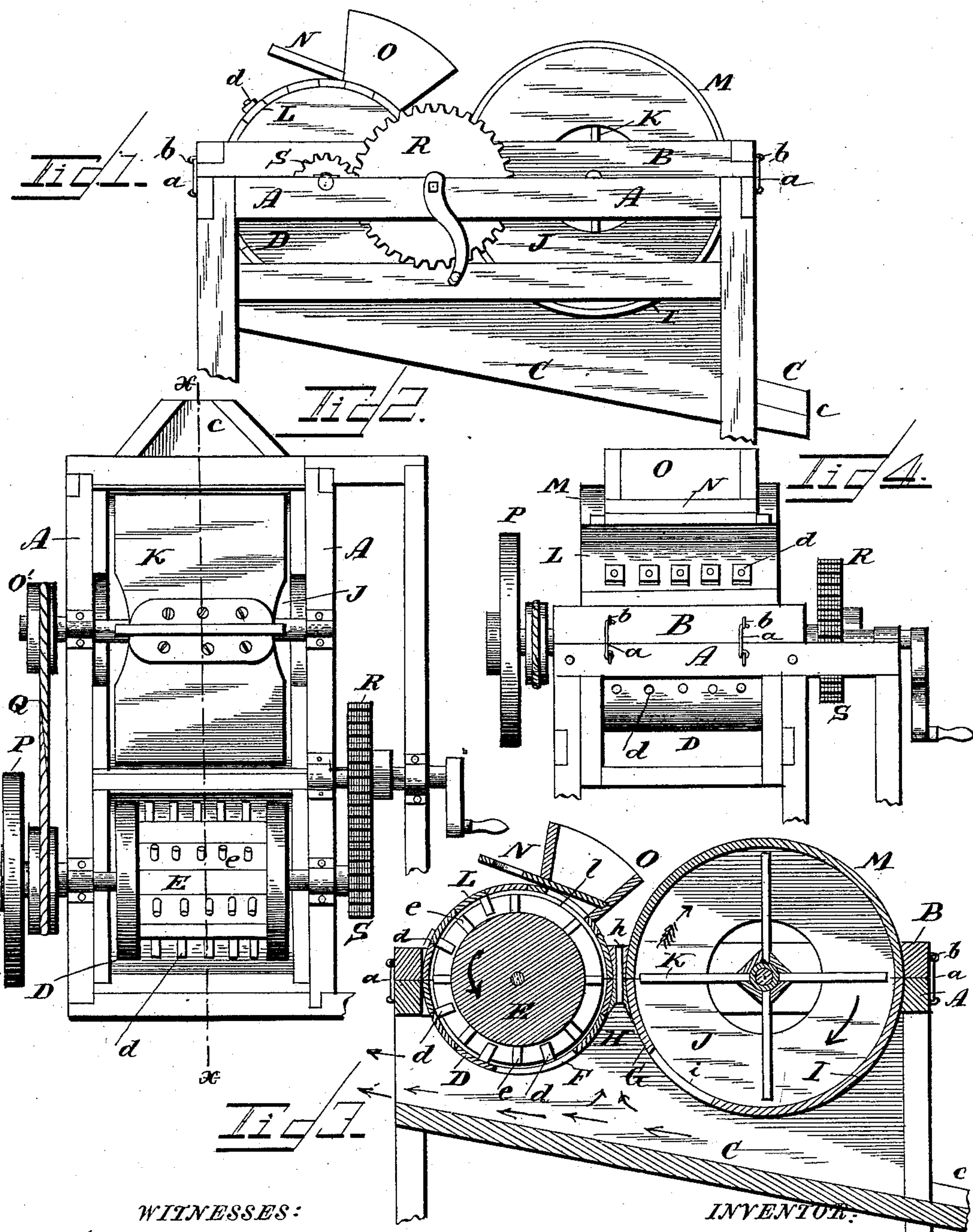


(No Model.)

W. H. GRAYSON.
PEA OR BEAN THRASHER.

No. 472,452.

Patented Apr. 5, 1892.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY GRAYSON, OF CARTER, TEXAS.

PEA OR BEAN THRASHER.

SPECIFICATION forming part of Letters Patent No. 472,452, dated April 5, 1892.

Application filed August 7, 1891. Serial No. 401,999. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY GRAYSON, a citizen of the United States, and a resident of Carter, in the county of Parker and State of Texas, have invented certain new and useful Improvements in Pea or Bean Thrashers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of my improved machine for thrashing and cleaning peas and beans. Fig. 2 is a plan view of the same with the top or cover removed. Fig. 3 is a longitudinal sectional view on the vertical plane indicated by the broken line marked $x x$ in Fig. 2, and Fig. 4 is an end elevation.

Like letters of reference denote corresponding parts in all the figures.

The invention relates to machines for thrashing and cleaning peas and beans; and my improvement consists in the novel construction and combination of parts, which will be hereinafter more fully described, and particularly pointed out in the claim.

Referring to the drawings, the letter A designates the main frame or bottom frame, and B the corresponding rectangular and removable top frame, which is fastened at opposite ends to the bottom frame A by means of hooks a and staples b . By simply unhooking these the entire top may be lifted off.

Within the bottom frame A is placed the longitudinally-inclined chute C, terminating in a contracted outlet or spout c at the discharge end of the machine. Above the highest or most elevated end of chute C is the thrasher-concave D, within which the thrashing-cylinder E revolves, both the stationary concave and the revolving cylinder being armed with teeth or beaters, (shown, respectively, at d and e), as usual.

The thrashing-concave is cut away at one side near the bottom, as shown at F, forming an outlet down into the chute C. Between the concave and the transverse slanting diaphragm G is an air-chamber H, of approximately triangular shape in cross-section, said

diaphragm G, in conjunction with the curved end piece I, forming the fan-chamber J, within which the fan or winnower K revolves, the journals of both the fan and the thrashing-cylinder being boxed in the sides of the main frame A.

The rectangular removable top frame B has at one end, above the thrashing concave and cylinder, a semi-cylindrical hood L, and above the fan and fan-chamber a similar but larger semi-cylindrical hood or housing M. The former hood L has an opening l on one side covered by an adjustable slide N and provided with a hopper O for feeding the peas or beans into the thrashing-concave. By adjusting the slide N the feed of the contents of the hopper into the machine may be regulated at will.

The triangular air-chamber H is provided on opposite sides near its top with an aperture h for a purpose hereinafter explained. In operation the pods, shells, and heavier particles are blown out at the chute at its rear end, as indicated by the arrows, while the thrashed and cleaned peas or beans will drop down upon the inclined chute by gravity and be discharged at c . It will be noted that the inlet and outlet apertures of the fan-case and the blast-exit from the machine are all quite large, while the aperture h is very small, the result being that the outgoing blast by a species of siphon action will cause a downdraft through the passage h , drawing the dust away from the feed.

The fan and the thrashing-cylinder are revolved in opposite directions or toward each other, the fan turning from left to right, by the belt pulleys O' and P, endless belt Q, and intermeshing cog-wheels R and S, the larger one of these being provided with a crank and handle for turning it. It will be obvious, however, that my machine may be operated by steam-power or by animal-power instead of hand, if desired.

By constructing the top part of the machine as described the whole interior arrangement may be exposed to view simply by unhooking and lifting off the rectangular top frame B, thus affording instant and easy access to the journal-boxes, fan-chamber, thrashing-concave, and thrashing-cylinder.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

In a machine for thrashing and cleaning peas
5 and beans, the combination, with the main
frame A, having a removable top and an in-
clined bottom containing the thrashing con-
cave and cylinder, of the fan-chamber and
fan, the air-chamber H, having an aperture *h*
10 intermediate of the fan-chamber and concave,

and means, substantially as described, for ro-
tating said cylinder and fan.

In testimony that I claim the foregoing as my
own I have hereunto affixed my signature in
presence of two witnesses.

WILLIAM HENRY GRAYSON.

Witnesses:

WM. F. HUTCHESON,
W. N. HUTCHESON.