S. E. OVIATT.

Thrashing Machine.

No. 29,095. Patented July 10, 1860.

FIG. 3

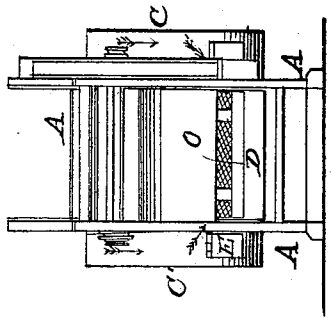


FIG 4

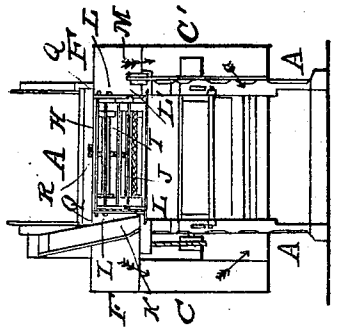


Fig. 1.

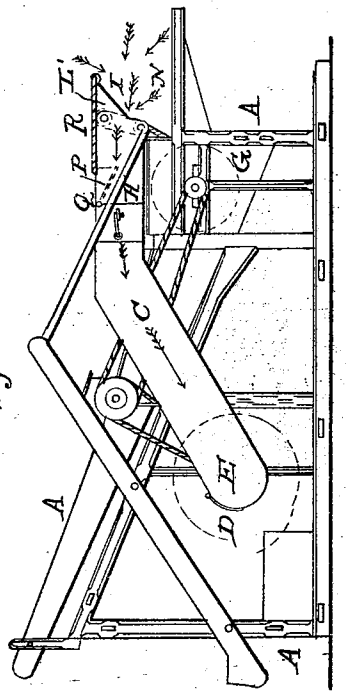
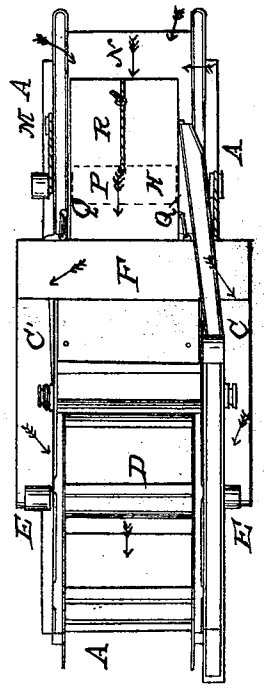


FIG. 2



WITNESSES

W. H. Bennage

Henry Vott.

INVENTOR

S. E. Oviatt

N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

S. E. OVIATT, OF RICHFIELD, OHIO.

THRESHING-MACHINE.

Specification forming part of Letters Patent No. 29,095, dated July 10, 1860; Reissued August 13, 1861, No. 1,218.

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 invented new and useful Improvements in Threshing-Machines; and I do hereby declare that the following is a full and complete description of the construction and operation of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a side view of a thresher, and separator, combined, with my improvement attached. Fig. 2, is a top view. Fig. 3, is a rear, end view. Fig. 4, is a front end view.

Like letters denote like parts in the several views.

The nature of my improvement relates to a certain arrangement of devices, by which the dust caused by a threshing machine, when at work, is conveyed off with the chaff, so that the person using my improvement is not enveloped in dust, or injured in health, by breathing the dust, which arises from threshing in the ordinary way. And further the draft of the separator is more readily and effectually controlled by my improvement.

A indicates the general view of a thresher, and separator combined, with the usual appendages belonging to such a machine. I attach two side pipes C, C′, the lower ends of which connect with, and terminate in the fan case D, Figs. 1, 2, and 3.

At the lower ends of the pipes are doors or slides E, for the convenience of oiling the fan shaft bearings. The upper ends of the pipes C, C′, connect with the transverse pipe F, Figs. 2 and 4, and this transverse pipe connects with, and opens into the flue H, under which revolves the threshing cylinder, indicated at G, Fig. 1. Directly over the cylinder is the floor of the flue, and top of the cylinder case. Above the cylinder is placed the mouth I, of the flue, in which revolves the screen J. This screen consists of rods, or their equivalents, extending across the mouth of the flue, and are attached to the belts K, K, which pass over the pulleys L, L, L′ L′. The shafts of the pulleys also extend across the mouth of the flue, and have their bearings in the sides of the flue. This revolving screen is operated by a belt from the cylinder shaft to the pulley M. This screen is for the purpose of preventing straw, and chaff from passing into the flue and pipes, as it is thrown up, when feeding, which would tend to clog up the pipes. The screen revolves in the direction to convey the straw down toward the cylinder, G.

The wheat is placed upon the table N, and fed into the machine, where, it is threshed, and the grain, straw, and chaff separated, and discharged from the machine, in the ordinary manner. During the operation a strong current of air is produced, by the great velocity with which the cylinder G, is required to revolve. This strong current of air causes the dust produced in threshing, to envelop the whole machine, and the persons attending it in dust, which renders it very dirty and disagreeable to tend the machine, besides being very injurious to the health, on account of taking into the lungs so much dust and dirt in the act of breathing. As the passages from the cylinder G, for straw, grain, and chaff are more or less filled up with material, when the machine is at work, the current of air produced by the cylinder cannot therefore escape through these passages, but will rush out directly from the cylinder close to the persons feeding the machine, and the faster the machine is worked, the more are the passages filled up, and consequently more dust raised, and it requires high speed to thresh with the desired effect.

The dust raised in threshing is produced by the cylinder G, and the teeth, near which the men are constantly employed in feeding the machine, and as the dust issues from the cylinder case, it rises and is conveyed by a current of air into the mouth I, of the flue, thence to the cross pipe F, and through the side pipes C, C′, into the fan case D, as indicated by the arrows. From the case it is blown out to the end of the machine by the fan O, seen in Fig. 3. This induction current of air, which passes into the mouth of the flue, is caused by the fan D, consequently all the dust, which arises is carried off through the flue, so that the persons attending the machine, are in no way inconvenienced by the dust, as has been found by practical tests. It is also found, that when threshing in a building, the room is free from dust, when compared with the old practice. With my improvement the dust may be conveyed outside of the building, by

having the proper draft, so that all persons in the building are benefited.

With slight changes in regard to the arrangement of the pipes, my improvement may be applied to all kinds of machines used for this purpose.

In the flue H, is placed a damper, or valve, as indicated at P, Figs. 1, and 2, which works or turns upon a hinge, or joint, on each end, in the sides of the flue, as indicated at Q. This valve will fill the whole aperture of the flue when closed. The cord R, is attached to the valve, for the purpose of operating it. By means of this valve, the person tending the machine can easily control the quantity of draft, required to clean the grain, by a slight movement of the cord, on a word from the measurer. The draft is easily, and quickly gaged by the feeder. In the old way the draft is gaged, by the measurer, passing from one side of the machine to the other, and moving the shutters, at the ends of the fan case. Thus with my improvement, the evil, and inconvenience, arising from the dust in threshing are removed, and the dust is discharged from the machine with the chaff &c. Also the draft, or wind for cleaning the grain, is more readily and effectually accomplished, than by the ordinary means.

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

The arrangement of the pipes C, C′, and F, and flue H, in combination with the revolving screen J, and valve P, substantially in the manner, and applied to the purposes herein described.

S. E. OVIATT.

Witnesses:
W. H. BURRIDGE,
HENRY VOTH.