P. A. DRUCKLIEB & D. HEMMING.

MACHINE FOR SEAMING CIGARETTES.

APPLICATION FILED MAY 31, 1912.

1,204,418. Patented Nov. 14, 1916.

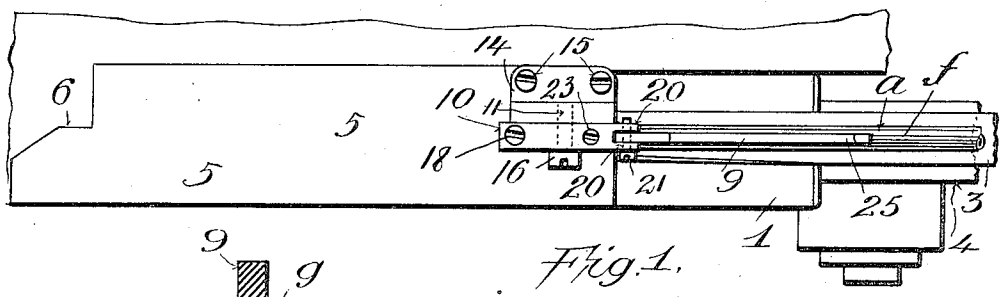


Fig. 1.

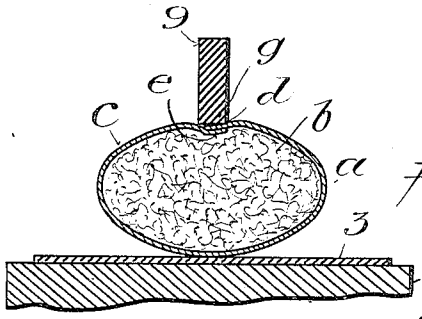


Fig. 4.

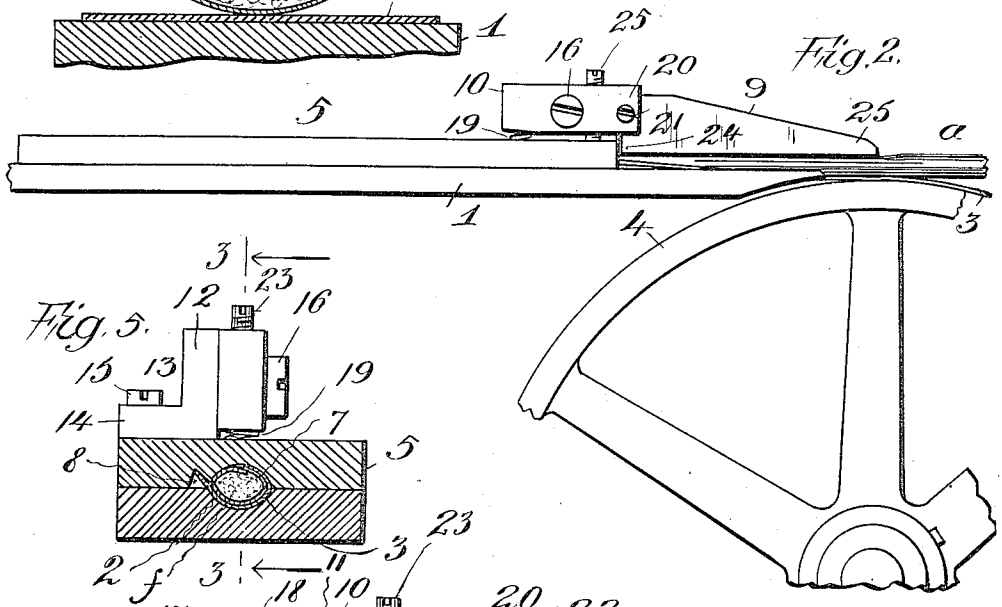


Fig. 2.

Fig. 3.

Witnesses:
W. P. Benjamin
G. J. Arnous

Inventors
Paul A. Drucklieb.
and Daniel Hemming.
By their Attorney
Joseph L. Levy

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

PAUL A. DRUCKLIEB, OF STAPLETON, NEW YORK, AND DANIEL HEMMING, OF NEW HAVEN, CONNECTICUT, ASSIGNORS TO NEW YORK CIGARETTE MACHINE COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

MACHINE FOR SEAMING CIGARETTES.

1,204,418. Specification of Letters Patent. Patented Nov. 14, 1916.

Application filed May 31, 1912. Serial No. 700,609.

To all whom it may concern:

Be it known that we, PAUL A. DRUCKLIEB, a citizen of the United States, and a resident of Stapleton, in the county of Richmond, State of New York, and DANIEL HEMMING, a citizen of the United States, and a resident of New Haven, in the county of New Haven and State of Connecticut, and whose post-office addresses are both 14 Park Place, in the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Seaming Cigarettes, of which the following is a specification.

The object of our invention is to provide a device, simple and efficient in itself, which can be readily attached to machines of almost any class for the manufacture of cigarettes, without involving any material change or alteration in those machines; and which invention consists in means for laying down or finishing the pasted seam of a cigarette rod, without the use of heat applied, by preferably applying the finishing pressure only to the seam, or to it and those portions of the paper cover which lie immediately adjacent the lap of the seam, and eliminating pressure from that portion of the cigarette rod which lies outside of the plane of the seam, and which will perform these and other desirable functions satisfactorily without tearing the paper or producing tucks or puckerings therein; and which will also produce in that manner a seam having a small lap, which is highly desirable. These objects are accomplished by means of our invention, one embodiment of which will be hereinafter more particularly set forth.

For a more particular description of our invention, reference is to be had to the accompanying drawings forming part hereof.

Figure 1 is a plan view of a portion of a cigarette making machine having our invention applied thereto. Fig. 2 is a side elevation of Fig. 1. Fig. 3 is an enlarged longitudinal sectional elevation substantially on the plane of line 3—3 of Fig. 5, looking in the direction of the arrows. Fig. 4 is a still further enlarged sectional elevation on the plane of the line 4—4 of Fig. 3 looking in the direction of the arrows; and Fig. 5 is an enlarged sectional elevation on the plane of the line 5—5 of Fig. 3, looking in the direction of the arrows.

Throughout the various figures of the drawings, similar reference characters designate similar parts.

At 1 is shown that portion of the bed of a cigarette making machine which lies in advance of the part which usually supports the means for applying paste to the laps of the cigarette rod.

As it must be assumed for the purposes of this description of our invention that the rod *a* comprising the tobacco filler *b* and inclosing paper strip *c* has been completed and the paste applied to the laps *d*, *e*, which forms the seam *f*, by any appropriate device, we do not think that it is necessary to illustrate such a device, and consider that it is only necessary to state that by the time that the cigarette rod has reached the means for finishing the seams, which is the subject matter of the present invention, that the paste has been appropriately applied and the edges of the strip *c* lapped to form the seam. The finishing device herein disclosed is preferably located, so as to secure the best results, adjacent the pasting device, so that the paste will not have had time to dry, spread or set through absorption or pressure before it reaches the seam pressing portion of this device.

The bed 1 is provided with a groove 2 of the desired shape to support the cigarette rod and which forms a continuation of the groove through which the partially completed rod runs.

At 3 is a continuous tape or band, which constitutes means for conveying the rod, which tape or band passes over a pulley wheel 4, all operating in the conventional way to propel the cigarette rod, the direction of its movement being indicated generally by the arrows in Fig. 3.

At 5 is the bed plate of our finishing device. It may be secured upon the bed plate 1 by any desired means. As it is intended to be readily attachable to or detachable from machines of conventional structure its rear is provided with a dovetailed portion 6, so as to preserve its proper alinement. Its under surface is provided with a groove 7 which forms with the groove 2 in the bed-plate 1, a tube receiving and confining the tape 3 and cigarette rod. It is also provided with a recess 8 to allow one edge of the tape

to leave the cigarette rod so that by the time the rod reaches the finishing device, the tape will be entirely freed from the rod and flattened out as shown in Fig. 4.

The embodiment of our finishing device comprises essentially a presser blade or foot 9. When in position, its perpendicular breadth is inconsequential, but according to the design of this invention, its operative cross sectional area (as indicated at *g*, in Fig. 4) should be preferably no greater or but slightly greater than the width of the seam, as shown in Fig. 4, whereby a maximum efficiency is obtained with a minimum disturbance of the contained tobacco or the paper covering the rod. It will be noted hereafter, that this presser blade is mounted, so as to exert a regulatable and gradually increasing pressure on the seam in the direction of its length. To secure these results, we have devised a simple construction, which may be accommodated to the plate 5, or any like or suitable part of a cigarette making machine, or which may be a fixed part of the plate 5 itself. This construction consists of the following elements: At 10 is a bearing block pivoted upon a pin 11, one end of which is secured to the upright portion 12 of an angular plate 13, the horizontal portion 14 being secured on the plate 5 by screws 15, the enlarged head 16 of the pivot bolt 11 pressing the pivot block 10 against the part 12 with a working fit, preserving the parallelism of the block 10, and coincidently the presser blade or foot, which is supported thereby, with the seam *f*, of the cigarette rod. The rear end of the block 10 is provided with a bore 17 threaded to receive an adjustable plug 18, against which plug bears the upper end of a spiral spring 19, the lower end of the spring resting upon the plate 5. The forward end of the block 10 is provided with jaws 20, between which extend a detachable screw 21, the heel 22 of the presser-blade 9 being held in and secured to the block by said screw 21, and between the jaws 20, thereby providing means for readily attaching or detaching the blade 9 and keeping it perpendicular to the seam of the cigarette rod. Between the jaws 20 and pivot pin 11, a set screw or stop 23 is inserted perpendicularly to the block 10, its lower end bearing on the block 5. The spring 19 furnishes means for keeping the operative surface of the presser blade yieldingly in contact with the seam *f*, the threaded plug 18 providing means for varying the tension of the spring and consequently the amount of pressure exerted by the presser blade on the seam. The set screw 23 provides means for regulating the inclination of the presser blade relatively to the cigarette rod and its seam, and incidentally, the plane or extent of contact which its operative surface *g* may have with the seam.

As constructed and shown here, the cigarette rod, freshly pasted and with its lap closed moves in the direction indicated by the arrows in Fig. 3, and the presser blade pressed downwardly by the spring 1 (and suitably adjusted by the set screw 23) contacts with the same at the lower heel 24 hereof, and the toe 25 of the blade 9 has decreased the diameter of the rod to the extent of its inclination, the depression of the rod where the presser blade is thus brought into contact with the seam being indicated by the dotted line 26; the contact of the presser blade with the seam and the pressure exerted thereby being regulatable and gradually increasing in the direction of the length of the seam. The result of this, among other things, is that the freshly pasted seam is adequately pressed, the presser foot dries the seam and spreads (without any undue friction or strain on the paper) the paste in the seams; the thinning out of the paste, which takes place laterally only substantially the width of the presser foot, enabling it to dry and become set very readily and before the seam is passed from contact with the presser foot; which latter pressure on the seam for a substantial distance, keeps the seam well ironed, lays it flat, and prevents it from puckering. During this operation there is substantially no disturbance of the contained filler, as shown in Fig. 4.

The adaptability of our improvements to machines already constructed, its simplicity and compactness, its freedom from intricate parts requiring constant adjustment and attention, are all valuable points in its favor. It is, therefore, manifest that our invention may be embodied in a structure differing from that disclosed herein without departing from the spirit thereof.

Having described our invention, we claim:

1. In a cigarette finishing machine, the combination of a supporting plate, a block pivotally mounted thereon, jaws at one end of the block, a presser blade secured to said jaws, an adjustable stop secured to the block between the pivot and said jaws, a bore at the other end of the block, and an adjustable plug therein, and a spring in said bore bearing on the plug and plate.

2. In a cigarette finishing machine, the combination with a support, a presser blade pivoted thereto and having an extension, a spring secured to said extension beyond the pivot, and means for adjusting the tension of the spring.

3. In a cigarette finishing machine, the combination with a support, a presser blade pivoted thereto and having an extension, a spring secured to said extension beyond the pivot, means for adjusting the tension of the spring, and a stop secured to said extension and located between the blade and said pivotal support.

4. In a cigarette finishing machine, the combination with a supporting plate, a block pivotally mounted on said plate, a presser blade secured to the block on one side of the pivot for said block, a spring exerting an upward pressure on the block on the other side of said pivot whereby the presser blade is caused to bear downwardly upon the cigarette rod with greater pressure at its toe than at its heel.

5. In a cigarette finishing machine, the combination with a support, a presser blade having greater longitudinal dimension than width, and a width coextensive with the lap of the seam, pivoted thereto, a spring bearing against the blade support for causing a pressure of the blade adjacent its outer end upon the cigarette seam, and a stop for regulating the inclination of the presser blade relative to the cigarette seam.

6. In a cigarette finishing machine, the combination with a pivoted block, a presser blade secured thereto and bearing on the cigarette rod adjacent its outer end, a spring for causing a downward pressure of the presser blade adjacent one end of the block and a regulatable stop secured in the block adjacent its other end.

Signed at the city, county and State of New York, this 28th day of May, 1912.

PAUL A. DRUCKLIEB.
DANIEL HEMMING.

Witnesses:
GUSTAVE I. ARONOW,
H. RADZINSKY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."