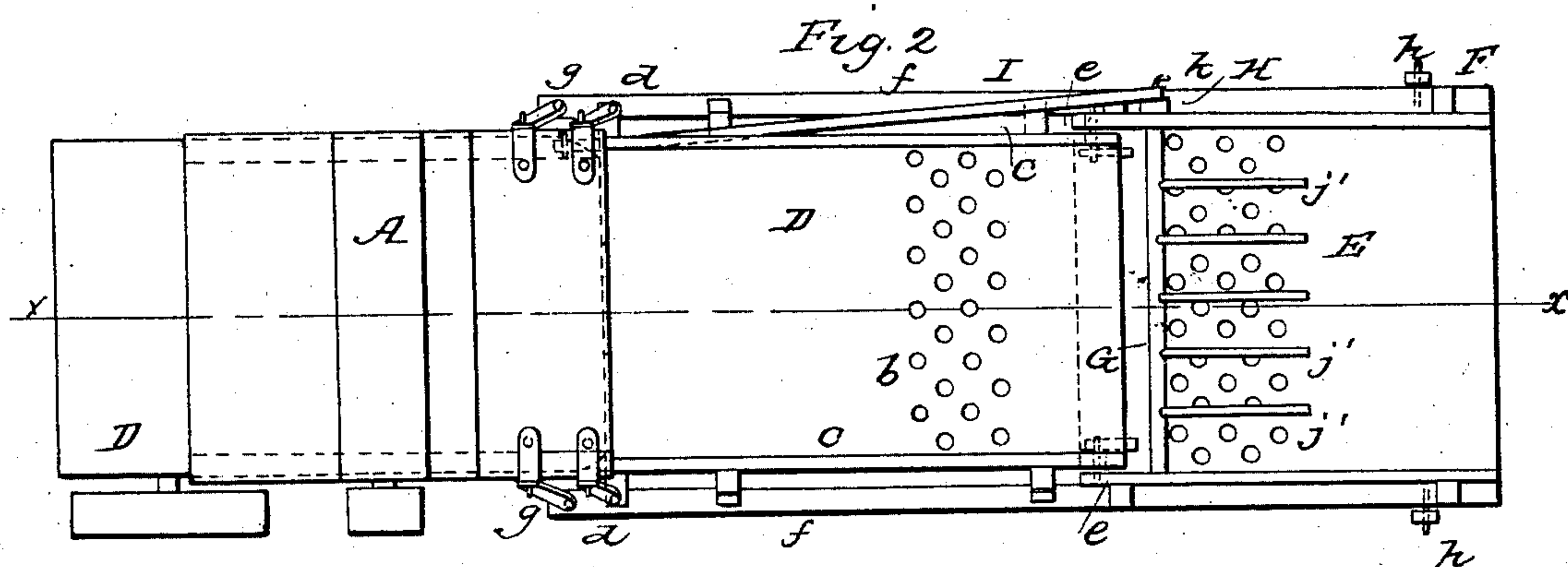


Grain Separator.

Patented April 17, 1860.



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UNITED STATES PATENT OFFICE.

GEORGE WESTINGHOUSE, OF SCHENECTADY, NEW YORK.

GRAIN-SEPARATOR.

Specification of Letters Patent No. 27,941, dated April 17, 1860.

To all whom it may concern:

Be it known that I, G. WESTINGHOUSE, of Schenectady, in the county of Schenectady and State of New York, have invented a new and useful Improvement in Grain-Separating Attachments for Threshing-Machines; 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.

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

This invention consists in a novel arrangement of two carriers or screens connected with the thresher substantially as herein-after fully shown and described, whereby the parts may be readily adjusted or set in proper working position and made to operate in the most efficient manner.

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

A represents a grain threshing machine which may be constructed in the usual or any proper manner.

B is the driving shaft of the thresher and *a, a*, are two cranks placed on said shaft in reverse positions with a pitman C, attached to each, see Fig. 1.

D is a carrier or screen, constructed in the usual way; to wit, with a perforated bottom *b*, and side strips *c, c*, the ends being open. This carrier is suspended at its back to the discharge end of the thresher A, by rods *d, d*, which are allowed to swing loosely from the frame of the thresher. The front end of carrier D, rests on friction rollers *e, e*, at the back end of a carrier E, which is constructed similar to D.

The carrier E, has side bars *f, f*, which extend back to the discharge end of the thresher A, and are suspended therefrom by rods *g, g*, which are just back of the rods *d, d*, which support the back end of carrier D. The front end of the carrier E, is supported by a rocking frame F, which is at-

tached to the carrier E, by pins or bolts *h*, or both ends of carriers E, may be supported by rocking frames similar to F, dispensing with the side bars *f, f*.

The front end of the carrier D, where it rests on the rollers *e, e*, is provided with inclined ways *i, i*, one of which is shown clearly in Fig. 1.

In the outermost carrier E, a shaft G, is placed transversely. This shaft is provided with the teeth *j*, which project from the shaft at right angles, and are quite close to and nearly parallel with the bottom of carrier E. To one end of shaft G, an arm H is attached; the upper end of said arm being connected by a pivot *k*, to a bar I, which extends back and is attached to the frame of the thresher A.

The operation is as follows: The grain is fed to the thresher A, as usual and the straw is discharged therefrom on the innermost carrier D, the two carriers D, F, vibrating and moving in opposite directions in consequence of the reverse position of the cranks *a, a*, relatively with each other. The carrier D, as it vibrates has its outer end somewhat elevated, during its outward movements in consequence of the inclined ways *i, i*, resting on the friction rollers *e, e*. This movement aids the discharge of the straw from the carrier and favors the separation of the grain from the straw. The straw passes from the carrier D to E, on which it is subjected to an auxiliary shake motion by the action of the teeth *j*, of shaft G, said shaft having a rock motion given it in consequence of the movement of carrier E, and the connection of the arm H, of the shaft G, to the bar I, which is attached to the thresher. The straw in passing along through the two carriers and being subjected to the shake motions described, has the loose grain thoroughly separated from it, the grain passing through the perforations in the bottoms of the carriers, and the straw discharged off from the end of carrier E. Any proper degree of inclination can be given the carriers by adjusting the rods *d, d*, *g, g*, higher or lower, holes being made through the upper parts of said rods to permit of such adjustment, so as to regulate the

movement of the straw through the carriers as circumstances may require for the perfect separation of the grain therefrom.

What I claim as new and desire to secure
5 by Letters Patent is—

The combination of the carriers D and E,
the carrier D resting on the inner end of

carrier E, whether the carriers are suspended from the thresher frame or otherwise, operating as described for the purpose set forth. 10

GEORGE WESTINGHOUSE.

Witnesses:

S. H. CAMPBELL,

L. STEWART.