Aug. 16, 1927. 1,638,985

W. C. DANIEL

FLOOR LAYING DEVICE

Filed April 6, 1926 2 Sheets-Sheet 1

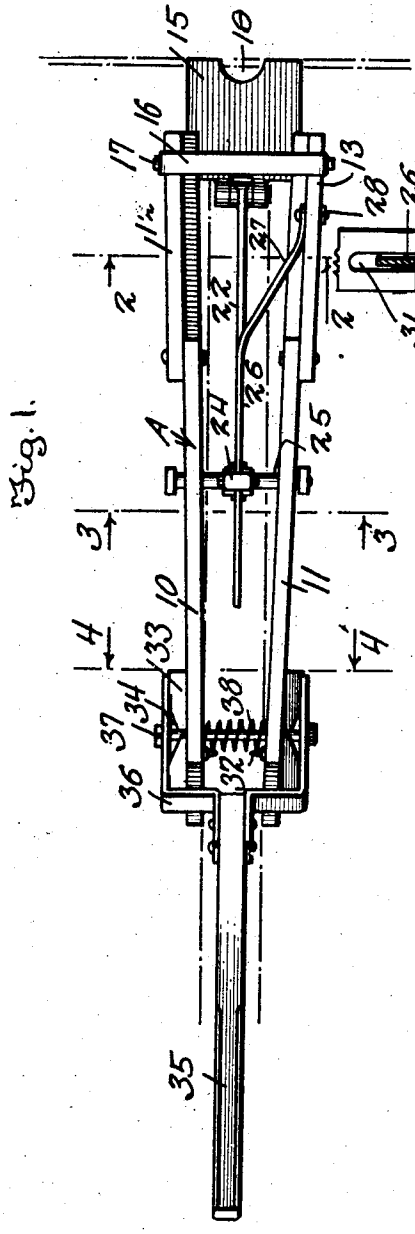


Fig. 1.

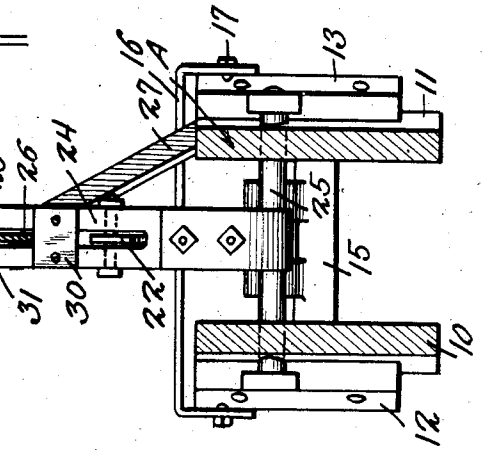


Fig. 3.

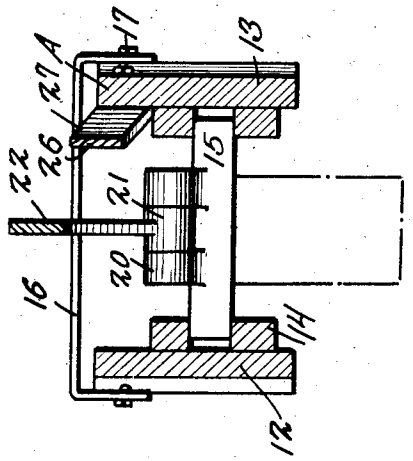


Fig. 2.

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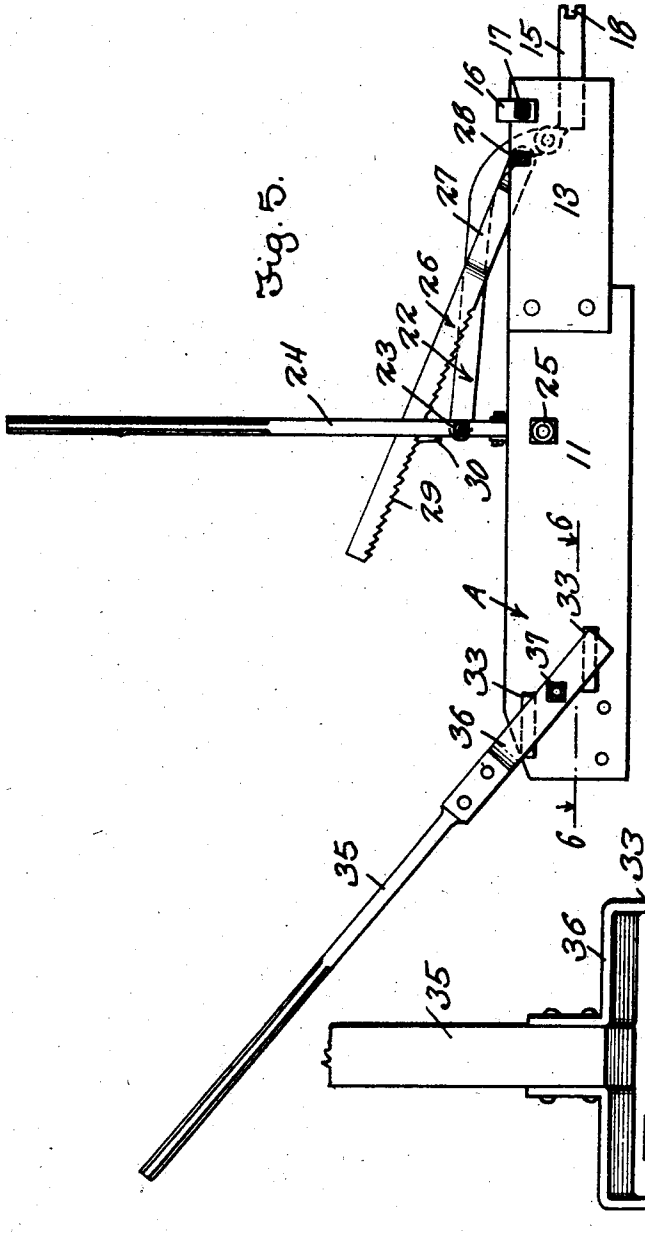
Witnesses
C. E. Churchman Jr.
G. V. Wright

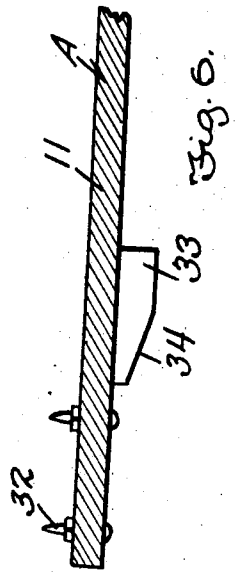
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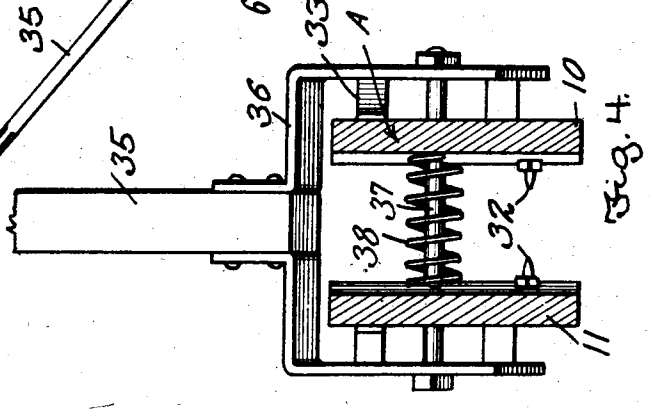
W. C. DANIEL

FLOOR LAYING DEVICE

Filed April 6. 1926 2 Sheets-Sheet 2







Willie C. Daniel, Inventor

Witnesses
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Patented Aug. 16, 1927. 1,638,985

UNITED STATES PATENT OFFICE.

WILLIE C. DANIEL, OF LOUISA, VIRGINIA.

FLOOR-LAYING DEVICE.

Application filed April 6, 1926. Serial No. 100,185.

This invention appertains to building implements and more particularly to a novel device for facilitating the laying of floors, and sheeting.

The primary object of this invention is to provide a novel floor laying device embodying novel clamping jaws for engaging the floor joists, which jaws form the supporting means or frame for the other operative parts of the machine.

Another object of the invention is to provide novel means for urging the jaws into gripping contact with the floor joists and for releasing the jaws from the joists, whereby the device can be readily and quickly moved to different positions, as the floor is being laid.

A further object of the invention is to provide a novel shoe for engaging the flooring or sheeting to be laid and novel means for actuating the flooring or sheeting, whereby the flooring or sheeting can be accurately laid irrespective of the warping of the boards.

A still further object of the invention is to provide a novel floor and sheeting laying device of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture, and one which can be placed upon the market at a reasonable cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawings, in which,

Figure 1 is a top plan view of the improved device showing the same in use,

Figure 2 is a transverse section through the device taken on the line 2—2 of Figure 1, looking in the direction of the arrows, and illustrating the means of mounting the floor or sheeting engaging shoe in position on the frame,

Figure 3 is a transverse section through the device taken on the line 3—3 of Figure 1 looking in the direction of the arrows, illustrating the operating means for the shoe,

Figure 4 is a transverse section through the device taken on the line 4—4 of Figure 1, looking in the direction of the arrows, illustrating the operating and releasing means for the joist gripping jaws,

Figure 5 is a side elevation of the improved device,

Figure 6 is a detail longitudinal section through one of the gripping jaws or frame plates illustrating the formation thereof.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A generally indicates the novel flooring and sheeting laying device, which comprises a pair of spaced frame plates 10 and 11, which can be formed of any desired material, such as white oak wood or the like. The frame plates 10 and 11 also constitute the novel gripping means for anchoring the device to the floor joists during the laying of the flooring and constitute one of the important features of the invention. The forward ends of the frame plates 10 and 11 have rigidly secured thereto the forwardly extending guide plates 12 and 13, and as shown these guide plates 12 and 13 are off-set laterally from the frame plates 10 and 11 for a purpose, which will be now described. The inner faces of the guide plates 12 and 13 have secured thereto guides 14 which extend flush with the inner faces of the frame plates 10 and 11 and the guides terminate at the forward ends of the frame plates 10 and 11. These frame plates 10 and 11 form stops for the shoe 15 which is slidably supported by the guides 14 and this shoe is preferably formed of metal, such as steel or iron. The shoe 15 is of a less width than the distance between the frame plates 12 and 13, so as to allow movement of the frame plates 10 and 11 relative to one another for a purpose which will also be hereinafter more fully described. Extending transversely of the guide plates 12 and 13 adjacent to the forward ends thereof is a connecting strap 16 of a substantially inverted U shape. The ends of the strap 16 are connected to the guide plates 12 and 13 by means of pivots or bolts 17 which are loosely mounted, so as to allow swinging movement of the plates thereon toward and away from one another. The shoe 15 is utilized for forcing the boards into position and the forward edge thereof can be provided with a groove 18 for receiving the tongues of floor boards, when the implement is used for laying a floor. The forward end of the shoe is also provided with a notch 19 of a substantially semi-circular shape and

this notch allows the easy nailing of the boards individually when the same have been moved into their correct place by the shoe. The inner end of the shoe 15 is provided with upwardly extending pivot ears 20 which receive therebetween the barrel 21 formed on the forward end of a link 22 and a suitable pivot pin extends through the ears 20 and the pivot barrel 21. The forward end of the link is turned downwardly, as can be readily seen by referring to Figure 5 of the drawings and the rear end of the link is pivotally connected as at 23 to a swinging operating lever 24 which extends above the frame plates. This operating lever 24 is rockably supported on the frame plates 10 and 11 by transversely extending pivot bolts 25 which extend loosely through the said frame plates, so as to allow movement of the plates toward and away from each other on said bolts. It is obvious that by swinging movement of the lever 24 that the shoe 15 can be moved forwardly or rearwardly in the guides 14 depending upon the direction of movement of the lever. In order to hold the lever in an adjusted position, after a board has been forced into place, a swinging latch bar 26 is provided. This latch bar 26 has the main portion thereof disposed parallel with the longitudinal axis of the implement, but the forward end thereof is offset as at 27 and pivotally connected by means of the bolt 28 with one of the guide plates which as shown is the plate 13. The body portion of the latch bar 26 is provided with rack teeth 29 which are adapted to successively engage a keeper plate 30 carried by a lever 24. It is to be noted that the latch bar 26 extends through a suitable guide slot 31 formed in the lever and that the latch plate 30 extends transversely of the slot so as to allow the free engagement of the latch lever with the keeper plate.

As herebefore stated, the frame plates 10 and 11 also form gripping jaws for engaging the floor or roof joists and the inner faces of said plates adjacent to the rear ends thereof are provided with teeth or studs 32 for engaging the joists. The outer faces of the frame plates 10 and 11 have secured thereto pairs of wedge bars 33 and these wedge bars have their faces tapered in opposite directions as at 34 for a purpose which will later appear.

Arranged in the rear of the operating lever 24 for the shoe 15 is an operating lever 35 for the frame plates or jaws and the lower end of the lever has secured thereto or formed thereon a yoke 36 for straddling the said frame plates, and this yoke is rockably mounted upon a transversely extending pivot bolt 37 carried by the plates or jaws 10 and 11 adjacent to the inner ends thereof. This bolt is likewise loosely carried by the plates or jaws 10 and 11 and the bolt is located between the wedges 34 so that upon swinging movement of the lever 35 the same will be moved into engagement with the wedge bars 33 for urging the jaws toward one another. In order to move the jaws away from one another when the lever 35 is moved to an upright position out of engagement with the wedge bars 33, a relatively heavy expansion spring 38 is coiled about the bolt 37 and the terminals of the spring engage the inner faces of the plates or jaws 10 and 11.

In use of the improved device, the same is laid longitudinally of a floor joist in the position desired with the plates 10 and 11 lying on opposite sides thereof. The lever 35 is now swung rearwardly so as to engage the wedge bars 34 which will move the plates or jaws into gripping contact with the joist against movement. A floor board is now placed on the joist and the shoe is moved in contact therewith by the lever 24 and upon pressure being applied to the lever 24 the shoe will force the board into proper position irrespective of how badly the same may be warped. The latch bar 26 will hold the board in its adjusted position, while the board is being nailed in place. After the board has been laid, the device can be quickly released from the joist and again moved to another position for permitting another board to be urged in place.

Owing to the construction of the tool, the same can be quickly clamped in place and only necessitates the employment of a single carpenter for the proper laying of a floor or roof sheeting.

Changes in details may be made without departing from the spirit or the scope of this invention, but what I claim as new is:

1. A device for laying flooring and sheeting comprising a frame including a pair of spaced side plates, off set guide pieces carried by the forward ends of the plate, guideways supported by said guide pieces extending flush with the inner faces of the side plates, a shoe slidably mounted within said guide-ways, a transversely extending connecting bar, means rockably connecting the ends of the connecting bar with the guide pieces for permitting swinging movement of the side plates toward and away from one another, means carried by the side plates for actuating the shoe, and means mounted upon the plates for moving the same toward and away from one another into and out of gripping contact with the joist.

2. A device for laying flooring and sheeting comprising a pair of spaced side plates, means rockably connecting the plates together, means carried by the forward ends of the plates for sliding the boards into position, gripping means carried by the inner faces of the plates adjacent to the rear ends thereof, a pivot bolt extending transversely

of the plates mounted loosely therein, an operating lever, a yoke carried by the inner end of the lever straddling said plates and rockably mounted upon the bolt, oppositely beveled wedge bars secured to the outer faces of the plates above and below the pivot bolt and arranged in the path of the arms of the yoke, whereby upon swinging movement of the lever in one direction, the plates will be urged toward one another, and an expansion spring coiled about said pivot bolt engaging the inner faces of the plates for normally urging the plates away from one another.

3. A device for laying flooring and sheeting comprising a pair of spaced side plates, means rockably connecting the plates together adjacent to their forward ends, a shoe carried by the forward ends of the plates for sliding the boards into position, gripping means carried by the inner faces of the plates adjacent to the rear ends thereof, means carried by the side plates for actuating the shoe, and means mounted upon the plates for moving the plates and the gripping means carried thereby toward and away from one another into and out of gripping contact with the joists.

4. A device for laying flooring and sheeting comprising a frame consisting of a pair of spaced side plates, means rockably connecting the plates together adjacent to their forward ends, gripping means carried by the inner faces of the plates adjacent to the rear ends thereof, a shoe slidably supported by the forward ends of the plates for sliding the boards into position, means carried by the side plates for actuating the shoe, and a single operating lever carried by the plates adjacent to the rear ends thereof for moving the plates and the gripping means carried thereby toward one another.

In testimony whereof I affix my signature.

WILLIE C. DANIEL.