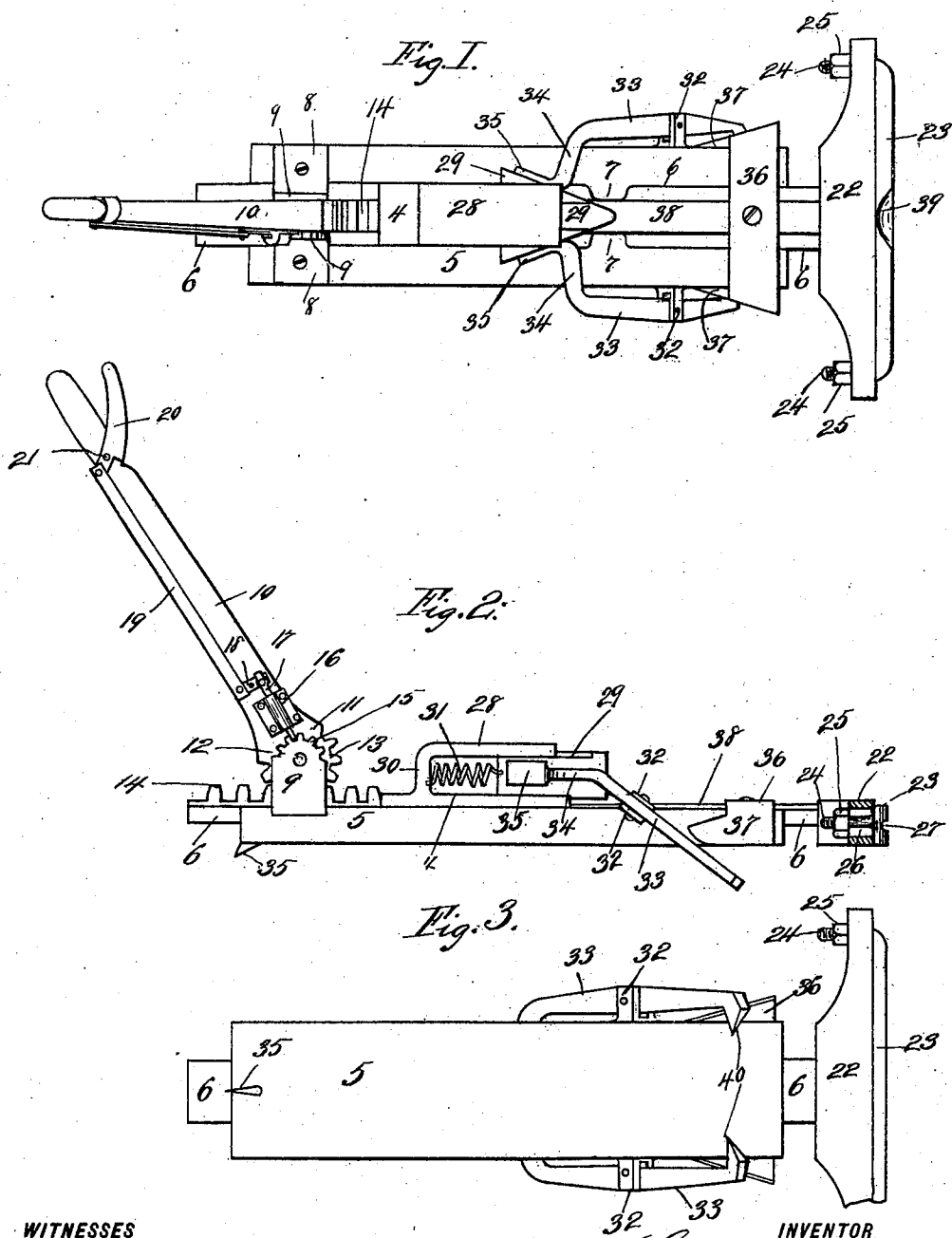


(No Model.)

L. BUNNELL.
FLOOR CLAMP.

No. 577,975.

Patented Mar. 2, 1897.



WITNESSES

J. M. Danielson Jr.
E. Gust

INVENTOR

Leslie Bunnell

BY

Edgar L. Lister
ATTORNEYS

UNITED STATES PATENT OFFICE.

LESLIE BUNNELL, OF RED LODGE, MONTANA.

FLOOR-CLAMP.

SPECIFICATION forming part of Letters Patent No. 577,975, dated March 2, 1897.

Application filed August 13, 1896. Serial No. 602,636. (No model.)

To all whom it may concern:

Be it known that I, LESLIE BUNNELL, a citizen of the United States, and a resident of Red Lodge, in the county of Carbon and State of Montana, have invented certain new and useful Improvements in Floor-Clamps, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar numerals of reference indicate corresponding parts wherever found throughout the several views.

This invention relates to floor-clamps; and the object thereof is to provide an improved device of this class which is designed for clamping or pressing the boards of a floor together and for holding them in position until they are nailed to the floor-beams or sleepers, a further object being to provide a device of this class which is adapted to be placed on the floor-beams and to operate in connection therewith to clamp, press, and hold the separate boards of the floor in position while they are being nailed.

The invention is fully disclosed in the following specification, of which the accompanying drawings form a part, in which—

Figure 1 is a plan view of my improved floor-clamp; Fig. 2, a side view thereof, and Fig. 3 a bottom plan view.

In the practice of my invention I provide a floor-clamp consisting of an oblong block 5, in the upper side of which is mounted a longitudinally-movable bar 6, which is placed in a corresponding slot or groove in the upper side of said block 5 and which is held in place by lugs or projections 7, which project over the sides thereof near the front end, and by cross-plates 8, secured to the rear end of the block 5 and provided with upwardly-directed jaws 9, between which is pivoted a lever 10, said lever being provided with a circular head 11, through which the pivot-pin 12 passes, and said circular head being provided with ratchet-teeth 13, which operate in connection with teeth or projections 14, formed on the rear end of the sliding bar 6.

One of the jaws 9 is circular in form at the upper end thereof and provided with ratchet-teeth, as shown at 15, and secured to the lever 10, near the circular head 11 thereof, is a longitudinal keeper 16, in which is mounted

a sliding bolt 17, which is pivotally connected with a cross-bar 18, which is pivoted to the lever 10, and to the other end of which is pivotally connected a rod 19, which is carried outwardly to near the end of the lever 10 and pivotally connected with one arm of a short operative lever 20, which is pivoted to the lever 10 at 21.

The sliding bar 6 is provided at its outer end with a cross-head 22, to the outer side of which is secured a longitudinal buffer-plate 23, said buffer-plate being provided at each end with angular arms 24, which are screw-threaded and provided with nuts 25, and the angular arms 24 are passed through slots 26 in the ends of the cross-head 22, whereby said buffer-plate is transversely adjustable, so as to correspond with the tongues formed on flooring-boards of different thicknesses, said buffer-plate being provided with a longitudinal groove 27 in its outer side which is designed to receive said tongues.

The sliding bar 6 is provided centrally thereof with a raised longitudinal portion 4, which is provided with an arm 28, which projects in line therewith toward the forward end of the clamp, and between said arm and the raised portion of the sliding bar 6 is mounted a sliding wedge-shaped head 29, which is connected with the angular portion 30 of the arm 28 by a spiral spring 31, which operates to force said head 29 outwardly.

Secured to or formed on the sides of the block 5, near the front end and at each side thereof, are outwardly-directed jaws 32, between which are pivoted arms 33, which extend backwardly across the sides of the block 5, and the upper ends of which are provided with inwardly-curved ends 34, which are provided with outwardly-inclined heads 35, between which the wedge-shaped head 29 is adapted to be forced, and the lower ends of the arms 33 are provided with inwardly-directed jaws or prongs 40, which are adapted to be forced into the sides of the floor-beam on which the clamp is placed, and said block 5 is provided at its rear end and centrally thereof with a backwardly-directed prong 35, the operation of which will be hereinafter described.

Secured to the sliding bar 6, near the forward end thereof, is a block 36, the ends of

which are provided with downwardly-directed wedge-shaped jaws 37, the points of which are directed backwardly, and which abut against the sides of the block 5, and the sliding bar 6 is preferably provided centrally thereof with a raised longitudinal rib or spline 38, at the rear end of which the teeth 14 are formed, said teeth and said spline or raised portion constituting a rack-bar, and the block 36 is countersunk therein, and the wedge-shaped head 29 is connected with the arm 28 and the raised portion 4 of the sliding bar 26 by a tongue-and-groove construction, it being understood that said head 29 is free to slide between said arm 28 and said raised portion 4.

The operation will be readily understood from the foregoing description when taken in connection with the accompanying drawings and the following statement thereof.

The lever 10 is first moved forward so as to draw the cross-head 22 of the sliding bar 6 back against the end of the block 5, and in this position of the parts the clamp or the block 5 is placed on the floor-beams and the prong 35 is forced therinto, the clamp being first shoved up against the edge of the board which is being laid, so that the tongue thereon will enter the groove 27 in the buffer-plate 23. The lever 10 is then moved backward, and this operation forces the sliding bar 6 forwardly and at the same time forces the wedge-shaped head 29 between the inclined jaws 35 of the arms 33, and this operation forces the prongs or jaws 40 at the lower ends of said arms into the sides of the floor-beam and prevents the backward movement of the clamp while the cross-head 22 is being forced forwardly. When the cross-head 22 is forced forward to its farthest extent and the floor-board is clamped in the desired position, a nail is driven into the board, and the buffer-plate 23 is provided with a notch or recess 39, which permits of the driving of the nail without injuring the clamp or board. When the board has been secured in place, the lever 10 is again moved forward, and this operation draws back the sliding bar 6 and forces the jaws 37 on the cross-block 36 between the lower ends of the arms 33 and the sides of the block 5 and releases the jaws or prongs 4 from the floor-beam, and the clamp may then be moved along said beam so as to provide room for another floor-board.

The object of the lever 20, the rod 19, with which it is connected, and the sliding lock-bolt 17, which operates in connection with the ratchet 15 on one of the jaws 9, between which the lower end of the lever 10 is pivoted, will be readily understood and is similar to other devices of this class, the object thereof being to hold the lever 10 in any desired position.

It is evident that many changes in and modifications of the construction herein described may be made without departing from the spirit of my invention or sacrificing its advantages. The blocks 8 and the jaws 9 may be formed

integrally with the block 5 and the sliding bar 6 may be held in position in any desired manner, and the longitudinal rib or spline 28 on said sliding bar 6 may be omitted, if desired, and the arm 28 may also be formed integrally with the sliding bar, and I reserve the right to make all such alterations in and modifications of the construction herein described as fairly come within the scope of the invention.

Having fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A floor-clamp, consisting of a main block, which is adapted to be clamped to a floor-beam, said block being provided with a sliding bar which is mounted longitudinally of its upper side, and which is provided with a cross-head, which is adapted to force the floor-boards into position, said sliding bar being also provided at the end thereof, opposite said cross-head, with ratchet-teeth, and said main block being provided with upwardly-directed jaws between which is pivoted a lever, the end of which is provided with ratchet-teeth which are adapted to operate in connection with those formed in the sliding bar, said sliding bar being also provided with a wedge-shaped head, and said main block with pivoted side arms, the upper ends of which are curved inwardly, and provided with jaws, between which said head is adapted to be forced, and the lower ends of said arms being provided with inwardly-directed prongs or jaws which are adapted to be forced into a floor-beam, said sliding bar being provided adjacent to the cross-head with a cross-block, the ends of which are provided with backwardly-directed wedge-shaped jaws which operate in connection with said pivoted arms, substantially as shown and described.

2. A floor-clamp consisting of an oblong block provided with a longitudinally-extending slot, a longitudinally-movable bar mounted in said slot, lugs or projections secured to the forward portion of said block and adapted to hold the said bar in position, standards secured to upwardly-directed jaws secured to the rear portion of said block, a lever pivoted therebetween, a sliding bolt on said lever and adapted to engage the toothed end of one of said jaws, means for operating the said plate adjacent to the upper end of said lever, a rack-bar formed on the upper portion of said bar and adapted to be engaged by the lower end of said lever, outwardly-directed jaws secured to either side of said block arms pivoted therebetween, said arms extending backwardly across the back of said block, curved ends formed on the upper portion of said arms, outwardly-inclined heads secured on the said ends, a raised longitudinal portion centrally secured to said sliding bar, a wedge-shaped head mounted therein and adapted to engage said inwardly-inclined head on said curved end of said arm, inwardly-directed prongs secured to the lower end of said arms and adapted to pass under the said block, a block se-

cured to the lower bar near the forward end
of the same, downwardly-directed wedge-
shaped bars mounted thereon and extending
in a backward direction, cross-heads secured
5 on the outer end of said sliding bar, a longi-
tudinal buffer or plate mounted therein, an-
nular bars in either end of said plate having
screw-threaded ends thereon and adapted to
pass through longitudinal openings within the
10 said cross-head and be adjusted thereon and
an outwardly-inclined spur adapted to engage

a beam, said parts being combined substan-
tially as and for the purpose described.

In testimony that I claim the foregoing as
my invention I have signed my name, in the 15
presence of the subscribing witnesses, this
5th day of August, 1896.

LESLIE BUNNELL.

Witnesses:

R. G. BEATTIE,
J. R. ANDREWS.