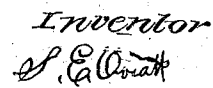
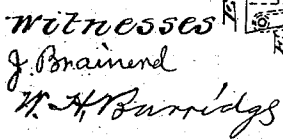


Straw Carrier.

Patented May 14, 1861.



UNITED STATES PATENT OFFICE.

S. E. OVIATT, OF RICHFIELD, OHIO.

THRESHING-MACHINE.

Specification of Letters Patent No. 32,309, dated May 14, 1861.

To all whom it may concern:

Be it known that I, S. E. OVIATT, of Richfield, in the county of Summit and State of Ohio, have made certain new and useful
5 Improvements in Threshing-Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, in which like letters refer to like parts
10 in the different views presented.

Figure 1 is a side view. Fig. 2 is a top view. Fig. 3 is a front view.

My improvements consist in the arrangement of a wire cloth diaphragm in combination with a revolving screen also a hood, whereby the dust occasioned by the use of a threshing machine is carried off along with straw and chaff and away from those
15 feeding and operating it, so that the operators of the machine can work free of dirt and dust, thereby preserving their health which is always more or less injured by the use of threshing machines not having my improvements attached to them; also the
20 draft of the separator is more readily and effectually controlled by my improvement than it can be without it.

The following is a description of my improvements.

30 A, Fig. 1, is the body of the machine in which the threshing apparatus common to all machines is placed. To the sides of the machine I attach two side pipes B B', Fig. 2, which connect with and terminate in the fan case J, which extends through and
35 across the machine. The upper ends of the pipes are brought together at the mouth of the machine D, where they open and terminate in the flue E, under the floor of which the threshing cylinder revolves. F, Figs. 2 and 3, being the driving pulley with
40 section of shaft.

B B', Fig. 2, show the form, connection and relative position of the pipes to each
45 other and to the mouth of the machine.

In my former improvement the side pipes B B' were made to terminate in a cross pipe placed immediately back of the flue E, and connected to the flue in front by openings
50 made in the side of the pipe. In my present arrangement I dispense with the transverse pipe and continue the side pipes along to the front until they terminate as before indicated in the flue E, saving thereby considerable expense in the construction of the
55

apparatus and rendering it much more simple in character.

In my present arrangement, as in my former, the screen E', Fig. 3, is placed in the chamber or flue E. This screen consists of
30 several rods or equivalents extending across the flue and their ends secured to the belts G G', the belts passing over the pulleys H H, H' H'. The shafts also extend across the flue the lower one projecting over the
35 side of the flue and connected by a belt to the pulley I, Fig. 2, on the shaft of the threshing cylinder and by which it is operated. Immediately in the rear of the revolving screen, above described, and filling
40 the whole throat of the opening E, is placed a wire cloth diaphragm E'', which is sufficiently fine in its meshes to prevent chaff and other small bodies which may pass between the slats of the revolving screen from
45 passing down into the pipes; but it should be observed that such small matters cannot be accumulated there, for the revolving screen will carry them around so that they are drawn into the threshing cylinder. The
50 object of this screen is to prevent the chaff and straw from passing into the flues and pipes when thrown up by the cylinder while in operation, thereby preventing the pipes from clogging and obstructing the draft, 85
the screen revolving in the direction to convey the chaff and straw down toward the cylinder.

The draft or current of air for the purpose of conveying the dust through the side pipes
90 is accomplished as before described in the former specification—viz., the case J, Fig. 1, is the revolving fan K, connected by pulleys and belts to the pulley F, Figs. 2 and 3, which in turn is connected by belting to the
95 pulley I on the shaft of the threshing cylinder. The machine when in motion causes the fan to revolve by its several connections to the cylinder and thereby producing a strong current of air downward and from
100 the mouth of the machine through the side pipes, carrying along with it all the dirt and dust arising from the mouth of the machine while in operation, which under ordinary circumstances is very great; enveloping all
105 those attending the machine in a thick cloud of dust and dirt and by taking more or less into the lungs by the act of breathing it becomes not only very unpleasant and dirty but extremely dangerous to the health, as
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most of the dust raised while threshing is by the cylinder at the front of the machine near which the persons feeding and attending it are mostly employed. The dust as it
 5 arises from the cylinder is arrested by the current of air and drawn into the mouth of the flue E, thence downward through the side pipes B B' into the fan case J, and from the case it is blown out by the fan to the tail
 10 end of the machine.

The inducing current of air caused by the great velocity of the fan draws the dirt and dust down and into the fan case, while the conducting current carries it onward to the
 15 end of the machine as before said, hence, it will be perceived that the persons using the machine with my improvements are in no way inconvenienced or injured by the dust and dirt, which is demonstrated by actual
 20 use.

By an apron or hood M, Fig. 1, which may consist of any proper material being thrown over and attached to the rear end of the machine as shown in Fig. 1, the elevat-
 25 ing or conducting apron N, Figs. 1, 2, is entirely inclosed with the exception of a space at the top O for the exit of the chaff, dust and straw. This covering prevents the escape of the dust into the barn and by the
 30 conducting current of air before described is blown out at the opening O, which open-

ing, if thought best may be projected out of the building thereby all the straw, chaff, dust and dirt be expelled into the open air. Thus by my improvement the inconvenience
 35 and evil resulting from the dust and dirt in threshing are wholly removed the dust being discharged from the machine with the straw and chaff as before said.

The apron N may be of any desired length,
 40 and used to convey the straw to the top of a stack, in which case I call it a stacker. In this way the dust is carried to so great an elevation, that in case the tail of the machine is to the windward, the dust does not inter-
 45 fere with the workmen. It should also be remarked, that the flue E, is detachable, for the purpose of getting at the threshing cylinder.

What I claim as my improvements and de-
 50 sire to secure by Letters Patent, is—

1. The wire cloth diaphragm, E'', in combination with the revolving screen E' and
 55 threshing, for the purpose set forth.

2. The canvas covering or hood, M, in combination with the stacker, for the purpose specified.

S. E. OVIATT.

Witnesses:

J. BRAINERD,

W. H. BURRIDGE.