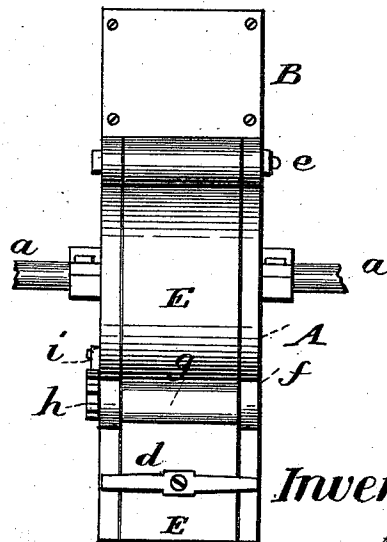
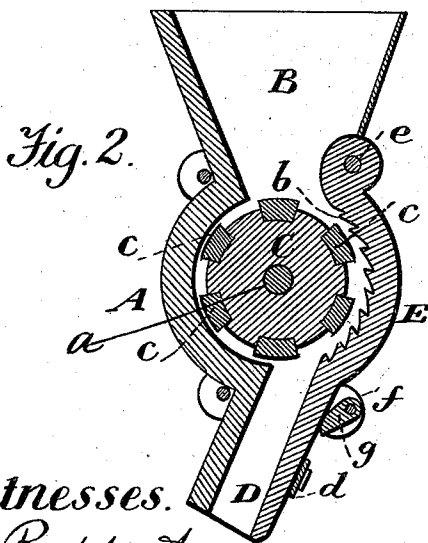
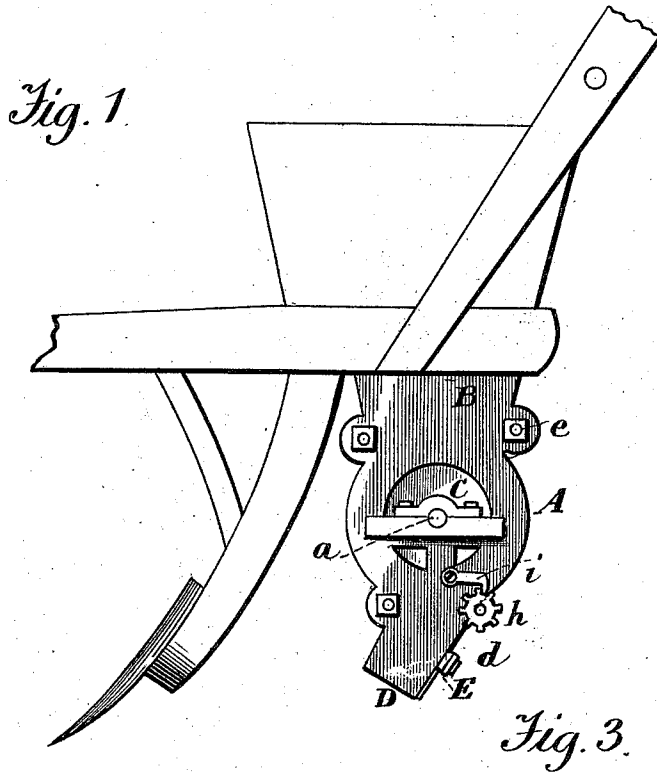


(No Model.)

J. A. SIMMONS.
FERTILIZER DISTRIBUTER.

No. 470,324.

Patented Mar. 8, 1892.



Witnesses.
A. Ruppert,
H. A. Daniels

Inventor.
James A. Simmons
Per
Thomas P. Simpson
att'y.

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 Enon-
dale, in the county of Kemper and State of Mis-
sissippi, 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-distrib-
uters; and it consists in certain improve-
ments 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 sec-
tion 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 ma-
terial. 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 dis-
charge-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*, ex-
tending 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 fine-
ness, as desired. As the fertilizer passes
down from the hopper, it is pulverized be-
tween the roller and the plate E and then
discharged through the spout D.

The device may be attached to a plow, cul-
tivator, 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 sub-
stantially as shown and described, for the
purpose specified.

In testimony whereof I have affixed my sig-
nature in presence of two witnesses.

JAMES A. SIMMONS.

Witnesses:

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