

No. 688,760.

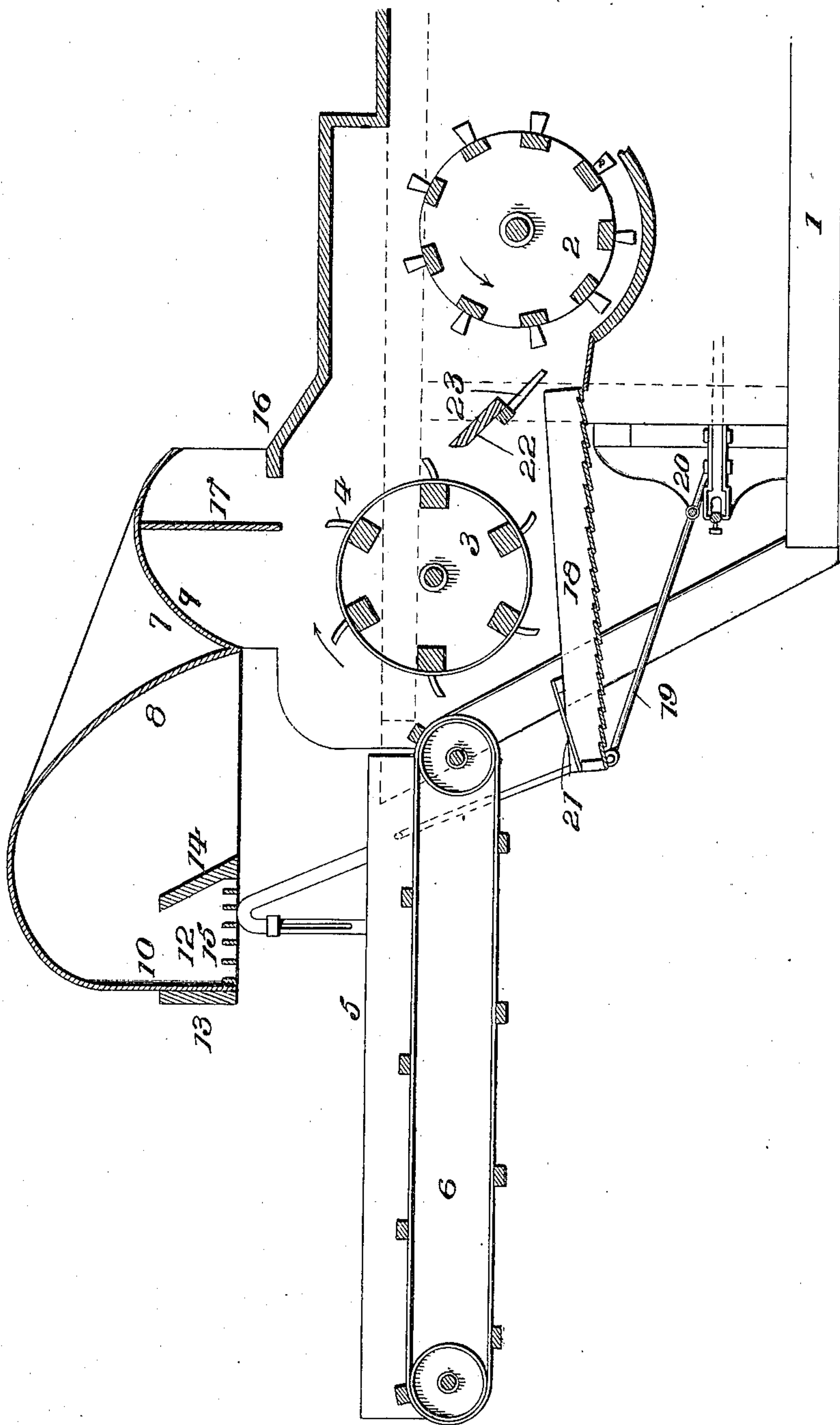
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G. E. WADLEIGH.

FEEDER AND SEPARATOR FOR THRESHING MACHINES.

(Application filed Nov. 24, 1900. Renewed Oct. 24, 1901.)

(No Model.)



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FEEDER AND SEPARATOR FOR THRESHING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 688,760, dated December 10, 1901.

Application filed November 24, 1900. Renewed October 24, 1901. Serial No. 79,862. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. WADLEIGH, of Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Feeders and Separators for Threshing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as it appertains to make and use the same.

This invention relates to feeders and separators for threshing-machines, especially bean-threshers.

The primary object of the invention is to provide means for separating or removing stones or other foreign matter from the grain before the same reaches the threshing-cylinder and also to prevent the stones from doing damage when acted upon by the separating means.

A further object is to provide improved means for insuring the passage of grain and fodder to the threshing-cylinder.

The invention will be hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawing the figure is a vertical sectional view showing the receiving end of a threshing-machine equipped with my improvement.

Referring to the drawing, 1 designates the frame of a threshing-machine, 2 the threshing-cylinder, which is designed to be rotated in the direction of the arrow indicated thereon, and 3 is a separating-drum set in advance of the threshing-cylinder on a plane above the latter—that is, the separating-drum is located intermediate the threshing-cylinder and the point of introduction of the grain, so that the latter will be subjected to the action of such drum before its delivery to the threshing-cylinder. This drum, which is designed to be rapidly rotated in the direction of the arrow, (being the reverse of the rotation of the threshing-cylinder,) is provided on its periphery with raised portions or beaters 4. In advance of this separating-drum is a receiving-table 5, over which travels an endless carrier 6, by which latter the grain is advanced to the drum 3.

Mounted on the frame 1 and extending transversely thereof above the separating-drum is a hood 7, constructed to form a receiver and guard or deflector for the stones thrown from the grain by the separating-drum, so as to arrest the same before they are discharged from the thresher. This hood is shown as provided with two curved deflecting-walls 8 and 9, diverging from a point above and nearly in line with the rear vertical face of the separating-drum. The wall 8 extends upwardly and rearwardly, terminating in a vertical portion 10, which is secured to a receptacle 12, having two sides 13 and 14 and a slotted or perforated bottom 15. Stones discharged into that portion of the hood outlined by wall 8 will fall into the receptacle 12, from which they may be removed at will, while beans thrown therein will fall through bottom 15 onto carrier 6. The wall 9 is carried forward and terminates above the top 16 of the thresher-frame 1, leaving an opening over which is suspended a flexible sheet 17, preferably of canvas or other suitable material. Stones thrown by the separating means into that portion of the hood described by wall 9 will strike against the flexible sheet and, their force or momentum being arrested, will be received on the top 16.

18 is a receiving-shoe located beneath the separating-cylinder and designed to receive the grain falling from such cylinder and the feed-table and carry it to the threshing-cylinder. The reciprocating movement is imparted to this shoe by a rod 19, secured to a crank-shaft 20. A deflector 21, located over the outer end of the receiving-shoe, is designed to deflect any foreign matter falling thereon which may be larger than the grain and carry it off from the shoe. This deflector may be perforated or composed of spaced-apart fingers secured to a cross-bar, as shown. Intermediate the separating-drum and the threshing-cylinder is a transverse board 22, having secured thereto a series of spaced-apart fingers 23. The board 22 serves to direct the fodder into the throat of the threshing-cylinder, and the fingers secured thereto allow the grain to pass from the receiving-shoe to said cylinder.

The advantages of my improvements are apparent to those skilled in the art. It will be noted that a rapidly-operating separating-drum will effectively separate stones and other foreign matter from the grain and throw the latter upward against the hood, where they will accumulate either in the stone-receiver or on the top of the thresher. It will also be noted that by locating the receiving-shoe beneath the separating-drum grain falling from the latter and the feed-table will be conveyed to the threshing-cylinder and that the deflector-board will serve to prevent any foreign matter larger than the grain itself falling thereon from entering the shoe; also, that the transverse board and spaced-apart fingers will direct the fodder and grain to the threshing-cylinder, and that beans thrown with the stones into the receptacle 12 will fall through the bottom of the latter back onto the receiving-table carrier.

I claim as my invention—

1. In a threshing-machine having a separating-drum in advance of the threshing-cylinder, a receptacle designed to receive substances tangentially discharged by the centrifugal action of said drum, and means intermediate of the drum and receptacle for guiding and deflecting said substances into the latter, as set forth.

2. In a threshing-machine having a separating-drum in advance of the threshing-cylinder, an open-top receptacle designed to receive substances tangentially discharged by the centrifugal action of said drum, and means intermediate of the said top and in the line of discharge for deflecting said substances, as set forth.

3. In a threshing-machine having a separating-drum in advance of the threshing-cylinder, a receptacle for foreign substances discharged by said drum, and a hood having a curved wall for deflecting such foreign substances into said receptacle, as set forth.

4. In a threshing-machine having a separating-drum in advance of the threshing-cylinder, a receptacle, designed to receive foreign substances, &c., tangentially discharged by centrifugal action of said drum, having openings in its bottom for the passage of grain or beans falling therein, and means for deflecting such foreign substances, &c., into said receptacle, as set forth.

5. In a threshing-machine having a separating-drum in advance of the threshing-cylinder, a feeding-table, a receptacle above said table, designed to receive foreign substances, &c., tangentially discharged by centrifugal

action of said drum, having openings in its bottom for the purpose stated and means intermediate the drum and receptacle for deflecting such foreign substances, &c., into said receptacle, as set forth.

6. In a threshing-machine having a separating-drum in advance of the threshing-cylinder, a hood above said drum having an outlet-opening and a receiver for substances forced against said hood and through said opening by said drum, as set forth.

7. In a threshing-machine having a separating-drum in advance of the threshing-cylinder, a hood above said drum having an outlet-opening for foreign substances discharged by said drum, a flexible arrester between said drum and outlet-opening and a receiver for substances forced against said hood and beyond said arrester and opening by said drum, as set forth.

8. In a threshing-machine having a separating-drum in advance of the threshing-cylinder, a hood above said drum having oppositely-extended walls forming deflectors for substances discharged by said drum, substantially as set forth.

9. In a threshing-machine having a separating-drum in advance of the threshing-cylinder, a hood above said drum having oppositely-extended walls forming deflectors for substances discharged by said drum, one of said walls forming an outlet, a receiver in line with said outlet, a receptacle to which the other wall is secured, and a flexible arrester depending from said hood over said outlet, substantially as set forth.

10. In a threshing-machine having a separating-drum in advance of and above the threshing-cylinder, a reciprocating shoe beneath said drum, and means over the outer end of said shoe for deflecting foreign substances from the latter, as set forth.

11. In a threshing-machine having a separating-drum in advance of and above the threshing-cylinder, a reciprocating shoe beneath said drum, and a deflector over the outer end of said shoe for deflecting foreign substances from the latter and formed with openings for the passage of grain onto the shoe, as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

GEORGE E. WADLEIGH.

Witnesses:

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