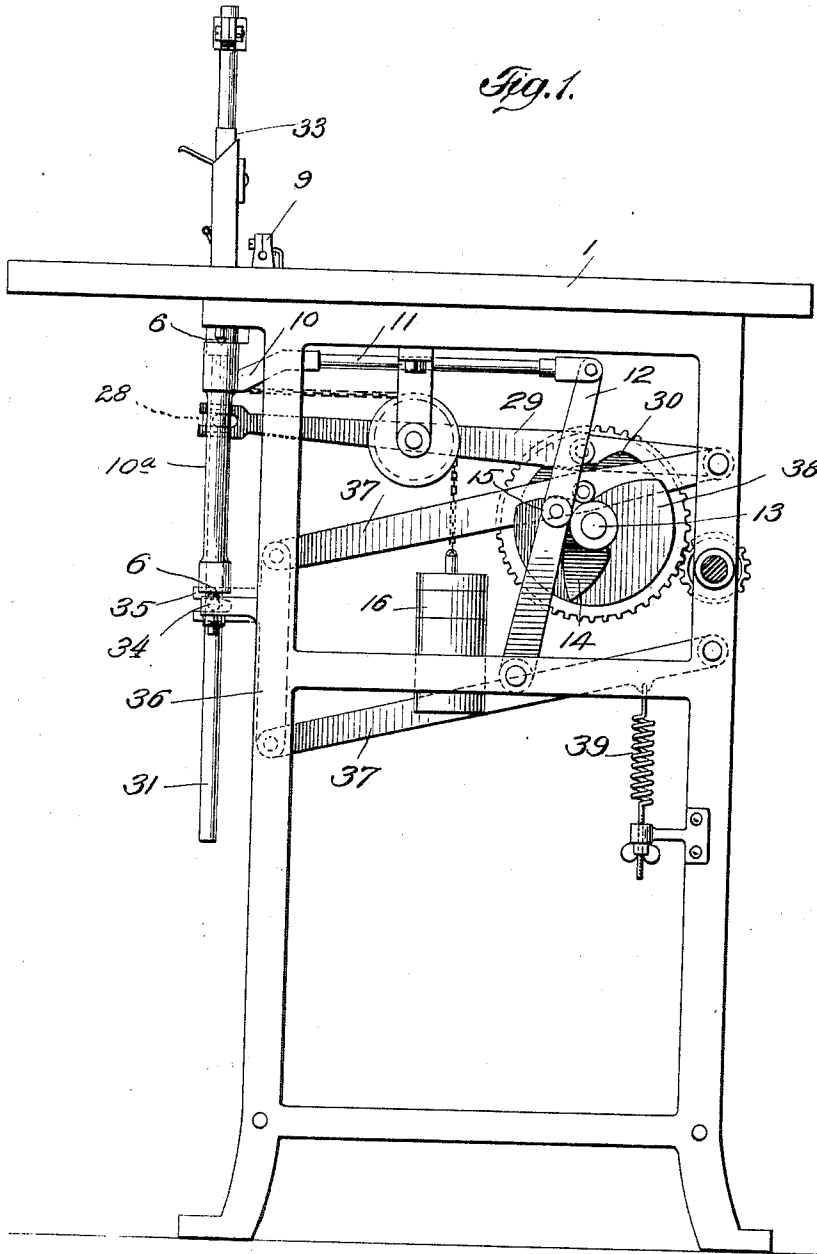


F. J. HAGEN.
CIGAR MAKING MACHINE.
APPLICATION FILED DEC. 5, 1911.

1,044,516.

Patented Nov. 19, 1912.
2 SHEETS—SHEET 1.



WITNESSES:
J. H. Miller
J. H. Miller.

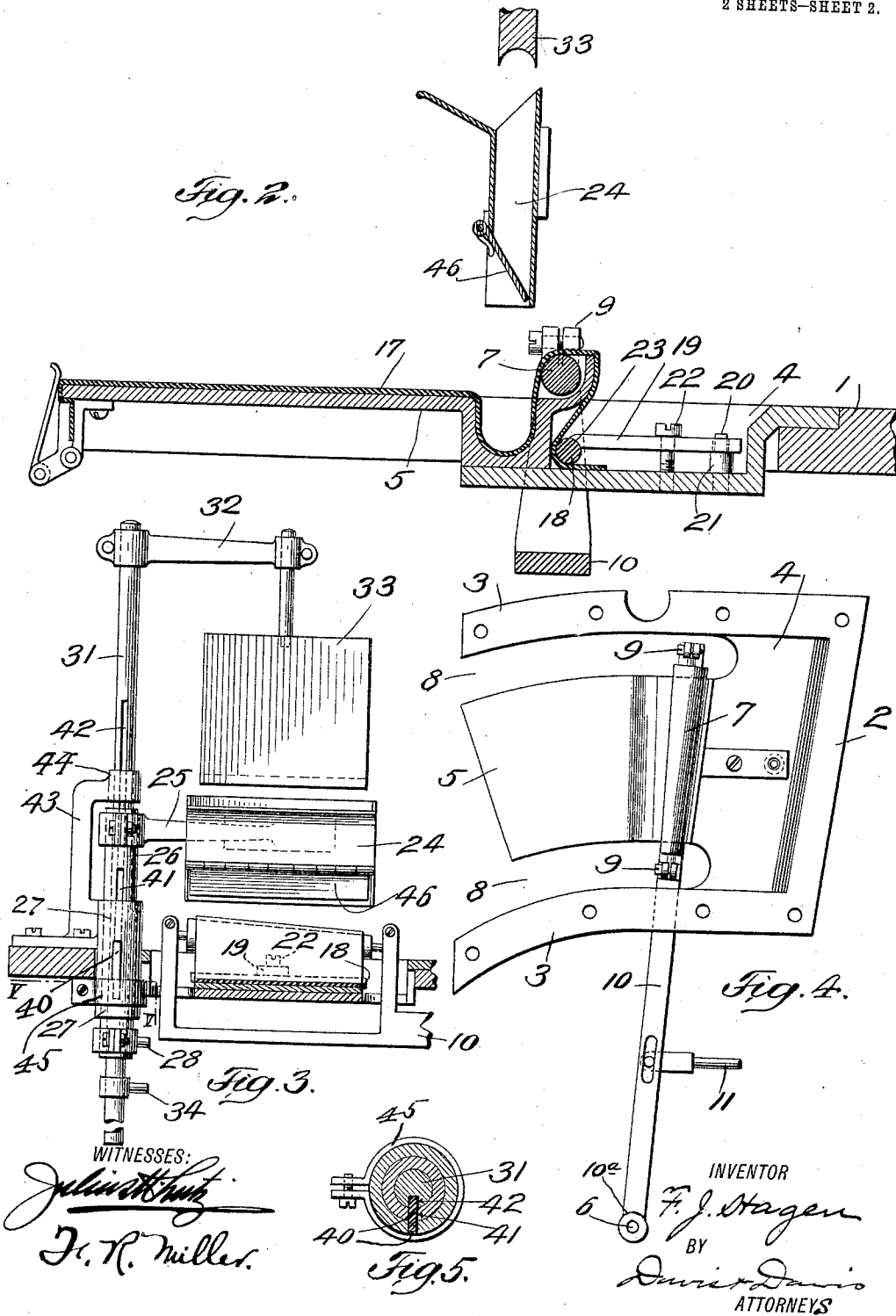
INVENTOR
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ATTORNEYS

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WITNESSES:

Julius H. Miller
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Fig. 5.

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UNITED STATES PATENT OFFICE.

FERDINAND J. HAGEN, OF NEW YORK, N. Y.

CIGAR-MAKING MACHINE.

1,044,516.

Specification of Letters Patent.

Patented Nov. 19, 1912.

Application filed December 5, 1911. Serial No. 664,019.

To all whom it may concern:

Be it known that I, FERDINAND J. HAGEN, a citizen of the United States, residing in the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Cigar-Making Machines, of which the following is a specification.

This invention relates to that class of cigar making machines in which the cigar bunch or filler is placed in a hopper and the hopper then lowered to the rolling table on which is arranged a rolling apron. A plunger then descends and forces the filler from the hopper to the rolling apron, whereupon the filler-forming and wrapper-applying roller is swung forward to shape the filler and apply the wrapper, the hopper and the plunger having first been lifted to permit of the forward movement of the said roller.

One of the main objects of the invention is to provide very simple means for moving the filler receiving hopper and the plunger and for accurately guiding said parts in their vertical movements.

Another object of the invention is to provide improved and simplified means for securing the inner end of the rolling apron, so that the same may be readily adjusted to take up any excess slack therein or to loosen it and provide the requisite amount of slack.

Other objects and advantages of the invention will appear hereinafter.

In the drawings, Figure 1 is a side elevation of a cigar making machine provided with my invention; Fig. 2 a longitudinal vertical sectional view of the rolling table and the parts immediately adjacent thereto; Fig. 3 a front elevation of the plunger and hopper supporting and guiding means, the rolling table and a portion of the supporting frame being shown in sectional view; Fig. 4 a plan view of the rolling table and its supporting frame and the filler forming roller; and Fig. 5 a detail horizontal sectional view of the means for supporting and guiding the hopper and the plunger.

Referring to the various parts by numerals, 1 designates the machine table which may be of any desired construction and is supported on a suitable frame. In a large recess in the front of this table is secured a frame 2 provided with side flanges 3 by

means of which it is secured to the table, the table being cut out to correspond to the shape of said frame. This frame is formed with a depression 4 at its inner or rear part, the bottom of said depression forming a support for the rolling table 5. The side edges of the rolling table and the flanges 3 are arranged on an arc of a circle struck from a point 6 which is the center of the pivot of the swinging arm which carries the forming roller 7. Between said flanges 3 and the edges of the rolling table are formed slots 8 through which extend the upwardly projecting arms 9. Between these arms the filler forming roller 7 is pivoted, and said arms are carried by the vibrating arm 10. This arm is formed with a vertically extended spindle 10^a which is pivoted between the center points 6. To vibrate the arm 10 a rod 11 is connected thereto, the rear end of said rod being pivoted to the lever 12. On a shaft 13 is mounted a cam 14 arranged to operate against a roller 15 on the lever 12 to force said lever forwardly for the rolling operation. These parts are returned to their normal positions by a weight 16.

I desire it understood that any suitable mechanism may be employed for vibrating the lever carrying the forming roller, and that any suitable form of roller may be employed.

The filler rolling apron 17 is connected to the rolling table at its forward edge by any suitable means. Its rear end is secured by means of a cylindrical bar 18 which is arranged at the back of the table and in the recess 4 of the table supporting frame. The rear end of the apron is arranged between the said cylindrical holding bar and the rear edge of the table and the upper surface of the holding frame. By forcing the holding bar forwardly into the corner formed by the said two surfaces it will bind the apron securely against the rear edge of the table and the upper surface of the supporting frame. Any suitable means may be employed for forcing this bar forwardly into its holding position. I have shown a bar 19 loosely supported at its rear end on a pin 20 carried by the supporting frame, said pin extending loosely through an aperture in the clamping bar. The bar rests upon a shoulder 21 of the pin 20. Between the supporting pin and the holding rod the clamping bar is apertured for the passage of a clamping screw 22 whose lower end is threaded into the bot-

tom of the holding frame. The forward edge of the clamping bar is concave, as at 23, to adapt said bar to engage the cylindrical surface of the holding rod. The concave portion of the clamping bar engages the holding rod above its center so that by forcing said clamping bar downwardly the holding rod will be forced forwardly to clamp the rolling apron. It is manifest that by loosening the clamp screw 22 the holding rod will be loosened so that it may rotate while at the same time it will be held in position. The rear end of the rolling apron may be readily adjusted in either direction when the holding bar is free to rotate. It is, therefore, manifest that I provide an exceedingly simple apron-holding means by which the adjustment of the rear end of said apron may be readily and quickly accomplished. It is also manifest that it will be unnecessary to perforate the rear end of the apron for the passage of fastening means and that, therefore, the life of the apron will be materially lengthened. The holding bar will engage the apron throughout the length of the bar so that the strain of holding the apron will be evenly distributed through a considerable area, thereby reducing the wear on the apron at the point of attachment. When the clamping bar is released the holding rod is free to rotate but will be held in position against lateral displacement by the clamping bar, and against end-wise displacement sufficient to free it from the clamping bar by the sides or flanges of the holding frame; so that it is practically impossible to remove the holding bar without completely detaching the clamping bar.

The filler receiving hopper 24 is carried by an arm 25 supported on a sleeve 26. This sleeve slides vertically in a guide 27 supported on the table at one side of the rolling table. Below the guide this sleeve is provided with a horizontal pin 28 which is engaged by the forward end of a lever 29. This lever is moved vertically by a cam 30 and is maintained in its raised position by the circular portion of said cam. At the proper instant, and after the filler has been placed therein the cam permits it to drop by gravity to its proper position with relation to the rolling apron. Within the sleeve is arranged a vertically reciprocating bar 31 which carries at its upper end an arm 32 from which the plunger 33 is suspended, said plunger being arranged to pass down through the hopper to deliver the filler to the apron. The plunger carrying rod 31 extends below the sleeve 26 and is provided with a horizontal pin 34, said pin being engaged by the forked end 35 of a vertical bar 36. Connected to the upper and lower ends of this bar 36 are parallel levers 37 which are pivoted at the rear end of the frame.

The upper lever 37 is arranged to be engaged by a cam 38 to lift said levers and the bar 31. The plunger 33 is maintained in its elevated position by the circular portion of the cam 38. To force the plunger downwardly through the hopper a spring 39 is connected to the lower one of the levers 37 and to a fixed part of the frame so that the cam 38 raises the plunger against the tension of said spring.

To maintain the hopper carrying sleeve and the plunger carrying rod against rotative movement in the supporting guide 27, a key 40 is passed through said guide, through a slot 41 in the sleeve and into a key-way 42 in the rod 31, thereby holding said sleeve and rod against rotative movement while permitting them to independently reciprocate vertically. The guide 27 is provided with an upwardly extending arm 43 which carries a guide 44 at its upper end through which the rod 31 reciprocates, said guide being arranged above the sleeve 26, as shown clearly in Fig. 3 of the drawings.

It is manifest that I provide a very simple means for supporting and guiding the hopper and plunger in their vertical movements. The sleeve 26 forms a long guide for the plunger carrying rod 31 so that said rod will be accurately guided but very steadily held during its reciprocation. The sleeve 26 is accurately guided and supported throughout its entire length by the plunger carrying rod, and is also supported by the guide 27.

By arranging the parts as shown and described a single key may be used for securing all of them in position and holding them against rotative movement. I prefer to insert the key through a slot cut in the guide 27 and to prevent the accidental displacement of the key by securing a collar 45 around the guide and over the key, as shown clearly in Fig. 3 of the drawings.

The hopper 24 is provided at its lower front edge with a forwardly swinging door 46. This door normally extends across the hopper and forms a movable bottom therefor. As the plunger descends and forces the filler from the hopper this door will be swung forwardly and thereby force the operator's fingers from under the hopper should they be placed too far inwardly when adjusting the wrapper in position to receive the filler. This prevents the operator's fingers being caught by the hopper and by the rolling apron.

What I claim is:

1. A cigar making machine comprising a rolling table, a rolling apron, a filler receiving hopper, a sleeve carrying said hopper, a vertical tubular guide and support for said sleeve at one side of the rolling table, a plunger arranged to reciprocate through

the hopper, a plunger carrying rod extending through the hopper carrying sleeve and guided by said sleeve, means connected to the lower end of the sleeve to reciprocate the hopper, means connected to the lower end of the rod to reciprocate the plunger, and a securing means extending through the tubular guide and the sleeve, and engaging the rod to hold said sleeve and rod against relative rotative movement.

2. A cigar making machine comprising a rolling table, a rolling apron thereon, a cylindrical rotatable holding-bar extending across the rear end of said apron, a retaining and clamping-bar engaging said rotatable holding-bar, and an adjustable means engaging said clamping-bar to force it against the holding-bar, whereby when said clamping means is loosened the holding-bar will be rotatably held in position on the apron and when said clamping-means is tightened the clamping-bar is forced against the holding bar to clamp it against rotation and secure the apron in place.

3. A cigar making machine comprising a rolling table, a rolling apron thereon, the rear end of said apron extending beyond the rear end of the table, a support for the rolling table, a cylindrical rotatable holding-bar extending across the rear end of said apron at the rear end of the rolling table, a retaining and clamping means engaging said rotatable holding-bar and arranged to force it against the rear end of the rolling table and against the rolling table supporting means, and an adjustable means for forcing the clamping means against the holding bar whereby when said clamping means is loosened the holding bar will be rotatably held in position and when said clamping means is tightened the holding bar will be held against rotation to secure the apron in place.

4. A cigar making machine comprising a rolling table, a rolling apron thereon, the rear end of said apron extending beyond the rear end of the table, a support for the rolling table formed with a recess or depression in its upper surface at the rear of the rolling table, a cylindrical rotatable hold-

ing bar in said recess and extending across the rear end of the apron, a retaining and clamping means engaging said rotatable holding bar and an adjustable means for forcing the clamping means against the holding bar, whereby when said clamping means is loosened the holding bar will be rotatably held in position and when said clamping means is tightened the holding bar will be held against rotation to secure the apron in place.

5. A cigar making machine comprising a rolling table, a rolling apron thereon, the rear end of said apron extending beyond the rear end of the table, a support for the rolling table, a cylindrical rotatable holding-bar extending across the rear end of the apron, a retaining and clamping means engaging said rotatable holding-bar and an adjustable means for forcing the clamping means against the holding-bar whereby when said clamping means is loosened the holding-bar will be rotatably held in position and when said clamping means is tightened the holding-bar will be held against rotation to secure the apron in place.

6. A cigar making machine comprising a rolling table, a rolling apron thereon, the rear end of said apron extending beyond the rear end of the table, a cylindrical rotatable holding-bar extending across the rear end of the apron, a rearwardly extending clamping-bar adapted to engage the holding bar substantially midway its ends, a support for the rear end of said clamping-bar, a clamping screw engaging said clamping-bar between its support and the holding-bar, the forward end of the clamping-bar being concave to fit over the holding-bar, whereby when the clamping-bar is released the holding-bar may be rotated during the adjustment of the apron.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

FERDINAND J. HAGEN.

Witnesses:

MARTHA E. HAGEN,

AUGUST KURTZ.