E. J. MARSTERS.

FEEDERS FOR THRASHING-MACHINES.

No. 191,985. Patented June 12, 1877.

Fig. 1

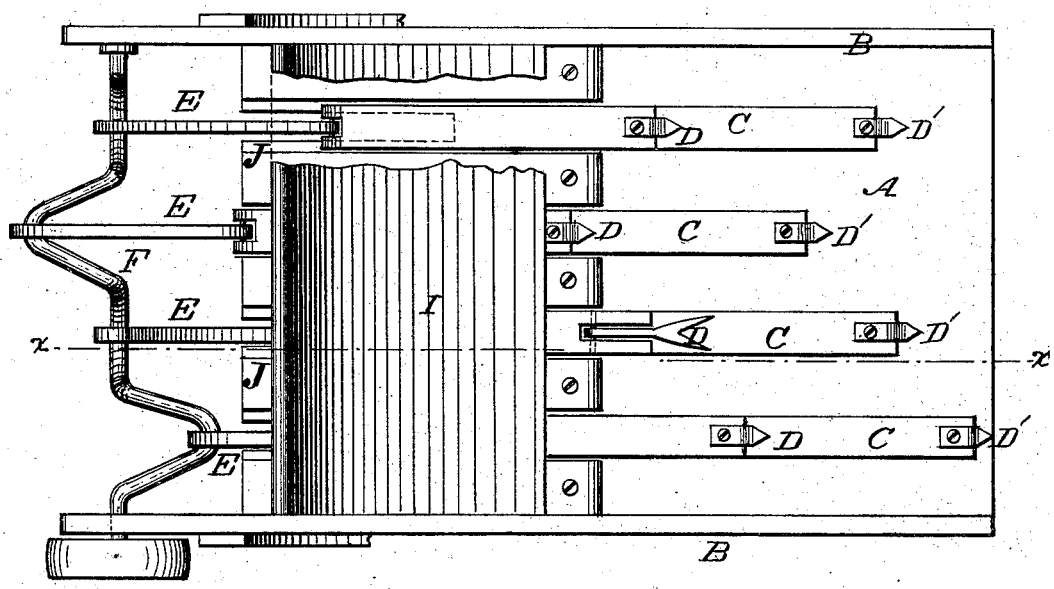
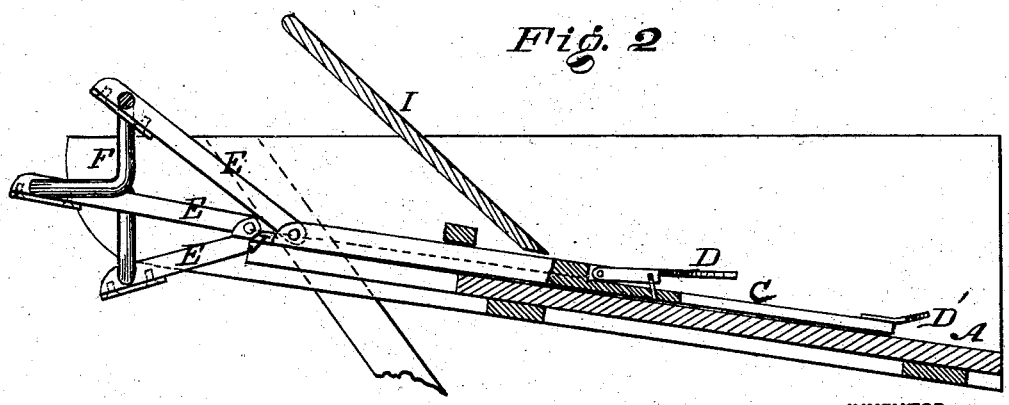


Fig. 2



WITNESSES:

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ENOCH J. MARSTERS, OF STOCKTON, CALIFORNIA.

IMPROVEMENT IN FEEDERS FOR THRASHING-MACHINES.

Specification forming part of Letters Patent No. **191,985**, dated June 12, 1877; application filed March 13, 1876.

To all whom it may concern:

Be it known that I, ENOCH J. MARSTERS, of Stockton, San Joaquin county, California, have invented a new and Improved Self-Adjusting Feeder for Thrashing-Machines, of which the following is a specification:

In the drawing, Figure 1 is a top plan view of my improved apparatus, and Fig. 2 is a sectional elevation.

The feeder is in the nature of an open-ended trough, with a sloping bottom, A, and vertical parallel sides, B. It is designed to be attached to the case of the ordinary toothed thrashing-cylinder, and to occupy the place of the sloping feed-board, upon which the grain is ordinarily deposited, and from which it is fed or delivered to the cylinder by hand. In this instance, the grain is fed forward, and brought within the range of action of the teeth of the cylinder, by means of reciprocating bars C, provided with two sets of teeth, D and D′. These bars are arranged parallel on the sloping bed A, and work in longitudinal grooves J, formed by securing raised pieces upon the feed-board in the proper position, by which means they are guided in their movements. The teeth D′ project from the lower end of the several bars, and the teeth D are attached to the middle portion thereof. The said teeth D D′ project from the upper side of the bars, but point downward, or in the direction the grain is to be fed.

The object I have in view is the production of a feeder for thrashing-machines which will operate equally as well with very long straw, and will produce a continuous and uniform feed, by a simple, cheap, and convenient construction of parts; and my invention therein consists in the combination of the means for operating the pushers; and, further, in the peculiar pushers carrying two sets of teeth attached to the middle and to the lower ends of the same, all as fully hereinafter explained.

The grain is deposited in the feeder partly upon the chute or slash-board I, and partly upon the lower portion of the push-bars C. The chute is fixed between the side boards B B, at an angle of about forty-five degrees, inclining rearward. It aids in feeding the grain forward and downward, so that the teeth of the pushers can seize hold of it, and deliver it to the thrashing-cylinder, and also prevents the grain obstructing the working of the pushers in the guide-grooves, or that of the pitman E, which connect them with the crank-shaft F.

Said shaft has four bends, each at right angles to those on either side of it. In other words, there is a bend at each quarter of a circle. From this arrangement it results that the bars C do not move up and down in pairs, but in such alternation as causes a steady or constant feed of grain to the thrashing-cylinder, in definite quantities.

The teeth D carry the grain down to a certain point, and the other teeth, D′, then take the same and carry it forward till delivered to, or siezed hold of by, the thrashing-cylinder. It is, hence, obvious that the teeth D′ can carry forward, at each downward movement of the pushers, only such quantity of grain as was brought down by the upper set of teeth at the previous stroke. The cylinder is therefore not liable to be choked, its action is more equable or uniform, and the grain is more thoroughly thrashed.

In feeding very long straw to the thrashing-machine, the same resting upon the pushing-bars in all positions, such pushing-bars are required to have a long stroke, which I effect by means of the peculiar crank-shaft. This shaft being placed at the upper part of the bed, and being connected directly to the pushing-bars by the pitman, forms a very simple, cheap, and convenient device, for obtaining the desired stroke.

By having the cranks advanced a quarter of a circle, as shown, the pushing-bars are operated consecutively, and a continuous and uniform feed is the result. The peculiar bars and two sets of teeth secured to the top of the same, in the positions shown, have been found very effective in use, and are also cheap in construction.

What I claim is—

1. In a feeder for thrashing-machines, the combination, with the feed-box A B, of the reciprocating pushers C, sliding in guides attached to the said feed-box, the crank-shaft F, journaled in the upper end of the feed-box

and having the series of quarter-bends, and the pitman E, connecting the cranks directly to the said pushers, constructed and arranged substantially as and for the purposes set forth.

2. The combination, with the pushers C, working in the alternation specified, of the two sets or series of teeth attached, respectively, to the lower end and the middle portion of said pushers, as and for the purpose set forth.

ENOCH J. MARSTERS.

Witnesses:

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