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INVENTIONS PATENTED.

No. 4251. ELIJAH U. SCOVILLE and WASHINGTON L. SCOVILLE, Manlius, N. Y. U. S., 9th January, 1875, for 5 years: "Door Hanger." (Penture de porte.)

Claim.—1st. The improved door hanger consisting of the part *c*, having head *e* with truncated cone *r*, cast thereon, the cap *a*, with truncated cone *r*, likewise cast thereon, the wheel *b*, having hub *s* and the bolt *t*, all constructed and arranged as set forth. 2nd. A plain faced wheel in combination with a door hanger, for the purpose specified.

No. 4252. WILLIAM T. JEBB and LEON F. HARVEY, Buffalo, N. Y., U. S., 9th. January, 1875, for 5 years: "Improvements on Station Tickets for Railroads, Steamboats, &c.," (Perfectionnements aux billets de stations pour les railroutes, bateaux à vapeur, &c.)

Claim.—1st. A passenger ticket printed with a list of stations as described with the initial station from where the passenger pays his fare exposed to view while the number or name of the terminal station of the ticket is printed thereon in a separate place, and concealed from view, so as to require the ticket to be defaced by the conductor in order to determine the terminal station and enable him to properly punch the same, as set forth; 2nd. The combination with the ticket *A*, as described in the preceding claim, of the agent's coupon *B*, numbered to correspond with the ticket *A* and containing the stations between which the passenger has paid his fare and the amount of the fare, as set forth.

No. 4253. EZRA CASWELL, LEVI WHITLOCK and SAMUEL SCOTT, Lyons, N. Y., U. S., 14th January, 1875, for 5 years: "Hub Boring Machine." (Machine à percer les moyeux.)

Claim.—1st. The combination of the internally threaded tube *O*, provided with the groove *a*, the shank screws *e*, clamp collar *f*, and detent screw *b*, arranged and operating in the manner described. 2nd. The internally threaded tube *U*, and retaining screw *b*, in combination with the smooth bore tube *O*, and shank screw *S*, for the purposes set forth; 3rd. The adjusting set screws *n*, *n*, when combined with the main plate *M* and hook screws *h*, arranged as specified. 4th. In combination with the gauge screws *d*, *d*, logs of the frame *l*, borer cutter *c*, and shank screw *S*, for the purposes set forth; 5th. The metal double crank handle *C*, in combination with the screw *S*, tube *O*, and cutter *c*, all arranged and operating as set forth.

No. 4254. SAMUEL T. NORMAN, (Assignee of R. d'Ary) Toronto, Ont., 14th January, 1875, for 5 years: "Mode of Making Galvanic Insoles, Belts and Bands." (Mode de confection des semelles, ceintures et bandes galvaniques.)

Claim.—The construction of galvanic body wear by means of the combination of the elements *a* and *m*, of a galvanic battery as set forth.

No. 4255. WILLIAM W. WICKES, (Assignee of J. J. BATE,) Brooklyn, N. Y., U. S., 14th January, 1875, for 5 years: "Improvements on Refrigerators." (Perfectionnements aux réfrigérants.)

Claim.—1st. The combination with a chamber, room or building *A*, of the ice box *B*, the outlet pipe *D*, formed with outlet openings *e*, provided with deflector *g*, and the fan wheel *F*, or its equivalent air forcing or drawing mechanism. 2nd. The combination with a chamber, room or building *A*, of the ice box *B*, the fan wheel *F*, or its equivalent and the slotted outlet pipe *D*, provided with the slides *n*, for varying the available size of the outlet opening *e*; 3rd. The combination within the closed chamber *A* of the ice reservoir closed at top and at all sides, (as shown in figs. 1, 2 and 3) and provided at its bottom or lower part with inlet and openings *a*, *b*, with the fan *F* or its equivalent air forcing mechanism, the whole arranged to provide for the forced circulation of the air contained in the aforesaid chamber *t*, in a horizontal current or blast through the bottom or lower part of the ice-reservoir, and the automatic supply of ice to the said current or blast; 4th. The combination within the closed chamber, room, or building *A*, of the pipes *C*, *D*, with the inlet and outlet openings provided to the self feeding ice-box *B*, closed at top and all sides as shown; 5th. The combination within a suitable chamber of a refrigerating box or air-cooler in which the air is cooled by contact with flowing water, the fan *F* or its equivalent blast producing mechanism and a pipe *D*, constructed to diffuse or distribute the cooled air throughout the chamber. 6th. The combination as represented in figs. 3 and 4 of the ice box or equivalent cooler provided in the upper part of the chamber, room or building *A*, the fan *F*, or its equivalent and the slotted pipes *C*, *D*, the whole arranged to secure an upward current of the air through the ice box and ejection therefrom back to the chamber at the upper part of the latter. 7th. The combination within the chamber, room or building *A*, and in the manner represented in fig. 5 of the ice box *B*, constructed with the grate *m*, the air inlet pipe *C*, taking the air from the top of the chamber, but entering the ice-box before the said grate and the outlet pipe *D*, leading from the top of the ice-box and distributing the cooled air to the lower part of the aforesaid chamber, the whole for operation, as set forth.

No. 4256. JUDSON L. THOMPSON and FRANCIS N. DAVIS, Beloit, Wis., U. S., 14th January, 1875, for 5 years: "Paper Barrel." (Baril en papier.)

Claim.—1st. A barrel or cask having its body formed of a single sheet of compressed paper board, bent into cylindrical form and provided with wooden heads and compressed paper hoops. 2nd. The head of the barrel constructed with an edge flange *F*, projecting beyond the body of the barrel and provided with a concentric groove in its outer face to afford the necessary hold in applying or removing the head and in handling the barrel. 3rd. A barrel or cask having its body formed of a single sheet of compressed paper board bent into cylindrical form and secured together at its edges by a dovetailed joint and double pointed nails. 4th. The interior stiffening piece *C*, combined with the body of the barrel to protect and cover the dovetailed joint, as described.

No. 4257. WILLIAM M. COMEY, Norfolk, Mass., U. S., 14th January, 1875, for 5 years: "Improvements on Games." (Perfectionnements aux jeux.)

Claim.—1st. The flag staff *S* having the flags *W* and *Y*, and arrange to operate as specified. 2nd. The castle *B*, having the ports *J*, in combination with the moat *N*, drawbridge *a*, and Knights *1* to *10*; 3rd. A game apparatus, constructed and played as described, the standard *C*, pivoted to the field at its lower end and

arranged to be housed in the runlet D; 4th. The standard C, provided with slots or recesses into which the arms E, F, may be folded; 5th. The arm F, in combination with the ball G, attached by a chain to the arm E, said arm F operating to prevent the chain from being carried too far from the player, as shown. 6th. The runlet I, for catching and returning the balls to the player, as specified.

No. 4258. RICHARD PATTON, (Assignee of J. M. MAHARG,) Montreal, Que., 14th January, 1875, for 5 years: "Steam Trap." (Trappe de vapeur.)

Claim.—The vessel A, lever D, and counterbalance E, in combination with valve a, operated by cross-head c and fork head f as set forth.

No. 4259. GEORGE M. BRIGHT and FRANCIS BARRON, (Assignee of J. H. BANKS,) London, Eng., 14th January, 1875, for 5 years: "Improvements on the Production of Printing Surfaces and of Engraved Metal Surfaces Applicable for other purposes." (Perfectionnements dans la production des surfaces d'imprimerie et des surfaces de gravure sur métal applicables à d'autres fins.)

Claim.—1st. The combined process as described for the production of raised surfaces applicable for type-printing and other uses consisting in: a,—obtaining a photographic print on a sensitized gelatine film carried by a glass plate; b,—swelling the image; c, obtaining a cast of the same in plaster without removing the gelatine from the glass; d,—obtaining a cast of the same in a wax composition; e,—obtaining an electrotype from the wax cast. 2nd. The modification described of the above process to obtain an engraved plate; 3rd. The modification described of the above process in which the soluble portion of the printed gelatine film is washed away in place of being swollen; 4th. The use of a bath of bichromate of potash or other bichromate or per oxide of chromium with hydrate of lime, added to it for sensitizing the gelatine plates in taking a cast from the plates, as described, without removing the gelatine from the glass; 5th. The toughening of the raised gelatine surfaces by the means described; 6th. The preparation of the plaster casts by immersions in water and subsequent drying prior to taking a second cast or wax impression from them, also in the hardening of the plaster casts by immersing them in hot size, treacle and oxide of chromium also in the hardening of the plaster casts by immersing them in a weak solution of a lum in water and pyrogallic acid; 7th. The pressing of the plaster just at the time of setting when taking plaster casts from gelatine plates or casts taken from them as described; 8th. Imparting a thin film of mercury to the surface of the gelatine plates, plaster casts or wax impressions to prepare them for electro-typing.

No. 4260. PATRICK BURKE, Toronto, Ont., 14th January, 1875, for 5 years: "Gas Carbureter." (Carburateur à gaz.)

Claim.—1st. In combination with a can (or other suitable vessel) A, half filled with gasoline M, poured in through the tap B, covered by the cap C, hinged to the top part D, and locked with the feeding pipe G, and exhaust pipe J; 2nd. In combination with the vapouring chamber E, the inside connecting tube H, and the row of small tubes I, with the wicks K, suspended from the top part D and the gasoline M, as set forth.

No. 4261. PLATT B. MYERS and SOLOMON ROUGH, Buchanan, Mich., U. S., 14th January, 1875, for 5 years: "Carpet Stretcher." (Tendeur de tapis.)

Claim.—The boards A with teeth a, a, the cords b, b, the perforated moveable roller D, with spokes d, d, and the hook B, all constructed as set forth.

No. 4262. GEORGE C. THOMAS, New York, U. S., 14th January, 1875, for 5 years: "Lock Nut Washer." (Rondelle de noix de sureté.)

Claim.—1st. The described washer bent or twisted in the manner described so as to form an elastic bearing for the nut, whatever may be the position of the latter, and so as to present the sharp retaining edges owing their efficacy to the elasticity of the washer, as specified; 2nd. The described washer consisting of a ring of thin steel having internal lips B, formed by radial slits or slots, each lip having one edge depressed and the other elevated, all as set forth.

No. 4263. EDWARD N. PORTER, (Assignee of E. E. FOSTER and M. B. EATON,) Morrisville, Vt. U. S., 14th January 1875, for 10 years: "Milk pan." (Boîte à lait.)

Claim.—The milk pan A, having its bottom spring downward concavely or otherwise and stayed by cross bars d, d, or other

means for the purpose set forth; 2nd. Providing the concave bottom with a valved outlet f, for stopping and drawing off the milk; 3rd. A milk cooler B, the perforated tortuous or straight water pipe C, arranged in the bottom of the cooler B, for distributing the water; 4th. The flexible tube H, applied to the cooler B, for regulating the height of the water therein; 5th. The combination of the milk pan A, having concave bottom, outlet tube b, stays d, d, and the cooler B, perforated pipe C, and flexible tube H.

No. 4264. ALBERT B. DANIELS, Franklin, Mass., U. S., 14th January, 1875, for 5 years: "Improvements on Games." (Perfectionnements aux jeux.)

Claim.—1st. The tower I, provided with the perforated floors. 1 to 7, in combination with the rotating table B; 2nd. The table B, provided with the chutes G, and tilting tablets D; 3rd. The stop E, in combination with the chute G, and tablet D. 4th. The tablets D, having upon one side the letters of the Alphabet, and upon the other corresponding numbers as shown; 5th. The base A, having a rim as shown, in combination with the rotating table B, provided with the tilting tablets D.

No. 4265. WILLIAM A. CLARKE, York, Ont., 15th January, 1875, for 5 years: "Instrument for Wrapping Wire or Cord on broken Vehicle Shafts, &c." (Appareil pour enrouler du fil métallique ou de la ficelle sur des timons cassés, &c.)

Claim.—1st. The combination of the frame E, H, and bobbin a, a. 2nd. The combination with the frame E, H, and the bobbin a, a, of the tightening nut D, as set forth.

No. 4266. NICHOLAS A. MANAAR, Buffalo, N. Y., U. S., 15th January, 1875, for 5 years: "Improvements on Tea Kettles." (Perfectionnements aux théières.)

Claim.—1st. The spout D, fastened to the part B, in the manner described; 2nd. The cover C, having the lower edge of the rim made slightly oval, so as to act as a spring for holding it in place, in the manner set forth; 3rd. The knob H, composed of the parts h, h₁, h₂, and combined with the cover G, as shown.

No. 4267. F. B. A. ROYER DE LA BASTIE, La Villette, Fce., 15th January, 1875, for 15 years: "Process and Apparatus for Tempering Glass." (Procédé et appareil pour recuire le verre.)

Claim.—1st. The process described of tempering and hardening glass by plunging the same when heated to about the point of softening, and under exclusion of the atmospheric air into a bath of liquid fatty, resinous or bituminous matter, also raised to a high temperature but below that of the glass; 2nd. The combination of the oven a, for heating with the closed bath C for plunging, made to communicate with each other so that the heated glass can be plunged with the least possible manipulation; 3rd. The combination of the rocking floor 19, inside the oven a, with the rocking table e inside the bath C, arranged and operating as described.

No. 4268. CHARLES F. LALONDE, Montreal, Que. 15 Janvier, 1875, pour 5 ans: "Perfectionnement aux machines à séparer les clous, vis, brochettes, rivets, crochets, &c., au sortir du bain d'étamage." (Improvements on Machines for Separating Nails, Screws, Tacks, Rivets, Hooks, &c., when taken out of Tin Bath.)

Résumé.—L'arbre B muni de ses palettes E, et animé d'un mouvement rotatif, dans la boîte tel que décrit.

Claim.—The shaft B provided with floats E, worked by rotatory motion in the box as described.

No. 4269. JOSEPH E. TOWNSHEND, Montreal, Que., 15th January, 1875, for 5 years: "Improvements in the Cleansing, Disinfecting and Preserving Feathers, Hair, Wool, Flocks, Fibre and all Materials used for Beds and Upholstery." (Perfectionnements dans la manière de nettoyer, désinfecter et conserver la plume, le crin, la laine, la bourre, le fibre et tous les objets employés dans les lits et la tapisserie.)

Claim.—The process of cleansing, disinfecting, and preserving feathers, hair, wool, flock, fibre and all materials used for beds or upholstery by the use of steam, evaporating and mingling with the vapours from Carbolic Acid or other disinfectants, and the subsequent desiccation by hot air in the manner described.

No. 4270. JOHN E THOMPSON, Stanbridge, Que., 15th January, 1875, for 5 years: "Improvements on Steam Cooking." (Perfectionnements aux ustensiles de cuisine à vapeur.)

Claim.—In combination with any steamer C, the perforated dampers, I, I, as set forth.

No. 4271. WILLIAM WEST and GEORGE WEST, Toronto, Ont., 15th January, 1875, for 5 years: "Improvements on Bedsteads." (Perfectionnements aux couchettes.)

Claim.—The bed D, constructed and arranged to draw out from the side of the main case before being folded down, as shown in the drawings, leaving the front division of the main case to be fitted up for other purposes, such as a book-case, a wardrobe, a show-case for stores, or as an ordinary cupboard.

No. 4272. JAMES GOODWIN, Sherbrooke, Que., 15th January, 1875, (Reissue of Patent No. 3377:) "Invalid Bedstead." (Couchette d'invalid.)

Claim.—The combination of a tick stretching frame D, and elevating posts C, applied to a bedstead, and operating as set forth: 2nd. The frame D, constructed with head and foot frames E, F, hinged thereto and capable of being elevated and depressed inclinedly, as set forth: 3rd. The combination of the shaft a, arms b, connecting rod c, pulleys d and f, and cords e, applied to a bedstead for operating a sheet attached to the rod c, in the manner described.

No. 4273. RYLEY WHITING and JAMES KYSER, Cleveland, Ohio., U. S., 15th January, 1875, for 5 years: "Trace Fastener." (Crochet de palonnier.)

Claim.—The whiffletree end composed of the recessed ferule A, and loop B, pivoted tongue C, having projection E, and spring D, combined to operate as specified.

No. 4274. JOSEPH BAKER, Trenton, Ont., 11th January, 1875, (Extension of Patent No. 223) for 5 years: "Flour Scoop." (Ecope à farine.)

Claim.—A scoop of any size or shape having a concave sive cloth bottom, formed of fine brass or other wire above which, and near inner surface, whereof is suspended by means of pivots, a frame work of wire called an agitator, whereto is attached a handle passing upwards inside of scoop through a projecting eyelet with thumb knob on top, between which and upper side of eyelet is coiled a spiral spring, the machinery being worked with one hand, and in the several parts of the said machine, in combination as aforesaid but not otherwise.

No. 4275. LEONARD J. HEWITT, Toronto, Ont., 15th January, 1875, for 5 years: "Railway Car Wheel." (Roue de wagon de railroute.)

Claim.—1st. The contour of the web C with the furrows C₁ and C₂, and ridges C₃ and C₄, as shown in Figs. 1, 2, 3 and 4 of the drawings; 2nd. The device of a ribless car wheel where the entire web consists of certain definitely constructed furrows C₁ and C₂, and ridges C₃ and C₄, as described.

No. 4276. GUILFORD D. BOOTH, Ottawa, Ont., 15th January, 1875, for 5 years: "Improvement on Breech-Loading Shot Guns." (Perfectionnement des fusils chargeant par la culasse.)

Claim.—1st. The insertion of the rifle barrel H, fig. 1, with the manner of lapping the cartridge puller C, as set forth: 2nd. Fastening long rifle barrels at muzzle by means of nut D, fig. 1, and short barrels by means of india rubber tube, or iron attachment, as set forth.

No. 4277. GEORGE W. OTIS, Lynn, Mass., U. S., 15th January, 1875, for 5 years: "Improvements on Lightning Conductors." (Perfectionnements aux paratonnerres.)

Claim.—1st. The combination of the rod D with plate or plates A, one or more having their edges formed in points B, as described; 2nd. The combination of the rod D, with plate E, with and without spikes G, as described.

No. 4278. CHARLES P. CROSSMAN, WEST WARREN and EDWARD J. BROWN, Worcester, Mass., U. S., 15th January, 1875, for 5 years: "Salt Box." (Salière.)

Claim.—A salt box having a perforated cover, and provided with a pulverizer arranged or disposed within the body of the box, in such a manner as to pulverize the salt contained therein by the mere act of shaking the box in whatever position the same may be placed, as shown.

No. 4279. WILLIAM L. PHILIPS, New York, U. S., 15th January, 1875, for 5 years: "Improvement on Stoves." (Perfectionnement des poeles.)

Claim.—The improved heating stove in which are combined the open fire box A, expansion chamber D, and jacket E, the same being provided with passages for air and the products of combustion as specified; also in the combination of the open fire box A, and expansion chamber D, the same being provided with passages for the products of combustion, as specified.

No. 4280. DANIEL CONBOY, Uxbridge, Ont., 18th January, 1875, for 5 years: "Improvements in Vehicles." (Perfectionnements dans les voitures.)

Claim.—The combination and arrangement of the seat B, bars C, C₁, seat c, pivoted back D, lugs D₁, side stays E, and hasps C₂, and F, arranged and operating as described.

No. 4281. ISAAC M. RHODES, Hancock, Mich., U. S., 18th January, 1875, for 5 years: "Fracture Bed." (Lit d'hôpital.)

Claim.—1st. The combination of the back section B, and seat or thigh section B₁, connected as specified with the supporting frame A; 2nd. The forms J, J, and the straps M, M, combined with the stretched D, D, and its back section B; 3rd. The combination of cords and pulleys L, l, o, p, r, arranged as described, with the stretcher D, the section B, and the seat pieces C₁, C₂, C₃, as set forth; 4th. The knee-joint formed by the diagonal adjustable pivots i, i, in combination with the extensible pieces C₁, C₂, and lower leg sections B₁, as described; 5th. The seat section B, and lower leg section B₁, pivoted together and to the frame A, as described, in combination, with an elevating device, as set forth; 6th. The extensible seat section B₁ in combination with the pivoted back and lower leg sections B, B₁, prop C, and elevating levers F, F, as described.

No. 4282. F. CORTEZ WILSON, Chicago, Ill., U. S., 21st January, 1875, for 5 years: "Oil Can." (Bidon à l'huile.)

Claim.—1st. An oil-can or tank having a stationary and moveable cover or dome C, and D, constructed and operated as set forth; 2nd. A fixed moveable top for oil tanks or reservoirs, constructed in conical form of less diameter than the body of the tank and provided with a cover, sink, pump or supply opening as described.

No. 4283. GEORGE W. BOWMAN, Morrow, Ohio., U. S., 21st January, 1875, for 5 years: "Improvements in Driers." (Perfectionnements dans les sécheries.)

Claim.—1st. The horizontally flattened horizontal flue H, having the stay and deflecting plate M arranged as set forth; 2nd. The combination of flat bottom B, register B₁, flat horizontal flue H, induction pipe I, J, discharge flue D, trays F, F, and doors G, Q, as set forth; 3rd. The combination of the horizontal flat flue H, stay and deflecting plate M, and regulator O, o, for the purpose specified.

No. 4284. JAMES B. WHITE, Wayne, Ind., U. S., 21st January, 1875, for 5 years: "Improvements on Omnibusses." (Perfectionnements aux Omnibus.)

Claim.—1st. Platform B, and guard D, in combination with steps C, hand rail b and wings E, when constructed and applied to street omnibusses as set forth; 2nd. The body A, of the omnibus constructed with sliding door G, top H and openings F as set forth.

No. 4285. CARLO R. TAYLOR, Ionia, Mich., U. S., 21st January, 1875, for 5 years: "Apparatus for Seasoning Lumber." (Appareil de séchage du bois.)

Claim.—A box for steaming lumber composed of sections, so that the size of the box or chamber can be increased or decreased at will, as shown; 2nd. The combination of the boxes *a, h* and frame *r*, as described.

No. 4286. EDINGTON B. DECKER, New-York, U. S., 21st. January, 1875, for 5 years: "Improvements in Boots and Shoes." (Perfectionnements dans les chaussures.)

Claim.—The india rubber or gutta percha shank piece *A*, as set forth.

No. 4287. WENDELL R. KING, Chicago, Ill., U. S., 21st January, 1875, for 15 years: "Baling Plastering Hair." (Emballage du poil à crépir.)

Claim.—The bale *B*, of plasterer's hair, consisting of several bundles *A*, containing a bushel each by weight, inclosed or incased in paper bags or similar material, and united compressed and secured to form a package as specified.

No. 4288. WILLIAM ASCOUGH, Buffalo, N. Y., U. S., 21st January, 1875, for 5 years: "Combination Square." (Equerre à combinaison.)

Claim.—The combination with a bevel square having a pointed tongue *B*, of the protractor *E*, spirit level *N*, and compass point *O*, all arranged to operate as described; 2nd. The combination with the stock *A*, of the moveable tongue *B*, and protractor *E*, when the same are turning upon the common pivot *C*, and moveably attached to each other by means of the thumb screw *G*, in the manner described; 3rd. The combination with the stock *A*, of the tongue *B*, protractor *E*, sights *I* and *L*, and thumb screw *K*, as described; 4th. The combination with the stock *A* of the pointed tongue *B*, and adjustable point *O*, as described.

No. 4289. WILLIAM INGLIS, Bolton, Eng., and JAMES INGLIS, Montreal, Que., 21st January, 1875, for 15 years: "Grain Storage Boat." (Bateau-magasin à grain.)

Claim.—1st. The floating vessel or boat, for storing or carrying grain, consisting of tank *A*, with outer bottom *B*, with inclined inner bottom *C*, and fenders or protecting boat, raft or boom *F*, as described; 2nd. The combination of floating tanks or bins *A*, with separate protecting boat, raft or boom *F*, as set forth.

No. 4290. HENRY RYDER, Somerville, Mass., U. S., 21st January, 1875, for 5 years: "Furnace Grate." (Grille de fourneau.)

Claim.—1st. The combination of a shaft *a*, having arms *c*, and legs *b*, not only with a grate frame *C*, provided with bearings *f*, for the feet of the said legs, but with a series of grate bars *B*, having notches or recesses *A*, to receive the arms at their ends as specified; 2nd. The combination of the stationary and moveable grate bars *A, B*, and the operative mechanism of the moveable bars *B*, with a series of friction rollers *f*, applied to support the moveable bars, and to them and the grate frame; 3rd. The combination of a friction roller *f* and a separate axle *m*, going through and supporting it with each moveable grate bar *B*, and the support frame *C* thereof; 4th. The friction rollers *f*, provided with grooves or slots to receive such extensions as described; 5th. The grate support frame *C*, provided with stationary tenons *n*, in combination with the stationary grate bars *A*, provided with grooves, slots, or mortises to receive such tenons; 6th. Not only in a grate support frame *C*, a series of moveable grate bars *B*, machinery for moving the latter back and forth longitudinally but in rollers *f*, applied to the frame and to support, as described, the grate bars while in motion, all being as specified; 7th. The shaft *a* having each foot grooved as shown at *m* in figure 13 in combination with the bearing *f*, provided with the curved projection *h*, to enter said foot as shown; 8th. The bars of one set of grate bars having their upper edges or teeth extending above the upper edges of the bars of the other set, as set forth; 9th. The inclined guards *D, D*, combined with the furnace and two sets of grate bars as described.

No. 4291. FRANK RHIND, Brooklyn, N. Y., U. S., 21st. January, 1875, for 5 years: "Improvements in Lamps." (Perfectionnements aux lampes.)

Claim.—1st. A combined lamp-extinguisher and flame spreader formed of two pivoted wings that move up over the flame from the ends of the wick and cause the flame to spread as set forth; 2nd. The combination of the spring *z*, bent as shown and secured to the under side of the burner with the slotted pivoted wings *a*, the wings being made to open backward when an upward pressure is applied to the under side of the spring, as set forth; 3rd. The combination of the hand plate *d*, having ring *e*, attached to its upper end with the operating rod *c* as shown; 4th. The combination of the rod *c*, having the ring *h*, secured to its upper end with the

bent spring *z*, and hinged and slotted extinguisher *a*, as shown; 5th. A lamp bowl or other vessel having a tube *u*, open at both ends, passing through it, the said tube being blown with the bowl or vessel, as set forth.

No. 4292, ROBERT C. BROOKS and ABRAHAM J. VAN WINKLE, San Francisco, Cal., U. S., 22nd January, 1875, for 5 years: "Process and Apparatus for distilling Alcohol Extract from Wort." (Procédé et appareil de distillation de l'alcool extrait de mout.)

Claim.—1st. The process of producing alcoholic spirits free from fusil oil by a single distillation; the same consisting in first vapourizing and removing the ether from the still, and then increasing the temperature until the alcohol vapourizes and passes off without raising the temperature in the still high enough to vapourize the water and fusil oil in the charge of wort, as described; 2nd. Alcoholic spirits obtained by first separating and removing the ether from the charge of wort, and then vapourizing and distilling the alcoholic spirits without vapourizing or separating the water and fusil oil from the wort, as described; 3rd. The column or still *R*, consisting of two or more chambers, in combination with the condenser and separator *P*, vat *A*, and condensing tank *D*, when combined and connected as described and arranged to operate as specified; 4th. The improvement consisting in extending the stand or induction pipes *12* above the surface of the wort in the chambers of the still as described; 5th. A low temperature condensing tank or separator *P*, constructed as described and located between the upper chamber of the still and the main condenser *D*, when provided with a draw off pipe, as described; 6th. In combination with the condenser and separator *P*, the pipe *25* and tank *27*, as specified; 7th. The closed vat *A* having the main vapour pipe *14*, coiled inside of it so that the vat will serve as a preparatory heating chamber, or fourth chamber of the still, and connected with the upper chamber of the still by a conducting pipe *1*, as described; 8th. The pipes *4* and *6*, which connect the chambers of the still, when regulated by valves *3* and *5* in combination with vat *A*, with its conducting pipe *1* and its valve *2* as described; 9th. The combination whereby the temperature of the still can be automatically regulated, by maintaining a current of water through the condensers, the same consisting in the water tank *D*, with its overflow pipe *32* which leads into the condenser and separator *P*, and also the separator overflow pipe *34*, the temperature being rendered automatic by the intermittent action of the still as specified; 10th. The improvement in distilling apparatus, consisting in providing pipes of sufficient size for vapour to pass through freely without creating a pressure in the body of the still, as described; 11th. The process of utilizing the low wines or third run of the purating still for reducing the proof of the second run, for the purpose specified.

No. 4293. JOSEPH K. FEICK, Berlin, Ont., 23rd January, 1875, for 5 years: "Last for making Seamless Boots." (Forme pour faire des chaussures sans coutures.)

Claim.—1st. The combination of a last or tree for seamless felt boots, gaiters, shoes and slippers, made in three pieces, the heel-piece *A*, the lengthening piece *B*, and the widening piece *G*, having a notch *D*, as described with the block *D*, the inner ring *E*, the outer ring *F*, and the bale *G*; 2nd. The combination of the block or top piece *D*, the inner ring *E*, and the outer ring *F* with a boot last *A*; 3rd. The combination of the bale *G*, its arms *h, h*, and clamping screw *H*, with the block *D*, and the last *A, B, C*.

No. 4294. WAREHAM S. WISNER, Brantford, Ont., (Assignee of C. P. BROWN,) 23rd January, 1875, for 5 years: "Improvements on Seed Sowing Machines." (Perfectionnements aux machines à semer les grains.)

Claim.—The valve *I*, as and for the purposes set forth.

No. 4295. CHARLES C. MOORE, Elizabeth, N. J., U. S., 23rd January, 1874, for 5 years: "Pencil Holder for Slate Frames." (Porte-crayon d'ardoise.)

Claim.—1st. In combination with a slate frame having recesses *A*, and *B* and shaft *D*, provided with a pin *f* or equivalent holding and operating device, and the spring *E* as described; 2nd. The combination with the shaft *D*, and pin *f*, of slot *C*, in the slate frame; 3rd. In combination with a slate frame having recesses *A, B*, shaft *D*, and spring *E*, the slot *C*, when provided with bevelled edges *H*, as described.

No. 4296. JOHN C. PEACOCK, London, Eng., 23rd January, 1875, for 5 years: "Gas and Fuel Stove." (Poele à gaz et à combustible.)

Claim.—1st. The general form of construction which allows any sort of fuel and gas to be burned in the same apparatus; 2nd.

The general form of construction of the base or stand by which the upper part can be adapted to a variety of household requirements, also the mode of arrangements by which the air of the room is drawn through the base or stand without passing through the fuel by which mode or arrangement the room is afforded an additional ventilation; 3rd. The method of and arrangement for introducing air for combustion to the upper part of the fuel tube by means of the air and ash perforated tube with its support; 4th. The use and arrangement of a perforated frustum of a cone placed at the bottom of the fuel tube; 5th. The method of using Argand burners with their arrangements on the perforated disc; 6th. The use of a close domed glass shade for the purposes of heating and lighting; 7th. The arrangement for the introduction of fresh warmed air into the apartment; 8th. The boiler arrangement described.

No. 4297. DONALD D. CATTANACH, Providence, R. I., U. S., 23rd January, 1875, for 5 years: "Oil Treating Process." (Procédé de traitement des huiles.)

Claim.—The process of treating linseed oil and kindred oils by subjecting the oil to agitation in the presence of air or light and air, or the specified equivalent oxidizing agent in the manner described with or without the preliminary purification of the said oil as set forth; 2nd. The gum or gum-like substance made from linseed oil or kindred oils in the manner described.

No. 4298. MOSES HULCHINSON, Norfolk, N. Y., U. S., 23rd January, 1875, for 5 years: "Heating Drum." (Poêle sourd.)

Claim.—A heating drum in which the upper and lower sections or heads are provided with horizontal flues, connected or united together by vertical pipes, the combination with such parts of the partitions arranged in the upper and lower heads for interrupting the passage of the gases on their way to the exit pipe in the upper section and causing them to circulate before escaping through the lower and upper flues as described.

No. 4299 THOMAS A. EDISON, Newark, N. J., U. S., 23rd, January, 1875, for 5 years: "Improvements in Electric Telegraphs." (Perfectionnements dans les télégraphes électriques.)

Claim.—1st. A signalling apparatus composed of a circuit closing spring and segmental weight, as set forth; 2nd. A telegraphic alarm and signalling apparatus made of one or more levers with circuit closing surfaces contained within a box and a key or finger-piece outside the box, as set forth; 3rd. The combination with the segmental circuit closing weight of the switch *f*, for the purposes set forth; 4th. The combination with the circuit closing segmental weight of the ratchet wheel *l*, escapement *n*, pendulum *o*, and spring *10*, for the purpose set forth; 5th. The receiving instrument composed of a drum and stylus for chemical paper, an electro-magnet and armature-lever stop, and a circuit closer, insulated from the drum when the parts are at rest for the purposes set forth; 6th. The combination with the circuit closing cylinder *u* and key *v* of the springs *z*, held up by the struts *32*, and stop *w*, actuated by frame *v*, as set forth.

No. 4300. THOMAS PEACOCK and JOHN C. PEACOCK, London, Eng., 23rd January, 1875, for 5 years: "Gas Cooking Apparatus." (Appareil de cuisine à gaz.)

Claim.—The general form, construction and arrangement of cooking stove and boiling apparatus with their combinations of non-conducting cases, the mode of introduction and regulation of supply of gas and the system of regulated withdrawal of the products of combustion from the lowest part of the cooking space; the special construction of concentric burners for the combustion of air and gas; the packing of the lids of the sauce pans; the form and construction of the kettle for boiling water.

No. 4301. WILLIAM A. LAMB, Orleans, N. Y., U. S., 23rd January, 1875, for 5 years: "Improvements on Waggon Seats." (Perfectionnements aux sièges de wagons.)

Claim.—1st. The cylindrical bolt *C*, secured by shoulders *a* in the seat box, in combination with its projection *E*, and the incline *F* of the body bearing box *B*, whereby the partial turning of the bolt will draw and lock and hold the seat and body together, as set forth; 2nd. The combination in a seat lock of the partially rotating bolt with the rubber retainer *I*, and the bearing box *B*, whereby the bolt projection is retained in its locked position with the fixed incline, as set forth; 3rd. The combination of the cylindrical shouldered bolt *C*, and its projection *E*, with the bearing-boxes *B*, *B'*, the incline *F*, the side opening *G*, in the fixed box and the rubber retainer for locking and unlocking vehicle seats as set forth.

No. 4302. MOSES GOLDMAN, Syracuse, N. Y., U. S., 23rd January, 1875, for 5 years: "Pocket Candlestick." (Bougeoir de poche.)

Claim.—1st. The candle *s*, provided with compartments *C, C*, placed in front thereof for a removable candle stick and a cap on the outer end covering the end of the case *A* when closed, and the match safe *f*, fitting in a space over the candle safe, all arranged within the cylindrical case *A*, as shown and constructed, and operating as described; 2nd. In combination with the candle safe *f*, the removable candle-stick *e*, having a receptacle for waste wax or tallow fitting the space *d* constructed as shown; 3rd. The spring clamp, consisting of the cap *n* and spring *S*, within a shank attached to the cap *n*, in combination with a pocket light; as described; 4th. In combination with the spring clamp, the extension braces *o, o*, as set forth.

No. 4303. JOHN W. MORGENEIER, Sheboygan, Wis., U. S., 23rd January, 1875, for 5 years: "Varnish for Coating Photographic Negatives and Glasses." (Vernis pour enduire les négatifs et les verres de photographie.)

Claim.—A varnish for producing matt or ground glass surface on photographic negatives and glass, composed of absolute alcohol gum, sandarac, turpentine, oil of lavender, gum camphor, sulphuric ether and pure rain water, the whole compounded as set forth.

No. 4304. GEORGE RAMSDELL, Detroit, Mich., U. S., 23d January, 1875, for 5 years: "Process of Making Wood Gas." (Procédé de fabrication du gaz de bois.)

Claim.—1st. The process of making wood gas or gas from vegetable substances by the successive operations executed as follows: first, by subjecting the substance to heat in a retort; second, conveying the gaseous products thence through water; third, conveying the gaseous products therefrom through hydro-carbon contained in a separate vessel, all as described; 2nd. In combination with the pipe *f*, the double drip composed of drip-boxes *L* and *M*, pipe *l* and pump *N*, as described; 3rd. The float *G*, with open bottom and central tube provided with dome shaped partitions *g*, perforations *h*, and downward conduits *h*, in combination with the pipe *f*, as set forth.

No. 4305. JOHN J. HIGGINS, New York, U. S., 23rd January, 1875, (Extension of Patent No. 4151) for 5 years: "Automatic Umbrella Runner." (Douille automatique de parapluie.)

Claim.—In combination with the stick *C* and springs *c, c*, of an umbrella, the runner composed of the inner tube *A* and outer tube *B*, all constructed and arranged to operate, as set forth.

No. 4306. JOHN J. HIGGINS, New York, U. S., 25th January, 1875, (Extension of Patent No. 4151) for 5 years: "Automatic Umbrella Runner." (Douille automatique de parapluie.)

No. 4307. HENRY H. RHODES, San Jose, Cal., U. S., 25th January, 1875, for 10 years: "Railroad Car Axle." (Essieu de wagon de rail-route.)

Claim.—The combination of the grooved sleeve *C*, the sections of the axle *A* and *B*, and the ring *F*, moulded in place, as set forth.

No. 4308. WILLIAM GOODING, Detroit, Mich., U. S., CHARLES SPALDING and ARTHUR WINCHESTER, Windsor, Ont., 25th January, 1875, for 5 years: "Coal Elevator." (Élévateur à charbon.)

Claim.—1st. The trussed span and folding bridge laterally moveable upon an elevated railway, and provided with rails for a hoisting and conveying car as described; 2nd. The combination of the frames *C, C*, trussed span *E*, and folding bridge *E'*, with an elevated railway as described; 3rd. The combination of the shaft *D*, pinions *c, c*, and toothed rack *c*, with the frames *C, C*, and an elevated railway as set forth; 4th. The combination with the frames *C, C*, of the beams *Q*, notched plates *R*, and adjustable inclined bars *S*, as set forth; 5th. The combination of the frame *F*, and gate *C*, provided with the pulley *10*, with the span *E*, and folding bridge *E'*, as set forth; 6th. The combination of the latches *1*, with the car *G*, and of the hooks *1*, with the bulk heads *H, H*, as set forth; 7th. The car *G*, provided with the shaft *I*, spools *L*, drum *m*, ratchet *n*, pawl *o*, rack shaft *p*, arm *p'*, rod *p'*, ropes *N, N*,

and a bucket or kibble, as set forth; 8th. The combination with the span, the bridge and the car of the hoist-rope *o*, pulley *r*, drum *P*, sheaves *q*, *q*¹, *q*², *q*³, *q*⁴, rope *J* and counterweight *K*, as set forth; 9th. The combination of the hooks *s*, *s*, each provided with a spring keeper *s*¹ with the spreader-bar *M*, as described.

No. 4309. ANDREW J. O'DAY, Elk Rapids, Mich., U. S., 25th January, 1875, for 5 years: "Ore Crushing and Rock Breaking Machine." (Machine à broyer les minerais et à casser la pierre.)

Claim.—1st. The reversible double and single face die plate *H*, having grooves upon its ends and adapted to be used with ends and sides interchangeably, in combination with removable steps *k*, *l*, as described; 2nd. The reversible double and single faced die-plate *G*, adapted to be used with ends and sides interchangeably in combination with a supporting stirrup and strap *i*, as described; 3rd. In combination with the jaw *F*, pivoted at its top, and having the lugs *f*, and the link bar *E*, pivoted between them, the lever *D*, pivoted to said link bar, and to the plunger block *A*, for the purpose of giving to the lower end of said jaw a rapid initial movement, gradually diminishing in speed and increasing in force, as shown

No. 4310. GEORGE M. HOLMES, Gardiner, Me., U. S., 25th January, 1875, for 5 years: "Mechanism for Planing the Cogs of Bevel Gear Wheels." (Machine à planer les dents des roues coniques.)

Claim.—1st. A shaft *C* for holding the bevel wheel gear, the cogs of which are to be planed, adjusted by mechanism, as described, to turn laterally and vertically about a point *D*, which is upon its axis, also on the line of travel of the planing-tool *a*, and at the apex of the conical or bevelled surface to be planed, as set forth; 2nd. A shaft *C*, for holding the bevel-wheel, the cogs of which are to be planed, adjusted by mechanism, as described, to revolve on its own axis, and to turn laterally and vertically about a point *D*, which is upon its axis, also upon the line of travel of the planing tool *a*, and at the apex of the conical or bevelled surface to be planed; 3rd. In combination with a shaft *C*, for holding the bevel gear wheel to be planed constructed and adjusted to turn about the point *D*, as described; a form or template *I*, or its equivalent to guide the gear wheel to the tool and enable the latter to form the proper radial contour of the sides of the cog, as described; 4th. In combination with the shaft *C*, the link *K*, and nut *L*, the latter

attached to the feed screw *M* as set forth; 5th. The combination in a machine for planing bevel gears of a planing tool *a*, adjusted to have a movement always along the same right line, the said line passing through the apex *D*, of the conical surface to be planed, a shaft *C* for holding the gear to be planed, adjusted to have a universal motion about the point *D*, and mechanism for bringing the gear to and holding it in contact with the tool *a*, as described; 6th. The combination of a pivoted shaft for supporting the wheel to be cut, a reciprocating cutter moving constantly in one only right line, and that line directed toward or passing through the point in which the shaft is pivoted, mechanism to gradually draw or otherwise move the free extremity of the shaft more and more nearly to a parallelism with the line of movement of the cutter and a device for guiding said movement of the shaft in a curved path with the view of gradually changing the position of the wheel being cut in relation to the cutter, to point the cutter to impart to the teeth the proper contour, the combination being and operating as specified.

No. 4311. WILLIAM HAMILTON, Fallsbury, N. Y., U. S., 25th January, 1875, for 15 years: "Machine for Making Animal Shoes." (Machine à faire les fers d'animaux.)

Claim.—1st. The combination of the flat-faced anvil *A*, side hammers *E*, *F*, and trip or other hammer *B*, arranged and operating as specified; 2nd. The combination of the shifting bar *L*, with the hammer-helve and tappet wheel, of a trip-hammer, as specified.

No. 4312. JOHN PRINCE, Rock Island, Que., 25th January, 1875, for 5 years: "Apparatus for Cooling Milk" (Appareil à rafraichir le lait.)

Claim.—1st. The arrangement of the distributing pipes *E*, *I*, *I*, and perforated ring *H*, also in the perforated discharge pipe *C*, as set forth; 2nd. The manner of packing the thimble *F*, to prevent leakage from the vat-pan *B*, as set forth.

No. 4313. DERRICK ALLARD, St. Albans, Vt., U. S., 25th January, 1875, for 5 years: "Smoke Stack." (Cheminée.)

Claim.—1st. The inverted cone *B*, with pipe *C*, in combination with rack *D*, pinion *E* and *C*, guides as described; 2nd. The inverted cone *H* with wings *I*, *I*², ring *K*, flanges *J*, inverted wire gauge cone *L*, as described.

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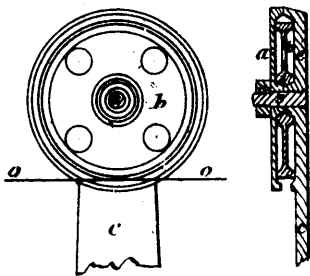
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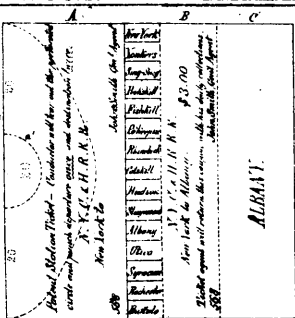
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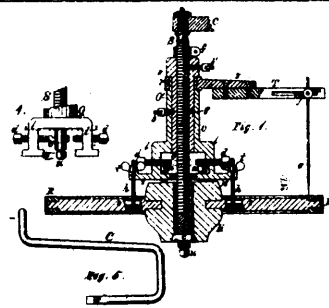
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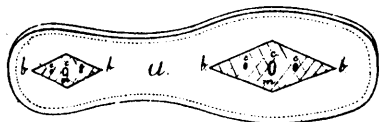
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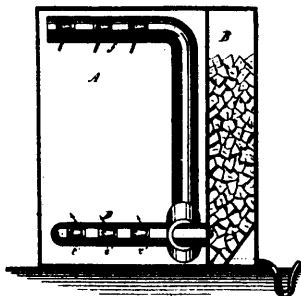
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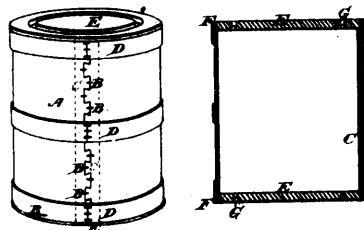
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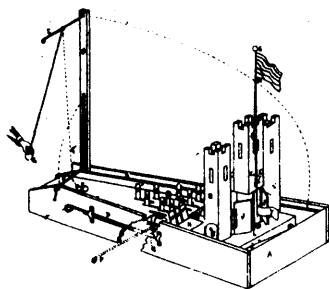
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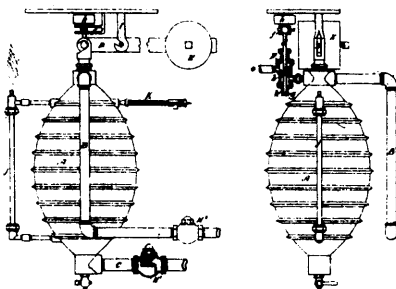
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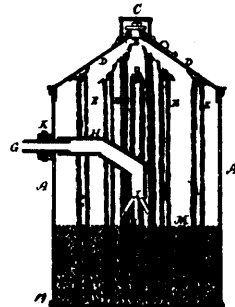
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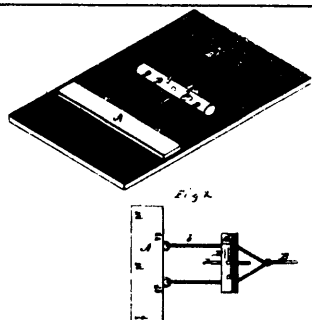
4257 Comey's Improvements on Games.



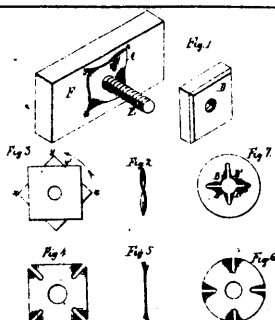
4258 Maharg's Steam Trap.



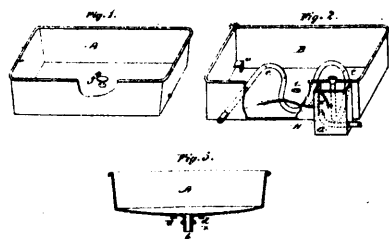
4280 Burke's Gas Carbureter.



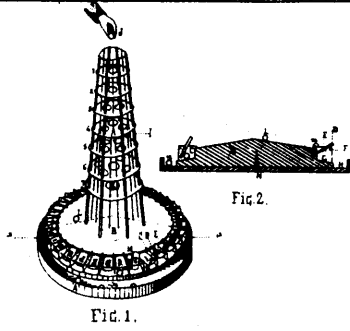
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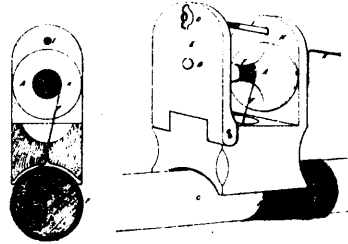
4262 Thomas' Lock Nut-Washer.



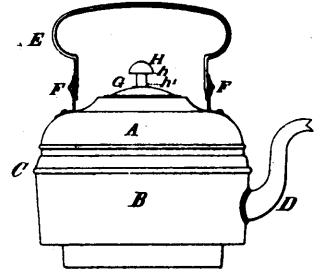
4263 Foster & Eaton's Milk Pan.



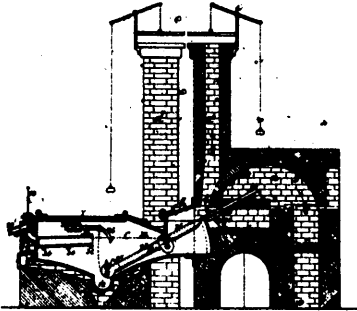
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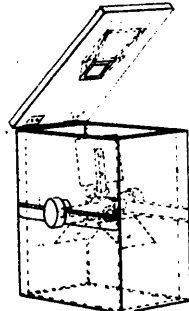
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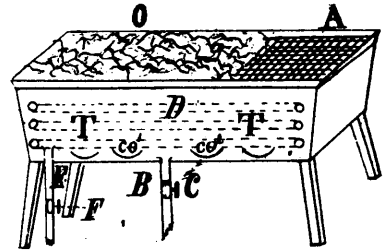
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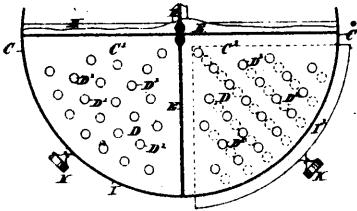
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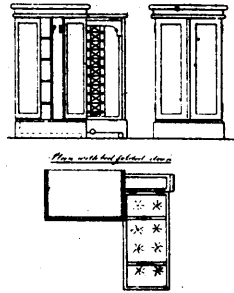
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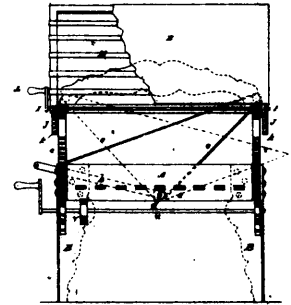
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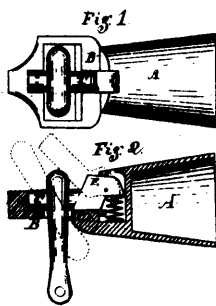
4270 Thompson's Improvements on Steam Cooking.



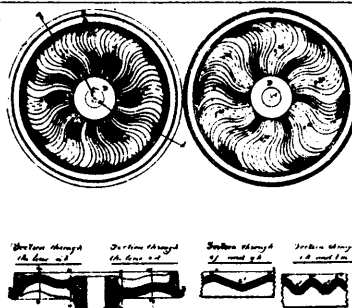
4271 West's Improvements on Bedsteads.



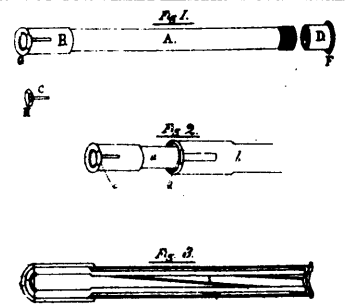
4272 Goodwin's Invalid Bedstead.



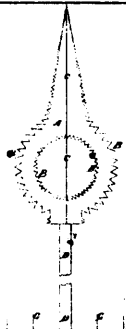
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4275 Hewitt's Railway Car Wheel.



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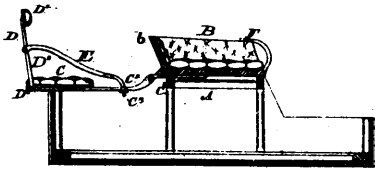
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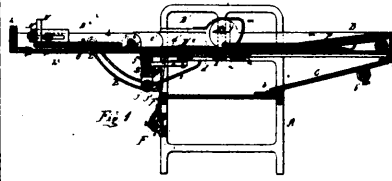
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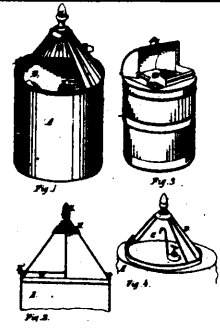
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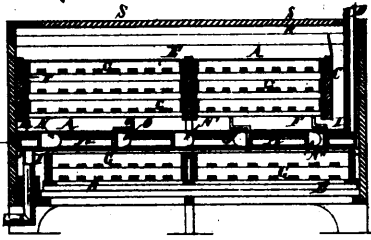
4280 Conboy's Improvements in Vehicles.



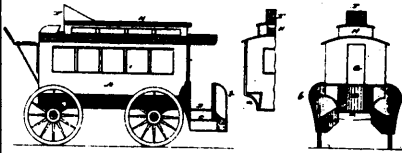
4281 Rhodes' Fracture Bed.



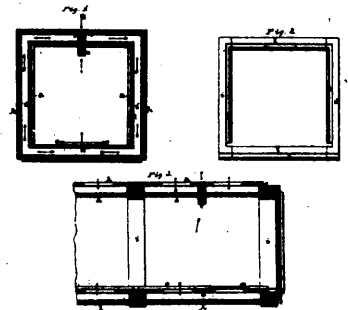
4282 Wilson's Oil Can.



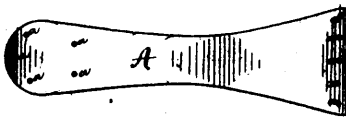
4283 Bowman's Improvements in Driers.



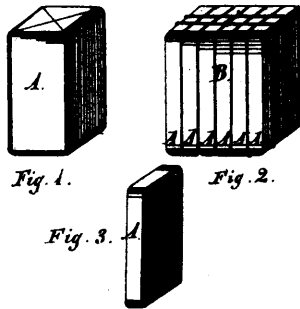
4284 White's Improvements on Omnibusses.



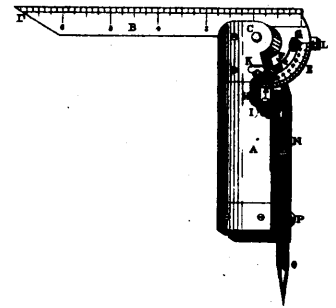
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4286 Decker's Improvements in Boots and Shoes.



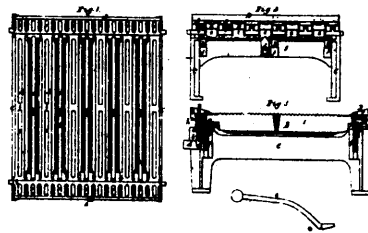
4287 King's Baling Plastering Hair.



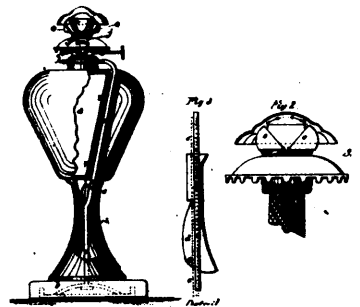
4288 Ascough's Combination Square.



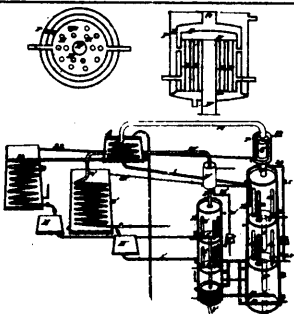
4289 Inglis' Grain Storage Boat.



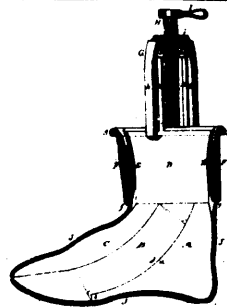
4290 Ryder's Furnace Grate.



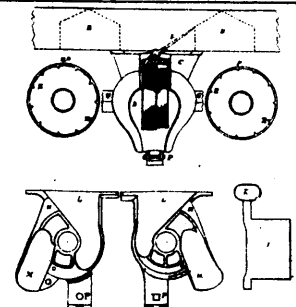
4291 Rhind's Improvements in Lamps.



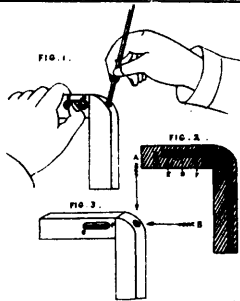
4292 Brooks & Van Winkle's Process and Apparatus for Distilling Alcohol Extract from Wort.



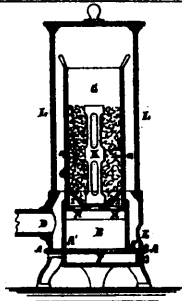
4293 Feick's Last for making Seamless Boots.



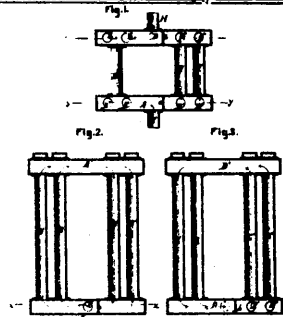
4294 Brown's Improvements on Seed Sowing Machines.



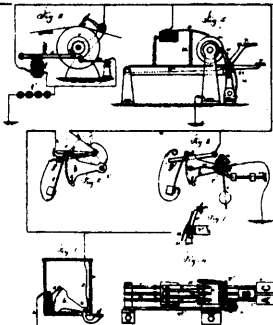
4295 Moore's Pencil Holder for Slate Frames.



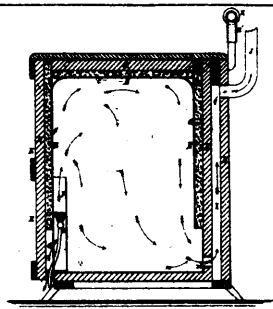
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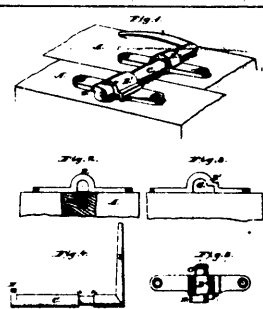
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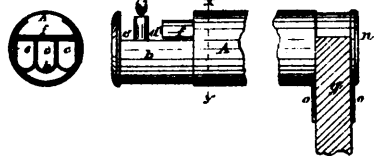
4299 Edison's Improvements in Electric Telegraphs.



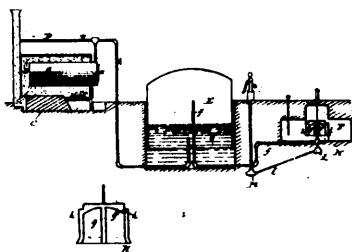
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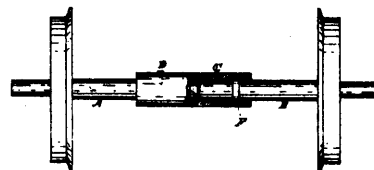
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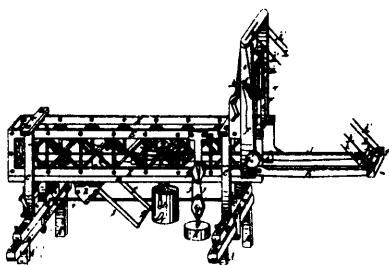
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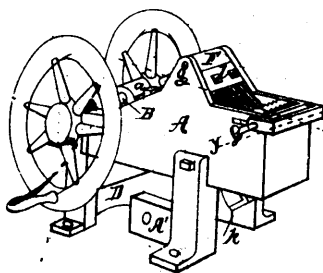
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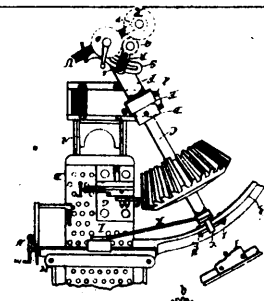
4307 Rhodes' Railroad Car Axle.



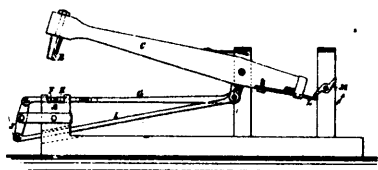
4308 Gooding, Spalding & Winchester's Coal Elevator.



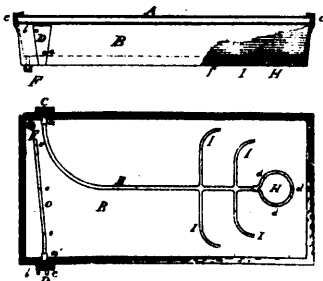
4309 O'Day's Ore Crushing and Rock-breaking Machine.



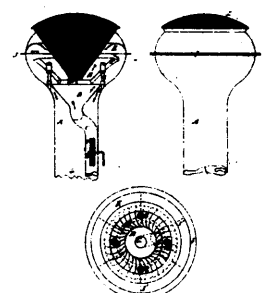
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