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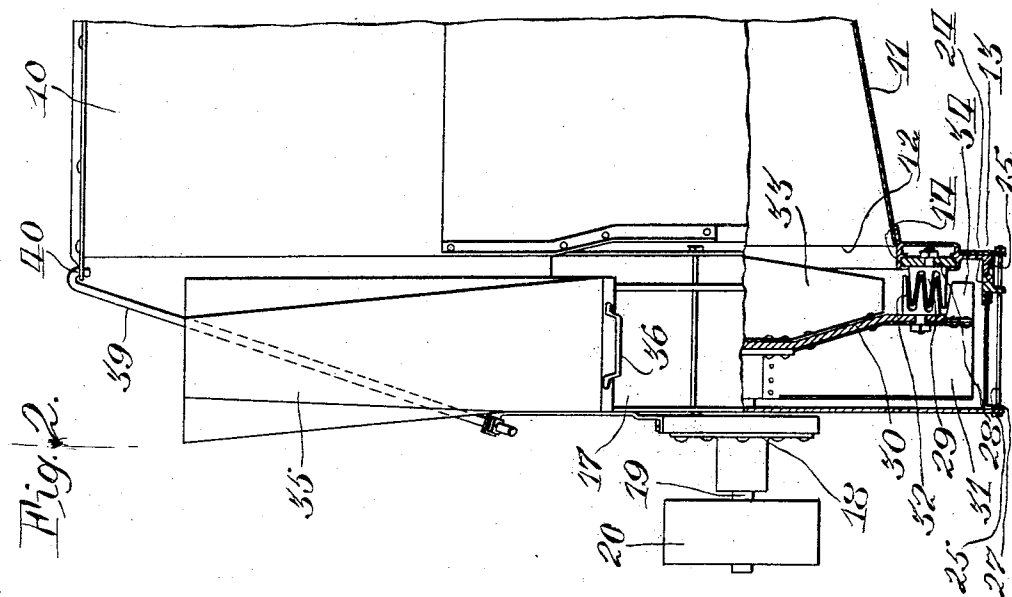
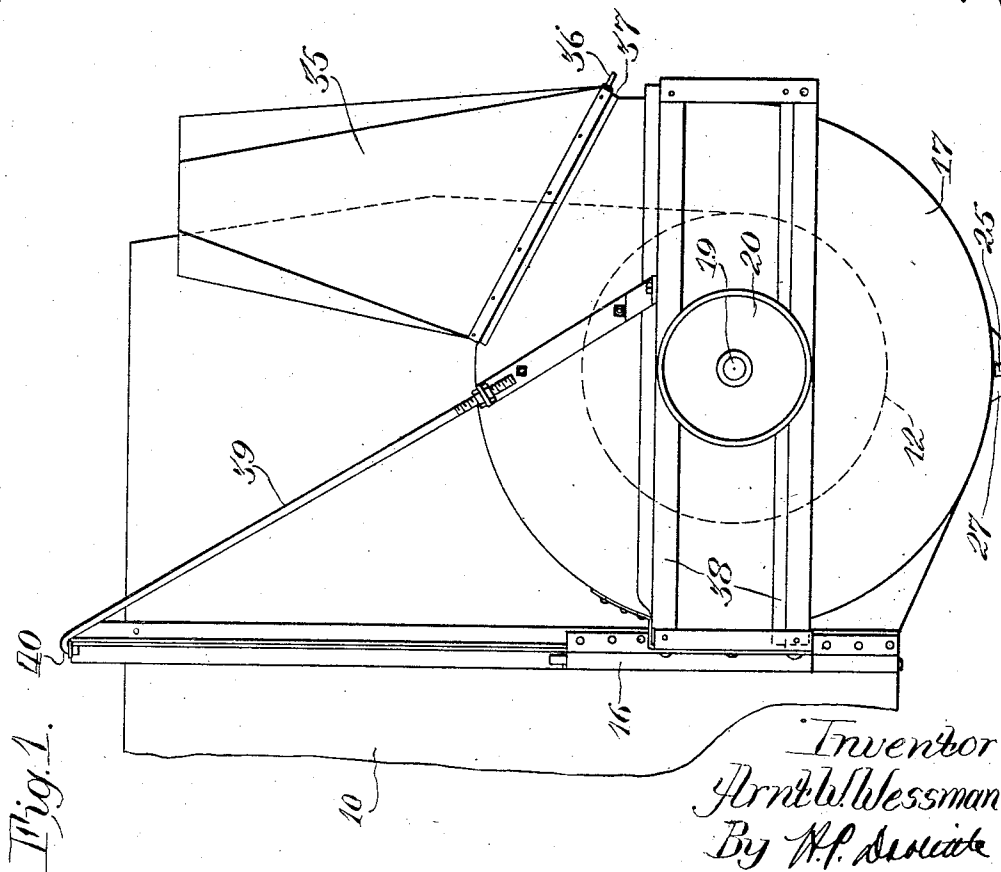
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1,825,838

INTERCHANGEABLE STRAW BRUISER AND WIND STACKER

Filed Dec. 28, 1929

2 Sheets-Sheet 1



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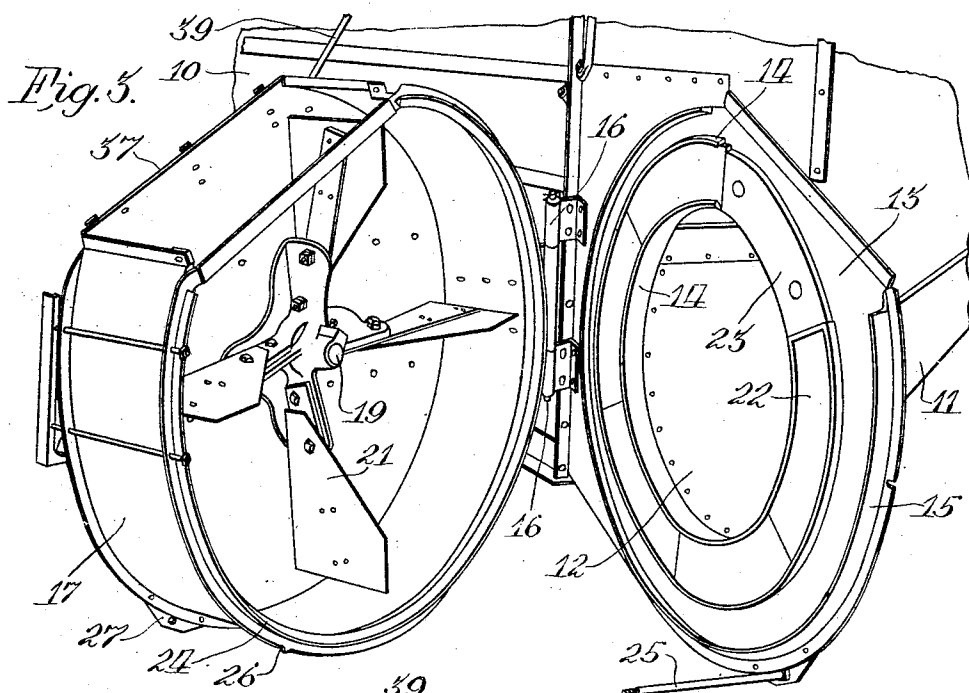
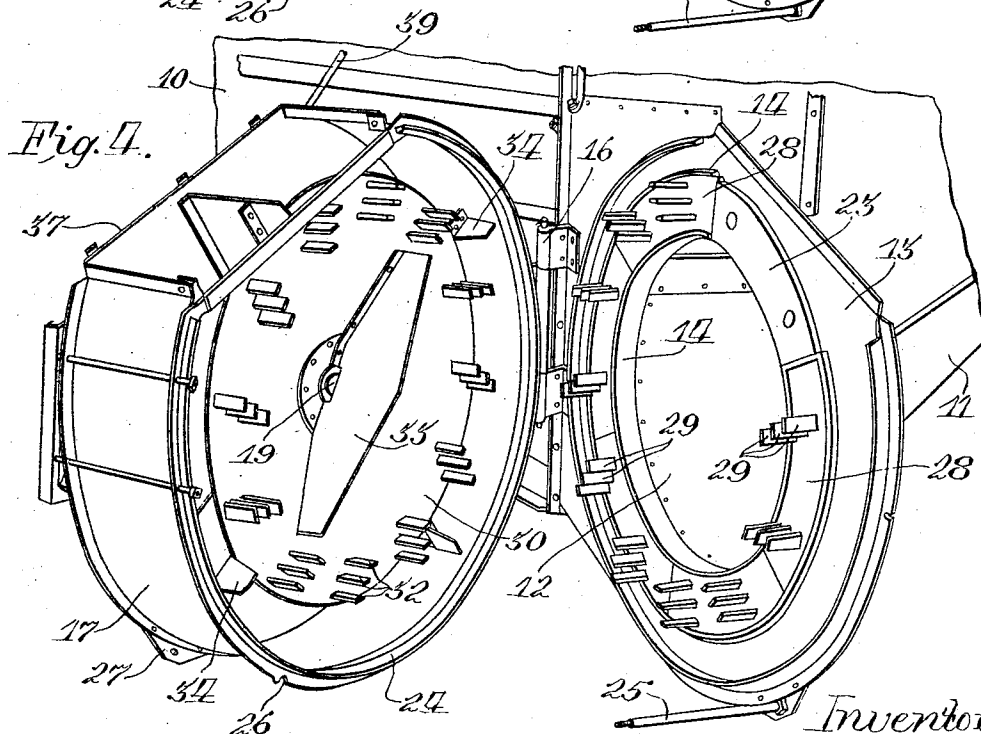
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INTERCHANGEABLE STRAW BRUISER AND WIND STACKER

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE

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INTERCHANGEABLE STRAW BRUISER AND WIND-SACKER

Application filed December 28, 1929. Serial No. 417,132.

The invention relates to threshing machinery and particularly to an interchangeable straw bruiser and wind stacker.

Threshing machines as now standard in the art are provided at their rear ends with an open ended, inclined straw delivery or discharge chute. The usual way of disposing of the straw is to connect a wind stacker to the open end of this chute, which stacker receives the straw from the chute and pneumatically discharges the same out of the machine. Sometimes it is desired to break up the straw into shorter lengths before discharging the same. Accordingly, so called straw bruisers are provided, which break up the straw by a bruising or chopping action.

The objects of this invention are to provide a wind stacker for threshing machines, which may be easily and quickly converted into a straw bruiser without the aid of any special tools or the expenditure of any great physical effort, and to provide such structure cheap to produce and which will readily adapt itself for use in connection with standard threshers without materially altering their construction.

Briefly, these desirable objects are accomplished by providing on the wall, which surrounds the opening in the straw chute, means removably to carry either blank plates or bruiser carrier plates. The usual fan housing and cover is provided with a shaft which is designed to carry either a conventional wind stacker fan or a plate provided on one face with fan elements and on its other face with bruising elements, a distributor element, and auxiliary fan elements.

Looking now to the drawings, wherein a practicable embodiment of this invention has been illustrated by way of example,—

Figure 1 is a side view of the rear end of a threshing machine showing the stacker attachment;

Figure 2 is a fragmentary, rear elevation of the structure shown in Figure 1 with the lower half through the straw chute and fan housing appearing in section;

Figure 3 is a perspective view with the cover swung open to show the arrangement when it functions as an ordinary wind stacker; and

Figure 4 is a similar perspective view showing the arrangement when it is to be used for bruising the straw.

A conventional thresher has been shown, having a body 10 provided at its rear end with the usual downwardly and outwardly inclined straw delivery or discharge chute 11 open as at 12. Surrounding this opening is a vertical wall 13. This wall carries in a manner to surround the opening 12 two spaced channel-shaped tracks 14. These tracks form almost a complete circle with the ends near the top side, however, spaced apart a short distance, as shown in Figures 3 and 4, for a purpose later to be made clear. The outer edge of the wall 13 carries a laterally extending flange 15.

The thresher body 10 carries hinges 16 to which is connected a fan housing or cover 17, carrying on its outer face a bracket 18 forming a journal for a shaft 19, which carries a pulley 20. This shaft 19 extends a substantial distance inside the housing 17 and, as shown in Figure 3, when the device is used for ordinary stacking, carries a conventional fan 21, said fan being removably mounted in any suitable manner. As shown in Figure 3, when it is not desired to bruise the straw, the tracks 14 have slid thereto, and to be carried thereby, a suitable number of blank arcuated or segmentally shaped plates 22, a locking plate 23 being bolted to the wall 13 between the ends of the tracks securely to retain these plates in fixed positions relative to the said tracks 14. The cover will then be swung shut against the wall 13 and a flange 24 on the cover with the flange 15, serves to make an interlocking lap joint, as shown in Figure 2, to make a tight connection. A bolt 25 extending from the wall 13 and through a seat 26 and a plate 27 is provided to clamp the cover tightly against said wall 13. The device now functions as an ordinary wind stacker.

If it is desired to bruise the straw before pneumatically stacking the same, the fan housing or cover 17 is hinged back and the plates 22 are slid out from the tracks 14 after first taking out the anchoring plate 23. Then substitute plates 28, also arcuated or segmentally shaped, are substituted for the plates

22 in a similar manner, said plates 28 carrying bruising elements 29 in the form of spikes. These plates are then again locked in place by the anchor plate 23. The next step is to
 5 remove the fan from the shaft 19. Then a combination fan, bruiser, and distributor, element is mounted on the shaft in place of the fan 21. This element, shown best in Figures 2 and 4, comprises a disk or plate 30 carrying
 10 on one face a number of fan blades 31 and on its other face, adjacent its periphery, an annular series of bruising spikes 32. The same face of the plate under discussion also carries across its center and radially inwardly
 15 disposed with respect to the spikes 32, a diametrically arranged distributor paddle 33, and also on the same face radially disposed outwardly of the spikes 32, are provided auxiliary fan elements 34. The spikes 32 cooperate
 20 with the bruiser elements 29 when the cover is closed and the paddle 33 functions to distribute the straw from the chute in the direction of the spikes, to be bruised thereby. The fan elements 31 and 34 create a blast of
 25 air functioning to discharge the bruised straw from the housing 17 upwardly through the discharge pipe 35, as is usual in wind stackers.

The pipe 35 will be supported from the
 30 thresher body in the usual way and carries a handle 36, said pipe loosely fitting over a seat 37 so that the same may be easily displaced when it is desired to hinge the cover 17 outwardly. The outer side of the cover
 35 carries frame elements 38, to which is connected a hanger 39 having its upper end, as at 40, pivotally connected to any appropriate frame element on the body 10 of the thresher. Thus, when the cover is swung outwardly, the
 40 same is properly supported.

From the above disclosure, the use and manner of operation of the improved straw bruiser has been made clear. It must also
 45 be appreciated that the change from a structure that will do ordinary wind stacking to a structure that will perform straw bruising can be accomplished easily and quickly.

Of course, the disclosure in the drawings has been selected by way of example only, and
 50 obviously changes can be made without departing from the spirit and scope of the invention as indicated in the following claims.

What is claimed is:

1. A straw bruiser for threshers having an
 55 open ended straw chute, said bruiser comprising a wall surrounding the straw chute opening, a track on the wall surrounding the opening, plates carrying bruising means, said
 60 plates being removably and slidably supported by the track, a fan housing enclosing the wall, and a windstacker fan and cooperable bruising means in said fan housing.

2. A straw bruiser for threshers having an
 65 open ended straw chute, said bruiser comprising a wall surrounding the straw chute

opening, a circular track on the wall surrounding the opening, arcuately shaped plates arranged end to end and slidably supported by the track, some of said plates provided with bruising means, a fan housing
 70 enclosing the wall, and a windstacker fan and cooperable bruising means in said fan housing.

3. A straw bruiser for threshers having an open ended straw chute, said bruiser comprising a wall surrounding the straw chute
 75 opening, a pair of circular spaced tracks on the wall surrounding the opening, segment-shaped plates slidably and removably mounted in said tracks, bruising means on
 80 said plates, means to lock the plates in fixed positions, a fan housing enclosing the wall, and a windstacker fan and cooperable bruising means in said fan housing.

4. A convertible windstacker, straw
 85 bruiser, for connection to the open ended straw chute of a thresher, said device comprising a wall surrounding said opening, a track on the wall surrounding the opening, said track when the device functions as a
 90 windstacker carrying removable blank plates and when functioning as a bruiser carrying removable plates provided with bruiser elements, a fan housing carrying a shaft, said shaft adapted to carry a removable fan for
 95 windstacking and a removable combination fan and bruiser element for bruising.

5. A straw bruiser device designed as a substitute for the fan of a windstacker, said device comprising a circular plate, fan blades
 100 on one side of the plate, bruiser elements on the other side of the plate adjacent its periphery, and a distributor paddle on the latter face of the plate and arranged inwardly of the bruiser elements.
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6. A straw bruiser device designed as a substitute for the fan of a windstacker, said device comprising a circular plate, fan blades
 110 on one side of the plate, bruiser elements on the other side of the plate adjacent its periphery, a distributor paddle on the latter face of the plate and arranged inwardly of the bruiser elements, and fan blades at the
 115 periphery of the plate and extending from the face of the plate which carries the bruiser elements, said latter fan blades being located radially outward of the bruiser elements.

7. A straw bruiser for threshers having an open ended straw chute, said bruiser
 120 comprising a wall surrounding the said opening, bruiser elements on the wall, a fan housing to cover the wall and opening, the housing carrying a shaft, a plate on the shaft, said plate carrying the fan elements on one
 125 face, and on the other face carrying bruiser elements, a distributing element, and auxiliary fan elements.

8. A straw bruiser for threshers having an open ended straw chute, said bruiser comprising a wall surrounding the said opening,
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a track around the opening on said wall, removable plates carrying bruiser elements arranged on the track, a fan housing to cover the wall, the housing carrying a shaft, a
5 plate removably carried on the shaft, said plate carrying fan elements on one face, and on the other face carrying bruiser elements, a distributing element, and auxiliary fan elements.

10 In testimony whereof I affix my signature.
ARNT W. WESSMAN.

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