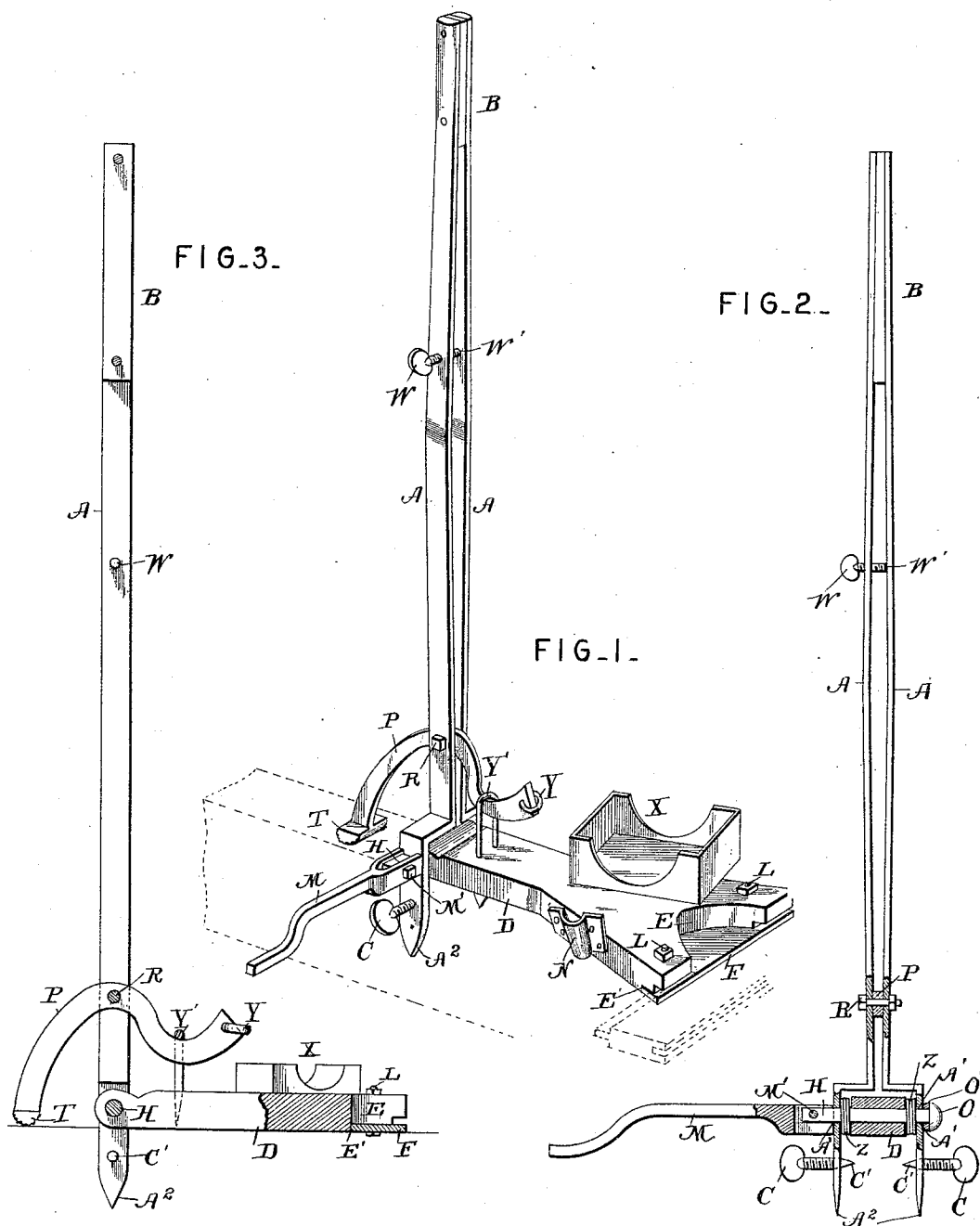


A. ZAUNER.
FLOOR CLAMP.

Patented Oct. 18, 1892.



Inventor

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UNITED STATES PATENT OFFICE.

ALEXANDER ZAUNER, OF SAN ANTONIO, TEXAS.

FLOOR-CLAMP.

SPECIFICATION forming part of Letters Patent No. 484,488, dated October 18, 1892.

Application filed March 11, 1892. Serial No. 424,563. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER ZAUNER, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented a new and useful Floor-Clamp, of which the following is a specification.

My invention relates to improvements in floor-clamps, the objects in view being to provide a cheap and simple device adapted to facilitate the laying of floors, whereby uniformity and a good joint is secured and any warping or curving of the boards destroyed.

Various other objects and advantages of the invention will appear in the following description, and the novel features thereof will be particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a perspective of a floor-clamp constructed in accordance with my invention. Fig. 2 is a transverse section through the same. Fig. 3 is a longitudinal section.

Like letters of reference indicate like parts in all the figures of the drawings.

In practicing my invention I employ a clamping-bar D of general Y shape—that is to say, said bar is widened toward its front end and is provided with a central notch of V shape at its edge, and designated as E. The lower front corners of the bifurcations formed by this notch are rabbeted, as at E', and let into the under side of the clamping-bar is a metal plate F, the same being secured in position by means of bolts L, passed through the plate and the bifurcations of the clamping-bar. The plate F combines with the clamping-bar to form a recess adapted to receive the tongue of ordinary flooring. Inasmuch as the distance between the tongue and the lower side of the flooring varies in accordance with the thickness of the flooring, and in order to adapt the metal plate F to such distance, the same is thus made removable, and narrower or thicker plates may be substituted for the one herein shown.

At one side of the clamping-bar D an inclined conical holder N is secured, the same being designed to receive and conveniently hold a punch employed in driving the nails. A small tray X may be secured to the upper side of the clamping-bar near the opposite edge to that at which is located the punch-

holder N, and this tray is employed to hold nails, which are thus supplied to the operator directly at the point of using, thus avoiding the necessity of reaching in the pocket of the apron, singling out a nail, and withdrawing the same. Near its rear end the clamping-bar is provided with a transverse cylindrical perforation, and through the same is passed a bolt H, and at opposite sides of the clamping-bar upon the bolt are located coiled springs Z. B designates a handle, the same having secured to its opposite sides a pair of spring jaws or strips A. The lower ends of the jaws or strips are bent into bayonet shape and are provided with perforations A' immediately below their bends, through which project the ends of the bolt H, the springs E, before mentioned, being interposed between the spring-jaws and the sides of the clamping-bar D. One end of the bolt terminates in a head O beyond one of the spring-jaws, while to the opposite end of the bolt beyond the opposite jaw there is eccentrically pivoted, as at M', a compoundly-curved lever M, the head of which is bifurcated, as shown, so as to embrace the bolt, the latter being flattened for the reception thereof. By lowering the lever M to a horizontal position, the lower extremity of said lever operating against the adjacent spring-jaw and employing the same as a fulcrum, causes the bolt to be drawn outwardly and the spring-jaws forced inwardly. These spring-jaws have their lower ends pointed, as shown at A², and above the same are provided with threaded perforations, in which are adjusted inwardly-disposed horizontal fulcrum-screws C, the inner ends of which are pointed, as at C'. If desired, a washer O' may be mounted upon the bolt between its head and adjacent spring-jaw, whereby the bolt is shortened, or rather its operating-surface decreased in length. The clamping-jaws may be increased in tension through the medium of a spreading-screw W, which is passed through one of the jaws perforated for its reception, as shown at W', and at its inner end bears against the opposite jaw.

A compoundly-curved lever P is pivoted upon a bolt R between the jaws A immediately above the clamping-bar. This lever P terminates at its rear end in a transversely-

disposed half-round toothed anchoring-head T, and at its opposite end is provided with a stop-ring Y. The lever is limited in its movement by a staple Y', by which it is loosely embraced, the said staple rising from the clamping-bar.

This completes the construction of the device, whose operation and use is as follows: The handle is grasped by the left hand, the front ends or bifurcations of the clamping-bar being permitted to touch the flooring. The handle is swung back sufficiently far until the anchoring end T of the lever P touches the floor. The lever M is now swung to a horizontal position either by the foot of the operator or by the unengaged hand and the handle drawn toward the operator as far as is necessary to force the plank against the laid portion of the floor, thus forming a tight joint. In releasing the instrument it is simply necessary to raise the lever M, the points of the screws C being automatically disengaged from the joist which they embrace. After the clamp has been set so as to press the board to its proper position the bifurcation or recess in the front end of the clamping-bar forms a space to permit of a proper driving of the nail.

Having described my invention, what I claim is—

1. In a floor-clamp, the combination, with a reciprocating clamping-bar and means for operating the same, said clamping-bar being provided at its front edge and lower corner with a transverse rabbet or recess, of a metal plate secured to the under side of the bar, substantially as specified.

2. In a floor-clamp, the combination, with a reciprocating clamping-bar and means for operating the same, said clamping-bar being provided at its front edge and lower corner with a transverse rabbet or recess, of a transverse metal plate let into the under side of the clamping-bar and having its front edge extending under the rabbeted portion thereof and bolts for removably securing the plate to the bar, substantially as specified.

3. In a floor-clamp, the combination, with the clamping-bar and a bolt passed through the rear end of the same, of a handle terminating at its lower end in jaws and provided with perforations for loosely receiving the bolt at opposite sides of the bar, means for opening and closing the jaws and sliding them on the bolt, and fulcrum-points for engaging the joists, extending inwardly from the jaws below the bolt, substantially as specified.

4. In a floor-clamp, the combination, with

the clamping-bar and a bolt passed through the rear end of the same, of a handle terminating at its lower end in spring-jaws perforated so as to loosely receive the bolt at opposite sides of the bar, means for increasing the tension of the jaws and for opening and closing the same, and fulcrum-points located at the inner sides and near the lower ends of the jaws, substantially as specified.

5. In a floor-clamp, the combination, with the clamping-bar, the bolt passed there-through, the handle, and the opposite spring-jaws bent to embrace the bar and perforated to loosely receive the bolt and terminating below the bolt in fulcrum-points, of the lever eccentrically pivoted to one end of the bolt beyond the jaw and having its inner end adapted to bear against said jaw, substantially as specified.

6. In a floor-clamp, the combination, with the clamping-bar, the bolt passed through the rear end of the same, the opposite spring-jaws perforated to loosely receive the bolt, a handle at the upper end of the jaws, and fulcrum-points at the lower ends of the same, of the coiled springs mounted on the bolts between the jaws and bar and the eccentrically pivoted lever having a lower bearing end for operating on the jaws, substantially as specified.

7. In a floor-clamp, the combination, with the clamping-bar, the transverse bolt, the opposite spring-jaws, means for operating the jaws, and fulcrum-points at the lower ends of the jaws, of the compoundly-curved anchoring-lever pivoted between the jaws, said lever terminating at its rear end in a half-round toothed anchoring-head, a stop at the front end of the lever, and a staple mounted over the lever and upon the clamping-bar, substantially as specified.

8. In a floor-clamp, the combination, with the clamping-bar, the pivoting-bolt, the handle, and the bayonet-shaped spring-jaws perforated to receive the bolt and embracing the clamping-jaw, of means for opening and closing the jaw and pointed and threaded set-screws adapted to serve as fulcrums, mounted in the lower ends of the jaws, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALEXANDER ZAUNER.

Witnesses:

S. S. MOODY,
J. H. SPURGIN.