

(No Model.)

3 Sheets—Sheet 1.

A. MOONELIS.

MACHINE FOR CUTTING CIGARETTE WRAPPERS.

No. 514,236.

Patented Feb. 6, 1894.

Fig- I.

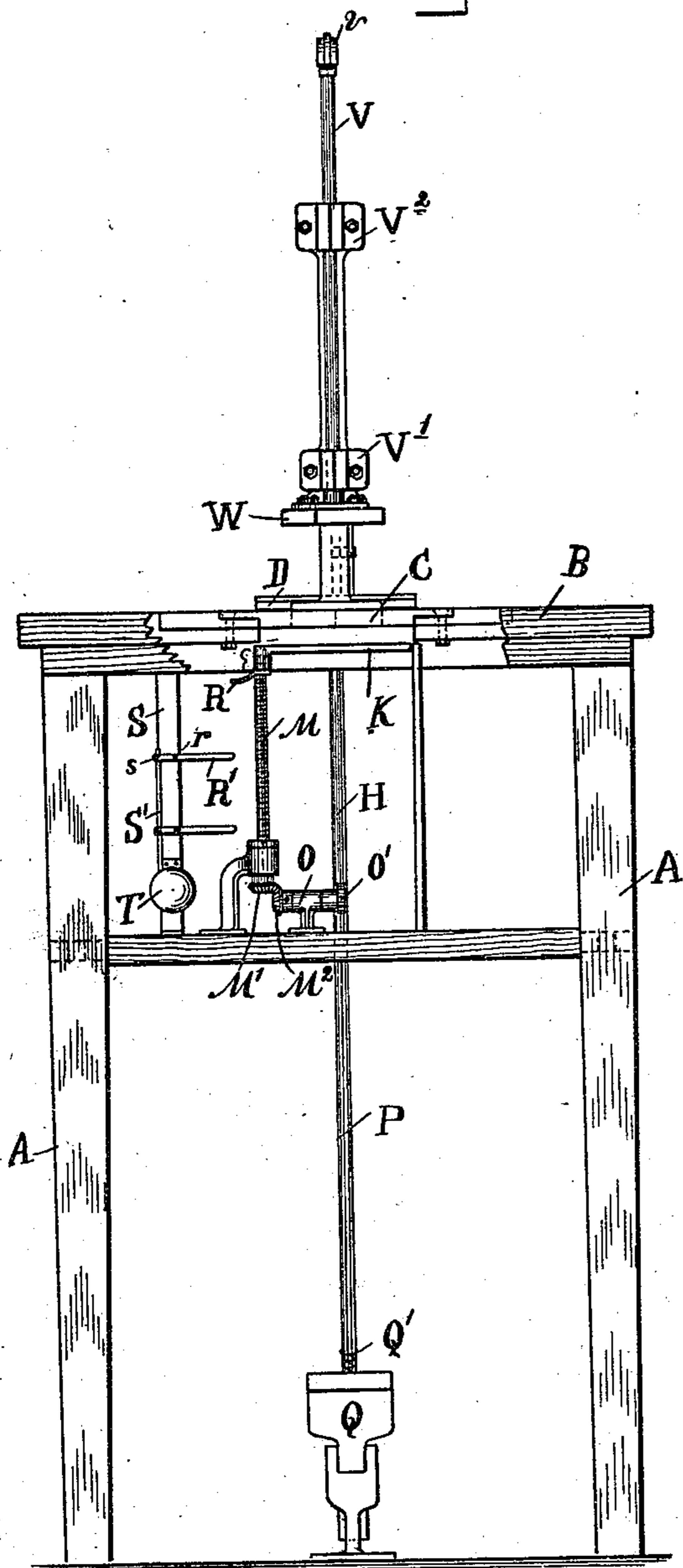
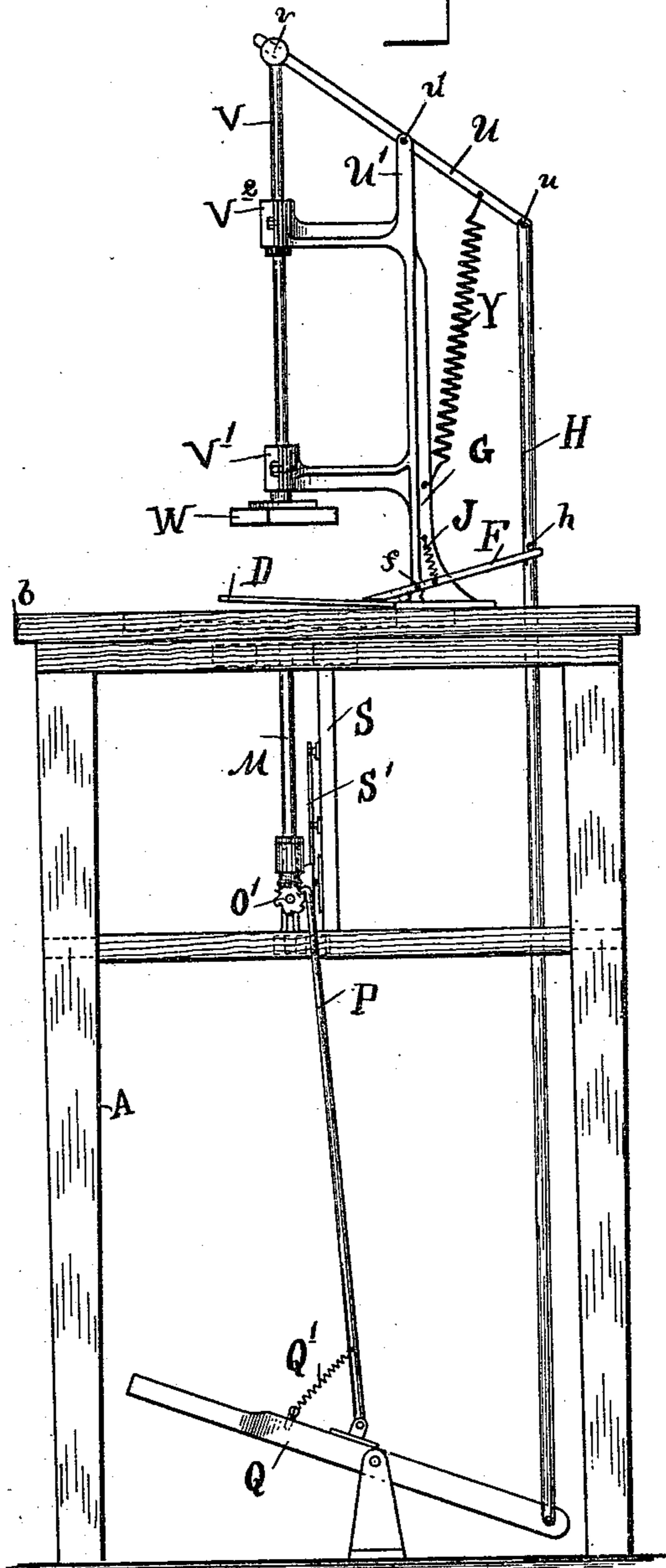


Fig II.



Witnesses

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J. E. Martin

Inventor

Adolph Moenlis
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Fig. III.

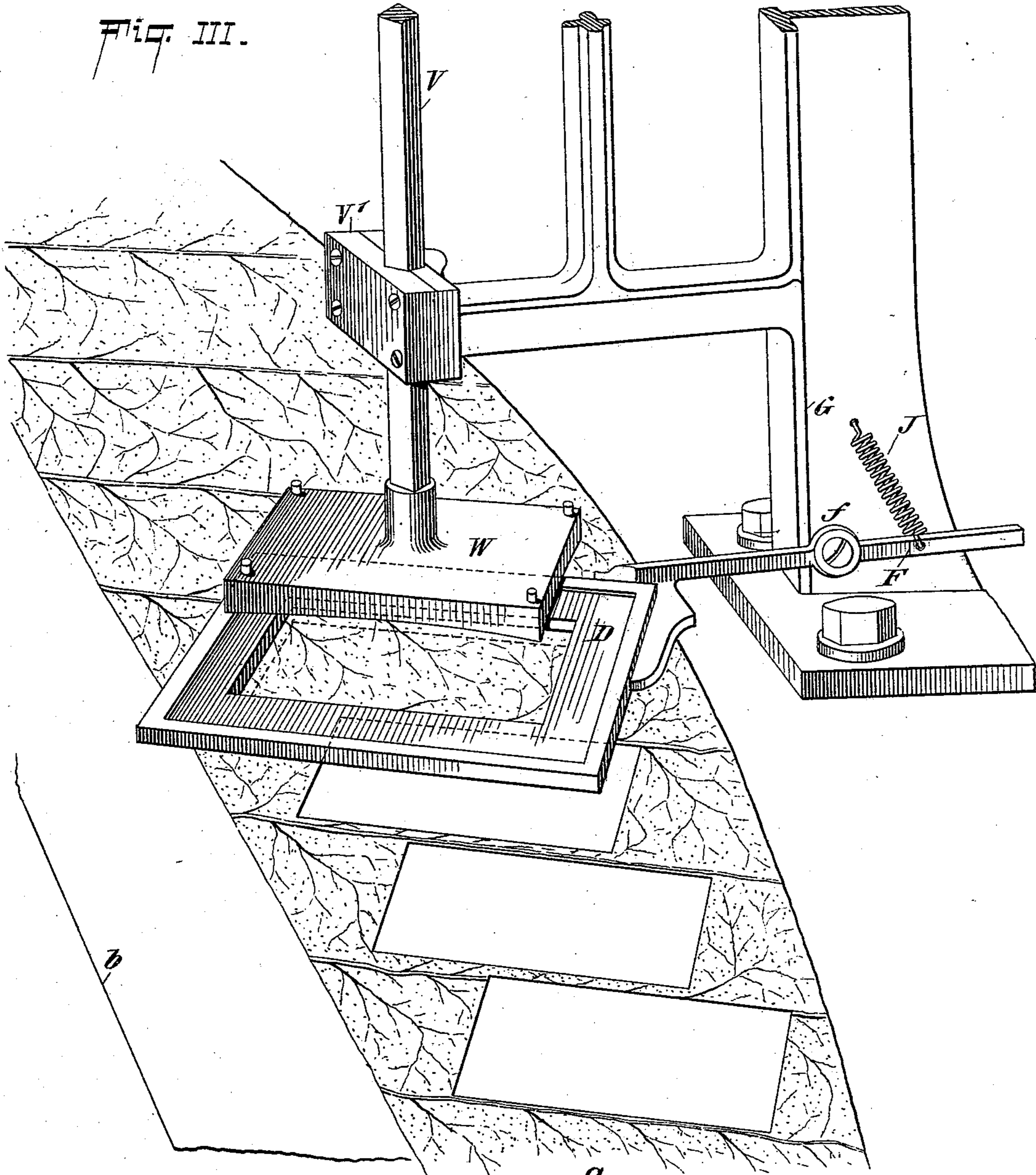
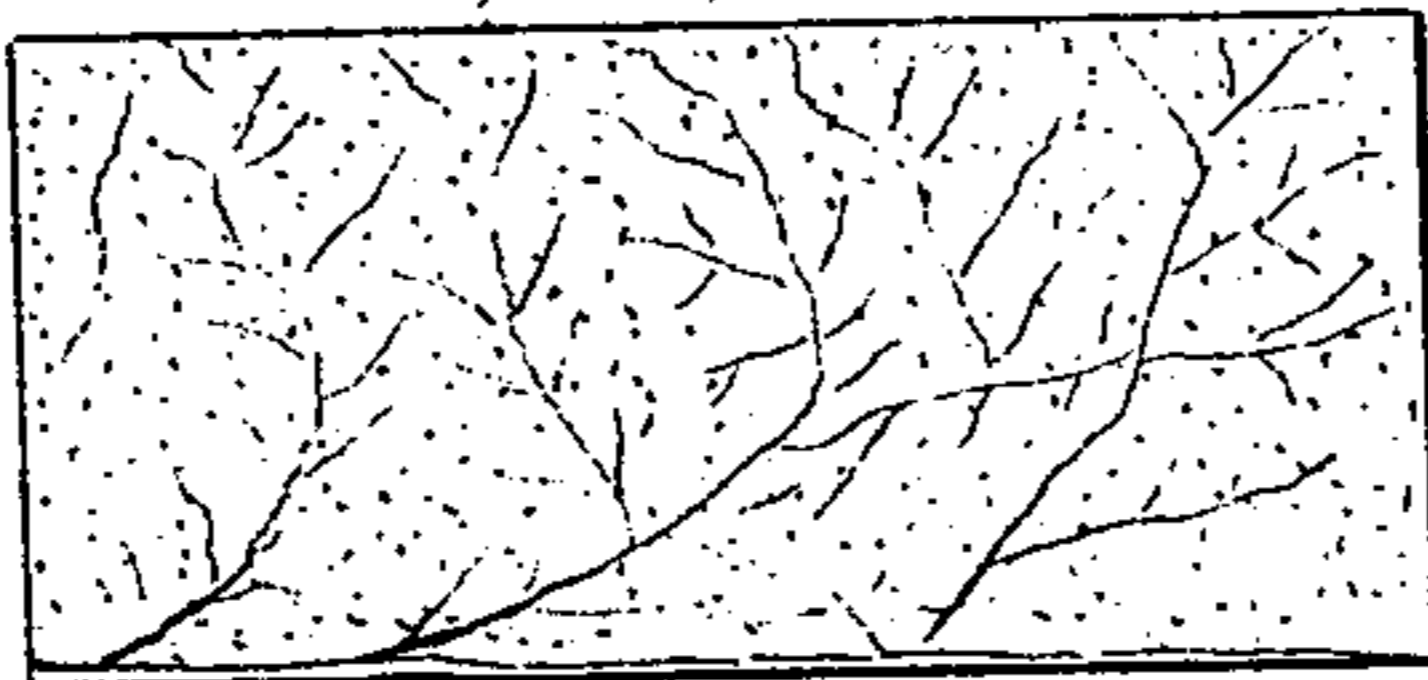


Fig. III.^a

WITNESSES:

William Goebel.
M. V. Bidgood



INVENTOR

Adolph Moonelis
BY *Trigh P. Ross*
ATTORNEYS.

(No Model.)

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Fig. IV.

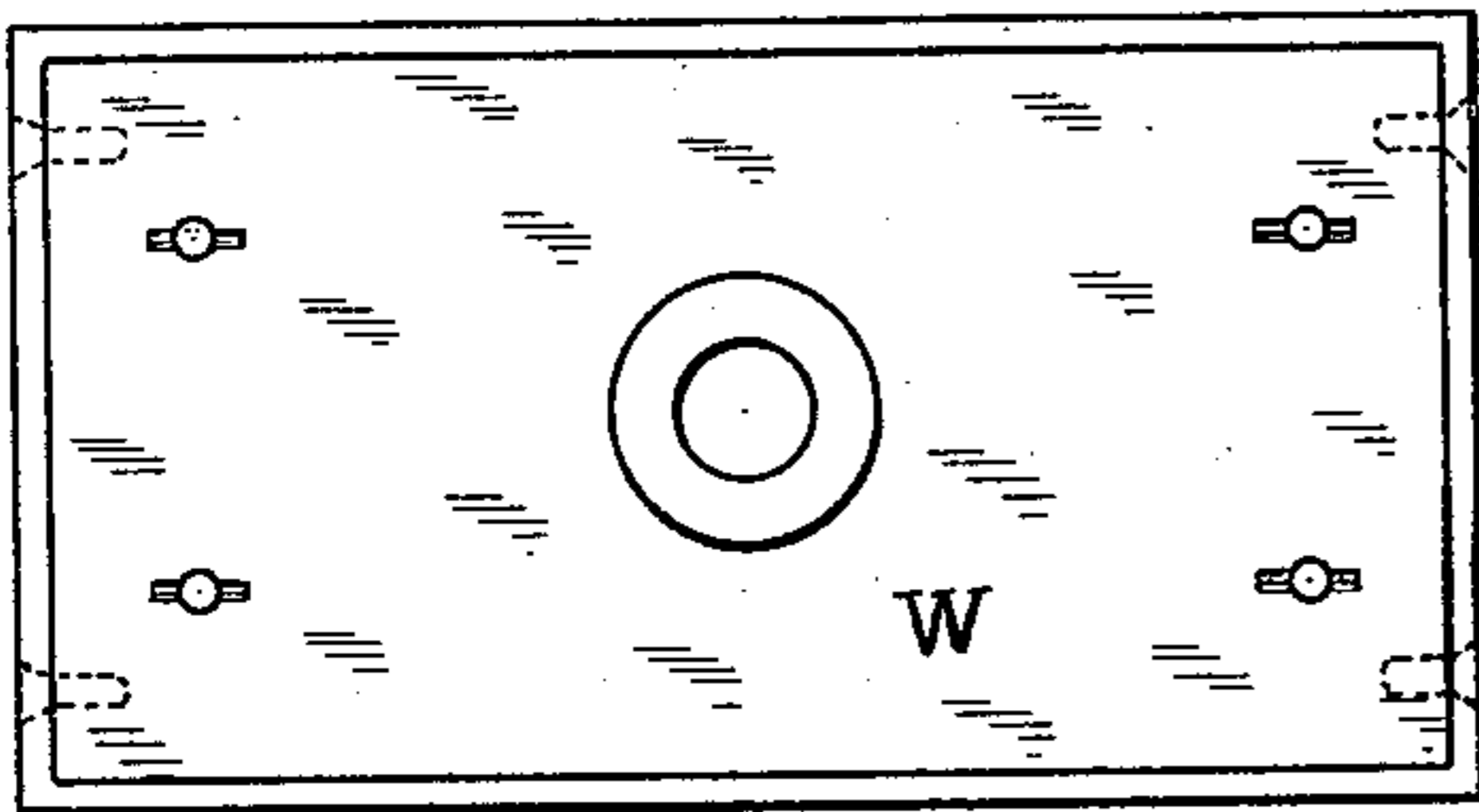


Fig. VI.

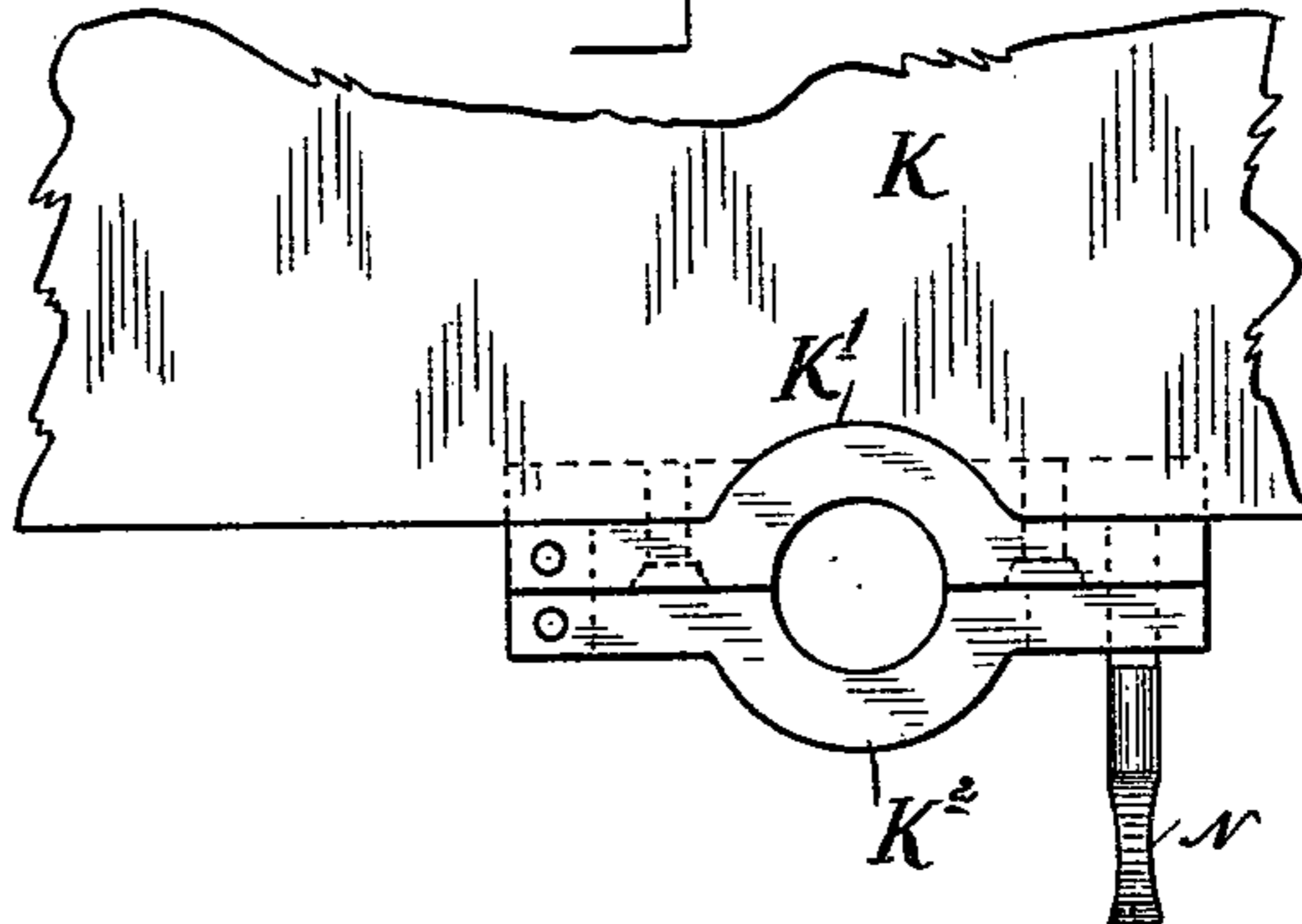


Fig. V.

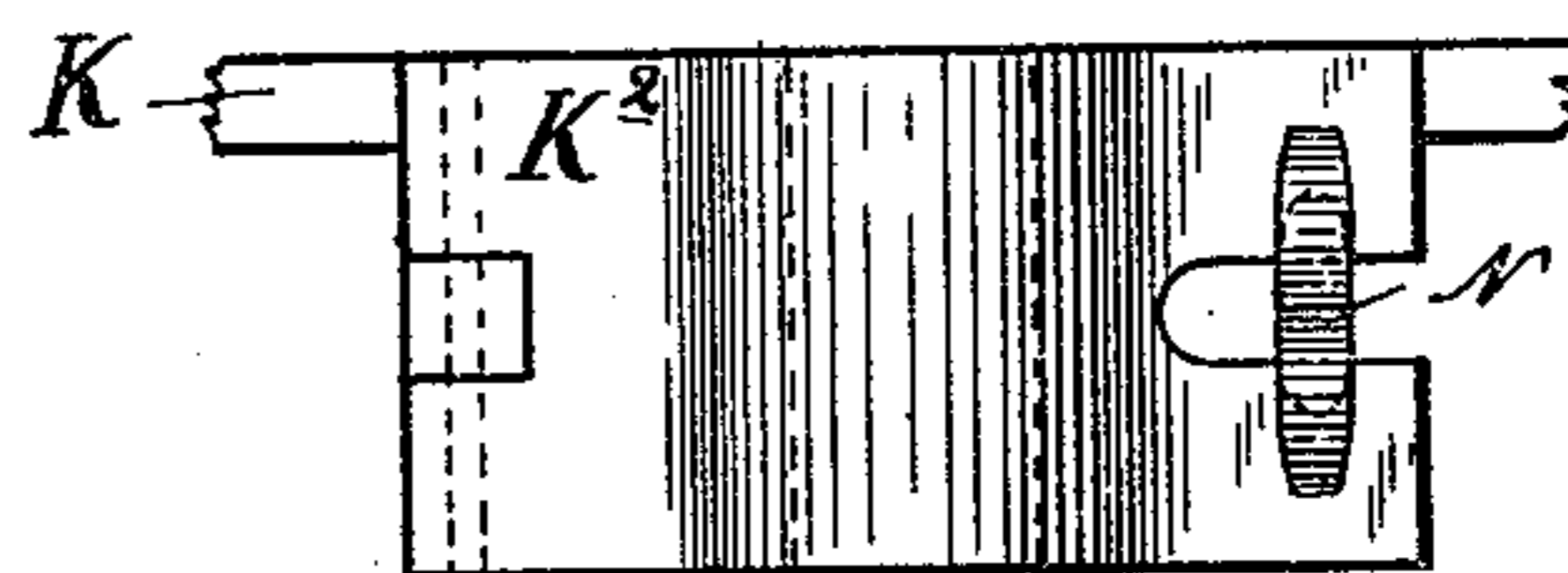
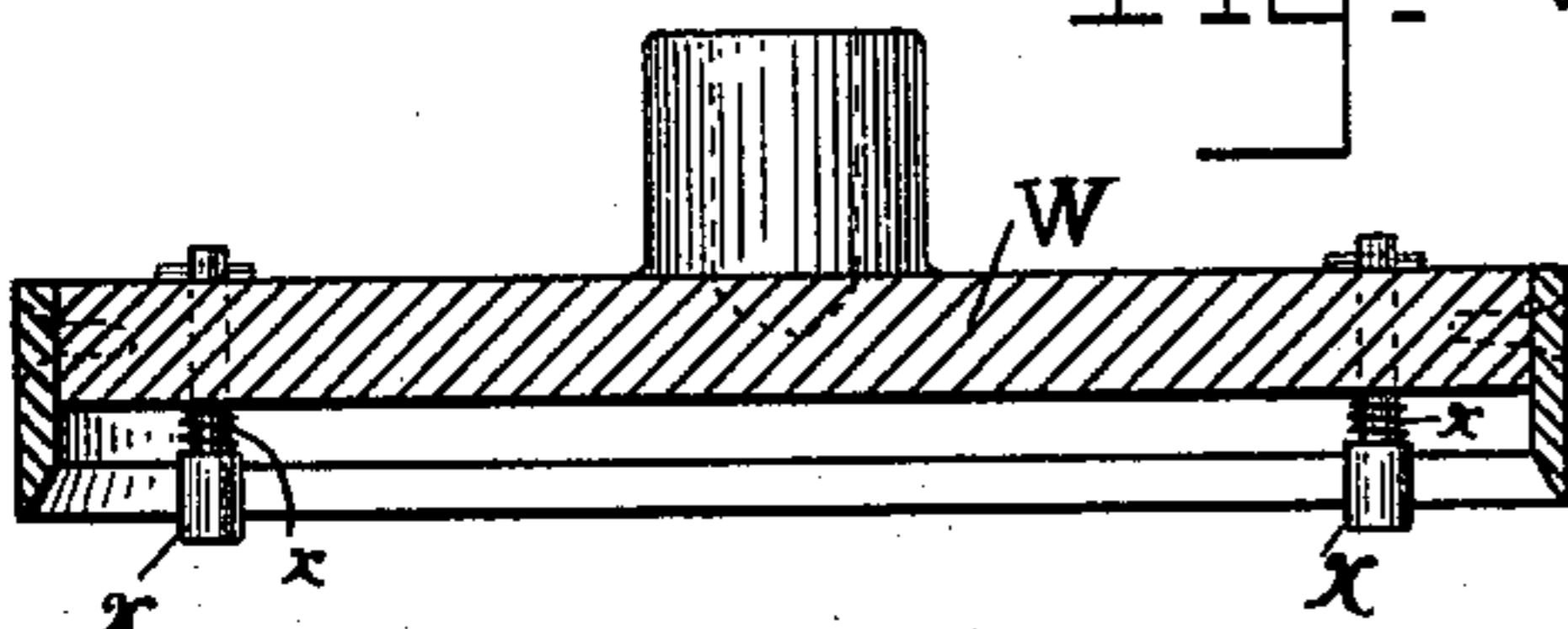


Fig. VIII.

Fig. VII.

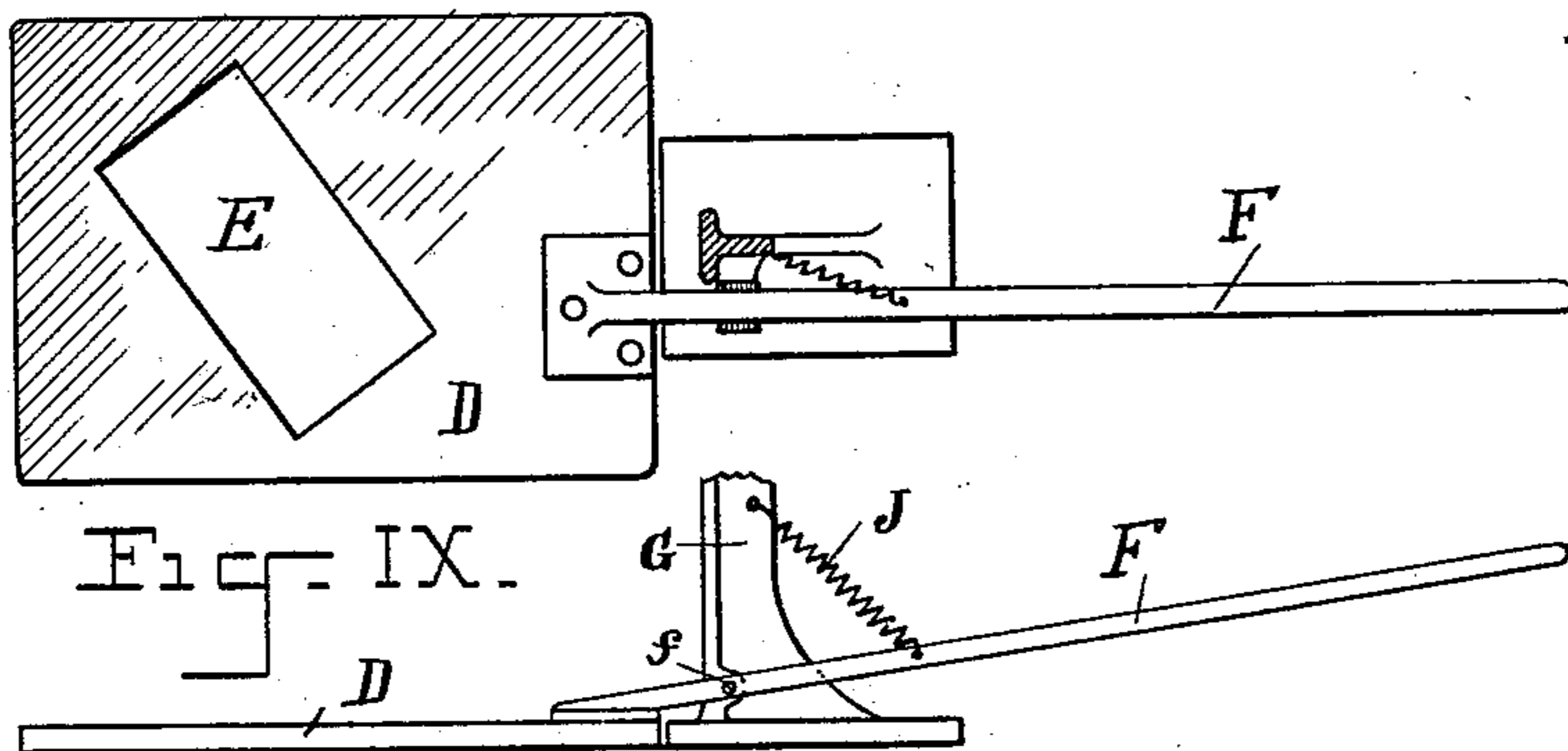
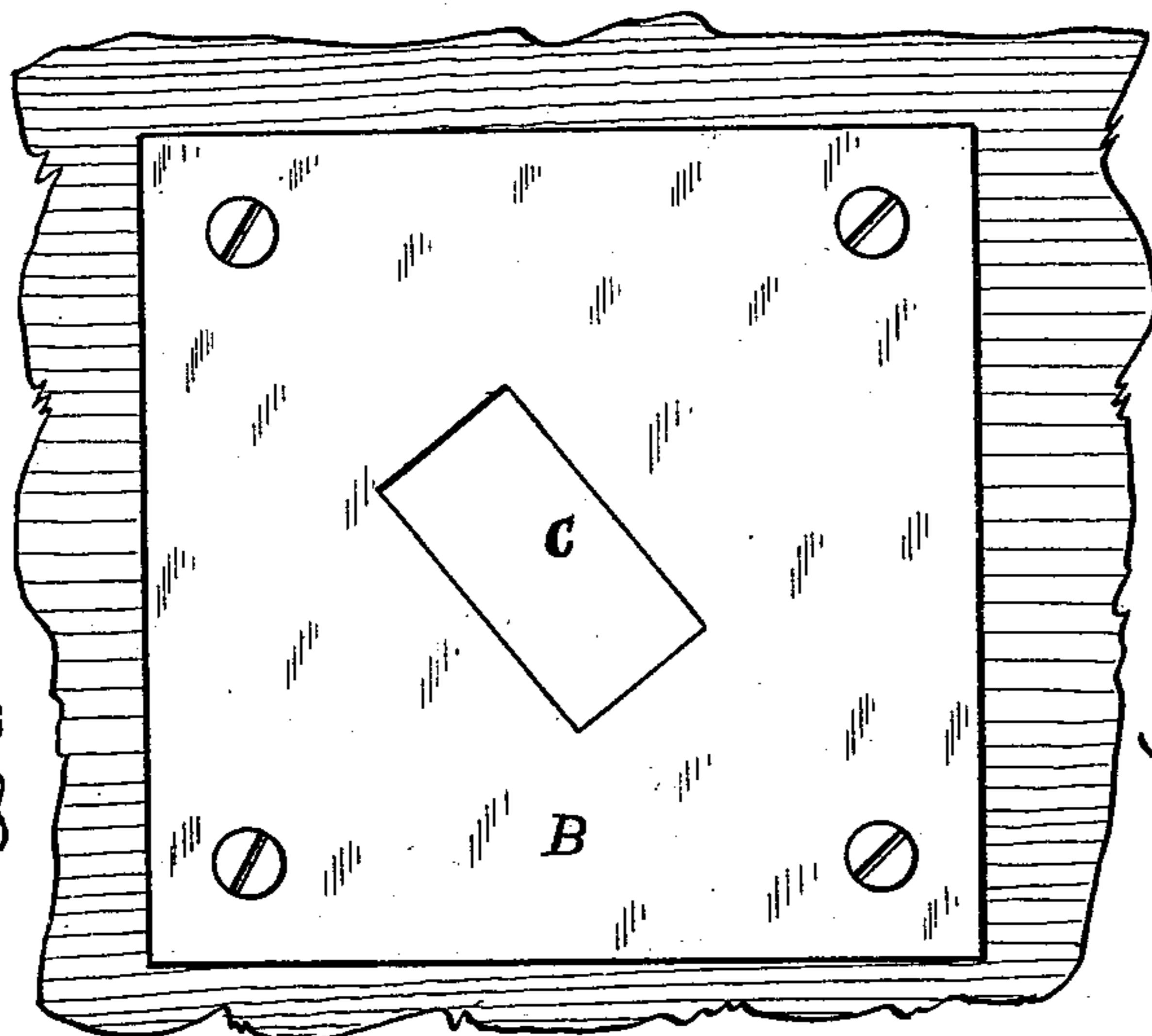


Fig. IX.

Fig. X.



Witnesses
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UNITED STATES PATENT OFFICE.

ADOLPH MOONELIS, OF NEW YORK, N. Y., ASSIGNOR TO THE INTERNATIONAL CIGARETTE MACHINERY COMPANY, OF SAME PLACE.

MACHINE FOR CUTTING CIGARETTE-WRAPPERS.

SPECIFICATION forming part of Letters Patent No. 514,236, dated February 6, 1894.

Application filed May 9, 1892. Serial No. 432,270. (No model.)

To all whom it may concern:

Be it known that I, ADOLPH MOONELIS, a citizen of the United States, residing in the city, county, and State of New York, have invented and produced a new and useful Machine for Cutting Cigarette - Wrappers, of which the following is a specification.

My invention relates, as above stated, to a machine for cutting wrappers for cigarettes, and it more especially is designed and intended to be used in connection with what are known as "all tobacco cigarettes;" this class of cigarettes employing tobacco leaf for covers or wrappers instead of paper or other artificial material.

In the utilization of tobacco leaves for cigarette covers, it is necessary to secure a section of tobacco leaf rectangular and preferably oblong in shape, the relative dimensions of the sides and ends of the wrapper depending upon the nature of the cigarette to be covered, and to so cut the wrappers as that the seams or veins of the leaf will, when the wrappers are cut therefrom as aforesaid, lie parallel to the main or longer edge of the wrapper so that when the cigarette is rolled and the wrapper is wound around it, the said veins or seams will lie along the length of the cigarette, and by pressure be embedded therein without danger of breaking or disfiguring the complete article of manufacture. It is also essential in the manufacture of fine quality of all tobacco cigarettes, to secure wrappers therefor which will be as free as possible from disfiguring seams or veins, and to this end it is essential and in fact necessary that the operator when cutting the wrappers from the leaf, should keep as near as possible to the outer edge, thus avoiding the heavy central vein or seam, and the branching veins immediately contiguous thereto.

With these ends in view, I have designed and perfected a novel cutting device whereby the operator will be enabled to feed the tobacco leaf through the cutting machine, and have devised a means which will permit of an unobstructed view at all times of the tobacco leaf being operated upon, so that an intelligent workman can with great rapidity sever

the wrappers from the tobacco leaves, and at the same time so guide and direct the leaf as that the best economical results can be obtained from every leaf, irrespective of its size, peripheral irregularity, distribution of seams or mutilation of surface or body.

The principal part of my invention consists specifically in providing a transparent stripper or holding and guiding plate having an opening for the purpose hereinafter described, made of glass, celluloid or any suitable transparent substance, and pivoting it upon an arm, lever or other frame whereby it will automatically close upon the leaf being operated upon without special intervention.

Another important feature of my invention consists in the novel arrangement of the cutting apparatus including with a cutter and transparent holding plate a bed or table having an opening through which the knife or cutter is adapted to penetrate, the opening being rectangular and preferably oblong in shape to correspond with the size and shape of the cigarette wrapper. This rectangular and oblong opening is set at an angle, and preferably at an angle of about forty-five degrees, to the front edge of the table or bed of the machine, so that the operator in feeding the tobacco leaves over the bed or table can, by moving the lower edge of the tobacco leaves, as hereinafter shown and described, parallel with the edge of the table so project the leaves as that successive incisions will be cut at approximately the angle aforesaid and for the following reasons:—As is well known, the veins or seams of a tobacco leaf which radiate from the main central seam lie at an angle of about forty-five degrees relative to the main or central seam and approximately parallel with each other, so that in carrying my invention into effect as above described, the operator can, with his eye, so direct each leaf as that the radiating veins or seams will lie with each successive adjustment, in line practically or approximately parallel with the longer sides of the rectangular opening of the table. In this manner I so cut the wrappers as to embody these radiating veins or seams so that they will not in-

terfere with the rolling operation and so that when the cigarette is rolled, the vein or seam in the wrapper can be easily pressed into the body of the cigarette without danger of breaking the wrapper or distorting the completed article of manufacture. As a complementary part to the above, it is necessary of course to arrange the cutter and the penetrable opening of the stripper upon the same angle as the rectangular opening of the table.

My invention also consists in other special adaptations which the peculiar nature of my machine demands; all of which will be duly set forth in connection with the accompanying drawings which form a part of this specification and in which:

Figure I represents a front elevation with a portion of the table or bed plate cut away to show some of the working parts. Fig. II represents a side elevation of the machine. Fig. III represents a perspective view of the working parts of the invention. Fig. III^a is a detail view of the finished wrapper. Fig. IV is a top view of the rectangular cutter. Fig. V is a longitudinal section of the rectangular cutter. Figs. VI and VII are detail views of the holding plate and its fastening arrangement. Fig. VIII is a plan view of the stripper and its attachment. Fig. IX is a side elevation of the same parts, and Fig. X is a plan view of the operating table or bed plate.

In these drawings, A represents the frame of my machine and B the operating table or bed plate.

C is a rectangular opening in the table B, preferably oblong in shape to correspond with the dimensions of the wrapper to be cut, and set, as shown, at an angle to the front edge of the table. The sides and ends of this opening are provided with cutting edges, the central portion of the table or bed plate being formed of steel or other suitable metal.

At D I show a transparent stripper or guiding or holding plate secured as shown to an arm or lever F. This lever or arm is pivoted at *f* to a standard G rising from the table B. The arm or lever F extends rearwardly and abuts against the pin *h* upon the vertically moving rod H. The stripper or holding plate D is made of glass, celluloid or any other suitable transparent material and is provided with an opening E rectangular and oblong in shape and made of exactly the same size, and adapted to register with, the opening C in the table or bed plate B.

As stated, the opening E is of the same size and dimensions as the opening C and one lies exactly over the other when the holding plate is pressed down upon the table. A spring J extends between and connects the arm or lever F with the standard G so that as the pin *h* carried by the vertically moving rod H is lifted, the spring J will draw upon the lever or arm F and permit the stripper or plate D to drop upon the table B thus closing upon the

tobacco leaf located between the plate and the table, the opening E registering with the opening C so that when the cutter hereinafter described descends it will penetrate both of said openings and sever the section of leaf carrying it down and depositing it upon a holder beneath the table. This holder is shown at K and consists of a bracket extending horizontally outward and is provided at one side with a pair of jaws K¹, K², hinged to each other and having a central opening adapted for the reception of the screw spindle M and arranged to be locked on said spindle by means of thumb screw N. The screw spindle M at its lower end is provided with bevel gear M¹ which intermeshes with, and is adapted to be operated by, a similar bevel M² arranged at right angles thereto, the latter being mounted upon a horizontal shaft O. This horizontal shaft is provided at its farther end with a ratchet wheel O'. In Fig. II, I show a pawl P for operating said ratchet wheel extending downwardly and connected to treadle Q pivoted thereto as shown and held in position against the aforesaid ratchet wheel by means of spring Q'.

At R I show a finger extending outwardly from the vertically traveling holder K and at R' I provide an arm pivoted at *r* to a standard S and at its outer end hinged as at *s* to a vertically moving rod S'. The rod S' extends downwardly and the parts are so arranged that when the finger R comes in contact with the arm R', it will press downwardly upon it and by means of the mechanism just described raise the rod S' and ring the bell T. When the parts have reached this position and the alarm has been rung, it will indicate that five hundred wrappers have been cut, for, as will be seen, every time the treadle Q is pressed down, it will operate to throw the ratchet wheel O' through the medium of the pawl P which in turn will cause a partial rotation of the spindle M through the medium of shaft O and bevel gears M¹, M²; this action will cause the holder K to feed downwardly.

The indicators which I have shown and described may be changed at pleasure and be made to register any desired number without departing from the spirit of my invention in this respect.

The mechanism I have shown and described is simply adapted to carry my idea into effect and may be varied in different ways. The vertically moving rod H is attached at its lower end to the treadle Q and when the treadle Q is pressed down at its front end, the rod H will be raised. The rod H is attached at its upper end to the lever U at *u*. The lever U is centrally pivoted at *u'* in the standard or frame U'. The farther end of the lever U is attached to the vertically sliding rod V at *v*. This vertically sliding rod is guided in ways V¹, V², and is adapted to move vertically and in a direction opposite to the rod H. The rod V is provided at its lower

end with a rectangular oblong cutter W having knife or cutting edges on its four sides and corresponding in size and shape to the openings E of the plate D and C of the table B.

5 At X I show small pressure fingers adapted to move vertically in the rectangular cutter W and provided with cushioning springs α . These pressure fingers are arranged one at each corner of the cutter. When the cutter
10 is forced down and reaches the end of its downward stroke and the cutter lies upon the accumulated wrappers, the pressure fingers will be slightly compressed; immediately upon the release of the cutter, the springs α will
15 expand into their normal positions thrusting the fingers down and causing the discharge of the last wrapper from the cutter.

At Y, I show a spring for retracting the working parts to their normal position after
20 the pressure of the operator's foot has been withdrawn from the treadle Q.

The operation of my machine is as follows:—
By referring to Fig. III, it will be seen that the tobacco employed is in the form of half
25 leaves, the leaves being cut longitudinally from end to end and along the main or central seam or rib. The tobacco leaf or half leaf is fed preferably from left to right, the operator standing in front of the machine and
30 holding the leaf in both hands. It will be seen also by referring to the drawings that the smaller veins or ribs of the tobacco leaf radiate approximately at angles of forty-five degrees from the main or central rib. The
35 operator feeds the leaf by using the central line of the leaf as a base and feeding it parallel with the edge or front b of the table so that the radiating seams or ribs will, as the leaf moves over the table, fall in line paral-
40 lel with the longer sides or edges of the rectangular opening C and consequently of the complementary rectangular opening E and cutter W. When the leaf is placed in the proper position, the operator presses upon the
45 treadle Q effecting the release of the plate D and causing it to drop down upon the leaf and hold it against the table B. Upon a further pressure on the treadle the cutter is forced through the leaf and the wrapper severed therefrom. By reason of the transpar-
50 ency of the plate D, the operator is enabled to nicely adjust the leaf in respect to the edges of the opening C of the table so that the greatest economy is effected in the cutting of to-
55 bacco and all the radial seams or ribs are cut in or out in the most desirable manner in each particular instance.

Having thus described my invention, the following is what I claim as new therein and
60 desire to secure by Letters Patent:

1. In a machine for cutting the wrappers of cigarettes, a transparent holding plate having an opening as shown and adapted to operate, substantially as and for the purposes set forth.

65 2. In a machine for cutting the wrappers of cigarettes, the combination of a bed or table

having an opening as shown, a transparent holding plate pivoted thereto, the said transparent plate having an opening corresponding with the opening of the table, as and for
70 the purposes set forth.

3. In a machine for cutting the wrappers of cigarettes, the combination of the table having an opening therein with the transparent holding plate pivoted thereto, and having an
75 opening and the rectangular cutter arranged to move vertically relatively to the holding plate and table, and to co-operate with them in the cutting operation, as and for the purposes set forth. 80

4. In a machine for cutting the wrappers of cigarettes, the combination of a table or plate having an oblong rectangular opening there-
85 in whose longer sides are set at an angle approximating forty-five degrees to the front edge of the said table, a transparent holding plate pivoted thereto and having an opening, and a rectangular cutter corresponding in size to the rectangular opening of the table, all adapted to operate substantially as and for
90 the purposes set forth.

5. In a machine for cutting the wrappers of cigarettes, the combination of a table having a rectangular opening therein set at an angle to the front of the table, and provided with
95 cutting edges, a rectangular cutter corresponding in shape, size and position with the aforesaid rectangular opening, and provided with knife edges and the intermediate transparent holding plate having an opening, all arranged substantially as and for the purposes set forth. 100

6. In a machine for cutting the wrappers of cigarettes, the combination of a table having a rectangular opening located at an angle to
105 the front of the table and provided with cutting edges, with a reciprocating complementary rectangular cutter, all arranged substantially as and for the purposes set forth.

7. In a machine for cutting the wrappers of
110 cigarettes, the combination of a table having a rectangular opening arranged at an angle to the front of the table provided with cutting edges, a reciprocating complementary rectangular cutter arranged at the same angle
115 to the front of the table and having means for discharging the severed wrapper therefrom, substantially as set forth.

8. In a machine for cutting the wrappers of
120 cigarettes, the combination of a table having a rectangular opening set at an angle to the front of the table, a reciprocating rectangular cutter and means substantially as shown and described arranged intermediate of the cut-
125 ter and the table for holding the leaf in position on the table, the said cutter corresponding in size, shape and position with the opening in the table, as and for the purpose set forth.

9. In a machine for cutting the wrappers of
130 cigarettes, the combination of the vertically reciprocating cutter, a table having an open-

ing therein corresponding to the cutter, means
for operating the cutter and an intermittently
moving holder K arranged beneath the open-
ing in the table and means operatively con-
5 nected with the reciprocating cutter for oper-
ating said holder and an indicating device
adapted to be actuated by the contact there-

with of the holder, substantially as and for
the purposes set forth.

ADOLPH MOONELIS.

Witnesses:

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