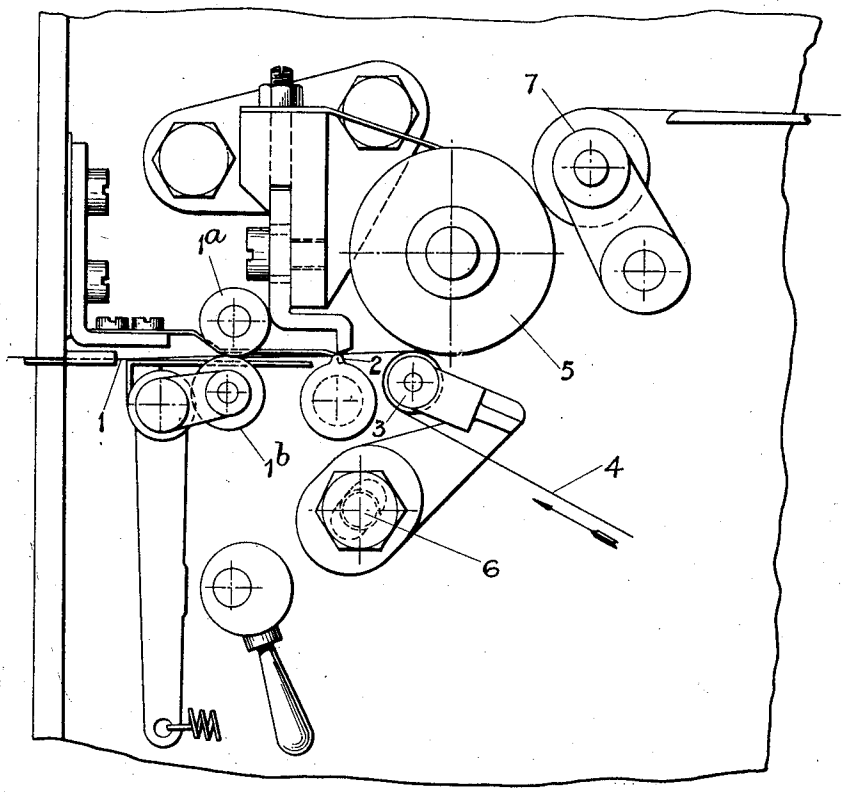
May 14, 1929. F. F. RUAU 1,713,196

CIGARETTE MAKING MACHINERY

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UNITED STATES PATENT OFFICE.

FÉLIX FRÉDÉRIC RUAU, OF DEPTFORD, LONDON, ENGLAND, ASSIGNOR TO MOLINS MACHINE COMPANY LIMITED, OF LONDON, ENGLAND.

CIGARETTE-MAKING MACHINERY.

Application filed December 2, 1926, Serial No. 152,294, and in Great Britain December 21, 1925.

This invention is for improvements in or relating to cigarette making machinery and more particularly to a method and means of severing cork or like tips from a travelling web of material and applying the same to a travelling web of cigarette paper and it has for its object the provision of means whereby each severed tip is arranged upon the travelling web of cigarette paper with two of the edges thereof arranged parallel to the edges of the travelling web of cigarette paper and the remaining two edges arranged substantially normal to the said edges.

According to the present invention there is provided a method of severing cork or like tips from a travelling web of material and applying the same to a travelling web of cigarette paper wherein the leading edge of the web of cork or the like is yieldingly held in engagement with the travelling web of cigarette paper as a tip is being severed.

Further the present invention consists of a device for severing cork or like tips from a travelling web of material and applying the same to a travelling web of cigarette paper which comprises means adapted to hold the leading edge of cork or the like in yielding engagement with the web of cigarette paper as a tip is being severed.

The invention is more particularly described with reference to the accompanying drawing which illustrates a section of a tipping and printing panel embodying the present invention.

Referring to the drawing a web of cork 1 is continuously fed by rollers 1^a and 1^b to a rotary cutting blade 2 of the character described in my co-pending U. S. Patent No. 1,700,906.

Arranged in advance of the said cutting device and in the path of the travelling web of cork is a guide roller 3 around which is adapted to travel a web of cigarette paper 4. The roller 3 is arranged so that the tangential plane common to the rotary cutting blade 2 and the roller 3 is located in a horizontal direction.

Mounted above the roller 3 is a pressure roller 5 preferably constructed of a greater diameter than the roller 3 and arranged in such a manner that a portion of the cylindrical face thereof extends below the tangential line which joins the edge of the rotary cutting blade 2 with the surface of the roller 3 and in advance of the roller 3 when considered in relation to the direction of movement of the leading edge of the travelling web of cork.

The roller 5 preferably has its rotational axis fixed, whereas the rotational axis of the roller 3 is movable about a pivot 6 towards and away from the line joining the axes of the roller 5 and the rotary cutter 2. By adjustably mounting the roller 3 in the manner hereinbefore described it is possible to vary the length of the path between the cutting mechanism and the point where the leading edge of the cork is gripped between the travelling web of cigarette paper and the pressure roller 5.

Further, due to the fact that the cylindrical surfaces of the rollers 3 and 5 are spaced apart from one another, the leading edge of the travelling web of cork is gripped between the travelling web of cigarette paper and the pressure roller 5 and is held merely by the friction which is produced between the roller 5 and the cork by the pressure of the travelling web of cigarette paper 4. This frictional grip may be varied by adjusting the position of the roller 3 relatively to the roller 5.

According to this invention it will be found that the positions of the rollers 3 and 5 may be adjusted to ensure that the cutting mechanism severs a tip from the travelling web of cork immediately the leading edge of the web is gripped between the pressure roller 5 and the cigarette paper 4. Further should the leading edge of the cork web be fed between the cigarette paper and the pressure roller 5 prior to the cutting operation, there exists sufficient slip to permit the web of cork to slip over the cigarette paper until the cutting operation is effected without deflecting the web of cork, the friction, however, is sufficient to grip the tip once it has been severed from the web and feed the same forward.

By arranging the two rollers 3 and 5 in the manner hereinbefore described so that the leading edge of the web 1 is yieldingly held during the cutting operation all possibility of the tip being moved relatively to the web whilst it is being severed is eliminated and each tip is applied to the web with two edges thereof arranged parallel with the edges of the web and the other two edges arranged at right angles thereto.

Preferably the pressure roller engages with a roller 7 which ensures that as the web of cigarette paper 4 is fed forward the web

is held in surface contact with the pressure roller 5. The provision of the roller 7 also ensures that the severed tip cannot move relatively to the web of cigarette paper and further assists in securely applying the tip to the web.

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

1. A device for severing tips from a travelling web of tipping material and applying the same to a travelling web of cigarette paper which comprises in combination means for feeding a web of tipping material continuously in the direction of movement of the cigarette paper, rotatable cutting mechanism adapted to sever a tip from the said web and a pair of rollers mounted one on either side of the web of cigarette paper and arranged so that the said web engages with the periphery of each roller in such a manner that the leading edge of the tipping material is frictionally held between one roller and the cigarette paper so as to permit the same to slip relatively to the cigarette paper until a tip is severed therefrom, whereupon the tip is gripped between the said roller and the cigarette paper so as to be fed forwardly by the same.

2. In a device for severing tips for cigarettes from a travelling web of tipping material, the combination with cutting means, of a roller having its peripheral surface disposed tangentially of the path of movement of the web, a relatively smaller roller having its surface disposed in proximity to the surface of the larger roller, said rollers being adapted to frictionally grip the web of material from the cutting means, and means for supporting said smaller roller for adjustment along the periphery of the first mentioned roller whereby the cutting and gripping operations may be co-ordinated.

In testimony whereof I hereunto affix my signature.

FÉLIX FRÉDÉRIC RUAU.