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The Canadian Patent Office Record

Vol. III.—No. 12. DECEMBER, 1875. Price in Canada $2.00 per An
United States - $2.50 "

CONTENTS.

INVENTIONS PATENTED.

No. 5278. ANSON O. KITTRIDGE, WILLIAM H. CLARK and WILLIAM J. CLARK, Salem, Ohio, U. S., 20th October, 1875, for 5 years: "Oil Can." (Bidon à l'huile.)

Claim.—In combination with an oil can a revolving sink, consisting of the bottom E, and side F, resting upon a ledge G, and whereon it revolves under the stationary top D; 2nd. The combination of the can A, revolving sink C, stationary top D, conical stationary top L, and revolving door M, collar N, and sleeve O; 3rd. The pump I, provided with a detachable spout H, for locking the same in the can A; 4th. The can A, revolving sink C, stationary top D, revolving door M, stationary top L, and pump I.

No. 5279. FREDERICK C. TAPLEY, (Assignee of Henry Pease) Clarkson, N. Y., U. S., 20th October, 1875, for 5 years: "Improvements in Knitting Machines." (Perfectionnements aux machines à tricoter.)

Claim.—1st. The combination of two needle-cylinders B, B, with two corresponding sets of long and short needles d, d_1, d_2, d_3, arranged in alternate grooves of the cylinders, the needles of each set alternating in action with each other, and the short needles of one set acting in conjunction with the long needles of the other set, and *vice versa*, to produce a fabric of double thickness; 2nd. The combination with the needle-cylinders B, B, of the quadruple cam blocks D, D_1, D_2, D_3, carrying the cams E, E, and arranged to be shifted in opposite pairs by the movement of a lever, so as to operate in connection with the alternate sets of needles; 3rd. The combination with the shifting cam-blocks D, D_1 D_2, D_3, of the parallel rock levers F, F_1, rock-arm K, and stops H_1 H_2.

No. 5280. LOUIS BASKET, New York, U. S., 23rd October, 1875, for 5 years: "Improvements on Electro-Magnetic-Engines." (Perfectionnements aux machines électro-magnétiques.)

Claim.—The combination with the rotary shaft G, or hub S, of the series of T-shaped armatures B, C, consisting of radial arms B, and axially or laterally extending cross-heads C, the said T-shaped armatures being magnetically isolated from each other, and having no connection of any kind one with an other, exceept through their common hub S, on the shaft G.

No. 5281. WILLIAM M. ADAMS, Toronto, Ont., 23rd October, 1875, for 5 years: "Improvements on Chimney Cowls." (Perfectionnements aux chapeaux de cheminées.)

Claim.—The revolving cowl B, provided with the bell mouthed tapering tube C, the exhaust end of which is placed centrally within the mouth of the cowl, in combination with the cylindrical top A.

No. 5282. LAWRENCE O. ROOT, Minneapolis, Min., U. S., 23rd October, 1875, for 5 years: "Improvements in Rail Road Cars." (Perfectionnements aux wagons de chemin de fer.)

Claim.—1st. A rail road truck provided with two longitudinal runners, one at each side of the same, one on the outside of the wheels, having grooves or shoulders on their inner lower edges to engage the outer flange of the rail and confine the car to the road bed of the track, in case the wheels leave the track or a rail becomes broken; 2nd. The combination of the runners A, stays G, brake beam B, provided with shoes M, and springs L, bearing against the standards K, and the link N, and lever O, for applying the brakes to the wheels P.

No. 5283. GEORGE B. DURKEE, Nelson, N. Y., U. S., 23rd October, 1875, for 5 years: "Snap-Hook." (Porte-mousqueton.)

Claim.—The combination with the hook A, A_1, of the pivoted-stop B, and spring E.

No. 5284. IVORY A. RICHARDSON, Malden, Mass., U. S., 23rd October, 1875, for 5 years: "Improvements on Playing Cards." (Perfectionnements aux cartes à jouer.)

Claim.—1st. Playing cards each suit of which is indicated by a different or distinguishing colour, the emblematic cards being provided with numerals to indicate the size or value of the card, and having such numerals, or in lieu thereof, a distinguishing margin or border corresponding in colour with the suit to which the card belongs; 2nd. The round playing cards each suit whereof is indicated by a distinguishing colour, and having numerals showing the size or value of the emblematic cards.

No. 5285. SAMUEL W. STEELE, and JOSEPH BAYER, Northfield, Vt., U. S., 23rd October, 1875, for 5 years: "Marbleizing Compound." (Composé pour marbrer.)

Claim.—1st. The following ingredients: No. 1: Spirits of turpentine, boiled oil, gun powder, saltpetre, beef's gall, and colouring matter; No. 2: Spirits of turpentine, boiled oil, nitric acid, and colouring matters; and No. 3: gum arabic, sugar, glue, beef's gall, and water in the proportions set forth; 2nd. The process of marbleizing surfaces consisting essentially of first painting the same with composition No. 1: and then dipping it in composition No. 3: upon which has been floated composition No. 2.

No. 5286. GEORGE C. EASTMAN, Lewiston, Me., U. S., 23rd October, 1875, for 5 years: "Flour Sifter." (Tamis à farine.)

Claim.—The combination of the woven wire body A, the peripheral rim B, and the arched handle C, with the supporting cross E, E, arranged in the said body and fastened to the rim; The combination of the metallic ring D, the woven wire body A, the plate rim B, the handle C, and the strengthening cross E, E_1.

No. 5287. SAMUEL LANDON, Iroquois, Ont., 23rd October, 1875, for 5 years: "Oil Tank." (Réservoir à l'huile.)

Claim.—1st. The combination of an independent cover or lid B, having a dome or cap I, hinged at the end of its greatest diameter with an oil tank A; 2nd. The combination of an independent pump H, having perforations or holes a, and a tripod valve b, at its bottom with an oil tank A.

No. 5288. GEORGE F. SIMONDS, Fitchburg, Mass., U. S., 23rd October, 1875, for 5 years: "Apparatus and Process for Tempering and Straightening Saws without Hammering." (Appareil et procédé de trempage et dressage des scies sans marteau.)

Claim.—1st. Formers *c*, *c*, constructed with a cross-grooved face; 2nd. The combination of formers for holding articles to any required position, with an air tight chamber D; 3rd. The combination of formers for holding articles to any required position, with an air tight oven D, inclosed in a heating furnace; 4th. The combination of formers *c*, *c*, revolving shafts *b*, b^1, and screws *f*, *f*, with oven D, enclosed in heating furnace; 5th. The combination of formers *c*, *c*, and revolving shafts *b*, b^1, with oven D, enclosed in heating furnace; 6th. In combination with a tempering oven revolving vertical formers; 7th. The improved process of tempering and straightening saws by means of heat and pressure and without hammering the saw being protected from atmospheric currents.

No. 5289. GABRIEL LEVERICH, Brooklyn, N. Y., U. S., 23rd October, 1875, for 5 years: "Improvements on Elastic Hubs for Vehicles." (Perfectionnements aux moyeux élastiques de roues.)

Claim.—1st. The recessed or slotted annulars C^1, and the radial spur *c*, of the box or bearing D, in combination with the hub A, and a cushion or cushions; 2nd. An elastic hub, the combination of the internal sleeve G, to prevent radial play of the box or bearing D, with the said bearing and one or more elastic cushions B, or C, the said sleeve to close the inner ends of the spoke mortises; 3rd. The elastic hub comprising the box or bearing D, with one or more circumferential shoulders provided with the nut F, at its outer ends and having the radial spur *b*, one or more elastic cushion B, C, the annulus C^1, and the sleeve G, to permit radial play of the box D.

No. 5290. WATSON P. WIDDIFIELD, Siloam, Ont., 23rd October, 1875, for 5 years: "Improvements in Wheeled Vehicle Brakes." (Perfectionnements aux freins de voitures à roues.)

Claim.—1st. The draw-bar H, pivoted lever I, chain I^1, and swinging shaft D, in combination with the axle C, or its equivalent; 2nd. The friction wheel E, with clutches E^1, and E^2, operates from the axle C, in combination with the shaft D, with pins *d*, and d^1; 3rd. The shaft D, eye bolts *g*, chains G and G^1, and brakes K, in combination with the wheels B; 4th. The lever F, quadrant F^2, with notches *f*, lever F, in combination with the wheel E.

No. 5291. WILLIAM E. ANDREW, New-York, U. S., 23rd October, 1875, for 5 years: "Process for Making Butter from the Oils of Animal Fat." (Procédé de confection du beurre avec les huiles de gras animal.)

Claim.—1st. The process of obtaining a product as a substitute for cooking butter, consisting of churning by itself suitably prepared oil obtained from animal fat whereby the oil globules are broken up and afterward subjecting it to a low temperature; 2nd. The process of manufacturing artificial butter by churning by itself suitably prepared animal oil and then combining the product thus obtained with butter already formed from cream the oil product being placed in the churn and churned until a thorough amalgamation is effected when the mass will partake of the flavour of natural cream butter; 3rd. The product consisting of animal oil alone and of the character described, having the globules broken up and having the appearance and consistency of butter.

No. 5292. CHARLES MARTIN, Toronto, Ont., 23rd October, 1875, for 5 years: "Ventilator." (Ventilateur.)

Claim.—The revolving or fixed hood B, having the trumpet-mouth B^2, centrally placed frustum of cone C, and tapering or parallel discharge-end B^1, in combination with the shaft A.

No. 5293. SAMUEL B. STRONG, Albion, N. Y., U. S., 23rd October, 1875, for 5 years: "Improvement in Pumps." (Perfectionnement dans les pompes.)

Claim.—The combination of the racks *a*, *a*, pinions *b*, *b*, racks D, D, handle C, casing B, pump stock A, and piston rod E.

No. 5294. NELSON KIMBALL, London, Ont., 23rd October, 1875, for 5 years: "Portable and Stationary Fence." (Clôture portative et fixe.)

Claim.—1st. The arrangement for fastening the fence by the wood or iron pin *b* passing through (and securing) the projecting top rail of fence into the top rail of adjoining panel; 2nd. Securing the fence at the bottom by the overlapping bottom rails secured by the wood stake *a*, or by the iron stake *d*, or by the iron rod *c*, secured to the anchor block *e*, 3rd. The iron pin *b*, the iron stake *d*, the rod *c* and the anchor block *e*, the top rail notched into post and the overlapping bottom rails of fence.

No. 5295. GIDEON W. COTTINGHAM, Rockport, Texas, U. S., 23rd October, 1875, for 5 years: "Sad Iron." (Fer à repasser.)

Claim.—1st. The grate G, of the longitudinal bars *a*, having draft openings *x*, near the upper edge and grooved longitudinally on the under side; 2nd. The combination of the grooved and perforated grate G, and the end plate D, with lower draft openings *y*; 3rd. The combination of the hollow iron A, pan C, end plate D, with draft openings *y*, *z*, and the grate G.

No. 5296. GIDEON W. COTTINGHAM, Rockport, Texas, U. S., 23rd October, 1875, for 5 years: "Clothes Ironing Machine." (Machine à repasser le linge.)

Claim.—1st. An ironing board elevated above the reciprocating table or carriage leaving an open space between them, upon which it is supported; 2nd. A reciprocating carriage and an elevated ironing board supported thereon and capable of being raised from either end or entirely removed; 3rd. The combination of the reciprocating table or carriage B, end supports D, D, with pins *i*, *i*, and the ironing board E; 4th. The combination of the iron G, pivoted arms H, and a treadle L, connected to the arms whereby the iron may be pressed down with any desired pressure on the ironing surface; 5th. The counter balancing weight M, in combination with the treadle L, connections *f*, K, J, arms H, and iron G; 6th. The arrangement with the carriage B, cords *e*, pulleys or drums C, C, and shaft *a*, of the gearing N, O, P, shaft *n*, and crank R.

No. 5297. JACOB B. SLICHTER, Kalamazoo, Mich., U. S., 30th October, 1875, for 5 years: "Elastic Paint Compounds." (Composé à peinture élastique.)

Claim.—Elastic paint composed of linseed residuum and dead oil naphta, rosin, asphaltum, Venitian red, and oxide of iron compounded.

No. 5298. JACOB B. SLICHTER, Kalamazoo, Mich., U. S., 30th October, 1875, for 5 years: "Fire-Proof Roofing Cement." (Ciment réfractaire à toitures.)

Claim.—Mastic roofing cement composed of asphaltum, residuum oil, ground silica, oxide of iron, and soluble or water glass or other alkaline substance or solution compound.

No. 5299. JACOB B. SLICHTER, Kalamazoo, Mich., U. S., 30th October, 1875, for 5 years: "Elastic Fire-Proof Paint." (Peinture élastique réfractaire.)

Claim.—A fire proof paint composition composed of linseed oil, naphta, soluble glass, chloride of calcium and gum, rosin or turpentine, with or without the addition of asphaltum compounded.

No. 5300. JAMES H. TACKABERRY, East-Tilbury, Ont., 30th October, 1875, for 5 years: "Buggy Top." (Couverture de voiture.)

Claim.—A jointless buggy top in combination with straps A, A, hooks C, and D, and hinges E, E, arranged in such a manner that the buggy top can be attached to any ordinary buggy seat or the seat of a waggon.

No. 5301. WILLIAM C. PEEL and JUSTUS V. ELSTER, Springfield, Ohio, U. S., 30th October, 1875, for 5 years: "Improvements on Dash-Boards for Vehicles." (Perfectionnements aux garde-crottes de voitures.)

Claim.—1st. A dash cover made of one piece of leather or other suitable material doubled across its centre or thereabout, and having a metal tube or moulding slipped over the bead or swell produced by said doubling; 2nd. In combination with leather C, of dash board A, the tube or moulding *a*; 3rd. The combination of tube or moulding *a*, with leather C, of dash board A, and the retaining screws *b*.

No. 5302. FERRAND G. WALLACE, Waterloo, Iowa, U. S., 30th October, 1875, for 5 years: "Improvements on Mill-Trams." (Perfectionnements dans la suspension des meules.)

Claim.—1st. The combination with a rocking bed stone, a runner G, a spindle F, and a bush E, of a spindle packing device for preventing the downward passage of flour through the eye of the bedstone; 2nd. In combination with a rocking bedstone A, runner G, spindle F, and bush E, the spindle packing device consisting of a packing disc secured between the plate H, having projections *g*, and plate K, applied to the bed stone.

No. 5303. WILLIAM D. BARTLETT, Amesbury, Mass., U. S., 30th October, 1875, for 5 years: "Improve-

ments on Heater-Furnaces." (Perfectionnements aux calorifères.)

Claim.—1st The provision of a curved blow-plate G, applied to the plate A; 2nd. The provision of a cover B, to the fire pot A; 3rd. The provision of a damper C, arranged to cut off the inflow of air through the passages D; 4th. The provision of plates E, combined with a tortuous arrangement of smoke flues I, forming air passages D; 5th. The provision of the tube F, to the fire pot for conveying cold air.

No. 5304. WILLIAM GOODWIN, Liverpool, Eng., 30th October, 1875, for 5 years: "Machine for facilitating the Transfer of Grain and Bulk Substances." (Machine pour faciliter le transbordement du grain et des effets en grenier.)

Claim.—1st. The combination of the elevator *a*, and movable platform *l*, *m*; 2nd. The construction and arrangement of the parts as illustrated and described; 3rd. The combination of the elevator and platform when each is made portable and independent of the other; 4th. The employment in combination with apparatus constructed as described of automatic weighing apparatus.

No. 5305. JAMES J. CATLING, London, Ont., 30th October, 1875, for 5 years: "Weather-Strip." (Bourrelet de porte.)

Claim.—The strips A, B, moving parallel to one another by means of the guides C, C_1, and the coil spring E, when attached to the bottom of a door.

No. 5306. THOMAS R. VENNERS and RICHARD ROWLEY, Cumberland, Md., U. S., 30th October, 1875, for 5 years: "Improvements on Machines for Rolling Tapered Bars." (Perfectionnements aux machines à laminer les barres effilées.)

Claim.—The combinrtion of the sliding journal carriages *d*, that support the upper roll C_1, gibs *f*, pins E, and eccentrics E_1, revolving in yokes or straps G.

No. 5307. ROBERT WINDER, Bolton, Eng., 30th October, 1875, for 5 years: "Type Composer." (Compositeur.)

Claim.—Under the first head: I. employing electro-magnets to control the motion of type ejectors; II. the parts 2, and 4. Under the second head: the construction, arrangement and combination of parts. Under the third head: I. arresting the motion of the receiving belt; II. the construction and arrangement of parts 19 and 20. Under the fourth: I. the construction, arrangement and combination of parts; II. the construction, arrangement and combination of the parts under Figs. 4, and 5. Under the fifth head: the construction, arrangement and combination of the parts 21, 23, 24 and 29; under the sixth head: the arrangement of the parts *f*, *g*, *h*, and *i*, as described under Fig. 6 and 7. Under the seventh head: the construction, arrangement and combination of the parts, whereby several types can be simultaneously ejected from a reservoir in proper order for words or sentences. Under the eighth: the arrangement and combination of parts as illustrated under Fig. 10.

No. 5308. DE WITT C. TAYLOR and ROBERT J. KIMBALL, Brooklyn, N. Y., U. S., 30th October, 1875, for 5 years: "Water-Meter." (Hydromètre.)

Claim.—1st. The valve J, fitted into the inlet pipe to be affected by the entire stream of water, and to regulate the sizes of two openings *a*, *d*, one of said openings allowing water to enter the registering part of the meter while through the other opening water passes through or past the meter without affecting the registering mechanism; 2nd. The combination of regulator *f*, with the inlet pipe E, which has an opening *a*, into the meter and with the valve J; 3rd. The combination of the regulator *h*, with the valve J, having the opening *d*, and with the inlet pipe E, of a water meter; 4th. In combination with a water meter containing the diaphragm G, the curtain or guard H; 5th. The tubular vertically movable valve J, constructed with the opening *d*, and combined with the inlet pipe E, which has the opening *a*.

No. 5309. JOSEPH W. BRANCH, Saint-Louis, Mo., U. S., 30th October, 1875, for 5 years: "Method of Inserting, Fitting and Securing Diamonds in Metallic Holders for Working in Stone." (Manière d'enfoncer, ajuster et assujettir les diamants dans des manches métalliques pour travailler la pierre.)

Claim.—1st. The process of inserting, fitting and securing diamonds into metallic holders by softening the holder or holders with heat and then pressing the diamond into the metal which afterwards in cooling contracts upon the diamond; 2nd. The described process of enveloping diamonds in heated metal and subsequently by any suitable means, such as grinding, removing the surplus metal and exposing the cutting point of the diamond; 3rd. A metallic diamond holder or tool having the diamond imbedded or inserted while the metal is softened by heat.

No. 5310. GEORGE D. BELCHER and JAMES A. STACY, Springfield, and GEORGE K. GRIFFIN and ALEXANDER MCEACHARN, Holyoke, Mass., U. S., 30th October, 1875, for 15 years: "Apparatus for detaching Small Boats." (Appareil a démarrer les embarcations.)

Claim. — 1st. The combination of levers *g*, *g*, with connection *s*, plunger *v*, and crank *d*, with suitable operating handle; 2nd. In combination with jaws *g*, *g*, the plunger *v*, operating to clear the tackle from the open levers.

No. 5311. GEORGE B. DIXWELL, Boston, Mass., U. S., 30th October, 1875, for 5 years: "Improvements on Steam Engines." (Perfectionnements aux machines à vapeur.)

Claim.—In combination with a steam engine cylinder A, the hot air jacket E, and air heating furnace C, connected therewith in combination with the steam engine cylinder A, hot air jacket E, and the furnace C, for heating the cylinder; a thermometer D, and the electrical alarm apparatus A_1, K, with their battery F, wires A_1, B_1, C_1, H, cup of mercury G, spring S_3, applied to such thermometer to indicate therewith the extremes of temperature to be maintained in the cylinder to prevent the formation of mist therein.

No. 5312. JOHN C. SPENCER and EDMUND ARCHAMBAULT, Montreal, Que., 30th October, 1875, for 5 years: "Stench Trap." (Trap d'égoût.)

Claim.—In the construction of a sewer-chimney the arrangement of a plate P, and outlet L, when taken in combination with belt B, rod R, grate G, and stone S.

No. 5313. ADAM OOT, Oswego, N. Y., U. S., 30th October, 1875, for 5 years: "Improvements in Churns." (Perfectionnements aux barattes.)

Claim —1st. The combination of the receptacle A, and sliding plates G, with the axles C, D, having throw-cranks arranged, and connected by cross pieces L, with dashers F, attached; 2nd. The combination of the gear wheels H, by which the churn is operated with the axles C, and D, provided with the throw cranks of the cross pieces L, and dashers F.

No. 5314. WILLIAM A. STEVENS, Luccassuna Plains, N. J., U. S., and RICHARD E. CROSS, Montreal, Que., 30th October, 1875, for 5 years: "Furnace for making Wrought Iron direct from the Ore." (Fourneau de fabrication du fer forgé avec du minérai.)

Claim. — 1st. The combination in a furnace for making iron of the lower arched chamber A, the fire place B, stack D, and the conical ore chamber C, superposed between the stack and the arched chamber, and communicating with the latter by passages *c*, *c*; 2nd. The combination with the arched chamber A, fire chamber B, stack D, and conical chamber C, superposed between the stack and arched chamber, and its upper end opening into the stack of the passages *c*, *c*, communicating with the arched and superposed chamber, the flues *f*, forming a continuation of the passages *c*, and communicating with the stack and the dampers E, *g*, and *g*, for closing and opening the flues *f*, and the open end of the chamber C; 3rd. The combination with the upper and lower chambers A, B, and stack D, of the passages *d*, *d*, communicating between the doors H, I, of the upper and lower chambers and with the stack.

No. 5315. THOMAS THORNTON, Saltburn, Eng., 30th October, 1875, for 5 years: "Apparatus for Closing Doors and Gates." (Appareil à fermer les portes et barrières.)

Claim. — 1st. The novel combination of the two eccentric vertical wheels A, A, with the horizontal wheel D; 2nd. The combination of all the parts.

No. 5316. SAMUEL WALLACE, Seaforth, Ont., (Assignee of J. D. McEachern), 30th October, 1875, for 5 years: "Improvements in Cheese-boxes." (Perfectionnements dans les boites à fromages.)

Claim.—The two casings A, and B, arranged and forming a cheese box with the ends C, C, in combination with one or more partitions D.

No. 5317. GEORGE P. REEVES, Helena, Montana, U. S., 30th October, 1875, for 5 years: "Improvements on Lacers." (Perfectionnements aux œillets de chaussures.)

Claim. — The shoe fastening A, provided with suitable prongs for securing it to the shoe, and having the central concavity *b*, the surrounding ridge or projection *a*, and the hook *d*, bent to fall within the ends of the curved portion.

No. 5318. GEORGE M. FULLER, Holyoke, Mass., U. S., 30th October, 1875, for 5 years: "Machine for making Water, Gas and Sewer Pipes." (Machine à faire des tuyaux à eau, à gaz et d'égoûts.)

Claim.—The combination of the roller B, arranged in fixed bearings, the roller C, having movable bearings *h*, the pivoted weighted levers *f*, suspended from the pulleys *b*, to move said bearings, the roller D, having bearings in the weighted levers *e*, suspended from the said pulleys, the pulleys *b*, and the winding shaft I, and cord attached thereto.

No. 5319. ROBERT GILL, Antwerp, N. Y., U. S., 30th October, 1875, for 5 years: "Fence Post." (Pieu de clôture.)

Claim.—A fence post formed by the combination of the inclined braces A, A, crossing near their top, the brace C, the cross braces D, D, and sill B.

No. 5320. CHARLES A. CHAMBERLIN, Camden, N. J., U. S., 30th October, 1875, for 5 years: "Improvements on Chain-cables." (Perfectionnements aux chaines-câbles.)

Claim.—1st. A chain cable composed of links having the broad inner faces C, C; 2nd. A chain cable composed of links with increased depth at the points of junction of the sides and bends and flattened at those points so that the depth will be greater than the thickness as at *a*, *a*; 3rd. A flexible chain cable composed of links with flattened bends of increased depth in the line of strain; 4th. A chain cable composed of links constructed with increased depth at the points of junction of the sides and bends as at *a*, *a*, and flattened at said points and increased in depth in the bends in the line of strain as at *y*, *y*, said bends being likewise flattened; 5th. A chain cable, the links of which have side bars with broad inner faces *c*, and of increased depth at the points of junction of the sides and bends as at *a*, *a*, and flattened at said points; 6th. A chain cable the links of which have side bars with broad inner faces *c*, and flattened bends of increased depth in the line of strain as at *y*, *y*; 7th. A chain cable composed wholly or in part of links having broad inner faces *c*, increased in depth at or about the points of junction of the sides and bends as at *a*, *a*, and increased in depth at the bends as at *y*, *y*; 8th. A chain link having a perforated stud or brace; 9th. A chain link having a stud or brace with broad bases extending beyond the usual points of fracture of the sides of the link; 10th. A chain link having a broad based perforated stud, in combination with flattened bends, containing a greater area in cross section than the sides.

No. 5321. JAMES SMALE, Exeter, Ont., 2nd November, 1875, for 5 years: "Seamless Shoe." (Soulier sans couture.)

Claim.—A seamless-shoe having the vamps A, and quarters B, and blocked and crimped to form said shoe.

No. 5322. ROBERT SUTHERLAND, Shelburne, Ont., 2nd November, 1875, for 5 years: "Churning Machine." (Machine à baratter.)

Claim.—1st. The combination of the pulleys J, J, belt K, and connecting-pin L; 2nd. The combination of the pulleys J, J, the belt K, connecting-pin L, pitman G, lever F, and coupling D, with dasher C, and churn B.

No. 5323. EDWARD E. HARGREAVES, Sarnia, Ont., 2nd November, 1875, for 5 years: "Improvements on Exhaust Fans." (Perfectionnements des aspirateurs.)

Claim.—The combination and arrangement of valves C, and D, and cord E, openings H, and J, with the exhaust fan B, and pipe G.

No. 5324. JOHN W. LEFFERTS, Baltimore, Md., U. S., 2nd November, 1875, for 5 years: "Shoe-sole Edge Trimmer." (Machine à parachever la tranche des semelles de chaussures.)

Claim.—The adjustable block B, and knife *d*, in combination with the slotted plate *b*, and thumb screw *e*.

No. 5325. CHARLES E. HILL, New York, U. S., 2nd November, 1875, for 5 years: "Improvements on Structures for Piers, Wharves, &c." (Perfectionnements dans la construction des piliers, quais, &c.)

Claim.—1st. A structure consisting of a series of contiguous adjacent columns each bound to a common foundation by a metal bolt *b*; 2nd. The combination of a series of columns each bound to the foundation by a bolt *b*, with a spider D, through which the said bolts pass and by which the columns are bound together; 3rd. The combination of the recessed blocks *a*, *a*, bolts *b*, and ring dowels *c*, enclosed in the recesses of the blocks; 4th. A column or other analogous permanent structure consisting of stone or baked ware strengthened and rendered self-contained by means of a central bolt which serves the two fold purpose of clamping the column, independently of the foundation, and of anchoring the column of the latter.

No. 5326. DAVID M. RICHARDSON, Detroit, Mich., U. S., 2nd November, 1875, for 5 years: "Wheat Polisher and Separator." (Emotteur-séparateur à blé.)

Claim.— 1st. The spiders C, arranged upon the shaft B, in combination with the perforated casing D; 2nd. The combination of an exhaust fan with the shaft B, spiders C, and perforated casing D, and an enclosed supporting frame; 3rd. The spider C_1, mounted on the shaft B, for discharging the grain at an elevated outlet in the casing D; 4th. The combination with the casing and fan of the air box I, provided with the diaphragm I_1, and valve *e*.

No. 5327. HENRY FOWLER, Detroit, Mich., U. S., 2nd November, 1875, for 5 years: "Machine for Cutting Hoops." (Machine à couper les cercles.)

Claim.—1st. A cradle or other device for holding a hoop bolt and adapted to be oscillated over a knife or knives whereby a hoop will be cut from the lower edge of said bolt at each vibration thereof; 2nd. The combination of the sliding cradle, the oscillating bolt holder hung therein and the loose adjustable sides of the said bolt holder which is reciprocated over the stationary knives; 3rd. The set screws *h*, *k*, k_1, in the sides of the cradle; 4th. The knives *n*, *n*.

No. 5328. WILLIAM H. SEYMOUR, Johnstown, N. Y., U. S., 2nd November, 1875, for 5 years: Scaffold-clamp." (Chevalet d'échafaud.).

Claim.—The bottom plate C, having back of the jaw, the hole *h*, of the form described with the seats or sockets *e*, *e*, therein, and the lever *a*, having back of the jaw-shoulders *s*, *s*, on its sides, and the spur *r*, on top in combination with the brace *b*, and key *k*.

No. 5329. GEORGE B. THURBER, Upton Station, Que., 2nd November, 1875, for 5 years: "Oscillating Water and Air Pump." (Pompe hydraulique et atmosphérique oscillante.)

Claim.—1st. A stationary valve D, with waste boxes and discharge chamber E, and suction pipe S, having their openings in the concave face of the valve by means of which water and air are supplied to and discharged from the cylinder at the proper time by its oscillation; 2nd. A cylinder with a convex face in the form of a segment of a circle having its centre in common with supporting trunnions passages *a*, and *b*, so arranged that they will receive and exhaust water and air at the proper time by the oscillation of the cylinder.

No. 5330. WILLIAM D. S. MONCRIEFF, Glasgow, Scot., 2nd November, 1875, for 5 years: "Improvements on Locomotive Carriages for Tramways, &c." (Perfectionnements aux voitures locomotives de chemins à ornières, &c.)

Claim.—1st. The novel combination of the six cylinders 20, forming a receiver for compressed air with the engine details 21 to 31, and the omnibus passenger accommodation; 2nd. The novel combination or arrangement wherein the engine details 21 to 31, are fitted within a distinct frame, which can be detached from the carriage frame; 3rd. The novel combination of the adjustable cut-off valves 34, and their rods 7, with the adjusting mechanism 8 to 17, acting in accordance with the change of pressure in the receiver.

No. 5331. WILLIAM H. MILLIKEN, Sacramento, Cal., U. S., 2nd November, 1875, for 10 years: "Traction Engine." (Machine de traction.)

Claim.—1st. The wheels A, in combination with independent axles B, yokes D, pivots and body; 2nd. The independent axles in combination with jointed sections of the main-axle middle sections of the same body provided with fixed bearings for the same, and the driving wheel carried thereby; 3rd. The combination of the wheels independent axles horizontally oscillating-yokes D, and rock shaft N; 4th. The combination of equalizing bars Q, and springs S, with the body and the horizontally oscillating independent wheels; 5th. The combination of pivoted yokes D, with the body, each having vertical movements relatively to the other.

No. 5332. JAMES ELLIOTT, Kittering, Eng., 2nd November, 1875, for 5 years: "Sewing Machine Needle." (Aiguille de machine à coudre.)

Claim.—Making sewing machine needles with their points tapered off to one side of the needle, instead of to the centre or longitudinal axis thereof.

No. 5333. WATSON P. WIDDIFIELD, Siloam, Ont., 2nd November, 1875, for 5 years: "Car Brake." (Frein de wagon.)

Claim.—1st. The shaft G_1, supported on the swinging links G, G, and provided with the fixed friction pulley D, in combination with the friction

pully C, attached to the revolving axle B; 2nd. The combination and arrangement of the lifting rod I, bent lever H_1, rod H, and pivoted links G, G, with attachments; 3rd. The combination and arrangement of the shaft G_1, provided with the eye-bolt *g*, chain G_2, friction pulley J, and brake lever K; 4th. For the application of brakes to individual cars, or collectively to all the brakes on a train the rope M, extending from the engine or other suitable point throughout the whole or partial length of a train in combination with the lifting rods I, or their equivalent.

No. 5334. PATRICK FITZGIBBONS, Oswego, N. Y., U. S., 2nd November, 1875, for 5 years: "Tube Expander." (Dilatateur de tuyaux.)

Claim.—1st. In combination with the hollow mandrel A, A_1, provided with the radial openings a_{II}, a_{II}, &c., the tooth jaws B, B, &c., placed within said openings, and the mandrel C, fitted into the axial opening a_1, within said mandrel A, provided with the nut D, and having its tapered portion C, bearing against the inner faces of said jaws; 2nd. The mandrel A, A_1, *a*, a^1, and a_{II}, the jaws B, B, &c., the mandrel C, *c*, *c*, the head E, carrying the grooved rollers F, F, &c., the nuts D, and H, and the washer I.

No. 5335. ADDISON CROSBY, New York, U. S., 2nd November, 1875, for 5 years: "Machine for Cleaning Flues." (Machine à nettoyer les bouilleurs.)

Claim.—1st. The combination of the stirrup-valve G, V, steam-jet I, bent nozzle C; 2nd. The combination of stirrup H, lever G, valve V, valve seat W, rod *r*, and spring *o*; 3rd. The valve seat W, in combination with stirrup H, and pipe E; 4th. The pipe C, and the nozzle I.

No. 5336. PETER COOK, Detroit, Mich., U. S., 2nd November, for 5 years: "Hoop Cutting Machine." (Machine à couper les cercles.)

Claim.—1st. The feed guide D, made in two parts hung upon the adjustable suspender *d*, d^1, and oscillating over the knives K, K_1, and concave beds C, C_1; 2nd. The feed guide D, hung upon a short arm in combination with the swinging hopper B, hung upon a longer arm and both oscillating over the knives K, K_1, and concave beds C, C_1.

No. 5337. FREDERICK W. BARTLETT, Buffalo, N. Y., U. S., 2nd November, 1875, for 5 years: "Ozone Machine." (Machine à ozone.)

Claim.—1st. The glass generating tubes, or half tubes *a*, *c*, arranged in any suitable way in connection with the vessel A, or plunger B, around the periphery of the plunger B, or next to the inner walls of the glass generating chamber or vessel A; 2nd. The plunger B, in combination with the phosphorous tubes *a*, *c*, and chamber A; 3rd. The plunger B, formed with the half tube *c*, *c*, *c*, on its outside and arranged in connection with the half tubes *a*, *a*, *a*, of the outer vessel A, or independently thereof and having a projection from the inside of each tube or a movable thimble on which phosphorous sticks rest; 4th. The chamber C, interposed between the base A, and dome D, with walls *f*, *g*, constructed of wire or open work and with the purifying stuffs *h*, in connection therewith, for the purpose of allowing the air to enter freely at any part of its circumference and the ozone to filter out through the stuffs and walls; 5th. The combination of the expansion chamber or dome D, with the open work separating chamber C, vessel A, and phosporous tubes *a*, *c*, all arranged in connection with each other; 6th. The flattened form of the phosphorous sticks *e*, *e*, whereby a better combustion and economy in use is obtained.

No. 5338. CHARLES A. HENNICKE, Mitchell, Ont., 2nd November, 1875, for 5 years: "Improvements in the manufacture of Cutters." (Perfectionnements dans la Fabrication des traîneaux.)

Claim.—The combination of both arm pieces and back top rail E, E, and the mode of bending the back end of the body raves A, A, so as to admit the insertion of the back pannel C, into the groove made in the body raves A, A, and continued upwards into the arm pieces E, E, and back top rail connecting the arm pieces as shown in Fig. 4 of the drawing.

No. 5339. DANIEL CAMERON and JOHN BALLANTINE, Galt, Ont., 2nd November, 1875, for 5 years: "Improvements on Rotary Bed Wood Planing Machines." (Perfectionnements aux machines à raboter le bois à tables rotatoires.)

Claim.—The double headed links C, C, in combination with the lugs B, B, provided with the cored-ends *b*, *b*, and notches b_1, the said lugs being cast or attached to the under side of the slats A, A.

No. 5340. JAMES H. CONNOR, Brockville, Ont., 2nd November, 1875, for 5 years: "Washing-Machine." (Machine à laver.)

Claim.—1st. In combination with the tub A, the rubbing board C, hung eccentrically on the rock shaft D; 2nd. The grooves or slots E, inclinedly cut in the sides of the tub A, to receive the rock shaft D; 3rd. The tub A, having bars B, of the oval or O, G, form arranged so that the rounded curvature tends downwardly to receive the direct action of the rubbing-board; 4th. The legs G, and H, inclinedly arranged and abutting; 5th. Providing the side pieces J_1, with notches K_1; 6th. A packing of soft spun-cotton M, applied to the joints of the boards B.

No. 5341. FREDERICK J. CHUBB, (Co-inventor with, and Assignee of, B. Hunniford) Guelph, Ont., 2nd November, 1875, for 5 years: "Improvements on Lime Kilns." (Perfectionnements aux fourneaux à chaux.)

Claim.—1st The hopper C, having an increasing horizontal section (equivalent on all sides) from the top downward to the beginning of the hopper bottom and provided with a hopper bottom C_1, the outline of the section of which may be described as a "cima recta" formed by concave and convex curves *a* and *b*; 2nd. The tie rods or timbers I, built in the masonry at intervals in the height of the kiln and notched and bolted or otherwise fastened at the angles; 3rd. In a kiln for calcining lime stone the layer of ashes H^1, or equivalent material inserted between the fire brick hopper lining H, and the masonry; 4th. The hood G, erected upon and fastened to the top of the masonry of the kiln; 5th. The inclined plane J, having the hoppered sides M, leading from the back of the draw bars *D*, to the front of the kiln and provided with the sliding hopper-bottomed measure K; 6th. The sliding door N, provided with the ventilator O; 7th. The slide furnaces E, consisting of the three radially placed fire chambers *e*, *e*, *e*, provided with a common outside opening E^1, and fitted on the hopper openings with iron gratings F, built to conform to the shape of the hopper.

No. 5342. RICHARD M. EAMES, Albany, N. Y., 2nd November, 1875, for 5 years: "Improvement on Apparatus and Processes for the Reduction of Ores." (Perfectionnement des appareils et procédés de réduction des minérais.)

Claim.—1st. The employment or use of the vapours of volatile hydrocarbons and fatty matters combined with superheated steam and atmospheric air for the production of heat in a reverbatory furnace, also in cupola furnaces; 2nd In combination with the hydrocarbon vapours the cylinders E, and F, the pipe H, and combustion chamber D.

No. 5343. EMMA E. O. WARNER, wife of J. P. WARNER, DeKalb, Ill., U. S., 2nd November, 1875, for 5 years: "Hinged Baking Pan." (Casserole de boulangerie à charnières.)

Claim.—A baking pan in which the portion surrounding the bottom to form the sides and ends or circumference is constructed in sections hinged to the bottom of the pan in combination with flanges on the end edges of each section with clasps at the ends of the upper wired edges of alternate sections.

No. 5344. THOMAS BOOTH, Toronto, Ont., 2nd November, 1875, for 5 years: "Pipe Wrench." (Clé à tuyaux.)

Claim.—1st. The block C, with working face constructed to the outline shewn in combination with and pivoted to the lever B, the end of said lever acting in connection with the block being finished to a convex outline and provided with a serrated face; 2nd. The notched or slotted lever end B_1, provided with the detachable disc G, the said die being secured in place by means of the screws *g*, *g*; 3rd. The pivot pin D, provided with the central flatted faces in combination with the slot E, provided with the notches E^1; 4th. The block C, provided with the bearing face C_1.

No. 5345. WILLIAM BURROWS, New-York, U. S., 2nd November, 1875, for 10 years: "Improvements in Stoves." (Improvements dans les poêles.)

Claim.—1st. A stove made of cast metal plates A, and ornamented with tiles B, or their equivalent removably secured to openings in the various plates so that the faces of the tiles are exposed to view through or within said openings; 2nd. As an improvement upon ornamental stoves, a stove composed of cast metal plates having openings for the display of ornamental tiles, said plates having flanges or lugs upon the same adapted to hold said tiles and display them through or with in said openings as well as to permit the removal or replacement of the same without disturbance of the proper plates; 3rd. The ornamentation of the plates A, thereof with tiles B, when the latter are removably attached to the former.

No. 5346. JOHN YOCUM, Dunville, Ont., 2nd November, 1875 (Extension of Patent No. 718), for 5 years: "Improvement in Ploughs." (Perfectionnement dans les charrues.)

Claim.—The combination of the wrought and cast iron beam and combining and fastening of the cast iron part H, R, S, D, with the wrought iron part D, E, F, by means of the bolts.

No. 5347. STEPHEN T. DRAPER, Clarence, Ont., 8th November, 1875, for 5 years: "Improvement on

Lamp Chimneys." (Perfectionnement des cheminées de lampes.)

Claim.—A lamp chimney constructed in two or more longitudinal parts A, B, to fit together and held by springs or other suitable fastening.

No. 5348. EARNSHAW BRADLEY, St. Leonard, Que., 8th November, 1875, for 5 years: "Improvements in the Manufacture of Extract of Hemlock Bark." (Perfectionnements dans la fabrication de l'extrait d'écorce de pruche.)

Claim.—The treatment of the ooze or liquor of hemlock bark with sulphurous-acid.

No. 5349. JAMES O. BYRNS, Detroit, Mich., U. S., 8th November, 1875, for 5 years: "Advertising Indices." (Index d'annonces.)

Claim.—An index having inscribed upon it the name of the department of an hotel to which it serves as a guide and an advertisement.

No. 5350. JOHN FAIRBURN, Upton Station, Que., 9th November, 1875, for 5 years: "Improvements in Vacuum-Pans." (Perfectionnements aux chaudières à vide.)

Claim.—A vacuum pan V, constructed with a dome B, middle section or belt E, in combination with the lower section or bottom F, the three forming a pan in shape somewhat similar to an ellipse.

No. 5351. CYRUS W. BALDWIN, Chicago, Ill., U. S., 9th November, 1875, for 5 years: "Improvements on Hydraulic Elevators." (Perfectionnements aux élevateurs hydrauliques.)

Claim.—1st. The combination with the two communicating upright cylinders A, B, of the lifting piston E, in the one cylinder and the water escape Y_1, in the other cylinder, located with respect to the lifting piston; 2nd. The combination with the main cylinder A, and graduating cylinder B, of the lifting piston E, water escape Y_1, and graduating valve piston K, for joint operation; 3rd. The combination with the graduating cylinder B, the escape Y_1, the escape-cock Y, and the graduating valve piston K, 4th. The graduating piston K, and its valve in combination with the escape-cock Y^1, and the valve-cord N, and intermediate mechanism by which said valve and cock are connected and operated; 5th. The combination with the water supply reservoir C, the main cylinder A, the lifting piston, and the elevator-car of the escape, the escape cock, the graduating piston and its valve for joint operation; 6th. In combination with the main and graduating cylinders elevator-car, and lifting piston E, the graduating piston K, provided with a valve opening upward, and arranged to rise in the graduating cylinder when the car rises; 7th. In a hydraulic elevator a steam and water piston of different diameters mounted upon the same stem within separate cylinders which are connected respectively with the steam boiler and piston tube of the car, the area of pressure being greater upon the steam piston than upon the water piston, so that the pressure of steam shall be concentrated by the water piston upon a small column of water under the car, to move the latter from the bottom to the top of a building or to any point between the bottom and top, at one stroke of the combined pistons for the purpose of preventing any jarring or jerking motion of the car; 8th. Counterbalancing the weight of the elevator car J, and its pistons by means of a column of water communicating with the water cylinder above the water pistons; 9th. A graduating water valve X^3, and valve chamber W^3, interposed in the connecting pipe between the water cylinder and tube of the car piston for the purpose of regulating the descending speed of the elevator without impeding the flow of water to the tube when the car ascends; 10th. The counterbalancing column of water combined with the connected steam and water pistons, to assist the steam pressure in raising the elevator car; 11th. The steam and water valves operated from the shipper rope Q_3, through the medium of the bell crank lever M_3, the connecting rod N_3, and the sheave O_3; 12th. The combination of the compound cylinders E_3, and G_3, of different diameters, the compound pistons H_3 and I_3, contained therein the counterbalancing column of water and the graduating valve with the tube A^3, or piston B_3, of the elevator car; 13th. The combination of the compound cylinders E_3, and G_3, of different diameters, the compound pistons H_3, I_3, contained therein with the tube A_3, or piston B_3, and an elevator car; 14th. The independent water and steam cylinders E_3, G_3 and pistons H_3, I_3, mounted on the same rod, combined with an elevator to produce a long continued motion of the elevator car at one stroke of pistons; 15th. The method of decreasing the height of the cylinder A, and increasing in proper ratio the speed of the car, J; 16th. The employment of a single lifting cylinder A, and one or more pistons for great heights and low pressure of water; 17th. The employment of two or more pistons connected together; 18th. The safety device explained, consisting of the wedge shaped sliding bar C_4, the latches I_4, pivoted within them and formed with the inclined ledges e_4, or their equivalents and the tilting lever F_4, suspended from the carriage bottom, the wedges being suspended from the hoisting ropes by the eye bolts D_4, and the whole operating in such manner that upon failure of one of the hoisting ropes the opposite wedge is caused to gripe the post or guide A_4, very powerfully while the latch takes into such post.

No. 5352. JOSEPH BLAKELEY, Toronto, Ont., 9th November, 1875, for 5 years: "Car-Axle Bearing." (Coussinet d'essieu de wagon.)

Claim.—1st. The friction wheels C, having their bearings in slotted standard D of a frame B, secured to the car-track outside the wheels and arranged vertically to the axle journals to diminish the frictional contact; 2nd. The lateral friction-bearings G, boxed to the standard D, to receive the forward and rearward thrust of the axle journals.

No. 5353. RICHARD V. DE GUINON, Jersey City, N. J., U. S., 9th November, 1875, for 5 years: "Mode of Lighting Streets and Buildings." (Système d'éclairage des rues et des bâtiments.)

Claim.—1st. The combination with one or more street lamp posts or one or more building (each of said lamp posts having a burner) of one or more cisterns containing petroleum or other burning fluid and having discharge pipes emanating from the oil, petroleum, fluid or vapour space of the same, and leading to the burner or burners, said cistern or cisterns being connected by an air supply pipe having a stop-cock, said pipe extending from an air chamber for holding compressed air located at a suitable distance from the cistern or cisterns, the compressed air being rhleasable at will from its chamber into the cistern or cisterns containing the oil, petroleum, burning fluid or vapour and serving to force the oil, fluid or vapour to the burner or burners; 2nd. The arrangement of supplying compressed air from one central reservoir to all or any of the cisterns containing oil or other burning-fluid in the whole or any portion of any city, town, village, or neighbourhood, and controlling and extinguishing almost instantaneously the lights of the whole or of any desired part of the same, from such central point or reservoir, by withdrawing the air pressure.

No. 5354. FREDERIC A. GLANZ and PETER C. GLANZ, (Assignees of H. Glanz) Buffalo, N. Y., U. S., 9th November, 1875, for 5 years: "Rope Moulding Machine." (Machine à mouler les câbles.)

Claim.—1st. The combination with the revolving cutter-head H, of the internally threaded feed bushing N, and a double set of adjustable yielding friction sheaves G^{11}; 2nd. The combination with the sides A, A^1, having the bearings, for the cutter-head H, and for the main shaft of the shaft B, bevel wheels D, worm and pinions E, worm wheels D^1, shaft G, and the rollers G^{11}; 3rd. The combination with the cutter-head H, of the spur wheel F^1, in intermediate reversing gearing F^2, pinion E, and the main shaft B; 4th. The combination with the cutter head H, of the rod machine L, attached to the side A^1, with its axial line coinciding with that of the said-cutter head; 5th. The cutter K, made of two longitudinal pieces, each having a single curved cutting edge, the said pieces being jointed longitudinally in a line with the intersection of the two curves by a screw and steady pin-passing transversely through the adjacent pieces; 6th. The internally threaded feed bushing N, when removably arranged within the cutter-head H.

No. 5355. ROBERT WILSON, Ithaca, N. Y., U. S., 9th November, 1875, for 5 years: "Horse Rake." (Râteau à cheval.)

Claim.—1st. The three pronged lever D^1, pivoted to the frame of a rake and adapted for use in connection with a draft-rod R, and the device for raising the teeth; 2nd. The holding down bar L, and the adjustable lifting-bar E^1, in combination with the raking teeth I, whereby the raking ends of the teeth can be adjusted and set at any desired height from the ground; 3rd. The eye brackets *g*, formed with hollow slotted bases g^1.

No. 5356. LYMAN D. GREEN, Watertown, N. Y., U. S., 9th November, 1875, for 5 years: "Rotary Pump." (Pompe rotatoire.)

Claim.—1st. The combination of the casing A, with valve chest C, the piston plate H, with eccentric ring G, and the horizontally reciprocating valve D, with auxiliary rocking valves *a*, *a*; 2nd. In combination with the casing A, and ring B, the piston plate H, with one or more apertures *z*, and the shaft I, with collar *f*, resting against the side of the casing whereby water is admitted back of the piston plate, to pack the plate and hub against their respective seats; 3rd. The water-groove K, sunk in the seat *e*, and connected to the suction port *d*, by a drilled channel K^1, the said groove acting as a reservoir for a self retaining water packing against the admission of air and water.

No. 5357. HUGH F. MCKERVEY, ANGUS MCKAY, CHARLES S. RAMSAY and PETER MCRAE, Cheboygan, Mich., U. S., 9th November, 1875, for 5 years: "Car-Coupler." (Attelage de wagons.)

Claim.—1st. An improved self-acting car-coupler in which the jaws A' opening vertically in combination with the coupling bar B, having at one end a spiral shaped spear-head *b*, and at the other fitting into a swinging block C; 2nd. The draw bar B, fitting into the swinging block C, in combination with the push bar D, and lever E.

No. 5358. JAMES W. BROOKS, Boston, Mass., U. S., (Assignee of C. W. Glidden and S. V. Simmons) 11th November, 1875, for 5 years: "Heel Trimming Machine." (Machine à finir les talons.)

Claim.—1st. The heel support box and drivers, in combination with a loose plate for retaining the drivers in position; 2nd. The heel-support

box, loose plate and rod *l*, in combination with and detachable from the heel cutting mechanism whereby the supports for heels of different sizes are made easily interchangeable; 3rd. The movable carriage, a turn table with projecting pins and ledge f_4, in combination with the plate grooved to move the turn table and knife holder; 4th. The combination with the turn table and trimming knife of an adjustable trimming knife holder, and slide plate to adjust the knife; 5th. The combination with a heel trimming knife of the rand crease gauge a_5; 6th. The combination of the knife d_4, and sole gauge t_4, with the gauge r_4, and heel-seat clamp; 7th. The top left-plate u_4, box *k*, and heel support, in combination with the locking pin.

No. 5359. JAMES W. BROOKS, Boston, Mass., U. S., (Assignee of A. D. Elliott, G. E. Fellows and S. A. Simmons), 11th November, 1875, for 5 years: "Heeling Machine." (Machine à talons.)

Claim.—1st. The combination of the shaft adapted to move the heel trimming mechanism of a heeling machine with a toothed wheel and such shaft and with a toothed wheel and clutch on a second shaft; 2nd. The toothed or loose wheel S, combined with the clutch c, c_1, adapted to engage the wheel at opposite sides; 3rd. The rod *g*, fork *f*, collar *d*, and pins *b*, in combination with the clutch *c*, and toothed wheel S; 4th. The combination with the clutch *c*, c_1, and toothed wheel S, of the spring *r*, and connecting mechanism for regulating the friction between the clutch and wheel.

No. 5360. JAMES W. BROOKS, Boston, Mass., U. S., (Assignee of G. McKay, H. P. Fairfield and C. W. Glidden), 11th November, 1875, for 5 years: "Machine for Attaching and Trimming Heels." (Machine à poser et parachever les talons.)

Claim.—1st. The walking beam and its connected piston adapted to be operated by compressed air in combination with the bar N, and last carrying bar; 2nd. The jack holding plate n_1, and the support for the heel seat clamp connected together through arm p_2, and adjustable together; 3rd. The bar N, in combination with the jack holding plate n_1, adjustable on the bar to adapt the jack to right and left shoes; 4th. The heel seat clamp Q, provided with hinged wings or levers 3, a spring and plates 5; 5th. The heel seat clamp Q, provided with ears q_2, in combination with the adjustable slotted eyed support q_1, arms p_2, and jack holding plate n_1; 6th. The walking beam f_1, link *n*, and bar M, in combination with the jack bar and the heel seat clamp connected with and carried by the bar; 7th. The plunger D, of the air compressing apparatus, provided with the perforated head *d*, movable plate and plug in combination with the support *e*, having opening d_2, to receive the plug and with valve to retain the compressed air in the cylinder; 8th. The compressed air receiver E, its connected pipe f_4, the valve chest G, in combination with the piston F, its link *j*, and walking beam; 9th. The crank b_3, adjustable two part link C, and plunger D, of the air pump; 10th. The combination of the valve chest and valve rod of a heeling machine with the levers H, *h*, and treadles for operating the levers; 11th. The pivoted vibrating radius bar crank and adjustable connection between the crank and radius bar in combination with the sliding carriage, and cord for operating the heel trimming mechanism; 12th. The plate X, adapted to carry a heel trimming mechanism, in combination with the forked cross plate provided with lugs w_2, w_2.

No. 5361. ASHER HOLMES, Hamilton, Ont., 11th November, 1875, for 5 years: "Churn Dasher. (Battebeurre.)

Claim.—A revolving churn dasher, consisting of the combination of the ball B, arms D, D, D, rings E, E, E, and funnel shaped tubes F, F, F, all arranged to slide and revolve horizontally on the spindle or shaft C, and be adjusted thereto by the thumb screw G, operated by bevel gear.

No. 5362. ALBERT J. R. PHILLIPS, SAMUEL R. PHILLIPS and CHARLES L. PHILLIPS, Philadelphia, Pa., U. S., 11th November, 1875, for 5 years: "Ice-creeper." (Crampon à glace.)

Claim.—1st. The ice-creeper plate A, having upper and lower spurs D, E, which are integral therewith; 2nd. The ice-creeper plate A, having spurs D, E, which are formed within the confines of the plate.

No. 5363. MOSES K. BORTREE, Jackson, Mich., U.S., 11th November, 1875, for 5 years: "Improvements on Corsets." (Perfectionnements aux corsets.)

Claim. — 1st. A duplex bore corset having a plurality of superposed strips of whale bone or horn, inserted in each bone receptacle; 2nd. The combination with a corset bone composed of a plurality of strips of the metallic tip *b*; 3rd. The six piece corset, composed of the pieces A, A_1, A_2, A3, and the gores *a*, a_1; 4th. A corset having a portion cut away at each side to expose the top of the hip; 5th. The combination of the adjusting strap D, and buckle D_1, with the hip pieces A_1, A_2, when the same are cut away to expose the top of the hip; 6th. The arrangement of the bones in the sides of a corset to diverge from a point under the arm to points in front of and behind the hips.

No. 5364. EDWIN W. JOHNSON, Foreston, Ill., U. S., 11th November, 1875, for 5 years: "Grain Cleaner." (Nettoyeur des grains.)

Claim.—The combination of a screen, scourer, and brusher; the combination with the screen, scourer and brusher of a fan F, and the respective air ducts; the combination in a grain scourer of open upper head I, closed lower head K, and rods L, the same being constructed in tapered form and having a tapered perforated outer shell I; the shell N, surrounding the perforated scouring and brushing shell with an air space between them, air passage P, Q, and fan F, the adjustable yoke W, eccentric L, and screen A, the combination of wind passage B, and vacuum chamber D, with the screen A.

No. 5365. THE ROSAMOND WOOLLEN COMPANY, (Assignee of C. E. Scrimgeour), Almonte, Ont., 11th November, 1875, for 5 years: "Process and Apparatus for Finishing Cloth." (Procédé et appareil pour parachever le drap.)

Claim.—1st. Subjecting the cloth in the process of finishing to the action of vapour generated from water in a close vessel by the injection of steam under pressure; 2nd. The combination of a perforated vapour distributing cylinder D, with its box E, or other device for vapourizing the cloth, and a close water tank A, for generating vapour connected thereto by a pipe C, and having a steam inlet pipe B, for connection with a boiler.

No. 5366. JAMES W. BROWN, London, Eng., 11th November, 1875, for 5 years: "Mode and Apparatus for Transmitting Telegraph Signals." (Mode et appareil de transmission des signaux télégraphiques.)

Claim.—The use of the three pens or styles *a*, *b*, *c*, or their equivalents, in combination with a ribbon perforated.

No. 5367. GILLMAN H. AMES, Adrian, Mich., U. S., 11th November, 1875, for 5 years: "Car-coupling." (Attelage de wagons.)

Claim.—1st. The coupling bar B, having the front slot J, and subjacent hook H, which may be applied to a car or to the draw head of a car; 2nd. The coupling bar B, having slot J, and subjacent hook H, and side-arms A, A, in combination with the draw head D, having side slots *s*, *s*; 3rd. The combination of the shaft *x*, *x*, pulley P, and chain J, with the coupling bar B, for the purpose of uncoupling the cars.

No. 5368. LEVI W. POND, Eau-Claire, Wis., U. S., 11th November, 1875, for 5 years: "Saw-mill Head Block." (Poupée de scierie.)

Claim.—1st. The jack C, provided with a sliding or movable bar operating below the face of the head block and permitting the movement of each jack independently of the others, in combination with the head block B; 2nd. The independent spring J, in combination with the head block B, and jack C, provided with an arm or stop K; 3rd. The frames or bars *m*, *n*, each having dogs *c*, c_1, c_{11}, pivoted thereto and also to the jack in combination with the dogs *f*, *f*, with rear ward extensions f_1, f_{11}, arms *g*, *i*, and lever I; 4th. The wheel L, provided with projections *r*, in combination with the set shaft D, ratchet wheel R, and brake P.

No. 5369. FRANKLIN BEAUMONT, Jr., and WILLIAM H. BEAUMONT, Dallas, Texas, U. S., 11th November, 1875, for 5 years: "Improvements on Stilts." (Perfectionnements aux échasses.)

Claim.—1st. The combination with a stilt rod and sliding tube or sleeve of any desired shape of a stirrup or foot support pivoted to said tube so that weight imposed thereupon secures the same to the stilt rod; 2nd. The rod A, sliding tube or sleeve B, having lugs b_1, b_1, and slot *b*, the spring E, and pivoted stirrup C, having serrated extension C.

No. 5370. ADOLPHE PAYETTE, Montreal, Que., 11th November, 1875, for 5 years: "Improvements on Axle-boxes." (Perfectionnements aux boîtes d'essieux.)

Claim.—The combination with any axle box of a reservoir or chamber H, for containing lubricating fluid communicating with the axle box F, and provided with a cup I.

No. 5371. OLIVER HOLDEN, Chicago, Ill., U. S., 11th November, 1875, for 5 years: "Apparatus for Separating Substances from Liquids." (Appareil à séparer les matières solides des liquides.)

Claim.—1st. The use of any alloys composed of two or more metals in combination which are electro-positive and electro-negative to iron when applied [such as zinc and tin] so as to reduce or increase and control the positive or negative action of the same, to the exact degree required to protect iron from corrosion or rust when such iron is exposed to the chemical action of fresh salt or accidental water or dampness; 2nd. The combination of certain metals or alloys of metals for the purpose of preventing incrustation or adhesion to the surfaces of iron or copper fro[illegible]

any vegetable mineral or animal substances, to which the metal or alloys may be applied; 3rd. The manner or method described in not only preventing incrustation or adhesion to metallic surfaces, but the separation, precipitation and collection of soda, borax, salt and other valuable substances that may be contained in water by the use of certain metals or alloys of metals, chemically or mechanically combined; 4th. The combination of the two cores or conical cylinders D, and E, when effected by both steam and electricity; 5th. The combination with such an apparatus of the rockers L.

No. 5372. ADOLPH POPPENHUSEN, College Point, N. Y., U. S., 11th November, 1875, for 5 years: "Improvements on Combs." (Perfectionnements aux peignes.)

Claim.—1st. The combination and arrangement with a long or combination comb, or comb of similar construction of the movable pieces or wings B, B, pivoted to the ends of the comb, and provided with the slots 2,2, or other device by means of which their outer ends may be connected together; 2nd. The combination and arrangement with a long or combination comb, or comb of similar construction, of the movable pieces or wings B, B, provided with the slots 3, 3.

No. 5373. EDWARD C. IBBOTSON, Montreal, Que., 12th November, 1875, for 5 years: "Improvements on Ventilating Railroad Cars." (Perfectionnements dans la ventilation des voitures de railroutes.)

Claim.—The inlet consisting of diaphragms *h*, opening K, with or without pivoted door *l*, and with or without diaphragms Y, in combination with outlet, consisting of cowls *m*.

No. 5374. JOHN W. DIXON, West Manayunk, Pa., U. S., 12th November, 1875, for 5 years: "Appatus for Manufacturing Paper Pulp." (Appareil à préparer la pâte à papier.)

Claim.—1st. In combination with a paper pulp digester, a separate chamber to contain steam, hot water, or hot air, having within it a coil or chamber connected with the pulp digester, whereby the circulating alkaline solution is heated during its passage from the pulp digester through said coil or chamber back to the pulp digester; 2nd. The combination of a paper pulp digester a coil or chamber through which the alkaline liquor is circulated from and to said pulp digester and an intermediate fan pump whereby the liquor is driven through the coil or chamber but not sucked from the digester.

No. 5375. ERNEST BAZIN, Paris, Fce., 12th November, 1875, for 5 years: "Improvements on Dredging Boats." (Perfectionnements aux cure-môles.)

Claim.—1st. The improvements in boats and apparatus; 2nd. The application of the hydraulic pressure or head of water to dredging or to the raising of stuff or materials lying at the bottom of the water by means of one or several tubes of which the inferior extremity is in contact with the bottom and the top and is connected with centrifugal or other pumps placed beneath the surface of the water and which expel as a force pump to substances brought to them by the rapid ascending current produced by this head of water; 3rd. The employment at the ends of tubes of either a flexible pipe or nozzles [according to the case] having openings, slots, apertures, the forms of which may be variable, and by which the clean water may be sucked into the pipes so as to prevent obstruction; 4th. The employment of a disintegrator kind of cylinder provided with teeth actuated with a rotary motion and preceding the suction tubes thus preparing the ground by disintegrating the soil so as to render more easy the absorption or suction of the rubbish or stuff.

No. 5376. ARCHIBALD RIDDELL, Guelph, Ont., 12th November, 1875, for 5 years: "Improvements on Suction and Force-pumps." (Perfectionnements aux pompes aspirantes et foulantes.)

Claim.—The hollow piston D, having ports I,J, at top and bottom and provided internally with a punctured valve plate G, in combination with a valved cylinder A, and piston pipe E.

No. 5377. JOHN D. GOULD, (Assignee of Joseph Benson), Boston, Mass., U. S., 12th November, 1875, for 5 years: "Improvements in Lamp Burners." (Perfectionnements aux becs de lampes.)

Claim.—1st. The tubular lamp burner B, having bent wires C; 2nd. The tubular lamp burner B, having micaceous cores D, and asbestos filling E; 3rd. The combination in a tubular lamp burner D, of the wires C, micaceous cores D, and asbestos filling E.

No. 5378. DANIEL KEARNEY, Montreal, Que., 12th November, 1875, for 5 years: "Automatic Fire-alarm and Extinguisher." (Appareil d'alarme-extincteur d'incendie automatique.)

Claim.—1st. The machine A, the combination of the projections *l*, with arm *e*, having projections *r*, acting upon surface S, and with bell crank *n*; 2nd. The machine B, or B_1, the combination of the equilibrium valves in g_1, with the piston K_1; 3rd. The machine B, or B_1, the combination of the equilibrium valves in g_1, piston K_1, and valve O_1; 4th. The machine B or B_1, the combination of the valve o_1, piston a_2, and space c_2; 5th. The machine B, or B_1, the combination of the equilibrium valves in g_1, piston K_1, connection i_2, valve o_1, connection K_2, piston a_2, and space c_2; 6th. The combination of the space c_2, with nipple g_2, and grooved beads l_2; 7th. The combination of the machine C, with the grooved bead l_2; 8th. combination of the machine A, with the machine B, or B_1; 9th. The combination of the machine C, with the machine A; 10th. The combination of the machine C, with the machine B, or B_1; 11th. The combination of the machines A, B and C; 12th. The combination of a train or trains of powder with either or both of the machines B. and C.

No. 5379. JOHN H. MORRELL, New York, U. S., 12th November, 1875, for 5 years: "Floodway for Warehouses." (Pertuis d'entrepôt.)

Claim.—The combination with the leader pipe C. and the inclined bottom sink or reservoir opening into the room through gratings of the netting D, and inclined outwardly opening valve B.

No. 5380. JOSEPH D. HOBBS, Northfield, Iowa, U. S., 12th November, 1875, for 5 years: "Tire Shrinking Machine." (Machine à refouler les bandages de roues.)

Claim.—The combination of the anvil A, back K, carrying scale B, and indicator S, rod O, levers H, jaws J, connecting rods C, double eccentric L, and lever F.

No. 5381. JOHN SIMS, Boston, N. Y., U. S., 12th November, 1875, for 5 years: "Cider-mill." (Moulin à cidre.)

Claim.—1st. The combination with the hopper H, and a pair of rollers C, C, of the feeder or dash head I, straps or bars G, and cam E_2; 2nd. Providing the rollers C, C, with teeth of diamond pointed shape and set curvilinear on their periphery.

No. 5382. AUGUSTE CHAVASSE and ARSENE RAMBOUILLET, Montreal, Que., 12th November, 1875, for 5 years: "Composition for Removing Boiler-scale." (Composé pour enlever les incrustations des chaudières.)

Claim.—Molasses of sugar, extract of cedar bark and the whites of eggs prepared and mixed.

No. 5383. RICHARD C. NUGENT and ROLAND MCGREGOR, Dayton, Ohio, U. S., 12th November, 1875, for 5 years: "Machine for Turning Flanges on Boiler Heads." (Machine à tourner les bords des fonds de chaudières à vapeur.)

Claim.—1st. The concave carrying disc P, arranged to revolve upon the adjustable pivot *n*, in combination with the shifting table E, and the ends of a pair of rolls B, B_1; 2nd. The pivoted shifting table E, provided with the adjustable bearing L, in combination with the segments D, and worms H; 3rd. The segments D, in combination with the worm shafts G, eccentrics K, boxes I, bearings F, and rolls B, B_1; 4th. The combination and arrangement of the rolls B, B_1, disc P, bed plate E, segments D, bearings F, worms H, boxes I, eccentrics K, shafts G, and connecting gearing *j*, j_1; 5th. The combination of the shaft *h*, flanged pinion wheels M, and segments D.

No. 5384. ADOLPHE PAYETTE, Montreal, Que., 12th November, 1875, for 5 years: "Improvements on Axles and Axle-boxes." (Perfectionnements aux essieux et aux boites d'essieux.)

Claim.—1st. The axle box E, provided with oil cup G, and extended beyond the end of the axle to form reservoir I; 2nd. The combination of the axle A, with collar B, cap D, and axle-box E, with or without either or all of the washers C, F, and F_1.

No. 5385. GEORGE W. COPELAND, (Co-inventor with, and Assignee of F. D. Ballon), Malden, Mass., U. S., 12th November, 1875, for 5 years: "Boot and Shoe Lasting Machine." (Machine à enformer les chaussures).

Claim.—The girth A, in combination with jaws B, B_1, having a horizontal motion toward and from the last C, and a relative vertical motion along the sides of the same; the girth A_4, in combination with jaws B, B_1, having a horizontal motion toward and from the last C, and a vertical motion along the sides of the same; the girth A, in combination with jaws B, B_1, having a vertical motion relative to the sides of the last C, and parallel thereto; the girth A_4, in combination with the jaws B, B_1, having a vertical movement relative to the sides of the last C, and parallel thereto; in combination with horizontally closing jaws B, B_1, carrying lasting plates A_1, A_2, shaped to conform to the under surface of the last C, the girth A, shaped and attached to said lasting plates A_1, A_2, near the edges thereof and drawn by the closing of the plates A_1, A_2, over the edge of the sole; the arrangement of lasting plates A_1, A_2, upon jaws B, B_1, which have a vertical movement parallel to the sides of the last C; the lasting plates A_1, and A_2, having positive motions, vertical and horizontal; the girth A, shaped to conform to the upper when suspended from the lasting plates A^1, A^2, with or without a reenforcement.

No. 5386. EDMUND S. HOWLAND, Batavia, Ill., U. S., 12th November, 1875, for 5 years: "Metallic Grinding Ring Dress." (Filetage des pièces métalliques destinées à moudre.)

Claim.—1st. The feeding drifts *a*, in combination with the ring A, arranged from the bottom of the eye to the surface, with the space between them on a short curve; 2nd. The combination of the feeding and grinding ridges constructed on three distinct tangents accelerating the draft by successive stages; 3rd. The shallow spaces between the grinding ridges, in combination with the fine sharp ridges for preventing clogging.

No. 5387. FREDERICK N. DUBOIS, New-York, U. S., 12th November, 1875, for 15 years: "Manufacture of Plumbers' Traps." (Fabrication des trappes de plomberie.)

Claim.—1st. The process of making traps by the ejectment of two or more convergent streams of material moving with unequal velocities through an annular orifice or die; 2nd. The seamless compressed trap; 3rd. The zigzag partitions combined in relation with the annular orifice or die.

No. 5388. WILLIAM H. BABBITT, Toronto, Ont., 12th November, 1875, for 5 years: "Improvements on Cooking-Pots." (Perfectionnements aux marmites.)

Claim.—1st. The cooking pot A, the combination of the partitions B, separating the pot into two or more parts; 2nd. The combination of the bevelled top *a*, the bevel starting from the partitions B; 3rd. The cooking pot A, the combination of the lip D, on the side of the pot to facilitate its draining.

No. 5389. JAMES C. BLYTH, Gloucester, and ALEXANDER A. BLYTH, Ottawa, Ont., 12th November, 1875, for 5 years: "Milk-Can." (Bidon à lait.)

Claim.— Providing the milk can A, with an ice-chamber B, suspended within its body and bearing at its throat.

No. 5390. EDWARD W. GRANT (Assignee of H. Nieman) Ypsilanti, Mich., U. S., 12th November, 1875 (Extension of Patent No. 4705), for 5 years: "Step-Ladder.' (Echelle à queue.)

No. 5391. EDWARD W. GRANT, (Assignee of H. Niemann), Ypsilanti, Mich., U. S., 12th November, 1875 (Extension of Patent No. 4705), for 5 years: "Step-Ladder." (Echelle à queue.)

No. 5392. ALEXANDER M. BRUSH (Assignee of F. M. Brush), Potsdam, N. Y., U. S., 15th November, 1875, for 5 years: "Organ Stop Action." (Jeu d'orgue.)

Claim.—1st. The draw stops A, having lugs B, B_1, and the rock shaft G, D, provided with the cranks P, pitmans Q, pedals J, and springs Q_1; 2nd. The draw stops A, having lugs B, B_1, and the rock-shafts G, D, provided with the pulleys M, I, springs K, O, and cords H, L, in combination with on and off treadles; 3rd. The stops A, provided with treadle mechanism for their operation.

No. 5393. WILLIAM H. JOHNSON, CHARLES A. FOOTE and GEORGE E. MARVINE, Delhi, N. Y., U. S., 15th November, 1875, for 5 years: "Milk Pan." (Boîte à lait.)

Claim.—1st. The discharging end of the pan forming the major part of the discharging end of the vat and fitted by a tight joint upon the end portion of the vat, and the pan having its discharge passage, outside of the vat, above the bottom of the same; 2nd. The combination of the flanged ice or cream box, the water vat and the milk pan; 3rd. The combination of the adjustable regulating bent pipe *h*, water vat A, and milk pan B.

No. 5394. ALPHONSO BUTTON, East-Saginaw, Mich., U. S., 15th November, 1875, for 5 years: "Combined Tools." (Outils combinés.)

Claim.—The upper section A, provided with the tack claw C, hammer face I, fluted lip E, upper-jaw K, and triangular slot J, and the lower section B, provided with the wrench D, hammer claw H, fluted lip E_1, and nipper-jaw K.

No. 5395. ABRAHAM N. BRENEMAN, Lancaster, Pa., U.S., 15th November, 1875, for 5 years: "Boot-Holder." (Machine à botte.)

Claim.—1st. The last or form *a*, with movable or fixed handle *c*; 2nd. The last or form *a*, with heel-part considerably sloped off at *b*, in combination with movable or fixed handle *c*.

No. 5396. HENRY WHITESIDE, Jr., Montreal, Que., 15th November, 1875, for 5 years: "Improvements on Mattrasses." (Perfectionnements aux matelas.)

Claim.—The division of the mattrass into three parts.

No. 5397. MATHEW GLENN, Stratford, Ont., 15th November, 1875, for 5 years: "Improvements on Machines for Separating Wheat, Seeds, &c." (Perfectionnements aux machines à séparer le blé, les graines, etc.

Claim.—1st. The arrangement of wire-sieves A, C, wooden frame E, and troughs B, D, F, in combination with a grain separating machine; 2nd. The elevator I, band L, buckets N, box J, spout P, pulleys K, M, and driving-band O.

No. 5398. FRANCIS C. CREAN and DICKSON ANDERSON, Montreal, Que., 15th November, 1875, for 5 years: "Propeller Wheel." (Roue de propulseur.)

Claim.—1st. A protecting and strengthening rim constructed in sections and secured to the blades.

No. 5399. ELIAS LONGLEY, Cincinnati, Ohio, U. S., 15th November, 1875, for 5 years: "Addressing Machine." (Machine à adresser.)

Claim.—1st. A machine for addressing papers and other packages, the combination of a spring for returning the movable shear blade to its open position after it has been closed down upon the fixed blade, a lever for operating the movable shear blade, another for operating the feed and pasting rollers, a slotted link for connecting the lever which operates the shear to the one which operates the rollers, two rollers for feeding the label strip to the shear, a roller for pasting said strip and for aiding in carrying it forward, and shears for cutting the same; 2nd. The combination of the lever M, the socket P, spring *d*, arm K, and movable blade J, whereby said blade is kept in position while being used; 3rd. The combination of two feeding rollers and a pasting roller, said pasting roller being operated by the feed rollers, and arranged between them and the slip cutting mechanism, whereby it is made to act as an auxiliary feed roller; 4th. The hinged and flanged guide R, in combination with the feed rollers; 5th. The removable paste reservoir D, having a nick for extending to the paste roller and a serrated mouth in combination with a pasting roller.

No. 5400. JOHN C. BASSETT, Oshawa, Ont., 15th November, 1875, for 5 years: "Threshing Machine Gear." (Engrenage de machine à battre.)

Claim.—1st. The casing B, having brackets P_{11}, provided with horizontal slots Q, to allow of the lateral-adjustment of the bearings F of the pinion shaft I; 2nd. The casing B, having vertical slots G, to allow of the adjustment of the brackets H, and journal-bearings F_1, vertically; 3rd. The casing B, provided with screws G_{11}, for the adjustment of the brackets H; 4th. The casing B, having a hinged-cover A, to enclose the gear wheels; 5th. The combination of the shaft I, having an interchangeable pinion K, and vertically adjusting shaft having driving-wheel D, for regulating the speed of the cylinder.

No. 5401. CHARLES APPLETON, Whitchurch, Ont., 15th November, 1875, for 5 years: "Sleigh-Brake." (Frein de traîneau.)

Claim.—The levers D, D, pivoted on the runners and connected by the flexible joint D_1, the said levers being operated by the horizontally moving pivoted lever G, spring H, and bars E, E, in combination with the runners A^1, A^1, provided with the guide or pocket pieces F, F.

No. 5402. WILLIAM N. WHITELEY, Springfield, Ohio, U. S., 15th November, 1875 (Extension of Patent, No. 4863), for 5 years: "Mower and Reaper." (Faucheuse-Moissonneuse.)

No. 5403. WILLIAM N. WHITELEY, SPRINGFIELD, Ohio, U. S., 15th November, 1875, (Extension of Patent, No. 4863), for 5 years: "Mower and Reaper." (Faucheuse-Moissonneuse.)

No. 5404. GEORGE MCCONNELL, Oconto, Wis., U. S., 24th November, 1875, for 5 years: "Improvements in Sleighs." (Perfectionnements aux traîneaux.)

Claim.—1st. The combination of the thill bar C, having the projection C_1, pintle bar *d*, of equal length therewith springs e_2, e_3, and sleigh frame having eyes *a*, a_1, attached to the runners thereof but without the usual front crosspiece; 2nd. The combination of the thill bar C, having the projection C_1, pintle bar *d*, of equal length therewith springs e_2, e_3, and sleigh frame having eyes *a*, a_1, attached to the runners thereof with the intermediate pintle brace strap *h*.

No. 5405. EDGAR E. MANN, Lawrence, Mass., and ELIPHALET WATSON, Northwood-Centre, N. H., U. S., 24th November, 1875, for 5 years: "Improvements on an apparatus for Fog-Signals." (Perfectionnements à un appareil de signal en cas de brume.)

Claim. — The combination of the curved tubes H, H, chambers N, N, valves L, L, L, L, valves K, K, K, K, horn B, cap A casements C, and E, and the screens D, D, D, D.

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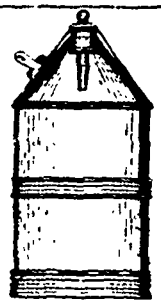

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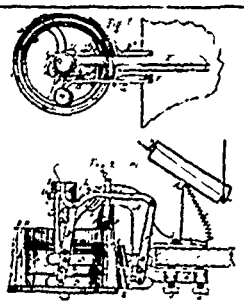

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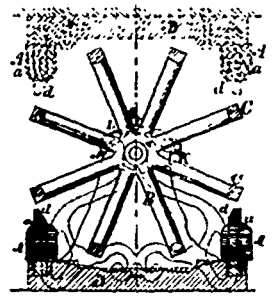

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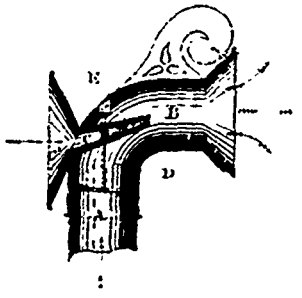

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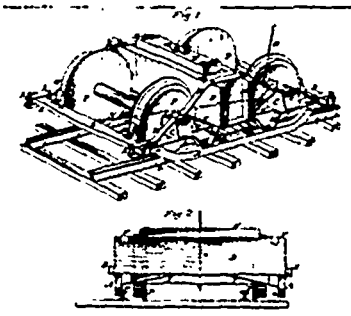

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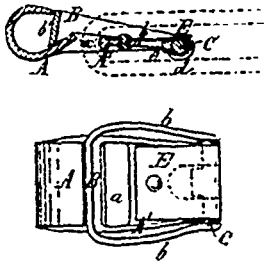

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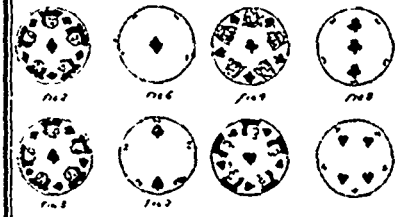
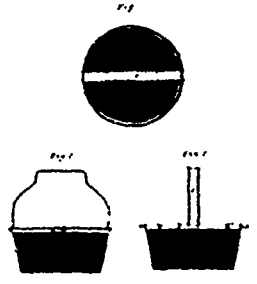
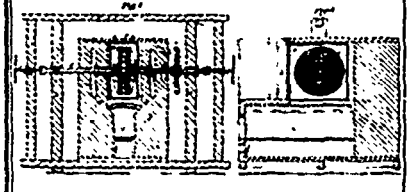


5284 Richardson's Improvements on Playing Cards.

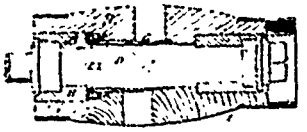


5286 Eastman's Flour Sifter.

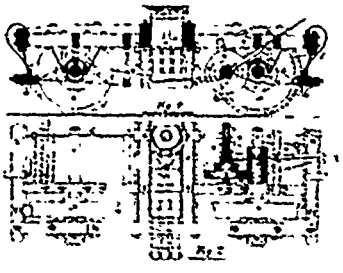
5287 Landon's Oil Tank.



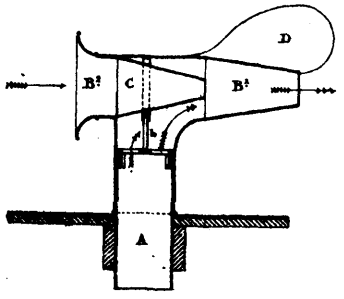
5288 Simonds' Apparatus and Process for Tempering and Straightening Saws without Hammering.



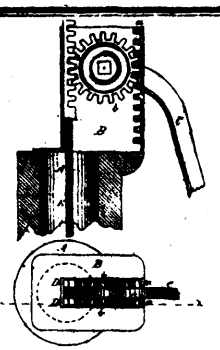
5289 Leverich's Improvements on Elastic Nuts for Vehicles.



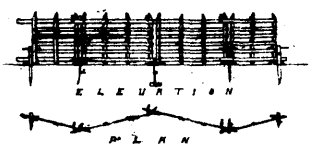
5290 Widdifield's Improvements in Wheeled Vehicle Brakes.



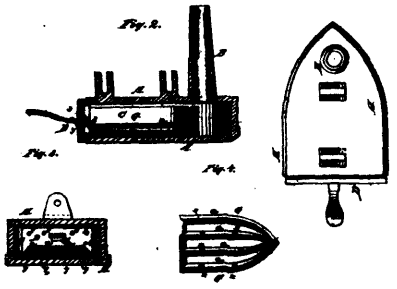
5292 Martin's Ventilator.



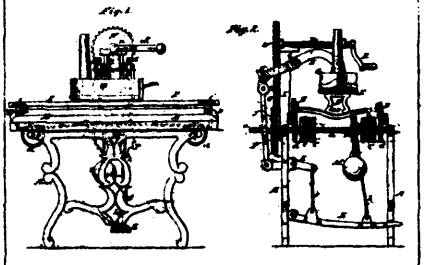
5293 Strong's Improvements in Pumps.



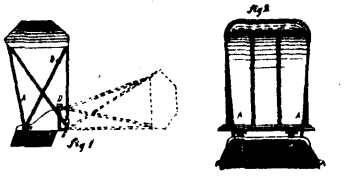
5294 Kimball's Portable and Stationary Fence.



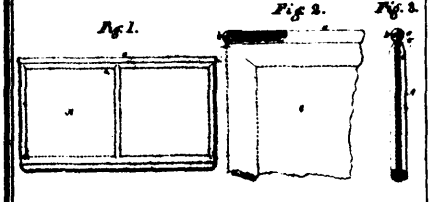
5295 Cottingham's Sad Iron.



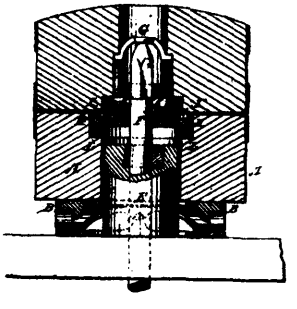
5296 Cottingham's Clothes Ironing Machine.



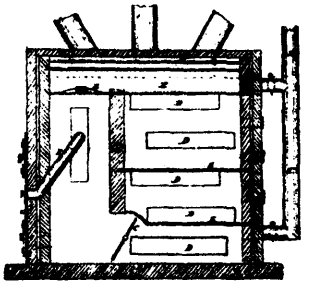
5300 Tackaberry's Buggy Top.



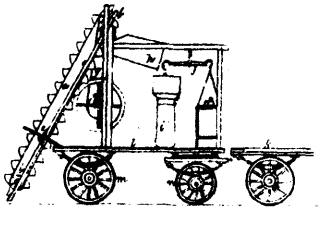
5301 Peel & Elster's Improvements on Dash-boards for Vehicles.



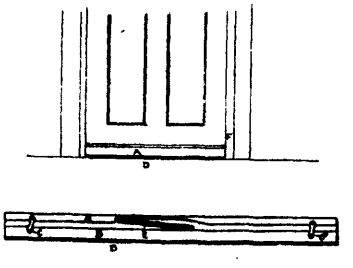
5302 Wallace's Improvements on Mill-tram.



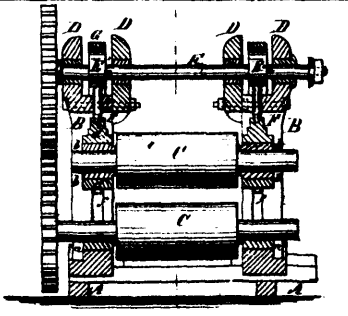
5303 Bartlett's Improvements on Heater-furnaces.



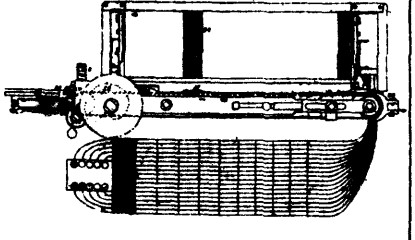
5304 Goodwin's Machine for Facilitating the Transfer of Grain and Bulk Substances.



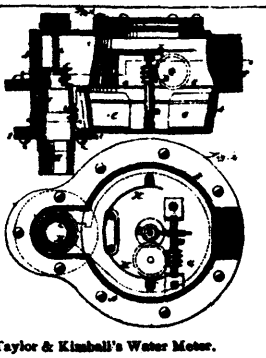
5305 Catling's Weather-strip.



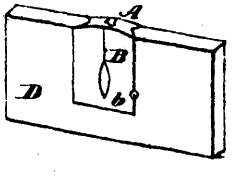
5306 Venner & Rowley's Improvements on Machines for Rolling Tapered Bars.



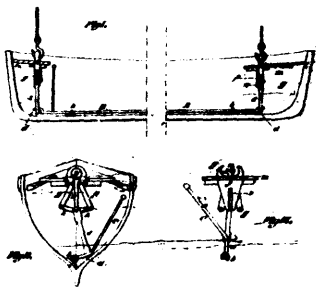
5307 Winder's Type Composer.



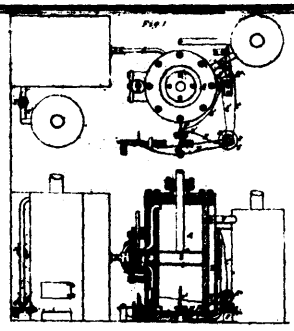
5308 Taylor & Kimball's Water Meter.



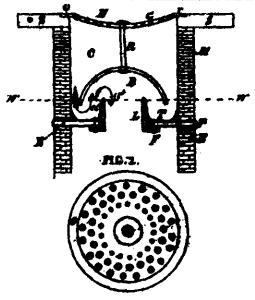
5309 Branch's Method of Inserting, Fitting and Securing Diamonds in Metallic Holders for Working in Stone.



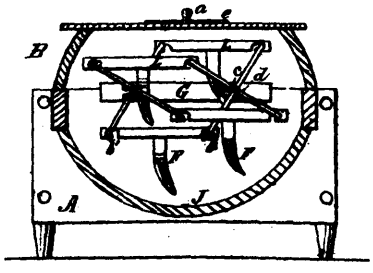
5310 Belcher, Stacy, Griffin & McEachern's Apparatus for Detaching Small Boats.



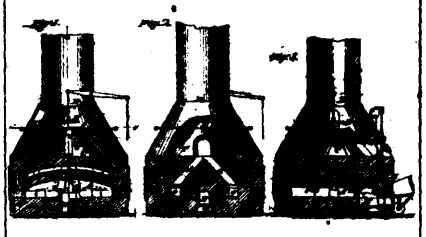
5311 Dixwell's Improvements on Steam Engines.



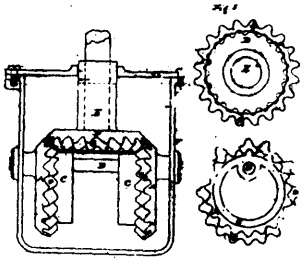
5312 Spencer & Archambault's Stench Trap.



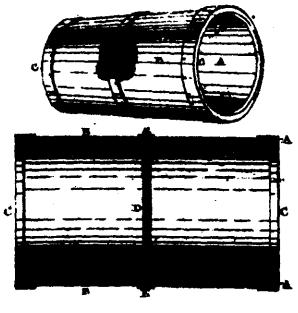
5313 Oot's Improvements in Churns.



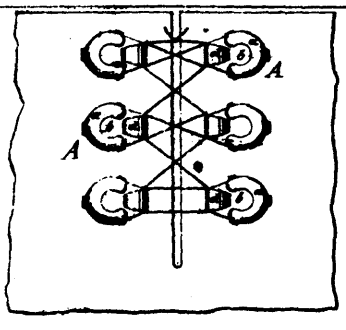
5314 Stevens & Cross' Furnace for making Wrought Iron direct from the Ore.



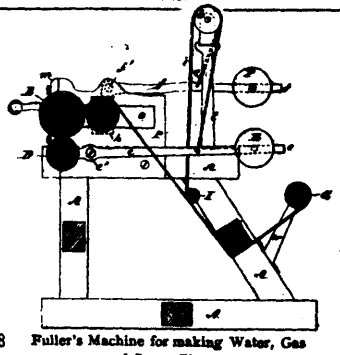
5315 Thornton's Apparatus for Closing Doors and Gates.



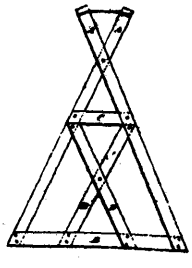
5316 McEachern's Improvements in Cheese-boxes.



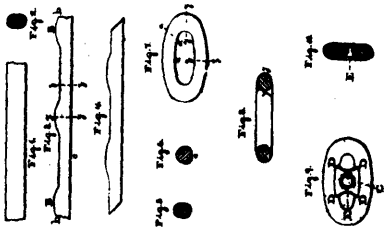
5317 Reeves' Improvements on Lacers.



5318 Fuller's Machine for making Water, Gas and Sewer Pipes.

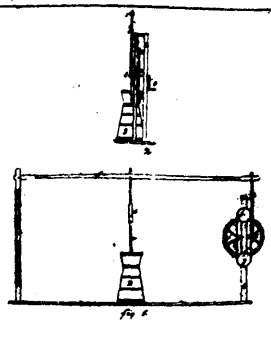


5319 Gill's Fence Post.

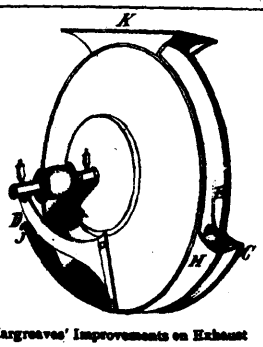


5320 Chamberlin's Improvements on Chain-cables.

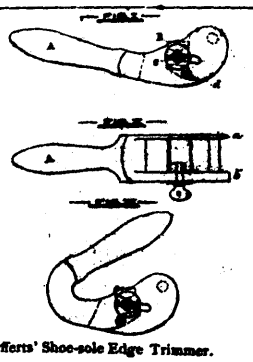
5321 Smale's Seamless Shoe.



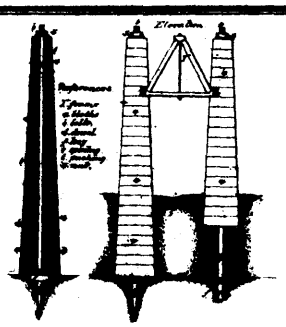
5322 Sutherland's Churning Machine.



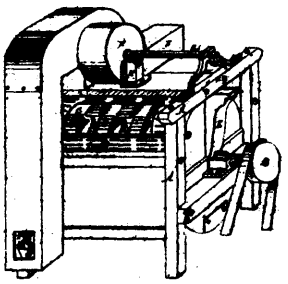
5323 Hargreaves' Improvements on Exhaust Fans.



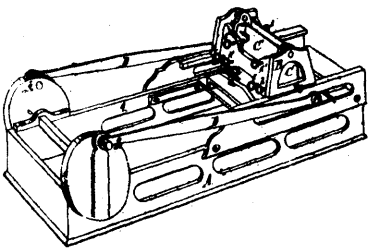
5324 Lefferts' Shoe-sole Edge Trimmer.



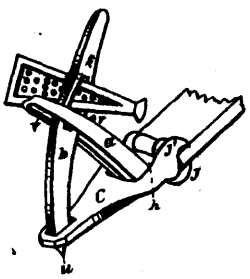
5325 Hill's Improvements on Structures for Piers, Wharves, &c.



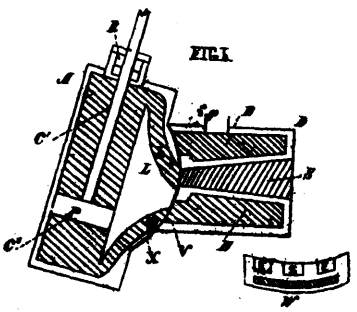
5326 Richardson's Wheat Polisher and Separator.



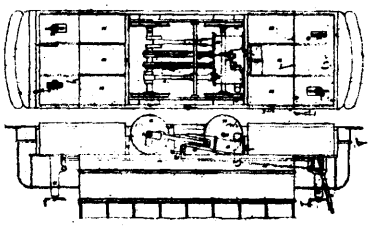
5327 Fowler's Machine for Cutting Hoops.



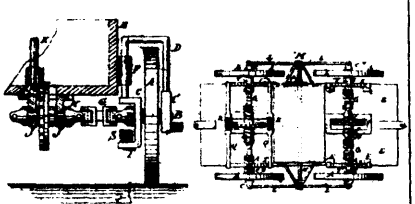
5328 Seymour's Scaffold-clamp.



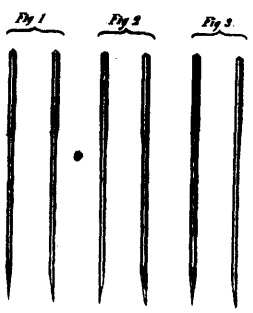
5329 Thurber's Oscillating Water and Air Pump.



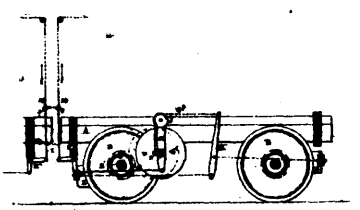
5330 Moncrieff's Improvements on Locomotive Carriages for Tramways, &c.



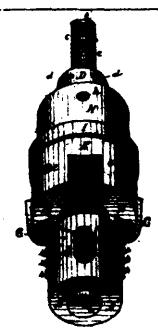
5331 Milliken's Traction Engine.



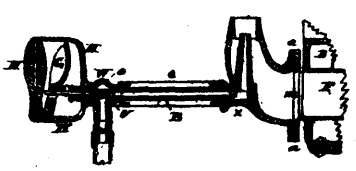
5332 Elliott's Sewing Machine Needle.



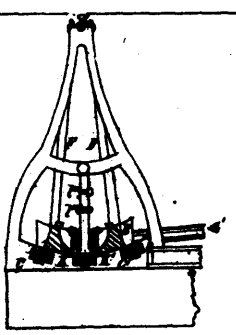
5333 Widdifield's Car-brake.



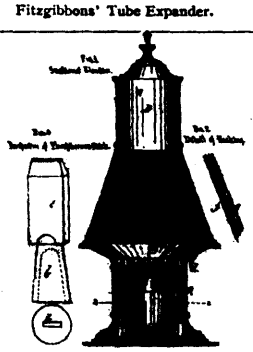
5334 Fitzgibbons' Tube Expander.



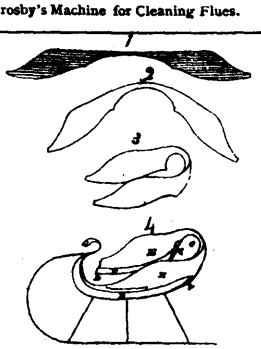
5335 Crosby's Machine for Cleaning Flues.



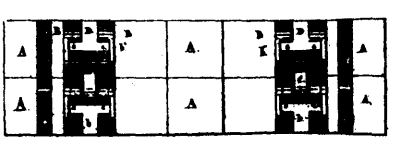
5336 Cook's Hoop Cutting Machine.



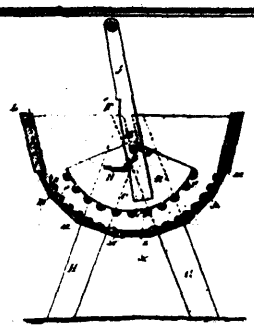
5337 Bartlett's Ozone Machine.



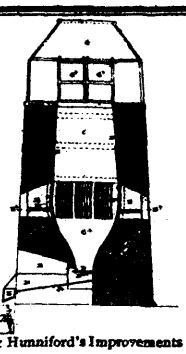
5338 Hennicke's Improvement in the Manufacture of Cutters.



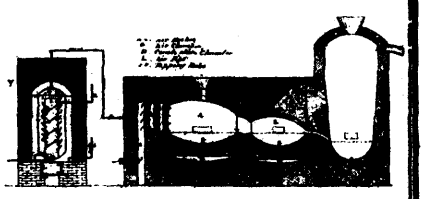
5339 Cameron & Ballantine's Improvements on Rotary Bed Wood Planing Machines.



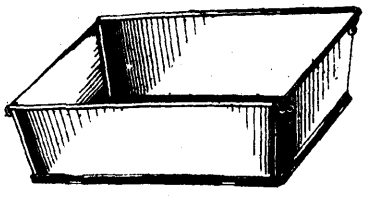
5340 Connor's Washing Machine.



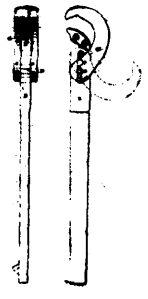
5341 Chubb & Hunniford's Improvements on Lime Kilns.



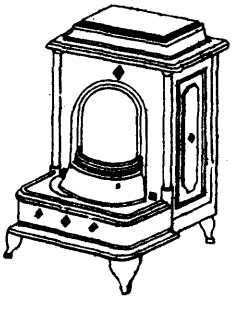
5342 Eames' Improvements on Apparatus and Processes for the Reduction of Ores.



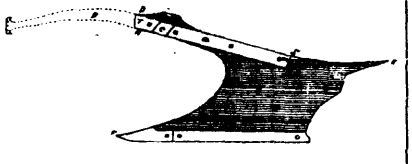
5343 Warner's Hinged Baking Pan.



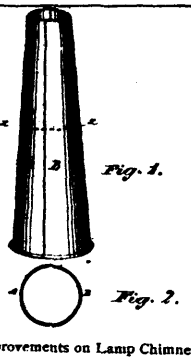
5344 Booth's Pipe Wrench.



5345 Burrows' Improvements in Stoves.

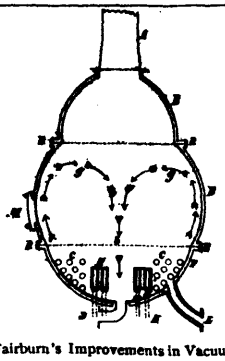


5346 Yocum's Improvements in Ploughs.

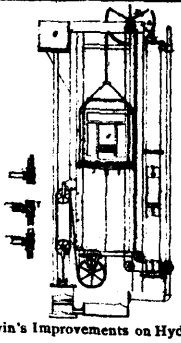


5347 Draper's Improvements on Lamp Chimneys.

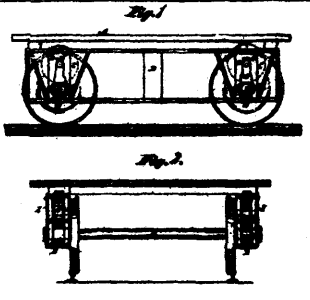
5349 Byrns' Advertising Indices.



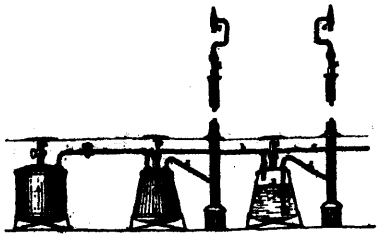
5350 Fairburn's Improvements in Vacuum-Pans.



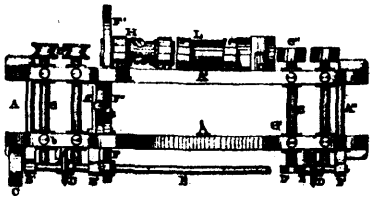
5351 Baldwin's Improvements on Hydraulic Elevators.



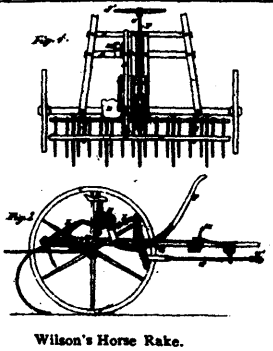
5352 Blakeley's Car-axle Bearing.



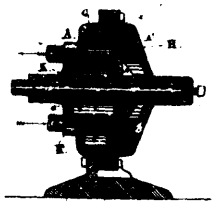
5353 De Guison's Mode of Lighting Streets and Buildings.



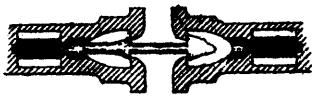
5354 Glanz's Rope Moulding Machine.



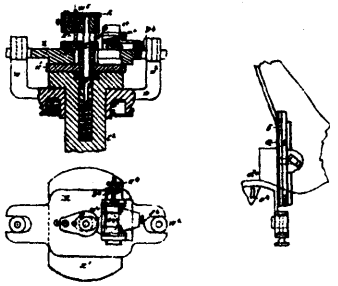
5355 Wilson's Horse Rake.



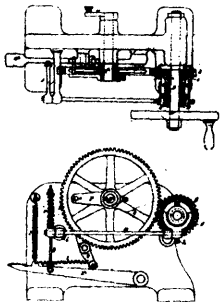
5356 Green's Rotary Pump.



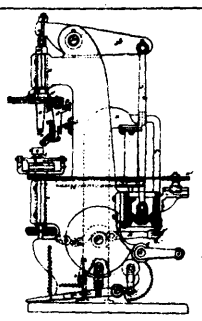
5357 McKervey, McKay, Ramsay & McRae's Car-coupler.



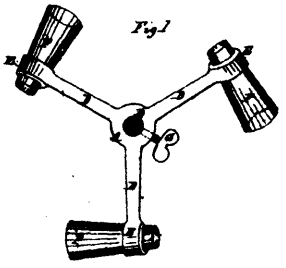
5358 Glidden & Simmons' Heel Trimming Machine.



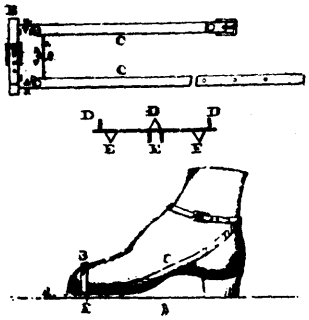
5359 Elliott, Fellows & Simmons' Heeling Machine.



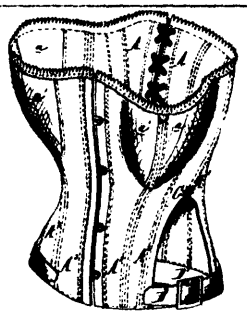
5360 McKay, Fairfield & Glidden's Machine for Attaching and Trimming Heels.



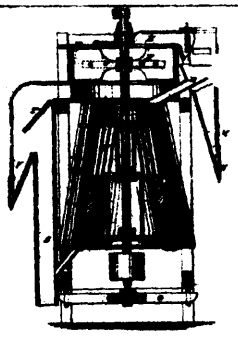
5361 Holmes' Churn Dasher.



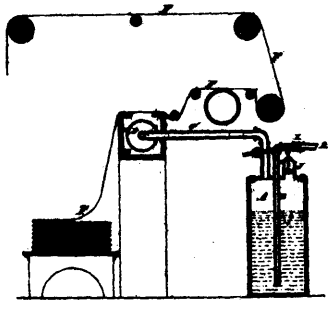
5362 Phillips' Ice-creeper.



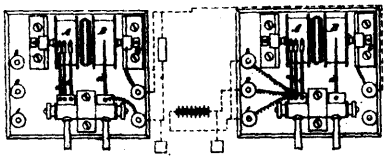
5363 Bortree's Improvements on Corsets.



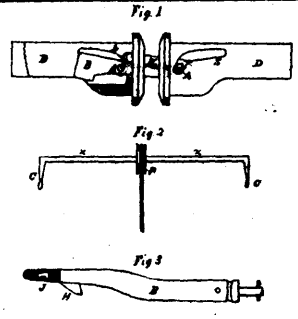
5364 Johnson's Grain Cleaner.



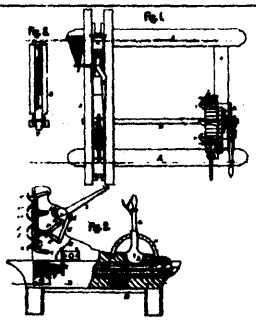
5365 Scrimgeour's Process and Apparatus for Finishing Cloth.



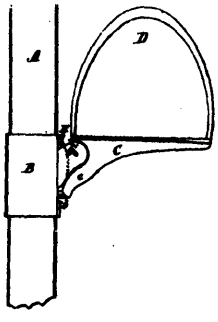
5366 Brown's Mode and Apparatus for Transmitting Telegraph Signals.



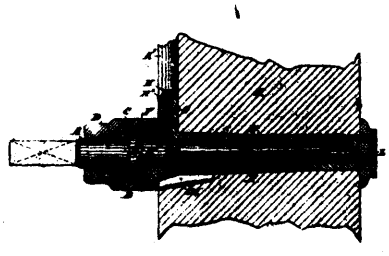
5367 Ames' Car-coupling.



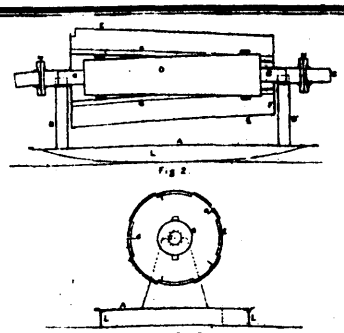
5368 Pond's Saw-mill Head Block.



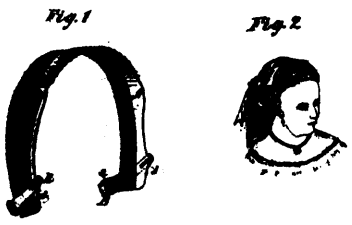
5369 Beaumont's Improvements on Stilts.



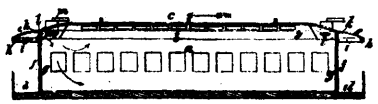
5370 Payette's Improvements on Axles-boxes.



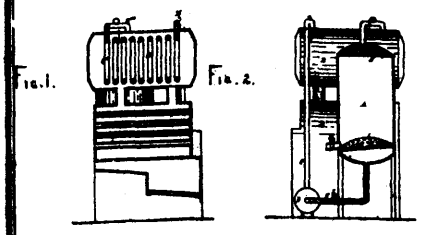
5371 Holden's Apparatus for Separating Substances from Liquids.



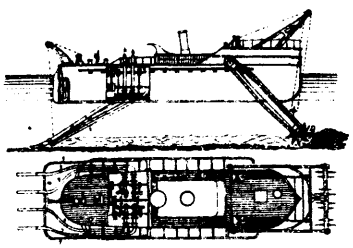
5372 Poppenhusen's Improvement on Combs.



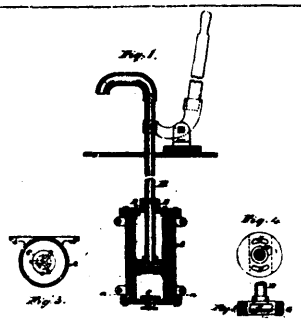
5373 Ibbotson's Improvements on Ventilating Railroad Cars.



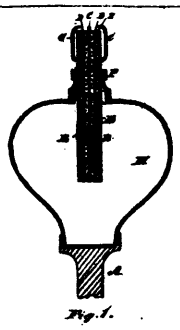
5374 Dixon's Apparatus for Manufacturing Paper Pulp.



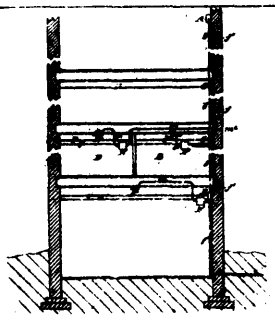
5375 Bazin's Improvements on Dredging Boats.



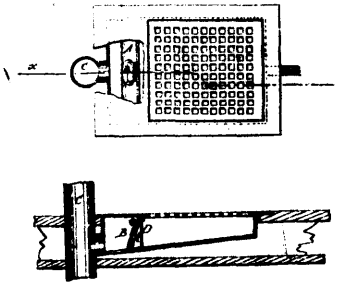
5376 Riddell's Improvements on Suction and Force-pumps.



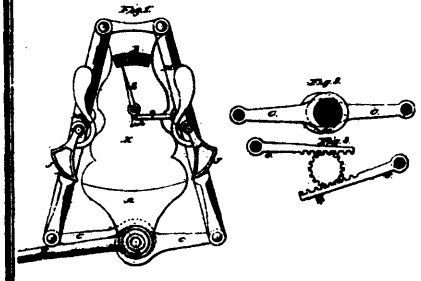
5377 Benson's Improvements in Lamp Burners.



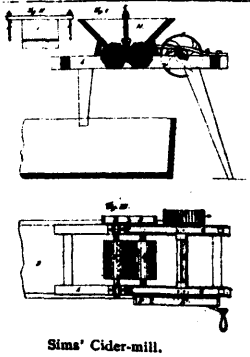
5378 Kearney's Automatic Fire-alarm and Extinguisher.



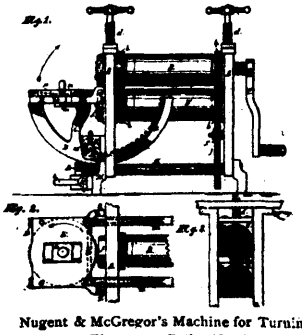
5379 Morrell's Floodway for Warehouses.



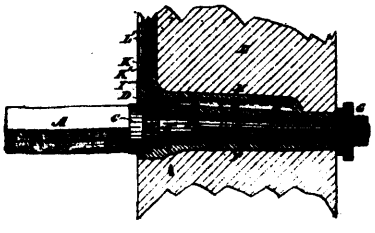
5380 Hobbs' Tire-shrinking Machine.



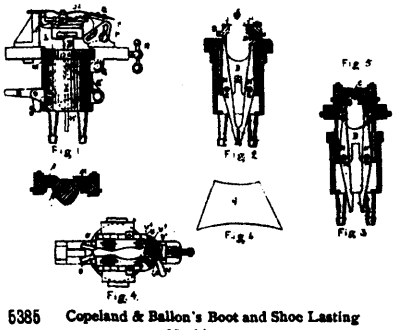
5381 Sims' Cider-mill.



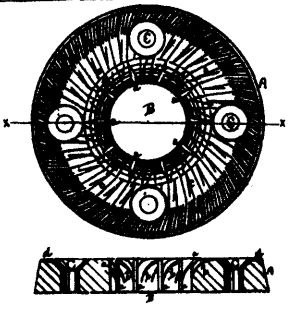
5383 Nugent & McGregor's Machine for Turning Flanges on Boiler Heads.



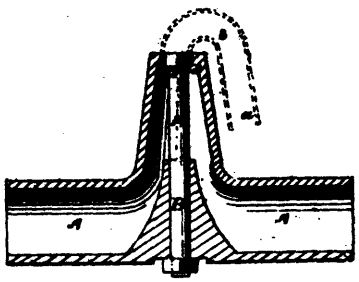
5384 Payette's Improvements on Axles and Axle-boxes.



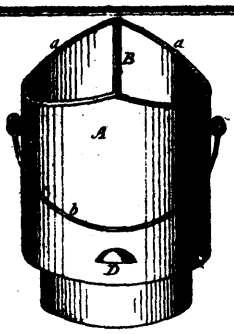
5385 Copeland & Ballon's Boot and Shoe Lasting Machine.



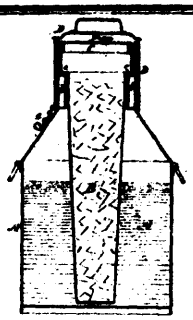
5386 Howland's Metallic Grinding Ring Dress.



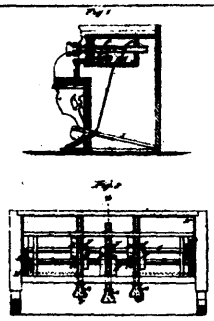
5387 *Du Bois' Manufacture of Plumbers' Traps.*



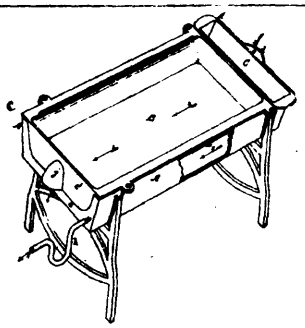
5388 **Babbitt's Improvements on Cooking-pots.**



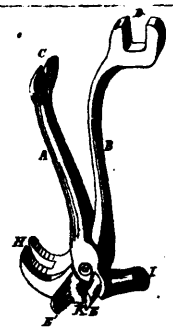
5389 **Blyth's Milk-pan.**



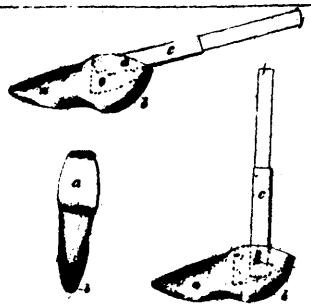
5392 **Brush's Organ Stop Action.**



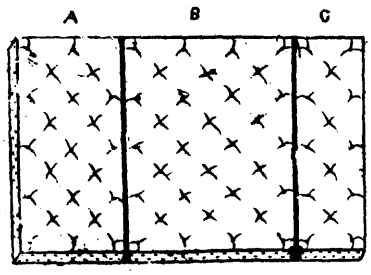
5393 **Johnson, Foote & Marvin's Milk Pan.**



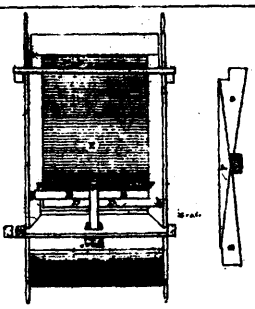
5394 **Button's Combined Tool.**



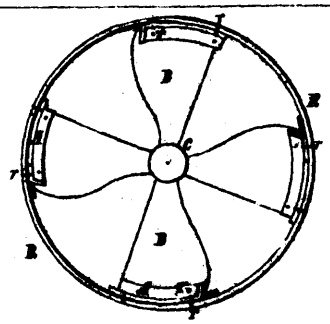
5395 **Breneman's Boot-holder.**



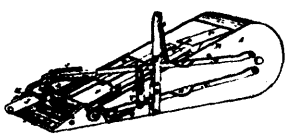
5396 **Whitesides' Improvements on Mattrasses.**



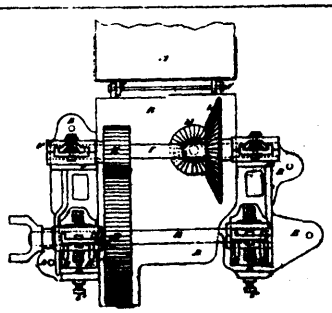
5397 **Glenn's Improvements on Machines for Separating Wheat, Seed, &c.**



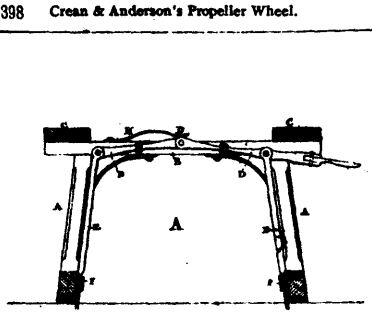
5398 **Crean & Anderson's Propeller Wheel.**



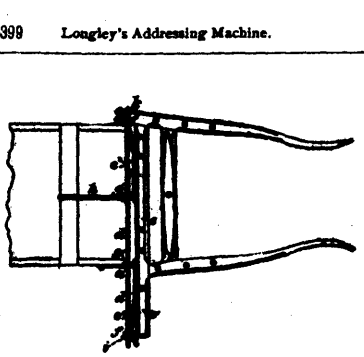
5399 **Longley's Addressing Machine.**



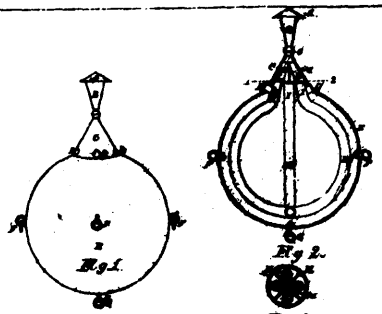
5400 **Bassett's Threshing Machine Gear.**



5401 **Appleton's Sleigh-brake.**



5404 **McConnell's Improvements in Sleighs.**



5405 **Mann & Watson's Improvements on an Apparatus for Fog-signals.**