

(No Model.)

G. S. PAINE.

FERTILIZING ATTACHMENT FOR CORN PLANTERS.

No. 316,645.

Patented Apr. 28, 1885.

Fig. 1

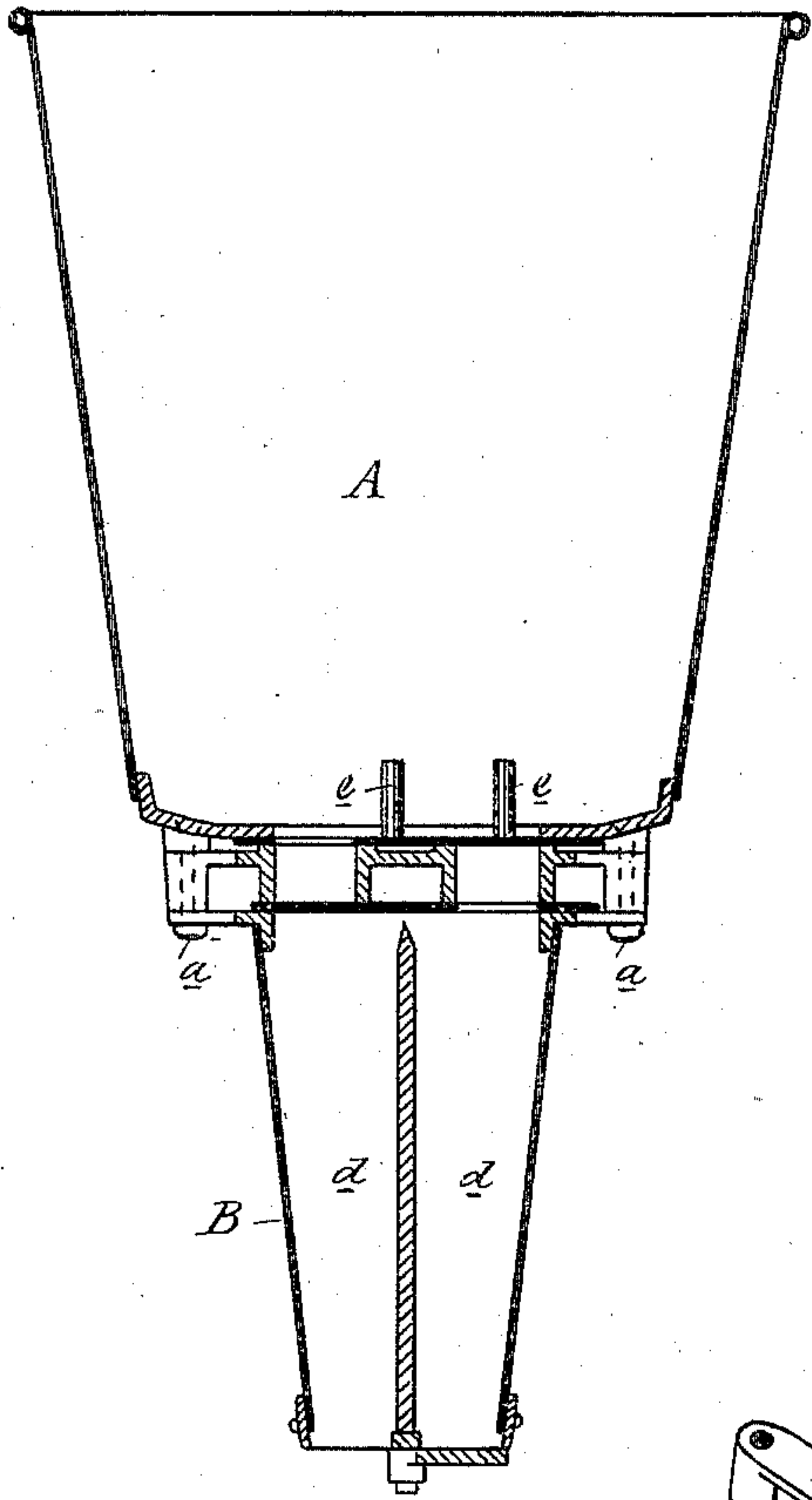


Fig. 2

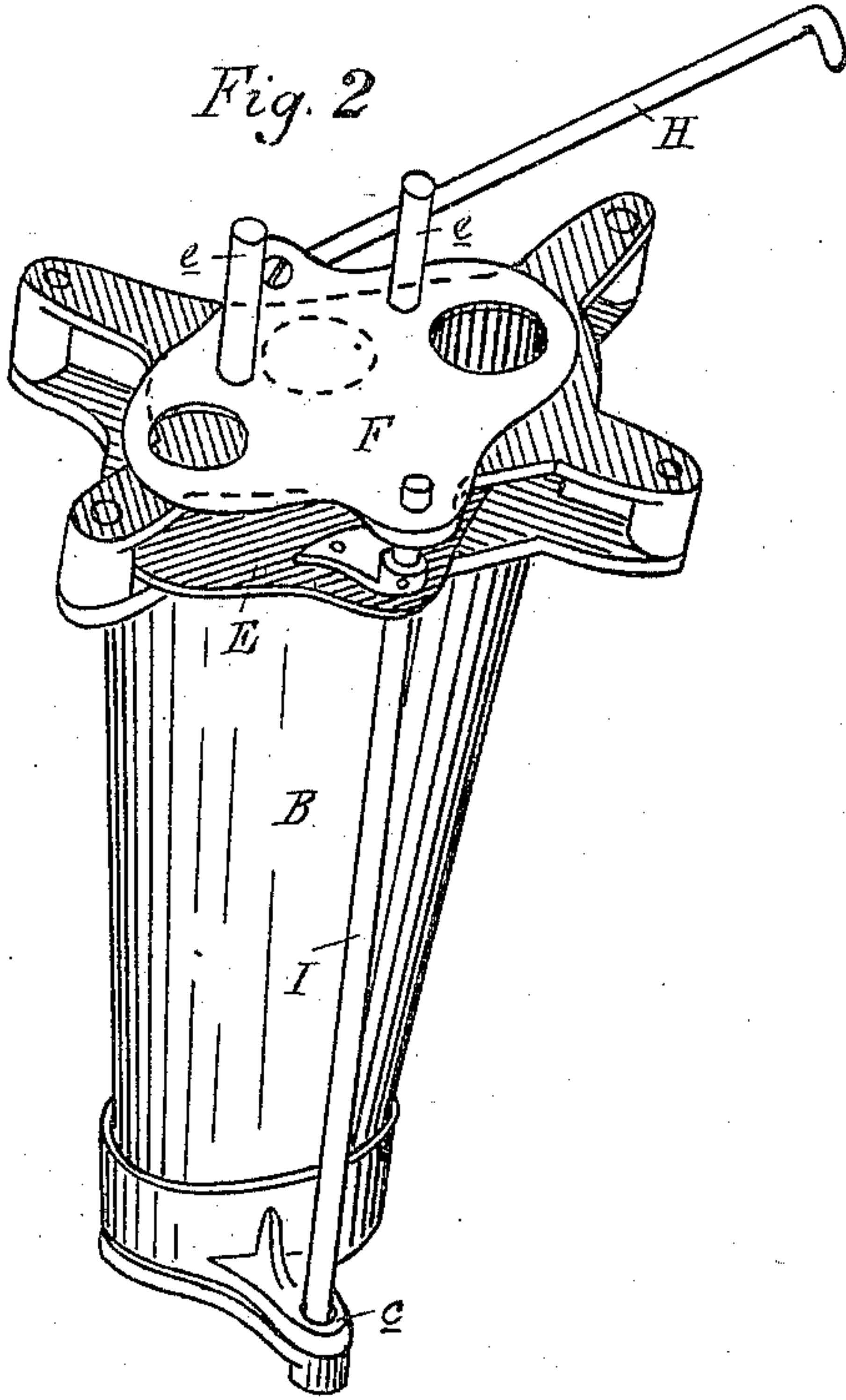


Fig. 3

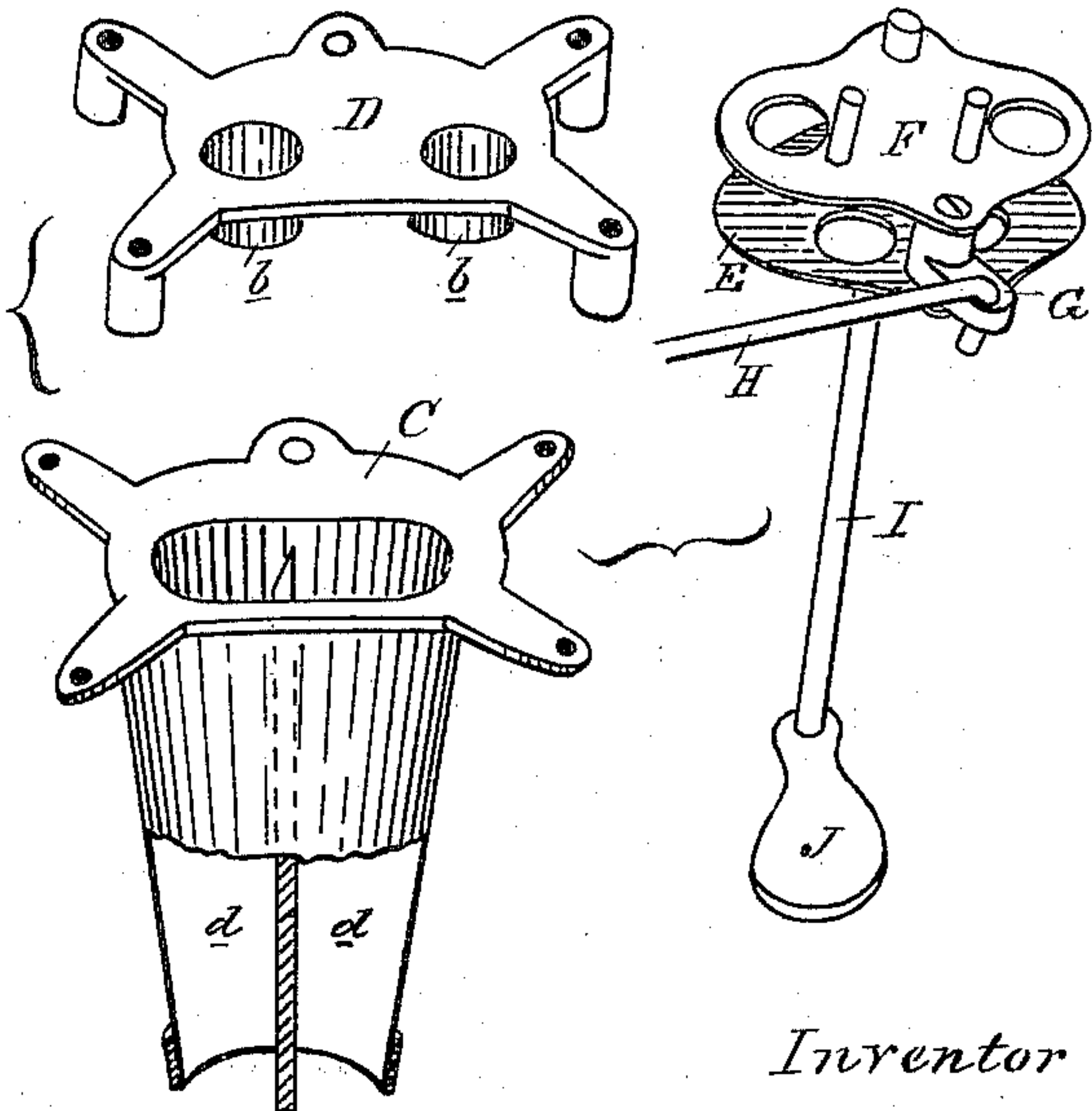


Fig. 4

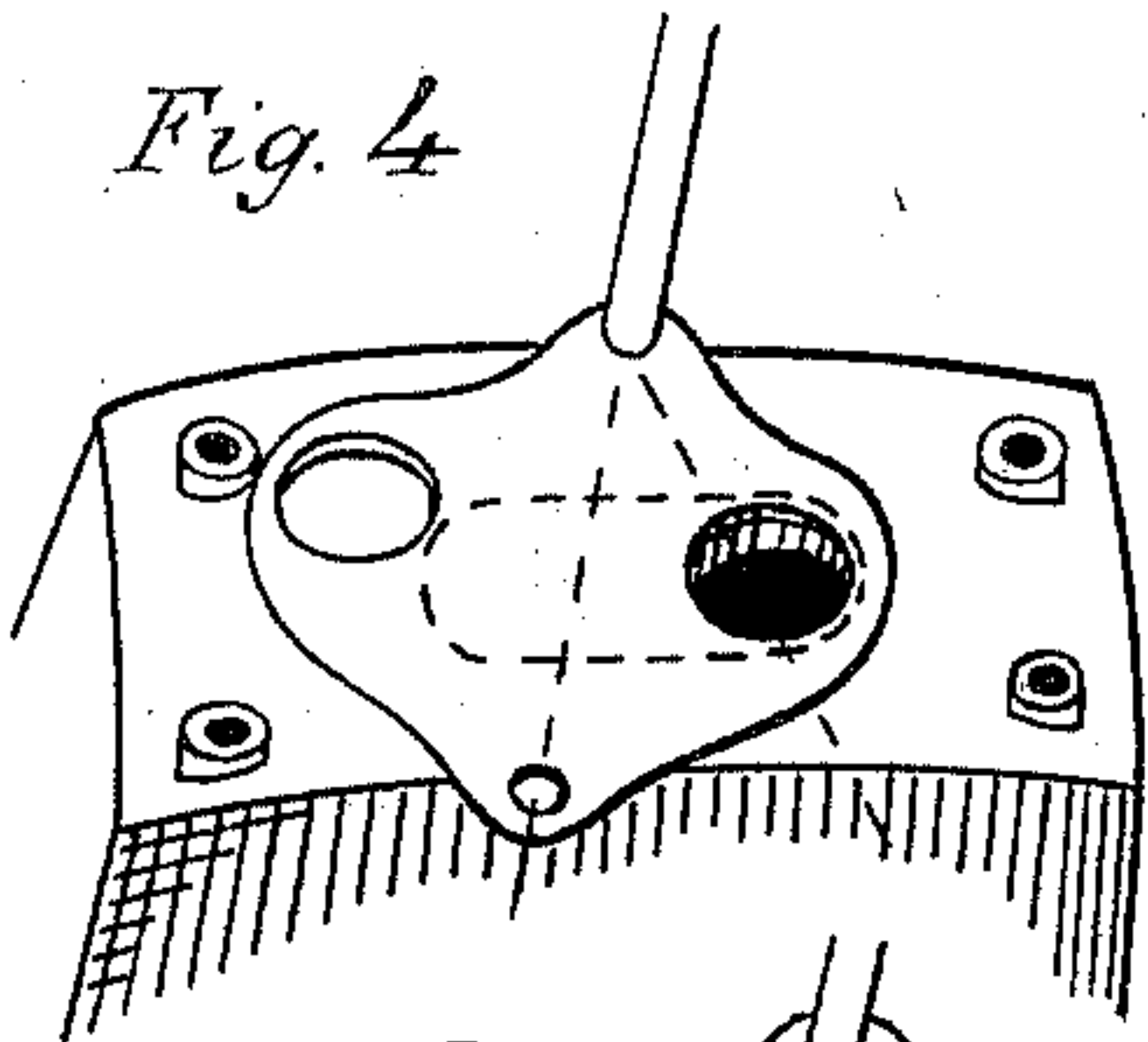
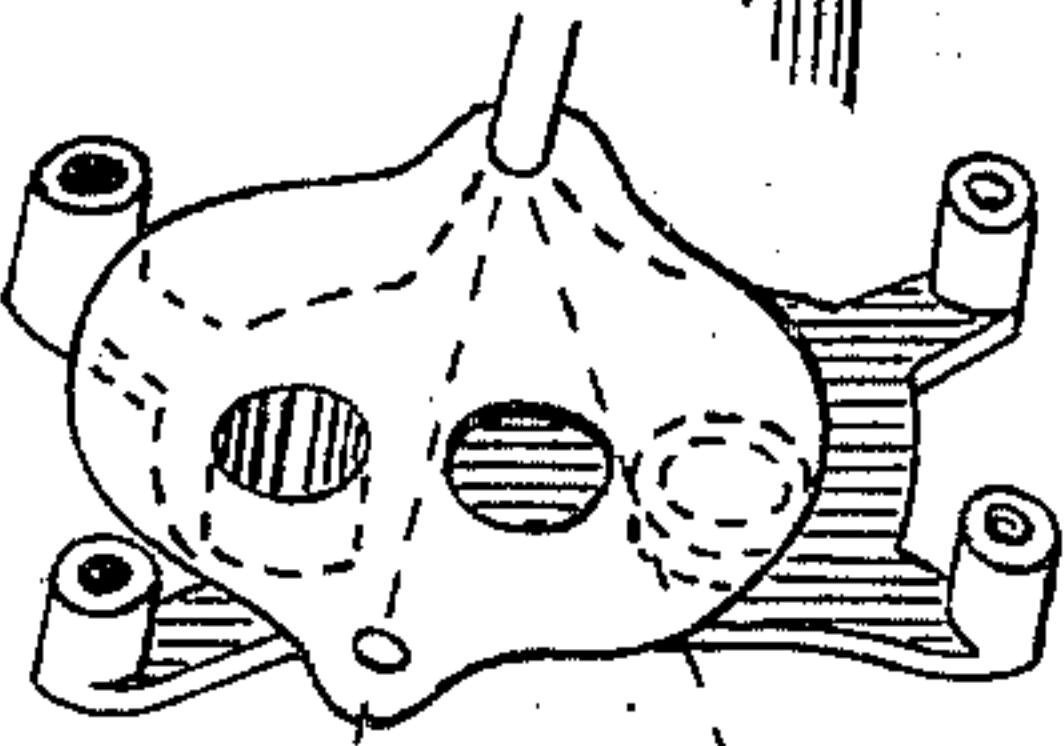


Fig. 5



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FERTILIZING ATTACHMENT FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 316,645, dated April 28, 1885.

Application filed June 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, GEORGE S. PAINE, of Wyandotte, in the county of Wayne and State of Michigan, have invented new and useful
5 Improvements in Fertilizing Attachments to Corn-Planters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of
10 this specification.

This invention relates to certain new and useful improvements in the construction of attachments to corn-planters, and is especially
15 designed as an improvement over a like invention for which Letters Patent were allowed me May 5, 1884, Serial No. 117,732.

Figure 1 is a central vertical section. Fig. 2 is a perspective with hopper removed. Fig. 3 is a perspective in detail. Fig. 4 is a dia-
20 gram bottom perspective of top valve, showing it in one of its positions. Fig. 5 is a similar view of the intermediate valve in one of its positions corresponding to the position of the valve shown in Fig. 4.

25 In the accompanying drawings, which form a part of this specification, A represents a suitable hopper, there being one placed at each end of the corn-planter.

30 B is a double dropper-spout rigidly secured to the lower and discharge end of the hopper, there being a spider, C, secured to the upper end of the dropper-spout, through the arms of which bolts *a* pass from the hopper-bottom.

35 Between the upper end of the spout and the discharge end of the hopper there is placed an intermediate spider, D, which is secured in position by the bolts *a*. This spider D is provided with the two short thimbles *b*, affording communication between the hopper and the
40 discharge-spouts.

E is a valve-plate interposed between the lower ends of the thimbles *b* and top of the spout B, and F is a similar valve-plate placed
45 between the upper face of the spider D and the discharge end of the hopper. These two valve-plates are secured together upon one side by an operating-arm, G, to which is attached a rod, H, connected with the feed-bar
50 of the planter, and by means of which both are operated simultaneously.

I is a rock-shaft, the lower end of which is journaled through a bracket, *c*, projecting lat-

erally from the lower end of the spout B, and has secured to it a valve plate or gate, J, designed to close alternately one of the drop-
55 ping-spouts *d* of the spout B, Fig. 1. The upper end of the rock-shaft passes through the two valve-plates E and F, to one of which it is secured in any such manner that as the valve-plates are moved the rock-shaft will
60 also move and close or disclose the discharge-opening of one of the spouts *d*. From the upper face of the valve-plate F there project the stirring-bars *e*.

In practice the reciprocation of the feed-
65 bar of the corn-planter will move the valve-plates E and F so that one of the holes in the upper valve, F, will disclose one of the thimbles *b*, the discharge end of which is closed by the valve-plate E, these thimbles regulating
70 the amount of fertilizer to be dropped into the hill. Upon the reverse movement of the valves one of the holes in the valve E is brought coincident with the thimble *b* contain-
75 ing the fertilizer, and the gate J closes the discharge end of the spout immediately below it, the fertilizer dropping down and resting upon this gate J. While this is being accom-
80 plished the other thimble is being filled, as above described. In the next movement of the parts the fertilizing material is allowed to drop from the spout into the hill with the corn
dropped by the planter.

Different sizes of thimbles may be employed, so as to deliver a greater or lesser quantity of
85 fertilizer to the spouts, as may be desired.

What I claim as my invention is—

1. In combination with the hopper A and spout B, the feed-thimbles *b* and simultane-
90 ously-moving valve-plates E and F, arranged one above and the other below said thimbles, substantially as described.

2. The combination of the hopper A, spout B, simultaneously-moving valve-plates E and F, rock-shaft I, connected with and operated
95 by said valve-plates, and the gate J, carried by said rock-shaft, all constructed, arranged, and operating substantially in the manner and for the purposes specified.

3. The combination of the hopper A, double
100 spout B, having a fixed division, spiders C D, operating-arm G, valve-plates E F, attached thereto, rod H, rock-shaft I, and gate J, when constructed, combined, and operating substan-

tially in the manner and for the purposes specified.

4. In combination with the hopper A and spout B, the spider D, provided with thimbles *b* and the simultaneously-moving valves E F, one arranged above and the other below said spider, substantially as described.

5. The combination, with the hopper A and the spout B, having spider C, of the spider D, having thimbles *b*, the valve E below said thimble, and the valve F above the spider D, and the arm G, connecting the two spiders C D, substantially as described.

6. The combination, with the hopper A, spout B, spiders C D, and the operating-arm G, of the valves E F, attached to said arm G and moving together, and the stirring-bars *e*, carried by the valve F, substantially as and for the purposes specified.

GEORGE S. PAINE.

Witnesses:

H. S. SPRAGUE,
E. SCULLY.