

(No Model.)

2 Sheets—Sheet 1.

J. E. DEERING.
HARVESTER.

No. 473,300.

Patented Apr. 19, 1892.

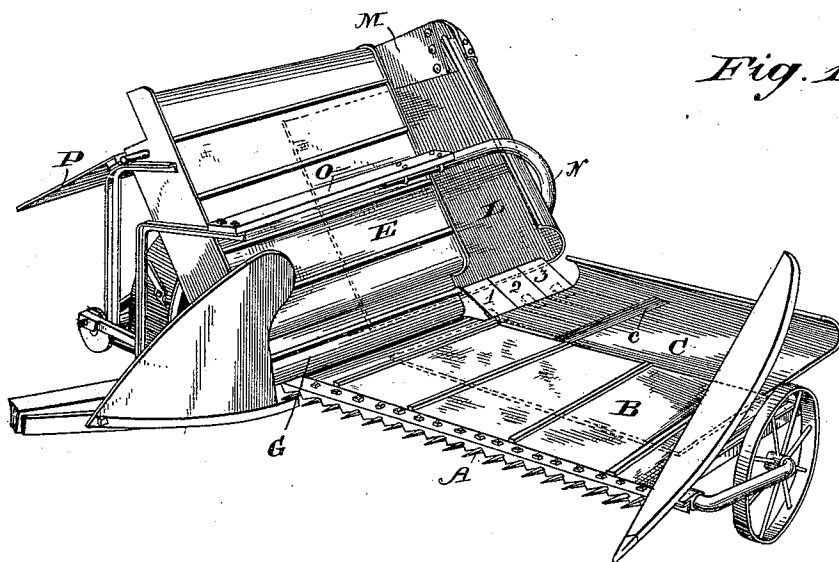
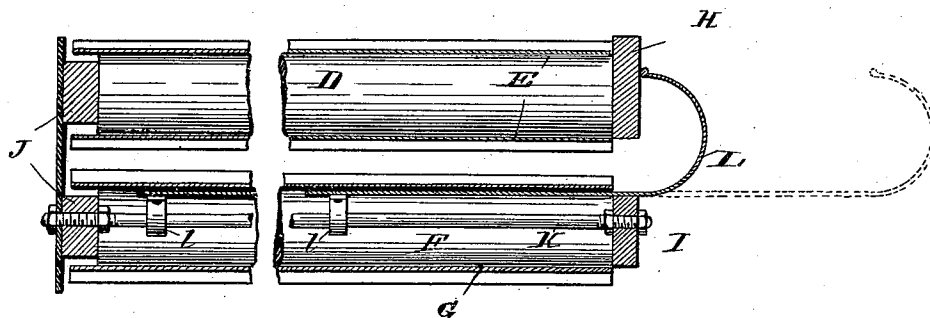


Fig. 1.

Fig. 2.



Witnesses
Arthur Johnson.
Elie M. Halverson

Inventor:
James E. Deering
By P. F. Steward
His Atty.

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Fig. 3.

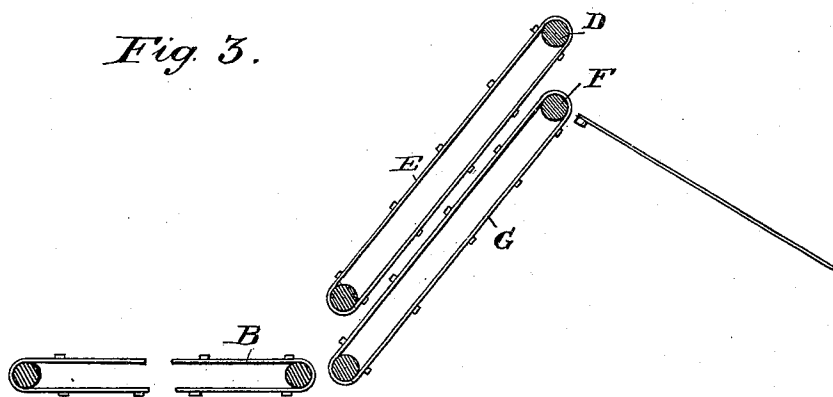
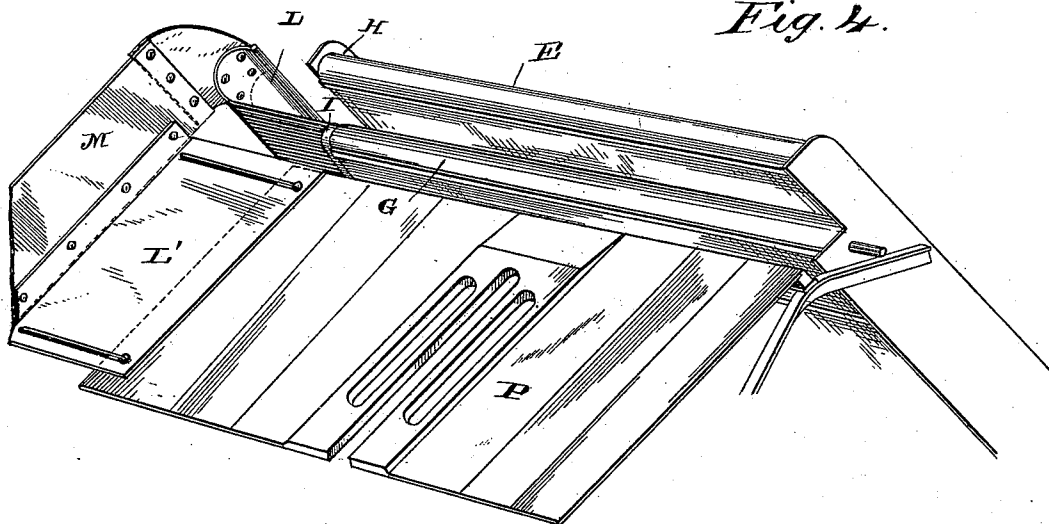


Fig. 4.



Witnesses

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Elise M. Halverson.

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UNITED STATES PATENT OFFICE.

JAMES E. DEERING, OF CHICAGO, ILLINOIS.

HARVESTER.

SPECIFICATION forming part of Letters Patent No. 473,300, dated April 19, 1892.

Application filed January 13, 1892. Serial No. 417,951. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. DEERING, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Grain-Harvesters, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view, and Fig. 2 a sectional end view, of the grain-conveying devices. Fig. 3 is a diagram illustrating the positions of the endless canvases which form the conveying and elevating devices. Fig. 4 is a perspective view showing the binder-table and the position of the adjustable head-board.

Grain-harvesters have heretofore been so constructed as to permit long grain to extend rearward beyond the conveying devices. In other words, the elevating devices have been made open rearwardly, so that rye or other long grain might be handled even in a machine having comparatively narrow elevators. Rearwardly-extending supports have been used, along which and up which projecting heads of the straws forming the swath might rest; but a serious objection has been encountered—namely, the tendency of the straw to work backward while moving along the platform conveyer and while being carried up the elevator. Although the main portion of the length of the straws in such cases have been compressed between the elevating-canvases, it is found that the tendency of the swath is to free itself by working backward. This difficulty I have often found so great in "open-end elevator machines" that a large portion of the grain "worked" backward so far as to escape the binding device.

My conveying and elevating devices consist of the usual three endless canvases shown in Fig. 3.

A is the cutting apparatus, and B is the endless conveying-canvas immediately therebehind.

C is an extension adapted to slide upon suitable guides between the upper and lower members of the conveying-canvas B. The construction of its guides will be understood

when I say that it is the same as that for supporting the elevator-extension, which will now be described.

In Fig. 2 I have shown a section of the elevator, in which section D is the uppermost roller, around which the elevator-apron E is moved, and F a roller around which the endless conveyer G is thrown. These rollers are supported in suitable end pieces H, I, and J. Extending from the support J to the support I is the rod K. L is a plate, preferably of metal, having the slides L' L', adapted to be guided upon the rod K. This rod is duplicated at the lower end of the lowermost elevator-canvas. Lying as these rods do between two portions of the canvas, the extension may be moved rearward to provide for the support of long grain and forward when necessity requires. The plate L is given an upward curve, so as to form, as shown in full lines in Fig. 2, a closed elevator—that is to say, one that shall absolutely confine the swath of grain and prevent it from working backward.

It will be observed that I not only adapt the plate to close the elevator, but by giving its upper part a forward curve prevent the heads of the straws from working forward, and hence from escaping the action of the part which forms the rear head-guide.

As there is a gap between the conveyers B and G, the conveyers L and C must be separated, and hence a gap made to exist between them. To bridge this gap, I apply the hinge-pieces 1, 2, and 3, and they may be thrown over to lie in the position shown by dotted lines and their edges rest behind the beveled cleat c on the extension C.

I provide the binder with a vertical head-board M, and to this I secure the extension L', and allow the binder-table P to move under it as the said binder is adjusted, as shown in Fig. 4.

The uppermost of the elevating devices is supported in the usual manner; but because of the parts H and I at the rear of the elevating-canvas being supported I provide a strong yoke N, properly secured to the lower portion of the harvester-frame and extending rearward, upward, and forward to the seat-

board O. This latter construction, however, I do not claim. The yoke N may be made adjustable, as shown and described in the patent to B. A. Kennedy, No. 434,021, of August 12, 1890.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, with the conveying devices, of the sliding head-supporting guide or guides, substantially as described.

2. In a harvesting-machine, the combination of the endless conveyer B and sliding head-supporting extension C, substantially as described.

3. In a harvesting-machine, the combination of the conveying device B and the rearwardly-extensible head-supporting guide C, having an upwardly-deflected portion, substantially as described.

4. In a harvesting-machine, the combination of the conveying device B and the rearwardly-extensible head-support C, having an upwardly and forwardly deflected portion adapted to form a head guide for the grain, substantially as described.

5. In a harvesting-machine, the combination of a conveying-canvas and the extensible head-supporting plate sliding in its adjustment between the parallel portions of the said endless conveyer, substantially as described.

6. In a harvesting-machine, the combina-

tion of the elevating device and sliding head-supporting plate, substantially as described.

7. In a harvesting-machine, the elevating devices, in combination with the extensible head-supporting plate L, having the upwardly-deflected head-guiding portion, substantially as described.

8. In a harvesting-machine, the combination, with the elevating device, of the extensible head-supporting plate L, having the upwardly and forwardly deflected head-guiding portion, substantially as described.

9. In a harvesting-machine, the combination of the conveying devices, the binder-table, the extensible head-supporting plate L, and the upturned head-guiding portion, and the head-guiding plate M, secured thereto and adjustable therewith, substantially as described.

10. In a harvesting-machine, the combination of the extensible head-support C and the extensible plate L, the said support and plate sliding between the parallel parts of the respective endless conveying-canvases, and a bridge-piece or bridge-pieces adapted to close the gap between said support C and plate L, substantially as described.

JAMES E. DEERING.

Witnesses:

ARTHUR JOHNSON,

ELISE M. HALVERSON.