No. 684,562. Patented Oct. 15, 1901.

J. WILHELM.

GRAIN CLEANER AND DISTRIBUTER.

(Application filed Jan. 23, 1901.)

(No Model.)

Fig. 1.

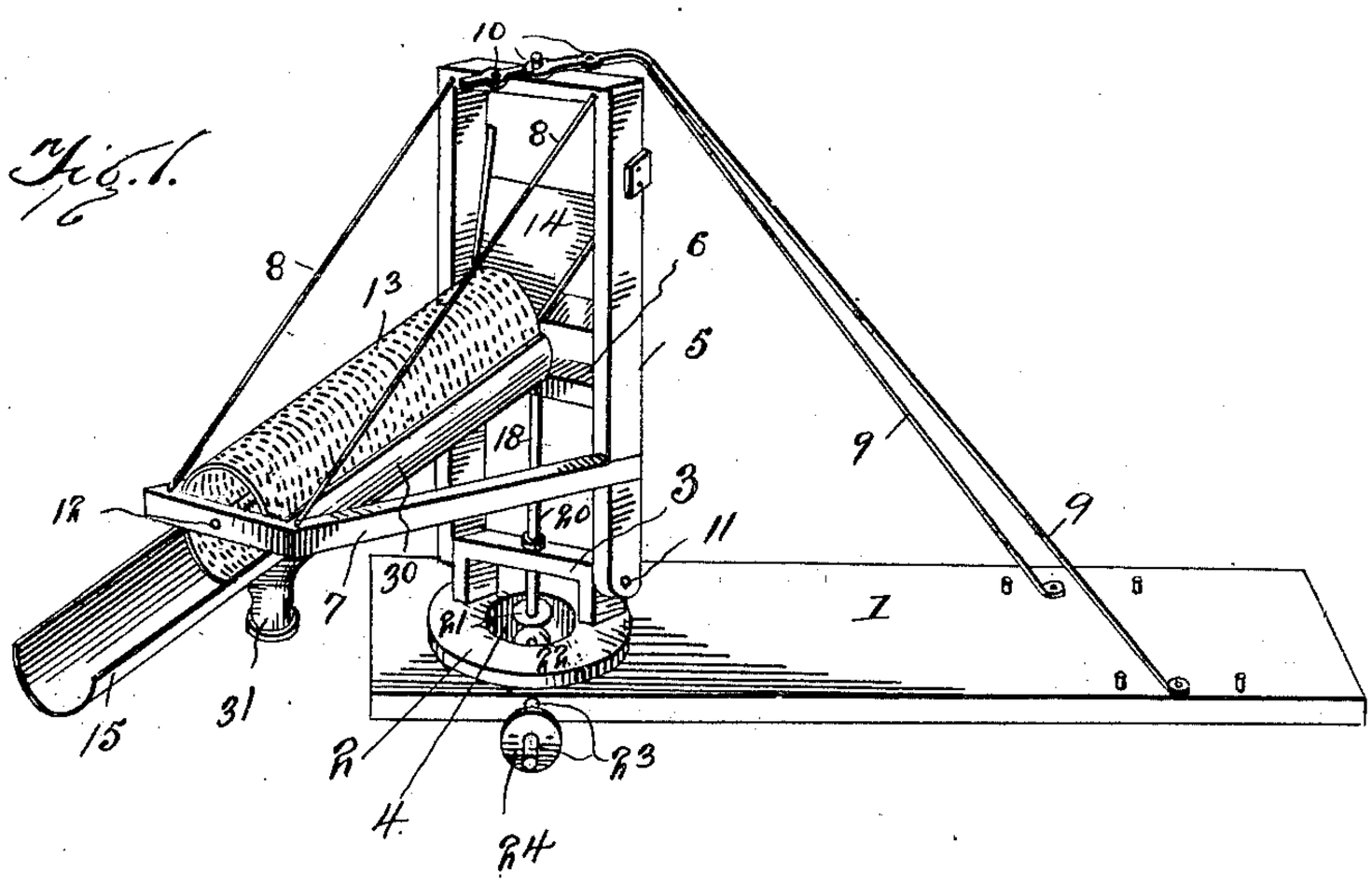


Fig. 2.

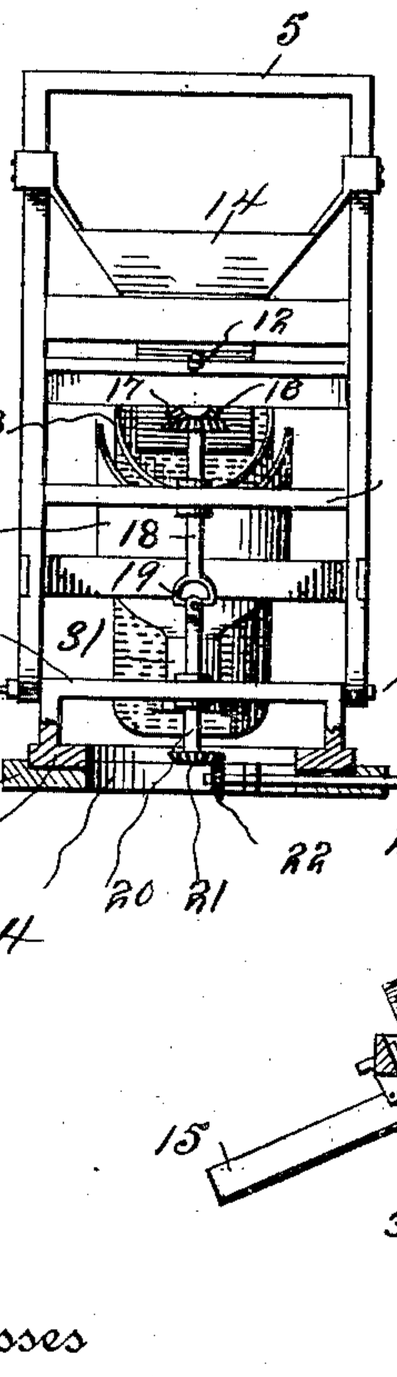
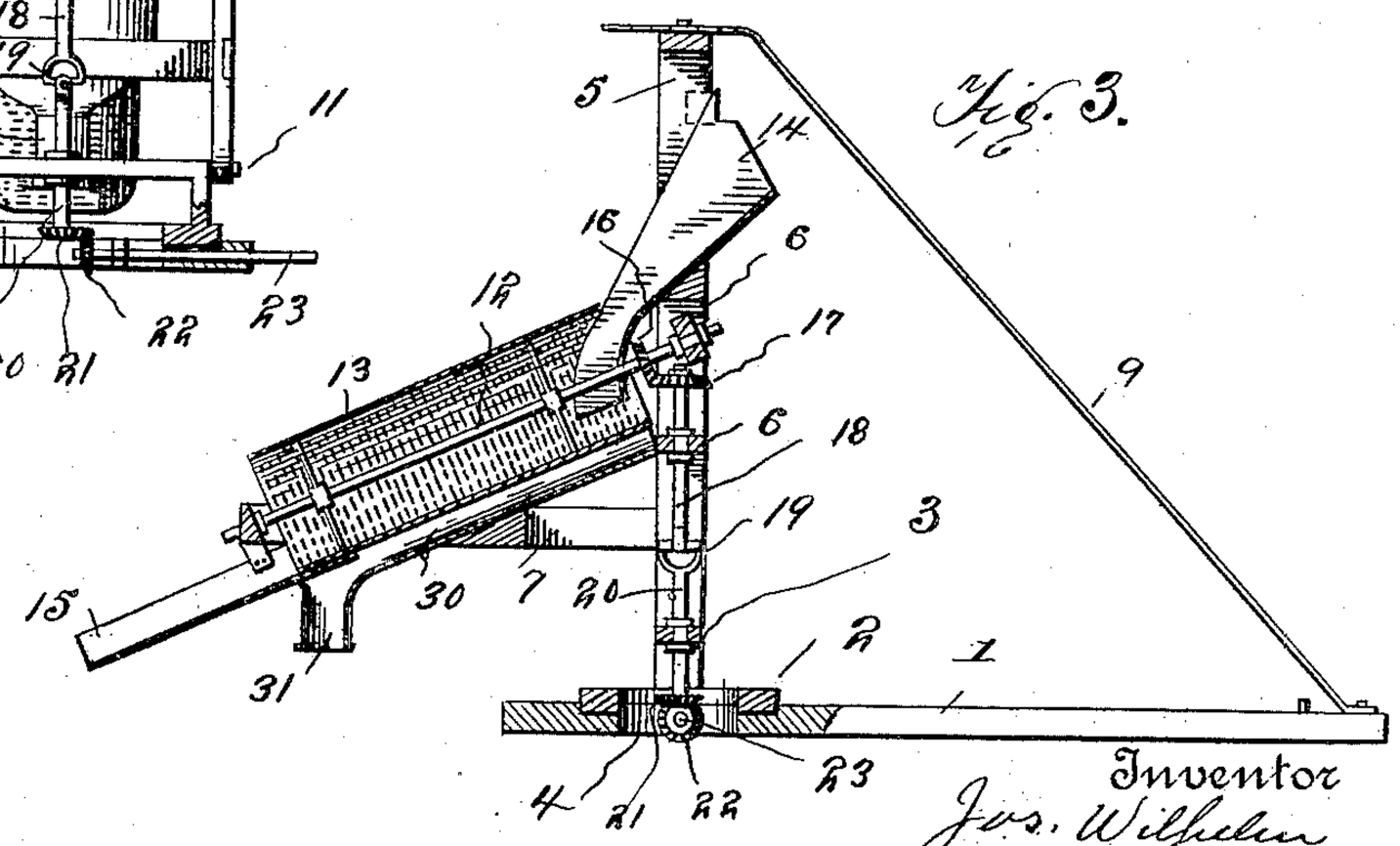


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JOSEPH WILHELM, OF WHEATON, MINNESOTA.

GRAIN CLEANER AND DISTRIBUTER.

SPECIFICATION forming part of Letters Patent No. 684,562, dated October 15, 1901.

Application filed January 23, 1901. Serial No. 44,409. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WILHELM, residing at Wheaton, in the county of Traverse and State of Minnesota, have invented certain new and useful Improvements in Grain Cleaners and Distributers, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to machines for cleaning and delivering grain.

The object of the invention is to construct a machine wherein grain, especially wheat or rye, shall be relieved from fine seeds and delivered in convenient position for loading.

As grain, especially wheat, is delivered from the threshing-machines as usually constructed in the United States there often remains with the wheat quite a quantity of fine seed, such as grass-seed, millet, chess, and other fine generally heavy seeds. This fine seed is a detriment to the wheat and causes it to bring a less price. When delivered at the mill or elevator, the grain is put through a screening-machine and the weight of the screenings is deducted from the full weight before making payment. The screenings are not paid for, but are frequently sold by the miller or elevator attendant at a price nearly as great as wheat. I purpose to remove this material before the grain leaves the farm, so that the screenings remain on the farm as a feed for poultry or stock and the grain is delivered in better condition.

Figure 1 is a perspective view of a machine illustrating my invention. Fig. 2 is a rear elevation with platform in section and braces omitted. Fig. 3 is a longitudinal vertical section.

The numeral 1 indicates a table, bench, or platform on which the machine is mounted. On this table there is a swiveled base-piece 2, preferably in the form of a ring. On this ring a bracket 3 extends upward and across the opening in the ring. There is an opening 4 in the platform under this bracket. An upright frame 5 is hinged at 11 to the bracket 3. This frame 5 has a cross-bar 6, which forms a bearing for an upright shaft. From one side of frame 5 there is an extending frame 7, which is connected by braces 8 to the top of the frame 5. The two frames 5 and 7 are thus rigid with each other and form practically a crane free to move in all directions within limits, as the ring 2 swivels on the platform or in a recess therein and the frame 5 can be inclined on its hinge. The top of the frame 5 is connected to the platform 1 by wires, rods, or braces 9, and the connection of such frame to the braces is adjustable, as by means of a pin on the frame extending through holes 10 in the braces. If the braces be wires or cables, they may be tied in position, as is common in supporting a crane or derrick. By extending the length of the braces 9 to the point of connection with frame 5 this frame may swing on the hinge 11 out of the perpendicular. By connecting braces 9 at the middle of frame 5 the frame or crane can be turned or swiveled on its base without obstruction from braces 9. A shaft 12 is held in inclined position relatively to frames 5 7 by being supported in suitable bearings in each. This shaft 12 has a screen supported thereon, the screen being in the usual form of a rotating bolt. A funnel or trough 14, supported on the upper part of the frame 5, leads into the upper end of the screen. A spout 15, attached to frame 7, preferably extends beyond the lower end of the screen, so that grain entering through the funnel 14 and passing through the rotating screen or bolt 13 may be delivered from spout 15. As the crane can be swung in any direction, this affords a convenient means for loading grain. The grain as it comes from the thresher is delivered into funnel 14, then passes through screen 13, and runs out of spout 15, which may swing from sack to sack as sacks are filled. Shaft 12 has a bevel-gear 16 fixed thereon, and this gear 16 engages a gear 17 on the driving-shaft 18, which shaft 18 is journaled in cross-bar 6. The shaft 18 has a knuckle or flexible joint 19 where it is connected with the shaft 20, which is supported in bracket 3. Shaft 20 has a bevel-gear 21, which engages a gear 22 on the horizontal shaft 23. Shaft 23 is supported on base 1 and is driven by power applied to pulley 24 or in other suitable manner. Thus the shafts will be driven and the bolt rotated by power applied to shaft 23, and the crane will still be at liberty to swing or swivel on its base and to be inclined more or less within limits. Under the screen 13 a

trough 30 receives the small seeds and other materials which pass through screen 13. Trough 30 has a spout 31, to which a bag may be attached, if desirable, to receive the screenings, or the spout may be left open to drop the screenings.

From the foregoing it will be understood that this screen is intended to receive the grain at funnel 14 and deliver it at spout 15 and to drop the fine material which passes through the mesh from the spout or outlet 31. The screen can generally be driven from the driving power by which the threshing-machine is driven, and by screening the grain before shipment the grain bears a higher rating.

What I claim is—

1. A distributing-screener, consisting essentially of a platform, a base-piece swiveled thereto, an upright frame on the base and hinged so as to swing out of perpendicular, a hollow cylindrical screen supported on said cylindrical frame, a funnel or trough leading to said screen, and driving mechanism connected to said screen, whereby the same may be rotated in all positions of the supporting-frame, all combined.

2. In a screener as described, the combination of a platform, a base-piece swiveled thereon and a frame connected to the base-piece and hinged so as to swing out of perpendicular, a shaft supported by the base-piece and frame, a shaft carried by the platform but having geared connection with the shaft on the base-piece, and a rotating screen on the upright frame driven by said shaft on the frame, all combined.

3. In a screener as described, the combination with the supporting base or platform, of a frame swiveled to said platform so as to be free to turn thereon, a frame-section hinged to said swiveled base, extending in generally upright direction but movable on the hinge out of perpendicular, braces connecting said frame and base, and a rotating screen supported on the generally upright frame and driven by flexible driving-gear connected to the base, substantially as described.

4. In a screener as described, the supporting-platform, the swiveled base, the frame or crane hinged to said base and braced from the platform, the inclined rotating screen carried by said frame or crane, a driving-shaft on the frame or crane having gears by which the screen is driven, and a shaft on the base-piece flexibly connected to the shaft on the crane, all combined.

5. In a screen of the character described, the funnel, rotating screener, delivery-spout, and screenings-trough, all mounted on and carried by the hinged frame or crane, the swiveled base to which the frame is hinged, and a driving-shaft for the screen composed of sections yieldingly connected, one section being on the base-piece and the other on the crane or frame, all combined substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH WILHELM.

Witnesses:
T. K. MORK,
A. J. OLSON.