

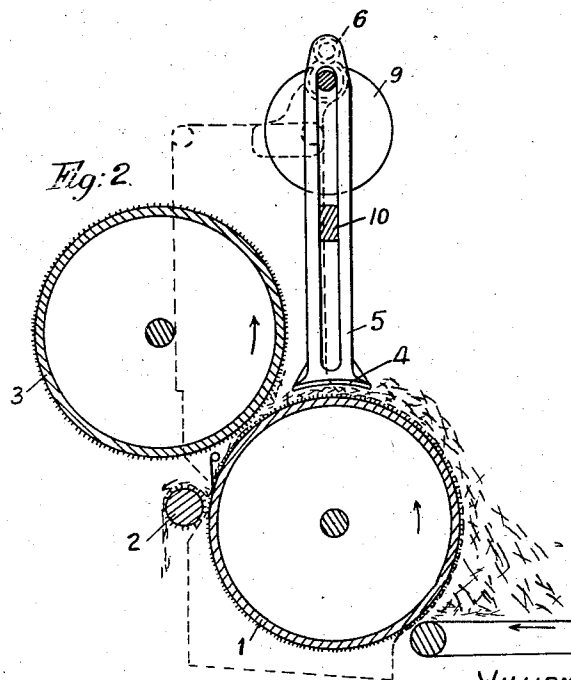
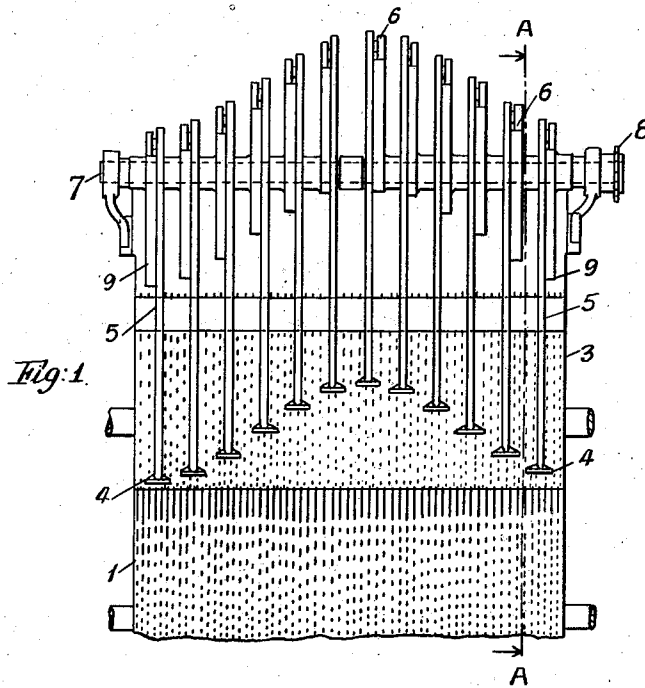
April 16, 1935.

W. H. LOUDEN

1,998,247

TOBACCO FEEDING MEANS FOR CIGARETTE MAKING MACHINES

Filed June 19, 1934



INVENTOR:
WILLIAM HEATHERILL LOUDEN

BY: *Francis C. Boyce*
ATTORNEY

Patented Apr. 16, 1935

755,650.1

1,998,247

UNITED STATES PATENT OFFICE

1,998,247

TOBACCO FEEDING MEANS FOR CIGARETTE MAKING MACHINES

William Heatherill Loudon, London, England

Application June 19, 1934, Serial No. 731,274

In Great Britain February 23, 1934

5 Claims. (Cl. 131-39)

The present invention relates to improvements in tobacco feeding means for cigarette-making machines, and of the kind comprising a roller provided with short pins which will be hereinafter referred to as a "carded roller", this roller being so arranged that, in rotating, the pins thereof engage with the tobacco and carry it round to a picker roller, which latter is also provided with pins which pick the tobacco from between the pins of the said carded roller. The tobacco removed by the picker roller passes onto the cigarette paper.

In such arrangements as that just described, means are usually provided for removing excess tobacco from the carded roller, such means often being in the form of a further pin carrying roller, hereinafter referred to as a "brushing roller", which latter has its axis of rotation disposed in a horizontal plane above that in which is disposed the axis of the carded roller, the said brushing roller being rotated in the same direction as that in which is rotated the carded roller and being sufficiently close to the latter to brush the excess tobacco therefrom.

In feeding means such as just described, there is a tendency for the amount of tobacco being supplied to the carded roller to vary at different points throughout the length of the said roller owing to the thickness and/or density of the mass of tobacco at these points varying and thus in turn varying the pressure between the tobacco and the part of the said roller where the pins thereof come into engagement with the tobacco, the result of this being that there is a considerable variation between the weights of the cigarettes produced.

It has been proposed to provide a row of tampers arranged parallel with the carded roller, the said tampers being periodically and simultaneously raised, and together allowed to fall, or lowered under the action of their own weight, onto the tobacco to tamp it down toward the surface of the carded roller, the said tampers thus each applying the necessary pressure to the tobacco, irrespective of the thickness of the latter at the point of application, to ensure a more even feed.

In some cases, for example when the carded roller is driven by a belt or chain, it is found that a number of tampers applied simultaneously to the tobacco, to tamp it toward the surface of the said roller and so produce a more even feed, exert a braking action upon the roller, and, by so slowing down its speed of rotation, cause a reduction in the rate at which the tobacco is delivered to the cigarette-making machine.

According to the present invention the tampers are actuated in such order that there is always a minority of them moving into effective engagement with the tobacco and a majority moving through other positions, in order that the braking action upon said carded roller shall be reduced to a minimum.

The invention will now be described with reference to the accompanying drawing, in which:—

Fig. 1 is a front view showing the arrangement of and method of operation of the tampers.

Fig. 2 is a transverse section on line A—A of Fig. 1.

Referring to the drawing, 1 indicates the carded roller, 2 the picker roller, and 3 the brushing roller, while 4 indicates the tampers, which are provided with slotted upwardly extending shanks 5, each of which is provided at its upper end with a roller 6.

Running transversely of the tampers 4 and passing through the slots therein is a shaft 7, one end of which is provided with a sprocket 8 whereby the shaft may receive motion, either from some convenient moving part of the main machine, or provision may be made whereby it is independently driven.

Secured to the shaft 7 are eccentrics 9, one for each of the tampers, the roller upon each tamper engaging its own eccentric.

The eccentrics 9 are so set that the tampers 4 do not act simultaneously, but, as will be clearly seen on reference to Fig. 1, whilst some are in their effective positions, others are more or less remote from the carded roller 1, so that at no time is the weight of all the tampers acting on the tobacco.

By this means the working of the feed mechanism is not interfered with, and a substantial maximum output is maintained.

As previously explained, the shaft 7 passes through the longitudinal slots of the shanks of the tampers 4; the said shaft thus acts as a guide for the said tampers, a second guide being provided to maintain the tampers in their vertical position, this last-mentioned guide comprising a bar or rod 10 of rectangular cross-sectional outline, also passing through the slots in the tampers, and being disposed in convenient spaced relationship with respect to the shaft 7.

Any other means may be employed for operating the tampers, it being understood that such means provide for the operation of said tampers in the manner before stated.

I claim:

1. The combination with tobacco feeding means

for cigarette-making machines having a carded feed-roller and a picker roller, of a plurality of tampers for tamping tobacco between the pins of the carded roller, together with operating mechanism for actuating said tampers in such order that there is always a minority of them moving into effective engagement with the tobacco, and a majority moving through other positions, in order that the braking action upon said carded roller shall be reduced to a minimum.

2. The combination with tobacco feeding means for cigarette-making machines having a carded feed-roller and a picker roller, of a plurality of tampers movable rectilinearly toward and away from the carded roller to tamp tobacco between the pins thereof, together with operating mechanism for actuating said tampers in such order that there is always a minority of them moving into effective engagement with the tobacco, and a majority moving through other positions, in order that the braking action upon said carded roller shall be reduced to a minimum.

3. The combination with tobacco feeding means for cigarette-making machines having a carded feed-roller and a picker roller, of a plurality of tampers for tamping tobacco between the pins of the carded roller, together with operating mechanism for said tampers, said mechanism actuating said tampers by raising them and permitting them to fall in such order that only a minority of them at any instant are in effective engagement with the tobacco upon the card-

ed roller in order that the braking effect upon said roller is reduced to a minimum.

4. The combination with tobacco feeding means for cigarette-making machines, having a carded feed-roller and a picker roller, of a plurality of tampers movable rectilinearly toward and away from the carded roller to tamp tobacco between the pins thereof, together with operating mechanism for said tampers, said mechanism actuating said tampers by raising them and permitting them to fall in such order that only a minority of them at any instant are in effective engagement with the tobacco upon the carded roller in order that the braking effect upon said roller is reduced to a minimum.

5. The combination with tobacco feeding means for cigarette-making machines, having a carded feed-roller and a picker roller, of a row of tampers, slotted shanks upon said tampers, a horizontally disposed shaft passing through said slotted shanks, cams upon said shaft for operating said tampers, a rod passing through said slotted shanks and arranged parallel with said shaft, the said cams being so set as to raise said tampers and permit them to fall toward said carded roller and tamp tobacco between the pins thereof in such order that the braking effect upon the carded roller is reduced to a minimum, said shaft and rod cooperating with the slotted shanks to guide the tampers in order that their movement takes place rectilinearly.

WILLIAM HEATHERILL LOUDEN.