(No Model.)

J. T. CRAW.

MECHANISM FOR MAKING PAPER BOXES.

No. 557,557. Patented Apr. 7, 1896.

FIG. 1.

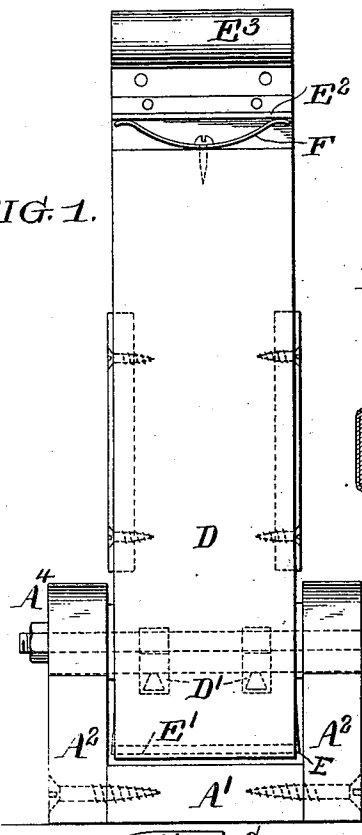


FIG. 7.

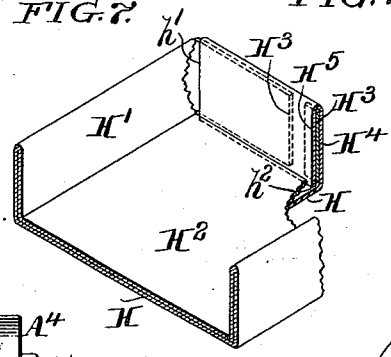


FIG. 2.

FIG. 4.

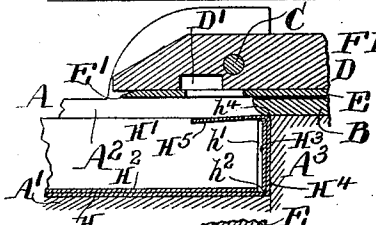


FIG. 5.

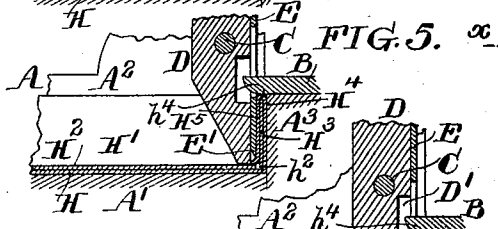


FIG. 6.

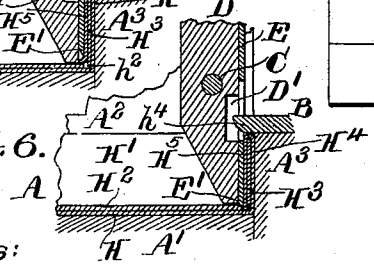
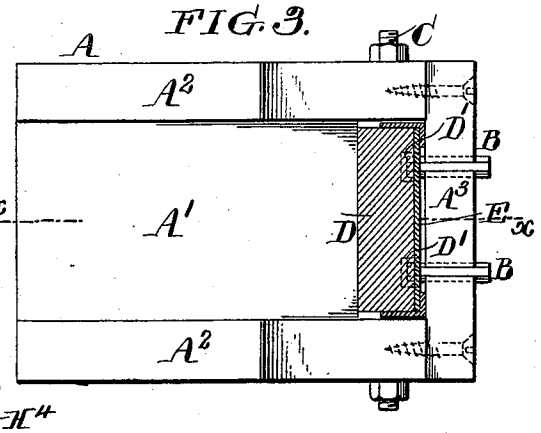


FIG. 3.



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MECHANISM FOR MAKING PAPER BOXES.

SPECIFICATION forming part of Letters Patent No. 557,557, dated April 7, 1896.

Application filed October 5, 1895. Serial No. 564,719. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH T. CRAW, a citizen of the United States, residing in Jersey City, Hudson county, State of New Jersey, have invented a certain new and useful Improvement in Mechanism for Making Paper Boxes, of which the following specification is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to mechanism for setting up knockdown boxes, and has for its object to simplify the setting up of such boxes and also to erect a box in a superior manner.

The nature of my improvements will be best understood as described in connection with the drawings, in which they are illustrated, and in which—

Figure 1 is a front view of my improved mechanism or tool; Fig. 2, a side elevation of the tool, taken on the section-line $x\,x$ of Fig. 3, Fig. 3 being a plan view shown partly in section on the line $y\,y$ of Fig. 2. Figs. 4, 5, and 6 are sectional views taken on the same plan as Fig. 2 and illustrating the operation of the device upon a paper box. Fig. 7 is a detail view of a box folded by the tool.

A indicates a "box," as I may call it, having a bottom A′, sides A^2 rising above the bottom, and an end A^3. Near the end A^3, I provide standards A^4 A^4, which may be, as shown, a part of the side walls A and which serve to support the pivot C, upon which the blade D turns.

B B indicate fingers secured on or in the end wall A^3 of the box, and having, preferably, rounded ends, as indicated, which project beyond the wall A^3 to the inside of the box. The height of the fingers B above the bottom A′ of the box should correspond closely to the height of the paper box which the tool assists in making.

C, as before mentioned, is a pivot upon which the blade D turns. The pivot is preferably situated, as shown, a slight distance in front of the end wall A^3 and in such a position that the rear of the blade D—that is to say, the portion of said blade which is closest to the wall A^3—shall, when the blade is turned up, as shown in Figs. 1 and 2, rest flat against the inside of the end wall A^3 or preferably so that the sliding blade E, which shares the pivoting motion of the blade D, shall so rest against the end wall. In the construction shown I provide cavities D′ in the back of the blade D, into which the fingers B project when the blade is erected, as shown in Figs. 1 and 2, and of course it will be understood that openings are formed through the blade E, as indicated in the drawings, so that the fingers B may pass through this blade. The blade E is secured to the back of the blade D, so as to slide thereon, and it is preferably formed with a sharpened point, as indicated at E′, said point preferably, also, being somewhat broader than the blade D, so as to project slightly on each side of it, as is clearly shown in Fig. 1. The blade E is kept normally in the position indicated in Figs. 1, 2, 4, and 5 by the action of the spring F or of any conveniently-placed spring, the spring F in the construction shown pressing against a projection E^2 extending out from the top of the blade E, and said blade being provided with a handle, as indicated at E^3.

H indicates the bottom of a knockdown paper-box fold formed with double bottom and double walls, the inner folds of the walls being indicated at H′ and the inner bottom fold at H^2. H^3 indicates a projecting end fold forming a part of the said wall of the box and bent at right angles to it, while H^4 and H^5 indicate, respectively, the outer and inner folds of the ends of the box, between which lie the folds or flaps H^3 when the box is erected for use.

In using my improved tool the blade D is brought or allowed to fall into the position indicated in Fig. 4. The box has its side folds then brought to approximate position and is inserted between the walls A^2 A^2 of the box A and thrust back against the end wall A^3, as indicated in Fig. 4, the fingers B pressing the fold H^5 down to about ninety degrees with the fold H^4, as indicated in Fig. 4, the bend being made on the line indicated at h^4. The blade D is then turned up to the position indicated in Figs. 2 and 5, the end of the blade

or of its attached sliding blade E pressing the fold H^5 inward and downward, as indicated in Fig. 5. The sliding blade E is then thrust downward, as indicated in Fig. 6, the effect being to force the end and corners of the fold H^5 to correct position, as indicated in Fig. 6, and I will state that I prefer to so form the inner side walls of the box and the inner bottom of the box as to leave a slight clearance, as indicated at h' and h^2, into which the blade E will force the bottom and side edges of the inner end fold H^5, as is clearly indicated in Fig. 6 of the drawings.

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

1. In a tool for setting up knockdown boxes, the combination of the box A and the blade D pivoted as described and so that its rear face will clamp a box end between itself and the end of the box when the end of said blade is turned down in the box.

2. In a tool for setting up knockdown boxes, the combination of the box A, the plate D pivoted as described and so that its rear face will clamp a box end between itself and the end of the box when the end of said blade is turned down in the box, and a blade E sliding on the back of blade D.

3. In a tool for setting up knockdown boxes, the combination of the box A, the fingers B B extending inward over the end wall of the box, and the blade D pivoted as described and so that its rear face will clamp a box end between itself and the end of the box when the end of said blade is turned down in the box.

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Witnesses:
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