United States Patent Office.

JOSEPH ALLONAS, OF MANSFIELD, OHIO.

Letters Patent No. 107,994, dated October 4, 1870.

IMPROVEMENT IN THRASHING-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, JOSEPH ALLONAS, of Mansfield, county of Richland, State of Ohio, have invented a new and useful Improvement in Thrashing-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a perspective view of my improved machine with the screen-cap removed, and nearly the whole of the screen broken away, to show various devices, and

Figure 2 is a vertical longitudinal section of the machine.

The invention relates to that class of thrashers and separators in which the straw and grain after passing the thrashing-cylinder are thrown into a long perforated or reticulated revolving screen or bolt, by means of which the grain is separated from the straw, the grain passing through the screen and being conveyed to a winnowing apparatus, while the straw is delivered from the rear or open end of said screen.

The invention consists, first, in combining with said screen and spiral rib a series of fingers or spurs attached to the inner side of the screen, and inclining inward and rearward, to assist in agitating the straw; second, in combining with the screen a series of fingers or rods arranged at its discharging end, and forming an extension thereof, said extension being much more open in its construction, and adapted to allow the tailings or unthrashed heads to pass through into the tail-spout; third, in the arrangement of the friction-rollers, which support the screen against the end-thrust consequent upon its inclined position at the front end of the screen, whereby they can be made to bear against the cogged rim through which the screen is made to revolve, and in certain other features of construction which will be fully explained.

In the drawing—

A A are sills, which, together with posts A^1 and girts A^2 A^3, form the frame-work upon which are supported the working parts of the machine as follows:

B is the thrashing-cylinder, and

B′ the concave. Both of these parts may be of any usual or desired construction, and need not be described in detail.

b is an apron, in practice extending to the front of the machine, and over which the grain is fed to the thrashing-cylinder.

C is a perforated or reticulated screen or bolt, made of wood or other suitable material, and placed directly in rear of cylinder B, in such position that the grain and straw can be discharged from said cylinder directly into it, as shown in the drawing.

This screen has no shaft or axle to support it, but rests upon a series of friction-rollers, c c^4, attached to the frame-work of the machine, substantially in the position shown, so that the screen shall descend slightly, the rear or discharging-end being the lowest.

C^1 is a cogged rim, fitting closely to the front or receiving-end of the screen, and provided with a shoulder or flange projecting beyond the cogs, as is plainly shown at c^1, fig. 2, this shoulder resting upon and traversing one pair of the friction-wheels.

At the other end of the screen there is a similar rim, C^2, except that it has a smooth flange, c^2, instead of being cogged. This rim rests upon its corresponding pair of friction-rollers, thus supporting the rear end of the screen.

At the front end of the screen I place another pair of friction-rollers, c^3 c^3, directly in rear of cogged rim C^1, and so located that said rim shall rest against them, whereby they are made to resist the end-thrust of the screen, consequent upon its inclined position.

D D are fingers, projecting beyond the rear end of screen C, and forming a sort of open-work extension, for a purpose which will be hereinafter explained.

E E are fingers or spurs, firmly attached to the inside of the screen. They project inward toward the center, and also incline toward the rear end of the screen. The number and location of these spurs may be varied to suit the kind and condition of the grain to be thrashed.

E′ is a spiral or screw-rib, running from end to end upon the inside of screen C. This rib may be made of either wood or metal, and should be of such height as will allow the straw to pass readily over it without sweeping the grain with it. I usually prefer to employ two or more of these ribs, placed parallel with each other, as by so doing I can increase the pitch of the screw, and yet keep the ribs close enough together.

The screen is provided with hoops or bands, which, in combination with the spiral rib, give to it (the screen) great stiffness and strength, while at the same time it can be made very light; in fact, it may be made wholly of narrow strips or slats.

For the purpose of protecting the screen and its accompanying parts from the sun and rain, a shell, semi-cylindrical in form, is supported above the screen in any desired manner.

F is a carrying or grain-table, placed below the screen and mounted upon vibrating links, as is customary in this class of machines. This table has a reciprocating motion imparted to it by means of eccentric f on shaft F′, eccentric f being connected with table F by pitman f^1.

Shaft F′ is mounted on bearings on the frame-work of the machine, and driven by a belt from the shaft of the thrashing-cylinder B.

L. Anderson,

Bed Bottom.

No. 107,995. Patented Oct. 4. 1870.

Fig 1.

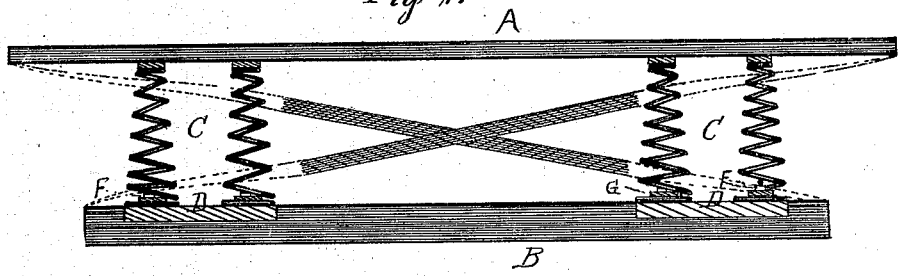
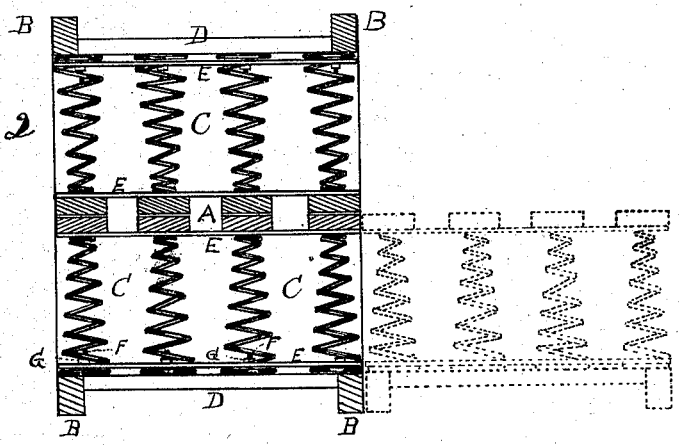


Fig 2



Witnesses

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