

R. A. BRIGHT, Jr.

Cigar Machine.

No. 83,247.

Patented Oct. 20, 1868.

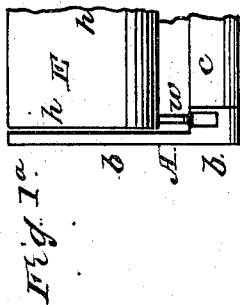
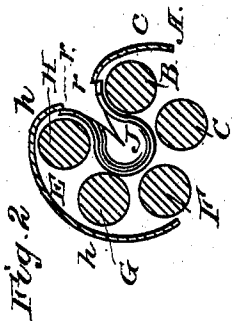
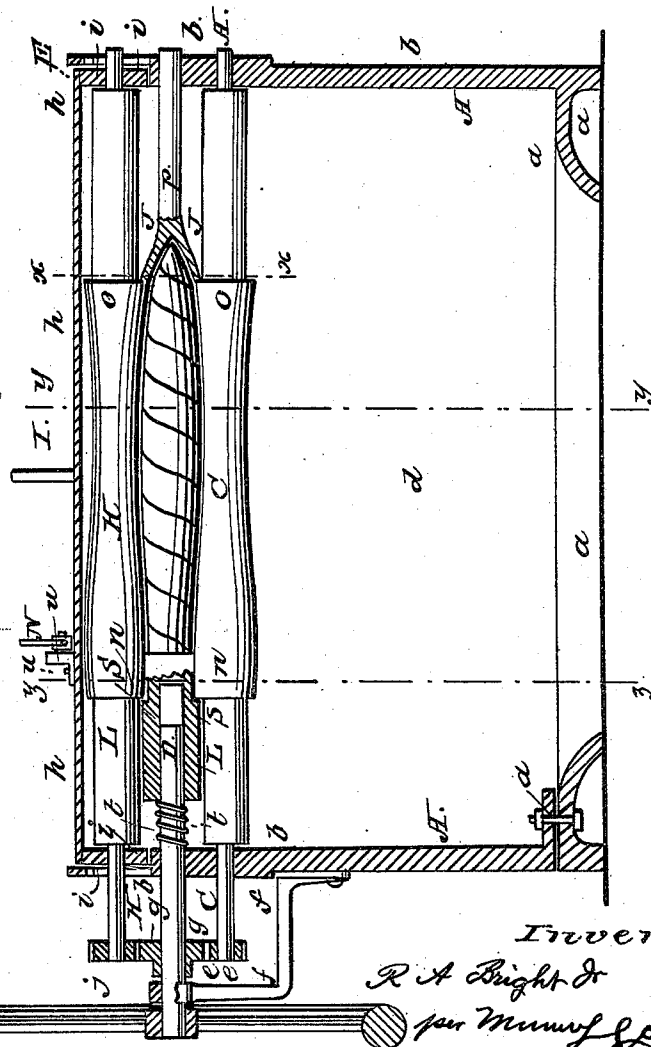


Fig. 1



Witnesses

Wm A. Wilson
A. C. Cotton

Inventor

R. A. Bright Jr

per Murray & Co
attorney.

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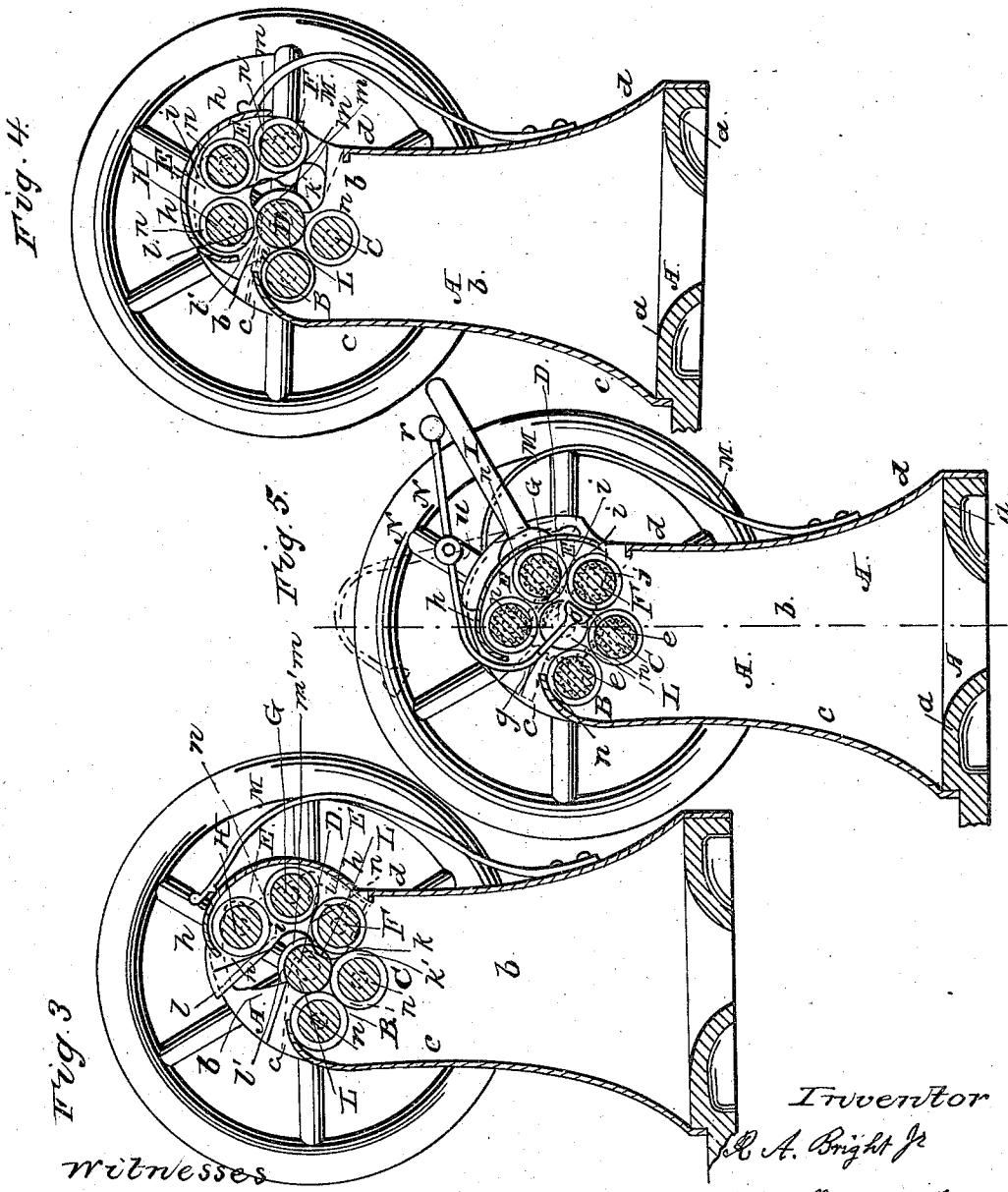


Fig. 3

Fig. 4.

Fig. 5.

Witnesses
Wm A Morgan
J L Bolton

Inventor
R. A. Bright Jr
per Wm M L
attorneys

UNITED STATES PATENT OFFICE.

RICHARD A. BRIGHT, JR., OF PROVIDENCE, RHODE ISLAND.

IMPROVEMENT IN CIGAR-MACHINES.

Specification forming part of Letters Patent No. 83,247, dated October 20, 1868.

To all whom it may concern:

Be it known that I, RICHARD A. BRIGHT, JR., of Providence, in the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Cigar-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, Sheet I, represents a vertical longitudinal section of my improved cigar-machine. Fig. 2, Sheet I, is a detail vertical transverse section of the same, taken on the plane of the line *x x*, Fig. 1. Fig. 1^a, Sheet I, is a detail plan view of the same. Figs. 3 and 4, Sheet II, are vertical transverse sections of the same, taken on the plane of the line *y y*, Fig. 1. Fig. 5, Sheet II, is a vertical transverse section of the same, taken on the plane of the line *z z*, Fig. 1.

Similar letters of reference indicate like parts.

The object of this invention is to construct a machine for making and completing cigars of suitable size and shape—that is, to roll the filling, wind the inner and outer wrapper around it, to form the point, and cut off the end, so as to make a perfect cigar.

The invention consists in the general construction of the machine, and more particularly in the application, form, and arrangement of a number of non-elastic rollers, between which the cigar is formed, and in the use of a follower to prevent the cigar from being too long, of a header for forming a point, and of a cutter for cutting and trimming the thick end of the cigar.

A in the drawing represents a metallic or other frame, consisting of a slotted bed-plate, *a*, of two uprights, *b b*, at the ends of the bed-plate, of a front face-plate, *c*, and of a rear plate, *d*. The front and rear plates extend from between the two uprights and to the bed-plate, as shown.

In the end pieces *b b* are the bearings of two horizontal non-elastic rollers, B and C, which carry, each at one end, outside of the frame, a small pinion, *e*, as shown in Fig. 1 and by dotted lines in Fig. 5.

D is a short horizontal spindle, having its bearings in one of the uprights *b* and in an arm, *f*, projecting therefrom, the inner end of said spindle extending some distance—say about one inch—beyond the inner face of the upright *b*, as shown. The spindle D carries a gear-wheel, *g*, which meshes into both pinions *e e*, as in Fig. 5, and carries also a fly-wheel and a crank or pulley, for receiving rotary motion by suitable mechanism.

E represents a frame, consisting of a long curved plate, *h*, and of two vertical end pieces, *i i*, attached thereto, the said end pieces resting with their lower edges respectively on shoulders formed on the end pieces *b b* of the frame A, the frame E being thereby fitted between the thin upper parts of the uprights *b*, as shown in Fig. 1.

In the end pieces *i i* of the frame E are the bearings for three horizontal non-elastic rollers, F, G, and H. The axles of these rollers project through one of the perforated uprights *b*, and carry pinions *j j*, of the same size as the pinions *e*, as indicated in Fig. 5.

The lower edges of the end pieces *i i* are provided each with two rounded projections, *k l*, (shown in Fig. 4,) and between them a rounded recess, *m*. Corresponding to them are formed on the aforesaid shoulders of the uprights *b* rounded recesses *k' l'*, and between them a rounded projection, *m'*, as in Fig. 4.

The frame E is provided with a projecting handle, I, by means of which it (the frame) can be swung so as turn around the projection *k* or *l*, as may be desired.

The upper part of the front plate, *c*, is bent somewhat over the roller B, and that of the back plate, *d*, is bent in, as on Sheet II.

When the frame E is so set that its edges *k l m* come all in contact with the parts *k' l' m'* of the frame A the pinions of its rollers F G H will be in gear with the wheel *g*, as in Fig. 5; otherwise they will not be in gear.

Each roller B C F G H is provided with two shoulders, *n o*, between the uprights of the frame A, the one shoulder, *n*, being near the spindle D, the other, *o*, near the opposite upright, *b*, as in Fig. 1. Between the shoulders *n o* each roller is formed with a curved side—that is, it is thinner in the middle than near the shoulders—so that between the five rollers

a cavity of such shape is formed as to be the form of a cigar.

Opposite the spindle D, and in line with it, is fitted through the upright *b* a pin, *p*, on which the point former or header J is secured. This header is a sheet-metal or other plate, bent into the shape of an open cone, with two projecting lips, *r r*, which fit respectively under the plates *c* and *h*, as shown in Fig. 1. By these lips the header is prevented from turning. The inner end of the header abuts against the shoulder *o* of the rollers.

Upon that portion of the spindle D which projects from the inner side of the upright *b* is fitted a cylindrical block, L, which has a shoulder, *s*. Between this block and the upright *b* is interposed a spring, *t*, which serves to push the block forward, so that its shoulder *s* is always in contact with the shoulders *n* of the rollers, as in Fig. 1, while at the same time the spring will allow the block L to yield to pressure against its inner end.

A spring or springs, M, may be fastened to the frame A, to hold the frame E in any desired position, either by mere friction or by fitting in some notches that may be formed in the plate *h*. N is a curved bar, pivoted to an adjustable ear, *u*, that is fitted upon the plate *h*. One end of this bar N has a weight, *v*, while the other end carries a knife, *o*, as shown in Fig. 5. The weight keeps this bar N always in the position shown in Fig. 5—*i. e.*, out of the way; but the bar can be swung so as to bring the knife between the rollers, to sever anything held between them, as shown by black lines in Fig. 5.

The operation of the machine is as follows: The frame A is set up so as to be stationary and immovable during operation. The frame E is, by means of the handle I, swung back so as to swing around the projections *k*. Thereby the rollers B and H are brought far apart, as in Fig. 3, to allow the insertion of the tobacco for forming the filling between the rollers. Then the frame E is swung forward into the position shown in Fig. 5, to bring all rollers in gear with the spindle. The rollers are then all revolved, and roll the filling into the desired form. The follower L will yield to the tobacco, if there should be so much as to make the cigar longer than required. The inner and

outer wrappers are then, with their ends, inserted between the rollers B H, and will be wound around the cigar. The header J causes the required form of point to be formed on the cigar. When the cigar has been completely rolled the knife is brought down to cut the broad end off and to trim it, so that the cigar will be of a certain desired length. To vary the lengths of the cigars, the ear *u* should be adjustable on the plate *h*, as indicated in Fig. 1.

The cigar is now complete, and by swinging the frame E forward, as in Fig. 4, to bring the rollers C and F apart, it will be discharged from between the rollers, and will drop through the slot of the bed-plate *a* into a suitable receptacle.

The machine is, by making one of the uprights *b* detachable from the plate *a* and face-plates *c d*, so arranged that the parts can be taken apart, so that rollers of various forms for various kinds of cigars, as well as headers and followers of suitable form, may be inserted.

From the front of the frame E may project some tongues, *v*, fitting into corresponding recesses of the frame A, as shown in Fig. 1^a, to keep the frame E steady when the machine is in operation.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A cigar-machine consisting of the stationary frame A, carrying rollers B C, of the swinging frame E, carrying the rollers F G H, of the header J, follower L, and cutter O, all made and operating substantially as and for the purpose herein shown and described.

2. The sliding follower L, fitted to the end of the spindle D, and made yielding by means of the spring *t*, substantially as described, and operating for the purpose specified.

3. The header J, formed on a pin, *p*, and having the lips *r*, as set forth, for the purpose specified.

4. The cutter O, formed on the swinging weighted lever N, substantially as set forth, the same being adjustable on the frame E, as described, for the purpose specified.

RICHARD A. BRIGHT, JR.

Witnesses:

A. J. SNOW,

EDMUND L. GLADDING.