

July 29, 1924.

1,502,702

L. H. WAGNER

GRAIN SAVING DEVICE FOR THRASHING MACHINES

Filed Oct. 20, 1923

2 Sheets-Sheet 1

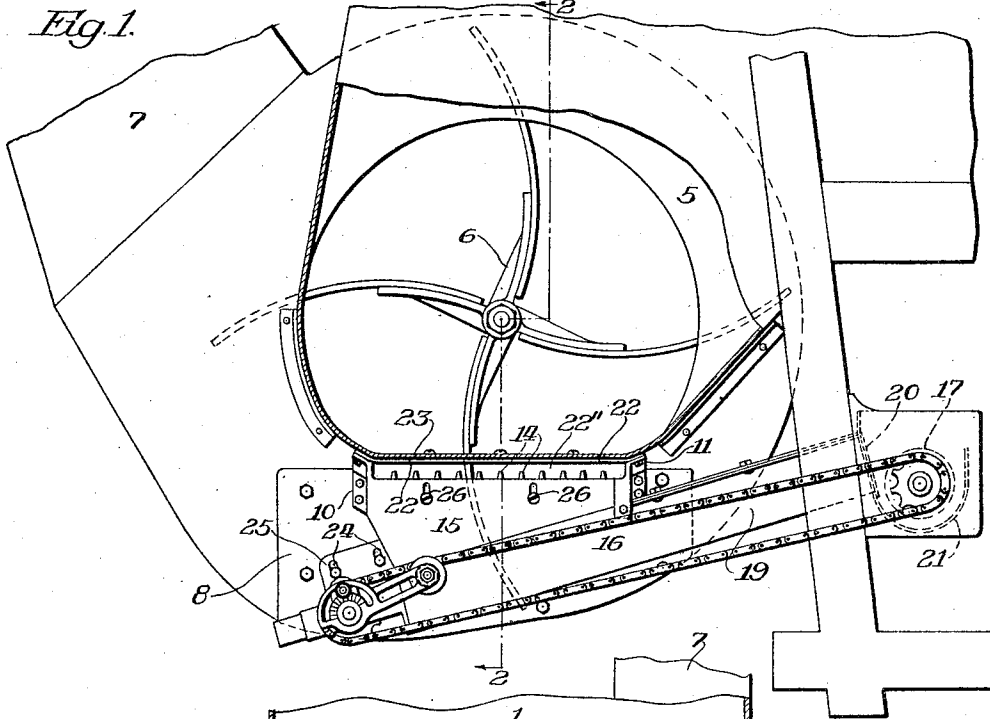
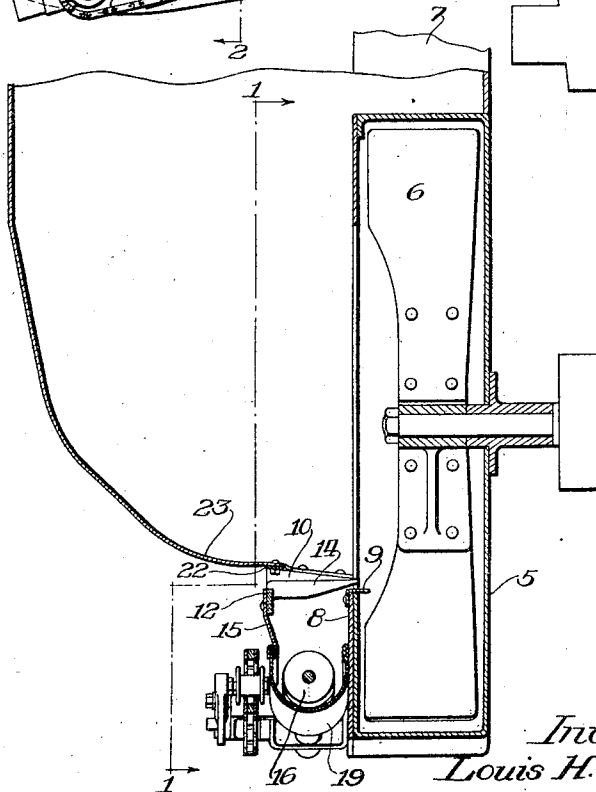


Fig. 2.



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Fig. 3.

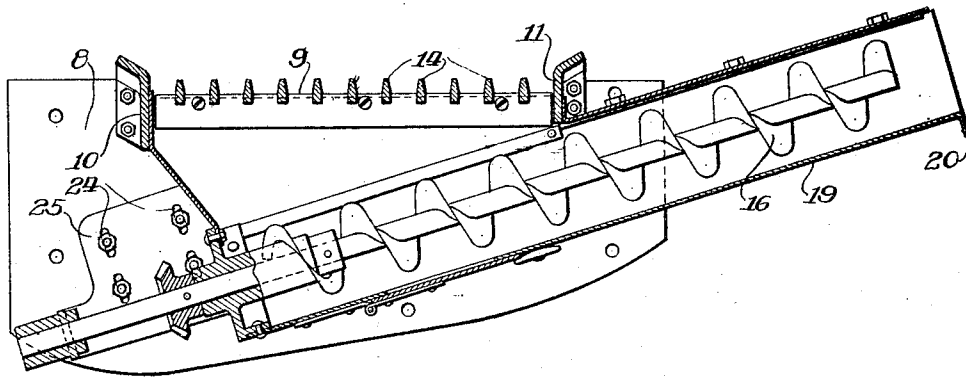


Fig. 4.

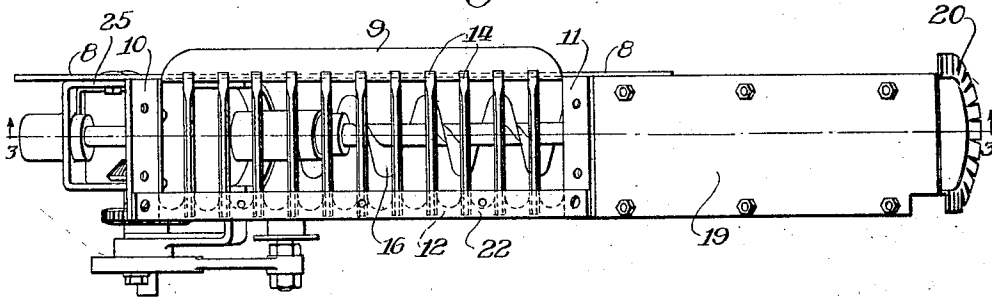


Fig. 5.

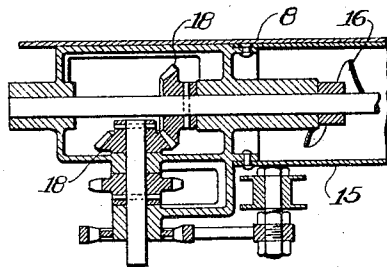
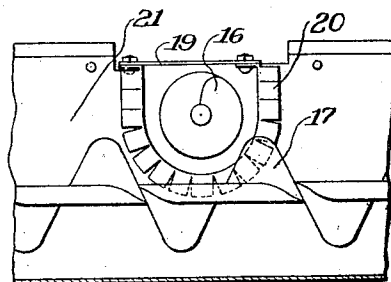


Fig. 6.



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UNITED STATES PATENT OFFICE.

LOUIS H. WAGNER, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE INDIANA MANUFACTURING COMPANY, OF INDIANAPOLIS, INDIANA, A CORPORATION OF WEST VIRGINIA.

GRAIN-SAVING DEVICE FOR THRASHING MACHINES.

Application filed October 20, 1923. Serial No. 669,721.

To all whom it may concern:

Be it known that I, LOUIS H. WAGNER, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Grain-Saving Devices for Thrashing Machines, of which the following is a specification.

Grain saving wind stackers forming part of thrashing machines have heretofore required especial and comparatively expensive workmanship in manufacture, as it has been the practice to build into the stacker structure the elements cooperating with the stacker fan for saving grain, usually necessitating a fan drum of peculiar arrangement, an auxiliary blast pipe and other parts, all assembled in such manner that the stacker as a whole including such grain saving parts could be readily attached in the factory to a thrashing machine as a unitary structure. In the use of thrashing machines in the field it is common to ship a wind stacker to the thrasher for attachment by him to his machine to replace a worn out stacker or substitute a grain saving stacker for the non-grain saving type. Removal of an old stacker and attachment of a new one involves considerable labor, and especially when the substitution is of the grain saving type, which requires certain additional workmanship. It is my object to provide a unitary grain saving device for wind stackers which may be readily attached to an existing stacker at the factory or in the field without changing or disturbing the original construction of the stacker; in other words, where the stacker is of the common or non-grain saving type my device can be readily attached thereto without removing the stacker from the thrashing machine, and such stacker thus converted into a grain saving stacker of like efficiency as if originally so constructed, all as will be hereinafter more particularly described and claimed.

In the accompanying drawings, forming part hereof, Figure 1 is a side elevation of a wind stacker showing my improvement attached thereto, taken on the dotted line 1—1 in Fig. 2; Fig. 2, a transverse sectional view taken on the dotted line 2—2 in Fig. 1; Fig. 3, a detail sectional view of my attachment taken on the dotted line 3—3 in Fig. 4; Fig. 4, a plan of the device; Fig.

5, a horizontal sectional view of the conveyer driving mechanism, and Fig. 6 an end view of the conveyer and its casing which communicates with the ordinary tailings auger-box of a thrashing machine.

In said drawings the portions marked 5, and, 6, respectively, indicate a wind stacker drum and fan of any appropriate character, and, 7, the discharge outlet of said drum.

My improvement comprises a plate, 8, having at its upper end a lip or air retainer, 9, adapted to extend into the fan drum 5 in a horizontal position so that a circular eye or inlet to the fan drum will be of a horizontal character at its lower side, as indicated in Fig. 1. To said plate 8 I attach end walls, 10, 11, which are connected at their outer edges by a bar or member 12, having integrally formed therewith or otherwise secured thereto a series of grates, 14, and extending downwardly from said bar 12 is a hopper wall, 15, said end walls, grates and hopper constituting a grain trap for receiving and precipitating loose grain to a conveyer, 16, beneath to be returned to the tailings auger, 17, of the thrashing machine and thus saved. Said auger conveyer 16, its driving mechanism, 18, and housing, 19, are of a well-known character and need not be further specifically referred to herein except that at the delivery end of the auger I scallop its housing 19, as at 20, so that it may be bent around the inlet to tailings auger-housing, 21, and said two elements thus efficiently connected. Across the outer edges of the grate bars 14 I provide a support, 22, to which the edge of the ordinary hopper, 23, is secured. As said support 22 is considerably above grates 14 a space 22' is left between these parts, which constitutes a vent through which air from outside the machine is withdrawn with such velocity as to create a draft across the grates 14 into the fan so that material passing from hopper 23 over said grates becomes subjected to a winnowing operation which separates loose grain kernels from the straw, chaff, etc., and obviates the necessity of employing an auxiliary blast pipe for such purpose as has been common.

It will be understood that in order to attach my device to a constructed stacker the hopper 23 is cut away sufficiently to provide an opening to snugly receive the

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upper grate portions of the device to which the surrounding edges of the hopper are connected, the plate 8 having been bolted to the fan drum. However, in making such attachment an opening is first cut into tailings auger housing 21 to provide an entrance for auger housing 19, and, when fitting the device, in order to assure that the auger conveyer will be at the proper angle, I provide slots, 24, in its wall, 25, so that the auger structure can be adjustably bolted to plate 8, which permits its slight movement, and to compensate for any opening which might be caused by its downward movement I provide the slot and bolt attachment, 26, for the hopper wall 15.

In this manner I provide a unitary grain saving attachment for wind stackers under course of manufacture or already in use, which in the form as indicated in Fig. 4 is of an assembled compact character and in condition to be readily attached to a wind stacker without modifying the stacker other than to provide an opening in its hopper to accommodate the upper or grate portion of the device, as heretofore explained.

I claim as my invention:

1. A grain saving device for thrashing machines comprising an attaching plate embodying an air retainer adapted to be se-

cured to a fan drum, a hopper, grain trapping grates above said hopper, a conveyer adjustably secured to said plate, and means for actuating said conveyer.

2. A grain saving device for thrashing machines comprising an attaching plate adapted to be secured to a stacker fan drum, a grain trap embodying grates and a hopper secured to said plate, a conveyer secured to said plate, and means for actuating said conveyer to discharge grain conveyed thereto by said trap.

3. A grain saving device for thrashing machines comprising an attaching plate, a grain trap embodying grates and a hopper secured to said plate, said trap having a vent adjacent said grates, a conveyer secured to said plate having flexible means at its end for connection to a tailings auger, and means for actuating said conveyer.

4. A grain saving device for thrashing machines comprising an attaching plate, a combined grate trap and hopper secured thereto, and a conveyer secured to said plate beneath said hopper for conveying material from the latter.

In testimony whereof I affix my signature.

LOUIS H. WAGNER.