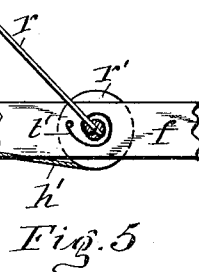
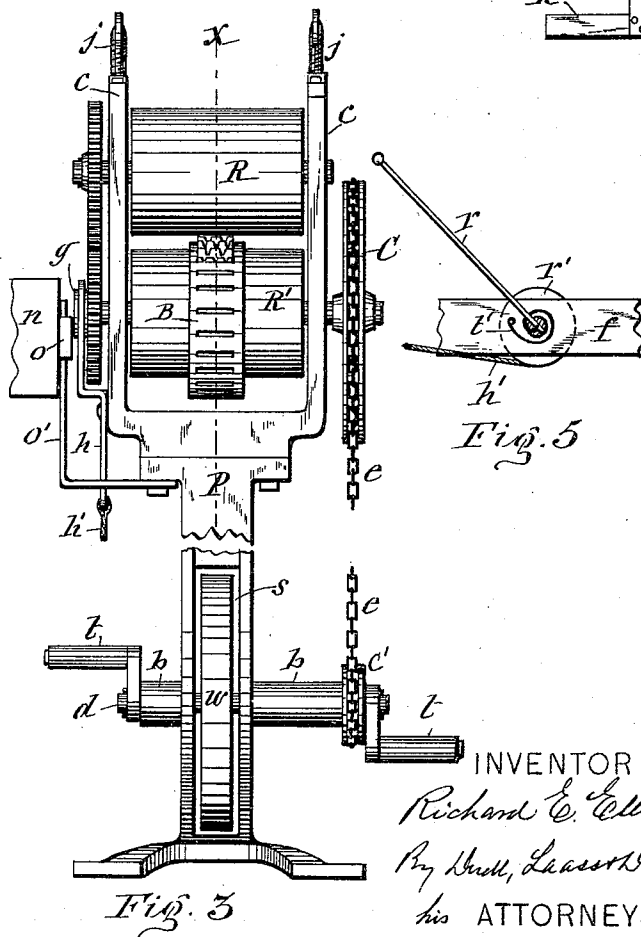
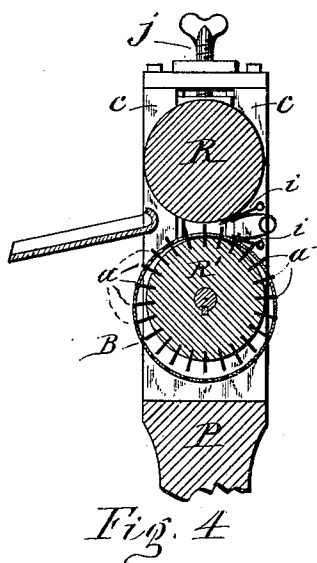
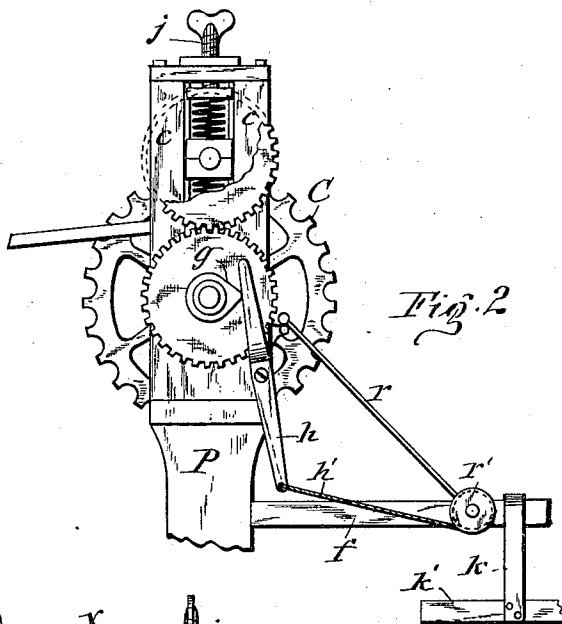
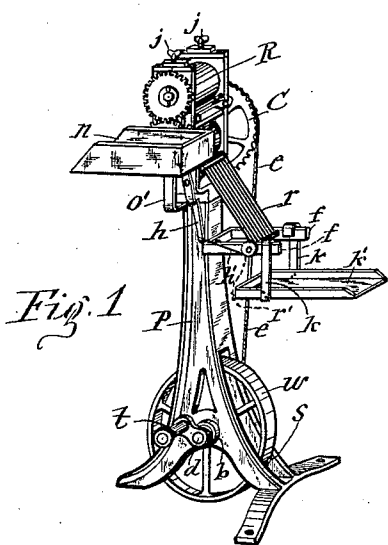


(No Model.)

R. E. ELLIS.
MACHINE FOR TREATING LEAF TOBACCO.

No. 467,246.

Patented Jan. 19, 1892.



WITNESSES:

H. M. Seamans
Mark W. Dewey

INVENTOR:

Richard E. Ellis
By Hull, Leason & Hull
his ATTORNEYS.

UNITED STATES PATENT OFFICE.

RICHARD E. ELLIS, OF SYRACUSE, NEW YORK, ASSIGNOR OF ONE-HALF TO
FREDERICK BASTABLE, OF SAME PLACE.

MACHINE FOR TREATING LEAF-TOBACCO.

SPECIFICATION forming part of Letters Patent No. 467,246, dated January 19, 1892.

Application filed April 1, 1891. Serial No. 387,205. (No model.)

To all whom it may concern:

Be it known that I, RICHARD E. ELLIS, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Machines for Treating Leaf-Tobacco, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to a machine designed to crush or cut up the stems in tobacco-leaves, so that the stems can be worked with the leaves into cigars.

The invention is a specific improvement of the machine for which I have obtained Letters Patent of the United States No. 339,089, dated March 30, 1886, by which improvement said machine is rendered more convenient in its operation.

The invention is fully illustrated in the annexed drawings, in which—

Figure 1 is a perspective view of a machine embodying my invention. Fig. 2 is an enlarged side view of the devices for automatically throwing the treated tobacco-leaves from the machine. Fig. 3 is a rear view of the upper and lower portions of the machine. Fig. 4 is a vertical transverse section on line *x x*, Fig. 3, and Fig. 5 is a detail view of the spring attachment to the leaf-delivering device of the machine.

Similar letters of reference indicate corresponding parts.

R' represents the roller, which is armed with a circumferential row of cutters *a a* and has hung on it the annular clearing-band *B*, which is provided with transverse slots through which the cutters of the top portion of the roller protrude, and *R* denotes the pressure-roller, which is over the roller *R'*, parallel therewith and in proximity thereto, so as to press against the cutters the stems of the tobacco-leaves which are passed between the two rollers. Said cutters crush or cut up the stems of the leaves, and as the treated leaves issue from between the said rollers the clearing-band *B* pushes the leaves from the cutters. By means of scrapers *i i*, held in contact with the pressure-roller *R* and band *B*, the gumming up of said parts is prevented. All of the aforesaid devices are constructed

and operate in the same manner as described in my aforesaid prior patent. In connection with said devices I now employ an improved supporting-frame consisting of the pedestal *P*, which is formed at its base with the vertical slot *s* and journal-bearings *b b* at opposite sides of said slot. The upper end of said pedestal terminates with the vertical parallel jaws *c c*, in which are seated the journal-boxes of the rollers *R R'*. The journal-boxes of the top roller *R* ride on springs and receive a downward pressure by set-screws *j j*, working in screw-threaded eyes in caps attached to the top of the jaws *c c*. The lower ends of said set-screws bear on plates mounted on coil-springs, which are seated upon the boxes of the aforesaid top roller. By means of said set-screws the tension of the springs can be adjusted to impart the desired pressure to the roller *R*.

For operating the machine by foot-power I journal in the bearings *b b* a shaft *d*, to which is secured the balance-wheel *w* within the slot *s*. To the ends of said shaft I attach treadles *tt*, and adjacent to one of said treadles I attach to the shaft a sprocket-wheel *C'*, which by a driving-chain *e* is connected with a sprocket-wheel *C*, attached to the end of the shaft of the cutting-roller *R'*.

ff represent two horizontal arms, which are firmly attached at one end to the pedestal *P* beneath the cutting-roller *R'*. To the free ends of these arms I connect hangers *k k*, which carry a tray *k'*. Between the arms *ff* and pivoted thereto is the lower end of a chute *r*, to the axis of which is rigidly attached a pulley *r'*, and on the periphery of this pulley is wound one end of a cord or very light chain *h'*, so that by pulling on said cord or chain the pulley is caused to turn and swing the chute with its upper end over and down toward the tray *k'*. It is obvious that the pulling of the cord or chain may be done at will of the operator; but when it is desired to effect this automatically one end of the cord or chain *h'* is connected to the lower end of a lever *h*, pivoted to the supporting frame or pedestal *P*. To the end of the shaft of the cutting-roller *R'* is fastened a suitable cam *g*, against which the upper end of the lever is held by the action of a coil-spring *t'*, which

is connected at one end to the pulley r' and at the opposite end to the adjacent arm f . Said spring exerts a force on the pulley in opposite direction from that in which the cord is wound on the pulley, thus causing said pulley to draw on the cord or chain h' and hold the lever h in contact with the cam g and at the same time hold the chute r normally inclined with its upper end to the roller R' , as shown. During the rotation of the cutting-roller R' the cam g actuates the lever h , so as to turn the pulley r' by the draft on the cord or chain h' , and the turning of said pulley throws the upper and free end of the chute r away from the roller R' and over toward the tray k' , and in said movement the said chute throws the treated tobacco-leaf issuing from between the rollers $R R'$ over and upon the aforesaid tray, where the treated leaves of tobacco are collected for subsequent use.

n represents a receptacle for the tobacco-leaves to be treated, which receptacle is detachably connected to the machine by means of a loop o , attached to the side of the receptacle and receiving through it the free end of an arm o' , attached to the supporting frame or pedestal P , as shown in Fig. 3 of the drawings. The tray k' , being likewise detachably connected to the arms $f f$, which latter are also detachable from the pedestal P , renders the machine compact and convenient for shipment.

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

1. In combination with the cutting-roller R' , pressure-roller R , and their supporting-frame, the chute r , pivoted at its lower end, the pulley r' , fixed to the axis of the chute, a spring forcing the chute with upper end toward the cutting-roller, and a cord wound on the said pulley in opposite direction from that of the force of the spring, and a lever connected to said cord for operating the same, as set forth.

2. In combination with the cutting-roller R' , pressure-roller R , and their supporting-frame, the arms $f f$, the chute r , pivoted to said arms, the pulley r' on the axis of the chute, a spring connected to the pulley and one of the arms f and holding the chute normally inclined to the cutting-roller, the cam g on the shaft of said roller, the lever h , pivoted to the frame and having one end lying on the cam, and a cord or chain h' , connecting the opposite end of the lever to the pulley r' , substantially as described and shown.

In testimony whereof I have hereunto signed my name this 21st day of March, 1891.

RICHARD E. ELLIS. [L. S.]

Witnesses:

MARK W. DEWEY,
C. L. BENDIXON.