To all whom it may concern:

Be it known that I, Michael Hess, a citizen of the United States, and a resident of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Box-Forming Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

This invention relates to a manually operated box forming machine, and is an improvement on a similar machine shown in the prior Patent No. 1,979,440, June 16, 1919, issued to Michael Hess.

The prime object of the invention is to seal simultaneously both ends of a folded box blank after adhesive material has been placed between the folded portions.

Another feature of the invention is the adjustable mounting of the guides, box former and blocks, whereby boxes of various sizes may be folded by the same machine.

The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings, which are made a part of this application, Figure 1 is a perspective view of the improved box forming device, the parts thereof being shown in open position. Fig. 2 is a similar view showing the box forming frame or former secured in position. Fig. 3 is a perspective view of the device in closed position and showing a box blank. Fig. 4 is a rear view of the movable backboard.

In the drawings 11 indicates a bench, 12 a supporting base, 13 side frames, 14 a combined cam and lever, and 15 a presser board, the same being substantially as shown in the prior patent referred to.

Intermediate the side frames 13 and upon the front face of the bench 11 is rigidly secured a presser post 16, the same also being similar to that shown in the prior patent referred to. Near the top of said post, however, and slidably supported thereby is a movable backboard 17, the same having a slot 18 therein in which is seated a guide block 19, upon the face of which is mounted a retaining plate 20, said slot, guide block and retaining plate permitting longitudinal movement of the backboard upon the presser post.

Near the base of the presser post is mounted a bottom board 21, which extends transversely of the presser post and is parallel with the presser board 15 when the latter is in closed position. Herein the bottom presser board is shown provided on its upper face with resilient pads 22 and on the lower face with a central bracket 23. The bracket 23 rigidly secures the bottom board to the presser post and at the same time is adjustable longitudinally thereon in any preferred manner.

The movable backboard, in addition to the vertical slot 18, is provided with three pairs of substantially parallel and horizontal slots 24, 25 and 26. The upper pair of slots 24 is provided to adjustably, yet rigidly, secure an upper pair of guides 27 to the backboard. A lower pair of guides 28 is provided with supporting blocks 29 having vertical slots 30 therein. A wing bolt 31 extends through the slots 26 and 30 and adjustably, yet rigidly, secures the guides 28 to the backboard.

The box former or frame 32 is provided with a transversely extending portion 33 by which it is rigidly secured to the movable backboard by means of the slots 29 and suitable bolts.

From the foregoing description it will be seen that any suitable size box former may be secured to the movable backboard and the upper and lower guides adjusted horizontally for close engagement with the box former, and the lower guides in addition thereto may be adjusted vertically so that they will not extend beneath the box former.

In operation the desired box former or plug is attached to the backboard and the guides brought into proper engagement therewith. The bottom board is adjusted to substantially the position shown in Fig. 2 with relation to the box former. A box blank 34 with adhesive material applied to the folded portions is placed on the box former with the sides inserted between the box former and the guides. When the presser lever is pulled downward, the upper presser board first engages with the upper folded end of the box and with continued movement of the lever the movable backboard moves downwardly upon the presser post, being guided and retained by the guide 19...
and plate 20 respectively until the bottom portion of the box former and box blank engage the bottom presser board 21. Continued downward movement of the lever applies equal pressure to both ends of the box blank and seals the ends at one operation. Upon release of the lever the upper presser board returns to the open position, as shown in Figs. 1 and 2. Suitable yielding means is provided for returning the movable backboard to its original position, as shown in Figs. 1 and 2 and is herein shown as a pair of tension springs 35, having one end secured to the backboard and the other to the presser post.

From the foregoing description it will be understood that there is provided in a box forming machine means for rigidly securing the corners of the box blank during the sealing operation.

While the device has been described with great detail in the foregoing specification, it will be understood that the invention is not to be limited thereby.

The invention claimed is:

1. The combination with a post adapted to receive and support a box structure, of a pivotally mounted presser block above said structure, and means beneath said box structure cooperating therewith and with said presser block for simultaneously sealing both ends of a box blank.

2. A box forming device including in combination a movable presser block, a movable box supporting structure, a second presser block, and means for causing said blocks to engage said box supporting structure to simultaneously seal both ends of a box blank.

3. A box forming device including in combination a stationary element, a box supporting structure slidable mounted thereon, a presser block rigidly secured to said stationary element near one end of the box supporting structure, a second presser block near the other end of said box supporting structure, and means for moving said last mentioned block and box supporting structure into close and cooperative engagement with said first mentioned presser block to simultaneously seal both ends of the box blank.

4. The combination with a box forming machine including a backboard, of guides adjustably mounted thereon, and a box former adjustably supported thereby.

5. The combination with a box forming machine including a backboard, of a pair of guides mounted thereon for horizontal adjustment near one edge of said board, a second pair of guides at the opposite edge of said board and mounted for vertical and horizontal adjustment, and a box former supported by said backboard.

6. A box forming device including in combination a stationary element, a bottom presser element rigidly secured to the stationary element, a box supporting structure slidable mounted for longitudinal movement on said stationary element, a second presser element, means for causing said last mentioned presser element to engage said box supporting structure and the latter to engage the first mentioned presser element, and yielding means for maintaining said box supporting structure in open position on the stationary element when all of said means are in an inoperative position.

In witness whereof, I have hereunto affixed my signature.

MICHAEL HESS.