No. 644,246. Patented Feb. 27, 1900.

G. W. GLAZIER.

BOX COVERING MACHINE.

(Application filed Nov. 15, 1899.)

(No Model.) 3 Sheets—Sheet 1.

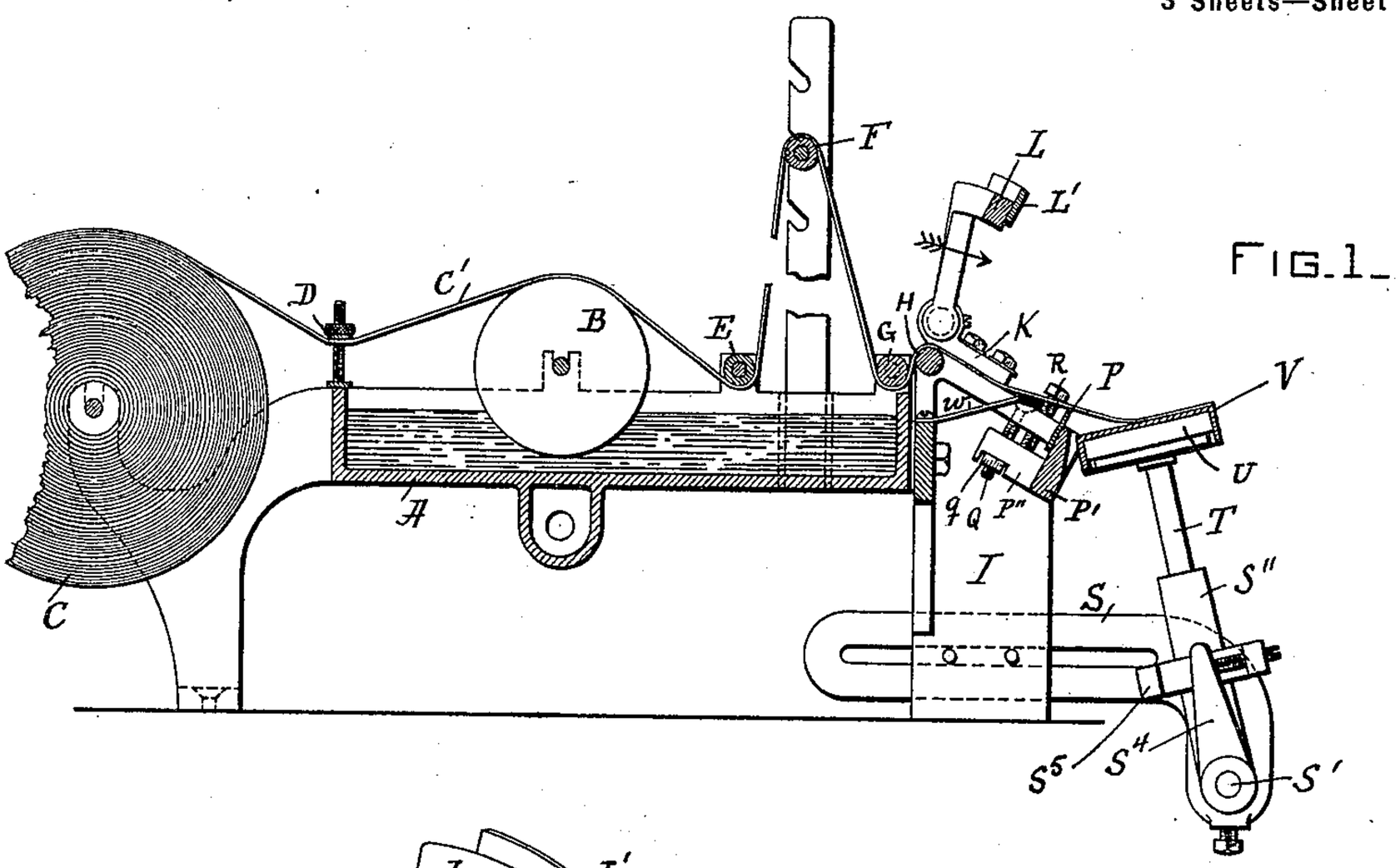

FIG. 1.

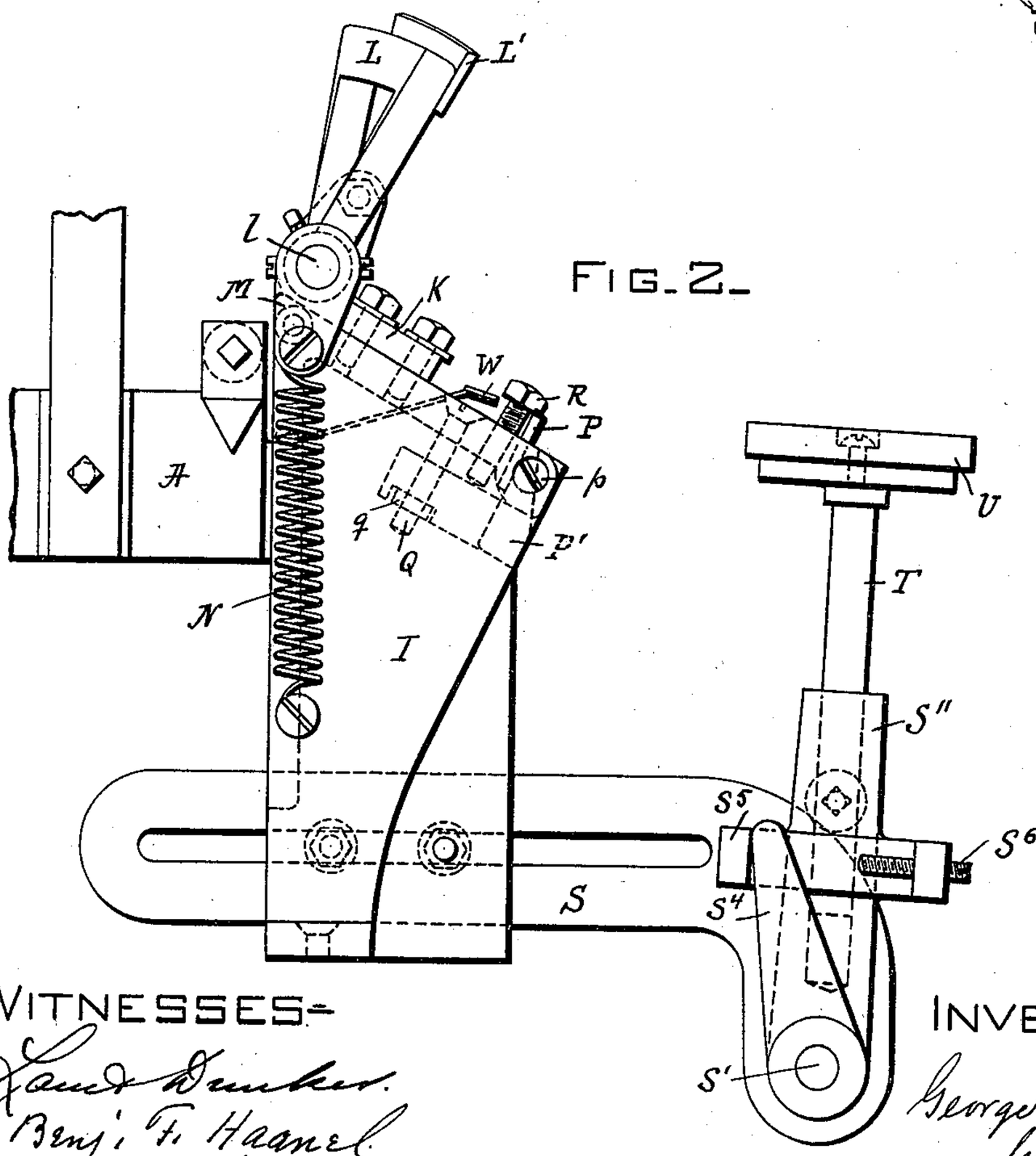

FIG. 2.

WITNESSES:

Louis Dunker.

Benj. F. Haanel

INVENTOR:

George W. Glazier

by Wm. Andrew

his atty.

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FIG. 3.

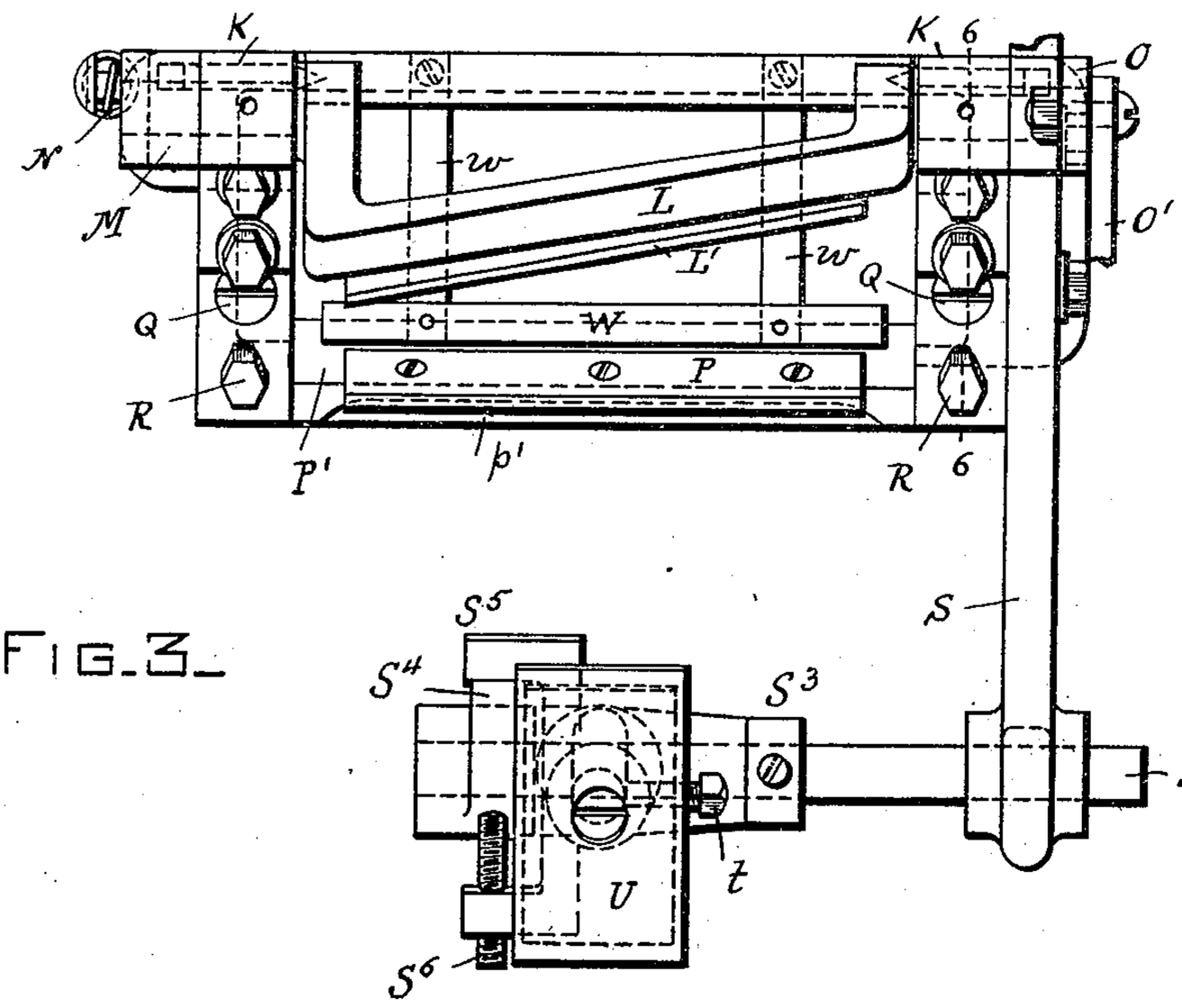
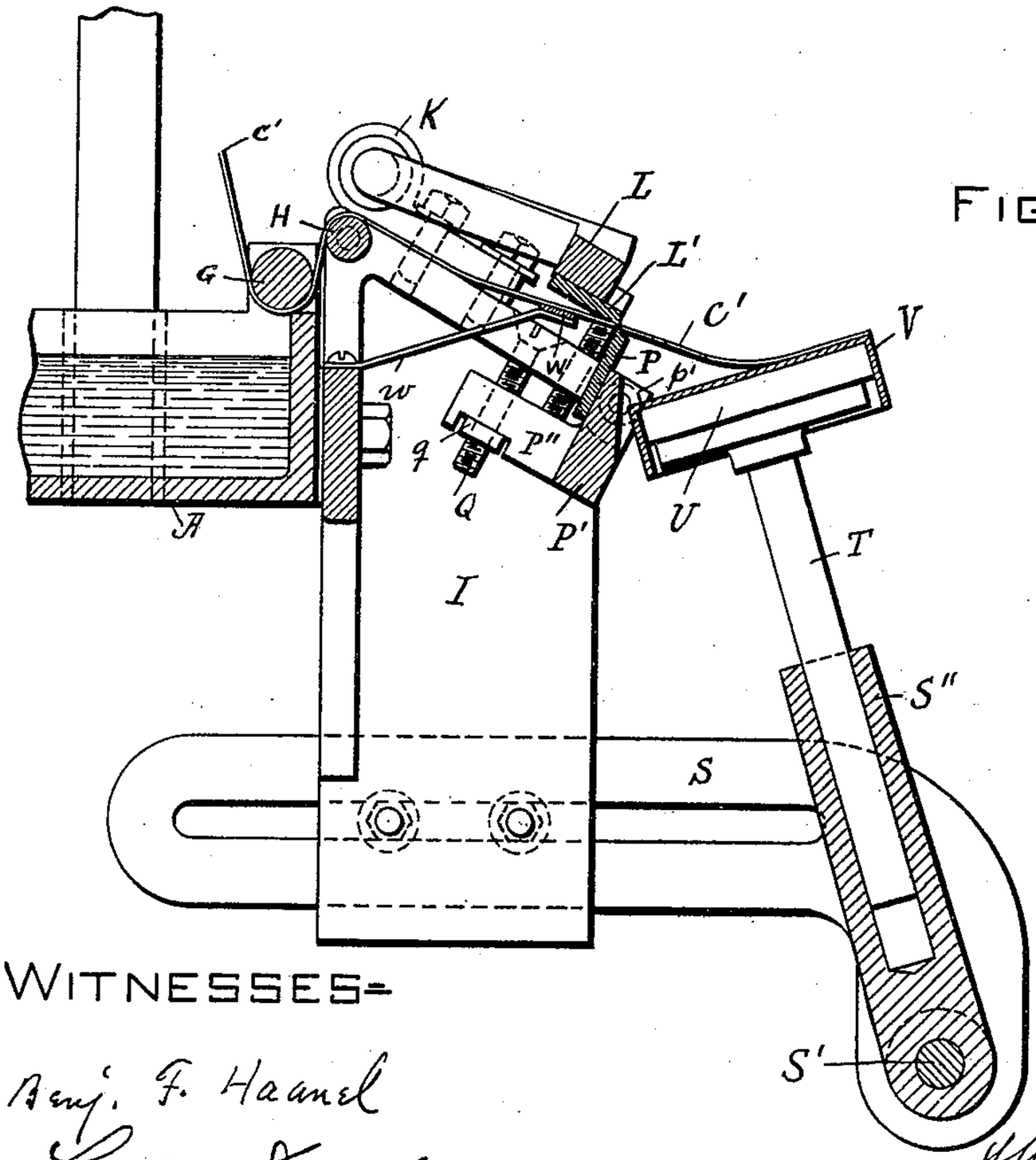


FIG. 4.



WITNESSES:

Benj. F. Haanel

Louis Dunker.

INVENTOR:

George W. Glazier.

by

Albert Gudeman his atty.

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(No Model.) 3 Sheets—Sheet 3.

FIG. 5.

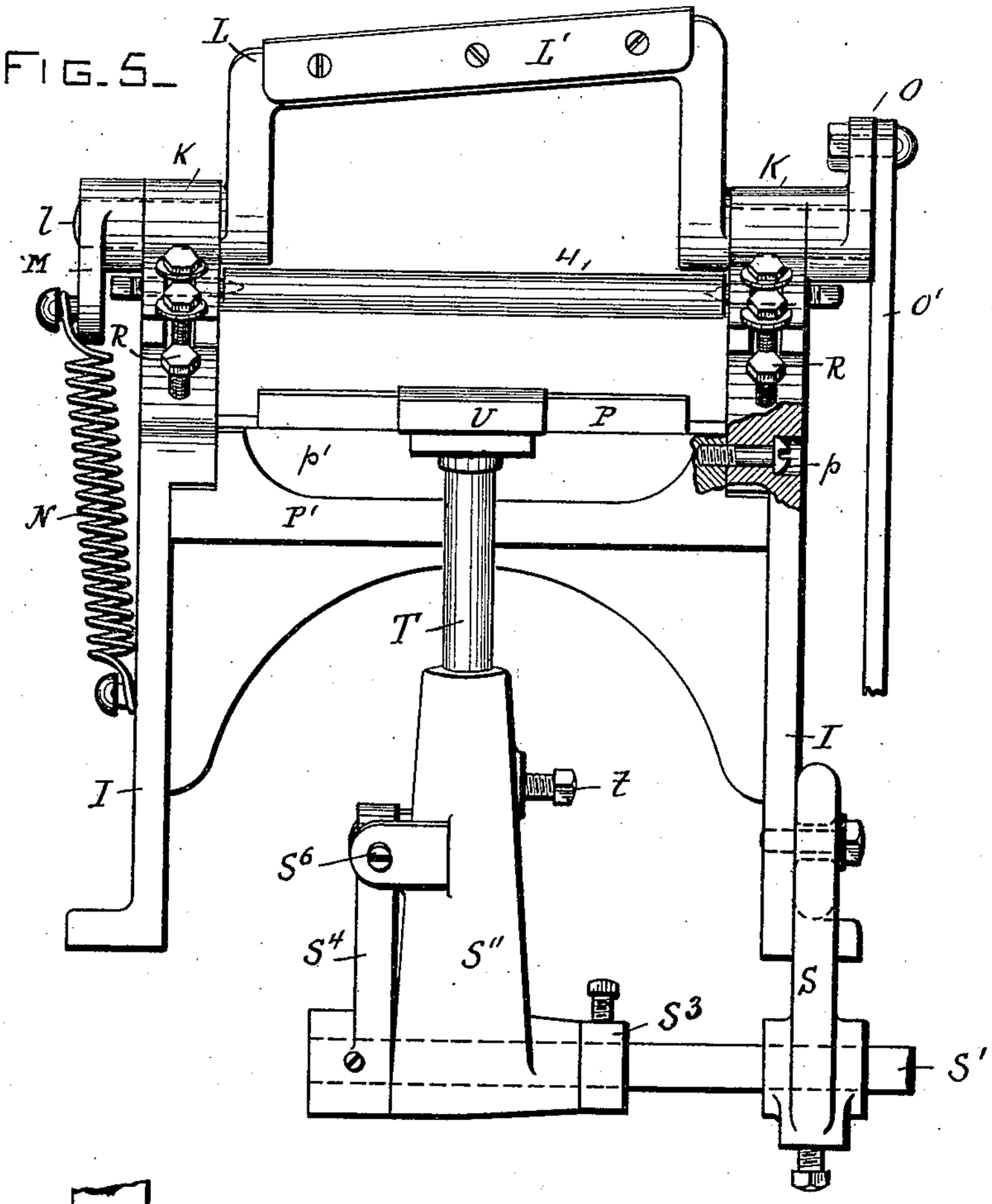
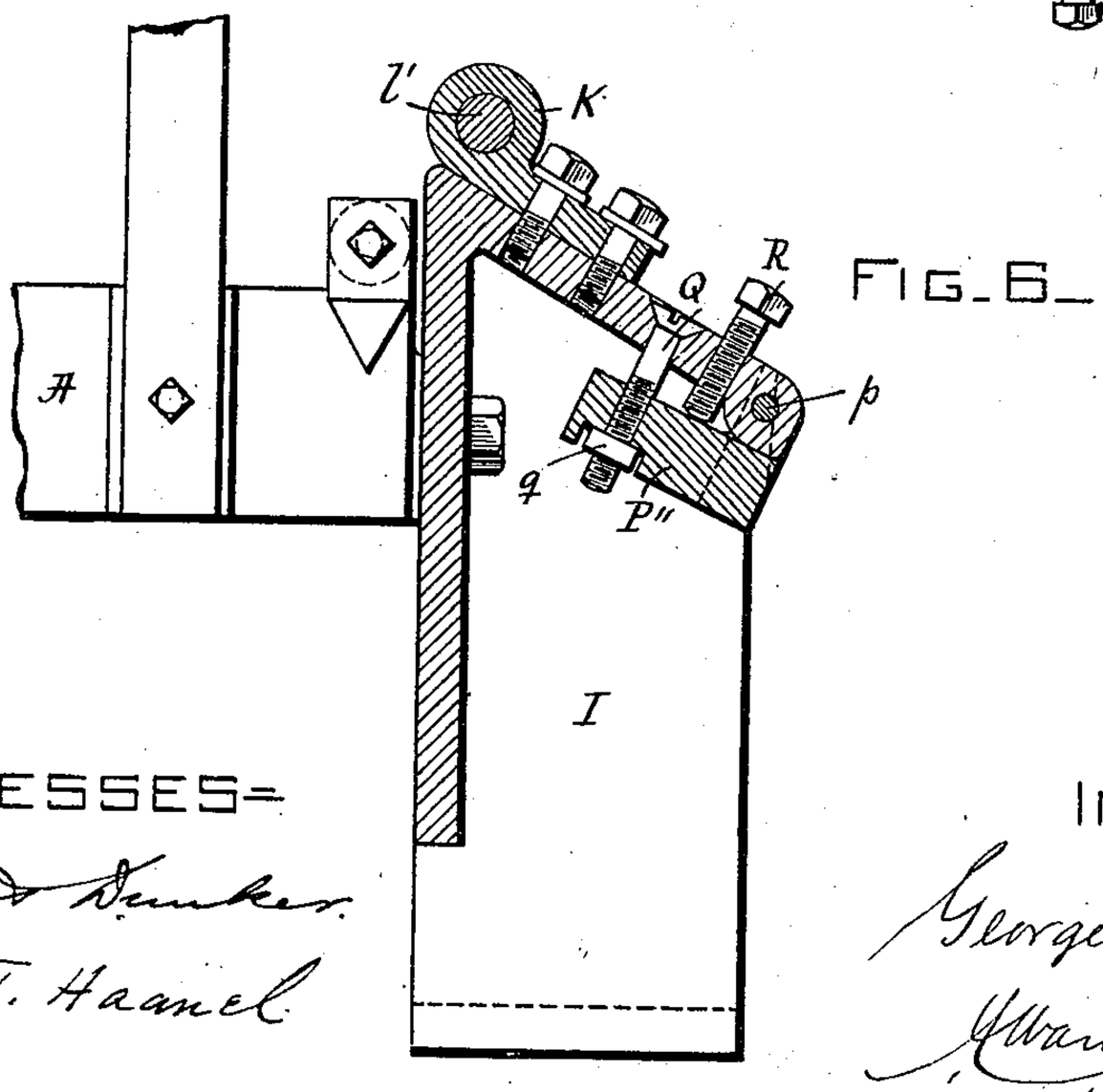


FIG. 6.



WITNESSES=

Louis Dunker.

Benj. F. Haanel

INVENTOR=

George W. Glazier

by Wm. Andrews

his atty.

UNITED STATES PATENT OFFICE.

GEORGE W. GLAZIER, OF SALEM, MASSACHUSETTS, ASSIGNOR OF THREE-FOURTHS TO CHARLES C. BRIGGS, OF SAME PLACE, AND JOHN C. METCALF, OF LYNN, MASSACHUSETTS.

BOX-COVERING MACHINE.

SPECIFICATION forming part of Letters Patent No. 644,246, dated February 27, 1900.

Application filed November 15, 1899. Serial No. 737,069. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. GLAZIER, a citizen of the United States, residing at 389 Lafayette street, Salem, in the county of Essex and State of Massachusetts, have invented new and useful Improvements in Paper-Box-Covering Machines, of which the following is a specification.

This invention relates to improvements in paper-box-covering machines for the purpose of covering the tops of paper boxes with a pasted strip of paper and cutting off the same to the desired length required for covering the top of the cover portion of the box, as will hereinafter be more fully shown and described, reference being had to the accompanying drawings, wherein—

Figure 1 represents a longitudinal section of the improved machine, parts being shown in elevation. Fig. 2 represents a detail side elevation of the head of the machine, showing the construction and arrangement of the paper-strip-cutting-off device. Fig. 3 represents a top plan view of Fig. 2. Fig. 4 represents a cross-section of Fig. 3, showing the oscillating knife in position for cutting off the pasted paper strip and showing the box-supporting block swung to its rear position. Fig. 5 represents an end elevation of Fig. 2; and Fig. 6 represents a cross-section on the line 6 6, shown in Fig. 3.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In Fig. 1, A represents the paste-containing receptacle, and B represents the pasting-roller loosely journaled in bearings on said receptacle, as usual.

C represents the paper-reel, arranged on a spindle loosely journaled in brackets attached to the frame of the machine, as is common in devices of this kind.

C′ is the paper strip, which is carried from the reel C in contact with the tension-bar D, and from there it is brought in contact with the upper portion of the rotary pasting-roller B, where said strip is pasted on its under side and conducted partially around the roller E and over the roller F to and around the guide-rollers G H, as usual in machines of this kind.

I wish to state that I do not claim the mechanism as above described, as such is well known in box-pasting machines and is only referred to for the purpose of properly describing the general operation of machines of this kind.

To the front of the paste-receptacle A is secured in a suitable manner the head I, the upper sides of which are inclined toward the front end of the machine, as shown in the drawings. To the said upper-inclined sides of the head I are adjustably secured bearings K K, in which are journaled the end trunnions *l l′* of the inclined or spiral frame L, to which the spiral or inclined movable cutter L′ is secured, as shown.

To the trunnion *l* is secured a lever M, to which is connected the upper end of a spring N, the lower end of which is attached to the head I for the purpose of automatically holding the knife L′ and its frame in the raised position shown in Figs. 1, 2, and 5. To the opposite trunnion *l′* is secured a lever O, to which is pivotally connected a link O′, which may be depressed by means of a treadle-lever connected to it for the purpose of swinging the movable knife L′ against the stationary knife P during the operation of cutting off the paper strip C, as is common in devices of this kind. The said treadle mechanism is not represented in the drawings, as it is a well-known feature in machines of this kind and does not form subject-matter of my present invention.

P is the stationary knife, which is secured in a suitable manner to a cross-bar P′, the ends of which are pivotally connected to the sides of the head I, as shown at *p* in Figs. 2, 4, 5, and 6, so as to permit the cutting edge of said stationary knife to be adjusted relative to the cutting edge of the movable knife L′, so as to compensate for any wear that may occur from time to time on said knives.

Integral with each end of the cross-bar P′ is made a lever or projection P″, and in connection therewith I make use of an adjusting de-

vice constructed as follows: Through the upper portion of the head I is inserted a screw-bolt Q, passing loosely through a perforation in the lever or projection P″ and provided at its lower end with a nut *q*, as shown in Fig. 6.

R is a set-screw screwed through the upper portion of the end of the head I and having its lower end pressing against the upper portion of the lever P″, as shown in said Fig. 6.

To adjust the position of the stationary knife P relative to the movable knife L′, it is only necessary to adjust the positions of the screw-bolts Q and R by loosening the one and tightening the other, or vice versa, as circumstances may require.

To one side of the head I is secured in an adjustable manner a bracket S, to which is longitudinally adjustably secured a spindle S′, on which is pivotally arranged an arm or bracket S″, located between a collar S^3 and lever S^4, secured to the spindle S′, as shown in Figs. 1, 2, 3, and 5. In the bracket S″ is longitudinally adjustable a spindle T, which may be secured in its adjusted position by means of a set-screw *t*, as shown. To the upper end of said spindle T is secured the box former or block U, adapted to receive the box V the top of which is to be covered, as shown. The bracket S″ is provided with a stationary stop S^5 and an adjustable set-screw stop S^6 for the purpose of limiting the oscillating adjustment of said bracket and box-former attached to it during the operation of covering the top of the box V held on the box-former U during the covering operation.

In practice I make on the front portion of the stationary knife-holding bar P′ a cut-away portion *p*′ to enable the box-former U and the box held thereon to be swung backward relative to the stationary knife P, in close proximity to the latter, so as to enable the pasted paper strip to be cut off the proper length required for the covering of the top of the box V.

Back of the stationary knife P is arranged a yielding metal bar W, connected by springs *w w* to the rear of the head I, and said yielding metal bar W serves for the purpose of holding the pasted strip C′ raised above the stationary knife P at all times except at the moment of severing the same, thus preventing the pasted under side of said strip from being dragged over the upper edge of the said stationary knife, and thereby preventing the latter from being fouled by the paste, as well as preventing the paste on the under side of the paper strip from being scraped off by contact with said knife.

It will be noticed that in this my improved box-covering machine the movable knife L′ is pivotally arranged above the stationary knife P and pivoted behind the latter in such a manner as to enable the operator to readily take hold of the end of the pasted strip while the movable knife is held raised after a desired length of strip has been cut off. It will also be noticed that the stationary knife P is arranged in an inclined position, by which arrangement the box-former U can be tipped backward in such a position during the cutting off of the pasted strip as to cause the latter to be cut off to the proper length for covering the top of the box.

By having a cut-away portion on the stationary knife-holding bar P′ the rear edge of the said box-former can be swung directly below the cutting edge of the stationary knife, thus facilitating the placing of the severed strip properly onto the box to be covered.

The operation of the machine is as follows: Normally the movable knife L′ is held by the influence of the spring N in the raised position shown in Figs. 1, 2, and 5 and the box-former U is held in the outward position shown in Figs. 2 and 3. The operator then places the box V upon the box-former U and swings it to the position shown in Figs. 1 and 4 and takes hold of the end of the pasted strip C′ resting on the yielding support W and pulls it forward and places it onto the top of the box V, after which the link O′ is depressed, causing the movable knife L′ to be swung forward in the direction of the arrow shown in Fig. 1 to the position shown in Fig. 4, causing the strip C′ to be severed, after which the operator releases his hold on the link O′, causing the spring N to return the movable knife L′ to its normal position. (Shown in Figs. 1, 2, and 5.) The operator then swings the box-former to the position shown in Fig. 2, smooths down the strip upon the top of the box, and removes the latter preparatory to the placing of another box onto said box-former to be covered, and so on during the operation of the machine. By having the movable knife L′ pivoted back of the stationary knife P and above the latter the operator is enabled readily to take hold of the end of the pasted strip C′ and to draw it forward, so as to place it in position onto the box previous to cutting off said strip the desired length according to the size of the box that is to be covered. By having the stationary knife P secured at an angle to the vertical and inclined toward the front of the machine the box-former may be swung backward, so that its rear end will come directly below the cutting edge of the stationary knife, thus enabling the strip to be cut off the proper length for covering the top of the box.

What I wish to secure by Letters Patent and claim is—

1. In an organized paper-box-covering machine, in combination, an oscillating knife L, pivotally arranged above and in rear of a stationary inclined knife P secured to a pivotally-adjustable bar P′, having a front cut-away portion *p*′ adapted to receive the rear portion of the box-former and box held thereon, substantially as and for the purpose set forth.

2. In an organized paper-box-covering machine, in combination, an oscillating knife I, pivotally arranged above and in rear of the stationary inclined knife P, secured to a bar P′, pivotally connected to the head or frame I, and having ears or projections P″, P″, and set-screws R, and regulating screw-bolts Q for the purpose of adjusting the position of the stationary knife relative to the movable knife, substantially as and for the purpose set forth.

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

GEORGE W. GLAZIER.

Witnesses:
ALBAN ANDRÉN,
THEKLA ANDRÉN.