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# The Canadian Patent Office

## RECORD




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### CONTENTS.

INVENTIONS PATENTED.....	311
ILLUSTRATIONS.....	325
INDEX OF INVENTIONS.....	1
INDEX OF PATENTEEES.....	11

### INVENTIONS PATENTED.

#### No. 15,562. Improvements on preparing Tan Bark. (*Perfectionnements dans la préparation du tan.*)

William H. Smith, Chicago, Ill., U.S., 2nd October, 1882; for 5 years.

*Claim.*—As a new article of manufacture, the self-cohering solid block of tan bark compressed by coarsion.

#### No. 15,563. Improvements on Mop Holders. (*Perfectionnements aux manches des torchons.*)

Joseph H. Omo, Fayette, Ohio, U.S., 2nd October, 1882; for 5 years.

*Claim.*—The combination of the handle A, the collar H having perforated wings I, and the sleeve B to the sides of which are attached the slides E of a frame C, which diverge outwardly and pass through the perforated wings I.

#### No. 15,564. Improvements on Dynamo-Electric Armatures. (*Perfectionnements aux armures électro-dynamiques.*)

Elmer A. Sperry, Cortland, N.Y., U.S., 2nd October, 1882; for 5 years.

*Claim.*—1st. In an annular armature, for an electric machine, having its greatest dimension of cross-section parallel with the armature shaft and secured thereto by means of one of its ends, or lateral edges, projecting its internal and external parallel and concentric surfaces together with its free extremity and brokenly to the pole pieces of the field. 2nd. In an annular armature for an electric machine provided with a series of rectangular depressions on both its interior and exterior surfaces, which are identical in shape and equal in capacity. 3rd. In an annular armature constructed of segments of thin sheet metal overlapping at their ends and supported by rods secured to outer continuous rings, said segments being connected by metal contact in continuous circuits in line of magnetic axis or circumference and insulated in groups from each other, laterally, or at right angles to said magnetic axis. 4th. In an armature, for an electric machine constructed of segments of thin sheet metal overlapping at their extremities in metal contact disposed between continuous rings on either lateral edge, said segments bearing projections on their internal and external edges of equal radial length and which are of such form as to leave rectangular depressions on opposite sides of the core which are equal in shape and capacity. 5th. The combination, with an annular armature, the body of which is composed of segments of thin sheet metal disposed between continuous rings on each lateral edge, of metallic rods which hold the separate parts in place and at the same time secure the whole to projections of the armature shaft.

#### No. 15,565. Improvements in the Manufacture of Nitro-Dextrine. (*Perfectionnements dans la fabrication de la nitro-dextrine.*)

Gilbert S. Denn, San Francisco, Cal., U.S., 2nd October, 1882; for 5 years.

*Claim.*—The nitro-dextrine compound.

#### No. 15,566. Improvements on Sofa-Beds. (*Perfectionnements aux sofas-lits.*)

Henry R. Plimpton, Boston, Mass., U.S., 2nd Oct., 1882; for 5 years.

*Claim.*—1st. In a sofa, or lounge bed, the combination of the back D, base A and the re-entering toggles S S'. 2nd. The pivoted latch hooks C C' C'', in combination with the back D and hinged slotted end pieces D' D''. 3rd. The combination of the raised buttress pieces E E' E'' and their hinges K K', with the depressed mattress supporting parts B' D, whereby the mattress is caused to be bent on a line C or near its upper surface. 4th. The combination of a fixed central longitudinal division H of the mattress and its support E' with the side divisions H E H' D, buttress pieces E' E' and hinges K K'. 5th. In a sofa bed provided with a tucking recess M N N' formed in the edges of the mattress. 6th. In a lounge bed, the combination of the bevelled or thin edged back L' L' with the body a. 7th. The combination of the springs H H' and toggled levers S S' with the base A and back D. 8th. The combination of the drawer crib I and the drawer slides I', with the fixed guides I' I' and the base a.

#### No. 15,567. Improvements on Dynamo-electric Machines. (*Perfectionnements aux machines électro-dynamiques.*)

Elmer A. Sperry, Cortland, N.Y., U.S., 3rd October, 1882; for 5 years.

*Claim.*—1st. In combination, the stationary helices H' H' H' H' having cores, all projecting in the same direction from a common base or yoke and provided with the separate curved pole pieces, said pole pieces being arranged in pairs of similar polarity and one pole piece of each pair partially embraced by, but separated by an intervening space from its fellow, the annular armature A having its surface of greatest width parallel with its axis and wound with transverse coils, said armature being suitably supported and arranged to rotate between the pole pieces of each pair, and a commutator connected with the coils of said armature. 2nd. The separate pole pieces arranged in pairs of similar polarity, the inner opposite margins of the pole pieces of each pair projecting toward each other, in combination with the annular armature supported at one edge and projecting into the space between the pole pieces of each pair, the arrangement being such that both sides and the greater portion of the free edge of the armature are presented to the pole pieces. 3rd. The combination, with a transversely wound annular armature having an iron core a, the disk C and radial commutator conductors B, of an insulating ring d and binding screw e. 4th. The combination of the governor L, located e, the shaft of the machine and provided with a system of weight and levers, the rod f, spring L', the commutator brushes and connecting mechanism, whereby the movement of the brushes is controlled. 5th. The combination of the governor L, mounted on the shaft of the machine, the rod f, spring L', lever m, rod m', bell crank lever m' and rod m'', with the commutator brushes k and their clamps. 6th. The combination of the transversely wound annular armature, the insulating ring and the supporting disk, with the connecting bolts.

#### No. 15,568. Improvements on Process and Apparatus for Freezing Paraffine. (*Perfectionnements aux procédés et aux appareils pour congeler la paraffine.*)

Edward Kells and Henry L. Church, Cleveland, Ohio, U.S., 3rd October, 1882; for 5 years.

*Claim.*—1st. The described process for freezing paraffine and other products of petroleum, by forcing the material through pipes enclosed in a refrigerating vessel. 2nd. Forcing the material through a chamber having perforated top and located in the bottom of a vessel containing the refrigerant. 3rd. In an apparatus for freezing paraffine or other products of petroleum, the combination, with the refrigerating vessel A provided with the open pipes B B and containing the refrigerating elements enveloping said pipes, of the conical chamber C, connected at a short distance from said vessel A and arranged to convey the material through the freezer in separate streams. 4th. The combination, with the refrigerating vessel D provided with the conical perforated chamber d at its bottom and containing the refrigerating element of the receptacle F connected by pipe F' and having the funnel neck E, of the false bottom k and the drawer H arranged to receive the material.

**No. 15,569. Improvements on Electric Couplings and Train Telegraphs.** (*Perfectionnements aux accouplages et aux télégraphes électriques des trains de railroutes.*)

Edward D. Parker, Salina, Kansas, U. S., 3rd October, 1882; for 5 years.

*Claim.*—1st. In an electric apparatus for signalling on trains, the combination of the circuit closer F fitted for operation by the cord or rope p with the main circuit wires a a of the locomotive, and branch wires c d. 2nd. In an electric apparatus for signalling on trains, the combination, with the electric wires a a, of the coupling formed with the springs h h, plates i i and tongues g g of non-conducting material, said plates i and springs h being integral and attached to the wires a whereby, when the coupling is detached, the circuit is closed through the springs h h and, when coupled, electric continuity of the line wires is secured, the plates i i being separated from each other at all times.

**No. 15,570. Improvements on hay and straw Cutting Machines.** (*Perfectionnements aux hache-paille.*)

David W. Carpenter and Edwin Shaw, Walton, N. S., 3rd October, 1882; for 5 years.

*Claim.*—1st. The combination of feeding roller A and ratchet wheel E, with pawl H and lever G. 2nd. The combination of lever M, with slot K and adjustable weight S. 3rd. The combination of lever M, slot K and rods O O, with feeding roller A.

**No. 15,571. Improvements on Undergarments.** (*Perfectionnements aux sous-vêtements.*)

Thomas B. Farrington, Minneapolis, Minn., U. S., 3rd October, 1882; for 5 years.

*Claim.*—1st. A pair of drawers composed of an upper cloth part A and close fitting lower knit part B joined above the calf. 2nd. A pair of drawers having knit extremities extending from the ankle to a point above the calf, said extremities having two more contractile parts, one about the ankle and the other about the leg, at a point above the calf and below the knee. 3rd. A garment composed of the cloth part A and the knit extremities B, the upper margin of said knit portions enlarged by increase of stitches to practically equal the cloth part in size. 4th. A garment composed of a cloth body and knit ends, said knit ends produced in a flat web and widened at the top by additional stitches upon the selvaige edges to equal the width of the cloth part at the point of juncture, and vertically seamed in line with the inclined seam of the cloth part. 5th. In combination with the body A, the knit end having its upper portion knit in polka stitch and its lower, or free portion, knit in one and one stitch.

**No. 15,572. Improvements on Wind Mills.** (*Perfectionnements aux moulins à vent.*)

Blanchard Chamberlain, Joseph H. Wilson, Robert Lamb, George H. Palmer and Harry E. Palmer, Bellefontaine, Ohio, U. S., 3rd October, 1882; for 5 years.

*Claim.*—1st. The combination, with counterbalance rod and chain L and feathering rod N, of the rack G and vertical governor shaft A, provided with vane arm A', arm E and segment arm F. 2nd. The combination of feathering rod N, rack G, governor shaft A, arms E F and A', vane C, bracket B, turn-table B', collar I, lug K and securing device J. 3rd. The combination of ratcheted plate V, latch 37, on the gearing frame, and tripping rod W carried by the tail vane.

**No. 15,573. Improvements on Scaffolds.** (*Perfectionnements aux échafaudages.*)

William E. Dean and John C. Dean, (assignees of George W. Smith,) Harlansburg, Penn., U. S., 3rd October, 1882; for 5 years.

*Claim.*—In a scaffold, the combination, with the upright or slightly inclined posts A, having adjustable forked braces a provided with hooks a', or means of attachment for the platform, of hoisting ropes thereto, of the platform D, the sliding uprights C, having horizontal bars H fitted to move upon the posts A, the handled shaft or drum B having passed through it the platform hoisting rope F, passed in contact with pulleys c hung upon the uprights C, said rope having its ends secured to the hooks a' of the braces a, the levers c' pivoted to the uprights C and bearing in sockets in the posts A, and of the cords c' connected to the outer end of said levers and passed over the platform D.

**No. 15,574. Improvements in Means for Extinguishing Fires on Railway Trains.** (*Perfectionnements aux moyens d'éteindre les feux sur les trains de railroutes.*)

Robert C. Blackall, Albany, Charles D. Hammond, Jesse W. Sprong, Slingerlands, and Samuel Huntington, Albany, N. Y., U. S., 3rd October, 1882; for 5 years.

*Claim.*—The combination, with the boiler of a locomotive, of a feed water injector C, having a delivery pipe E for connecting said injector with a check valve F, attached to said boiler, provided with a branch pipe E' and stop valves e' and e' arranged for the purpose of optionally discharging the entire volume of water passing through the injector, either into, or outside of said boiler, or for dividing the volume of water.

**No. 15,575. Improvements in a Sap Spout and Pail.** (*Perfectionnements à un seau et siphon pour la sève.*)

Charles C. Post, Burlington, Vt., U. S., 3rd October, 1882; (Extension of Patent No. 1729).

**No. 15,576. Improvements on Step Ladders.** (*Perfectionnements aux échelles à queue.*)

Henry P. Spencer, Detroit, Mich., U. S., 4th October, 1882; for 5 years.

*Claim.*—The combination in a step ladder, of the side pieces A entire at their extremities and slit between the ends, the steps B, prop C, the brace D, the central rod d and the sliding sleeve a concealing a cam which is operated by the lever d.

**No. 15,577. Improvements on Hoop Cutting Machines.** (*Perfectionnements aux machines à tailler les cercles.*)

David F. Holston, Defiance, Ohio, U. S., 4th October, 1882; for 5 years.

*Claim.*—1st. A machine for the purpose of cutting hoops from veneers in which is combined, with the necessary frame, an adjustable feed mechanism, a vertically reciprocating knife, a pressure foot and a stop. 2nd. A machine for cutting hoops from the edge of veneers, wherein the reciprocating movement of the knife is compelled by a cam of the main shaft, and the rotary motion of the feed roll is intermittently compelled by another cam, also secured to said main shaft. 3rd. In a machine for the purpose of cutting hoops from the edge of veneers, the combination of the rolls C D, adjustable roll E and pressure foot N, for the purpose of feeding and confining the veneer while being cut. 4th. The combination of the frame A, bed B, rolls C D, vertically adjustable roll E, boxes F, standard G, lever H, weight I, vertically reciprocating knife J, cams K O, shaft L, lever P, pitman M Q, crank R and ratchet wheel S.

**No. 15,578. Improvements in the System of Constructing Roads.** (*Perfectionnements au système de construction des chemins.*)

William B. Henning, Waterloo, Jacob B. Casebeer and Timothy G. Matheny, Auburn, Ind., U. S., 4th October, 1882; for 5 years.

*Claim.*—1st. The combination, with a flat surfaced or slightly crowned road or other thoroughfare, of drain pipe lines underneath said road surface, the said pipe lines serving as drain pipe lines, aerating pipe lines and heating pipe lines. 2nd. The combination, with a flat surfaced or slightly crowned road or other thoroughfare, having a system of pipe lines there under, of connecting sections and aerating chambers for the said pipe lines. 3rd. The combination, with a flat surfaced or slightly crowned road or other thoroughfare, having a system of drain, pipes, connections, and aerating chambers, of filtering sections underneath the said road surface and over the said pipe lines.

**No. 15,579. Paper Bag Machine.** (*Machine à sacs de papier.*)

Duncan Macmillan, London, (Assignee of Thomas R. Rhoder, Westminster), Ont., 5th October, 1882; (Extension of Patent No. 7978.)

**No. 15,580. Improvements on Steam Boilers.** (*Perfectionnements aux chaudières à vapeur.*)

Samson Fox, Leeds, Eng., 5th October, 1882; (Extension of Patent No. 8185.)

**No. 15,581. Improvements in Sleeping Cars.** (*Perfectionnements dans les wagons dortoirs.*)

Gustave Levi and Adolphus Davis, Montreal, Que., 5th October, 1882; (Extension of Patent No. 8000.)

**No. 15,582. Improvements on Sleighs.** (*Perfectionnements aux traîneaux.*)

Johan C. F. Pagel, Detroit, Mich., U. S., 5th October, 1882; for 15 years.

*Claim.*—1st. A sleigh wherein the back, bottom and body raves are formed from one continuous piece A. 2nd. A sleigh wherein the back, bottom and body raves are formed from one piece, in combination with the broad arms C also formed from one piece.

**No. 15,583. Improvements in Steam Boilers.** (*Perfectionnements aux chaudières à vapeur.*)

Samson Fox, Leeds, Eng., 5th October, 1882; (Extension of Patent No. 8046.)

**No. 15,584. Improvements on Steam Boilers.** (*Perfectionnements aux chaudières à vapeur.*)

Samson Fox, Leeds, Eng., 6th October, 1882; (Extension of Patent No. 8046.)

**No. 15,585. Improvements on wagon racks.** (*Perfectionnements aux râteliers des wagons.*)

Alpheus McCallum, Kars, Ont., and James F. Cass, L'Original, Ont., 6th October, 1882; (Extension of Patent No. 7967.)

**No. 15,586. Improvements on Fence Posts.** (*Perfectionnements aux pieux des clôtures.*)

Edward J. Major, Montreal, Que., 6th October, 1882; (Extension of Patent No. 14,916.)

**No. 15,587. Improvements on Fence Posts.** (*Perfectionnements aux pieux des clôtures.*)

Edward J. Major, Montreal, Que., 7th October, 1882; (Extension of Patent No. 14,916.)

**No. 15,588. Improvements in the Art of Coloring and Finishing Pictures.** (*Perfectionnements dans l'art de colorer et finir les images.*)

Charles H. Myers, Phelps, N. Y., U. S., 9th October, 1882; for 5 years.

*Claim.*—The process of coloring and finishing pictures, by first rendering the paper upon which they are painted or photographed, semi-transparent, by treating the paper to a compound of the following ingredients: sugar of lead one and one-fourth ounce, spirits of turpentine one quart, Canada balsam one pound, second, applying the color to the back, third, cementing the picture to a suitable backing, fourth, securing it to the backing by great pressure, and fifth, finishing it on the surface.

**No. 15,589. Improvements on Washing Machines.** (*Perfectionnements aux machines à laver.*)

Robert H. Cornett, Emporia, Kansas, U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. In combination with the roller supporting frame B<sub>1</sub>, the vertical rollers B<sub>2</sub> journaled for the purpose of delivering the clothes freely from the washing rollers. 2nd. In combination with the supporting frame A and the tub, the arms U pivoted between the rear upright B, and the frame B<sub>1</sub> carrying the washing rollers, the said frame at its sides being secured to the said arms at their lower ends. 3rd. In combination with the arms U and the frame A for supporting the tubs and working parts of the apparatus, the hoop for supporting the frame B<sub>1</sub> out of the tub.

**No. 15,590. Improvements in Water Closets.** (*Perfectionnements aux latrines.*)

George C. Phillips, Boston, Mass., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. The combined water closet bowl and hopper, having its ventiduct extended upward alongside of, and against the outer surface of the hopper and formed in part by the hopper. 2nd. The bowl extended downward within the hopper, in combination with the hopper provided with the ventiduct leading out of the lower part of it, and also with the passage or duct *d* leading from the hopper into the ventiduct from the space *e*, about the extension of the bowl within the hopper. 3rd. The bowl and hopper in one piece and provided with the ventiduct projecting upward from the hopper and formed in part thereby and having main and auxiliary openings leading into it from the hopper.

**No. 15,591. Improvements on Heating Apparatus.** (*Perfectionnements aux calorifères.*)

Ulric Beaupré, Montreal, Que., 9th October, 1882; for 5 years.

*Claim.*—In a boiler, either circular or square, or of any other shape whatever, for the heating of water, for the warming of buildings, the combination of the independent separated horizontal sections A B C and D, the inlets *b<sub>2</sub>* and outlets *d<sub>3</sub>* bound together by the bolts *d<sub>4</sub>*, the independent shell E and self-feeding apparatus L and tumbling fire-grate S.

**No. 15,592. Improvements on Car Wheels.** (*Perfectionnements aux roues des wagons.*)

George W. Miltimore, Chicago, Ill., U. S., 9th October, 1882; for 15 years.

*Claim.*—1st. The method of making car wheels, by placing the spokes in position within the rim, then passing them outward by fixing a mandrel between their converging end, then cutting the shoulders on the spokes so that they will form a circular seat and then inserting and securing on each side hub plates of such size that they will bear upon the shoulders of all the spokes. 2nd. The metal wheel consisting of a rim, spokes provided with bearing shoulders against which hub plates rest upon opposite sides, the inwardly projecting ends of which spokes bear upon the axle. 3rd. A spoke 2 made of bar iron, twisted by a quarter turn to form shoulders 1<sub>1</sub>, cut away at its inner end so that the ends of all the spokes will form a common bearing. 4th. A spoke 2 made of bar iron, twisted by a quarter turn to form shoulders 1<sub>1</sub> and provided with a hole 3 located so as to cut the longitudinal axis of the spoke at the point of the twisting. 5th. In a car wheel, a solid rim having its periphery mortised to receive the tenons of the spokes and cut away to form flat seats for the shoulders of the spokes. 6th. In a car wheel, the combination of the solid rim, having its inner periphery mortised to receive the tenons of the spokes and cut away to form flat seats for the shoulders of the spokes, and the spokes having tenons and flat or square shoulders 1<sub>9</sub>.

**No. 15,593. Improvements on Machines for Grinding and Amalgamating Ores.** (*Perfectionnements aux machines à broyer et amalgamer les minerais.*)

William H. Howland, San Francisco, Cal., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. In a machine for grinding ore, the combination, with the pan A, having a central hub for the drive shaft, of the flaring bonneted frame C, fixed in the rim of the said pan and having a screen at, the ring-shaped die *c* formed with the flange *c'*, and the grinding blocks E connected with the driver. 2nd. In ore grinders, the grinding blocks E made rectangular in cross section and provided with lugs *g* *g* in the opposite ends, one above and the other below the central horizontal line. 3rd. In grinding machines, the hollow driver B formed with web *d* and having perforations *t*, and the air or water pipe *h*, combined

with the pan A provided with the grinding surfaces *c* *c*. 4th. In ore amalgamators, the rotating yoke *g* carrying the arms *a* combined with the pan A provided with the ring *o*. 5th. In ore amalgamators, the curved ring *n* combined with the pan F, the inner ring or case *o* combined with the pan F and rotating stirrers. 6th. The inner ring or case *o* combined with the pan *f* and rotating stirrers.

**No. 15,594. Improvements on Bridle Bits.** (*Perfectionnements aux mors des brides.*)

James H. Jones, Lansingburg, N. Y., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. The bridle bit bar A of a bow shape and having keys or buttons on its ends adapted to receive and interlock with cheek-pieces, which are detachable from the said bit bar. 2nd. A cheek-piece for detachable bridle bit bar formed with a slot adapted to receive a button, or key on the said bit bar, and also with openings adapted to receive the bridle straps. 3rd. A bridle-bit consisting of a central part having at its ends locking buttons or keys, for engaging the bit bar with cheek pieces. 4th. The combination, with the bow-shaped bit bar, having terminal button or key-fastenings, of the cheek-pieces adapted to receive the bit ends and to admit of the same being turned so as to lock the cheek pieces to the bit bar. 5th. The combination, in a bridle bit, of the bow-shaped bit bar and two cheek-pieces formed separately and provided with devices for locking the same together. 6th. In an arched or bow-shaped bit bar, having wings, buttons or flanges on its extremities, shoulders *a* and intermediate necks, in combination with plates having key-holes and slots through them, one or more rings or strap receiving slots.

**No. 15,595. Improved Apparatus for the Manufacture of Air Gas.** (*Appareil amélioré pour la fabrication du gaz d'air.*)

Daniel H. Martin, Ipswich, Queensland, 9th October, 1882; for 5 years.

*Claim.*—1st. The combination and arrangement of two double acting bellows for the purpose of supplying air to the gas generator. 2nd. So constructing air gas apparatus that the air is supplied under water above which is the carburetted liquid in what is called the gas generator. 3rd. The combination and arrangement of the cocks A<sub>3</sub> B<sub>3</sub> and F<sub>1</sub> with connecting rod E and hand handle E<sub>1</sub>, so that all said cocks may be opened or closed by one motion. 4th. The combination of the levers, pivot and rod marked from I to I<sub>4</sub> inclusive, and the stopping mechanism marked from J to J<sub>6</sub> inclusive, with the radial arms C, for automatically stopping and resuming the manufacture of gas by the rising and falling of the gas holder H<sub>3</sub>. 5th. The combination of the radial arms C, and the stopping mechanism marked from J to J<sub>6</sub> inclusive, with the projecting piece E<sub>2</sub> on rod E to which the cocks A<sub>3</sub> and B<sub>3</sub> are connected. 6th. The combination of valve G<sub>4</sub> and its seat G<sub>5</sub> with the float G<sub>3</sub>. 7th. The combination and arrangement of the several parts of the apparatus in the relative positions, whereby a safe, cheap, efficient and compact air gas making machine is produced.

**No. 15,596. Improvements on Saw Mills.** (*Perfectionnements aux scieries.*)

Charles E. Lewis, Bay City, Mich., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. Pressure rollers for gang saw mills, composed of the cross head C, the double crank shaft F and the rollers D mounted on said shaft. 2nd. The combination, with the cross head C having downwardly projecting arms E, of the shaft F having crank O projecting in opposite directions, and the rollers D mounted on said shaft, whereby the said rollers can adjust themselves to apply equal pressure to logs of the same or different thickness. 3rd. The double crank shaft F constructed with a central journal K, whereby the adjacent ends of the rollers can be brought close together.

**No. 15,597. Improvements on Sheet Metal Pipes and Machines for Making the same.** (*Perfectionnements aux tuyaux en tôle et aux machines pour leur construction.*)

William Austin, Philadelphia, Pa., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. As a new article of manufacture, a sheet metal pipe having its body stiffened by means of a spiral rib formed by pressing up the metal. 2nd. The improved pipe sections, consisting of a single sheet of metal, folded into a tubular form, with its edges united longitudinally and having a spiral rib formed thereon. 3rd. A blank for a sheet metal pipe, consisting of the curved sheet of metal, having oblique ribs *b* formed thereon. 4th. The improved pipe blank consisting of a curved sheet of metal, having one folded end and one flat edge and having also oblique rib *b* formed thereon. 5th. In a pipe forming machine, the combination of two co-operating rolls provided, respectively, with a spiral groove and a spiral rib extending their entire length, or substantially so. 6th. The spiral roll C, the spiral grooved roll B co-operating therewith, said rolls being mounted and sustained at both ends by a supporting frame D. 7th. The spirally ribbed and spirally grooved rolls geared together, in combination with means for imparting motion thereto. 8th. The combination of the spirally ribbed and spirally grooved rolls B and C, one provided with a longitudinal groove K, to receive and retain the edge of the blank. 9th. In combination with the spirally grooved roll, the spirally ribbed roll provided with the groove K and with the flattened surfaces adjacent to said groove. 10th. In a pipe forming machine, two co-operating rolls, provided substantially their entire length with a corresponding rib and groove respectively, and also provided at their extreme ends with short male and female threads.

**No. 15,598. Improvements on Mechanical Musical Instruments.** (*Perfectionnements aux instruments de musique mécaniques.*)

Frank Stone, Worcester, Mass., U.S., 9th October, 1882; for 10 years.

*Claim.*—1st. In a mechanical musical instrument, governed by a moving perforated music sheet operating directly as a valve, the tube board provided with horizontal cells, having vertical air passages formed through the roof thereof and with reeds inserted therein, said tube board being located beneath the music or valve sheet and above the air exhausting apparatus. 2nd. In combination, the sounding board having the wind chamber beneath it, tube board located upon the top of said round board with its cells and reeds parallel therewith, and having air inlet passages opening through the roofs of the respective cells, the perforated music sheet operating directly as a valve to said air inlets and arranged to move parallel with the top of said tube-board. 3rd. In combination, the bellows reservoir centrally connected and supported with the wind chest by a hollow standard or conductor, and the exhausters respectively arranged in couples at the right and left of said standard or support and attached to the upper and lower sides of said reservoir for operation in connection therewith. 4th. In combination, the action bed or table A, the sounding devices supported thereon, the bellows reservoir connected therewith by a depending hollow standard or air conductor, the bellows exhausters arranged respectively above and below the ends of said reservoir, the coupling pitmans P, the operating pitmans R and the actuating shaft with cranks and feed rolls thereon. 5th. The tube board D, having its series of cells formed of the relative proportions indicated, with air ducts formed through the roofs of the cells and the reeds d located in relation thereto, viz: with the air ducts over the heel ends of the reeds and the lowered toned reeds set into the cells to a proportionally greater distance than the higher toned reeds. 6th. In combination, the action bed or table with the sounding board, tube board and feed devices arranged thereon, and the removable cap or top covering carrying the presser roll G and provided with the hinged section H. 7th. The combination, with the tube board D and cap piece H, of the presser I consisting of a wire having its ends bent to form spring portions I which are secured to said cap piece, and with its central portion extending transversely across the top surface of the tube board for pressing upon the music sheet.

**No. 15,599. Improvements on Machines for Baling Hay.** (*Perfectionnements aux presses à foin.*)

Peter K. Dederick, Albany, N. Y., U. S., 9th October, 1882; for 15 years.

*Claim.*—1st. The combination of the arm F with the arm D, extension or cam E and sweep or horse lever G. 2nd. The loose, or adjustable horse lever and the preliminary condenser, connected and combined with the pressing devices so as to admit of independent operation. 3rd. The press rods X X passing around the feed orifice and press box at opposite sides and secured at or near opposite ends of the press frame.

**No. 15,600. Improvements on Machines for Removing Potato Sprouts.** (*Perfectionnements aux machines à enlever les germes des pommes de terre.*)

Edwin Payne, Oxbors, N. Y., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. In a potato sprouter composed of a revolving cylinder, provided with ogee-formed slats, cross bars and ribbed heads. 2nd. In combination with a frame of the revolving sprouting cylinder provided with a segmental door and a tray.

**No. 15,601. Improvements on Thill Lugs.** (*Perfectionnements aux dossières.*)

Nehemiah T. Folsom, Boston, Mass., U. S., 9th October, 1882; for 5 years.

*Claim.*—1st. A metallic thill lug formed at its upper end to receive and permit the removal of a buckle holding loop. 2nd. The combination of the lug A, the buckle holding loop and means for securing the ends of said loop to the lug. 3rd. The combination of the lug a, having the recess a', the clamping plate e, the screws d d and the buckle holding loop. 4th. The combination of the thill lug, having the recess a' in its upper end, the leather loop holding the buckle in its bight, the clamping plate e operating to clamp the ends of the loop in the recess of the lug, and the screws d d. 5th. The combination of the metallic thill lug, the shaft girth loops and the socketed plate secured to the lug by screws K K.

**No. 15,602. Improvements in Shooting Skiffs.** (*Perfectionnements dans les esquifs des chasseurs.*)

George Warin, Toronto, Ont., 9th October, 1882; (Extension of Patent No. 8008.)

**No. 15,603. Harvesting Machine.** (*Moissonneuse.*)

Charles D. Dewey, Brockport, N. Y., U. S., (assignee of Robert Thomson and Alfred R. Williams of Stratford, Ont.,) 9th October 1882; (Extension of Patent No. 7988.)

**No. 15,604. Improvements on Harvesting Machines.** (*Perfectionnements aux moissonneuses.*)

Charles D. Dewey, Brockport, N. Y., U. S., (assignee of Robert Thomson and Alfred R. Williams, Stratford, Ont.,) 9th October, 1882; (Extension of Patent No. 7988.)

**No. 5,605. Improvements on Barbed Fence Wire.** (*Perfectionnements au fil métallique barbelé des clôtures.*)

Samuel L. Chisholm, Chicago, Ill., U. S., assignee of Joseph T. Cook, Moline, Ill., U. S., 11th October, 1882; for 5 years.

*Claim.*—1st. In a continuous barbed fence wire, the combination, with the wire links A consisting of short sections of wire having hooks at their ends, of the alternating sheet metal links B provided with points and apertured to receive the hooks of the wire links so as to join the latter and serve as barb. 2nd. In a barbed fence wire, the combination, with the two barbed sheet metal link B, of the wire links A having their hooks a turned in different planes.

**No. 15,606. Improvement in Sewing Machine Motors.** (*Perfectionnement aux moteurs des moulins à coudre.*)

Anatole E. Rouif, Montreal, Que., 11th October, 1882; for 5 years.

*Claim.*—1st. A coiled spring wound up at stated intervals and serving to give rotary motion in either direction through a train of gears and wheels to the driving wheel of a sewing or similar machine. 2nd. The means for reversing the action of a coiled motor spring by causing either end of such spring to work while the other is held fast, consisting in a fixed gear wheel mounted on a shaft, and a loose gear wheel revolving on said shaft, the coiled spring being attached at its outer end to a projection or casing formed in one with such loose gear, and the inner end of said spring being secured to said shaft which is moved in the direction of its axis to cause either gear, at will, to intermesh with the first of a train of gears.

**No. 15,607. Improvements on Car Couplings.** (*Perfectionnements aux attelages des wagons.*)

Darwin S. Walrath, Peter Kitts and Titus Sheard, Little Falls, N. Y., U. S., 11th October, 1882; for 5 years.

*Claim.*—1st. A frame and a draw-head, having a spring between them, and both having a limited longitudinal movement in opposite directions in the platform of the car, in combination with means for retaining the connecting link. 2nd. A frame and draw-head separated by a spring, both having a limited movement in opposite directions in the platform of the car, in combination with the bumper head. 3rd. A frame and a draw head separated by a spring, both having a limited movement in the platform of the car, in combination with the bumper head and means for restraining the connecting link. 4th. The frame carrying the spring actuated cross bar H, the spring actuated draw-head E and the intermediate bumper G, in combination with the bumper head N. 5th. The frame having the extensions C C provided with the slots c c and the cross piece D, having the hole d, in combination with the draw-head E, having the stem or shank e carrying the spring F. 6th. The draw-head E, having the chamfered stem or shank e, in combination with the intermediate bumper G, provided with a stem or shank g and the spring g'. 7th. The spring actuated cross bar H, having the stem h and spring h', in combination with the lever k and the bumper head N. 8th. The lug k', having its top made concentric with the pivot k' and formed into a ratchet, in combination with the lever handled pawl k' pivoted to the lever k. 9th. The bumper head N, formed with the flaring mouth and the tapering throat and with the table n and projection n'. 10th. The bumper head N, in combination with the intermediate bumper and cross bar H. 11th. The frame formed of the grooved upright pieces A A, the top piece B, the slotted and grooved extensions C C and the perforated cross piece D, in combination with the stemmed draw-head E, stemmed intermediate bumper G, cross bar H and bumper head N.

**No. 15,608. Improvements on Devices for Levelling Engine Boilers.** (*Perfectionnements aux appareils de nivellement des chaudières à vapeur.*)

Thomas F. Wilson and Albert L. Wilson, Gorham, N. Y., U. S., 11th October, 1882; for 5 years.

*Claim.*—1st. Raising and lowering the front ends of horizontal boilers of traction, road or other movable engines by the devices, or their equivalents, to keep the said boiler, or boilers, level when the engine is going up or down inclines. 2nd. In combination with the boiler A of a movable engine, the post c, horizontal bar b, attached to the front axle a, its rear end raised and lowered by chain d, drum or rod e, toothed wheel g and worm h on crank rod k.

**No. 15,609. Improvements on Bed Bottoms.** (*Perfectionnements aux sommiers des lits.*)

Dallas Knowlton, Brantford, Ont., 11th October, 1882; for 5 years.

*Claim.*—In a bed bottom of woven wire or other material, the rods E E to guide bar D, and the screws F F to draw up bar D.

**No. 15,610. Improvements on Velocipedes.** (*Perfectionnements aux vélocipèdes.*)

Joseph R. Smith, Brockville, Ont., 11th October, 1882; for 5 years.

*Claim.*—1st. An iron wheel for velocipede consisting of the hub, or nave, made of two flanged disks 1, having a perforated centre and flange notched peripherally shrunk on a hollow-spindle 4, the spokes 5 laterally inserted in the notches and screwing into the rim 6. 2nd. The perch 3 of rolled T-iron rivetted at the upper end to a socket 9, having a termination 10 of T-iron, slotted to receive the vertical web of the perch and the lower end rivetted to a bifurcation 11, having a T-iron termination, slotted to receive the vertical web of the perch. 3rd. The steering frame 21, formed of rolled T-iron in one piece, bent to form and having at both terminations a friction block 15, in combination with a chambered block 18 for holding a lubricant and packing by a band 19, and bolt and nut 20. 4th. The steering frame 21,

formed of one piece of rolled T-iron and secured to a hollow post 22 containing a king bolt 23, said post having a sharp outwardly turned base for securing the sockets of the perch and the steering handle 31 from rising by nut 24. 5th. The adjustable sliding seat 25, formed with a loop 27, ridge 28 and drop lug 29 on the under side, in combination with a spring bar 26 inserted in said loop, whereby the weight of the rider causes the seat to pinch the spring bar, a spiral spring 30 retaining the seat in the set position when the rider is off the seat. 6th. The perch 8 having a bifurcated termination formed with thimbles 12, in combination with the wheels journalled by axle bolts 7 secured in said thimbles by screws 14 and connected by sleeve 13, whereby the velocipede can be converted into a bicycle by removal of the rear wheels and placing one in the bifurcation and securing it rotatively by the axle bolt and screw 7 in the axle and cranks 16, formed in one piece with shoulders 32, and the hub disk 33 sprung thereon. 8th. In combination with the crank axle 16, the foot rests constructed of halves 34 35, having lugs 36, chambers 37, recess 38, oil chambers 39 and bar 40. 9th. The wheel rims 6 of oval iron.

**No. 15,611. Gas Motor Engine.** (*Machine à moteur à gaz.*)

Nicolaus A. Otto, Dentz, Germany, Francois W. Crossley and William J. Crossley, Manchester, Eng., 11th October, 1882; (Extension of Patent No. 8023.)

**No. 15,612. Gas Motor Engine.** (*Machine à moteur à gaz.*)

Nicolaus A. Otto, Dentz, Germany, Francis W. Crossley and William J. Crossley, Manchester, Eng., 12th October, 1882; (Extension of Patent No. 8023.)

**No. 15,613. Improvements on Bed Bottoms.** (*Perfectionnements aux sommiers des lits.*)

Stanislas Pariseault, St. Jean-Baptiste, Que., 12th October, 1882; for 5 years.

*Claim.*—Les trous N percés dans les pièces e et les goujons F et H en la manière de rendre au sommier son élasticité première, c'est à dire, la possibilité d'enlever et de retourner la partie flexible formée des pièces marquées E D et K.

**No. 15,614. Improvements in Crimping Machines.** (*Perfectionnements aux machines à cambrer.*)

Thomas P. Marshall, Jarvis, Ont., 12th October, 1882; for 5 years.

*Claim.*—1st. In combination with the frame and mould block H, of the semi circular metal heel plate Y. 2nd. In combination with the mould block H, a metal press plate N to cover the said block and between which the leather of a seamless boot is placed, the said plate being secured upon the leather by the projection U of the movable end R at one end, and the nut or bolt head O on the other or the equivalent thereof. 3rd. The rubber blocks J J placed in each side respectively of the mould block, and also wooden blocks K K and metal plate L. 4th. The combination of the frame A, mould block H, press plate N, press screw W. 5th. The projections c d to the frame A, forming spaces a b to receive the movable end R, for crimping different sizes of boots and shoes. 6th. A crimping machine for crimping a seamless boot or shoe consisting of the frame A, mould block H, having a foot-shaped recess I, foot block V, rubber blocks J J in each side of mould blocks, wooden blocks K K, iron plate L, metal press plate N, movable end plate R and provided with a projection U, screws m m, metal wheel plate Y, recesses at end a b with projection c d. 7th. In a crimping machine, the movable cross piece B.

**No. 15,615. Improvements on Felting Machines.** (*Perfectionnements aux machines à feutrer.*)

John Ruhl and Conrad Ruhl, Norwilt, Ont., 12th October, 1882; for 5 years.

*Claim.*—1st. The combination of two tiers of rollers C D geared in vertical pairs, said tiers of rollers having an endwise reciprocating movement in their journal bearings. 2nd. The combination, with two tiers of rollers C D, of the bars J connecting the journals of the rollers C, and bar K connecting the journals of the rollers D, and rods L M, cams N O and shaft P for imparting an endwise reciprocating movement to the rollers. 3rd. The combination of the rollers C D, arranged in two tiers, having journals provided with gear cog wheels F F, and gears G meshing with gears F, and gear H for driving the meshing gears G, whereby the rollers C and D are meshed vertically in pairs. 4th. In combination with the frame A carrying on bearings E the reciprocating rollers C and D, the steam box B, perforated on its upper side to discharge steam, fed thereto by a generator, against the material to be felted while passing between the rollers.

**No. 15,616. Improvements on Harvesters.** (*Perfectionnements aux moissonneuses.*)

John H. Elward, Oregon, Ill., U. S., 12th October, 1882; for 15 years.

*Claim.*—1st. The adjustable reel 12, mounted in sliding boxes 18 on arms 11, having a tilting movement by the operation of levers. 2nd. The combination, with the horizontal apron 21, of the elevating aprons 23 24 operating independently and relatively at different speed and axially combined. 3rd. The elevating aprons 23 24 operating independently on the same axial line over floor 22 to take up the grain from the horizontal apron 21 and deliver it in condition to be bound. 4th. The combination, with a grain receiver, fed by elevating aprons, of a bundling mechanism consisting substantially of the swinging frame 35 to bundle and release the grain, spring 40 and cord 41 to compress the bundle by tension of the spring on the cord arm 39, on shaft 36, to loop the cord nearly around the bundle and resting a sufficient time to allow the bundle to be bound by hand. 5th. The combination, with frame 34, having boss projection 43, of the belt or

sprocket wheel 37, sleeved concentrically thereon and provided with a projecting pin 381, and a shaft 36 passing eccentrically through said boss and carrying on its end cross head 39, for intermittently operating the swing frame 35 and bundling arms 39. 6th. The combination of the fixed elevator floor 22, having sides 22a, and swinging frame 22; carrying the elevator aprons 23 24, said elevator frame pivoted at top to the sides 22a, whereby the apron frame will swing outwardly from the bottom. 7th. The carrying table 46 and pivot frame 47, in combination with guides 45, whereby the sheaves are accumulated, carried and dumped in sufficient number to make the shocks. 8th. The trays 49 for carrying binding straw, in combination with a bundling mechanism. 9th. The box 50 for catching loose straw and shattered grain, in combination with a bundling mechanism.

**No. 15,617. Improvements on Horse Shoes.** (*Perfectionnements aux fers à cheval.*)

Theodore S. Very, Boston, Mass., U. S., 12th October, 1882; (Extension of Patent No. 14,028.)

**No. 15,618. Improvements on Horse Shoes.** (*Perfectionnements aux fers à cheval.*)

Theodore S. Very, Boston, Mass., U. S., 13th October, 1882; (Extension of Patent No. 14,028.)

**No. 15,619. Improvements on Refrigerating Apparatus.** (*Perfectionnements aux garde-manger.*)

John T. Reed, Boston, Mass., U. S., 13th October, 1882; for 5 years.

*Claim.*—1st. In a tank or receptacle for containing refrigerants, provided with apertures E and with inclined slats or guards F, for the purpose of admitting the ascending air and the gases at different levels, and allowing them to pass over the refrigerants employed. 2nd. Withdrawing the heavier air and gases from the compartment which contains the meat or other perishable articles, at varying distances from its bottom, and causing them to pass over the refrigerant by which they are absorbed. 3rd. In a refrigerator, a receptacle for refrigerants having its sides formed with apertures at different levels.

**No. 15,620. Improvements in Gun Cleaners.** (*Perfectionnements aux nettoyeurs des fusils.*)

James F. Davis, Fall River, Mass., U. S., 13th October, 1882; for 10 years.

*Claim.*—The joints A, tubular reservoir B, perforated joint C, collars D D D', swabs E E' and the nut F.

**No. 15,621. Improvement on Cant Dogs.** (*Perfectionnements aux renards.*)

Edward Mansfield, Orono, Me., U. S., 13th October, 1882; for 5 years.

*Claim.*—1st. The combination of the ferrule or ring R made in one piece, with the pick point adapted to be driven into the wood without previous heating, and hook e. 2nd. The pick point, having its shank formed of two substantially cylindrical portions of different diameters. 3rd. The hook e round, or nearly so, in cross section and formed with the rib f upon its back.

**No. 15,622. Improvements on Dredging Machines.** (*Perfectionnements aux dragueurs.*)

Adolf C. Both, Portland, Me., U. S., 13th October, 1882; for 5 years.

*Claim.*—1st. The combination of the revoluble windlass or sleeve S and the connection chains q with the frame E, cross-head C, buckets B and their connection bars r q and with the wheel W, the said wheel W and cross-head C being provided with the chains D and G. 2nd. The revoluble windlass or sleeve S provided with the end stuffing boxes and the oil chamber and its induct, and applied to the shaft a and connected with the cross-head C. 3rd. The revoluble sleeve S, provided with the lugs K and also with the bolt i arranged in it, and the said lugs. 4th. The shaft p, having at each end of it a screw d screwed into the plate s, in combination with such plates s and u, and the filling pieces t arranged with and applied to guides l. 5th. The combination of the socket pieces p', guide plates a and filling pieces m, with the bars r' and the guides l of the frame e.

**No. 15,623. Improvements on Coops for Fowls.** (*Perfectionnements aux poulaillers.*)

Jehu M. Householder, Wingfield, Ka., U. S., 18th October, 1882; for 5 years.

*Claim.*—1st. In a coop for fowls, the combination, with the door frame, whose upper cross bar is provided with depending loops, or rings, of a cylindrical rod adapted to pass through said loops, or rings, and a swinging door, provided at its upper end with rings, or loops, through which the said rod passes. 2nd. The combination, with the door frame whose upper cross bar is provided with depending loops or rings, of a cylindrical rod adapted to pass through said loops or rings, a swinging door provided with an opening, and at its upper end with rings, or loops, through which said rod passes, and a stud, or pin, secured to said rod to bear between one of the rings of the door frame and one of the rings, or loops, of the door. 3rd. The combination, with a door frame, having a pawl, or catch lever, pivoted thereto, and a swinging door pivotally secured at its upper end to the frame, of a latch secured to one side of said door to automatically engage said pawl or catch, to prevent the swinging of the door inwardly. 4th. The combination, with a door frame having a pawl or catch lever pivoted thereto and a door pivotally secured at its upper end to the frame, of a pivoted latch secured to one side of the door and consisting of a central spear portion provided with shoulders to engage said pawl, and an upper and a lower curved arm. 5th. The combination, with a door frame having a pawl, or catch lever, pivoted thereto, and a swinging door pivotally secured at its upper end to the frame, of

an automatic locking device consisting of a semi-circular plate, centrally pivoted to the side of the door adjacent to said pawl and provided with an annular flange, a guide loop against which said pawl will bear and a pivoted pawl.

**No. 15,624. Improvements in Clothes Wringers and Mangles.** (*Perfectionnements aux essoreuses et calendres à linge.*)

Camille Gentesse, Montreal, Que., 13th October, 1882; (Extension of Patent No. 14,863).

**No. 15,625. Improvements in Clothes Wringers and Mangles.** (*Perfectionnements aux essoreuses et calendres à linge.*)

Camille Gentesse, Montreal, Que., 14th October, 1882; (Extension of Patent No. 14,863).

**No. 15,626. Improvements in Machinery for Crushing and Reducing Ores, &c.** (*Perfectionnements aux machines à broyer et réduire les minerais, etc.*)

George Dalton, Leeds, Eng., 14th October, 1882; for 5 years.

*Claim.*—1st. The combination, with a fixed and movable jaw and operating shaft of a crusher, or reducing apparatus of a rigid lever fulcrum in the machine frame and means for connecting it with the movable jaw and shaft as explained, for imparting an up and down movement from the latter to the former toggle blocks, and one or more toggles arranged between stationary toggle blocks and said movable jaw, so as to cause the latter to approach the fixed jaw by the downward movement thereof. 2nd. The combination, with the movable jaw and operating shaft of a crusher, or reducing apparatus, of a lower fulcrum between the said jaw and shaft and pivoted at one end to said jaw, connecting rod or link on said shaft, one or more toggles and stationary toggle blocks, stationary. 3rd. The combination, with a crusher, or reducing apparatus, comprising fixed and movable jaws and mechanism as explained for imparting to the movable jaw a movement up and down, and of approach to and recession from the fixed jaw, of a sieving apparatus located with reference to said crusher, or reducing apparatus, and an elevator arranged to lift and deliver between the jaws of the crusher the material too large to pass through the sieving apparatus.

**No. 15,627. Improvements on Locomotive Engines.** (*Perfectionnements aux machines locomotives.*)

Henry Waterman, Hudson, N. Y., U. S., 14th October, 1882; for 5 years.

*Claim.*—1st. The method of placing upon the driving wheel of a locomotive an amount of weight not due to the weight of the engine, by combining with the frame of the engine and the tender a cylinder and piston, a connecting rod, pivoted oscillating links, a supporting vibratory stud and a shoe piece for supporting the upper end of the said stud. 2nd. The combination of the frame A of the engine with the brackets *e*, links *d, d*, the elongating vibratory stud *f, g*, a shoe piece *K*, having different holes, or joints, for connecting it with the upper end of the stud, a piston rod *e*, steam or air cylinder *a* and piston *a*. 3rd. The vibratory supporting stud *f, g*, whereby it is made to aid in transferring a portion of the weight of the tender to the driving wheels of the engine and in returning the parts to their proper positions for re-application by the admission of steam, or compressed air, to the cylinder *a*. 4th. The shoe piece *k*, having a series of holes, or joints, for regulating in different degrees the amount of weight to be placed upon the engine. 5th. The pivoted oscillating links *d, d*, in combination with the rear-cross bar of the frame of an engine, their upper ends being arranged at such a distance from each other as to allow the free vibration of a draw-bar between them and their lower ends so near to each other as to form a central point upon which a portion of the weight of the tender may rest.

**No. 15,628. Improvement on the Process and Apparatus for Subdividing Fatty Matters.** (*Perfectionnement au procédé et à l'appareil de subdivision des corps gras.*)

Arthur Murix, (assignee of William F. C. McCarty,) St. Petersburg, Russia, 14th October, 1882; for 10 years.

*Claim.*—1st. The use of carbonate of magnesia, or of either of its equivalents, in the proportion of 10 per cent of the fatty substance, for effecting the subdivision and the coagulation of the albumine in the fatty substance under treatment. 2nd. The above process, consisting in the molecular subdivision of all fatty or oily substances, treated by water and heat for the purpose of obtaining the base glycerine oxide, as well as the stearic and oleic acid. 3rd. The application of vacuum for separating the fatty substances according to their gravity, after the chemical separation has taken place. 4th. The construction and arrangement of apparatus for obtaining glycerine, stearic acid and oleic acid for commerce economically, without saponification, or use of acids or alkalis. 5th. The construction and arrangement of the apparatus shown in Figs. 1 and 2 of the drawing. 6th. The products obtained by the combination of the above described processes on account of the difference existing between the said products thus obtained and those previously obtained by the industrial means hitherto known.

**No. 15,629. Improvements in Sleeping and Drawing Room Cars.** (*Perfectionnements aux wagons dortoirs et salons.*)

William L. Lowell, Halifax, N. S., (assignee of William H. Paulding, Peekskill, N. Y., U. S., Thomas Clarke, Truro, N. S., and George Renil, New York, N. Y., U. S.,) 14th October, 1882; for 15 years.

*Claim.*—1st. In a sleeping and drawing room car, the combination of the swinging back of the seat, as hinged at *G*, with the supporting springs *F*, bolt *B*, the curtains *M M*, and attachments *K H L L*, the bolt *a a*, the stop *E*, the sliding partition *I*, attachments *C D*, slot *Z*, lattice shelves and open partitions *x* and *w*. 2nd. The combination of the handle *D*, the spring *C* and the sliding partition *I*. 3rd. The combination of the bolt *B*, the spring *m* and slots *g g* with the swinging backs, forming upper berths. 4th. The bolt *a a*, in combination with the spring *b*, the swinging back of seats and the spring *F*. 5th. The swinging half tube *L*, in combination with the curtain *M* and hook *L*. 6th. The partition *I*, in combination with handle *D*, door *R*, slot *P* and removable piece *S* so arranged that *I* may be entirely withdrawn from between the seats.

**No. 15,630. Improvements on railway gates.** (*Perfectionnements aux barrières des railoutes.*)

Pierre Mayraud, Three Rivers, Que., 16th October, 1882; for 5 years.

*Claim.*—1st. In a railroad gate, the combination of counter balanced gate arms *G* pivoted to the gate post to swing vertically the wheels or sectors *S*<sub>1</sub>, sectors *S*<sub>2</sub> keyed upon underground shafts *S*<sub>3</sub>, the underground shaft *S*<sub>4</sub> carrying pinions *W* gearing into the face teeth of the sectors *S*<sub>2</sub>, carrier wheel *W* or equivalent and pinion *W* with hand wheel *H* mounted upon the same spindle *S*, all arranged and combined with the gate posts *P*. 2nd. The gate wings, the tongue *g* to which the barring or palisading *g* is secured combined with the arms *g* and a cross piece. 3rd. The sectors *S*<sub>2</sub> having the upper extremity of their rims formed into a sharp cutting edge for the easy clearing of ice and similar obstructions.

**No. 15,631. Improvements on Shoes.** (*Perfectionnements aux souliers.*)

Frederick E. Farwell, Fitchburg, Mass., U. S., 16th October 1882; for 5 years.

*Claim.*—1st. The shoe A provided with the horn *B*. 2nd. In a shoe, the horn *B*, in combination with the plate *C*. 3rd. A shoe provided with the horn *A* and spring *m*.

**No. 15,632. Improvements on Panel Raisers.** (*Perfectionnements aux machines d'assemblage à panneaux.*)

Edgar N. Gore, Elkhart, Ind., U. S., 16th October, 1882; for 5 years.

*Claim.*—In a panel raising machine, the combination, with the inclined arbors or shafts *A* disposed end to end and sloping toward each other, of the cutters *B*, whose cutting surfaces or faces are adapted to impart to the interposed board a shear out, that is upon their downward movement, to cut obliquely from the bottom of the groove or channel outward to the surface of the board.

**No. 15,633. Improvement in Stove Doors.** (*Perfectionnements aux portes des poêles.*)

Dans R. Alden, Sterling, Mass., U. S., 16th October, 1882; for 5 years.

*Claim.*—1st. The combination, with a stove or oven door, of a plate or panel of glass fixed therein and provided with a hole going through it. 2nd. The combination of an oven or stove door with a plate or panel of glass perforated and fixed therein, and with a covering plate and screw bolt and nut, arranged with the perforation or hole of the said glass plate or panel.

**No. 15,634. Paint.** (*Peinture.*)

Antonia Buzolich, Carlton, and Thomas K. Smith, Prahram, Colony of Victoria, 16th October, 1882; for 15 years.

*Claim.*—1st. An improved composition prepared from seed or nut oil, hydrochloric acid, phosphoric acid, chrysophanic acid, sulphuric acid, shellac, resin, benzoin, white and blue vitriol, chromate of potash, beeswax and garlic. 2nd. The process of preparing a paint composition consisting in heating vegetable oil which forms the basis of the composition, then destroying animal life therein, by the incorporation of hydrochloric or other poisonous acid, then refining said product with phosphoric acid, by admixture and mechanical filtration, then neutralizing the alkali and acid therein contained, by the addition of chrysophanic, sulphuric or other acid, then refining the composition when cold by filtration, then strengthening its body and prevent coagulation by heating and adding dissolved shellac, resin or rook benzoin, to form a paste, then poisoning it sufficiently to make it destructive to animal and vegetable life, by adding white and blue vitriol and chromate of potash, and lastly to increase its adhesiveness dissolving therein beeswax and garlic while the mass is hot.

**No. 15,635. Washing Machine.** (*Machine à laver.*)

Martin W. Robinson, Somerville, Mass., U. S., 16th October, 1882; (Extension of Patent No. 8034.)

**No. 15,636. Improvements on Pumps.** (*Perfectionnements aux pompes.*)

Pierre E. Jay, New York, U. S., 16th October, 1882; for 15 years.

*Claim.*—1st. The two axially coincident barrels *A B*, each constructed with an offset *b* and flange *d*, and each provided with its own packing *D*, gland *E* and bolts *e*, and arranged with a space between them sufficient to permit access to their interiors, in combination with suitable pipes connecting said cylinders, and a piston common to both. 2nd. The combination of the divided or sectional jacket with the inner ends of the separated and axially coincident cylinders *A* and *B*, provided with packing and compressing rings or glands. 3rd. The combination, with the two axially coincident barrels *A B*, of the rings *E* constructed with the screw-threaded portions *A*<sub>1</sub>, and the double nut *F* adapted to be screwed upon the said portion *A*. 4th. The combination, with the axially coincident barrels *A B*, of the packings *D*, rings *E* having screw-threaded portions *A*<sub>1</sub>, the double nut *F* and the bolts and nuts *e*.

### No. 15,637. Improvements on Bleaching Machines. (*Perfectionnements aux machines à blanchir.*)

Frank A. Hooker and Seth W. Lowell, Charlotte, Mich., U. S., 16th October, 1882; for 15 years.

*Claim.*—1st. In a fruit bleacher, the combination of the doors D arranged to slide vertically within the ends of the bleacher, with the frames C, the guide bars of which project beyond the transverse bars c<sub>1</sub> and have bevelled ends c<sub>2</sub>. 2nd. A fruit bleacher provided with ways B, the extremities of which project from the ends of the bleacher with frames C sliding on said ways, and with doors D arranged to slide vertically within the ends of the frames C being provided with guides c<sub>1</sub>, having bevelled ends c<sub>2</sub>; adapted to raise the doors by insertion under their lugs d<sub>1</sub> and with springs d<sub>2</sub> adapted to close the doors after the frames have passed through. 3rd. A fruit bleacher provided with ways B, vertically acting doors D and frames C, consisting of the guides c and transverse bars c<sub>1</sub> having their outer edges bevelled at c<sub>2</sub>, said guides projecting beyond the bars c<sub>1</sub> and provided with bevelled end c<sub>2</sub> adapted to be inserted under the lugs d<sub>1</sub> and elevate the doors, the bevelled edges c<sub>2</sub> adapted to assist the operation by pressing under the bottom edges of the doors.

### No. 15,638. Machine for Obtaining Fibres. (*Machine à extraire les fibres.*)

The Sanford Universal Fibre Company, New York, (Assignee of Gelston Sanford, Brooklyn, N. Y., U. S., 17th October, 1882; for 5 years.

*Claim.*—1st. In a machine for obtaining fibre, the combination of a semicircular, or arc-shaped bed, and a cylinder arranged adjacent thereto and having a progressive alternate rotary motion. 2nd. The combination of a semicircular, or arc-shaped bed composed of bars or sections and yielding supports therefor, and a cylinder arranged adjacent to the bed and having a progressive alternate rotary motion. 3rd. The combination of a semicircular, or arc-shaped bed D, a cylinder C arranged adjacent thereto and having a gear wheel F upon its shaft, the oscillating arms G, the shaft f journaled therein and carrying the pinion f and wheel H, the crank I and crank pin g, the pin i on said pin, and the pitman rods J and wheel K.

### No. 15,639. Machine for Obtaining Fibre from Plants. (*Machine à extraire les fibres des plantes.*)

The Sanford Universal Fibre Company, New York, (Assignee of Gelston Sanford, Brooklyn, N. Y., U. S., 17th October, 1882; for 5 years.

*Claim.*—1st. The combination, with a stationary hollow bed or concave having a grooved ribbed or roughened surface, of a grooved ribbed or roughened cylinder arranged in said bed, or concave, and having both a rotary movement and a longitudinal movement, or end chase. 2nd. The combination, with the stationary bed or concave and the cylinder, of a worm wheel and worm or screw for rotating the cylinder, a crank upon the worm or screw shaft and devices for imparting a reciprocating motion to the cylinder from said crank. 3rd. The combination, with the stationary bed or concave grooved transversely, of the cylinder C grooved circumferentially, and also provided with longitudinal grooves d and having both a rotary movement and a longitudinal movement or end chase. 4th. The combination of the bed or concave B, the cylinder C and the shaft Cr, the worm wheel f, the driving shaft F having the worm or screw h, and the crank G, the rock shaft F provided with arms j and k, the links or rods l and the connecting rod H.

### No. 15,640. Improvements on Invalid Beds. (*Perfectionnements aux lits des malades.*)

Isaac D. Johnson, Keanett Square, Penn., U. S., 17th October, 1882; for 5 years.

*Claim.*—1st. The combination, with the hinged head section of an invalid bed, of a vertically sliding frame arranged in guides back of the head board, and rods jointed to the frame at the bottom and to the head-section at the top. 2nd. The combination, with the hinged head section of an invalid bed, of mechanism for raising it and one or more counter weights to balance said head section. 3rd. The combination, with the hinged head section of an invalid bed, of a vertically sliding frame connected to the head section by jointed rods, a locking device arranged upon the vertically sliding frame and adapted to engage with the rigid parts of the bedstead and a cord connecting with the sliding frame, through said locking device, whereby the unlocking of the frame and the adjustment of the same is effected by one and the same movement. 4th. In an invalid bed, the combination, with a stationary stretcher, of a subjacent vertically adjustable mattress adapted to pass within the frame of the stretcher and sustain the weight of the patient or be dropped below the same. 5th. The means for regulating the tension of the strips forming the stretcher, consisting of the combination, with said strips and the bed rail, of bars arranged to hold the hem of said strips at the end and having screw-holes through the same, a headed screw-bolt passing through said bar and also through a rib attached to the bed rail. 6th. The means for securing the fixed ends of the strips forming the stretcher, consisting of the combination, with said strips and the bed rail, of bars extending across said strips to hold the hem and projecting therefrom at each edge, the projecting ends being provided with pins or dowels to fit neatly in vertical holes in the bed rail, whereby said strips will be held against lateral strain but may be readily removed from the bed rail by raising said bars upward to withdraw the dowel pins. 7th. The combination, with the ribbed side rails, of the stretcher frame the commode sliding horizontally on said ribs and the mattress or other bed vertically adjustable beneath the stretcher. 8th. The stretcher frame having transverse strips across it and ribs on its inner sides, in combination with the commode box made horizontally adjustable on said ribs, and the subjacent and vertically adjustable mattress, whereby the patient is allowed to occupy a natural sitting position with his feet below his seat. 9th. The commode having a circular opening in

its top with an opening at the side of the same. 10th. The combination of the pulley, weight and cord at the foot of the bed, the stationary stretcher having a constant relation to said pulley and weight and the subjacent vertically adjustable mattress. 11th. The combination, with an invalid bed, of the strips U for turning the patient, fastened at the middle to the stretcher strips and free at the end. 12th. The combination, with the hinged head section of an invalid-bed and mechanism for raising it, of a crane vertically pointed to the centre of the front face of the head board, to swing laterally, carrying a pulley at its outer end over which the cord for raising the head-section runs, whereby said cord is brought within reach of the invalid or of an attendant, at either side of the bed. 13th. The combination, with the crane vertically pivoted to the head-board of the bed, the cord supported thereby and the vertical pulley in head board, over which said cord runs, of two horizontal pulleys pivoted in the head board, one on each side of the vertical pulley. 14th. The combination, with the stretcher frame provided with transverse strips and longitudinal ribs on its inner sides and the subjacent vertically adjustable mattress frame, of the commode fitted to slide upon said ribs and provided with hinged legs which may be secured in the horizontal plane of the commode top, or may swing to a vertical position to stand upon said mattress frame. 15th. The combination, with the rigid rectangular stretcher frame and the subjacent vertically adjustable bed frame provided with vertical grooves in its corners, of bed posts, secured to the stretcher frame provided with vertical corners projecting into the grooves of the bed frame to serve as parallel guides to the same when raised or lowered. 16th. The combination, with the complete rectangular stretcher-frame and independently secured removable foot posts, of the foot board, provided with vertical hooks near their top edges at their ends, engaging eyes on the inner sides of the foot-posts, and a central dowel pin registering with a hole in the foot of the stretcher frame, whereby said foot board is so secured to the head that it may be readily removed in any emergency. 17th. The combination, with a vertically adjustable bed and means for raising, lowering, or fixing the same at any desired height, of an independent rectangular frame made deep sided to serve as a crib, when the bed is secured with its top at the lower edge of the frame and posts for supporting the same.

### No. 15,641. Improvements on Culinary Vessels. (*Perfectionnements aux ustensiles de cuisine.*)

John W. Fisher, New York, and Michael W. Hamma, Brooklyn, N. Y., U. S., 17th October, 1882; for 5 years.

*Claim.*—1st. In a culinary vessel, the combination, with an earthenware bowl, of a metallic enclosing band having an upper corrugated edge adapted to grasp the bowl, thereby supporting the same. 2nd. The combination of the vessel A, having one or more annular shoulders a, the enclosing band B secured thereto and an intermediate supporting, or strengthening, frame composed of the arms C and disk, or ring Cr. 3rd. The combination, with the vessel A, having an annular series of depressions c, of the enclosing band B, having its upper portion pressed into engagement with said depressions. 4th. The combination, with the bowl A, having annular shoulders a and groove b, of the band B, having an inwardly bent upper edge adapted to engage within the groove b, whereby said parts are securely connected. 5th. The combination of the bowl A, having tapering sides and provided near the top with annular shoulders and groove, and the casing B, having vertical walls and an inwardly turned upper edge adapted to engage with the annular groove formed in the bowl, said casing being provided with a bail, or handle, and having, at its lower end, an annular recess h, for the attachment of the perforated flanged bottom D, a space being left between the bowl and its casing for the circulation of heat. 6th. The combination, with the bowl A, having convex rim g, of the outer casing B, extending down so as to leave a space below and around the bowl and provided with annular corrugations e f, the upper annulus clasping the rim g, and the lower annulus adapted to bear against the convex surface of the bowl and forming a shoulder to support the same in its casing. 7th. The combination of an inner earthenware vessel, or bowl, and an outer metallic casing, of an outer metallic casing extending down so as to leave a space below the bowl and between it and its casing for the circulation of heat. 9th. The combination of the inner vessel A, casing B having its lower edge turned inward and upward to form an inner annular recess h, and the bottom D having an annular flange adapted to rest in said recess. 10th. The combination of the inner vessel A, band B and perforated bottom D. 11th. The combination of an earthenware vessel, a metallic enclosing jacket and an intermediate supporting frame. 12th. The combination, with the vessel A, having annular shoulder a, of the jacket B, provided with internal annular projection d. 13th. The combination of the inner vessel A, having shoulders a and groove b, the casing B, having annular recess h and inner projection d, the bottom D, provided with perforations i, i, and the intermediate supporting frame composed of the arms C and ring Cr.

### No. 15,642. Improvements on Electric Chandeliers. (*Perfectionnements aux candélabres électriques.*)

Thomas A. Edison, Menlo Park, N. J., U. S., 17th October, 1882; for 15 years.

*Claim.*—1st. An electrical knock down chandelier, consisting of a stem, a base provided with a set of contact springs, or plates, for each arm of the chandelier and arms, each provided at its inner end with an insulating block carrying contact terminals for the wires of the arm, and adapted to form electrical contact with the proper set of springs, or plates, when placed in position. 2nd. The combination of a chandelier-arm, provided at its inner end with an insulating part upon which are secured metallic plates, blocks or springs forming one set of terminals of a wire circuit within the arm, and a base provided with contact plates or springs with which the plates, blocks or springs, of the arm form electrical contact, when the arm is placed in position. 3rd. An electrical chandelier arm, provided with conductors therein, an insulated inner end and circuit-terminals arranged thereon, to which the wires are electrically connected. 4th. The



combination, in an electrical chandelier, of a standard, or support. A carrying a set of conductors, those of one or the main circuit, a base provided with a series of contact plates, or springs, one set for each arm connected in multiple arc to the main circuit and an arm, or arms, for carrying the lamps each provided with conductors and with an insulated end carrying contact plates, arranged to complete circuit with the proper set of contacts in the base. 5th. A chandelier base, provided with an insulated plate and having secured thereon contact plates, or springs, each set forming terminals of a derived circuit. 6th. An electrical knock down chandelier in which each part intended to be separable is provided with an insulated portion carrying or supporting contact plates, or springs, forming the terminals of its wire conductors and arranged to complete circuit with its neighbouring portion, when the two are secured together. 7th. The combination, in an electrical chandelier, of a wooden body and arms, and conducting wires secured within perforations therein.

**No. 15,643. Improvements on Mail Bag Fastenings.** (*Perfectionnements aux cachets de sûreté des valises à lettre.*)

John H. Bartlett and Peter D. McIntyre, Ottawa, Ont., 17th October, 1882; for 5 years.

*Claim.*—1st. In a mail bag fastening, the opposing cams K K pivotally hung in slots in the shell of the lock yielding to the insertion of the rivet and resisting its withdrawal by compression. 2nd. The lock shell constructed of the sections H H<sub>1</sub> and plates N N<sub>1</sub> adjusted and rivetted together.

**No. 15,644. Improvements in Devices for Converting Motion.** (*Perfectionnements aux appareils à convertir le mouvement.*)

Frank Elbing, Algersdorf, Austria, 19th October, 1882; for 5 years.

*Claim.*—1st. The crank mechanism, having slotted crank arm A, crank pin B hung by arm b on the crank arm, and the grooved plate C having a guide slot engaged by the crank pin. 2nd. The combination, with a crank, of a secondary crank engaging the main arm and held in position by an eccentric guide.

**No. 15,645. Improvements on Apparatus for Dispensing Effervescent Liquids.** (*Perfectionnements aux appareils de distribution des liquides effervescent.*)

Louis Bergen, New York, N. Y., U. S., 19th October, 1882; for 5 years.

*Claim.*—1st. The combination of two compartments, a pipe leading to, one compartment from the receptacle containing a liquid, a pipe, or passage, connecting this compartment and the other compartment directly together and provided with a valve, whereby the gas may be allowed to escape from the former compartment to the latter compartment, and an escape from the compartment last named to the atmosphere. 2nd. The combination of two compartments arranged one above the other, a pipe leading to the lower from the receptacle containing the liquid, a pipe, or passage, connecting the two compartments directly together, and provided with a valve, whereby gas may be allowed to escape from the lower compartment into the upper compartment, and an escape cock arranged in the upper compartment. 3rd. The combination of two compartments, a partition between the same, capable of movement by inflowing liquid, a pipe leading to one compartment, from the receptacle containing the liquid, a valve controlling communication between this compartment and the other compartment, and an escape from the compartment last named.

**No. 15,646. Improvements on Fittings and Fixtures for Electric Lamps.** (*Perfectionnements dans la pose et aux garnitures des lampes électriques.*)

Thomas A. Edison, Menlo Park, N. J., U. S., 19th October, 1882; for 15 years.

*Claim.*—1st. The combination of a base piece, a lamp or chandelier standard, a safety catch and a cap covering the base-piece. 2nd. The combination of a base piece, secured to the wall, or ceiling, a bracket, or chandelier, the stem of which is attached to said base-piece, an incandescing electric lamp or lamps supported by said bracket, or chandelier, and a safety-catch and circuit connections upon said base piece. 3rd. The combination of a pendant incandescing electric lamp and a socket to which said lamp is removably attached, with an open flaring reflector supported by means attached to or above said socket, whereby the downward reflection of the light is uninterrupted and the lamp can be removed from and placed in said socket, without disturbing the position of said shade, or reflector. 4th. The combination, with the downwardly hanging arm of a bracket, or chandelier, of a lamp socket secured to said arm, a pendant incandescing electric lamp removably secured to said socket, and a shade, or reflector, supported by means surrounding the bracket, or chandelier, arm above said socket and resting upon said socket. 5th. The combination, with the downwardly hanging arm, of a bracket, or chandelier of a lamp socket, secured to said arm, a pendant incandescing electric lamp, removably secured to said socket, and a shade or reflector supported by means clamped between said socket and a shoulder, or ring on said bracket, or chandelier arm, above said socket.

**No. 15,647. Improvements on Skates.** (*Perfectionnements aux patins.*)

William A. Sutton, New York, N. Y., U. S., 10th October, 1882; for 5 years.

*Claim.*—1st. In a skate, the combination, with a fixed heel plate, of an oscillating clamp plate, having fixed rear clamps and a movable

front clamp, said front clamp being actuated by a connecting rod, pivoted to the movable clamp and secured adjustably to a pivot-lug of the heel plate, sideways of the runners, so as to throw the movable clamp against the heel by swinging the runner in line with the foot. 2nd. The combination of the runner having a fixed heel plate, with an oscillating clamp plate having fixed rear clamps and a movable front clamp, and with means whereby the movable front clamp is connected to a side pivot of the fixed heel plate, so as to be carried toward or away from the heel, by swinging the runner into, or out of line with the foot. 3rd. The combination, of a fixed heel plate and oscillating clamp plate, having fixed rear clamps and a movable front clamp, with a connecting-rod, pivoted to the movable clamp and secured adjustably to a pivot-lug of the heel plate by a screw-nut at each side of the pivot-lug. 4th. The combination of a sole-plate, having an adjustable sole-clamp at one side, and a movable sole-clamp arranged at the other side of the sole-plate with an eccentrically pivoted cam-lever, connected by a pivoted bracket to the movable clamp.

**No. 15,648. Offal Dryer and Cooler.** (*Séchoir et rafraîchisseur des rebuts.*)

Max Tamm, Saint-Louis, Mo., U. S., 19th October, 1882; for 5 years.

*Claim.*—1st. The cooler L, consisting of a tank, left open at the top, the rotating shaft M<sub>1</sub>, revolving stirrer K<sub>1</sub>, having radial arms k<sub>1</sub> k<sub>2</sub> with incline face k<sub>3</sub>, the dryer consisting of two, or more tanks C D, closed at top, its two bottoms d d<sub>1</sub> forming a steam space e, the steam pipe F, the water pipe G and the rotating shaft I, carrying stirrer K of like construction to that in the cooler, all said parts combined and constructed by means whereof the dried offal can be immediately cooled and packed for use. 2nd. The combination of one or more dryers consisting of a tank, or compartment having closed top, the bottoms d d<sub>1</sub> forming a steam space e, the steam pipe F with its branches, the water pipe G with its branches, the shaft I, its stirrers K<sub>1</sub>, having curved arms k<sub>1</sub> k<sub>2</sub> with incline face k<sub>3</sub>, the feed and discharge pipes H and O, the cooler consisting of a tank L open at top, its shaft M<sub>1</sub> carrying stirrer K<sub>1</sub>, the fan and its communication to the dryers and the top shaft and gearing, meshing with said vertical shafts.

**No. 15,649. Improvements on Sleeping Cars.** (*Perfectionnements aux wagons dortoirs.*)

Peter M. Melick, Newark, N. J., U. S., 19th October, 1882; for 5 years.

*Claim.*—1st. In a car seat convertible into a sleeping couch, the combination, with cushions A A', backs B, braces b and pivot i, of bars I, carrying said pivots and provided with racks e at their lower extremities and fitting into sockets in the platform, or leg, the pinions x and shaft z arranged below platform D and operating to raise the lifting bars I, and stops l arranged and operating to sustain rods I when elevated. 2nd. In combination with the platform D, back B and leg G, the rods I carrying the back B by the pivots i and arranged in sockets in the platform, or leg, and provided with mechanism for lifting, and the arm C hinged to end piece d by a horizontal joint and arranged so that the entire arm, above the seat cushions, may be turned downward and outward. 3rd. In combination with the wall of the car and the backs B turned up, the partition E constructed and secured to the side, or wall, of the car and provided with a strip E<sub>1</sub> at the bottom, to fill the space between the edges of the adjacent backs. 4th. The combination, with the wall of the car and the backs B turned up, of the strip E<sub>1</sub> secured to the wall of the car and serving to fill the space between the adjoining backs. 5th. In combination with the partition E or strip E<sub>1</sub> secured removably to the wall of the car, the means for connecting the same to the edges of the upturned backs B as at e or p and thereby supporting, or bracing, the backs in a horizontal position.

**No. 15,650. Improvements on Telephones.** (*Perfectionnements aux téléphones.*)

Allen W. Rose, Farrington Road, Eng., 20th October, 1882; for 5 years.

*Claim.*—1st. The improved combined telephonic instrument.

**No. 15,651. Improvements on Steam Engines.** (*Perfectionnements dans les machines à vapeur.*)

Alexander Morton, Glasgow, Scotland, 20th October, 1882; for 5 years.

*Claim.*—1st. The combination of the short lever, or spanner A, centered at one end B, on a projection on the connecting rod X and having a radiating, or movable end C attached to an overhung crank D by a link E, and to the valve rod P by a simple lever, or levers G, connecting links H M with a slide block and slot, or curved bar O, whereby an equal distribution of steam, or other gas, to both ends of the cylinder, or cylinders, is effected whether in full, or intermediate gear. 2nd. The combination of the short lever, or spanner A centered at one end B on a projection on the connecting rod X and having a radiating, or movable end C attached first by a link E to levers F and U, the said lever F moving through an arc which crosses, or is subtended by a line drawn through the centres of the engine, and second to the valve rod P by a lever G, links H M, slide block N and slot, or curved bar O, whereby an equal distribution of steam, or other gas, to both ends of the cylinder, or cylinders, is effected, whether in full, or intermediate gear. 3rd. The combination of the short lever, or spanner A, centered at one end on a projection on the connecting rod X and having a radiating, or movable end C attached, first by a link E to levers F and U, the said lever F moving through an arc which crosses, or is subtended, by a line drawn through the centres of the engine and second to the valve rod P by a simple lever G, links H M and Y, the latter link being substituted for the curved slot, or bar O, whereby an equal distribution of steam, or other gas to both ends of the cylinder or cylinders, is effected, whether in full, or intermediate gear. 4th. The combination of the short lever, or span-

ner A, centered at one end on a projection on the connecting rod X and having a radiating, or movable end C connected by a link E to an overhung crank D, and by a simple lever G to a link H and to a T-piece O, which latter so vibrates, that its longer arm O1 is always parallel, or approximately parallel, with the link H, the rocking head of the said T-piece being also connected to the valve rod P by a link M, whereby an equal distribution of steam, or other gas, to both ends of the cylinder or cylinders, is effected, whether in full, or intermediate gear.

**No. 15,652. Improvements in Sheds for Drying Bricks.** (*Perfectionnements dans les hangars de dessiccation de la brique.*)

James Evans, Philadelphia, Pa., U.S., 20th October, 1882; for 5 years.

*Claim.*—1st. The covered skeleton rack, for drying bricks, consisting of the combination of a ground frame, vertical posts, roofs, movable sliding shelves resting on strips and stops for limiting the sliding movement of said shelves.

**No. 15,653. Improvements on Barrel Rollers and Guides.** (*Perfectionnements aux rouleaux et aux guides des barils.*)

Bernard H. Schonhoff, Cape Girardeau, Mo., U. S., 20th October, 1882; for 5 years.

*Claim.*—1st. The plates E journalled upon the pointed adjustable rods D, said plates being of a size equal to the headings of a barrel, or hoghead. 2nd. The adjustable pointed rods D, working in bearings, or sleeves *b*, formed upon the arms B C and provided with inches *c*, in combination with the plates E and thumb-screws *d*. 3rd. The handle A, having secured thereto the tong-shaped arm B, and similarly shaped free arm C, pivotally connected to the arm B and secured and held in place by the sliding ring *f*, working upon the handle A, in combination with the adjustable pointed rods D, thumb-screws *d* and journalled plates E.

**No. 15,654. Improvements on Fixtures and Attachments for Electric Lamps.** (*Perfectionnements aux garnitures et à la pose des lampes électriques.*)

Thomas A. Edison, Menlo Park, N. J., U. S., 20th October, 1882; for 15 years.

*Claim.*—1st. The combination of two bracket arms and a pivotal connection therefor, arranged to constantly maintain electrical connection from a conductor in the other, and a casing attached to one arm and inclosing and protecting the pivotal connection. 2nd. The combination of two bracket arms, one pivoted upon or within the other, so as to rotate freely, and means for constantly maintaining electrical connection between a conductor, or conductors, in each arm and a casing attached to one arm and inclosing and protecting the pivotal connection. 3rd. The combination of a bracket arm, provided with an insulated pivotal piece having thereon one or more metal rings, and a bracket arm having a box, or casing, to receive the pivotal piece and provided with a spring, or springs; constantly bearing upon the ring, or rings, and electrical connections from the spring, or springs, and ring, or rings, and a casing inclosing and protecting the springs and rings. 4th. A swinging electrical lamp bracket, composed of two or more arms, provided with means for constantly maintaining the proper electrical connections therethrough, and a casing inclosing and protecting the said means. 5th. A circuit controller for an electric lamp, in which the manipulative portion is a band, or ring, of insulating material mounted directly upon the lamp socket. 6th. The combination, with a broken electrical circuit of a circuit closer, attached to the interior of a band, or ring, of insulating material, mounted upon the base of the lamp. 7th. The combination, with the socket of an electric lamp, of a circuit controller, operated by a ring, or band of insulating material, encircling the socket. 8th. The combination, with an electrical circuit, of two pairs, whereat the circuit is broken, and a wedge for closing such break attached to the interior of a band, encircling and holding the pins and circuit connections. 9th. The combination, with a circular, or ring circuit controller, of means for limiting its motion. 10th. The combination, with a circular, or ring circuit controller, of means for audibly indicating when the proper amount of movement has been given.

**No. 15,655. Improvements on Presses.**

(*Perfectionnements aux presses.*)

Hiram M. Smith, Richmond, Va., U.S., 20th October, 1882; for 5 years.

*Claim.*—1st. The combination, with the reciprocating plunger, of the straight pitman G G pivoted to the plunger, the arms G<sub>2</sub> G<sub>2</sub> pivoted to the straight pitman, the shaft H carrying said arms G<sub>2</sub> G<sub>2</sub>, and and the supporting hangers H<sub>1</sub> H<sub>1</sub> inside of the arms G<sub>2</sub> G<sub>2</sub>, whereby the pitman can be swung down to or beyond the vertical line of their pivots *g* without requiring the pitman to be bent. 2nd. The combination, with the reciprocating plunger of the press and the mechanism for reciprocating said plunger, of the shaft H, the spur segment, or quadrant keyed to said shaft H, the devices for imparting power to said segment, and the devices which automatically disengage from said segment the power mechanism. 3rd. The combination, with a reciprocating plunger, the shaft H and the reciprocating devices connecting the plunger with said shaft, of the cogged segment secured to said shaft, the power shaft I, the power wheel J, the loose pinion J, the clutch K K<sub>1</sub>, the rocking lever M M, the arm O, carried by said lever end, the tripping arm O, carried by the shaft H and adapted to engage with the arm O, to automatically throw the clutch out of engagement with the plunger. 4th. The combination, with the reciprocating plunger, of the shaft H, the reciprocating devices, which connect the plunger with said shaft, the means for imparting power to said shaft H during the operation of pressing the shifting lever for releasing the power devices, the arm O<sub>1</sub> carried by said shifting lever, the slotted spring P adapted to engage with said arm, and the tripping

arm O, carried by shaft H and arranged to release the arm O<sub>1</sub> from said spring P. 5th. The combination, with the reciprocating plunger, the rocking shaft H, the reciprocating devices which connect said shaft with the plunger, the quadrant, the detachable power devices adapted to be engaged with said quadrant, during the operation of pressing the devices which automatically disengage the power devices from said quadrant, and returning mechanism which carries the quadrant outwardly after its disengagement. 6th. The combination of the pressing valve, the plunger above the table, the means for moving the plunger down, the shaft H and the devices which support said shaft from the table. 7th. The combination, with the table and the plunger above the table, of the means for drawing the plunger toward the table and the devices for thrusting upward against the table in the line of the plunger, when it is drawn downward. 8th. The combination, with the plunger, of the pitman adapted to be brought into vertical position when the plunger is down, the means for bringing down the pitman, the arm O for throwing the pitman moving devices out of operation, and the crank arm, or curved arm H<sub>3</sub> attached to said arm O and arranged to have its curved part lie immediately below the pitman when it is down. 9th. The combination, with the plunger, the pitman for drawing the plunger down and the devices which move the pitman, of the means which positively lock the pitman in its lowermost position. 10th. The combination, with the plunger, of the pitman, the shaft H, the segment L, the means for rotating the segment, the arms G<sub>2</sub> and the intermediate devices which connect the segment with the arms G<sub>2</sub>. 11th. The combination, with the plunger, of the pitman, the shaft H, the devices which rock the shaft H to swing the pitman down, the means for throwing the power devices out of engagement, the arms O and the means for adjusting the position of said arm relative to the shaft H, whereby the time at which the power devices are thrown out can be regulated. 12th. The combination, with the plunger and the pitman G, provided with two upwardly projecting threaded arms *g*<sub>2</sub> *g*<sub>2</sub>, of the box *g*<sub>1</sub> arranged to have both ends simultaneously adjusted upon the arms *g*<sub>2</sub> *g*<sub>2</sub>.

**No. 15,656. Improvements in Railroad Rail Joints.** (*Perfectionnements dans les joints des rails de railroutes.*)

Francis Lightfoot, Media, Pa., U. S., 20th October, 1882; for 5 years.

*Claim.*—1st. Rails having their contiguous ends upset so as to be reduced in width, though retaining full weight, the upset ends lapping so as to form a tread about equal to that of the full rail. 2nd. A rail having longitudinally projecting lips C, in combination with a second rail, said lips being introduced into the space between the tread and the base of said second rail and overlapping the neck thereof.

**No. 15,657. Improvements on Attachments to Harvesters.** (*Perfectionnements aux dispositions aux moissonneuses.*)

Lorenz Spitzig, New Germany, Ont., 20th October, 1882; for 5 years.

*Claim.*—A harvester attachment for lifting pea-vines in cutting, consisting of two sections A E, hinged together in advance of the cutting knives, the section A having an opening J, to receive the point of the knife guards, and an extension D forward of the hinge, the end of said extension entering a slot G in a wall F of section E intermediately of the point and hinge, whereby the section A will be motionless when attached to a bar on a harvester, and the section E have a rising and falling movement at the point, to freely follow the unevenness of the ground.

**No. 15,658. Improvements on Grain Bag Fasteners.** (*Perfectionnements aux attaches des sacs à grain.*)

William Hunter, Wawanosh, Ont., 20th October, 1882; for 5 years.

*Claim.*—The hinged metal collar A fastened around mouth of grain bag C by means of studs D engaging with slots E and secured to said bag by rivets B.

**No. 15,659. Improvements on Knitting Machinery.** (*Perfectionnements aux machines à tricoter.*)

Henry A. Fruitt, Philadelphia, Pa., U. S., 20th October, 1882; for 5 years.

*Claim.*—1st. The loop-retaining hook, or pin, having a cutting blade *f* secured to or forming part thereof. 2nd. The loop-retaining hook, or pin, having a blade *f* forming part thereof and having opposite cutting faces *e* *e*. 3rd. The combination of the needles *a* and guides *d* of the knitting machine, with the loop-retainers *b* having knives *f* secured to, or forming part thereof.

**No. 15,660. Improvements on Sinks.**

(*Perfectionnements aux éviers.*)

Joseph A. Talpey, Somerville, Mass., U. S., 20th October, 1882; for 5 years.

*Claim.*—1st. A cast metal sink having a trap integral with the body thereof. 2nd. In a sink, the walls *d* *m*, guard G, dam H, pipe J, basin D and strainer E.

**No. 15,661. Improvements on Devices for Uncoupling Cars.** (*Perfectionnements aux appareils à découpler les wagons.*)

Benedict Hickok, Buffalo, N.Y., U.S., 23rd October, 1882; for 5 years.

*Claim.*—In a freight car, in combination with the usual draw-head *a*, link *b* and pin *c*, the uncoupling devices consisting of the rod *d*, at the end, or ends, of a car, said rod having a tongue, or projection *d*, in connection with the coupling pin *c*, or attached thereto by a short chain *d*<sub>1</sub>, and provided with a handle *f* and a turned-up end *i*, the latter engaging in the catch *h*.

**No. 15,662. Improvement in a Water and Vermin Repelling Compound.**  
(*Perfectionnement dans un composé répulsif pour l'eau et la vermine.*)

Daniel M. Lamb, New York, N. Y., U. S., 23rd October, 1882; for 5 years.

*Claim.*—1st. The process of treating a solution of any animal fat, spermaceti, or wax, with or without a mixture of hydro-carbon gum, dissolved in any suitable light hydro-carbon solvent, by passing a gas, or gases, such as are specified and generated through the solution so formed, and then freeing the solution from any residual gas, or acid, by a treatment with an alkaline solution, either with or without the addition of water. 2nd. A solution formed by dissolving any animal fat, spermaceti, or wax, with or without the addition of a hydro-carbon gum, dissolved in any suitable light hydro-carbon solvent, and then subjecting the solutions so formed to a gaseous treatment and a washing process. 3rd. As a new article of manufacture, a fabric, or article coated, or saturated with the herein described solution of animal fat, wax, or spermaceti with or without a mixture of a hydro-carbon gum, and then the coating fixed by heat.

**No. 15,663. Improvements on Chronographs.**  
(*Perfectionnements aux chronographes.*)

William H. Douglas, Stourbridge, Eng., 23rd October, 1882; for 5 years.

*Claims.*—1st. The general arrangement and combination of the parts of chronographs by which an extra minute hand and dial index, and an extra seconds hand are shewn, with the ordinary hands upon the usual dial face, or upon a back dial, if preferred, or any mere modification of such arrangement and combination, involving the same principles. 2nd. The parts connected with the operation of starting, stopping, and returning the extra minute and seconds hand, to separate the ratchet wheel S from the star piece F, and place ratchet wheel S and slide P between the plates. 3rd. The slide P, the spring K', the two clicks V and X, the lifting spring Y, and the double spring Z, each and all in their adaptation to chronographs. 4th. The arrangement of the mechanical parts on the top plate of a watch to bring an extra minute hand on to the dial.

**No. 15,664. Improvements on Buckle Attachments.**  
(*Perfectionnements aux appareils des boucles.*)

La Fayette Hartson, Wyoming, Iowa, U. S., 23rd October, 1882; for 5 years.

*Claim.*—A holed strap, tongued buckle, and two rivets combined, with a clip doubled to form two parallel parts apertured at the fold, to allow the buckle tongue to pass through and having the strap end arranged between and rivetted to both of said parts.

**No. 15,665. Improvements on Gas Apparatus.**  
(*Perfectionnements aux appareils à gaz.*)

George Ramsdell, Oswego, N. Y., U. S., 23rd October, 1882; for 5 years.

*Claim.*—1st. In combination with an oil retort and a gas mixing chamber, a wood retort provided with an upper compartment for wood, and a lower compartment for charcoal, and a passage connecting the rear end of said compartments and an exit pipe connecting with the forward end of the charcoal compartment. 2nd. In combination with a gas and vapour mixing chamber and a rotary valve located therein, two side pipes leading respectively to a wood and an oil retort, an upright pipe leading to a super heating retort, and a depending pipe leading to a lower valve chamber. 3rd. In combination with wood retorts and oil retorts located in horizontal and vertical pairs, a valve chamber with which the pipes of the two lower wood retorts connect and a rotary valve located in said chamber, an upright pipe leading from the latter to a gas vapour mixing chamber provided with pipes leading respectively to the upper wood retort and the oil retort.

**No. 15,666. Improvements on Coupling Joint for Shafting.**  
(*Perfectionnements aux joints des arbres de couche.*)

William Johnston, Philadelphia, Pa., U. S., 23rd October, 1882; for 5 years.

*Claim.*—1st. In a variable coupling joint for shafting, a link in combination with heads, each provided with an oscillating block and pin. 2nd. The coupling link, in combination with a head formed of sections a, b, between which is held the oscillating block with which said link is connected. 3rd. The heads having bevelled faces which are in contact and operate after the manner of frictional gearing. 4th. A head, provided with anti-friction metal interposed between the oscillating block and the contiguous portion of the head. 5th. An oscillating block, having within it an oscillating pin to which the coupling link of the heads is attached. 6th. The variable coupling joint for shafting, provided with a lubricant receiving groove, which is formed in one of the sections of the head adjacent to the oscillating block thereof.

**No. 15,667. Improvements in Treatment and Moulds for the Manufacture of Sugar.**  
(*Perfectionnements dans le traitement et les moules pour la fabrication du sucre.*)

Moris Weinrieb, Vienna, Austria, 23rd October, 1882; for 5 years.

*Claim.*—1st. The rectangular centrifugal moulds, or frames, with ribbed or zig-zag, or graduated plates placed therein. 2nd. The combined manufacture of sugar in sticks simultaneously with sugar in lumps, or blocks, in centrifugal machines, and by means of the rectangular forms, or moulds.

**No. 15,668. Improvements on Dust Pans.**

(*Perfectionnements aux porte-ordures.*)

Samuel M. Perry, Plainfield, N. J., U. S., 23rd October, 1882; for 5 years.

*Claim.*—1st. The combination, in a dust pan, of the detachable handle and a detachable leg with the hood or partial cover. 2nd. The combination, with a dust pan having a bottom, side and back wall and an open front, of a socket, or recess, when the said recess is placed partially, or wholly, inside of the back-wall of the pan, and in such relation to the pan that it may sustain a removable handle in a nearly upright manner when said pan is in position for use. 3rd. The combination of a dust pan body, open socket and detachable handle, when the shank of said handle is so formed that, when it is fast in said socket, it shall extend through the same and sufficiently below the bottom of the pan to form a pivot, or leg, for the rear portion of the pan. 4th. The combination, with the detachable handle of a dust pan, of a suspending pin in connection with a suspending perforation eye, hook, or equivalent device. 5th. A dust pan having a perforation, eye, hook, or other suspending device, at its front edge. 6th. The combination, with a detachable dust pan handle, of a clamp. 7th. The dust pan hood having a serrated edge.

**No. 15,669. Wire Staple.** (*Crampe en fil métallique.*)

Patrick Dunn and Thomas Harris, Cote St. Paul, Que., 23rd October, 1882; (Re-issue of Patent No. 13,941.)

*Claim.*—1st. A wire staple having the extremity of the legs straight on the inside and bevelled downwardly, from the outer to the inner side, to form a point and prevent the legs from spreading. 2nd. A wire staple, having one point of the legs out bevelled out the other side, and the other out parallel thereto, and turned inwardly so as to make both legs straight on the inner side. 3rd. As an improved article of manufacture, a wire staple having the crown, or head, depressed, or indented. 4th. A wire staple having the crown, or head, depressed or notched, and the points of the legs bevelled on the outside. 5th. A wire staple having the crown, or head, depressed, or notched, and the extremity of the legs bevelled downwardly, from the outer to the inner side, to form a point, and prevent the legs spreading when driven. 6th. A wire staple having the head, or crown, depressed or notched, one point out bevelled on the outside, and the other cut parallel thereto and turned inwardly.

**No. 15,670. Improvements on Button Fastenings.**  
(*Perfectionnements aux agrafes des boutons.*)

George O. Schneller, Ansonia, Conn., U. S., 23rd October, 1882; for 5 years.

*Claim.*—1st. The metal socket B, closed down upon both sides of the article to which the button is to be attached, combined with a button, the shank of which is constructed to take its bearing upon the button side of the socket, and the fastening device to take its bearing upon the opposite, or reverse side of the socket.

**No. 15,671. Improvements in Carriage Gears.**

(*Perfectionnements aux trains des voitures.*)

George E. Bartholomew and Edmond Armand, Montreal, Que., 23rd October, 1882; for 5 years.

*Claim.*—1st. In combination with a carriage body, a spring and one or more straight coupling, one or more draw-bars, rigidly connected to the underside of said carriage body, and their downwardly turned ends fastened to said couplings at a point below said carriage body in the line of draught. 2nd. In combination with the coupling F and fifth wheel B the short brace f. 3rd. The fifth wheel B, made up of upper and lower divisions, on the former being arranged clips b b' for holding the head block C, and the latter having clips b b' on its outer sides, for attaching same to axle.

**No. 15,672. Improvements on Reduction Mills.**  
(*Perfectionnements aux moulins à réduire.*)

Henry J. Gilbert and G. A. Gilbert, Racine, Wis., U. S., 23rd October, 1882; for 5 years.

*Claim.*—1st. In a roller mill, the fast rollers C provided with driving pulleys 1 2 3 4, and so forth, at their ends, at one side of the machine, and the pulleys W at their opposite ends, the slow rollers F having driving pulleys b c d e, and so forth, the shafts H<sub>1</sub> provided with the eccentrics and pulleys O<sub>1</sub> and idlers h and h', in combination with belts E E' and O, arranged upon the pulleys of the rollers C and F, and shafts H<sub>1</sub> respectively. 2nd. In combination, in a roller mill, of the fast rollers C, provided with pulleys w, belts O, shafts H<sub>1</sub>, provided with the eccentrics O<sub>2</sub>, and pulleys O<sub>2</sub>, connecting rods H<sub>2</sub>, sieves G and adjustable springs I. 3rd. In combination, rolls C F, sliding boxes D, the yokes K, eccentric bolts M, levers N<sup>1</sup> N<sup>2</sup> N<sup>3</sup>, transverse shafts p<sub>1</sub>, and connecting rods P. 4th. In combination with the upright and supporting rails of a roller mill, the sliding adjustable boxes D having openings on their sides, yokes K, the screw shaft H, sleeves h<sub>4</sub>, nuts h<sub>3</sub>, springs H<sub>2</sub>, hand wheels H<sub>4</sub>, hand nuts h<sub>2</sub> h<sub>1</sub>, levers N<sup>1</sup> N<sup>2</sup> N<sup>3</sup>, rod F, and transverse shafts p<sub>1</sub>.

**No. 15,673. Improvements on Barbed Fences.**

(*Perfectionnements aux clôtures barbelées.*)

James Carpenter and Leander Fitts, Moravia, N. Y., U. S., 23rd October, 1882; for 5 years.

*Claim.*—1st. The strap A, having enlarged, or re-enforced edges and transversely crimped or corrugated surfaces and barbs B B, pressed or struck out of said re-enforced edges. 2nd. The strap A, formed with enlarged or re-enforced edges, and with crimped or corrugated surfaces, and the barbs B B, pressed, or struck out of said enlarged edges at the convex side of the corrugations and alternately in opposite directions from the plane of the strap. 3rd. The within de-

scribed method of forming barbed fence straps, consisting in, first rolling out the strap with enlarged, or enforced edges, then corrugating said band, and pressing out of the enlarged edges thereof, barbs standing in opposite directions from the plane of the straps.

### No. 15,674. Improvements on Steam Generators. (*Perfectionnements dans les générateurs de vapeur.*)

Daniel Hess, Atlanta, Ga., U. S., 23rd October, 1882; for 5 years.

*Claim.*—1st. The combination of the coiled E, placed within a chamber surrounded by a jacket, said chamber and jacket heated by the exhaust steam, and a superheating coil located in, and forming the fire-box. 2nd. The combination of the steam generating coil E, the superheating coil F and the reservoir D.

### No. 15,675. Improvements in Log Chains. (*Perfectionnements dans les chaînes à billots.*)

John W. Raymond, Lowville, and Giles D. Price, Erie, Pa., U. S., 23rd October, 1882; for 5 years.

*Claim.*—The combination of the slightly opened hook B, chain A, provided with the link a, having the indentations az, and the hooks CC and Cl the point of the latter lying in the same plane with its eye, and points of the former lying in a plane at a right angle to that of their eyes.

### No. 15,676. Improvements on Sliding Seats for Boats. (*Perfectionnement aux sièges en coulisse des bateaux.*)

George Warin, Toronto, Ont., 23rd October, 1882; for 5 years.

*Claim.*—1st. In a boat, the combination of the rollers D, provided with axles E and so arranged that the weight of the seat shall be borne by the axles, while the periphery of the rollers revolve upon a track formed on guides attached to the boat. 2nd. In a boat, provided with a detachable seat B, having parallel guides C attached to it, the rollers D connected together in pairs by the axles E, which axles pass through guide ways (f made in the guides C, so as to keep the pairs of rollers distinctly independent of each other, in combination with a track F, formed on the guides A.

### No. 15,677. Improvements on Car Wheels. (*Perfectionnements aux roues des wagons.*)

The Sheffield Veloipede Car Company, (Assignee of George S. Sheffield,) Three Rivers, Mich., U. S., 23rd October, 1882; for 5 years.

*Claim.*—1st. In a car wheel the combination, with a metal hub and a metal tire, having a depending flange, formed integral therewith, of wooden spokes having their inner ends fitting against the hub, and their outer ends fitting against the metal tire. 2nd. The combination, with a metallic hub, having a depending flange formed integral therewith on its inner side, and a metallic hub, having a flange formed integral therewith on its outer end, of wooden spokes, a felly fitting against the inner periphery of the thread, a ring fitting upon the hub, and bolts for securing the parts together. 3rd. The combination, with a metal hub, provided with a flange and a metal tire, provided with a depending flange, formed integral therewith, of wooden spokes, provided at their inner ends with wedge-shaped tenons, and at their outer ends with enlarged wedge-shaped portions, a retaining ring encircling the hub, a felly fitting against the inner periphery of the tread, and bolts for securing the parts together.

### No. 15,678. Improvements on Sewing Machines. (*Perfectionnements aux moutins à coudre.*)

The Empress Embroiderer Company, (Assignee of Franklin H. Chilton,) New York, N. Y., U. S., 24th October, 1882; for 5 years.

*Claim.*—1st. In an embroidering attachment, the presser foot, oscillating thread carrier and the thread detainer, the carrier and detainer being connected by mechanism to have a simultaneous movement communicated from a rack and pinion. 2nd. In an embroidering attachment the open presser foot, the movable thread carrier I, having at its end the elongated point m, and the shorter point n, the thread detainer having the lip p and extended portion N. 3rd. The presser foot, oscillating thread carrier and pivoted thread detainer having a movement simultaneous with that of the carrier and being out to receive the actuating cam. 4th. The oscillating thread carrier, thread detainer and pinion, and rack operated by the vertical post, the horizontal arm and actuating lever, the carrier and detainer being connected by mechanism, to have a simultaneous movement communicated from the rack and pinion. 5th. The actuating lever, having jaws to receive the end of the horizontal arm connected with the vertical post, the rack and pinion thread carrier and thread detainer, the carrier and detainer being connected by mechanism to have a simultaneous movement communicated from the rack and pinion. 6th. The actuating lever, having jaws to receive the end of the horizontal arm, connected with the vertical post, the rack and pinion thread carrier, and thread detainer. 7th. The thread carrier I, consisting of the shank and the hook-shaped extension J, having at its end the elongated point m and immediately above it the shorter point n, the carrier being adapted to move in the groove of a circle, the elongated point m to sustain the embroidering thread, and the shorter point n to carry against a thread detainer. 8th. The thread detainer and thread carrier, adapted to be operated from the spiral shaft, in combination with the lever by which motion is imparted to the shaft. 9th. The lever E, having loop d and extension m, in combination with the shaft M and with a thread carrier and thread detainer. 10th. In an embroidering attachment, consisting of the reciprocating sliding arm J, arranged in line with the length of the presser foot, and to one side of the sewing needle and adapted to carry the embroidering thread forward of the needle, the presser foot A, the eye bar H, carrying the embroidering thread and having a movement across the line of travel of the arm J, and mechanism for imparting motion to the bar H and

arm J. 11th. An oscillating shoe D, supplied with a swivel f, in combination with the angular eye bar H, carrying the embroidering thread, sliding arm J and foot A. 12th. The oscillating shoe D, having a recess a, adjustable plate E and swivel f, in combination with the angular eye bar H, sliding arm J and foot A. 13th. An embroidering attachment consisting of the foot A, eye bar H and arm J, and mechanism for giving the arm J a sliding movement in line with the length of the presser foot, and the bar H a movement across the path of the arm J and behind the needle bar, whereby the embroidering stitch is formed behind the sewing needle. 14th. An embroiderer for sewing machines, consisting of the presser foot A having a laying device m, and the hook E pivoted in near relation to the vertical line of centre of the sewing needle and connected at d with the rod D, which passes rearward and is actuated by the rocking lever C, to have a longitudinal sliding movement, in combination with the eye bar F adapted to have a simultaneous movement with the hook E and in a different direction thereto, and to deliver the embroidering thread to the hook.

### No. 15,679. Improvements on Roller Bushes (*Perfectionnements aux dés des rouleaux.*)

Patrick Brownley and Robert W. Lowe, St. John, N. B., 24th October, 1882; for 5 years.

*Claim.*—The end open bush A, having an inner flange around each opening, provided on the inside of one opening with a screw ring C and fitted with rolls E.

### No. 15,680. Improvements on Towing Lighters. (*Perfectionnements aux allèges de remorque.*)

Heinrich Ressel, Vienna, Austria, 24th October, 1882; for 5 years.

*Claim.*—1st. In tug boats and lighters, the arrangement of a pneumatic tray-shaped bottom, constructed so as to keep a sheet of air between the bottom of the boat and the water beneath it. 2nd. In tug boats and lighters, a steering gear connecting the tug steamer with the following lighter in such a manner that the said lighter can be made to act as rudder for the steamer. 3rd. The steam steering gear between the tug steamer and the lighter following it, consisting of the steam cylinder g attached to the stern of the tug steamer, in combination with the semi-rotary piston h, having the shaft d attached to the lighter. 4th. In tug boats and lighters, the construction of the connection between a tug and a lighter, and between the lighters themselves, in such a manner that a convex bow will fit into a concave stern and thus a continuous articulated body will be formed.

### No. 15,681. Improvements on Steam Boilers. (*Perfectionnements aux chaudières à vapeur.*)

Nicholas Clute, Schenectady, N. Y., U. S., 24th October, 1882; for 5 years.

*Claim.*—1st. The method of supplying steam boilers with a continuous supply of more water than is evaporated, the surplus being conveyed from the boiler by means of an eduction pipe at the water line and returned to the circulation, whereby a uniform water level is constantly maintained within the boiler. 2nd. In an automatic feed water regulator for steam boilers, the combination, with a boiler and a pump, of one or more receivers adapted to receive the overflow hot water from the boiler, and cold water from any suitable supply, and to deliver the water to the pump to be constantly fed to the boiler, whereby a uniform water line is maintained in said boiler. 3rd. In an automatic feed water regulator for steam boilers, a receiver having an overflow nozzle, an air vent, a supply pipe, or pipes, and an outlet to a pump. 4th. In an automatic feed water regulator for steam boilers, the combination, with a boiler, of a pump, a hot water receiver, a cold water receiver and suitable connections and valves. 5th. In an automatic feed water regulator for steam boilers, the combination of a boiler A, pump B, receivers CD, and suitable connections, the combination of automatic feed water regulator for steam boilers, the combination of the boiler A, pump B, having connection a, provided with check valves c, pipe a connecting the pump and boiler, the hot water receiver C, having pipe d, provided with globe valve e and adapted to convey water from the boiler to the hot water receiver, the cold water receiver D, having overflow nozzle i, and a supply pipe f, provided with stop cock g, the pipe h connecting the pipes d and f, and the pipe b connecting the pump and receivers.

### No. 15,682. Improvement in Cinder Sifters. (*Perfectionnement des cribles à cendres.*)

John T. Wilson and William J. Hallaru, Toronto, Ont., 24th October, 1882; for 5 years.

*Claim.*—1st. A cinder sifter in which a perforated cylinder is pivoted and caused to revolve within a casing, a hopper formed on one end of the casing and designed to direct the cinders into the end of the cylinder immediately below it, in combination with a worm, or screw formed on the inside surface of the cylinder, for the purpose of causing the cinders to travel from the end at which they enter the cylinder to the end from which they are discharged. 2nd. In a cinder sifter in which a perforated cylinder is pivoted within a casing, the combination of a skirting F extending from the casing to the end of the cylinder at which the cinders enter. 3rd. In a cinder sifter in which a perforated cylinder is pivoted within a casing, an inclined guide G formed on the end of the casing, near the discharging end of the cylinder, in combination with the skirt J slanting in the reverse direction, and extending below the discharging end of the cylinder.

### No. 15,683. Improvements on Slates. (*Perfectionnements aux ardoises.*)

James D. McDade, Pittsburg, Pa., U. S., 24th October, 1882; for 5 years.

*Claim.*—1st. A double reversible writing slate provided with a double, or sheath forming a hinge connection of the two slates and

serving as a pencil case, or holder. 2nd. A double reversible slate with double tube fitted into recesses, in the adjacent frames, and pivoted upon pintles formed at the end of the recesses and passed into the ends of said tubes, forming a joint or hinge. 3rd. A double reversible slate fitted with a double tube, or hinge connection, forming a double pencil case. 4th. A double reversible slate fitted with double tubes forming hinge and having bands of elastic material on the tube working in suitable recesses on the frame. 5th. A double reversible, or single, slate fitted with bands of india rubber, or other elastic material, inserted into cuts, made at the ends of the frame pieces. 6th. The combination of double reversible-slates, having frames A recessed and formed with pintles *a* to receive a double tube B, fitted with internal covers *b* and secured by pins *a*, and elastic bands R upon the tube B and on the frame A. 7th. A single slate fitted with a tube B secured into the frame A, the tube fitted to form a pencil case. 8th. The tube B or B' having slot *b* and provided with internal cover *b*, in combination with a writing slate. 9th. The tube B or B' provided with cover *b* and having open ends fitting upon pintles formed in the frame of a slate and secured thereto by pins *a*. 10th. As a new article of manufacture, the metallic blank B<sub>2</sub> for double and single tubes B and B'.

### No. 15,684. Improvements on Heating Stoves. (*Perfectionnements aux poêles de chauffage.*)

Almon H. Hearington, London, Eng., 24th October, 1882; for 5 years.

*Claim.*—1st. The compound burners having an inner tube into which air and gas are admitted, an outer tube, or chamber containing water and tubes, or passages, opening through such water spaces into the place to be heated. 2nd. In combination with such compound burners, the opening and regulating cock surrounded by spaces containing water and through which air and gas are admitted and burned. 3rd. The regulating cocks, or valves through which gas is admitted to the compound burners having water spaces surrounding them and arranged so that each can be operated independently of the other. 4th. The compound burner having the admission pipe for gas and air, the upper hollow box and annular perforated plate, or wire gauze, and the lower annular series of vertical cylinders or perforated tubes. 5th. The compound burner having admission pipe for gas and air, the upper hollow box and the series of vertical cylinders and tubes for the passage of ascending and descending currents of gas, or gas and air. 6th. The compound burner, having the admission pipe for air and gas, the two annular perforated plates or wire gauze through which separate currents of gas and air ascend and descend, and the several concentric cylinders, or cases, and radial, or other ribs by which the perforated plates, or wire gauze are retained in position.

### No. 15,685. Improvements in Saw Mills. (*Perfectionnements aux scieries.*)

DeWitt C. Prescott, Marinette, Wis., U. S., 24th October, 1882; for 5 years.

*Claim.*—1st. In a setting mechanism for saw mills, the knees and connections, in combination with a pawl carrier fastened to the shaft by which the knees are adjusted, two ratchet wheels mounted loosely on the same shaft and surrounding the carrier and connecting mechanism, operated by a lever, whereby the vibration of the latter causes the ratchet wheels to oscillate in opposite directions and engage alternately with their respective pawls on the shaft. 2nd. The pawl carrier F mounted rigidly on the actuating shaft, in combination with the ratchet wheels G and H mounted loosely on said shaft and arranged around the carrier, the pawls I and J on the carrier, the vibrating toggle L, the pitman M and N, the knees C and mechanism connecting the latter with the actuating shaft, whereby the knees are adjusted by the movement of the shaft. 3rd. In a setting mechanism for saw mills, the ratchet wheels G and H mounted on the shaft from which motion is communicated to the adjustable knees, in combination with the pitman M and N, the vibrating toggle L constructed with sections in different planes, to each of which one of said pitman is connected, and an operating lever. 4th. The actuating shaft of a setting mechanism for saw mills, in combination with a pawl carrier rigidly attached thereto and provided with suitable pawls, the ratchet wheels mounted loosely thereon, the toggle L provided with the arms *l* in different planes and the central web arm *l*<sub>2</sub>, and the pitman M and N. 5th. The actuating shaft of a setting mechanism for saw mills, in combination with the pawl carrier F rigidly secured thereto, the pawls I and J mounted thereon and provided with tail pieces *i*, the loose pin *f*<sub>2</sub> arranged on the carrier underneath the tail pieces of the pawls, and mechanism whereby the pin may be lifted to turn the pawls on their pivots and disengage them from the ratchet wheels. 6th. The actuating shaft of a setting mechanism for saw mills, in combination with the pawl carrier F rigidly secured thereto, the pawls I and J mounted thereon and provided with tail pieces *i*, the loose pin *f*<sub>2</sub> arranged on the carrier underneath the tail pieces of the pawls, the bevelled slide K arranged in a groove in the shaft, and mechanism for reciprocating the latter. 7th. The actuating shaft of a setting mechanism for saw mills, in combination with the pawl carrier F rigidly secured thereto, the pawls I and J mounted thereon and provided with tail pieces *i*, the springs *k* arranged in sockets in the carrier underneath the working ends of the pawls, the mechanism for raising said pin. 8th. In a setting mechanism for saw mills, the knees and connections, in combination with a pawl carrier fastened to the shaft by which the knees are adjusted, the two pawls mounted on said carrier, the two loose ratchet wheels mounted on said shaft and surrounding the carrier and pawls, the mechanism connecting the two ratchet wheels, whereby the oscillation of one will cause the other to oscillate in the opposite direction, a lever for oscillating one of the ratchet wheels and a graduated series of stops, to make half the set by the vibration of the lever in one direction and the other half by its return movement, both the movements being determined by the adjustment of the stops.

### No. 15,686. Improvements in Pile Drivers. (*Perfectionnements dans les chasse-pieux.*)

Hosea T. Stock, Toledo, Ohio, U. S., 24th October, 1882; for 10 years.

*Claim.*—1st. In a railroad pile driver, a car provided at both ends

with a turn table and the movable frame G. 2nd. The frame G provided with engine and boiler H at one end and the leader N and driving hammer O at the opposite end, in combination with platform car A having turn tables D F and adjustable side rollers *a*. 3rd. The car A provided with turn tables D F, one at each end, and adjustable rollers *a*. 4th. The combination of the frame G having boiler and engine at one end and the leader and hammer at the opposite end, with plate H, frame F and track D.

### No. 15,687. Improvements on Saw Mills. (*Perfectionnements aux scieries.*)

George H. Millen, Edward Mousseau, Hull, Que., and Edward L. Perkins, Ottawa, Ont., 24th October, 1882; for 5 years.

*Claim.*—1st. The combination, in a saw mill, of the guide ways 5, intervening endless chain 6 having blocks 9 travelling on guide ways, reciprocating saw frames 12 carrying a circular saw 11 and travelling on rails 13 and operated by rack bars 15 engaging with pinions 16 on two parallel shafts 17, operated by hand wheel 22 on shaft 20, and intermediate gears 21, figured scale plate 23 provided with a rack bar and pointer operated by a pinion on shaft 17, reversing table 30, tilting frame 27 connecting with shaft 8 by gears 25, shaft 24 and bevelled gears 31, and friction rollers 29 on main driving shaft 28. 2nd. In a saw mill, the combination of guide ways 5, endless chain 6, reciprocating saw frames 12 travelling on ways 13. 3rd. In a saw mill, the endless chain 6 driven from a turn table by friction rollers mounted on a tilting frame and by intermediate shafts and gears. 4th. In a saw mill, in combination with guide ways 5 and endless chain 6, the twin circular saws 11 mounted on frames 12, receded and approached simultaneously from and towards the guide ways and endless chain 6 by gearing. 5th. The scale plate 23 having a rack bar with pointers, operated by a pinion on one of two parallel shafts 17 reciprocating the saw frames, whereby the movement of said frame is measured to define the adjustment of the saws to and from the guide ways 5. 6th. In a saw mill, the combination, with two circular saws 11 moving reciprocally with frames 12, of the ways 5 and endless chain 6, carrying blocks 9 dishd to prevent lateral movement of the log, and provided with spikes to hold the log from endwise movement while being sawed. 7th. In a saw mill, the combination of endless chain 6, carrying blocks 9 travelling on ways 5, twin circular saws 11, each mounted on a reciprocating frame 12, parallel shafts 17 17 simultaneously operating said frames by hand wheel 22 and intermediate gearing, and an indicator 23 by which the gauge or set of the saws, apart, is measured and governed by the operation of the hand wheel. 8th. In a saw mill, the combination of the endless chain 6, carrying blocks 9 sliding on ways 5, between twin circular saws 11 mounted independently on two frames 12, parallel shafts 17 reciprocating said frames, indicator 23 measuring the gauge of the saws, hand wheel and gearing operating said shafts and a reversing table, tilting frame, friction rollers, intermediate gearing, shaft to zig back the log by a reverse movement of the chain, by the operation of lever 32, to tilt the frame. 9th. The indicator 23 in combination with the two parallel shafts 17 for gauging the saws. 10th. In a saw mill, the combination of an endless chain having blocks holding the log from lateral and endwise movement, twin circular saws reciprocated by frames receding and approaching an indicator and a reversing gear.

### No. 15,688. Improvements in Car Wheels. (*Perfectionnements dans les roues des wagons.*)

John K. Sax, High Bridge, N. J., U. S., 25th October, 1882; for 5 years.

*Claim.*—1st. A car wheel composed of a flanged rim, having a recess at the inner side and a metal body, fused, or welded, to the said rim. 2nd. The combination in a wheel, of the hammered, or rolled metal rim, having inward projecting side flanges, and a cast metal body fused to said rim.

### No. 15,689. Improvements on Underground Conduits for Electric Wires. (*Perfectionnements aux conduits souterrains pour les fils électriques.*)

Christian H. Goebel and George W. Bratton, Philadelphia, Pa., U. S. 25th October, 1882; for 5 years.

*Claim.*—1st. Wires, in combination with inclosing split pipes and clamping devices. 2nd. Wires, in combination with pipes having sectional, or split couplings, or T's. 3rd. A conduit for electric wires formed of split pipes and split couplings, and devices for clamping the sections of the pipes and couplings. 4th. An electric conductor or cable, composed of pipes formed of separate, or sectional pipes, each section containing a conductor with an inclosing insulating material, such conductor constructed with a recessed end and having its other end projecting beyond the end of the section. 5th. The pipes with inclosed wires and branches C<sub>1</sub>, in combination with the conduit provided with indicators D. 6th. The method of insulating electric wires, consisting in surrounding them with vulcanizable insulating material, inclosing this material in split pipes and clamping said pipes together, so as to compress said material during the application of heat. 7th. The combination, with an underground conduit and electric wires therein, of a current controlling, or circuit making and breaking device adapted to be operated from the surface of the ground. 8th. The box H provided with separate wires, in combination with the rotatable plug J having a bar, or wire K.

### No. 15,690. Improvements on the Process for Tanning and Finishing Leather. (*Perfectionnements au procédé pour tanner et finir le cuir.*)

Joseph Hend. Joel F. Mourhess and Daniel F. Cridler, Hornellsville, N. Y., U. S., 25th October, 1882; for 5 years.

*Claim.*—The process for the tanning of leather, in which the hides are dipped in a solution from forty to ninety degrees strength of oak, henlock and gambier. 2nd. In the process for tanning leather, the dipping of the leather when dry, into liquid grease, for the purpose of stiffening, preparatory to whitening and finishing it.

### No. 15,691. Improvements on Steam Boilers.

(*Perfectionnements aux chaudières à vapeur.*)

The Ames Iron Works, (Assignees of William R. Michener.) Oswego, N.Y., U.S., 25th October, 1882; for 5 years.

*Claim*.—1st. The outer or main shell A of segmental form, in cross section, the inner segmental shell B of smaller diameter, united at its bottom edges with those of the main shell, and the independent flat bottom plate C, secured to the edges of one of the segmental shells aforesaid, and constituting the bottom of the main fire flue. 2nd. The combination, with the flat bottom plate C, of the removable corrugated plate G. 3rd. In combination with the segmental shells A and B, united at their edges and having, pendent therefrom, the fire box F and ash pan f, the plate H extended across the front of the latter and attached to the edges of the boiler shell. 4th. The combination, with the segmental boiler shell A, of the cheek pieces I secured to the exterior thereof and resting on the axle a, and the block h attached to the latter and abutting against the cheek pieces aforesaid. 5th. The combination, with the segmental boiler shell A, of the cheek pieces I, secured to the exterior thereof and having pendent bolts engaging a clip bar K, on the under side of the axle a, and the blocks h attached to the top of the latter. 6th. The main boiler shell A, having a straight bottom C formed of a continuation of said shell, and the flue shell B of segmental form, in cross section, joined at its longitudinal edges to the interior of the main shell at, or near, the edges of the straight bottom portion thereof.

### No. 15,692. Improvements on Fruit Evaporators.

(*Perfectionnements aux séchoirs à fruits.*)

The Steam Heat Evaporating Company, (Assignee of Frank S. Belcher and Frank A. Hooker.) Charlotte, Mich., U.S., 25th October, 1882; for 15 years.

*Claim*.—1st. The combination, with the frame A, its upright a<sub>1</sub> and grooves a<sub>3</sub>, of the sections B, adapted to enter the said grooves and to be readily removed therefrom. 2nd. The combination, with the frame A, its upright a<sub>1</sub> and grooves a<sub>3</sub>, of the sections B, connected by the unions b at alternate ends, said unions being adapted to be disconnected, whereby the sections, or any one of them, can be easily removed from the frame. 3rd. The sections B, joined by unions b, and provided with rivets g, and collars g<sub>1</sub> placed around said rivets, whereby sagging and bulging of the sections is prevented. 4th. The pipe D, secured to the projection d, of the upper steam section descending vertically to a point slightly below the lower section, bent upwardly parallel with the descending portion, and carried to a point slightly above the upper section, provided with a nozzle d<sub>2</sub> around its end into which it projects, and provided further with a vent pipe d<sub>1</sub> and vent holes d<sub>4</sub>. 5th. The nozzle d<sub>2</sub> arranged around the end of the pipe D, which projects into it, and provided with a funnel d<sub>3</sub>. 6th. The frame A, its uprights and grooves, the steam sections B, supply pipe b<sub>2</sub>, waste pipe b<sub>1</sub> and safety pipe d<sub>1</sub>.

### No. 15,693. Improvements on Electric Lights.

(*Perfectionnements aux lumières électriques.*)

Thomas A. Edison, Menlo Park, N.J., U.S., 25th October, 1882; for 15 years.

*Claim*.—1st. The combination, with an incandescent electric lamp and its socket, detachable from each other and adapted to be used in a complete or round wire circuit, of controllable means for positively holding them in position together, and means for automatically completing the circuit connections between them, through both limbs, or members, of the circuit, upon placing them together in position. 2nd. An incandescent electric lamp having contact plates, or rings, upon its neck or base, arranged one above the other on the base of the lamp forming the terminals of both limbs, or members of a complete or round wire circuit. 3rd. The combination, with a separate removable incandescent electric lamp and its socket, of means for holding them positively in position relatively to each other. 4th. A circuit controller for an electric lamp, provided with a pin adapted to take in properly arranged grooves or notches, in the cylinder of the controller, thereby retaining it in position to make, or break the circuit as desired, and against accidental displacement. 5th. A circuit controller consisting of a cylinder, a rod therein, a spring adapted to project the rod from the cylinder and means for limiting and determining at will, the action of the spring upon the rod. 6th. A circuit controller for electric lamps, the combination of a cylinder with grooves upon its head, a spring-actuated contact rod passing therethrough, and a pin attached to a rod, and taking in the grooves.

### No. 15,694. Improvements on Folding Joints for Camp Furniture.

(*Perfectionnements aux joints des meubles pliants.*)

Pierre Latour, Ottawa, Ont., 25th October, 1882; for 15 years.

*Claim*.—1st. A pair of plates following more or less closely the shape and relative position of the two short bars crossing the through piece at any angle in parallel lines, or otherwise, and which crossing pieces are connected thereby endwise, but out of line, and to which they are suitably secured either rigidly, by screws, or similar devices, or pivotally, and between the two ends of which the through piece is held centrally by means of a pivot. 2nd. A folding joint for folding camp furniture and similar articles. 3rd. A folding joint for folding camp furniture and similar articles. 4th. A folding joint, in combination with the bars and pieces forming the legs and other parts of camp furniture, and with other joints d.

### No. 15,695. Improvements in Door Locks.

(*Perfectionnements dans les serrures des portes.*)

Johan Mathisen, Christiania, Norway, 26th October, 1882; for 5 years.

*Claim*.—1st. As a new article of manufacture, a door lock adapted to be applied and secured to the side of the door, opposite to that towards which the door opens. 2nd. In door-locks, a loose collar h sur-

rounding and masking the tube or sleeve b. 3rd. A link e, provided with knife bearings e<sub>1</sub> e<sub>2</sub>, for connecting the operating arm d with the latch. 4th. The peculiar hollow shape of the latch. 5th. Door locks provided with two projections, or lugs l, and a single screw m, for securing the lock in position. 6th. The method of keeping the two parts of the lock case together, by a single screw i. 7th. In combination with door locks, two counter plates p<sub>1</sub> and p<sub>2</sub> made adjustable as regards their relative position. 8th. The method of locking the latch by means of an independent or auxiliary lock K and key. 9th. The modified construction of door locks represented by figures VII-XI, with vertical sliding latch.

### No. 15,696. Improvements on Furniture Castors.

(*Perfectionnements aux roulettes des meubles.*)

Robert G. Jordan and David C. Meehan, (Assignees of Ole Pederson.) Columbus, Ohio, U. S., 26th October, 1882; for 15 years.

*Claim*.—1st. In a furniture castor, the wheel A, cast in one piece, with the axle B. 2nd. A fork or bifurcated stem C, provided with the lugs a, in combination with the wire b, or other point, adapted to be bent in place under the axle.

### No. 15,697. Improvements in Garden Knives.

(*Perfectionnements aux couteaux des jardiniers.*)

Dandy Fletcher, Sandwich, Ont., 26th October, 1882; for 5 years.

*Claim*.—A tempered, malleable iron, or steel blade, hooked flat in the plane of its curve, sharpened on the inner edge, and twisted upward and inward near the shank, and a handle at an angle of about 60° in the plane of the forward part of the cutting edge of the blade.

### No. 15,698. Improvements on Axle Nuts.

(*Perfectionnements aux écrous des essieux.*)

Edgar P. Holly, Lockport, N. Y., U. S., 26th October, 1882; for 5 years.

*Claim*.—1st. In combination with the axle A and axle box B, an adjustable axle-nut C consisting of a movable follower ring D, (containing packing ring a,) and studs b b, which fit loosely through holes b<sub>1</sub> b<sub>2</sub>, in the flange f<sub>1</sub> of the nut C, and rest against the follower-nut E, threaded on the outer surface of the nut C. 2nd. In an axle nut, the combination of the nut C, follower-nut E, flange f<sub>1</sub> and holes b<sub>1</sub> b<sub>2</sub>, with the follower-ring D, packing-ring a and studs b.

### No. 15,699. Improvements on Thrashing Machines.

(*Perfectionnements aux machines à battre.*)

John McCloskey, London, Ont., 26th October, 1882; for 5 years.

*Claim*.—1st. The after straw deck A, provided with slats E<sub>1</sub> on the under side, combined with and operated by the inner, or outer, cranks of a combined double throw crank shaft D, they being connected together by a knuckle joint coupling C, or other suitable connecting devices. 2nd. An after straw deck A, provided with slats E<sub>1</sub> on the under side. 3rd. The combination of the levers K K, rack J, draft regulator G and draft regulator G<sub>1</sub>, provided with slot b and rod H, constructed as specified.

### No. 15,700. Improvements on Harvesters.

(*Perfectionnements aux moissonneuses.*)

Paul Flock, Waterford, Ont., 26th October, 1882; for 5 years.

*Claim*.—1st. A rake head for harvesters, with a heel cast upon the leading side thereof, in combination with a rest attached to the main plate of the jack, or otherwise attached, having a jog g<sub>1</sub> formed therein, with which the heel of the rake head comes in contact and is turned over to a horizontal position, when the dog is released. 2nd. A rake head for harvesters as described, and having a locking dog h, in combination with the ordinary tripping cam H. 3rd. A rest G constructed with a jog g<sub>1</sub>, in combination with a rake head having a heel cast upon the leading side thereof, and the ordinary locking dog h forming also a part thereof, and the tripping cam H.

### No. 15,701. Improvements on Vehicle Gears.

(*Perfectionnement aux trains des voitures.*)

William Lockwood, Madrid, N. Y., U. S., 26th October, 1882; for 5 years.

*Claim*.—It consists in semi-elliptical spring E E, centrally secured on the top of the side bars C C, and curved end springs F F, passing around the side bars up to, and connecting with the extremities of the said elliptical springs.

### No. 15,702. Improvements on Grain Reducing Process.

(*Perfectionnements au procédé pour moudre les grains.*)

Francis Taggart, Brooklyn, N. Y., U. S., 26th October, 1882; for 15 years.

*Claim*.—1st. Projecting the grains, or granules, with force against a hard abutment, or obstacle, by means of a continuously flowing current of aeriform fluid, into which the grains are introduced at a convenient point, whereby the latter are disintegrated and then collecting into one channel the comminuted particles, while the aeriform fluid is allowed to escape by a different outlet. 2nd. The combination, in a pulverizing or reducing apparatus, of the following elements, viz: a receiver for compressed air, or other equivalent aeriform fluid, an ejector through which a continuous current of air flows, a feed pipe for supplying the particles to be reduced arranged in such relation to the air passage that the current of air shall draw the particles into said current, a discharge nozzle through which the current of air and particles mingled flow continuously, a chamber into which

they are discharged, a solid target, or impediment, against which the particles are discharged and broken within said chamber, and exit openings for the separate escape of the air and reduced particles. 3rd. In combination, an ejector, a reservoir for grains, or granules, having a regulating valve, and an outlet communicating with said ejector at a suitable point, an abutment located in front of the ejector, against which the grains, or granules, are projected by the impulse of the blast from the said ejector, and a chamber inclosing the abutment, open for the escape of aeriform fluid and having a separate outlet, or chute, for conveying into a receptacle the comminuted particles. 4th. In apparatus in which grain is reduced by impact, by a continuous jet of air, or equivalent fluid, induced by compressing mechanism, the combination of an abutment arranged within a chamber having separate outlets for the spent air, and the products of disintegration, with air and grain induction pipes opening opposite said abutment, an air ejector, a grain bin, and a feed regulating device, the pipes which conduct the air and the grain being arranged in such relation to each other and to said chamber, that the material will be fed by an interior column of air drawn in, or partially so, as the feeding vehicle and projected against said abutment by a continuous jet of air under strong impelling force.

**No. 15,703. Improvements on Furniture Castors.** (*Perfectionnements aux roulettes des meubles.*)

Robert G. Jordan and David C. Meehan, (Assignees of Ole Pederson,) Columbus, Ohio, U. S., 26th October, 1882; for 15 years.

*Claim.*—1st. In a furniture castor, the inner wheels E' and the shank A, provided with the axle B, in combination with the large wheels E. 2nd. The shank A, provided with the axle B, and bear-

ings a a', in combination with the wheels E E', and a stem. 3rd. The stem D, provided with spaces, or recesses for receiving strips of wood.

**No. 15,704. Improvements on Furniture Castors.** (*Perfectionnements aux roulettes des meubles.*)

Robert G. Jordan and David C. Meehan, (Assignees of Ole Pederson,) Columbus, Ohio, U. S., 26th October, 1882; for 15 years.

*Claim.*—1st. The shank D provided with the collar having the malleable metal lip i, and the step f, in combination with the stem D, provided with the groove g. 2nd. The roller A and the pivots B B, rigidly connected by the rectangular bar a and provided with the flanges b b, in combination with the shank C, slotted at its lower end and provided with lips d d. 3rd. The shank C, having its lower end slotted and provided with the lips d d, in combination with the pivots, or axle, provided with the flanges b b, whereby the castor is secured by oscillation directly into its shaft.

**No. 15,705. Improvements on Spring Beds.** (*Perfectionnements aux lits à ressorts.*)

La Fayette Wildermuth, New Lexington, Ohio, U. S., 26th October, 1882; (Extension of Patent No. 11,867.)

**No. 15,706. Improvements on Spring Beds.** (*Perfectionnements aux lits à ressorts.*)

La Fayette Wildermuth, New Lexington, Ohio, U. S., 27th October, 1882; (Extension of Patent No. 11,867.)

INDEX OF INVENTIONS.

Armatures, dynamo-electric, E. A. Sperry.....	15,564
Axle nuts, E. P. Hally.....	15,698
Bag fasteners, grain, W. Hunter.....	15,638
Bag fasteners, malt, J. H. Bartlett et al.....	15,643
Bag machine, paper, D. Muenkhan.....	15,579
Baling hay, machine for, P. K. Dederick.....	15,599
Bark, preparing tan, W. H. Smith.....	15,592
Barrel rollers and guides, B. H. Schonhoff.....	15,653
Bed bottoms, D. Knowlton.....	15,609
Bed bottoms, S. Pariseau.....	15,613
Beds, invalid, J. D. Johnston.....	15,640
Beds, sofa, H. R. Plympton.....	15,606
Beds, spring, L. Wildermuth.....	15,705
Bleaching machine, F. A. Hooker et al.....	15,637
Boats, sliding seats for, G. Warin.....	15,676
Boilers, levelling engine, T. F. and A. L. Wilson.....	15,608
Boilers, steam, U. Beaupré.....	15,591
Boilers, steam, N. Chute.....	15,681
Boilers, steam, S. Fox.....	15,580
" " ".....	15,583
" " ".....	15,584
Boilers, steam, The Ames Iron Works.....	15,691
Bricks, sheds for drying, J. Evans.....	15,652
Bridle bits, J. H. Jones.....	15,594
Buckle attachments, La F. Hartson.....	15,664
Bushes, roller, P. Brownley et al.....	15,679
Button fastenings, G. S. Schnellcr.....	15,670
Cant dogs, E. Mansfield.....	15,621
Car wheels, G. W. Millmore.....	15,592
Car wheels, J. K. Sax.....	15,688
Car wheels, The Sheffield Velocipede Car Co.....	15,675
Cars, sleeping, G. Leve et al.....	15,581
Cars, sleeping, P. M. Mellek.....	15,649
Cars, sleeping and drawing room, W. L. Lowell.....	15,629
Cars, uncoupling, B. Hickok.....	16,661
Carriage gear, G. E. Bartholomew et al.....	16,671
Castors, furniture, R. G. Jordan et al.....	15,696
" " ".....	15,703
" " ".....	15,704
Chains, log, J. W. Raymond et al.....	15,675
Chandeliers, electric, T. A. Edison.....	15,612
Chronographs, W. H. Douglas.....	15,663
Closets, water, G. C. Phillips.....	15,590
Conduits, underground, C. H. Goebel et al.....	15,689
Coops for fowls, J. M. Householder.....	15,623
Couplings, car, D. S. Walrath et al.....	15,607
Couplings, electric, E. D. Parker.....	15,569
Couplings for shafting, W. Johnston.....	15,666
Crimping machines, T. P. Marshall.....	15,614
Crushing machine, ore, G. Dalton.....	15,626
Culinary vessels, J. W. Fisher et al.....	15,611
Dextrine, intro, G. S. Dean.....	15,565
Doors, stove, D. K. Alden.....	15,633
Dredging machines, A. C. Both.....	15,622
Dust pans, S. M. Perry.....	15,564
Electric armatures, dynamo, E. A. Sperry.....	15,564
Electric lights, T. A. Edison.....	15,693
Electric machines, dynamo, E. A. Sperry.....	15,567
Engine boilers, levelling, F. and A. L. Wilson.....	15,608
Engines, gas motor, N. A. Otto et al.....	15,611
" " ".....	15,612
Engines, locomotive, H. Waterman.....	15,627
Engines, steam, A. Mouton.....	15,651
Evaporators, fruit, The steam heat Evaporating Co.....	15,692
Fatty matters, subdividing, A. Marx.....	15,628
Felting machines, J. and C. Ruhl.....	15,615
Fence post, E. J. Major.....	15,586
" " ".....	15,587
Fences, barbed, J. Carpenter.....	15,673
Fibres, machine for obtaining, The Sanford Universal Fibre Co.....	15,639
Fires, means for extinguishing, R. C. Blackall et al.....	15,574
Furniture, camp, P. Latour.....	15,694
Gas apparatus, D. H. Martin.....	15,595
Gas apparatus, G. Ramsdell.....	15,665
Gates, railway, P. Mayrand.....	15,630
Generators, steam, D. Hess.....	15,674
Grain reducing process, F. Taggart.....	15,702
Gun cleaners, J. F. Davis.....	15,620
Harvesters, P. Flock.....	15,700
Harvester attachments, L. Spitzig.....	15,567
Harvesters, grain, J. H. Elward.....	15,616
Harvesting machines, C. D. Dewey.....	15,603
Hay cutting machine, D. W. Carpenter et al.....	15,570
Hoop cutting machine, D. F. Holston.....	15,577
Horse shoes, T. S. Very.....	15,618
Joints, folding, P. Latour.....	15,694

Knife, garden, D. Fletcher.....	15,697
Knitting machinery, H. A. Fruit.....	15,659
Ladders, step, H. P. Spencer.....	15,576
Lamp fixtures, electric, T. A. Edison.....	15,654
Lights, towing, H. Ressel.....	15,680
Liquids, dispensing, L. Bergin.....	15,645
Locks, door, J. Mathison.....	15,695
Locomotive engines, H. Waterman.....	15,627
Mangles and wringers, clothes, C. Gentesse.....	15,624
Mangles and wringers, clothes, C. Gentesse.....	15,625
Mills, reduction, H. J. and G. A. Gilbert.....	15,672
Mop holders, J. H. Omo.....	15,568
Motion, converting, F. Elbing.....	15,644
Motors, sewing machine, A. E. Ronif.....	15,606
Musical instruments, mechanical, F. Stone.....	15,598
Nitro-dextrine, G. S. Dean.....	15,565
Nuts, axle, E. P. Holly.....	15,698
Offal drier and cooler, M. Tamn.....	15,648
Ores, amalgamating, W. H. Howland.....	15,593
Ore crusher and reducer, G. Dalton.....	15,626
Pail, sap, C. C. Post.....	15,575
Paint, A. Buzolich et al.....	15,634
Panel raisers, F. N. Gore.....	15,632
Paraffine, freezing, E. Kells et al.....	15,568
Pictures, colouring and finishing, C. H. Myers.....	15,588
Pile drivers, H. T. Stock.....	15,686
Pipes and machines, sheet metal, W. Austin.....	15,597
Post, fence, E. J. Major.....	15,586
Potatoe sprouts, removing, E. Payne.....	15,600
Presses, H. M. Smith.....	15,655
Pumps, P. E. Jay.....	15,636
Rack, wagon, A. McCallum et al.....	15,585
Rail joints, railroad, F. Lightfoot.....	15,656
Reducing machines, ore, G. Dalton.....	15,626
Reducing process, grain, F. Taggart.....	15,702
Refrigerating apparatus, J. T. Reed.....	15,619
Roads, system of constructing, W. B. Henning et al.....	15,578
Sap spout, pail, etc., C. C. Post.....	15,575
Saw mills, C. E. Lewis.....	15,596
Saw mills, G. H. Millen et al.....	15,687
Saw mills, D. C. Prescott.....	15,685
Seats for boats, sliding, G. Warin.....	15,676
Sewing machine, The Empress Embroiderer Co.....	15,678
Sewing machine motors, A. E. Ronif.....	15,606
Scalloids, G. W. Smith.....	15,573
Snaf coupling, W. Johnston.....	15,666
Sheds for drying bricks, J. Evans.....	15,652
Shoes, F. E. Farwell.....	15,631
Sifter, cluder, J. T. Wilson et al.....	15,682
Sinks, J. A. Talpey.....	15,660
Skates, W. A. Sulton.....	15,617
Skiffs, shooting, G. Warin.....	15,602
Skates, J. D. McDade.....	15,683
Sleighs, J. C. F. Pagel.....	15,582
Sofa bed, H. R. Plympton.....	15,566
Staple, wire, P. Dunn et al.....	15,669
Stove doors, D. K. Alden.....	15,633
Stoves, heating, A. H. Hearington.....	15,684
Straw cutting machines, D. W. Carpenter et al.....	15,570
Sugar, manufacture of, M. Heinrich.....	15,667
Tan bark, preparing, W. H. Smith.....	15,562
Tanning process, J. Head et al.....	15,690
Telegraphis, train, E. D. Parker.....	15,569
Telepho es, A. W. Rose.....	15,650
Thill lugs, N. T. Folsom.....	15,601
Thrashing machines, J. McCloskey.....	15,699
Undergarments, T. B. Farrington.....	15,571
Vehicle gears, W. Lockwood.....	15,701
Velocipedes, J. R. Smith.....	15,610
Vermin and water repelling compound, D. M. Lamb.....	15,662
Wagon racks, A. McCallum et al.....	15,585
Washing machines, R. H. Cornett.....	15,589
Washing machine, M. W. Robinson.....	15,635
Water closets, G. C. Phillips.....	15,590
Water and vermin repelling compound, D. M. Lamb.....	15,562
Wheels, car, G. W. Millmore.....	15,590
Wheels, car, J. K. Sax.....	15,688
Wheels, car, The Sheffield Velocipede Car Co.....	15,677
Windmills, B. Chamberlain et al.....	15,572
Wire, barbed fence, S. S. Chisholm et al.....	15,605
Wringers and mangles, clothes, C. Gentesse.....	15,624

INDEX OF PATENTEES.

Alden, D. K., stove doors.....	15,633
Ames, (The) Iron Works, steam boiler.....	15,691
Armant, E., et al., carriage gear.....	15,671
Austin, W., sheet metal pipes and machines.....	15,597





## Patents issued up to 17th November, 1882, Claims and Drawings of which will appear in a subsequent number of the Patent Record.

- No. 15,707. The Smith Manufacturing Company, Delta, Ohio, assignees, "Box or Bucket for Berries," 27th Oct. 1882.
- No. 15,708. J. F. Pense, Syracuse, and E. K. West, Baldwinville, N.Y., "Heating Apparatus," 2nd Nov. 1882.
- No. 15,709. W. F. Elliott and S. D. Lane, Columbia, Ohio, "Attachment for Vehicle Dashes," 2nd Nov. 1882.
- No. 15,710. W. H. Miles, Brooklyn, N. Y., "Brush Holder," 2nd Nov. 1882.
- No. 15,711. S. Holladay, San Francisco, Cal., assignee, "Railway Car Brakes," 2nd Nov. 1882.
- No. 15,712. N.-Yagn, St. Petersburg, Russia, "Hydraulic Motor," 2nd Nov. 1882.
- No. 15,713. A. Smith and H. Skinner, Yonkers, N. Y., "Looms," 2nd Nov. 1882.
- No. 15,714. M. Conrad, Chicago, Ill., "Tongue Supports for Wagons," 2nd Nov. 1882.
- No. 15,715. J. Feldman, London, Eng., "Umbrellas," 2nd Nov. 1882.
- No. 15,716. A. V. Laven, Yarker, Ont., "Strap Coupling," (Ext. of Patent No. 13,780), 2nd Nov. 1882.
- No. 15,717. The Guelph Carriage Goods Company, Guelph, Ont., assignees, "Dash Moulding," (Reissue of Patent No. 5301), 2nd Nov. 1882.
- No. 15,718. J. L. Kapple, Cleveland, Ohio, "Folding Seat," (Ext. of Patent No. 8058), 2nd Nov. 1882.
- No. 15,719. W. Morrison, Toronto, Ont., "Dredge," 2nd Nov. 1882.
- No. 15,720. T. Burdick, Grand Haven, Mich., "Spring Bed Bottoms," 3rd Nov. 1882.
- No. 15,721. R. T. Oney, Huntington, West Virginia, "Cypher Codes and apparatus therefor," 3rd Nov. 1882.
- No. 15,722. F. B. Nichols and C. Thomson, Halifax, N.S., "Radiating Flues," (Extension of Patent No. 15,523), 3rd Nov. 1882.
- No. 15,723. F. B. Nichols and C. Thomson, Halifax, N.S., "Radiating Flues," (Extension of Patent No. 15,522), 4th Nov. 1882.
- No. 15,724. G. W. Hight and D. H. Bailey, Nashville, Tennessee, assignees, "Wrench," 4th Nov. 1882.
- No. 15,725. F. A. Roe, N. Y., "Spring Horse Shoe," 4th Nov. 1882.
- No. 15,726. F. Cordrey, Fort Wayne, Ind., "Car Couplings," 4th Nov. 1882.
- No. 15,727. E. Whyte, Kansas, Miss., "Price Ticket Holder," 4th Nov. 1882.
- No. 15,728. E. C. Durand, Greenview, Ohio, "Belt Shifters," 4th Nov. 1882.
- No. 15,729. J. Paradis and N. A. Biv, Longueuil, Que., "Thrashing Machine and Separator," 6th Nov. 1882.
- No. 15,730. T. Galloway, Oshawa, Ont., "Scatterer and Drill," 6th Nov. 1882.
- No. 15,731. A. Saunders, Westerly, R. I., "Boring Machine," 6th Nov. 1882.
- No. 15,732. C. T. Cochel, Uniontown, Maryland, "Decoys," 6th Nov. 1882.
- No. 15,733. W. Duffield, London, Ont., "Process for Manufacturing Gas," 6th Nov. 1882.
- No. 15,734. T. Packer, Thamesville, Ont., "Sectional Black Board," 6th Nov. 1882.
- No. 15,735. W. F. Stoetzel, Omaha, Nebraska, "Eaves Trough Hanger," 6th Nov. 1882.
- No. 15,736. A. E. Smith, Brouxville, N. Y., "Axles," 6th Nov. 1882.
- No. 15,737. W. A. Eddy, Randolph, N. Y., "Carriage Seat," 6th Nov. 1882.
- No. 15,738. W. H. Essery, Toronto, Ont., "Adjusting Gear for Planing Machines," 6th Nov. 1882.
- No. 15,739. W. M. Haney, Bellevue, Iowa, "Milk Can," 6th Nov. 1882.
- No. 15,740. D. M. Richardson, Detroit, Mich., "Grain Scourer and Polisher," (Extension of Patent No. 11,930), 6th Nov. 1882.
- No. 15,741. B. T. Babbitt, New York, "Air Compressor," (Extension of Patent No. 8118), 6th Nov. 1882.
- No. 15,742. W. E. Fuller, Toronto, Ont., "Automatic Leg Planer and Groover," (Extension of Patent No. 8075), 6th Nov. 1882.
- No. 15,743. J. W. Thomas and A. R. Ludlow, Springfield, Ohio, "Seeding Machine or Cultivator," 6th Nov. 1882.
- No. 15,744. J. G. Harlicker and S. W. Oyster, Harrisburgh, Penn., "Liquid Drainer," 6th Nov. 1882.
- No. 15,745. A. Benoit, Dunham, Que., "Car Coupling," 6th Nov. 1882.
- No. 15,746. A. H. Marden, Cambridge, Mass., "Car Brakes," 6th Nov. 1882.
- No. 15,747. B. F. Lancaster, L. J. Crooker and R. W. Black, Augusta, Maine, "Lamp Stove," 6th Nov. 1882.
- No. 15,748. H. Stubbendgrff, Montreal, Que., assignee, "Blind Hinges," 6th Nov. 1882.
- No. 15,749. W. B. Munger, Oberlin, Ohio, "Machines for Converting Motion," 6th Nov. 1882.
- No. 15,750. C. Gordon, Rochester, N. Y., "Machines for Cooling and Drawing Beer," 6th Nov. 1882.
- No. 15,751. A. E. Rich, Fall River, Mass., "Bottle Stopper and Fastener," 7th Nov. 1882.
- No. 15,752. C. W. Knapp, Geneva, Ohio, "Saw Handles," 7th Nov. 1882.
- No. 15,753. L. C. Delowere, Salem, Mass., "Spray Nozzle," 7th Nov. 1882.
- No. 15,754. A. N. Matthews, St. John, N.B., "Steam Valve Packing," 7th Nov. 1882.
- No. 15,755. J. W. Thomas, Springfield, Ohio, "Seeding Machine or Cultivator," 7th Nov. 1882.
- No. 15,756. W. Y. Allen, Rockland, Mass., "Sewing Machine," 7th Nov. 1882.
- No. 15,757. G. W. Calkins, Cleveland, Ohio, "Hoisting Buckets," 8th Nov. 1882.
- No. 15,758. W. E. and J. Dean, Harlansbury, Penn., assignees, "Fire Escapes," 8th Nov. 1882.
- No. 15,759. J. Goble, Ingersoll, Ont., "Steel Wheel," 8th Nov. 1882.
- No. 15,760. R. H. Anderson, Richmond, Virginia, "Garment Reinforce," 8th Nov. 1882.
- No. 15,761. T. V. Leltoy, Utica, N. Y., "Journal Bearing," 8th Nov. 1882.
- No. 15,762. The Williams Manufacturing Company, Montreal, Que., assignees, "Sewing Machines," 10th Nov. 1882.
- No. 15,763. F. Ahrens, Big Rapids, Mich., "Pumps," 10th Nov. 1882.
- No. 15,764. J. Sanders, Selburne, Ont., "Pumps," 10th Nov. 1882.
- No. 15,765. The Meriden Britannia Company, Hamilton, Ont., assignees, "Coffin and Casket Handles," 10th Nov. 1882.
- No. 15,766. J. B. Armstrong, Guelph, Ont., "Carriage Axles," 10th Nov. 1882.
- No. 15,767. A. C. Gibson and E. Armat, Toronto, Ont., "Rotary Engine," 11th Nov. 1882.
- No. 15,768. W. H. Wortman, London, Ont., "Hay Elevator and Carrier," (Ext. of Patent No. 8090), 11th Nov. 1882.
- No. 15,769. H. Kline, Bend Head, Ont., "Chain Straw Carrier," (Ext. of Patent No. 1865), 11th Nov. 1882.
- No. 15,770. H. R. Terris, Cleveland, Ohio, "Lifting Jacks," 11th Nov. 1882.
- No. 15,771. C. D. Ekman, London, Eng., "Cellulose," 11th Nov. 1882.
- No. 15,772. A. Sanford, Oshkosh, Wis., "Cant Hooks," 11th Nov. 1882.
- No. 15,773. T. F. Rowland, Brooklyn, N. Y., (assignee of H. A. Due, jr., Charleston, South Carolina, "Abrition Mills," 11th Nov. 1882).
- No. 15,774. J. Riffe, London, Eng., "Electric Lamps," 11th Nov. 1882.
- No. 15,775. W. Harris, Forest City, Maine, "Process for tanning hides," 11th Nov. 1882.
- No. 15,776. S. B. Greacen, Perth Amboy, N. J., "Friction Lock for Steering Wheels," 11th Nov. 1882.
- No. 15,777. W. J. English and W. Wood, Cahoon, N. Y., "Water Traps," 11th Nov. 1882.
- No. 15,778. G. M. and N. Cossitt, Brockville, Ont., assignees, "Horse Rake," (Ext. of Patent No. 1790), 13th Nov. 1882.
- No. 15,779. J. Mundell, W. J. Gordon and J. Mundell, Philadelphia, Penn., "Hydro-carbon Furnace," 13th Nov. 1882.
- No. 15,780. J. E. Booth, Bangor, Maine, "Rock Drill," 13th Nov. 1882.
- No. 15,781. R. S. Morse, East Dixfield, Maine, "Clothes Washer," 13th Nov. 1882.
- No. 15,782. A. M. Bailey, Marlborough, A. B. and C. G. Williams, Cleveland, Ohio, "Process of Preserving Eggs," 13th Nov. 1882.
- No. 15,783. A. G. Shannon, Santa Rosa, Cal., "Perforating letters and operating arsus for type writing machines," 13th Nov. 1882.
- No. 15,784. H. W. Fleury, Aurora, Ont., assignee, "Cone rivet cutter," 13th Nov. 1882.
- No. 15,785. J. L. Pelletier, Montreal, Que., "Boots and Shoes," (Ext. of Patent No. 8119), 17th Nov. 1882.
- No. 15,786. F. M. Hazleton, Duncan's Mills, Cal., "Car-coupling," 17th Nov. 1882.
- No. 15,787. E. Stern, Boston, Mass., "Hammers for sewing machines," 17th Nov. 1882.
- No. 15,788. C. Laufer and C. H. Zimmer, Lee Centre, N. Y., "Farm Fences," 17th Nov. 1882.
- No. 15,789. C. L. Ferguson, Toronto, Ont., "Thill couplings," 17th Nov. 1882.
- No. 15,790. F. C. Ayer, Columbus, Ohio, "Combined rein and whip holder and lock socket," 17th Nov. 1882.
- No. 15,791. I. Joseph, Toronto, Ont. "Process for lining car axle boxes," 17th Nov. 1882.
- No. 15,792. The Babcock and Wilcock Company, New York, N. Y., assignees, "Steam boilers," 17th Nov. 1882.
- No. 15,793. The Babcock and Wilcock Company, New York, N. Y., assignees, "Steam boilers," 17th Nov. 1882.
- No. 15,794. L. W. Robards, Newton, Ill., "Flax thrashing machines," 17th Nov. 1882.
- No. 15,795. A. G. Barton Constantine, and J. H. Hahn, Detroit, Mich., "Hay racks," 17th Nov. 1882.
- No. 15,796. W. B. Guernsey, Norwick, N. Y., "Automatic car brake," 17th Nov. 1882.

THE  
**CANADIAN PATENT OFFICE RECORD.**  
 ILLUSTRATIONS.

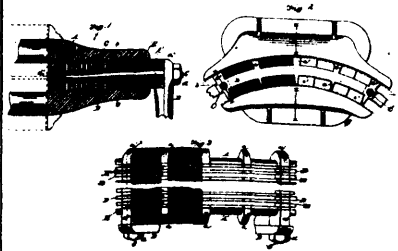
Vol. X.

NOVEMBER, 1882.

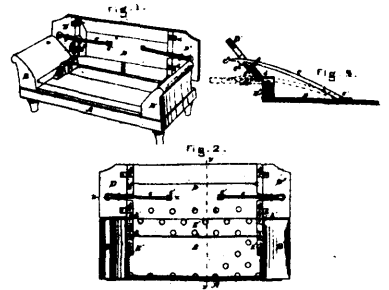
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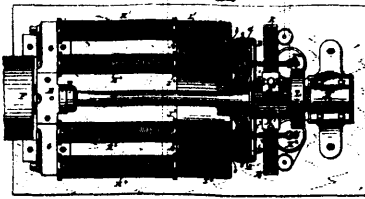
15563 Omo's Improvements on Mop Holders.



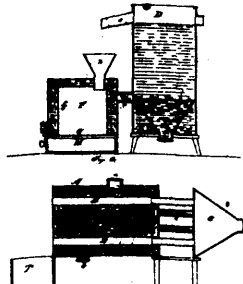
15564 Sperry's Improvements on Dynamo Electric Armatures.



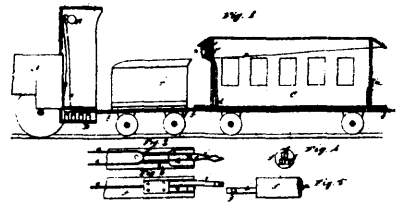
15566 Plimpton's Improvements on Sofa Beds.



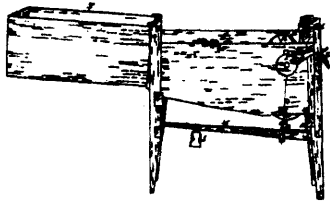
15567 Sperry's Improvements on Dynamo-Electric Machines.



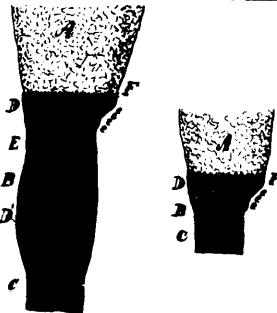
15568 Kells's Improvements on Process and Apparatus for freezing Paraffine.



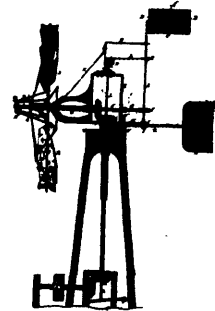
15569 Parker's Improvements on Electric Couplings and Train Telegraphs.



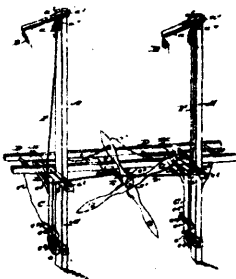
15570 Weeden's Improvements on Hay and Straw Cutting Machines.



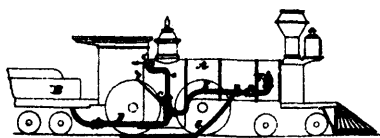
15571 Farrington's Improvements on Undergarments.



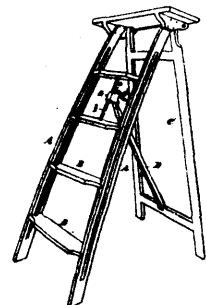
15572 Wilson's Improvements on Wind Mills.



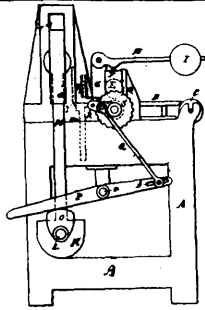
15573 Smith's Improvements on Scaffolds.



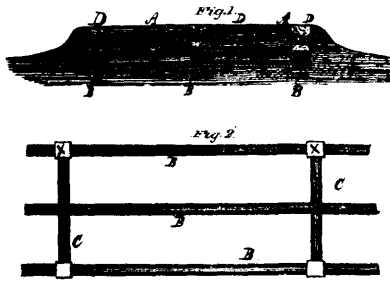
15574 Blackall's Improvements in Means for Extinguishing-Fires on Railway Trains.



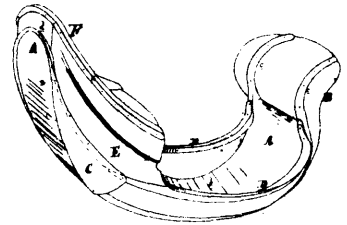
15576 Spencer's Improvements on Step Ladders.



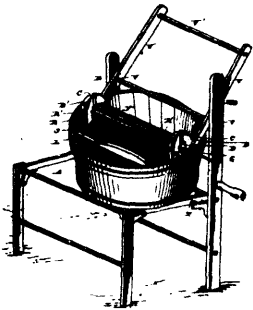
15577 Holston's Improvements on Hoop Cutting Machines.



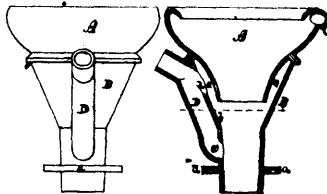
15578 Henning's Improvements in the system of Constructing Roads.



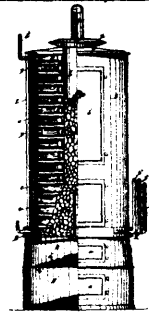
15582 Pagel's Improvements on Sleighs.



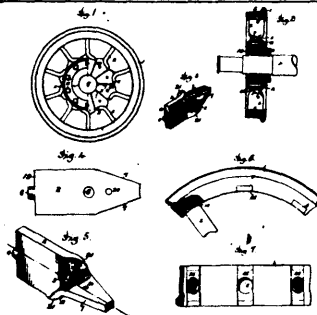
15589 Cornett's Improvements on Washing Machines.



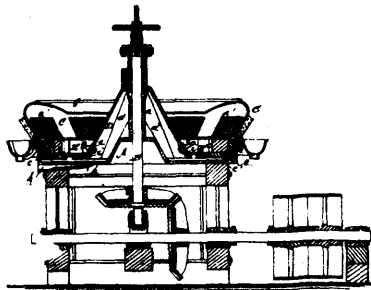
15590 Phillips's Improvements in Water Closets.



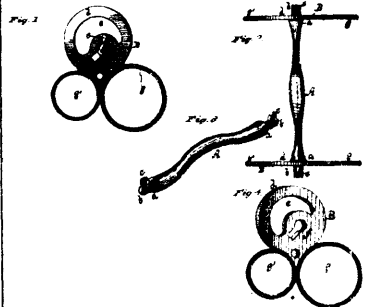
15591 Beaupré's Improvements on Steam Boilers.



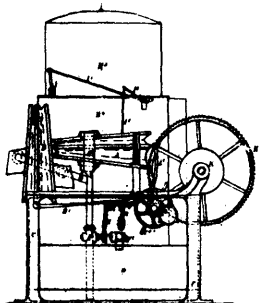
15592 Millimore's Improvements on Car Wheels.



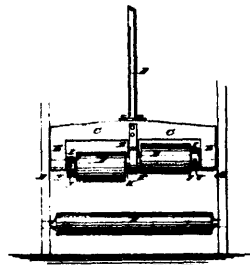
15593 Howland's Improvements on Machines for Grinding and Amalgamating Ores.



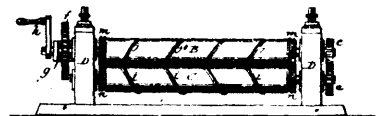
15594 Jones's Improvements on Bridle Bits.



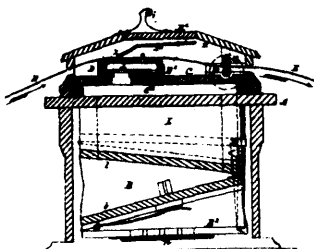
15595 Martin's Improved Apparatus for the Manufacture of Air Gas.



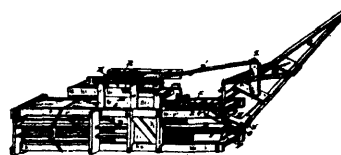
15596 Lewis's Improvements on Saw mills.



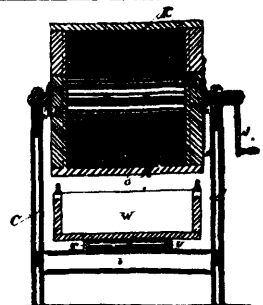
15597 Austin's Improvements on Sheet Metal Pipes and Machines for Making the same.



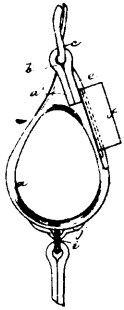
15598 Stone's Improvements on Mechanical Instruments.



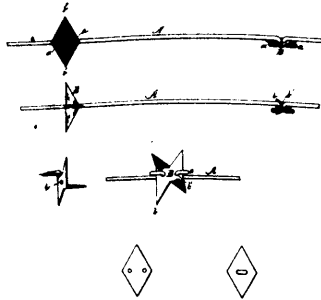
15599 Dederick's Improvements on Machines for Baling Hay.



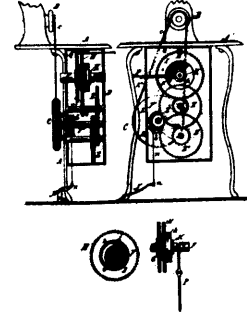
15600 Payne's Improvements on Machines for Removing Potato Sprouts.



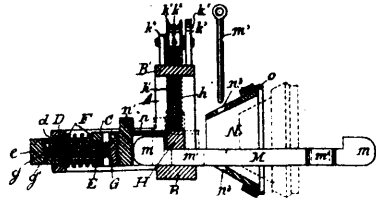
15601 Folsom's Improvements on Thill Lugs.



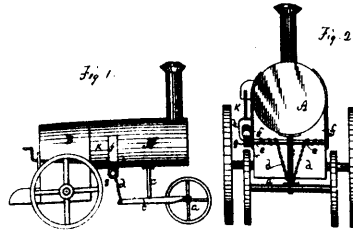
15605 Cook's Improvements on Barbed Fence Wire.



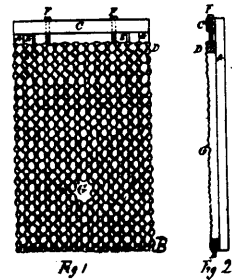
15608 Rouff's Improvements in Sewing Machine Motors.



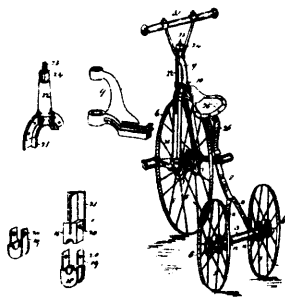
15607 Wairath's Improvements on Car Couplings.



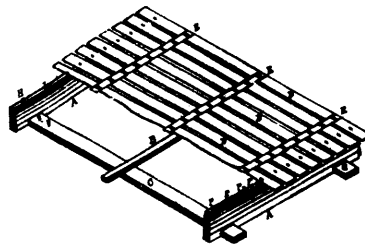
15608 Wilson's Improvements on Devices for Levelling Engine Boilers.



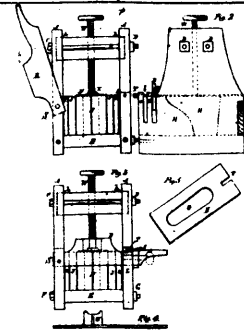
15609 Knowlton's Improvements on Bed Bottoms.



15610 Smith's Improvements on Velocipedes.



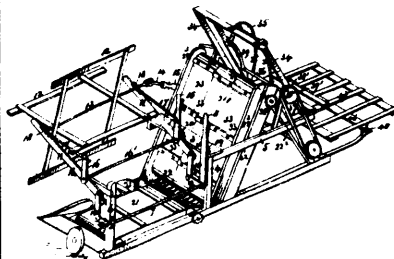
15613 Pariseault's Improvements on Bed Bottoms.



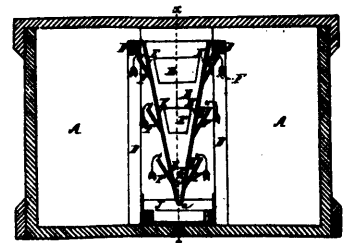
15614 Maraball's Improvements in Crimping Machines.



15615 Ruhl's Improvements on Felting Machines.



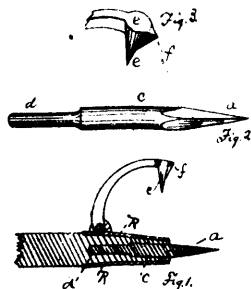
15616 Elward's Improvements on Grain Harvesters.



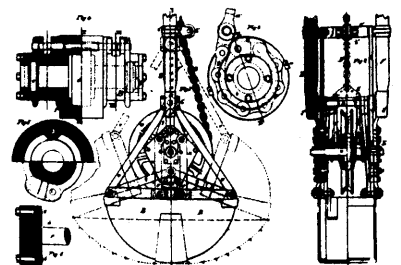
15619 Reed's Improvements on Refrigerating Apparatus.



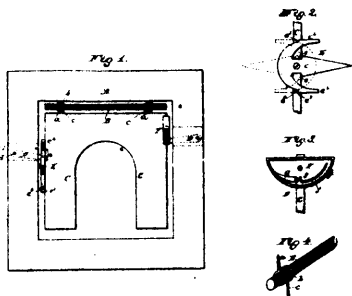
15620 Davis's Improvements in Gen Cleaners.



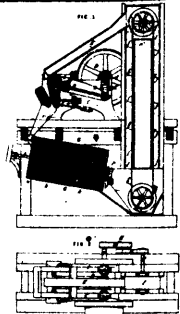
15621 Mansfield's Improvements on Cant Dogs.



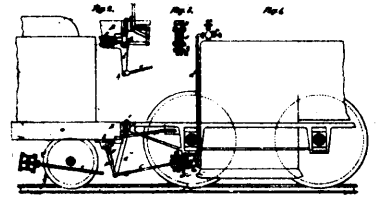
15622 Both's Improvements on Dredging Machines.



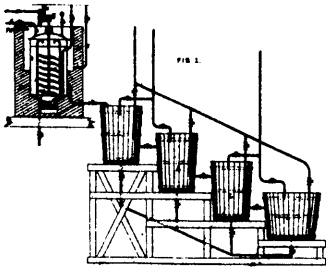
15623 Householder's Improvements on Coops for Fowls.



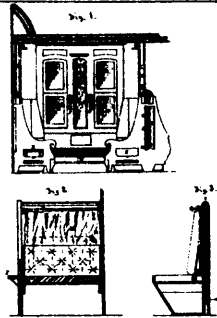
15626 Dalton's Improvements in Machinery for Crushing and Reducing Ores.



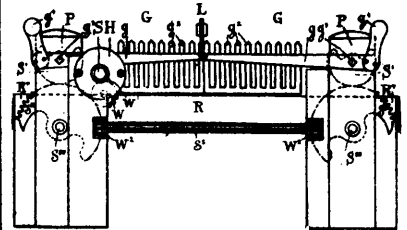
15627 Waterman's Improvements on Locomotives.



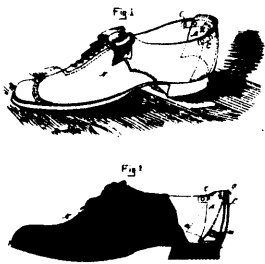
15628 McCarty's Improvements on the Process and Apparatus for Subdividing Fatty Matters.



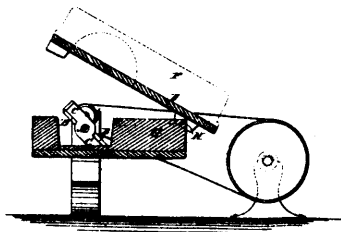
15629 Clarke's Improvements in Sleeping and Drawing Room Cars.



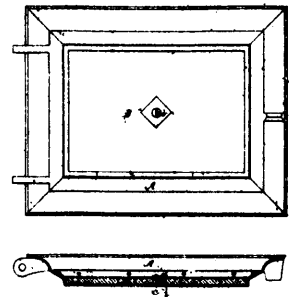
15630 Mayrand's Improvements on Railway Gates.



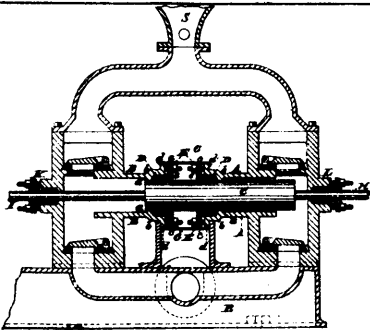
15631 Farwell's Improvements on Shoes.



15632 Gore's Improvements on Panel Raisers.



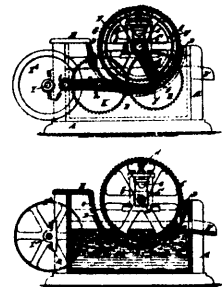
15633 Alden's Improvements in Stove Doors.



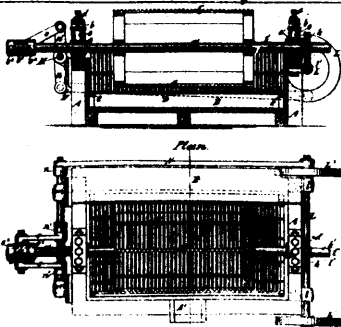
15636 Jay's Improvements on Pumps.



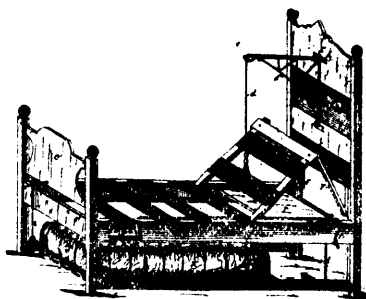
15637 Hooker & Lowell's Improvements on Bleaching Machines.



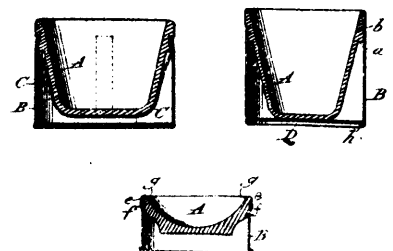
15638 Sanford's Machine for Obtaining Fibres.



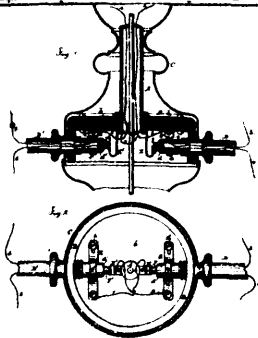
15639 Sanford's Machine for Obtaining Fibres.



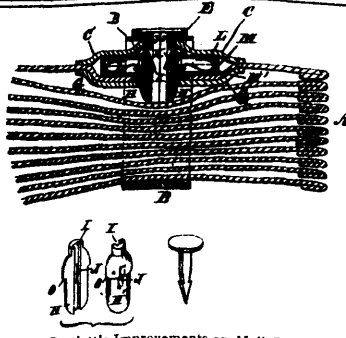
15640 Johnson's Improvements on Invalid Beds.



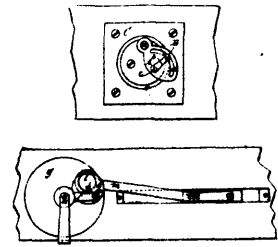
15641 Fisher's Improvements on Culinary Vessels.



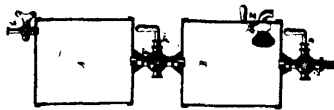
15642 Edison's Improvements on Electric Chandeliers.



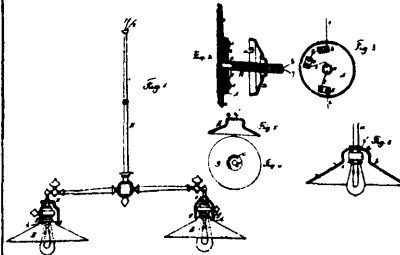
15643 Bartlett's Improvements on Mail Bag Fastenings.



15644 Eibing's Improvements in Devices for Converting Motion.



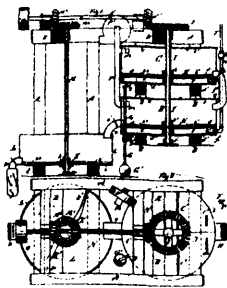
15645 Bergen's Improvements on Apparatus for Dispensing Effervescent Liquids.



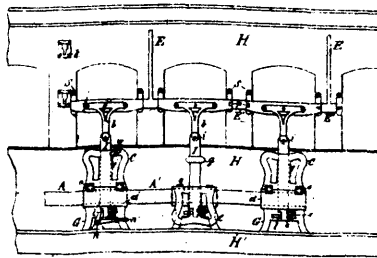
15646 Edison's Improvements on Fittings and Fixtures for Electric Lamps.



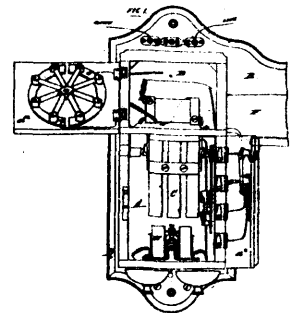
15647 Sutton's Improvements in Skates.



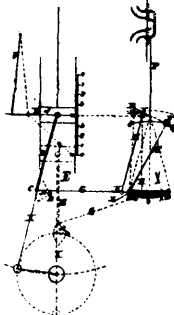
15648 Tamm's Offal Drier and Cooler.



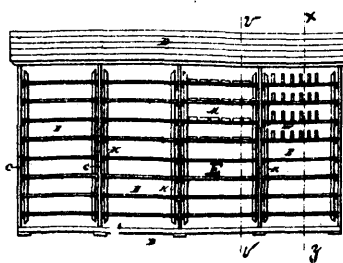
15649 Melick's Improvement on Sleeping Cars.



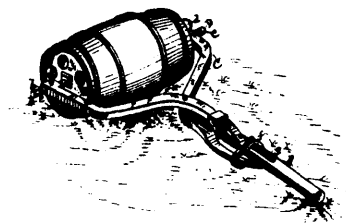
15650 Rose's Improvements on Telephones.



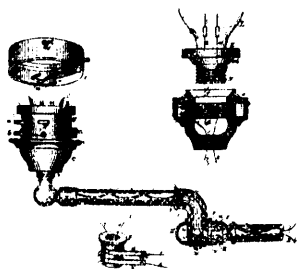
15651 Morton's Improvements on Steam Engines.



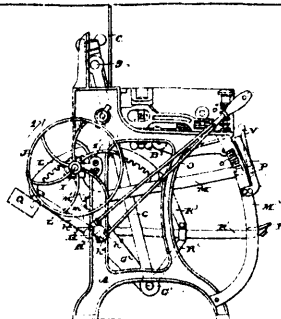
15652 Evans's Improvements in Sheds for Drying Bricks.



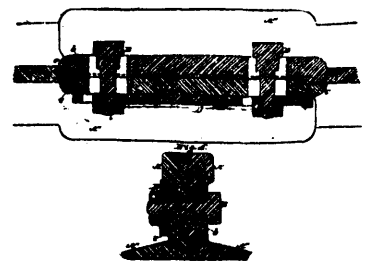
15653 Schonhoff's Improvements on Barrel Rollers and Guides.



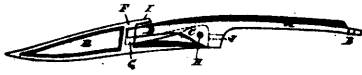
15654 Edison's Improvements on Fixtures and Attachments for Electric Lamps.



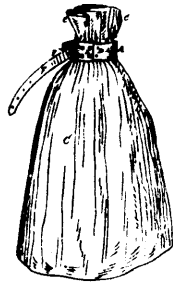
15655 Smith's Improvements on Presses.



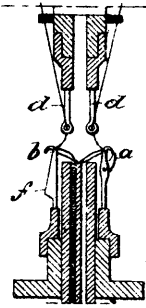
15656 Lightfoot's Improvements in Railroad Rail Joints.



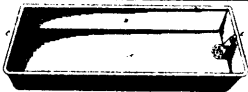
15657 Spitzig's Improvement on Attachments to Harvesters.



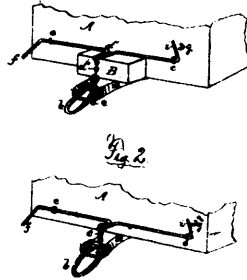
15658 Hunter's Improvements on Grain Bag Fasteners.



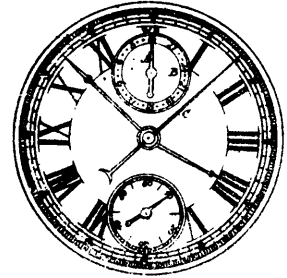
15659 Fruitt's Improvements on Knitting Machinery.



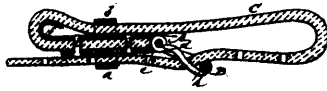
15660 Talpey's Improvements on Sinks.



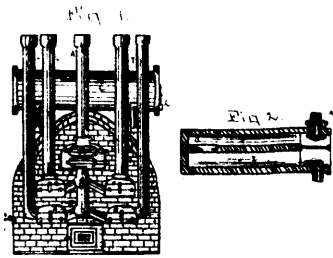
15661 Hickock's Improvements on Devices for Uncoupling Cars.



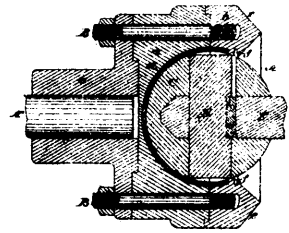
15663 Douglas's Improvements in Chronographs.



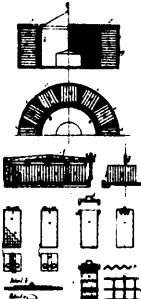
15664 Hartson's Improvements on Buckle Attachments.



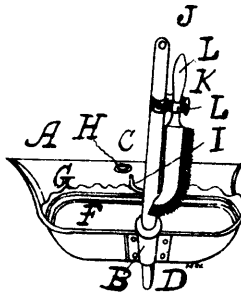
15665 Ramsdell's Improvements on Gas Apparatus



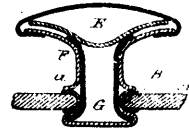
15666 Johnston's Improvements on Coupling Joint for Shafting.



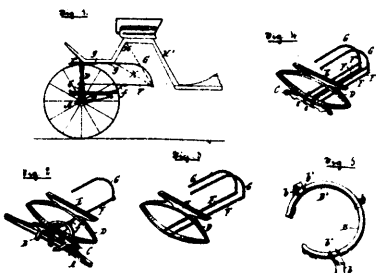
15667 Weirich's Improvements in Treatment and Moulds for the Manufacture of Sugar.



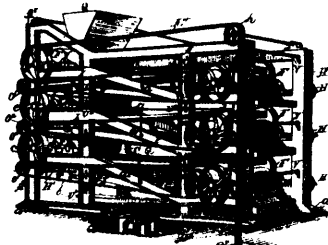
15668 Ferry's Improvements on Dust Pans.



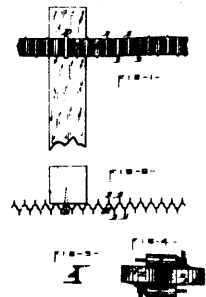
15670 Schneller's Improvements on Button Fastenings.



15671 Bartholomew's Improvements in Carriage Gears.

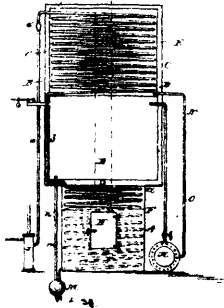


15672 Gilbert's Improvements on Reduction Mills.

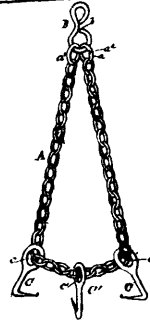


15673 Carpenter's Improvements on Barbed Fences.

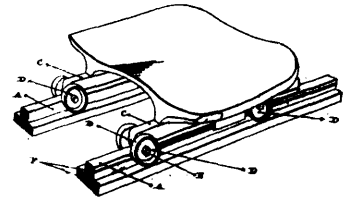




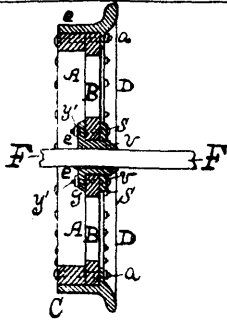
15674 Hese's Improvements on Steam Generators.



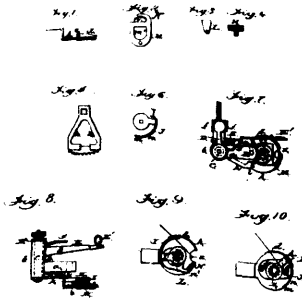
15675 Raymond's Improvements in Log Chains.



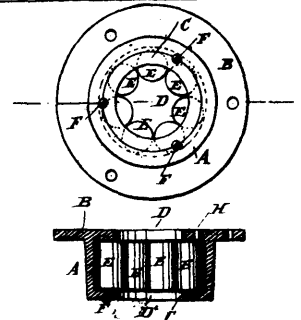
15676 Warin's Improvements on Sliding Seats for Boats.



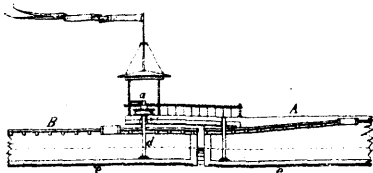
15677 Sheffield's Improvement on Car Wheels.



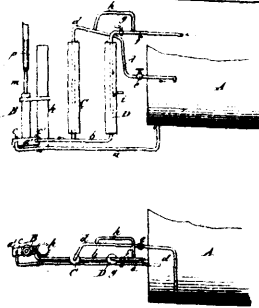
15678 Chilton's Improvements on Sewing Machines.



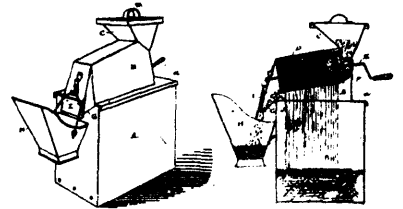
15679 Brownley's Improvements on Roller Bushes.



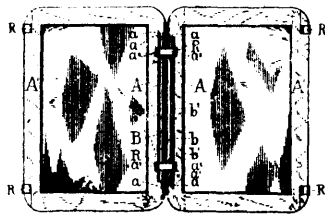
15680 Ressel's Improvements on Towing Lighters.



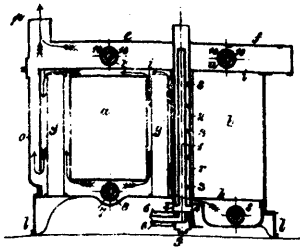
15681 Clute's Improvements on Steam Boilers.



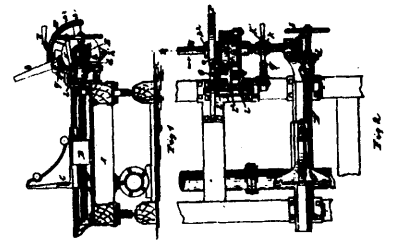
15682 Wilson & Hallam's Improvements in Clader Sifters.



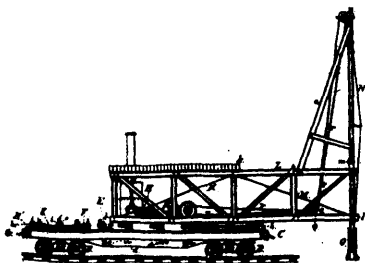
15683 McDade's Improvements on Slates.



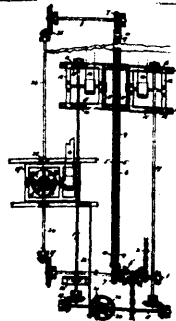
15684 Hearington's Improvements on Heating Stoves.



15685 Prescott's Improvements in Saw Mills.



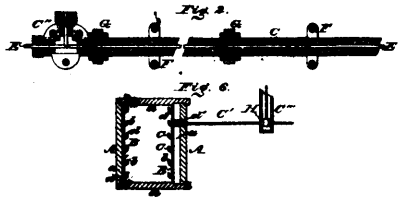
15586 Stock's Improvements in Pile Drivers.



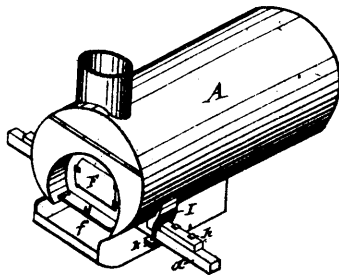
15687 Millen, Mousseau & Perkins's Improvements on Saw Mills.



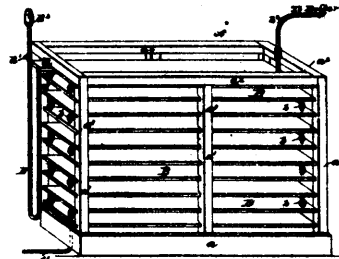
15688 Sax's Improvements in Car Wheels.



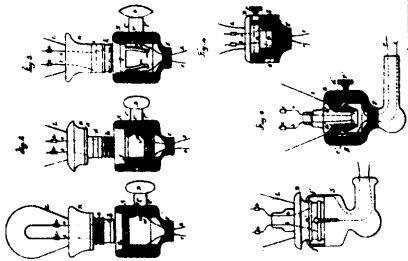
15689 Goebel's Improvements on Underground Conduits for Electric Wires.



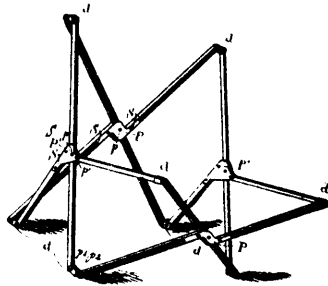
15691 Michener's Improvements on Steam Boilers.



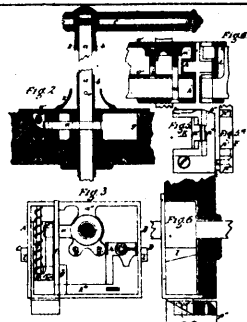
15692 Belcher & Hooker's Improvements on Fruit Evaporators.



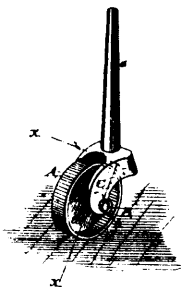
15693 Edison's Improvements on Electric Lights.



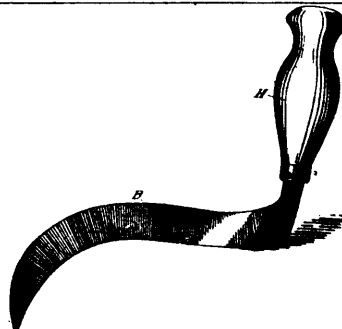
15694 Latour's Improvements on Folding Joints for Camp Furniture.



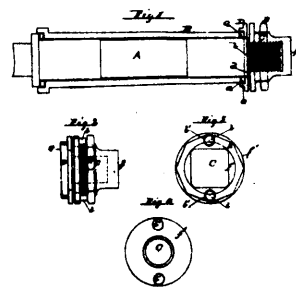
15695 Mathisen's Improvements in Door Locks.



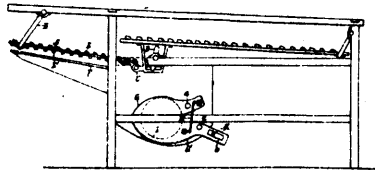
15696 Pederson's Improvements on Furniture Castors.



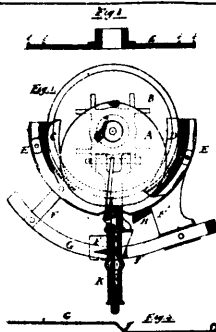
15697 Fletcher's Improvement in Garden Knives.



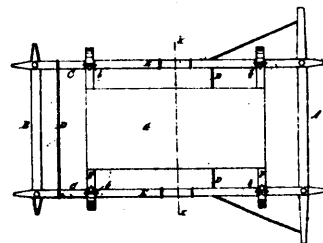
15698 Holly's Improvements on Axle Nuts.



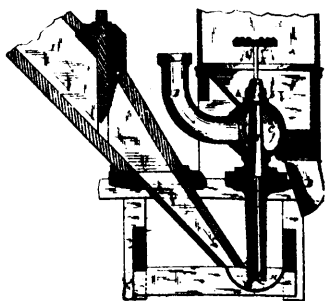
15699 McCloskey's Improvements on Thrashing Machines.



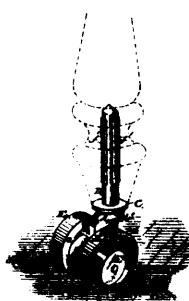
15700 Flock's Improvements on Harvesters.



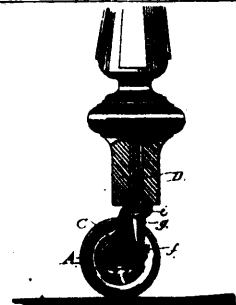
15701 Lockwood's Improvements on Vehicle Gears.



15702 Taggart's Improvements on Grain Reducing Process.



15703 Pederson's Improvements on Furniture Castors.



15704 Pederson's Improvements on Furniture Castors.