

April 5, 1932.

L. H. TURNER

1,852,196

BOX FORM

Filed May 25, 1931

2 Sheets-Sheet 1

Fig. 1.

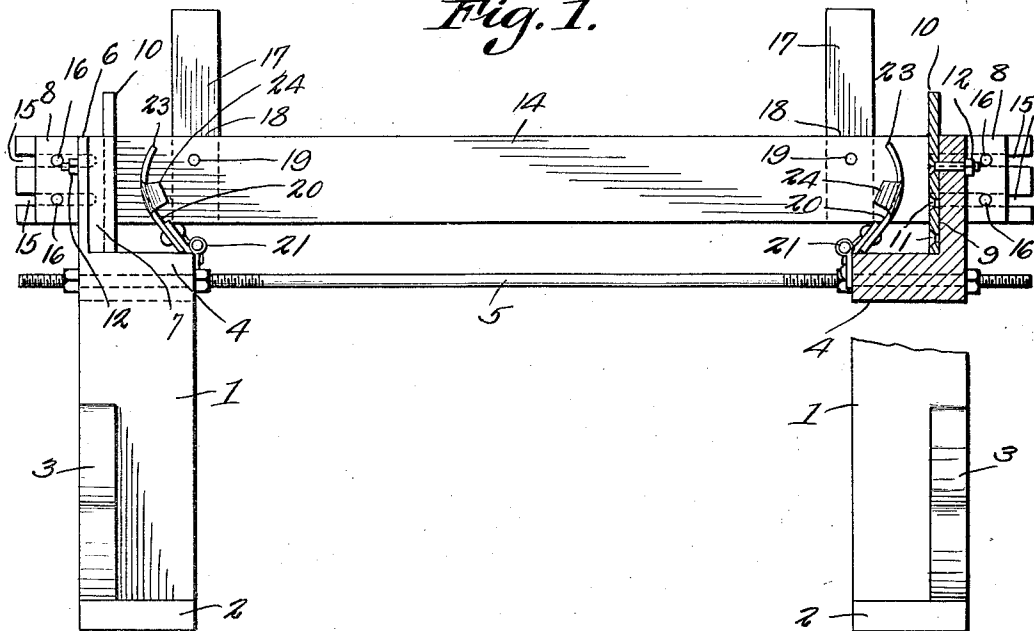
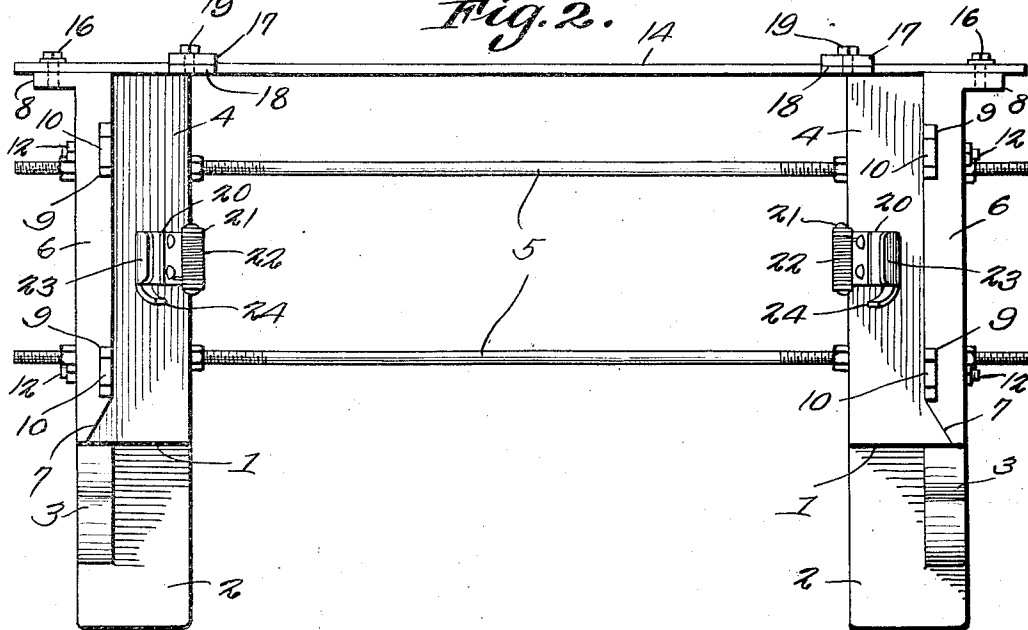


Fig. 2.



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Fig. 3.

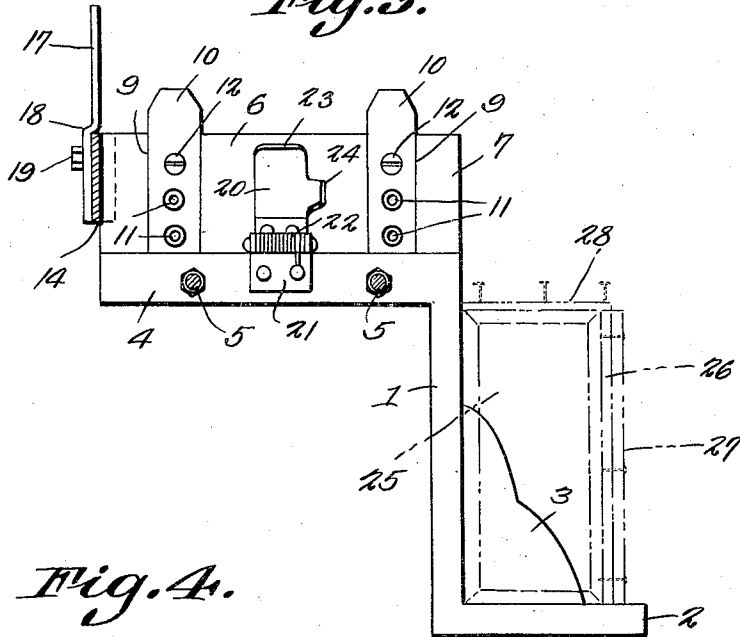


Fig. 4.

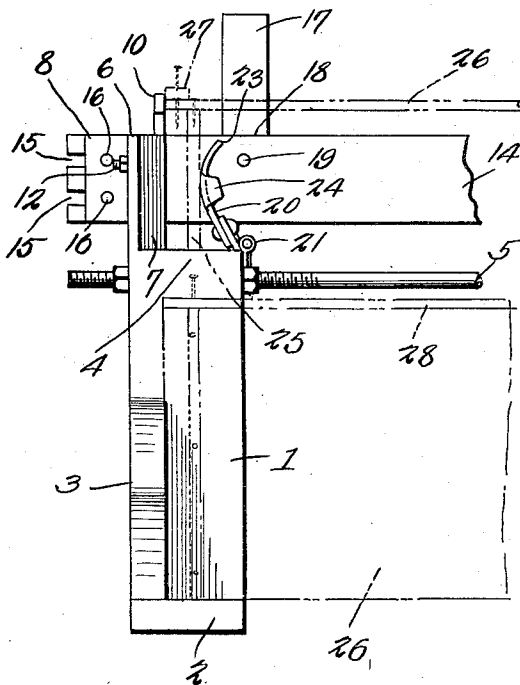


Fig. 5.

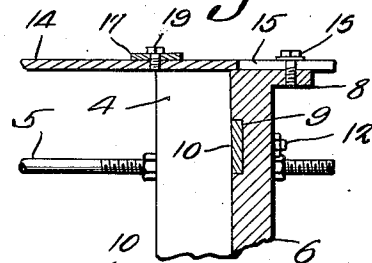


Fig. 6.

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UNITED STATES PATENT OFFICE

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BOX FORM

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This invention aims to provide a novel means whereby the parts of a cherry box, or any other sort of box, may be held in place during the nailing of the box. Another object of the invention is to simplify the frame construction of the device, so that it will have great strength, and at the same time, be capable of being made at less expense than heretofore.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of the invention herein disclosed, may be made within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:—

Figure 1 shows in front elevation, a device constructed in accordance with the invention, parts being broken away, and parts being in section; Figure 2 is top plan; Figure 3 is an end elevation; Figure 4 is a fragmental front elevation, with the box dotted in place, as it will appear during the final step in completion of the box; Figure 5 is a fragmental horizontal section; Figure 6 is a fragmental rear elevation.

In carrying out the invention, there is provided a frame, including end members which are L-shaped, each end member comprising a vertical standard 1, provided at its lower end with a forwardly extended horizontal foot 2, disposed at right angle to the standard. Vertical abutments 3 are located at the outer edge of each standard, and are connected to the standards and to the feet 2. The standards 1 are provided at their upper ends with rearwardly extended horizontal heads 4. Owing to the specific L shape of the end members, as shown clearly in Figure 3, the cost of the material is reduced greatly, and it is not necessary to provide expensive

tables or complicated frames for the support of the working parts.

The end members are held in place by longitudinally adjustable ties 5, which may be bolts, with nuts on them, the bolts being mounted in the heads 4, as Figures 2 and 3 will show. The longitudinally adjustable ties 5 adapt the machine for boxes of different sizes, and they also enable the end members of the frame to be adjusted to parallel relation, to facilitate the making of the boxes, as will be disclosed hereinafter. On the outer edges of the heads 4 there are upstanding plate-like wings 6, having bevelled forward ends 7 which facilitate the introduction of the material into the machine.

At their rear ends, the wings 6 have outwardly extended flanges 8. In the inner surfaces of the wings 6, there are vertical seats 9 in which retainers 10 are vertically adjustable. The retainers 10 extend upwardly above the upper edges of the wings 6, and have holes 11 arranged in vertical lines, as shown in Figure 3, the holes being adapted to securing elements 12, such as bolts, mounted in the wings 6 and permitting the aforesaid vertical adjustment of the retainers 10.

The machine comprises a back, and the back includes a bar 14, having slots 15 in it ends, these slots being adapted to receive holding devices 16, such as screws (Figure 5), mounted in the flanges 8 of the wings 6. The back bar 14 is provided with arms 17 extended upwardly above the back bar 14, and having shoulders 18 which rest on the upper edge of the back bar. The arms 17 are connected to the back bar 14 by securing members 19.

Clamps 20 cooperate with the wings 6 in holding certain parts of the box, as will be described hereinafter. The clamps 20 are connected by hinges 21 to the inner edges of the heads 4. Springs 22 are contained in the hinges 21 and tend to swing the clamps 20 toward the wings 6, so as to hold the box-parts, in the construction of the box. The clamps 20 have upper inwardly inclined fingers 23. On the forward edges of the clamps 20 there are inwardly extended fingers 24. Under the action of the springs 22, the clamps 20 swing

inwardly to the position of Figure 4, and then the movable leaves of the hinges 21 engage the heads 4, as shown at 100 in Figure 4, and hold the clamps 20 with the fingers 23 slanting downwardly toward the wings 6, and with the fingers 24 slanting backwardly toward the wings, to facilitate the introduction of the material between the clamps and the wings.

In practical operation, the box ends 25, are set up on the heads 4 and are held by the spring clamps 20 against the retainers 10. Owing to the positions assumed by the fingers 24 and 23 of the clamps 20 with respect to the wings 6 in Figure 4, the box ends can be slid to place either horizontally and backwardly or vertically and downwardly, and abut against the back bar 14. The bottom 26 of the box is laid on the upper edges of the ends 25 and is held against horizontal movement by the retainers 10 and the arms 17. The cleats 27 are placed on the bottom 26 (if cleats are used), in engagement with the retainers 10 of Figure 4. After the cleats 27 are nailed, the partially completed box is taken off the heads 4 and is set up against the standards 1, on the feet 2, between the abutments 3, and the side 28 is nailed to place. Finally, the box, is turned over from the dotted position of Figure 3, and the opposite side is fixed in place.

What is claimed is:—

1. A box-form comprising L-shaped end members, each including a substantially vertical standard, forwardly-extended feet at the lower ends of the standards, rearwardly-extended heads at the upper ends of the standards, means carried by the heads for holding parts of a box whilst the box is being partially completed, the standards and the feet forming supports for the partially completed box whilst the completion of the box is going forward beyond the degree of completion attained on the heads, abutments located in the angles formed by the feet and the standards and engaging the ends of the partially completed box on the feet, and a tie connecting the end members, the tie being longitudinally adjustable to vary the distance between the abutments, and to vary the distance between the said part-holding means on the heads.

2. A box-form comprising end members, upstanding wings at the outer edges of the tops of the end members, movable clamps cooperating with the wings and located at the inner edges of the tops of the end members, a back bar extended between the rear edges of the wings, an upstanding arm on the back bar, means for connecting the ends of the back bar adjustably to the rear edges of the wings to permit the wings to be adjusted toward and away from each other, along with the end members, a tie connecting the end members, the tie being longitudi-

nally adjustable to permit the end members to be adjusted toward and away from each other, retainers on the wings and extending upwardly above the wings, and means for holding the retainers in vertically adjusted positions.

3. A box-form comprising end members having approximately horizontal heads, upstanding wings at the outer edges of the heads, a back connecting the rear portions of the wings, and clamps hinged to the inner edges of the heads, the clamps being provided at their upper ends with inwardly-inclined fingers, and being provided on their forward edges with inwardly-inclined fingers, the clamps swinging outwardly toward the wings, until the clamps engage the heads, and stop, with the first-specified fingers slanting downwardly toward the wings, and with the second-specified fingers slanting backwardly toward the wings.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

LEE H. TURNER.