

(No Model.)

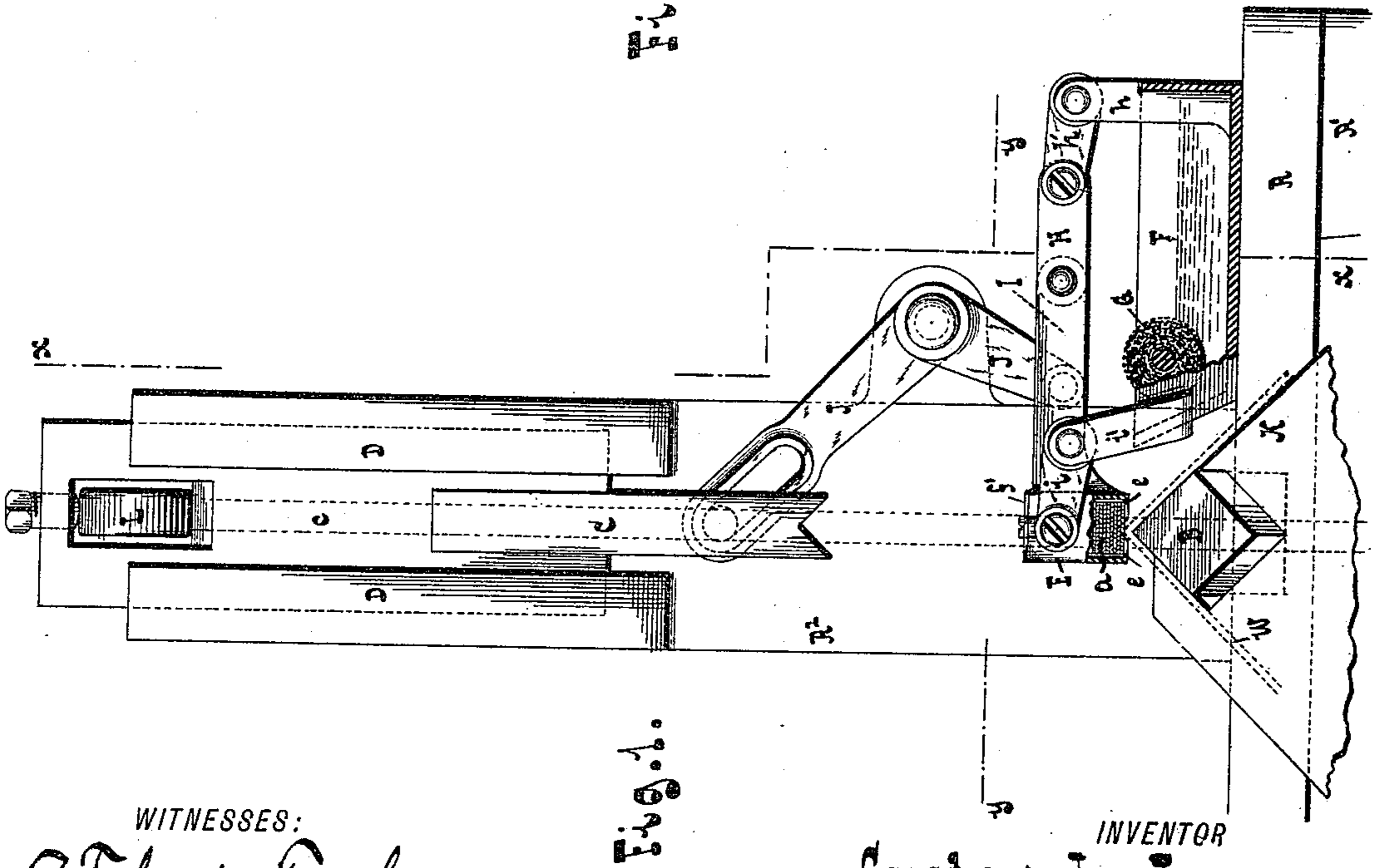
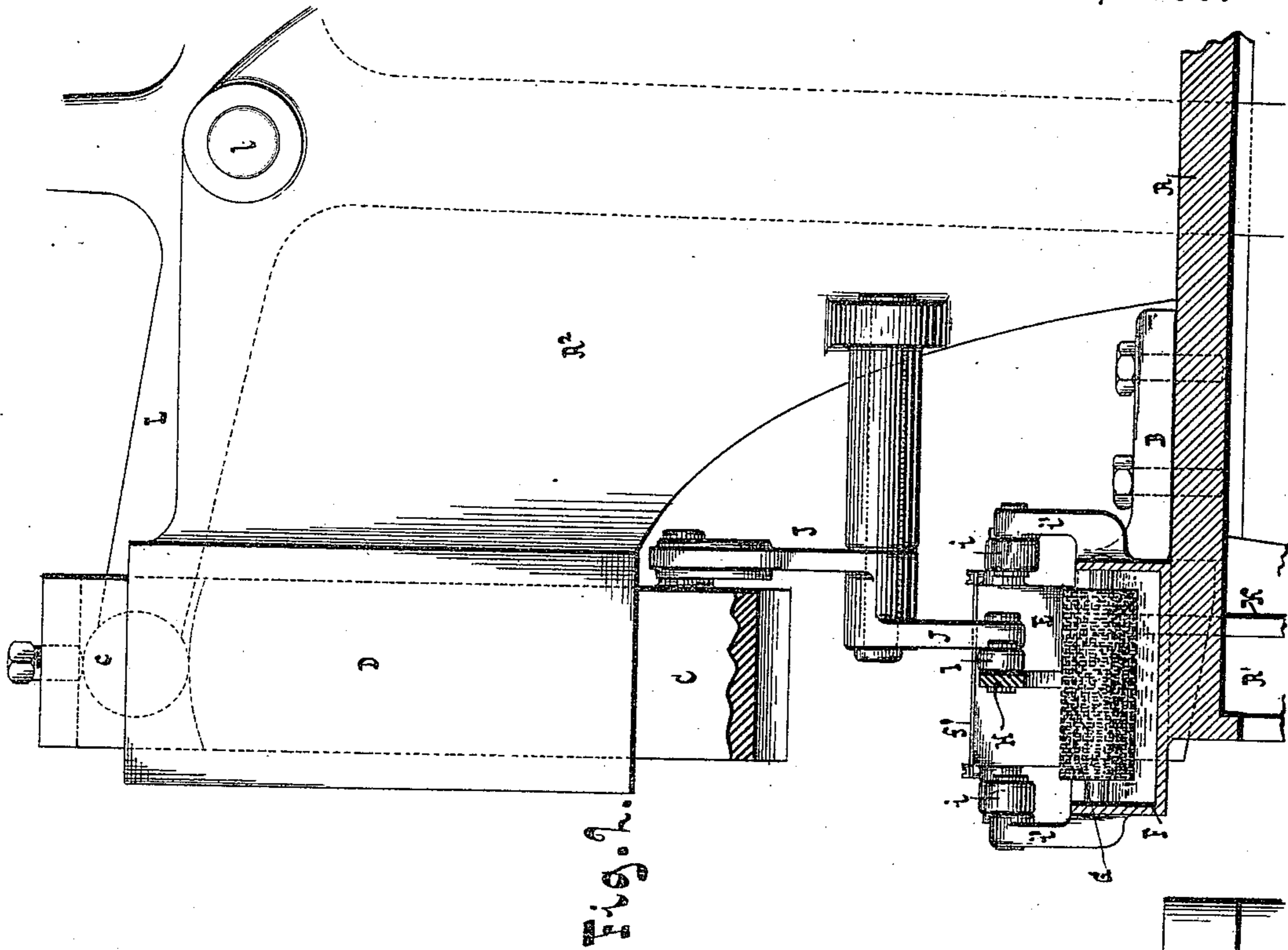
3 Sheets—Sheet 1.

G. L. JAEGER.

MACHINE FOR APPLYING CORNER STAYS TO BOXES.

No. 438,545.

Patented Oct. 14, 1890.



WITNESSES:

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Fig. 1.

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(No Model.)

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Fig. 6.

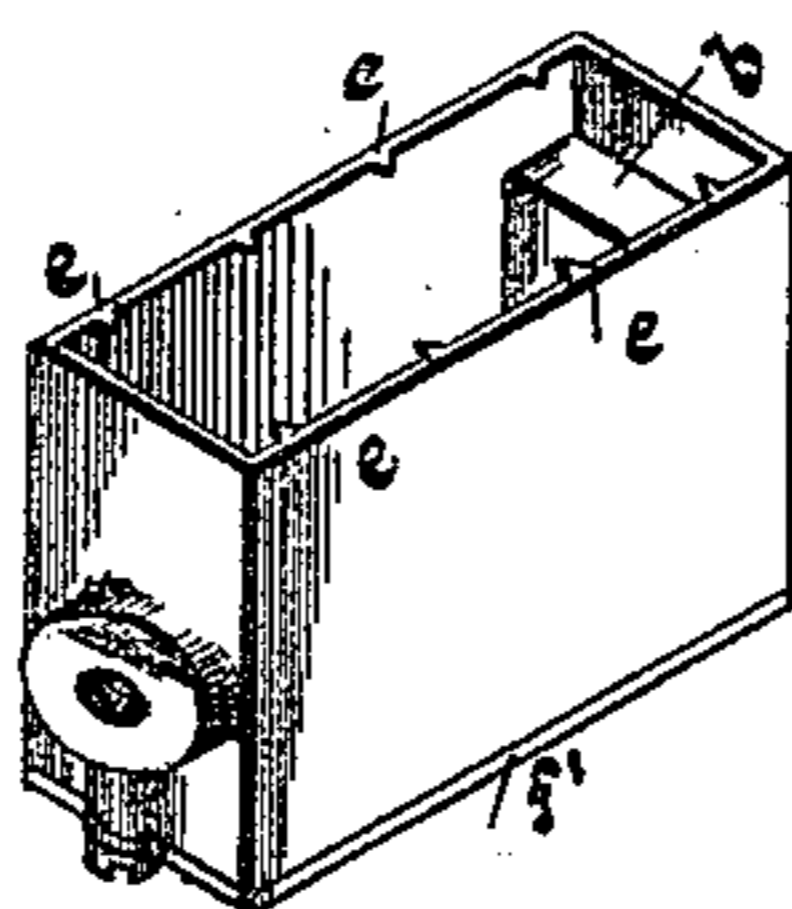


Fig. 7.

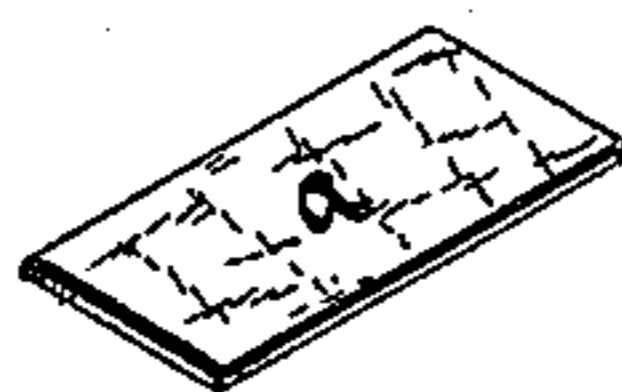
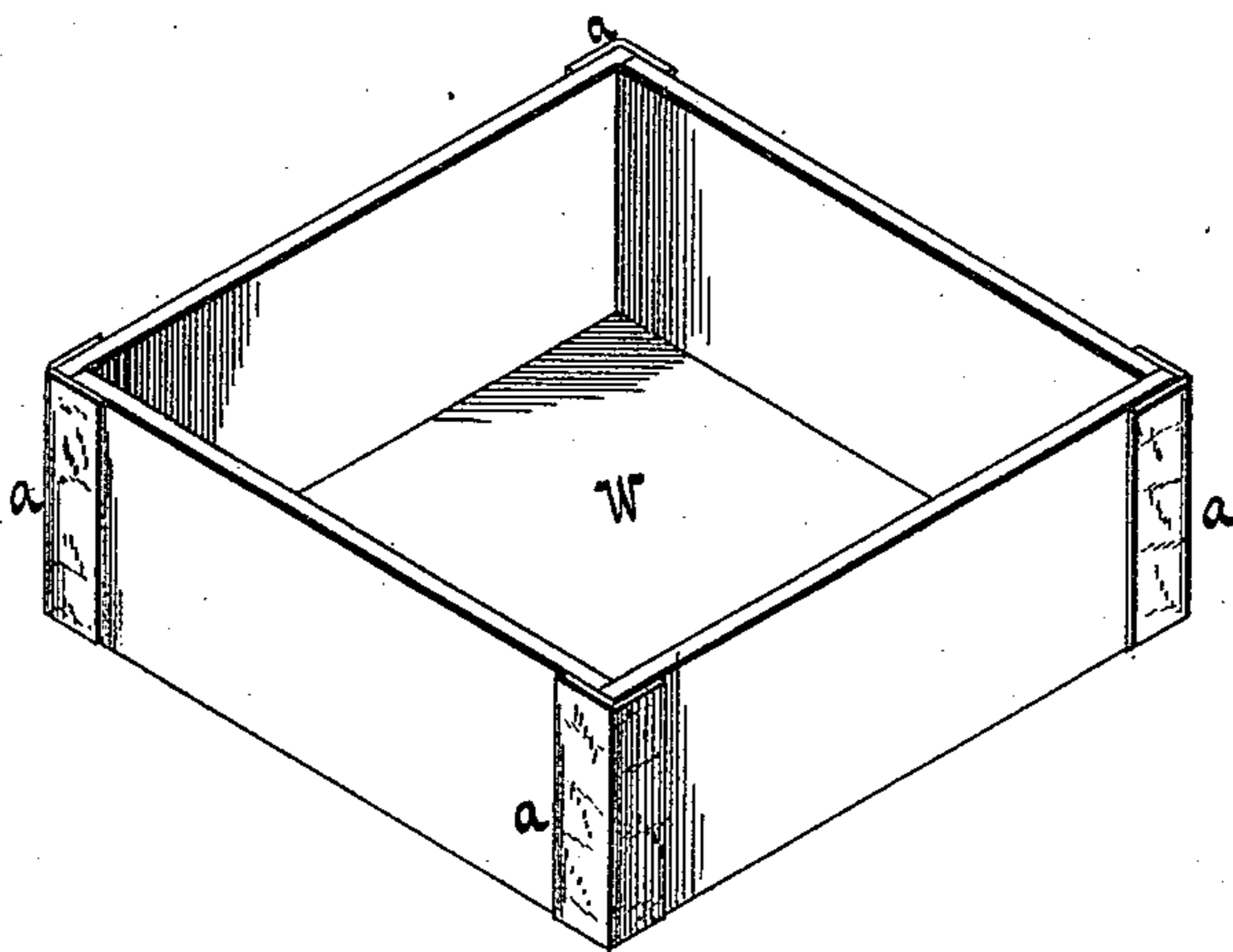


Fig. 8.



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GUSTAV L. JAEGER, OF NEW YORK, N. Y.

MACHINE FOR APPLYING CORNER-STAYS TO BOXES.

SPECIFICATION forming part of Letters Patent No. 438,545, dated October 14, 1890.

Application filed April 4, 1890. Serial No. 346,512. (No model.)

To all whom it may concern:

Be it known that I, GUSTAV L. JAEGER, a citizen of the United States, residing at New York, in the county and State of New York, have invented new and useful Improvements in Machines for Applying Corner-Stays to Boxes, of which the following is a specification.

This invention relates to a machine for applying corner-stays to boxes, such corner-stays being first cut out into the required length and width and placed into a holder, then rendered adhesive one after the other, and finally secured to the box by pressure, the said holder having a movement between the means for rendering the corner-stays adhesive and the box-support, as fully pointed out in the following specification and claims, and illustrated in the accompanying drawings, in which—

Figure 1 represents a sectional front elevation of the machine, showing the corner-stay holder in a position to deposit a corner-stay on the box. Fig. 2 is a vertical section in the plane $x x$, Fig. 1. Fig. 3 is a longitudinal section in the plane $y y$, Fig. 1. Fig. 4 is a sectional elevation similar to Fig. 1, showing the machine applying the corner-stay to the box. Fig. 5 is a longitudinal section through the corner-stay holder. Fig. 6 is a perspective view of the same. Fig. 7 is a perspective view of one of the corner-stays. Fig. 8 is a perspective view of a box provided with a corner-stay.

Similar letters indicate corresponding parts.

In the drawings, the letter A designates a table supported upon legs A', and from which rises the standard A². In the outer end of this standard are formed guides D D, between which is fitted the shank c of the punch C.

B is the box-support, which is firmly secured to the table A, and the sides of which are inclined to fit the corner of the box W. The face of the punch is formed to correspond to the inclined sides of the box-support B, the two co-operating to lay the stay upon the corner of the interposed box.

The stays a , Figs. 5 and 7, are made of paper, muslin, or any other suitable flexible material, and they are cut out to correspond in length and width to the size of the box to

which they are to be applied. These stays may be introduced into the machine in a "plain" state, and afterward rendered adhesive by the application of paste; or said stays may be previously prepared by coating one side of each with a suitable adhesive—such as mucilage—which is left to dry, and if such previously-prepared strips are used they are afterward rendered adhesive by the application of moisture. The stays, whether plain or "previously prepared," are formed into a pile and introduced into a holder E, Fig. 5. A perspective view of this holder is shown in Fig. 6. It is open at its bottom and provided with small projections or hooks e , which project inward from the lower side edges of the bottom and engage with the bottom corner-stay of the pile. A spring f , Fig. 5, engages with the top of the pile and tends to force the corner-stays in the direction of the hooks e . A cover f' , removably secured by screws or other means to the top of the holder, forms a base for the spring f , and when removed permits the introduction of the stays into the holder. The fount F, located to one side of the box-support B, contains suitable means for transmitting a liquid to the corner-stays.

The device employed, which I shall hereafter term the "transmitter" G, is shown in this example in the form of a roll of the usual construction; but it may be made in the form of a pad of sponge or other suitable material.

If the corner-stays are plain, the fount is supplied with paste; but if the corner-stays are previously prepared it is supplied with water to moisten the stays, and thereby render them adhesive.

The corner-stay holder E is arranged between the transmitter G and the box-holder B. A lateral and downward movement is imparted to the same, so that it alternately comes over the transmitter G and the box-holder B, it being depressed at the end of each stroke, so as to bring the lower corner-stay first into contact with the transmitter, Fig. 4, to render the stay adhesive, and then to bring the same into contact with the corner of the box upon the box-support, Fig. 1. The corner-stay when brought into contact with the corner of the box adheres to the same, and when the holder is withdrawn on its backward stroke the said

stay slips through the hooks *e* of the holder and remains upon the box. The descending punch C lays the stay upon the corner of the box, (see Fig. 4,) the pressure exerted by the
 5 said punch causing the stay to adhere firmly to the corner of the box.

Any suitable mechanism can be used to cause the corner-stay holder E to move between the transmitter and box-support.

10 In the example shown in the annexed drawings the holder is provided with a laterally-projecting arm H, which is connected at its outer end with a stationary part of the machine—such, for instance, as the standard *h*—
 15 by a link *h'*. The body of the holder is connected by two links *i i* to a standard *i'*, the said links being of the same length as the link *h'*. When the arm H is set in motion, the holder travels in a semicircular arc between the transmitter G and the box-support B. Consequently at the end of each stroke the holder travels in a line perpendicular to the transmitter or support, as the case may be,
 20 and is depressed to bring the corner-stay squarely into contact therewith, causing it to be evenly supplied with moisture or paste and to adhere to the box-support. The ascent of the holder being also perpendicular no transverse strain is put upon the corner-stay when
 30 the holder moves from the box, and consequently the corner-stay will remain centrally upon the same.

The arm H is connected to one arm of a lever J by a link I. The other arm of the lever
 35 is engaged by the punch C, the parts being so adjusted that on the downward stroke of the punch the holder moves toward the transmitter to render the stay adhesive, and on the upward stroke of the punch the holder is
 40 moved toward the box-support and places a stay on the box. It is evident that the movement of the holder E can be derived from a source independent of the punch.

A suitable gage K, consisting of a flat plate,
 45 is secured to the table A, Fig. 3, by a bar *k*, slot *k'*, and screw *k*² connection. It is adjustable in the direction of the depth of the box-support and is used to afford means for accurately and rapidly setting the box on the sup-

port. In order that the holder E can be used 50 for different lengths of strips or stays, Figs. 5 and 7, it is made long enough to receive the longest strip. For shorter strips the space is filled out by suitable blocks *b*. The punch C may be actuated by the usual foot-lever L, 55 which is pivoted at *l* to the arm A², or connected thereto by other well-known means.

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

1. The combination, with a box-support, a punch, a fount, and its transmitter, of a holder constructed to contain a pile of corner-stays and having a movement between the transmitter and the box-support, substantially as shown and described. 60 65

2. The combination, with a box-support, a punch, a fount, and its transmitter, of a corner-stay holder movable in a semicircular path between the transmitter and the box-support and means for moving the holder, 70 substantially as described.

3. The combination, with a box-support, a punch, a fount, and its transmitter, of a corner-stay holder movable between the transmitter and box-support and a connection between the punch and holder, whereby the latter is moved by the punch, substantially as described. 75

4. The combination, with a box-support, a punch, a fount, and its transmitter, of a holder adapted to contain a pile of corner-stays and having a movement across the box-support, substantially as shown and described. 80

5. The combination, with a box-support, a punch, a fount, and its transmitter, of a holder constructed to contain a pile of corner-stays and having a movement between the transmitter and the box-support and a gage K, adjustable in the direction of the depth of the box-support. 85 90

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

GUSTAV L. JAEGER. [L. S.]

Witnesses:

WM. C. HAUFF,

E. F. KASTENHUBER.