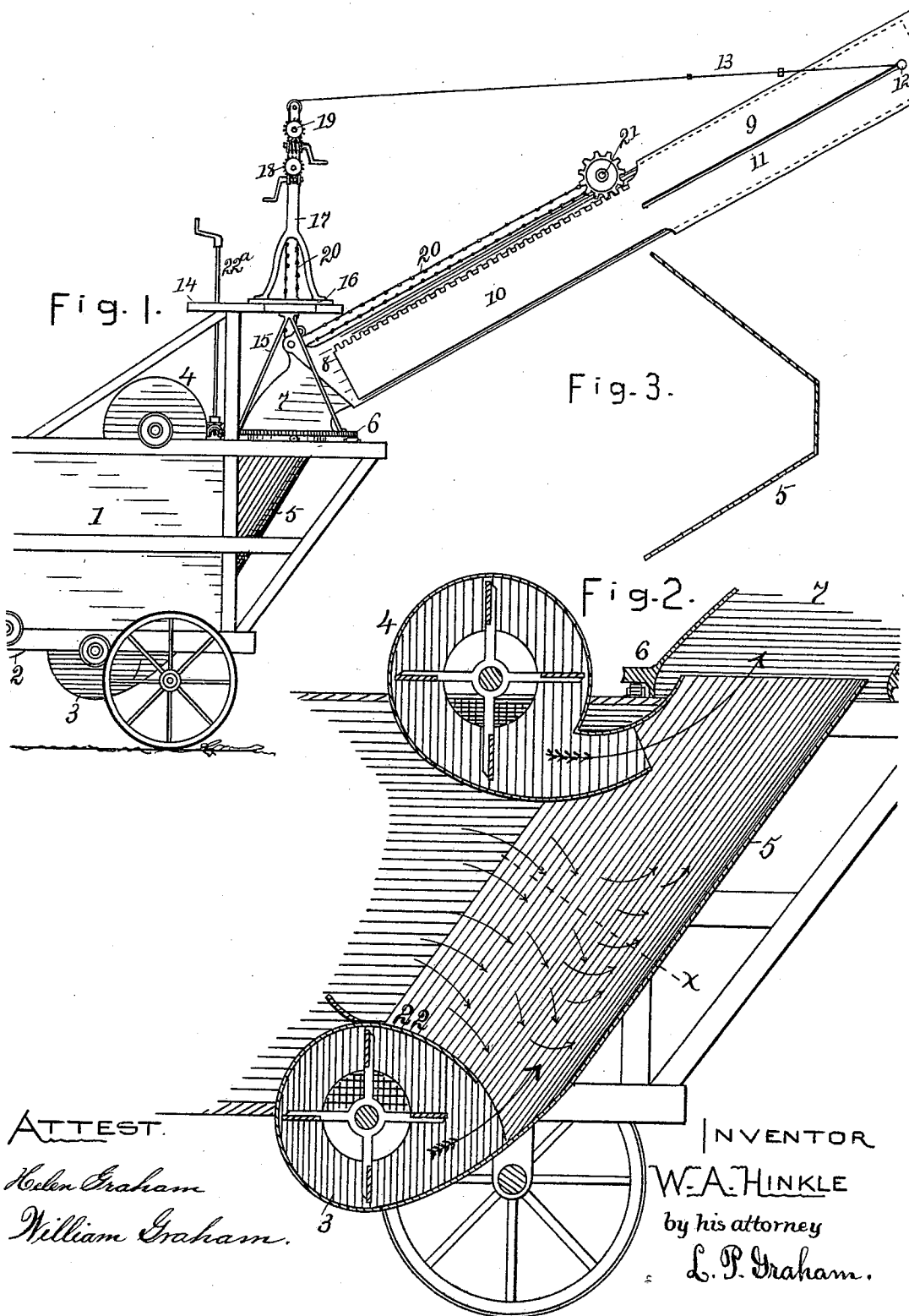


(No Model.)

W. A. HINKLE.
STRAW STACKER.

No. 518,843.

Patented Apr. 24, 1894.



ATTEST.

Helen Graham

William Graham.

INVENTOR

W. A. HINKLE

by his attorney

L. P. Graham.

UNITED STATES PATENT OFFICE.

WILLIAM A. HINKLE, OF FORSYTH, ILLINOIS.

STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 518,843, dated April 24, 1894.

Application filed December 8, 1893. Serial No. 493,156. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. HINKLE, of Forsyth, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Straw-Stackers, of which the following is a specification.

This invention relates to pneumatic straw stackers, and it is designed to improve the various details hereinafter particularized. It is embodied in the details of construction and combinations of parts hereinafter set forth and claimed, reference being made to the drawings accompanying and forming a part of this specification, and in which—

Figure 1 is a side elevation of the discharge end of a thrasher equipped with my improvements. Fig. 2 is a vertical section through the blast developing mechanism, and Fig. 3 is a section through the blast trough on dotted line X in Fig. 2.

The body of the thrasher is shown at 1, the chaff fan of the thrasher at 2, a preliminary blast fan at 3, and a secondary blast fan at 4.

The blast trough is shown at 5, and it is formed with converging sides, as indicated in Fig. 3, which concentrate the straw and chaff above the blast of the preliminary fan. The preliminary fan is located at the lower end of the blast trough, the upper surface of its casing is inclined downward and rearward, as seen at 22 in Fig. 2, while the secondary fan is located at the upper end of the trough and formed to act in the direction of the stacker tube.

The cogged turn-table which carries the stacker tube is shown at 6, and 7 represents the first section of the tube.

At 8 is represented a section of the stacker tube, pivotally connected with section 7, and 9 indicates a section adapted to slide on section 8, after the manner of a telescope. The section 9 has its sides 10 extended rearward along section 8, and such sides are cogged on their upper surfaces to form racks. Slots 11 are formed in the sides of section 9, and pins 12 project through such slots, from section 8 and provide points of connection for supporting and adjusting line 13. The supporting and adjusting line is divided near the tube and connected with pins on both sides, while its rear end runs over a roller in the top of standard frame 17, and connects with

a drum on shaft 19. A chain, as 20, runs over a sprocket wheel on shaft 18, extends around idlers at the pivotal connection of section 8 with section 7, and acts on a sprocket wheel on shaft 21, which shaft is provided at each end with a gear wheel which meshes with the teeth of racks 10. The drum shafts 18 and 19 are each provided with gear wheels, worms acting on the gear wheels and cranks to turn the worms, in order that the line may be wound up or let out to change the elevation of the stacker tube, and in order that the chain may be made to extend or shorten the stacker tube by moving section 9 on section 8. The platform 14 is built above the turntable of the stacker tube, and firmly braced from the thrasher frame. The standard frame 17 rests on and in the platform in a manner permitting free rotation of the standard frame, the base 16 forming an auxiliary turntable, and braces 15 connect the standard frame with turn-table 6 in such manner that the frame is compelled to partake of the rotary motion of the stacker tube, whenever the latter is radially adjusted. The shaft 22^a extends downward through the platform and operates, through suitable gearing, a shaft carrying a worm wheel in mesh with the teeth of the turn table.

The operator stands on the platform in full view of the stack, and directs the stacker tube as occasion may require, turning it radially to the right or left by means of the shaft 22^a, raising or lowering the discharge end by means of line 13, and lengthening or shortening the tube by means of chain 20 and its attendant gearing. The straw, chaff, &c., are directed toward the trough 5 by the chaff fan of the thrasher, and are guided over the blast of fan 3 by the converging sides of the trough and the inclined surface 22. As the straw, &c., reaches section 7, or the receiving end, of the stacker tube, it is subjected to the blast of the secondary fan 4 and is forced through the tube to any required distance. The fans both receive air from outside the thrasher, and consequently they have no tendency to become clogged with straw, as might happen if the air were taken from inside the thrasher; and in addition to this there is no return current developed.

It is a common complaint by the users of

pneumatic stackers that the grain is often forced out of the thrasher with the straw, and this results from the location of the fans, which may be such as to lift the grain with the discharge blast, or from supplying the fans with air from the thrasher, and thereby creating suction that draws the grain through the fan and forces it out through the stacker. By my particular arrangement and construction of the fans, the primary fan develops a blast sufficient to raise the straw and chaff to the stacker tube, but not enough to raise the grain, the strong blast of the secondary fan is applied to the straw and chaff after it is entirely separated from the grain, and, as the air is drawn from outside the thrasher, there is no tendency to draw the grain out of the thrasher by suction.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In pneumatic straw stackers for thrashers, the combination of a blast trough at the discharge end of the thrasher, such trough having converging sides and a transverse incline whereby the straw &c. is guided toward the back and lower end of the trough, a preliminary blast fan at the lower end of the trough, a secondary blast fan at the upper end of the trough, both fans receiving air from outside the thrasher, and a stacker tube ex-

tending from the upper end of the trough, substantially as set forth.

2. In pneumatic straw stackers for thrashers, the combination of a stacker tube mounted on a turn-table on the thrasher, a platform above the turn-table, supported from the thrasher, a standard frame connected with the turn-table and extended through the platform, and mechanism on the standard frame above the platform, whereby the movements of the stacker tube may be directed, substantially as set forth.

3. In pneumatic straw stackers for thrashers, the combination of a stacker tube composed of telescoping sections mounted on a turn-table on the thrasher and pivoted to swing vertically, a platform above the turn-table supported from the thrasher, a standard frame connected with the turn-table and extending through a bearing in the platform, and a line extending from the upper part of the standard frame around idlers at the hinge of the tube with the turn-table and means operated by said line to telescope the sections of the tube, substantially as set forth.

In testimony whereof I sign my name in the presence of two subscribing witnesses.

WILLIAM A. HINKLE.

Attest:

D. D. HILL,
L. P. GRAHAM.