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S. HATHAWAY

2,624,344

TOBACCO STEMMER

Filed March 8, 1948

FIG. 1

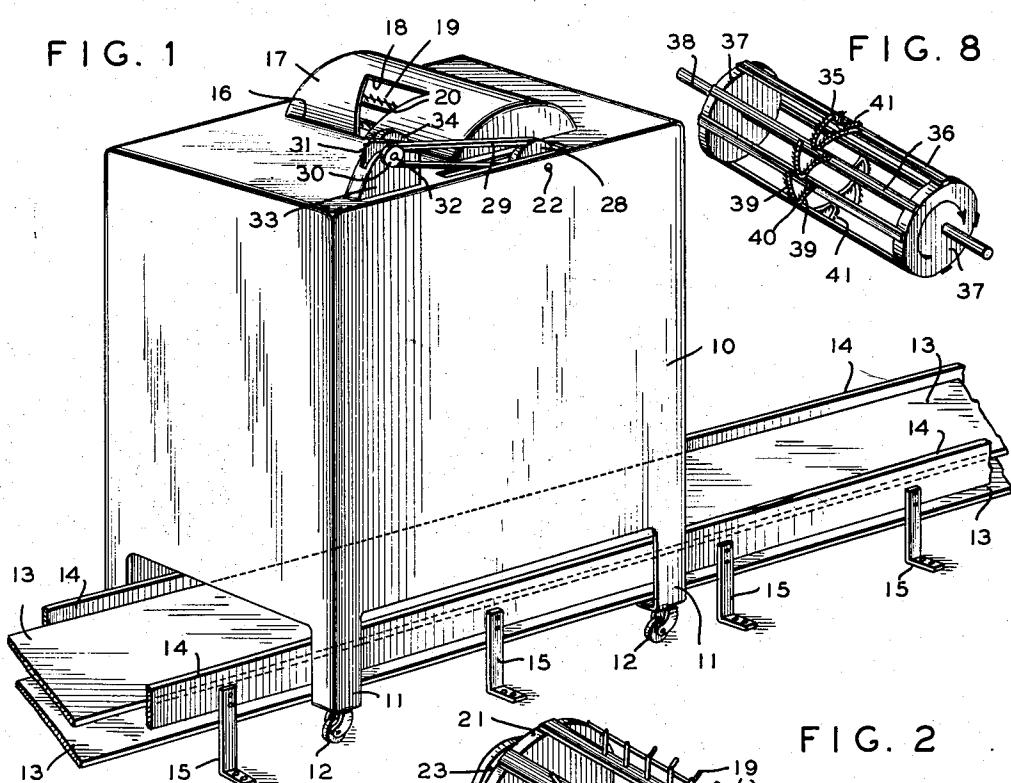


FIG. 8

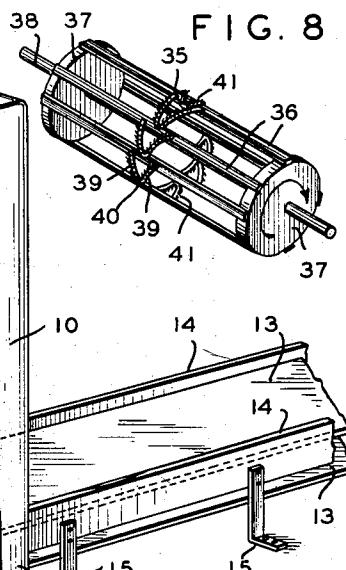


FIG. 3

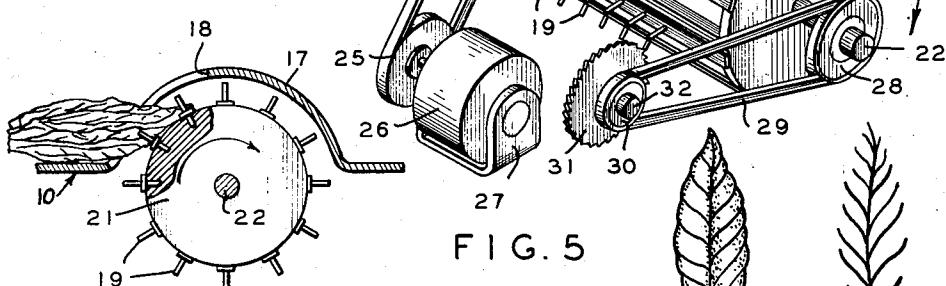


FIG. 2

FIG. 5

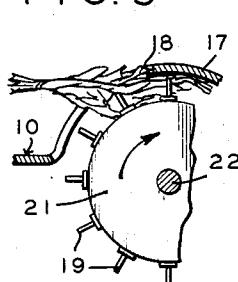


FIG. 6 FIG. 7

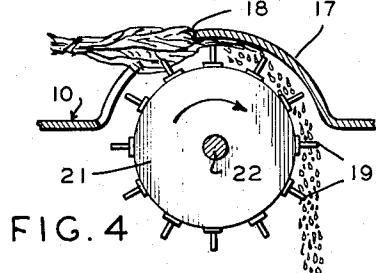
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FIG. 4



UNITED STATES PATENT OFFICE

2,624,344

TOBACCO STEMMER

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1 Claim. (Cl. 131—130)

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This invention relates to the tobacco industry and more particularly to machines for removing the stems of tobacco leaves so that the remaining portions of the tobacco leaves can be utilized in the manufacture of tobacco products.

Machines for removing the unusable portion of the leaves, namely the stems, are expensive, complicated, heavy, and cumbersome, as well as inefficient and therefore impractical.

There is a definite need for a tobacco stemmer of relatively small, compact, inexpensive construction which is of light weight and can be easily moved, as well as a machine that is practical and which includes a means for detaching the blade portions of the leaves from the stems.

It is therefore an object of the invention to provide a machine of this character susceptible of use over a conveyor in which the operating parts are enclosed to reduce as far as possible likelihood of injury to operators, attendants, or others.

Further objects and advantages of the invention will be apparent from the following specification taken in conjunction with the accompanying drawings wherein:

Fig. 1 is a perspective of a machine in accordance with the present invention and an associated conveyor;

Fig. 2, a perspective illustrating the operating parts;

Fig. 3, a detail section of the stripping drum and guard;

Figs. 4 and 5, similar views showing progress in the stripping action;

Fig. 6, a tobacco leaf prior to being stripped;

Fig. 7, a stem after the tobacco has been stripped therefrom; and

Fig. 8, a perspective showing a modified form of cleaning or stripping reel.

With continued reference to the drawings, the machine of the present invention includes a housing or casing 10 supported by legs 11 upon rollers or other anti-friction means 12 so that the machine which is of relatively light weight may be easily moved from place to place and employed in conjunction with a conveyor belt 13 operating between guards 14 supported by brackets 15. The top of the housing 10 is provided with a substantially rectangular opening 16 which is covered by a guard 17 having a substantially triangular opening 18 for reception of the tip ends of hands of tobacco in order to remove the leaf portions from the stems by means of the stemming mechanism. The stemming mechanism includes cleaning or stripping pins or

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fingers 19 supported on bars 20 attached to heads 21 and forming a cleaning reel. This cleaning reel is mounted on a shaft 22 supported in the frame of the housing 10 and is provided with a pulley 23 driven by a V-belt 24 and a pulley 25 from a motor 26 supported by a bracket 27 on the frame of the housing 10. On the opposite end of the shaft 22 is mounted a pulley 28 which drives a V-belt 29, pulley 30 and cut-off saw 31.

10 The saw 31 is mounted on a shaft 32 supported in a housing 33 and the saw is likewise provided with a guard 34.

In operation the stripping reel and the saw move in a clockwise direction as indicated by the 15 arrow in Figs. 2-5 and when the tip end of a hand of tobacco is presented to the tipping reel through the slot 18, the fingers 19 engage the blade portion of the leaves about the stem and strip them from the stem. It is necessary that a sufficient 20 amount of the stems be held in the hand to permit a firm grip thereon and consequently the stripped portion of the stems can be severed from the remaining portions by means of the saw 31.

The leaf structure stripped from the stem is 25 discharged by centrifugal force from the reel and deposited by gravity upon the conveyor 13. The cleaning or stripping pins or fingers 19 are preferably independently removable from the bars 20 on which they are mounted. While the stripping 30 pins or fingers 19 have been shown as straight and extending radially of the reel from the bars 20, it is to be understood that if desired these pins may be given a slight curvature in the direction of rotation in order to have a hook-like 35 effect in tearing the leaf portion from the stem.

A modified form of cleaning or stripping reel is shown in Fig. 8 and may comprise cleaning or stripping means 35 mounted on bars 36 which in turn are secured to heads 37. Heads 37 are 40 fixed on a shaft 38 which may be mounted in the bearings serving to support the reel previously described.

A plurality of cleaning means 35 is provided on the reel and each of these means may conveniently comprise a pair of arms 39 diverging from an apex 40 in the direction of rotation of the reel the arms 39 having a curvature substantially conforming to the periphery of the reel formed by the bars 36. The apex 40 as well as 45 the end of each arm 39 may conveniently be secured to bars 36 by welding or the like. In order to properly clean or strip the leaf portion from the stems, each bar 39 is provided with a plurality of teeth or fingers 41 which may either be 50 straight and extend radially from the reel or

which may be given a curvature in the direction of rotation of the reel.

The length of the arms 39 and the angle therebetween is such as to make the V formed thereby substantially the same dimensions as V-shaped slot 18 in the guard 17, thus presenting the cleaning pins or fingers adjacent the slot 18 to efficiently engage and strip the leaf portion from the stem.

It will thus be seen that the structure just above described provides a modified form of cleaning roll comprising a minimum number of parts and which will serve to engage and properly clean the leaves.

It will be obvious to those skilled in the art that various changes may be made in the invention without departing from the spirit and scope thereof and therefore the invention is not limited by that which is shown in the drawings and described in the specification but only as indicated in the appended claim.

What is claimed is:

A device for stripping the leaf portions of tobacco from the stems, comprising a platform having a substantially flat surface with a substantially rectangular opening therein, a reel rotatably mounted in said opening, a housing extending upwardly from the platform around the upper portion of said reel, said reel having fin-

gers projecting therefrom with the ends thereof slightly spaced from the edges of said substantially rectangular opening and the inner wall surface of said housing, said housing having a substantially triangular-shaped opening, one of the apices thereof being at the level of the platform and the opposite side from said apex being substantially parallel to the platform, the width of said side being of a dimension substantially corresponding to the width of a hand of tobacco whereby said hand of tobacco may be held above the platform with a portion of said hand substantially within the boundaries of the opening so that the rotating fingers will engage the leaves, strip them from the stem, and dispose them within the housing.

STANLEY HATHAWAY.

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20 The following references are of record in the file of this patent:

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