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2 Sheets--Sheet 1.

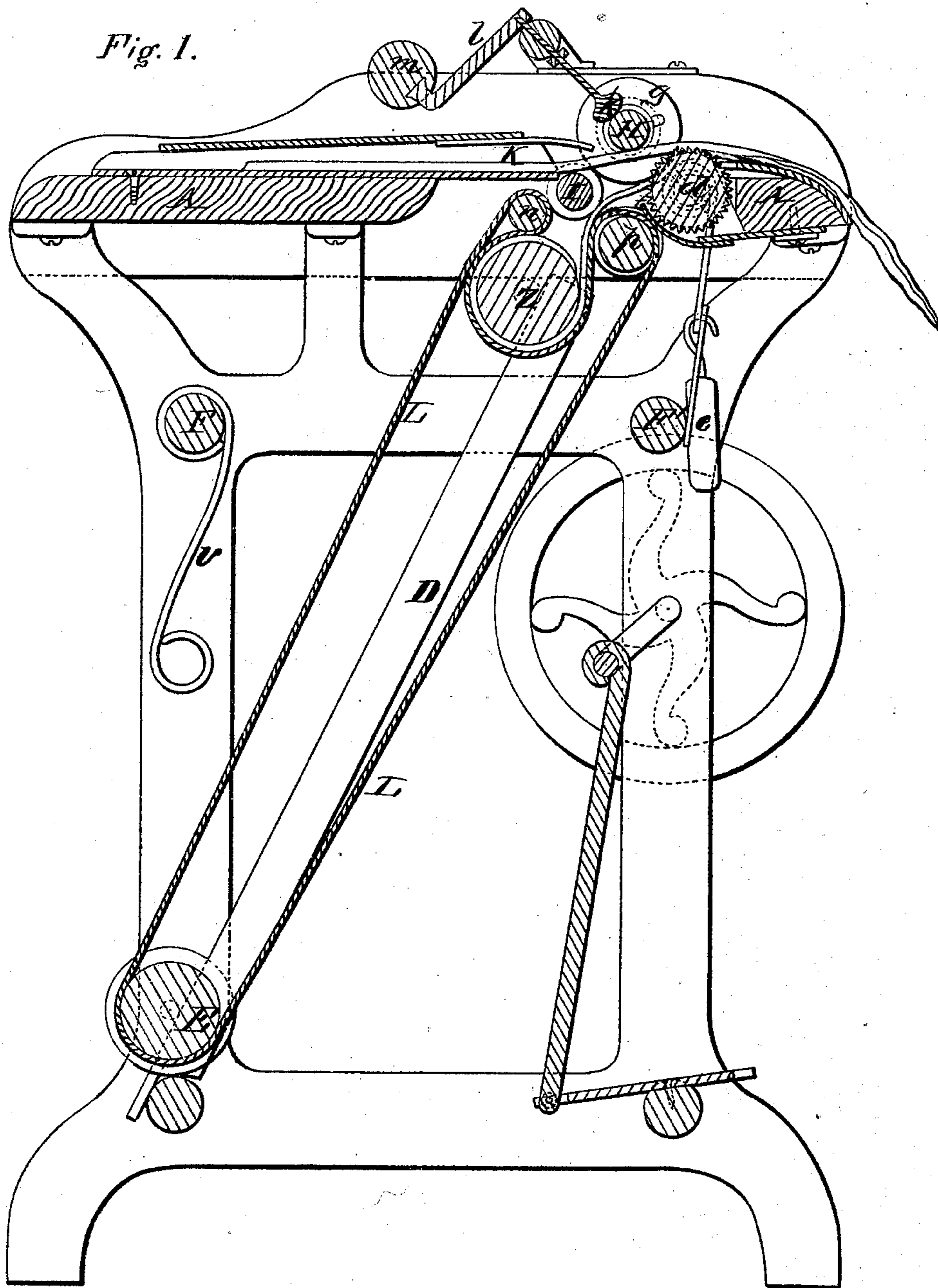
OTIS DEAN.

Improvement in Machines for Stripping and Booking Tobacco.

No. 122,816.

Patented Jan. 16, 1872.

Fig. 1.



Witnesses.

Villette Anderson

E. Anderson

Inventor.

Otis Dean

Chipman & Osmerd
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Fig. 2.

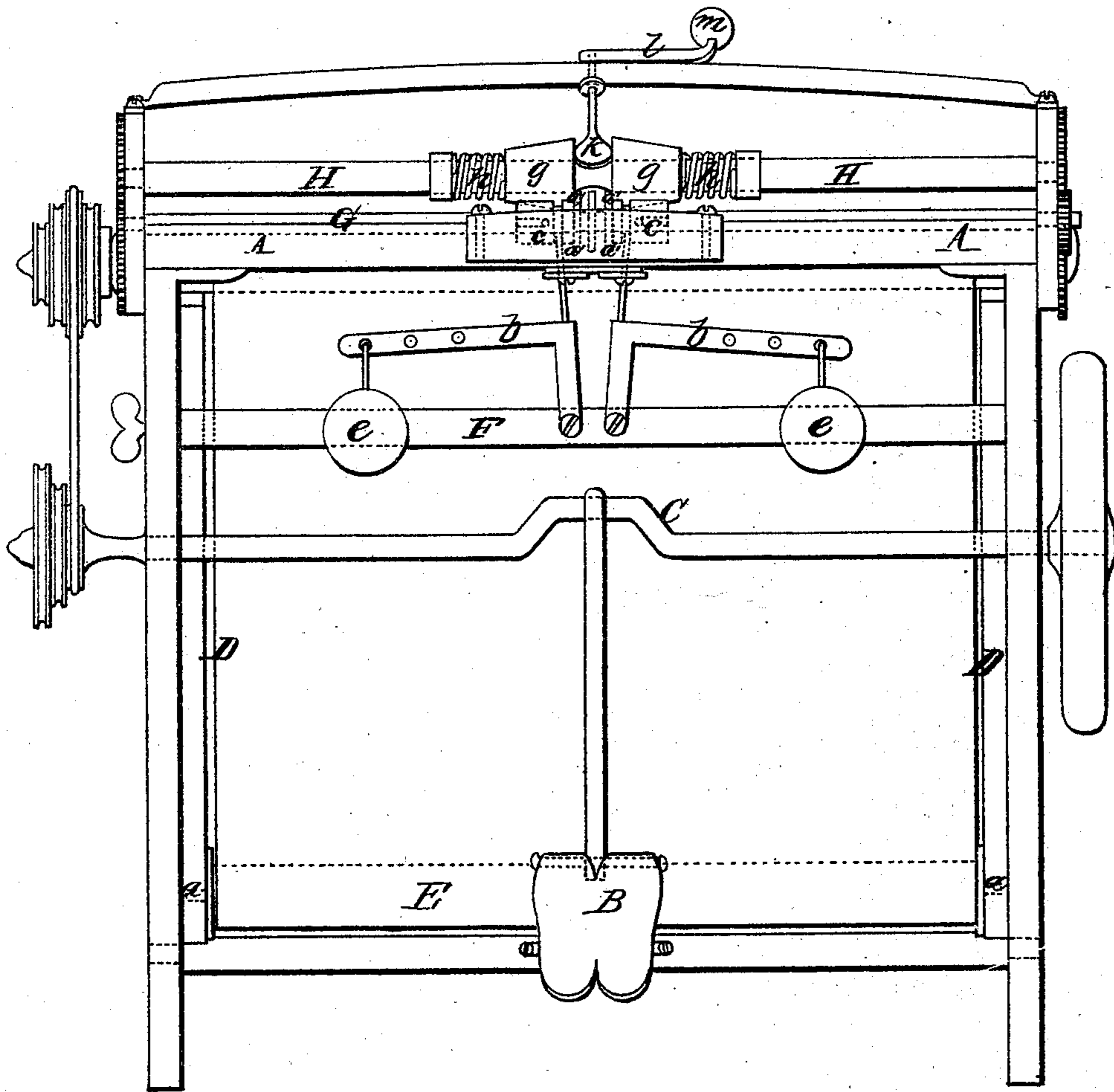
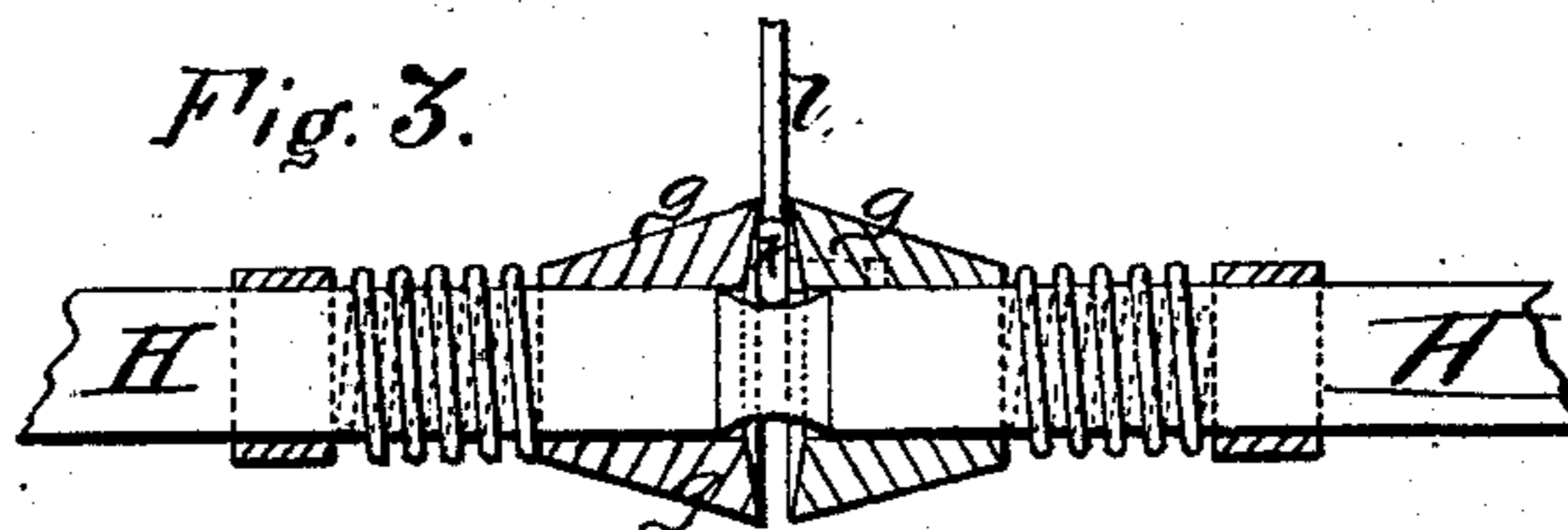


Fig. 3.



Witnesses.

Villette Anderson

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UNITED STATES PATENT OFFICE.

OTIS DEAN, OF RICHMOND, VIRGINIA, ASSIGNOR OF TWO-THIRDS OF HIS
RIGHT TO PHILIP WHITLOCK, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR STRIPPING AND BOOKING TOBACCO.

Specification forming part of Letters Patent No. 122,816, dated January 16, 1872.

To all whom it may concern:

Be it known that I, OTIS DEAN, of Richmond, in the county of Henrico, and State of Virginia, have invented a new and valuable Improvement in Machines for Stripping and Booking Tobacco; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a transverse central section of my improved tobacco-stripper and booker. Fig. 2 is a front view of the same; and Fig. 3 is a longitudinal section through the knives and a side view of its shaft and springs.

This invention has relation to certain improvements in machines for stripping and booking tobacco-leaves; and it consists of the automatically-closing knives and feeder and the novel arrangement of the endless belt and its rolls, as hereinafter described.

In the accompanying drawing, the letter A designates the table or frame, provided with a treadle, B, and crank-shaft C, or other means for communicating motion to the knives and rolls. D represents inclined guides attached to the sides of the frame, and designed to keep the lower or weighter roll E of the booking-band in proper position. These inclined guides serve as bearings for the journals *a a* of said roll. F F' are transverse bars screwed to the frame near the upper portion, and serving for the attachment of certain devices hereinafter described. Pivoted to the front transverse bar F are two elbow-levers, *b b*, which engage with the sliding collars *c c*, which serve to guide the stem over the toothed feeding-wheel *d* secured to the shaft G. The collars *c c* slide on the shaft G. They are slotted to engage with pins which project from the shaft, and prevent the said collars from rotating on the shaft. They are also provided with grooves to engage with the upwardly-projecting arms of the levers *b b*. The horizontal arms of these elbow-levers are notched or perforated to permit of the adjustment of the weights *e e*. At the inner end of each of these collars is a flanch, *a'*, at its outer edge of about the same diameter as the

feed-wheel, but sloping or beveled toward the inner edge, thus having a tendency to center the stem upon the feed-wheel. These flanches *a'* are provided with cutting-edges on the outside, and engage with the main cutters on the shaft H, rotating between and intersecting the same. The shaft H is somewhat constricted or channeled at its center to assist in centering the stem. On each side of this channel are the cutters *g g*, each of which is, preferably, in the form of a frustum of a cone, the cutting-edge being at the base. These cutters are provided with slots to engage with pins on the shaft H, or other suitable means, to permit of the movement of said cutters lengthwise on the shaft. These cutters are kept up to the stem by means of springs *h h*, which press against the outer ends of the frustums, forcing the same constantly toward each other. Between the cutters is placed a cam, *k*, which turns upon an oblique stem in a suitable bearing, and is provided with a crank-arm, *l*, having upon its outer end a weighted knob or handle, *m*, adapted to be operated automatically or by hand. By means of this cam the movement of the cutters can be effectually controlled. Somewhat in rear of and downward from the shaft H is placed a roller, I, centrally channeled, to guide the stem into the way K, through which it passes off. The feed-wheel *d* is made slim, and is toothed upon its periphery. Around the lower portion of the periphery of said wheel passes a clearing-arm, *t*, which serves to keep the wheel free. L represents an endless band, passing over the small rollers *n* and *p*, and under the booking-roll Z and the weighted or counterbalancing roll E. The wings of the leaf, relieved from the stem, are pressed downward by the conical-shaped knives, and are guided around the booking-roll Z, being pressed in their passage between the rollers I and *n*. The small roller *p* serves to keep the leaf closely rolled on the booking-roll Z. As the leaf accumulates on the roll Z the counterbalancing-roll E rises, and when the roll is full the band is loosened by placing the journals of the weighted roll in the hangers *v v*, pendent from the rear transverse bar F'. The booking-roll with its contents may then be readily removed.

In this machine it is designed to feed the leaves with the large end of the stem or mid-

rib in advance. The feed-guides and the knives will then close automatically as the stem grows smaller, thus cutting the stem out clean, and avoiding waste of the leaf.

I claim as my invention—

1. In a machine for stemming tobacco-leaves, the automatically-closing knives *g*, substantially as specified.

2. In a machine for stemming tobacco-leaves, the combination, with the automatically-closing knives *g*, of the toothed feed-wheel *d* and the automatically-expanding knives *c c*, substantially as specified.

3. The combination, with the knives *g g*, feed-

wheel *d*, and expanding knives *c c*, of the cam *k*, having an oblique shaft and automatically operated, substantially as specified.

4. The combination, with the booking-roll *Z*, of the endless band *L*, reverse rolls *n* and *p*, and rising roll *I*, substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

OTIS DEAN.

Witnesses:

RO. HOWARD,
ISBIN BENEDICT.

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