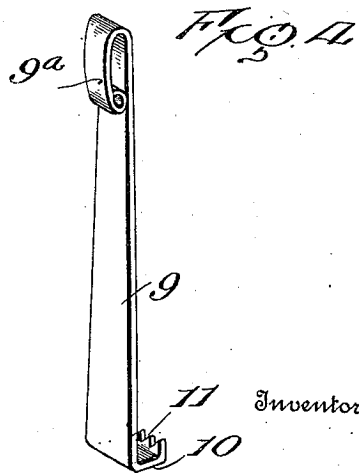
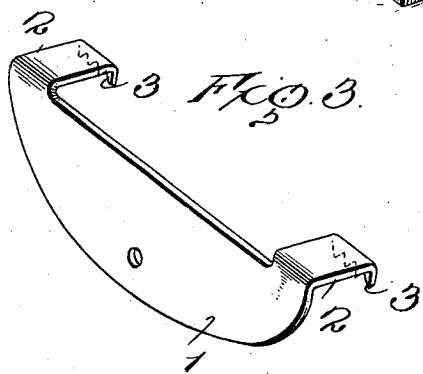
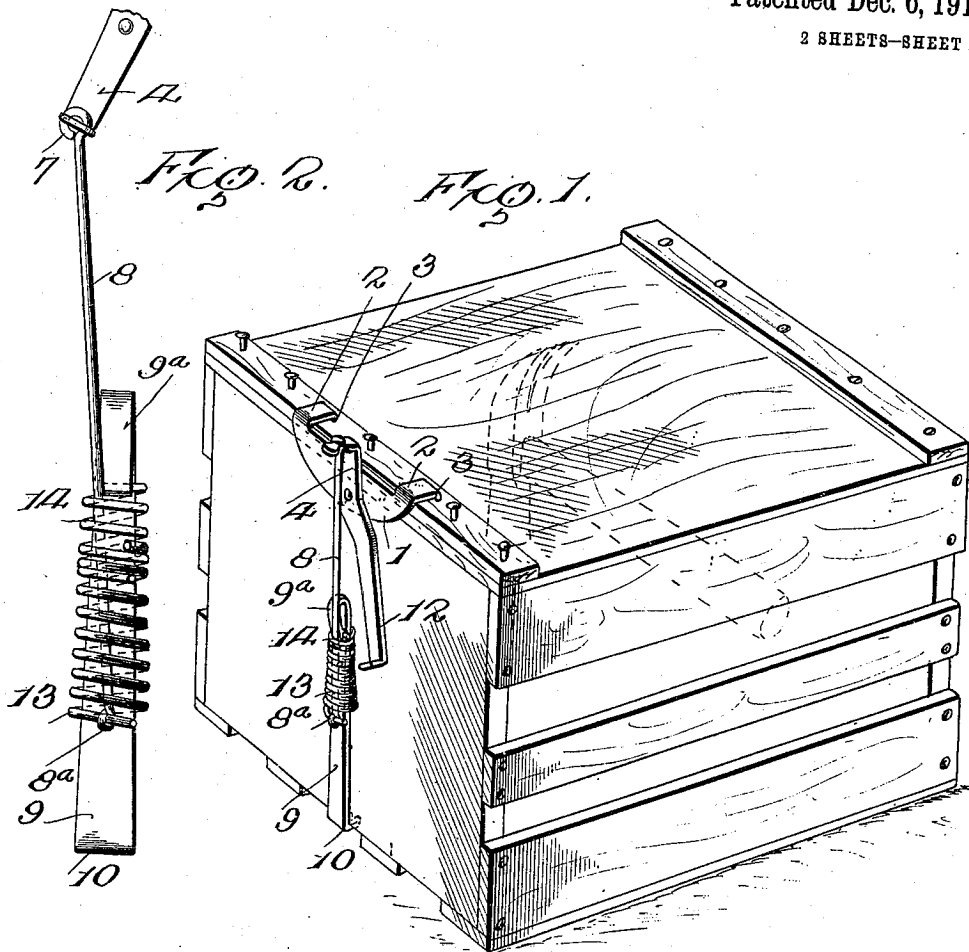


W. L. HERRICK.
 CLAMP.
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 2 SHEETS—SHEET 1.

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CLAMP.

977,738.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WARREN L. HERRICK, citizen of the United States, residing at San Jose, in the county of Santa Clara and State of California, have invented certain new and useful Improvements in Clamps, of which the following is a specification.

This invention comprehends certain new and useful improvements in devices for use in nailing the covers or lids upon shipping crates or boxes of various kinds, and the invention has for its primary object a simple, durable and efficient construction of clamp which may be advantageously used to draw down and clamp a cover or lid and hold it in closed position securely upon the body portion of the crate, case or the like, while the nails or other fastening devices are being applied, the device being automatically locked and held in closed or operative position so that both of the operator's hands may be free and so that he may also be free to shift or change his position, as required in the nailing operation.

As is well known, it is customary, in nailing down lids or covers, to clamp the lid upon the body portion of the crate, for instance, within the jaws of an apparatus, the jaws being closed upon the lid and body portion by a foot treadle. These machines just mentioned are stationary, or are at least not easily portable, and hence another object of the invention is a portable device of this character which may be very easily manipulated to apply it and release it from a crate and the cover thereof.

With these and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions, arrangements and combinations of the parts that I shall hereinafter fully describe and claim.

For a full understanding of the invention, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view illustrating one embodiment of my invention and the application thereof; Fig. 2 is an enlarged elevation of a part of the device; Fig. 3 is a perspective view of the head of the device; Fig. 4 is a detail perspective view of a connecting arm; Fig. 5 is a perspective view of a modified form, showing it

in applied position; and, Fig. 6 is an elevation of the modification.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In that embodiment of my invention illustrated in Fig. 1, my improved clamping device comprises a head 1 which is in the form of a plate and which is provided at its upper edge with laterally extending lugs 2 designed to extend over one end of a crate top or lid near the edge thereof, the lugs being preferably toothed, as indicated at 3, or provided with prongs which are adapted to penetrate the cleat or the like which extends over the lid, so as to securely hold the lid in place.

The lever 4 is fulcrumed intermediate of its ends on the head 1 and is provided at one end with a laterally projecting extremity 5 which is recessed at opposite edges, as indicated at 6, so as to form a protuberance to hold said extremity in a loop 7 which is formed on one end of a connecting arm 8. The connecting arm 8 co-acts with a complementary arm 9 which in the present embodiment of the invention is provided at its lower end with a laterally projecting lug 10 toothed or provided with prongs, as indicated at 11, in a manner corresponding to the lugs 2. This lug 10 is designed to engage under the bottom of the body portion of the crate or the like, the handle end 12 of the lever 4 being swung up so as to extend the device whereby it may be easily secured to the lid and to the body portion. The connecting arms 8 and 9 are passed through a coil adjusting and tensioning spring which is formed in two sections, the coils of said sections being engaged at one end, as shown, whereby the spring may by a rotary movement be lengthened or shortened as required, and the lower end of the arm 8 is hooked, as indicated at 8^a, to engage the lower spring section 13, while the upper end of the arm 9 is correspondingly hooked, as indicated at 9^a to engage the upper end of the upper spring section 14. By means of this adjusting spring, the device may be used with equal facility on boxes of slightly different heights. For example, crates and fruit boxes vary in thickness sometimes and the size of the fruit demands that a cleat be put underneath the

cover or lid, making the crate that much higher. The adjustable feature of the spring as just described, compensates for this.

From the foregoing description in connection with the accompanying drawings, the operation of my improved clamp will be apparent. In the practical use of the device, the head 1 by means of its toothed pronged lugs 2, is engaged with one end of the head or cover, the lug 10 is engaged with the bottom of the body portion of the crate or the like, the lever being then handle end uppermost and the handle end is then drawn down to contract the adjusting spring and draw the lid down upon the body portion of the box. It is to be noted that the lever is provided with a crook 4^a, so that it may snap past the center and securely hold the parts with the spring tension, whereby both hands of the operator may be free for the nailing operation.

That view or embodiment of my invention illustrated in Fig. 1 is particularly designed for use in connection with boxes or crates which require relatively rigid cleats over the ends of the lid or cover. Under such circumstances, it is manifest that the clamp need not extend throughout the width of the lid, but may merely engage the cleat at about a middle point, as the cleat in turn will hold the lid tightly down upon the body portion of the boxes or the like from one side of the lid to the other. But for nailing crates or boxes which do not employ cleats, I prefer that modification or embodiment of my invention which is illustrated in Fig. 5. In this form of the device, the parts are substantially like the parts illustrated in Fig. 1 with the exception of the head, which in the modified form of the device is designated 1^a and which is provided with toothed or pronged lugs 2^a connected together at their extremities by a cross bar 15 which preferably extends laterally beyond both of the lugs and is of a length to engage practically the entire lid from one side to the other. It is clear that owing to the spaces between the lugs 2^a being entirely open, the cross bar 15 will interfere in no way with the nailing operation, the lugs 2^a being relatively narrow. It will also be seen from this modification that my invention is not limited to the use of a tension spring constructed in two sections. For instance, the spring in Figs. 5 and 6, designated 16, is a continuous spring connected at its ends to the arms 8 and 9.

It is to be understood that my invention is not limited to the modification herein described, but that various other changes may be made in the construction, arrangement

and proportions of the parts, without departing from the scope of the invention as defined in the appended claims.

Having thus described the invention, what is claimed as new is:

1. A clamp of the character described, comprising a head provided with lugs, a lever fulcrumed intermediate of its ends on said head, an arm pivotally connected to one arm of said lever, a co-acting arm, the last named arm being provided with a lug, and a spring through which the arms pass in overlapping relation to each other, the arms being connected to the spring, substantially as described.

2. A clamp of the character described, comprising a head provided with laterally projecting toothed lugs, a lever fulcrumed intermediate of its ends on said head, an arm provided at one end with a laterally projecting lug, another arm pivotally connected to one arm of the lever, and a spring through which the two arms pass, the spring being constructed in adjustably connected sections, the said arms being connected to the sections respectively.

3. A clamp of the character described, comprising a head provided with laterally projecting lugs, a lever fulcrumed intermediate of its ends on said head, an arm provided with a lug, another arm connected to said lever, a spring through which the overlapping ends of the arms pass, the spring being constructed in sections, the convolutions of which are interengaged, whereby a turning movement of one section relative to the other will extend and contract the spring, the adjoining ends of the arms being connected to said sections respectively.

4. A clamp of the character described, comprising a head provided with laterally projecting lugs, a lever fulcrumed intermediate of its ends on said head, an arm provided at one end with a laterally projecting lug and provided with a hook at the other end, another arm provided at one end with a loop, the lever being formed with a laterally projecting extremity on which the loop is pivotally mounted, the second named arm being provided at its opposite end with a hook, the adjoining ends of the two arms overlapping, and a spring through which said ends pass, the hooked ends of the arms being connected to the spring, as and for the purpose set forth.

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

WARREN L. HERRICK. [L. S.]

Witnesses:

GEORGE J. LITTLE,
H. V. HAMMONS.