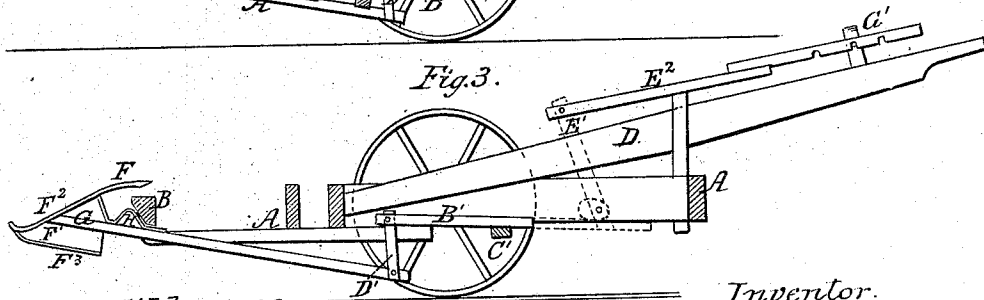
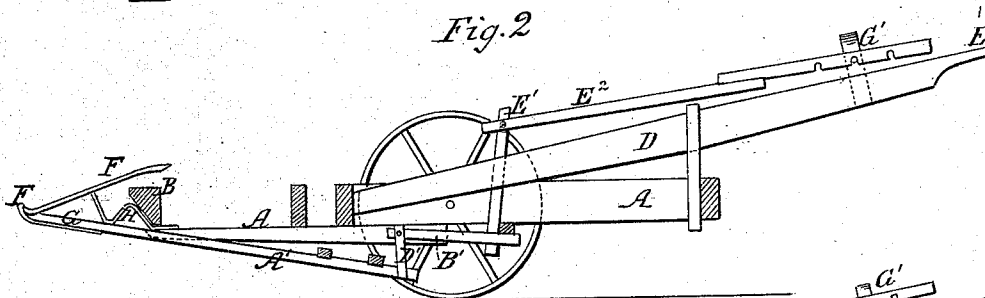
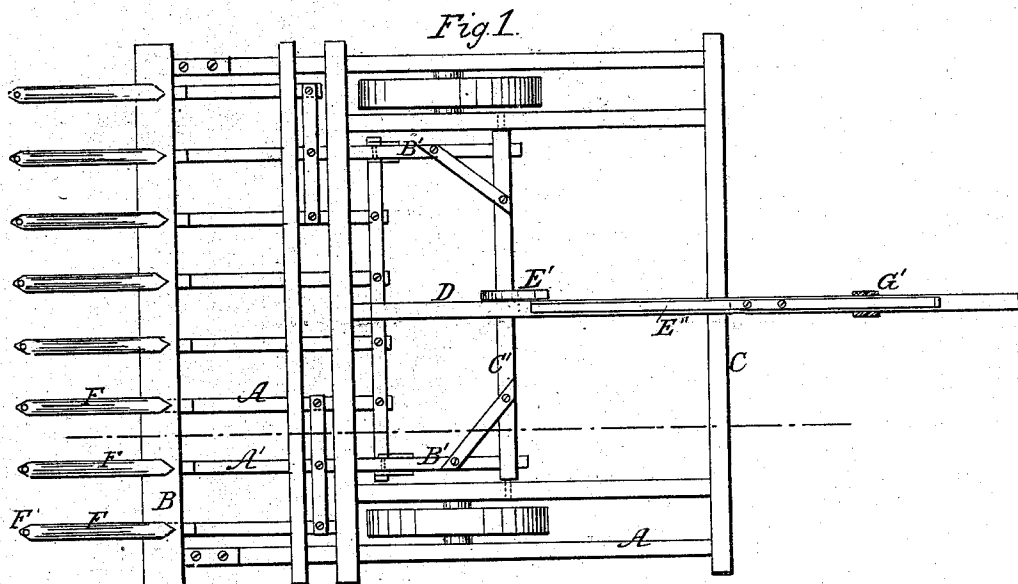


W. M. JACKSON.
Grain Lifter and Harvester.

No. 104,460.

Patented June 21, 1870.



Witnesses.

Chas. Nida
Jno. F. Brooks

Inventor.

W. M. Jackson
per Wm. C. Atty.

UNITED STATES PATENT OFFICE.

WILLIAM M. JACKSON, OF WOODLAND, CALIFORNIA.

IMPROVEMENT IN GRAIN-LIFTER FOR HARVESTERS.

Specification forming part of Letters Patent No. 104,460, dated June 21, 1870.

To all whom it may concern:

Be it known that I, WILLIAM M. JACKSON, of Woodland, in the county of Yolo and State of California, have invented a new and useful Improvement in Grain-Lifters; 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 make and use the same, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to improvements in grain lifting or elevating attachments to heading and reaping machines, for straightening the lodged grain in advance of the cutters; and consists in an improved arrangement of means for elevating or depressing the lifting or elevating fingers or shoes moving in advance of the cutters when applied to the heading-machines.

Figure 1 represents a plan view of the frame and supporting-wheels of a heading-machine with my improved arrangement of elevating attachment. Fig. 2 represents a sectional elevation of the same; and Fig. 3 represents a sectional elevation also, showing a modified arrangement of the devices for elevating and depressing the lifting or elevating attachment.

Similar letters of reference indicate corresponding parts.

A represents the frame of a grain-heading machine such as is now in common use, the cutters of which work in advance of the beam B in a way similar to the cutters of reaping-machines. These machines are arranged to be drawn in front of the horses by means of tongues projecting rearward from the beam C in a suitable and well-known way, the said tongues being hinged to the bar C.

The frames are provided with rigid bars D, which are arranged to act, at the ends E, in conjunction with adjusting-posts rising up from the tongue, so that, by changing the connection of the lever with the said adjusting-posts, the front or cutter-supporting side of the frame may be elevated or depressed, as is required by the nature of the work in hand.

F represents the grain-elevating fingers, mounted on extensions G of the stocks A', pivoted or hinged to the cutter-bar-supporting beam B at H, so as to oscillate thereon in vertical planes.

These devices are arranged, in any suitable

numbers, to project in advance of the cutter-bar, for elevating the grain according to the plan described in the patent granted to me on the 11th day of June, 1867, and numbered 65,750, wherein the said elevating devices are not only represented as adapted for being hinged to the cutter-supporting bar, but they are represented as of elastic construction, so as to yield more readily in case the front of the machine is depressed so far as to bring the shoes in contact with the ground, which often occurs from various causes.

In the said patent above referred to the stocks or extensions A', which extend rearward beyond the bar B and are united together in sections of three or more by lateral braces, are represented as having spiral springs connected to them and to some part of the machine above, so as to press down upon the rear ends of the stocks to hold the shoes off the ground or to relieve their pressure thereon by a yielding connection.

This improvement is distinguished from that in the substitution for these springs of springing arms B', projecting from a transverse shaft, C', connected to the said rear ends, or to the bar uniting them, by the links D'; also, a vertical arm, E¹, and an adjusting-bar, E², connected thereto, and extending rearward to the position where the attendant rides, to enable him, by moving the said bar back and forth, to adjust the fingers F and shoes G up or down by swinging them on their hinged connections with the bar B, as required, while at the same time the elastic nature of the arms B' and the shaft C', which I propose to make of tough springing wood, affords the same facility to the stocks A' of the shoes to yield when the bar is connected at G' in any position for holding the fingers higher or lower that is afforded by the aforesaid arrangement of spring-connections.

The said bar E² is notched near the end for connection on a pin or bolt at G' to hold the fingers in any required position.

I do not desire to limit myself to the precise arrangement of the shaft C', arms, and links for adjusting the said rear ends of the stocks, for other arrangements may be made to accomplish the same with good results. For instance, the bars B' may be extended rearward beyond the shaft C', and under tappets

K on another shaft running transversely of the frame, to which the bar E² may be similarly connected, so that when it is moved to turn the shaft the tappets will force the arms B' down, raising the rear ends of the stocks A' and throwing the shoes down. In this case the raising of the shoes will be effected, when the tappets are turned up, by the preponderance of the weight of the rear ends of the stocks.

In another variation of these devices the arms B' may be extended near to the rear of the frame, without the shaft C, and be pivoted to the frame at the said rear end, and the tappets K may be placed under them, so as to raise the said arms when turned upward, throwing down the shoes, the greater weight of the extensions A' and that of the arms B' between the joints H and the tappets being relied on to raise the shoes.

In both these latter cases the arms B' will be much longer than in the arrangement shown in Figs. 1 and 2, and they may therefore have greater elasticity.

In the construction of the shoes, I substitute for the yielding iron bar connected to the fingers E and to the stocks A', behind the hinge joint, an extension of the said stocks and permanent connection of the same with the fingers F, either at the lower ends of the fingers, at F¹, as shown in Fig. 2, or above the lower ends, at F², as shown in Fig. 3, and in

the latter case the introduction of the blocks F⁴ between the said extensions and the straps F³ extending rearward from the points of the fingers F.

I am enabled to make this rigid connection of the stocks with the fingers by reason of the adjustable arrangement above described for the rear ends of the stocks, whereby the operator is enabled to control the said shoes, so that it is not needed that they be yielding, and, by reason of the said rigid connections, they are more simple of construction and more durable.

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

1. The arms B', transverse shaft C', and links D', in combination with vertical arm E¹ and graduating-bar E², all adjusted together as set forth, to operate fingers F and shoes G, in the manner described.

2. The combination, with stocks A' and unyielding fingers F, of elastic arms B', as and for the purpose specified.

The above specification of my invention signed by me this 13th day of September, 1869.

WM. M. JACKSON.

Witnesses:

GEO. W. MABEE,

ALEX. F. ROBERTS.