

(No Model.)

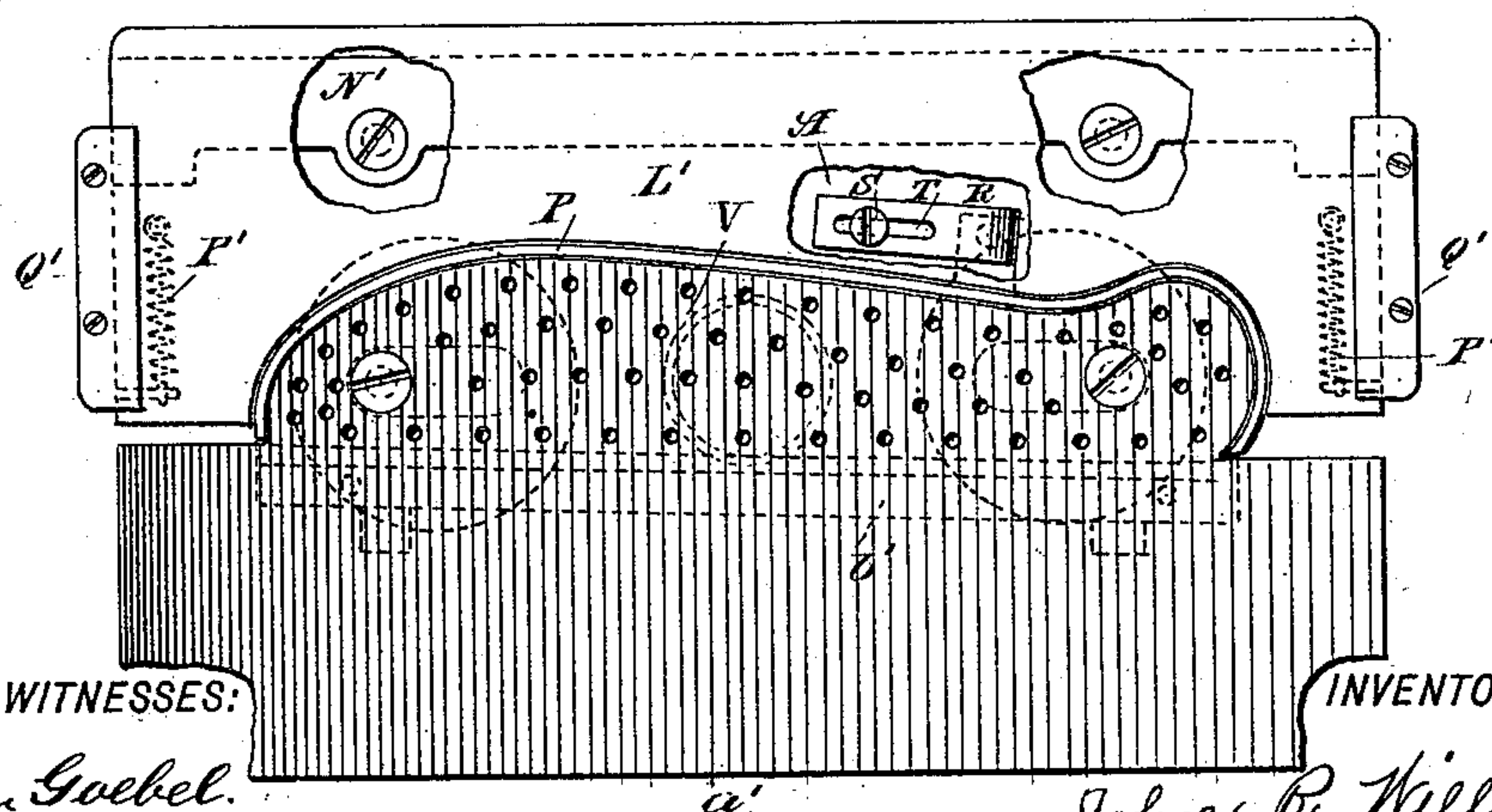
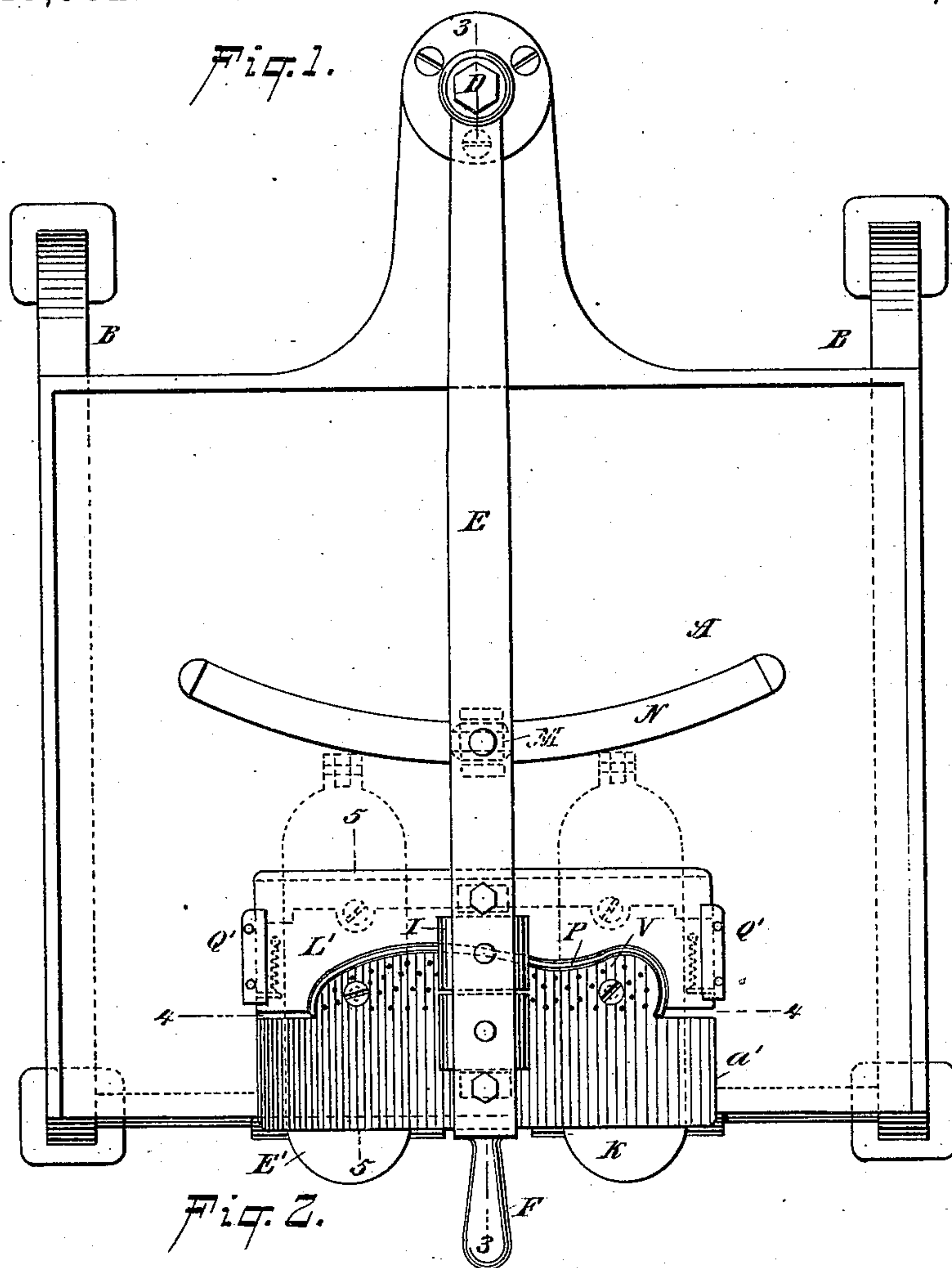
3 Sheets—Sheet 1.

J. R. WILLIAMS.

MACHINE FOR CUTTING OUT WRAPPERS AND BINDERS FOR CIGARS.

No. 548,902.

Patented Oct. 29, 1895.



WITNESSES:

William Goebel.  
William R. Ellison

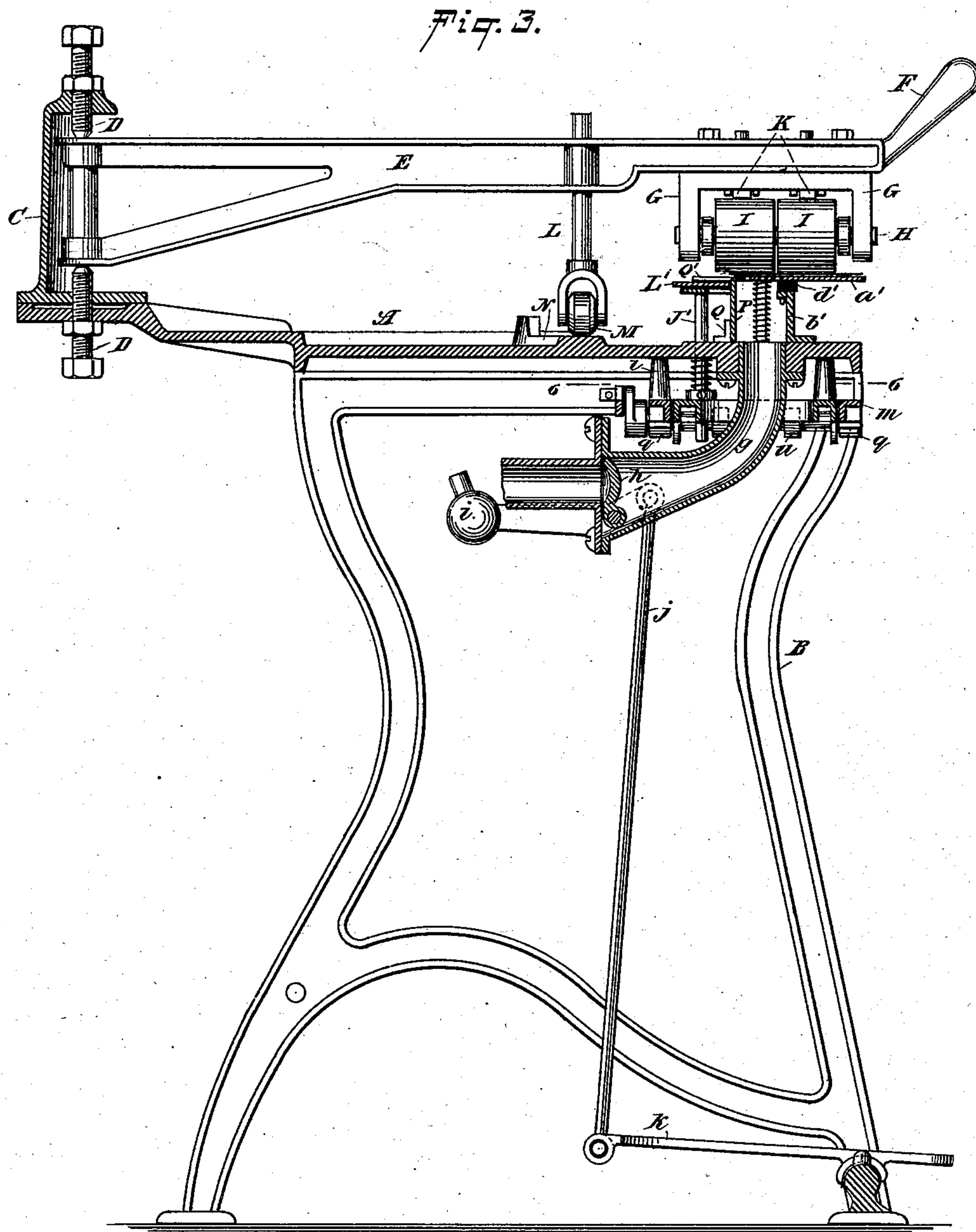
INVENTOR

John R. Williams,  
BY  
Chas. C. Gill  
ATTORNEY.

(No Model.)

3 Sheets—Sheet 2.

J. R. WILLIAMS.  
MACHINE FOR CUTTING OUT WRAPPERS AND BINDERS FOR CIGARS.  
No. 548,902. Patented Oct. 29, 1895.



WITNESSES:

William Goebel.  
William R. Ellison

INVENTOR

John R. Williams,

BY

Chas. O. Gill  
ATTORNEY.



(No Model.)

3 Sheets—Sheet 3.

J. R. WILLIAMS.

MACHINE FOR CUTTING OUT WRAPPERS AND BINDERS FOR CIGARS.

No. 548,902.

Patented Oct. 29, 1895.

Fig. 4.

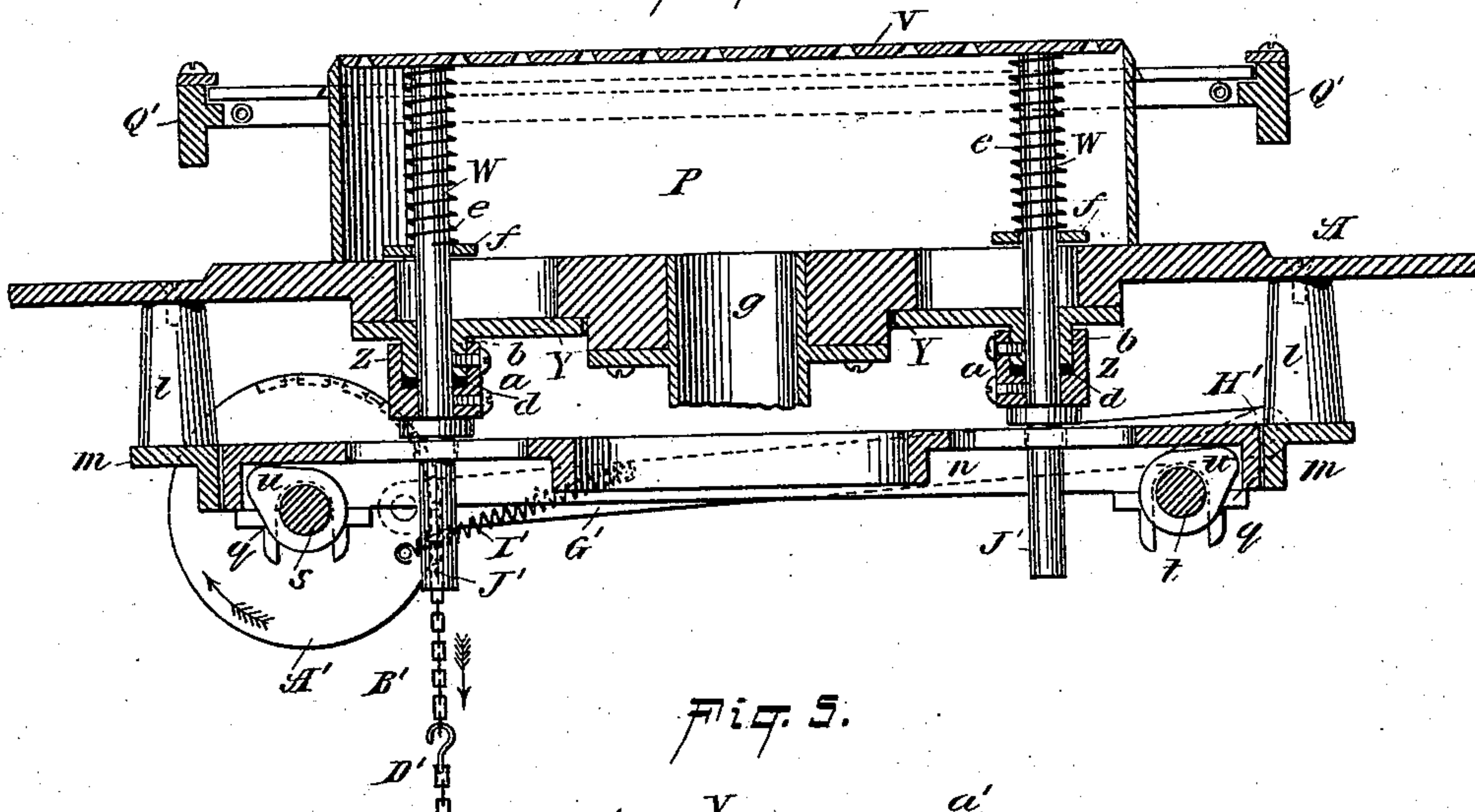


Fig. 5.

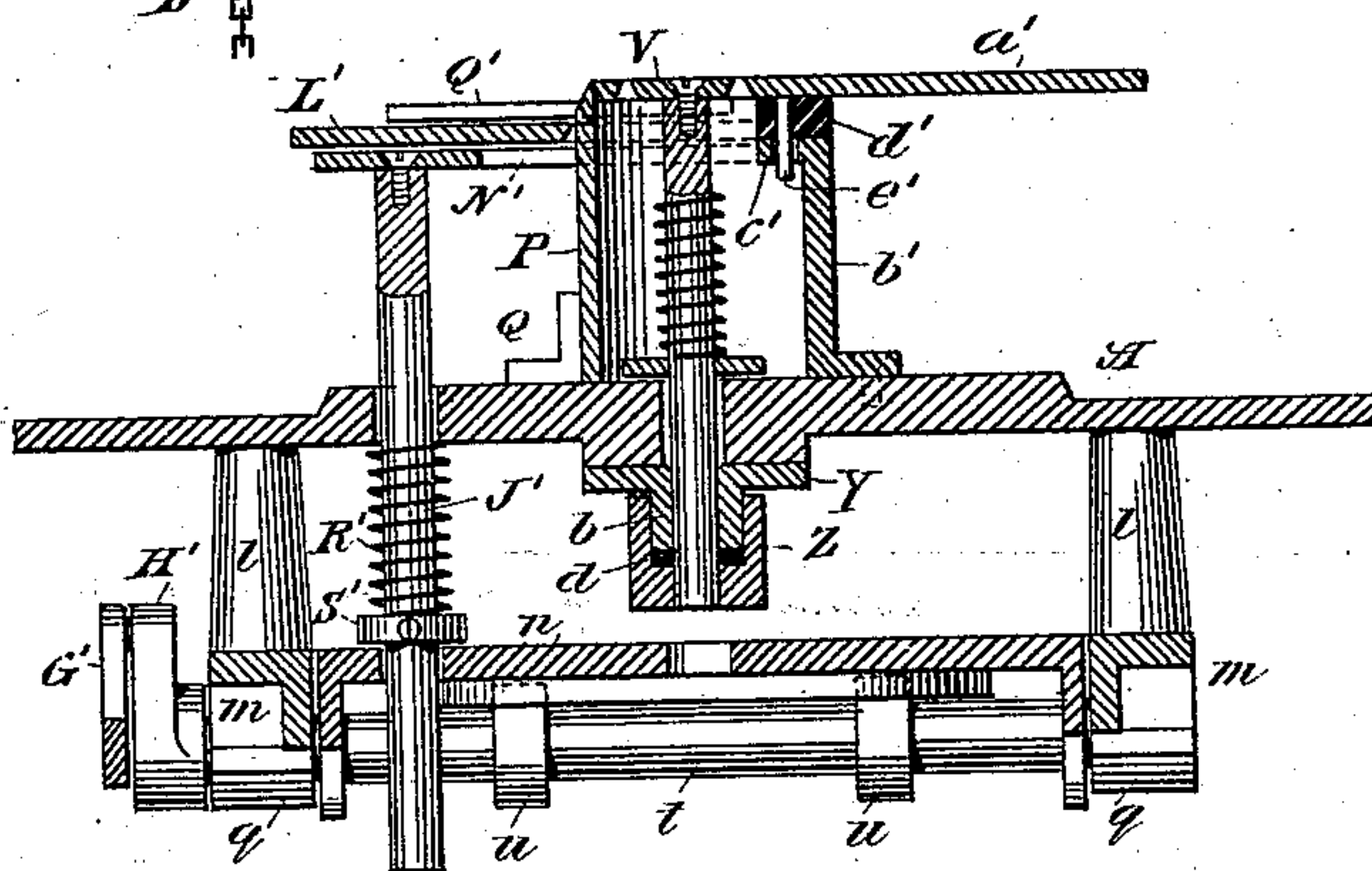
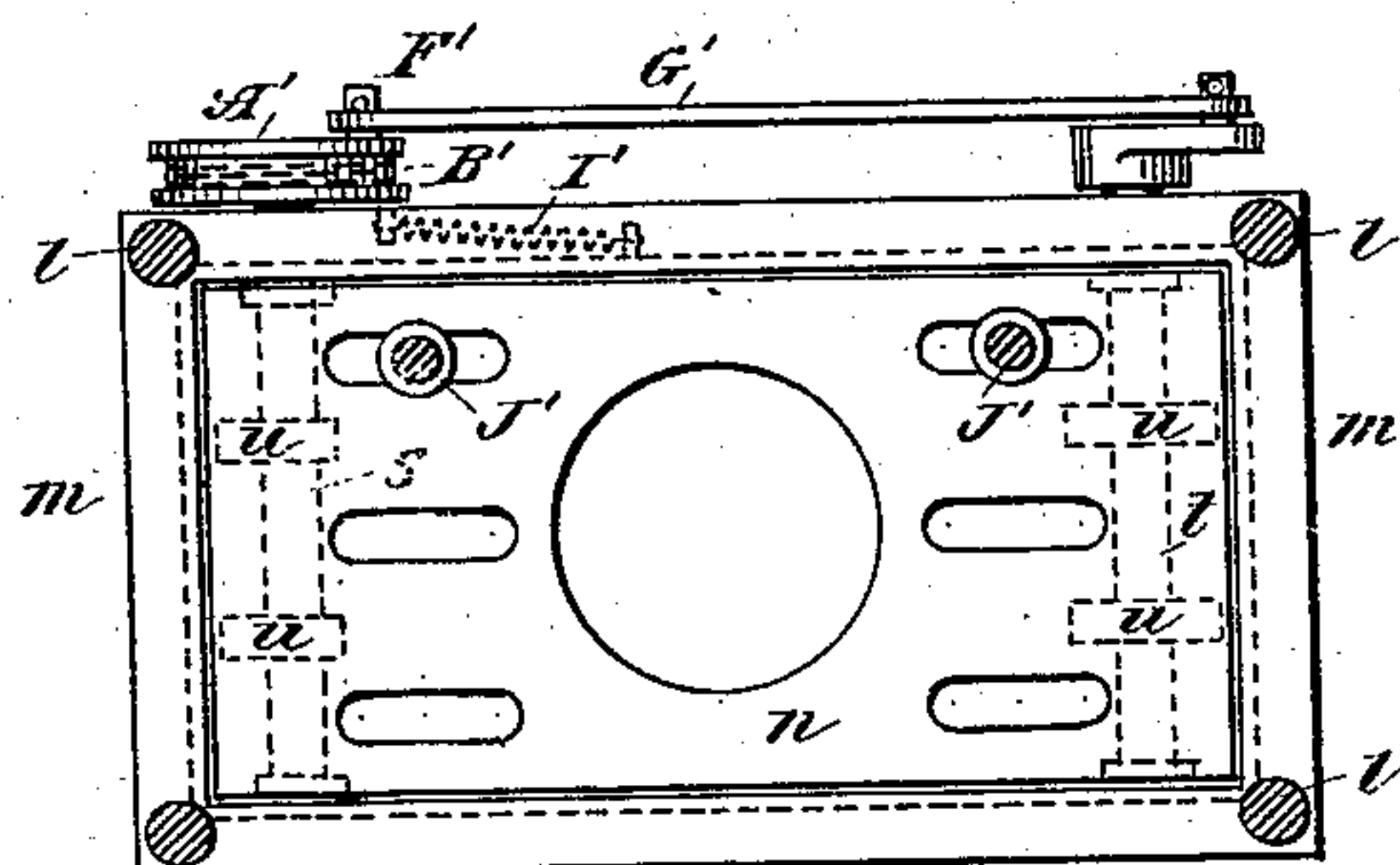


Fig. 6.



WITNESSES:

William Goebel.  
William R. Allison

INVENTOR

John R. Williams,

BY

Chas. C. Gill  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

JOHN R. WILLIAMS, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO THE  
JOHN R. WILLIAMS COMPANY, OF NEW YORK, N. Y.

MACHINE FOR CUTTING OUT WRAPPERS AND BINDERS FOR CIGARS.

SPECIFICATION forming part of Letters Patent No. 548,902, dated October 29, 1895.

Application filed January 8, 1895. Serial No. 534,217. (No model.) Patented in Spain May 24, 1895, No. 17,183.

*To all whom it may concern:*

Be it known that I, JOHN R. WILLIAMS, a citizen of the United States, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Machines for Cutting Out Wrappers and Binders for Cigars, (for which I have obtained a Spanish patent, No. 17,183, dated May 24, 1895,) of which the following is a specification.

The invention relates to improvements in machines for cutting out cigar wrappers or binders; and it consists in novel mechanism, hereinafter specifically described, for cutting the blanks for the wrappers or binders and affording a surface or table upon which the wrappers or binders may be rolled around the "filler," the leaf while subjected to the operation of cutting or rolling being held by air-pressure.

The invention pertains particularly to improvements on the machine shown, described, and claimed in Letters Patent of the United States No. 400,153, granted to the John R. Williams Company March 26, 1889, as assignee of John R. Williams, for a machine for cutting out cigar wrappers or binders.

The object of the present invention is to provide a machine which may be more conveniently and economically employed for cutting the wrappers or binders for cigars and the like than the machine of said Patent No. 400,153, and this object has been fully accomplished by the present invention, whereby a manufacturer is enabled to obtain from fifteen to twenty per cent. more wrappers or binders from a given quantity of "leaf" than has been possible with the use of the machine of said patent.

In the machine of the said Patent No. 400,153, the cutting-die has a continuous cutting-edge of conventional outline, and within this outline is a perforated yielding platen, while without and conforming to it is provided a non-perforated yielding table. In the machine embracing the present invention the continuity of the cutting-edge of the die is broken and the perforated platen therein connects with one section of the surrounding yielding table, the said cutting-edge representing, preferably, practically one longitudinal

half of the former continuous cutting-edge of the said Patent No. 400,153, and in the use of the machine made the subject hereof the operator instead of, as heretofore, cutting a definite complete outline from within the edges of the leaf and wasting the surrounding desirable portions thereof exterior to the die or parts thereof will cut the wrappers or binders from along the edge of the leaf and of any outline that edge may render possible. In the machine of said Patent No. 400,153, it was not possible to form a binder or wrapper wider than the die, while in the present machine the cut wrapper or binder may be of any width or shape desired and the leaf completely used in the production of satisfactory wrappers or binders without material waste. The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which—

Figure 1 is a top view of a machine constructed in accordance with and embodying the invention. Fig. 2 is an enlarged detached top view, partly broken away, of the cutting-die and rolling-table exterior thereto. Fig. 3 is a central vertical longitudinal section of the machine on the dotted line 3 3 of Fig. 1. Fig. 4 is an enlarged vertical section of same on the dotted line 4 4 of Fig. 1. Fig. 5 is a like section of same on the dotted line 5 5 of Fig. 1; and Fig. 6 is a horizontal section of same, looking downward, on the dotted line 6 6 of Fig. 3.

In the drawings, A designates the bed-plate of the machine, said plate being suitably supported on legs B and sustaining on its rear portion the standard C, which affords a bearing between the adjusting pivot-screws D D for the swinging arm E. The arm E has a handle F at its front end and carries the hanger G, in which is journaled the axle H for the pressure-rollers I I, as shown in Fig. 3. The rollers I I are loosely mounted on the axle H, and each is given a downward pressure by the smaller rollers K K. The arm E also carries the hanger L, having at its lower end the wheel M, adapted to travel on the track N, formed on the bed-plate A. The arm E, with the rollers I I and wheel M, are embraced in the aforesaid Letters Patent No.



400,153, granted March 26, 1889, and are not independently claimed herein.

Upon the front portion of the bed-plate A and in the line of the arc of travel of the rollers I I is secured the upturned die P, whose outline corresponds with the conventional outline of one longitudinal half of the wrapper or binder to be cut, and which has affixed to its side the angle-plate lug Q, adapted to be held upon the bed-plate A by the clamp R, secured to said bed-plate by a screw S, passing through an elongated slot T in the clamp, the latter being rendered adjustable with respect to the lug Q by the elongated slot through which the screw S passes. Within and closely fitting the upper edges of the die P is arranged the perforated platen V, which is secured by screws to the upper ends of the rods W W, located at the ends of the die, as shown in Fig. 4, and passing downward through the elongated slots X, disks Y, and caps Z, the said disks and caps at each end of the die being connected together and to the rods W by means of the screws a.

Between the hubs b on the under side of the disks Y and the caps Z are applied flexible washers or packing d, forming air-tight joints. The disks Y are close against the under side of the bed-plate A and close the elongated slots X. Within the walls of the die P the rods W W are inclosed by the coiled springs e, which are held between the washers f and platen V and exert an upward pressure against the latter, allowing the same a suitable yielding tension, adapting it for the varying conditions of the leaf to be cut upon the die when the machine is in use.

The perforated platen V is integral with the front rolling-table a' and receives additional support from the elongated standard or frame b', secured to the bed-plate A and closing the front side of the die P. Upon the upper edge of the frame b' is formed a horizontal flange c', and upon this is retained the elongated soft or yielding strip of rubber or other suitable material d', which directly receives the plate comprising the platen V and table a', and which plate carries small pins e', freely passing downward through said rubber d' and flange c'. The rubber d' will yield under pressure with the springs e, and hence the platen V and table a' may have a suitable yielding motion. The table a' extends laterally beyond the ends of the die P and also forward toward the operator and forms a convenient support for the leaf and a surface upon which the rolling or trimming operations may be performed.

In the bed-plate A and at a point within the walls of the die or cutter P is provided an aperture adapted to receive the end of the pipe g, which in use will be connected with an ordinary suction-blower or exhaust, (not shown,) whereby the leaf placed upon the die may be held close against the platen V by air-suction in a well-known manner. In the pipe g is pivoted the valve h, having the

weight i to close it and being connected through the pitman-rod j with the foot-treadle k, by which the valve h may be opened and the leaf upon the die P brought under the influence of the exhaust above referred to.

Upon the under side of the bed-plate A, below the die or cutter P, is suspended by lugs l l l l the rectangular frame m, the lugs being held against the bed-plate A by screws, as shown by dotted lines in Fig. 4. The frame m incloses the vertically-movable plate n and sustains in bearings q (see Figs. 3 and 5) the parallel shafts s t, carrying cams u, adapted upon the turning of the shafts to bear upward against and elevate the plate n.

Upon one end of the shaft s is secured the wheel A', which, through the chain B' and pitman-rod D', is connected with the foot-treadle E', and through the crank-pin F', rod G', and arm H' is connected with the shaft t, the purpose of these connections being to enable the operator to turn the wheel A' and shaft s by the pressure of the foot on the treadle E' and to impart from the wheel A' a like movement to the shaft t, whereby the shafts s t may have a simultaneous movement and through the cams u elevate the opposite ends of the plate n to a corresponding extent.

After the wheel A' has been turned to elevate the plate n the spring I' (see Figs. 4 and 6) will, as soon as the foot is released from the treadle E', retract the wheel to its normal position, which is that shown in Fig. 4, and permit the plate n to assume its former position on a horizontal plane with the frame m. The vertical movement of the plate n is imparted through the rods J' J' to the rolling-table L', the latter, when the plate n is elevated, being raised to a level with the platen V, so that the table and platen and table a' may at that time form a continuous surface upon which the cigar may be rolled while the leaf is held smooth by suction. When the plate n is lowered, the table L' will have a corresponding movement downward, so as not to interfere with the operation of the die for cutting wrappers or binders.

The table L' is shown enlarged in Fig. 2, wherein it will be seen that it consists of a plate supported on a frame N' and provided with springs P', which operate to draw it toward and close around the die P. The opposite ends of the table L' are held by guides O', which prevent the elevation of the same from the frame N', while the die or cutter P and springs P' insure the plate from slipping from the said guides. The upper ends of the rods J' are united with the frame N' by screws, as shown in Fig. 5, and these rods are given a spring-tension downward, when the rolling-table is in an elevated position, by means of the coiled springs R', which encircle the rods between the collars S' and the bed-plate A.

In the operation of the machine the leaf from which the wrappers or binders are to be cut is placed over the die P and the valve h



opened by pressure on the foot-treadle *k*, whereupon the exhaust will hold the leaf smooth upon the platen *V* and the operator will move the arm *E*, and thereby the rollers *I I*, across the die, which will have the effect of cutting the blank from the leaf, after which the pressure on the treadle *k* may be relieved and the valve *h* permitted to cut off the exhaust, whereupon the blank will be released from the platen and may be removed. This operation may be repeated until the desired number of blanks have been cut, and then, if it is desired to roll the cigars on the same machine, the table *L'* may be elevated by the foot-treadle *E'*, as hereinbefore described, and the platen *V* and table *L'* and table *a'* thus utilized as a continuous surface upon which to accomplish the rolling, the treadle *k* being employed to establish the connection of the exhaust with the platen for the purpose of holding the wrapper while the cigar is being rolled. If desired, as soon as each wrapper is cut it could be rolled around the cigar, the table *L'* being elevated after each movement of the arm *E*, the rolling performed, and the treadles *k E'* then released.

In cutting the wrappers or binders the edge of the leaf will be placed toward the front or table *a'*, so that the die, with one motion of the arm *E* and rollers *I I*, may sever a complete wrapper or binder. It will not be necessary at all times that the leaf extend from end to end of the die *P*, since, the die not having a continuous cutting-edge, the leaf may in width extend over upon the table *a'* sufficiently to compensate for the lack in length of the wrapper or binder. The die *P* of the construction herein presented is capable of cutting wrappers or binders varying in form or outline, since the open side of the die admits of the cutting being from the edges of the leaf and the extending of the latter outward upon the table *a'*. In the use of the closed die shown in the aforesaid Patent No. 400,153 both the width and length of the wrapper or binder are invariably fixed, and hence no opportunity is afforded for allowing a greater width in the wrapper than the actual width of the die. Thus very frequently a piece of leaf large enough for a wrapper of some form must be wasted because it is not of that particular length and width suitable for the closed die of said patent. The use of the die *P*, having the open side, results in a great saving of the tobacco and the securing of the maximum number of wrappers from a given quantity of leaf.

The machine constructed as above described is adapted to receive dies varying in size, and hence cutting wrappers and binders for cigars of different dimensions. If the die or cutter *P* should be found too large for the special wrapper or binder to be cut, it will be released from the bed-plate by loosening the clamp *R*, and the platen *V* and table *a'* will be detached from the rods *W W*, whereupon a

smaller die and platen could be substituted, the new die being secured by the clamp *R* and the new platen and table *a'* being attached to the rods *W W*, the latter being moved inward toward each other to meet the screw-holes in the smaller platen, the making of new screw-holes in the bed-plate *A* for the varying sizes of dies and in the platen to suit the position of the rods *W W* being thus avoided. The rods *W W* may be moved laterally in the slots *X* to suit the varying sizes of platens by turning the disks *Y*, which are eccentrically secured on the rods and are of such size as to cover the slots *X* no matter what position may be given to the rods *W*. In the drawings the rods *W W* are at the ends of the slots *X*; but a one-half turn of the eccentric disks *Y* would bring them to the inner end of said slots, so as to meet the screw-holes in a small platen. A person possessing one of the machines with a few different sizes of platens and dies would thus be enabled to provide wrappers for cigars of the usual sizes.

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

1. In a machine for cutting wrappers or binders from leaf-tobacco for cigars and the like, the elongated die open along one of its longitudinal sides and containing the yielding perforated platen, combined with air suction apparatus connected with said die, the table exterior to and adjacent to the upper edges of the said die, and means for pressing the leaf against the die; substantially as set forth.

2. In a machine for cutting wrappers or binders from leaf-tobacco for cigars and the like, the elongated die open along one of its longitudinal sides and containing the platen, combined with means for holding the leaf on the die, means for pressing the leaf against the die to effect the cutting, and the table exterior to the die and uniting with the said platen to form a support for the leaf; substantially as shown and described.

3. In a machine for cutting wrappers or binders from leaf tobacco for cigars and the like, the elongated die *P* open along one of its longitudinal sides, combined with the plate forming the platen to fill the outline of said die and the exterior table; substantially as shown and described.

4. In a machine for cutting wrappers or binders from leaf tobacco for cigars and the like, the elongated die open along one of its longitudinal sides, the yielding perforated platen within the die and the tables at opposite sides of the die, one of said tables being integral with said platen and both of said tables being adjacent to the upper edges of the die, combined with suction apparatus connected with said die, and means supporting and permitting a vertical movement in the said tables and platen; substantially as set forth.

5. In a machine for cutting wrappers or



binders from leaf tobacco for cigars and the like, the elongated die open along one of its longitudinal sides, the vertical frame at the open side of said die and having the rubber  
5 strip thereon, and the plate forming the interior perforated platen filling the die, and the table exterior to the die and resting on said strip, combined with the suction apparatus connected with said die, and means for

pressing the leaf upon the die; substantially as set forth.

Signed at New York, in the county of New York and State of New York, this 4th day of January, A. D. 1895.

JNO. R. WILLIAMS.

Witnesses:

CHAS. C. GILL,  
EDWARD D. MILLER.