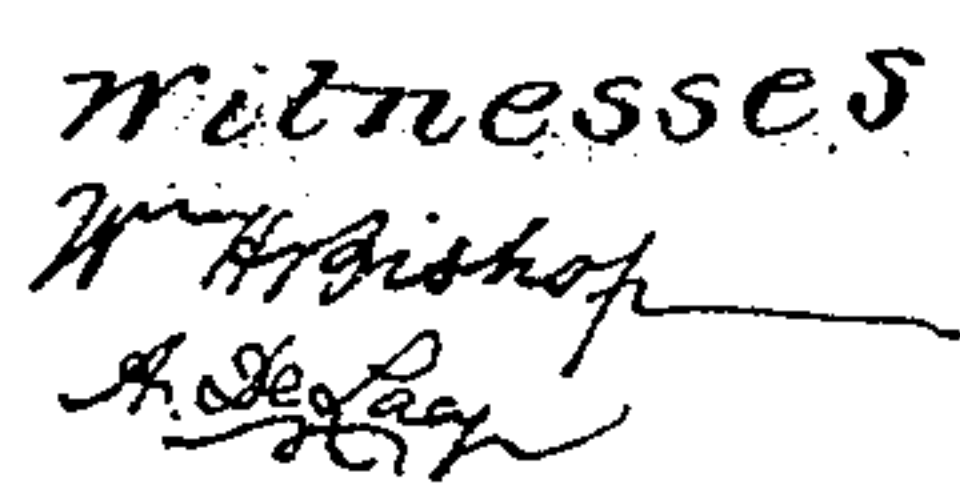


Pressing and Cutting Tobacco.

Patented Jan. 27, 1863.



William W. Huse.

UNITED STATES PATENT OFFICE.

WILLIAM W. HUSE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN MACHINES FOR PRESSING AND CUTTING TOBACCO.

Specification forming part of Letters Patent No. 37,508, dated January 27, 1863.

To all whom it may concern:

Be it known that I, WILLIAM W. HUSE, of Brooklyn, Kings county, and State of New York, have invented certain new and useful Improvements in Machinery for Preparing Chewing-Tobacco; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a plan of the machine, and Fig. 2 a longitudinal vertical section.

The same letters indicate like parts in all the figures.

My said invention relates to improvements on a method of preparing chewing-tobacco invented by me and described in an application for Letters Patent now pending in the United States Patent Office, according to which method the tobacco is laid in light wooden troughs open at top and at both ends, leaves to form the wrapper being first laid on the bottom of the troughs, the filling on top of that, and then covered with other leaves or wrappers, and such troughs thus charged by hand with the tobacco passed through under a pressure-wheel to press the tobacco sufficiently to admit of transferring it from the wooden troughs into strong iron troughs, in which it is in like manner subjected to heavy pressure to compact it, so that it can be cut in suitable lengths to form plugs, as required by the trade.

The object of my present improvements is to save in part the time and labor requisite for handling and refilling the heavy iron troughs required for the second pressing, and also the time and labor required for cutting the long strips of compressed tobacco into suitable lengths for plugs; and according to my said invention of improvements the tobacco is taken by hand from the light wooden troughs after having been partially pressed, or however otherwise properly prepared, and laid in a moving endless trough, *a*, formed by hinged sections into an endless chain passing around two rollers, *b* and *c*—one at each end—the roller *b* receiving motion by a band or belt, *d*, from a wheel, *e*, on the main shaft, *f*, and passing around a pulley, *g*, on the shaft of the roller, or by other and equivalent means. As the strips or slivers of partially-compressed tobacco are laid in this endless trough, the ends

should be carefully lapped, so that they shall be joined by the after process of compression, and if the ends to be lapped are not sufficiently beveled or thinned off when taken from the wooden troughs the attendant can shave them off to the required bevel with a knife or other suitable means. The endless trough in this way presents and feeds the slivers or strips of tobacco to and between two endless belts, *h h*, made of leather or other suitable material, that pass around two pairs of rollers, *i i* and *j j*. The shaft of one of these rollers carries a pulley, *k*, which receives a belt, *l*, from a pulley on the shaft of the roller which imparts motion to the endless trough. In this way one of the endless belts is made to travel at the same velocity as the endless trough, to receive and carry the tobacco at the same velocity as it is delivered by the trough. The two pairs of rollers are so placed that the proximate surfaces of the two belts *h h* are a little nearer to each other than the thickness of the sliver of tobacco presented by the endless trough, so that it will be slightly compressed in passing between the belts. This, however, is not very material, as the chief purpose of the belts is to transfer the sliver of tobacco from the endless trough to what I denominate the "trough-wheel." This trough-wheel *m* is placed just beyond the two belts *h h*. It is mounted on the main shaft *f*, and its periphery is flanged on each side to make a continuous trough with parallel sides, which embrace the two rollers *i* and *j* nearest to it, and around which the two belts *h h* pass. As the end of the sliver of tobacco between the two belts reaches the periphery of the wheel *m*, it is bent and carried up by the rotation of the wheel and between it and the upper belt, and in so passing it is compressed against the periphery of the wheel, the side flanges of which prevent it from spreading laterally. It is sufficiently pressed into this endless trough to be carried around by the rotation of the wheel to the other side, where it is compressed by a pressure-roller, *n*, the periphery of which extends into the trough-like space between the flanges of the wheel *m*. The thickness of the pressure-roller *n* should be such as to fit accurately but freely between the said flanges. The shaft of the pressure-roller *n* is mounted in boxes *o*, adapted to slide in the sides of the frame, and behind these

boxes blocks of india-rubber or other suitable springs, *p*, are placed, (shown by dotted lines,) to yield to any undue thickness of tobacco; but the roller should be so set relatively to the periphery of the wheel *m* as to give to the sliver of tobacco the required degree of compression. The pressure-roller is carried by contact of its periphery with the sliver of tobacco which is carried by the wheel *m*; but, if desired, the shaft of the pressure-roller may be geared so as to be made to travel with the same velocity as the periphery of the wheel *m*. As the continuous sliver of tobacco passes out from between the wheel *m* and roller *n*, it passes to and between two rollers, *q* and *r*. The roller *q* is free to turn, and the other, *r*, is rotated by a belt, *s*, or equivalent means, so that its periphery shall travel at the same speed as the periphery of the trough-wheel. The periphery of the roller *r* is armed with radial knives or cutters *t*, whose cutting-edges in the rotation pass in contact, or nearly so, with the periphery of the roller *q*, so that the compressed sliver of tobacco in passing between these two rollers is cut into plugs of the required length, depending on the distance between the several knives or cutters.

To prevent the tobacco from adhering to the knives after being cut, the periphery of the roller *r* between the knives is covered with vulcanized india-rubber, which is compressed by the tobacco in passing between the rollers, so that the india-rubber in recovering its original form shall force off the plugs of tobacco from the knives; but other suitable means may be used to insure the delivery of the plugs as they are cut off from the sliver. The plugs so cut off are then to be treated in any suitable manner.

The two belts *h h* may be dispensed with, in which case one of each of the pairs of rollers *i* and *j* is to be removed and the endless trough-chain placed sufficiently near to the remaining rollers *i* and *j*, which then perform the duty of the two belts—viz., receiving the sliver of tobacco from the chain, pressing the

slivers to cause them to stick together where they are lapped, and of transferring the sliver to the trough-wheel.

The moving parts are described and represented as being driven by belts or bands; but it will be obvious that other modes of gearing may be substituted.

The sole object of making the endless feeding-chain with sides in the form of a trough is to hold the slivers on the chain, and therefore any equivalent means may be substituted for the sides, or all such means may be dispensed with if the person attending the machine will be careful in placing the slivers on the feed-chain and keeping them in place.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The wheel-trough—that is, the wheel with flanges each side of its periphery, into which the slivers of tobacco are to be placed and compressed—in combination with the two endless belts or equivalent rollers for introducing the slivers of tobacco to the trough-like periphery of the wheel, and the pressure-roller for compressing the tobacco after it has been introduced into the trough-like periphery of the wheel, substantially as and for the purpose specified.

2. The endless feeding-chain, substantially as described, in combination with the trough-wheel, the two belts or equivalent rollers for transferring the slivers from the feeding-chain to the wheel-trough, and with the pressure-roller for compressing the tobacco into the wheel-trough, substantially as and for the purpose specified.

3. In combination with the wheel-trough and pressure-roller, a cutting mechanism, substantially as described, for cutting the compressed sliver of tobacco into plugs of the required length, as set forth.

WILLIAM W. HUSE.

Witnesses:

ANDREW DE LACY,
WM. H. BISHOP.