

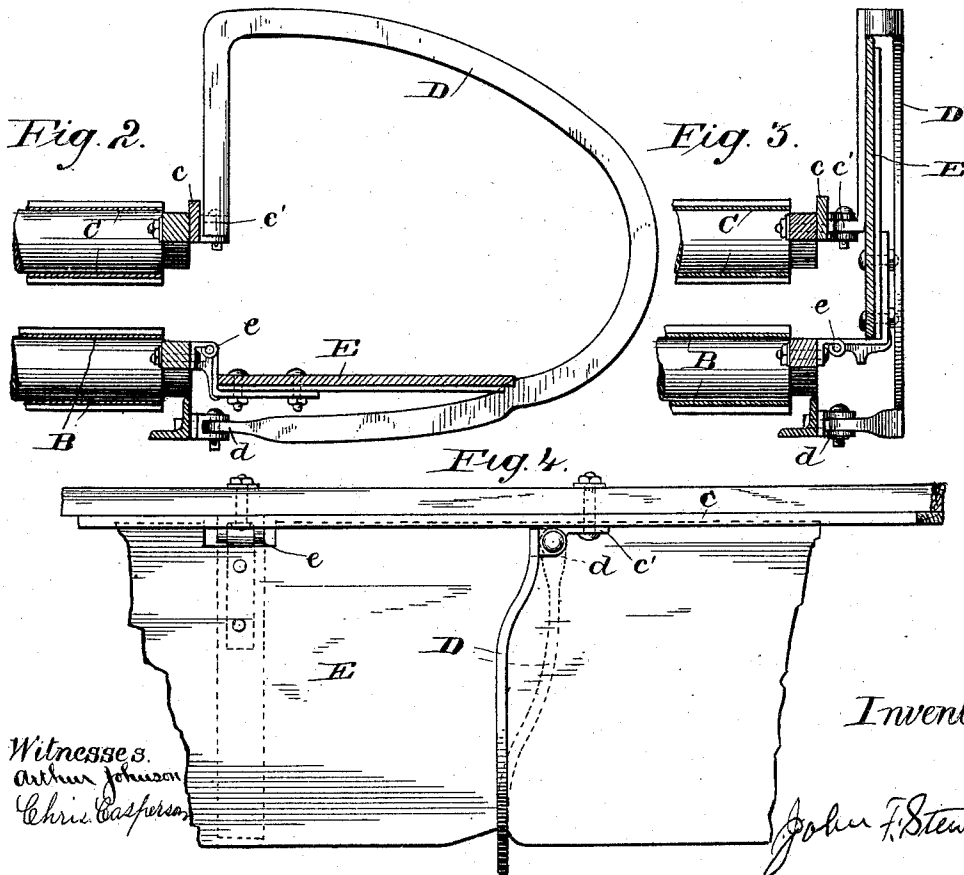
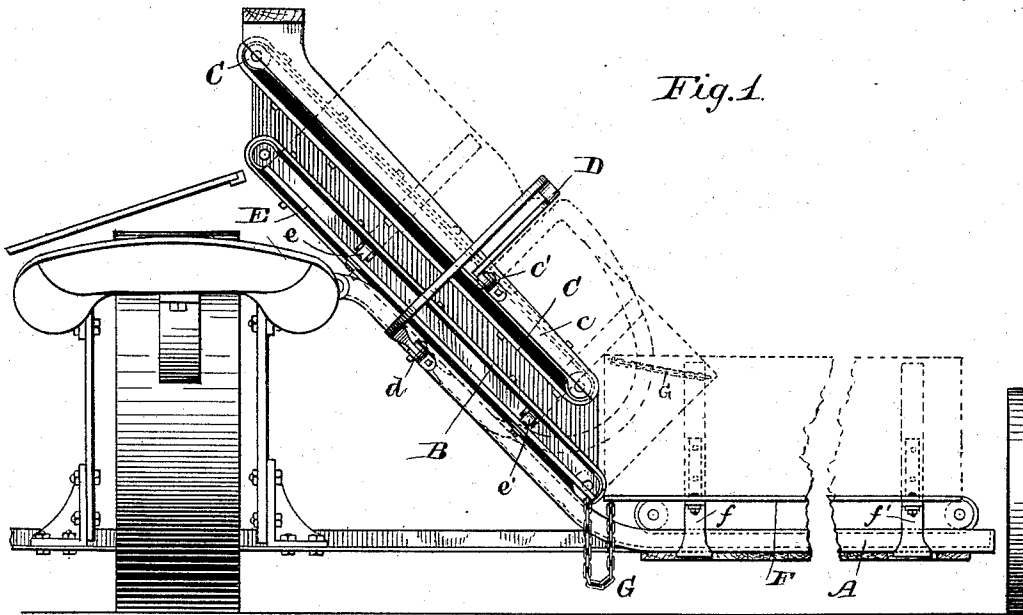
(No Model.)

2 Sheets—Sheet 1.

J. F. STEWARD.
HARVESTER.

No. 476,326.

Patented June 7, 1892.



Witnesses.
Arthur Johnson
Chris. Casperson

Inventor.

John F. Steward.

(No Model.)

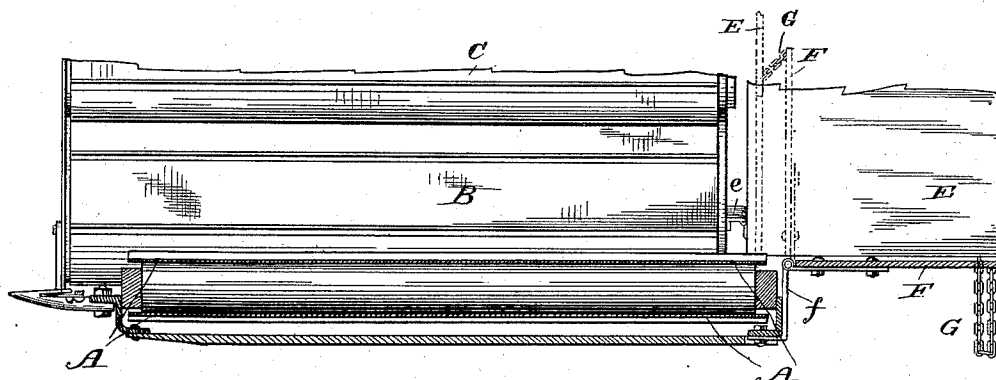
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Fig. 5.



Witnesses.

Arthur Johnson
Eli M. Robinson

Inventor.

John F. Steward

UNITED STATES PATENT OFFICE.

JOHN F. STEWARD, OF CHICAGO, ILLINOIS.

HARVESTER.

SPECIFICATION forming part of Letters Patent No. 476,326, dated June 7, 1892.

Application filed June 24, 1891. Serial No. 397,297. (No model.)

To all whom it may concern:

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

Figure 1 shows so much of my invention as is necessary to illustrate my invention. Figs. 2, 3, and 4 are details. Fig. 5 is a stubble-side view of the grain-platform and backboards in section, showing the said backboards prostrated to adapt the machine to handling long grain in full lines and folded upward in dotted lines.

My invention consists in so adapting the elevating device of a grain-harvester that the latter may be opened rearwardly to permit the handling of long grain or closed at will.

Some conditions of grain are found in which the straw works backward to such an extent as to escape reaching the binding mechanism in proper position if the elevator is left open, even though said grain be short, and it is to adapting a machine to handle long grain and still be competent to handle fluffy and crinkled grain that I have produced the device shown and claimed.

I have seen fit to exemplify my invention as adapted to a form of harvester-frame to which I have found it especially adaptable; but said frame and any parts shown not immediately connected with the devices claimed form no part of the present invention.

For my present purpose it is but necessary to refer to the conveying and elevating devices, assuming the latter to be located upon the harvesting-machine in the usual manner.

A is the platform endless conveyor, broken in order to shorten the figure. B is the lowermost elevating-canvas, and C the uppermost. All three of these endless conveyers are drawn over rollers suitably journaled in the main frame, and the parts forming the elevating devices as a whole are held in proper position by being connected at their front to the usual main frame-work. The upper one of the two elevating-canvases is to a certain extent an independent one, secured, as stated, in front and extending rearward, overhanging, as it were, the lower elevating-canvas and supported at its rear end by means of a yoke D, as

will be best understood by referring to Fig. 2, whereupon the bar or other suitable portion of the main frame is the hinge-piece *d*. Upon the rearmost bar *c* of the upper elevator-frame is the hinge-piece *c'*. To these hinge-pieces the yoke D is jointed, the latter being shaped substantially as shown in Fig. 2.

I make my elevating-canvases somewhat narrower than usual, yet sufficiently wide to handle even the longest grain, forty inches being a suitable width, but extend the yoke D rearward to any suitable distance—say from fifteen to twenty inches.

In order to give sufficient width for the grain to lie on while passing up the elevator, I provide the board E and connect it by means of the hinges *e* and *e'* to the main frame substantially parallel with the upper surface of the lower elevating-canvas. In long grain the board may be turned down, as shown in Figs. 2 and 4, and in short grain folded upward, as shown in Fig. 3.

My object in hinging the yoke D is to adapt it to be folded close to the machine when it is not necessary to have it extend rearward. The yoke is placed so near the seat of the driver that the latter may swing it upward, so as to lie nearly parallel with the hinged extension-board. If swung downward, its weight will be sufficient to hold the board upright. I notch the board, as shown in Fig. 4, so that a part of the yoke will rest in the notch and the latter prevent said yoke from swinging downward. Should the driver raise the board slightly, however, the notch is lifted away and the yoke will at once swing downwardly and the board close simultaneously. It is also desirable to fold the backboard F of the receiving-platform, and for that purpose I provide the hinges *f* and *f'*. In order that it may be controllable from the driver's seat, I connect it to the extension-board of the elevating devices, so that when the latter are moved the former will also be moved. This may be done in many ways; but I have chosen to illustrate the simplest and most efficient method known to me, which method consists in connecting the corners of the boards F and E, as shown in Fig. 1, by means of a chain G, reaching from the adjacent corners. It will be readily understood that if the board E be folded upward the chain will pull the board

F along with it, and with the chain made of such length as to be pulled straight when the two boards are vertical the board F will be held in place by means of the chain. If, however, the board F be folded first, then the board E will follow.

Any suitable latching mechanism may be used to hold the hinged yoke D in its extended position; but I prefer the latch consisting of a simple notch in the board, and shall consider any latching device the equivalent thereof as long as it serves the same purpose.

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

1. The combination of the rearwardly-open elevating devices and the pivoted yoke D, substantially as described.

2. The combination of the rearwardly-open elevating devices, the hinged board E, and the hinged yoke D, substantially as described.

3. The combination of the rearwardly-open elevating devices, the hinged board E, and yoke D, the said board and yoke latched when in the extended position, substantially as described.

4. The combination of the rearwardly-open elevating devices, hinged extension-board E, hinged yoke D, and hinged backboard F, substantially as described.

5. The combination of the rearwardly-open elevating devices, the hinged extension-board E, the hinged yoke D, and the hinged backboard F, the said backboard and hinged board E so connected that the folding movement of one shall cause the other to fold, substantially as described.

JOHN F. STEWARD.

Witnesses:

ARTHUR JOHNSON,
A. L. UPTON.