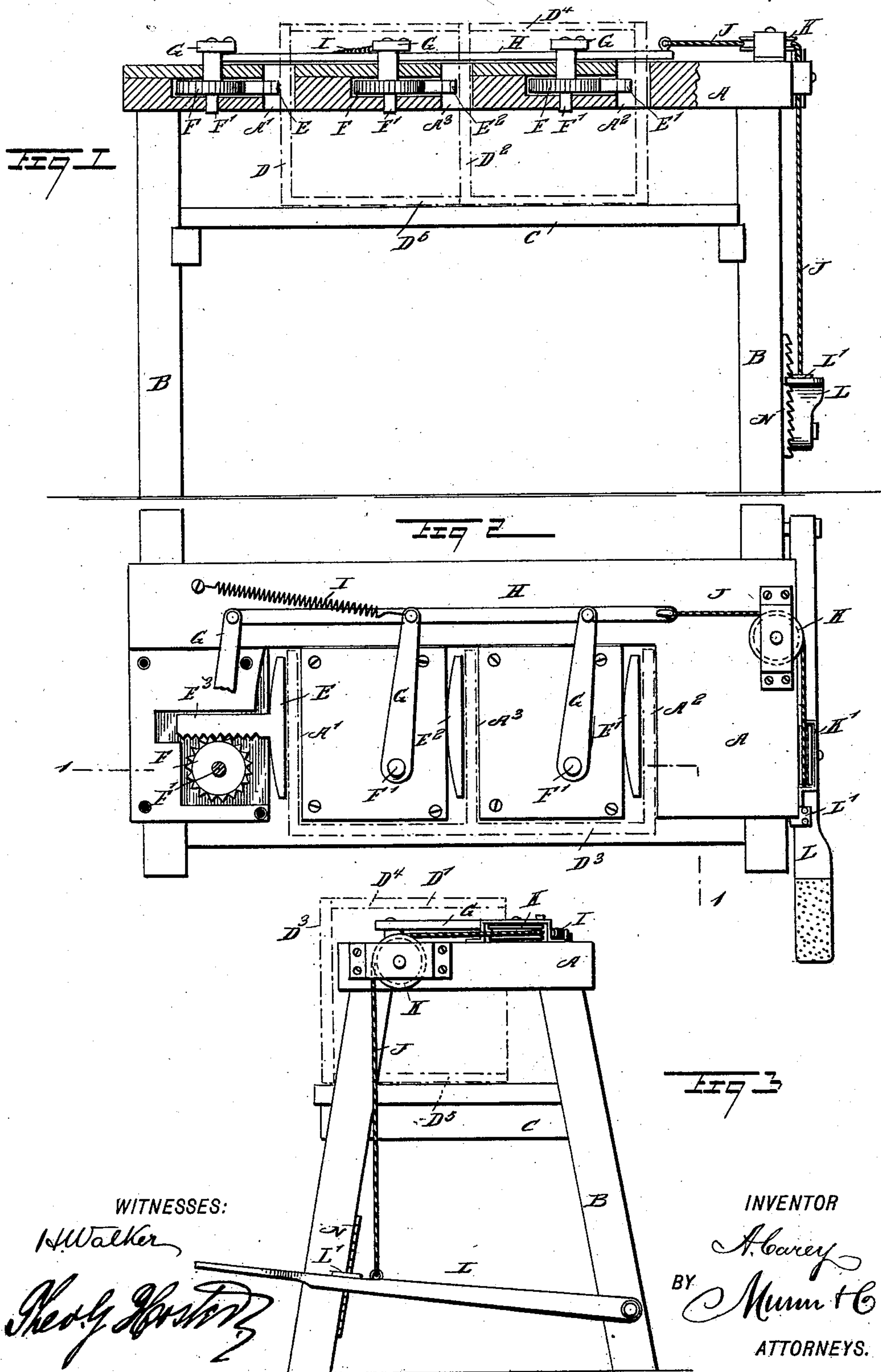


(No Model.)

A. CAREY.
BOX MAKING MACHINE.

No. 534,136.

Patented Feb. 12, 1895.



UNITED STATES PATENT OFFICE.

ABNER CAREY, OF CAIRO, ILLINOIS.

BOX-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 534,136, dated February 12, 1895.

Application filed October 3, 1894. Serial No. 524,783. (No model.)

To all whom it may concern:

Be it known that I, ABNER CAREY, of Cairo, in the county of Alexander and State of Illinois, have invented a new and Improved Box-Making Machine, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved box making machine, which is comparatively simple and durable in construction, very effective in operation, and arranged to properly and conveniently hold the ends and centers (if such are used) in position while nailing on the sides and bottom.

The invention consists principally of a top plate having transverse slots for the reception of the ends of the box, and clamping bars held movable in the said top plate, to clamp the ends in place.

The invention also consists in certain parts and details, and combinations of the same, as will be hereinafter fully described and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the views.

Figure 1 is a sectional front elevation of the improvement, on the line 1—1 of Fig. 2. Fig. 2 is a plan view of the same, with parts broken out; and Fig. 3 is an end elevation of the same.

The improved machine is provided with a top plate A, supported on suitable legs B, carrying a table C, located a suitable distance below the said top plate A, so as to support the ends and center of a box as hereinafter more fully described. In the top plate A are arranged a series of transversely-extending slots A', A², A³, extending to a depth from the front edge of the top plate corresponding approximately to the depth of the box to be formed. Into the slots A', A², A³ are passed the ends D, D', and the center D² (if such is used) for the box, the said ends and center resting with their lower ends on the table C.

In the slots A', A² and A³ are held movably the clamping bars E, E', E² respectively, adapted to press and clamp the ends and center in position on the top plate A, so as to permit the operator to conveniently center the bottom and sides of the box upon the ends

and center, it being understood that the said ends and center extend a suitable distance above the top plate A to permit of conveniently nailing the bottom and sides in place. Each of the clamping bars E, E', E² is provided with a longitudinally-extending rack bar E³, fitted to slide in suitable bearings in the top plate A, (see Fig. 2,) and engaged by a gear wheel F, secured on a vertically-disposed shaft F' mounted to turn in suitable bearings in the top plate A.

On the upper end of each shaft F' is secured a transversely-extending arm G, and the several arms are pivotally connected at their rear ends with a longitudinally-extending connecting bar H, pressed on by a spring I, so as to hold the clamping bars E normally in an innermost position, that is, out of contact with the ends and center, the said clamping bars then being in such a position as to leave the slots A', A² and A³ totally unobstructed for the insertion of the ends and center. The forward end of the connecting bar H is connected with a rope or chain J, passing over the pulleys K and K' held on the top plate A, to then extend downwardly and connect with a treadle L, fulcrumed on one of the legs B. Near the forward or free end of the said treadle L, is arranged a catch plate L', adapted to engage a toothed rack N, secured to one of the legs B, as plainly shown in Figs. 1 and 3.

The operation is as follows: When the treadle L is disengaged from the toothed rack N, then the spring I, in acting on the connecting bar H, draws the latter rearward, to move the clamping bars E, E', E² out of the slots A', A², A³ respectively, to permit the operator to conveniently insert the ends and center, resting the same on the table C, and abutting the same at their rear edges at the rear ends of the said slots. As the latter are spaced according to the size of the box, the said ends and center are in the proper position. The operator now presses the treadle L, so that the clamping bars E, E', E², move longitudinally into the slots and clamp the said ends and center in position on the top plate A. The operator now nails on the top edges of the said ends and center, the bottom D⁵, and then releases the treadle L so as to move the bars E, E', E² out of contact with the ends

and center, and then he removes the connected parts from the top plate A, turns the same over and again places the ends and center into the slots, with the nailed on bottom at the front of the top plate, as indicated in dotted lines in Figs. 2 and 3. The operator then again presses the treadle L, to clamp the ends and center in position, and then nails on the side D⁴, after which the ends and center are again released from the clamping bars E, E', E², by releasing the treadle L, and the connected parts of the box are again removed from the top plate and the box turned over and inserted in the top plate, for nailing on the other side D³ in the same manner as previously described in reference to the side D⁴.

It will be seen that by the arrangement described, the operator is enabled to properly place the ends and center in position to conveniently and rapidly nail on the sides and bottom of the box, it being understood that the several parts are always held in the proper position so as not to require any gaging, measuring and like manipulation for getting the several parts of the box into proper alignment.

I do not limit myself to the special construction of the mechanism for imparting a sliding motion to the clamping bars, as the said mechanism may readily be varied to accomplish the same result. For instance ec-

centrics may be employed instead of the gear wheels F and rack bars E³.

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

1. A box-making machine, comprising a top plate having transverse slots, and clamping bars held movably in the said top plate, to clamp the parts of the box in place, substantially as shown and described.

2. A box-making machine, comprising a top plate having transverse slots, clamping bars held movably in the said top plate, to clamp the parts of the box in place, and a table arranged below the said top plate, for supporting the lower ends of parts of the box previous to being clamped by the said clamping bars, substantially as shown and described.

3. A box-making machine, comprising a top plate having transverse slots, clamping bars held movably in the said top plate, to clamp the parts of the box in place, and means, substantially as described, for simultaneously moving the said clamping bars into and out of contact with the parts of the box to be held in position, as set forth.

ABNER CAREY.

Witnesses:

C. S. CAREY,

H. H. HALLIDAY.