

No. 640,909.

Patented Jan. 9, 1900.

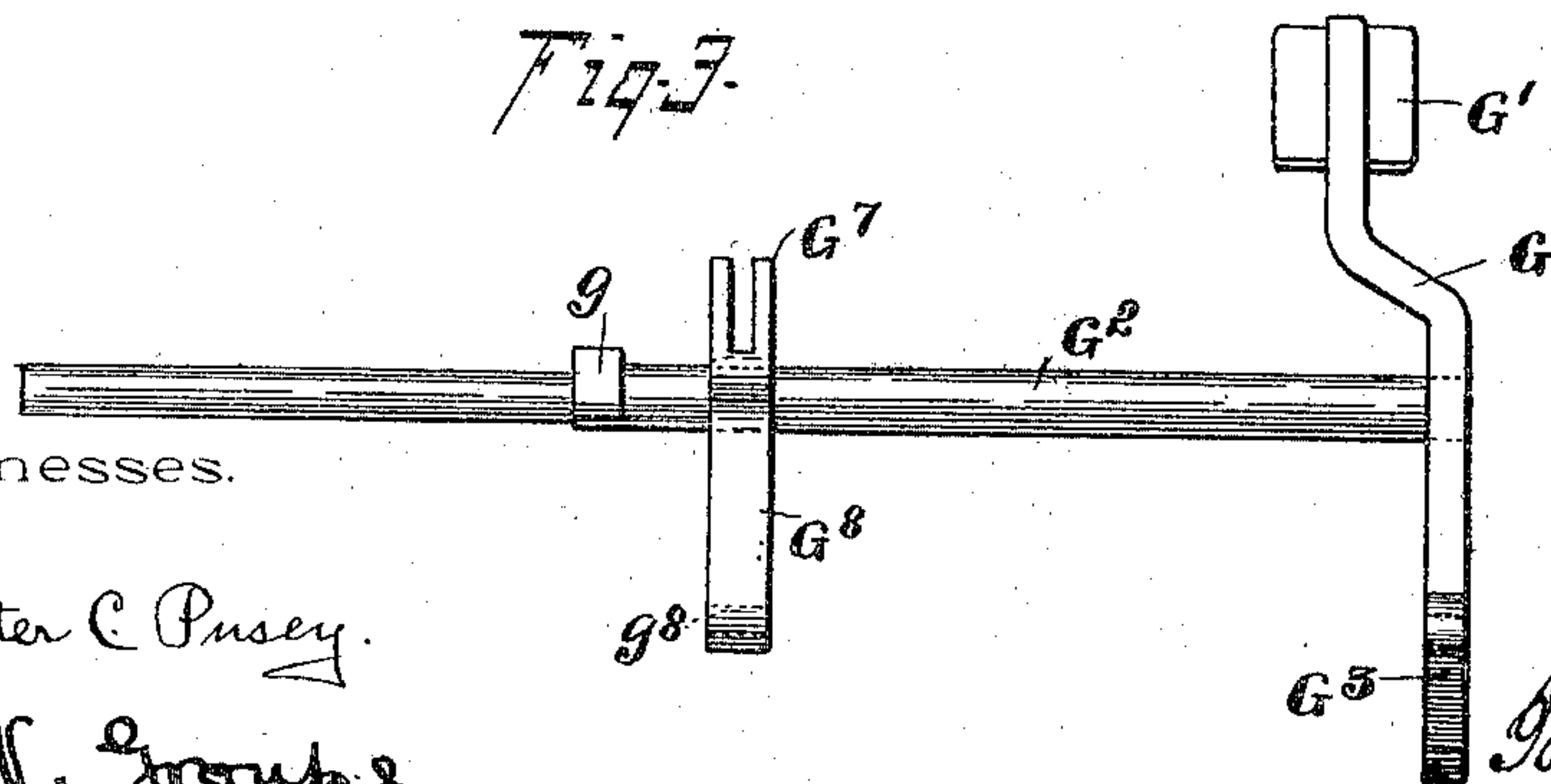
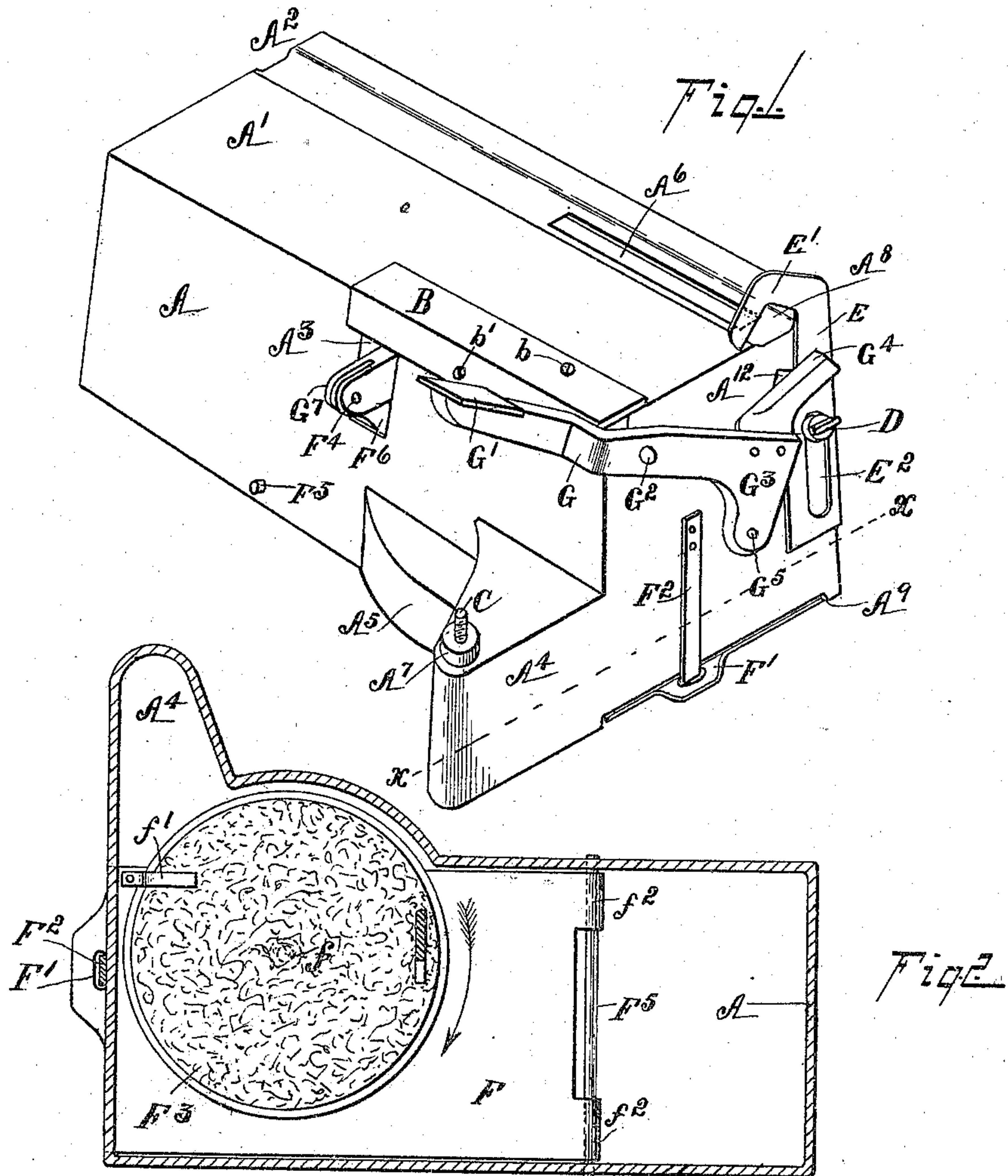
I. W. HEYSINGER.

MACHINE FOR SIMULTANEOUSLY CUTTING AND PRINTING CIGARS.

(No Model.)

(Application filed Apr. 14, 1898.)

2 Sheets--Sheet 1.



Witnesses.

Inventor.

Walter C. Pusey.  
A. V. Grouper

Isaac W. Heysinger.

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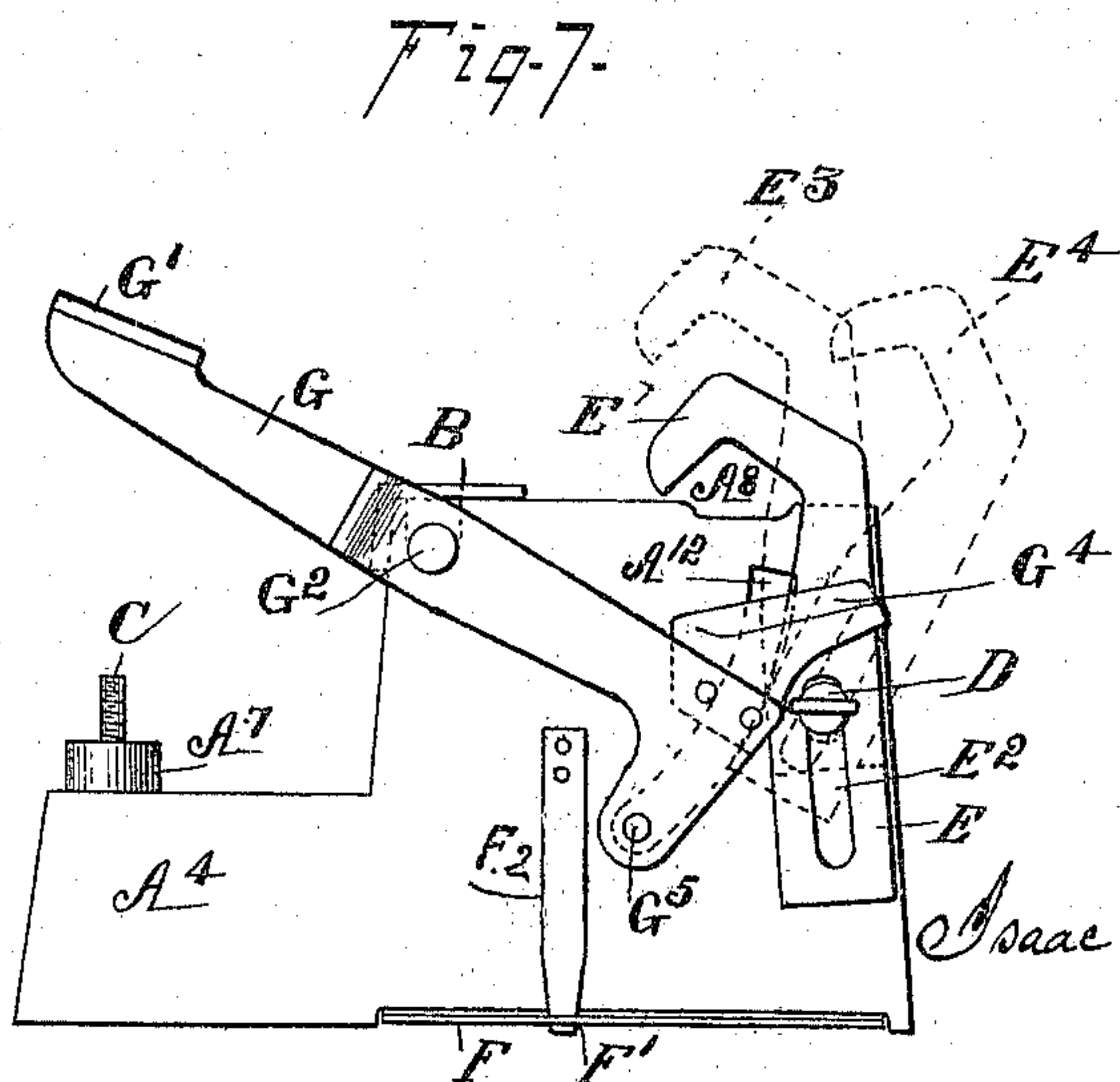
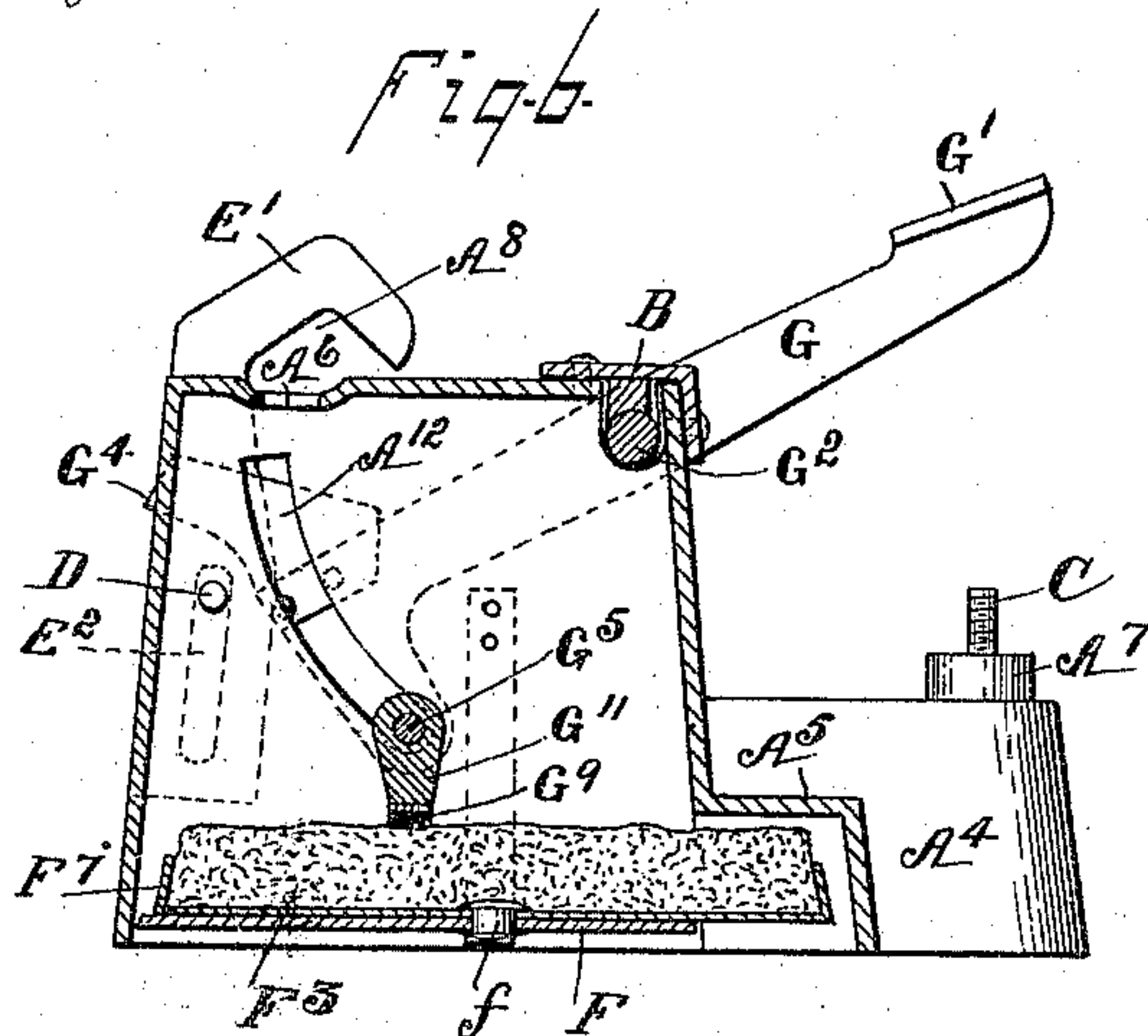
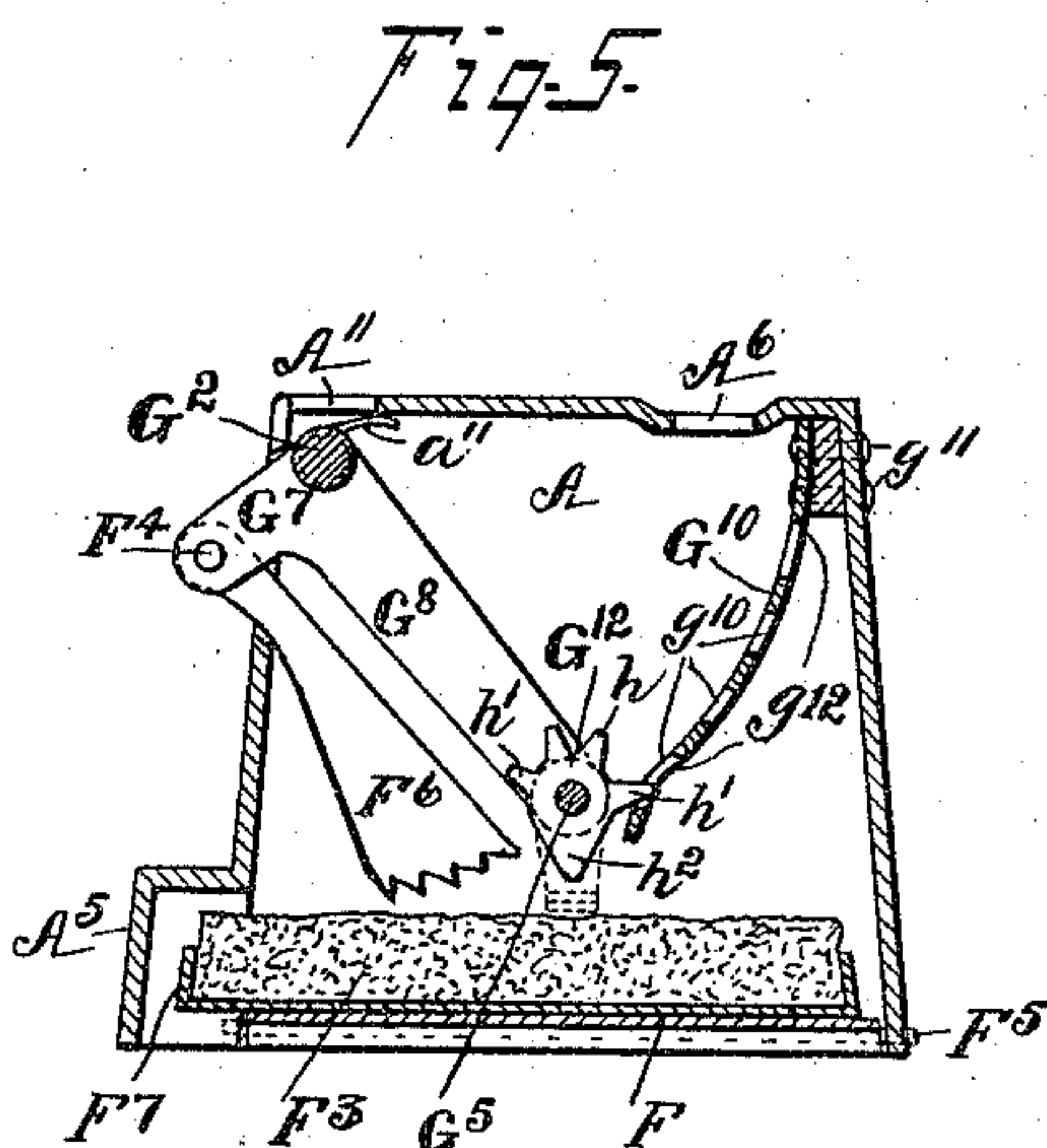
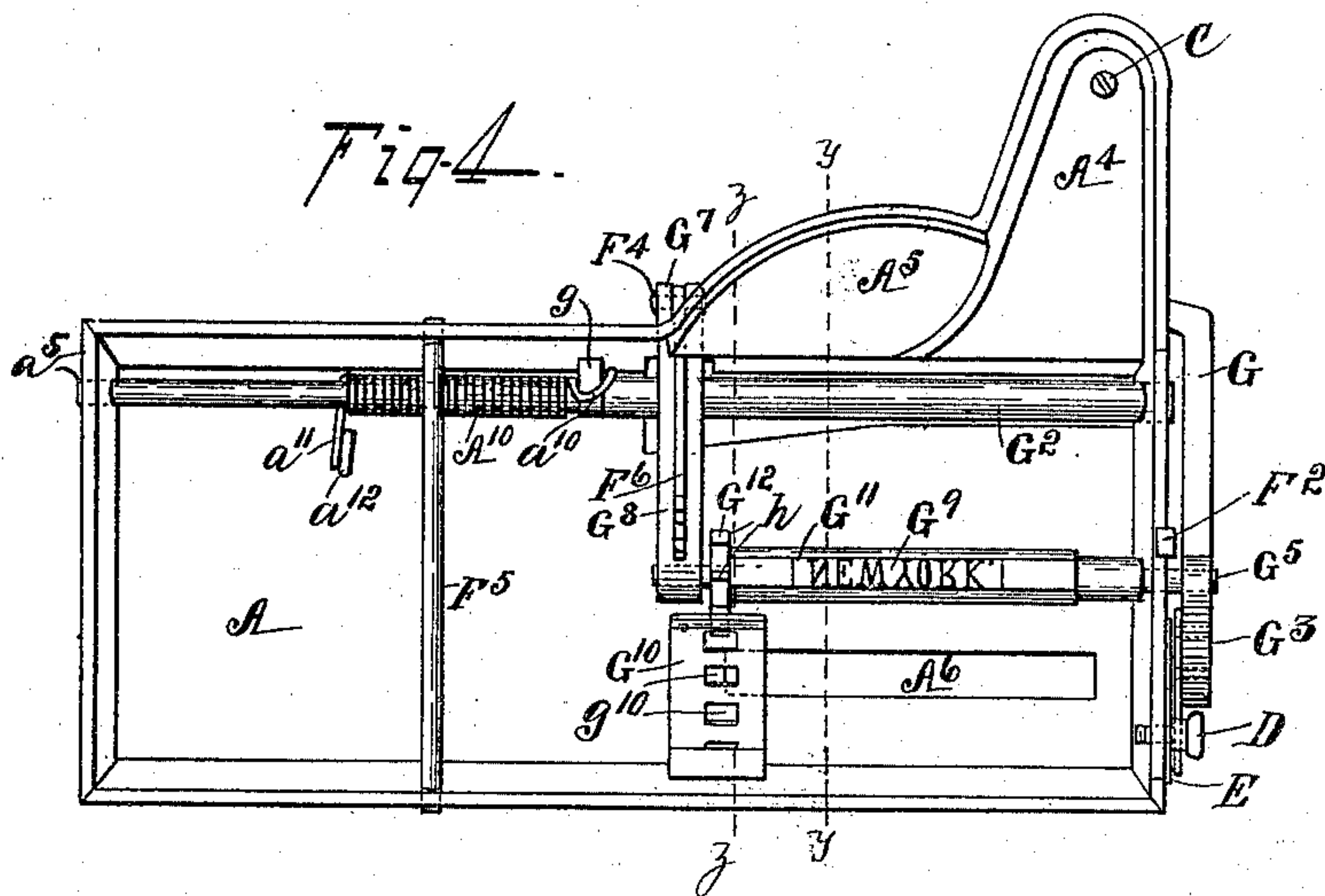
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Witnesses.

Walter C. Pusey.  
A. C. Group.

Inventor.

Isaac W. Heysinger



# UNITED STATES PATENT OFFICE.

ISAAC W. HEYSINGER, OF PHILADELPHIA, PENNSYLVANIA.

MACHINE FOR SIMULTANEOUSLY CUTTING AND PRINTING CIGARS.

SPECIFICATION forming part of Letters Patent No. 640,909, dated January 9, 1900.

Application filed April 14, 1898. Serial No. 677,532. (No model.)

*To all whom it may concern:*

Be it known that I, ISAAC W. HEYSINGER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have made a certain new and useful Improvement in Machines for Simultaneously Cutting and Printing Cigars, of which the following is a full, clear, and exact description, reference being had to the drawings which accompany and form a part of this specification, in which—

Figure 1 is a perspective view of a machine for simultaneously cutting and printing cigars which embodies my invention. Fig. 2 is a horizontal cross-section through the dotted line  $xx$  of Fig. 1 and looking downward upon the rotatory pad. Fig. 3 is a view of the operating-lever detached from the machine. Fig. 4 is a view of the machine from beneath, the inking-pad and its attachments having been removed. Fig. 5 is a vertical section along the dotted line  $zz$  of Fig. 4, showing the pawl which rotates the pad and the gear which rotates the printing-block in side view. Fig. 6 is a vertical section along the dotted line  $yy$  of Fig. 4, showing the printing or type block in place and the cutting device in side view beyond; and Fig. 7 is an elevation of the machine, showing the different exposed parts at the end in full view and indicating different positions in which the notched cigar-support may be placed while being acted upon by the knife.

The lettering in all the figures is uniform.

My invention relates to the construction of a portable machine which can be placed on the cigar-maker's table and without extraneous connections and by means of which the freshly-made cigars can be cut off at their blunt ends to a regulated length and at the same time be imprinted upon the sides thereof with such name, title, or other device as may serve to identify the cigars or their makers when placed on the market for sale or use and in which certain improvements over devices for similar purposes now in use are employed in the construction and arrangement of parts as will result in increased economy of manufacture, facility of operation, and efficiency in results, as will be clearly set forth.

Referring to the drawings, A in Fig. 1 represents an interiorly-raised or box-shaped

structure adapted to stand upon a table and partially or wholly open underneath, as shown in Figs. 5 and 6. Along the upper surface is a groove  $A^2$ , which is adapted to loosely receive a cigar, the same being held down while being cut by the hand of the operator. At the operative end of said box is a centrally-pivoted lever G, the free end provided with a thumb-piece or handle  $G'$  and at its opposite end with a cutting-blade  $G^4$  in such manner that when the handle  $G'$  is pressed downward, the said lever being pivoted at  $G^2$ , the knife end  $G^4$  will swing upward along the arc of a circle and cross the adjacent end of the groove  $A^2$  at the part  $A^3$ , which has been raised sufficiently to accommodate the tapered end of the cigar. This lever and blade operate in a vertical plane along the outside of the vertical end of the box A, as shown in the figures.

In order to hold down the free end of the cigar while being cut off and to secure adjustments to different sizes and tapers of cigars, an overhanging support  $E$   $E'$  is provided, against which the knife-blade  $G^4$  traverses and against the surface of the notch  $E'$ , of which it shears externally. The free end of the cigar being introduced beneath this notched support and projecting through the same, when the handle  $G'$  is depressed the knife  $G^4$  will be forced upward, and the blunt end of the newly-made cigar will be sheared off squarely when the said notched support is properly adjusted to the size of cigars being at the time made. To enable such adjustment to be readily made, I provide the vertical arm of the notched support E with the longitudinal slot  $E^2$ , so that it can be raised or lowered to any height desired, and I fasten it to the end of the box A by a thumb-screw D or a like fastening, so that the notched support  $E'$  cannot merely be raised and lowered, but also set at different angles forward and back, as shown at  $E'$   $E^3$   $E^4$  of Fig. 7. In this way perfect accuracy of cut can be secured for all sorts and shapes of cigars, the machine being adjusted once for all according to the sort of cigars to be made at the time. Instead of the notch under  $E'$  a ring-shaped or oval hole may be used in the support, said hole being large enough to have its lower margin beneath the level of the bottom of the groove in which the cigar lies while



being cut; but I prefer to use the open notch, as shown. The support itself at E' is not sharpened, as it is a mere support, the knife G<sup>4</sup> doing the cutting; but I taper or bevel the width of the notched support so as to conform generally to the taper at the ends of cigars. It will be seen that this cutting mechanism requires no particular skill on the part of the operator, so that this work can be done at the ordinary cigar-maker's price, which includes the cutting to length.

In order to print or mark the cigar along its length with some name or device, I provide the mechanism which I will now describe. In Fig. 1 it will be seen that in the bottom of the groove A<sup>2</sup> there is an open longitudinal slot A<sup>6</sup>, which extends, as shown in Figs. 4, 5, and 6, entirely through the cover of the box A and is of a sufficient length and width to accommodate the type-bearing face of the type-block G<sup>9</sup>, as shown in Figs. 4 and 6. The pivoted support G<sup>2</sup> of the cutting-lever G is prolonged as a shaft within the upper forward edge of the box or support A, as shown in Fig. 4, the corresponding part of A A', Fig. 1, being removed and a covering-plate B attached by the small screws b b' to hold the shaft in place, (see also A<sup>11</sup> and B, Figs. 5 and 6.) The rear end of the shaft G<sup>2</sup> (see Fig. 4) extends through the opposite end wall of A at A<sup>5</sup>, in which it is supported. The lever end is supported in the notched bearing in the lever end of A, as shown in Fig. 6. The lever G has a downward projection G<sup>3</sup>, Fig. 1, beneath the knife G<sup>4</sup>, provided with a hole G<sup>5</sup>, and along the shaft G<sup>2</sup> there is a corresponding arm G<sup>8</sup> inside the box, as shown in Fig. 5, the end of the box A, as shown in Fig. 6, being provided with a curved slot upon G<sup>2</sup> as a center. A small rod extends from G<sup>5</sup> outside the box to G<sup>5</sup> in the arm G<sup>8</sup>, upon which is journaled a rotatable type-block G<sup>11</sup>, having at one end a pointed toothed segmental spur-wheel G<sup>12</sup>, the teeth of which are lettered h h.

In Fig. 5 is shown at G<sup>10</sup> a perforated rack having a curvature centered on G<sup>2</sup> and attached to the box A at G<sup>11</sup>. The teeth of this rack I prefer to stamp out from sheet metal, as shown at g<sup>10</sup>, Fig. 5, so that I construct this curved rack by merely stamping it out of a sheet of suitable metal, curving it to the proper form, and attaching it in place. This makes a very cheap and accurate fit and enables the adjustment of parts to be secured by merely bending the rack as desired. The teeth h h of the spur-wheel occupy only one half a circle, the remainder being made with a projection h<sup>2</sup>, as shown in Fig. 5, so that when the type-block presents downward it will press vertically upon the inking-pad and when it presents upward it will press vertically upon the under side of the cigar without rotation, and to insure the engagement of the spur-wheel in the rack after such vertical movements I make the terminal teeth h' h' of the spur-wheel longer than the others and corre-

spondingly elongate the terminal slots at top and bottom of the rack G<sup>10</sup>, so as to permit of vertical play without complete disengagement, as shown at g<sup>12</sup> g<sup>12</sup>, Fig. 5. Beneath this type-block is the rotary pad F<sup>3</sup>, Figs. 2, 5, and 6. To support this pad, I pivot it to a hinged plate F, hinged at f<sup>2</sup> f<sup>2</sup> to the box A and closed at the end of the box by a snap spring-catch F' F<sup>2</sup>, Figs. 1, 2, and 7.

F<sup>5</sup> is the cross-pin, to which F is hinged. (See Fig. 4.)

The circular inking-pad F<sup>3</sup> is pivoted at its center at f, Figs. 2, 5, and 6, so that it can freely rotate, and I prefer to make it in a box-like shape open above and provided with an absorbent pad of felt or the like. In Fig. 2 is shown a small spring-pawl f', which bites into the pad and prevents it from being rotated backward. This pawl f' may engage with teeth upon the frame of the pad, if desired. The shaft G<sup>2</sup>, Fig. 3, is provided with an arm G<sup>7</sup>, which I prefer to bifurcate, and in this is loosely hung a toothed pawl F<sup>6</sup>, (see Fig. 5,) which engages also with the soft pad, though it may have a toothed engagement with its frame, so that when the thumb-lever is pressed down and the knife and type-block ascend the pad will be pushed slightly around on its pivoted center, so as to constantly present a fresh surface to the type-block when it again descends to form contact therewith. When the thumb-lever rises again, the pawl F<sup>6</sup> simply slips back over the surface of the pad, held from backward rotation by f', Fig. 2.

The spring A<sup>10</sup>, Fig. 4, holds the thumb-piece G' forcibly elevated under spring tension. I prefer to coil it around the shaft G<sup>2</sup>, one end a<sup>11</sup> engaging with the inner surface of the box A and the opposite end a<sup>10</sup> against a shoulder on the shaft G<sup>2</sup>, (shown at g, Fig. 3.) The front of the box A is opened at A<sup>3</sup>, Fig. 1, to admit the movements of the arm G<sup>7</sup> and the pawl F<sup>6</sup>, which is pivoted at F<sup>4</sup>, Figs. 1 and 5. By engaging the free end a<sup>11</sup> of the spring A<sup>10</sup>, Fig. 4, behind a stud a<sup>12</sup> and hooking its opposite end a<sup>10</sup> around the stud g I make a traction on the shaft, so as to always insure a close shearing cut between the knife G<sup>4</sup> and the support E'.

The screw C, Figs. 1, 4, 6, and 7, is inserted from beneath through the forward projection A<sup>4</sup> of the box A, in which is a threaded collar A<sup>7</sup>. As this screw C is raised or lowered it will alter the depth of descent of the thumb-lever G' and correspondingly the protrusion of the type-block through the slot A<sup>6</sup> and the force of imprint upon the side of the cigar.

The swell A<sup>5</sup>, Figs. 1 and 2, is to accommodate the circle of the pad F<sup>3</sup>.

As the type-block is freely journaled upon the rod G<sup>5</sup>, (see Figs. 4 and 6,) it may be slipped along the same, and as the spur-wheel G<sup>12</sup> is attached to the type-block in the form shown by changing the position of the curved rack G<sup>10</sup> along the box A the position of the type-block can be changed to different distances along the cigar as desired. By elon-



gating the perforations  $g^{10}$  in the rack  $G^{10}$  from side to side (see Fig. 4) the type-block can also be moved longitudinally without changing the position of the curved rack  $G^{10}$ .

5 Other mechanical modifications to suit special requirements will suggest themselves to any skilled mechanic without the exercise of invention, and I do not confine myself rigidly to the precise conformation or construction  
10 herein shown and described, but may vary the same, or use the various devices in other connections, as may be necessary, and in the manner above referred to without departing from the principles of my invention as herein  
15 shown, described, and claimed for greater clearness in a single structure.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is the following:

20 1. In a machine for simultaneously cutting and printing cigars, the combination of an interiorly-raised support, a cutting-lever at end of said support centrally pivoted thereto, and having a downwardly-operated handle at one  
25 side of said pivot, and an upwardly-operated knife at the opposite end of said lever, and a downwardly-presenting cigar-support adapted to engage with said knife in its ascent, together with a printing mechanism beneath  
30 said interiorly-raised support, and adapted to reciprocate upward and downward beneath the same in coordination with the knife end of said lever, and a slot in said interiorly-raised support through which the type-block  
35 of said printing device is enabled to make contact with the lateral surface of a cigar while held in position for being cut by said knife, substantially as described.

2. In combination with an interiorly-raised  
40 cigar-support, a centrally-pivoted lever secured to the end of the same, having an operating-handle at one end and an upwardly-acting knife at the opposite end, and a downwardly-presenting support for the end of the  
45 cigar, above said interiorly-raised support and adjacent to said knife, an upwardly and downwardly reciprocative type-block beneath said interiorly-raised support, said support provided with a slot therein, and said type-  
50 block adapted to operate upwardly through said slot, and to be reciprocated downwardly to make contact with an inking-pad beneath, and said type-block reciprocated by the movements of said lever and coincident with the  
55 knife end thereof, together with an inking-pad beneath said type-block, substantially as described.

3. In combination with a covered box or other upwardly-raised support, the vertically-  
60 reciprocative knife, pivoted at one end of said box, a support for the end of a cigar adapted

to be cut off by said knife, a slot in the top of said box adapted to present beneath a cigar while the same is being cut at its end, a type-  
65 block beneath the top of said box adapted to be reciprocated upward and downward by the corresponding reciprocation of said knife-lever, the said type-block raised while the handle of said lever is depressed, said type-  
70 block rotatable upon a horizontal axis, and means for causing said type-block to be rotated while vertically reciprocated, first to make contact by its printing-face with an inked pad, and afterward to present through  
75 said slot against the side of a cigar held in place upon the top of said box, together with a horizontally-rotatable pad beneath the same, said pad operatively connected with and rotated by said reciprocative mechanism, and  
80 said pad hinged to and removable from said box for reinking or otherwise, when necessary, substantially as described.

4. In combination with the covered box or upwardly-raised support, a centrally-pivoted  
85 knife-lever at one end thereof, having thumb-piece or handle at one end thereof, and knife at the opposite end thereof, said knife adapted to cut in its upward ascent, and a notched cigar-end support, presented downwardly and in contact with said knife, said cigar-end sup-  
90 port being adjustable vertically for cigars of different diameters, and presented thereto in different positions, substantially as described.

5. In combination with the segmental spur-wheel, the rotatable type-block secured there-  
95 to, and means for reciprocating the same, a perforated sheet-metal rack, the teeth of said spur-wheel adapted to enter and be rotated thereby, said rack supported at one end and adjustable at the other, substantially as de-  
100 scribed.

6. In combination with the rotatable and reciprocative type-block, a segmental spur-wheel secured thereto, the terminal teeth of  
105 said spur-wheel longer than the others, and a perforated rack adapted to the teeth of said spur-wheel, and having the terminal perforations vertically elongated, so that when a partial rotation has been completed, the further  
110 reciprocation of said type-block will cause the said type-face to ascend or descend in a substantially vertical plane, and, when the reciprocation is reversed, will cause the said terminal tooth to begin the rotation of said  
115 type-block, and without previous disconnection therefrom, substantially as and for the purposes described.

ISAAC W. HEYSINGER.

Witnesses:

WALTER C. PUSEY,  
ANDREW V. GROUPE.