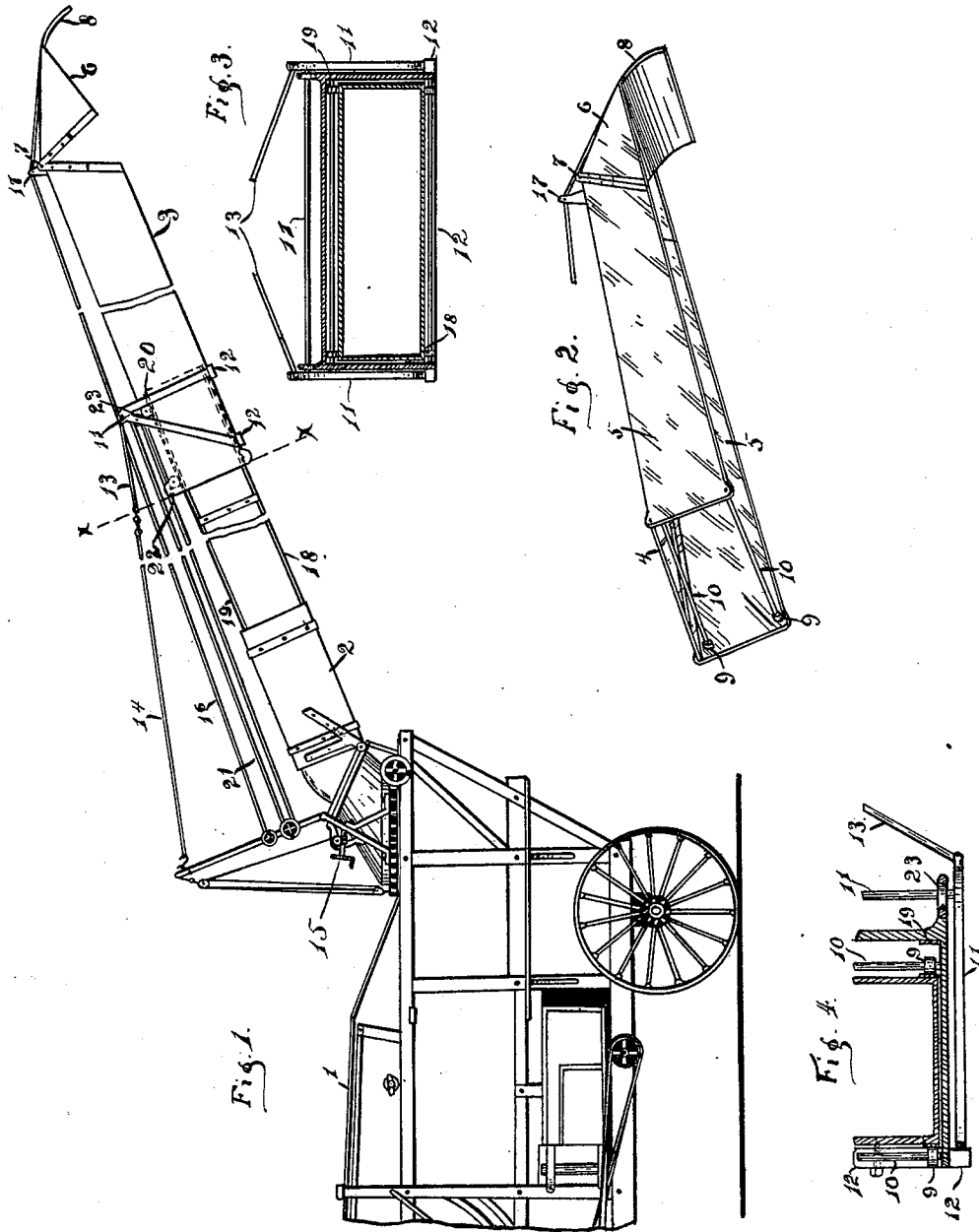


(No Model.)

J. W. HARVEY.  
PNEUMATIC STACKER.

No. 582,643.

Patented May 18, 1897.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

JOHN W. HARVEY, OF INDIANAPOLIS, INDIANA.

## PNEUMATIC STACKER.

SPECIFICATION forming part of Letters Patent No. 582,643, dated May 18, 1897.

Application filed April 7, 1894. Serial No. 506,746. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. HARVEY, of Indianapolis, county of Marion, and State of Indiana, have invented a certain new and useful Attachment for Straw-Stackers; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like numerals refer to like parts.

My invention relates to an attachment to pneumatic straw-stackers used in connection with threshing-machines.

Heretofore it has been difficult and often impossible to stack straw with a pneumatic stacker when there was a breeze or wind. The plan has been to throw the straw by the impetus it has acquired several feet beyond the mouth of the stacker whenever it was necessary. It is plain that when there is a breeze or wind the straw cannot in that manner be located properly, as it will be blown away. The pneumatic delivery-tube cannot well be made long enough to accomplish this purpose, as it would require entirely too much power to maintain the proper draft. I have sought to overcome this difficulty by adding a wind-guard or bottomless extension to the delivery-tube of the ordinary stacker, which is in the nature of a guide or guard through which the straw is blown by the blast without an increase of the draft or power and by which the wind is prevented from blowing the straw aside. The wind-guard or extension is preferably telescoped on the outside of the delivery-tube.

The features of my invention will appear fully from the accompanying drawings and the description following.

Figure 1 is a side elevation of a pneumatic stacker with my attachment, the whole mounted on the rear of a thresher. Fig. 2 shows my attachment in perspective, the under side being visible. Fig. 3 is a cross-section at X X of Fig. 1, showing the inner end of my attachment as mounted on the delivery-tube. Fig. 4 shows the right-hand end of Fig. 3 enlarged.

In detail, 1 is a threshing-machine with the pneumatic stacker 2 mounted thereon. These of themselves constitute no part of my invention. 3 is my attachment, wind-guard, or extension, which is a long trough-shaped

device with the under side open, thus consisting of a rigid top 4 and the rigid sides 5. On its outer end it is provided with a hood 6, hinged at its top at 7 to the wind-guard or extension 3. This hood is like the ordinary hood heretofore in use, excepting that it is provided with a downwardly-curved extension or deflector 8. At one end of my attachment I provide rollers 9, mounted on rods 10, that extend from one side to the other, there being one rod above and one below. These rollers 9 are placed at each end of the rods 10 just within the casing or sides 5. The end of the wind-guard or extension slips over the outer end of the delivery-tube of the stacker and is adjustable thereon. At the outer end of the delivery-tube I provide the bracket 11, having the cross-bars 12 below. My attachment is reciprocable within this bracket 11, and the cross-bars 12 being secured to the under side of the stacker the wind-guard or extension is prevented, by the lower rod 10 engaging the cross-bar 12, from being pushed out too far. In the upper part of the bracket 11 are eyes, in which ropes 13 are secured and connected with the rod 14 to enable the stacker to be lifted by means of the controlling device 15, mounted on the rear of the thresher. This part of the device is like that in ordinary use.

A rope 16 extends from the controlling device to the lever 17 on the hood 6. The purpose of this rope is to elevate the hood or deflector or lower it, as desired, so as to change the angle of deflection. This permits one to turn down the straw at a certain place, and by elevating it to allow the straw to be thrown beyond the end of the entire device. The purpose of the extension 8 on the hood is to deflect the straw thus blown through the wind-guard or extension 3, and which is curved downward in its course by virtue of gravitation and thus deposit it where desired. When I desire to throw the straw beyond the end of my attachment, I elevate the hood and its extension 8 above the path of the straw.

On the four corners of the delivery-tube of the stacker I place metal strips 18 or tracks on which the rollers 9 bear and run backward and forward. I place the same kind of strip or track within the upper corners of the wind-guard or extension at 19, on which the roller

20 bears and runs. The roller 20 is mounted on the delivery-tube. By this construction I am enabled more freely to adjust my attachment on the delivery-tube, and it is likewise  
5 more securely mounted.

My wind-guard or extension is adjusted on the delivery-tube that is pushed out or drawn in by means of the rope 21 passing over the pulley on the controlling device and over a  
10 pulley 23 on the bracket 11, with both ends of the rope secured in the eye 22, formed on the inner end of my extension. One man, therefore, operating the controlling device can alter the angle of the delivery-tube or  
15 swing it horizontally in any position and adjust and regulate the position of my extension or do all of these things with ease, enabling him to locate the straw exactly where he desires it, whether there be a breeze or not.  
20 Of course my wind-guard or extension should be provided with sides, as shown, or curved in cross-section, so as to have the equivalent of sides protecting the straw in its passage from the deflecting influence of  
25 the wind. It must be curved in cross-section, of course, when combined with a round delivery-tube. The form, therefore, of my attachment may be modified, but it essentially consists of the wind-guard or extension with  
30 rigid top and sides and without any bottom, so as to guide the straw from the delivery-tube and enable it to be deposited where desired. With this device one is enabled to build a larger stack and build it better, especially the back portion of the stack, which  
35 can be built up as straight and regular as any other portion thereof.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a pneumatic straw-stacker, the combination with a delivery-tube, of a wind-guard 40 open at the bottom and ends and having rigid sides and top, and means for longitudinally adjusting such wind-guard on the delivery-tube.

2. In a pneumatic straw-stacker, the combination with a delivery-tube, of a wind-guard 45 open at the bottom and adjustably mounted on the tube, and a hood on the outer end of such wind-guard so curved downward as to 50 deflect the straw.

3. In a pneumatic straw-stacker, the combination with a delivery-tube, of a wind-guard 55 open at the bottom and adjustably mounted on the outer end of such tube, and a hood adjustably mounted on the outer end of the wind-guard and provided with a downwardly-extending flange, substantially as shown and described.

4. In a pneumatic straw-stacker, the combination with a delivery-tube, of a wind-guard 60 open at the bottom and adapted to envelop and slide upon the delivery-tube, suitable friction-rollers and tracks on the wind-guard and tube, and means for longitudinally adjusting the wind-guard on the tube. 65

5. In a pneumatic straw-stacker, the combination with a delivery-tube, of a hood 70 adapted to deflect the straw, and means for adjusting the distance of such hood from the mouth of the delivery-tube.

In witness whereof I hereunto set my hand this 4th day of April, 1894.

JOHN W. HARVEY.

Witnesses:

G. C. CONNER,  
V. H. LOCKWOOD.