May 26, 1964 S. BIZJAK 3,134,573

BOARD CLAMP

Filed April 12, 1962

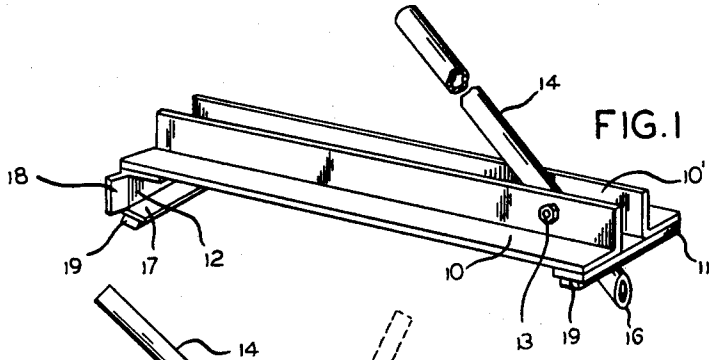


FIG.1

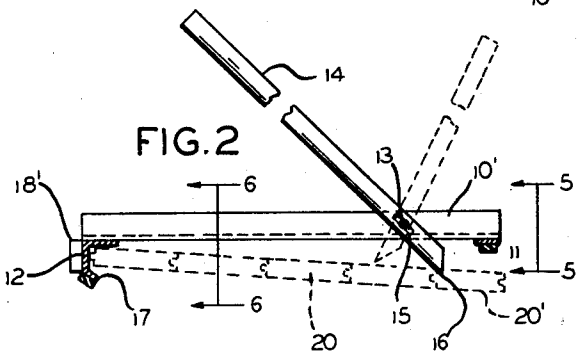


FIG.2

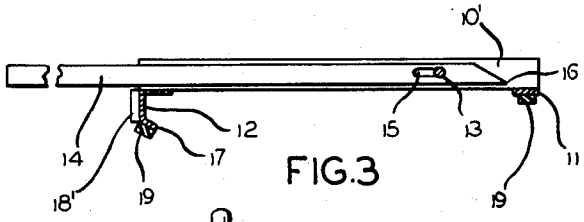


FIG.3

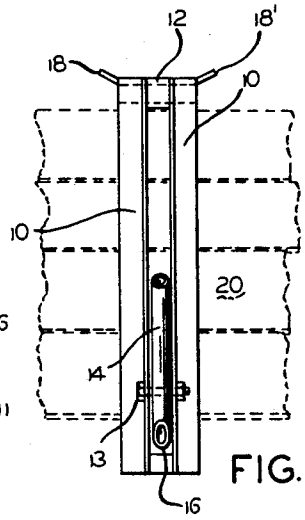


FIG.4

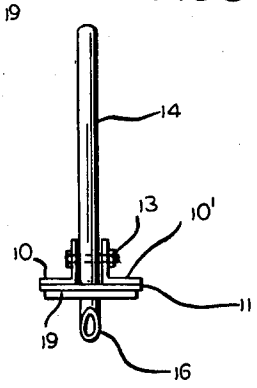


FIG.5

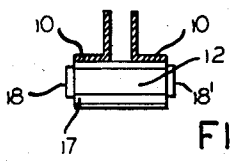


FIG.6

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BOARD CLAMP

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5 Claims. (Cl. 254—17)

My invention relates to clamps and more particularly to a device for clamping boards that are equipped with a tongue and groove, oppositely disposed.

The prime purpose of my invention is to provide a clamping device that may be employed to conveniently handle and/or convey a plurality of boards in side by side relation with a single handling.

Another object of my invention is to provide a clamp which will enable a plurality of boards to be placed in side by side position with ease in less time than when singly applied.

Still another object of the invention is to provide a device that is constructed in a manner to minimize damage to the boards during their installation.

It is manifest to anyone familiar with the art that when laying roof boards or the like the boards customarily are placed individually and secured to the roof or the like. This is especially difficult when the roof or other frame structure has a radial contour and is supported by laminated arches or the like. When the clamp as described is employed, it permits conveying a plurality of boards with one handling and permits the several boards to be forced downward at their depending ends for engagement with the tongue or groove of the boards already fastened in position.

The device is simple in construction, economical to manufacture, and designed for speedy, easy manipulation of boards in a variety of ways.

Other and further objects of my invention will become more apparent in the course of the following specification, when taken in conjunction with the accompanying drawings, in which:

FIGURE 1 is a perspective view of the entire assembled device;

FIGURE 2 is a longitudinal cross sectional view of the device showing the movement of the lever in phantom;

FIGURE 3 is a longitudinal cross sectional view of the device with an actuating lever thereof in a downward position during transportation;

FIGURE 4 is a top or plan view of the assembled device showing a plurality of boards, shown in phantom, being clamped;

FIGURE 5 is an end view of the device taken at the section line 5—5 in FIGURE 2; and

FIGURE 6 is a cross section of the device taken at the line 6—6 in FIGURE 2.

Similar characters of reference indicate corresponding parts throughout the several views, and referring now to the same, the characters **10** and **10'** show angle irons longitudinally disposed in parallel relation and spaced apart from one another.

The forward ends of the angles **10** and **10'** are held in a spaced position by a laterally disposed plate **11** welded to or attached in any other practical manner to the angles **10** and **10'**, and the opposite ends of the angles **10** and **10'** have an angle **12** laterally disposed and attached thereto in a similar manner.

Angle irons **10** and **10'** together with the angles **11** and **12** define a supporting base or frame.

A transversely extending pin or bolt **13** is supported by the vertical sections or flanges of the angles **10** and **10'** near one end thereof for pivotal support of a lever **14**, which is equipped with a longitudinal slot **15** near the lower end thereof. The extreme or end of lever **14** terminates in a point **16**. The end may be cut at an angle to provide the point. Obviously this engaging point may be of various shapes or contours.

The angle **12** has a lower supporting flange **17** extending toward lever **14** and formed at an angle extending downward with respect to the general plane of the base. The extreme outer edges **18** and **18'** of the angle **12** are flared outwardly or away from lever **14** to act as guides when the clamp is applied to the boards.

If desired, the lower face of the member **17** of the angle **12** and the lower face of the plate **11** may have pliable pads **19** constructed of rubber or the like applied thereto to provide an efficient coefficient of friction and prevent the device from sliding on a surface to which it is applied.

The operation of the clamp and its manipulation are exceedingly simple. By referring to the drawings, it will be noted that a plurality of tongue and grooved boards **20** may be placed into side by side engagement with one another and forced together by applying the lower side of lever **14** in a clockwise direction as viewed in FIGURE 2, thereby forcing the tongue and grooved edges of the boards tightly together. The channel serves as a stop during such action. The assembled boards may then be moved to a desired position by sliding the unit on frame members. When a plurality of boards are thus assembled, they may be moved into edge to edge abutting relation to boards already in place on a frame structure. By engaging the pointed edge **16** of the handle **14** into the boards that have been placed and fastened in position, as for example, the board **20'**, the angle **12** will force the boards **20** forward when the lever **14** is rotated in a clockwise direction, thereby holding the boards **20** unitarily in position and into edge to edge engagement with the fastened boards. After the boards **20** are put into position, the device is released and ready for accommodating and loading additional boards. The pin and slot connection between lever **14** and pin **13** facilitates removal of the lever point from the boards and allows disposition of point **16** at varying distances from the base.

By enabling the handling of a plurality of boards in this fashion, the boards can be made to roughly conform to the curvature of an arc while they are held together at the tongue and groove joints. After such conformation, they may be nailed to the supporting framework.

The lower end of lever **14** may be brought to bear against the side of a previously fastened board **20'** to bring it downwardly into alignment with the new boards **20**. It may also be brought to bear against the side portion of the newly assembled boards as indicated in dotted outline in FIGURE 2 so as to force these downwardly into alignment with the exposed edge of a fastened board **20'**.

Whereas I have shown and described an operative form of the invention, it should be understood that this showing and description thereof should be taken in an illustrative or diagrammatic sense only. There are many modifications in and to the invention which will fall within the scope and spirit thereof and which will be apparent to those skilled in the art. The scope of the invention should be limited only by the scope of the hereinafter appended claims.

I claim:

1. A board clamping device for forcing a plurality of boards with interfitting tongue and groove edge constructions into tight fitting engagement with one another and handling the same including an elongated base having a length greater than the widths of a plurality of boards, a board retaining member having a channel-like opening fixed to the under side of said base at one end thereof, a lever pivotally mounted on said base at a point spaced from the other end of said base and removed from said retaining member by a distance at least equal to the widths

of a plurality of boards, said opening facing said other end of said base, said lever having an upstanding handle portion and a depending portion adapted to engage a board below said base, said depending portion terminating in a point to allow prying of boards therewith, whereby a plurality of boards with tongue and groove edge constructions may be fitted together beneath said base with the exposed side edge of one board positioned against said retaining member while the other exposed side portion of another board may be contacted by said depending portion so as to allow forced engagement of several boards together by movement of said handle and movement of said depending portion toward said board retaining member, said other end having a downwardly facing surface to allow support of said base on said surface while said lever and boards engaged by said lever and board retaining member are manipulated.

2. The structure of claim 1 wherein said base includes a pair of spaced angle members extending parallel to one another but in spaced relation, and said lever is positioned between upstanding flanges of said angle members and pivoted thereto.

3. The structure of claim 1 wherein said board retaining member is in the form of a channel shaped member extending generally parallel to the pivotal axis of said lever, said channel shaped member having a flange spaced from and underlying said base so as to allow the edge of a board to rest thereon.

4. The structure of claim 1 wherein said depending portion has a pointed end and said lever has a pin and slot connection with said base.

5. The structure of claim 1 wherein said board retaining member has side surfaces flared outwardly away from said lever so as to enable convenient guiding of boards into said member.

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