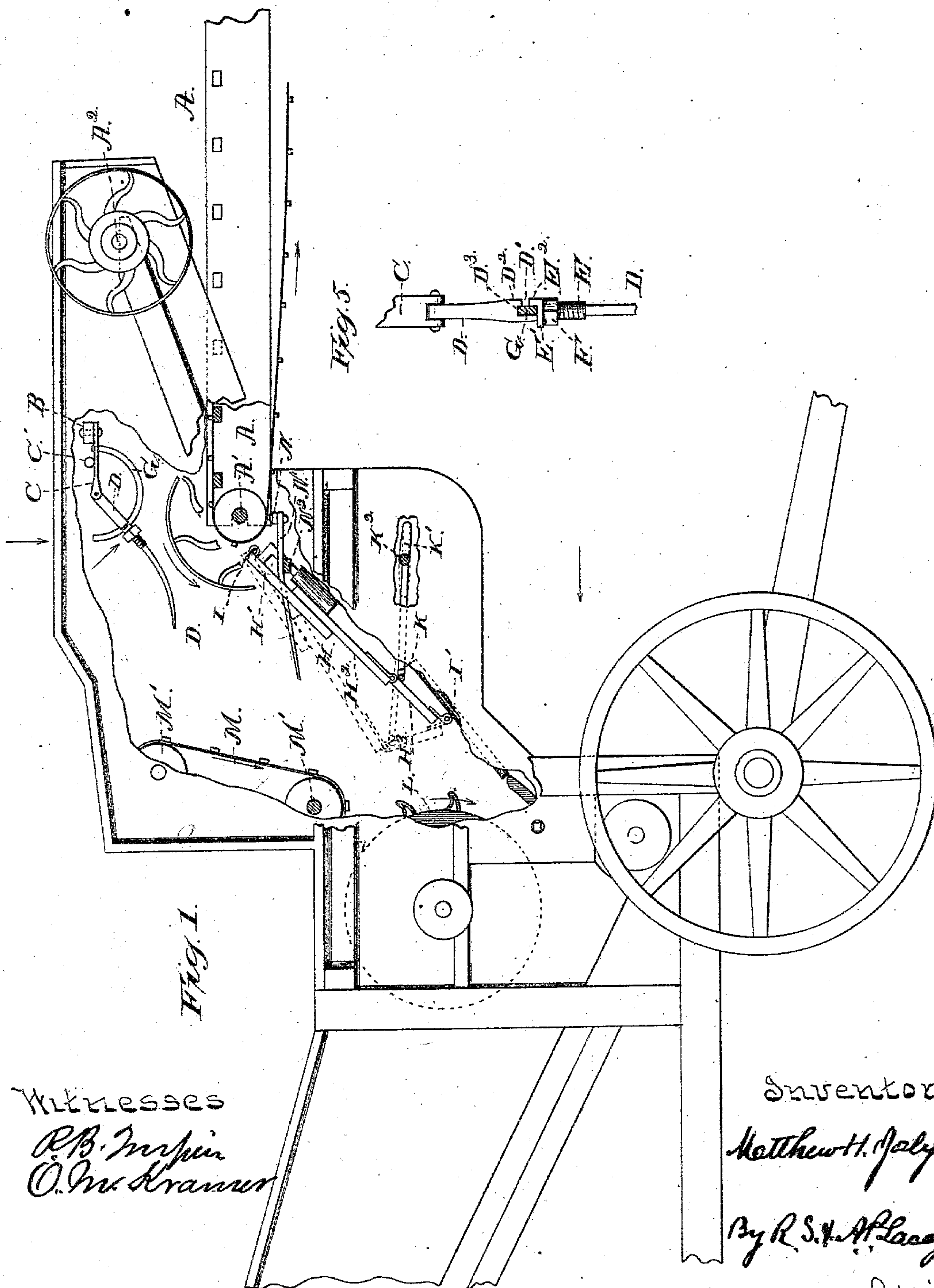


2 Sheets—Sheet 1.

No. 296,695.

Patented Apr. 8, 1884.



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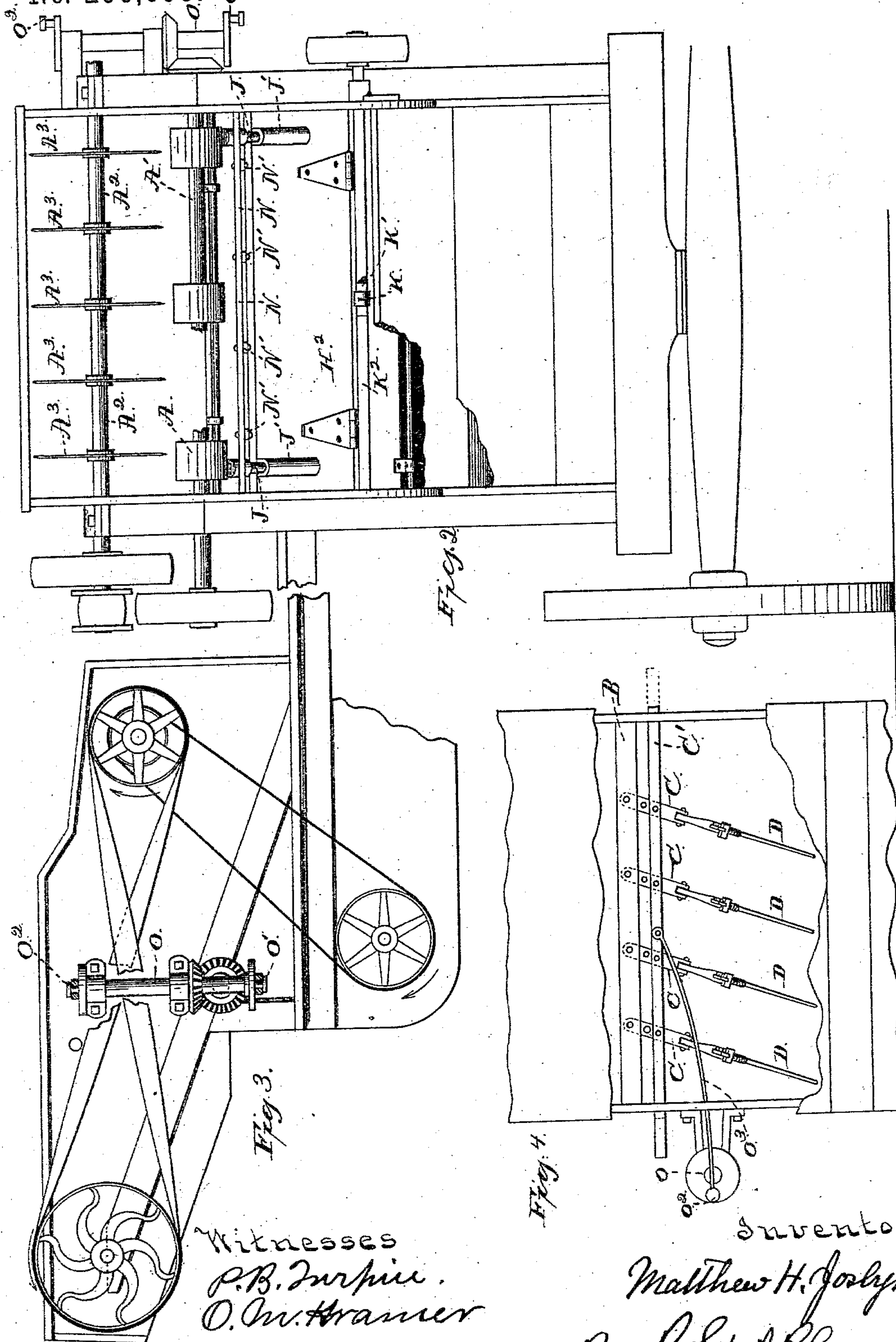
(No Model.)

2 Sheets—Sheet 2.

M. H. JOSLYN.  
BAND CUTTER AND FEEDER.

No. 296,695.

Patented Apr. 8, 1884.



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# UNITED STATES PATENT OFFICE.

MATTHEW H. JOSLYN, OF ROCHESTER, NEW YORK, ASSIGNOR TO MYRON L. JOSLYN, OF SAME PLACE.

## BAND CUTTER AND FEEDER.

SPECIFICATION forming part of Letters Patent No. 296,695, dated April 8, 1884.

Application filed December 22, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, MATTHEW H. JOSLYN, a citizen of the United States, residing at Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Band Cutters and Feeders; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in band cutters and feeders for thrashing-machines.

It consists in the combination, with the cylinder and suitable feeding devices, of a grain-casting platform made in sections, with its upper and lower sides hinged to the framing, and its middle portion movable to and from the cylinder.

It consists, further, in the combination, with the cylinder and the grain-casting platform, of the returning-belt arranged above the cylinder, and adapted for use substantially as hereinafter specified.

It consists, further, in the combination, with the feeding-belt, of the separating-fingers and means, substantially as hereinafter described, whereby said fingers may be adjusted to and from the feeding-belt.

It consists, further, in other improvements, all of which will be hereinafter described and claimed.

In the drawings, Figure 1 is a side view of the forward portion of a thrashing-machine, the casing being partly broken away in order to better illustrate the interior construction. Fig. 2 is a front elevation of the machine. Fig. 3 is an elevation of the forward portion of the machine on the side opposite that shown in Fig. 1. Fig. 4 is a detached view from overhead, indicated by arrow *x* in Fig. 1. Fig. 5 is an enlarged detail view, illustrating one of the spreading-fingers, all of which will be described.

The casing is of ordinary construction. In the upper forward end of the casing I arrange the feed-belt A, journaled on shafts A' A'.

This belt is arranged in a horizontal plane, and its outer end is projected beyond the casing in position to receive the straw as it is fed into the machine. A shaft, A<sup>2</sup>, is journaled above the feed-belt about midway of its ends, and is provided with a series of band-cutting disks, A<sup>3</sup>. A bar, B, is secured in the casing above and slightly in advance of the inner end of belt A. To this bar I pivot the arms C, which are connected together by a rod, C', which is pivotally secured to each of arms C about midway of their lengths, as most clearly shown in Fig. 4. Fingers D are pivoted at their upper ends to the arms C, and their opposite ends are curved, as shown, and extended down in position to engage the grain and spread the latter as it is delivered from the inner end of the belt A. A slot, D', is formed in one side of the fingers D. This slot is formed square at one end, and its other end is provided on its outer edge with an ear, D<sup>2</sup>, which forms a notch, D<sup>3</sup>, in the end of the slot. The portion of the finger in front of the slot is threaded, as shown at E. A collar, E', is placed on the finger next slot D', and is provided with a lug, E<sup>2</sup>, projected forward over the slot D and opposite ear D<sup>2</sup>. A nut, F, turns on threaded portion E of the finger and up against collar E', as shown.

A segmental bar, G, is secured to the rocking arms C, and is curved on an arc struck from the pivot of parts C D. The outer end of this bar G is passed through slot D', and is held therein by ear D<sup>2</sup> and lug E. By loosening nut F, it will be seen, the fingers can be set to and from the delivery end of the feed-belt. I make these fingers adjustable, as described, in order that they may be adapted to properly scatter lighter or heavier straw. When the straw is very dry and the grain-heads light, a very slight blow on the upper portions thereof after the band is cut will suffice to properly spread the bundle over the belt. In thrashing such grain I set the fingers high, so they will only give the light stroke required. On the other hand, when the bundle is heavy, either from the weight of the grain or from dampness of the straw under the band, or when the bundle is more closely compacted than usual and does not readily separate, the fingers are set so they will extend closer to the carrier and



farther in the grain. The number of these upper spreader-fingers, it will be understood, can be varied at the will of the operator. It is obvious that the finger may be secured at any desired point of adjustment by means different from those described. For instance, instead of the sleeve and nut, a set-screw might be arranged to turn through the fingers and bear against the segment, so that the finger may be clamped at any point thereon.

The grain-casting platform H is composed of boards or sections H<sup>1</sup> H<sup>2</sup> H<sup>3</sup>, and is hinged at its upper and lower ends, I I', to the framing. The lower and middle sections are hinged together, and the upper and middle sections are connected by rod J and sleeve J'. The rod J is secured to the rear side of section H<sup>1</sup>, and extends into sleeve J', which is secured on the rear side of section H<sup>2</sup>, as most clearly shown in Figs. 1 and 2. This permits the vertical movement of the said sections along each other, and yet prevents their detachment and retains them at all times in parallel planes and close together, whether in the position shown in full lines or in that indicated in dotted lines, Fig. 1. In order to give this platform H the desired motion, I employ the pitman K, secured at one end to the upper edge of section H, and extended forward, with its other end journaled on a crank, K', formed on a shaft, K<sup>2</sup>, journaled in the framing. As this shaft is revolved the pitman K is given a reciprocating motion, causing the platform to be thrown forward and back, as indicated in Fig. 1.

The thrashing-cylinder L is arranged in front of the lower end of the platform H. A returning-belt, M, is supported on rollers M' above and slightly in advance of the cylinder. The upper end of this belt is inclined forward, as shown.

A bar, N, is secured under the inner end of the feed-belt and in front of the upper end of the platform H. Fingers N' are pivoted at one end to the bar N, and extended horizontally through slots formed in the platform H. For convenience of reference, I term these fingers the "lower spreader-fingers," and the fingers D the "upper spreader-fingers." The fingers N' are connected by a bar, N<sup>2</sup>, which is connected by a suitable pitman with a crank, O', formed on the lower end of a shaft, O. The upper end of this shaft is provided with a crank-pin, O<sup>2</sup>, on which I secure the pitman O<sup>3</sup>, which operates the rod C'. Thus as the shaft O is revolved the upper and lower fingers are simultaneously operated. I have clearly shown the connecting-belts, pulleys, &c., whereby the several parts of my machine are driven. These do not form a part of my invention, and I have not thought it necessary to describe them in detail. It is obvious they may be varied in numerous ways without departing from the principles of my invention.

It is obvious that many modifications may be made in the form, &c., of some of the parts—such, for instance, as platform H—without departing from the principles of my invention.

In this platform it is desirable to throw it forward at its middle portion, so that the grain will be thrown up toward the belt M. It will be appreciated that this may be effected by arranging the upper or lower end of the platform so they may slide vertically in guides, instead of using sleeve J' and rod J, as before described, though I prefer this latter construction, as thereby a simple, easy connection is formed, and one which will not, under any ordinary circumstances, become clogged in the operation of the machine.

In operation the bundles of grain are placed on the feed-belt, and carried thereby past the disks A<sup>3</sup>, which cut the bands, and the grain is delivered over the inner end of the feed-belt, at which point it is caught and separated by the upper spreaders. It then falls vertically onto the platform H, being further separated in its passage by the lower spreaders.

The platform H is pivoted or hinged at both upper and lower ends, and is forced inward at the middle. This throws the grain on the said platform up against the belt M. It is caught by the belt M and returned downward, as will be readily understood. This prevents the straw from becoming massed in the corner of the casing occupied by belt M, and facilitates the return thereof to the cylinder. By the construction described the grain is thoroughly agitated and separated before it passes into the cylinder.

I do not desire to be limited to the particular means shown for operating the grain-casting platform, nor to that for operating the spreader-fingers, as various modifications or changes might be effected therein without departing from the principles of my invention.

It will be seen that, instead of hinging the platform at both ends and making it in section, it may be hinged at its upper end alone and operated at its lower end, so as to throw the grain upward. Such construction would avoid the necessity of making the platform in sections, and would effect the upward throw of the grain and prevent the straw from getting back of the upper end of the platform. I, however, prefer the construction shown and before described. In operation it will be seen that long grain passing over the feed-belt will be engaged by the return-belt M, and depressed at its ends to the cylinder. In this case good results will be had without the use of a grain-casting platform, though such platform is preferred, for the reasons before stated.

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

1. The combination, substantially as set forth, of the cylinder, the grain-casting platform, hinged at its upper edge, and movable as described, and a suitable grain-feeding device arranged in position to deliver grain onto the casting-platform, substantially as and for the purposes set forth.

2. The combination, substantially as herein described, of a grain-feeding mechanism, a



thrashing-cylinder, and a sectional grain-casting platform arranged in front of the cylinder, said platform being hinged at its upper and lower sides and movable at its middle portion, 5 as and for the purposes specified.

3. In a thrashing-machine, the grain-casting platform, substantially as herein described, composed of the section H', hinged at its upper end to the framing-rods J, the section H<sup>3</sup>, 10 hinged at its lower end, the section H<sup>2</sup>, hinged to section H<sup>3</sup>, and sleeves J', fitting on rods J, all arranged and adapted to operate substantially as and for the purpose set forth.

4. The combination, with the thrashing-cylinder, the feed mechanism elevated above the cylinder, and having its delivery end arranged in advance thereof, and the returning-belt, arranged in front of the delivery end of the feed mechanism and approximately vertically over 20 the receiving side of the cylinder, substantially as set forth.

5. The combination, substantially as set forth, of the cylinder, the feed mechanism, the grain-casting platform, and the returning-belt, 25 all arranged and adapted for use substantially as specified.

6. The combination, with the cylinder and the grain-casting platform, of lower spreader-fingers having their points extended in front 30 of the platform, between the latter and the cylinder, and means whereby said fingers are operated or oscillated in an approximately-horizontal plane, and in a line at right angles

to the line of motion of the platform, substantially as set forth.

7. The combination, with the feed-belt, of a series of pivoted spreader-fingers arranged above the delivery end of the feed-belt, means whereby these fingers are oscillated in a plane at right angles to that of the feed-belt, and 35 means whereby said fingers are adjusted and held at any suitable point to and from the feed-belt, substantially as set forth.

8. The combination, with the bar C, pivotally supported at one end, and the finger D, 40 pivoted to the opposite end of the bar C, of the segment G, secured at one end to the bar C and lapped at its other end alongside fingers D, and means, substantially as described, whereby said finger may be clamped to said segment 50 at any point of adjustment along the same, substantially as set forth.

9. The combination of the feed-belt, the series of upper spreader-fingers, arranged above the inner end of said belt, the grain-casting 55 platform, the pivoted lower spreader-fingers, arranged to vibrate in approximately a horizontal plane, the cylinder, and the grain-returning belt arranged above the cylinder, all substantially as and for the purposes specified. 60

In testimony whereof I affix my signature in presence of two witnesses.

MATTHEW H. JOSLYN.

Witnesses:

P. B. TURPIN,

O. M. KRAMER.