

No. 1826. OLIVER B. HOWARD, Deering, Me., U. S., 27th November, 1872, for 5 years: "A Razor Strap." (Un cuir à rasoir.)

*Claim.*—The combination of the handle *d*, rod *c*, pieces *h*, *i*, and pieces *b*, *c*, the part *a*, composed of leather and a metal inner-strip, the spaces between the two parts of the strip *a*, being arranged to hold the boxes *m*, and *t*.

No. 1827. SOCRATES SCHOLFIELD, Providence, R. I., U. S., 27th November, 1872, for 5 years: "Machine for Making Cigar Bunches." (Appareil à lier les cigares.)

*Claim.*—1st. The employment of the spur roll *L*, or its equivalent for feeding loose masses of tobacco, into the sizing chamber of a cigar bunch making machine when such roll is driven by adjustable frictional means so arranged as to allow the roll to cease its action when the chamber has been properly filled, without interfering with the continuous action of the other parts of the organized machine; 2nd. The automatically locking, sizing chamber *B*, in combination with the opening and closing roll portion of the machine by the direct movement of which the said chamber is operated; 3rd. The combination with the feeding roll *L*, and knife or gate *J*, of a throat plate *N*, arranged to receive a limited up and down movement in timely relation to the opening and closing movement of the knife or gate; 4th. The combination of the automatically operating apron *F*, with the opening and closing rolls *c*, *e*, 5th. The slide *U*, having end trimming cutters *h*, *h*, in combination with the bucket wheel *S*, or its equivalent, arranged for operation in relation with the rolls; 6th. The latch bar *K*, in combination with the shaft *E*, the moveable cam *L*, the shaft *B*, the wiper *O*, the stationary cam *M*, the sliding clutch collar *N*, the spring *P*, and the pin *n*, on the loose revolving wheel *J*.

No. 1828. JOHN H. HENDERSON, Ayr, Ont., 27th November, 1872, for 5 years: "A Sewing Machine Needle Threader." (Appareil pour enfiler les aiguilles des machines à coudre.)

*Claim.*—The arrangement and combination of the tube *d*, piston *a*, spring *e*, slot *f*, pin *h*, tongue *c*, slit *i*.

No. 1829. JOHN H. MILLS, Boston, Mass., 29th November, 1872, for 5 years: "Mode of generating Steam." (Manière de produire la vapeur.)

*Claim.*—1st. A system of generating steam in the employment of two liquids, one, as a vaporizing and power transmitting agent, which vaporizes at a comparatively low temperature, and the other possessing sufficient heat at or below its boiling point to vaporize the former; 2nd. A system of generating steam by the use of differential agents as stated, such a construction and arrangement of apparatus that the heat transmitting fluid or medium remains at rest, while the vapors of the vaporizing fluid have no access to the atmosphere, but are condensed by the apparatus and returned to the generator; 3rd. A system of generating steam as described in which two differential cylinders are employed for purposes stated, the method of re-heating the exhaust steam in transit from the primary to the auxiliary cylinder by passing the exhaust pipe through the heat transmitting fluid or agent; 4th. The general combination of the water receptacle or jacket *C*, the generator *B*, the condensing apparatus *Q*, and the differential cylinders *G*, and *T*; 5th. Double cylinder engines, the construction and arrangement of valves and cranks, whereby the exhaust from the first cylinder takes place simultaneously, or thereabouts with the "cut off" of direct steam from said cylinder; 6th. The construction and arrangement of the valves and cranks of double cylinder engines whereby the exhaust from the two cylinders is so governed that such exhaust shall both act upon the piston of the auxiliary cylinder and escape or exhaust from such cylinder during the entire stroke of its piston.

No. 1830. WILLIAM E. PRALL, Washington, U. S., 29th November, 1872, for 5 years: "Device for Supplying Locomotives with water." (Appareil pour fournir l'eau aux locomotives.)

*Claim.*—The combination with each other and with a locomotive as described of an air-chamber carried or drawn by the locomotive to receive and retain atmospheric air under pressure, an air-pump operated by the locomotive or by steam from its boiler to fill said air-chamber, an independent stationary reservoir to contain a water supply; and pipes, first to convey the compressed air to said water-reservoir, that its pressure may operate upon the surface of the water therein, and second to convey this water under pressure into the tender or tank of the locomotive, the whole being arranged consecutively and conjointly substantially as set forth.

No. 1831. BENJAMIN F. GREEN, Syracuse, N. Y., U. S., 30th November, 1872, for 5 years: "Chair and Step Ladder Combined." (Chaise-escalau.)

Consists in combining with the two main sections forming a chair and step-ladder a friction-clamp and dowel-pins for securing the parts in a folded position and also metallic terminations for the support of the chair-back.

*Claim.*—The apex spring-clamp *d*, *e*, dowels *f*, *j*, and serrated plugs *h*, in combination with the hinged sections *A*, *a*, *B*, *b*, of the chair and ladder.

No. 1832. JOHN S. PATRIC, Rochester, N. Y., U. S., 30th November, 1872, for 5 years: "Machine for Compressing Air." (Appareil à comprimer l'air.)

Invention consists in providing an automatic acting engine for the purpose of compressing air to be used as a motor for driving machinery, thereby affording power which may be conveyed in pipes to almost any desired distance without loss of friction, etc.

*Claim.*—1st. The vessel *B*, provided with compressing chambers *C*, and *D*, centrally located water-box *E*, and suitable inlet and outlet water and air valves; 2nd. In combination with the tilting air compressing vessel *B*, suitable automatically acting locking device; 3rd. The flexible packing gasket *r*, applied in the manner described, in combination with the swing valve.

No. 1833. JOHN C. HANNA, Rossville, Iowa, U. S., 30th November, 1872, for 5 years: "A Sash Fastener." (Un ferme-croisée.)

A window catch for supporting windows when open and securing them when closed.

*Claim.*—The combination of the hinge *A*, thumb-catch *C*, and supporting catch *D*, with the plate *E*, and slot *F*.

No. 1834. JOHN H. OSBORNE, Guelph, Ont., 30th November, 1872, for 5 years: "A Sewing Machine Treadle." (Une pédale de machine à coudre.)

Consists in so adjusting the treadle to the stand or frame as to render it moveable, either to or fro and capable of being fastened at any desired point.

*Claim.*—An adjustable sewing machine treadle with the combination of the hangers *C*, *C*, the bolts or set screws *D*, *D*, in the hand screws *F*, *F*, and the rod *G*.

No. 1835. DUNCAN MCKENZIE, Brooklyn, N. Y., U. S., 30th November, 1872, for 5 years: "A Baker's Oven." (Un four de boulangerie.)

Consists in a combination of flues for returning to the baking-chamber, and utilizing, the gaseous products of combustion and vapour of the oven.

*Claim.*—The combination with the baking-chamber *A*, of the oven and one or more fire-places *B*, for heating the latter by the gaseous products of combustion entering said chamber, of a return flue or flues *D*, arranged to connect with the ash-pits *C*, of the fire places.

No. 1836. JAMES YOUNG, Kelly, Scotland, G. B., 30th November, 1872, for 5 years: "Process for the treatment of Natural Petroleum." (Mode de traitement du pétrole.)

*Claim.*—The treatment of natural petroleum with liquid muriatic or hydrochloric acid heated so as to eliminate the acid gas, or with muriatic or hydrochloric acid, in the gaseous state.

No. 1837. JAMES YOUNG, Kelly, Scotland, G. B., 30th November, 1872, for 5 years: "Process for the Manufacture of Carbonate of Soda." (Procédé pour la fabrication du carbonate de soude.)

*Claim.*—1st. The process of boiling with water bi-carbonate of soda mixed with compounds of ammonia, or heating it by steam so as to reduce it to carbonate of soda by driving off and recovering a portion of the carbonic acid and the residual compounds of ammonia; 2nd. Conducting the manufacture of carbonate of soda in the manner described so that all the ammonia or compounds of ammonia are always kept within air-tight apparatus.

No. 1838. CHARLES V. KASSAR, Assignee of Wm. H. Harris, Buffalo, N. Y., U. S., 30th November, 1872, for 10 years: "A Hot-Air Furnace." (Une fournaise à air chaud.)

*Claim.*—1st. The combination with the combustion chamber *D*, supplemental radiating chamber *E*, connecting flues *f*, and shell *d*, of the pendant reversible flues *k*, within the chamber *D*; 2nd. The arrangement of the pendant reversible flues *k*, with the connecting flues *f*, so as to leave an annular space *k*, at their junction forming a self-packing joint; 3rd. The arrangement, in the combustion chamber of a hot-air furnace of the air-pipes *l*, suspended at their upper ends from the top plate *d*, to which they are rigidly secured while their lower ends fit over, upwardly projecting sleeves of the base plate between which and the ends of the pipes, sufficient space is left for the expansion of the pipes; 4th. The combination with the sheet-iron shell *d*, of the combustion chamber and top-plate *d*, thereof provided with a flange *n*, of the connecting ring *o*, secured to the shell *d*, and overlapping the outer edge of the plate *d*, so as to connect at both, and form a packing space.

No. 1839. CYRILLE DEMERS, St. Flavien, Que., 30th November, 1872, for 5 years: "A Clothes Washing Machine." (Machine à laver le linge.)

Consists of grooved or corrugated boards covered with zinc worked horizontally by levers.