

(No Model.)

J. R. INGELS.
STRAW CARRIER.

No. 541,932.

Patented July 2, 1895.

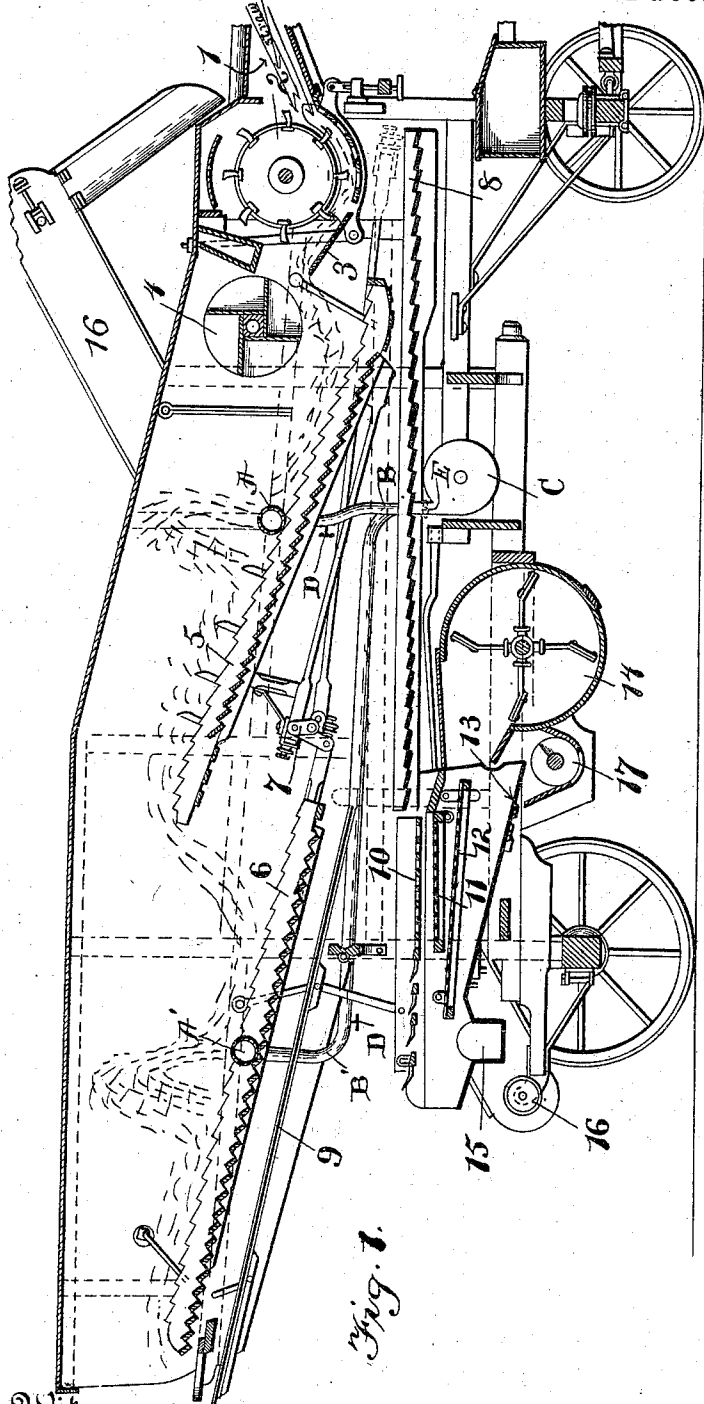


Fig. 1.

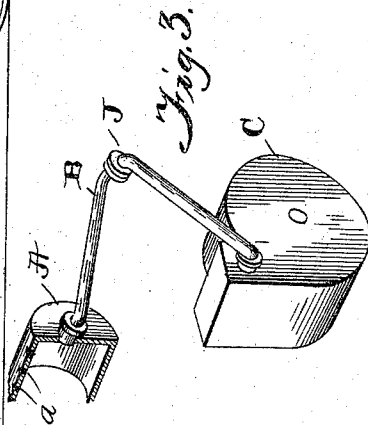


Fig. 3.

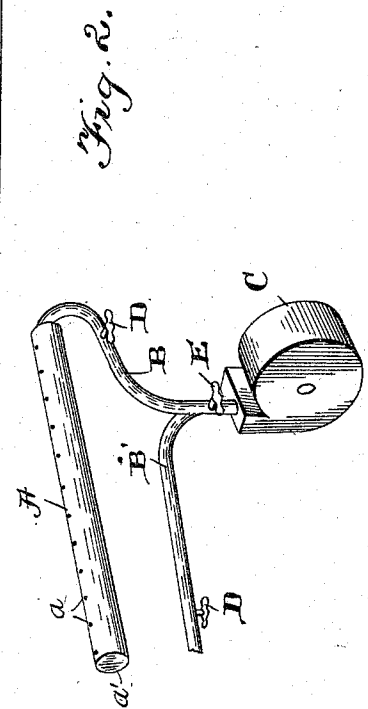


Fig. 2.

Witnesses:

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Inventor
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UNITED STATES PATENT OFFICE.

JOHN R. INGELS, OF HIAWATHA, KANSAS.

STRAW-CARRIER.

SPECIFICATION forming part of Letters Patent No. 541,932, dated July 2, 1895.

Application filed September 27, 1894. Serial No. 524,266. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. INGELS, a citizen of the United States, and a resident of Hiawatha, Brown county, State of Kansas, have invented certain new and useful Improvements in Straw-Carriers; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

This invention relates to straw carriers for thrashing machines and the like, and more especially to that class thereof known as vibrating tables; and the object of the same is to provide improved means for additionally tossing the straw in its passage over such tables. Heretofore devices of this character have been frequently constructed wherein a fan or other device was connected with the shaking table in such manner as to direct the air blast upwardly between the slats of the table, and in other constructions the blast was directed longitudinally over the table from one end or one edge. One patent of which I am aware contained a perforated table beneath which extended a perforated pipe directing a blast of air upward through the table, and included means for moving this perforated pipe gradually along beneath the table. The present invention consists in the employment of a single pipe located about midway between the front and rear edges of the table, extending completely across the same, and supported permanently thereby either by resting on the table or by being sunk into it flush with its upper face. It is not contemplated to direct a blast of air upwardly through various points in the table or through all parts thereof, nor to direct a blast of air longitudinally of the table in any direction; but by means of the devices described below, a single blast of air at about the center of the length of the table lifts the straw when it reaches this line and permits it to fall again onto the table to progress toward its rear end and there drop off. The height to which the straw is tossed is, of course, dependent on the strength of the air blast, but it is my object not so much to thoroughly agitate the straw as to blow it out of place, as to simply toss it at one point near the center of the table and allow it to fall back thereon. The

mechanism by which this is accomplished forms the subject-matter of the present application, all as hereinafter more fully described and claimed, and as illustrated in the accompanying drawings, wherein—

Figure 1 is a central longitudinal section of one form of thrashing-machine with my improvements applied to each of the two tables shown therein. Fig. 2 is a perspective detail of the improvement detached. Fig. 3 is a perspective detail, partly in section, showing the use of a rigid pipe and joint instead of a flexible pipe.

In the said drawings, 1 designates the feed opening for the admission of grain to the thrasher.

2 is the cylinder or a band cutter and feeder.

3 is the grate.

4 is the beater.

5 and 6 are two vibrating tables. 7 is the mechanism for moving them.

8 is the grain bottom.

9 is the return grain bottom.

10 is the chaffer, 11 the heel riddle, 12 the wheat (or grain) riddle, 13 the shoe grain bottom, 14 the blast fan, 15 the tail end spout, 16 the return elevator, and 17 the grain conveyor of an ordinary or any preferred form of thrashing machine.

I have shown my improvements as applied to the two tables of this machine, although it will be understood the same are equally applicable to a thrasher of any suitable form which employs the shaking or vibrating tables.

The operation of this machine is well known and needs no description here.

Coming now to my improvements, A is a pipe or tube standing preferably straight across the table 5 and resting thereon or sunk flush with the surface thereof as preferred, and in the upper face of this pipe are perforations *a* as seen in Fig. 2. One end of this pipe may be closed as seen at *a'*, and communicating with the other end is a piece of flexible pipe or rubber hose B leading down along one side of the table to an independent fan or blower C as seen. A similar hose B' leads from the fan C to another perforated pipe A' mounted on the other table 6. Suitable dampers or valves D may be employed in these feed pipes if it is desired to cut off the blast of air from one or both of the per-

forated pipes, or a single damper as in dotted lines at E; or, if desired, independent fans may be used, one for each feed pipe, or fast and loose pulleys on the fan-shafts for controlling their movements—all of which modifications will readily occur to the skilled mechanic and are embraced in the general idea of my invention.

In operation, the thrasher having been started and straw or grain being fed in at 1, it passes under the cylinder, over the grate, under the beater, and onto the first table 5, upon which it is agitated and tossed about to shake out some of the grain. Continuing thence to the rear, it falls upon and is tossed about by the second table 6 for the same purpose, and finally falls out at the rear end of the machine. I have noticed, however, that the tables occasionally do not break up bunches of straw, especially when thrashing very fast and crowding the machine more than the capacity of the same, and hence the utility of my improvement. As a given mass of straw passes over one of the perforated pipes A, a strong blast of air is directed into and through it from below, which blast scatters and tosses the wisps of straw as indicated; and which blast will increase the separating capacity in any ordinary machine about one half. If the perforated pipe is sunk into the table at or below the level of its upper face, it will offer no impediment to the free passage of the straw, even if the blast of air be cut off. The flexible feed pipe permits the perforated pipe to partake of the vibratory or shaking motion of the table; and a rigid feed pipe might be used by forming it with suitable joints where it connects with the perforated pipe and the fan casing, as well as between such points as indicated at J in Fig. 3—all of which forms no departure from the spirit of

my invention. The exact shapes, sizes, and materials of parts are also immaterial; and considerable further change and elaboration may be made as will be clear.

What is claimed as new is—

1. In a straw carrier, the combination with a shaking straw table; of a single pipe resting permanently on and extending across the table at a point between its ends and having perforations in its upper face, one end of the pipe being closed, a flexible pipe communicating with the other end, a damper in said flexible pipe, and a fan for supplying a blast of air through the flexible pipe to the perforated pipe, as and for the purpose set forth.

2. In a straw carrier, the combination with a shaking straw table; of a single pipe permanently carried by and sunk into the table flush with its upper face and extending across the same at a point between its ends, said pipe having perforations in its upper face, and means for supplying a blast of air to this pipe, as and for the purpose set forth.

3. In a straw carrier, the combination with a vibratory table for carrying the straw, and a perforated pipe with closed ends resting permanently on and extending across said table at a point between its ends; of a fan for supplying a blast of air, and a feed pipe having jointed connections with one end of the perforated pipe and with the fan casing and having a joint in its body between said connections, as and for the purpose set forth.

In testimony whereof I have hereunto subscribed my signature on this the 18th day of September, A. D. 1894.

JOHN R. INGELS.

Witnesses:

T. McLAUGHLIN,
C. B. BAKER.