

between the runners and raves, all substantially as and for the purpose specified.

### No. 17,804. Photographic Camera Box.

(*Chambre noire photographique.*)

E. & H. T. Anthony & Co., (Assignees of E. B. Barker), New York, N. Y., U. S., 2nd October, 1883; 5 years.

*Claim.*—1st. A photographic camera box, made substantially as shown and described, with the front of the bellows attached to the lens-frame by an oscillating or revolving joint, as set forth, whereby the camera may be readily reversed for taking either vertical or lateral pictures, as desired, without moving the lens-frame. 2nd. In a photographic camera, the combination of the revolving block F G, with the standards F, lens-frame carrier B, and bellows C, substantially as shown and described. 3rd. In a photographic camera, the revolving block F G, constructed with a groove *f*, to receive the clips *g*, substantially as shown and described. 4th. In a photographic camera, the independent standards made open at their tops and attached to the under frame E1, and adapted to hold and guide the sliding lens-frame B, and permit instant removal of the lens-frame from between them, substantially as shown and described. 5th. In a photographic camera, the combination, with the under frame E1, and the sliding lens-frame B, of the independent standards E, substantially as shown and described, whereby the lens-frame may be conveniently removed from or replaced between the standards, as set forth. 6th. In a photographic camera, the supporting plate I K, provided with curved slots I1, and adapted for attachment to the under side of the camera-box, and to the under-frame or running-gear, substantially as shown and described, whereby the usual swing back positions may be given to the camera, as set forth. 7th. The combination, with the camera box, and its under frame, of the slotted supporting-plate I K, operated as described and set forth. 8th. In a photographic camera, the combination with the rear section of the camera-box, and with the under frame or running gear thereof, of oscillating supports, substantially as shown and described, to form a swing-back for the camera, as set forth. 9th. In a photographic camera, the combination with the sliding plates H, under frame E1, and rear camera section B1, of the oscillating supports I K, substantially as shown and described. 10th. The combination with the plate K, and the camera box A, of the headed studs or pins *h* *h*1, and the slots K1, substantially as shown and described, whereby the camera may be quickly detached, revolved, fastened upon the said plate, as set forth. 11th. In a photographic camera, the spring Q, for holding the shield or plate-holder in position, said springs being attached to the running gear or plate of the camera, substantially as shown and described, and for the purpose set forth. 12th. The combination, with the camera A, and the plate K, or running gear, of the springs, Q, substantially as shown and described, and for the purpose set forth.

### No. 17,805. Mousing Hooks.

(*Appareil à aiguilleter les crocs.*)

W. H. Hammond and H. Page, Bristol, Mass., U. S., 2nd October, 1883; 5 years.

*Claim.*—The within described mousing, consisting of the block C having arms *c* *c* for clasping the same to the eye of the hook, and the body of the mousing B, having the clasp *a*, the spring *s*, and the lever *d*, when arranged, substantially as and for the purpose specified.

### No. 17,806. Wrenches. (*Clés à écrous.*)

Carl A. Blonquist, Theodore Buskirk and Arnold J. J. Machen, Toledo, Ohio, U. S., 2nd October, 1883; 5 years.

*Claim.*—1st. In a wrench, the combination with a shank the sides<sup>s</sup> of which are provided with ribs extending over the entire length of said shank, of the sliding jaw carrying sleeve having grooves on its inner sides that correspond with and receive the said ribs, substantially as set forth. 2nd. In a wrench, the combination with a shank having transverse teeth sunk in its face, and flanges adjoining the sides of said teeth, of the sliding jaw carrying sleeve having recesses or concavities upon its inner sides, so as to bear upon the sides and flanges of said shank mainly at its ends and angles only, as set forth. 3rd. The combination, with the toothed shank, of the sliding jaw carrying sleeve having outwardly projecting wings or flanges and a transverse slot, a toothed block sliding in the said slot, and engaging the teeth of the shank, and a lever pivoted between the wings of the sleeve and having a thumb-piece, an outward-extending arm resting against the under side of the jaw, and pivotal connection between its upper end and the toothed sliding block which is fitted in a recess in the upper side of said lever, and a spring arranged to force the thumb-piece of the lever outwardly, as set forth. 4th. As an improvement in wrenches, the combination of a toothed shank having a fixed head or jaw, the sliding jaw carrying sleeve, means substantially as described, for retaining the said sleeve in any position to which it may be adjusted, and a flange projecting from the face of the movable jaw, and extending over and protecting the teeth of the shank, substantially as set forth.

### No. 17,807. Damper Regulators.

(*Régulateur des registres.*)

J. Cumberbatch, Newark, N. J., U. S., 3rd October, 1883; 5 years.

*Claim.*—1st. The combination, with the bottom-closed drum A and central rod F, of a series of concave-convex spring-disks H I, connected together forming one continuous interior chamber about the rod, connecting closely with the rod at top, and communicating at the lower end by an annular passage about the rod with the steam-space of a boiler, as shown and described. 2nd. The drum-cap B, having hollow screw D, and the bottom spring-disk having hollow screw G, in combination, with a hollow screw working in a central thread of cap and receiving the screw G in a female thread of its upper part, said screws being all arranged in axial alignment to form a communicating passage between the chamber within the spring and the boiler, as shown and described. 3rd. The combination with an

outer nut, and a thread on rod F, of the intermediate hollow nut J, threaded externally and internally, to form a close connection between the rod and springs, as described. 4th. The combination, with the expansible chamber formed by the springs H I of the disk R, secured to and above said spring and fitting the cylinder A, whereby the springs will expand and contract directly upward, as described. 5th. The combination, with the rod F, rigidly attached to a chamber expanded by steam, of the lever L, rod N, lever O, and valve P, the latter arranged in the boiler-furnace flue Q, as shown and described.

### No. 17,808. Pump. (*Pompe.*)

J. A. Mumford, Hansport, N. S., 3rd October, 1883; 5 years.

*Claim.*—1st. In a pump, the hollow plunger D, having valved inlet and outlet, in combination with a cylinder constructed of two sections A and B, of different diameters, one section having an inlet and the other an outlet, one end of the plunger D reciprocating in one section of the cylinder and the opposite end in the other section of the cylinder, substantially as set forth. 2nd. The combination, in a pump, of a cylinder consisting of two sections A and B, of different diameters, one section having an inlet and the other an outlet, a hollow plunger D, having a valved inlet and outlet, reciprocating in both sections by pump rod K, and a lever L, or other suitable means, substantially as set forth. 3rd. The combination, in a pump, of a cylinder consisting of two bores or sections A and B, of different diameters, one bore having an inlet and the other an outlet, a hollow plunger D, having a valved inlet and outlet reciprocating in both bores, a pump rod K connected to the plunger and passing through the pump tube I, and a lever or other suitable device for operating the pump, substantially as set forth.

### No. 17,809. Padlock. (*Cadenas.*)

C. C. Dickerman, Boston, Mass., U. S., 3rd October, 1883; 5 years.

*Claim.*—In a padlock, the swinging locking bolt *a*, made as and to operate as shown and described. 2nd. In a padlock, the swinging locking dog or tumbler *a*, as shown and to operate, as and for the purpose described. 3rd. In a padlock, in combination with the swinging locking bolt *a*, the locking dog or tumbler *a*, or its equivalent. 4th. In a padlock, in combination with the swinging locking bolt *a*, the locking dog or tumbler *a*, 5th. In a padlock, in combination with the hasp, the swinging bolt *a*, the locking dog or tumbler *a*, as and for the purpose shown and described. 6th. In a padlock, in combination with the swinging locking bolt *a*, and the locking dog or tumbler *a*, the notches *a*3 and *a*4 in the locking bolt, or their equivalent. 7th. In a padlock, in combination with the swinging locking bolt *a*, and the locking dog or tumbler *a*, the trunnion *a*6. 8th. In a padlock, the locking bolt *a*3, and the locking dog *a*5, in combination with the double bitted key, one bit of which engages the lower end of the locking bolt, and the other the lower end of the locking dog in, unlocking, substantially as shown and described.

### No. 17,810. Dumping Cart.

(*Tombereau.*)

Thos. Hill, Jersey City, N. J., U. S., 3rd October, 1883; 5 years.

*Claim.*—1st. The axle B, having the cranked parts B1, the bearers C C, provided with housings *c*, and the journals *b* *b*, in combination with the bars D having journals *d* *d*, and cranked downwardly therefrom, whereby the body may be supported as described. 2nd. The socket plate G, in the shaft cross-bar E, and the latch H, in combination with a hasp J, having the hook point *h*, and arranged on the box A or bar D, as and for the purpose specified.

### No. 17,811. Dry Destructive Distillation of

Coal. (*Distillation à sec de la houille.*)

H. Wurtz, N. Y., U. S., 3rd October 1883; 5 years.

*Claim.*—1st. A vertical distilling chamber of an oblong horizontal section, without external fire-space or flues, provided with lids, doors, or valves closing both over the top and under the bottom, containing a series of receptacles or cases of corresponding oblong section, linked or hooked together with inter-spaces between, forming a connected chain suspended constantly from the upper end of the chamber, with means of arresting their descent at each interspace, said chamber being connected by pipes at its lower end with a tubular gas-heater or coil external to the said chamber, and enclosed in a distinct highly heated fire-space, all constructed, combined, and operating substantially as set forth. 2nd. A vertical distilling chamber of oblong horizontal section, provided with lateral recesses in its two broader sides at their lower ends, furnished with perforated or cellular refractory brick walls, forming part of the internal walls of the said distilling chamber itself, said recesses also containing horizontal tubes which convey heated gas behind said perforator or cellular walls from an external tubular gas-heater or coil, all combined, constructed, and operating substantially as specified. 3rd. In the series or chain of vertical cases in the distilling chamber described, the combination of the laterally-movable link above each case, with the hook rigidly fixed to the case, immediately above, and the vertically-movable sole, combined and operating together in the manner and for the purposes, substantially as set forth. 4th. The combination, with a retort or distilling chamber, of an ante-chamber or vestibule situated at a higher level, and provided with a gas tight door through which to introduce into said ante-chamber a freshly charged case, and furnished with one or more horizontally hinged valves or doors, closing gas tight at the base of the ante-chamber and between it and the distilling chamber below, and furnished with a gas induction pipe at top, together with means, as set forth, of attaching and suspending said charged case from the crown or apex of the said ante-chamber internally, all combined and constructed in the manner and for the purposes, substantially as set forth. 5th. The combination of the gas induction pipe *j*, at the top with the reduction pipe *j*1, Fig. 2, at the bottom of the ante-chamber, by which said ante-chamber is emptied of air before opening communication with the distilling chamber below, the whole arranged substantially in the manner specified. 6th. In combination with a retort or dis-