

(No Model.)

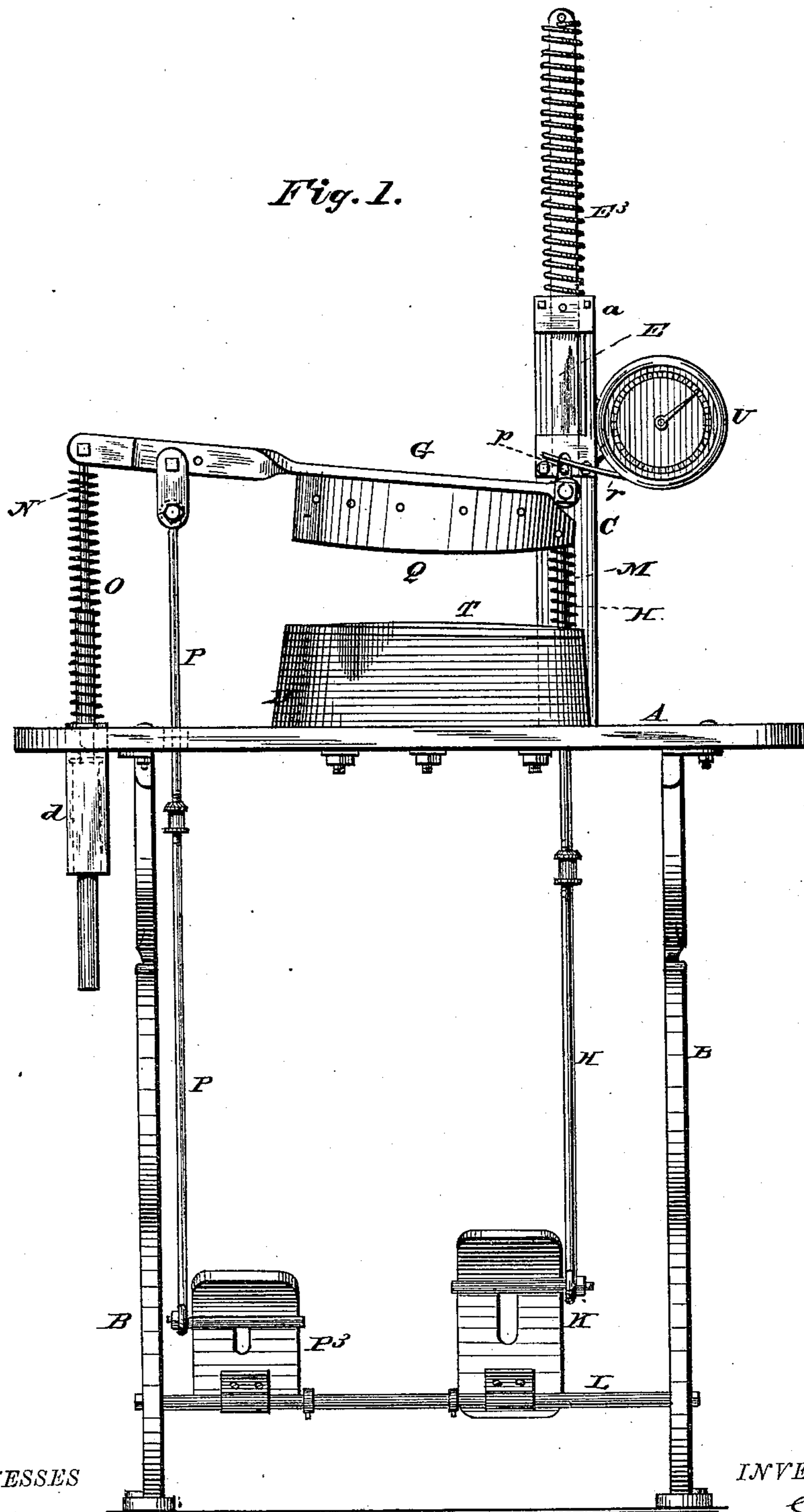
4 Sheets—Sheet 1.

J. E. SCHMALZ.  
CIGAR WRAPPER CUTTING MACHINE.

No. 247,118.

Patented Sept. 13, 1881.

*Fig. 1.*



WITNESSES

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(No Model.)

4 Sheets—Sheet 2.

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Fig. 2.

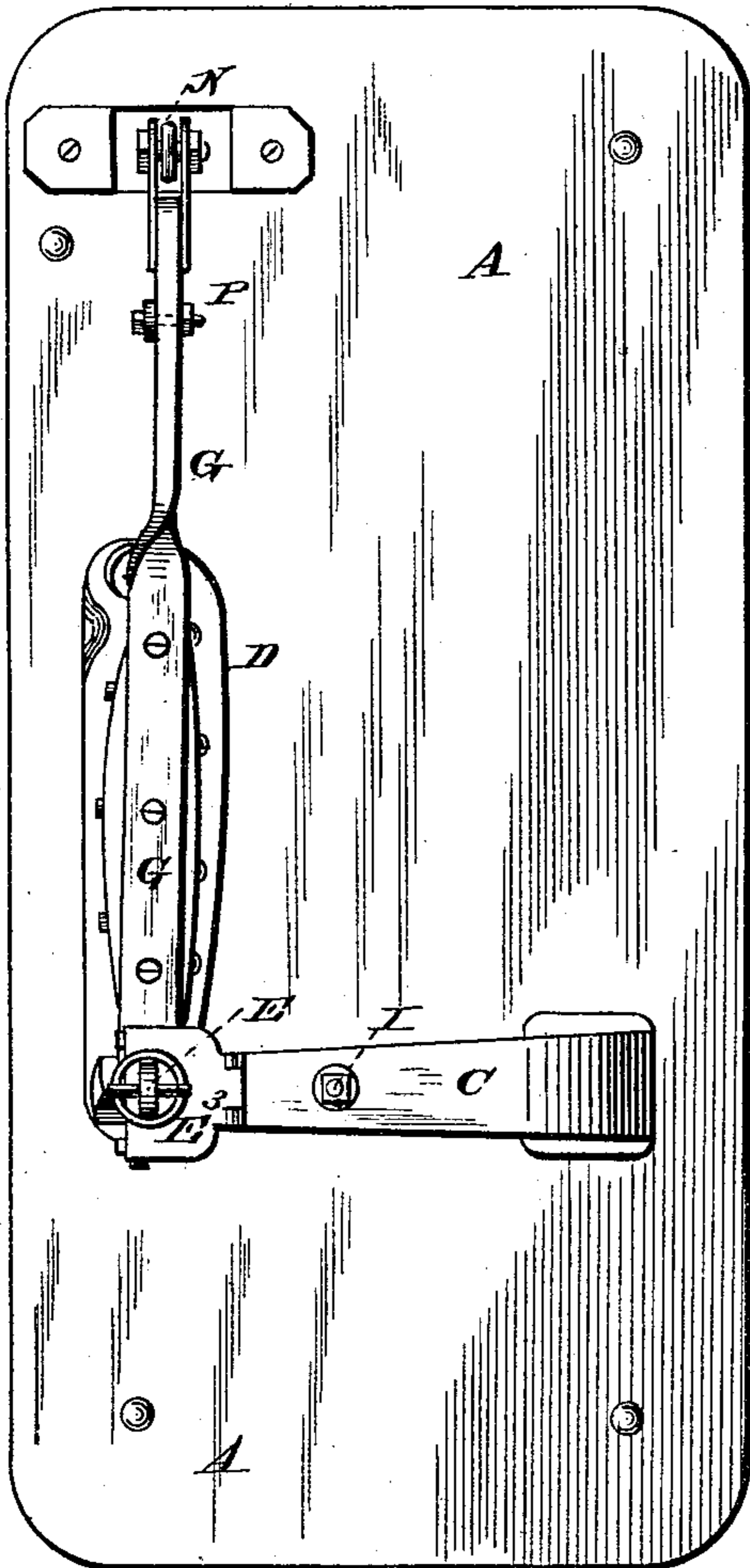
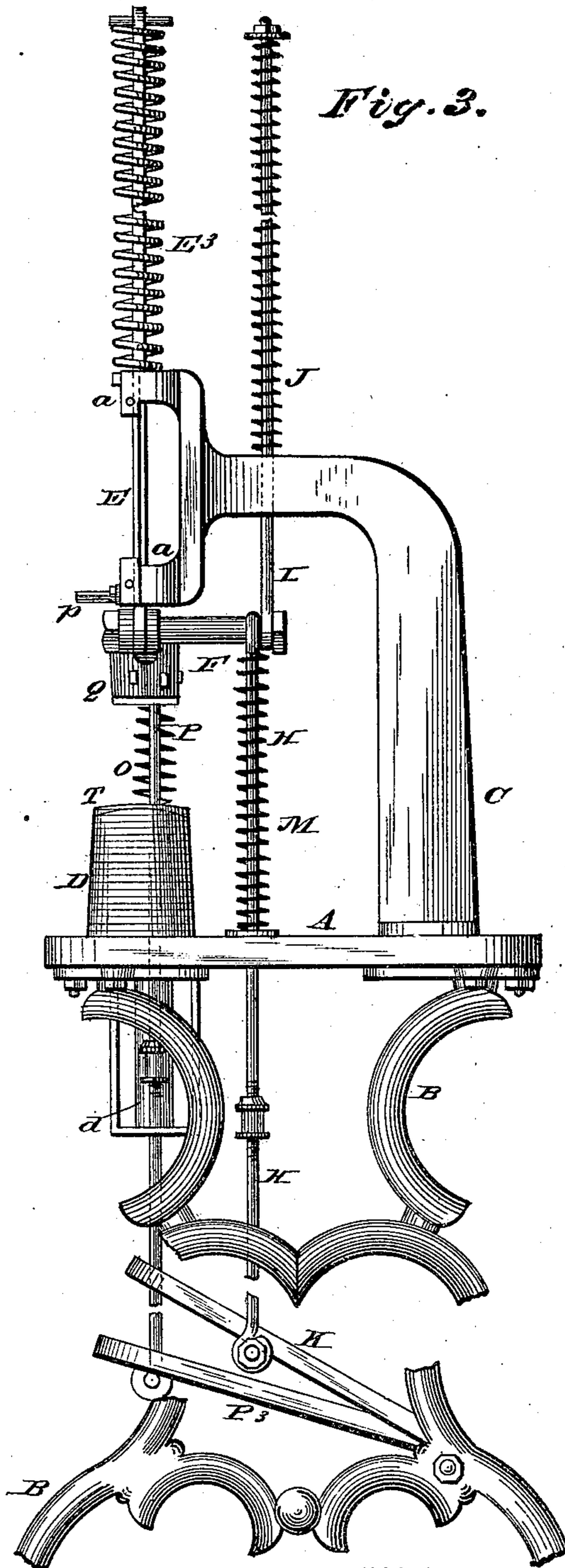


Fig. 3.



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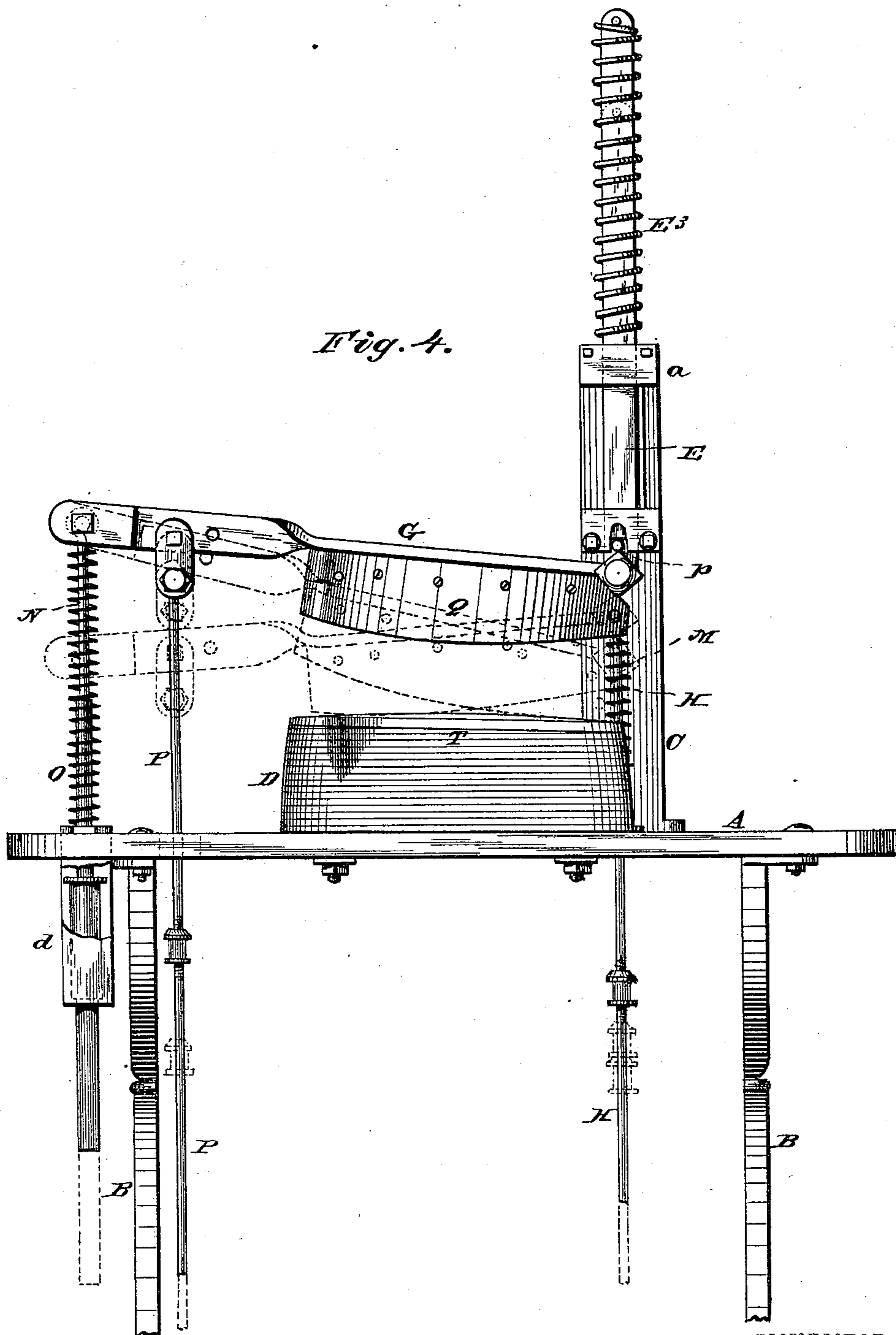
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(No Model.)

4 Sheets—Sheet 4.

J. E. SCHMALZ.  
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Fig. 5.

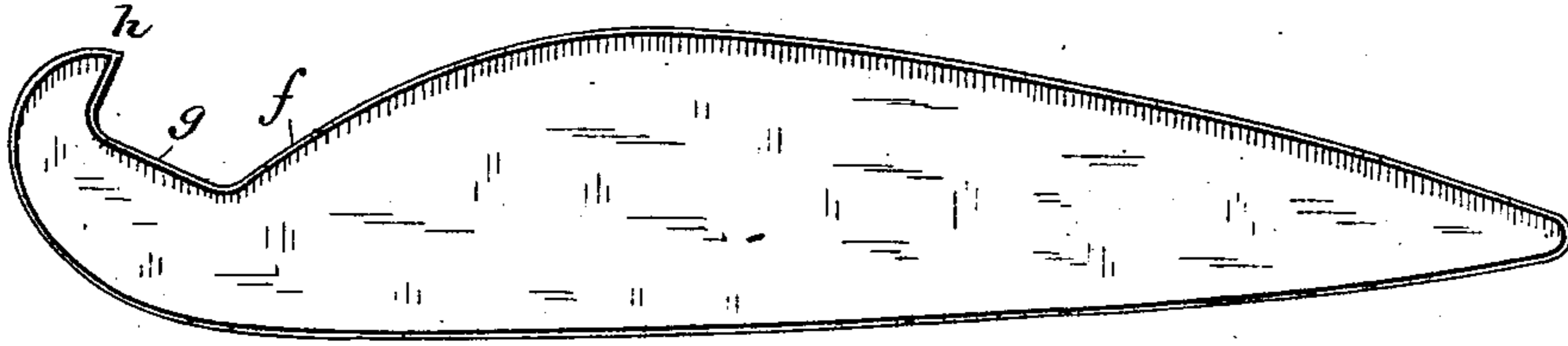


Fig. 6.

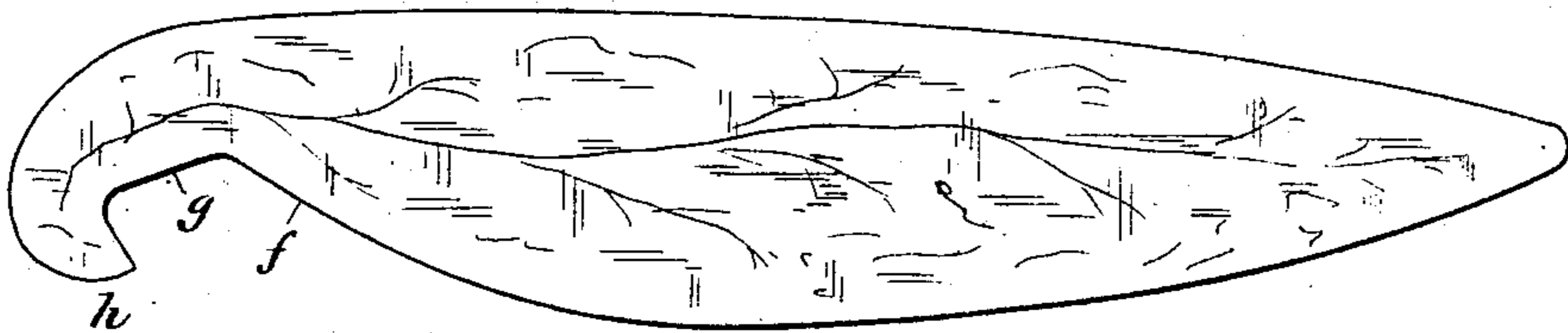


Fig. 7.

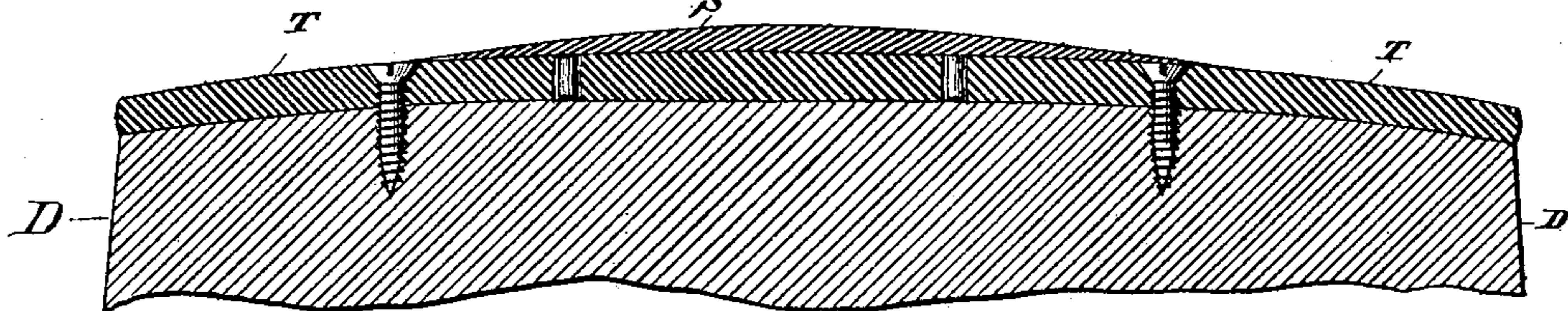
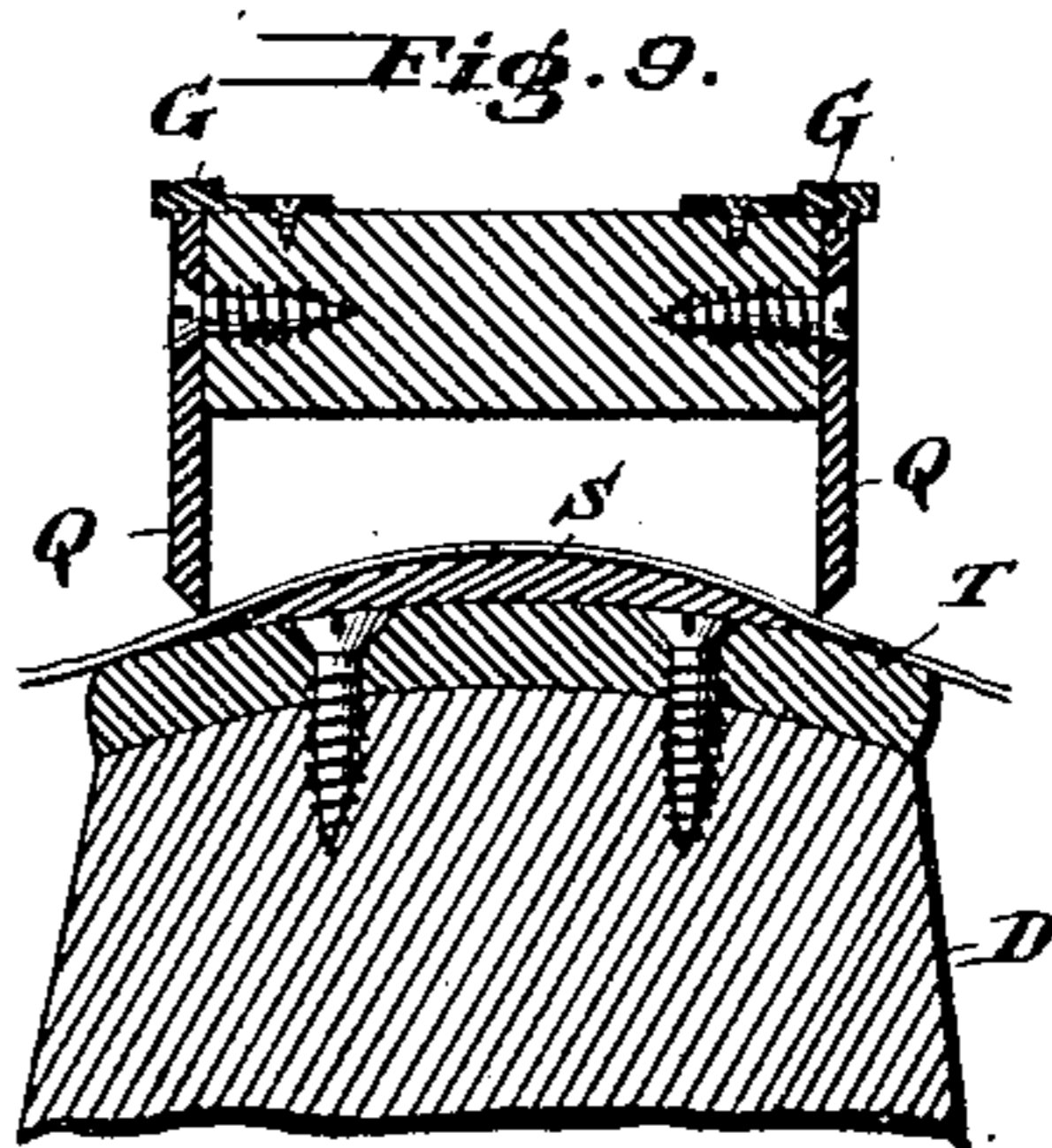
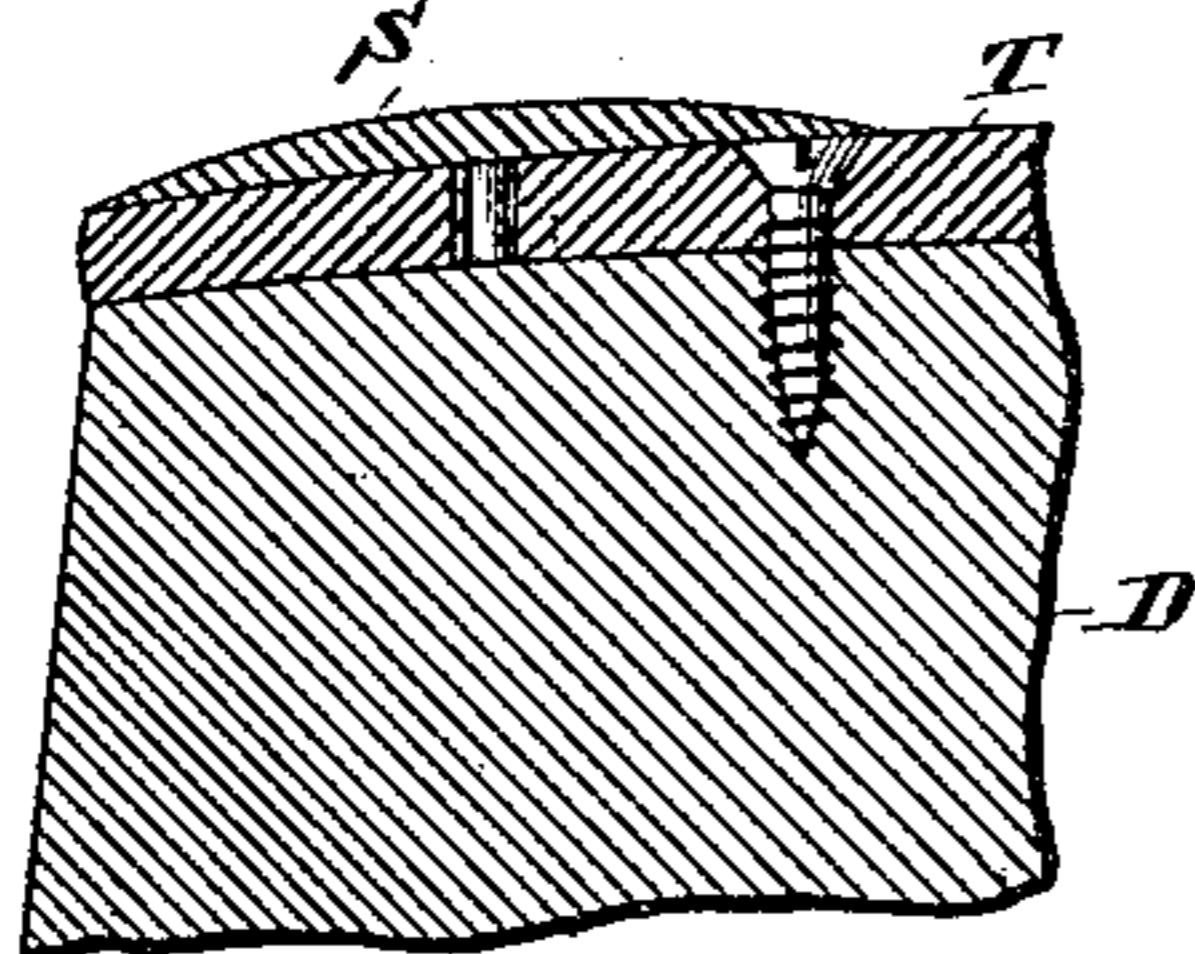


Fig. 8.



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# UNITED STATES PATENT OFFICE.

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TO SIMON J. FLATOW, OF SAME PLACE.

## CIGAR-WRAPPER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 247,118, dated September 13, 1881.

Application filed June 29, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN E. SCHMALZ, residing at New Orleans, in the State of Louisiana, have invented certain new and useful  
5 Improvements in Machines for Cutting Cigar-Wrappers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use  
10 the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

The object of the present invention is to provide a machine for cutting cigar-wrappers in  
15 which the action of a hand wrapper-knife is imitated, so as to permit said wrappers to be "cut out," in the real sense of the term, in contradistinction to being stamped or punched out  
20 by a vertically-descending die or punch, as has heretofore been proposed.

Another object of the invention is to furnish a cigar-wrapper of such a form or configuration that it can be employed for wrapping the  
25 cigar-bunch and produce a finished and closed tip without the necessity of removing any surplus material by hand or otherwise.

It is a fact well known that cigar-wrappers cut or punched out from the leaf by a drop  
30 punch or cutter possess thick or projecting edges, which detract from the appearance or finish of the cigar, and are not so desirable as the hand-cut wrappers provided with beveled or clean-cut edges. A drop punch or cutter  
35 forcibly and quickly brought down upon the tobacco-leaf also has the tendency to injure or break the latter, and frequently it cannot be used at all on certain kinds of tobacco.

My invention is designed to obviate the defects of existing wrapper-cutters by permitting  
40 wrappers with regular and thin edges to be cut out with celerity and ease in a uniform and perfect manner; and to these ends the invention consists in the construction and combination of devices, which will hereinafter be  
45 more fully described, and then set forth in the claims.

In the drawings, Figure 1 is a vertical elevation of my wrapper-cutter, showing the parts

in their normal positions. Fig. 2 is a plan view  
50 of the table, bed-plate, and cutter. Fig. 3 is an end elevation of the machine. Fig. 4 is a side elevation, similar to Fig. 1, showing the action of the cutter in dotted lines. Fig. 5 is a face view of the cutter. Fig. 6 represents  
55 the form of wrapper formed by the cutter for producing a finished tip without subsequent trimming. Figs. 7 to 9, inclusive, are detail sectional views of the bed plate or block and  
60 attachable and detachable face-plates for permitting wrappers of varying widths to be cut by the same cutter.

The frame of the machine comprises a table or stand, A B, to the top of which is secured a standard or upright, C, and a bed plate or block,  
65 D. The standard C extends over the rear end of said bed-plate and terminates in brackets a, which serve as guides for a vertically-reciprocating bar, E, having an encircling spring, E<sup>3</sup>. The lower end of the latter is connected with  
70 a transverse or horizontal arm, F, the outer end of which passes through the rear end of the cutter frame or holder G, while its inner end terminates below the horizontal portion of the standard C and carries downwardly and  
75 upwardly projecting rods or stems H I. The rod I passes through the standard C, and is encircled by the spiral or other spring J, and the rod H extends through the table, and is connected at its lower extremity with the treadle  
80 K. The front or free end of said treadle terminates in proper relation to the front of the table so as to be within easy reach of the operator, and its rear end is fulcrumed on a rod or shaft, L, extending between the frame-work  
85 of the machine.

A spiral or other form of spring, M, is fitted on the rod H, and serves to assist the springs J and E<sup>3</sup> in returning the bar E and the cutter  
90 carried by the same to their normal or highest positions after the pressure upon the treadle is removed.

The cutter frame or holder G is provided with eyes at its rear end, which receive the transverse arm F and are capable of turning thereon.  
95 The opposite end of the cutter-frame is connected with a vertical guide-stem, N, which passes through the table A and plays through

a suitable guide-tube, *d*, attached to the under side of said table A. A suitable spring, O, fitted on the guide-stem between the table and cutter-frame, serves to raise the front portion of the cutter upon the removal of the pressure used to overcome the force of the spring in the final cutting action of the cutter.

A vertical rod, P, joined to the cutter-frame, at or near the end thereof, which bears the stem N, passes through the table, and is connected with a treadle, P<sup>3</sup>, fulcrumed on the treadle-shaft L in the same manner as the treadle K. Both the treadles are so arranged that they can be operated by the feet of a single operator, as will readily be apparent.

The form of cutter shown in Fig. 5 and in the other views of the organized machine is the one which most closely simulates the action of a hand cutting-knife when it is depressed upon the bed plate or block.

The cutter Q may be termed an open or hollow shell or body, which is of the same shape or configuration as the wrapper or product to be cut out by the same, as is clearly shown in Fig. 6. The lower or cutting edge of the cutter Q is curved or made convex, which distinguishes it from the hollow knife-punch having a straight cutting-edge that has heretofore been employed in all machines for cutting cigar-wrappers.

The configuration or shape of the bed plate or block upon which the knife performs its cutting action is not essential; but I prefer to round off the rear side and the front or tip portion thereof, so that the tobacco-leaf can be properly manipulated on the bed-plate for ascertaining the position of defective portions, or, in other words, for bringing the tobacco in such a position as will insure the cutting out of perfect wrappers. The front or tip portion of the bed plate or block is generally provided with a groove or recess for guiding the fingers of the operator into the same in manipulating or holding the tobacco-leaf.

The operation of the hollow convex-edged cutter Q, performing its cutting action upon the upper surface of the bed-plate or inside the edge rim of the latter, may be described as follows, viz: The treadle or other device for depressing the rear end of the cutter is brought into action for causing this part to bear down upon the bed-plate and cut out the butt portion of the wrapper. This first position of the cutter is shown by dotted lines in Fig. 4. The cutter, when brought down upon the bed-plate, as just stated, will not only perform its proper cutting action, but it will also tend to clamp or confine the tobacco-leaf between it and the bed-plate, so as to permit the remainder of the leaf to be stretched or drawn over the bed-plate. This having been done, and the hand of the operator being in proper position at the end of the bed-plate to hold the leaf, the pressure upon the first treadle is removed, whereupon the springs will elevate the latter and cause the rear end of the cutter to rise above

the bed-plate. The second treadle or other device for depressing the cutter is now brought into service for causing the cutter to rock upon the bed-plate, producing in this manner a draw or gradual cut, commencing at the butt portion of the wrapper and terminating at the tip or head portion thereof. The cutting operation having been completed, the second treadle is released, which causes the cutter to pass into its normal or elevated position, ready for the next operation.

The precise configuration of the cutting-edge of the knife or cutter herein shown is an important element, because it enables me to cut out a wrapper of the shape illustrated in Fig. 6. Both the cutter and the wrapper are of the same shape, and hence a description of one will answer for both.

The configuration of the butt, belly, and neck portion of the cutter is not essential, as any desired width, length, or taper may be given to the same. The head portion of the cutter, however, where it joins the neck portion *f*, has a straight edge, *g*, and beyond said straight edge or portion *g* is a rearwardly-curved hook, *h*, constituting a bill-shaped end termination of the cutter, which is convex on its outer edge and concave on the edge adjoining the straight portion *g* and the neck *f*, as is shown in the drawings.

A wrapper shaped as herein shown, or cut by the cutter just described, is specially adapted for wrapping a cigar bunch or filler by a machine which does not require a knife for removing surplus material before the completion of the wrapping operation. It will be obvious, however, that a wrapper cut in the manner shown can be used by hand-workers, and enable the latter to wrap cigar bunches or fillers without the assistance of a knife in finishing the tip. This is due to the fact that the hook-shaped tip portion of the wrapper, having the straight portion located as shown, will permit the wrapper to follow the shape or contour of the tip or head portion of the cigar-bunch, and in doing so bring the straight portion under the hooked extremity for producing a closed tip of a uniform shape and perfect in every particular.

Wrappers having either a wider middle portion or a wider tip or head portion than is shown in Fig. 6 are easily made without changing the knife or bed-plate by attaching detachable face-plates S to the latter, over which the tobacco-leaf is stretched in cutting the wrapper.

Fig. 8 illustrates a bed-plate having a convex face-plate, used in cutting wrappers for thick-bellied cigars, and Fig. 9 shows a convex plate applied to the tip of the bed-plate for shaping "marble-head" cigars. It will be obvious that these attachable face-plates can be of different sizes, and that they serve to bulge out or raise the tobacco-leaf, so that the wrapper, after it is straightened out, will be wider than the bed-plate. Dowel-pins and holes or

other means may be employed for retaining the attachable plates in position.

I have in the present instance illustrated a machine provided with treadles for depressing the cutter and springs for returning the latter into a raised position after the performance of the cutting operation. I do not confine myself to such a construction, as I may employ other mechanical devices for performing a like result without departing from the spirit of my invention. For example, a machine-shaft may be contrived for periodically or intermittently depressing and elevating the cutter, or else the springs may be dispensed with and counterbalance-weights used in connection with the treadles.

In a well-organized machine I also find it expedient and advantageous to employ a registering mechanism, *U*, for indicating the number of wrappers cut by the machine. In the present instance a pin or projection, *p*, on the vertical bar carrying the cutter, serves to strike a lever or arm, *r*, whenever said bar moves in an upward direction after the performance of each cutting operation. The lever *r* controls or actuates a ratchet or pawl or other mechanism for gradually advancing a pointer over a dial.

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

1. In a machine organized for cutting out the wrappers for cigars, a cutter or knife having a continuous curved or convex cutting-edge conforming in shape to the shape of the wrapper to be produced, and mechanism for depressing said cutter first at the butt portion and then at the tip portion thereof, in

combination with a bed-plate arranged below said cutter and a suitable table or stand, substantially as and for the purpose set forth.

2. In a cigar-wrapper cutter, the combination of the cutter or knife, the cutter frame or holder, the rear spring-encircled guide-stem, having horizontal bottom arm and spring-encircled rods carried thereby, and the front spring-encircled stem and the treadles and their rods, connected with the ends of the cutter-frame, with the bed-plate or block and the table, as and for the purpose set forth.

3. In a cigar-wrapper cutter, the hollow or shell-shaped cutter *O*, having a rearwardly-curved hook, *h*, at its tip portion or head, connected with the neck portion *f* of said cutter by a straight cutting-edge, *g*, in combination with a bed-plate and mechanism for bringing the cutter and bed-plate together, substantially as and for the purpose set forth.

4. In a cigar-wrapper cutter, the combination of the attachable and detachable face-plate *S* with a bed-plate and a vertically-movable cutter or knife arranged above the bed-plate and encompassing the face-plate, as and for the purpose set forth.

5. As a new product or article of manufacture, a cigar-wrapper having a rearwardly-turned hook at its head or tip end and a straight portion at the inner edge of said hook, connecting it with the neck of the wrapper, as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN E. SCHMALZ.

Witnesses:

THOS. E. BADEN,  
WM. TANNER.