

### No. 8786. Improvements on Sewing Machines. *(Perfectionnements aux machines à coudre.)*

Duncan H. Campbell, Pawtucket, R.I., U.S., 13th May, 1878, for 15 years.  
*Claim.*—1st. A shuttle E, having its point in line with its longitudinal centre, a longitudinal recess *c* at each side and two longitudinal webs *e*, separated by a space or channel *e*; 2nd. A shuttle race C having an inwardly projecting shuttle supporting way or spline *c* on each side thereof, which is broken away on each side at or near the middle of the race; 3rd. A shuttle race C having inwardly projecting shuttle supporting ways or splines *c*, a portion of which is movable for the removal and insertion of the shuttle; 4th. A rectangular shuttle carrier D, mounted on ways *c* or splines *c*, within the shuttle race, and having two oppositely located fingers *d*, for engaging laterally with opposite shoulders of the shuttle, whereby said carrier may control a shuttle in its longitudinal movements without affording any support therefor; 5th. The combination with suitable feeding and thread delivering mechanism of a hooked needle B, a centrally pointed shuttle E, supported within the race by splines or ways *c*, which are broken away adjacent to the needle, and a shuttle carrier D which surrounds the shuttle longitudinally and laterally and loosely engages with its heel and shoulders; 6th. The combination with a hook needle, of a shuttle having a longitudinal groove on its under side, and a projecting stop *e* centrally located in the race C, in front of the hook side of the needle, for preventing a loop entered by the shuttle from being moved forward; 7th. The combination with a hook needle B and presser foot H, of a thread eye K, and a vibrating thread arm L, which is connected and controlled as to the extent of its movement by the presser foot H; 8th. A thread arm L, having a jointed spring tip *u*, which renders the arm rigid when carrying thread, and flexible when returning past the standing thread of a loop; 9th. The combination with a hook needle B and presser foot H, of a vibrating thread eye K (for delivering thread to the needle) which is varied with relation to the extent of its vibratory movement by the location of the presser foot with relation to the work plate b; 10th. The combination with the presser foot L, its holder *h* and the main shaft A, of a cam *a* on said shaft, a rod *h* connecting with said cam *a*, a horizontal spring lever *h*, and a self adjusting spring clamp *h*, which uniformly engages with the holder *h* and lifts the presser foot regardless of the varied thickness of material beneath the foot; 11th. The combination with suitable tension devices which will properly permit the delivery of thread to a needle for forming a loop, of a thread wheel lever *l* and an operating lever *o* which positively vibrates the thread wheel lever *l* at intervals, for forcibly taking up the slack thread and tightening the stitches; 12th. The combination with a positively vibrated thread wheel lever *l*, of an adjustable abutment *p*, which limits the movement of said lever; 13th. The combination with a spring tension wheel *s* and a vibrating thread wheel lever *o*, of a brake *n*, which is operated by the thread and thread wheel lever *o*; 14th. In a wax thread machine, a vertical thread tube *m*, located within the head F of the machine and exposed to the heating apparatus M, whereby the thread as it is moved to and fro within the tube *m*, by the action of the needle and take up, is maintained in a well heated condition; 15th. A feeding slide G, provided with upper and lower guide plates *f*, in combination with a machine head F, which is channelled at top and bottom *f*, for the reception of the guide plates of the slide G.

### No. 8787. Fire Kindling Apparatus. *(Appareil à allumer le feu.)*

John Beardi, Franklin, Ind., U.S., 13th May, 1878, for 5 years.  
*Claim.*—The combination of the torch B, consisting of the perforated receptacle *c* and handle *h*, with the can A, screw-cap *a* and guards *b*.

### No. 8788. Improvement on Spark-Arresters. *(Perfectionnement aux arrête-flammèches.)*

Robert Brayton, David June and Oratus S. French, Fremont, Ohio, U.S., 15th May, 1878, for 5 years.  
*Claim.*—1st. The elongated inverted cone I and its connection with the nozzle II, either by the wings I entering into the nozzle II or projecting over it, and thus preventing any displacement; 2nd. The nozzle II recessed and counterbored to receive the cone I, or turned off on the outside to fit into recess in point of cone, thus insuring by aid of the wings or divisions of the elongated cone I, a perfect and equal distribution of the exhaust steam into reservoir D.

### No. 8789. Improvements in Cultivators. *(Perfectionnements dans les cultivateurs.)*

Robert H. Dewar, Stony-Creek, Ont., 16th May, 1878, for 5 years.  
*Claim.*—A harrow cultivator constructed of the hinged front and end bars D E, draft bars M, cross bars F G, crossed diamond shaped and a tooth H passing through each point of contact of said bars, and secured by nuts L; 2nd. In combination with the hinged frames A B, of the rows of metal teeth H constructed of different lengths and provided with square shoulder I, threaded elongation J and curved steel point K; 3rd. The combination of the hinged front and rear bars D E, cross bars F G, draught bars M, curved steel pointed teeth H, the rows of teeth increasing in size from front to rear.

### No. 8790. Process of Coloursing Photographic Pictures. *(Procédé pour colorer les images photographiques.)*

John S. Hulett, Napanee, Ont., 16th May, 1878, for 5 years.  
*Claim.*—1st. The board D and the frame F; 2nd. The use of albumen, in combination with the other parts of the process, in connection with the machine.

### No. 8791. Improvements on a Ship's Anchor. *(Perfectionnements à une ancre de navire.)*

Samuel H. Stockton, St. John, N.B., 16th May, 1878, for 5 years.  
*Claim.*—The combination of the base of the stock A with the arms *b b* having rounded angles, so that it is impossible for the chains of the anchor to get folded or fastened in the stock.

### No. 8792. Improvements in Furnaces. *(Perfectionnements dans les fourneaux.)*

Thomas W. Williams, Swansea, Wales, 16th May, 1878, for 5 years.  
*Claim.*—The combination and arrangement of the tube E *e* and smaller tubes and nozzles F, as used in connection with the hollow perforated fire bars of furnaces.

### No. 8793. Improvements in Rotary Engines. *(Perfectionnements aux machines rotatives.)*

Nils Nilson, Minneapolis, Minn., U.S., 16th May, 1878, for 5 years.  
*Claim.*—1st. The combination of the rotating cylinder C having steam chambers C<sub>1</sub> and abutments E, with the inferiorly arranged guide plate *a*, having segments recesses *g*; 2nd. The combination of the rotating cylinder C and the disc D having perforations *h* and *h*<sub>1</sub> for the induction and escape of the steam or other motive power, steam chests H, inlet pipe I, and the rotary steam, water, or air engine described, consisting of the rotating cylinder C, having circumferential steam chambers C<sub>1</sub> and sliding abutments E, in combination with the stationary guide-plate A, stationary disc D, steam chest H, adjustable slide valves *i*, inlet pipe I and escape pipe L.

### No. 8794. Improvements on Threshing Machines. *(Perfectionnements aux machines à battre.)*

Jonathan Brown, Ashbur, Ont., 16th May, 1878, for 15 years.  
*Claim.*—1st. The combination of the cylinder *b*, concave *c* and one or two blocks *d*, the concave and blocks being provided with the spiral ribs *a* whereby the seed is discharged at one or both ends of the cylinder; 2nd. The ribs *d* upon the surface surrounding the cylinder, whereby the seed is carried around spirally and made to move faster; 3rd. The hinged door *j* and slide *k*, for distributing the seed over the surface of the shaker; 4th. The cover *m* under the cylinder *b*, in combination with the cover *n*; 5th. The movable extension bolt *p*, in combination with the shaker *h*; 6th. The board or plate *q* secured in the front end of the shoe, so as to catch the seed as it falls through the shaker *h* and convey it to the screen.

### No. 8795. Improvements on Sewer Traps. *(Perfectionnements aux trappes d'égouts.)*

Buckland P. Bower, Cleveland, Ohio, U.S., 16th May, 1878, for 5 years.  
*Claim.*—1st. A chamber having an induction pipe leading therefrom and an induction pipe extending downwardly below the line of standing water in said chamber, the lower end of said pipe constituting a valve seat, which later is closed by a valve that acts by its floating pressure to close the valve seat; 2nd. In a trap, a removable *g* as section formed at the bottom so as to stand erect without support, when removed from the trap; 3rd. In a trap, a glass section, screw cut at the top, for attachment to the adjacent portion of the trap; 4th. In a trap provided with a glass section, the combination with said trap and glass section, of an interposed gasket of rubber of equivalent material; 5th. A sediment chamber formed of glass; 6th. In combination with a trap embracing valve mechanism, a removable section D of glass located, with respect to the valve mechanism, so as to expose the same to view; 7th. In combination with a trap embracing valve mechanism, a removable section D of metal, glass, or any suitable material; 8th. In combination with a trap embracing valve mechanism, a section or window of glass located, with respect to said valve mechanism, so as to expose the same to view.

### No. 8796. Improvements on a Cider Mill. *(Perfectionnements à un pressoir à cidre.)*

Thomas F. Brown, (Assignee of Ladore V. Sikes,) East Otto, N.Y., 16th May, 1878, for 15 years.  
*Claim.*—A cider mill in which the press and grinder are arranged at opposite ends of a truck B, on a platform inclined from said ends to the middle, and there provided with gutter *a*.

### No. 8797. Coin Envelope. *(Porte-monnaie.)*

Charles F. Trout, Boston, Mass., U.S., 16th May, 1878, for 5 years.  
*Claim.*—1st. The coin envelope composed of the strap and pocket or loop; 2nd. The loop and the strap and the elastic ring.

### No. 8798. Improvements on Brooms. *(Perfectionnements aux balais.)*

Joseph Lay, Olmstead Falls, Ohio, U.S., 16th May, 1878, for 5 years.  
*Claim.*—1st. The splints or brush core A secured together and to the handle having a tapering or pointed end, by nails or rivets surrounded by an external covering of splints or brush secured to said handle, and to the core or filling by one or more bands with nails or rivets; 2nd. A broom made up of splints which are split or divided into two or more parts, about half their length more or less, forming the core or covering, or both, and secured together and to the handle by means of two or more bands and nails, or their equivalents.

### No. 8799. Improvement on Benches. *(Perfectionnement aux bancs.)*

Austin D. Cable and William L. Thompson, Montreal, Que., 16th May, 1878, for 5 years.  
*Claim.*—1st. The catch or support Q to be used with a folding bench; 2nd. The catch or support R used in combination with the catch Q in a folding bench; 3rd. The catch or grip S and the slat P, applied to a table panel set upon a folding bench, for the purpose of securing said panel to the bench; 4th. In a folding bench, the combination of catches K and Q and the vertical piece H, with legs D and slats A; 5th. The combination with a folding bench, of a panel to form a table, or of a seat to form a part bench, and of a saw buck.

### No. 8800. Improvements on Lamp Burners. *(Perfectionnements aux becs des lampes.)*

Charles C. Richmond, Boston, Mass., U.S., 20th May, 1878, for 5 years.  
*Claim.*—1st. The adjustable sleeve C, of the form of an inverted bell, and having an outer passage or space *d*, between it and the cone B, and an inner passage or space *f* between it and the wick tube *h*, on each side thereof; 2nd. The perforated sleeve D, having its upper edge in contact with the cone B, and an air passage *i* between its base and the wick tube on each side thereof.

### No. 8801. Stove and Furnace Grate. *(Grille de poêle et de fourneau.)*

Samuel Smith, East Bridgewater, Pa., U.S., 20th May, 1878, (Extension of Patent No. 2960,) for 5 years.