

I. H. GREEN.

BAND-CUTTING FEEDERS FOR THRASHING-MACHINES.

No. 191,335.

Patented May 29, 1877.

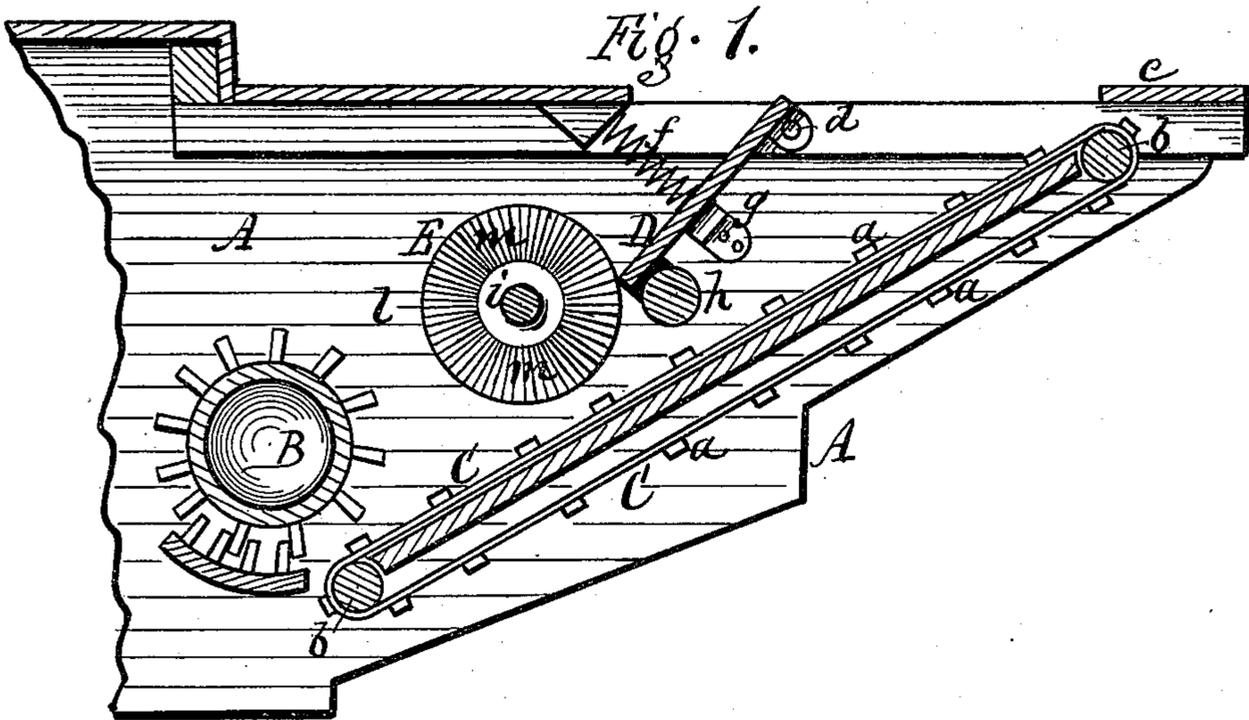


Fig. 2.

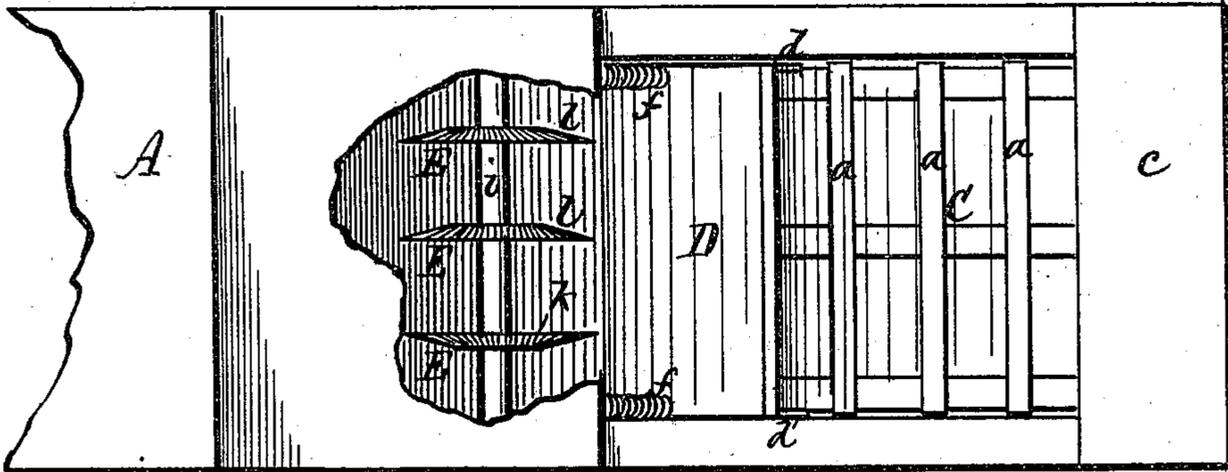
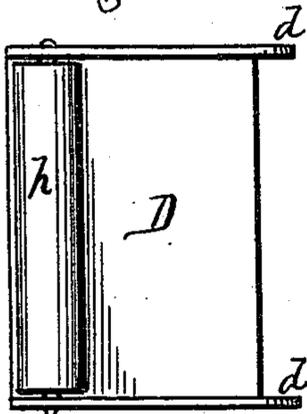


Fig. 3.



Attest.
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UNITED STATES PATENT OFFICE.

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IMPROVEMENT IN BAND-CUTTING FEEDERS FOR THRASHING-MACHINES.

Specification forming part of Letters Patent No. 191,335, dated May 29, 1877; application filed February 3, 1877.

To all whom it may concern:

Be it known that I, IRA H. GREEN, of Canandaigua, in the county of Ontario and State of New York, have invented a certain new and useful Improvement in Thrashing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of my improvement. Fig. 2 is a plan of the same. Fig. 3 is a bottom view of the presser.

My improvement relates to the feeding end of the thrashing-machine.

The invention consists of an apparatus for feeding in the bundle, pressing it down into place, and cutting the bands, as hereinafter more fully described and definitely claimed.

A represents the frame or casing at the feeding end of the machine, which is of ordinary construction. B is the thrashing-cylinder. C is an endless apron, having slats *a a* thereon, which passes around rollers *b b*. This apron stands in the inclined position shown, the upper or outer end resting directly under the grain-table *c*, while the lower end extends to the thrashing-cylinder, and in line with the throat between the same and the concave. The bundles of grain fed onto this apron are carried down bodily by the movement of the endless apron to the cylinder, and entered directly between the cylinder and the concave. D is the presser. It consists of a board hung on pivots *d d*, and resting angularly over the inclined apron, leaving an open space at its lower end, beneath which the bundles pass in being fed to the cylinder. It is held down to its work by one or more springs, *f*, and is prevented from closing too far by stops *g g*. It has, preferably, at its lower end, a roller, *h*, to obviate friction and the consequent clogging of the grain; but this roller may be dispensed with, if desired. E E E are a series of circular cutters, mounted on a shaft, *i*, and receiving a rapid rotary motion. They are mounted back of the cylinder, but in front of the presser. Each of these cutters is in the form of a very thin frustum of a cone, having a flat or square surface, *k*, on one side, and an angular rim, *l*, on the opposite side, the

latter being cut with lines or ridges *m*, which produce a sickle-edge to the cutter. The angle is so acute as to always leave a sharp edge.

The operation is as follows: The bundles of grain are laid upon the table *c*, and passed endwise down into the machine without being cut or untied. They are carried down by the endless apron C, and passing beneath the elastic presser D they are compressed and held firmly just behind the cutters E E E. These cutters, revolving rapidly enter lengthwise between the straws of the bundle, and cut crosswise of the band, severing the same instantly, and leaving the whole bundle free and loose to be passed between the cylinder and concave. By this means the great labor and trouble of cutting the bands by hand before the bundles enter the machine are obviated, and the work is greatly facilitated. The endless apron C carries the bundles down bodily, preventing friction, and obviating the necessity of the attendant pushing them down.

The presser D is important, to seize and hold the bundles firmly while the bands are being cut. Its position is essential, for it must be located just behind, and near to, the cutters, so as to hold firmly near the band while the cutting is being performed; otherwise the looseness of the bundle would interfere with the cutting.

The sickle-teeth of the cutters cause them to take hold of the band without danger of pushing it away, as they might do if smooth-edged. The wide edge, produced by the bevel of the cutters, spreads the band after it is cut, thereby having a tendency to throw it apart, so that it will not interfere with the proper spreading of the grain as it enters the throat of the cylinder.

Another special advantage of the bevel of the cutters is that the cutters can be ground on the flat side upon a grindstone, thereby keeping the cutting-edge always sharp without affecting the sickle-teeth.

This machine is adapted to thrashing clover by simply removing the cutters. It is also well adapted to feeding loose grain, or that which is not bound in bundles, the endless apron carrying it down to the work, and preventing clogging.

Having thus described my invention, what I claim herein as new is—

1. In a thrashing-machine, the combination of the endless apron C, the spring-presser D, and the cutters E E E, the presser standing directly in the rear of the cutters to hold the bundles while the bands are being cut, as shown and described, and for the purpose specified.

2. The combination, with the circular cutters E E E, of the spring-presser D, pivoted at *d d* at the upper end, standing in an in-

clined position, with its lower edge resting closely to the cutters, and serving to compress the bundle close to the cutters, to enable the latter to cut the band, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

IRA H. GREEN.

Witnesses:

FRED C. HAWLEY,
MATTHEW H. JOSLYN.