

Cigar Machine.

No. 32,743.

Patented July 9, 1861.

Fig: 1.

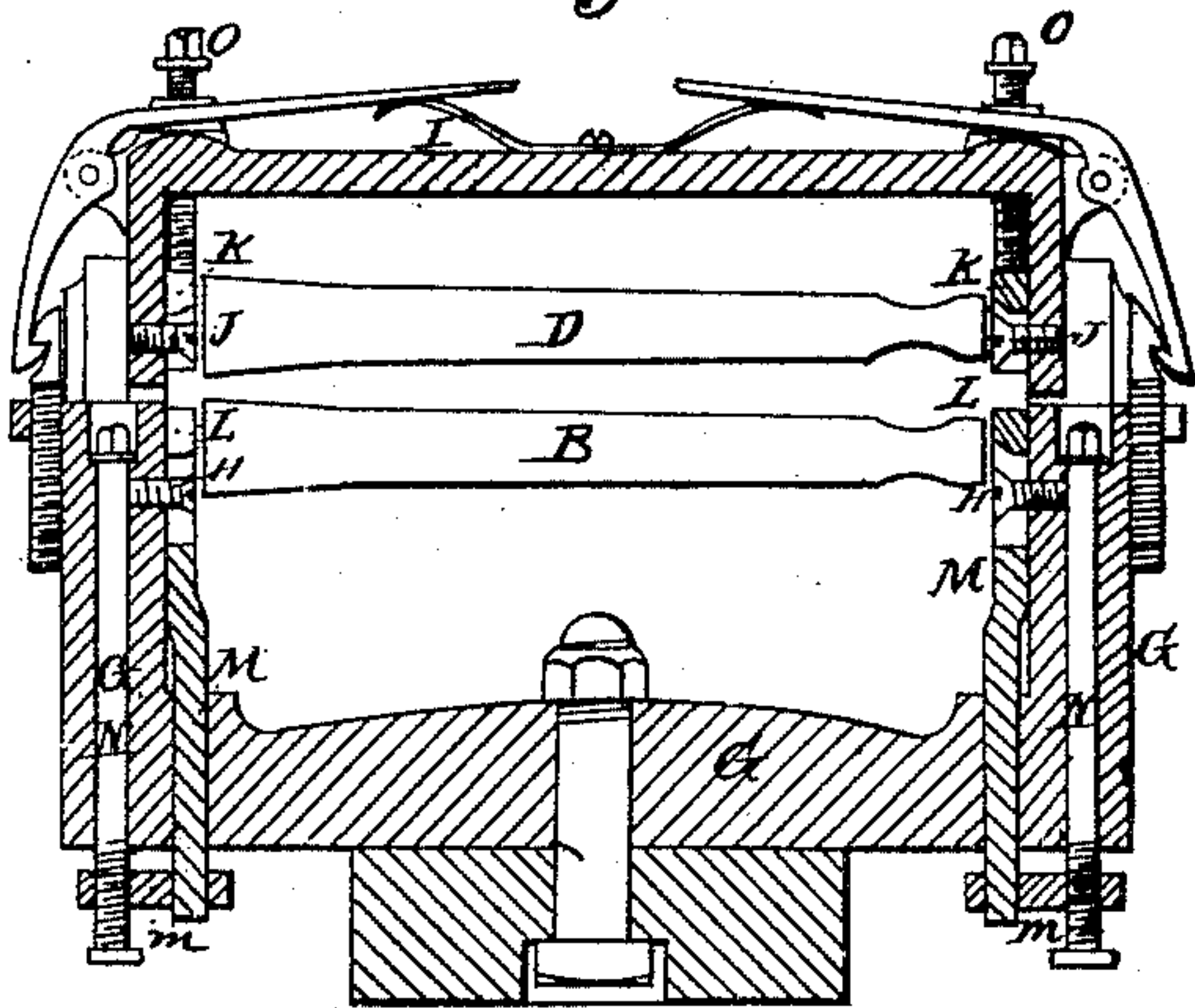


Fig. 2.

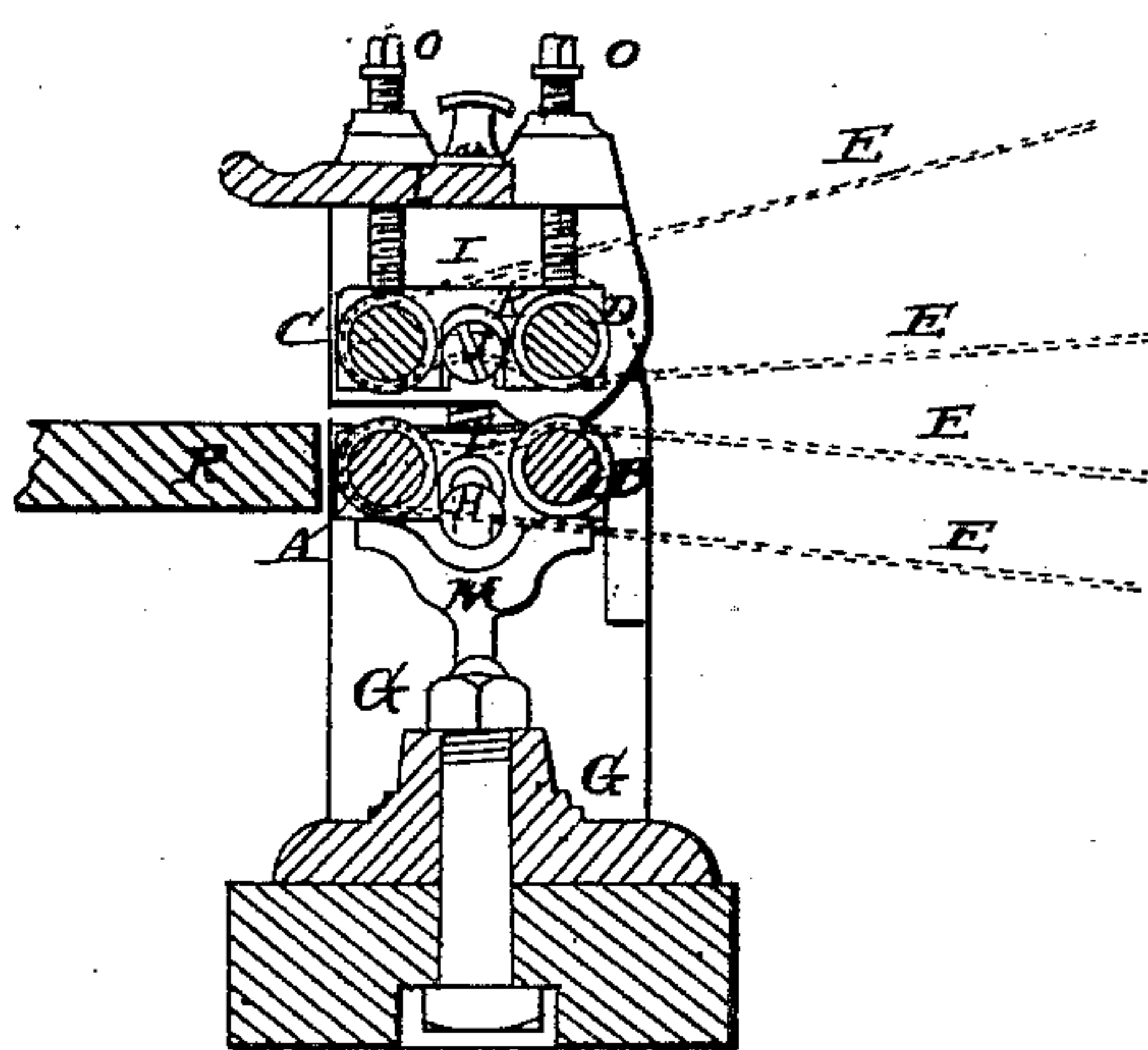
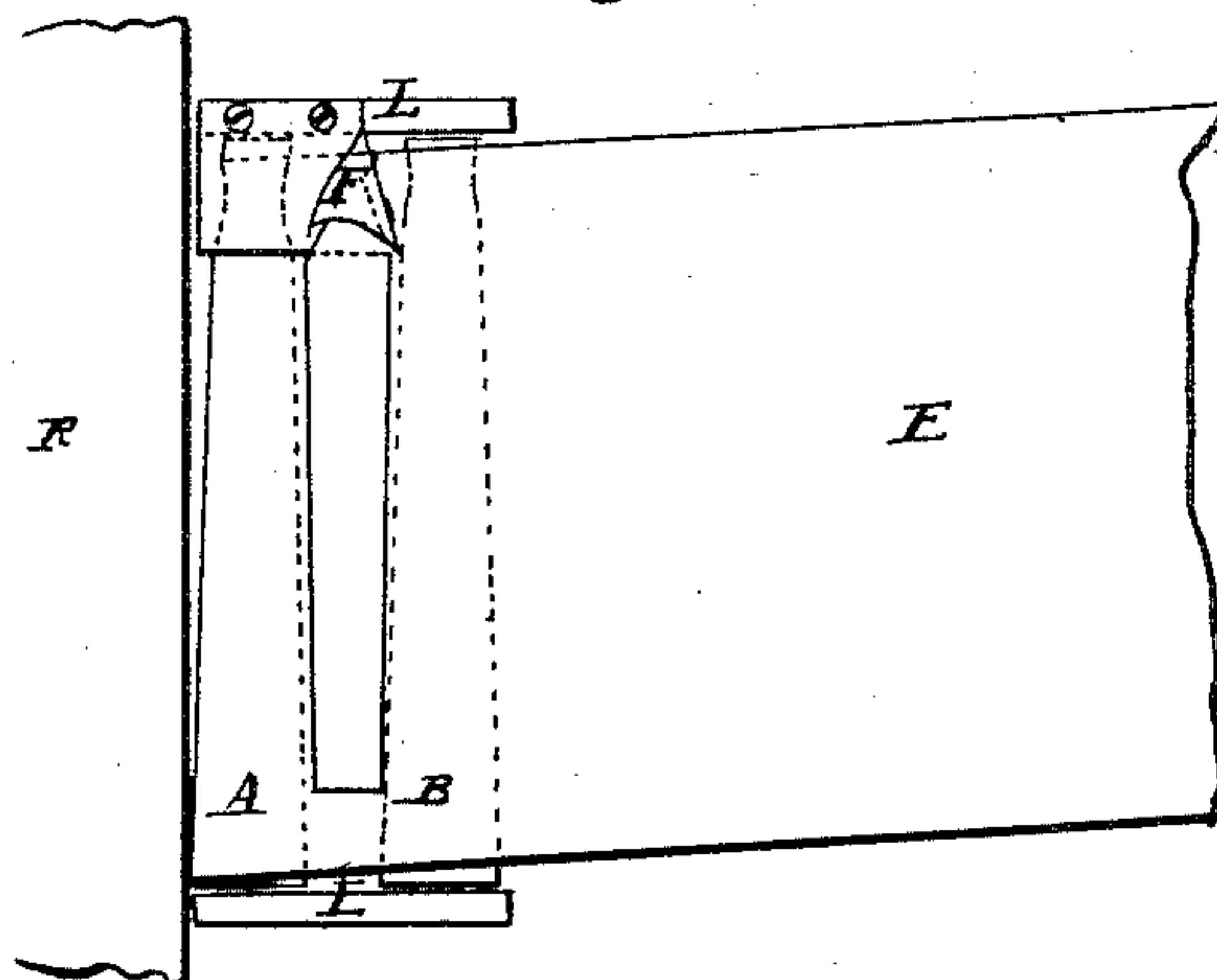


Fig. 3.



Witnesses:

William Kirland
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Inventor:

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UNITED STATES PATENT OFFICE.

GEORGE BARKER, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINERY FOR MAKING CIGARS.

Specification forming part of Letters Patent No. 32,743, dated July 9, 1861.

To all whom it may concern:

Be it known that I, GEORGE BARKER, of the city, county, and State of New York, have invented certain new and useful Improvements in Cigar-Making Machinery; and I hereby declare that the following is a full, clear, and exact description of the operation and construction of the same, reference being had to the annexed drawings, forming part of this specification.

My invention relates more especially to machines in which the tobacco is rolled or wrapped by means of a belt or belts and between four rollers, in all which machines heretofore constructed no cigars could be finished without much trouble and loss of time, excepting the one particular size and shape for which the machine was constructed, therefore making all such machines vexatious, and of little use to cigar-makers generally. It is found in practice that material used at one hour of the day in a certain moist state, owing to the weather or temperature of the room, changes its condition to a more or less moist state, and the apparatus which finished the cigar properly at one hour will not do its work the same at a succeeding hour without some mode of regulating the effect of the apparatus upon the cigar. The same evil is also encountered in changing from a fine costly quality of tobacco to a cheap coarse quality, the finer qualities of wrapper always demanding a less rigid rolling and a less fierce movement into the socket to avoid chaffing and spoiling the tips and outer wrapper.

My invention consists in so constructing the apparatus as to render it readily adjustable, at the will of the operator, to suit the various sizes and patterns of cigars and qualities of material which circumstances may require to be rolled or wrapped, and to show more clearly the advantages and effect of my improvements I specify—

First. That the rollers in a machine between which rollers the material is wrapped by means of a belt or its equivalent, operate as well for shaping the cigar as for forming the size of it, and consequently the surfaces of the rollers, or a part of them, as they act upon the material, may at times be required to be parallel to one another, or as nearly so as desired, for shaping the cigar, when at the same time tapering or conical-shaped rollers may be actu-

ally necessary to regulate the traveling of the belt and retain it in proper position, especially when such belt is to travel in a path oblique to the axis of the rollers to give the cigar an endwise motion; and an object of my invention is to allow the varying of the effect upon the shape of the cigar by means of raising or depressing either end of either of the rollers without affecting the angle formed by the surface of conical-shaped rollers and the path of the belt, so that various patterns of cigars may be rolled in one and the same machine.

Second. That the rollers in a machine between which rollers the material is wrapped by means of a belt or belts, serve for supporting the belt in its proper position, as well as for shaping the cigar—the belt, instead of the rollers, in fact rolling the material—therefore, when a new or more or less rigid belt is desired, such rollers must be dismantled wholly or in part to allow the removal of a belt, and remounted to apply another belt; and an object of my improvements is to allow of the more ready removal and replacing of belts, thereby not only saving time, but avoiding the derangement of other parts of the machine.

Third. That when it is desired to change the size (circumference) of the cigars to any considerable extent it is necessary to enlarge or contract the space between the surfaces of the rollers, either by changing the size of the rollers or changing the relative bearings of their axles and the rollers, or else their bearings must be dismantled for this purpose. In my improved arrangements the relative bearings of the rollers can be changed by a simple change of bearing-plates having the centers of the boxes more or less distant; and an object of my invention is to provide for and effect an easy and quick change of rollers, or of their bearings, for which there is no provision in any machine heretofore constructed.

Fourth. That in machines for rolling on the wrapper and forming the tip or head of the cigar between rollers by means of a belt, in connection with a heading-socket, when it is intended to finish right and left cigars in one and the same machine, it is evident and necessary that to change from one kind to the other the ends of the rollers must be reversed in order that the cigar may tend to traverse endwise in a reverse direction; and an object

of my invention is to permit the rollers to be easily and speedily taken out and reversed by means of the use of bearing-plates in combination with the rollers.

Fifth. That in machines for winding on wrappers and finishing the heads of cigars by means of a belt and heading-socket, when, by reason of the desired pattern, size, or quality of the cigar, such cigar presses either too much or not sufficiently toward and into the socket, in order to control the cigar and to remedy the evil it is found necessary to increase or lessen the pressure upon one of the ends of the cigars, and this adjustment requires the frequent attention of operators on such machines. The cigar lying between the four rollers, its outer surface is held and formed in a position somewhat parallel to the surfaces of the rollers, and consequently as it rolls on the belt it traverses in the direction of its axis toward the socket in proportion to the pressure or grip of the rollers upon any given part or quantity of the tobacco, and such pressure can by my invention be regulated to favor, retard, or counteract the traversing motion of the cigar toward the socket on a belt traveling oblique to the axis of the rollers; and an object of my invention is to give the operator a ready means of adjusting the pressure on either end of the cigar to suit the desired pattern, and to produce a new effect upon the cigar by means of the bearing-plates, in combination with the means of adjusting the position of such plates, as the case may require.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation by the aid of the drawings, in which—

Figure 1 is a vertical section through the novel parts. Fig. 2 is a cross-section, and Fig. 3 is a partial plan showing the position of the belt and heading-socket.

The action and object of the rollers A B C D, belt E, and socket F, and table R are similar to the same parts in the patent granted to Thomas Thorp, May 1, 1860, and need not be particularly described here. My improvements relate to means for hanging and adjusting the rollers A B C D. In the frame G, on each side, I fix guiding-pins H H, projecting a proper distance, and headed, as represented. In the swinging frame I, I also fix other similar pins, J J. Upon these guiding-pins I place or support bearing-plates K L, of suitable metal, having in or nearly in the line of their perpendicular centers slits extending from the bottoms of the plates a suitable distance upward, and fitted to said pins and their heads in a manner which will allow the plates to turn on the pins as well as rise or fall. These bearing-plates are pierced in the proper points with holes, in which the pivots or bearings of

the rollers A B C D rest, and by which they are supported. The bearing-plates L L are supported by forked rods M, passing downward through the frame G, and carrying at their lower ends threaded arms *m m*. Bolts or screws N are fitted in proper bearings in the frame G and extend through and fit in the threaded arms *m m*, so that by turning the bolt N, by means of a proper key attached to its head, the rod M and bearing-plate L are raised or depressed at pleasure. By these means the rollers A B may be adjusted at either end. Over each end of the bearing-plates K K, I mount a screw, O, against the end of which the plate is kept by the strain on the belt E when properly arranged. By turning these screws, therefore, each end of either of the rollers C D may be adjusted independently, and thereby any desirable action on the cigar produced, as before specified. By unscrewing the screws O sufficiently the bearing-plates K K may be raised above the pins J, and then removed with the rollers from the machine, after which the plates L L and rollers A B may be removed in a similar manner, either for the purpose of changing the belt, the rollers, or the bearing-plates, or for reversing the rollers. I prepare a series of bearing-plates, each set varying slightly in the position of the bearings of the rollers, so that the distance between the rollers A B or C D may be readily adjusted by simply changing the bearing-plates.

By means of the various adjustments here-in described, and with the use of a series of bearing-plates and several sets of rollers of differing sizes and forms, I am enabled by the use of only one machine to make all the desirable sizes and patterns of cigars, thereby rendering a single machine equivalent to a large number as heretofore constructed. And now, having fully described my improvements, I proceed to state that I do not claim as my invention the use and operation of a belt or belts in any manner, nor of rollers of any form; but

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

The employment, in a cigar-machine, of adjustable bearing plates or boxes K L, for the purpose of mounting the rollers, in combination with the guiding-pins and adjustable screws or their equivalent, the whole being constructed and operated in the manner and for the purpose set forth.

In testimony whereof I have hereunto set my name in the presence of two subscribing witnesses.

GEO. BARKER.

Witnesses:

WILLIAM KIRTLAND,
CHAS. BARKER.