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J. WESTINGHOUSE & W. WEBBER.

THRASHING MACHINE.

No. 259,955. Patented June 20, 1882

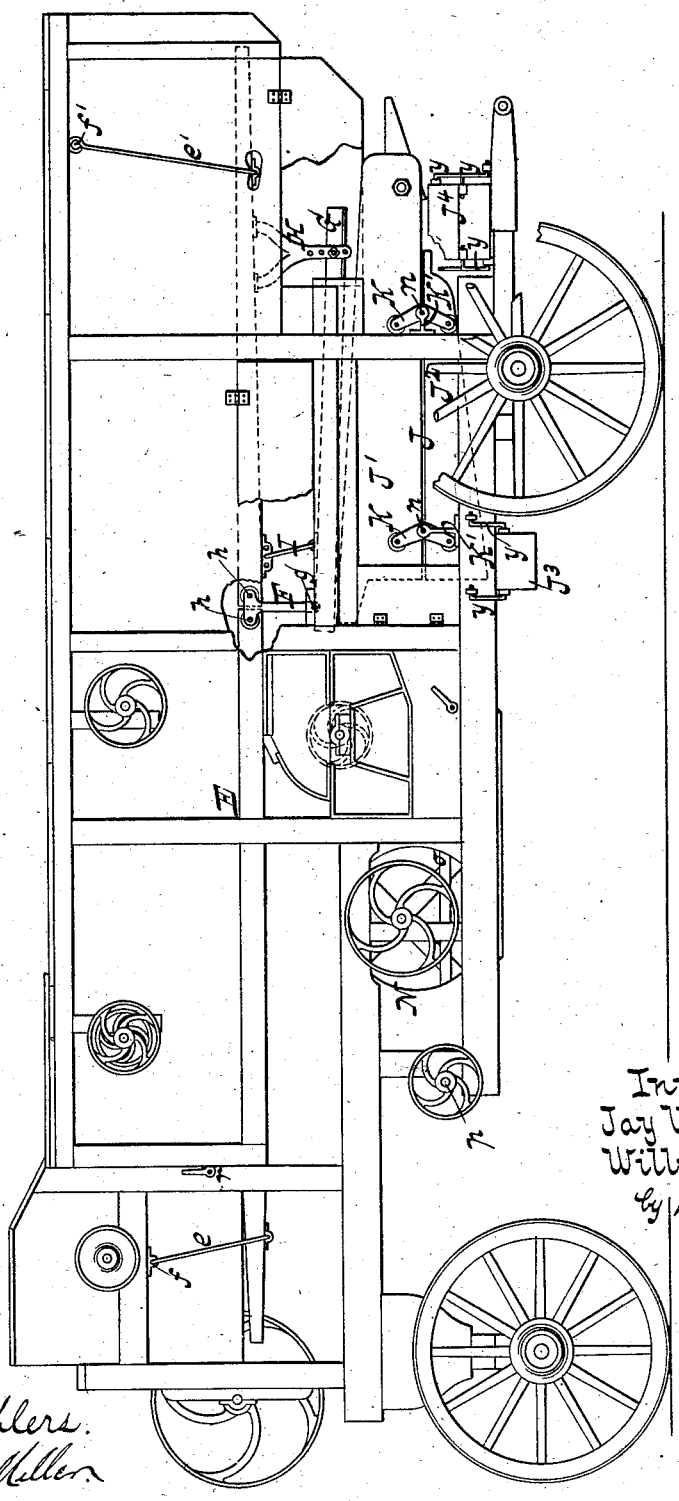

Fig. 1.

Witnesses.
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William Miller.

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Attys

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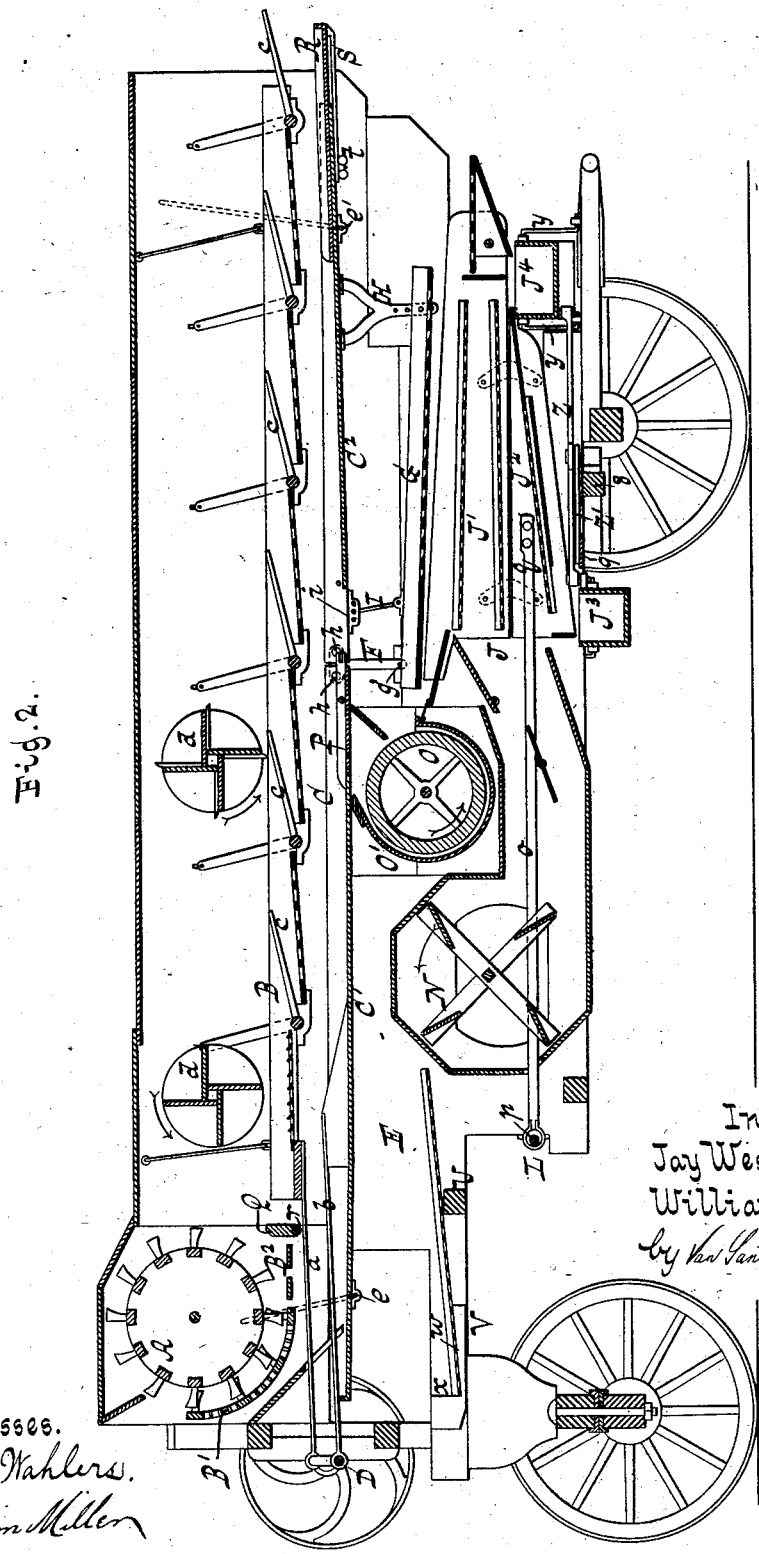

Fig. 2.

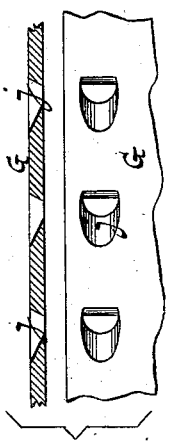

Fig. 2*.

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J. WESTINGHOUSE & W. WEBBER.

THRASHING MACHINE.

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Fig. 3.

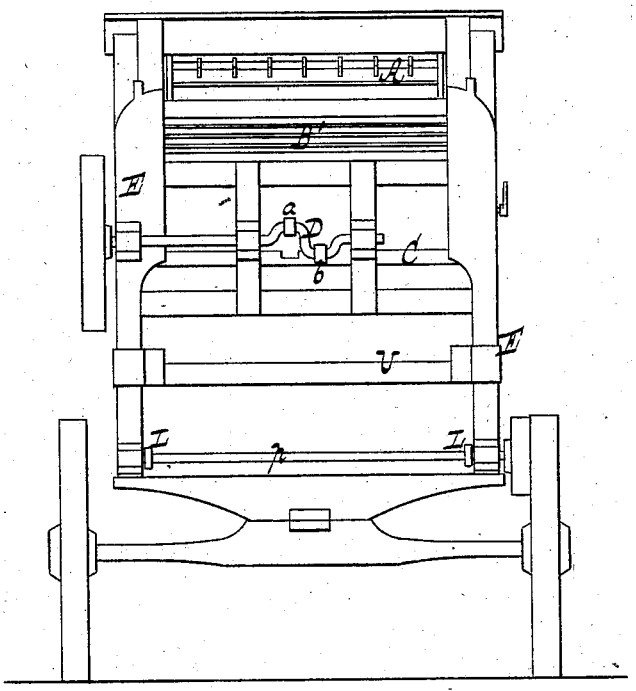
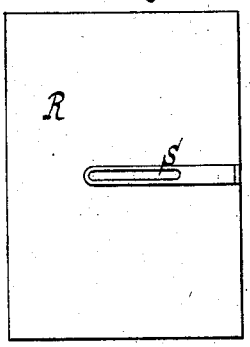


Fig. 4.



Witnesses.
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J. WESTINGHOUSE & W. WEBBER.

THRASHING MACHINE.

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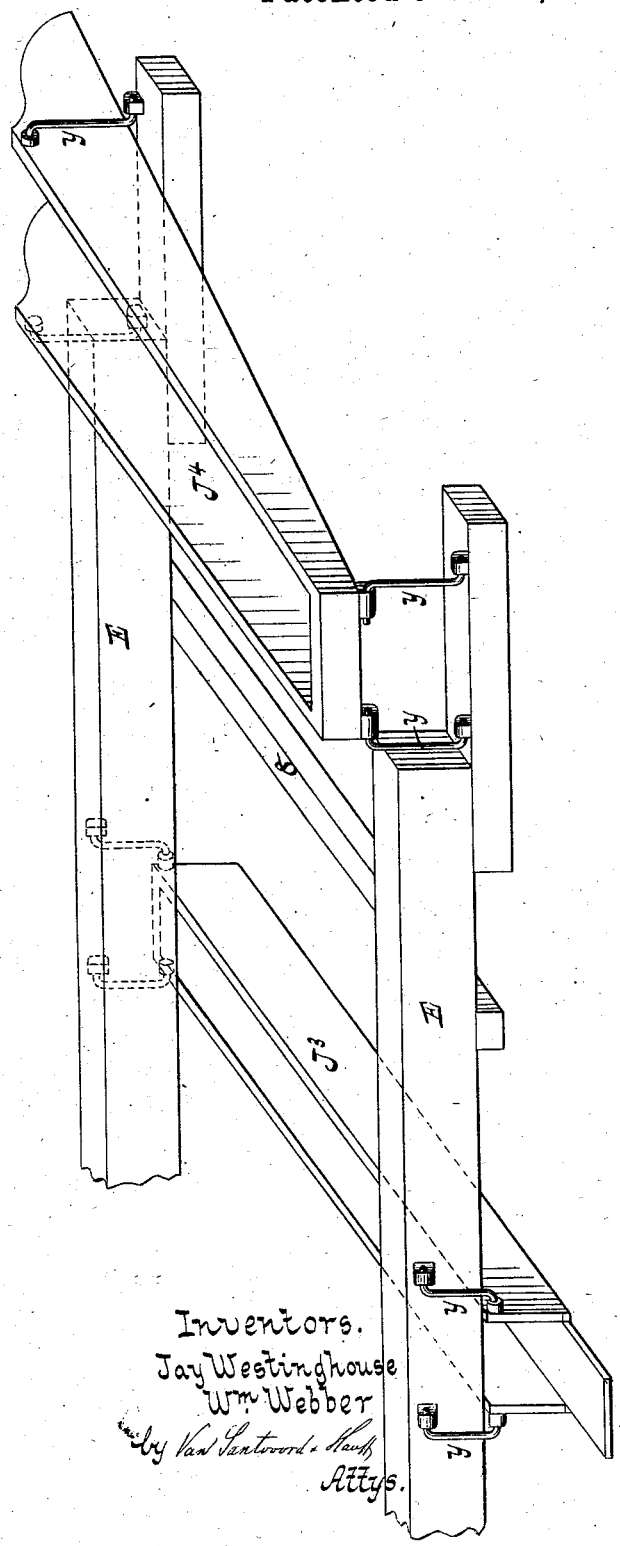

Fig. 5.

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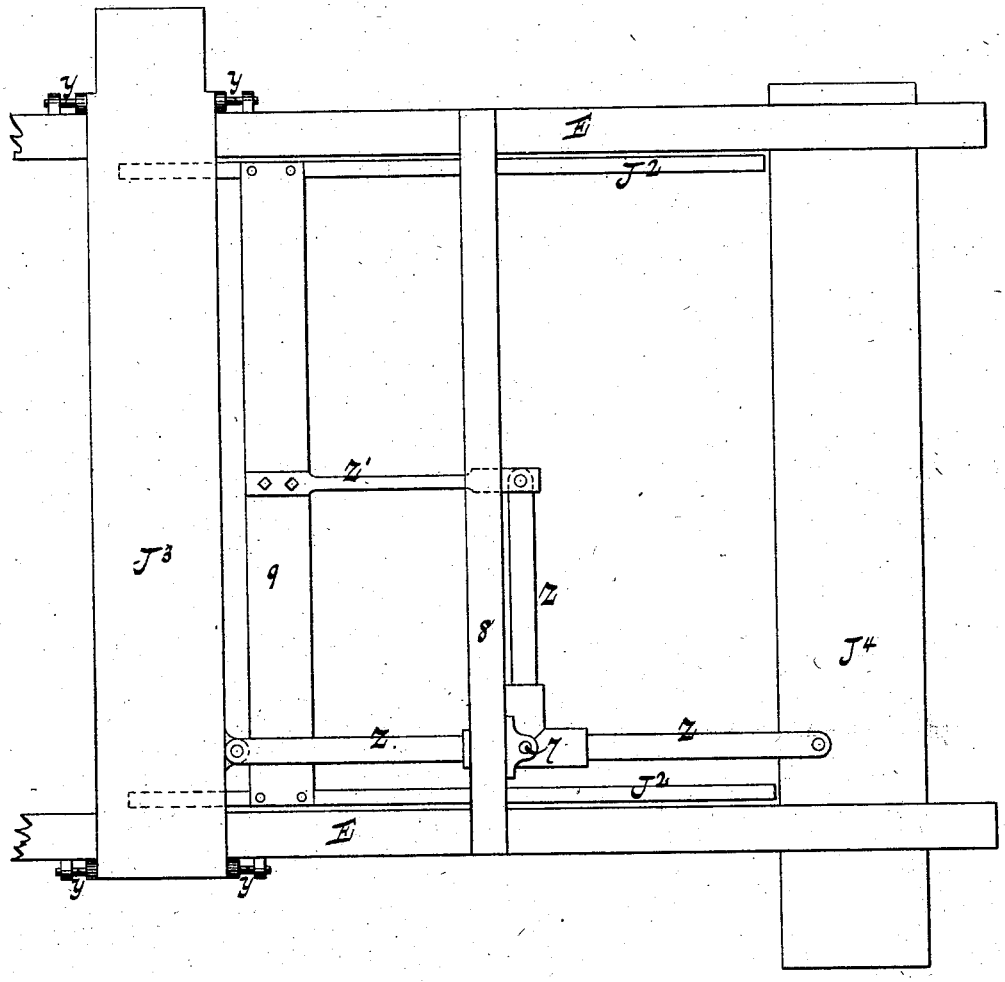
J. WESTINGHOUSE & W. WEBBER.

THRASHING MACHINE.

No. 259,955. Patented June 20, 1882

Fig. 6.



Witnesses.
Chas. Wahlers.
William Miller

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UNITED STATES PATENT OFFICE.

JAY WESTINGHOUSE AND WILLIAM WEBBER, OF SCHENECTADY, NEW YORK, ASSIGNORS TO G. WESTINGHOUSE & CO., OF SAME PLACE.

THRASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 259,955, dated June 20, 1882.

Application filed May 21, 1881. (No model.)

To all whom it may concern:

Be it known that we, JAY WESTINGHOUSE and WILLIAM WEBBER, both citizens of the United States, residing at Schenectady, county of Schenectady, and State of New York, have invented new and useful Improvements in Thrashing-Machines, of which the following is a specification.

This invention relates to thrashing-machines, among others those embodying a clover-huller; and it consists in certain novel combinations of parts, hereinafter fully described.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a side elevation. Fig. 2 is a vertical longitudinal section. Fig. 2* is a detail view of the distributer. Fig. 3 is a front view of the machine. Fig. 4 is an inverted plan view of the extension to the grain-carrier. Fig. 5 is a perspective view, showing the manner of hanging the spouts. Fig. 6 is an inverted plan or bottom view, showing the mechanism for shaking the spouts.

The same letters indicate the same or corresponding parts.

The letter A designates the thrashing-cylinder; B, the straw-carrier, and C the grain-carrier or pan, both carriers being connected to a double crank-shaft, D, Figs. 2 and 3, by rods *a b*.

The straw-carrier B is provided with vibrating agitators *c*, and above the same are arranged the revolving beaters *d*.

The grain-carrier C is divided into a forward section, C′, and a back section, C², which are supported on the machine-frame, (marked E,) at their outer ends, by means of suspension-rods *e e′*, while they are supported and connected together at their inner ends by T-arms, F, which are pivoted to the machine-frame, as at *g*, and pivoted to both sections of the grain-carrier, as at *h h*.

The suspension-rods *e e′* and T-arms F are arranged at both sides of the machine, opposite to each other, and the rods are exterior of the side boards, while the T-arms are interior thereof.

The crank-rod *b* is connected to the forward section, C′, of the grain-carrier, and when, by the action of the crank D through this rod, motion is given to the carrier, the outer ends of the sections C′ C² swing in the arc of a circle described from the upper pivotal point *f* or *f′* of the suspension-rod *e* or *e′*, while at the same time the inner ends of both sections swing in the arc of a circle described from the pivotal point *g* of the T-arms F, together with the arms. By this means each section, C′ C², of the grain-carrier is made to carry or propel the material that may be received thereon toward its inner end, at which point is located the delivery-opening *i* of the carrier, hereinafter more fully described.

The letter G designates the distributer, which is suspended from the grain-carrier C, at or near its rear end, by means of hangers H, and suspended from the machine-frame, at or near its forward end, by means of rods I, the hangers being fixed to the grain-carrier and pivoted to the distributer, while the rods are pivoted both to the frame and to the distributer. The forward end or portion of the distributer is situated below, and receives the grain falling through the delivery-opening *i* of the grain-carrier, whence the distributer extends rearwardly on an inclined plane, terminating within the rear end of the grain-carrier and near the rear end of the screens of the grain-shoe located beneath it. When the parts are in a central position, as shown in the drawings, the suspension-rods I of the distributer are inclined toward the rear end of the machine and the rods *e′* of the grain-carrier toward its front end.

The hangers H are a medium through which the distributer G receives motion from the back section, C², of the grain-carrier, and whereby the rear portion of the distributer is caused to partake of the motion of such section independently of the forward portion of the distributer—that is to say, when the grain-carrier moves rearward the rear end or portion of the distributer swings on the upper pivotal point of the suspension-rods *e′* of the carrier, together with the latter, thus receiving a compound falling and back movement, while the forward end or portion of the distributer swings on the upper pivotal point of its suspension-rods I, which, as before stated, is on the machine-frame, such forward portion thus receiving a compound rising and back movement. In like manner the motions of the distributer are reversed when the grain-carrier moves toward the front end of the machine, the rear

portion receiving a compound rising and forward movement and the forward portion a compound falling and forward movement, and the effect of these motions of the distributer is that it obtains a tendency to carry the grain forward or retard the movement thereof toward its rear end, so that the grain is retained on the distributer until it passes through the perforations thereof to the grain-shoe below.

The sides of the perforations *j* of the distributer, Fig. 2*, are inclined in the usual manner; but the front side thereof has the greatest inclination, which is the reverse arrangement to that heretofore adopted.

The letter J designates the grain-shoe, divided into an upper section, J′, and a lower section, J^2, both provided with the usual sieves or screens, &c. These shoe-sections J′ J^2 are entirely supported by oscillating levers K, which have their fulcra in brackets K′ on the machine-frame, and are pivoted to both shoe-sections, as at *l l*, the pivots *n* constituting the fulcra of the levers, being situated in the plane of the division-line between the shoe-sections.

To the lower shoe-section, J′, are connected by means of rods *o* the eccentrics L L, Figs. 2 and 3, mounted on a shaft, *p*, and when this shaft revolves a reciprocating motion is imparted to the lower shoe-section by the eccentrics, while a like motion is communicated to the upper shoe-section, J^2, from the lower one through the levers K, the operation of the shoe being thus produced in a simple and effective manner.

The connecting-rods *o* are located on the interior of the side boards of the machine-frame, passing through the fanning-mill N, and they are secured to the interior of the sides of the lower shoe-section, as at *q*, Fig. 2.

With the grain-shoe J are combined two spouts, J^3 J^4—namely, the grain-spout and the tailing-spout—which extend transversely to the shoe at the appropriate places, and both of which are hung to the machine-frame by means of pivoted rods *y*, whereby they are adapted to receive a longitudinally reciprocating or shaking motion for discharging the material.

To produce the motion of the spouts J^3 J^4 they are both connected to a T-lever, Z, (best seen in Fig. 6,) which in turn is connected to the lower section, J^2, of the shoe by a rod, Z′, so that this section acts on the spouts through the T-lever. The T-lever Z has its fulcrum on a pivot, 7, fixed to a girder, 8, of the machine-frame, and the part of the shoe to which the lever is connected consists of a girder, 9.

The arrangement of the shoe-screens, &c., is such that the upper section, J′, of the shoe counterbalances the weight of the lower section, J^2, combined with the force required to operate the spouts J^3 J^4, and by this means the motion of the parts is improved, while the strain on the connections is reduced, lessening their liability to work loose.

The letter O designates the clover-huller, consisting of a revolving cylinder inclosed in a suitable shell, O′. This huller O is located next to the distributer G in a forward direction, and its shell is open at the top, as shown in Fig. 2, to receive the clover from the grain-carrier C, the area of the delivery-opening *i* of the carrier being such that not only the distributer G, but also the clover-huller, is beneath it, adapting such opening to both.

A portion of the delivery-opening *i* is formed in both sections, C′ C^2, of the carrier, or, in other words, the opening is at the junction of the sections, and in the opening is arranged a movable leaf, P, which partially closes the opening. By moving this leaf P to the forward portion of the opening *i*, as shown in Fig. 2, it cuts off the delivery of material to the huller O, leaving an opening to the distributer, while if the leaf is shifted to a rear position it allows a delivery of material to the huller, at the same time cutting off that to the distributer. The leaf P can be fastened in various ways, which will readily suggest themselves and need no description. Next to the thrashing-cylinder A, toward the rear of the machine, is located a deflector, Q, whose primary object is to keep back the kernels thrashed from the straw by the cylinder and allow them to drop at once through the concave B′ and grating B^2 at that point, without being carried on the straw-carrier. This deflector Q is adjustable from a vertical to an inclined position, the means used for this purpose being a rock-shaft, *r*, to which the deflector is secured, and a suitable clamping device for retaining the shaft in the desired position.

If the grain is damp and the deflector Q is left in a vertical position, it is liable to retard the grain, and thus clog the thrashing-cylinder, and hence when the grain is in that condition we set the deflector back from the perpendicular, thus overcoming the disadvantage named.

We are aware that a vertically-adjustable bar provided with fingers or tines has been arranged in rear of the thrashing-cylinder for preventing the thrashed grain which falls below the straw from being caught up by the straw on the separator; but such is not our invention.

We are also aware that a grain-carrier has been provided with a grain-delivery opening and a slide for opening and closing the latter to admit the grain to or exclude it from the huller; but such broadly is not claimed by us.

At the rear end of the grain-carrier C is arranged a sliding extension, R, Figs. 2 and 4, for the purpose of varying its length. This extension R slides upon the top of the grain-carrier, and it is provided with a slotted arm, S, which slides under the carrier and is clamped at that place by a thumb-nut, *t*, passing through its slot.

At the forward end of the machine, and below the grain-carrier C, the frame is constructed with a girder, U, and brackets V, the latter being on the interior of the sills of the frame, so that any of the shoe-sieves which are not in use may be put on the girder and brackets, as

shown in Fig. 2, for safe keeping. The brackets V are inclined at *w*, and are provided with a shoulder, *x*, at the base of the inclination against which the sieves abut, for the purpose of keeping them in place.

What we claim as new, and desire to secure to secure by Letters Patent, is—

1. The combination, substantially as herein-before set forth, of the grain-carrier divided into a forward and back section, the swinging suspension-rods supporting the sections on the machine-frame at their outer ends, and the T-arms pivoted to the machine-frame and to both sections of the grain-carrier at the inner ends of the sections to support and connect them with each other at that point.

2. The combination, substantially as herein-before set forth, of the grain-carrier swinging upon pivoted suspension-rods, and having a grain-delivery opening at or near its center, the perforated distributer, the hangers of the grain-carrier, having the distributer pivoted thereto, and the swinging rods pivoted to the machine-frame and to the distributer, whereby the distributer is caused to move with the grain-carrier, and its front and rear ends obtain respectively a compound rising and back movement and a compound falling and back movement.

3. The combination, substantially as herein-before set forth, of the grain-carrier divided into a forward and a back section, the suspension-rods supporting the sections of the carrier at their outer ends, the swinging T-arms pivoted to both sections of the grain-carrier at the inner ends of the sections, the distributer, the hangers fixed to the grain-carrier and pivoted to the distributer at the rear end, and the swinging suspension-rods carrying the forward end of the distributer.

4. The combination, substantially as herein-before set forth, of the grain-carrier divided into a forward and back section, and provided with a grain-delivery opening at the junction of the sections, the suspension-rods supporting the sections at their outer ends, the swinging T-arms pivoted to the sections at their inner ends, the sliding leaf supported by and capable of moving on the grain-carrier, and acting as a cover for partially closing its delivery-opening, the vibratory distributer, having its forward end arranged beneath the delivery-opening in the grain-carrier, and the clover-huller in communication with said opening, for the purpose specified.

5. The rock-shaft *r*, provided with the deflector O, and capable of rotating to adjust the deflector from a vertical to an inclined position, and conversely, in combination with the thrashing-cylinder, the concave, and the grating, substantially as described, whereby the grain thrashed from the straw is directed through the grating, as and for the purpose set forth.

6. The combination, substantially as herein-before set forth, with the grain-carrier, of the sliding adjustable extension, having a slotted arm and thumb-nut at the rear end of such carrier.

In testimony whereof we have hereunto set our hands and seals in the presence of two subscribing witnesses.

JAY WESTINGHOUSE. [L. S.]
WILLIAM WEBBER. [L. S.]

Witnesses:
LORENZO STEWART,
H. R. HEGEMAN.