

(No Model.)

S. P. BABCOCK.

SPRING METAL CUT-OFF FOR HAND PLANTERS.

No. 276,996.

Patented May 8, 1883.

Fig. 1.

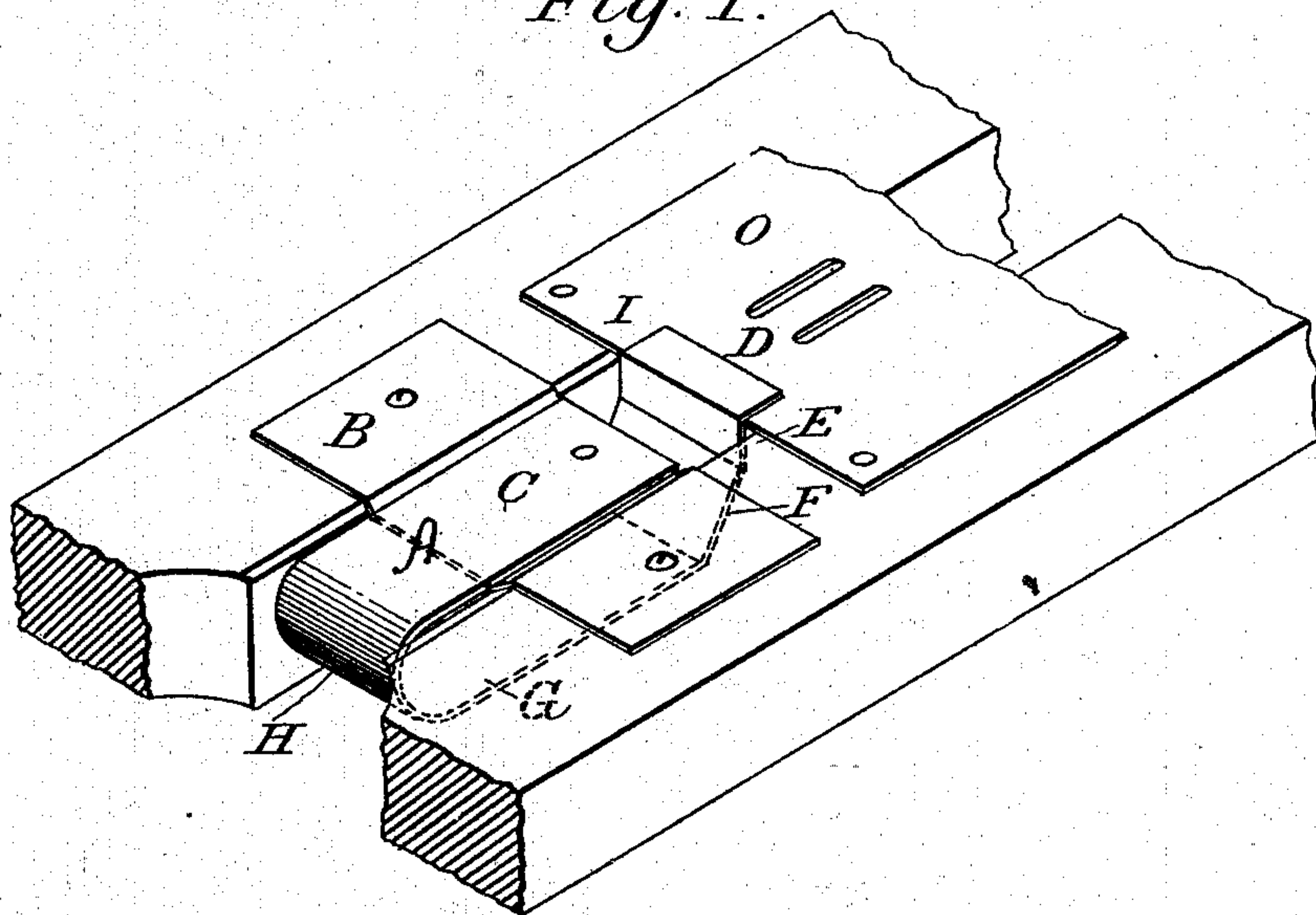
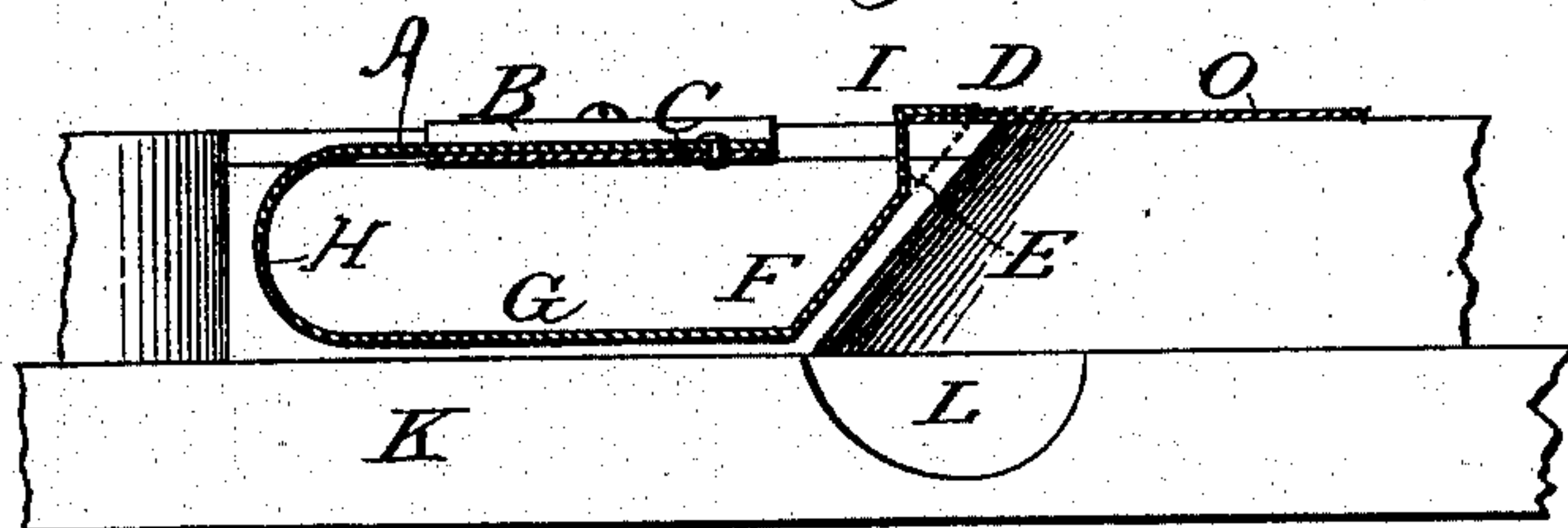


Fig. 2.



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SPRING-METAL CUT-OFF FOR HAND-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 276,996, dated May 8, 1883.

Application filed August 23, 1882. (No model.)

To all whom it may concern:

Be it known that I, SYLVESTER P. BABCOCK, of the city of Adrian, State of Michigan, have invented a Spring-Metal Cut-Off for Hand-Planters, of which the following is a specification.

The object of my invention is to make a strong, durable, and elastic cut-off for hand-planters, that will work with all the reliability of a brush or rubber cut-off, and continue to do so when a rubber or brush with the same amount of work would become unsatisfactory and almost useless.

Figure 1 of the accompanying drawings is a perspective view of the cut-off complete, and shows the metal support B, to which the spring A is riveted at C. Fig. 2 is a sectional view, and shows the shape and position of the spring in using; also, a section of a plunger, K, and seed-cup L.

The working part of the cut-off A is made of sheet metal of sufficient spring and temper to insure its keeping in shape and of throwing it back to its normal position when thrust aside by the work it is to perform. It is made of a strip about four inches long and about five-eighths of an inch wide. One end of this strip has a bend at I about one-eighth of an inch back and nearly at right angles with itself, forming the lip D. Then about one-fourth of an inch from the bend I an obtuse angle, E, is made, and about one-fourth of an inch from the angle E another obtuse angle, F, is made, each being about forty-five degrees. The two obtuse angles E and F bring the lip D parallel with the body of the spring at G. About one and a half inch from the angle F a half-inch circular bend, H, is made, bringing the other end of the metal strip parallel to the body at G and about on a line with the lip D. To this spring a sheet-metal support, B, about one inch wide and two inches long, is riveted at C or near the end of the spring, and at the center and near one edge of the support B. The metal support B is perforated centrally near each end, allowing screws to pass through for a permanent fastening to the body of a planter.

In using this cut-off the pendent part of the spring is placed in a suitable recess formed in the standard of a planter at the lower end of the hopper, the support B reaching over and

resting on each side of said recess. The lip D rests on a thin bearing, O, over an opening to the lower end of the hopper or seed-chamber and parallel with the support B. The seed has free access to the angle end of the cut-off under the lip D, so that when the planter is held vertically the seed lies constantly against the end of the spring. When the plunger K, in which a measuring-cup, L, is formed, is lifted to the upper end of its stroke, the cup L is just above the angle F, and readily fills with seed, then, forcing the plunger down, carries the seed-cup, with its contents, past the cut-off to discharge. Seed partly but not fully in the measuring-cup must necessarily strike the cut-off at F, and is held back by the pressure of the cut-off, unless so poised as to bind between the cut-off and the upper edge of the measuring-cup, when the pressure of the seed, acting on the wedge shape of the cut-off at F, lifts the cut-off and allows it to pass without clogging the action of the plunger or crushing the seed. Should the seed continue to bind after passing the angle F, then the body at G will lift or the whole pendent portion of the cut-off; but when relieved of the pressure it will instantly regain its normal position. When rubber or brush cut-offs are used the corners answering to the angles F soon wear off, and the measuring becomes unsatisfactory unless the corners are renewed, while a metal cut-off with proper shape and action is almost indestructible by the work it is intended to perform.

I am aware that some of the features of this cut-off are not new at the present time, as instanced in Patent No. 193,590, issued to me July 31, 1877; but it has more recently been improved and perfected.

I find that an angle of about forty-five degrees is the proper angle at F; but the spring should not continue in a straight line to I. Should the spring continue in a straight line from the angle F to I, as shown by the dotted line, then when the spring is lifted about one-fourth of an inch at its upper end, as often is done, the lip D lifts up, and the body of the spring one-fourth of an inch below the lip lifts away from the lip-bearing O, and the loose seed get between the spring and bearing and will not permit the cut-off to resume its normal position, and thus is a source of annoyance. Should the angle F be a right angle and the

body of the spring continue in a straight line from F to I, the spring would not lift away from the lip-bearing; but the spring is much less apt to lift, as the right angle gives a square abutment, and is very apt to draw down instead of lifting away from the measuring-cup, and often crushes the grain or bends the body of the cut-off at G. The unyielding support of the spring being above the line of the angle F, it is seen at once that it is better to have an incline or wedge abutment at F. Therefore the two obtuse angles, as herein shown, give the incline at F and the right angle at I, enabling the cut-off to lift easily and avoiding all clogging at the lip-bearing. A circular form of the cut-off at its upper end accomplishes the

same object, as in either case the obtuse angle at F and the right angle at I is the result.

I claim as my invention—

A metal spring cut-off, A, secured to a support, B, curved at H, and having the spring portion G parallel to said support B, being bent upward at F at an angle of forty-five degrees, and again bent upward at E at right angles to portion G, and bent at right angles at I, forming the lip D, which normally rests upon the bearing O, substantially as and for the purpose shown and described.

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Witnesses:

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