L. Planer.

Sheet 1-2 Sheets.

Tobacco Cutter.

No. 46,820. Patented Mar. 14, 1865.

Fig. 2.

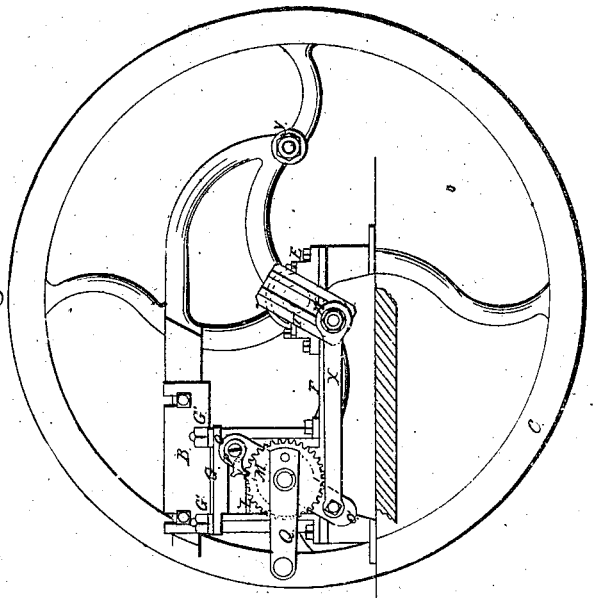
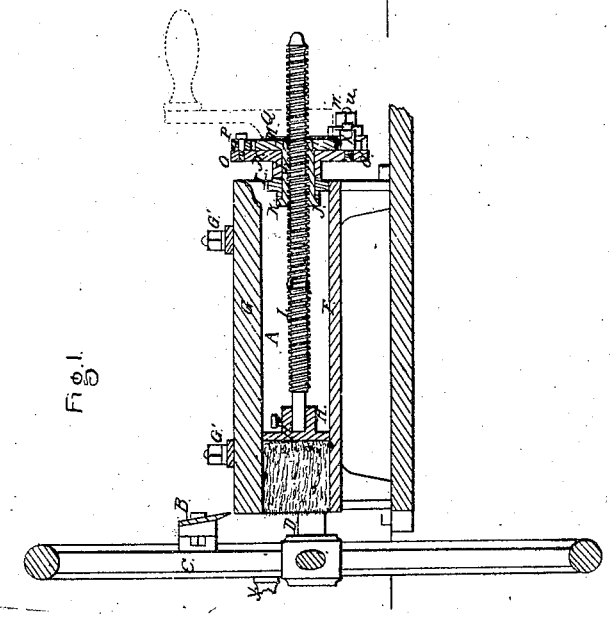


Fig. 1.



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Tobacco Cutter.

No. 46,820. Patented Mar. 14, 1865.

Fig. 3.

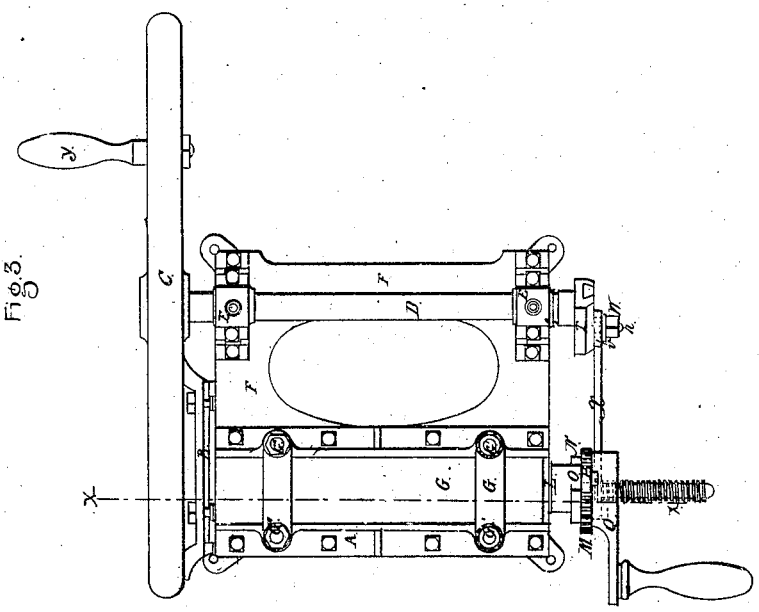


Fig. 4.

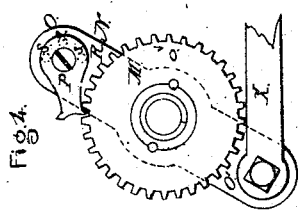


Fig. 5.

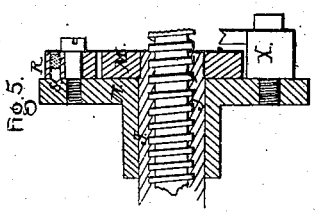
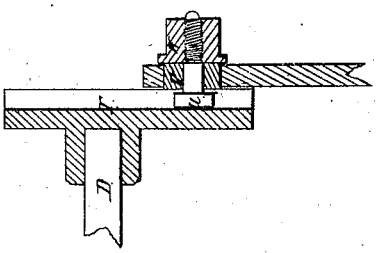


Fig. 6.



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UNITED STATES PATENT OFFICE.

LOUIS PLANER, OF NEW YORK, N. Y.

IMPROVED MACHINE FOR CUTTING TOBACCO.

Specification forming part of Letters Patent No. **46,820**, dated March 14, 1865.

To all whom it may concern:

Be it known that I, LOUIS PLANER, of the city, county, and State of New York, have invented certain new and useful Improvements in Tobacco-Cutting Machines; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a longitudinal vertical section of my improvements in tobacco-cutting machines, the line of section taken in a plan indicated by the line *x x*, Fig. 3. Fig. 2 is a rear elevation of the same. Fig. 3 is a top view of the same. Fig. 4 is a detached view of the feed-wheel and feed-lever on a larger scale; Fig. 5, a longitudinal vertical section of the same. Fig. 6 is a vertical section of the adjustable crank-pin and connecting-rod, which transfer motion to feeding device.

Similar letters of reference indicate corresponding parts in the several figures.

It is very essential in a tobacco-cutting machine to have a perfect feed which cannot vary, except at the will of the operator, and which will be equally effective in this respect when either hand or other power is employed in running the machine. Again, it is essential to be able to adjust the feed so as to get a very small or a very large cut without the delay of altering the arrangement or changing any of the parts of the machine.

I am aware that tobacco-cutting machines have been made with an adjustable feed before my invention; but they have been wanting in either some or all of the foregoing elements, as well as being objectionable on account of great wear from friction of parts used in their arrangement and loss of power in running them.

The objects of my improvements, therefore, are as follows: To obtain in a tobacco-cutting machine a true and regular feed, and at the same time be able by a rapid and simple adjustment to make any cut varying from a very fine to a large one; also, by the same arrangement of parts being able to economize power and to do away with much friction, and consequently wear of parts; also, to be able by the same arrangement of parts to back out the piston, in order to allow of the box of the machine being refilled with tobacco to be cut. I can effect this last operation by means of a hand-crank, either while the machine is in motion or at rest. Still it is evident that where the machine is in such a position that there is not space enough to operate the hand-crank my aforesaid method of backing out the piston by the power of the machine would be the more convenient one. I therefore employ in a tobacco-cutting machine an arrangement of parts by means of which an adjustable but uniform and reversible feed is obtained. The hand-crank before referred to may be used not only for backing out the piston, but also, when the machine is cutting loose tobacco, for pressing the tobacco forward toward the knife before commencing the cutting operation and in order to pack it for the purpose of being cut.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents the tobacco-box.

B is the cutter attached to the fly-wheel C, and D the fly-wheel shaft mounted in bearings E, the whole arranged upon the frame F, and in proper relation to each other, in the usual way for cutting the tobacco on the one end of the box by rotating the fly-wheel C.

G is the cover of the box A, which is secured by means of nuts and screws G′ in the ordinary way.

H represents the piston attached to the coarse threaded screw I, by means of which the tobacco is forced toward or from the knife B; but this screw and piston-rod I is not intended to turn on its axis in the operation of the machine.

J is a nut threaded to fit the screw I, and made with a shoulder, K, and a proper journal to rotate against and in a bearing, L, formed on the rear end of the box A. To the rear end of the nut J is permanently secured the feed-wheel M, the periphery of which is toothed.

N is the feed-lever, vibrating upon the nut J between the feed-wheel M and the bearing L, and having two arms, O and O′. The arm O is provided with a reversible pawl, P, which is made to engage the teeth of the feed-wheel M, and locks the same with the lever N; but it may be set so as not to engage or lock the feed-wheel, and thereby allow the feed-wheel to be turned by hand or by means of hand-crank Q, as shown in Figs. 1, 2, 3. The pawl P is provided with a pointed spring-bolt, R, and the arm O is provided with cavities S S S,

to keep the pawl P engaged with the teeth of the feed-wheel, or when disengaged to keep it from falling to engage.

T is a dovetail slotted crank secured to the end of the shaft D opposite to the feed-wheel, and U is a crank-pin made with a dovetail head, which is fitted in the above-said slot of the crank T, and provided with a loose shoulder, V, and a nut, W, so that by means of the nut W the crank-pin U may be secured nearer to or farther from the center of the shaft D.

X is a connecting-rod pivoted to the arm O′ of the feed-lever on one end, and on the other it is fitted over the crank-pin U, whereby motion is transferred from the shaft D to the feed-lever N.

The operation of this machine is as follows: The tobacco-box is filled, and by means of the cover G and set-screws closed up. The pawl P is then disengaged and the hand-crank Q applied to the feed-wheel. The cutter B is then set opposite the opening of the tobacco-box, to stop the tobacco from escaping from the box A, and by rotating the feed-wheel the piston H packs the tobacco to a certain density suitable for cutting. After having proceeded thus far, the hand-crank is removed, and the pawl P is turned in proper direction to lock with the teeth of the feed-wheel, and motion is given to the fly-wheel by means of taking hold of the handle Y on the fly-wheel, whereby motion is transferred to the crank T, connecting-rod X, feed-lever N, feed-wheel M, and thereby propelling the piston H, when the cutter B cuts off the amount of tobacco, having been propelled forward after the piston H has nearly arrived within short distance of the cutter. The pawl P is then reversed to bring the piston H back to its original position. At the same time the tobacco-box is charged again; also, the pawl P may be disengaged, instead of reversed, and the piston H withdrawn by means of the hand-crank Q, and then the box A is charged again with tobacco, after which the same operation follows, as before described.

From the foregoing it may be clearly perceived that the feed motion may be varied by means of the slotted crank T very readily and by setting the crank-pin U nearer to or farther from the center of the shaft D, and the feed may be stopped, reversed, or forwarded while the machine is in motion, and also the tobacco can be pressed and packed previously in the box A to a proper density before the cutting operation commences.

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

The combination of the slotted crank T, the connecting-rod X, feed-wheel M, nut J, feed-lever N, reversible pawl P, fixed screw and piston-rod I, with its piston-head H, tobacco-box A, and cutter B, arranged and operating substantially as and for the purposes herein described.

LOUIS PLANER.

Witnesses:
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