



(No Model.)

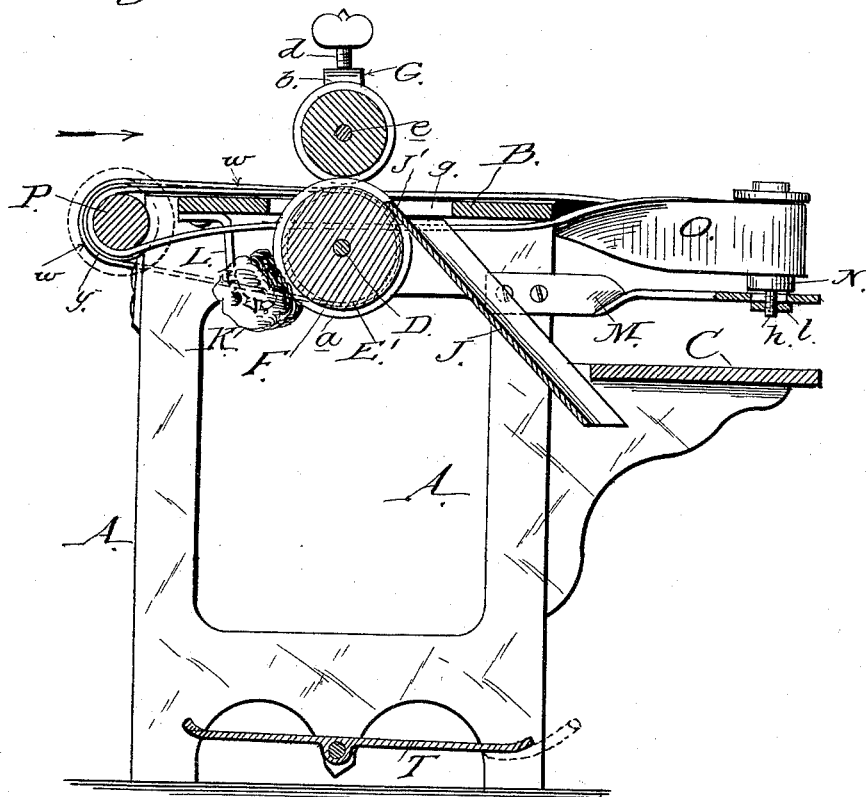
2 Sheets—Sheet 2.

J. H. STRAYER.  
LEAF TREATING MACHINE.

No. 458,686.

Patented Sept. 1, 1891.

*Fig. 2.*



WITNESSES

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# UNITED STATES PATENT OFFICE.

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## LEAF-TREATING MACHINE.

SPECIFICATION forming part of Letters Patent No. 458,686, dated September 1, 1891.

Application filed February 18, 1891. Serial No. 381,794. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HENRY STRAYER, a citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented certain new and useful Improvements in Leaf-Treating Machines, of which the following is a full and clear description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a side elevation of a leaf-treating machine embodying my invention. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a cross-sectional view on the line *x* of Fig. 1.

My invention relates to machines for treating leaf-tobacco; and my invention consists of the constructions and combinations of devices which I shall hereinafter fully describe and claim.

To enable others skilled in the art to which my invention appertains to make and use the same, I will now describe its construction and indicate the manner in which the same is carried out.

In the accompanying drawings, A represents any desired form of frame adapted to support the working portions of the machine. The upper portion of the frame forms a table B, upon which the leaf-tobacco is placed, while at one end of said frame is an extension which forms a supplemental table C, arranged in a lower plane than the main table and adapted to receive the parts of the leaf after the stem has been removed, as I shall hereinafter state.

Journaled in the upper portion of the main frame and extending transversely across the same is a shaft D, upon the opposite ends of which are secured pulleys E E', respectively, while at the center of said shaft is a rotary cutter F, having a deep peripheral groove *a*, whose side and bottom walls form a guide for the stem, which is permitted to be cut from the leaf without danger of its being crushed, the said cutter having beveled cutting-edges on each side thereof, as shown in Fig. 3.

Bolted to the upper surface of the table B is an angular arm G, having a vertical member *b*, provided with a slot *c*, within which is adapted to be loosely seated a bolt or short shaft *e*, threaded at one end to receive a nut

*f*, the purpose of which is to hold the upper cutter H in position, but not tightly, and to allow the cutter to rise and to fall (owing to irregularities in the stem) during the passage of the leaf and to confine the stem within the deep groove of the lower cutter, the said shaft *e* carrying at its opposite end the grooved cutter H, which lies immediately over the lower cutter and operates within the groove of the latter to remove the stem. The upper portion of the lower cutter operates within a slot *g* in the table B, and this slot is extended in front of the cutter and connects with the upper end of a spout or chute J, secured beneath the table and adapted to receive the stems after they are removed by the cutters and to discharge them beneath the machine into a suitable receptacle or otherwise, said chute having a tongue J' lying in the groove of the lower cutter.

To prevent the stems adhering to the lower cutter after they have been severed, I employ the tongue J' of the chute, while a moistening device—such as the sponge K, which is secured in a suitable holder L beneath the table—is kept moist and adapted to bear against the edges of the lower cutter to keep it wet and thereby prevent the lower cutter gumming.

Secured to the frame A and projecting forwardly are two arms M, which lie slightly above the supplemental table and have their outer ends slotted to receive the spindles or shafts *h*, upon which the loosely-vertical pulleys N are mounted, the said spindles being threaded at their lower ends for the reception of nuts *l*, whereby the spindles may be moved along the slots in the arms and the position of the pulleys changed to increase or decrease the tension of the belts O, which pass around them. These belts pass around drums P at the front side of the machine, and thence extend horizontally over the upper and lower faces of the table B to points near the rear of the table, where a quarter-twist is formed by reason of the belts passing around the vertical pulleys N. The belts lie upon each side of the lower cutter and are separated from each other, and when the leaf is placed upon the belts it is carried between the cutters, which divide the leaf longitudinally, severing the stem, which is directed into the discharge-

chute. The divided portions of the leaf are carried forward by the belts until they reach the quarter-twist therein, when they are directed onto the supplemental table ready for use.

Power to operate the machine may be of any well-known form. It is here shown as consisting of a pivoted treadle *T*, having an arm *m*, connected by a pitman *n* with a wrist pin or stud *r* on the large wheel *s*. This wheel is mounted on a stub-shaft *t*, which also carries a pulley *u*, from which a belt *v* runs to the pulley *E* on the shaft of the lower cutter. On the opposite end of the lower cutter-shaft is the pulley *E'*, from which a belt *w* runs to a pulley *y* on the shaft of the drum *P*, whereby the belts are operated.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a frame having a main table and a supplemental table below the same, horizontal drums at one end of the main table, vertical pulleys over the supplemental table, belts running over said main table and provided with a quarter-twist for directing the parts of the leaf from the main table to the supplemental table, means for operating the belts, the upper and lower cutters between which the leaf passes, whereby the stem is severed, and means for operating the lower cutter, substantially as herein described.

2. The main frame with its main and supplemental tables and a lower rotary cutter and means for operating the same, in combination with the horizontal drums at one end of the main table, the vertical pulleys supported over the supplemental table, the separated belts passing around the drums and pulleys and provided with a quarter-twist for directing the portions of the leaf from the

main table to the supplemental table, the yielding upper cutter, and a discharge-chute into which the severed stems are directed, substantially as herein described.

3. The combination of the main frame, the lower rotary cutter and means for operating the same, the yielding upper cutter, the horizontal traveling belts with their horizontal and vertical supporting-pulleys and operating mechanism, and a moistening device below the table and held against the lower cutter, substantially as herein described.

4. In a leaf-treating machine, the main frame, the lower cutter and its operating mechanism, and the carrying-belts and means for operating the same, in combination with an arm secured to the main table of the frame, having a slotted member *b*, a bolt or shaft secured within said slot and carrying the upper cutter, a spring within the slotted member, and a screw passing into the said member and engaging the spring, substantially as herein described.

5. A leaf-treating machine comprising a main frame provided with a main and supplemental table, a lower rotary cutter, means for operating the same, a yielding upper cutter, a slotted arm secured to the main table and carrying the upper cutter, the carrying-belts provided with quarter-twists for directing the severed leaf from the main table to the supplemental table, the drums around which the belts pass, the slotted forwardly-projecting arms at the opposite end of said table, the vertical pulleys for said belts, a discharge-chute for the stems, and a moistening device for the lower cutter, substantially as herein described.

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Witnesses:

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