

Patented Feb. 8. 1870.

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United States Patent Office.

MARTIN M. KLUCK, OF HARTFORD, CONNECTICUT, ASSIGNOR TO HIMSELF
AND HERMAN GLAFCKE, OF SAME PLACE.

Letters Patent No. 99,687, dated February 8, 1870.

MACHINE FOR SPREADING TOBACCO-LEAVES.

The Schedule referred to in these Letters Patent and making part of the same

I, MARTIN M. KLUCK, of Hartford, in the county of Hartford, and State of Connecticut, have invented a certain Improved Machine and Process for Spreading Tobacco-Leaves, of which the following is a specification.

Nature and Objects of the Invention.

In preparing the leaves of the tobacco-plant for use in making cigars, they are made to go through a process of "booking," which is merely spreading the leaves out one after another, so as to make them as free from creases as possible; and then piling them one upon another, like the leaves of a book. This is done by manual labor, and, so far, has never been well done.

It has not been possible to take the crease out of the leaves, and the process, as at present practised, requires a great expenditure of time.

My machine is intended to do just this work in a perfect manner, and with vastly more rapidity than it has ever been done by hand.

Description of the Accompanying Drawings.

Figure 1 is a front elevation.

Figure 2 is a side elevation.

Figure 3 is a plan view.

Like letters indicate like parts in all the figures.

General Description.

The machine is in the shape of a table, of about the height and general size of a sewing-machine table.

To the top of the table *a* are affixed the two standards *b* and *b'*, united by the bar *s*, for the sake of strength.

These standards support the two hollow cylinders *c* and *d*, in such a way that the surface of the upper cylinder lies always upon the surface of the lower.

The axle of the lower cylinder is separate from the cylinder, so that it can be taken out and another cylinder put on. The cylinder is made, however, to revolve with the axle, by means of the set-screw *i*.

The axle of the lower cylinder turns in fixed bearings in the standards *b* and *b'*. It shoves into its bearings from the pulley end, and is kept in place by fastening on its cylinder, through which it must be inserted at the same time it is put into its bearings.

The axis of the upper cylinder turns in two perpendicular grooves *n* and *n'*, so that it can rise and fall freely.

Both cylinders are furnished with a longitudinal groove, in which to fix, by means of a slot almost filling the groove, the respective ends of a long, thin band, *x*, of some water-proof stuff, such as, for instance, India rubber, or impermeable paper. A breadth of the stuff of about eighteen inches is quite sufficient for spreading the largest leaf. The length is optional, only the stuff must be as thin as possible, so that as many yards as possible can be put upon the cylinders.

The axle of the lower cylinder is driven from the op-

erator by means of the operator's feet operating upon the tread-wheel *y*.

The intermediate agents, the grooved wheels *e* and *h*, and the cord *g*, are obvious at a glance. The operator's heels rest upon the heel-rest *f*. With the balls of his feet, first with one foot, and then with the other, he revolves the tread-wheel; the motion is not fast, but it is fast enough, as it is multiplied before it reaches the axle of the cylinder *d*, and from the peculiar shape of the tread-wheel, the operator can stop it instantly by holding his foot still.

To commence operations, the band is wound entirely upon the upper cylinder, one end only being fastened to the lower cylinder.

The machine now being put in motion, the operator takes a leaf of tobacco, and holds its point between the two cylinders *c* and *d*. As this leaf is gradually absorbed by the lower cylinder, it is spread out flatly to its fullest extent, the operator meanwhile having a chance to remedy any temporary difficulty which may occur.

Other leaves are then wound on the lower cylinder in the same way, till the band is exhausted. With each alternate leaf the stem is held first to the right, and then to the left, so as to keep the surface even.

As soon as the lower cylinder is full, the set-screw *i* is loosened, the cylinder taken off the axle, and an elastic band put around the full cylinder, and it is left to lie in this condition for ten or twelve hours, the operation just described going on meanwhile, with other cylinders kept in readiness.

After the leaves have lain the requisite time in their extended position, the cylinder is replaced in the machine, and the band rolled off, by means of a winch upon the upper cylinder, and is, at the same time, rolled on to the upper cylinder.

The winch is operated by the left hand, while, with his right, the operator catches the leaves as they fall, and piles them into a "book."

By this mode of procedure, a considerable gain in time is made over the old hand-process, and a still greater gain in material.

Claims.

I claim, as my invention—

The stationary cylinder *d*, the movable cylinder *c*, and the connecting-band *x*, when constructed, arranged, and operated substantially as described, for the purposes set forth.

Also, the combination of the cylinder *d* and the band *x*, constructed, arranged, and operating substantially as described, for the purpose set forth.

Also, the process, set forth herein, of spreading tobacco leaves.

MARTIN M. KLUCK.

Witnesses:

WM. E. SIMONDS,

H. GLAFCKE.