No. 736,599. PATENTED AUG. 18, 1903.

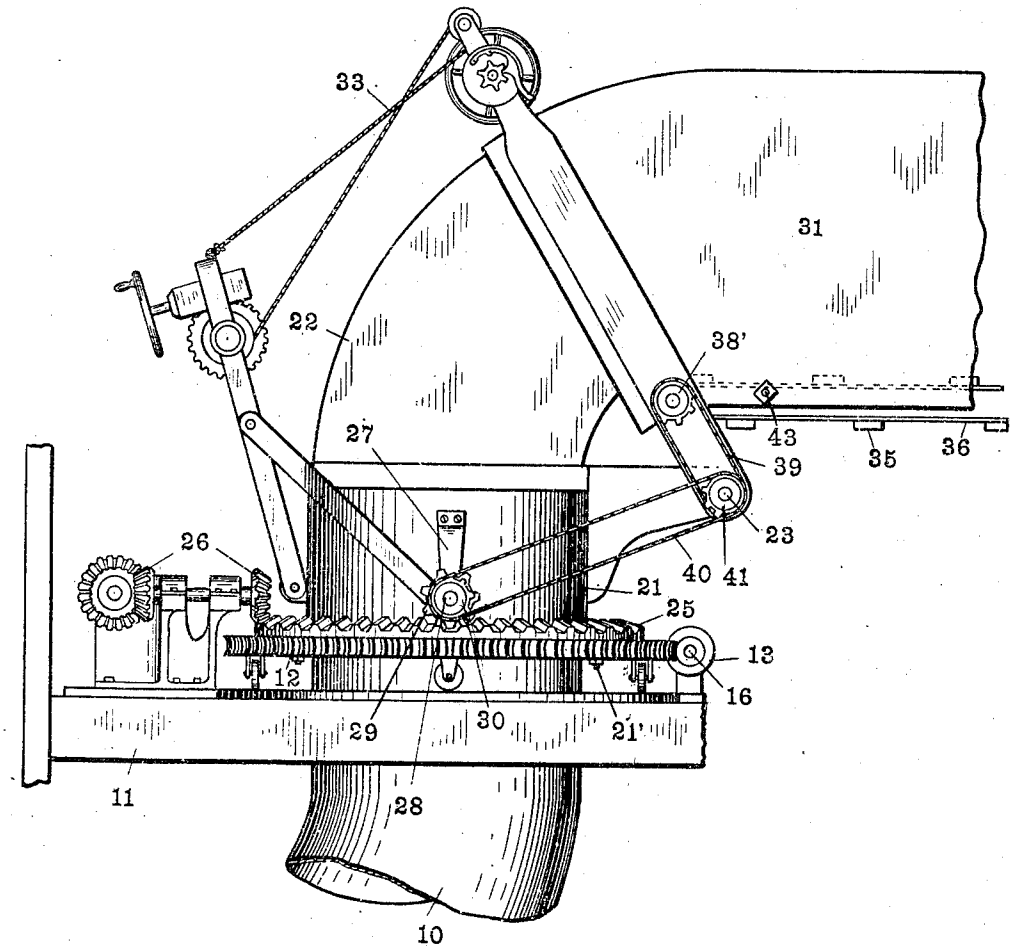
A. M. HOOD.

STRAW STACKER.

APPLICATION FILED JUNE 1, 1903.

NO MODEL. 4 SHEETS—SHEET 1

Fig. 1.



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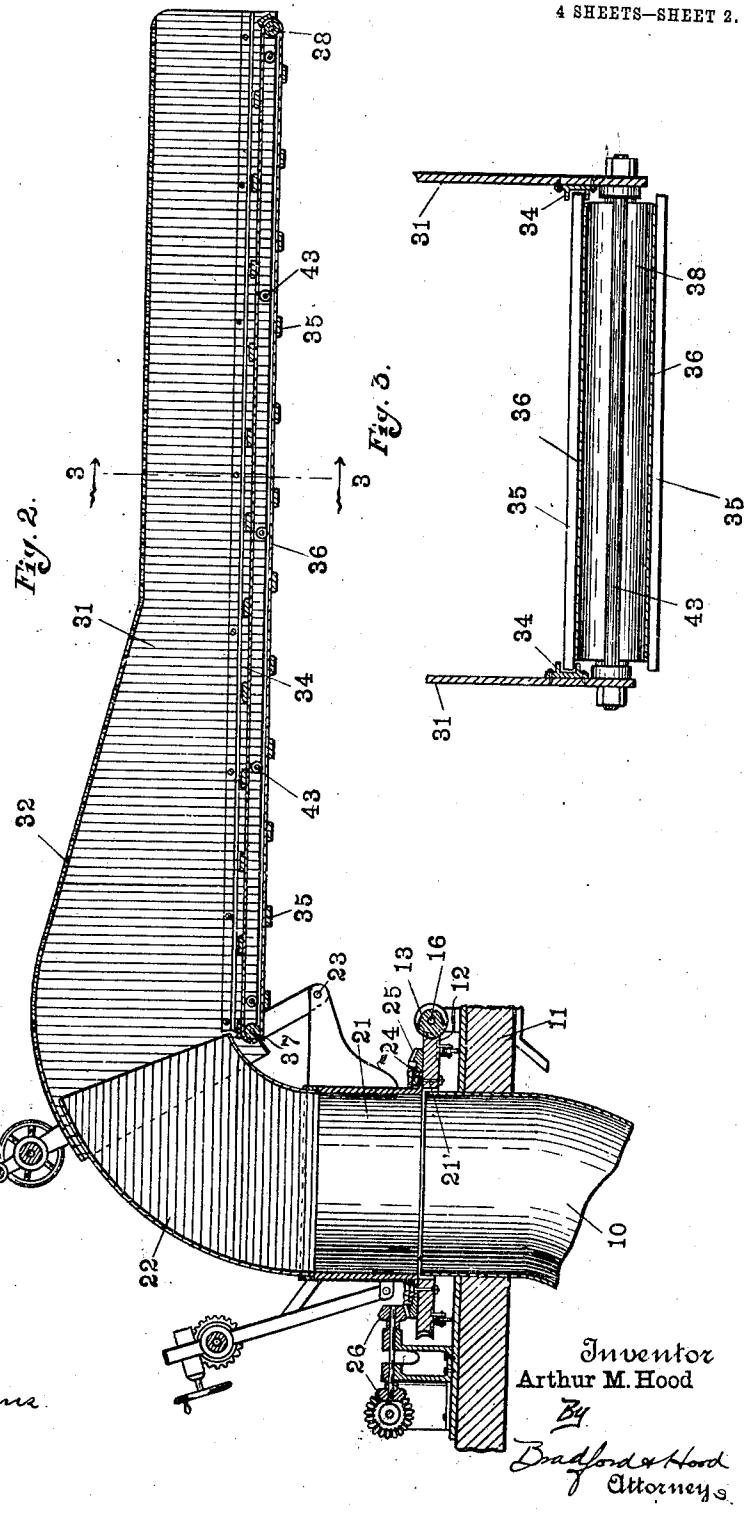
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NO MODEL. 4 SHEETS—SHEET 2.



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NO MODEL. 4 SHEETS—SHEET 3.

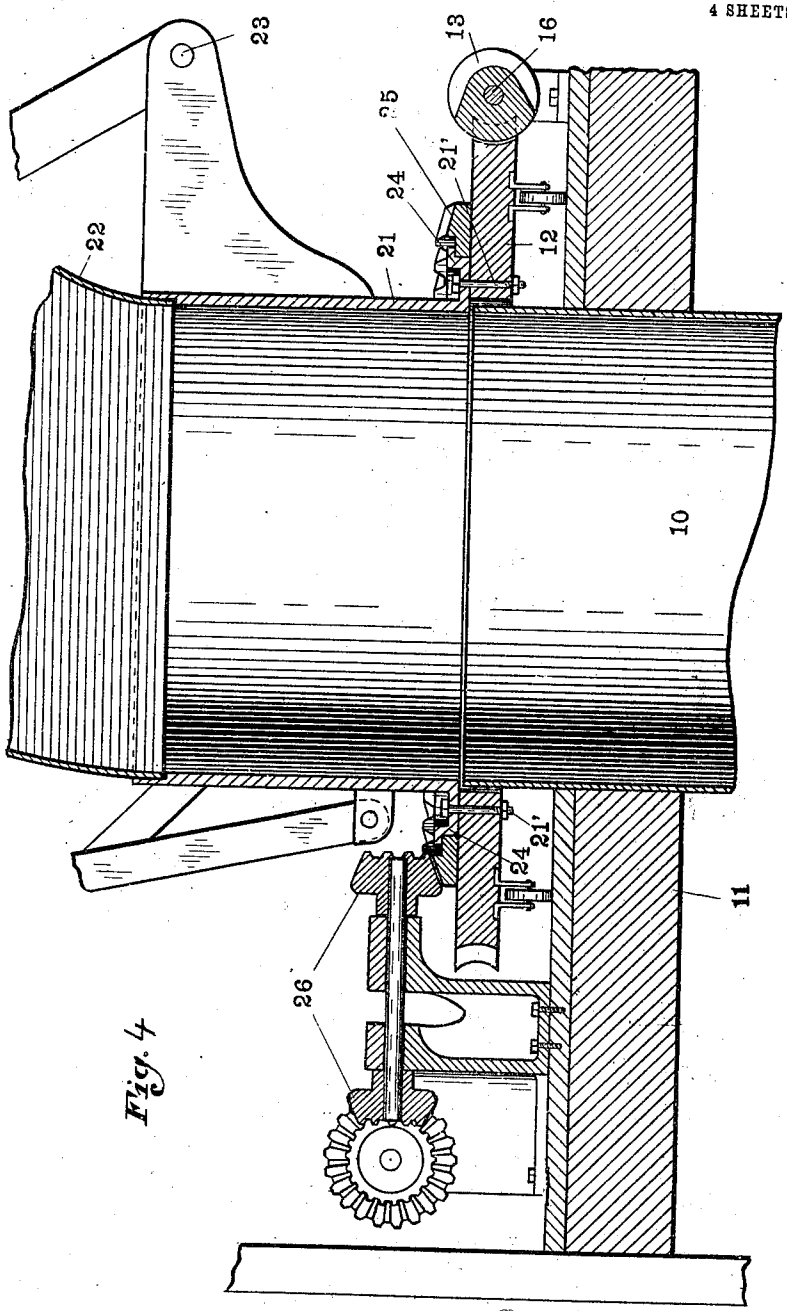


Fig. 4.

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NO MODEL. 4 SHEETS—SHEET 4.

Fig. 5.

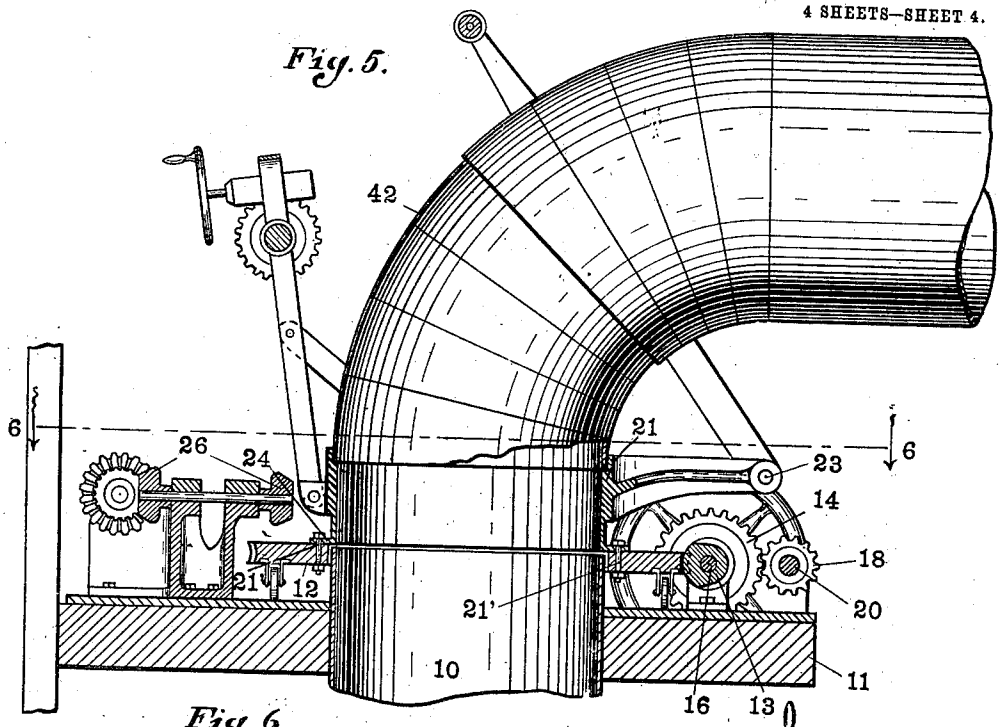
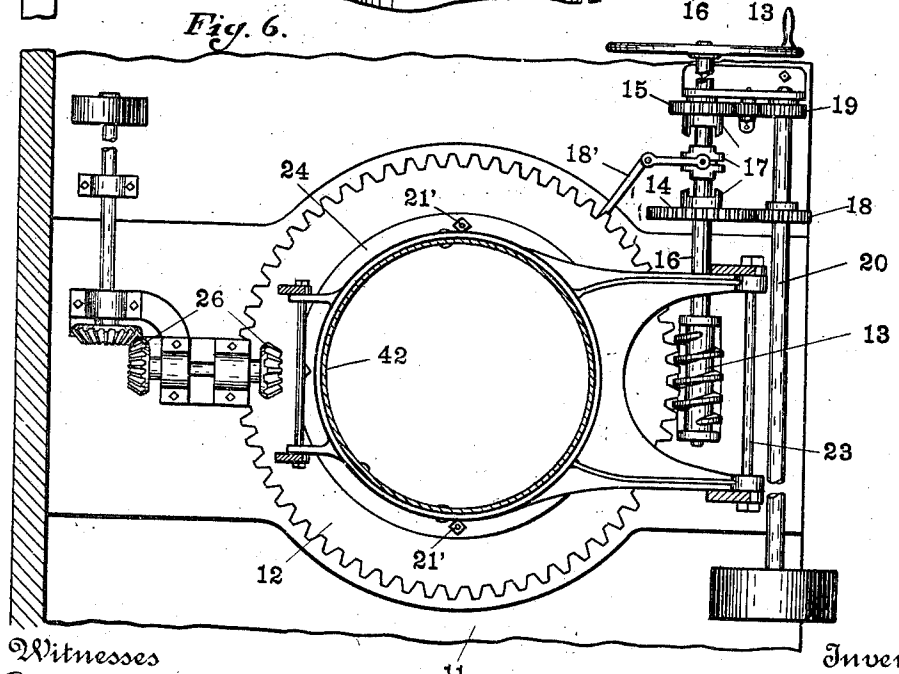


Fig. 6.



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No. 736,599. Patented August 18, 1903.

UNITED STATES PATENT OFFICE.

ARTHUR M. HOOD, OF INDIANAPOLIS, INDIANA.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 736,599, dated August 18, 1903.

Application filed June 1, 1903. Serial No. 159,564. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR M. HOOD, 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 Straw-Stackers, of which the following is a specification.

The object of my invention is to provide improvements in that type of stackers in which the straw is delivered from the separator by a blast of air, the construction being such that either a pneumatic discharge-tube or a mechanical discharging mechanism may be easily attached to the blower-tube, the arrangement in the device shown in the drawings being such that the substitution may be accomplished without disturbing the usual horizontally-vibrating turn-table and its automatic operating mechanism.

The accompanying drawings illustrate my invention.

Figure 1 is a side elevation of the discharge end of the blower-tube, the receiving end of the mechanical carrier, and the intermediate and adjacent parts. Fig. 2 is a vertical section, on a smaller scale, of the parts shown in Fig. 1, together with the continuation of the mechanical discharge-section. Fig. 3 is a vertical transverse section on line 3 3 of Fig. 2 on a larger scale. Fig. 4 is a vertical section of the blower-tube, the turn-table, and adjacent parts of the mechanical carrier-section on a considerably-enlarged scale. Fig. 5 is a similar view, on a smaller scale, with the mechanical discharge-section removed and a pneumatic discharge-tube substituted therefor; and Fig. 6 a plan of the parts shown in Fig. 5.

In the drawings, 10 indicates a blower-tube which leads from any usual form of discharge or blast-fan (not shown) of a separator, said tube extending through and slightly above a platform 11, which is secured to the separator-casing in any desired manner. Surrounding the upper or discharge end of the blower-tube 10 is a turn-table 12 of any desired form. Any suitable means may be used for automatically oscillating the turn-table 12—as, for instance, the worm 13, a pair of gears 14 and 15, rotatable upon the shaft 16 of worm 13, and a clutch 17, keyed to said shaft between the two gears and automatically shifted by lever 18′ in the usual well-known manner, the gears 14 and 15 being driven by gears 18 and 19, carried by a driving-shaft 20, which may be belted in the usual manner to the separator. The upper end of the blower-tube 10 preferably does not extend above the upper face of the turn-table, and detachably bolted to said turn-table, so as to aline with said tube, is a tubular section 21, which is provided at its upper end with an elbow extension 22, concentric with the pivot-pin 23. Section 21 is provided at its lower end with a flange 24, which lies concentric with the axis of the turn-table 12 and parallel with the upper face of said turn-table. Rotatably mounted upon turn-table 12 and held in position by flange 24 is a gear-ring 25, which is driven by means of a suitable train of gearing 26, belted to any suitable part of the separator. That gear of train 26 which meshes with gear-ring 25 is preferably placed on the longitudinal axis of the separator for a purpose which will appear.

Journaled in a suitable bracket 27 on the tubular section 21 is a shaft 28, which carries a gear 29, meshing with gear-ring 25, the bracket being preferably about ninety degrees from the train of gearing 26 when the said mechanism points directly to the rear of the machine, so that as it is oscillated gear 29 will not come into engagement with the first gear of the train 26, and the stacking mechanism may be swung around, so as to extend forward over the separator during transportation. Shaft 28 also carries a sprocket-wheel 30.

Pivoted upon pin 23 is a discharge-section 31, which is an inverted trough provided with a perforate top 32, and this inverted-trough-like structure is adapted to be swung about the pivot 23, so that its outer end may be raised or lowered, by any usual adjusting means 33, as shown in Fig. 1. Arranged near the bottom of each side of section 31 on the inner face is a track 34, which tracks are adapted to receive and support the ends of cross-slats 35 of a raddle-belt 36, said belt being preferably a piece of continuous webbing through which neither straw nor dust may pass. The raddle is supported at the inner end by a driving-roll 37 and at the outer end by an idler 38, and the outer end

of the shaft of roll 37 is provided with a sprocket-wheel 38', around which passes a driving-chain 39, said chain 39 passing around a sprocket-wheel carried by said shaft 23. Shaft 23 carries a second sprocket-wheel 41, and a chain 40 passes around the two sprocket-wheels 41 and 30. The lower ends of the sides of section 31 may be held together by suitable brace-rods 43.

In operation the material from the separator is blown through tube 10, through section 21 and elbow 22, and into section 31, the air passing out through the perforations in top 32, while the straw falls upon the raddle and is carried out by said raddle. The raddle is continuously driven in all positions of oscillation of the turn-table by reason of the continuous rotation of gear-ring 25, which rotates independently of the movement of the turn-table. If any particular customer desires his straw to be stacked by a pneumatic stacker, the operator has merely to remove bolts 21', whereby the entire mechanical carrier, with all of its attached and operating parts—as, for instance, the tubular section 21 and the gear-ring 25—may be slipped from the turn-table 12. The operator then has merely to substitute a pneumatic stacker-tube, such as shown in Figs. 5 and 6, the elbow-section 42 being so formed as to take the place of the elbow-section 21 and adapted to be secured in position upon the turn-table 12 by the same bolts 21', this change being accomplished without disturbing the automatic oscillating mechanism.

The gear-ring 25 might be revolubly mounted upon the section 21, so as to be removable therewith, if desired.

I claim as my invention—

1. In a pneumatic stacker, the combination, with a blower-tube to receive straw from a threshing-machine, and a turn-table surrounding said tube, of a tube-section detachably secured to said turn-table to receive material from the blower-tube, a mechanical carrier-section carried by the tube-section and adjustable thereon, and means for driving said carrier, the arrangement being such that the mechanical carrier may be easily removed from the blower-tube and a pneumatic discharge-tube substituted therefor.

2. In a pneumatic stacker, the combination, with a blower-tube to receive straw from a threshing-machine, of a mechanical carrier, means for horizontally and vertically vibrating said carrier with relation to the blower-tube, and means for detachably securing said mechanical carrier in coöperating position with relation to the blower-tube and to the means for accomplishing one of the vibratory movements, whereby said mechanical carrier may be easily removed from the blower-tube and said vibrating means, and a pneumatic discharge-tube substituted therefor.

3. In a pneumatic stacker of the type described, the combination, with a blower-tube to receive straw from a threshing-machine, of a turn-table surrounding the discharge end of said tube, a gear-ring mounted upon the turn-table and independently rotatable thereon, a tube-section detachably mounted on the turn-table, means for driving the turn-table, and means for independently driving the endless carrier.

4. In a pneumatic stacker of the type described, the combination, with a blower-tube to receive straw from a threshing-machine, of a bottomless trough-like discharge-section arranged to receive material from the blower-tube, an endless belt mounted in said discharge-section to form the bottom thereof, cross-slats attached to said belt, and guides carried by the discharge-section to support the ends of said slats.

5. In a pneumatic stacker, the combination, with a blower-tube to receive straw from a threshing-machine, of a turn-table surrounding said tube, a vertically-vibratable mechanical carrier-section carried by the turn-table and arranged to receive straw from the blower-tube, means for driving the turn-table, and independent means for driving the mechanical carrier in different positions of the turn-table.

6. In a pneumatic stacker, the combination, with a blower-tube to receive straw from a threshing-machine, of a turn-table surrounding said tube, a vertically-vibratable mechanical carrier-section carried by the turn-table and arranged to receive straw from the blower-tube, a gear-ring independently rotatable about the axis of the turn-table, driving connections between said ring and the mechanical carrier, means for driving said gear-ring, and means for driving the turn-table.

7. In a pneumatic stacker, the combination, with a blower-tube to receive straw from a threshing-machine, of a turn-table surrounding said tube, a vertically-vibratable mechanical carrier-section detachably secured to the turn-table and arranged to receive straw from the blower-tube, a gear-ring independently rotatable about the axis of the turn-table and detachable therefrom, driving connections between said ring and the mechanical carrier, means for driving said gear-ring, and means for driving the turn-table whereby the mechanical carrier-section may be readily removed from the turn-table and its driving means and a pneumatic discharge-tube substituted.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 19th day of May, A. D. 1903.

ARTHUR M. HOOD. [L. S.]

Witnesses:
JAMES A. WALSH,
FRANK A. FAHLE.