

(No Model.)

J. A. SIMMONS.
FERTILIZER DISTRIBUTER.

No. 470,324.

Patented Mar. 8, 1892.

Fig. 1.

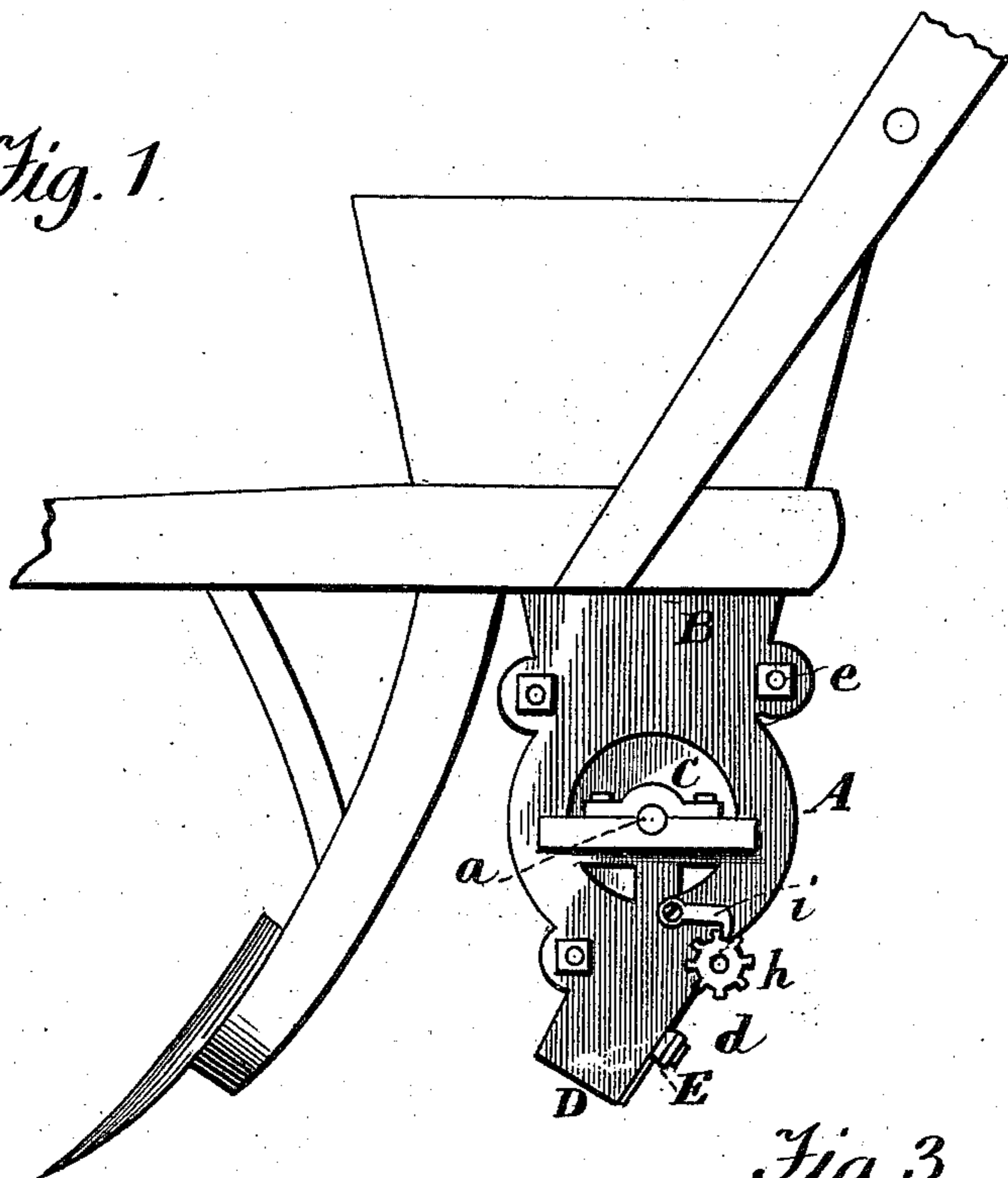
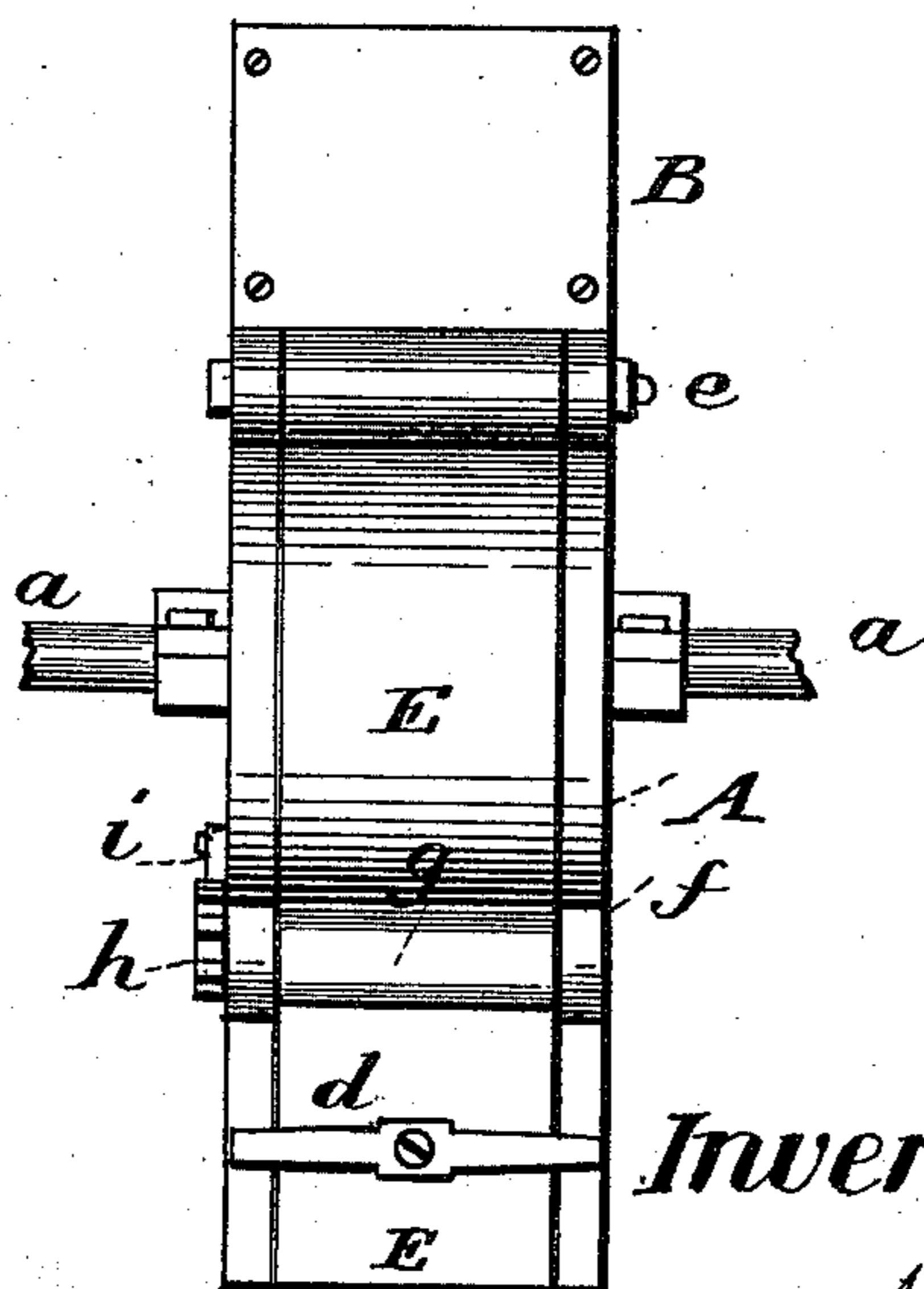
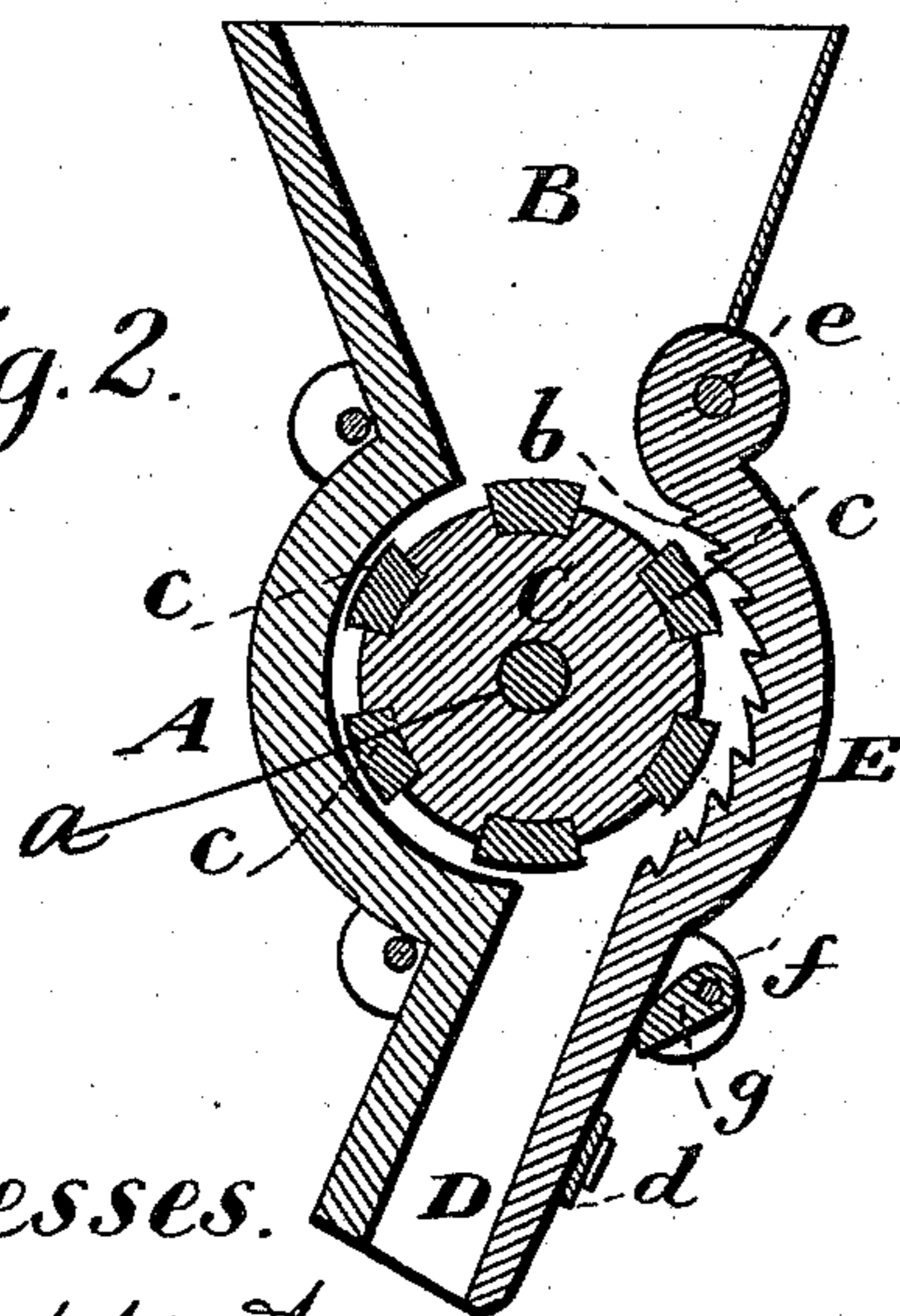


Fig. 3.

Fig. 2.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES A. SIMMONS, OF ENONDALE, MISSISSIPPI.

FERTILIZER-DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 470,324, dated March 8, 1892.

Application filed August 24, 1891. Serial No. 403,586. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. SIMMONS, a citizen of the United States, residing at Enondale, in the county of Kemper and State of Mississippi, have invented certain new and useful Improvements in Fertilizer-Distributers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention relates to fertilizer-distributers; and it consists in certain improvements in the construction of the same, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a side view of my improved device attached to a plow. Fig. 2 is a vertical section of the device. Fig. 3 is a rear view of the device.

A designates a housing, at the top of which is a hopper B to receive the fertilizing material. Within the housing or casing A is placed a grinding drum or roller C, which is mounted on a shaft *a*, which is journaled in bearings carried by the casing. The roller C is preferably constructed of iron with steel ribs or bits *c*, which are removably set in the periphery of the roller, the latter being grooved for the purpose, so that the said bits may be severally removed and replaced, as desired. The housing is provided with a discharge-spout D, which extends downward therefrom, as shown.

A movable plate E forms a rear part of the casing B, being hinged at *e* to the main part. The said plate is provided with a concave serrated inner surface *b* in position for the roller C to coact therewith for pulverizing or comminuting the fertilizing material as it passes through to the spout. A two-arm spring *d* is secured at the center to the lower

part of the hinged plate E, the extremities of said spring bearing against the side parts of the casing, so that the spring tends to lift the plate E from the roller C. A cam-bar *g*, extending across the plate E, is journaled in lugs *f* on the casing, and on an extended journal of said cam-bar is a ratchet-wheel *h*, a pawl *i* being secured in position to connect therewith. By means of the cam-bar, with ratchet and pawl and the spring *d*, the plate E may be adjusted with its inner serrated surface closer to or farther from the roller C, and thus the fertilizing material may be pulverized to a greater or less degree of fineness, as desired. As the fertilizer passes down from the hopper, it is pulverized between the roller and the plate E and then discharged through the spout D.

The device may be attached to a plow, cultivator, or planter, suitable gearing being provided to connect the shaft of the roller C with the axle of a driving or carrying wheel.

I claim—

The combination, with the case A B D and the grinding-drum C, of the toothed plate E, hinged at *e*, the two-armed spring *d*, secured at its middle on said plate and resting at its edges on the sides of said case, the cam-bar *g*, journaled in lugs of said case, and the ratchet-wheel *h*, fixed on an extended journal of said bar *g*, a pawl *i* being pivoted to the case to work in said ratchet-wheel, all substantially as shown and described, for the purpose specified.

In testimony whereof I have affixed my signature in presence of two witnesses.

JAMES A. SIMMONS.

Witnesses:

H. C. RUSH,
W. F. HORTON.