

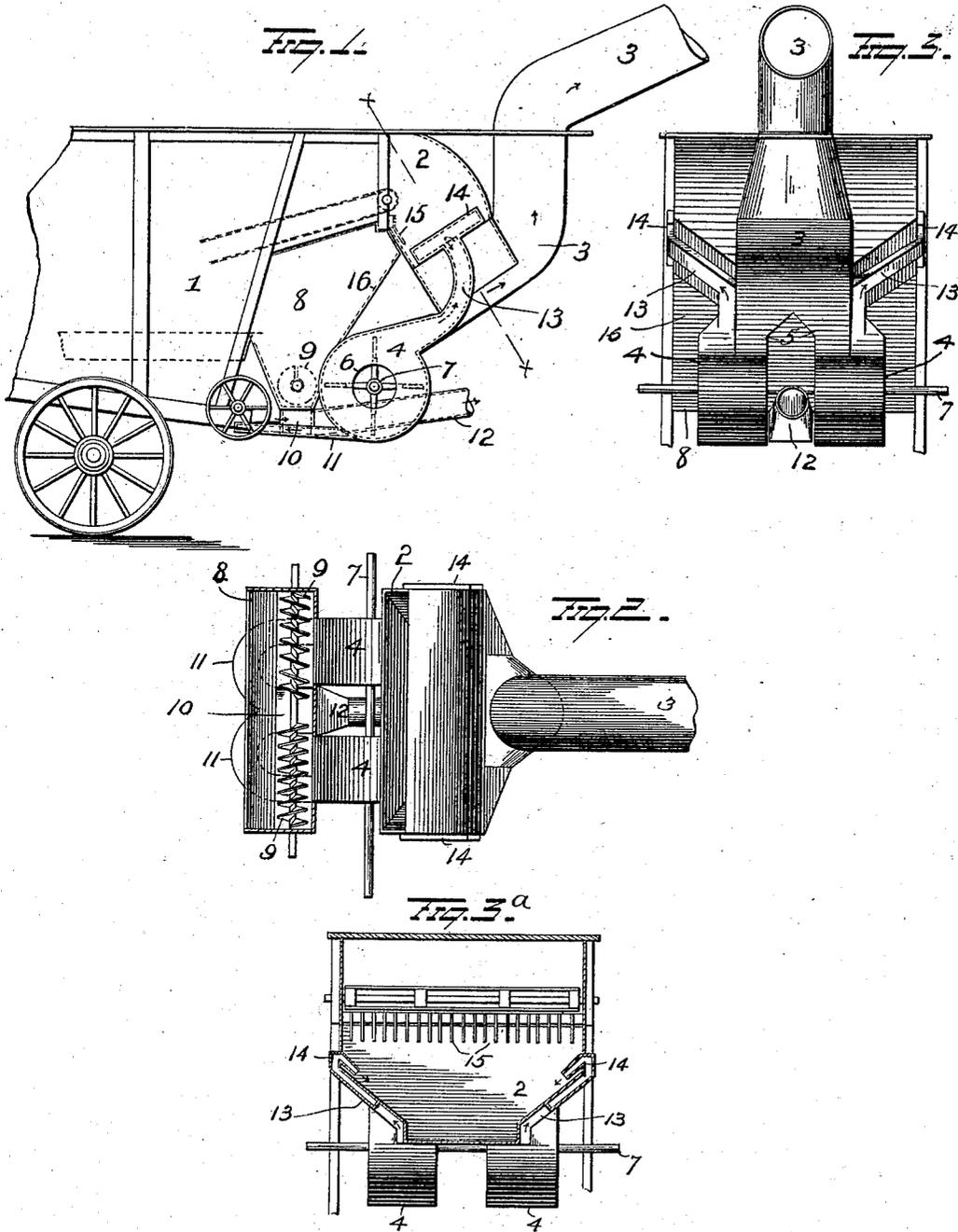
No. 748,070.

PATENTED DEC. 29, 1903.

J. HENRY.  
PNEUMATIC STACKER.  
APPLICATION FILED MAR. 6, 1902.

NO MODEL.

2 SHEETS—SHEET 1.



WITNESSES  
Ed. Nottingham  
G. F. Downing.

INVENTOR  
John Henry  
By A. A. Seymour  
Attorney

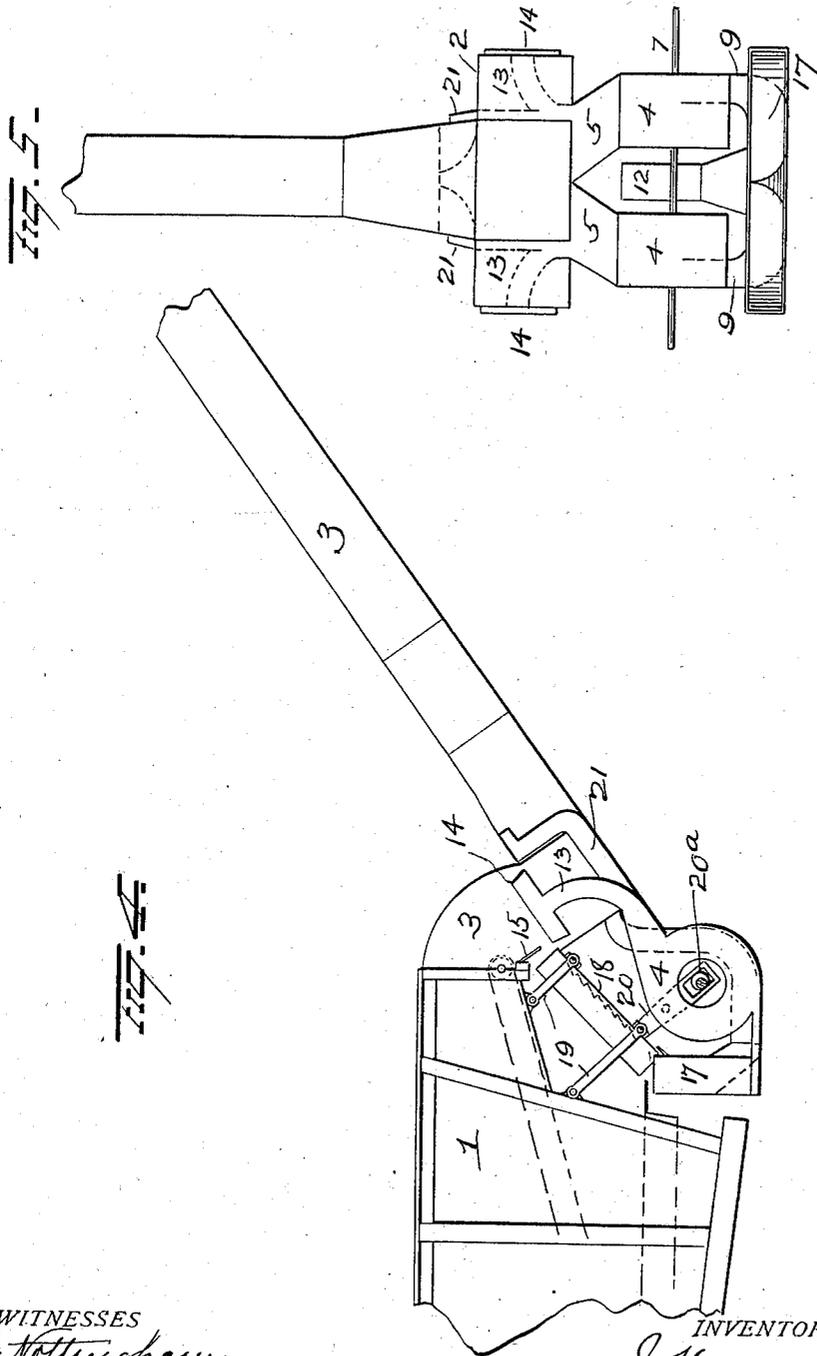
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2 SHEETS—SHEET 2.



WITNESSES  
*E. J. Tottenham*  
*G. F. Downing*

INVENTOR  
*J. Henry*  
By *H. A. Seymour*  
Attorney

# UNITED STATES PATENT OFFICE.

JOHN HENRY, OF GRAND FORKS, NORTH DAKOTA.

## PNEUMATIC STACKER.

SPECIFICATION forming part of Letters Patent No. 748,070, dated December 29, 1903.

Application filed March 6, 1902. Serial No. 96,984. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN HENRY, a resident of Grand Forks, in the county of Grand Forks and State of North Dakota, have invented certain new and useful Improvements in Pneumatic Stackers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in pneumatic stackers, the object of the invention being to provide improved mechanism wherein a blast or blasts of air are employed to effectually stack the straw and separately convey the chaff onto the straw stack or to some other point of discharge; and with this object in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view showing the application of my improvements to a threshing-machine. Fig. 2 is a plan view, partly in section, showing the apparatus removed from the threshing-machine. Fig. 3 is a rear face view. Fig. 3<sup>a</sup> is a view in section on the line *xx* of Fig. 1. Figs. 4 and 5 are views of modified forms of my invention.

1 represents the rear end of a threshing-machine to which my improvements are attached, as will now be explained.

At the discharge-outlet of the thresher a straw-receiving chamber 2 is located and is contracted at its discharge end, where it communicates with the straw-conveyer tube 3, which latter is preferably rectangular where it is joined by the chamber 2 and then converges into cylindrical shape for directing the straw onto a stack. With the inlet end of tube 3 fan-casings 4 communicate by means of short pipes 5 and have fans 6 mounted therein and secured on a driving-shaft 7 common to both fans and operated by any desired means.

At the chaff-discharging outlet of the thresher a trough-shaped chaff-receptacle 8 is located and is provided with a double worm 9 (turned by any desired means) to convey

the chaff to and force it into a central pocket 10, with one side of which curved pipes 11 (connected with the fan-chambers) communicate. With the opposite side of this pocket 10 a chaff-conveying pipe 12 is connected and is adapted to convey the chaff (driven there-through by blasts of air directed into pocket 10 by pipes 11) to an independent point of discharge or into the straw-conveyer tube 3, as preferred.

In order to prevent the accumulation of straw in chamber 2, which would interfere with the perfect operation of the stacker, short air-pipes 13 are connected with air-blast pipes 5 and are adapted to direct a portion of the blast into flat elongated nozzles 14, projecting through the sides of the straw-chamber 2, and direct blasts of air along the contracted or converging sides to drive the straw to the center and insure its falling into conveyer-tube 3, where it comes into the path of the main air-blast and is forced onto the stack.

To prevent straw from being blown into chaff-receptacle 8 and compel all the straw to pass into chamber 2, I provide a series of fingers 15 in an opening at the bottom of the thresher discharge, and a stationary inclined platform 16 is located in proper position to direct any chaff which may be blown up the incline back into its receptacle.

As a modified form of my improvements I have shown in Figs. 4 and 5 a hopper-shaped chaff-receptacle 17, into which chaff which escapes between fingers 15 is directed by a shaking inclined platform 18. This platform 18 is supported on spring-links 19 and is preferably shaken by a slotted rod 20, operated by a cam or eccentric 20<sup>a</sup> on the fan-shaft and disposed in the slot in the rod. In this form of my invention I also provide auxiliary air-blast pipes 21, directing a blast of air into the top of the angular portion of tube 3 to assist in forcing the straw from the angular to the cylindrical portion of said tube.

A great many other slight changes and alterations might be resorted to in the general form and arrangement of the several parts described without departing from the spirit and scope of my invention, and hence I would have it understood that I do not wish to limit myself to the precise details set forth, but

consider myself at liberty to make such slight changes and alterations as fairly fall within the spirit and scope of my invention.

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

1. In a pneumatic stacker, the combination with a straw-conveying tube and means for forcing a blast of air therethrough, of a straw-receiving chamber having a contracted portion communicating with the conveyer-tube and means for directing a blast of air from the side of said chamber toward the contracted outlet thereof.
2. In a pneumatic stacker, the combination with a straw-conveying tube and means for forcing a blast of air therethrough, of a straw-receiving chamber having a contracted portion communicating with the conveyer-tube and means for directing a blast of air along the side walls of said receiving-chamber toward the contracted outlet of the straw-receiving chamber.
3. In a pneumatic stacker, the combination with a straw-conveyer tube and means for forcing a blast of air therethrough, of a straw-receiving chamber communicating with the conveyer-tube and contracted at its outlet end to enter said tube, the end walls of said chamber being inclined to said outlet and means for directing blasts of air along the said inclined sides of said receiving-chamber.
4. In a pneumatic stacker, the combination with a straw-conveyer tube and means for forcing a blast of air therethrough, of a straw-receiving chamber communicating with the conveyer-tube, means for directing a blast of air along the sides of said receiving-chamber, and means for directing an auxiliary blast of air along the upper inner face of the

conveyer-tube just beyond the point of discharge of the receiving-chamber.

5. In a pneumatic stacker, the combination with a straw-conveyer tube and means for directing a blast of air therethrough, of a chaff-receptacle, means for propelling the chaff to the center of said chaff-receptacle, means for discharging an air-blast transversely through the central portion of said receptacle to eject the chaff and an inclined platform for directing the chaff into the chaff-receptacle.

6. In a pneumatic stacker, the combination with a straw-conveyer tube adapted to communicate with the straw-discharge of a threshing machine, of fan-casings and fans therein to direct a blast of air through said straw-conveyer tube, a chaff-receptacle to be located at the chaff-outlet of the threshing machine, air-blast pipes communicating with the fan-casings and adapted to eject the chaff from said receptacle, fingers to prevent the falling of straw into the chaff-receptacle, a stepped inclined platform on which a portion of the chaff may be blown and adapted to direct the chaff into the chaff-receptacle and means for shaking said platform.

7. In a pneumatic stacker, the combination with a chaff-receptacle, a pocket and means for discharging chaff from said receptacle into the pocket, of a discharge-pipe communicating with said pocket and means for forcing air-blasts through said pocket.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN HENRY.

Witnesses:

T. CARTER GRIFFITH,  
M. I. SMITH.