

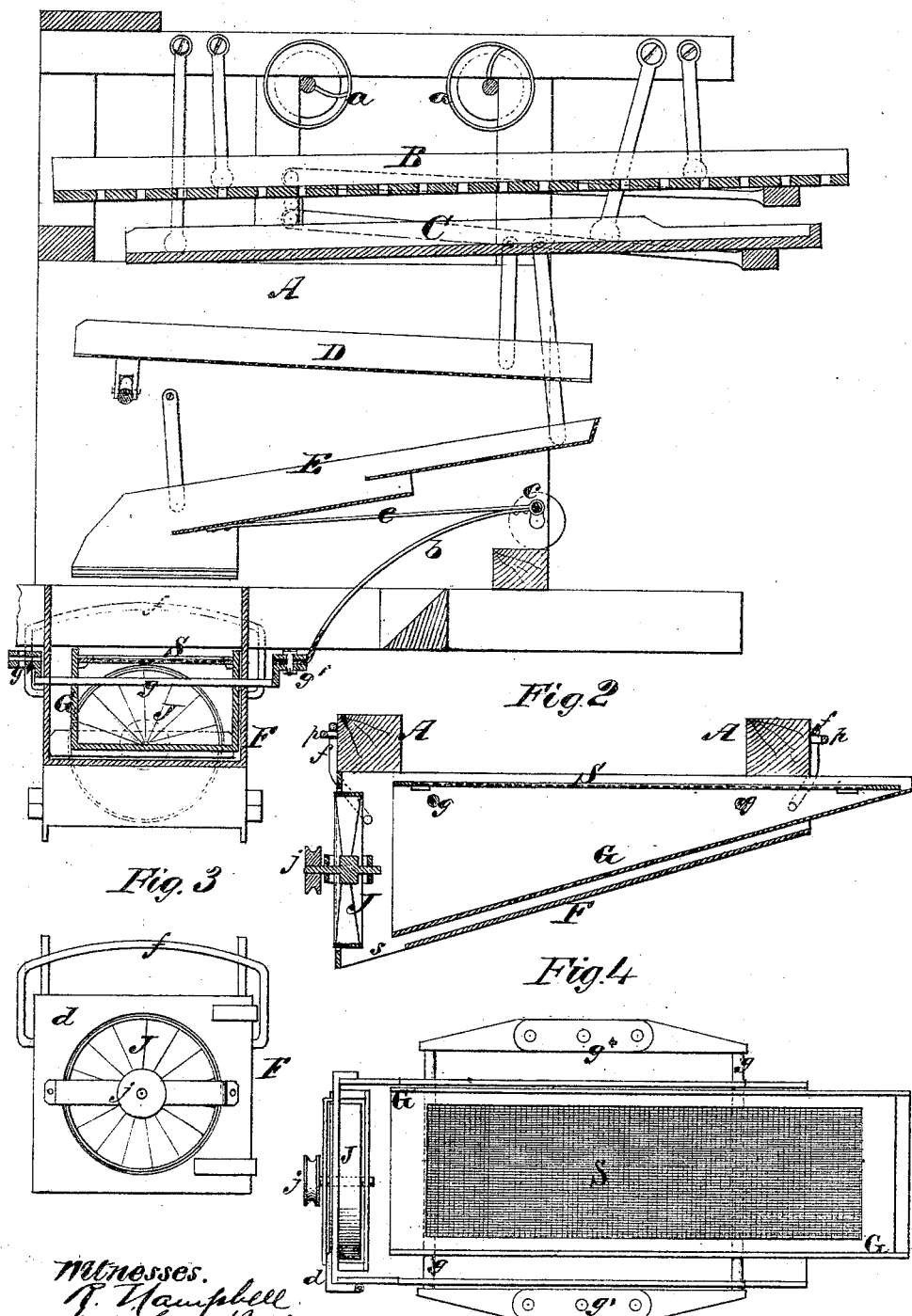
M. H. MANSFIELD.

Improvement in Discharge-Spouts for Thrashing, Hulling,
and Separating Machines.

No. 114,021.

Fig. 1.

Patented April 25, 1871.



Witnesses.
J. Mansfield
J. C. Campbell.

Inventor
M. H. Mansfield
by
Marion Fenwick & Laurence.

United States Patent Office.

MARTIN H. MANSFIELD, OF ASHLAND, OHIO.

Letters Patent No. 114,021, dated April 25, 1871.

IMPROVEMENT IN DISCHARGE-SPOUTS FOR THRASHING, HULLING, AND SEPARATING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MARTIN H. MANSFIELD, of Ashland, and county of Ashland and State of Ohio, have invented certain Improvements on Discharge-Spouts for Thrashing, Hulling, and Separating-Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a section taken vertically and longitudinally through part of a separating-machine and my improved discharge-spout.

Figure 2 is a longitudinal section through the improved spout.

Figure 3 is a view of one end of the spout.

Figure 4 is a top view.

Similar letters of reference indicate corresponding parts in the several figures.

The object of this invention is to improve the discharge-spout of a thrashing and separating-machine—first, by the application to such spout of a fan; second, by the application to such spout of a screen; third, by the application to such spout of a second spout, which is provided with a screen, and which, with its screen, is allowed to receive a shaking motion, all as will be hereinafter explained.

To enable others skilled in the art to understand my invention, I will describe its construction and operation.

In the accompanying drawing, fig. 1, I have represented my improved spout applied to part of a thrashing and separating-machine, in which—

A is the frame.

B, the perforated straw-carrier and separator.

C, a vibrating-table for receiving the seeds as they fall from the straw-carrier and delivering them on a screen, D.

Beneath the screen D is the separating-shoe E, which receives motion from a crank, c, by means of a connecting-rod, e.

Above the straw-carrier B are two helical beaters or stirrers, which move the straw about upon said carrier.

None of the parts above named are claimed under this petition.

As the seeds, mixed with more or less impurities, fall from the shoe E they are received into a spout, F, and conducted laterally out of the machine.

This spout F has an inclined bottom leading down to a discharge-aperture, s, (see fig. 2;) and at this lower end of the spout a fan, J, is applied, which

may be made in any suitable manner, and which will, when it is rotated, direct strong currents of air through the spout from one end to the other thereof.

This fan J is applied to the end d of the spout.

On one end of the shaft of fan J is a grooved pulley, which receives around it a belt that leads to a driving-belt pulley on some part of the machine.

The spout F may be attached to the machine by means of bails ff on the spout and pins pp on the sills of the machine, as shown in fig. 2, or in any other suitable manner.

These bails will allow the spout to be removed at pleasure, and also turned to discharge the seed from either side of the machine, whichever is most convenient.

Inside of the spout F is a second spout, G, which is narrower than the main spout F, and which is sustained by means of two transverse rods, g g, that pass freely through the sides of spout F, and are connected together by bails g' g'.

Within the second spout G is a screen, S, the meshes of which are large enough to allow the seeds to pass through them, but are not large enough to allow sticks, straws, and other foreign substances to pass through them.

The screen S is removable.

When the spout thus constructed is attached to the separator, as shown in fig. 1, a connection is made between the crank c and one of the bails g' by means of a strap, b, so that when crank c is revolved the screen S and the inside spout G will receive a rapid reciprocating motion.

The fan J is rotated by means of a belt passed around its pulley j, as above explained.

It will be seen, from the above description, that the seeds mixed with foreign matters will be subjected to the action of a strong blast from fan J from the moment they leave the shoe E until they are finally discharged from the spout F; also, that the seeds are received into the spout upon a screen, S, which has given to it a lateral motion, thus separating sticks, straws, &c., from the seeds.

The seeds then fall from the screen upon the inclined bottom of the inside spout G, where they are tossed from side to side as they descend to the discharge-aperture s, and are in this manner stirred up while being acted upon by the descending blast from the fan J.

Having described my invention,

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

1. The fan J, constructed substantially as described, in combination with the discharge-spout of a separating-machine, and arranged to operate the discharge-spout of a separating-machine, substantially as and for the purpose described.

2. A discharge-spout constructed with a blast-fan and laterally-vibrating screen, substantially as described.

3. The combination and arrangement of the later-

ally-movable screen S with the discharge-spout F, substantially as described.

4. The combination of the secondary laterally-movable spout G and the primary spout F, arranged to operate substantially as described.

MARTIN H. MANSFIELD.

Witnesses:

JOHN D. JONES,

F. A. VANTILLY.