

(No Model.)

H. M. WRIGLEY.

ATTACHMENT FOR PAPER BOX ENDING MACHINES.

No. 533,109.

Patented Jan. 29, 1895.

FIG. 1.

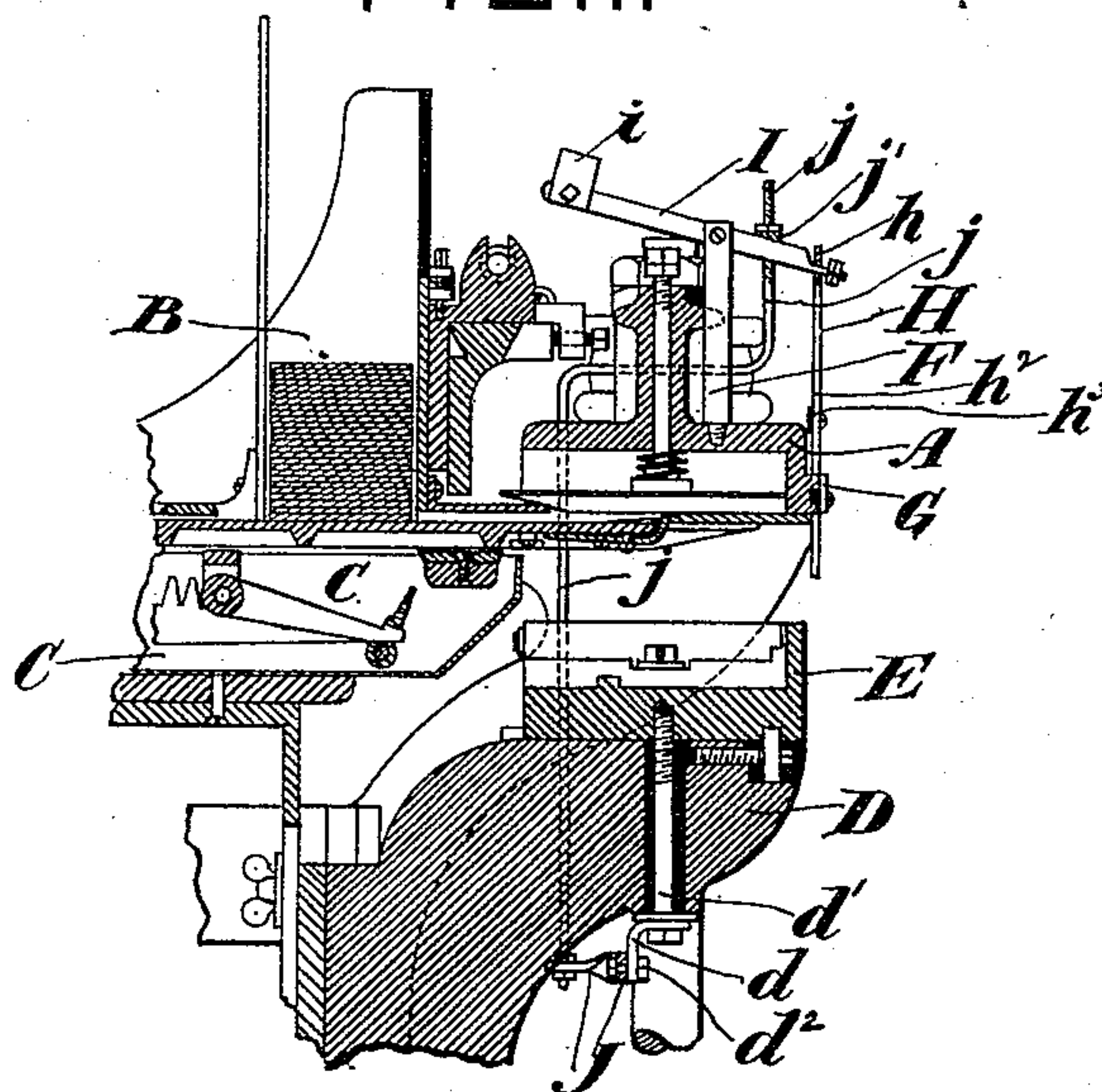
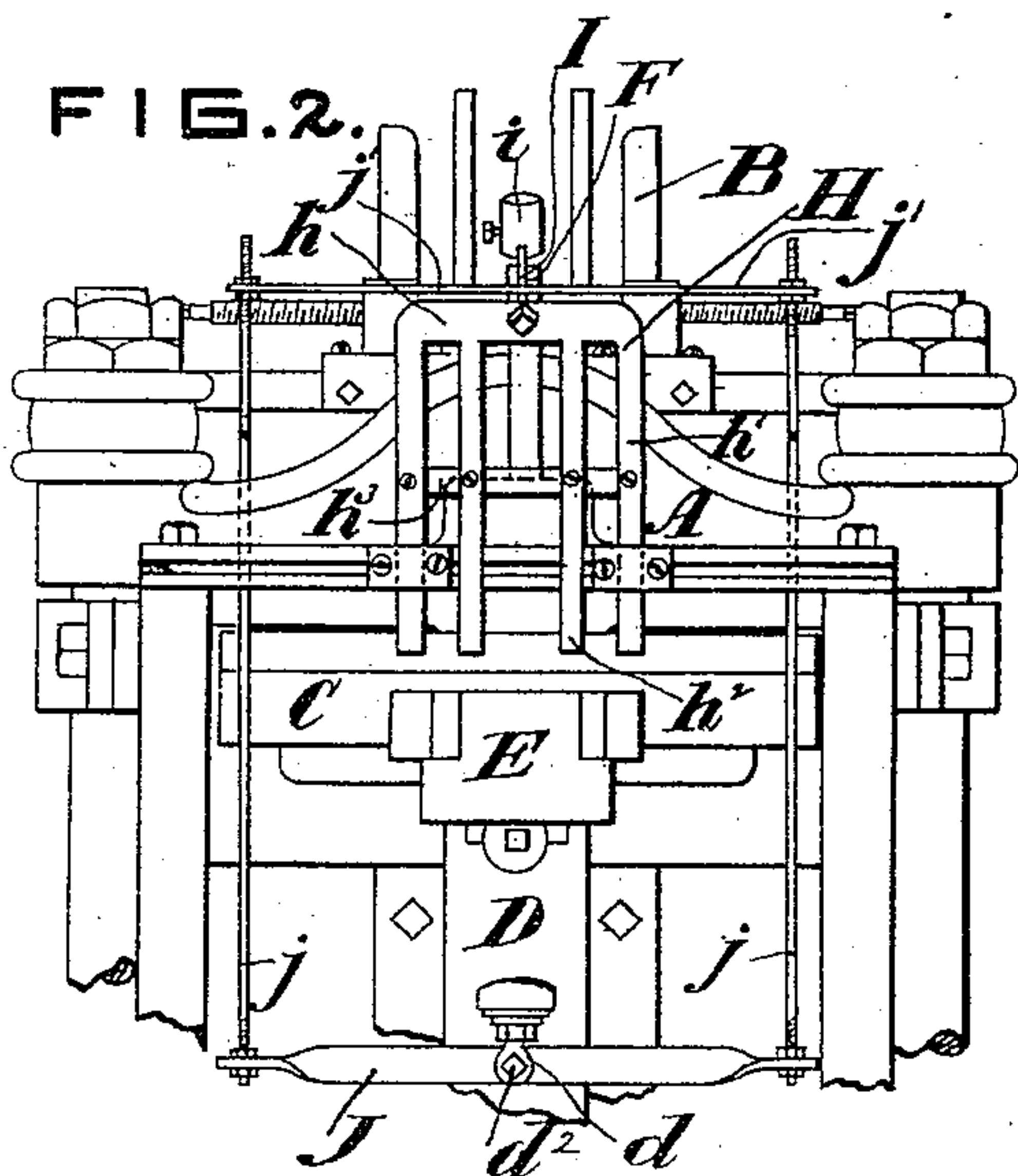


FIG. 2.



WITNESSES

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ATTACHMENT FOR PAPER-BOX-ENDING MACHINES.

SPECIFICATION forming part of Letters Patent No. 533,109, dated January 29, 1895.

Application filed November 24, 1894. Serial No. 529,811, (No model.)

To all whom it may concern:

Be it known that I, HENRY M. WRIGLEY, a citizen of the United States, and a resident of Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Attachment for Paper-Box-Ending Machines, of which the following is a specification.

The object of my invention is to provide a gage attachment for paper box ending or setting up machines, whereby the blanks for closing the ends of boxes are automatically stopped in the desired position and the stop gage automatically removed after the end closing blank has been applied, whereby the operation of ending boxes may be rapidly and accurately performed.

The invention will be first fully described in connection with the accompanying drawings, and then particularly referred to and pointed out in the claims.

Referring to the drawings, in which like parts are indicated by similar letters wherever they occur throughout both the views: Figure 1 is a vertical, central sectional view of so much of a paper box setting-up machine, with my improvements attached, as is necessary to illustrate my invention. Fig. 2 is a front elevation of the same.

The fixed head, A, with the receptacle, B, for the blanks to be fed under the head, A, the paste box, C, and the mechanism for automatically feeding the lower blank from the receptacle under the fixed head and supplying it with the paste, the vertically moving horn, D, with the base block, E, on its upper end, and the several details shown in the drawings for automatically feeding the blank, pasting it, and forcing the blank box against the fixed head, A, are substantially the same as in the well known form of machines used for setting up box ends, and need not, therefore, be specifically described.

As an illustration of the structure to which my improvements are applied, reference may be made to the patent to Glazier, No. 515,207, of February 20, 1894, but the improvement may of course be applied to various machines of the same kind. I have selected this one as a type and will describe my improvements with reference to it. Its application then to other machines of the same general charac-

ter may be made by any mechanic skilled in the art to which this invention relates. Upon the fixed head, A, of this well known structure I erect a supporting standard, F, and upon the front of the fixed head, A, I secure sliding ways or boxes, G, in which the outer legs of the gage frame, H, are fitted to slide and guide it vertically by said strap boxes, G. The gage or stop frame, H, is preferably composed of an upper web, h , with four dependent legs or members, the outer ones, h' , passing through the boxes, G, while the inner ones, h^2 , pass freely in front of the projection upon which the boxes, G, are secured. The frame is strengthened by the transverse bar, h^3 . The form of this gage frame, H, is not material and the intermediate downwardly projecting members may, if desired, be dispensed with. It is only essential that a stop frame be fitted to slide vertically in front of the stationary head, A.

In the upper end of the standard, F, is pivoted a lever arm, I. The forward end is coupled in any suitable manner to the vertically sliding stop frame, H, and upon the rear end of the bar, I, is secured a weight, i , the tendency of which is to elevate the forward end of the bar, I, and the gage frame, H, which is coupled to it.

Secured to the vertically reciprocating horn, D, is a transverse bar, J. The means shown for coupling the bar to the horn is an angle bracket, d , the upper angle being perforated to pass the screw bolt, d' , which holds the block, E, to the horn. When the bolt is tightened up, the bracket is held rigidly to the under projection of the horn. The vertical arm of the bracket is also perforated to pass the screw bolt, d^2 , which couples the bar, J, to the bracket, d . In the outer ends of this bar, J, are secured rods, j , which extend up above the stationary head, A, and are bent to pass toward the front of the machine and again bent to pass up above the plane of the lever, I. The upper ends of these rods pass through a bar, j' , the upper ends of the rods, j , being screw threaded, and the bar, j' , being held rigidly to the upper ends of the rods, j , by nuts underneath the bar, j' , and nuts upon top of it, which rigidly fix the bar to the rods. The bar, j' , passes over the forward end of the lever arm, I, and when the horn, D, is

thrown to the lower position, pulls the forward end of the bar down and brings the dependent legs of the frame, H, below the front end of the stationary head block, A, so that
 5 when the lower end blank in the receptacle, B, is pushed forward, it will be stopped in proper position to be applied to the box end which is placed upon the movable block, E; but as the block, E, moves upward in the direction of the stationary head, A, to force the
 10 pasted blank upon the box end, the bar, j' , will be, of course, forced upward, and the weight, i , will draw the frame, H, upward, so that its lower edge is above the base of the
 15 head block, A, and the moment the horn, D, with its block, E, is started on its downward movement, the box may be removed and another one replaced, the operator thus having ample time to remove one box and replace
 20 another without interrupting the continuous motion of the machine.

In machines of this class it has been contemplated to apply fixed stops in front of the upper pressure plate in machines in which
 25 the upper plate is movable and the lower one stationary, and the lower one movable and the upper plate stationary but such construction was not efficient in a rapidly working machine, because the pressure plates would be
 30 compelled to travel some distance before the box with the completed end could be removed and another one replaced. Now, in my device there is no interruption in the action of the machine and a great many more
 35 boxes can be ended in the same time than could be if the stop was fixed permanently to the upper pressure member.

It is obvious that my improvement can, with slight modifications, be applied to a box
 40 ending machine in which the upper instead of the lower pressure block is made movable, in which case the bar, j' , should be coupled to the forward end of the lever, I, or the bar, j' , might be passed under the forward end of
 45 the rod, and the weight, i , transferred to the forward end of said bar, I, to hold the lever on top of the bar, j' . There may also be other mere mechanical changes made with-

out varying the principle of my invention and, hence, without limiting myself to the 50 specific details of construction shown,

What I claim as new, and desire to secure by Letters Patent, is—

1. In a paper box ending machine, the combination of a rest for the end of the box, a 55 block vertically above said rest, and means for bringing the block and rest together and separating them, means such as shown for feeding the pasted blank under the upper pressure block, a gage fitted to slide vertically 60 in front of the upper block, and means such as shown to hold said gage above the lower face of the upper block as the pressure blocks are brought together, substantially as shown and described. 65

2. In a box ending machine, the combination of the vertically sliding box rest, stationary pressure block above it, means such as shown to feed the pasted end blank underneath the stationary block, the gage, H, fitted 70 to slide in front of the stationary block, a support on top of the stationary block for the lever arm, I, the lever arm pivoted in said block, the frame secured to the movable box rest, extending up above the stationary block 75 and bearing upon the top of the lever for the purpose of holding the gage in the lower position when the pressure blocks are separated, and the weight upon the opposite end of the lever to elevate the frame as the pressure 80 blocks are brought together, substantially as shown and described.

3. The herein described attachment for box ending machines, consisting of the gage, H, the support, F, and lever, I, pivoted in said 85 support, to be attached to the upper pressure block of the machine, the frame, composed of the bar, J, the rods, j , and upper cross bar, j' , means such as shown to secure said bar in place, and guides to be secured to the forward 90 edge of the upper block, combined and arranged substantially as shown and described.

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Witnesses:

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