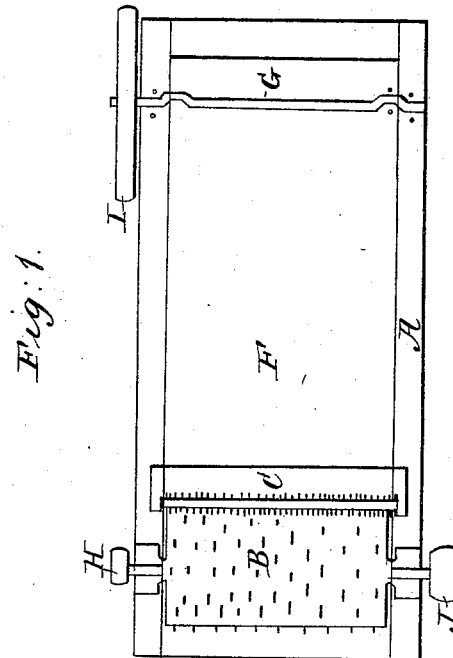
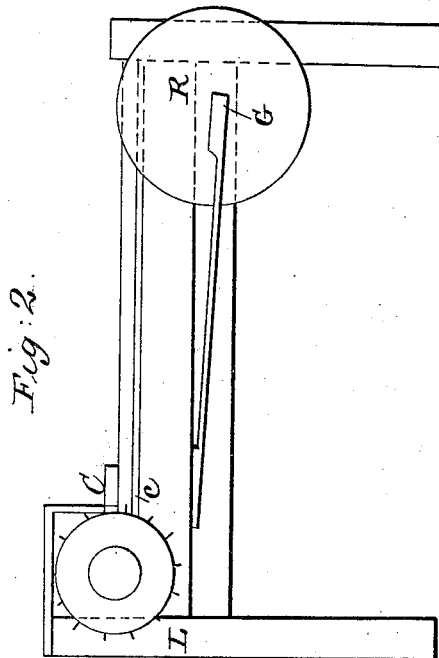
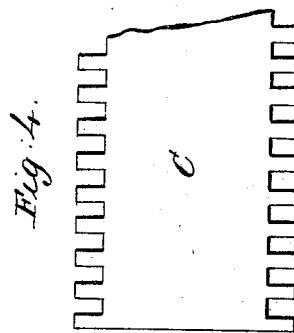
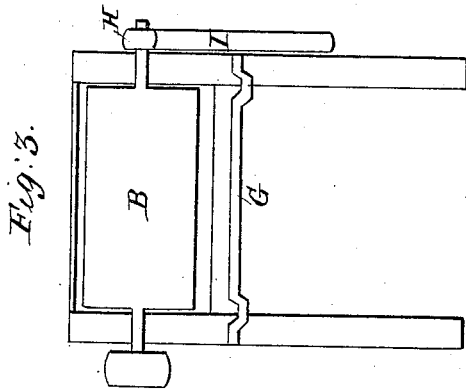


H. M. SMITH.
Tobacco Cutter.

No. 55,173.

Patented May 29, 1866.



Witnesses.
Isaac S. Tower.
H. M. Smith

Inventor.
H. M. Smith

UNITED STATES PATENT OFFICE.

H. M. SMITH, OF RICHMOND, VIRGINIA.

IMPROVEMENT IN MACHINES FOR CUTTING SMOKING-TOBACCO.

Specification forming part of Letters Patent No. 55,173, dated May 29, 1866.

To all whom it may concern:

Be it known that I, HIRAM MOORE SMITH, of the city of Richmond and State of Virginia, have invented a new and useful Improvement on a Machine to Cut or Break Tobacco and Stems and Prepare it for Smoking-Tobacco; and I do hereby declare that the following is a full and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan of the machine; Fig. 2, an elevation; Fig. 3, an end elevation; and Fig. 4, a full-size section of one end of the steel comb, two or more of which form the breast through the teeth of which the teeth of the cylinder intersect.

In constructing my tobacco-cutter I make a frame, A, Figs. 1, 2, and 3, of wood, according to the drawings, which are drawn by a scale of one inch for one foot.

The cylinder B is made of wood, or iron, of any length from twenty inches to three feet long, twelve to fifteen inches diameter. If of wood I cover it with sheet-iron, divide it by twelve lines parallel with the axis, then divide the length into spaces one-fourth of an inch apart, and put a steel tooth set like a saw-tooth in every fourth space on each succeeding line, shifting one space to either right or left, thus giving the teeth a spiral form in the cylinder. This cylinder is hung in metal boxes, as represented in the frame A. I now make a breast by making two or more steel plates, C, Fig. 4, three-sixteenths of an inch thick, of cast-steel, and the same length of the cylinder. These have holes in the center between the edges and about six inches apart, so that the plates or combs can be turned over, and thus be used twice, or end for end, in case they should both be broken at one end and not at the other. The teeth are one-fourth of an inch long, about one-twelfth of an inch thick. The teeth in the cylinder are about the same thickness. Two or more of these combs are used in forming the breast C C, attached to wood or iron bar D, Fig. 2, and

that bar bolted firmly to the frame, and so close to the cylinder that the teeth of the same will intersect the teeth of the breast the full depth. An additional breast made in the same way may be attached to the posts above the cylinder, and thus increase the cutting capacity of the machine.

The floor E covers the whole frame from the cylinder back, and is dropped about two inches below the breast.

The screen shown by line F in Fig. 2, and in Fig. 1 by bottom of hopper being removed, extends the whole length and width of the machine, and is low enough to pass under the cylinder and receive all the tobacco cut.

The screen is driven by a double crank connected by spring-pitmen attached to the screen at 1. The first two feet of the screen has No. 50 wove wire to take out the sand and snuff. The balance of the screen is wove wire No. 7, 8, or 9, according to the fineness of tobacco required.

To operate the machine, drive pulley J by belt so as to give one thousand revolutions to the minute, connect crank-wheel I to pulley H, so as to give the crank about two hundred revolutions to the minute.

The screen is hung at K and L, so as to lift as it goes forward and drop as it comes back, keeping it entirely clear from chocking.

Place the tobacco to be cut upon the bottom of hopper E and force it under D in contact with the cylinder by using a wooden piston operated either by hand or by rack and pinion.

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

The fine steel or iron comb made single or with two edges to reverse, in combination with the fine steel teeth in the cylinder, and in combination with the screen, operating for the purpose and in the manner as above described and set forth.

H. M. SMITH.

Witnesses:

J. S. TOWER,
J. T. SMITH.