

**No. 6736. Cement to Replace Fire Earth in Making Smelting Furnaces.***(Ciment remplaçant la terre à feu pour faire les fourneaux de fonderie.)*

Jean M. Parent, Beauport, Que., 9th November, 1876, for 5 years.

*Résumé.*—Le procédé de composer un ciment avec du quartz, de la glaise et du sable magnétique.*Claim.*—The process for making a cement with quartz, clay and magnetic sand.**No. 6737. Threshing Machine Tooth.***(Dent de machine à battre.)*

Jonathan W. Waterman, Oregon, Wis., U. S., 9th November, 1876, for 5 years.

*Claim.*—The threshing and hulling tooth A, having the tapering sides from the poll a to the convex bit edge b, and the edges of said sides convex-concave and tapering back again to said poll, and furthermore provided with the double concaves or re-entered planes f.**No. 6738. Shirt Stretcher.***(Planche à tendre les chemises.)*

James Elliott, Montreal, Que., 9th November, 1876, for 5 years.

*Claim.*—1st. A frame constructed in two or more parts adapted to fit into the inside of a shirt and to be joined together therein so as to keep it stretched to its full extent, and thus to prevent the contraction of the cloth in drying; 2nd. The combination of the arms A B, the connecting pins and sockets a b, the strips C E and distance piece D with connecting pin c and socket d.**No. 6739. Washing Machine. (Machine à laver.)**

Allen D. Ferris and Albert N. Ferris Blakeley, Ma., U. S., 9th November, 1876, for 5 years.

*Claim.*—1st. The frame A B, suds box C D E F, curb G, lever H and cleat I; 2nd. The combination of the stationary cleat I and the detachable stop bar J with the pivoted suds box C and with the frame A B.**No. 6740. Compound Metal Working Machine. (Machine à travailler le métal composé.)**

Hollis W. Moore, Olean, N. Y., U. S., 9th November, 1876, for 5 years.

*Claim.*—1st. The combination of the standard A provided with the curved ledge B, pivoted eccentrics C and curved groove b, and the slide D provided with ledge H, eccentric C' and curved tongue d, the latter fitting in the groove b; 2nd. The slide E carrying the shear blade G and punch H, lever I with eccentric f stirrup J, connecting bar K and lever L with the tire upsetting devices in combination with the standard A having shear blade G, and die H.**No. 6741. Improvements on Hide Handlers.***(Perfectionnements aux cuves de tanneries.)*

Otis W. Bean, Tecumseh, Mich., U. S., 9th November, 1876, for 5 years.

*Claim.*—1st. The combination with a tan vat a horizontal platform adapted to receive the hides upon its surface and to be raised and lowered in the vat, 2nd. The combination of the platform B and posts D U, top cross beam E, binding chains C G and hoisting chains G G.**No. 6742. Improvements on Broom Machines.***(Perfectionnements aux machines à balais.)*

Alphonso Walrath and Edward D. Bronson, Amsterdam, N. Y., U. S., 9th November, 1876, for 5 years.

*Claim.*—1st. The combination of endless belt or belts X having U-shaped holders with spring rods x x supported at their ends only and situated below and at the sides of said belt or belts, 2nd. The spurred carrying belt C<sub>1</sub> C<sub>2</sub> for the covers in combination with the inclined endless belt H provided with spotting knives h h, said belt opening at right angles to the carriers for the purpose of spotting or bevelling the broom corn stock while the covers are being carried to the winder, 3rd. The combination of a grooved pressure roller G with spurred belt C<sub>2</sub> for the purpose of pressing the heads of the covers down upon the spurs, 4th. In combination with spurred carriers for the covers of the brooms and with spotting knives h h, stirrup fingers M M which will partly or completely free the trimmed or spotted heads from the spurs of said carriers, 5th. A laterally movable pulley guide d for the wrapping wire, in combination with pulley o, bobbin d, drum o, friction strap of and treadle O; 6th. The rod P having vertically cutting knife p and obliquely cutting knife p<sub>1</sub> in combination with a rotating broom handle holder, 7th. In combination with means for holding and carrying forward the covers, the treadle f, lever F, arms f<sub>1</sub> and E, pinion a<sub>2</sub>, short shaft a<sub>1</sub>, pulley a<sub>3</sub> and the driving mechanism thereof; 8th. The revolving endless cover carriers mechanically connected with the broom holder in combination with a suitable clutching device; 9th. A rotating cutter for cutting the shoulders of the broom in combination with a suitable rotary broom holder, 10th. A rotating cutter situated on a movable shaft or support, in combination with a broom holder whereby the cutters may be brought at will against the broom corn, 11th. A C-shaped holder H; 12th. The combination of a hollow shaft or broom holder G, clamping levers g and rotating cutter S<sub>1</sub>, 13th. The combination of a rotating cutter shaft S, lever S<sub>1</sub> and rotating broom holder, 14th. The combination of unequal pulleys V V or a driving shaft B with endless movable belt wheels W V<sub>2</sub> on broom holding shaft Q having cog s u and fixed clutches W having cogs to w, 15th. The combination of treadles Z Z with wires or rods Y Y a vers X X springs z z and wheels U U.**No. 6743. Improvements on Self-binding Harvesters.***(Perfectionnements aux moissonneuses-lieuses.)*

James F. Gordon, Rochester, N. Y., U. S., 9th November, 1876, for 5 years.

*Claim.*—1st. The vertically reciprocating binder arm F hinged to a vertical axial shaft D or its equivalent, whereby the arm is given a horizontal oscillation laterally across the grain, in combination with its vertical reciprocation; 2nd. In combination with the vertical axial shaft D, binder arm F, and twisting mechanism, the oscillating arm E, 3rd. In combination with a binder arm F, movable twisting mechanism shaft D and arm E, the connecting rod F<sub>1</sub> and crank D; 4th. In combination with the reciprocating binder arm F and vertical axial shaft D the swinging arm G, 5th. The combination of the wire spool M, friction roll O, strap P, yielding roller M<sub>1</sub>, spring Q and the binding wire S; 6th. In combination with the adjustable platform k the vertical brackets h; 7th. In combination with the swinging arm G, the steadying roller V and track N; 8th. The pivoted trip cam b constructed and arranged to operate in conjunction with the clamping jaw T; 9th. The pivoted switch U in combination with the stationary track or trucks Y Y and roller b of the pivoted arm X; 10th. The driving pinion H of the binder provided with the flanges, 11th. The connecting rod or pitman F<sub>1</sub> extended beyond the point at which it is pivoted to binder arm for the purpose of forming a take-up for the wire.**No. 6744. Fulling Mill. (Moulin à foulon.)**

Willard H. Mase and Silas Terwilliger, Matteawan, N. Y., U. S. 9th November, 1876, for 15 years.

*Claim.*—1st. The combination of the hammer arm and its pendent link with the friction roller and cam, 2nd. The combination of the hammer arm, the pendent link, the friction roller, the cam and the guide for the pendent link.**No. 6745. Improvements on Invalid Bedsteads. (Perfectionnements aux couchettes de malades.)**

Asahel J. Goodwin, Brookline, Mass., U. S., 9th November, 1876, for 5 years.

*Claim.*—1st. The combination of the slide frame or bed supporter B with the bedstead A, provided with means of supporting an additional bed; 2nd. The combination of the toggles E E, lever F, bar G and pin G with the bedstead A and the slide frame B; 3rd. In combination with the bedstead A its slide frame B and their rails C D, arranged and provided with ledges and the sliding board or seat H; 4th. The combination of the frame L and shaft K with the notched cams I and shaft K; 5th. The combination of the rails b d with the rails a C, said rails being so arranged that the ends of the slats in rails D d are between the ends of the slats in rails a C.**No. 6746. Machine for Washing, Cooling and Purifying Petroleum. (Machine à laver, refroidir et épurer le pétrole.)**

John R. Minnick, London, Ont., 9th November, 1876, for 5 years.

*Claim.*—The combination of the supply pipe A, pivot plug B, revolving swivel C, perforated arms D and screw to hold swivel E.**No. 6747. Improvements on Blanks of Screws and Bolts. (Perfectionnements aux ébauches de vis et de boulons.)**

Samuel Vaustone and John W. Hoard, Providence, R. I., U. S., 9th November, 1876, for 5 years.

*Claim.*—1st. A rolled screw blank, whether single or double, and with its shank straight tapering, a swelling and its head and point or either formed in the act of rolling; 2nd. The process or method of forming screw blanks, whether single or double, by rolling over pieces of wire between die rollers, 3rd. A screw blank having a swelled shank.**No. 6748. Improvements on Car-couplings. (Perfectionnements aux attelages de wagons.)**

Ninian H. Dolsen, Chatham, Ont., 9th November, 1876, for 5 years.

*Claim.*—1st. The side pieces C C having the extensions D bolted together for strengthening the draw head, 2nd. The combination with the gate swinging on post F and closed by spiral spring G, of the spring bolt H and catch J, operating automatically for supporting and releasing the draw pin, 3rd. The provision to the draw bar of the covering K for protecting the draw pin, 4th. The draw pin constructed of the pin portion a having an arm b projecting horizontally and bent vertically, and a leg c to support the pin in the coupling link, 5th. The combination of a hook-shaped draw pin and a volute spring Q engaging with its heel for throwing the hook forward when retracted in uncoupling, 6th. The draw link having steel springs S S bolted to a fixed centering and provided with the head block U.**No. 6749. Method of Heating and Refrigerating Liquids and Apparatus therefor. (Manière de chauffer et refroidir les liquides et appareil pour cet objet.)**

William Lawrence, London, Eng., 9th November, 1876, for 5 years.

*Claim.*—1st. The method of, and apparatus for, refrigerating liquids by passing the heated liquid over the external surfaces of corrugated metal plates enclosing or forming parts of water chambers, and by cooling by one, two or more waters differing in temperature, 2nd. The construction of apparatus for the above purpose with transverse axis or centres for reversing, turning over or placing the apparatus at any desired inclination for rising, washing or cleansing the inside of the chambers or their external surfaces, and also for repairs (when required) by soldering or otherwise, 3rd. The converse method and use of the apparatus for heating liquids (instead of for refrigerating or cooling them), 4th. The construction and use of the apparatus for heating by steam and for condensing steam.