

No. 4784. ALFRED G. BAYLES, New York, U. S., 4th June, 1875, for 5 years: "Gas Burner." (Bec à gaz.)

Claim.—The hollow-cap C, with wire gauze discs *d*, in combination with chamber A, with inlet pipe *b*, and burner *d*.

No. 4785. ELISHA DRAPER, London, Ont., 4th June, 1875, for 5 years: "Apparatus to Facilitate the Study of Music." (Appareil à faciliter l'étude de la musique.)

Claim.—The slides B, D, with the letters of the musical scale placed thereon, and the springs I, I, attached thereto, the tuned sonorous D, D, balls E, E, guards F, F, cross-bars H, H, H, and supports L, L, in combination with a musical staff and key-board as shown, and the combination and arrangement of all the parts.

No. 4786. WILLIAM M. LEYDE, Newport, and JOHN J. STOTWELL, Cottage Grove, Min., U. S., 4th June, 1875, for 5 years: "Thrashing Machine." (Machine à battre.)

Claim.—1st. In combination with the primary carrier A, and secondary carrier G, the picker D, provided with the convex edged blades or flanges *d*; 2nd. In combination with the primary carrier A, the secondary carrier G, the sides of which project over the main body of the machine; 3rd. The combination of the primary-carrier A, picker D, and beater or agitator F, each provided with blades, with secondary-carrier G, made of a width greater than the primary-carrier A; 4th. The combination with the secondary straw-carrier G, of the agitator *n*.

No. 4787. WILLIAM P. YEOMAN, Waukegon, Ill., U. S., 4th June, 1875, for 5 years: "Ear Ring." (Pendant d'oreille.)

Claim.—The combination of the arm *b*, and cup *c*, with the hinged arm *i*, and sleeve *h*.

No. 4788. LUTHER M. BISSELL, Addison, Ont., 4th June, 1875, for 5 years: "Sower Shaker Attachment for Vehicles." (Ajustage des agite-semoirs pour les voitures.)

Claim.—1st. The cam-ring A, attachable to a hub or wheel of a vehicle for operating a rocking-bar G, connecting with a lever for giving longitudinal motion to the distributor of a seed-box; 2nd. The combination of the lever E, mounted on the clip D, attached to the axle, rock-bar G, pivoted to said lever and elbow-lever H, connecting with said rock-bar, and axially mounted on the fulcrum-pin F, for connection with and operation of the distributor of a seed-box; 3rd. The cam-lever I, pivoted to the lever E, to bring the rock-bar G, into or out of engagement with the cam-ring A, for stopping or operating the distributor.

No. 4789. LEWIS J. ATWOOD, Waterbury, Ct., U. S., 4th June, 1875, for 5 years: "Improvements on Lamps." (Perfectionnements aux lampes.)

Claim.—1st. The removable portion of the burner made with a circular chimney rest and spring chimney clamps, a cylindrical body *p*, and a deflector at the top of the cylinder all rigidly united together, in combination with the stationary portion of the burner containing the wick tube *a*, the air distributor *k*, and the cylindrical body *q*, over which the removable cylinder *p*, is placed when the parts of the burner are put together and which cylinders are of nearly equal length so as to firmly sustain the removable portion of the burner; 2nd. The wick raising wheels made of sheet-metal with a cylindrical hub on one side, surrounding the shaft; 3rd. The combination with the cylinder *c*, air distributor *k*, deflector *f*, and cylinder *q*, of the chimney holder *h*, adapted to receive the flattened base and the chimney fastenings *l*.

No. 4790. DUNCAN A. McDONELL, Charlottenburg, Ont., 27th May, 1875, (Extension of Patent No. 421), for 5 years: "Improvements on Sleighs for Drawing Timber, Cord Wood, &c." (Perfectionnements aux traîneaux à trainer le bois de haute futaie, de corde, &c.)

Claim.—The beams E, and the raves D, being connected with the crown-pieces B, by means of screw bolts, which completely perforate the crown pieces, the beams and the raves; the sand-board F, of the front-sleigh projecting a short distance beyond the hind beam of said sleigh; the small-pole L, of the hind-sleigh being attached to the said projected sand-board F, by means of a pair of clevises which are arranged in the following manner, to wit: the clevis on the projected sand-board F, attached to it by bolts which perforate the sand-board being perpendicular to the plane of said sand-board, and the clevis on the small-pole L, being placed in a position at right angles to the plane of the first named clevis *i*, *a*, horizontally *a*, regards the upper surface of said small pole L, said pair of clevises being marked M.

No. 4791. GEORGE H. PALMER, Monmouth, Ill., U. S., 5th June, 1875, for 5 years: "Improvements in Army Equipments." (Perfectionnements dans les équipements d'armées.)

Claim.—1st. The back-pad A, double-shoulder straps B, B, B, B, and metal deer or rings E and D, combined; 2nd. The combination of the back-pad A, double-shoulder-straps B, B, B, B, rings or deer E and D, with straps H and F, and double-loop I; 3rd. The combination of back-pad A, and double-shoulder straps B, B, B, B, with straps H and F, bags or pouches L, L, and straps X; 4th. Back-pad A, double-shoulder straps B, B, B, B, straps H and F, and loop I, in combination with rings E and D, coat-straps N, N, bags *i*, *i*, and waist belt J; 5th. The combination of straps P, P, binding straps O, O, and side or bearing straps Q, Q, with back pad A, and double-shoulder straps B, B, B, B; 6th. Back-pad A, double-shoulder straps B, B, B, B, combined with carbine-sling R; 7th. The back-pad A, double-shoulder straps B, B, B, B, straps R, combined with waist belt J, loops G, straps U, carbine-sling R, and straps S.

No. 4792. NELSON LOVERIN, Montreal, Que., 5th June, 1875, for 5 years: "Apparatus for the Teaching of History and Statistics." (Appareil pour l'enseignement de l'histoire et des statistiques.)

Claim.—The apparatus for teaching history and statistics by symbols, said apparatus consisting of the square frame A, bars between the standards *b*, *b*, divided into compartments as shown in the drawings, and adapted to receive the cubes *j*, as well as by means of small pins to hold suspended in position the larger symbols *k*, *l*, *m*, together with the symbols.

No. 4793. ADONIRAM J. SMALL, Woodstock, N. B., 5th June, 1875, for 5 years: "Barrel Lifter." (Élévateur de barils.)

Claim.—1st. The hoop of iron or any other metal A, A, hinged or pivoted in the middle; 2nd. The handles H, H, attached to the hoop by any device or method that will set the handles off from the hoop to give sufficient leverage to grip the barrel to be lifted; 3rd. The combination of the pivoted or hinged hoop A, A, with the handles H, H.

No. 4794. JOHN E. FINLEY, Memphis, Ten., U. S., 5th June, 1875, for 5 years: "Churn Dasher." (Batte-beurre.)

Claim.—The propeller-wheel P, F, the thimble T, the encircling-rim R, with holes H, H, and the air chamber B, with holes O, O.

No. 4795. JAMES J. ROBERTS, CHARLES S. PHARIS, ISAAC R. PHARIS, and EMIL LAASS, Geddes, N. Y., U. S., 5th June, 1875, for 5 years: "Method of expanding Steam-Cylinder Packing Rings." (Mode d'expansion des garnitures métalliques des cylindres à vapeur.)

Claim.—The combination with a piston-head of a wedge-plate, which is attached to the piston-nub independently of the follower, so that all of the wedges may readily be removed with the wedge-plate, without a removal of the follower or cylinder-head; 2nd. The arrangement of the wedge-plate attached to the piston-nub, independently of the follower, with the cylinder head provided with a cylinder-cap, so that the said wedge-plate can be removed without taking off the whole cylinder-head.

No. 4796. THOMAS S. DICKERSON, Chicago, Ill., U. S., 5th June, 1875, for 5 years: "Process and Apparatus for the Manufacture of Gas from Petroleum and other Oleaginous Substances." (Procédé et appareil pour la fabrication du gaz avec le pétrole et autres substances oléagineuses.)

Claim.—1st. The process of producing fixed-gas by vaporizing petroleum or other oleaginous substances, the method of checking the passage of the gases and vapours through the retorts, to wit, by introducing them into the top of vertically arranged retorts, and discharging them at the bottom thereof; 2nd. The retorts L, L, made in sections flanged at their ends and arranged horizontally one above the other, in combination with the generator A, the vapour-pipe G, entering the upper section of the retorts, and a discharge pipe K, leaving the lower section thereof.

No. 4797. CHARLES HUTCHINGS, Kansas City, Mo., U. S., 5th June, 1875, for 5 years: "Rein Holder." (Porte-guides.)

Claim.—1st. The vertically-hinged jaw C, having a bevelled edge and a return upper end, in combination with the vertical