

G. WESTINGHOUSE.

Grain Winnower.

No. 34,605.

Patented March 4, 1862.

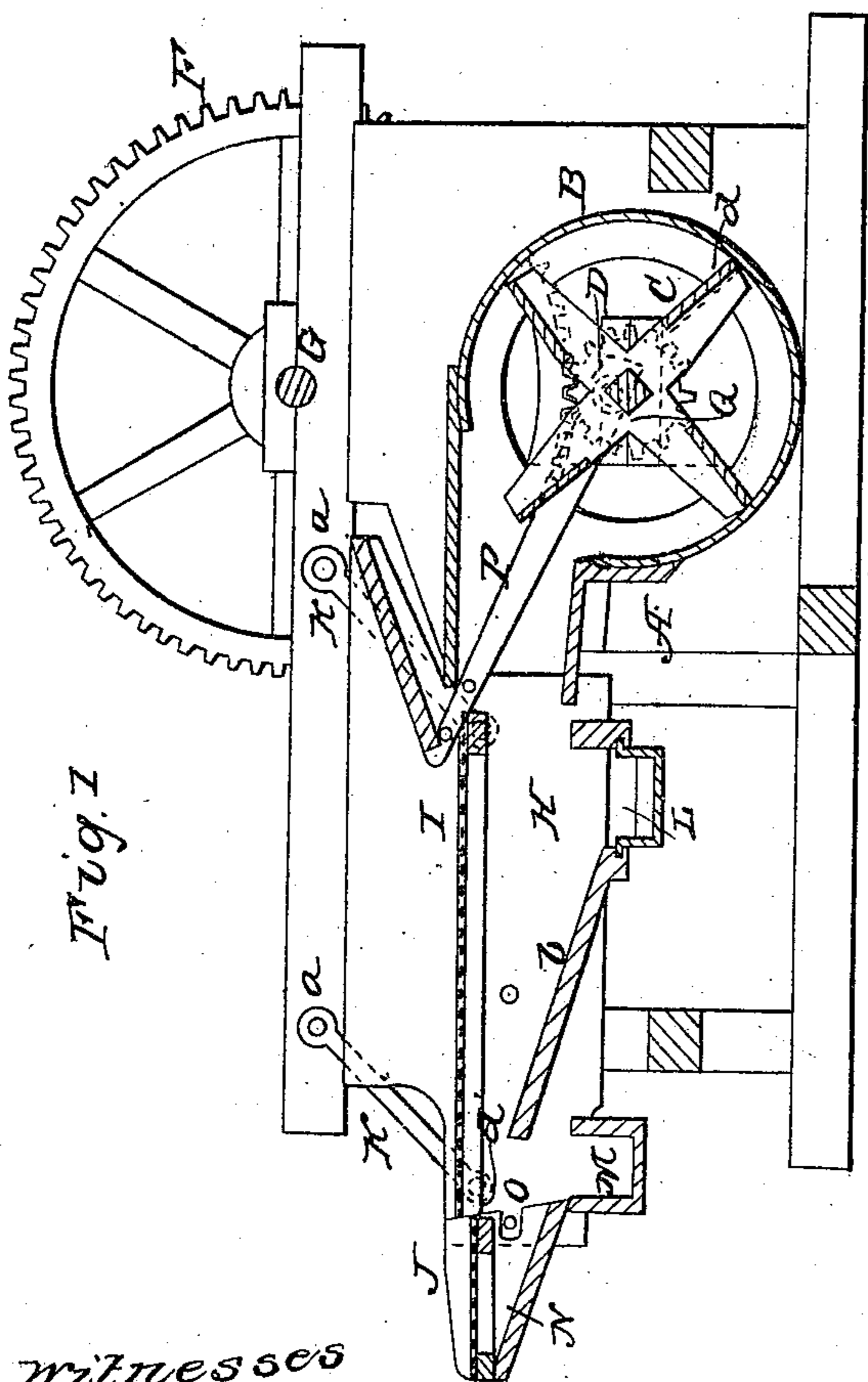
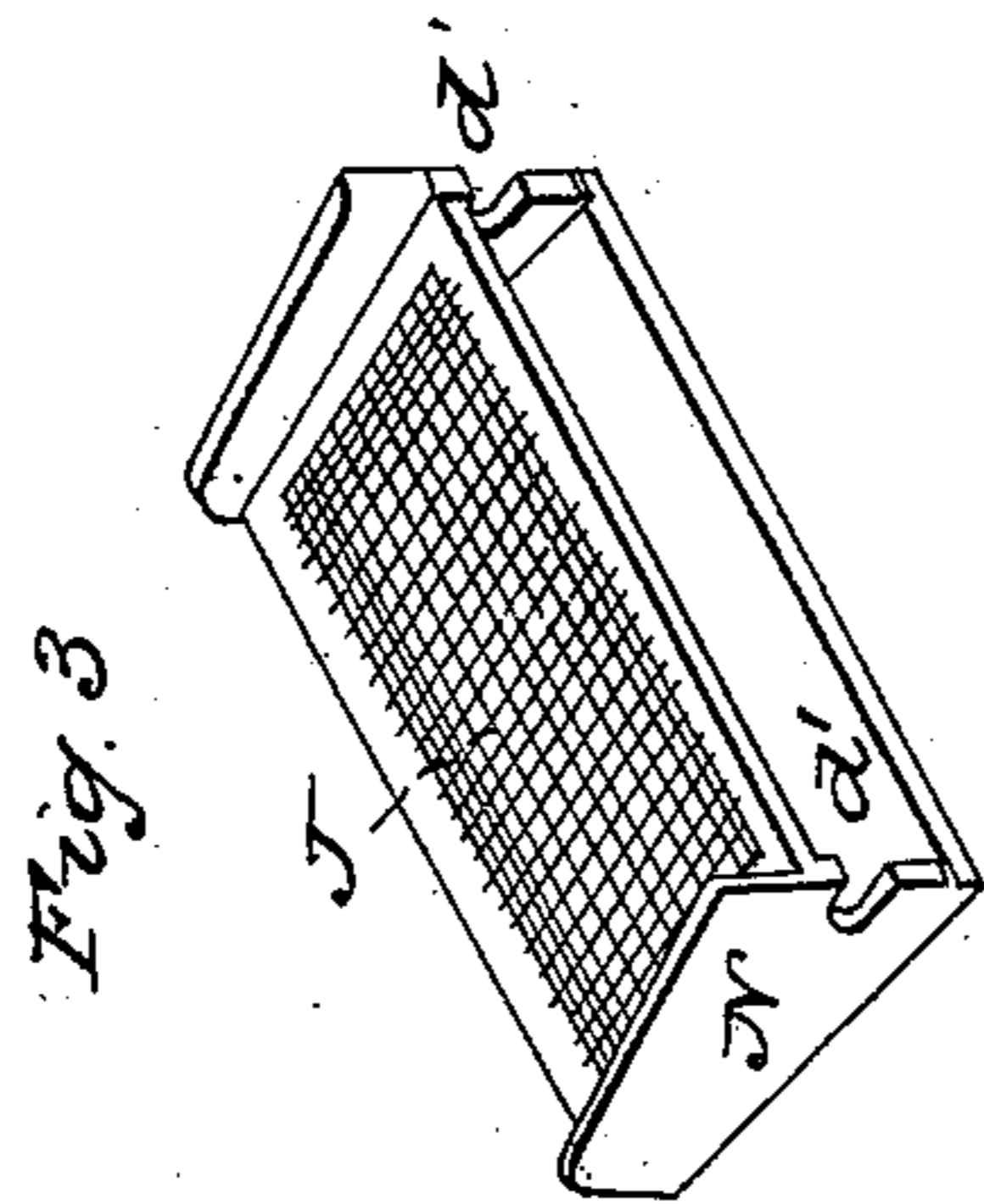
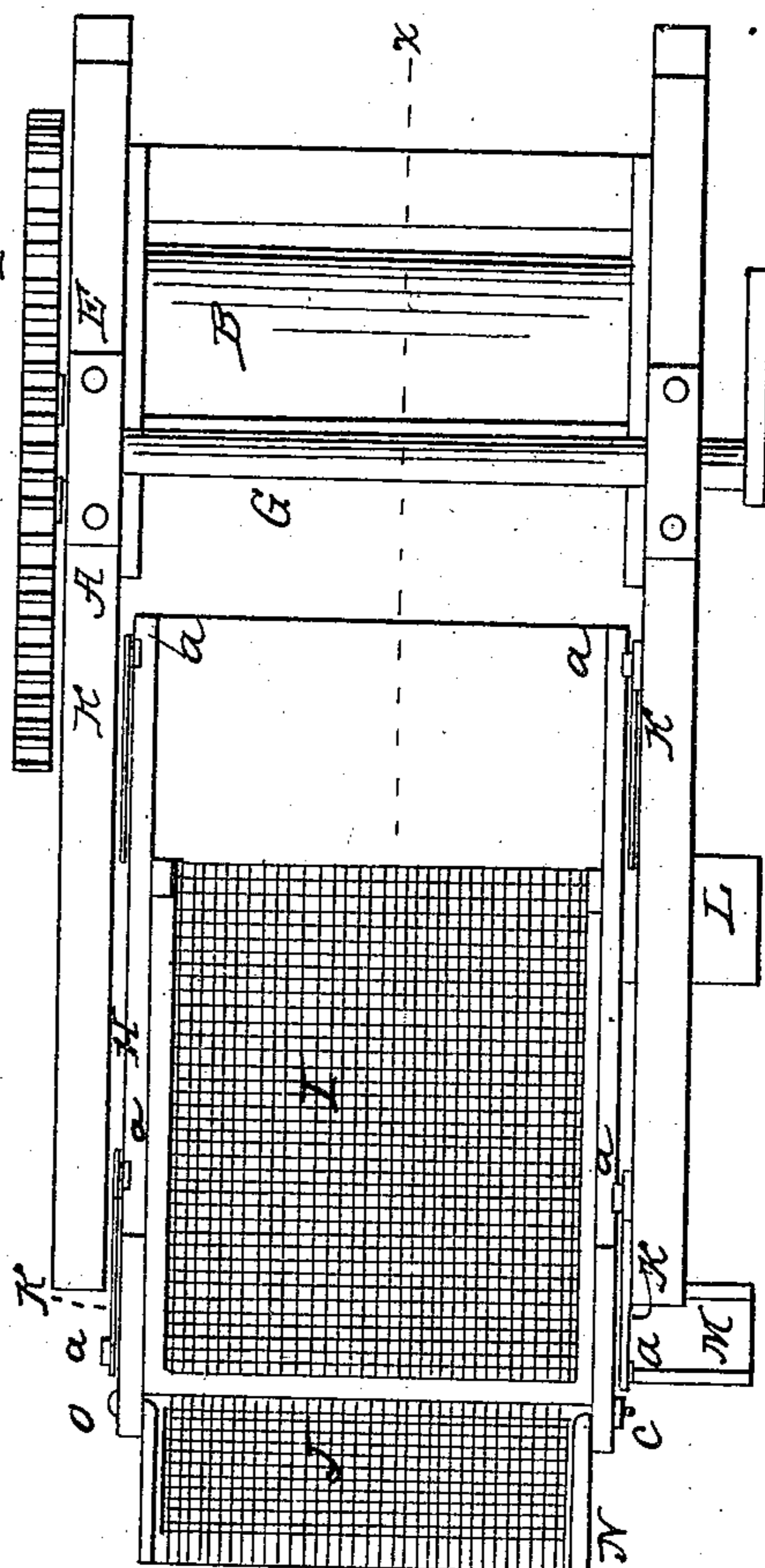


Fig. 2



witnesses
W. Brown
G. Reed

Inventor:
George Westinghouse.
per Murray & Co.
Attorney.

UNITED STATES PATENT OFFICE.

GEORGE WESTINGHOUSE, OF SCHENECTADY, NEW YORK.

IMPROVEMENT IN GRAIN AND SEED WINNERS.

Specification forming part of Letters Patent No. 34,605, dated March 4, 1862.

To all whom it may concern:

Be it known that I, GEORGE WESTINGHOUSE, of Schenectady, in the county of Schenectady and State of New York, have invented a new and Improved Grain and Seed Fanning or Winnowing Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line $x x$, Fig. 2; Fig. 2, a plan or top view of same; Fig. 3, a detached perspective view of the tail-screen pertaining to same.

Similar letters of reference indicate corresponding parts in the several figures.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the frame of the machine, which may be of rectangular form, and which is provided with a fan-box B at one end, in which a rotary fan C is placed. The shaft D of the fan C has a pinion E at one end of it, and into this pinion a toothed wheel F gears, said wheel being on a shaft G, which is on the top of the frame A.

H represents the shoe, which may be constructed in the usual way, with a main screen I in its upper part and tail-screen J at its outer end directly in line with screen I and adjoining it. The shoe H is suspended in the frame A by parallel rods K—two at each side—said rods being attached to the frame A and to the shoe H by pivots a .

The shoe has a trough L placed transversely in its bottom to discharge the sound grain at one side, and an inclined board b beneath screen I conducts the grain which passes through the screen I to the trough. (See Fig. 1.) M is a trough, which is placed transversely at the bottom of the shoe near its outer end. This trough receives the screenings from the tail-screen J, which is placed in an adjustable box N, fitted in the outer end of shoe H, and secured therein by a rod O, with a screen or nut at one end, as shown at c , said rod O passing through the sides of the shoe

H and through notches $d' d'$ in the sides of the screen-box N. By screwing up the nut c the inner end of box N may be clamped in the shoe H, and secured in a horizontal or in a more or less inclined position, as may be desired, so as to regulate the screening by accelerating or checking the discharge from the end of the screen J. By this arrangement the box N may be adjusted when the shoe H is in operation.

The shoe H is operated from the fan-shaft D by means of two connecting-rods P P, which are attached to cranks Q on the fan-shaft D. The shoe H is considerably above the fan-shaft D, and has such a relative position therewith that the cranks Q and rods P will vibrate the shoe H in an oblique direction—say at an angle of about forty-five degrees. By operating the shoe H in this direction the straws in the grain will not catch in the screen I and pass through it, as is the case when a horizontal reciprocating motion is given it, and the former or oblique movement of the shoe does not require to be so great as a horizontal movement in order to perform the necessary work.

The fan C has one of its wings or blades d made heavier than the other three, in order to counterpoise the shoe H and its screens. This heavy blade or wing is directly or nearly in line with the cranks Q, but at the opposite side of the fan-shaft D. This counterpoising of the shoe H serves to equalize its motion and insure an easy and smooth working of the machine.

I am aware that straw-carriers in thrashing-machines have been hung between swinging arms, and this I do not claim, broadly; but,

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The arrangement together of the swinging shoe H, when operating as specified, fan C, and adjustable box N, as herein shown and described, for the purpose set forth.

GEORGE WESTINGHOUSE.

Witnesses:

G. Y. VAN DE BOGERT,
N. VAN DEBOGERT.