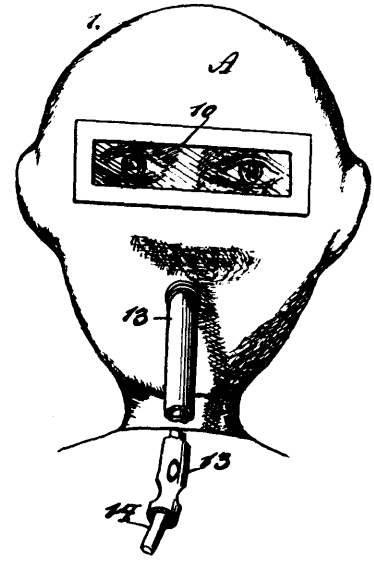
Claim.—1st. In a loom for weaving, the combination of positive take-up mechanism, positive let-off mechanism, a vibrator extending the warps between the fell of the fabric and the delivering point of the let-off rollers or warp beam, and allowing of deflection on the opening or closing of the shed and on variation arising in the length of the warps between the said points, and means whereby variations In the length of the said warps serve to vary the point at which movement is imparted to a lever operating the let-off mechanism, substantially as described. 2nd. In a loom for weaving, the combination of positive take-up mechanism, positive let-off mechanism, a vibrator the movements of which are due to the motion of the heddles when opening and closing the shed, and means whereby variations in the length of warp between the fell and the point of let-off serve to vary the point at which movement is imparted to a lever operating the let-off mechanism, substantially as described. 3rd. In a loom for weaving, the combination of positive take-up mechanism, positive let-off mechanism, a vibrator extending the warps between the fell of the fabric and the delivering point of the let-off rollers or warp beam, and allowing of deflection on the opening or closing of the shed and on variation arising in the length of the warps between the said points and a rod or the like for transmitting motion from the loom to a lever for operating the let-off mechanism, the said rod or the like having one end which is in adjustable connection with the said let-off lever, supported in or by an arm or attachment upon or in connection with the said vibrator in such a manner that the deflection of the vibrator varies the point at which the movement for operating the let-off is communicated to the let-off lever, and thus varies the effective length of the said lever, so that the latter has its effective length increased or diminished relatively with the length of the take-up lever, substantially as described. 4th. In a loom for weaving, the combination of a lever operating positive take-up mechanism, a lever operating positive let-off mechanism, a rod connecting the said levers so that their respective mechanisms operate simultaneously the point of connection between the let-off lever and the said connecting rod being made variable, in combination with a vibrator extending the warps between the fell of the fabric and the delivering point of the let-off rollers or warp beam, and allowing of deflection on the opening or closing of the shed and on variations arising in the length of the warps between the said points and an arm or device on the said vibrator connected with the rod, substantially as and for the purpose described. 5th. In a loom for weaving, a lever operating the let-off mechanism under the thrust or pull of a rod or other motion-transmitting piece, having the end or part engaging with the said lever adapted to be automatically controlled from an oscillating vibrator for the purpose of varying the point at which the movement is imparted to the said lever, and of thus varying the effective

length of the said lever, substantially as described. 6th. In a loom for weaving, a vibrator such as described for extending the warps between the fell of the fabric and the delivering point of the let-off rollers or warp beam, and allowing of deflection on the opening or closing of the shed and on variation arising in the length of the warps between the said points, in combination with means whereby variations in the length of warp between the fell of the fabric and the point of let-off serve to vary the point at which movement is imparted to a lever operating the let-off mechanism, substantially as described. 7th. In a loom for weaving, having a vibrator operating as aforesaid, the employment of a rod or other motion-transmitting piece for transmitting the motion from the loom to a lever for operating the let-off mechanism, the said rod or piece having the end or part engaging with the said let-off lever in adjustable connection therewith and supported in or by an arm or attachment upon or in connection with the said vibrator in such a manner that the movements of the vibrator under the tension of the warps vary the point at which the movement for operating the let-off is communicated to the let-off lever, and thus vary the effective length of said lever, substantially as described.

No. 54,467. Safety Hood. (*Capuchon de sûreté.*)

Alfred Orr and Andrew William Chapman, both of Charleston, Missouri, U.S.A., 28th December, 1896; 6 years. (Filed 14th December, 1896.)

Claim.—1st. The combination with a hood adapted to cover the face and head of the wearer, of a respiratory device connected with the said hood and consisting of an inhaling tube provided with openings for the admission of the air to the interior of the hood, and a second tube of thin and collapsible material secured within the first tube and connected with a mouth-piece, the said inner tube being adapted as a conductor for expired air, as and for the purpose specified. 2nd. In a hood adapted to cover the head of a person in a substantially air-tight manner, an outer inhaling tube having an apertured mouth-piece extending within the hood, the said mouth-piece being provided between its inner end and the wall of the hood with openings for the admission of the air to the interior of the hood, and a thin collapsible tube contained within the first tube and connected with the interior of the mouth-piece at its inner end and adapted as a conductor for the expired air, as and for the purpose specified. 3rd. In a hood arranged to substantially enclose the



head of a person in a substantially air-tight manner, a mouth-piece connected with the said hood, being provided with apertures therein, a flexible tube connected with the said mouth-piece, adapted as a conductor for inhalation purposes, and a tube adapted as a ductor of exhalations, the said exhalation tube being of a thin collapsible material, connected with the said mouth-piece and extending through the inhalation tube, as and for the purpose set forth.

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

4561. THE CANADIAN GENERAL ELECTRIC COMPANY (assignee), 2nd term of No. 37,880, from the 2nd December, 1896. Electric Meter, December 1st, 1896.

4562. JOHN R. WHITNEY, 3rd term of No. 25,476, from the 4th December, 1896. Process of and Moulds for Casting, December 3rd, 1896.

4563. BURDETT LOOMIS, 2nd term of No. 37,914, from the 4th December, 1896. Process of and Apparatus for Manufacturing Gas, December 4th, 1896.

4564. GEORGE M. STANCHFIELD, 3rd term of No. 25,493, from the 6th December, 1896. Composition for Softening Printer's Ink, December 4th, 1896.

4565. THE CHICAGO ROCKFORD HOSIERY COMPANY (assignee), 2nd term of No. 37,931, from the 9th December, 1896. Thread Feed for Knitting Machines, December 4th, 1896.

4566. JAMES F. HODGETTS, 2nd term of No. 38,039, from the 2nd January, 1897. Method of Constructing Hulls, December 7th, 1896.

4567. THE J. W. MANN MANUFACTURING COMPANY (assignee), 2nd term of No. 38,148, from the 25th January, 1897. Sulky Spring Tooth Harrow, December 7th, 1896.

4568. MARIE F. LANCRENON, 2nd term of No. 38,002, from the 24th December, 1896. Heating Apparatus, December 9th, 1896.

4569. JOHN WILLIAM GROVER, 2nd and 3rd terms of No. 25,608, from the 24th December, 1896. Spring Washer for Screw Bolts and Nuts, December 9th, 1896.

4570. GEORGE HENRY PEDLAR and SARAH E. PEDLAR, 2nd term of No. 38,137, from the 23rd January, 1897. Shingle, December 9th, 1896.

4571. REGINALD STANLEY, 2nd term of No. 37,971, from the 16th December, 1896. Tunnelling and Mining Machine, December 10th, 1896.

4572. JACOB FELBEL, 2nd term of No. 38,083, from the 9th January, 1897. Typewriting Machine, December 10th, 1896.

4573. WALTER NOEL HARTLEY and WILLIAM EDMUND BRANDFORD BLENKINSOP, 2nd term of No. 37,967, from the 15th December, 1896. Oil and Varnish, December 11th, 1896.

4574. THOMAS KANE, 3rd term of No. 25,817, from the 20th January, 1897. Candy, December 14th, 1896.

4575. J. D. CRAWFORD, 3rd term of No. 25,584, from the 18th December, 1896. Paper, December 15th, 1896.

4576. JOHN REESE PARSONS, 2nd term of No. 37,973, from the 17th December, 1896. Vehicle, December 16th, 1896.

4577. JAMES NOXON, 2nd term of No. 37,996, from the 24th December, 1896. Seeding Machine, December 17th, 1896.

4578. J. O. WISNER, SON & CO. (assignee), 2nd term of No. 37,989, from the 23rd December, 1896. Cultivator and Seeding Machine, December 18th, 1896.

4579. EDWARD N. HENRY, 2nd term of No. 37,982, from the 21st December, 1896. Carriage, December 19th, 1896.

4580. BURDETT LOOMIS, 2nd term of No. 38,151, from the 25th January, 1897. Process of and Apparatus for Manufacturing Gas, December 19th, 1896.

4581. THE TANDEM CAR BRAKE COMPANY OF TORONTO (assignee), 2nd term of No. 37,997, from the 24th December, 1896. Propelling Power, December 22nd, 1896.

4582. ALFRED WEED, 2nd term of No. 38,157, from the 26th January, 1897. Method of Making Files and Rasps, December 23rd, 1896.

4583. BERNARD CHARLES MOLLOY, 3rd term of No. 25,806, from the 19th January, 1897. Amalgamator for Precious Metals, December 23rd, 1896.

4584. WILLIAM R. LYLE, 2nd term of No. 30,065, from the 4th of January, 1897. Screen Door, December 24th, 1896.

4585. WILLIAM HENRY HUMPHRIES, 2nd term of No. 38,008, from the 26th December, 1896. Pea Harvester, December 26th, 1896.

4586. ROBERT McLAUGHLIN, 2nd term of No. 38,052, from the 4th January, 1897. Carriage Gear, December 29th, 1896.

4587. THE MASSEY-HARRIS COMPANY (assignees), 2nd term of No. 38,063, from the 4th January, 1897. Harvester Binder, December 29th, 1896.

4588. ROBERT JOHNSON, 2nd term of No. 38,064, from the 4th January, 1897. Rotary Engines, Blowers, Pumps and Water Meters, December 31st, 1896.

TRADE-MARKS

Registered during the month of December, 1896, at the Department of Agriculture—Copyright and Trade-Mark Branch.

5825. OXINE LIMITED, Bond Court House, Walbrook, London, England. Soups, Essences of Meat, and Extracts of Meat and Vegetables, 1st December, 1896.

5826. ROBERT HORNE BRYSON, Montreal, Que. A Compound Syrup of Licorice, 2nd December, 1896.

5827. JONATHAN ALBERT McLEAN, Montreal, Que., trading as the CANADIAN COCOANUT COMPANY. Cocoanut, 2nd December, 1896.

5828. M. J. PENNINGTON, Montreal, Que. Cigars and Cigarettes, 2nd December, 1896.

5829. FREDERICK W. CHRISTIE, Toronto, Ont. Medical Batteries, 3rd December, 1896.

5830. ALBERT FOX, Côte St. Paul, County of Hochelaga, Que. Soap, 5th December, 1896.

5831. R. A. LISTER AND COMPANY, LIMITED, Victoria Iron Works, Dursley, England. Dairy Machinery, and more particularly to Mechanical Cream Separators and their accessories, 7th December, 1896.

5832. THE FARBENFABRIKEN, vormals, FRIEDRICH BAYER AND COMPANY, Elberfeld, Prussia, Germany. Chemical and Pharmaceutical Products, 7th December, 1896.

5833. JAMES EPPS AND COMPANY, LIMITED, Holland Street, Blackfriars, London, England. Cocoa, 10th December, 1896.

5834. BOSTON WOVEN HOSE AND RUBBER COMPANY, Boston, Massachusetts, U.S.A. Wheel Tires, and more particularly elastic or pneumatic tires, 14th December, 1896.

5835. BOSTON WOVEN HOSE AND RUBBER COMPANY, Boston, Massachusetts, U.S.A. Wheel Tires, and more particularly yielding or pneumatic tires, 14th December, 1896.

5836. THE GUTTA PERCHA AND RUBBER MANUFACTURING COMPANY OF TORONTO, LIMITED, Toronto, Ont. Rubber Belting, Hose, Packings and Mechanical Rubber Goods, etc., and generally, manufactures in which India Rubber or Gutta Percha is a component part, 14th December, 1896.

5837. ROBERT BROWN, LIMITED, Glasgow, Scotland. Whisky, 14th December, 1896.

5838. J. B. BROOKS AND COMPANY, LIMITED, Criterion Works, Great Charles Street, Birmingham, England. Cycle Saddles, Saddlery, Harness and Leather Goods, Bicycles, Tricycles, and other Velocipedes, and the component parts and fittings of Velocipedes, 17th December, 1896.

5839. B. T. A. BELL, Ottawa, Ont. A Newspaper, 17th December, 1896.

5840. JAMES HENRY MACKENZIE AND GEORGE JEREMIAH HART, Toronto, Ont. Baking Powder, 18th December, 1896.

5841. HUGH McKAY AND COMPANY, London, Ont. Cigars, 21st December, 1896.

5842. HENRY IEVERS, Quebec, Que. General Trade Mark, 22nd December, 1896.

5843. HENRY IEVERS, Quebec, Que. A Mouth Wash and Tooth Powder, 22nd December, 1896.

5844. JOHN WALKER AND SONS, LIMITED, London, England, and Kilmarnock, Scotland. Whisky, 23rd December, 1896.

5845. W. FRANK HATHAWAY, St. John, N.B. Flour, 26th December, 1896.

5846. WILLIAM GEORGE DUNN, Hamilton, Ont. Baking Powder, 26th December, 1896.

5847. TASSÉ, WOOD AND COMPANY, Montreal, Que. Cigars, 26th December, 1896.

5848. } THE OLD BUSHMILLS DISTILLERY COMPANY, LIMITED, Belfast,
5849. } Ireland. Whisky, 28th December, 1896.

5850. G. H. MUMM ET COMPAGNIE, Reims, Marne, France. Vins de Champagne, 29 décembre 1896.

5851. DÉSIRÉ E. DROLET, Quebec, Que. Flour, 31st December, 1896.

COPYRIGHTS

Entered during the month of December, 1896, at the Department of Agriculture—Copyright and Trade-Mark Branch.

8865. MANUAL OF THE LAW OF LANDLORD AND TENANT. (For use in he Province of Ontario.) By R. E. Kingsford, M.A., LL. B. The Carswell Co., (Ltd.), Toronto, Ont., 1st December, 1896.

8866. MARY MY LOVE. Words by J. Philip Cunmore. Music by Hastings Weblyn. The Anglo-Canadian Music Publishers' Association, (Ltd.), London, Eng., 2nd December, 1896.

8867. HISTORIQUE DES JOURNAUX D'OTTAWA. F. J. Audet, Ottawa, Ont., 3 décembre 1896.

8868. THE CURE OF SOULS. By John Watson, M.A., D.D. Hodder & Stoughton, London, England, 4th December, 1896.

8869. THE CANADIAN MAGAZINE. (December, 1896.) The Ontario Publishing Co., (Ltd.), Toronto, Ont., 5th December, 1896.

8870. A STORMY VOYAGER. By Annie S. Swan. Wm. Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 5th December, 1896.

8871. BY NORTHERN LAKES. (Reminiscences of Life in Ontario Mission Fields.) By Rev. W. W. Walker. Wm. Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 5th December, 1896.

8872. MASSEY'S MAGAZINE. (December, 1896.) The Massey Press, Toronto, Ont., 5th December, 1896.

8873. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 5TH DECEMBER, 1896. The Mail Printing Co., Toronto, Ont., 5th December, 1896.

8874. THE TRAVELLER'S REMEMBRANCER, FOR LADIES. A. C. Greene, Liverpool, England, 5th December, 1896.

8875. SUC-A-MA-TA-MIA. (Poundmaker.) Photo. Geraldine Moodie, Maple Creek, Assa., N.W.T., 5th December, 1896.

8876. THE TRAVELLER'S REMEMBRANCER, FOR GENTLEMEN. A. C. Greene, Liverpool, England, 5th December, 1896.

8877. MABEL GRAY, AND OTHER POEMS. By Lyman C. Smith, Oshawa, Ont., 7th December, 1896.

8878. THE BELL TELEPHONE COMPANY OF CANADA, LIMITED, WESTERN EXCHANGES, SUBSCRIBERS' DIRECTORY, ONTARIO DEPARTMENT, DECEMBER, 1896. The Bell Telephone Company of Canada, (Ltd.), Montreal, Que., 7th December, 1896.

8879. ALMANACH POUR TOUS, POUR L'ANNÉE 1897. Joseph Beauchamp, Québec, Qué., 9 décembre 1896.

8880. THE MILITARY TWO-STEP. By Albert Nordheimer. A. & S. Nordheimer, Toronto, Ont., 9th December, 1896.

8881. QUEEN VICTORIA, HER LIFE AND REIGN. By J. Castell Hopkins. The Bradley-Garretson Co., (Ltd.), Brantford, Ont., 9th December, 1896.

8882. THE CHRONICLES OF KARTDALE. OUR JEAMES. Edited by J. Murdoch Henderson. Wm. Drysdale & Co., Montreal, Que., 10th December, 1896.

8883. NOUVEAU COURS DE LANGUE ANGLAISE. (Selon la Méthode d'Ollendorff.) A l'usage des Ecoles, Académies, Pensionnats et Collèges. C. O. Beauchemin et fils, Montréal, Que., 10 décembre 1896.

8884. DICTIONNAIRE COMPLET ILLUSTRÉ DE LA LANGUE FRANCAISE. Par F. Larousse. C. O. Beauchemin et fils, Montréal, Qué., 10 décembre 1896.

8885. GRAMMAIRE FRANCAISE ELÉMENTAIRE, AVEC UNE MÉTHODE D'ANALYSE GRAMMATICALE ET D'ANALYSE LOGIQUE. (A l'usage des Ecoles Chrétiennes.) Par F. P. B. Nouvelle Edition conforme au Dictionnaire de l'Académie. (Edition de 1878.) C. O. Beauchemin et fils, Montréal, Qué., 10 décembre 1896.

8886. LE LIVRE DE MUSIQUE. Par Claude Augé. (Avec Exercices, Morceaux et Gravures). C. O. Beauchemin et fils, Montréal, Qué., 10 décembre 1896.

8887. HISTORY OF THE OTTAWA VALLEY. By John L. Gourlay, A.M., Ottawa, Ont., 10th December, 1896.

8888. TRAVELLER'S WEEKLY REPORT. Robt. J. Lovell, Toronto, Ont., 11th December, 1896.

8889. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 12TH DECEMBER, 1896. The Mail Printing Co., Toronto, Ont., 12th December, 1896.

8890. WHILE THE HEART BEATS YOUNG. (Waltz.) By Agnes L. Chambers, Mill Brook, Ont., 12th December, 1896.

8891. THE DELINEATOR. (A Journal of Fashion, Culture and Fine Arts. January, 1897.) The Butterick Publishing Co., (Ltd.), New York, N.Y., U.S.A., 14th December, 1896.

8892. THE GLASS OF FASHION. (January, 1897.) The Butterick Publishing Co., (Ltd.), New York, U.S.A., 14th December, 1896.

8893. THE ONTARIO REPORTS. Volume XXVII. (Containing Reports of Cases Decided in the Queen's Bench, Chancery and Common Pleas Divisions of the High Court of Justice for Ontario.) The Law Society of Upper Canada, Toronto, Ont., 14th December, 1896.

8894. PUBLIC SCHOOL WRITING COURSE, VERTICAL SYSTEM, BUSINESS FORMS. (No. 7.) The Canada Publishing Co., (Ltd.), Toronto, Ont., 14th December, 1896.

8895. L'ALMANACH DU PEUPLE ILLUSTRÉ, 1897. C. O. Beauchemin et fils, Montréal, Qué., 14 décembre 1896.

8896. CONSULTATIONS GRATUITES. Farce en un Acte. A trois personnages. Par Régis Roy. Suivie du Dialogue-Bouffe: "Le Sourd." C. O. Beauchemin et fils, Montréal, Qué., 14 décembre 1896.

8897. EN NOUANT SA RAQUETTE. (Romance Manitobaine.) Paroles de E. Buron. Musique de P. Sale. Edmond J. P. Buron, St. Boniface, Man., 15 décembre 1896.

8898. THE SNOWFLAKE, AND OTHER POEMS. By Arthur Weir, Montreal, Que., 16th December, 1896.

8899. U. C. C. MARCH. (Upper Canada College.) By J. Bedford Campbell. The W. F. Shaw Publishing Co., Toronto, Ont., 16th December, 1896.

8900. OVERLAND TO CARIBOO. (An Eventful Journey of Canadian Pioneers to the Gold Fields of British Columbia in 1862. By Margaret McNaughton. Wm. Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 16th December, 1896.

8901. IN GOLDEN SEPTEMBER. (Impromptu Romantique.) For Piano. By W. O. Forsyth. Whaley, Royce & Co., Toronto, Ont., 17th December, 1896.

8902. RUGBY MARCH. (Two-Step.) For Piano. By Elmer H. Smith. Whaley, Royce & Co., Toronto, Ont., 17th December, 1896.

8903. SUE KITTIE MARCH. (Two-Step.) For Piano. By Sim Samuel. Whaley, Royce & Co., Toronto, Ont., 17th December, 1896.

8904. RHYMES OF THE KINGS AND QUEENS OF ENGLAND. Being an Account of the Rulers of England from the Norman Conquest to the Reign of Victoria. (With Numerous Illustrations.) By Mary Leslie, Guelph, Ont., 17th December, 1896.

8905. EVERY-DAY ENGAGEMENTS AND INVITATIONS. By Marie H. Holmested. G. M. Rose & Sons, Toronto, Ont., 18th December, 1896.

8906. OUR UNSEEN COMPANIONS. By Sancho Quixote. G. M. Rose & Sons, Toronto, Ont., 18th December, 1896.

8907. TISAB TING; or, THE ELECTRICAL KISS. By Dyjan Fergus. Ida May Ferguson. Moncton, N.B., 18th December, 1896.

8908. WHEN HELEN SMILES. Words by Wilfred S. Skeats. Music by Mary O'Hara. A. & S. Nordheimer, Toronto, Ont., 18th December, 1896.

8909. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 19th DECEMBER, 1896. The Mail Printing Co., Toronto, Ont., 19th December, 1896.

8910. THE ONTARIO LEGAL CHART, 1897. Compiled by H. R. Hardy, Barrister-at-law, Toronto, Ont., 19th December, 1896.

8911. CANADIAN HISTORY, 1492—1897. Scaife's Comparative and Synoptical System of Teaching History. Applied to all Countries. (Student's Edition.) (Chart.) The Comparative Synoptical Chart Co., (Ltd.), Victoria, B.C., 19th December, 1896.

8912. MÉTHODE DE LECTURE. (En Quatorze Tableaux.) Par les Frères du Sacré-Cœur, Arthabaskaville, Qué., 21 décembre 1896.

8913. ELEMENTARY COMPOSITION EXERCISE BOOK. No. 1. By S. E. Lang, B.A. (For use in Second Book Classes.) The Copp, Clark Co., (Ltd.), Toronto, Ont., 21st December, 1896.

8914. THE LIBERAL CABINET OF CANADA, 1896. (Lithograph.) Toronto Lithographing Co., Toronto, Ont., 21st December, 1896.

8915. DREAM OF ROSSLAND WALTZES. By Kathleen Kerr Jarvis, Toronto, Ont., 22nd December, 1896.

8916. GRAFTON'S GRADED ARITHMETIC, BOOK I. By E. W. Arthy. F. E. Grafton & Sons, Montreal, Que., 22nd December, 1896.

8917. GRAFTON'S GRADED ARITHMETIC, BOOK III. By E. W. Arthy. F. E. Grafton & Sons, Montreal, Que., 22nd December, 1896.

8918. GRAFTON'S GRADED ARITHMETIC, BOOK I. (Teachers' Manual with Answers.) By E. W. Arthy. F. E. Grafton & Sons, Montreal, Que., 22nd December, 1896.

8919. GRAFTON'S GRADED ARITHMETIC, BOOK III. (Teachers' Manual with Answers.) By E. W. Arthy. F. E. Grafton & Sons, Montreal, Que., 22nd December, 1896.

8920. GRAFTON'S HISTORICAL READERS. THINGS NEW AND OLD; OR, STORIES FROM ENGLISH HISTORY, BOOK III. By H. O. Arnold-Forster. (Illustrated.) F. E. Grafton & Sons, Montreal, Que., 22nd December, 1896.

8921. GRAFTON'S HISTORICAL READERS. THINGS NEW AND OLD; OR, STORIES FROM ENGLISH HISTORY, BOOK IV. By H. O. Arnold-Forster. (Illustrated.) F. E. Grafton & Sons, Montreal, Que., 22nd December, 1896.

8922. GRAFTON'S HISTORICAL READERS. THINGS NEW AND OLD; OR, STORIES FROM ENGLISH HISTORY, BOOK V. By H. O. Arnold-Forster. (Illustrated.) F. E. Grafton & Sons, Montreal, Que., 22nd December, 1896.

8923. GRAFTON'S HISTORICAL READERS. THINGS NEW AND OLD; OR, STORIES FROM ENGLISH HISTORY, BOOK VI. By H. O. Arnold-Forster. (Illustrated.) F. E. Grafton & Sons, Montreal, Que., 22nd December, 1896.

8924. THE WARDEN OF THE PLAINS. And Other Stories of Life in the Canadian North-west. By John MacLean, M.A., Ph. D. Wm. Briggs (Book-Steward of the Methodist Book and Publishing House), Toronto, Ont., 24th December, 1896.

8925. COWLEY'S COMPREHENSIVE CLASS BOOK FOR SUNDAY SCHOOL TEACHERS. C. E. Cowley, London, Ont., 24th December, 1896.

8926. FLOATING WALTZES. By J. W. B. Ford. Arthur Cox, Toronto, Ont., 24th December, 1896.

8927. VIRGIL'S ÆNEID, BOOK I. (Edited with Introductory Notices, Notes, Complete Vocabulary and Illustrations.) By John Henderson, M.A., and E. W. Hagarty, B.A. The Copp, Clark Co., (Ltd.), Toronto, Ont., 26th December, 1896.

8928. ART SUPPLEMENT OF THE DAILY MAIL AND EMPIRE, TORONTO, SATURDAY, 26TH DECEMBER, 1896. The Mail Printing Co., Toronto, Ont., 26th December, 1896.

8929. NOTICE OF APPOINTMENT. (Municipal.) Robt. D. Richardson, Winnipeg, Man., 26th December, 1896.

8930. IF I ONLY COULD BLOT OUT THE PAST. Words and Music by Gussie L. Davis. Whaley, Royce & Co., Toronto, Ont., 29th December, 1896.

8931. THE HOWES O' BUCHAN AND FAR AWA. WITH OTHER POEMS. By Charles Minto, Montreal, Que., 30th December, 1896.

8932. INSURANCE PLANS OF ARKONA, ATHENS, AULTSVILLE, BRUCE MINES, BURK'S FALLS, COLDWATER, COURTRIGHT, CUTLER, DELAWARE, EGANVILLE, FINGAL, FRENCH RIVER, GLENCOE, GORE BAY, HARROW, HAVELOCK, LITTLE CURRENT, LUCAN, MANITOWANING, MASSEY, MAXVILLE, MOUNT BRYDGES, OIL CITY, OSNABRUCK CENTRE, PORT BURWELL, RICHARD'S LANDING, SHEDDEN, SPANISH RIVER, SPRAGGE, VIENNA, AND WALES, AND ST. ANTHONY LUMBER COMPANY MILL AND YARD, WHITBY, IN ONTARIO. Chas. E. Goad, Montreal, Que, 30th December, 1896.

8933. INSURANCE PLANS OF BAIE ST. PAUL, BEAUHARNOIS, BEAUPORT, CACOUNA, CAPST. IGNACE, CHATEAU RICHER, CONTRECŒUR, HÉBERTVILLE, HOWICK, MURRAY BAY AND POINTE A PIC, ROBERVAL, STE ANNE DE BEAUPRÉ, STE. ANNE DE LA POCATIERE, ST. CHARLES, ST. DENIS, STE. FLAVIE, ST. HILAIRE, ST. MICHEL, ST. JÉROME, ST. OURS, ST. RAYMOND, ST. VINCENT DE PAUL, AND TROIS PISTOLES, IN QUEBEC. Chas. E. Goad, Montreal, Que, 30th December, 1896.

8934. INSURANCE PLANS OF DORCHESTER, GRAND FALLS, HARTLAND, MONCTON, SHEDIAC AND SUSSEX, IN NEW BRUNSWICK. Chas. E. Goad, Montreal, Que., 30th December, 1896.

8935. ELEMENTARY COMPOSITION EXERCISE BOOK, No. 2. BY S. E. LANG, B.A. (For Use in Third Book Classes.) The Copp, Clark Co., (Ltd.), Toronto, Ont., 31st December, 1896.

8936. EUPHROSYNE GAVOTTE. 20th Century Dance. Arranged by M. J. Sage. Music by Ludwig Waizmann. J. L. Orme & Son, Ottawa, Ont., 31st December, 1896.

8937. THE ELEMENTS OF ENGLISH GRAMMAR. By Alfred S. West, M.A. The Copp, Clark Co., (Ltd.), Toronto, Ont., 31st December, 1896.

8938. SELECTIONS FOR SIGHT TRANSLATION AND SUPPLEMENTARY READING IN GERMAN. By A. Müller. The Copp, Clark Co., (Ltd.), Toronto, Ont., 31st December, 1896.