

screw shank 18 and one or more branches *k*. 5th. The feed rolls *M M* with their connected shafts *P Q* supported in the pivoted frame *N* and adapted to be vibrated therewith, to carry the nail rod into the path of the cutters, in combination with means for automatically rotating the feed wheels to advance the nail rod, after each finished nail has been severed therefrom. 6th. The feed rolls *M M* with their connected shafts *P Q* supported in the pivoted frame *N* and adapted to be vibrated therewith, to carry the nail rod into the path of the cutters by mechanism connected with the reciprocating bar *U*, in combination with the ratchet wheel *h* and pawl *e*, whereby the rotation of the feed wheels, to advance the nail rod, is effected in the return movement of the shaft *P Q*, after the finished nail has been severed. 7th. In combination with the hammers *D D G G*, the vertical slide bars *A B*, the latter *B* arranged to pass between the helves of the said hammers, said bars being provided with adjustable cutters *h* and adapted to be simultaneously moved in opposite directions to cause the cutters to advance and recede. 8th. The combination, with the vertical slide bars *A B*, of the pivoted rocker *C* connected therewith and actuated by the reciprocating bar *U*. 9th. The combination, with the sliding bar *U*, of the rock shaft *E* and its lever *D* connected, at one end, with the piston rod *f* and having, at its opposite end, a projection *n* adapted to enter a notch *w* in the bar *U*, and the lever *G* connected with the bar *U* by a spring *h* and actuated by a cam *i* on the wheel *H*, as the latter is rotated by mechanism connected with the piston rod. 10th. The combination, with the lever *D* and its projection *n*, and the slide bar *U* with its notch *w*, of the projections *g* on the underside of the bar *U*. 11th. The combination, with the lever *G* and its actuating cam *i* on the wheel *H*, of the ratchet wheel *I* secured upon the shaft *d* of the wheel *H* and rotated intermittently by the pawl *e* pivoted to the arm *B* of the rock shaft *E*, whereby the cutters and feed rods are brought into action and returned to their normal position at each complete revolution of the ratchet wheel. 12th. The wheel *K* secured to the shaft *d* and provided with a cam *h*, in combination with the lever *e* connected with the arm *k* of the throttle valve *h* in the steam pipe *l*, and the spring *m*, whereby the steam is partially shut off just before the completion of the nail, and again let on after the finished nail has been cut off.

**No. 13,623. Improvements in Apparatus for Lowering and Raising Boats on Vessels.** (*Perfectionnements aux appareils d'abaisser et de monter les canots des vaisseaux*)

Reginald H. Earle, St. John's, Nfld., 4th November, 1881, for 5 years.

*Claim.*—1st. The fixed davits *C*, swinging frame *D* and cradle *E*, provided with rope and tackle. 2nd. In boat lowering apparatus, the swinging frame consisting of the bent arms *c* connected together and carrying a suspended cradle at their outer ends, in combination with the davits *C*. 3rd. The gravity cradle *E* consisting of hooks *t* and cross bars *h*, in combination with the swinging frame *D* that is fitted for being raised and lowered from the vessel. 4th. In boat lowering apparatus, the combination of stands *B*, pivoted davits *C* and the swinging frame *D* jointed to the side of the vessel, when by either the boat the frame can be suspended from the davits. 5th. The levers *a*, in combination with the stands *B*, and swinging arms *e* of the frame *D*. 6th. The dogs *b* combined with the stands *B*, and jointed davits *C*.

**No. 13,624. Improvements in Electrical Lamps.** (*Perfectionnements aux lampes électriques*.)

Henry B. Sheridan, Cleveland, Ohio, U. S., 4th November, 1881, for 5 years.

*Claim.*—1st. In combination with the core *c* working in the two coils *D E*, and the carbon holders *k k*, of the lever *d* provided with the arm *l* and plate *h* the lever *a* provided with the pawl *x*, having a different pivoting point from the lever *d* and connected with the said lever *d* adjustably, the spring *i*, the three part cone pulley *h* and the chains *l v*, whereby the points of the carbons are kept in the same position automatically. 2nd. The combination, with the base plate *B* and the spring *i*, of the part *j* having offset, and the screw *k* carrying sliding block *l*, whereby the tension of the said spring can be regulated. 3rd. The combination, with the lever *d* operated by the magnet core *c*, and the base plate *B*, of the non-conducting hanger *m* having copper plate *n*, the non-conducting standard *p* having copper plate *o*, and the conduction wires *q* leading to the binding posts *l y*, whereby the cessation of a current through the stronger coil will cause the opening of a direct circuit through the said binding posts. 4th. The combination, with the carbon holder *B* having perforated guide plate, guide rods *x x* attached to plate *Y* and carbon *S*, of the carbon *S*, holder *k*, pipe *G*, wire *F*, contact plates *u o* and wires *q*, whereby the abnormal separation of carbons *S S* operates to form a short circuit between the binding posts of the fine wires. 5th. The combination, with the open outer ends of the magnet coils, of the vibrating plates *4*, whereby the sliding core is retarded.

**No. 13,625. Improvements on Cigar-holders.**

(*Perfectionnements aux porte-cigares*.)

Henry A. Stone, Brooklyn, N. Y., U. S., 4th November, 1881, for 5 years.

*Claim.*—1st. The combination, with the mouth piece *A*, of the holding tube *B* having spring arms *C*, and the sliding sleeve *D*, said holding tube and sleeve having corresponding cylindrical portions. 2nd. The combination of a mouth piece with a holding tube provided at one end with spring arms, and with a sleeve similar in form to said holding tube, adapted to slide thereon and compress said spring arms, said holding tube and sleeve being formed with closely fitting cylindrical portions, whereby a practically air-tight joint is appended between said portions at any point of adjustment.

**No. 13,626. Improvements in Paint Mills.**

(*Perfectionnements aux moulins à couleurs*.)

John McDougall, Montreal, Que., 4th November, 1881, for 5 years.

*Claim.*—One or more of the rollers having in addition to the ordinary rotary motion, a transverse reciprocating vibratory movement.

**No. 13,627. Improvements in Stove Educts.** (*Perfectionnements aux décharges des calorifères*.)

John F. Lloyd, Boston, Mass., U. S., 4th November, 1881, for 5 years.

*Claim.*—1st. The smoke receiver *A* open at its opposite ends, and in its front and rear, as described, and provided with the covers *b*, the adjustable thimble *B* and slide *C*. 2nd. The combination of the elbow pipe *S* with the smoke receiver *A*, open at its opposite ends and in its front and rear, and provided with the end covers *b*, and the adjustable thimble *B* and slides *C*.

**No. 13,628. Improvements in Wrappers for Bottles, Jars, etc.** (*Perfectionnements aux classes des bouteilles, jarres, etc.*)

Bennett D. Marks, Louisville, Ky., U. S., 4th November, 1881, for 5 years.

*Claim.*—1st. A bottle wrapper made from a sheet or veneer of wood, and having ridges or projections *C* formed upon its outer surface. 2nd. A bottle made from a sheet or veneer of wood with the upper end slotted or gored out, with a retaining cord, band, or tie, which is passed around the bottle in any suitable manner.

**No. 13,629. Improvements on Steam Boiler and Other Furnaces.** (*Perfectionnements aux fournaux des chaudières à vapeur et autres*.)

William S. Hutchinson, Chicago, Ill., U. S., 4th November, 1881, (Extension of Patent No. 6,727.)

**No. 13,630. Improvements on Chain Pump Buckets.** (*Perfectionnements aux godels des chapelets*.)

Theodore Hoyt, (Assignee of Edwin Hoyt), Stamford, Ct., U. S., 4th November, 1881, (Extension of Patent No. 6,873.)

**No. 13,631. Improvements on Spring Hoes, or Teeth for Grain Drills.** (*Perfectionnements aux houes élastiques, ou dents des semoirs-traceurs*.)

James S. Bogle, Thomas Ludlow and Rodgers, Springfield, Ohio, U. S., 4th November, 1881, (Extension of Patent No. 7,208.)

**No. 13,632. Improvements on Pumps.** (*Perfectionnements aux pompes*.)

Julius A. Pease, West Medford, Mass., 8th November, 1881, for 5 years.

*Claim.*—1st. A pump-cylinder having a lift-discharge, a force discharge and an intermediate hollow piston, provided with discharge openings at its top, and an inlet valve at its lower end, and having an adjustable stop-rod adapted to close the said piston valve. 2nd. The combination, in a pump having a lift discharge above the piston, and a force discharge below the piston, of the hollow cylindrical piston *F* open at its upper end and having a valve at its lower end, with an adjustable stop rod *X* carried by said piston and having the relation to its valve. 3rd. The combination, in a pump, of the cylinder sections *A A*, the hollow piston *F*, open at its top and valved at its lower end, and a packing for said piston, with the adjustable stop-rod *X*, a lift-discharge at the top of said cylinder, and a valved force discharge below said piston.

**No. 13,633. Improvements on Apparatus for Purifying Alcoholic Liquors.** (*Perfectionnement aux appareils de rectifier les liqueurs alcooliques*.)

Brian A. Osgood, Wakefield, Mass., U. S., 5th November, 1881, for 5 years.

*Claim.*—1st. The improved apparatus for purifying liquors consisting of the retort *a* having evaporating tubes *c* and pan *d*, the conductor *f* containing two or more sets of inner and outer cones *K l* and *n p* each outer one provided with a perforated pan *m* and the tank *g* having faucets *u*. 2nd. The pan *d* having a central depression and provided with tube *h*, perforations *e* and annular partition *v*, in combination with the retort and lower set of cones. 3rd. The combination, of the outer cone *K* having notches *K* and supporting the perforated pan *m*, and the inner cone *l* secured to the outer cone and having its lower raised above the pan upon which the outer cone rests the outer cone being open and the inner cone closed at the top. 4th. In combination, with the set of cones *K l* and pan *m*, the similar set of cones *n p* supported by said pan.

**No. 13,634. Improvements on Car Axle Box Lubricators.** (*Perfectionnements aux boîtes à graisse des chars*.)

Giles F. Gear, Cleveland, Ohio, U. S., 5th November, 1881, for 5 years.

*Claim.*—1st. In a railway car journal box, the brush *J* pivoted to the bar *I* by means of a stem or wrist connecting the said brushes to said bar. 2nd. In car axle boxes, the oil vessel or reservoir *F* constructed and arranged in relation therewith and to the axle, in combination with the bar *I* and brushes. 3rd. In combination with a car axle box, the ring *I* provided with one or more guides extending across the periphery of the said ring and reaching over the collar or journal of the axle. 4th. In combination with a car axle box, the pivoted brushes *J* and ring *I* provided with a curved or caved periphery and guides extending across said cave and reaching over onto the collar or journal.