

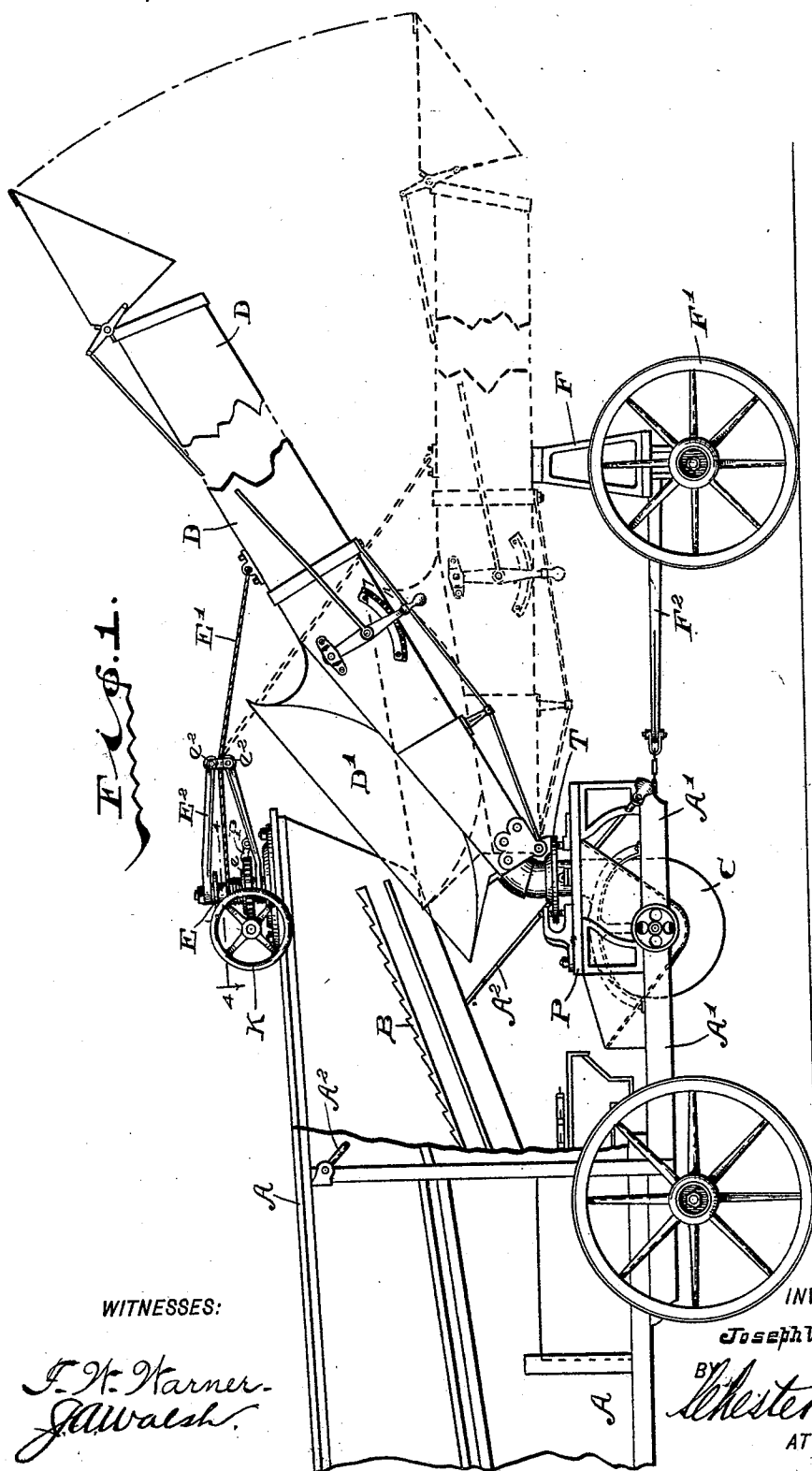
(No Model.)

2 Sheets—Sheet 1.

J. W. NETHERY.
PNEUMATIC STRAW STACKER.

No. 517,475.

Patented Apr. 3, 1894.



WITNESSES:

J. H. Warner.
J. Walsh.

INVENTOR

Joseph W. Nethery,

BY

Chester Bradford,
ATTORNEY.

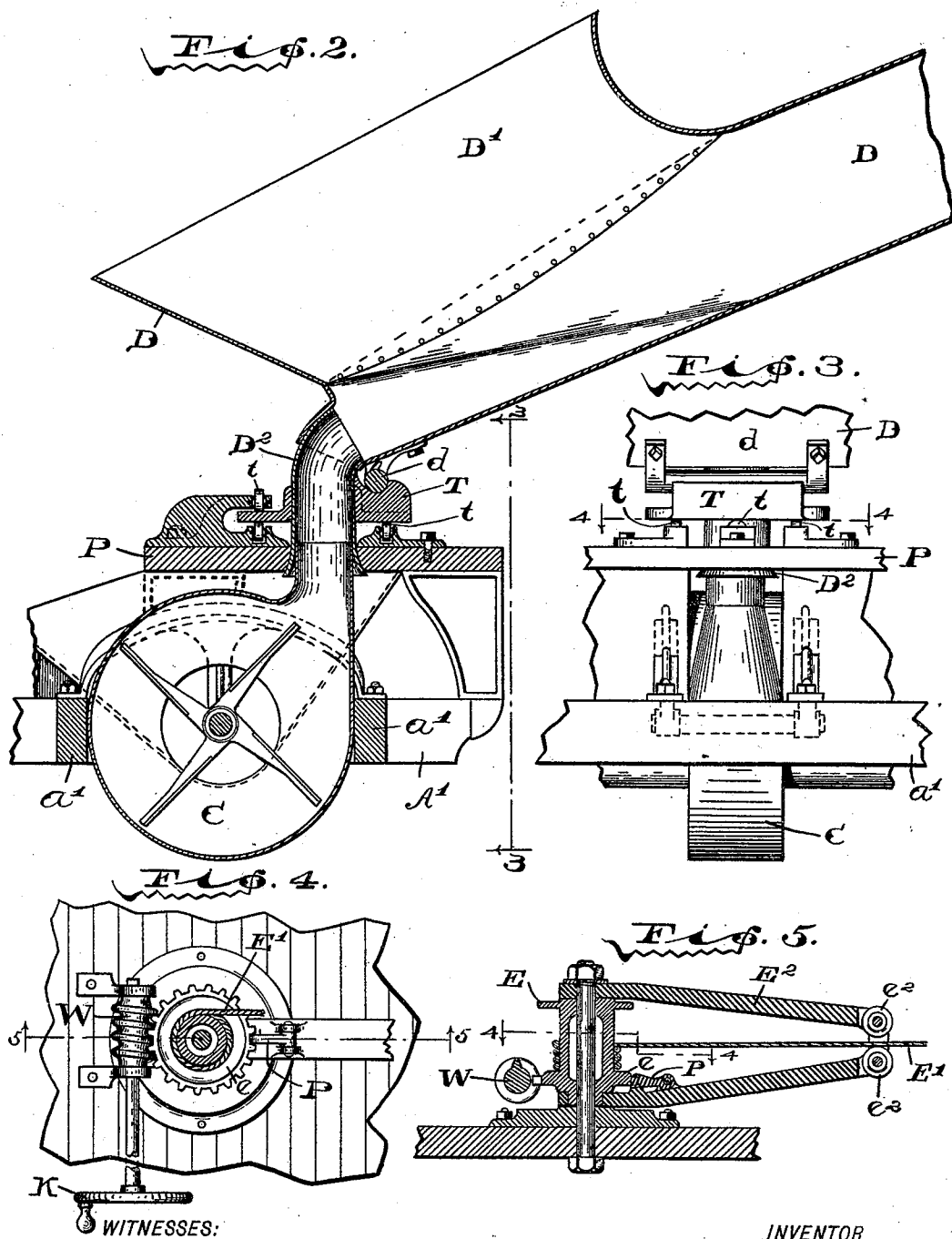
(No Model.)

2 Sheets—Sheet 2.

J. W. NETHERY.
PNEUMATIC STRAW STACKER.

No. 517,475.

Patented Apr. 3, 1894.



WITNESSES:
F. H. Karner.
J. A. Walsh.

INVENTOR
Joseph W. Nethery,
BY
Chester Bradford,
ATTORNEY.

UNITED STATES PATENT OFFICE.

JOSEPH W. NETHERY, OF INDIANAPOLIS, INDIANA, ASSIGNOR TO THE
INDIANA MANUFACTURING COMPANY, OF SAME PLACE.

PNEUMATIC STRAW-STACKER.

SPECIFICATION forming part of Letters Patent No. 517,475, dated April 3, 1894.

Application filed July 8, 1893. Serial No. 479,888. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. NETHERY, 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 Pneumatic Straw Elevators and Stackers, of which the following is a specification.

Said invention relates to that class of straw elevators and stackers in which the means of moving the straw and chaff is an air blast, and it mainly consists in a certain construction whereby such a stacker is more conveniently applied to thrashing machines already constructed.

It further consists in certain details of construction and arrangements of parts, all as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference indicate similar parts, Figure 1 is a side elevation of the rear end of a thrashing machine, with one side broken away to show the straw carrying floor more plainly, with a straw elevator and stacker embodying my invention attached thereto, the central portion of the trunk of said straw elevator and stacker being broken away; Fig. 2 a central sectional view of the base of the straw elevator and stacker on an enlarged scale; Fig. 3 a detail view of the same as seen from the dotted line 3 3 alongside Fig. 2; Fig. 4 a horizontal sectional view of a portion of the windlass, as seen from the dotted lines 4 4 in Figs. 1 and 5, and Fig. 5 a vertical sectional view of said windlass as seen from the dotted line 5 5 in Fig. 4.

In said drawings the portions marked A represent the sides and framework of the usual thrashing machine; B the straw carrying floor therein; C the blast fan; D the trunk or chute; E the windlass by which said trunk or chute is raised and lowered, and F the truck by which the stacker is carried when not in use, and transported from place to place.

The thrashing machine, including its casing and frame-work A and straw carrier table B, are or may be of any ordinary or desired form, and need no special description. Secured to the sills of the frame A are extension sills A'

which carry the structure of my improved elevator and stacker, and these sills are supported at the outer ends by stay rods A², as shown in Fig. 1.

The fan in itself is not dissimilar to other corresponding fans. It is mounted in suitable bearings supported by the sills A' and its neck or nozzle C' extends up into and communicates with the lower end of the trunk D, or an intermediate pipe leading thereto. Surrounding this fan is a suitable frame-work, including a platform P, upon which the turn-table T of the stacker is mounted.

The trunk or chute D is in many respects similar to those of other straw stackers and elevators of this character. At its lower end it is open on the top side, and has a hopper D' attached thereto, into which hopper the straw from the straw carrying floor B of the thrashing machine falls as it comes therefrom, and is thence driven, by the blast of air from the fan, out through the trunk or chute, as is usual. This trunk is mounted by means of a rocking bearing *d* on the turn-table T, and its extreme end is curved on arcs of circles struck from the center of said bearing. An intermediate pipe D² passes through a central orifice in the turn-table and enters this curved lower end, its upper end being correspondingly curved to fit therein, while its lower end extends down over the discharging orifice of the blast fan, all as shown most plainly in Fig. 2. This turn-table T is adapted to revolve between anti-friction trucks *t*, as also shown in said figure. By this means the double movement required is secured. The trunk swings from side to side by the revolution of the turn-table, while it is raised and lowered on the rock-bearing *d*.

The windlass E is preferably in the form of a spool, with a worm wheel *e* formed thereon and preferably integrally therewith, and a rope E' runs therefrom to a suitable point on the trunk D. A worm W is the preferable means of operating this windlass, and is shown most plainly in Fig. 4. Its usual means of operation is a hand-wheel or crank K. This windlass or spool is placed between the two members of a frame E², which extends out therefrom in the direction of the trunk a certain distance, and in the extreme end of this

frame are preferably small sheaves e^2 between which the rope E' passes. By means of a pawl P this mechanism is adapted to achieve a double purpose. When the pawl is thrown back, turning the worm W will wind up the rope E' , or unwind it, and raise or lower the trunk D . When the pawl is in engagement with the worm wheel e , as shown in the drawings, turning the worm W will swing the whole structure from side to side, carrying with it the trunk D , which turns on the turn-table T . Either movement, therefore, of the trunk may be secured at will by means of this one piece of mechanism. The axis of this windlass E is in line with the axis upon which the trunk D turns from side to side, which is, of course, the center of the turn-table and also the center of the neck or nozzle of the fan. By means of this arrangement the trunk is enabled to be swung from side to side without disturbing its elevation.

The truck F is of an ordinary and well known form, and consists principally of a bolster mounted on an axle upon which are usual wheels F' , and said truck is connected by means of a reach or tongue F^2 to the rear end of the frame A' . It serves to support and carry the trunk of the straw stacker when the same is out of use or being transported from place to place.

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

1. The combination, in a pneumatic straw elevator and stacker, of auxiliary sills A' extending out from the rear of an ordinary thrashing machine, a fan mounted thereon, a platform surrounding said fan, a turn-table on said platform, a trunk or chute mounted on said turn-table, and means for raising and lowering said trunk and swinging it from side to side.

2. The combination, in a pneumatic straw elevator and stacker, of a fan, a platform and frame-work surrounding it, a turn-table mounted on said platform, a trunk or chute mounted on said turn-table by means of a rocker-shaft d , an intermediate tube D^2 connecting the mouth of the fan and the lower end of the trunk or chute, and means whereby said trunk or chute may be raised and lowered and swung from side to side, substantially as set forth.

3. The combination, with a thrashing machine, of a pneumatic straw elevator suitably mounted on an auxiliary frame-work, and extending out therefrom at an angle, and provided with a hopper D' formed integrally therewith upon the upper side of its lower end, said hopper being positioned adjacent to the discharging end of the thrashing ma-

chine to receive the straw therefrom, and a blast fan leading to the lower end of the trunk or chute below the hopper, the blast wherefrom is arranged to pass entirely across said hopper and into the trunk or chute, thereby driving the straw from said hopper into and through said trunk or chute, the several parts being arranged and operating substantially as shown and described.

4. The combination, with the trunk or chute of a straw elevator and stacker, of a windlass for raising and lowering the same and swinging it from side to side, consisting of a windlass proper or spool, a rope running therefrom to the trunk or chute, an arm or frame running out from the same axis as the windlass or spool, and in the same direction as said trunk or chute through the outer end of which the rope passes, and means for revolving said windlass or spool, consisting of a screw gear mounted on the axle of said windlass, and a worm wheel mounted on a shaft running transversely thereto substantially as set forth.

5. The combination, with the trunk or chute of a straw elevator and stacker, of a windlass for raising and lowering the same and swinging it from side to side, consisting of a windlass or spool, a rope running therefrom to said trunk or chute, an arm or frame extending out from the axis on which said windlass or spool is mounted, through the outer end of which the rope passes, means for revolving said windlass or spool, and a pawl mounted on said arm and adapted to be engaged with or be disengaged from a wheel or rack on said windlass or spool, whereby the same may be caused to move together when engaged, and the windlass or spool permitted to revolve separately when disengaged, substantially as and for the purposes set forth.

6. The combination, in a straw elevator and stacker, of a fan located on an extension of the frame-work of the thrashing machine having a neck or nozzle which extends up vertically through the center of the turn-table, said turn-table, a windlass mounted upon the top of the thrashing machine whereby the elevator trunk is raised and lowered, the axis whereof is in line with the center of the turn-table and said fan neck or nozzle, and said elevator trunk, and said thrashing machine, said parts being arranged and operating substantially as set forth.

In witness whereof I have hereunto set my hand and seal, at Indianapolis, Indiana, this 1st day of July, A. D. 1893.

JOSEPH W. NETHERY. [L. S.]

Witnesses:

CHESTER BRADFORD,
JAMES A. WALSH.