R. H. CROWEL.

DOOR CLAMP.

APPLICATION FILED JAN. 18, 1915.

1,138,088. Patented May 4, 1915.

Fig. 1.

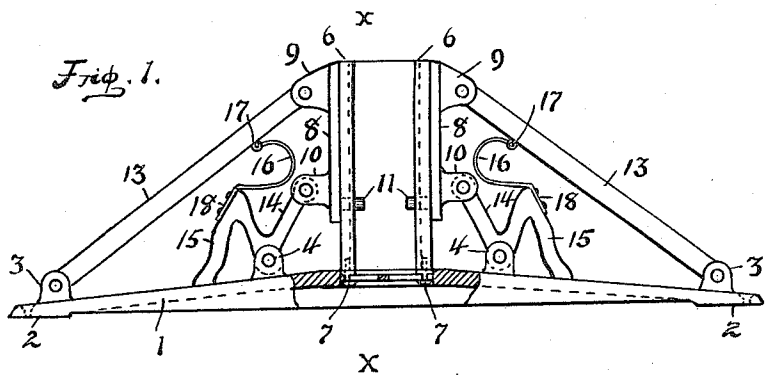


Fig. 2.

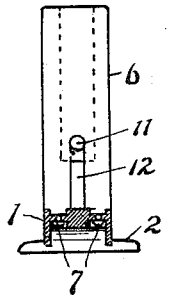
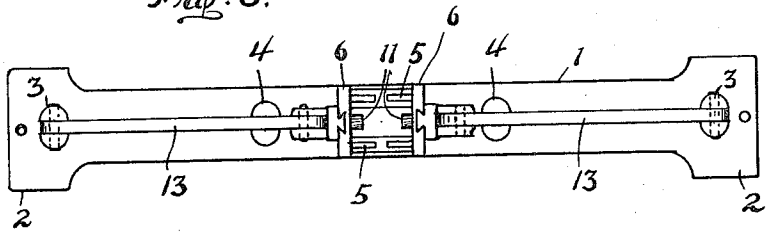


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

ROLLAND H. CROWEL, OF FORT WAYNE, INDIANA.

DOOR-CLAMP.

1,138,088. Specification of Letters Patent. Patented May 4, 1915.

Application filed January 18, 1915. Serial No. 2,832.

To all whom it may concern:

Be it known that I, ROLLAND H. CROWEL, a citizen of the United States of America, and resident of Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Door-Clamps, of which the following is a specification.

This invention relates to improvements in door clamps and the object thereof is to afford a device adapted to hold doors and other objects in an edgewise position so that the operation of dressing the edges thereof and in fitting hinges and locks thereto will be facilitated.

Another object of the invention is to so construct the device that objects of various sizes placed between its jaws will become automatically clamped and held in edgewise position without the necessity of making adjustments.

The above objects are accomplished by the construction illustrated in the accompanying drawings in which:

Figure 1 is a side elevation of the device; Fig. 2 is a transverse section of Fig. 1 on the line x—x thereof; and Fig. 3 is a plan view of Fig. 1.

Similar characters of reference indicate corresponding parts throughout the several views and referring now to the same:

1 is a base having a foot 2 at each of its ends and also bifurcated lugs 3 and 4 projecting upwardly from its upper side upon each side of its middle. Upon either side of the center of the base are horizontal slots 5 extending lengthwise of the base. Upon said base are arranged vertically disposed jaws 6 that face each other, the lower end of each jaw being loosely attached to the base by means of screws 7 that extend through said slots respectively into the lower end of the corresponding jaw. Thus the jaws may be moved toward each other upon the base. In the back of each jaw is loosely secured a vertically sliding plate 8 having bifurcated lugs 9 and 10 respectively upon its rear side, and upon its front side a stud 11 that projects through a vertically extending slot 12 in the corresponding jaw, the pin being located near the lower end of the plate and extending horizontally to a point beyond the inner face of the jaw so as to afford a projection. Each plate 8 is connected with the base by means of toggles 13 and 14 which are connected respectively at their ends with the corresponding bifurcated lugs. Each of the toggles 14 have integral extensions 15, the ends of which rest upon the upper face of the base when the toggle is in normal position. A spring 16 is pivoted to each of the toggles 13 as indicated at 17, and is also rigidly secured to the extension 15 of the corresponding toggle as indicated at 18. The tension of the spring is such as to bear downwardly upon the extension to which it is attached and upwardly against the corresponding toggle 13. Thus the vertically sliding plates 8 are normally held in their uppermost position by force of the springs acting against their toggles.

In the operation of the invention a door, or piece of timber is placed between the jaws 6 and allowed to rest upon the projecting studs 11, whereupon, owing to the weight of the door or timber upon the studs, the plates 8 from which the studs project will be moved downwardly, and owing to the arrangement of the toggles attached to the plates, they will be caused to swing inwardly and the jaws attached to the plates will be forced against the sides of the door or timber so that the latter becomes clamped therebetween. Downward pressure upon the studs causes the plates to move the jaws toward each other with force corresponding more or less to the weight placed upon the studs, and this effect is magnified to some extent owing to the angularity of the toggles. It will therefore be understood that the pressure of the jaws against the sides of the door when its weight is placed upon the studs is sufficient to hold the door rigidly in position to be worked upon.

What I claim is:—

1. A door clamp comprised of a base; two horizontally movable jaws arranged vertically upon the base; a vertically sliding plate on the back of each jaw, having a stud near its lower part that extends through the corresponding jaw and projects from the inner face thereof, each of the jaws having a vertically extending slot for the movement therein of the corresponding stud; a pair of toggles connecting each plate with the base; and a spring in connection with each pair of toggles having tension adapted to hold them in normal position.

2. In a device of the class described a base; oppositely disposed jaws horizontally movable on the base; a sliding plate in connection with each jaw having a stud pro-

jecting through the corresponding jaw to a point beyond its inner face; a pair of toggles connecting each sliding plate with the base; and a spring in connection with each pair of toggles having tension to hold the same in normal position.

3. In a device of the class described a base; a pair of jaws oppositely disposed and having horizontally sliding connection therewith; a plate on the back of each jaw having vertically sliding connection therewith and having also a stud projecting beyond the inner face of the jaw; and spring actuated toggles connecting each plate with the base.

In testimony whereof I affix my signature, in presence of two witnesses.

ROLLAND H. CROWEL.

Witnesses:
WALTER G. BURNS,
MATHILDA METTLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."