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No. 2993. CYRUS W. SALADEE, Pittsburg, Penn., U. S., 9th January, 1874, for 5 years: "Bolster, Spring and Standard for Waggons." (Sellette, ressort et montant de wagon.)

Claim.—1st. The standard *c*, wrought cast or formed in one continuous piece of iron or steel; 2nd. The cap *F*, to cover the ends of the bolster *B*; and 3rd. Combination with the body *A*, standard *c*, and ends of the bolster *B*, the spring *E*, or its equivalent.

No. 2994. ERNEST CHATELoup, Montreal, Que., 9th January, 1874, for 5 years: "Self-feeding Hot Water Furnace." (Calorifère à eau à alimentation continue.)

Claim.—1st. The conical flue *E*, and its opening *F*, to throw the coal in the fire box *D*; 2nd. The smoke utilizer *K*, to receive and utilize the smoke in producing more heat; and 3rd. The combination of the furnace *A* with the ash pit *B*, the fire box *D*, the conical flue *E*, the smoke tubes *J*, *J*, and all its other parts.

No. 2995. EDMOND MATHIEU, Montreal, Que., 9th January, 1874, for 5 years: "Ointment for Piles." (Onguent pour les hémorrhoides.)

Réclame.—Un onguent amélioré *6* pour les hémorrhoides, composé en quantité plus ou moins grande d'iode, d'iogure de potasse, de noix de galle, d'opium, de cauphre et de saïndoux dans les proportions et pour les fins décrites.

No. 2996. THEODORE A. LUNDY and EDWARD WALKER, Guelph, Ont., 9th January, 1874, for 5 years: "Blind Roller." (Rouleau de rideau.)

Claim.—The combination of the Spring *F*, with the loose centre *D* and the hollow centres *E*, *E*.

No. 2997. THOMAS PIPER, Hamilton, Ont., 13th January 1874; for 5 years: "Improvements on Sewing Machine Treadles." (Perfectionnements aux pédales des machines à coudre.)

Claim.—The metal spring clutch *E*, in combination with one or more pulleys *G*, or hub *J*, of fly wheel-shaft *D*, fly wheel *C*, belts *F*, arranged and constructed as described, to operate single and double treadles for sewing and other machines.

No. 2998. JOHN GRANT, Shubenacadie, N. S., 13th January, 1874, for 5 years: "A Railway Snow Plough." (Une charrue à neige de rail-route.)

Claim.—The combination of the inclined plane *A* and cutters *a*, *b*, and *c*, with the plough *B*. 2nd. Separating the snow into halves by the cutters *a*, *b* and *c*, and centre piece *C*, and forcing it through the trough formed by the sides *G* & *H*, up the inclined plane *A*, and through it to each side of the track by the plough *B*, in the manner set forth; 3rd. The adjustable centre piece *C*, for throwing the snow to one side of the track in the manner set forth.

No. 2999. WILLIAM W. BYAM, STEPHEN GROSE and MAJOR HARPER, Whitby, Ont., 13th January, 1874, for 5 years. "Blind Slat Machine." (Machine à lames de persiennes.)

Claim.—1st. The combination of the revolving shaft *D*, eccentric and eccentric rod *N*, cutters *O* *O*, and the stop *a*, arranged as described for the purpose of cutting slats the proper length; 2nd. The combination of the revolving shaft *D*, eccentrics *P*, levers *Q*, working on the fulcrums *R*, rod or bar *S*, pushers *T*, and holder *K*, arranged as described for the purpose of carrying the slats to the dies and clamps to receive the clip bearings; 3rd. The combination of the revolving shaft *D*, gearing *F*, *F*, shaft *G*, eccentric *H*, rod *I*, die or cutters *J*, die blocks *J*, and *J*2, die block cleaners *a*, feed rollers *a*, *a*, ratchet *b*, and ratchet wheel *c*, and lever *c*, arranged as described for the purpose of cutting the metal clip bearings and feeding the iron to the same. 4th. The combination of the revolving shaft *D*, eccentrics and rod *L*, pressure and cleat clamping dies *M*, blocks *j*, and springs *i*, arranged as described for the purpose of affixing the metal clip bearings. 5th. The combination of the adjustable heels *K*, the frame *A*, the clamps *A*, arranged as described for the purpose of enabling the machine to produce any required length of slat.

No. 3000. WILLIAM W. BYAM, STEPHEN GROSE and MAJOR HARPER, Whitby, Ont., 13th January, 1874, for 5 years: "A Venetian Blind." (Une persienne.)

Claim.—The combination of the slats *b*, *b*, a clip bearings *J*, *J*, the strip *C*, the plate *D*, the crank pin *E*, the partially toothed wheel *F*, and pinion *G*, arranged and connected as described and operated by the knob *I*.

No. 3001. THOMAS NEY, (Assignee of John Small,) Glenallen, Ont., 13th January, 1874, for 5 years: "Horse Poke." (Carcan de cheval.)

Claim.—1st. The curved spikes; 2nd. The manner of attaching the spikes to the spring above; 3rd. The curved spike holes or passages in the head of the poke; 4th. The combination of these parts with the spring and head parts of the Dexter Horse Poke.

No. 3002. WILLIAM SELLERS, Haverhill, Mass., U. S., 13th January, 1874, for 5 years: "Lawn Mower." (Faucheuse de parterre.)

Claim.—The improved Lawn Mower as described, the same consisting essentially of the frame *A*, driving wheels *B*, *B*, supporting and guide wheel *C*, the rotary cutter carrier *F*, and its series of knives *h*, *h*, &c., and the turning finger plate *G*, constructed, arranged and combined together as described; 2nd. The combination in a lawn mower provided with a series of rotating cutters *h*, of a turning finger plate *G*, the combination with the latter of the guiding and supporting wheel *C*, as set forth.

No. 3003. ALEXANDER RODGERS, Muskegon, Mich., U. S., 13th January, 1874, for 5 years: "Lath Machine." (Machine à latte.)

Claim.—1st. The combination of the gang of differential saws *B*, on a horizontal arbour *A*, and the inclined feed table *C*; 2nd. The combination of the differential saws *B*, inclined feed table *C*, and a feed roller having a tapered form, also a spiral rib, and arranged to confine the work to the guide as set forth.

No. 3004. ALEXANDER RODGERS, Muskegon, Mich., U. S., 13th January, 1874, for 5 years: "Improvements in Balance-Cranks." (Perfectionnements aux volants à axes-condés.)

Claim.—1st. A balance crank, constructed as described; 2nd. The counter balance E, and key K, provided with the keeper m, in combination with the crank body A, shank D, and bolt G.

No. 3005. ALEXANDER RODGERS, Muskegon, Mich., U. S., 13th January, 1874, for 5 years: "Log Canting Machine." (Machine à rouler les pièces de bois.)

Claim.—1st. The canting levers B in combination with the lifting bars C, the latter being provided with cap c, connection Ci, and cross head d; 2nd. The bearing plates d, provided with pulley supports K, in combination with the guiding posts D, cross head a, bar G, with its attachments c, ci, and chain f; 3rd. The canting levers B, and their operating mechanism, in combination with the series of carrying-rolls A, or their equivalents; 4th. The canting levers B, the lifting bar C, and its attachments in combination with the chain f, and the frictional gearing for operating the same; 5th. A log carter composed of the elements set forth, all combined and arranged for joint operation in the manner specified.

No. 3006. JOHN S. ADAMS, (Assignee of John Colicott,) West Roxbury, Mass., U. S., 13th January, 1874, for 5 years: "Automatic Kaleidoscope." (Kaléidoscope automate.)

Claim.—1st. The revolving table m, actuated by ordinary clock-work machinery and placed in the kaleidoscope tube d; 2nd. The combination with the table m, and box a, of the rest c, standard b, socket e, and tube d; 3rd. The arrangement with the hub p, and arms s, of the stopples t, and glass chambers u, all actuated by the clock-work machinery within the box a; 4th. The combination and arrangement of the stopples t, attached to the arms s, by the spiral springs v, with the rods w, and bridge y; 5th. The arrangement of the revolving chambers v, with the revolving table m, both automatically rotating as set forth; 6th. The combinations of the regulator p, attached to the box as described, and having the notching q¹, with the pin or screw h, and lantern wheel k.

No. 3007. MERRITT HINE & HORACE P. DIBBLE, New Haven, Ct., U. S., 13th January, 1874, for 5 years: "Machine for Threading Bolts." (Machine à fileter les boulons.)

Claim.—1st. A bolt cutting machine in which the thread cutting dies are arranged in the ends of the levers as described, said levers constructed to receive and hold the interchangeable die-holders D, the said die-holders constructed to carry the dies F, and the said holders provided with means for adjusting the said dies; 2nd. The dies F constructed with the rib w, and the holders D with a corresponding groove.

No. 3008. THEODORE F. CONKLIN, Fond-du-Lac, Wis., U. S., 13th January, 1874, for 5 years: "Improvements on Engine Smoke Stacks." (Perfectionnements aux cheminées de locomotives.)

Claim.—The fan-beaters G with feathers I rotated by means of screw-wheel D, and working in combination with concave cap F; 2nd. The fan-beaters G, carried on arms H, radiating from shaft B, and placed in and working in combination with any smoke stack.

No. 3009. JAMES PARKYN, Montreal, Que., 13th January, 1874, for 5 years: "Manufacture of Bran for Transportation, Storage, &c." (Préparation du son pour le transport, emmagasinage, &c.)

Claim.—1st. As a new article of manufacture in bran compressed to a solid and compact mass in such manner that no interstices shall exist between the particles forming the mass; 2nd. As a new article of manufacture, in bran compressed into a coherent or cohesive mass by the addition of moisture.

No. 3010. DANIEL T. CASEMENT, Painesville, Ohio, U. S., 13th January 1874; for 15 years: "Pressure Regulator for Fluids." (Régulateur de la pression des fluides.)

Claim.—A left valve L, with adjustable or variable weights P, or their equivalents, and a diaphragm I, arranged in a vertical pipe or case A, having a removable cap or plug to afford easy access to the valve in combination with the supply pipe B, connecting with the fluid source and the delivery pipe E, for regulating, controlling and limiting the pressure and friction of fluids, the combination of two or more regulators and a special branch and cock with the supply pipe and the delivery pipe for the discharge of different

currents of different pressures from a constant source or one current of constant pressure from a variable source by differently weighted valves.

No. 3011. SAMUEL MCGEE, Madison, N. J., U. S., 13th January, 1874, for 5 years: "Combined Hub and Oil Box." (Moyeu et boîte à huile combinés.)

Claim.—1st. An oil-box or reservoir combining in its construction a central section A, threaded, and sections B and C, a nearly central oil chamber, and a packing box or collar B, the parts being constructed and arranged as set forth; 2nd. The combination of the cylinder A, caps B, and C and collared shaft F, the parts being arranged for regulating the end traverse of the axles.

No. 3012. JAMES HALLY, Valleyfield, Que., 13th January, 1874, for 5 years: "Apparatus for the extraction of Peat." (Appareil pour l'extraction de la tourbe.)

Claim.—1st. The spout or shield a with or without prolongation at a', and having division l; 2nd. The excavators i with shoulderers k and secured to endless revolving bands p; 3rd. The discs or cutters m with or without teeth on their periphery; 4th. The novel combination of the spout on shield a, with division l, endless bands p, passing over revolving drums b, c, and carrying excavators i and discs or cutters m, all arranged and working together as set forth.

No. 3013. FRANCIS CULHAM, Bosanquet, Ont., 13th January, 1874, for 5 years: "Machinery for operating Semaphore signals." (Mécanisme de signaux sémaphores.)

Claim.—The combination of the endless or double wire A, A, the signal arm B, lamp stand C, sleeve D, and lever G.

No. 3014. BENJAMIN BARTER, Faribault Minn., U. S., 20th January, 1874, for 5 years: "Machine for Dressing Flour." (Un bluteau.)

Claim.—1st. A machine for dressing flour, the combination of a bolt or shaker consisting of one grade or several grades of cloth, a brush or brushes to clean said bolt or shaker and a fan or its equivalent to assist in the operation of the dressing and cleaning; 2nd. The combination of a bolt or shaker covered with cloth of various grades arranged transversely to the direction of the travel of the flour to be dressed and by which it will be both graded and bolted, and a brush or brushes and a fan or its equivalent as described; 3rd. The combination in a flour dressing machine of a second shaker divided into longitudinal sections each of which is covered with bolting cloth but differing in degree or grade from each other to produce a second grading and cleaning of the flour with a brush or brushes and a fan or its equivalent as described; 4th. A machine for dressing flour the combination of a hopper C, an upper shaker or bolt provided with cloth of different grades arranged thereon transversely for grading and bolting and a lower shaker divided into longitudinal sections and covered with cloth and a series of brushes M, and a fan or its equivalent as described; 5th. The combination of one or more chambers J, with the shaker K, for holding the different grades of flour subject to an air current from a fan as described; 6th. The combination of the shakers D, and H, the brushes G, and M, openings B, and C, with the fan arranged to operate as set forth; 7th. The combination of the shaker K, and adjustable partition T, when constructed and arranged to operate as set forth; 8th. The combination with the fan U, zig-zag cloth V, perforated cover A', and shakers D, and K, when constructed and arranged to operate as set forth; 9th. The combination with the fan U, and shakers D, and K, the box and chamber W, provided with valves K, therein, for the purpose of regulating the air current as set forth.

No. 3015. JAMES DAVIS, JOHN ARMSTRONG & DAVID DAVIS, Pittston, Penn., U. S., 20th January, 1874, for 15 years: "Tanning Process." (Procédé de tannage.)

Claim.—The described process of tanning consisting in the application of the compound described, consisting of water, sulphuric acid, salt and alum, to the hides and skins before the introduction of tanning extracts as described.

No. 3016. EDWARD E. BREWER, Douglas, N. B., 20th January, 1874, for 5 years: "A Churn." (Une baratte.)

Claim.—1st. The combination of the dashers C, C, and paddles D, D, 2nd. The shape of the churn A.

No. 3017. JOSEPH SLATER & HENRY S. BLATT, Sandy Lake, Penn., U. S., 20th January, 1874, for 15 years: "Sled Brake." (Frein de traîneau.)

Claim.—The combination of sliding rod D, provided with claw P, and pivoted to arm C, of rock-shaft B, the lever G, and keeper E, all constructed and arranged as specified.

No. 3018. ALONZO D. McMASTER, Rochester, N. Y., U. S., 20th January, 1874, for 5 years: "Stove Board." (Sous-poêle.)

Claim.—1st. A sheet metal stove board having a raised centre supported by ties of any suitable material; 2nd. The wired outer edge a, in connection with a stove board having a raised centre supported beneath by ties.

No. 3019. WILLIAM H. ROGERS, New London, Ct., U. S., and DAVID L. CAVEN, Stratford, Ont., 20th January, 1874, for 5 years: "Combined Check Nut." (Noix de sûreté combinée.)

Claim.—The construction of the hollow chamber E, in the nut B, in combination with the leather nut C, or its equivalent as specified.

No. 3020. WILLIAM WILSON, Hamilton, Ont., 20th January, 1874, for 5 years: "Safety Railway Switch." (Aiguille de railroute de sûreté.)

Claim.—1st. The taper point rails N, and I, in connection with the rails A, and B; 2nd. The combination of the raised blocks D, the nose iron C, and the check rail B, worked by means of the crank F; 3rd. The arrangement of the crank with 21 throw as regulated for the spaces between the points and rails as set forth.

No. 3021. NELSON JOHNSON, Jasper, N. Y., U. S., 20th January, 1874, for 15 years: "Invertible Saw Teeth." (Dents de scie inversible.)

Claim.—The combination of the plate A, and tooth B, with circles a, b, having the same centre but of unequal radii, the straight part d, rivets e, and i, and rounded corners n, m.

No. 3022. CYRUS KINNEY, London, Ont., 20th January, 1874, for 5 years: "A Nut Lock." (Une bride de noix.)

Claim.—The nut lock E, made of a single piece of wire, bent to the form shown as set forth.

No. 3023. REMIGIUS ELMSLEY, Toronto, Ont., 20th January, 1874, for 5 years: "A Billiard Marker." [Un compteur de billiard.]

Claim.—1st. The time piece D, sliding stem C, and cross bars C, in combination with the table A, arranged as described; 2nd. The sliding stem C, and tube B, contained within or without the suspension rod B, latch lever E, dog F, and spring H, in combination with the lever G, of the clock D, arranged as described.

No. 3024. DANIEL T. CASEMENT, Painesville, Ohio, U. S., 20th January, 1874, for 15 years: "Method of Burning Fuel and Generating Steam." (Manière de brûler le combustible et produire la vapeur.)

Claim.—The combination of a stratum of balls, blocks, or broken pieces of metal, or other substance with a furnace stove range, grate or other burner in such manner that the products of combustion rising from the fire on the grate or other fire bed will be caused to pass through the spaces between and round said balls and be brought into direct contact with the surface thereof, for increasing the combustion and radiation by the method described; a vertically adjustable grate having a water circulation in its bars connected to the water space by an adjustable connection, to enable it to be adjusted and at the same time maintain the circulation; the said grate, suspended by the pipes of the said adjustable connection; a windlass J, K, Ki, or other equivalent raising and lowering apparatus connected to said grate, suspending and adjusting pipes as specified; the suspending pipes K, stuffing boxes G, bars or frame I, chains K, and shaft J, combined and arranged with the grate C, crown sheet and water space of the boiler; the tubular grate for holding the balls attached to a central vertically adjustable tube Ci, and connected at the centre part to a coil F, circulating around and between the balls, and returning to the central tube or directly to the water space; the combination of a coil Fi, with the balls Ei, and their supporting grate Di, whether the grate be adjustable or not for the protection of the balls and for generating steam in the coil Fi, extended into the fire space above the balls for amplifying the generating power of the boiler; the return pipes Y, in the crown sheet and the sides of the furnace; a series of hollow dampers or gates, arranged in the flues and having connections for a water circulation through them to utilize the escaping heat, the aid dampers W, geared so as to be turned simultaneously in opposite directions; the return flues A, from the crown sheet through the water space to the bottom with the water dampers W, in them as described for economizing the escaping heat.

No. 3025. JOHN W. BOOKWALTER, Springfield, Ohio, U. S., 20th January, 1874, for 15 years: "Steam Generator." (Générateur de vapeur.)

Claim.—The combination in a steam generator with a wrought

metal shell of a series of cast metal tubes and tube-shoots, the latter being cast in one piece with the tubes as specified.

No. 3026. LOUIS COTÉ, St. Hyacinthe, Que., 20th January, 1874, for 5 years: "Machine for Forming Boot and Shoe Stiffeners." (Machine à former les contreforts de chaussures.)

Claim.—1st. A mandril of a spherical, spheroidal or other shape B, fixed upon a rotating shaft and revolving in a corresponding matrix C, constructed and operating as set forth; 2nd. An elastic cushion or springs placed between a matrix and its supports, in combination with it, and a compressing mandril, constructed and operating as set forth.

No. 3027. FRANCIS H. WHITMAN, Harrison, Me., U. S., (Assignee of E. H. Woodsum), 20th January, 1874, for 15 years: "Block Fitting Machine." (Machine à ajuster les cales.)

An improved railway sleeper has been invented, the improvement in which consists in the insertion of a block of hard wood into the softer wood of the sleeper. The present invention relates to a machine for cutting and boring the blocks simultaneously.

Claim.—1st. The device as described by means of which blocks are cut and bored simultaneously for the purposes set forth. 2nd. The combination of the shaft B, vertical shaft H, saw frame C, C, shaft E, with its cutters F, F, treadle D, movable frame L, shafts I, and K, compound levers O, P, R, and lever W, as described.

No. 3028. JOHN HEWITT, Grimsby, Ont., 20th January, 1874, for 5 years: "Sad and Fluting Iron." (Fer à repasser et à tuyauter.)

Claim.—A smoothing, polishing or glossing iron A, provided with a fluting roller or rollers D, which is or are used in combination with an independent fluting board c.

No. 3029. JOHN HEWITT, Grimsby, Ont., 20th January, 1874, for 5 years: "Improvements on Fluting Plates." (Perfectionnements aux fers à tuyauter.)

Claim.—A fluting plate B, in combination with a smoothing iron A, and an independent fluting board c.

No. 3030. JOHN HEWITT, Grimsby, Ont., 20th January, 1874, for 5 years: "Glossing and Fluting Iron." (Fer à apprêter et à tuyauter.)

Claim.—1st. A smoothing iron A, the front end of which is bevelled off so as to form a polishing and glossing rib extending the entire width of the iron and transverse to the longitudinal plane of its ironing surface; 2nd. In combination with a polishing and glossing iron A, a detachable fluting plate B, the forward end of its fluting ribs being bevelled off.

No. 3031. HIMAN FRANK, Pittsburg, Penn., U. S., 20th January, 1874, for 5 years: "Regenerative Gas Furnace." (Régénérateur à gaz.)

Claim.—1st. The regenerator m, constructed of bricks having vertical and transverse openings running through them. 2nd. The longitudinal flues running through the walls of the regenerator through which the products of combustion pass to the stack in combination with the chambers and transverse openings in the walls through which the air and gas pass to the combustion chamber; 3rd. The valve a, set in a removable frame b, and operated by the handle c; 4th. The valve a, with its removable seat b, and handle d, in combination with the gas and air flues of a furnace or either of them and so arranged relatively thereto, that the aerial and gaseous currents or either of them can be regulated at the will of the operator; 5th. The dome-shaped valve h, in combination with the flues c, d, and e, for reversing the aerial and gaseous currents of a regenerative furnace, at the option of the operator; 6th. The air and gas flues arranged in relation to the dome-shaped valve so that by the operation of the valve the respective currents may be directed into either one of two passages at the will of the operator; 7th. The valve h, having extended ends h1, h2, whereby the aerial and gaseous currents of a regenerative furnace may be cut off at the pleasure of the operator; 8th. The construction and arrangement of the air and gas ports of a furnace, in connection with a suitable damper so that the inflow of air and gas may be regulated at the pleasure of the operator; 9th. A valve device operated by a single motion and acting so as to open or close simultaneously in relatively equal proportions, the air and gas ports which lead to the combustion chamber, whether of equal or different sizes to increase or reduce the inflowing currents in relative proportions whether such currents are relatively equal or not; 10th. A valve device in combination with each of the several parts of a furnace whereby to regulate the amount of heat at any desired part of the bed; 11th. The tile o, placed in the throat of the furnace to divide the inflowing volume of gas and air into a number of smaller currents for the purpose of causing their more intimate admixture prior to their entrance into the furnace bed; 12th. The fire bridge q, having a contracted or reduced opening q1, in combination with the tile o, for the purpose of causing the more intimate admixture of the inflowing air and gas; 13th. The fire bridge q, made removable as described.

No. 3032. HIMAN FRANK, Pittsburgh, Penn., U. S., 20th January, 1874, for 5 years: "A Furnace Brick." (Une brique à fourneau.)

Claim.—The tile or brick A, having transverse openings or passages *a*, and *b*.

No. 3033. HIMAN FRANK, Pittsburgh, Penn., U. S., 20th January, 1874, for 5 years: "Hot Blast Oven." (Fourneau à air chaud.)

Claim.—1st. The walls A, constructed as described with vertical passages, and transverse passages, such passages being made through the brick or tile which compose the walls, 2nd. The heating chamber, constructed with alternate walls A, and chambers B, the former having passages *a*, extending between the chamber c, and the fire chamber and stack for the passage of the heated gases, and passages *b*, extending between the chambers B, for the tile which compose the walls as described.

No. 3034. ISRAEL P. MAGOON, and HENRY FAIRBANKS, St. Johnsbury, Vt., U. S., 20th January, 1874, for 15 years: "Locomotive Feed Water Heater." (Chauffeur d'eau d'alimentation de locomotive.)

Claim.—1st. The arrangement of a perforated or open woven partition or strainer in the exhaust pipe of locomotives between the mouth or discharge and steam chest; 2nd. The arrangement of a perforated or open woven partition or strainer in the tube *e*, which conducts the exhaust steam to the feed water heating chamber; 3rd. The divided exhaust passage *a, b*, one division leading to the smoke flue and the other to the feed water heating chamber when one or both divisions are provided with a perforated or woven partition or strainer as described.

No. 3035. JOEL WEST and ORREN M. PARKER, Creston, Iowa, U. S., 20th January, 1874, for 10 years: "Steam Bell-ringer." (Sonne-cloche à vapeur.)

Claim.—1st. The piston J, I, when constructed as described with an extended end J, opposite to its usual rod end and provided with a tappet L, and arranged to operate with the other parts of a bell-ringing device; 2nd. The valve stem M, when extended through both ends of the steam chest B, and arranged to operate with the other parts of a steam bell-ringing device; 3rd. The tubular valve E, when constructed as described and arranged to operate with the parts G, G'; 4th. The piston I, when provided with a tappet L, L', on each end and arranged to operate with the valve E, steam passages G, G' and relief passages H, H', and bell P; 5th. The cylinder A, and steam chest B, when constructed as described, pipes C, D, valve E, piston I, steam ways G, G', air passages H, H', piston I, tappets L, L', extended valve stems M, M', connecting rod V, crank T, and bell P, when combined and arranged to operate as described.

No. 3036. EDWIN R. WHITNEY, Bolton, Que., 20th January, 1874, for 5 years: "Veneer Cutting Machine." (Machine à couper les bois de placage.)

Claim.—1st. The crank beam H, for operating the log connected to the carrying wheel G, by a wrist pin and having a sliding motion on the tail pin I, whereby the log is brought to the action of the knife by a circuitous or crank motion; 2nd. Providing the crank beam H, with adjustable dots J, J', sliding in race slots K, for receiving and holding the log fixedly; 3rd. The friction bar K', applied as set forth for receiving the lateral pressure of the crank beam H; 4th. The knife beam L, having a horizontal lateral adjustment parallel to the log and operated by the screw shafts O, O', bevelled gears Q, R, shaft S, and hand-wheel T, arranged as set forth.

No. 3037. EDWIN R. WHITNEY, Bolton, Que., 20th January, 1874, for 5 years: "Glass Printing Type." (Caractère d'imprimerie en verre.)

Claim.—A new article of manufacture, in a glass printing type or block moulded or cut with the design, character, or letter of the impression to be produced either raised or sunk from the surface.

No. 3038. JAMES MCCALLUM, Nepean, Ont., 20th January, 1874, for 5 years: "A Potato Digger." (Un extracteur à patates.)

Claim.—1st. The riddle C, having a vertical action imparted to the bars separately or conjointly in combination with an endless apron, both operating within the frame A; 2nd. The arrangement within the main frame at the rear thereof of the endless chain wheels H, tappet bars G, shaft I, and cog gears, for operating the endless apron and riddle conjointly by the ground wheels B; 3rd. The combination of a stop pin P, cam collar flange O, and spring N, with the apron shaft for effecting disengagement of the operating pinion; 4th. The arrangement with the main frame *a*, and front axle of the bifurcated arm Q, for suspending the shovel by the rods S, and for regulating the same at any desired height by a nut and screw adjustment applied as set forth.

No. 3039. WILLIAM S. HUNTER & CHARLES C. COLBY, Stanstead, Que., 20th January, 1874, for 5 years: "Manufacture of Paper." (Fabrication du papier.)

Claim.—1st. The manufacture of paper, the incorporation with a textile fabric of paper pulp, in a wet or semi liquid state applied to both sides of the cloth simultaneously whereby the interstices of the cloth are filled with pulp and a surface of pulp formed on both sides of the fabric; 2nd. Fabricated paper or paper cloth, consisting of a textile fabric and paper pulp combined, when dried, callendered or otherwise finished as an improved manufacture.

No. 3040. LEVI SCOFIELD & JUSTIN B. WAIT, Grand Haven, Mich., U. S., 20th January, 1874, for 5 years: "An Ironing Table." (Une table à repasser.)

Claim.—1st. The hinged ironing table A provided with cleats I, H, on its under surface, in combination with the frame B, and hinged support G, with or without the swinging brace J, the whole constructed, arranged and operated in the manner set forth; 2nd. The supporting frame B hinged to the table top, in combination with the articulated bars E, E', and F, F', the latter being provided with recesses on the upper ends, which engage with the rod D, as described.

No. 3041. GEORGE W. WHITNEY, Cleveland, Ohio, U. S., 20th January, 1874, for 5 years: "Shoulder Braces and Suspenders Combined." (Harnais et bretelles combinés.)

Claim.—1st. In the construction and arrangement of the several parts of the brace and supporter with the interchangeable strap F; 2nd. The described construction of the capsular pads A, concealed or gored and strengthened by stays and water-proof stiffening B.

No. 3042. JOHN HEWITT, Grimsby, Ont., 20th January 1874, for 5 years: "Smoothing, Band, Glossing and Fluting Iron." (Fer à repasser, apprêter et tuyauter.)

Claim.—1st. A smoothing iron A pivoted in the handle and provided with a series of ironing faces B, C, D; 2nd. A smoothing iron A pivoted in its handle, and held in position through the medium of a spring latch F; 3rd. A smoothing iron pivoted in its handle and provided with a detachable fluting plate H; 4th. The independent fluting board in combination with an iron having fluting ribs r, formed on it, or on a plate attached to it as described.

No. 3043. JOEL LYONS, Chippewa, Ont., 20th January, 1874, for 5 years: "Improvements in Metal Plates for Boot and Shoe Heels." (Perfectionnements aux plaques métalliques pour les talons de chaussures.)

Claim.—The front part with circular side, the three sided or circular reversible plate, solid or with skate adjustment, or with central circular hole filled with leather, the screws equidistant.

No. 3044. JAMES MORRIS, Liverpool, Eng., 20th January, 1874, for 5 years: "Improvements on Machines for Finishing Printed Sheets." (Perfectionnements aux machines à satiner les feuilles imprimées.)

Claim.—Under the first part, 1st. coating the ink set-off on the rolls by whitening or other powdery matter supplied in a shower as described; 2nd. The appliances under this head or their equivalents for the purpose set forth. Under the second part enclosing whitening or other powdery matter in a bag of textile fabric, and placing the same in a perforated or open work-container made to vibrate as set forth; under the third part, 1st. the buffing rollers for effectually removing the ink set-off from the rolls B; 2nd. The end nut clamps 10, for securing the discs of calico or other woven fabric on their carrying shaft or spindle. Under the fourth part, the cleaning brushes 12, operating in the manner set forth.

No. 3045. WILLIAM CORRIS, Rochester, N. Y., U. S., 20th January, 1874, for 5 years: "Improvement on carriage hubs." (Perfectionnement des moyeux des roues.)

Claim.—1st. The combination of the grooved hub A, and dovetailed spokes B, of the keys *f, f'*, and flanges *c, c'*; 2nd. The combination of the flanges *c, c'*, grooved hub A, keys *f, f'*, wedge *d*, and spoke B.

No. 3046. CALMAN WOLF, Rochester, N. Y., U. S., 20th January, 1874, for 5 years: "Improvement on bedstead fastenings." (Perfectionnements dans l'ajustage des couchettes.)

Claim.—1st. In combination with the hook C, of a bedstead fastenings, the wedge D, when constructed with the flanges *c, d* or

equivalent, upon the opposite faces, and with the blanks *h, k, k*, the whole arranged to operate in the manner specified, 2nd. In combination with the hook *C*, and wedge *D*, the reacting spring *E*, engaging with the shoulder *m*, of the hook shank as described.

No. 3047. PROSPER HUERNE, San Francisco, Cal. U. S., 20th January, 1874, for 5 years: "Improvements on a water filter." (Perfectionnements à un filtre à eau.)

Claim.—1st. The reversible hollow globe or oblong shell *A* with its tubes *V, v, m*, in combination with the corresponding filtering stone *G*, having the hole or passage *B*, and short pipes or tubes *b, n, n*. 2nd. The hollow globe or shell *A* with its filtering stone *G* in combination with the pipes *A, b*, and tank *J*, said pipes being connected by the pipe *c* with its cock *ci*, by which the operation of the filter can be reversed for cleaning the filter with filtered water; 3rd. A reversible globe or ovoid filter provided with a corresponding interior filtering stone, said globe or ovoid being reversible for the purpose of cleaning the stone.

No. 3048. GEORGE BRUCE, Aurora, Ont., 20th January, 1874, for 5 years: "Improvements in the construction of buildings." (Perfectionnements dans la construction des édifices.)

Claim.—Covering the metal fronts and walls, and the supports of walls, roofs and floors *B*, of a building or structure with a stratum of a non-conducting substance *c*, and encasing the same with a light covering of iron *A*, or other suitable material arranged as described.

No. 3049. JAMES J. HOWELL, Brantford, Ont., 21st January, 1874, for 5 years: "Improvements on outside shutter hinges." (Perfectionnements aux pentures de contrevents.)

Claim.—The addition of the stop *C* to the portion of the hinge *A*, which is screwed into the window frame, said stop preventing the shutter from being lifted out of gear or taken off by the wind or otherwise.

No. 3050. N. CLEMENT dit LARIVIERE, Montréal, Que., 21st January, 1874, for 5 years: "Improvements on wagon door iron work." (Perfectionnements aux ferrures de portes des wagons.)

Résumé.—La combinaison de la roue à coulisse *B*, avec le coulisseau *c*; 2o. La combinaison de la roue conductrice *D*, avec la liasse bisautée *E*; 3o. La combinaison des roues à coulisse *B*, et conductrice *D*, avec le coulisseau *c*, et la liasse *E*, pour fermer et pendre les portes de chars.

No. 3051. EBENEZER A. GOODES, Philadelphia, Penn., U. S., 21st January, 1874, for 5 years: "Improvements on sewing machines." (Perfectionnements aux machines à coudre.)

Claim.—1st. Needle bar rotating by means of the cam-cylinder *G*, and engaging-pin *J*; 2nd. The mechanism for causing the reverse rotation of the needle-bar, consisting of the sliding sleeve *K*, in combination with the cam-cylinder *G*, and pin *J*; 3rd. The swivel-collar *L*, and set-screw as described, in combination with the removable pin *J*, and cam-cylinder *G*, for controlling the needle-bar as to rotation; 4th. The take-up mechanism consisting of the arms *M, N*, constructed as described, in combination with the pin *p*, of the needle-arm; 5th. The mechanism as described for automatically controlling the feed movement for forming ornamental stitches; 6th. The slide *o* cam *u*, and oscillating guide *X*, in combination with the feed-bar; 7th. The adjustable toothed-shell *P*, in combination with the feed-bar and operating with intermediate mechanism for imparting variable motion to the feed bar; 8th. The shell *P*, having differential teeth *R*; 9th. The lever *Z*, in combination with the slide *W*, cam *U*, guide *X*, and the feed-bar operating for controlling the feed movement by hand; 10th. The lever *V*, in combination with the slide *W*, guide *X*, and laterally yielding feed-bar, as described for adjusting said slide to vary the extent of lateral inclination imparted through the guide *X*, to the feed-bar.

No. 3052. LEVI S. JOHNSON & MARVIN G. JOHNSON, Cortland, N. Y., U. S., 21st January 1874, for 5 years: "Preparation of beef for table use." (Préparation du bœuf pour la table.)

Claim.—A beef compound prepared by cutting raw lean beef very fine and mixing it with salt, saltpetre, and sugar, and packing, and drying, and smoking the compound in bags as set forth.

No. 3053. EVERETT P. RICHARDSON, Lawrence, Mass. U. S., 21st January 1874, for 5 years: "Improvements on machines for sewing hose."

(Perfectionnements aux machines à coudre les tuyaux élastiques.)

The invention relates particularly to the manufacture of hydraulic hose from woven material.

Claim.—1st. In combination with the stitch-forming mechanism, the horizontal work supporting and whorl-containing arm *a*, fastened to the slide *f*; 2nd. In combination with the arm *a*, and its whorl, the slide bar *v*, reciprocated to actuate the whorl by means of the rocker shaft *h*, and its arms *a*, *e*, and the link *d*, lever *e*, and cam *f*; 3rd. The guide plate *h*, formed as shown and pivoted at *g*; 4th. In combination with the arm *a*, guide *h*, and the stitch-forming mechanism, the feed-wheels *g*, *z*, arranged and operated as described; 5th. The vertically adjustable frame *o*, for supporting the feed wheel shafts, and permitting adjustment of the feed wheels with reference to the work support; 6th. The arrangement of the cams *t*, *s*, *w*, and the crank pin *p*, upon the same shaft *c*; 7th. The arrangement of the fulcrums of the levers *u*, *v*, upon the same shaft *s*, as described.

No. 3054. H. M. BAKER, W. F. STONE & J. H. VERMILYA, Washington, U. S., 23rd January, 1874, for 10 years: "Improvements on Sewing Machines." (Perfectionnements aux machines à coudre.)

Claim.—1st. The combination in a sewing machine of a bent driving shaft or its equivalent, and a vibrating arm attached thereto as a means of operating the shuttle carrier; 2nd. The combination of the cam upon the driving shaft and the levers *I* and *J*, constructed and operating conjointly as described, as a means of operating the feed of a sewing machine; 3rd. The adjustable fulcrum *L* and its equivalent, by means of which the length and the rise of the feed can be regulated simultaneously; 4th. In combination with a straight driving shaft in a sewing machine, an angularly-bored cylindrical sleeve or its equivalent; 5th. The combination of the needle bar, a slotted cam attached thereto and a cam guide, the whole being arranged as described, so that the needle bar may be operated near to that side of the needle head which is next to the operator; 6th. The combination of the needle bar and the driving shaft of a sewing machine by means of a cam formed and arranged as described so that the power of the driving shaft will be thrown, directly upon the needle bar at the time when the needle is entering the goods.

No. 3055. JOHN PRATT & ADOLPHE ROY, (Assignees of J. Goullioud, Montréal, Que., 23rd January, 1874, for 5 years: "Improvements on Machines for Weaving Corsets, Gaiters, etc." (Perfectionnements aux machines à tisser les corsets, guêtres, etc.)

Résumé.—1o. La combinaison du fer oscillant *X*, avec un support *N*, et le levier *Z*; 2o. La combinaison du grand levier *Y* oscillant sur l'arbre *K*; 3o. La combinaison du cliquet *D* avec son ressort *D*¹, et la came *K*, tel que décrit.

No. 3056. HENRY MARTIN, Chicopa, and M. H. KING, Springfield, Mass., U. S., 23rd January, 1874, for 5 years: "Brick Machine." (Machine à brique.)

Claim.—The combination with lever *E*, having the sliding centre *T*, the friction wheel *B*, having cord and weight *C, W*, hub and cord *d, m*, operated by the lever *D*, with friction band *A*, the parts being arranged and constructed in the manner described.

No. 3057. E. N. RANDALL & G. E. BRALEY, West Troy, Vt., U. S., 23rd January, 1874, for 5 years: "Milk Vat." (Boîte à lait.)

Claim.—In combination with the rectangular milk vat *A*, and chamber *H*, the ducts *I*, arranged longitudinally at the outer edges of the said chamber, and having perforations *C*, to cause the current of hot and cold water, air or steam, to pass transversely under the milk vat, uniformly for heating or cooling the milk as set forth.

No. 3058. T. G. MESSENGER, Loughborough, Eng., 3rd February, 1874, for 5 years: "Improvement on the Coupling of Pipes and in the Fittings therefor." (Perfectionnement dans l'assemblage des tuyaux et aux matériaux pour cette fin.)

Claim.—1st. The combination with the socket *A* of the recesses *a*₁ and *a*₂, in conjunction with the spigot *B*, ring *C*, collar *D*, bolts *E*, and nuts *F*, as described and illustrated by fig. 1; 2nd. The double socket *A*, double collars *D*, and double rings *C*, bolts *E*, and nuts *F*, in combination with the spigots *B*, as described and illustrated by fig. 3; 3rd. The combination with the spigot *B*, of the tab *H*, and fillet *I*, in conjunction with the socket *A*, collar *D*, ring *C*, bolts *E*, and nuts *F*, as described and illustrated by figs. 4 and 5; 4th. The combination with the spigots *B*, of the loose socket *A*, collar *D*, and plain metal ring *K*, in conjunction with two elastic rings *C*, *L*, as described and illustrated by fig. 6; 5th. The combination with a series of pipes of the lugs *G*, cast on the out-

side pipes in conjunction with the fillets I, cast round the pipes as applied to a continuous water space L, as described and shown by fig. 7; 6th. The combination with the socket A, and spigot B, of the collar D, claws M, and fillet N, as described and shown by figs. 8, 8a, and 8b; 7th. The combination with the spigots B, of a fixed or loose collar D, and worm and thread o, plain metal ring K, and elastic rings C, as described and shown by fig. 9; 8th. The combination with a series of triangular tubes of the joint fig. 11, in conjunction with the blank sockets P, and T-shaped iron Q, as described and illustrated by figs. 10 and 11; 9th. The combination with a T-shaped connection of the T-shaped iron Q, with worm at the long end passing through a gland in the branch connection as described and illustrated by figs. 12 and 13; 10th. The combination with a branch connection of the cross iron Q, with two screw ends, and two glands and collars, and packing figs. 14 and 15; 11th. The double cylindrical conjoint b, as shown in figs. 16 and 16a.

No. 3059. J. D. MARSBANK, Harrisburg, Penn., U. S., and J. R. ANNETT, Montreal, Que., 3rd February, 1874, for 5 years: "Improvements in a Cupola Furnace for Melting Iron." (Perfectionnements à un fourneau à manche pour la fonte du fer.)

Claim.—1st. The interior lining B, of a cupola for foundry purposes, when made in oval oblong form thrown back in egg-shape above the tuyeres and contracted at the top just below the charge door; 2nd. In combination with the interior lining B, constructed as described, the tuyeres D, D, D, D, D, arranged on opposite sides of the cupola so as to alternate.

No. 3060. JOHN M. ARMOUR, Syracuse, N. Y., U. S., 3rd February, 1874, for 5 years: "Improvements in Knitting Machines." (Perfectionnements aux machines à tricoter.)

Claim.—1st. The cam-wheel provided with the cams 4 and 5, operating in connection with cams 1, 2 and 3; 2nd. The cam-wheel having cams described and the fixed or adjustable gate o, between cams 1 and 5; 3rd. The feeder G, when operated in connection with the needle or needles and stitching hooks as described.

No. 3061. ELISHA C. GODDARD, Sweetsburgh, Que., 3rd February, 1874, for 5 years: "Improvements on the Ithaca Wheel Rake." (Perfectionnements au rateau à cheval dit "Ithaca.")

Claim.—The combination of the joints B, Q, and I, as set forth.

No. 3062. JOSEPH V. BROWN, New York, U. S., and ROBERT P. FIDLAR, Stirling, Ont., 3rd February, 1874, for 5 years: "Improvement on Mucilage Bottles." (Perfectionnement des pots à mucilage.)

Claim.—1st. The combination of the sponge E, and the tube G, together with the cork H; 2nd. The combination of the sponge E, and tube G, and cork H, together with form of air tight cap and shape of bottle.

No. 3063. SAMUEL COLLINSON, St. Catharines, Ont., 3rd February, 1874, for 5 years: "Machine for Cutting Sickles." (Machine à tailler les faucilles.)

Claim.—The sliding and rolling bed A, the yoke B, through which screw C passes and the bed plate D, as shown in drawing.

No. 3064. SAMUEL COLLINSON, St. Catharines, Ont., 3rd February, 1874, for 5 years: "Improvement on Tongs Used in Machinery." (Perfectionnement aux tenailles à l'usage des mécaniciens.)

Claim.—The inner jaws marked B, on the drawings

No. 3065. ELIAS SAHM, Greenville, Penn., U. S., 3rd February, 1874, for 5 years: "Combined Square and Gauge for Carpenter's Use." (Équerre-jauge combinées à l'usage des charpentiers.)

Claim.—The graduated arm A, in combination with the points 1 and 2, and the sliding rod B, the head F, and the graduated arm E, constructed as described.

No. 3066. WILLIAM TODD, Portland, Me., U. S., 3rd February, 1874, for 5 years: "Improvements on Car-couplings." (Perfectionnements aux attelages de wagons.)

Claim.—1st. The combination of the draw bar Z, provided with

projection C₁, hook t, and plate f; 2nd. The combination of the coupling hook t, with lever h, link i, and lever d; 3rd. The draw-bar Z, provided with recesses m, and attached to car by strap K, secured to collar j; 4th. The combination of the latch t, with draw bar provided with pocket d₂, and hole e₂, as described.

No. 3067. GARDENER M. SKINNER, Gananoque, Ont., 3rd February, 1874, for 5 years: "Improvements on Spoon Baits for Fishing." (Perfectionnements aux cuillères-appâts pour la pêche.)

Claim.—1st. The fluted or corrugated spoon A, applied and used as described; 2nd. The ring B, attached within the concavity of the spoon, in combination with the main wire D, applied and operating as set forth.

No. 3068. WILLIAM GOWAN, Wausau, Wis., U. S., 3rd February, 1874, for 5 years: "Improvements on Saw Mills." (Perfectionnements dans les scieries.)

Claim.—1st. The bevelled pinion C, and gears D, D₁, shaft E, ratchet wheels G, F, lever G₁, pawls I, I₁, and quadrant L, in combination, all operating for rotating the set screw B; 2nd. The saddles M, applied to the jock hoods for supporting the dogs N, 3rd. The combination of the friction pulleys N, lever o, hanging frame P, shafts Q, E, and gears R, R₁; 4th. The friction brake S, applied and used as set forth; 5th. The combination of the cam slotted dog bars U, and lever T, for operating the dogs as set forth; 6th. The scale Fig. 7, graduated with allowances for saw cuts and side boards for different thicknesses of lumber from one inch upwards; 7th. The lever J, and ring J₁, in combination with the quadrant L, for adjusting the lever G₁, to the different thicknesses of lumber to be cut; 8th. Providing the quadrant L, with a graduated scale K; 9th. The loose pin I, having a cam recess or flat side to engage with the lug Z, for tripping the pawl Z'; 10th. Providing the quadrant L, with a screw Z₂, for its adjustment in the manner set forth.

No. 3069. G. BOUCHER DE BOUCHERVILLE, Quebec, Que., 3rd February, 1874, for 5 years: "Fire-escape." (Sauveteur d'incendie.)

Réclame.—Une forte corde H, H₁, le cylindre croux A, Ar, les blocs B, et D, la tige C, C₁, les trous F, F₁, la roue à rochet J, avec son cliquet X, et son frein L, la vis M, la noix N, la corde Z, avec sa poignée P, son neud coulant Q, et ses étriers R, R₁, le neud Z, tous combinés ensemble pour les fins réclamées.

No. 3070. JAMES A. GREEN, Hamilton, Ont., 3rd February, 1874, for 5 years: "Improvements in Railway Switches." (Perfectionnements aux aiguilles de chemin de fer.)

Claim.—1st. The combination of the bed-plate A, sliding V-slotted plate B, and sliding plate C, and connecting rod Q, operated on by the rods H, J, and crank L, by the wheel of a locomotive; 2nd. The pin L, of the plate C, in combination with the slot of the plate B, for pushing the switch rail over to its place on a line with the main-rail; 3rd. The arrangement for operating the signal disc S₁, by the combination of the pin or screw B, and slotted arm T, disc rod S, with the sliding plate B; 4th. The arrangement of the connecting rods H, and J, and crank L, for pushing the slotted sliding plate backwards and forwards as specified.

No. 3071. WILLIAM HAMILTON, Neversink, N. Y., U. S., 3rd February, 1874, for 15 years: "Machine for Making Ox Shoes." (Machine à faire des fers à bœufs.)

Claim.—The combination with a trip-hammer having a socket die or anvil B, and a hammer die E, constructed as described, of a die c, arranged and operating as specified.

No. 3072. DANIEL T. CASEMENT, Painsville, Ohio, U. S., 3rd February, 1874, for 15 years: "Improvements on Seal Locks." (Perfectionnements aux cadenas à cachet.)

Claim.—1st. The combination of the hasp or slide bolt and the locking bolt in the manner described for locking self-actually; 2nd. The combination with said locking bolt and hasp or slide bolt of the push pin as specified; 3rd. The combination of the seal holder, seal punch, and the push pin with the locking bolt and hasp or slide bolt in such manner that the punch may be thrust out through the seal by the push pin when it disengages the locking bolt; 4th. The slide bolt or hasp having the slot O, hole K, and inclines L, in combination with the locking bolt having the extension N, and the inclines M; 5th. The combination of the seal guard I, with the harper slide bolt, and the seal holder H; 6th. The seal holder having notched edges; 7th. The arrangement of the lock case push pin and seal punch to prevent ingress of the broken pieces of the seal and other matters; 8th. The arrangement of the mouth or opening of the lock case for the hasp or slide bolt for the escape of water, ice, &c., as described.

No. 3073. JAMES WILSON, Kingston, Ont., 3rd February, 1874, for 5 years: "Improvements on Paddle Wheels." (Perfectionnements aux roues à aubes.)

Claim.—1st. The endless apron L having a series of buckets K, and operating within a frame A, secured to the sides of the vessel; 2nd. The endless roller L having a series of buckets K, and provided with friction rollers G, running between guide plates F, secured to the frame A; 3rd. Securing the bucket supports I, to the endless apron by the bars H, and J having pivotal connection with link plates as set forth.

No. 3074. ALEXANDER AMOS, Potsdam Junction, N. Y., U. S., 3rd February, 1874, for 5 years: "Improvements on Horse Hay Rakes." (Perfectionnements aux râtaux à cheval.)

Claim.—1st. The thimbles A, having the sockets a, made to run parallel with and to the front of bar B, so as to obtain a fulcrum on the latter, by which the teeth can be sprung into the grooves b, c, in connection with the shanks c, constructed to permit the teeth to lie squarely against the same; 2nd. The angular projection I, secured to the lever F, having pivotal connection at the front of the incline and foot lever d, in combination with the hooked lever H, presser bar E, lever D, chain i, connecting rod g, provided with holes and lifting bar E, the whole constructed and arranged in the manner set forth; 3rd. The latch / in combination with connecting rod or bar p, clevis lever D, bar E, and teeth a, constructed and operating as set forth; 4th. Securing the outer teeth of the rake in a fixed manner, whereby the said teeth shall only be lifted by the operation of the bar E, as set forth.

No. 3075. COLIN MCPHAIL, Big Harbour, N. S., 3rd February, 1874, for 5 years: "Armour for War Ships." (Armure de vaisseaux de guerre.)

Claim.—Providing the sides of a ship with an armour B, fitting into a recessed hull, and so hinged thereto that it can be adjusted to an inclined position for the protection of the hull and deck.

No. 3076. CHARLES H. CHAPMAN, Shirley, Mass., U. S., 3rd February, 1874, for 5 years: "Tape Weaving Loom." (Métier à tisser le galon.)

Claim.—1st. The web rod D, when made with the projection or boss D⁵; 2nd. The combination of the feeler lever T, the bent lever T², T³, and latch T, with the rod K³; 3rd. The web rod D⁴, link D², lever D, with the cam C²; 4th. The device for throwing the shuttle, the lever K²; 5th. The combination of the cams N², M², and the rocker K, with the levers P, Q, and J awls P², Q², operating as described.

No. 3077. WILLIAM McALLISTER, Lawrence, Mass., U. S., 3rd February, 1874, for 5 years: "Improvements for Protecting Buildings from Fire." (Dispositions pour la protection des édifices contre l'incendie.)

Claim.—The deflector D, and the two gutters b, b, arranged together, and with the roof a, a, and conduit c, in the manner described; the gutter B applied to the roof or side of the building, so as to be capable of being turned from a horizontal or an inclined position, or vice-versa; the separate spout p, combined and arranged with the gutter B, provided with the duct o, and applied to the roof or side of the building, so as to be capable of being turned from a horizontal into an inclined position or vice-versa; the deflector k, arranged with the front of the building and with the rotary gutter; the deflector D and the rotary gutter applied to the roof in combination with one or more conduits for discharge of water against such deflector; The deflector D, and the lateral or end deflector or deflectors f, arranged and combined with the ridge of the roof and the end or ends of the building and provided with water supply conduits as specified.

No. 3078. JOHN WOOLRIDGE, Dean's Corners, Ill., U. S., 3rd February, 1874, for 5 years: "Improvements on Land Rollers." (Perfectionnements aux brise-mottes.)

Claim.—1st. Two rolls J, J, connected by a two part bar B, that is attached to the tongue, at an oblique angle, and of which the lower section is pivoted in the manner described; 2nd. The means described for holding the rolls to each end of the bar B, so that they may turn laterally in passing over obstructions consisting of

the frames H, and blocks G, constructed and pivoted together as set forth; 3rd. The means described for allowing the pivoted section of the bar B to stand still while the roller is being turned at the end of a land and yet to be automatically locked by the moving forward of the team, consisting of the oblique grooves and over hanging lip at the outer end of each section of bar H, constructed as specified.

No. 3079. WILLIAM C. DAVOL, Jr., Fall River, Mass., U. S., 3rd February, 1874, for 5 years: "Fire Hose Leak Stopper." (Arrête-fuite d'eau de tuyaux élastiques.)

Claim.—The flexible hose leak stopper A, in combination with the bars B and J, with rivets c, c, and i, i, holes d and k, set screw D recesses f, l, projection F and pin p, as set forth.

No. 3080. JOHN HILTON, Carter's Depot, Ten., U. S., 3rd February, 1874, for 5 years: "Fever Specific Compound." (Composition spécifique pour la fièvre.)

Claim.—A compound of the extract or powder of the astibe decandra with distilled water or arnica in the proportions set forth.

No. 3081. ROBERT H. HUDGIN, Howard, Ont., 3rd February, 1874, for 5 years: "Construction of Gate Posts." (Confection de poteaux de barrières.)

Claim.—1st. The combination of the pieces of plank or boards, together with the prepared rails as seen in figure 1, and marked 0000, forming the post A, in the same figure; 2nd. The combination of the sill S, brace T, together with the pieces of plank, forming the post as in figure 3.

No. 3082. MAXIMILIAN BOCK, Brooklyn, N. Y., U. S., 3rd February, 1874, for 5 years: "Improvements on Shoe Fasteners." (Perfectionnements aux agrafes de souliers.)

Claim.—The fastener composed of the united links B, C, of which one is shorter and narrower than the other so that it can be folded into the same as set forth.

No. 3083. JOHN ROGERS, Brooklyn, N. Y., U. S., 3rd February, 1874, for 5 years: "Furnace for Manufacturing Lamp Black." (Fourneau de fabrication du noir de fumée.)

Claim.—1st. An apparatus for producing lamp black, consisting of the furnace B, having the bars a, a, perforated plate or grate c, and the air opening d, beneath the grate, all arranged as described; 2nd. The combustion pan A, of a lamp black apparatus, made annular with a central perforated air pipe i; 3rd. The lamp black furnace B, made with double walls d, m, which are perforated at n, and o, respectively.

No. 3084. L. D. SAWYER, H. P. COBURN & J. AMES, (Assignees of L. B. HOIT,) Hamilton, Ont., 4th February, 1874, for 5 years: "Corn Sheller." (Egre noir à blé-d'inde.)

Claim.—The hand corn sheller as described consisting of the frame stationary ribbed face plate A, with hopper F, adjustable spring H, rotating disc B, with crank arm K, central shaft C, spring D, and the adjusting devices L, M, also apron I, all constructed and arranged to operate as specified.

No. 3085. JAMES FOLEY, Montreal, Que., 10th February, 1874, for 5 years: "Machine and Process for Making Bark Extract for Tanning and other purposes." (Machine et procédé pour faire l'extrait d'écorce pour le tannage et autres fins.)

Claim.—1st. The manufacture of extract of bark, the filtration of the liquor obtained by leaching, by passing it through a bed or beds of animal or vegetable charcoal or spent tan bark, separately or

combined, to free it from impurities previous to being inspissated; 2nd. The manufacture of extract of bark; the separation of depository matter from the liquor obtained from the leached bark, previous to, or after filtration as set forth, by passing the liquor in a thin sheet or film over a tier or series of shelves provided with transverse slats D, for collecting the sedimentary deposit; 3rd. In combination with an evaporating vessel F, the employment of a steam drum or casing full of vertical tubes with the steam in the drum encircling the tubes, and the rectangular sided hollow steam containing rings E, arranged vertically, concentrically or eccentrically; in one or more series within the said vessel, the whole separately or combined as set forth.

No. 3086. LEVI W. POND, Eau-Claire, Wis., U. S., 10th February, 1874, for 10 years: "Improvements on Booms." (Perfectionnements aux estacades flottantes.)

The object of the invention is to provide a device for throwing a boom across a stream to catch floating material and to open and close the boom by the action of the current, effected by the use of rudders of peculiar construction.

Claim.—1st. The boom *b*, in combination with one or more rudders *c*, pivoted on supports *h*, and so arranged as to be operated by a rope; 2nd. The boom rudder *f*, when provided with end pieces *k*, and combined with the boom *b*; 3rd. The combination of the boom *b*, projecting piece *m*, rudder *c*, and rope *g*.

No. 3087. WILLIAM RICHARDS, Toronto, Ont., 10th February, 1874, for 5 years: "Machine for Opening Metallic Cans." (Machine à ouvrir les boîtes métalliques.)

Claim.—The blade A, with a pronged point B, in combination with a cutter C, either solidly attached to the blade A, or held within a slot D, the whole being arranged as specified.

No. 3088. JOSEPH P. MANTON, Providence, R. I., U. S., 10th February, 1874, for 5 years: "Improvements on Ships' Windlasses." (Perfectionnements aux guindeaux.)

Claim.—The combination of a winch axle H, and pinion I, with the holding wheel F, of the windlass, said wheel having one side of its teeth suitably pointed for being turned by said pinion and winch whilst the other side of said teeth is bevelled to accommodate the pawls *a*, said wheel thus serving as a gear and ratchet wheel for heaving in the chain as specified.

No. 3089. HANSEN H. ROBINSON, Stanbridge, Que., 10th February, 1874, for 5 years: "Improvements on Horse and Cattle Yokes." (Perfectionnements aux carcans de chevaux et de bétail.)

Claim.—1st. The yoke *a*, in combination with the head stall *b*; 2nd. The yoke *a*, having the opening *c*; 3rd. The yoke *a*, having openings *e*, and curved point *d*.

No. 3090. GEORGE S. HARWOOD, Boston, Mass., U. S., 10th February, 1874, for 5 years: "Improvements on First Breaker Feeder for Carding Machinery." (Perfectionnements à l'alimentateur de cardes en gros.)

Claim.—1st. The combination of the moveable apron V, with the moveable apron W, either or both of them being made adjustable; 2nd. The open hollow fan *n*, 3rd. The open hollow picker *o*, 4th. The receiving space *k*, provided with a perforated bottom, 5th. The combination of the outwardly inclined lifting apron *d*, raising the wool *h*, outwardly and upwards in contradistinction to drawing it under and upwards with the inwardly inclined perforated bottom *m*; 6th. The construction of the lifting apron consisting of an endless sheet of flexible material *e*, with slats *f*, and spikes *g*; 7th. The combination of the feed apron *d*, with shield *i*, and with or without spooler *h*, 8th. The combination of the aprons V, and W, with the open fan *n*, open picker *o*, and picker roll *p*; 9th. The combination of the spiked lifting apron *d*, with the clearing beater fan *n*.

No. 3091. PHILIP HADDY, Waterloo, Ont., 10th February, 1874, for 5 years: "Improvement on Coffee Roasters." (Perfectionnement dans les torrificateurs à café.)

Claim.—1st. The pan B, shaped to fit any stove; 2nd. The combination of said pan B, with the roasting cylinder A.

No. 3092. CAMALIEL B. THOMPSON, Boston, Mass., U. S., 10th February, 1874, for 5 years: "Improvement on Shirt Bosoms." (Perfectionnement des devants de chemises.)

Claim.—The shirt bosom described, consisting of two double bosoms, constructed and arranged to operate in the manner specified.

No. 3093. ALEXANDER T. MILLAR, (Assignee of A. R. Giles), Ottawa, Ont., 10th February, 1874, for 5 years: "Improvements on Carriage Jacks." (Perfectionnements aux crics à voitures.)

Claim.—The combination, and arrangement of the lever A, arm B, pivoted thereto and block D, adjustable on the arm B, by the link connection C, operating as set forth.

No. 3094. HENRY F. READ, Brooklyn, N. Y., U. S., 10th February, 1874, for 15 years: "Improvements on Water Meters." (Perfectionnements aux compteurs à eau.)

Claim.—1st. The combination in a water meter of a separate and independent gearing frame E, a separate and independent dial frame S, P', a hand rubber screw propeller B, with its conical hub G, and the shield H, and an enclosing shell A, C, with inlet and outlet openings E, A, all working together by gearing enclosed within the compartment Q, of the frame E; 2nd. The separate winged frame E, T, R, K, having the gearing compartment Q, upper rubber bearing J, for the propeller stem I, and the deflecting sealing shield H, of a water meter as described; 3rd. The separate gearing frame E, with its end plates R, R', and wings T, in combination with the enclosing shell C, whereby an enclosed compartment Q, for the gearing is obtained; 4th. The separate gearing frame E, as a seat and support for the dial gearing frame S, P', and put together the one upon the other in the same line for convenient and ready connection of the propeller stem with the operating gearing of said frames; 5th. The intermeshing sleeved sealing joint *e*, in combination with the separate contiguous discs R, S, of the dial and gearing frames and their gearing connecting spindle O; 6th. The combination of the sealing cone, shield H, of the separate gearing frame E, with the cone G, of the propeller stem I; 7th. The combination of the enclosed sealing joint formed by the parts G, H, with the enclosed gearing compartment Q, and the intermeshing sealing joint *e*, for joint action in retarding the course of the water from the propeller into the dial compartment through the intermediate opening H'; 8th. The filter *r*, interposed between the plates R, S, of the dial and gearing frames in combination with perforations *r*, in said plates R, S; 9th. A mould Y, having spiral grooves S, in the solid body and having a pitch from one end to the other to allow of the withdrawal of the moulded propeller as described.

No. 3095. J. P. MANTON, G. H. REMINGTON, and B. D. THAYER, Providence, R. I., U. S., 11th February, 1874, for 5 years: "Improvements on Ships' Windlasses." (Perfectionnements aux guindeaux.)

Claim.—1st. The combination with a windlass shaft, for working the same, the single wheel E, and ratchet or friction pawls K', K, applied to the sides thereof; 2nd. The wheel E, constructed with ratchet teeth R, on its periphery for a pawl gear and double flanged runs *b*, *b*, in combination with sliding blocks J, and ratchet or friction pawls K', K; 3rd. The combination of a windlass pump brake head L, constructed with slotted sectors *h*, *h*, with sliding blocks I, and links *d*, *d*, for maintaining the proper position of the pawl or ratchet gear for all variations of the length of the stroke as described.

No. 3096. H. HILLS, G. W. MILLS and W. M. Lockwood, Highland, Mich., U. S., 11th February, 1874, for 5 years: "Improvements on Pruning Shears." (Perfectionnements aux sécateurs.)

Claim.—The revolving cutter C, secured upon an axis on the moving lever B; 2nd. The stationary lever A, and moving lever B, when the former is pivoted within the fork of the latter for greater steadiness; 3rd. The levers A, B, pivoted together, the former being provided with a hook, and the latter with a revolving cutter C, connected by the radius rod D, with the lever A.

No. 3097. **FREDERIC W. RHINELANDER**, New York, U. S., 11th February, 1874, for 5 years: "Improvements on Boot and Shoe Tips. (Perfectionnements aux garnitures des bouts de chaussures.)"

Claim.—The enamelled metal shoe tip as a new article of manufacture.

No. 3098. **WILLIAM H. LUNT**, Cambridge, Mass., U. S., 11th February, 1874, for 5 years: "Improvements on Filters." (Perfectionnements aux filtres.)

Claim.—The combination of filtering valve D, and the sleeve C, and pitman d, (connected as described) with the case A, and its educt or discharging nose B, all arranged to operate as set forth.

No. 3099. **ELSWOOD SMART**, Brockville, Ont., 11th February, 1874, for 5 years: "Improvements on Oil Gates." (Perfectionnements aux robinets à l'huile.)

Claim.—The stem c, having a cam or inclined rear face a, and projection or swell b, attached to a curved or bent tube A, in combination with the lever D, having a gib or notched projection E, engaging therewith and operating as set forth; 2nd. The lever D, so designed and constructed that the gib E, in casting bore its own core in the sand in moulding; 3rd. The valve plate F, having a loose connection with the lever D, centrally, and adjustable to the washer c, surrounding the outlet, by a screw I; 4th. The combination of the cam faced stem c, lever D, having a gib E, engaging therewith and valve plate F, for bringing a graduated pressure to bear on the washer C, to prevent leakage as set forth.

No. 3100. **EDMUND P. HANNAFORD**, Montreal, Que., 11th February, 1874, for 5 years: "Improvements on a Signal Lamp." (Perfectionnements à une lampe à signal.)

Claim.—1st. The arms B, B, attached to revolving or partially revolving shaft A, carrying or moving; the coloured transparent glasses over the openings of the white glasses L, I; 2nd. The cutting or slotting of the apertures D, D, in the bottom of the lamp to allow the arms B, B, to move as may be necessary.

No. 3101. **HIRAM A. HOLMES**, Epsom, N. H., U. S., 11th February, 1874, for 15 years: "Improvement on Clapboard Machines." (Perfectionnement des machines à douves.)

Claim.—The combination of the saw-mill carriage A, and separate stationary cam w, with a machine for supporting and intermittently revolving the log while being sawed into clapboards.

No. 3102. **WILLIAM FULLER**, Montreal, Que., 11th February, 1874, for 5 years: "Plastic Compound." (Composition plastique.)

Claim.—A plastic compound of gluten or other matrix in combination with the dust of stone or wood and with or without glue size as described.

No. 3103. **WILLIAM X. STEVENS**, East Brookfield, Mass., U. S., 11th February, 1874, for 5 years: "Improvements on Shears for Cutting Bars of Iron." (Perfectionnements aux cisailles pour couper les barres de fer.)

Claim.—1st. The movable arm or lever B, provided with a trunnion b, outside of its die D, in combination with the stationary socket c, stationary arm A, with its die C, and the collar E, with its adjusting bolts, F; 2nd. The combination with the arms or lever A, B, having cutting dies or portions C, D, of the shaft I, the crank or eccentric pin H, the pawl G, and the teeth upon the lever B; 3rd. The cast arms or levers A, B, or either of them having its die C or D, fitted to it, by first shaping the perimeter of the die or shearing blade and subsequently casting the metal of the lever upon it.

No. 3104. **CHARLES E. BLAKE**, San Francisco, Cal., U. S., 11th February, 1874, for 5 years: "Filling for Teeth." (Composition dentaire.)

Claim.—A filling for teeth consisting of the usual base covered with a stratum of platinum or other metal approximating to the colour of the enamel of the teeth; 2nd. The chemical admixture of alloy of platinum and gold for the purpose of providing an improved dental gold, 3rd. As a new article of manufacture in platinum foil or leaf coated with gold either upon one or both sides.

No. 3105. **GEORGE J. WILSON**, Ottawa, Ont., 11th February, 1874, for 5 years: "Improvements on Clothes Racks. (Perfectionnements aux séchoirs à linge.)"

Claim.—The combination of adjusting rack A, A, and centres B, B, with extended rails C, C.

No. 3106. **GEORGE YOUNG**, Oshawa, Ont., 11th February, 1874, for 5 years: "Improvements on Sewing Machine Shuttlers." (Perfectionnements aux navettes des machines à coudre.)

Claim.—The bar C, pivoted within the shuttle A, and bent to bear on the opposite journal of the bobbin B, with or without the provision of a segment plate C, and the pin or hook D, and arranged to operate for regulating the tension of the thread and keeping the bobbin in place as described, the same being a winding tension.

No. 3107. **FRANCIS CULHAM**, Widder Station, Ont., 11th February, 1874, for 5 years: "Improvements on Nut Fasteners of Railway Rails." (Perfectionnements aux machines à assujétir les noix des rails des voies de fer.)

Claim.—The combination of the fastener C, and the nuts D, D, D, in the manner specified.

No. 3108. **PETER MUNSINGER**, Mitchell, Ont., 11th February 1874, for 5 years: "Improvements on Pumps." (Perfectionnements dans les pompes.)

Claim.—The tube F, combined with the piston G, for performing the combined offices of a piston rod and suction tube, 2nd. The piston G, constructed with open sides, and provided with a packing M, to expand laterally by the pressure of water within the piston, as set forth.

No. 3109. **WILLIAM H. CUTLER**, Buffalo, N. Y., U. S., 11th February, 1874, for 5 years: "Improvements in Portable Inhaling Tubes. (Perfectionnements aux tubes inhalateurs portatifs.)"

Claim.—1st. A core for inhaling instruments formed of paper, 2nd. A core for inhaling instruments formed of a tube or tubes of bibulous paper or analogous material as specified.

No. 3110. **ROBERT B. TAIT**, Oakville, Ont., 11th February, 1874, for 5 years: "Improvements in Car-Couplings." (Perfectionnements dans les attelages de Wagons.)

Claim.—1st. The draw head A, having the cavity a, sunk in the bottom of the bell mouth A', the hinged tongue B, with lip b, working in a slot cut out on cast in A, by means of which not only can the pin D, be adjusted to drop automatically within the link E, when the latter strikes the tongue B, but the link can also be adjusted to suit different elevations of draw heads without the operator having to place his hands between approaching drawheads; 2nd. The draw head A, having the bellmouth A', in combination with the hinged tongue B, rod or shaft C, and weights c, or their equivalent; 3rd. The drawhead A, with bellmouth A', cavity a, in combination with the hinged tongue B, with lip b, rod or shaft C, and weights c, or their equivalent arranged and operating as described.

No. 3111. **HENRY MCKENZIE**, Marquette, Mich., U. S., 11th February, 1874, for 5 years: "Improvements on Leaching Apparatus." (Perfectionnements aux appareils à lessive.)

Claim.—1st. A leach tub provided with a rim or flange E, and stays F; 2d. A leach tub provided with wheels F; 3rd. A leach tub having the upper side of the bottom grooved as described and pierced with conical perforations D; 4th. The combination with a leach frame A, of pawls, or catches arranged at proper heights to sustain the tubs; 5th. The spring track L', arranged to allow of the upward passage of the tubs; 6th. The combination with a leach frame of an upper track L, leading to dump and lower track K, from filling place to leach frames A; 7th. The catch pit G, arranged to sustain the leach tubs and provided with sifter H. 8th. The combination of the catch pit G, with press I; 9th. The leach tubs arranged vertically above each other in the frames and carried by the pawls K, 10th. The combination of a leach frame A, provided with tracks K, and L, and having spring track L', with the leach tub platform G, and press I, all arranged and working together as set forth.

No. 3112. ALPHONSE HALON, Quebec, Que., 11th February, 1874, for 5 years: "Portable Range." (Une cheminée portative.)

Reclame.—1o. La grille mise dans la cheminée, indiquée par la lettre A, ainsi que l'entier de l'appareil représenté par les lettres B, D, F, J, la chaudière G, Fig. 1, le trou pour le tuyau P, le trou pour les vasesaux Q, la chantplore R, le four indiqué par la lettre H, Fig. 5, et le tablier L, Fig. 1, le tout tel que décrit.

No. 3113. ALEXANDER ANDERSON, London, Ont., 11th February, 1874, for 5 years: "Improvements on Coupling for Railway Cars." (Perfectionnements aux attelages de wagons de chemins de fer)

Claim.—1st. The disc or buffer D, made to be fitted to a coupling link in the manner specified, of the fine size of an ordinary draw head and projecting at the top to afford a grasp, for the hand; 2nd. The combination of the buffer D, the link and the draw heads.

No. 3114. JOEL TUFFORD, Beamsville, Ont., 20th February, 1874, for 5 years: "Machine for Drilling Iron or Steel." (Machine à forer le fer ou l'acier.)

Claim.—1st. The combination of the upright shaft F, driven by means of a pulley E, on the lower journal of drill spindle by a belt, also the cone H, on counter shaft by which means the cone C on nut is driven; 2nd. The clutch I, on counter shaft F, with the lever J attachment also the large pulley K, on top as set forth.

No. 3115. G. B. GETTY, E. MENDENHALL & E. BARTON, Bloomsbury, Penn., U. S., 20th February, 1874, for 5 years: "Head Block for Saw-Mills." (Poupée de scierie.)

Claim.—1st. The stirrup G, provided with the arm d, and carrying the pawls f, which latter are adjustable in said stirrup to enable the board to be sawed any desired thickness in combination with the inclined floor irons h, and rack bar D; 2nd. In combination with the stirrup G, and pawl f, the springs a, e, and i; 3rd. The combination of the rack bar D, with standard C, stirrup G, with flanges b, and arm d, pawls f, springs a, e, and i, crank-shaft J, and irons h, all constructed and arranged to operate automatically as set forth.

No. 3116. HARRY R. BARNES, Rockstream, N. Y., U. S., 20th February, 1874, for 5 years: "Improvements on Hoes." (Perfectionnements aux houes.)

Claim.—1st. The triangular hoe of concave form constructed with the plain edges a, a, on two sides and the projecting teeth c, c, on the third as described; 2d. A hoe blade provided with the central longitudinal corrugation d, and reverse side corrugations f, f, with the edges a, a, turned up in their centre length and downward at the extremities for the purpose specified; 3rd. The combination with the blade and the handle of the shank e, provided with the head g, and off set h, in the manner specified.

No. 3117. JAMES DEFOE, Detroit, Mich., U. S., 20th February, 1874, for 5 years: "Improvements on Wood Pavements." (Perfectionnements dans le pavage en bois.)

Claim.—The prismaidal wooden blocks A, of the form shown, laid on end, in straight or diagonal rows as described, with any suitable fitting in the wedge shaped interstices between the faces and ends of said blocks.

No. 3118. JAMES TREDALE, Toronto, Ont., 20th February, 1874, for 5 years: "Improvements on Coal Oil Stoves and Lamps." (Perfectionnements aux poêles et aux lampes à pétrole.)

Claim.—The combination of the cold air passages and plaster deck thereby causing the complete combustion, without chimney, of the coal oil, also the cooling air passages, inside wick and under plaster deck thereby causing a great heating power in the flame without danger of heating the oil or lamp, any number of these lamps can be combined for heating purposes.

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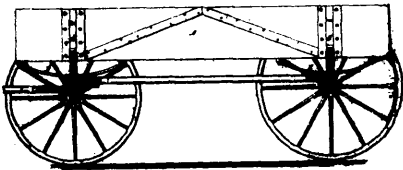
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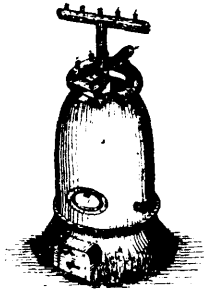
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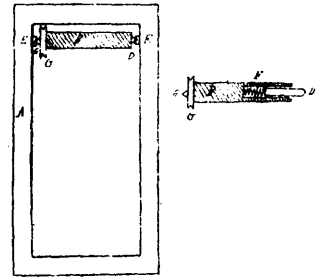
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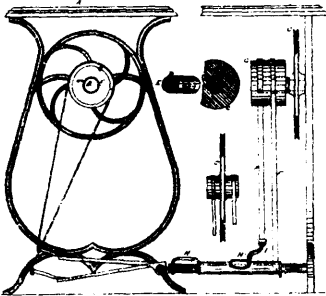
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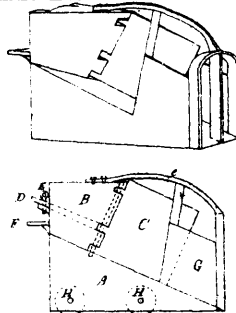
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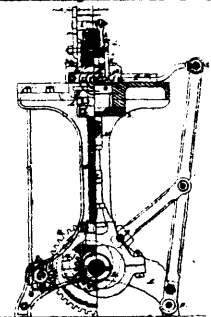
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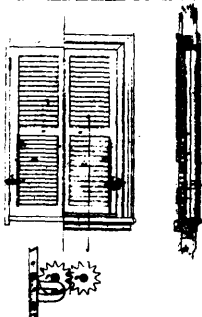
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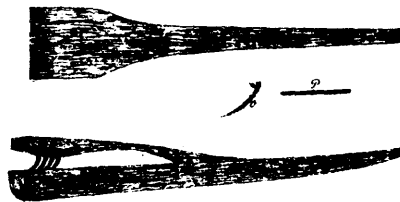
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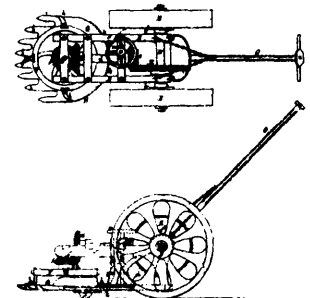
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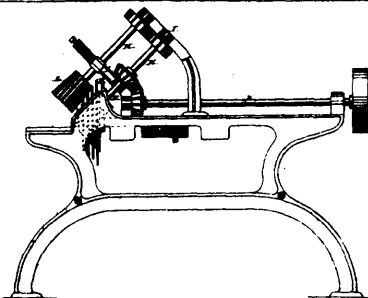
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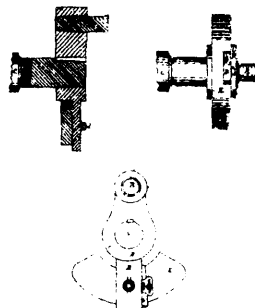
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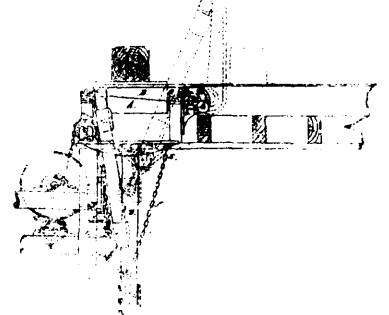
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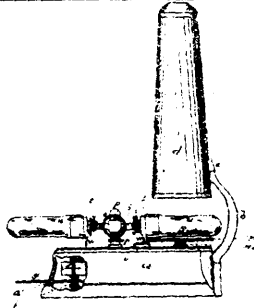
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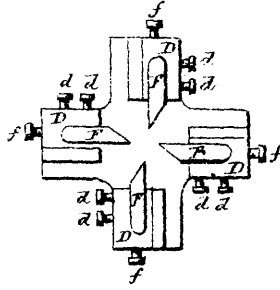
3004 Rodgers' Improvements in Balance-Cranks.



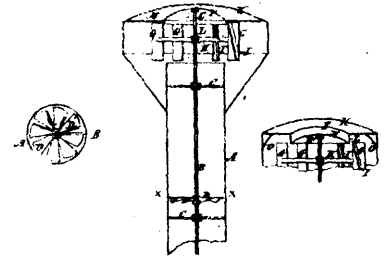
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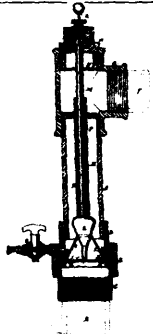
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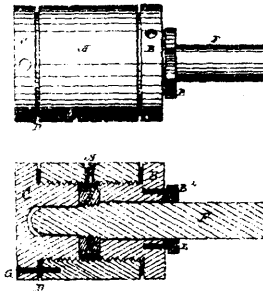
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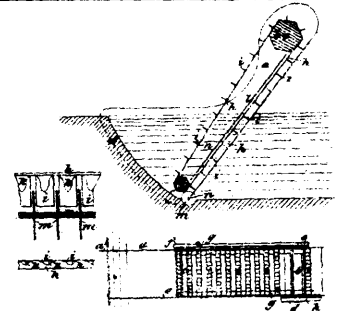
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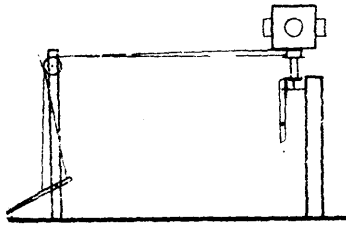
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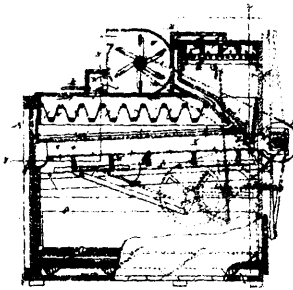
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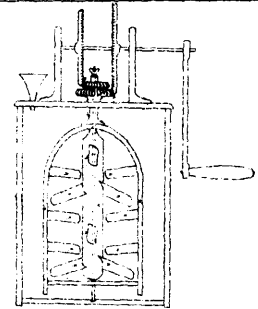
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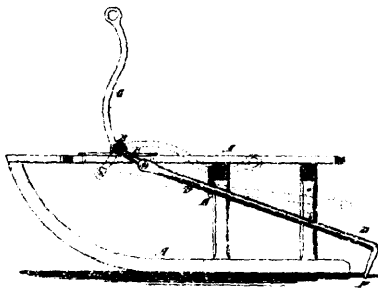
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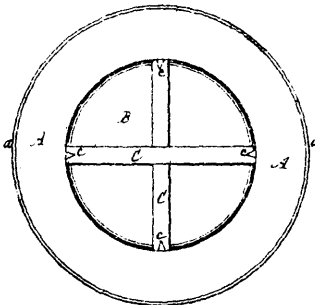
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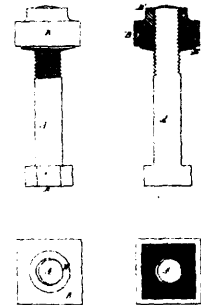
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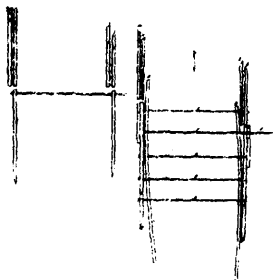
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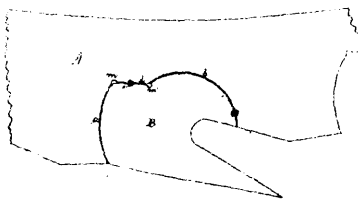
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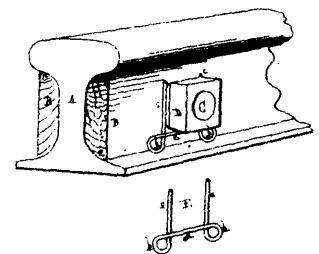
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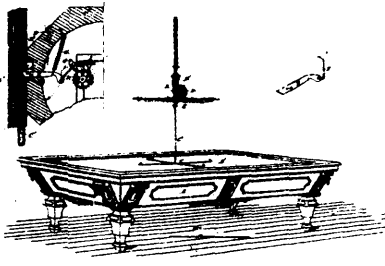
3020 Wilson's Safety Railway Switch.



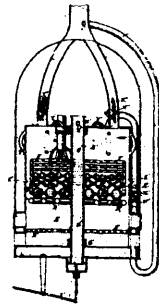
3021 Johnson's Invertible Saw Teeth.



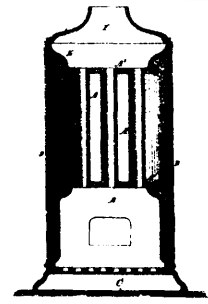
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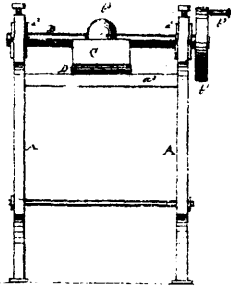
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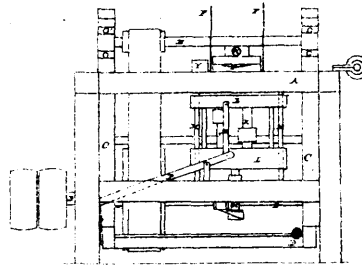
3024 Casement's Method of Burning Fuel and Generating Steam.



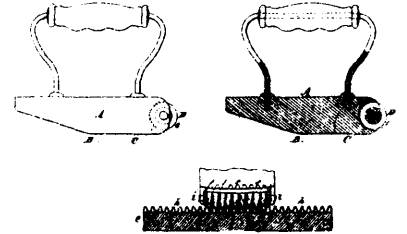
3025 Bookwalter's Steam Generator.



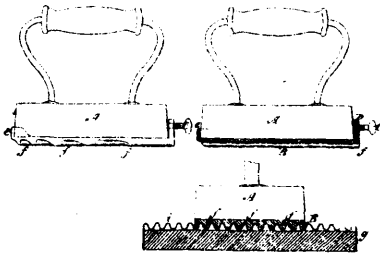
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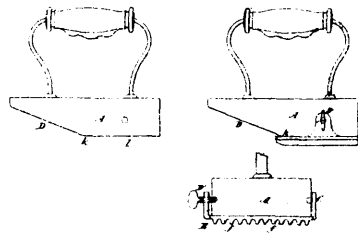
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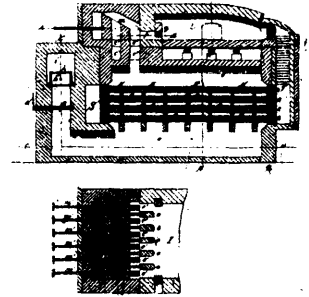
3028 Hewitt's Sad and Fluting Iron.



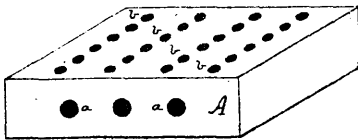
3029 Hewitt's Improvements on Fluting Plates.



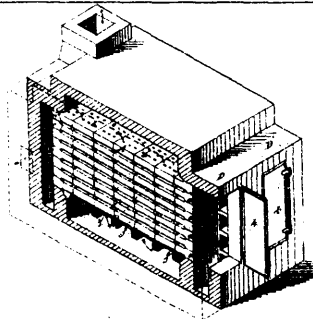
3030 Hewitt's Glossing and Fluting Iron.



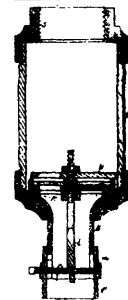
3031 Frank's Regenerative Gas Furnace.



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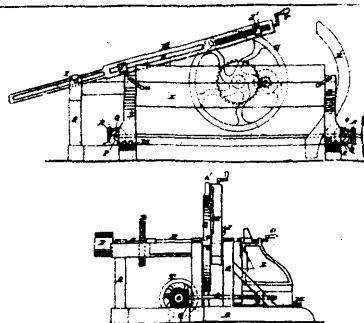
3033 Frank's Hot Blast Oven.



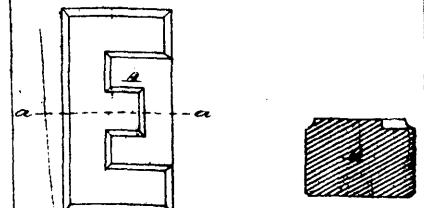
3034 Magoon & Fairbank's Locomotive Feed Water Heater.



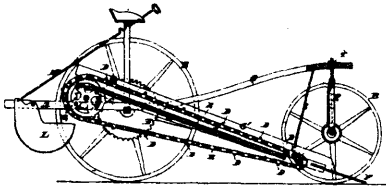
3035 West & Parker's Steam Bell-ringer.



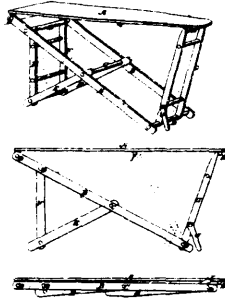
3036 Whitney's Veneer Cutting Machine.



3037 Whitney's Glass Printing Type.



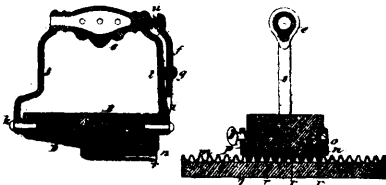
3038 McCallum's Potato Digger.



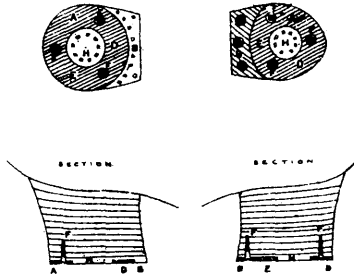
3040 Scofield & Wait's Ironing Table.



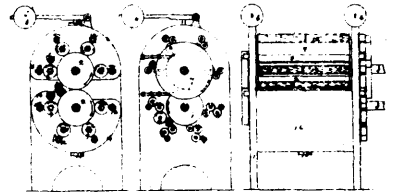
3041 Whitney's Shoulder Braces and Suspenders Combined



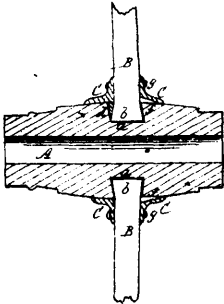
3042 Hewitt's Smoothing, Band, Glossing and Fluting Iron.



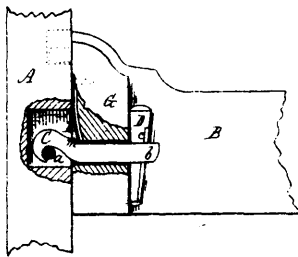
3043 Lyons' Improvements in Metal Plates for Boot and Shoe Heels.



3044 Morris' Improvements on Machines for Finishing Printed Sheets.



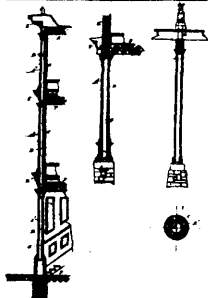
3045 Corris' Improvement on Carriage Hubs.



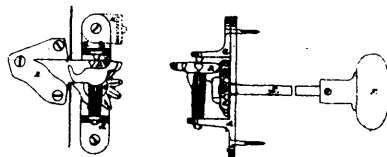
3046 Wolf's Improvement on Bedstead Fastenings.



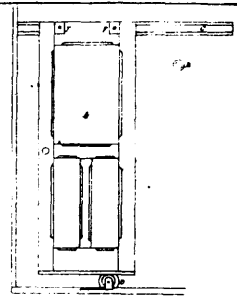
3047 Huerne's Improvements on a Water Filter.



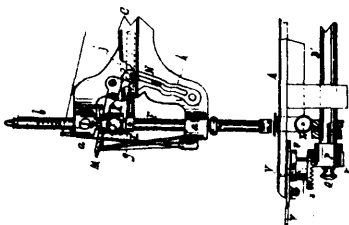
3048 Bruce's Improvements in the construction of Buildings.



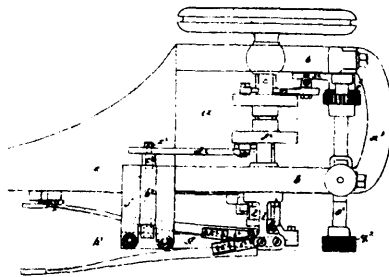
3049 Howell's Improvements on outside Shutter Hinges.



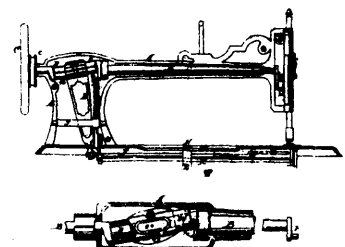
3050 Clement dit Lariviere's Improvements on Waggon door Iron Work.



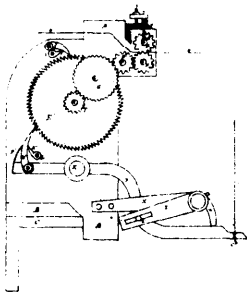
3051 Goods' Improvements on Sewing Machines.



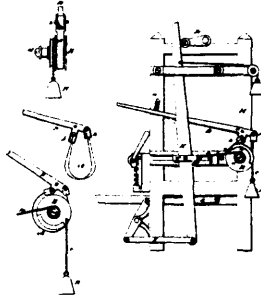
3053 Richardson's Improvements on Machine for Sewing Hose.



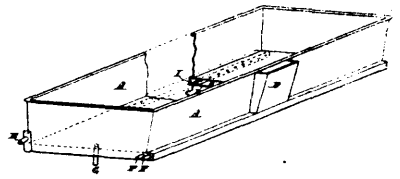
3054 Baker, Stone & Vermilya's Improvements on Sewing Machines.



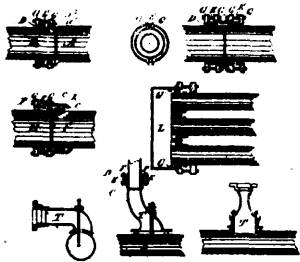
3056 Goulloud's Improvements on Machines for Weaving Corsets, Gaiters, &c.



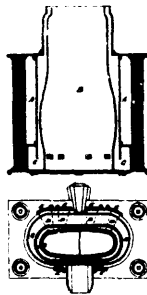
3056 Martin & King's Brick Machine.



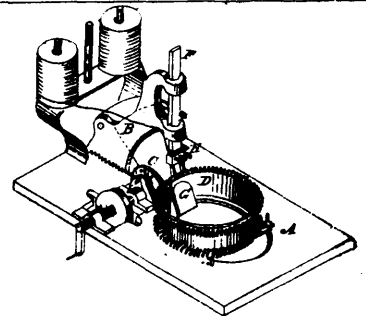
3057 Randall & Braley's Milk Vat.



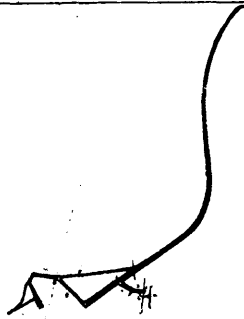
3058 Messenger's Improvements on the Coupling of Pipes and in the Fittings thereof.



3059 Marsbank's Improvements in a Cupola Furnace for Melting Iron.



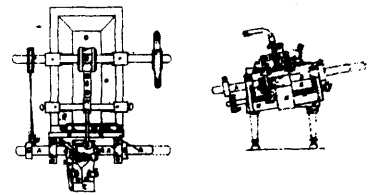
3060 Armour's Improvements in Knitting Machines.



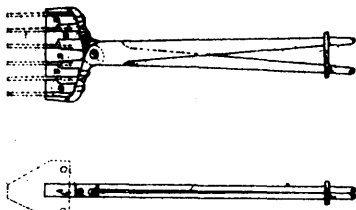
3061 Goddard's Improvements on the Ithaca Wheel Rake.



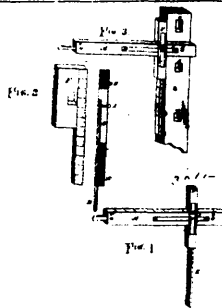
3062 Brown's Improvement on Mucilage Bottles.



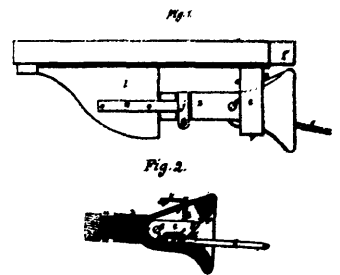
3063 Collinson's Machine for Cutting Sickles.



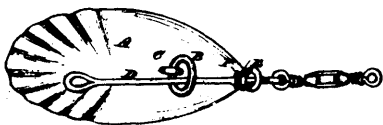
3064 Collinson's Improvement on Tongs used in Machinery.



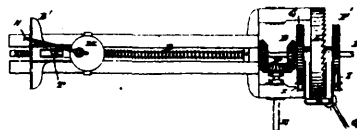
3065 Sahn's Combined Square and Gauge for Carpenter's Use.



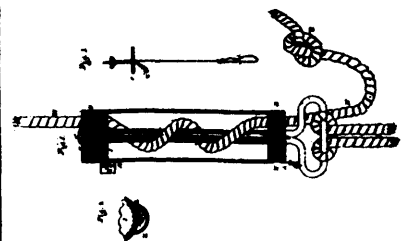
3066 Todd's Improvements on Car-Couplings.



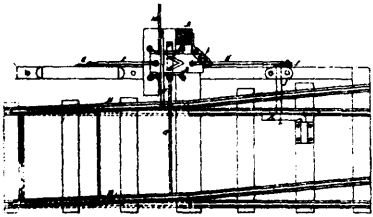
3067 Skinner's Improvements on Spoon Baits for Fishing.



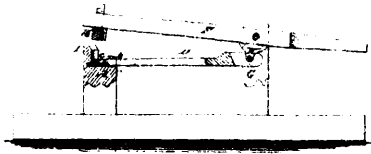
3068 Gowan's Improvements on Saw Mills.



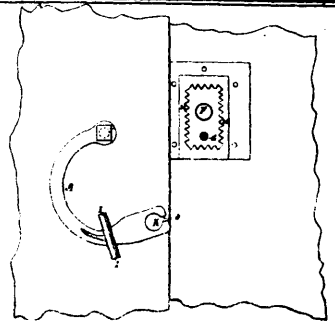
3069 De Boucherville's Fire-escape.



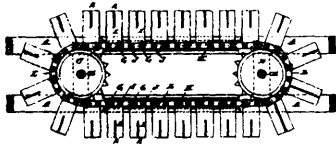
3070 Green's Improvements in Railway Switches.



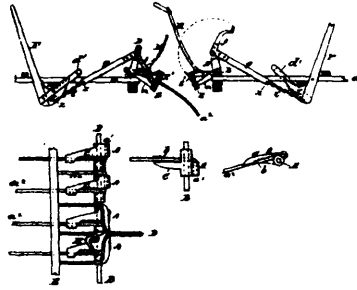
3071 Hamilton's Machine for Making Ox Shoes.



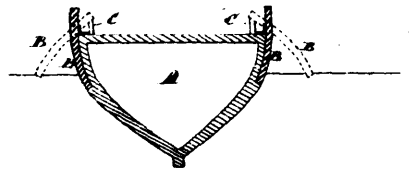
3072 Casement's Improvements on Seal Locks.



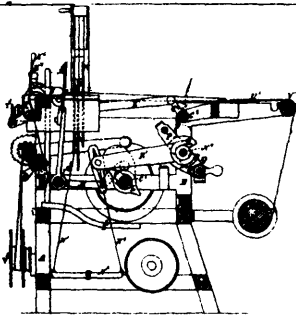
3073 Wilson's Improvements on Paddle Wheels.



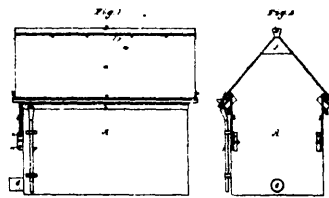
3074 Amos' Improvements on Horse Hay Rakes.



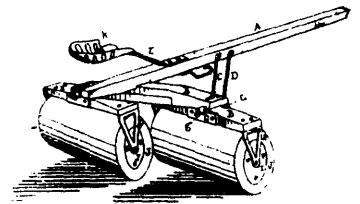
3075 McPhail's Armour for War Ships.



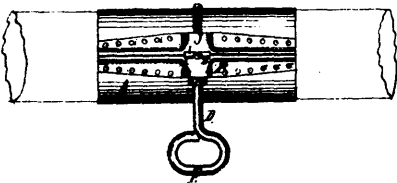
3076 Chapman's Tape Weaving Loom.



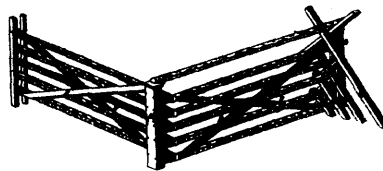
3077 McAllister's Improvements for Protecting Buildings from Fire.



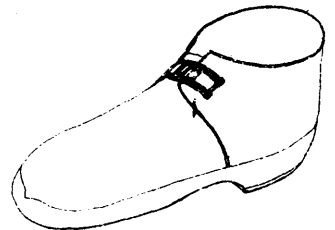
3078 Woolridge's Improvements on Land Rollers.



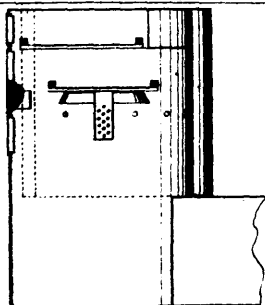
3079 Davol's Fire Hose Leak Stopper.



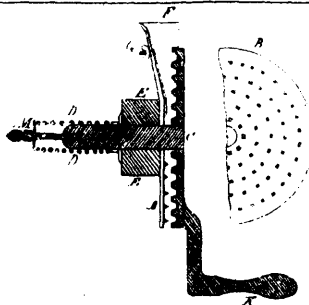
3081 Hudgin's Construction of Gate Posts.



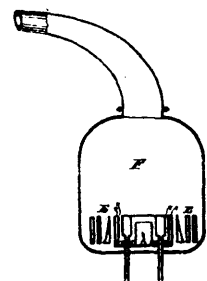
3082 Bock's Improvements on Shoe Fasteners.



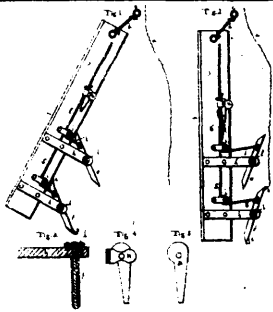
3083 Rogers' Furnace for Manufacturing Lamp Black.



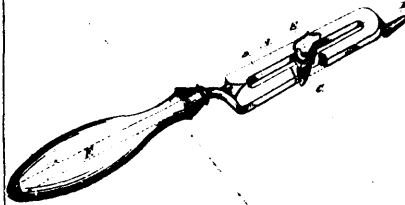
3084 Holt's Corn Sheller.



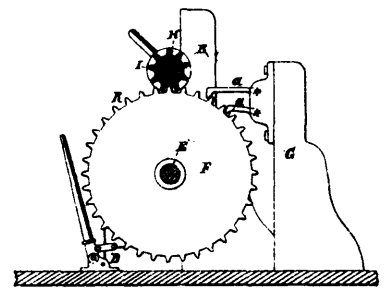
3085 Foley's Machine and Process for Making Bark Extract for Tanning and other Purposes.



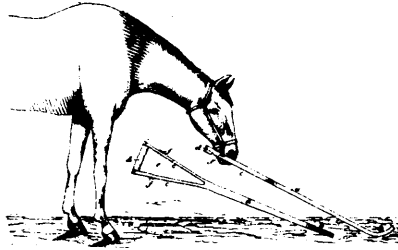
3086 Pond's Improvements on Booms.



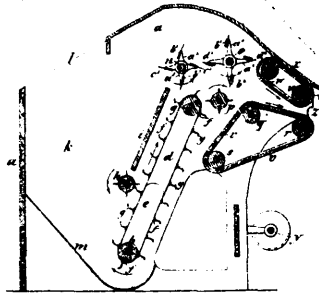
3087 Richards' Machine for Opening Metallic Cans.



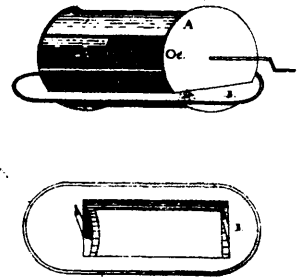
3088 Manton's Improvements on Ships' Windlasses.



3089 Robinson's Improvements on Horse and Cattle Yokes.



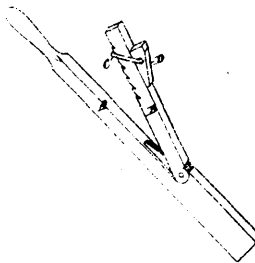
3090 Harwood's Improvements on First Breaker Feeder for Carding Machinery.



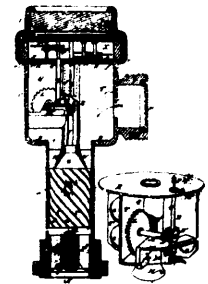
3091 Haddy's Improvement on Coffee Roasters.



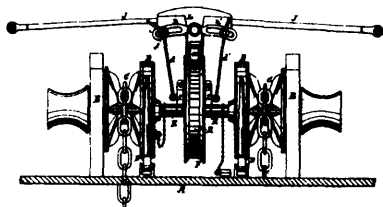
3092 Thompson's Improvement on Shirt Bosoms.



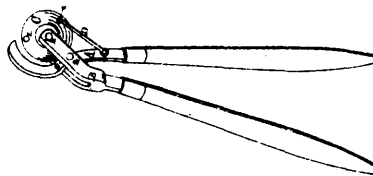
3093 Giles' Improvements on Carriage Jacks.



3094 Read's Improvements on Water Meters.



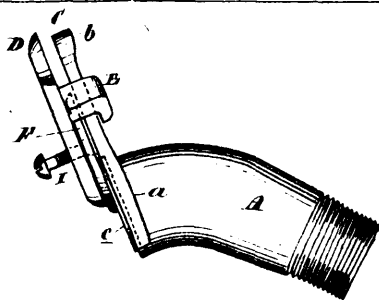
3095 Manton, Remington & Thayer's Improvements on Ships' Windlasses.



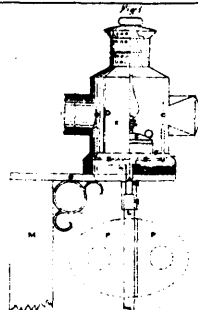
3096 Hills, Mills & Lockwood's Improvements on Pruning Shears.



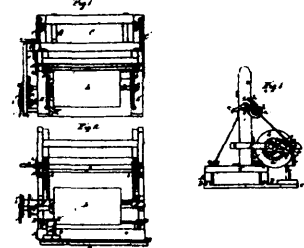
3099 Lunt's Improvements on Filters.



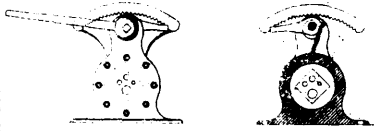
3099 Smart's Improvements on Oil Gates.



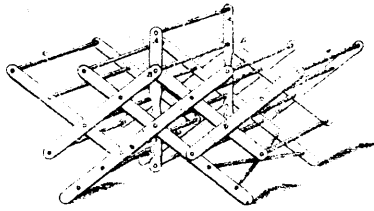
3100 Hannaford's Improvements on a Signal Lamp.



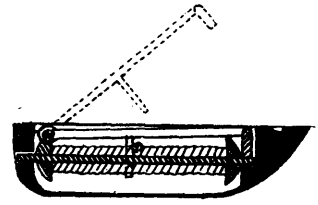
3101 Holmes' Improvement on Clapboard Machines.



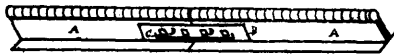
3103 Stevens' Improvements on Shears for Cutting Bars of Iron.



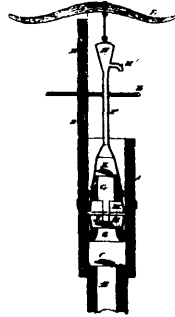
3105 Wilson's Improvements on Clothes Racks.



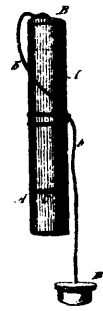
3106 Young's Improvements on Sewing Machine Shuttles.



3107 Culham's Improvements on Nut Fasteners of Railway Rails.



3108 Munsinger's Improvements on Pumps.



3109 Cutler's Improvements in Portable Inhaling Tubes.



Fig. 2.

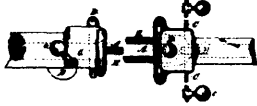
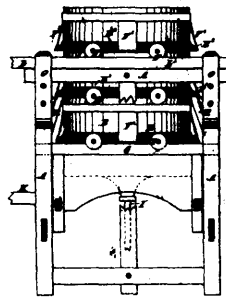
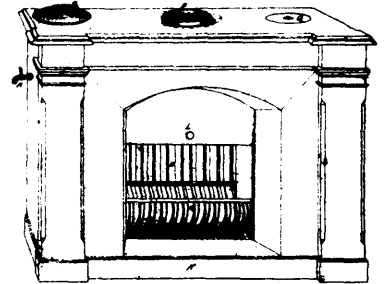


Fig. 3. Fig. 4.

3110 Tait's Improvements in Car-Couplings.



3111 McKenzie's Improvements on Leaching Apparatus.



3112 Halon's Portable Range.

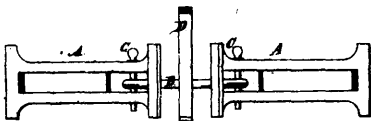


Fig. 1.

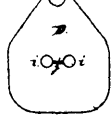
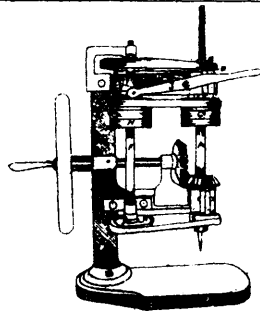
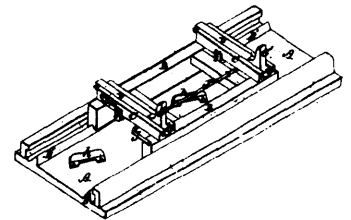


Fig. 2.

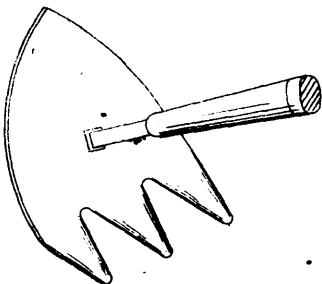
3113 Anderson's Improvements on Couplings for Railway Cars.



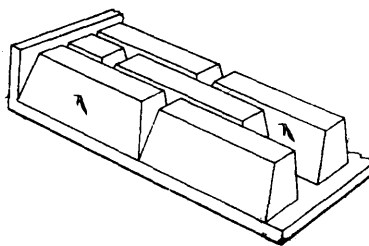
3114 Tufford's Machine for Drilling Iron or Steel.



3115 Getty, Mendenhall & Barton's Head Block for Saw-Mills.



3116 Barnes' Improvements on Hoes.



3117 Defoe's Improvements on Wood Pavements.

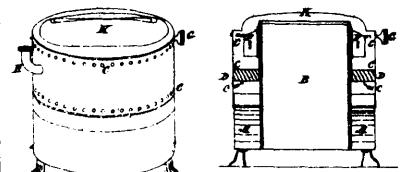


Fig. 3.

Fig. 4.

3118 Tredale's Improvements on Coal Oil Stoves and Lamps.