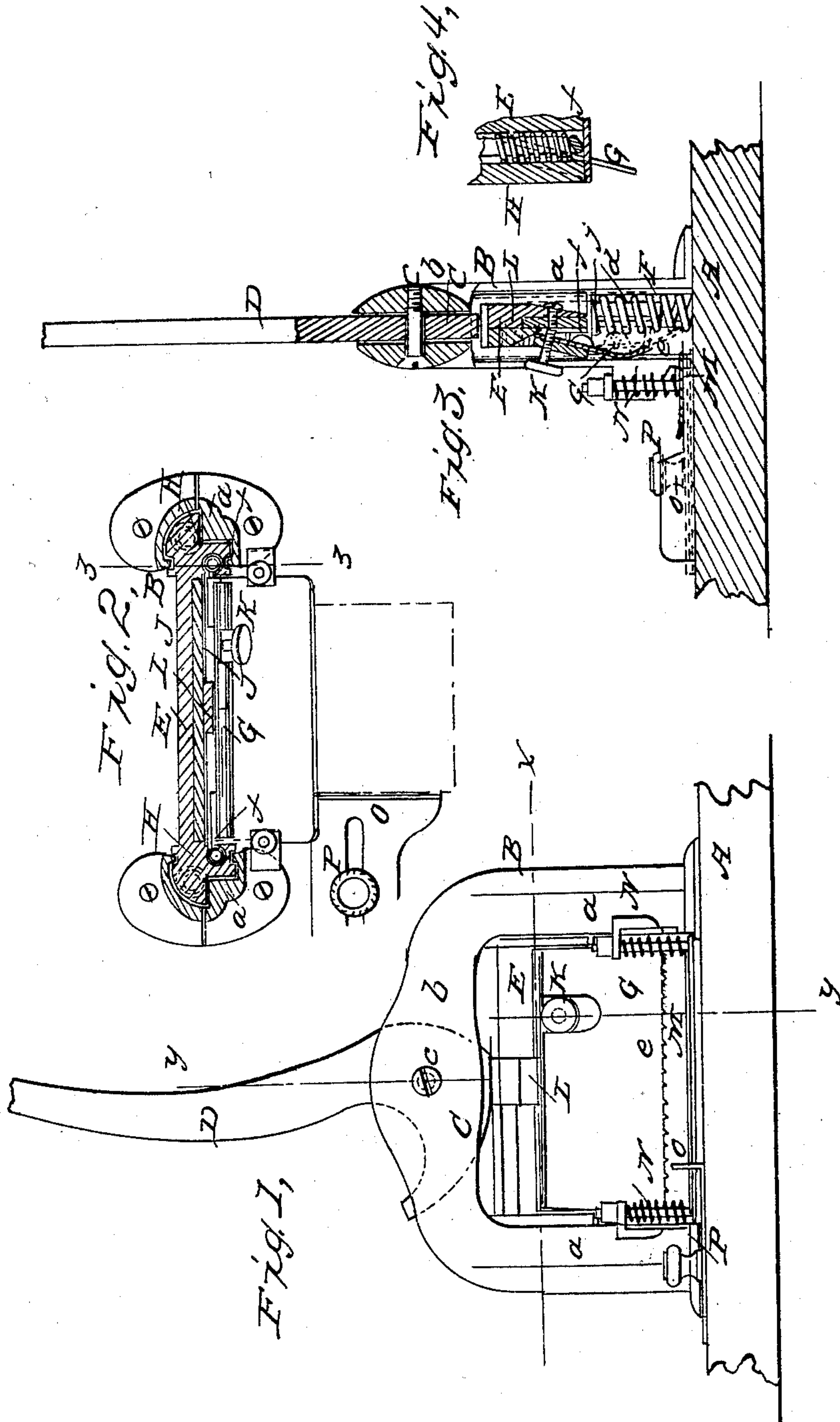


R. SMITH.

Self Feeding Tobacco Cutter.

No. 45,451.

Patented Dec. 13, 1864.



Witnesses:

Henry Meins
bL Popliff

Inventor:

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attys

UNITED STATES PATENT OFFICE.

RICHARD SMITH, OF SHERBROOKE, CANADA.

SELF-FEEDING TOBACCO-CUTTER.

Specification forming part of Letters Patent No. 45,451, dated December 13, 1864.

To all whom it may concern:

Be it known that I, RICHARD SMITH, of Sherbrooke, in the Province of Canada West, have invented a new and useful Self-Feeding Tobacco-Cutter Designed for Manual Operation; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front view of my invention in elevation; Fig. 2, a horizontal section of the same, taken in the line *x x*, Fig. 1; Fig. 3, a vertical section of the same, taken in the line *y y*, Fig. 1; Fig. 4, a vertical section of a portion of the same, taken in the line *z z*, Fig. 2.

Similar letters of reference indicate like parts.

This invention consists in the application of an automatic-feeding device to a tobacco-cutter, as hereinafter fully shown and described, whereby the device may be operated by hand, and the tobacco, in the plug or fig, cut of a uniform degree of fineness throughout.

A represents a base-plate, on which an upright frame, B, is permanently secured, said frame being composed of two upright columns, *a a*, connected by a curved or anchored top, *b*. This frame may be cast in two equal parts, one-half of each column and of *b* being in a single piece, the columns being concave, and a space allowed between the parts of *b* to admit of the insertion of a cam, C, the pivot *c* of which passes through *b*. This cam has a handle or lever, D, connected with it of any suitable length, and the cam and handle may be cast in one piece.

E represents a knife-gate, the ends of which are fitted in the columns *a a* of the frame B, and have rods *d* attached to them, on which spiral springs F are fitted, said springs being within the columns and having a tendency to keep the knife-gate elevated and bearing against the cam C, as will be fully understood by referring to Fig. 3.

G represents a plate, the lower edge of which is provided with small teeth or points *e*. This plate extends the whole length of the knife-gate E, and it is hung at each end on pivots or journals *f f*, which are of oval form in their transverse section. These pivots or journals have their bearings in the ends of the knife-gate E, and spiral springs H bear upon said journals, which, in consequence of their oval form, cause the springs to press the upper part

of the plate toward the knife-gate. (See more particularly Figs. 3 and 4.)

J is a knife, which is attached to the gate E and extends the whole length of the same, but does not project down as low as the toothed edge of the plate G; and K is a set-screw, which passes through the plate G for the purpose of determining the distance the upper part of the plate G may be from the knife-gate. (See Fig. 3.)

At one side of the knife-gate E, at its upper part, there is a beveled projection, L, the use of which will be presently shown.

M is a horizontal plate, which has a spiral spring, N, bearing upon each end of it, and O is a sliding or adjustable gage placed on the base-plate, and secured in position by a set-screw, P.

The plug or fig of tobacco is placed underneath the plate G, which retains it in proper position, the gage O serving as a guide in adjusting the plug or fig under the plate G. The knife-gate E is forced down by actuating the lever D, and the toothed edge of the plate G first comes in contact with the plug, the teeth penetrating it, and the knife-gate E being still depressed, the beveled projection L acts upon the upper edge of plate G, and causes the lower edge of the same to force the plug forward underneath the knife J, which reaches the plug by the time the latter has been fed forward. After the first cut is made the lever D and cam C are allowed to return to their original position by the springs H, and the knife again forced down for a succeeding cut, and so on.

The length of the feed may be regulated according to the degree of fineness it is desired to cut the plug by adjusting the screw K.

Thus by this simple means I obtain an efficient automatic-feed mechanism for a tobacco-cutter, one which will work or operate accurately and without the liability of becoming deranged by use.

I claim as new and desire to secure by Letters Patent—

The applying to a hand tobacco-cutting machine of a feed mechanism constructed or composed of a toothed plate, G, operated from the knife-gate E, which is moved through the medium of the cam C, all arranged in the manner substantially as set forth.

RICHARD SMITH.

Witnesses:

T. H. MOREHOUSE,
W. G. COCKBURN,