

No. 47128.

Patented. April 4, 1865

A diagram showing a beam of light entering a prism from the left. The beam is represented by two parallel lines labeled 'a' and 'b'. It passes through the prism and is focused by a lens (labeled 'B') onto a point 'c' on a screen. The distance from the lens to the screen is labeled 'h'. The distance from the prism to the lens is labeled 'g'. The distance from the prism to the screen is labeled 'a'. The distance from the lens to the point of focus is labeled 'b'. The diagram is labeled 'A'.

Fig. 3.

A perspective view of a mechanical device, possibly a pump or engine component. The device features a curved, ribbed surface on the left, a horizontal base, and a sloped upper section. Various parts are labeled with letters: 'B' is on the base; 'c' and 'a' are on the sloped surface; 'g' is near the curved surface; 'h' is on the upper sloped surface; 'i', 'j', and 'k' are near the base; and 'l' is at the far right end. The word 'Man' is partially visible on the right side.

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IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 47,128, dated April 4, 1865.

To all whom it may concern:

Be it known that I, AMOS RANK, of Salem, Columbiana county, State of Ohio, have invented a new and useful Improvement in Harvesters; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a plan view of my improvement in harvesters. Fig. 2 is a vertical longitudinal section of the platform in a position for receiving the cut grain. Fig. 3 is a similar view of the platform in a position for discharging the cut grain.

Similar letters of reference indicate corresponding parts in the several figures.

My invention and improvement in harvesters relate to the dropping of the cut grain from the platform in such manner that rakes, or other similar contrivances which have hitherto been used for this purpose, are dispensed with, and in their stead a vibrating slotted platform is employed the rear end of which rises to receive the cut grain and falls to allow of the discharge of the same.

The object of my invention is to so apply a guard or cut-off to a vibrating self-discharging platform of the above description that, while this guard acts as a dividing-bar and prevents the grain from falling on the platform during the discharge of the gavel therefrom, it will serve as a counter-weight and assist in raising the rear end of the platform to its proper position to receive the grain, and it will also assist, during its rising movement, to discharge the grain from the platform, all as will be hereinafter described.

To enable others skilled in the art to make and use my invention, I will describe its construction and operation.

In the accompanying drawings, A A represent the inner and outer dividing-boards, which should extend above the platform a sufficient distance to prevent the grain, as it is cut and falls back on the platform, from escaping at the sides of the machine.

B represents the finger-beam, which need not differ in any respect from those commonly employed in harvesting-machines.

C is a beam, which is suitably pivoted at its ends to the side boards, A A, just behind the finger-beam, and which has a number of slats,

a a a, secured to it at regular intervals apart, and extending back longitudinally a suitable distance to form a platform or apron for receiving the grain as it is cut. These slats a may be made tapering from their forward to their rear ends; or they may be made straight, and their edges arranged parallel to each other. The spaces between the slots a a should be of such width as will allow the stubble to project up and serve as a means for dragging the grain from the platform when this latter is in the depressed position shown in Fig. 3, and while this is the case the slats should be made of such stiffness as not to sag when the weight of grain is upon them, yet so thin as to allow the stubble to take a good hold on the gavel when they are dropped down. The rear end of this pivoted platform is raised and depressed by means of a lever, D, applied to the rocking-beam C, and suitably arranged so as to be under the control of the person attending the machine.

To a platform or apron which is constructed and arranged substantially as above described, I apply a guard or cut-off for the purpose of preventing the grain from falling on the apron while the gavel is being dropped. This guard consists of a bar, g, extending across the forward part of the platform, and secured in a plane parallel to the finger-beam to two vibrating arms, h h, which extend back and are pivoted at i i to the dividing-boards A A. These arms or levers project out in rear of the pivots i i, and pass loosely through staples c c or their equivalents, that are affixed to the rear ends of two of the slats a a, as shown in Figs. 1, 2, and 3. By thus pivoting the arms, which carry the guard g, at an intermediate point between the ends of the platform, this latter is made to serve as a means for giving a positive upward and downward movement to said guard, so that when the rear end of the platform is elevated to receive the cut grain the guard is thrown down closely upon the finger-beam, out of the way of the falling grain, and when the rear end of the platform is dropped to discharge its gavel the guard g will be thrown up to the position shown in Fig. 3, in which position it will serve as a cut-off and a support for the cut grain until the gavel is discharged and the platform brought back to a position for receiving this cut grain. The arms h h also serve as levers, and the guard-

rod *g* as a counter-weight, to assist in balancing the platform, and thus relieving the attendant of much labor in elevating it. While this is the case, the arrangement of the guard-levers and guard is such that the latter will have a tendency to press the grain backward, and thus assist its discharge from the platform during the descent of the latter.

In Fig. 1, I have represented an arm, *b*, projecting outward from each end of the guard *g*. The object of these arms is to prevent the cut grain from falling off at these points when the gavel is being deposited upon the ground. It is not intended that the guard *g* shall rise so high above the cutting apparatus as to endanger the tangling of the grain, nor to cause it to thrust the grain forward as it drops down.

In Figs. 1 and 2, I have shown two eyes, formed on the guard-levers *h h*. The object of two eyes on each lever is to enable me to increase the length of the forward portions of said arms, for the purpose of adapting the guard to operate as well in tall as in short grain. Other equivalent means may be em-

ployed for lengthening or shortening the said levers at pleasure without destroying the connection at their rear ends with the platform.

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

1. The combination of a hinged platform with a guard, *g*, and guard-levers *h h*, when the rear ends of said levers are attached by a sliding connection to the platform, substantially as described.

2. The connecting of the bail or guard *g* at a fixed point to the divider-boards of a platform in such manner that while the bail is always connected to the platform the bearing-point *i* of the bail always remains the same, substantially as herein described.

3. The arms *b b*, applied at the ends of the guard *g*, substantially as described.

AMOS RANK.

Witnesses:

PETER AMBLER,
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