M. H. JOSLYN.

Band-Cutting Feeder for Thrashing-Machines.

No. 198,985 Patented Jan. 8, 1878.

FIG. 1.

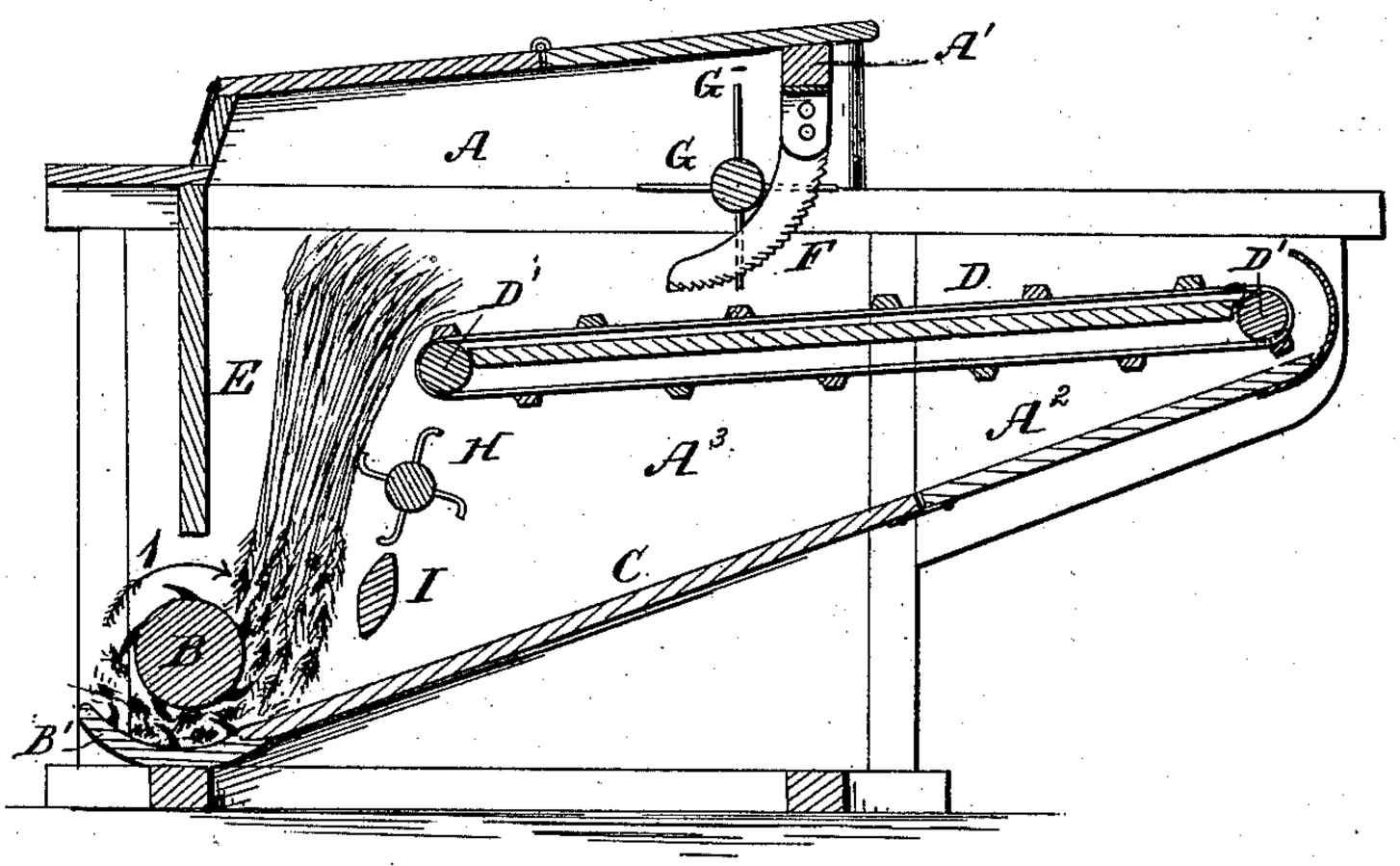
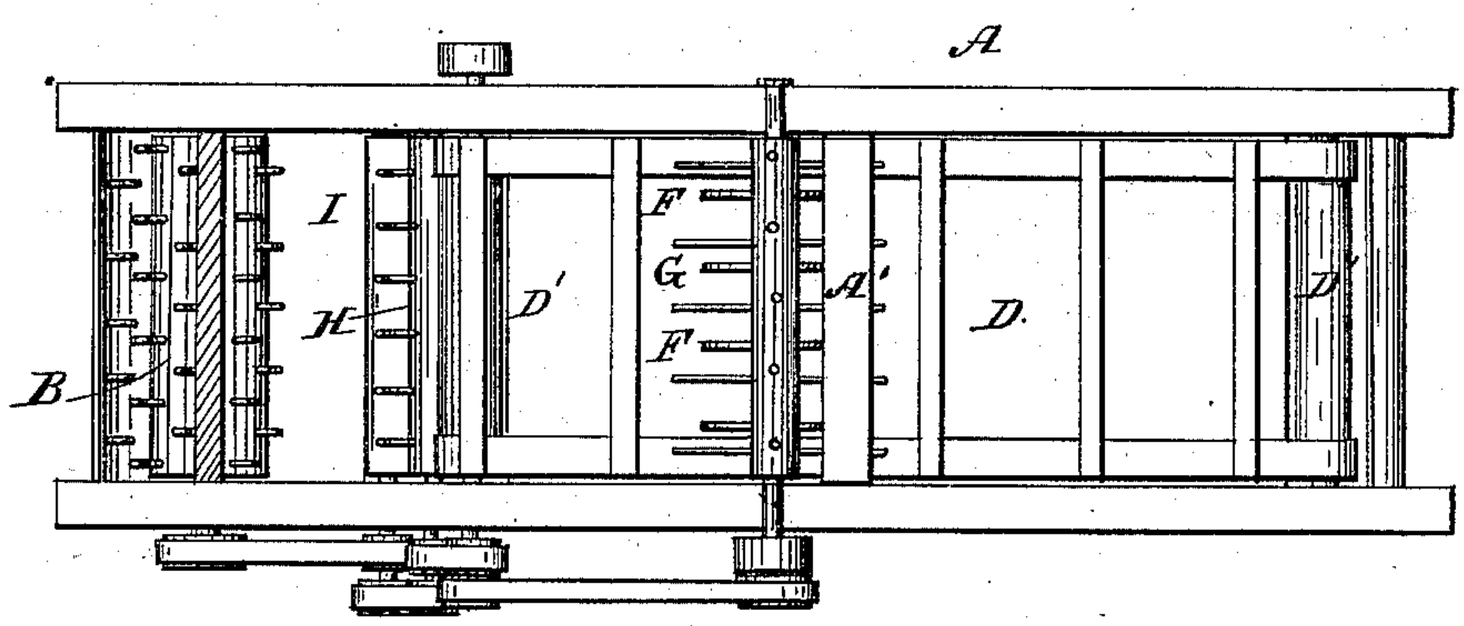


FIG. 2



WITNESSES

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MATTHEW H. JOSLYN, OF ROCHESTER, NEW YORK.

IMPROVEMENT IN BAND-CUTTING FEEDERS FOR THRASHING-MACHINES.

Specification forming part of Letters Patent No. **198,985,** dated January 8, 1878; application filed November 1, 1877.

To all whom it may concern:

Be it known that I, MATTHEW H. JOSLYN, of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Band-Cutters and Feeders for Thrashing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification.

The object of my invention is to furnish a band-cutter and feeder, by which the bundles of grain may be fed to the machine with any desired rapidity, and by which will be prevented what is usually known as "slugging"—that is, drawing into the cylinder too great a quantity of straw in a bunch; and it consists in the relative arrangement of the straw-carrier to the cylinder of the thrasher, whereby the bundles are carried and dropped into a vertical position, with their ends on the feed-board in front of the cylinder, so that the straw will slide regularly and evenly in a continuous stream into the thrasher; and it consists, further, in the arrangement of a toothed roller and flapper with reference to the cylinder and straw-carrier, and in other improvements, all of which will be hereinafter explained.

In the drawings, Figure 1 is a vertical longitudinal section, and Fig. 2 is a plan with a part of the top removed, of my invention.

A is the frame, which supports the several parts of my improved feeder, and it is so constructed that it may be readily attached to any ordinary thrashing-machine.

In the drawings I have shown the framing A so constructed as to support the thrashing-cylinder B, concave B′, and the feed-board C, in order that the relative positions of the parts of my invention to these parts of the thrasher may be clearly exhibited.

In practice, the framing of my band-cutter and feeder is a distinct and separate construction, which may be attached to the thrashing-machine so as to rest on the feed-board C, and over the cylinder, with the same relative positions of the several parts as are shown in Fig. 1.

The thrashing-cylinder B is an undershot cylinder, revolving in the direction indicated by the arrow 1.

D is the straw-carrier, supported on rollers D′ D′, journaled in the frame A. It carries the bundles of grain E under the cutters, and deposits them in a vertical position on the feed-board, in front of the cylinder, as shown in Fig. 1. It is supported in a nearly horizontal position, with its inner end elevated about the length of an ordinary bundle of grain above and slightly in rear of a vertical line from the front side of the cylinder, so as to afford a sufficient space in which to deposit the bundle, as shown.

F F are a series of curved sickle-edged knives, having their upper ends rigidly fixed to a cross-bar, A′, on the upper side of the framing A. They curve forward, as shown, with their lower ends near to the carrier D. They are employed in any suitable number, so as to provide cutting means when it is desired to pass two or more bundles side by side into the machine, and they are made rigid in position, as shown.

G is a picker or feed-roller, journaled to the frame A, so that it revolves over and close to the knives F, as shown. It is provided with the fingers or teeth G′, arranged so as to extend through between the cutters and close to the carrier D. They catch and force the bundle through under the knives F, and after the bands are cut they loosen up and scatter the straw over the carrier.

H is a toothed roller arranged below and slightly in front of the inner end of the carrier D. It revolves in the rear of the bundle E. It separates more thoroughly the straws of the bundle, and pitches the straw forward and forces it downward to the cylinder. It is especially useful where the straw is damp and is clotted together, for it will tear the bundle to pieces and render it loose and even in mass, so that it will be passed into the cylinder in regular flow.

Were the bundles of grain to be thrashed always perfectly dry, this roller H might be dispensed with, there being put in its place a back-board, slightly inclined, so as to give

proper direction to the grain as it falls from the carrier. In this case the gravity of the straw would carry it to the cylinder; but since in nearly all stacks of grain there is more or less damp straw, I prefer to construct all my machines with the roller H, thereby providing for all kinds of grain.

I is a flapper, journaled in the frame A, and arranged to revolve below the roller H, and near to the surface of the feed-board C, as shown. It is provided as an additional means whereby the grain or straw is thrown into the cylinder, and is adapted especially for wet heavy straw, that might otherwise, by reason of its dampness, adhere to and "bank up" and fail to slide down the feed-board into the cylinder. This flapper is made flat, and serves as a suction-fan, by which the dust is prevented from rising from the cylinder and enveloping the persons who are feeding the machine.

When a bundle of grain is passed into the feeder, it is conveyed by the carrier to the knives, under which it is carried by the feed-roller. The band is cut, and the straw, after clearing the knives, is loosened up and scattered over the carrier by the fingers of the roller. The cut bundle is then deposited, heads down, and in a nearly vertical position, on the inclined feed-board, immediately in front of the cylinder.

The gravity of the straw will ordinarily cause the bundle to slide toward the cylinder, the teeth of which catch that portion nearest to them and carry it through the machine, and each following series of teeth catch additional portions of straw, so that the whole bundle is carried through in an even and regular flow.

The roller H and flapper I operate in the manner hereinbefore described to facilitate the operation of feeding.

With my device it is impossible to "slug" the thrasher—that is, feed the grain in bunches, causing a thugging noise, and checking the motion of the machinery. There is perfect regularity in the feed, the quantity of straw being regular and of even flow. It requires less care and skill to feed it, and with it more grain can be thrashed in a given time than can be done with ordinary cutters and feeders, and requires fewer men to attend it. Where the bundles are small, two, three, or more, according to the capacity of the device, may be fed at once, requiring no more care or skill to do so on the part of the operator than is required to feed a single bundle.

My device is provided with an inclined bottom, A^2, which is so arranged and adapted that it will abut closely against the end of the feed-board C, as shown, and thereby provide a close bottom and an air-chamber, A^3, below the carrier, and in the rear of the flapper I and roller H.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination, with the undershot cylinder B and its concave, and the inclined feed-board C, of the conveyer D, having its delivery end located nearly or quite above the delivery end of the feed-board, substantially as and for the purpose set forth.

2. The combination, with the carrier D, picker G, and knives F, arranged as described, of the toothed roller H, journaled to the frame below the inner end of the carrier, substantially as and for the purpose set forth.

3. The combination, with the carrier D and the thrashing-cylinder, of the toothed scattering rake or roller H, journaled below the inner end of the carrier, and the rotary flapper I, journaled below the plane of the scattering-rake, and in front of the thrashing-cylinder, substantially as and for the purposes set forth.

4. The combination, with the carrier D and curved knives F, fixed rigidly in position, of the feed-roller or picker G, journaled to the frame, so that its teeth G′ revolve between the knives, substantially as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

MATTHEW H. JOSLYN.

Witnesses:

P. B. TURPIN,

W. J. OSGOOD.