

No. 842,886.

PATENTED FEB. 5, 1907.

R. HOFFMANN.
CIGARETTE FORMER.
APPLICATION FILED AUG. 16, 1906.

Fig. 1.

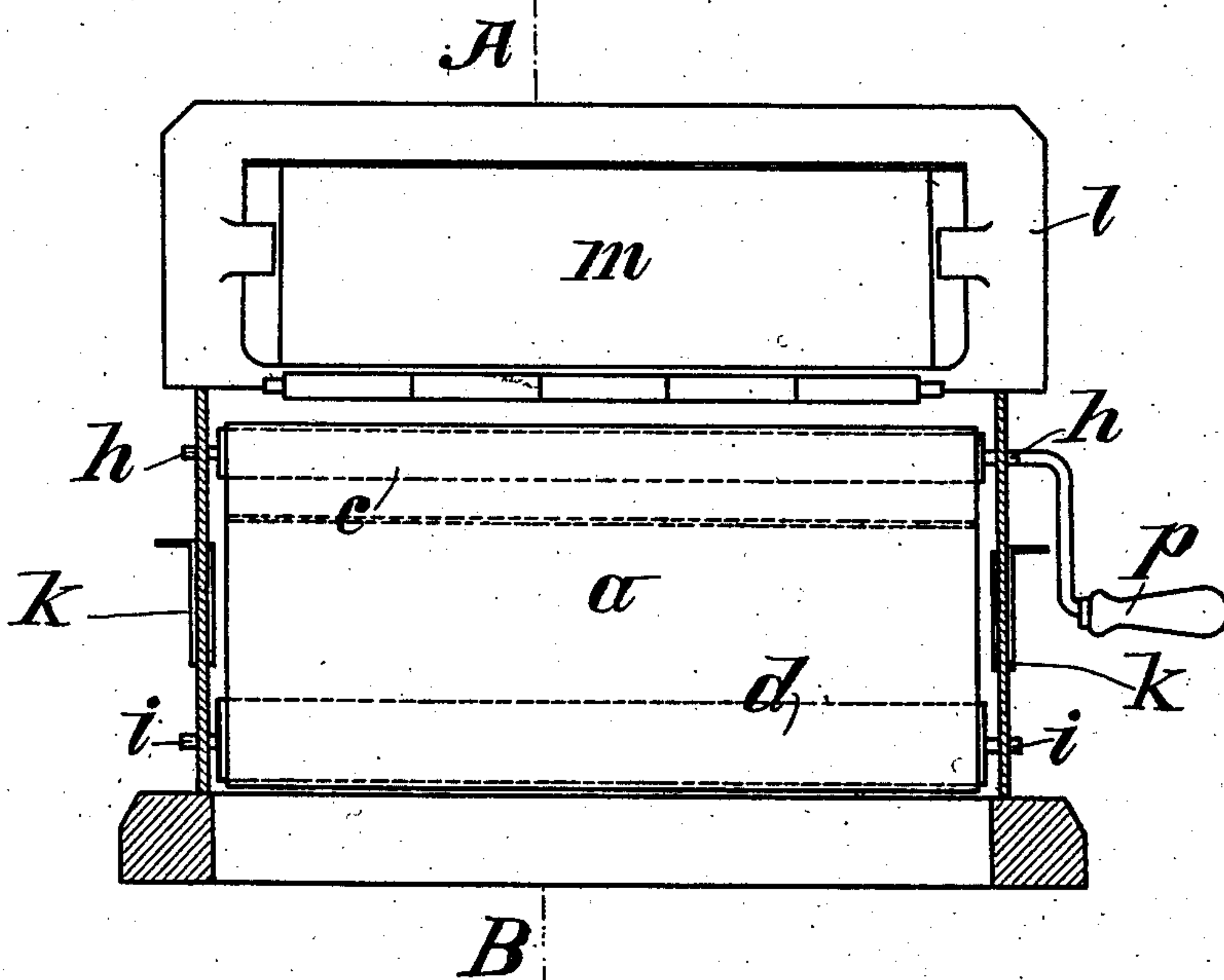


Fig. 2.

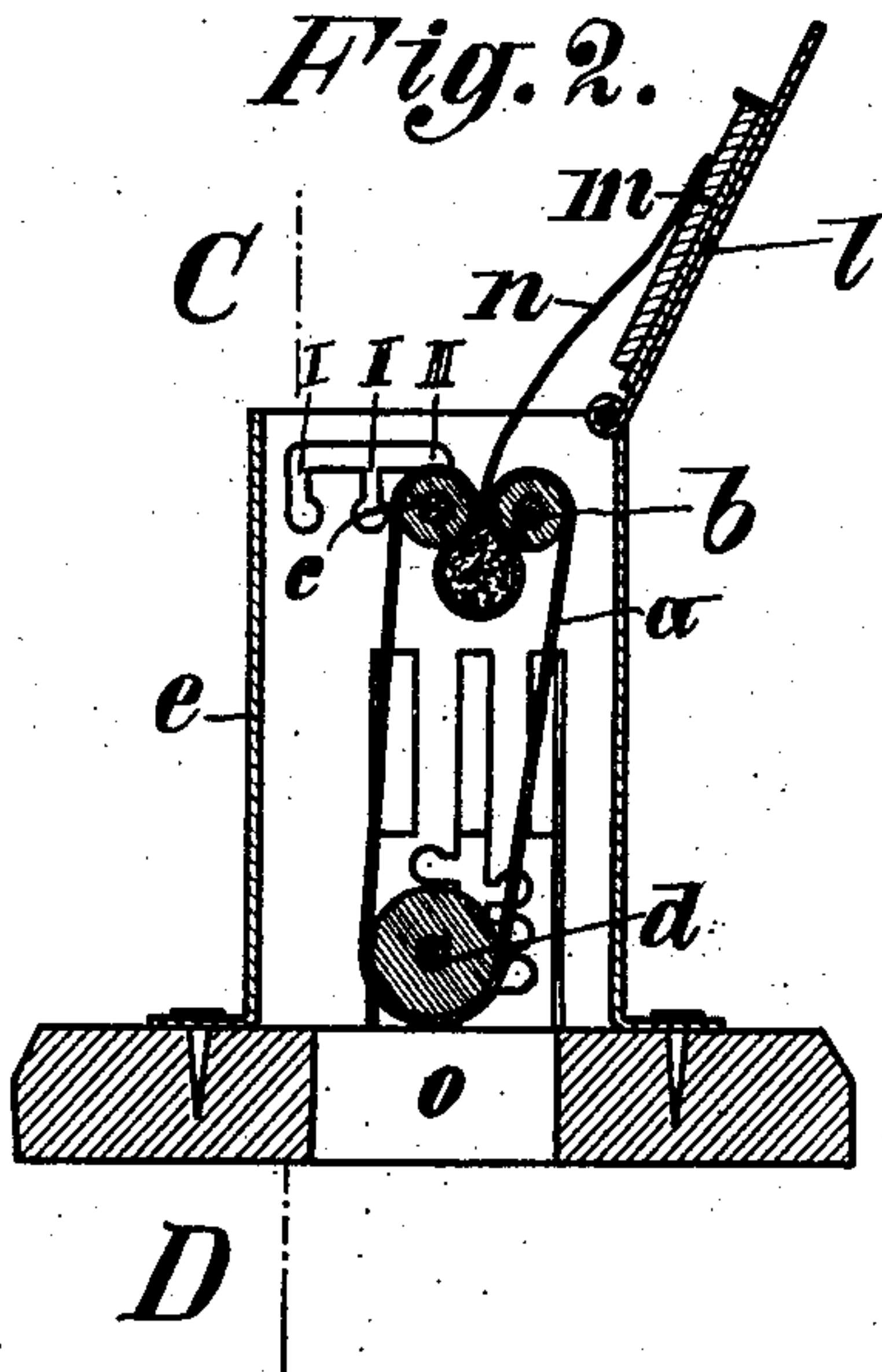
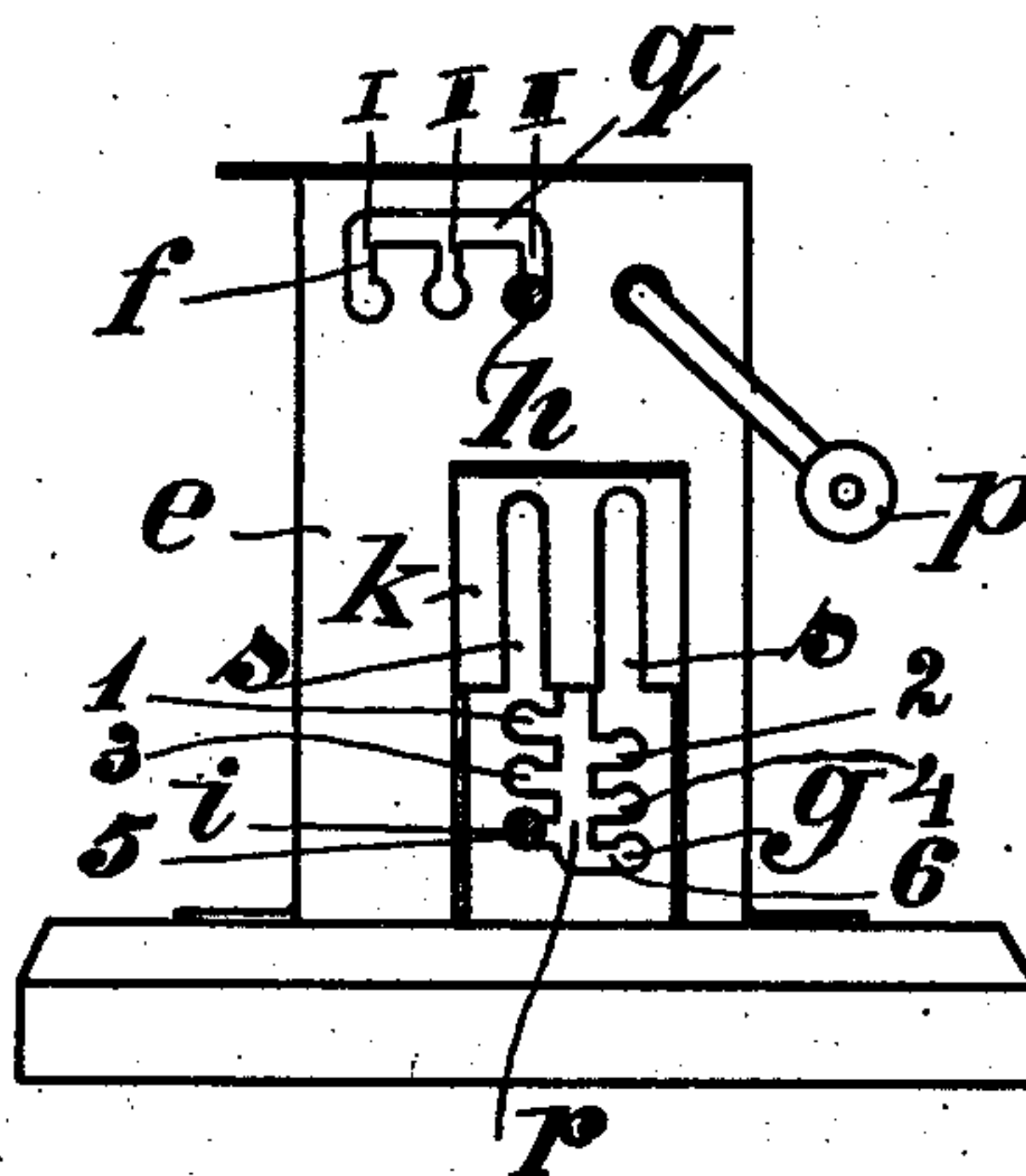


Fig. 3.



Witnesses:

C. Hoffmann
W. F. Hall

Robert Hoffmann
Inventor by
William F. Hall
Attorney

UNITED STATES PATENT OFFICE.

ROBERT HOFFMANN, OF CASSEL, GERMANY.

CIGARETTE-FORMER.

No. 842,886.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ROBERT HOFFMANN, a subject of the Emperor of Germany, residing at Cassel, in the Empire of Germany, have invented certain new and useful Improvements in Cigarette-Formers, of which the following is a specification.

My invention relates to improvements in cigarette-formers, in which three rollers with an endless band are arranged for rolling the tobacco and for placing the wrapper around the rolled tobacco; and the objects of my improvement are, first, to provide means for varying at will the distance between the lower roller and the two upper rollers in accordance with the desired diameter of the cigarettes to be formed; second, to provide means for securing the adjusted lower roller from shifting; third, to provide means for shifting the one upper roller with regard to the other upper roller, which serves as a driving-roller; fourth, to provide the driving-roller with a rough surface, and, fifth, to provide a wrapper-wetting device above the two upper rollers. I attain these objects by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a vertical longitudinal section through a cigarette-former on the line C D in Fig. 2, the cover being turned upward. Fig. 2 is a vertical cross-section through the same on the line A B in Fig. 1; and Fig. 3 is a side view of the same, the cover being turned downward.

Similar letters of reference refer to similar parts throughout the several views. The casing *e* is made from any suitable material and is preferably made rectangular in horizontal section. The one upper roller *b* is mounted to turn with its pins in this casing *e* and is provided with a suitable crank *p*, by means of which it can be turned. The two end sides of the casing *e* are each provided with a horizontal slot *q* and preferably three vertical recesses *f*, in which the pins *h h* of the upper roller *c* engage. It will be seen that the roller *c* can be shifted and be brought into either of three positions (I, II, and III, see Fig. 3) at different distances from the roller *b*. The end sides of the casing *e* are further each provided with a vertical slot *r* and preferably six alternating horizontal recesses *g*, in which the pins *i i* of the lower roller *d* engage. Thus the latter can be equally shifted and be brought into either of the six positions 1, 2, 3, 4, 5, and 6. (Shown at Fig. 3.) In

either of these positions the roller *d* can be secured from shifting by means of two slides *k*, each of which is provided with two vertical slots *s s*. The slides *k* are vertically guided on the casing *e* in any known manner, and it will be seen that the pins *i i* of the lower roller *d* can engage in either slot *s* of each slide *k*. By lifting the two slides *k* the pins *i i* of the roller *d* will be released, so that they can be shifted. An endless band *a* of any suitable material is placed around the three rollers *b*, *c*, and *d*. The casing *e* is provided with a cover *l*, which can be turned upward and is in any known manner arranged to support itself in its open position. (Shown at Fig. 2.) The cover *l* is preferably provided with a wetting-pad *m*. The driving-roller *b* is preferably provided with a rough surface—for example, by covering it with emery-paper or the like. Thereby a greater friction can be produced between the roller *b* and the endless band *a*, so that the latter can be taken along by the former with a greater certainty.

The cigarette-former is operated as follows: For a certain diameter of the cigarettes to be formed the lower roller *d* is adjusted, according to experience, by placing its pins *i i* in the respective recesses *g*—say in the position 5 in Fig. 3—and by securing them by means of the slides *k*. Then the pins *h h* of the upper roller *c* are inserted in the respective vertical recesses *f*—say in the position II—so that the two rollers *b* and *c* are apart from each other. The cover *l* is turned upward and tobacco is placed on the horizontal part of the endless band *a* between the two rollers *b* and *c* and is pushed downward or packed, so as to tighten the band *a*. Next the roller *c* is shifted and is brought into the position III, nearest the driving-roller *b*, so that the tobacco filling up the space or pocket between the band *a* and the two rollers *b* and *c* will be compressed. Thereupon the crank *p* is so turned as to move the endless band *a*, whereby the tobacco will be rolled. Then the lower edge of a wrapper *n* is inserted in the slit between the two rollers *b* and *c* and its upper edge is pressed against the wetting-pad *m* for wetting its gum or other adhesive substance. By turning the crank *p* the wrapper *n* will be taken along by the band *a* and it will be wrapped around the rolled tobacco, so that a cigarette is now formed. At last the upper roller *c* is shifted into its initial position II to release the cigarette, which can be taken

out of the casing *e*. Any tobacco getting between the two rollers *b* and *c* and the walls of the casing *e* is allowed to escape through an aperture *o* provided in the bottom.

5 It will be seen that by placing the lower roller *d* higher upward—say in the position 1 in Fig. 3—a larger space or pocket can be formed between the band *a* and the two upper rollers *b* and *c* in their positions shown
10 in Fig. 2, so that the cigarette formed will have a larger diameter. Of course the upper roller *c* may in this case be shifted into the position I in Fig. 3 for the introduction of the tobacco. By adjusting the lower roller
15 *d* in either of the six positions 1, 2, 3, 4, 5, and 6 the diameter of the cigarettes can be regulated, it being a maximum for the position 1 and a minimum for the position 6 of the roller *d*.

20 The wetting device *m* renders it unnecessary to wet the wrappers with one's tongue, which is objectionable for well-known hygienic reasons.

The construction of the cigarette-former
25 may be varied in many respects without deviating from the spirit of my invention. The lower roller *d* may be vertically adjusted in any other known manner. If so preferred, it may be left in an invariable position and
30 the two upper rollers *b* and *c* may be mounted to turn in a part that can be vertically shifted on the casing *e*.

I claim—

35 1. In a cigarette-former and in combination a casing comprising side walls having bearings therein near the upper parts of the same and bearings near the bottoms thereof and a cover, a pair of rolls journaled in the upper bearings, a single roll journaled in the
40 lower bearing, an endless belt guided over the rolls, means for rotating one of the upper rolls for feeding the belt and a paper-moistener carried by the cover, substantially as described.

45 2. In a cigarette-former, the combination with a casing, two opposite sides of which are each provided in the lower part with a vertical slot and a plurality of adjoining horizontal recesses and in the upper part

with a bearing, a horizontal slot and a plu- 50
rality of adjoining downwardly-directed recesses, of a driving-roller mounted to turn in the bearings of said casing and provided with a crank, an upper roller engaging with its pins in the upper slots and recesses of said casing and mounted to turn in either recess
55 in each side, a lower roller engaging with its pins in the lower slots and recesses of said casing and mounted to turn in either recess in each side, means for securing the lower roller in the respective recesses, and an end-
60 less band passing over the three rollers and adapted to form a pocket for tobacco between the two upper rollers and to roll the tobacco and to wrap an inserted wrapper
65 around the rolled tobacco.

3. In a cigarette-former, the combination with a casing, two opposite sides of which are each provided in the lower part with a vertical slot and a plurality of adjoining horizontal
70 recesses and in the upper part with a bearing, a horizontal slot and a plurality of adjoining downwardly-directed recesses, of a rough-
ened driving-roller mounted to turn in the bearings of said casing and provided with a
75 crank, an upper roller engaging with its pins in the upper slots and recesses of said casing and mounted to turn in either recess in each side, a lower roller engaging with its pins in the lower slots and recesses of said casing and
80 mounted to turn in either recess in each side, means for securing the lower roller in the respective recesses, an endless band passing over the three rollers and adapted to form a pocket for tobacco between the two upper
85 rollers and to roll the tobacco and to wrap an inserted wrapper around the rolled tobacco, a cover for said casing and adapted to support itself when turned upward, and a wet-
ting-pad on said cover and adapted to wet
90 the gummed wrappers.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT HOFFMANN

Witnesses:

WILHELM RHINDERGOLF,
PAUL SCHMIDT.