

Technical and Bibliographic Notes / Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

Coloured covers/
Couverture de couleur

Coloured pages/
Pages de couleur

Covers damaged/
Couverture endommagée

Pages damaged/
Pages endommagées

Covers restored and/or laminated/
Couverture restaurée et/ou pelliculée

Pages restored and/or laminated/
Pages restaurées et/ou pelliculées

Cover title missing/
Le titre de couverture manque

Pages discoloured, stained or foxed/
Pages décolorées, tachetées ou piquées

Coloured maps/
Cartes géographiques en couleur

Pages detached/
Pages détachées

Coloured ink (i.e. other than blue or black)/
Encre de couleur (i.e. autre que bleue ou noire)

Showthrough/
Transparence

Coloured plates and/or illustrations/
Planches et/ou illustrations en couleur

Quality of print varies/
Qualité inégale de l'impression

Bound with other material/
Relié avec d'autres documents

Continuous pagination/
Pagination continue

Tight binding may cause shadows or distortion along interior margin/
La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure

Includes index(es)/
Comprend un (des) index

Title on header taken from:
Le titre de l'en-tête provient:

Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/
Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées.

Title page of issue/
Page de titre de la livraison

Caption of issue/
Titre de départ de la livraison

Masthead/
Général (périodiques) de la livraison

Additional comments:
Commentaires supplémentaires:

This item is filmed at the reduction ratio checked below/
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	14X	18X	22X	26X	30X
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
12X	16X	20X	24X	28X	32X

The Canadian Patent Office

RECORD

Vol. II.—No. 5.

AUGUST, 1874.

Price in Canada \$1.50 per An
United States - \$2.00

CONTENTS.

INVENTIONS PATENTED,	71
INDEX OF INVENTIONS,	81
INDEX OF PATENTERS,	81
ILLUSTRATIONS,	83

INVENTIONS PATENTED.

No. 3681. GEORGE B. CORNELL, Chicago, Ill., U. S., 20th July, 1874 for 5 years: "Improvements on Wrenches for Inserting Bung Bushes." (Perfectionnements aux clés à ajuster les des des bondes.)

Claim.—The shank or handle A, and core B, provided with the base C, having a series of irregular surfaces adapted to bear against corresponding sections E, whereby the separate sections are adjusted outward uniformly from the centre and against all parts of the bush.

No. 3682. CHARLES C JÉRÔME, Chicago, Ill., U. S., 20th July, 1874, for 5 years: "Moth Proof Fur Cases." (Boîtes à fourrures à l'épreuve des mites.)

Claim.—The cover F, having a circular groove g, and lugs G, G, cut and attached on its inside face as described, in combination with the rings a, and c, and partings D, and inclines E, arranged and combined as specified.

No. 3683. REUBEN P. COLTON, Gananoque, Ont., 20th July, 1874, for 5 years: "Improvements on Harrows and Cultivators." (Perfectionnements aux herbes et aux cultivateurs.)

Claim.—1st The rails a, constructed as shown in figs 1 and 4, and having diamond shaped socket g, formed as described, and tooth h, of the configuration shown, all combined and working together as set forth; 2nd. The socket g, having flat surfaces k, as shown in fig. 5; 3rd. The rail a, having the cross-section shown in fig. 4, with grain of iron as shown.

No. 3684. JAMES M. FOSS, St. Albans, Vt., U. S., 20th July, 1874, for 5 years: "Improvements on Railway Locomotives." (Perfectionnements aux locomotives de railroutes.)

Claim.—1st. The combination of the pipe g, with the pipe h, constructed arranged and operated as described; 2nd The combination of chimney d, pipes g, and h, plate c, and exhaust d', all working together as set forth; 3rd. The combination of the pipes g, and h, shafts k, and l, arms m, cranks o, and p, and rods q, all working together as set forth.

No. 3685. THOMAS FORD, Plattsville, Ont., 20th July, 1874, for 5 years: "Machine for Cutting the Tapering Plug end of Well Tube Joints." (Machine à tailler cône les joints des tuyaux de puits.)

Claim.—The body A, cylinder B, cutter frames D, D, having knives E, bars G, and screw-arm I, and clamp-screws H, when all the parts are constructed and arranged as specified.

No. 3686. JOHN D. RICHARDSON, Houston, Texas, U. S., 20th July, 1874, for 5 years: "Improvements on Springs." (Perfectionnements aux ressorts.)

Claim.—A metallic spring composed of flexible bars A, connected together at the ends and so constructed with reference to their connection with the load to be supported that when in operation the leaves may be under tensile strain in the manner specified.

No. 3687. JOHN RUTHVEN, Lévis, Que., 20th July, 1874, for 5 years: "Gas Machine." (Machine à gaz.)

Claim.—1st. The combination with the carburetter A, having evaporating chambers A', A', A', formed therein of a secondary carburetter H, having evaporating chambers H', H', H', and H', and connected with A, by one or more pipes V; 2nd. In combination with the carburetter A, and secondary carburetter H, each provided with evaporating chambers, the gas chamber I, and drying chamber P; 3rd The supply pipe S, and branch pipe T, (each with stop-cock) serving to admit the hydrocarbon fluid either into the main carburetter A, or the secondary carburetter H; 4th. In combination with the evaporating chamber H', H', H', and H', of the secondary carburetter H, draw off pipes U, U', V', and U', provided with stop-cocks and respectively connecting with the evaporating chambers with the pipe S, 5th. In combination with any carburetter the chamber D, placed between the air pump and the carburetter and provided with means for heating the air passing through it; 6th. The wicking or other analogous substance K, arranged in the evaporating chambers A', A', A', and H', H', H', and H'.

No. 3688. ORVILLE K. WOOD, Westchazy, N. Y., U. S., 20th July, 1874, (Extension of Patent No. 2524.) for 5 years: "Machine for Cleaning, Separating and Grading Grains, &c." (Machine à nettoyer, séparer et assortir les grains, &c.)

Claim.—1st. The combination of the smooth and cog rollers a, a, and c, in combination with plato X, rollers a, a, and c; 2nd The dowells B, B, in combination with the feeder J, and moveable i, into a, o; 3rd. The shoe D, D; 4th The rod r, the guides q, q, and R, R, the plates S, S, and T, T; 5th The blank board f, f; 6th. The lock pins h, h, 7th. The method of confining the wind blast; 8th. The fluted irons x, x, and W, W, and the cog roller B; 9th. The fanning mill or separator, constructed, combined and arranged as described.

No. 3689. ORVILLE K. WOOD, Westchazy, N. Y., U. S., 21st July, 1874, (Extension of Patent No. 2524.) for 5 years: "Machine for Cleaning, Separating and Grading Grains, &c." (Machine à nettoyer, séparer et assortir les grains, etc.)

No. 3690. WILLIAM E. WRIGHT, Rome, N. Y., U. S., 21st July, 1874, for 5 years: "Drying-house." (Sécherie.)

Claim.—1st. The combination of the case with recess and perforated lining with furnace A, in fig. 2, and smoke receiver B, hot air chamber C, adjustment of smoke pipe D, exhaust steam pipe I, suction and injector blower E, distributing chamber F, drying chamber G, wit wire cloth shelves or belts and glass cover, escape flue H, and blast pipe K, and L; 2nd. The distributing chamber F, provided with the openings h, and i, i, i, 3rd The case fig. 1, with recess and perforated lining and copper bottom and form of hexagonal outlet; 4th. The furnace A, as constructed to form a hot air

chamber A, in connection with steam boiler or otherwise; 5th. The smoke receiver B; 6th. The drying chamber with glass covering G, g, q, r, and shelves or bolts of wire cloth; 7th. The escape flue with registers, k, k, H; 8th. The iron pipe I, for super-heating steam; 9th. The blast pipes K, and L, for burning coal dust screenings and heating the case.

No. 3691. GEORGE DOANE and ROBERT L. HARRIS, Grosse Isle, Mich., U. S., 21st July, 1874, for 5 years: "Improvements on Hinges." (Perfectionnements aux pentures.)

Claim.—A yoke-shaped pintle B, formed from a single piece of metal, the lower part bent over to form an attaching brace D, and the upper portion likewise bent at or near right angles thereto, forming an additional arm or brace C, on the opposite side in combination with a strap or leaf A, having an eye piece o, as set forth.

No. 3692. CHARLES E. SEAL, Winchester, Va., U. S., 21st July, 1874 for 5 years: "Gas Cut off and Regulating Cock." (Robinet pour couper et régler le gaz.)

Claim.—1st. The combination of a valve having a complete automatic opening or closing movement, with a controlling mechanism whereby the said valve can be positively moved to and secured at any desired gauge; 2nd. The valve B, having stem b, valve chamber A, and connecting rod L, combined with the lever G, and ratchet and pawl mechanism I, H, h, as described.

No. 3693. JOHN K. MACAULAY, Kingston, Ont., (Assignee of C. H. Williams,) 25th July, 1874, for 5 years: "Brick-Machine." (Machine à brique.)

Claim.—1st. The flaring mouth rim B, fitting on the top of the cylinder A, and having a central hub or cap C, to form a covered bearing for the journal of the shaft D; 2nd. Constructing the wall of the cylinder A, with recesses E; 3rd. The combination and arrangement of the toggle levers for operating the plunger I, by the rod J; 4th. The application of the nuts J, and M, to the toggle lever H, and rod J, for regulating the throw and stroke of the plunger I; 5th. The arrangement and employment of the wheel N, having a peripheral cam groove R, receiving a projection on the rod J, for operating the toggle levers; 6th. The mould wheel S, constructed with a sunk annular face and having mortises to receive the moulds T, separately as set forth; 7th. The combination of the followers U, race bearing ring V, and quadrant W, constructed and operating as set forth; 8th. The arms X, keyed on the shaft D, and engaging with a drop roller or pin Y, on the under side of the mould wheel for operating the same intermittently; 9th. The pressing plungers I, provided with a series of inclined channels Z, distributed over the face, as set forth.

No. 3694. EDWARD M. DAVIES, Alleghany, and FRANCIS G. REBBECK, Pittsburgh, Penn., U. S., 31st July, 1874, for 15 years: "Curtain Fixture." (Ajutage de rideaux.)

Claim.—1st. The combination with the curtain roller cap A, having axle a, of the bracket B, the intermediate tension spring C, with suitable caps or washers and the binding check nut E, arranged and constructed as described.

No. 3695. PATRICK GRIFFIN, Cork, Ireland, 31st July, 1874, for 5 years: "Rectification of Spirits." (Rectification des spiritueux.)

Claim.—The purification of whiskey and other analogous spirit by submitting it in a divided state to the action of atmospheric air in the manner described.

No. 3696. DANIEL FORBES, Cambridge, Mass., U. S., (Assignee of H. Wells,) 31st July, 1874, for 5 years: "Needle Threader." (Enfileur d'aiguille.)

Claim.—1st. A hook to be used in threading needles which is made flat for a part or the whole of its length, the notch giving it the hook shape being cut out from the metal as described; 2nd. A hook for threading needles cut from a notched strip of flattened wire as specified.

No. 3697. NEWCOMBE E. WHEELER, London, Ont., (Assignee of C. D. Blinn) 31st July, 1874, for 5 years: "Window Blind." (Une jalousie.)

Claim.—The notch represented by the letter P, as set forth.

No. 3698. ABRAHAM LORRAIN, Bord-à-Plouffe, Quebec, 31st July, 1874, for 5 years: "Horse Power Wheel." (Roue de manège.)

Claim.—1st. Securing the peripheral transverse floor-boards F within the outer ring E; 2nd. The inner ring D bearing on the floor boards F supported by the outer ring E, said rings being secured to the radial arms C; 3rd. Providing the wheel with doors G at the sides thereof as set forth.

No. 3699. FRANCIS M. SNIVELY, Bellaire, Ohio, U. S., 31st July, 1874, for 5 years: "Trace Fastening." (Ajutage des traits.)

Claim.—The socket a for the end of the whistle-tree; having the two slots b c running at right angles to each other, in combination with the cross-head d as specified.

No. 3700. HENRY ING, Hamilton, Ont., 31st July, 1874, for 5 years: "Gas Regulator." (Regulateur à gaz.)

Claim.—1st. The arrangement and combination of the plate A, dial B drum P, pointer C, pulley Q, tube E, pulleys J, K cords H, H, lever L, on the tap of the gas pipe M, all operating to control and regulate gas to the meter O, and indicate the same as specified; 2nd. The arrangement of stopping the pulley Q by means of the stop T, on the said pulley and stop U, on the plate A, also the right and left holes a, b, in pulley Q, to receive wire cords H H, and prevent twisting of the same also the stops c, c, on said pulley as specified.

No. 3701. CHARLES H. WHITE, White's Station, Mich., U. S., 31st July, 1874, for 5 years: "Railroad Switch." (Aiguille de railroute.)

Claim.—1st. The described railway switch wherein the rails A, B, of the main line are stationary, and the shunting is effected by the movement of the internal guide-bars, as set forth; 2nd. The stringers U, C, secured to the track inside the rails A, B, provided with the grooves c for the reception of the frog-point e E E, and having the guide-bars D, D, pivoted thereto; 3rd. The stringers, C, each having a groove e, for the reception of a frog point E, as shown.

No. 3702. WILLIAM VAHEY, Forest, Ont., 31st July, 1874, for 5 years: "Machine for Blocking Horse Collars." (Machine à donner la forme à jour aux colliers de cheval.)

Claim.—1st. The two part blocks B, B, screw C and nut c, constructed and arranged on the table A as set forth; 2nd. The combination of the plate D, with the block B, for holding down the collar while under tension; 3rd. The combination with the table A, and blocks B, B, of the frame E, follower E, screw F, cords G, and ring f, as set forth.

No. 3703. WILLIAM MURPHY, Petitcodiac, N. B., 31st July, 1874, for 15 years: "Reversible Organ Blow Pedals." (Pédales d'orgues mobiles.)

Claim.—1st. The construction and use of "Reversible Pedals" the opposite faces being finished alike or covered with different material, as may be preferred, as described; 2nd. The use of supports C, spring catches D, and hinge screws E; 3rd. The strap fastenings H, cross-bars G, and lugs F, in combination with the above described pedals and their front fastenings for the purpose described.

No. 3704. GEORGE WEBSTER and JOHN F. WEBSTER, Hamilton, Ont., 31st July, 1874, for 5 years: "Improvements on Sewing-Machines" (Perfectionnements aux machines à coudre.)

Claim.—1st. The needle bar N, having an even uniform motion without stop or rest on its upward or downward movement produced by the driving shaft H, acting upon the eccentric A, connecting rod E, and needle bar arm I, in combination with a uniform motion of the shuttle forming a perfect double thread lock stitch; 2nd. The arrangement of an adjustable shuttle race composed of round wires l, l, placed in the slots P, P, and adjusted by the set screws b, b, b, b; 3rd. The arrangement of the pivoted lever I, provided with a ball and socket joint driving the shuttle carrier J, by a crank as shown in fig. 2, or its equivalent; 4th. A positive thread take up produced by the needle arm V, arm levers i, d, j, shanks and disc L, K, in combination with a regular or even motion needle bar.

No. 3705. JAMES DWYER and JOHN VAN B. CARTER, Detroit, Mich., U. S., 31st July, 1874, for 5 years: "Base Burning Heating Stove." (Poêle de chauffage à foyer de base.)

Claim.—1st. The combination of the back flue G, flue strips b, b, the curved partition, and its damper f, with the opening c, in the illuminating section D, and the segment strips g, g, in the base of the stove; 2nd. The arrangement of the segment flue-strips g, g, in the base A, with relation to the flues c c d in the back of the stove; 3rd. The combination of the horizontally vibrating and dump grate J, with the ring I supported by the braces k, k; 4th. The series of slots m, in the section c, each provided with a follower n or its equivalent; 5th. The combination of one or more flue strips in the base chamber, with one or more strips in a flue chamber G, at the back of the stove, as described.

No. 3706. WILLIAM CRAIG, (Assignee of Hiram C. Grover), Nunda, N. Y., U. S., 31st July, 1874, for 5 years: "Washing Machine." (Machine à laver.)

Claim—The fluted heads C, rounds D, and fluted balls G, all constructed and arranged for operation as set forth.

No. 3707. DAVID N. B. COFFIN, Jr., Newton, Mass., U. S., 31st July, 1874, for 5 years: "Improvements on Capstans and Windlasses." (Perfectionnements aux cabestans et vindas.)

Claim—1st. The combination with a single shaft, of two or more fast friction wheels, a corresponding number of correlative loose chain-wheels, and suitable means for locking the chain-wheels severally to their respective friction wheels or to the shaft; 2nd. The combination of the fast friction wheel *a*, loose bearing gear *f*, loose chain-wheel *g*, and lock bolts *h* or their equivalents operating in the manner described; 3rd. The bearing gear, friction-wheel and chain-wheel, as arranged with relation to one another when the flanges of the gear wheel and the chain-wheel are constructed as described, so as to form local openings or annular openings for a partial exposure of the lock-bolts *h* in the friction-wheel upon both sides thereof; 4th. The combination of two or more loose chain-wheels *g* and a corresponding number of independent riding pulw 17 acting upon the chain lugs 21; 5th. The independent riding pulw 17 constructed at its free end, as shown at *x, y*, to act upon the loose chain-wheel in the manner described; 6th. The combination of the friction wheel *a*, friction-strap *k*, and spring *z*; 7th. The gear wheel *g* upon the capstan shaft in combination with the shiftable gear-wheel 10, having a flange 14, and the clasp 13; 8th. The capstan-pawls having lateral lugs or their equivalents, formed upon them, in combination with the fixed catches upon the capstan-barrel, all as shown in Fig. 9; 9th. The spindle-barrel and head of the capstan, in combination with the inclined and inverted taper gears 13, 14, 15, gear carrier *m*, and lock-bolts *p* and *q* or their equivalents all arranged and operating as described; 10th. The inclined and inverted taper gears 13, 14, 15 and gear carrier *m*, in combination with the sliding lock-bolts *r*; 11th. The centre bearing constructed as described, whereby it is made to support the main shaft *b*, and at the same time hold the end of the capstan-shaft in position and prevent it from being carried upward by the action of the wheels into which its gear wheel meshes.

No. 3708. LUDWIG O. P. MEYER, Newtown, Ct., U. S., 31st July, 1874, for 5 years: "India Rubber Compound against which Safety Matches can be Ignited." (Composition de caoutchouc pour frotter les allumettes de sûreté.)

Claim—A compound of India Rubber, or allied gum, sulphur and gray sulphuret of antimony as described, forming a suitable surface on which to ignite safety matches.

No. 3709. DANIEL C. KELLAM, Pontiac, and ROBERT HAYES and ALBERT HAYES, Detroit, Mich., U. S., 31st July, 1874, for 5 years: "Improvements on Window Screen Frames." (Perfectionnements aux cadres des écrans de fenêtres.)

Claim—1st. In combination with the frames *a, a'*, the concealed springs B, B'; 2nd. In combination with the frames *a, a'*, the sockets D, D, situated on the side faces of said frames; 3rd. The frames *a, a'*, provided with extensions *c, c'*, on their ends, to which are attached concealed springs B, B', in combination with the sockets D, D, situated on the side faces of the frames *a, a'*, and flush with the upper and lower surfaces of the cross-bars of the frames.

No. 3710. BENJAMIN TAPPAN, Steubenville, Ohio, U. S., 31st July, 1874, for 15 years: "Miners' Lantern" (Lampe de mines.)

Claim—1st. A casing composed of a central section of mica, and an upper and a lower section of wire gauze or finely perforated metal, the said section entirely surrounding the upper part of the lamp, the wick or flame chamber, and the space above, and fitted in upon or over each other and held in position in manner set forth; 2nd. The mica portion of the casing E, having wire gauze sections D, D, fitted to its edges at top and bottom, and combined with the lamp A, Al, rods G, flange B, ring H, and hinged and lock cap I.

No. 3711. HENRY WHITESIDE, Jr., Ottawa, Ont., 31st July, 1874, for 5 years: "Spring Slat for Beds." (Tringle de ressorts de lits.)

Claim—The steel wire spring bent in the form as indicated in Figs. 1 and 2, in combination with the wooden slat as shown in Figs. 3 and 4, as set forth.

No. 3712. HENRY BEHNING and JUSTUS DIEHL, New York, U. S., 31st July, 1874, for 5 years: "Improvements in Piano-fortes." (Perfectionnements aux pianos-fortes.)

Claim—The elevated rest C, on a grapple B, as described.

No. 3713. EZRA S. WATERMAN, Hamilton, Ont., 31st July, 1874, for 5 years: "Improvements in Bed Bottoms." (Perfectionnements aux fouds de lits.)

Claim—1st. The slats *c*, of a bed bottom supported by strap steel springs E; 2nd. The construction and combination of the bevelled sills A, cross-pieces B, strips D, with the single and double springs E; 3rd. The arrangement of fastening the springs E, strips D, and slats C, with one bolt or rivet as specified.

No. 3714. WILLIAM F. REDDING, New York, U. S., 31st July, 1874, for 5 years: "Improvements on Metallic or other Boxes." (Perfectionnements aux boites métalliques ou autres.)

Claim—1st. The novel combination of the box B, cover C, handle H, rivets 1 and 2, all operating as set forth; 2nd. The handle H, secured to the cover C, and pivoted to the box B, for the purpose set forth.

No. 3715. WILLIAM MOREHOUSE, Buffalo, N. Y., U. S., 31st July, 1874, for 5 years: "Improvements on Ship Knees." (Perfectionnements aux courbes des navires.)

Claim—A ship knee consisting of the wrought angle iron A, strengthened by a corner brace *d*, as described.

No. 3716. WILLIAM B. HALL, Lancaster, Penn., U. S., 31st July, 1874, for 5 years: "Improvements in Cartridge Crasing for Breech Loading Fire Arms." (Perfectionnements dans le suage des cartouches de chargement par la culasse.)

Claim—The combination of a grooved roller or cylinder A, and crasing wheel B, on their respective arms *a*, and *b*, hinged together at C, operated and constructed in the manner set forth.

No. 3717. WILLIAM H. BECKETT, Chelmsford, Eng., 31st July, 1874, for 5 years: "Improvements in Valves." (Perfectionnements aux valves.)

Claim—The adaptation or combination of the parts *c₁, c₂, d*, and *e, e₁*, and *b'*, acting in the manner stated.

No. 3718. WILLIAM M. WATSON, Tonica, Ill., U. S., 31st July, 1874, for 5 years: "Nut Lock." (Noix de sûreté.)

Claim—1st. The method or process described of locking and unlatching nuts by bending the lip formed on the screw threads out of place, and restoring it again as specified; 2nd. The lip *e*, formed by bending the bolt thread; 3rd. The key A, made with one side flat and the other bevelled to correspond with the angle of the thread, as described.

No. 3719. CHESTER COMSTOCK, New Canaan, Ct., U. S., 31st July, 1874, for 5 years: "Combined Hot Air and Hot Water Furnace." (Calorifère mixte.)

Claim—1st. The hot water chamber F, provided with the pipes *f, f'*, and combined with the fire place E, shells B, A, and smoke pipes *g, g', g''*; 2nd. The combined hot air and hot water furnace, in combination with one or more hot air registers and radiators or coils placed in any room and affording to both their respective supplies of hot air and heated water or steam as described.

No. 3720. J. YGNACIO CASSIANO, San Antonio, Texas, U. S., 3rd August, 1874, for 5 years: "Improvements on Hats." (Perfectionnements dans les chapeaux.)

Claim—1st. The hat band B, made in sections, and each section provided with one or more U-shaped springs C; 2nd. The combination of an extension brim E, and extension devices for varying the extension with the permanent brim of a hat; 3rd. The folding extension arms G, mounted on sliding extension arms K; 4th. The combination of the elastic straps L, with the extension brim E, and the sliding extension arms K; 5th. The combination with a hat, of a brim or sun shade E, for extending beyond the permanent brim, also for folding back under it; 6th. The combination of the ring C, stationary arms D, adjustable arms G, and clips *g'*, with a hat and an extension brim E; 7th. The combination of the elastic cord F, with the extension brim and the clips *g'*; 8th. The combination of the hooks M, with the clips *g'*, elastic cord and the extension brim as specified.

No. 3721. PHINEAS F. KING, GEORGE N. BEARD, ELEAZAR J. BEARD and JAMES ASHWORTH, St. Louis, Mo., U. S., 3rd August, 1874, for 5 years: "Nut Lock." (Noix de sûreté.)

Claim—1st. The bolt provided with two nuts, and composed of two sections constructed so as to draw in opposite directions with each other; 2nd. The combination of sections *a, b*, having heads *c, d*, screw threaded portions *g*, and reduced shank *h*, and provided with nuts *e, f*.

No. 3722. GEORGE P. DRAPER, Rochester, N. Y., U. S., 3rd August, 1874, for 10 years: "Improvements on Sewing Machine Tables." (Perfectionnements aux tables des machines à coudre.)

Claim.—1st. A supplementary or detachable cover having side flanges or rabots for embracing the edges of the top of a sewing machine table, in combination with such top having a recess for the passage of a sewing machine and a closed case placed below such opening for receiving the sewing machine, as described; 2nd. In combination with the table top of a sewing machine having an opening therein, a double jointed hinge or hinges for connecting the bed plate or base of a sewing machine with such table-top, whereby the machine is adapted to be raised above or to be lowered below the said top as described; 3rd. In combination with a recessed sewing machine table-top, the bed plate or base of a sewing machine connected therewith by a hinge or joint, the members of which are moveable longitudinally with respect to their axes as described; 4th. In combination with the recessed table top and base or bed of a sewing machine, a double jointed reversible hinge or hinges, constructed to slide upon or with their axes for the purpose of moving the base or bed plate longitudinally with respect to the opening in the table-top as described; 5th. In combination with a longitudinal inmovable hinged or pivoted bed or base of a sewing machine and a recessed table-top, a plate or cover L, for staying the bed or base and for filling the space in the top after the machine is placed in position for use as described; 6th. In combination with a recessed sewing machine table, having a hinged sewing machine connected therewith, a closed case or pocket, having an elevated bridge or extension tray K, as specified; 7th. The base or bed of a sewing machine having a swinging and a sliding motion on its axis, in combination with a recessed sewing machine table, and a case or pocket below such opening as described; 8th. The base or bed of a sewing machine provided with a projection or flange on its under surface for guiding said base or bed over or along the recess, and clamping the same therein for use as described; 9th. A supplementary or detachable sliding cover, in combination with the bed plate or base of a sewing machine, having a swinging and a longitudinal movement on its axis as described.

No. 3723. LA FAYETTE DRAPER, North Attleborough, Mass., U. S., 3rd August, 1874 for 5 years: "Improvement on Curry-combs." (Perfectionnement des étrilles.)

Claim.—A curry-comb having one or more of its rows of teeth inclined in one way nearly into parallelism with the base plate, and the others in the opposite direction in such manner with respect to the base plate, as specified.

No. 3724. CORNELIUS CALLAHAN and EDWIN E. SIBLEY, Chelsea, Mass., U. S., 3rd August, 1874, for 5 years: "Knitting Machine." (Machine à tricoter.)

Claim.—1st. A needle for knitting machines having an angular or bent portion 22, below the pivot of the latch, and, in that part of the needle which traverses the loop, whereby the needles may be brought into and out of line without stretching the loops; 2nd. In combination with a series of needles constructed as described, the needle cylinder C, having alternate straight and cut under grooves, for their reception; 3rd. The ring L, provided with pawls and drop rods for operating the shipper by which the driving pulley is thrown into and out of action; 4th. The ring L, connected with the shipper and provided with a series of pawls engaging with a rotating ratchet wheel connected with or forming a part of the needle cylinder in combination with the rods *f*, by which the pawls are operated on the breakage of a thread; 5th. In combination with the ring L, for actuating the shipper, the relieving stop Q, operating in the manner set forth; 6th. The drop rods *f*, supported by the threads and passing directly down through openings *g*, in combination with the pawls and ratchet to operate the stop mechanism; 7th. The drop rods *f*, with their hooks 30, in combination with the slotted thread guides *a*, *b*, all constructed as described; 8th. The pawls 31, provided with arms *h*, sliding through eyes at the lower ends of the drop-rods *f*; 9th. The independent pawls 31, each connected with a separate drop-rod, and pivoted on studs projecting from the ring L, in combination with the ratchet wheel M, operating as described; 10th. The adjustable drawing rolls T, U, attached to a frame revolving with the needle cylinder actuated thereby in combination with a support *h*, for the spreader placed above the rolls; 11th. A wheel foot, or cam B₂, adjusted on the work inside of the circular row of needles for the purpose of holding down the work while the needles are passing up through the loops.

No. 3725. ROBERT C. CUFF, Hamilton, Ont., 3rd August, 1874, for 5 years: "Machine for mincing meat." (Hache-viande.)

Claim.—The combination of the worm wheel and pinion for giving motion to the block, the arrangement of the knives and the support for the block for the purpose set forth.

No. 3726. ALEXANDER H. WAGNER, Windsor, Ont., 3rd August, 1874, for 5 years: "Improvements on pitchers." (Perfectionnements aux pots.)

Claim.—1st. The under or lower lip B, acting in combination with a vertical lip A, upon a vessel suitable for containing thick or cohesive liquids and channel D as described; 2nd. The lips A and B, acting in combination and with channel D between them when placed at any angle with each other or with the vessel or any parts thereof so that they effectuate the purpose set forth,

No. 3727. ARTHUR HARVEY, Toronto, Ont., 3rd August, 1874, for 5 years. "Mode of Applying for Insurances, Writing or Printing and issuing Policies therefor." (Système de demande d'assurance, de grossoyage ou impression et d'émission des polices.)

Claim.—1st. The system of preparing a form of application in duplicate; 2nd. The embodiment therein of all the terms of the insuring corporation or persons; 3rd. The system of attaching one form of application to the Policy; 4th. The form of Policy which by the above system is much simplified and may consist of the mere acceptance by insurer of the proposed contract without other conditions or stipulations; 5th. The system or mode described of applying for and effecting insurance and issuing policies of insurance as set forth.

No. 3728. JAMES W. CUTHBERTSON, Brantford, Ont., 3rd August, 1874, for 5 years. "Window Screen." (Ecran de fenêtre.)

Claim.—The slotted outside moveable frame pieces B, provided with points c, fastened by screws a, to and in combination with the frame A, of a screen as specified.

No. 3729. WILLIAM J. BURLEIGH, Rome, N. Y., U. S., 3rd August 1874, for 5 years. "Manufacture of Starch Polish." (Préparation d'un cirage à linge.)

Claim.—The starch polish compound of white wax, spermaceti, castor oil, mutton tallow, borax, salt, gum arabic and isinglass, as specified.

No. 3730. THOMAS YOUNG, Montreal, Q.ue., 3rd August, 1874, for 5 years. "A Cooking Stove." (Un poele de cuisine.)

Claim.—1st. The combination of the semi-elevated oven G, and flues *d*, *d*₁, *d*₂, *d*₃, with the fire pot F, and damper i, as described; 2nd. The combination of the semi-elevated oven G and hot closet H, with the flues *d*, *d*₁, *d*₂, *d*₃, damper i, and fire pot F, all arranged as set forth.

No. 3731. JAMES E. CISCO, Conneautville, Pa., U. S., 3rd August, 1874, for 5 years. "Car-Coupling." (Attelage de wagon.)

Claim.—1st. The combination of the coiled spring *b*, rubber block c, and piston *d*, having a rod e, with the draw head A, and operating as set forth; 2nd. The notched bar J, in combination with the link L, having a projecting lip at each end as shown and described for the purpose specified; 3rd. The rubber cushion or facing P, applied to the mouth of the draw head, for the purpose set forth.

No. 3732. ABNER A. GRIFFING, Jersey City, N. J., U. S., 3rd August, 1874, for 5 years. "Steam radiator." (Radiateur de vapeur.)

Claim.—The U pipe *d*, *e*, *f*, with its legs terminating in a disc or plug c, which closes an opening in a steam chest for the purpose of providing each leg of the pipe with a direct and independent connection with the steam chest, as described.

No. 3733. WALDEMAR PHILMANY, Cleveland, Ohio, U. S., 3rd August, 1874, for 5 years: "Process of Treating Textile Fabrics to Prevent Mildew and Decay." (Procédés de traitement les matières ligneuses pour empêcher la rouille et la carie.)

Claim.—1st. The process of treating woody fibre in any of its forms, textile fabrics or their raw material with the sulphate of copper and chloride of barium or their equivalents in the manner set forth and for the purpose of arresting mildew and decay; 2nd. A new article of manufacture of textile fabrics having combined therewith sulphate of copper, chloride of barium and their combination so as to form a union of said salts with the fabric for the purpose set forth; 3rd. The combination of the sulphate of copper and chloride of barium or their equivalents with woody fibre in any of its forms for the purpose of arresting rot and decay as set forth.

No. 3734. STEPHENS C. HENDRICKSON, Brooklyn, N. Y., U. S., 3rd August, 1874, for 5 years: "Electric Railway Signals." (Signal électrique de railroute.)

Claim.—1st. The combination of a moveable signal disc of two colours with suitable controlling mechanism, actuated by

electro-magnetism, when said mechanism is so arranged that a signal of either colour may be displayed when the circuit of the controlling electro-magnet is closed, while the breaking or interruption of said circuit will cause an intermediate or parti-coloured signal to be displayed as specified: 2nd The movable signal disc D, and shaft D', in combination with the arms n, n', n'', n''', n'', n''', n''', n''', electro-magnet M, and lever m, provided with suitable detents, for the purpose specified: 3rd The ratchet wheel K, and pawl k, in combination with the shaft D, and signal disc D, as specified: 4th The combination of the rollers upon the arms n, n', n'', with the detent lever m, as specified: 5th The arrangement of the insulated sections T, and T', of a railway track each forming a portion of an electric circuit, in such a manner that a section of said track of suitable length which does not form a portion of the said circuit shall intervene between them for the purpose specified: 6th The four insulated sections or rails of a railway track T, T', T'', T''', in combination with the battery B, and electro-magnet R, as specified: 7th A primary circuit which is arranged to be closed by a locomotive or train, and a relay included in such circuit in combination with a normally closed secondary electric circuit controlled by such relay, which circuit includes one or more signal operating electro-magnets as specified.

No. 3735. PATRICK S. DEVLAN, Jersey City, N. Y., U. S., 3rd August, 1874, for 5 years: "Process of Treating Sponge." (Procédé des traitements des éponges.)

Claim.—1st. Prepared sponge for upholstering purposes treated as described: 2nd Process of treating sponge by first cutting it into small pieces, then treating it with a suitable bleaching agent, and finally with a solution of borax and glycerine, or its equivalent, as set forth: 3rd A packing for rail-road journal boxes, axles or other machinery, made from an elastic sponge treated as described, with or without a fibrous material as set forth: 4th A packing for journal boxes composed of a sponge and a mineral substance, such as asbestos, stœatite, or graphite, mixed together about in the proportion set forth: 5th A packing for journal boxes, composed of sponge, hair or other fibrous material, and a mineral substance, such as asbestos, stœatite or graphite mixed together about in the proportion specified: 6th A packing for journal boxes composed of sponge saturated with a solution of nouchouc or equivalent gum and mixed with a mineral substance such as asbestos, stœatite or graphite as specified.

No. 3736. HENRY BOLTON, Elizabethtown, Ont., 3rd August, 1874, for 5 years: "Washing Machine." (Machine à laver.)

Claim.—The frame C, in combination with the rubber B, and tube A, as set forth.

No. 3737. CYRUS KINNEY, Dereham, Ont., 3rd August, 1874, for 5 years: "Sash Holder and Fastener." (Arrête-croisée.)

Claim.—The holder A, in combination with the catches E, and F for the purpose set forth.

No. 3738. HENRY WOODWARD and MATHEW EVANS, Toronto, Ont., 3rd August, 1874, for 5 years: "Electric Light." (Lumière électrique.)

Claim.—The placing of carbons B, in lamps or other suitable vessels A, filled with rarified gas possessing the property of not chemically combining with the carbon when in a state of incandescence in connection with the arrangement of the electrodes E, E, fixing or connecting the carbon B, as set forth.

No. 3739. WALLACE LOCKWOOD, Ekfrid, Ont., 3rd August, 1874, for 5 years: "Rising Platform and Hoisting Machine." (Elevateur.)

Claim.—1st. A frame constructed of four upright standards A, and eight slanting supports B, braced together by the tie rods and nuts B', in combination with a rising platform constructed for the purpose set forth: 2nd The rising platform C, and chains D, in combination with the lever E, cross-head F, and iron bow H, for the purpose set forth: 3rd The drum I, in combination with the crank shaft K, and small wheel M, for the purpose set forth.

No. 3740. SAMUEL H. DAVIS, and DAVID W. DAVIS, Detroit, Mich., U. S., 3rd August, 1874; (Extension of Patent No. 252 N. B.) "Freezing and Preserving Apparatus for Meat, Fish, &c." (Appareil de congélation et de conservation de la viande, du poisson, etc.)

Claim.—The preserving chamber room or box, as a whole, when constructed with the walls A, posts B, space P, filled with a bad conducting material, partition C, posts D, chamber H, metallic lining E, and cover G, opening a, and hatches b, arranged relative each other and to operate as set forth: also the freezing pan when constructed and employed in the manner described.

No. 3741. BYRON SLOPER, New York, U. S., 4th August, 1874, for 5 years: "Improvements in Gas Machine." (Perfectionnements aux machines à gaz.)

Claim.—1st. The combination with a hydrogen gas generator A, of a combustor G, containing a hygeical diaphragm H, as described: 2nd The arrangement of a hydrogen gas generator A, of the frame or diaphragm C, dividing A, into upper and lower reservoirs A', and A'', in combination with pipe E, and cock F, as described: 3rd In combination with the generator A, and carburetor G, the compression cock I, in the connecting pipe I, for regulating the pressure of gas as described: 4th In combination with the generator A, and carburetor G, the surplus reservoir P, connected with the generator A, by pipe Q, as described: 5th The use of small hump intermingled with raw cotton as a packing for gas carburetors.

No. 3742. DAVID S. CORNELL, Warwick, Ont., 13th August, 1874, (Extension of Patent No. 64.) for 5 years: "Improvements on Gate Hanging." (Perfectionnements aux pentures de barrières.)

Claim.—The gate hanging as shown, viz the rod a, the eyes b, b, and c, c, the cap e, the rod f, the post d, bevelled on the front side, and the scantling k, in the gate bevelled on the backside.

No. 3743. JOSIAH B. BROWN, Philadelphia, Pa., U. S., (A signee of R. N. Wetherill,) 13th August, 1874, for 5 years: "Portable Burglar Alarm." (Alarme de volent portatif.)

Claim.—In combination with suitable alarm mechanism, the triangular or wedge shaped box A, having yielding bottom A', whereby it is adapted to be operated in the manner specified.

No. 3744. DENNIS C. GRANT, Houghton, Mich., U. S., 13th August, 1874, for 5 years: "Ice-Plough and Ram Attachment for Vessels." (Ajustage des brise-glace et béliers de vaisseaux.)

Claim.—1st. The detachable and adjustable ice-plough attachment consisting of an inclined plow with bifurcated rear part applied to the vessel by means of cable a, and crank screw bolts c: 2nd The plough ram B, having recess D, in combination with adjustable grooved cam D, and the ratchet on stem-post for producing any suitable inclination of the plough or ram attachment: 3rd The improved plough or ram composed of solid front part or prow with recess C, at outer most point for chamo or torpedo, and bifurcated rear extending part, fitting the stem of the vessel.

No. 3745. DANIEL E. COOKE, Brantford, Ont., 13th August, 1874, for 5 years: "Refrigerator for Preserving Meat, &c." (Refrigérant pour conserver la viande, etc.)

Claim.—1st. The application truss E, having the upper and lower edges F, rued and soldered to bars A, and stays C, substantially as set forth: 2nd. The application of stays C, attached to bars A, by truss E, and soldered at D, as set forth.

No. 3746. H. VAN DE WATER, Phelps., N. Y., U. S., 13th August, 1874, for 5 years: "Turbine Water Wheel." (Turbine hydraulique.)

Claim.—1st. The gate P, closing upward, arranged between the guides B, and buckets C, and so constructed and applied in relation to grooves of the water wheel casing, that said grooves are entered and tight joint formed at top and bottom of the gate when the gate is shut, as described: 2rd. The ring b, with its bottom surface forming regular or uninterrupted inclined continuations of the curved portions of the buckets of the hub, thus forming smooth flaring or funnel shaped sluice-ways for the inflowing water as set forth: 3rd. The crowning or arched cap E, in combination with the inclined or flaring ring b, the same being applied as described and shown, whereby the ring is made to serve as an abutment for the cap E, as described: 4th. The cutting device v, applied to the bucket so as to precede it in its path of motion and cut away any obstruction between it and the casing as described.

No. 3747. WILLIAM MILLER, Boston, Mass., U. S., 13th August, 1874, for 5 years: "Method for Equalizing or Distributing Pressure." (Méthode d'équilibrer ou distribuer la pression.)

Claim.—The levers I, J, K, L, rods D, E, and levers C, F, G, H, combined to operate with the platform A, spring B, and bed-piece A', as specified.

No. 3748. GEORGE W. MILNER, Charlottetown, P. E. I., 13th August, 1874, for 5 years: "Improvements on Pipe-Vices." (Perfectionnements aux mordaches à tuyaux.)

Claim.—1st. The combination of the leg C, having bifurcated jaws D, and leg B, having jaws D', arranged intermediately in the jaws D, and provided with a series of holes r', to receive an interchangeable fulcrum pin E, as set forth: 2nd. The application of the screw H, fitted to the end of the leg C, and passing through an elongated hole in the leg B', for closing the legs together by the hand nut I, as set forth.

No. 3749. AUGUSTIN S. TRUDEL, St. Antoine de Tilly, Que., 13th August, 1874, for 5 years: "Mode of Propelling Barges." (Système de propulsion des bateaux).

Résumé.—1mo. Les coques cylindriques F. F.; 2mo. Les quilles en spirales telles que décrites.

Claim.—1st. The cylindrical hulls F. F., 2nd. The spirally formed keels as described.

No. 3750. CHARLES BUCHNER, Tilsonburg Ont., 13th August, 1874, for 5 years: "Machine for Washing Clothes." (Machine à laver le linge).

Claim.—1st. The combination of the cylinder A, with the flexible bottom B as set forth; 2nd. The mode of suspending on pivots in vertical grooves C, the cylinder A as set forth.

No. 3751. RAPHAEL GAONAS, Montreal, Que., 13th August, 1874, for 5 years: "Improvements on Gauge for Centre-Bits." (Perfectionnements aux jauges de vilebrequins).

Claim.—1st. A gauge A made of a tube in two pieces having butts G, C, to open and to shut the same, two lugs E, F, and a clamping screw D, as set forth; 2nd. The combination with the gauge of two pieces of leather E, F, to narrow the gauge's inside diameter and squeezing the bit as set forth.

No. 3752. LYMAN S. COLBURN, Oberlin, Ohio, U. S., 13th August, 1874, for 5 years: "Improvements on files." (Perfectionnements aux limes).

Claim.—File, having the angle or oblique direction of teeth thereof pointing the same way on both sides as set forth.

No. 3753. EZRA CASWELL, Lyons, N. Y., U. S., 13th August, 1874, for 5 years: "Hub-Boring Machine." (Machine à percer les moyeux).

Claim.—The tram T, hooks h, screws s, and the adjustable removable plate O, in combination with the shank M, tube F, plate L, and cutter k, all constructed and arranged as specified.

No. 3754. JULES A. SAVARD, Quebec, Que., 13th August, 1874, for 5 years: "Improvements on Clocks." (Perfectionnements aux horloges).

Résumé.—La prolongation de l'arbre B de la roue de centre C, la combinaison des roues du centre C et d'engrenage D, avec la roue de champ centrale E, le tambour G qui reçoit les pivots des tiges à pignons H, H, la disposition des pignons I, I, et de la roue de champ J, J, de chaque cadran, le support recourbé à équerre L, et l'arbre K, qui communique aux rouages de la minuterie N, N, le mouvement imprimé par l'arbre B du mouvement de la pendule ordinaire tel que décrit.

Claim.—The prolongation of the arbour B of the centre wheel C, the combination of the centre wheel C with the gearing D and the central cog wheel E, the cylinder G, which receives the pivots of the pinion rods H H, the arrangement of the pinions I I, and the cog wheels J J, of each dial, the bent support of the square L, and the arbour K communicating with the wheel hub of the dial to movement N N; the motion given by the arbour B from the centre of the ordinary pendulum as described.

No. 3755. JOSEPH BURNS, Anamosa, Iowa, U. S., 13th August, 1874, for 10 years: "Well Boring Machine." (Machine à percer les puits).

Claim.—The three-part auger consisting of the square shanked centering bit B, the spiral cutting blade C, adapted to be adjusted relatively to the centering bit and the spiral carrier D, resting upon and continuous with the blade C as described; 2nd. The vibrating lavers R, R, provided with carrying pawls S, S, and pivoted loosely on auger shaft, in combination with the ratchet-nut T, as described.

No. 3756. HENRY G. THOMPSON, and BROR F. BERGH, 13th August, 1874, for 15 years: "Tack Driving Machine." (Machine à chasser la broquette).

Claim.—1st. A magnetic hammer for the purpose of receiving, holding, and driving a tack combined with automatic machinery, constructed for operating and feeding the same as set forth; 2nd. A magnetic hammer in combination with non-magnetic feeding devices as described; 3rd. An incline H for receiving and delivering the tack when made of more than one angle as set forth; 4th. An adjustable rod I for connecting the incline H, with the cam levers J, as set forth; 5th. A rattler; 6th. The stationary head G of the feeding cylinder C, E, when made funnel shaped within said cylinder; 7th. One or more spring pins, arranged in the incline; 8th. A non-magnetic feeding incline; 9th. Hardened steel seat h, or its equivalent inlaid into a non-magnetic incline; 10th. A hardened steel pointer k or its equivalent; 11th. A recess or cup m at the foot of the incline; 12th. The combination of cam-movement for operating, and the separator for delivering the tack for presentation to the hammer; 13th. A stationary head in a revolving

cylinder and a brush arranged as set forth; 14th. The tack channel extending through the bottom of the incline H, and made tapering as set forth; 15th. Giving an intermittent motion to the feeding cylinder by means of a bolt, when used in combination with clutch pulley whereby tacks are fed upon an incline only when machine is operated for presenting tacks to the hammer; 16th. The combination of the clutch pulley for setting the mechanism of the machine in motion; 17th. The wheel D, with recess h, and notches it, in combination with the pulley G, arm m with projection n, spring s, and stop p, p; 19th. The bottom of the feed motion constructed to form a guard to prevent the displacement of the tacks as set forth; 19th. For lasting boots and shoes, a guide or rest to enable the operator to drive tacks at any desired distance from the outer edge of the last as described; 20th. For lasting boots and shoes, a ball and socket joint in combination with a jack for holding the last as described; 21st. For lasting boots and shoes a slip joint in the rod that supports the jack in combination with the ball and socket joint as set forth; 22nd. For lasting boots and shoes a "Bailey's Jack" in combination with hammer for driving tacks, said hammer being operated by automatic means as set forth; 23rd. An adjustable sleeve on top of the hammer; 24th. For lasting boots and shoes a spiral spring on top of the hammer in combination with an adjustable sleeve enclosing said spring as set forth; 25th. The sleeve N, with spring S within the same in combination with the hammer used for driving tacks as set forth; 26th. The combination of a spiral spring on top of hammer with spiral spring when used in sleeve of hammer as set forth; 27th. Compressing spring on top of hammer by means of spiral spring in sleeve of hammer in advance of the regular movement of the parts, as set forth; 28th. Feeding or operating a separator so as to cause the tacks to slide down incline to receiver on backward movement of cylinder as described; 29th. The combination with the stationary head G, and revolving cylinder E of the pivoted brush s, spring s, and pins s, as set forth; 30th. The combination of three spiral springs when applied to one hammer for driving tacks for the purpose of accomplishing three different functions as set forth.

No. 3757. ROBERT SCOTT and SILAS L. COOK, Côte St. Paul, Que., 13th August, 1874, for 5 years: "Improvements in the Manufacture of Spades." (Perfectionnements dans la fabrication des bêches).

Claim.—1st. Spade, shovel or like implement or tool forming the part for the reception of the handle by welding to a shank B, left on the blade A, a sheet iron or steel strap, the lower part of which is formed into a socket C and the upper into two straps D, E, as described; 2nd. Spade, shovel &c. formed with a socket C, and straps D, E, for the reception of the handle F, as described.

No. 3758. GEORGE W. HARRISON, Lansing Mich., U. S., 13th August, 1874, for 5 years: "Pitman Connection." (Raccordement des bielles).

Claim.—1st. The combination with a pitman or connecting rod, metallic boxes and elastic blocks; 2nd. In combination with the recessed end of the pitman, the shouldered metallic boxes J, which together form an enclosed chamber to receive the elastic blocks O, as set forth; 3rd. In combination with the pitman having recessed end, the recessed cap P, elastic blocks O, metallic boxes J, and strap B, as set forth.

No. 3759. THOMAS E. MULLINS, Hopewell Corner, N. B., 13th August, 1874, for 5 years: "Steam Cooking-Apparatus." (Appareil de cuisine à vapeur.)

Claim.—1st. The steaming chamber A, to receive the food pans, having a condensing jacket C, and provided with tube E, as set forth; 2nd. Providing steaming chamber A, and water chamber B with an annular raised ring I, and legs J, as set forth.

No. 3760. JAMES W. HERINGTON and JAMES W. STOKES, Mill Point, Ont., 13th August, 1874, for 5 years: "Horse-Collar." (Collier de cheval.)

Claim.—1st. A horse collar fashioned of iron, steel or other suitable metal, either uncovered, covered with leather or other material or padded and consisting of the rights A, A, joined by the base A, in combination with the neck strap B, as specified; 2nd. The pivoted staples C, with eyes c, in combination with the socket C, with shoulders c, attached to the collar A, as described.

No. 3761. ROBERT CHRISTIE, Hamilton, Ont., 13th August, 1874, for 5 years: "Improvements in Reaping and Mowing Machines." (Perfectionnements aux faucheuses-moissonneuses.)

Claim.—1st. The arrangement and combination of the lever C, rod E, tilter hinge A, lever stand B, operating the cutter-bar M, as specified; 2nd. The arrangement of the steady rod, k, attached to lugs b, b, as specified; 3rd. The arrangement of the opening A, in the tilter hinge A, for the bar H, to allow oscillation as specified; 4th. The arrangement of the push bar D, pivoted by pin d, in the slot N, of the tilter hinge A, as specified; 5th. The metallic guard G, cast to the frame of the machine for protecting the pitman head, f, as specified.

No. 3762. JACOB N. MILLER, Bellefontaine, Ohio, U. S., 13th August, 1874, for 5 years: "Convertible Seat Buggy." (Voiture à siège mobile.)

Claim.—1st A shiftable seat on sliding concealed ways; 2nd The slides D, extending around the outer and upper edges of the sides of the body and employed to support the seat B; 3rd. The screw cylinder E, lever F, rods G, G, bell crank levers H, H, and clamps I, combined and arranged to operate in connection with the seat B, and rails D; 4th. The bolts or pins T, and stops I, employed to limit the movement of the seat B; 5th. The moveable front seat C, attached with hinged legs J, and having short legs P, employed in combination with sockets R, which support it in position for a driving seat; 6th. The hinged legs J, J, constructed with extended bearings and combined with the seat C; 7th. The construction and combination of the bearing or bushing K, stud P, bolt L, and hinged legs J; 8th. The seat-backs Q, constructed with pivot-hooks G, and supported by sockets R, arranged centrally between the front and rear edges to admit of reversing the said backs; 9th. A shifting front seat with retractile feet.

No. 3763. HORACE E. WELLS, Van Wert, Ohio, U. S., 13th August, 1874, for 5 years: "Lumber Drying Kilm." (Fourneaux de sécherie à bois.)

Claim.—1st. A kiln for drying lumber, consisting of a drying room B, with the separate heating room H, at one end, and a steaming room E, at the other, constructed as described and arranged on nearly the same plane, as set forth; 2nd. In combination with the drying room B, the heating room H, constructed near one end of the same and provided with vertical tiers of steam-pipes P, and alternating partitions I, arranged as set forth; 3rd. In combination with the steaming room E, and drying room B, provided with railway tracks as described, the switching cars L, and switching tracks O, T, and S, constructed and arranged as set forth; 4th. In combination with the drying room B, provided with sliding doors G, and H, for the passage of the cars, the steaming room E, provided with the diagonal ways M, and sliding doors F, as set forth.

No. 3764. ROBERT TEATS, Central City, Col., U. S., 13th August, 1874, for 5 years: "Ore Roasting Furnace." (Fourneaux de calcinage des minerais.)

Claim.—1st. Two revolving furnaces A, when fitted with conical ends B, B, as specified; 2nd. In combination with the revolving cylinder A, the sifting conveyor 7 when placed diametrically across the cylinder and in its axial plane as specified; 3rd. In combination with the cylinder A, and conveyor 7 placed as described, the angle pieces 10, operating in connection with the conveyor and cylinder for the purpose specified; 4th. In combination with the cylinder A, the perforated throat C, c, and perforated ring door F, operating as specified; 5th. In combination with the cylinder A, and the sliding furnace E, the hinged ring H, h, h, as specified; 6th. The shafts L, M, gearing O, P, Q, R, and clutch S, connected and operating as specified; 7th. The combination of the hopper I, door Z, yoke G, and weighted lever 5, arranged and operating as specified; 8th. The combination of the furnace A, supporting wheels J, the slotted plates 11, 12, and adjustable journal bearings 13, and 14, constructed in the manner and operating substantially as specified.

No. 3765. SAMUEL S. WHITE, Philadelphia, Penn., U. S., (Assignee of N. Stow,) 13th August, 1874, for 15 years: "Dental Engine." (Engin dentaire.)

Claim.—1st. The combination of the treadles C, C, and interposed pivoted connecting levers E, E; 2nd. The combination of a treadle power, two treadles C, C, interposed connecting levers E, E, and a stand F, F, adjustable round the base of the treadle power on which stand the levers are pivoted; 3rd. The combination of the treadles C, C, their pivoted connecting levers E, E, and a sectional stand F, F, the parts of which are united by a hinge F; 4th. The combination of the driving wheel B, its crank axle G, a treadle C, and the spring pitman D, rigidly attached to the treadle and pivoted on the crank-pin; 5th. The combination of a bracket-frame G, (in which the driven mechanism is mounted) suspended by cords or equivalent flexible connections, the driving wheel B, and the bolt J, passing directly from the driving wheel to the driven pulley I, on the bracket frame; 6th. The combination of the driving wheel B, the bracket-frame G, the driving belt J, passing directly from the driving-wheel to the driven pulley I, on the bracket frame and an elastic suspending cord H, which permits the lateral movement of the bracket frame; 7th. The combination of the base A, its rigid upright arm A, the pulley bracket G, swinging freely thereon in a horizontal plane, the pulley I, and the flexible shaft I; 8th. The combination of the base A, the spring arm A², (figures 5 and 6) rocking thereon the bracket frame G, turning horizontally on the rocking spring arm, and the pulley I, the flexible shaft I, and the tool-holder M, mounted on the bracket frame; 9th. The combination of the suspended bracket frame G, the pulley I, therein driven directly from the driving wheel B, the hand-piece M, the flexible sheath K, connecting the bracket frame and hand-piece and the wire coil connection L, between the driven pulley and the tool holder; 10th. The combination of the bracket frame G, the tubular rotating endwise moving

mandrel I, the wire coil L, and the clamp it, on the mandrel; 11th. The combination of the tubular ended slotted tool holder M, and the flattened tool shank M²; 12th. The combination of the flexible sheath K, the hand-piece N, and the counterbalancing suspended traversing clevis O.

No. 3766. WILLIAM WATSON and DONALD WATSON, Sommerville, Mass., U. S., 22nd August, 1874, for 5 years: "Improvement on Friction Mechanism for Loose Pulleys." (Perfectionnement au mécanisme de friction des poulies folles.)

Claim.—Moving the several friction brakes D, simultaneously toward the rim of the wheel or loose pulley A, the series of rollers F, and inclined planes F, arranged together and combined with the brakes D, and shaft B, by means substantially as explained, the brakes being furnished with retractile springs, as set forth.

No. 3767. WILLIAM ABERCROMBIE, Hamilton, Ont., (Assignee of R. L. Greenlee,) 22nd August, 1874, for 5 years: "Improvements on Sash and Door Clamps." (Perfectionnements aux mordaches à emboîture des portes et croisées.)

Claim.—1st. The combination in a sash and door clamping machine of two or more clamps A, L, constructed with a clamping lever N, and rack M, mounted upon a bar E, adjustable along the bearers A, B, and entirely detached from the side bearers or their supports; 2nd. The combination of the clamps A, L, draw rod R, lever N, pivoted rack M, and counterweight W, with the bar E, and an adjustable longitudinal clamp I, J, K, as set forth.

No. 3768. PETER WALLACE, London, Ont., 22nd August, 1874, for 5 years: "Improvements on Machines for Making Matches." (Perfectionnements aux machines à faire des allumettes.)

Claim.—1st. The upright plane H, moving up and down on the standard M, by means of the pitman G, in combination with the cutting box J, and cutters I, and the grooved guide plate Q, as set forth; 2nd. The upper horizontal screw N, and the wheel O, for the purpose of feeding the lumber in the trough K, and the cutters I, in combination with the feeder foot P, the cap N, stop catch R, and the lever R², as set forth; 3rd. The rack R, with the grooved slips Z, gauge Z², and set screw Z³, supported on the false bottom Z⁴, and carriage S, in combination with the screw U, the nut T, wheel W, ratchet X, catch Y, and feeding hook V, as set forth; and 4th. The catch lock R, in and of frame operating upon the screw U, lever R², and stop catch R³, as set forth.

No. 3769. JAMES SPRATT, London, Eng., 22nd August, 1874, for 5 years: "Solidified Tea." (The solidifié.)

Claim.—1st. The mode of treating tea by compressing it into solid blocks of convenient size, and with transverse V-shaped grooves; 2nd. The V-shaped transverse grooves A, formed in the opposite sides of the compressed blocks A, of tea, as shown.

No. 3770. HENRY HARMER, Southampton, Ont., 22nd August, 1874, for 5 years: "Improvements on the Working of the Railway Switch." (Perfectionnement dans le fonctionnement d'une aiguillière de railroute.)

Claim.—The slide bar E, the wheel F, the shaft Z, the cross doors C, the house A, and the principle of clamping the switch man in the house until, after connecting the switch with a siding, he has reconnected it with the main line.

No. 3771. JOHIAL H. CLEVELAND, Buffalo, N. Y., U. S., 22nd August, 1874, for 5 years: "Improvements on Sewing Machines." (Perfectionnements aux machines à coudre.)

Claim.—1st. Folding and sewing the cloth for tucks for garments &c., by means of a tucker in such a manner that the right sides of the stitches will be upon the right side of the cloth; 2nd. In combination with gauge D, guiding the cloth during sewing, the adjustable folder blade F; 3rd. The combination with the gauge D, of the projecting lip D²; 4th. The combination with the shank A, of the hollow cylinder B, when the same is serving as a means for adjustment of the gauge D, and folder blade F; 5th. The combination with the shank A, of the case plate B, cylinder B, moveable gauge D, moveable folding blade F, and guide G, as described.

No. 3772. CHARLES F. GARDNER, London, Eng., and EBENEZER POCOCK, Paris, Fce., 22nd August, 1874, for 5 years: "Machine for Lasting

Boots and Shoes." (Machine à former les chaussures.)

Claim.—1st. The elastic arms *e*, *h*, *h*, and rod *d*, attached to a last *a*, and operating to exert pressure on the upper of a boot or shoe in lasting and for immobilizing the same in the manner and for the purposes set forth; 2nd. The catch *i*, for maintaining the mechanism stationary in the last during the operation of uniting the upper to the sole as described; 3rd. The strap *l*, rubber springs *n*, *n*, hooks *o*, *o*, loops *p*, *p*, and spring *r*, for further securing the upper on the last as set forth; 4th. The special mechanism composed of parts *s*, *t*, *u*, *r*, and *v*, for facilitating and accelerating the lasting as described.

No. 3773. GRIFFIN S. LACEY, New York, and URIAH C. ALLEN, Glens Falls, N. Y., U. S., 22nd August, 1874, for 5 years: "Gas Regulator." (Régulateur à gaz.)

Claim.—The combination with the inlets *C*, outlet *d*, and valve seat *e*, of the valve *f*, stem *g*, and diaphragm *L*, attached to the ring *i*, and provided with an externally grooved ring *N*, and cord *O*, as specified.

No. 3774. HENRY BEAUCHAMP, Montreal, Que., 22nd August, 1874, for 5 years: "Washing Machine." (Machine à laver.)

Réclams.—1or. La combinaison d'un gros tube *A*, entouré de quatre petits tubes *B*, *B*, avec un entonnoir *E*, divisé par des lames métalliques *F*, et ayant des petits tubes *H*, attachés à la paroi intérieure de l'entonnoir *E*, tel que décrit; 2me. La combinaison des bouchons *C*, empaquetés à la tête des tubes *A*, et *B*, et ayant des valves *D*, clouées à leur bout inférieur, tel que décrit.

Claim.—1st. The combination of a large tube *A*, surrounded by four small tubes *B*, *B*, with a funnel *E*, divided by metallic plates *F*, and having small tubes *H*, attached to the inside face of the funnel *E*, as described; 2nd. The combination of the plugs *C*, packed at the head of the tubes *A*, and *B*, and having valves *D*, fastened at their lower end as described.

No. 3775. WILLIAM FRANZ, Bucyrus, and WILLIAM POPE, Crestline, Ohio, U. S., 22nd August, 1874, for 10 years: "Automatic Knitting Machine." (Machine automatique à tricoter.)

Claim.—1st. The flanged cam-cylinder *A*, having its inner surface cut away, except in the part occupied by the cams *se* as to form a wide groove *b*, extending vertically from the shoulder *C*, on which the heels of the needles rest to the flange *D*, and communicating at each end with the narrow groove *E*, above the cams as described; 2nd. The combination with the cylinder *A*, provided with the shoulder *C*, of the stationary guides *L*, and *J*, and the pivoted latches *G*, and *H*, as described; 3rd. The combination of the cam *M*, the stationary cams *K*, and *L*, automatic latches *G*, and *H*, and stationary guides *L*, and *J*, as described; 4th. The combination of the index finger *P*, and gauge *Q*, as described; 5th. The combination of the adjustable carrier *A*, latch guard *B*, and yarn-guide *A*, as described; 6th. The combination with the cylinder *A*, and detached cog ring *T*, of the thread carrier *A*, attached to the latter and revolving a regulated distance independently of the cylinder as set forth; 7th. In combination with the cylinder *A*, provided with the lug *Z*, the detached cog-ring *T*, having lugs *Z*, and *Z*, so placed that the ring may be revolved, through a portion of its arc of oscillation independently of and without communicating motion to the cylinder *A*, as described; 8th. The combination of the cam-cylinder *A*, and needle cylinder *V*, detached cog-ring *T*, and bed-plate *W*, as described; 9th. The oscillating clamp or lock *U*, in combination with the take up spring *F*, as described; 10th. The mode of regulating the tension of the take-up spring *F*, by means of the bolt *D*, and thumb nut *D*, as described; 11th. A setting up device for circular knitting machines, consisting of a disc *C*, provided with an expandible series of elastic hooks *F*, being composed of a single wire as described; 12th. The setting up device, consisting of a disc *C*, and hooks *F*, when the latter are constructed from a continuous wire as described; 13th. The combination of the slotted disc *C*, the eye bolt *E*, thumb nut *E*, and elastic hooks *F*, as described.

No. 3776. THOMAS A. D. FORSTER and EDWARD L. STOWELL, Philadelphia, Pa., U. S., 22nd August, 1874, for 5 years: "Tooth Paste." (Pâte dentifrice.)

Claim.—1st. A tooth paste made fluid or semi-fluid by the addition of glycerine or glycerine and water; 2nd. A fluid or semi-fluid tooth paste put up in a collapsible tube; 3rd. A corrugated, collapsible tube as described.

No. 3777. WILLIAM ROBERTSON, Yorkville, Ont., 22nd August, 1874, for 5 years: "Cloth Shrinking and Drying Machine." (Machine à fouler et sécher le drap.)

Claim.—The perforated cylinder *B*, provided with steam-inlets *I*, *E*, and outlet *F*, internal steam heating pipes *D*, and adjustable gauge *J*, for use in connection with a suitable steam generator for shrinking and drying cloth, as set forth.

No. 3778. SAMUEL RICHARDS, Philadelphia, Pa., U. S., 22nd August, 1874, for 5 years: "Implement for Cutting and gauging Butter and Lard" (Outil pour couper et jauger le beurre et le saindoux.)

Claim.—The combination of the handle *a*, angular and flat corner pieces *b*, *c*, *d*, *e*, with the blades and supporting shelves with or without the removable side-plates constituting an implement for separating pieces of butter or lard from solid masses of these materials as set forth.

No. 3779. JOB JOHNSON, Brooklyn, N. Y., U. S., 22nd August, 1874, for 5 years: "Ball Castor." (Roulette sphérique de meuble.)

Claim.—1st. The annular bearing *b*, for the ball *a*, in combination with the cap *l*, retaining such ball as set forth; 2nd. The flanges *n*, upon the socket *l*, of the castor, in combination with the plate *c*, with ribs thereon, the attaching screws or rivets *4*, and the ball *a*, as set forth.

No. 3780. WILLIAM H. WEAGANT, Morrisburgh, Ont., 22nd August, 1874, for 5 years: "Window Blind." (Jalousie.)

Claim.—A window blind composed of thin slats or strips of wood *A*, having their edges *C*, *D*, bevelled and overlapping each other, as specified.

No. 3781. ELIJAH OSBORN, Spencer, N. Y., U. S., 22nd August, 1874, for 5 years: "Improvements on Running Gears for Waggons." (Perfectionnements aux trains de voitures.)

Claim.—1st. The bars *A*, arranged at right angles to each other and connected together at their rear ends by a cross bar *C*, and adapted to receive and support the fifth wheel, or circle *F*, as described; 2nd. A platform for waggons and other vehicles, consisting of the upper and lower bars *A*, *B*, arranged as shown, and connected together at their rear ends by the spring bar *C*, and adapted to receive and support the fifth wheel, or circle *F*, as described; 3rd. A platform for waggons and other wheeled vehicles constructed of three branching or radiating arms *A*, *B*, and *C*, one of said arms being for connection with the cross-spring and the other two arms being to the side-spring as described; 4th. The combination of the three branching arms *A*, *B*, *C*, with the truss-frame constructed of the arms *G*, *H*, and *I*, connected to the arms *A*, *B*, *C*, by interposed pillars or studs as described; 5th. A platform for waggons consisting of the upper and lower bars *A*, *B*, intermediate strengthening studs or rivets *E*, and spring bar *C*, all arranged, and adapted to receive and support the fifth wheel, or circle *F*, substantially as described.

No. 3782. HUGO B. SHERWOOD, Mill Point, Ont., 24th August, 1874, for 5 years: "Tool Handle." (Manche d'outil.)

Claim.—A tool handle *A*, having the combined screw cutting die and nut *C*, attached in any suitable way arranged as described.

No. 3783. HENRY P. BECKER and NATHAN UNDERWOOD, Jr., Dixon, Ill., U. S., 24th August, 1874, for 5 years: "Machine for Scouring and Polishing Grain." (Machine à nettoyer et polir le grain.)

Claim.—1st. In combination with a revolving conical brush, an exterior conical screen made of woven wire and punched or perforated metal plates or sheets, or portions of each as described; 2nd. In combination with the conical brush and screen and with the shaft for supporting and turning said brush, the ring or disc *I*, fastened to said brush, the screw in the ring or disc, and the screw on the shaft, so that by turning said shaft from the exterior or the brush from the interior, said brush can be raised or lowered in the interior of the screen to adjust it thereto, as it wears away as described; 3rd. In combination with the base-plate *B*, the trough *b*, and its outlet, and the annular passage *c*, and its inlets and outlets, being all in one piece as described; 4th. In combination with a conical brush, and a conical case arranged and operating together as herein described, the two sets of concentric flanges in the heads *a*, the removable section in the screen to adjust said screen to the brush as it wears away as described; 5th. The detachable and reversible fan case and fan so that the machine may be applied to a driving power equally well in whichever direction the driving mechanism may turn as described.

No. 3784. WILLIAM H. TAYLOR, Baldwinsville, and CHARLES POTTER, Schenectady, N. Y., U.

S., 24th August, 1874, for 5 years: "Harness Pad Tree." (Fut de selle de harnais.)

Claim.—The combination of pads *b, b*, with jockey plates *A, A*, grooved to receive the back straps, and hinged to the yoke as set forth.

No. 3785. DAVIS W. BAILEY, Watertown, Mass., U. S., 24th August, 1874, for 5 years: "Improvement in Concrete for Roads, &c." (Perfectionnement du béton pour les chemins, &c.)

Claim.—An improved composite concrete composed of asphaltum, oil, ground stone, sand and other mineral or earthy substances, together with lime and cement, the adaptation of the same to road ways, walks, floors, water-courses, and water-works, &c., and the mode of applying the same by layers of stone, cement, &c., pressed together, and the employment of mineral substances to produce a light coloured or variegated surface, as explained.

No. 3786. TERENCE SPARHAM, Brockville, Ont., 24th August, 1874, for 5 years: "Fire-proof Paint." (Peinture réfractaire.)

Claim.—A paint made by the admixture of mica, plumbago, and soap-stone, in a finely powdered state or any one or more of these substances as the body of the paint with coal-tar or petroleum or other liquid bituminous substance to make it the proper consistency for use.

No. 3787. ORON THOMPSON, East Flamborough, Ont., 24th August, 1874, for 5 years: "Railway Car-coupler." (Attelage de wagon de rail-route.)

Claim.—The combination and arrangement of the several parts, namely, the coupler *B*, in connection with the cheek *C*, and the buffer cheek *D*, working in the lugs of the hunter *A*, and uncoupled by the chain *F* as set forth.

No. 3788. EDWARD L. FENERTY, Halifax, N. S., 24th August, 1874, for 5 years: "Improvements on Skate Fastenings." (Perfectionnements dans l'ajustage des patins.)

Claim.—The combination of the lever *B*, pivoted to the rear part of lower heel plate *A, A*, the link *C*, socket block *D*, with the adjusting screw *E*, passing through a female screw in the part turned down on sliding heel plate *F*, as set forth.

No. 3789. JOHN SHARP, Horton, Ont., 24th August, 1874, for 5 years: "Improvements in Spinning." (Perfectionnements dans le filage.)

Claim.—1st. The imparting twist to cardings rovings or ropings during their passage through the draft rollers as set forth. 2nd. The combination of roving twistors *A*, and draft rulers *h, h*, and *D*, as set forth; 3rd. The use of a separate bobbin or spool for each strand or thread of carding, roving or roping produced by a carding engine, as set forth.

No. 3790. GEORGE R. PROWSE, Montreal, Que., 24th August, 1874, for 5 years: "Fire Extinguisher." (Extincteur d'incendie.)

Claim.—A fire extinguisher in which the chemicals are held in solution, the arrangement within a single vessel *A*, of two separate and distinct chambers *B*, and *E*, for containing the chemicals of equal capacity and discharging in an equal and continuous stream into the mixing chamber *C*, also contained within the vessel *A*, as set forth.

No. 3791. GEORGE K. SMITH, Waterloo, Iowa, U. S., 24th August, 1874, for 5 years: "Metal for Ploughs." (Métal à charrues.)

Claim.—A compound of scrap steel, scrap wrought iron, and cast iron, in the proportion enumerated, and prepared mixed and cast in the manner specified.

No. 3792. STEPHEN MOORE and HOMER ROGERS, Sudbury, Mass., U. S., 24th August, 1874, for 5 years: "Preparation of Leather or Leather Board for Shoes." (Préparation du cuir ou carton-cuir pour les chaussures.)

Claim.—Leather or leather board prepared or saturated with a solution of rosin and a liquid distillate of petroleum or its equivalent, all as set forth.

No. 3793. ROBERT CORBET, OWEN Sound, Ont., 24th August, 1874, for 5 years: "Process of Raising, Heating and Distributing Water." (Système d'élevation, chauffage et distribution de l'eau.)

Claim.—The application of the ejector *A* in any of its forms in combination with the application and arrangement of distributing pipes *D*, in such a manner as will lead to tanks or vessels for containing hot water. To the purpose of raising and heating and distributing hot water simultaneously, for tanneries, breweries, distilleries, mills and other manufactories, in the manner specified.

No. 3794. WILLIAM HARKNE'S, Providence, R. I., U. S., 24th August, 1874, for 5 years: "Gas Apparatus." (Appareil à gaz.)

Claim.—1st. The generator *B*, provided with the fire grate *m*, a smoke pipe *k*, having a valve for closing the same and having a mouth above and below provided with lids *A* and *b*, 2nd. In combination with the generators *B*, pipes *l*, and *g*, provided with suitable valves and arranged to admit air to the top, or the bottom of the generator at will; 3rd. The removable vaporizer *M*, provided with the transverse groove *n*, and a longitudinal groove *o*; 4th. The combination in a gas apparatus of a steam boiler one or more generators *B*, constructed and arranged to heat the coal therein, and pass the steam downward through the same, and one or more retorts arranged to vaporize a hydro-carbon and mingle and heat the vapours therein; 5th. The process of making illuminating gas, that is to say, by passing steam downward through a generator, containing incandescent coal and thence into a retort in which hydro-carbon oil is vaporized, and then passing these mingled gases through heated retorts as set forth.

No. 3795. HENRY W. SPRATT, Lee, Eng., 31st August, 1874, for 5 years: "Voting Apparatus." (Appareil à votation.)

Claim.—1st. The structure *A*, doors in parts *A1, A2, A3, A4*, doors *O C1*, and the *L* shaped door *D*, the whole arranged so as when opened out to form a voting chamber with desks, notice boards, turnstile and compartment for recording mechanism; 2nd. The arrangement in connection with the indicators or recording instruments *d*, of the sliding bars *b*, with their knobs or handles *b1*, in recesses provided with sliding doors *c2*, so as to prevent access to more than one knob or handle at a time; 3rd. The sliding bars *b*, formed or provided with inclines *b4*, steps or projections *b5*, and projecting parts *b6*, carrying fingers *b5*, in combination with the locking pieces *e*, tumbler levers *f*, and their springs *g*; 4th. The combination with the sliding bars *b*, of the sliding frame *g*, and its anti-friction wheels *g1*, raised by the inclines *b4*, during the forward movements of the bars *b*, the said frame being arranged in combination with the oil parts, so as by its upward and return movements to actuate a public index or recording machine *o*, ring the bell *n1*, and raise the bar *b*, by which it has been raised to its normal position; 5th. The combination with the sliding bars *b*, of the vertical sliding bar *i*, provided with catches *i1*, whereby, when one bar is drawn out all the others are locked until the bar drawn out is released whereupon the unlocking is effected during its return by the action upon the lever *h*, of the pin *g2*, of the sliding frame *g*; 6th. The combination with the tumbler levers *f*, locking pieces *e*, and sliding bars *b*, of the locking bar *l*, arranged to be moved by the crank pin *j1*, actuated for locking the whole of the sliding bars *b*, when the voter has given the number of votes to which he is entitled; 7th. In combination with the sliding frame *g*, and locking bar *l*, the slotted arm *k*, stud *j2*, slotted lever *j3*, spindle *j4*, pawl *j5*, ratchet *j6*, toothed wheel *j8*, pinion *j7*, spindle *j9*, crank or cam *j9*, and pin *j10*; 8th. The combination with the sliding bars *b*, and sliding frame *g*, of the slotted arm *m*, pin *m1*, arm *m2*, pawl *m3*, ratchet *m4*, and index wheel *m5*, arranged to indicate to the voter the number of votes he has given and to return to zero as he leaves the voting chamber; 9th. The combination with the locking pieces *e*, and sliding bars *b*, of the unlocking bar *g*, arranged to be actuated by an arm or connection carried by or connecting with the turnstile so as to unlock the sliding bars *b*, as the voter leaves the voting chamber; and 10th. The novel combination and arrangement of the chamber *A*, doors *A1, A2, C, C1, D, D1*, pivots *E*, catches *F*, tables *G*, casing *c*, frames *c1* and *g*, sliding doors *c2*, handles or knobs *b1*, sliding bars *b*, inclines *b4*, step *b5*, projections *b6*, fingers *b5*, slots *b6*, levers *b1*, indicators or recording instruments *d*, locking pieces *e*, tumbler levers *f*, springs *g*, sliding frame *g*, anti-friction wheels *g1*, lever *h1*, bar *i*, catches *i1*, pin *g2*, slotted arm *k*, stud *j2*, slotted lever *j3*, spindle *j4*, pawl *j5*, ratchet *j6*, toothed wheel *j8*, pinion *j7*, spindle *j9*, crank or cam *j9*, pin *j10*, bar *l*, springs *l1*, projections *l2*, slotted arm *m*, pin *m1*, arm *m2*, pawl *m3*, ratchet *m4*, wheel *m5*, pawl *m6*, tongue *n*, bell *n1*, index or recording machine *o*, and other parts forming a complete voting apparatus whereby the operator by one movement of one of the handles or knobs *b1*, is enabled to effect the six separate objects or operations hereinbefore specified.

No. 3796. THOMAS ROWAN and JOHN R. READ, Glasgow, Scot., 31st August, 1874, for 5 years: "Improvements on Floor Cloths." (Perfectionnements aux tapis.)

Claim.—1st. Improved floor cloth made by combining two plies of woven fabric with an interposed elastic water proof composition; 2nd. Making of a composition with the ingredients and proportions, for the purposes described.

No. 3797. JOHN E. MOYE, Clifton, Ont, 31st August, 1874, for 5 years: "Composition of Matter for the Cure of Rheumatism, &c." (Composition pour la guérison des rhumatismes, &c.).

Claim.—A compound of Castor Oil, Sassafras oil, Tincture of Arnicæ, Tincture of Wormwood, Tincture of opium, Tincture of Blood Root, Tincture of Lobelia, Spirit of Turpentine and Alcohol, for the purposes set forth.

No. 3798. CARL HOFFMANN, New York, U. S., 31st August, 1874, for 5 years: "Furnace Grate." (Grille de fourneau).

Claim.—1st. A furnace grate, constructed of grate bars provided with oblique ledges which, when the bars are in position form air channels *d*, in the manner described; 2nd. The arrangement on the adjoining grate bars of oblique ledges which interlock with each other as set forth; 3rd. The curved or angular air channels *f*, in the ends of the grate bars *B* as described.

No. 3799. JOHN THOMPSON, Bramley, Ont, 31st August, 1874, for 5 years: "A Gate." (Une barrière).

Claim.—1st. The sliding adjustable post *B*, to which the gate *A*, is hung, projection *b*, in combination with the stationary post *C*, with band *D*, and series of notches *C*, placed in any convenient position on the post *C*; 2nd. The latch *E* operated by the spring *E'*, handles *e* in combination with the recess *G*; 3rd. The cross piece *F* actuated by the spring *F'*, in combination with the recess *L*, on the latch *E*, as described.

No. 3800. EDWARD P. HILDEBRAND, Indiana, Pa., U. S., 31st August, 1874, for 5 years: "Improvements on Coal Stoves." (Perfectionnements aux poêles à charbon).

Claim.—A heating stove, having in the top or upper part a hot air chamber *B*, its lower part depending into the stove and exposed on its bottom and sides to the heat and products of combustion and communicating with the external atmosphere by means of pipes *C*, passing through the upper portion of the stove and apertures *C'*, in said body, as set forth.

No. 3801. JOHN BROWN, Brantford, Ont, 31st August, 1874, for 5 years: "Device to Protect from the Sun and Rain." (Pavillon pour garantir du soleil et de la pluie).

Claim.—A self supporting device, with either flat or convex-top *E*, and folding or stationary supports *C*, constructed of wire or other material, with covering of silk or other fabric, leaving the arms and hands free to be used for agricultural, mechanical and other purposes, in the manner set forth.

No. 3802. GEORGE M. SEYMOUR and JAMES C. HAIGHT, New York, U. S., 31st August, 1874, for 5 years: "Horse Power." (Manège).

Claim.—A horse power having a rotating disc *A*, on which the animal walks and a concentric shaft *C*, to an arm of which the animal is hitched, and both operating through crossed gearing *a*, *B*, upon a driving pinion *F*, so as to produce a continuous rotary motion as described; 2nd. The arrangement of the axis *A*, wheel *B*, shaft *C*, arm *E*, gearing on *a* and *B*, and pinion *F*, in the manner set forth.

No. 3803. JOSIAH FOWLER, Saint John, N. B., 31st August, 1874, for 5 years: "Carriage Spring." (Ressort de voiture).

Claim.—The use of the steel bars or springs *a*, *a*, *a*, *a*, as set forth.

No. 3804. JOHN ABELL, Woodbridge, Ont., 31st August, 1874, for 5 years: "Cover for Shaft Couplings." (Couvre-embayage des arbres).

Claim.—The safety cover *C*, consisting of the two pieces *C1*, and *C2*, fastened together by the spring latches *D*, or their equivalent and having projecting end collars *C3*, in combination with the coupling *A*, as specified.

No. 3805. FREDERICK SEEGMILLER, Seaforth, Ont, 31st August, 1874, for 5 years: "Machine for Drying Grain." (Machine à sécher le grain).

Claim.—The arrangement of the cylinder *G*, in combination with the furnace with moveable iron front as set forth.

No. 3806. THOMAS McBRIDE, Philadelphia, Pa. U. S., 31st August, 1874, for five years: "Hydraulic Railroad Brake." (Frein hydraulique de railroute).

Claim.—1st. In combination with the pipes *I* and *L*, communicating respectively with the tender and boiler, the three way valves *K*, so that water may be taken from and returned to the tender and the pressure of the boiler exerted on the fluid in the tube *D*, as set forth; 2nd. In combination with the water tank or tender, the pipe *I*, and adjacent portion of the tube *D*, made of larger diameter than the remainder of the tube; 3rd. In combination with the conveying tube *D*, the glycerine tank or reservoir *M*, having communication with said tube by means of the pipe *m*, and check valve *mt*, as described; 4th. In combination with the conveying tube *D*, of a hydraulic carbrake, the cylinder *G*, provided with a piston or diaphragm, and pipes *o*, and *o'*, as described; 5th. In combination with the cylinder *G*, the glycerine tank *M*, said cylinder and tank communicating by means of a pipe *N*, provided with a check valve *N*, as set forth; 6th. In combination with the tube *D*, cylinder *G* and pipes *O* and *O'*, the stop cocks *f*, *o*, and *o'*, as described.

No. 3807. FREDERICK A. BALCH, Hingham, Wis., U. S., 31st August, 1874, for 15 years: "Machine for Separating Cockle from Wheat." (Machine à séparer la nielle du blé).

Claim.—1st. The combination of a revolving cockle separator *B* with a screening separator to remove the larger grains and thereby constitute a combined grador and cockle separator; 2nd. In combination with the revolving cockle separator *B*, the flanged roller *C*, upon the shaft *D*, within the separator *B*, to support the same in the manner described and cause the same to rotate with unobstructed ends; 3rd. The combination of a revolving cockle separator *B*, constructed with open ends as shown and a cockle trough permanently fixed to the frame; 4th. In combination with the revolving separator *B*, a revolving screen to remove the larger grain and separate the cockle and other impurities at a continuous operation; 5th. The combination of a revolving cylinder with internal cells to receive the grains of cockle and remove them as set forth; a separator screen to remove the larger grains and discharge spouts which may be separated or united for the purpose of keeping the grades separate or otherwise as desired; 6th. A cylinder perforated with holes of proper size to receive singly the grains of cockle and an outer removable jacket, as set forth.

No. 3808. REGINALD H. EARLE, Saint John, N. F. L., 31st August, 1874, for 5 years: "Improvements in Ice-Creepers." (Perfectionnements aux grappins à glace).

Claim.—The ice-creeper constructed of the grooved plate *A*, the plates *B*, sliding on each other and having spikes *C*, and the set screw *D*, as described.

No. 3809. GERARD DUNNING and CHARLES B. GEORGE, Waukegan, Ill., U. S., 31st August, 1874, for 5 years: "Improvements on Horse Shoes." (Perfectionnements aux fers à chevaux).

Claim.—1st. A horse shoe having a series of side calks *a*, convex on the outside, with spaces, or recesses *b*, for the nail, and having recesses *b*, between the several calks as specified; 2nd. A horse shoe the grooved heel calk *d*, so formed as to furnish the heel calk with two bearing surfaces separated by the groove as specified.

No. 3810. WILLIAM D. FARRAND, New York, U. S., 31st August, 1874, for 5 years: "Spark Arrester." (Arrête-étincelles).

Claim.—The combination of a spark arrester and a tube or tubes connecting the arrester with the furnace as specified; The combination of the smoke flue *A*, *B*, lateral enlargement *E*, *D*, and smoke pipes *F*, as specified; The combination of the smoke flue *A*, *B*, enlargement *E*, *D*, smoke pipes *F*, and the receptacle *C*, as specified.

INDEX OF INVENTIONS.

Ball castor, J. Johnson..... 3779
 Barges, mode of propelling, A. S. Trudel 3749
 Bed bottoms E. S. Waterman 3713
 Beds, spring slat for, H. Whiteside, Jr..... 3711
 Boots and shoes, machine for lasting, C. F. Gardner, and E. Pocock..... 3772
 Boxes, metallic or other, W. F. Redding 3711
 Brick Machine, John H. Macaulay 3693
 Buggy, convertible seat, J. N. Miller..... 3762
 Burglar alarm, portable, J. B. Brown..... 3743
 Butter and lard, implement for cutting and gauging, S. Richards 3778
 Capstans and windlasses, D. N. B. Coffin 3778
 Car-coupling, J. E. Cisco..... 3731
 Carriage spring, J. Fowler..... 3803
 Cartridge creasing for breech loading fire-arms, W. B. Hall..... 3716
 Centre-bits, gauge for, R. Gazonas 3751
 Clocks, J. A. Suard 3751
 Cloth shrinking and drying machine, W. Robertson 3777
 Concrete for roads, &c., D. W. Bailey 3785
 Cooking apparatus, steam, T. E. Mullins 3759
 Cultivators and harrows, R. P. Colton..... 3683
 Curry combs, La F. Draper..... 3723
 Curtain fixture, E. M. Davies and F. J. Rebbeck 3694
 Dental engine, S. S. White..... 3765
 Door and sash clamps, W. Abercrombie..... 3767
 Drying house, W. E. Wright..... 3690
 Files, L. S. Colburn..... 3752
 Fire extinguisher, G. R. Prowse 3790
 Floor cloths, T. Rowan, and J. R. Reid..... 3796
 Freezing and preserving apparatus for meats, fish, &c., S. H., and D. W. Davis 3740
 Furnace grate, C. Hoffman..... 3798
 Furnace, hot air and hot water combined, C. Comstock..... 3719
 Gas apparatus, W. Harkness..... 3794
 Gas, cut off and regulating cock, C. E. Seal 3692
 Gas machine, J. Ruthven..... 3687
 " B. Sloper 3741
 Gas regulator, H. Ing..... 3700
 " G. S. Lacey, and U. C. Allen..... 3773
 Gate, J. Thompson..... 3799
 Gate hanging, D. S. Cornell 3742
 Grain, machine for cleaning, separating and grading, O. K. Wood 3688
 Grain, machine for drying, F. Seegmiller 3805
 " " scouring and polishing, H. P. Becker, and N. Underwood, Jr..... 3783
 Harness pad tree, W. H. Taylor, and C. Potter 3754
 Harrows and cultivators, R. P. Colton..... 3693
 Hats, J. Ygnacio Cassiano..... 3720
 Hinges, G. Doano, and R. L. Harris 3691
 Hoisting machine and rising platform, W. Lockwood..... 3739
 Horse collar, J. W. Herington, and J. W. Stokes 3760
 " machine for blocking, W. Vahey 3702
 Horse power, G. M. Seymour, and J. C. Haight..... 3802
 " wheel, A. Lorrain..... 3698
 Horse shoes, G. Dunning, and C. B. George..... 3809
 Hub boring machine, E. Caswell..... 3753
 Ice creepers, R. H. Earle..... 3808
 Ice-plough and ram attachments for vessels, D. C. Grant 3744
 Insurance, mode of applying for, writing or printing and issuing policies therefor, A. Harvey..... 3727
 Knitting machine, C. Callahan, and E. E. Sibley 3724
 " " automatic, W. Franz, and W. Pope..... 3775
 Leather or leather board, preparation of, for shoes, S. Moore, and H. Rogers..... 3792
 Light, electric, H. Woodward, and M. Evans..... 3738
 Locomotives, J. M. Foss..... 3684
 Lumber drying kiln, H. E. Wells..... 3783
 Matches, machine for making, P. Wallace..... 3768
 Matches, safety, India rubber compound for igniting, L. O. P. Meyer..... 3768
 Meat, machine for mincing, R. C. Cuff..... 3725
 Miners' lantern, R. Tappan 3710
 Moth proof fur cas s, C. C. Jerome..... 3682
 Mowing and reaping machines, R. Christie..... 3761
 Needle threader, D. Forbes..... 3696
 Nut lock, W. M. Watson 3718
 Nut lock, P. F. King, G. N. Beard, E. J. Beard, and J. Ashworth..... 3721
 Ore roasting furnace, Robert Teats..... 3764
 Organ, blow pedals reversible, W. Murphy..... 3703

Patent, fire proof, T. Sparham..... 3786
 Piano-fortes, H. Behning, and J. Diehl 3712
 Pipe vices, G. W. Millner 3748
 Pitchers, A. H. Wagner..... 3726
 Pitman connection, G. W. Harrison..... 3758
 Ploughs, metal for, G. K. Smith 3791
 Pressure, method for equalizing or distributing, W. Miller 3747
 Pulleys, loose friction, mechanism for, W. and D. Watson 3780
 Railway brake, hydraulic, T. Melbride..... 3806
 Railway-coupling, O. Thompson..... 3787
 Railway signal, electric, S. C. Hoordrickson..... 3731
 Railway switch, Charles H. Wain..... 3701
 Railway switch, working of, H. Harner..... 3770
 Rain and sun, device to protect from, J. Brown 3801
 Reaping and mowing machine, R. Christie..... 3761
 Refrigerator, D. E. Cooke 3745
 Rheumatism, composition for the cure of, J. E. Moyer 3797
 Rising platform and hoisting machine, W. Lockwood 3739
 Sash and door clamps, W. Abercrombie 3767
 Sash holder and fastener, C. Kinney 3737
 Sewing machines, George and John F. Webb's 3784
 " J. H. Cleveland 3771
 " tables, G. P. Draper..... 3722
 Shaft couplings, cover for, J. Abell 3804
 Ship's knees, W. Morehouse..... 3715
 Shoes, preparation of leather or leather boards for, S. Moore and H. Rogers..... 3792
 Skate fastenings, E. L. Fenerty..... 3738
 Spades, R. Scott and S. L. Cook 3757
 Spark arrester, W. D. Farrand 3810
 Spinning, John Sharp..... 3789
 Spirits, manufacture of, P. Griffin 3695
 Sponge, process of treating, P. S. Devlan 3736
 Springs, J. D. Richardson 3686
 Starch polish, manufacture of, W. J. Burleigh..... 3729
 Steam radiator, A. A. Griffing 3732
 Stove, base burning heating, J. Dwyer and J. Van B. Carter 3705
 Stoves, coal, E. P. Hildebrand 3800
 Stove, cooking, T. Young 3739
 Sun and rain, device to protect from, J. Brown 3801
 Tack driving machine, H. J. Thompson and B. F. Bergh 3756
 Tea, solidified, J. Spratt 3769
 Textile fabrics, process of treating, to prevent mildew and decay, W. Thilmann..... 3733
 Tool handle, H. B. Sherwood 3782
 Tooth paste, T. A. D. Forster and E. L. Stowell..... 3776
 Trace fastening, F. M. Sniveley 3699
 Turbine water wheel, H. Van DeWater 3746
 Valves, W. H. Beckett..... 3717
 Votig apparatus, H. W. Spratt 3795
 Waggon, running gear for, E. Osborn..... 3781
 Washing machine, W. Craig..... 3706
 " H. Bolton..... 3736
 " C. Buchner 3750
 Water, process of raising, heating and distributing, R. Corbett..... 3793
 Well boring machine, J. Burns 3735
 Well tube-joints, machine for cutting the tapering plug end of, T. Ford..... 3885
 Wheat, machine for separating cockle from, F. A. Balch 3807
 Window blind, N. E. Wheeler 3697
 " W. H. Wengant..... 3750
 Window screen, J. W. Cuthbertson 3728
 Window screen frames, D. C. Kellam and Robert and Albert Hayes..... 3709
 Wrenches for inserting bung bushes, G. B. Cornell 3681

INDEX OF PATENTEEES.

Abell, John, cover for shaft couplings 3804
 Abercrombie, William, sash and door clamps..... 3767
 Allen, Uriah C., and G. S. Lacey, gas regulator 3773
 Ashworth, James, G. N., and E. J. Beard, and P. F. King, nut lock..... 3721
 Bailey, Davis W., concrete for roads, &c..... 3785
 Balch, Frederick A., machine for separating cockle from wheat..... 3807
 Beard, George N., and Eleazar J., P. F. King, and J. Ashworth, nut lock 3721
 Becker, Henry P., & N. Underwood, Jr., machine for scouring and polishing grain..... 3753
 Beckett, William H., valves..... 3717

Behning, Henry, and J. Diehl, piano-fortes	3712	Lockwood, Wallace, rising platform and holsting machine	3739
Bergh, Bror, F. and H.G. Thompson, tack driving machine	3756	Lorrain, Abraham, horse power wheel	3693
Bolton, Henry, washing machine	3736	Macaulay, John H., brick machine	3693
Brown, John, device to protect from sun and rain	3801	McBride, Thomas, hydraulic railway brake	3806
Brown, Josiah B., portable burglar alarm	3743	Meyer, Ludwig O.P., india-rubber compound against which safety matches may be ignited	3708
Buchner, Charles, washing machine	3760	Miller, Jacob N., convertible seat buggy	3762
Burlough, William J., starch polish	3729	Miller, William, method for equalizing, distributing pressure	3747
Burns, Joseph, well boring machines	3755	Millner, George W., pipe vices	3748
Callahan, Cornelius, and E. E. Sibley, knitting machine	3724	Moore, Stephen, and H. Rogers, preparation of leather or leather board for shoes	3792
Carer, John Van B., and James Dwyer, base burning heating stove	3705	Moorehouse, William, ships' knees	3715
Casiano, J. Ygnacio, hats	3720	Moye, John E., composition for the cure of rheumatism, &c.	3797
Caswell, Ezra, hub boring machine	3753	Mullin, Thomas E., steam cooking apparatus	3759
Christie, Robert, reaping and mowing machine	3761	Murphy, William, reversible organ blow pedals	3703
Cisco, James E., car coupling	3771	Osborne, Elijah, running gear for waggon	3781
Cleveland, John H., sewing machines	3771	Pocock, Ebenezer, and Charles F. Gardner, machine for lasting boots and shoes	3772
Coffin, David N. B., capstans and windlasses	3707	Pope, William, and W. Franz, knitting machine	3775
Colburn, Lyman S., files	3752	Potter, Charles, and W. H. Taylor, harness pad tree	3784
Colton, R. P., harrows and cultivators	3683	Prowse, George R., fire extinguisher	3790
Constock, Chester, hot air and hot water furnace	3719	Rebeck, Francis J., and E. M. Davies, curtain fixture	3694
Cook, Silas L., and R. Scott, spades	3757	Redding, William F., metallic or other boxes	3714
Cook, Daniel E., refrigerator	3745	Reid, John R., and T. Rowan, floor cloth	3796
Corbet, Robert, process of raising, heating and distributing water	3793	Richard, Samuel, implement for cutting and gauging butter and lard	3778
Cornell, David S., (assignee), gate hanging	3742	Richardson, John D., springs	3688
Cornell, George B., wrenches for inserting bung bushes	3681	Robertson, William, cloth shrinking and drying machine	3777
Craig, William, (assignee), washing machine	3706	Rogers, Homer, and S. Moore, preparation of leather or leather board for shoes	3792
Cull, Robert C., machine for mincing meat	3725	Rowan, Thomas, and J. R. Reed, floor cloth	3796
Cuthbertson, James W., window screen	3728	Ruthven, John, gas machine	3687
Davies, Edward M., and F. J. Rebeck, curtain fixture	3694	Savard, Jules H., clocks	3754
Davis, Samuel H., & David W., freezing and preserving apparatus for meat, fish, &c.	3740	Scott, Robert, and S. L. Cook, spades	3757
Devlan, Patrick S., process of treating sponge	3735	Seal, Charles E., gas cut off and regulating cock	3692
Diehl, Justus, and H. Behning, piano-fortes	3712	Seigmiller, Frederick, machine for drying grain	3805
Doane, George, and R. L. Harris, hinges	3691	Seymour, George M., and J. C. Haight, horse power	3802
Draper, George P., sewing machine tables	3722	Sharp, John, spinning	3789
Draper, LaFayette, curry combs	3723	Sherwood, Hugo B., tool handle	3782
Dunning, Gerard, and C. B. George, horse shoes	3809	Sibley, Edwin, and C. Callahan, knitting machine	3724
Dwyer, James, and J. Van B. Carter, base burning heating stove	3705	Sloper, Byron, gas machines	3741
Evans Mathew, and Harry Woodward, electric light	3738	Smith, George K., metal for ploughs	3791
Earle, Reginald H., ice creepers	3808	Snively, Francis M., trace fastening	3699
Evans, Thomas, and F. Mutter, car-coupling	3811	Sparham, Terence, fire proof paint	3786
Farrand, William D., spark arrester	3810	Spratt, Henry W., voting apparatus	3795
Fererty, Edward L., skate fastening	3789	Spratt, James, solidified tea	3769
Forbes, Daniel, needle threader	3696	Stoakes, James W., and J. V. Herington, horse collar	3760
Ford, Thomas, machines for cutting the tapering plug end of well tube joints	3685	Stowell, Edward L., and T. A. D. Forster, tooth paste	3776
Forster, Thomas A. D., and E. L. Stowell, tooth paste	3776	Tappan, Benjamin, miners' lantern	3710
Foss, James M., locomotives	3684	Taylor, William H., and C. Potter, harness pad tree	3784
Fowler, Josiah, carriage spring	3803	Teats, Robert, ore roasting furnace	3764
Franz, William, and W. Pope, knitting machine	3775	Thilmayr, Waldemar, process of treating textile fabrics to prevent mildew and decay	3733
Gadonax, Raphael, gauge for centre bits	3751	Thompson, Henry G., and B. F. Bergh, tack driving machine	3756
Gardner, Charles F., and E. Pocock, machine for lasting boots and shoes	3772	Thompson, John, gate	3799
George, Charles B., and G. Dunning, horse shoes	3809	Thompson, Oron, railway car-coupler	3787
Grant, Dennis C., ice plough and ram attachment for vessels	3744	Trudel, Augustin S., mode of propelling barges	3749
Griffin, Patrick, manufacture of spirits	3695	Underwood, Nathan Jr., and H. P. Becker, machine for scouring and polishing grain	3783
Griffing, Abner A., steam radiator	3732	Vahcy, William, machine for blocking horsecollars	3702
Haight, James C., and G. M. Seymour, horse power	3802	Van Do Water, H., turbine water wheel	3746
Hall, William B., cartridge creasing for breech loading fire arms	3716	Wagner, Alexander H., pitchers	3726
Harkness, William, gas apparatus	3794	Wallace, Peter, machine for making matches	3768
Harmer, Henry, working of railway switch	3770	Waterman, Ezra S., bed bottoms	3713
Harris, Robert L., and G. Doane, hinges	3691	Watson, William M., nut lock	3718
Harrison, George W., pitman connection	3758	Watson, William, and Donald, friction mechanism for loose pulleys	3766
Harvey, Arthur, mode of applying for insurances, writing or printing and issuing policies therefor	3727	Weagant, William H., window blind	3780
Hayes, Robert, and Albert, and D. C. Kellam, window screen frames	3709	Webster, George, and John F., sewing machines	3704
Hendrickson, Stephen C., electric railway signal	3731	Wells, Horace E., lumber drying kiln	3783
Herington, James W., and J. W. Stoakes, horse collar	3760	Wheeler, Newcombe E., (assignee), window blind	3697
Hildebrand, Edward P., coal stoves	3800	White, Charles H., railway switch	3701
Hoffmann, Carl, furnace grate	3798	White, Samuel S., (assignee), dental engine	3765
Iug, Henry, gas regulator	3700	Whiteside, Henry Jr., spring slot for beds	3711
Johnson, Job, ball caster	3779	Wood, Orville K., machine for cleaning, separating and grading grain	3688
Jerome, Charles C., moth proof fur cases	3682	Woodward, Henry, and M. Evans, electric light	3735
Kellam, Daniel C., and Robert, and Albert Hayes, window screen frames	3709	Wright, William E., drying house	3690
King, Phineas F., G. N., and E. J. Beard, and J. Ashworth, nut lock	3721	Young, Thomas, cooking stove	3730
Kinney, Cyrus, ash holder and fastener	3737		
Lacey, Griffin S., and U. C. Allen, gas regulator	3773		

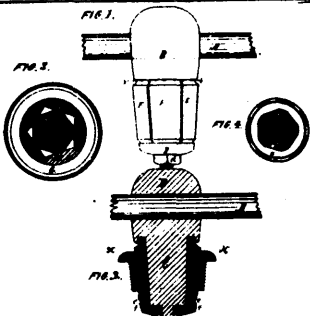
THE CANADIAN PATENT OFFICE RECORD.

ILLUSTRATIONS.

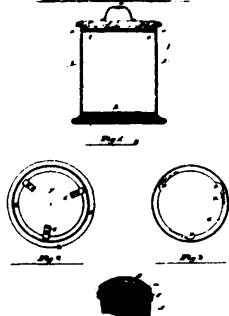
Vol. II.

AUGUST, 1874.

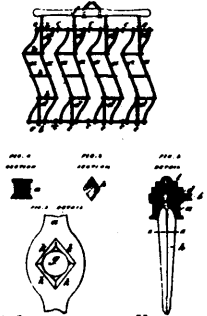
No. 5.



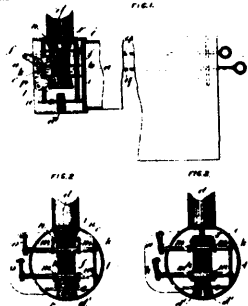
3681 Cornell's Improvement on Wrenches for Inserting Bung Bushes.



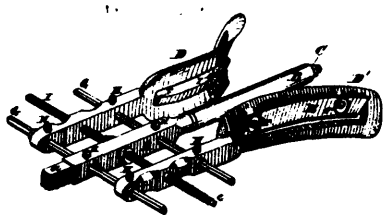
3682 Jerome's Moth Proof Fur Cases.



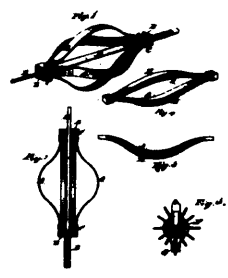
3683 Colton's Improvements on Harrows and Cultivators.



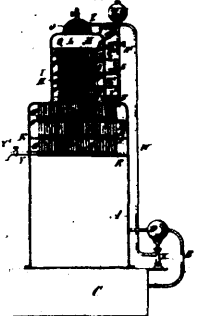
3684 Foss' Improvements on Railway Locomotives.



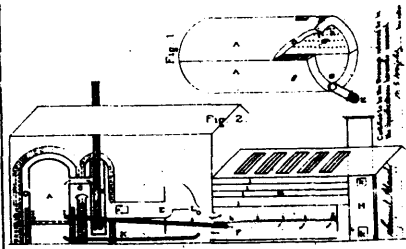
3685 Ford's Machine for Cutting the Tapering Plug end of Well Tube Joints.



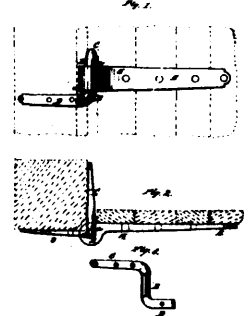
3686 Richardson's Improvements on Springs.



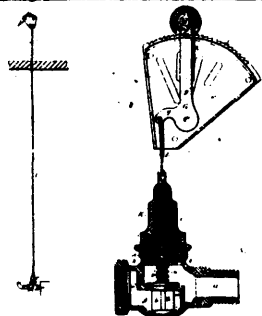
3687 Ruthven's Gas Machine.



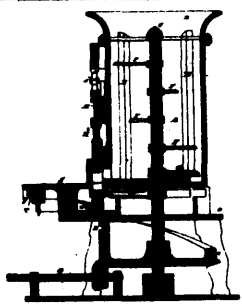
3690 Wright's Drying-house.



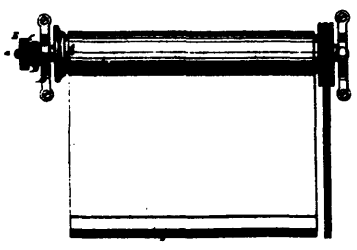
3691 Doane & Harris' Improvements on Hinges.



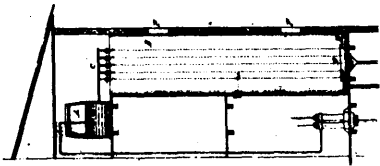
3692 Seal's Gas Cut off and Regulating Cock.



3693 Macaulay's Brick-Machine.



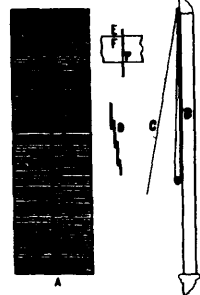
3694 Davies's Curtain Fixture.



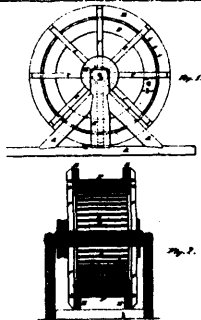
3695 Griffin's Manufacture of Spirits.



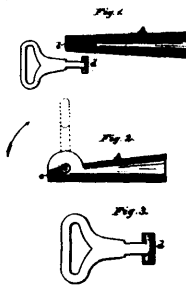
3696 Wells' Needle Threader.



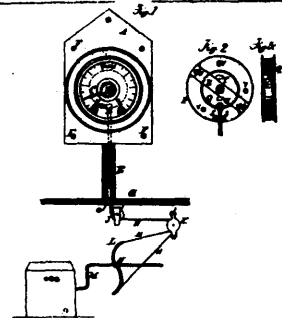
3697 Blinn's Window Blind.



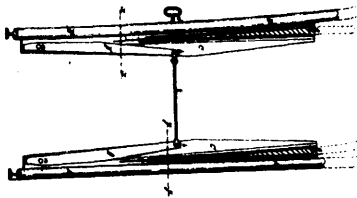
3698 Lorrain's Horse Power Wheel.



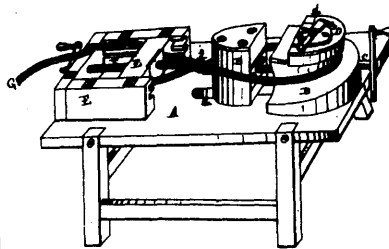
3699 Snively's Trace Fastening.



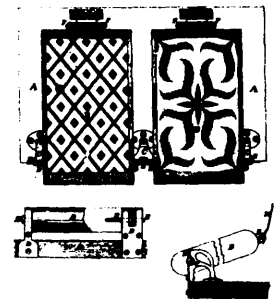
3700 Ing's Gas Regulator.



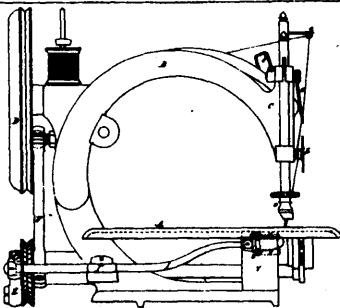
3701 White's Railroad Switch.



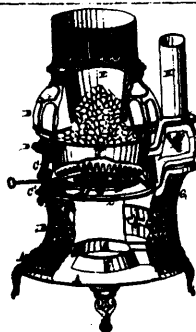
3702 Vahey's Machine for Blocking Horse Collars.



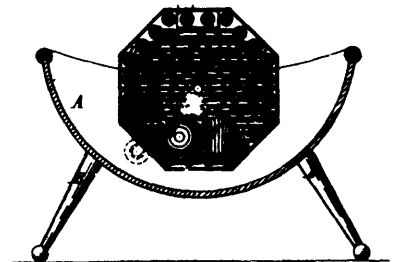
3703 Murphy's Reversible Organ Blow Pedals.



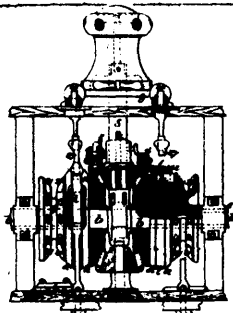
3704 Webster & Webster's Improvements on Sewing Machines.



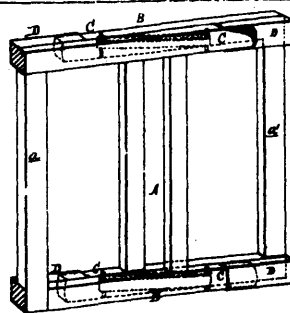
3705 Dwyer & Carter's Base Burning Heating Stove.



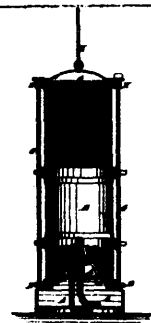
3706 Grover's Washing Machine.



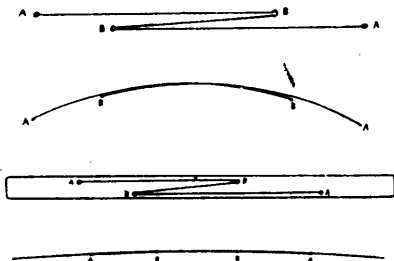
3707 Coffin's Improvements on Capstans and Windlasses.



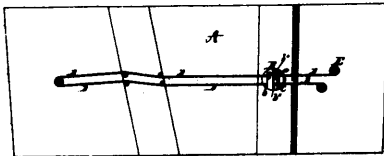
3708 Kellam, Hayes & Hayes's Improvements on Window Screen Frames.



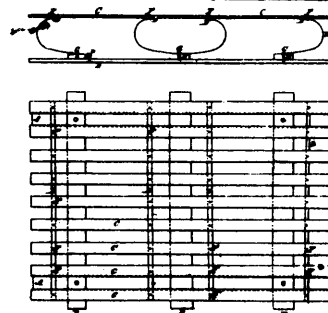
3710 Tappan's Miner's Lantern.



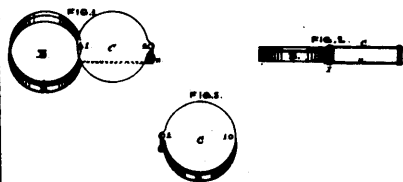
3711 Whiteside's Spring Slat for Beds.



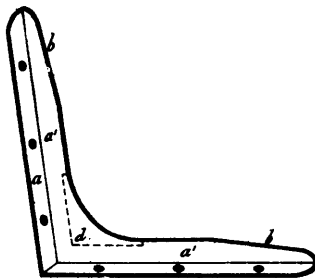
3712 Behning & Deihl's Improvements in Piano-Fortes.



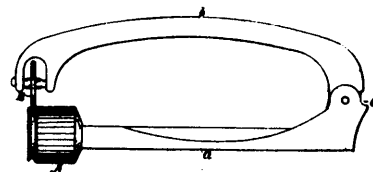
3713 Waterman's Improvements in Bed Bottoms.



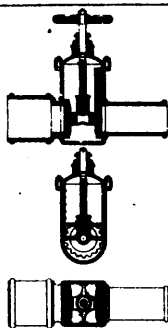
3714 Redding's Improvements on Metallic or other Boxes.



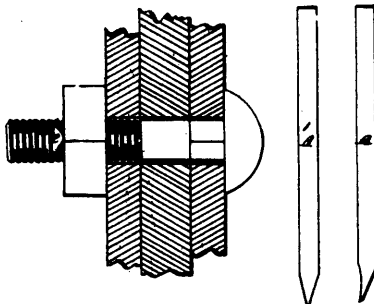
3715 Morehouse's Improvements on Ship Knees.



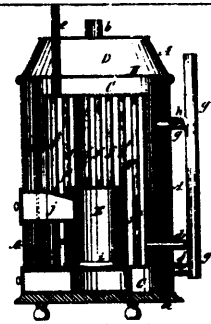
3716 Hall's Improvements in Cartridge Creasing for Breech-loading Fire-arms.



3717 Beckett's Improvements in Valves.



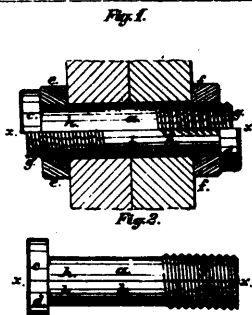
3718 Watson's Nut Lock.



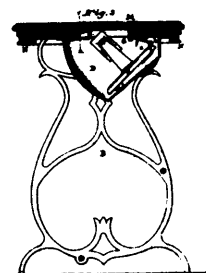
3719 Comstock's Combined Hot Air and Hot Water Furnace.



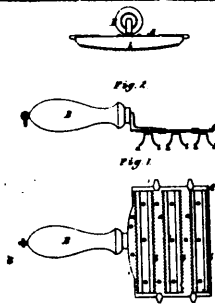
3720 Cassiano's Improvements on Hats.



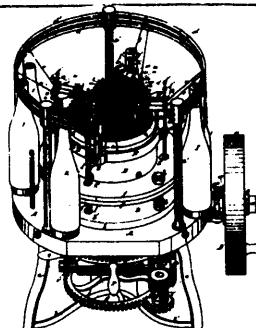
3721 King, Beard, Beard & Ashworth's Nut Lock.



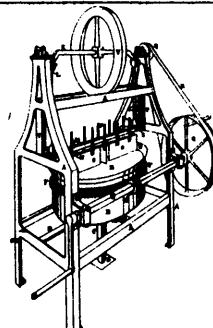
3722 Draper's Improvements on Sewing Machine Tables.



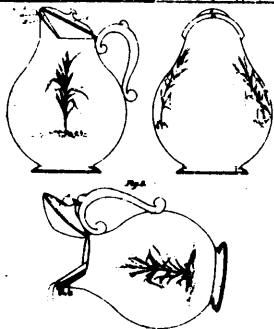
3723 Draper's Improvement on Curry-Combs.



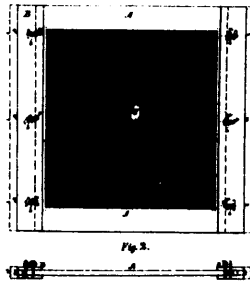
3724 Callahan & Sibley's Knitting Machine.



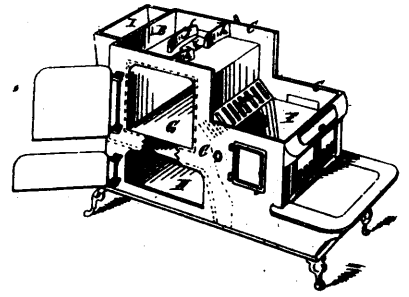
3725 Cuff's Machine for Mincing Meat.



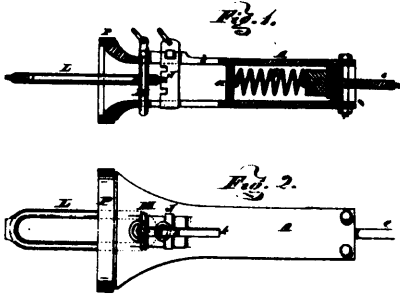
3726 Wagner's Improvements on Pitchers.



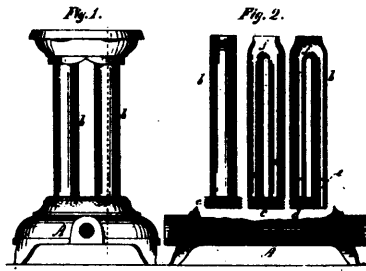
3728 Cuthbertson's Window Screen.



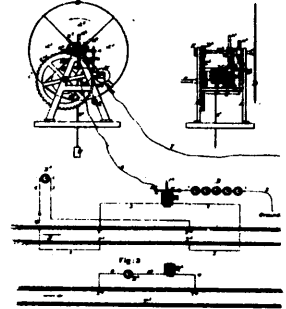
3730 Young's Cooking Stove.



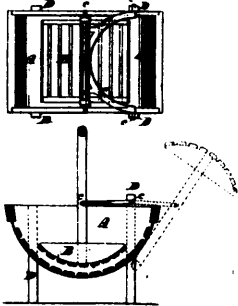
3731 Cisco's Car-Coupling.



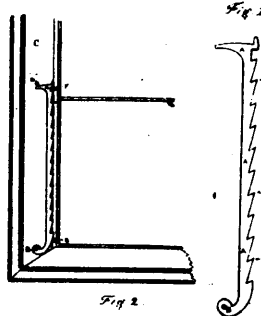
3732 Griffing's Steam Radiator.



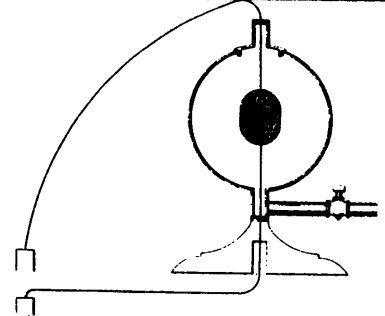
3734 Hendrickson's Electric Railway Signals.



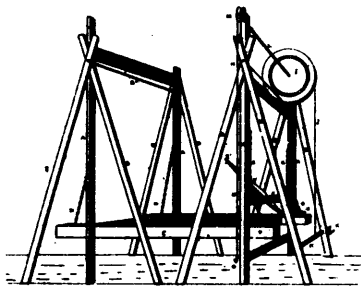
3736 Bolton's Washing Machine.



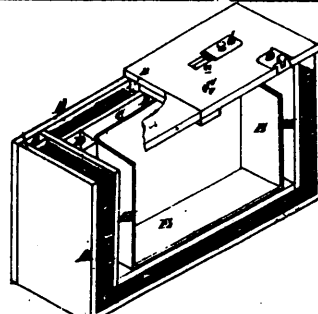
3737 Kinney's Sash Holder and Fastener.



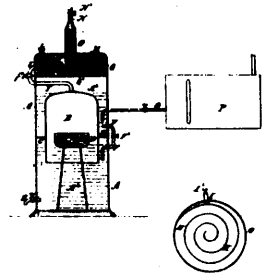
3738 Woodward & Evans' Electric Light.



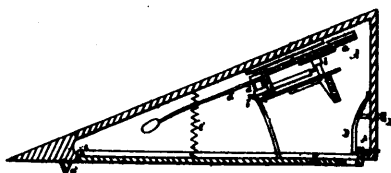
3739 Lockwood's Rising Platform and Hoisting Machine.



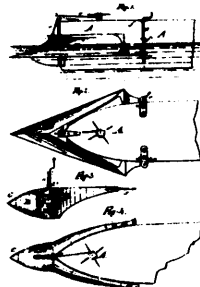
3740 Davis & Davis' Freezing and Preserving Apparatus for Meat, Fish, &c.



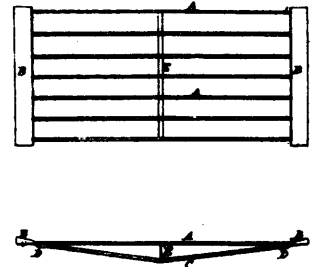
3741 Sloper's Improvements in Gas Machine.



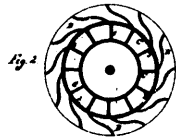
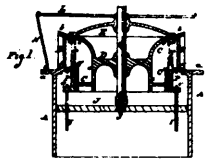
3748 Wetherhill's Portable Burglar Alarm.



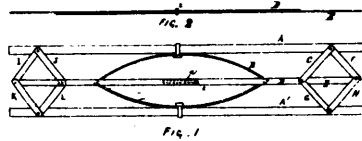
3744 Grant's Ice-Plough and Ram Attachment for Vessels.



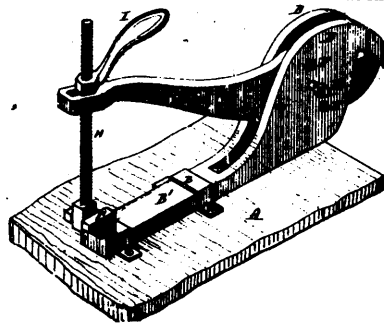
3745 Cook's Refrigerator for Preserving Meat, &c.



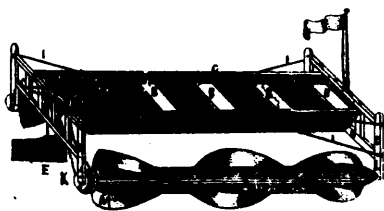
3746 De Water's Turbine Water Wheel.



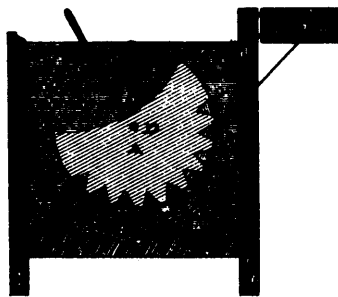
3747 Miller's Method for Equalizing or Distributing Pressure.



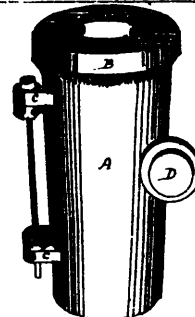
3748 Milner's Improvements on Pipe-Vices.



3749 Trudel's Mode of Propelling Barges.



3750 Buchner's Machine for Washing Clothes.



3751 Gadosas Improvements on Gauge for Centre-Bits.

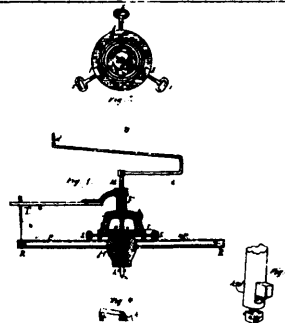


Fig. 1.

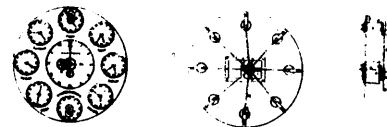


Fig. 2.

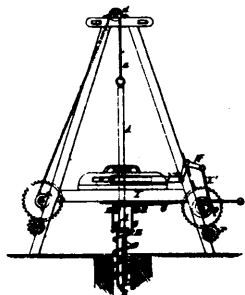
3752 Colburn's Improvements on Files.



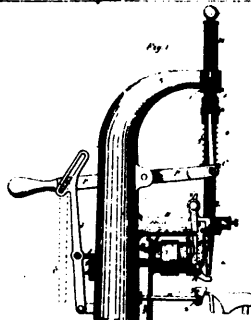
3753 Caswell's Hub-Boring Machine.



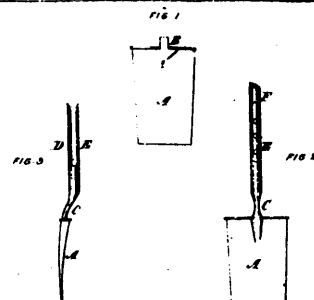
3754 Savard's Improvements on Clocks.



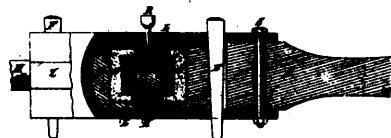
3755 Burns' Well Boring Machine.



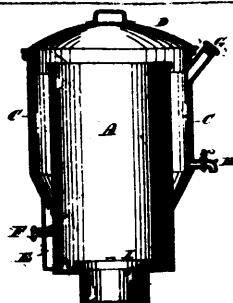
3756 Thompson & Bergh's Tack Driving Machine.



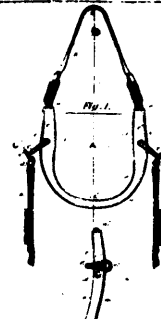
3757 Scott & Cook's Improvements in the Manufacture of Spades.



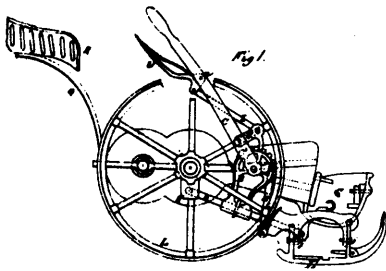
3758 Harrison's Pitman Connection.



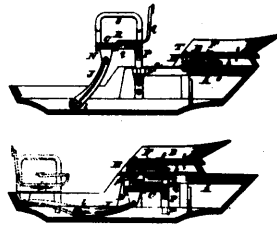
3759 Mullins' Steam Cooking-Apparatus.



3760 Herington & Stoakes' Horse-Collar.



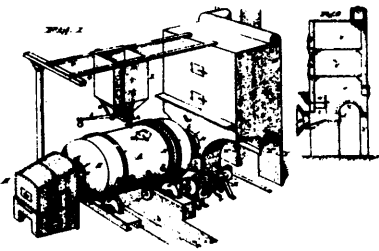
3761 Christie's Improvements in Reaping and Mowing Machines.



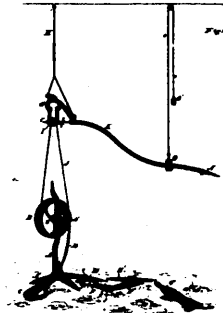
3762 Miller's Convertible Seat Buggy.



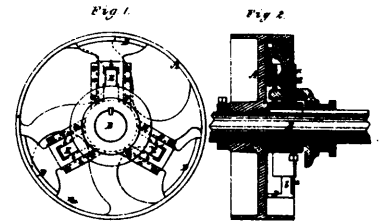
3763 Well's Lumber Drying Kiln.



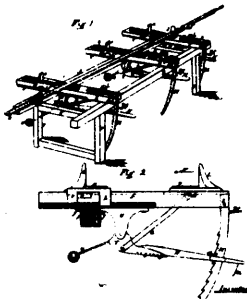
3764 Teats' Ore Roasting Furnace.



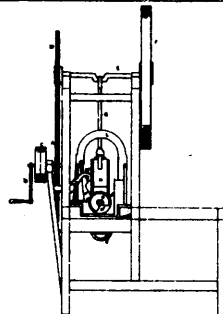
3765 Stow's Dental Engine.



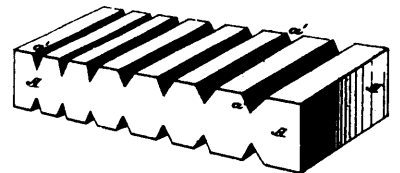
3766 Watson & Watson's Improvement on Friction Mechanism for Loose Pulleys.



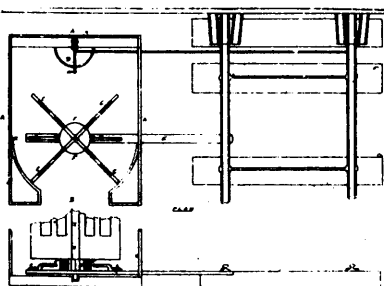
3767 Greenlee's Improvements on Sash and Door Clamps.



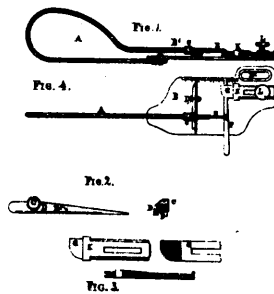
3768 Wallace's Improvements on Machines for Making Matches.



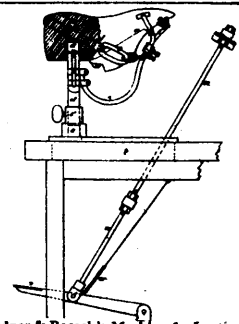
3769 Spratt's Solidified Tea.



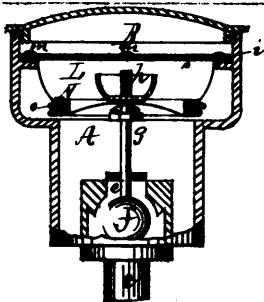
3770 Harmer's Improvements on the Working of the Railway Switch.



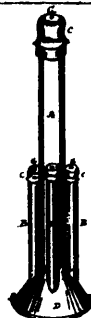
3771 Cleveland's Improvements on Sewing Machines.



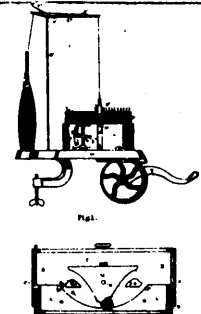
3772 Gardner & Pooock's Machine for Lasting Boots and Shoes.



3773 Lacey & Allen's Gas Regulator.



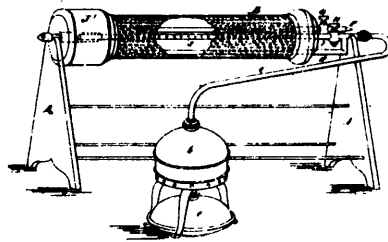
3774 Beauchamp's Washing Machine.



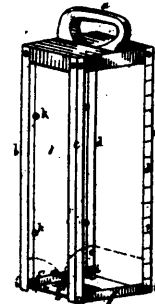
3775 Franz & Pope's Automatic Knitting Machine.



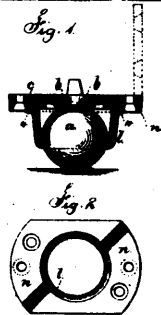
3776 Forster & Stowell's Tooth Paste.



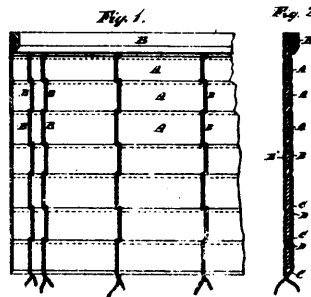
3777 Robertson's Cloth Shrinking and Drying Machine.



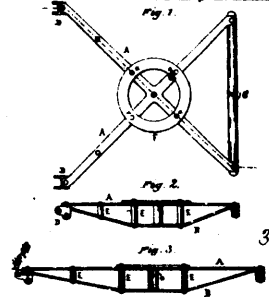
3778 S. Richard's Implement for Cutting and Gaging Butter and Lard.



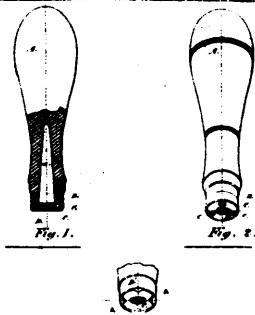
3779 Johnson's Ball Castor.



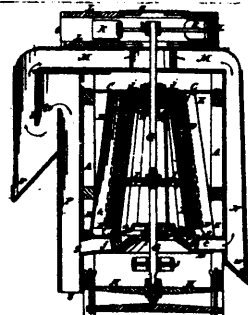
3780 Weagant's Window Blind.



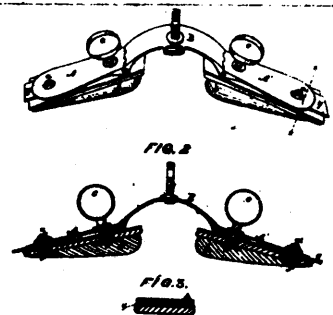
3781 Osborn's Improvements on Running Gear for Waggons.



3782 Sherwood's Tool Handle.



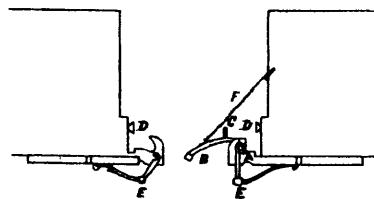
3783 Becker & Underwood's Machine for Scouring and Polishing Grain.



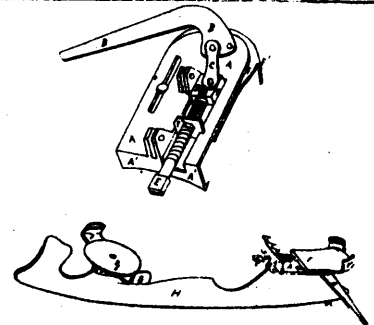
3784 Taylor & Potter's Harness Pad Tree.



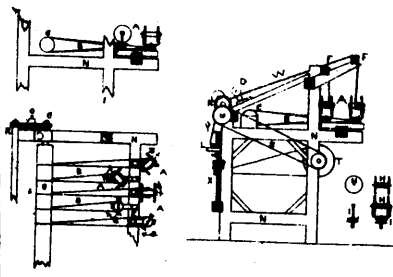
3785 Bailey's Improvement in Concrete for Roads.



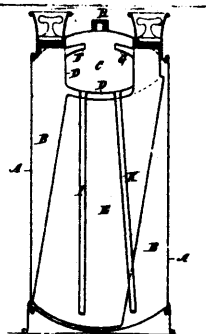
3787 Thompson's Railway Car-coupler.



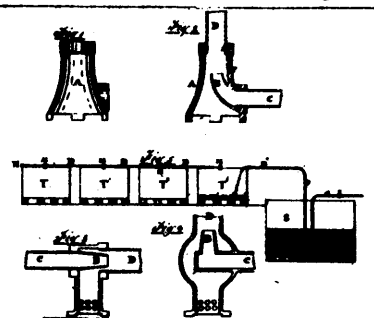
3788 Fenerty's Improvements on Skate Fastenings.



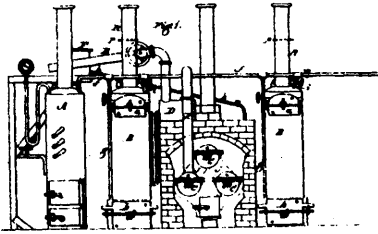
3789 Sharp's Improvements in Spinning.



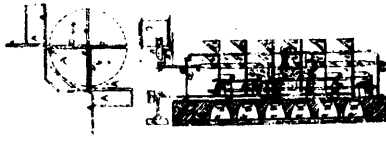
3790 Prowse's Fire Extinguisher.



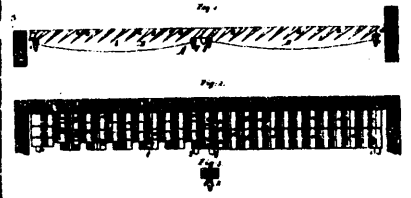
3793 Corbett's Process of Raising, Heating and Distributing Water.



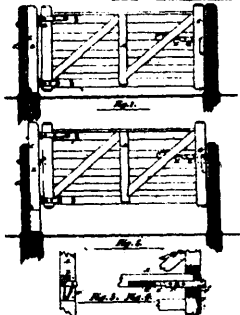
3784 Harkness' Gas Apparatus.



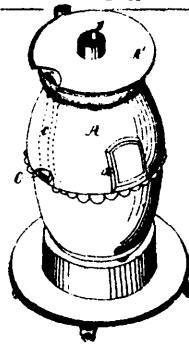
3785 Spratt's Voting Apparatus.



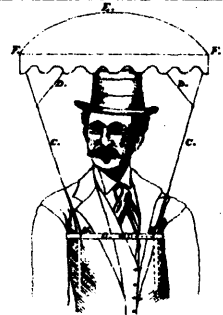
3788 Hoffmann's Furnace Grate.



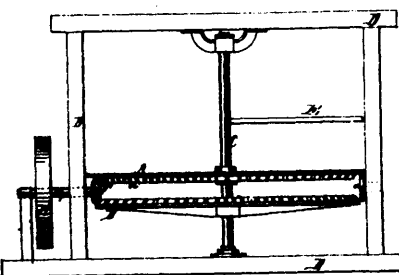
3789 Thompson's Gate.



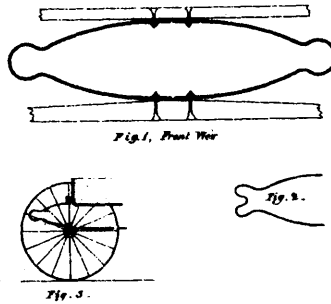
3800 Hildebrand's Improvements on Coal Stoves.



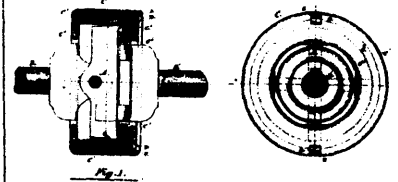
3801 Brown's Device to Protect from the Sun and Rain.



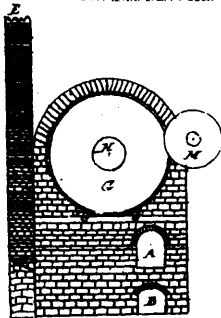
3802 Seymour & Haight's Horse Power.



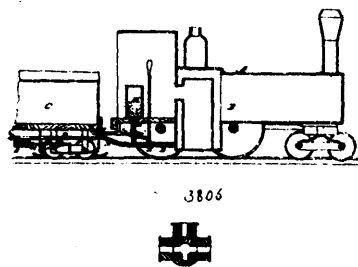
3803 Fowler's Carriage Spring.



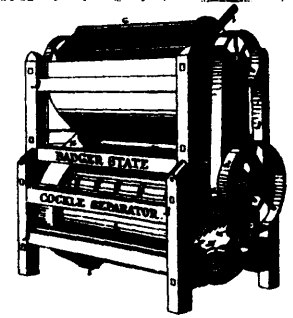
3804 Abell's Cover for Shaft Couplings.



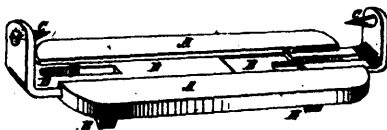
3805 Seagraville's Machine for Drying Grain.



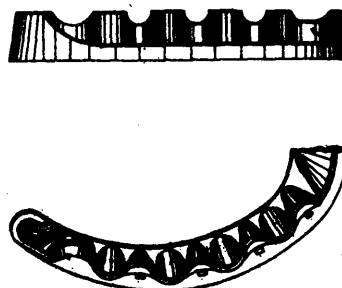
3806 McBride's Hydraulic Railroad Brake.



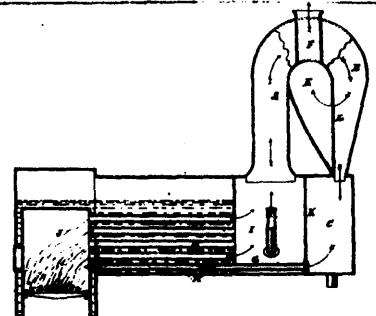
3807 Balch's Machine for Separating Cockle from Wheat.



3808 Harle's Improvements in Ice-Creepers.



3809 Dunning & Waukegan's Improvements on Horse Shoes.



3810 Ferrard's Spark Arrester.