

(No Model.)

2 Sheets—Sheet 1.

J. MILLER.
SHEAF CARRIER.

No. 384,862.

Patented June 19, 1888.

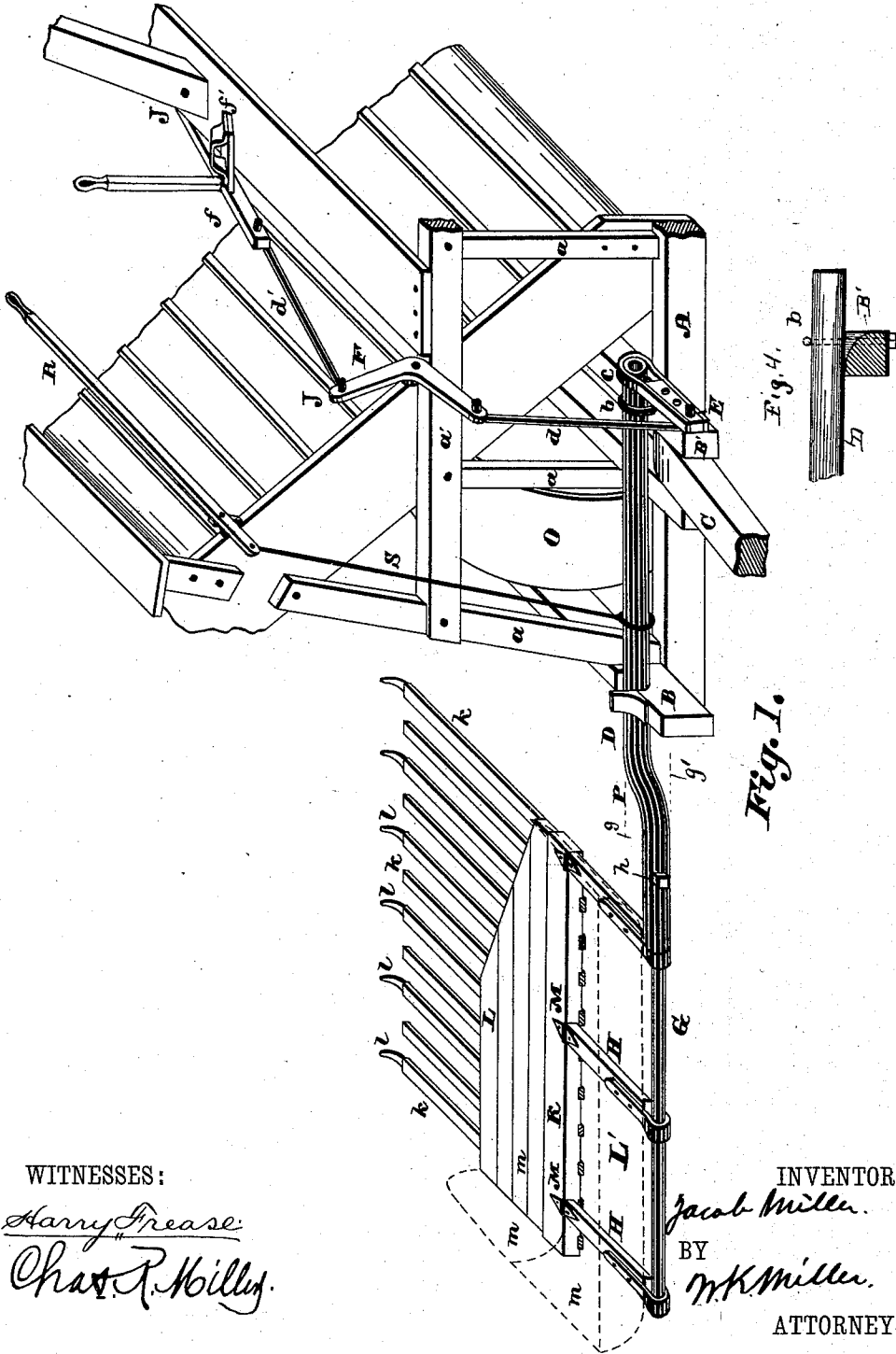


Fig. 1.

WITNESSES:

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INVENTOR.

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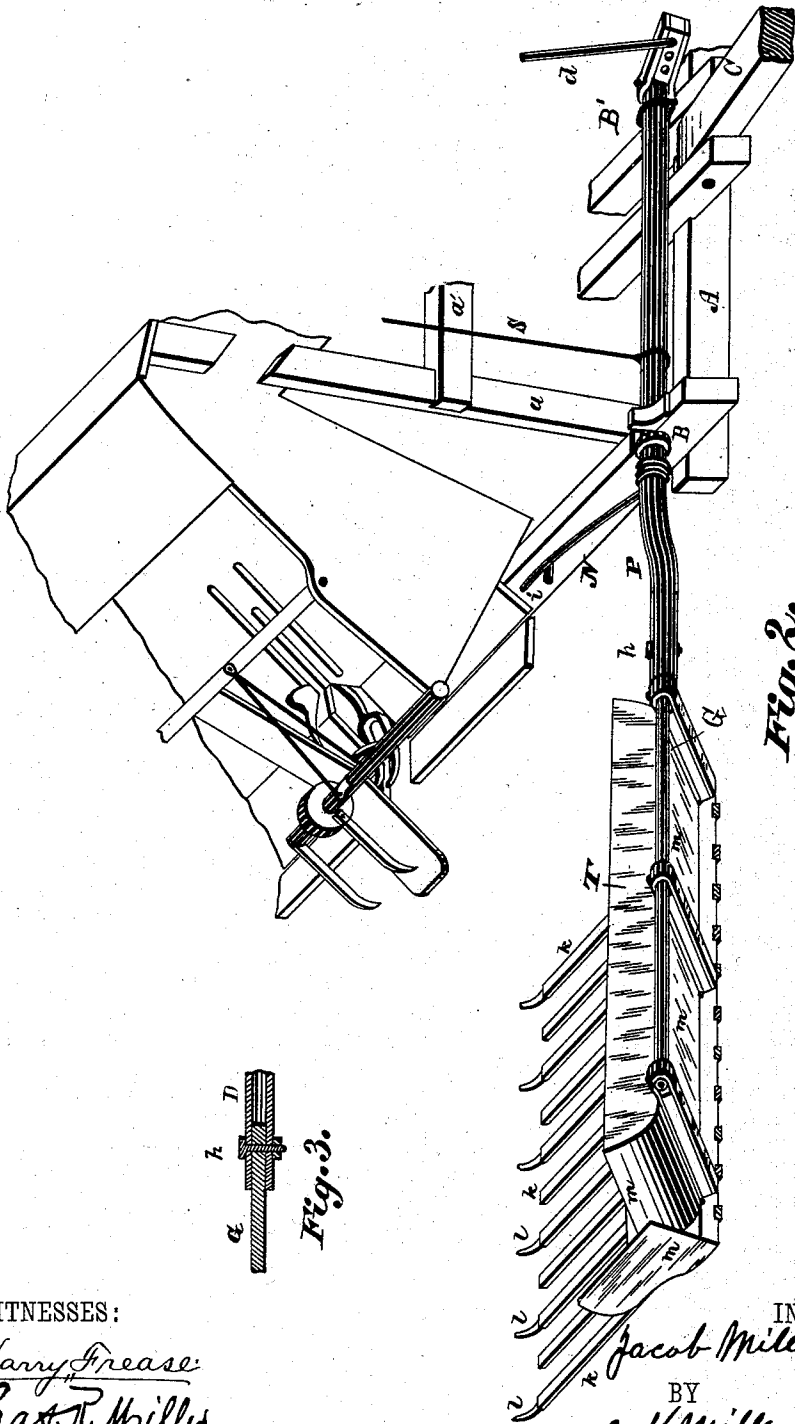


Fig. 2.

Fig. 3.

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UNITED STATES PATENT OFFICE.

JACOB MILLER, OF CANTON, OHIO.

SHEAF-CARRIER.

SPECIFICATION forming part of Letters Patent No. 384,862, dated June 19, 1888.

Application filed September 14, 1885. Serial No. 177,060. (No model.)

To all whom it may concern:

Be it known that I, JACOB MILLER, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have invented
5 a new and useful Improvement in Sheaf-Carriers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

10 My invention relates to improvements in sheaf-carriers; and it consists in certain features of construction and combination of parts hereinafter described, and set forth in the claims.

15 Figure 1 is a perspective view of my improved grain-carrier, showing the carrier as suspended for gathering sheaves, with the front board-work removed and indicated by the dotted lines. Fig. 2 is a perspective showing
20 the table when dropped to discharge the gathered sheaves. Fig. 3 is a sectional view showing the manner of connecting the carrier to the supporting-shaft, and Fig. 4 is a detached view showing one manner of supporting the
25 inner end of the shaft D.

A is the front sill of the harvester-frame; B and B', cross-pieces; C, the tongue; *a* and *a'*, the binder-supporting frame. D is a hollow rock-shaft journaled on the timbers B and B'.
30 At B' the shaft is held in position by the clip *b*, loosely embracing the shaft and sufficiently narrow to permit the outer end of the shaft carrying the sheaf-carrier to be elevated, as hereinafter described. At B the top of the
35 journal-box is open to permit the outer end of the shaft to be elevated. One end of the shaft D is provided with an arm, E, constructed of a light piece of iron bent in the form of a U. The shaft D is placed in the closed end and a
40 block of wood is placed between the legs of the U and secured by through-rivets. This block of wood is perforated and adapted to receive the link *l*, which in turn is connected to a bell-crank, F, which has a pivotal connection with and is supported by the timber
45 *a'*. To the upper end of the bell-crank there is connected link *d'*, which has a pivotal connection with a foot-lever *f*, which carries foot-board *f'*. Immediately outside of frame-piece
50 B the shaft D may be bent down, forming crank P, as shown from dotted line *g* to dotted line *g'*, Fig. 1. Into the open end of the pipe-

shaft D is inserted pipe-shaft G, which is just enough smaller than pipe-shaft D to fit into it. This is passed in and secured by the through-
55 bolt *h*. I prefer using pipe in this way for the supporting-shaft, because it is stronger in proportion to the weight than solid bars of iron. On the shaft G there are provided the
60 arms H, formed of U-shaped pieces of light bar-iron, the closed ends fitted to the shaft G. Into the open ends are placed blocks of wood, which are secured by bolts or rivets. The arms H are rigidly connected to the shaft G. To the ends of the arms there is hinged the
65 head-piece K of the dropping-platform L, which is composed of the bar K and a series of fingers or slats, *k*, which may be secured in grooves in the head-piece and extend rearward at right angles with the bar K. The
70 hinges M are placed on the tops of the arms H and the bar K, allowing the bar to rest against the ends of the arms, forming a support for the platform L, and holding it on a line about the level of the arms H and about parallel
75 with the ground, the hinges M allowing the dropping-platform to flex upwardly only, and holding it rigid in all other directions. On the ends of the slats K may be placed small
80 fingers *l*, slightly upwardly curved.

The frame-work just described may be covered with light board-work *m*, or the covering may be of sheet metal, thus forming a dropper
85 of two parts or sections, L and L'—the first section in the form of a dropping-table rigidly attached to the rock-shaft G and having an end or head board, T, the second or rear section hinged to the first. One object of this form of
90 construction is to secure great strength with the least amount of weight. The connection of the shaft D with the frame by means of the open box B is such as to allow the outer end of the shaft to strike the ground without injuring the shaft, the open box permitting the shaft to rise and fall freely therein. This open
95 box also permits the shaft to be raised up by the lever R and connecting-link S over stumps or stones. I regard this flexible connection of the carrier with the harvester of great importance, as in all localities grain-fields are ditched
100 for the purpose of drainage, or are washed out by rain-fall, and in traversing the field as frequently as is necessary to gather the crop the carrying-wheel O is liable to drop into the

furrows or ditch, and if the carrier be not flexibly connected, as described, the outer end striking the ground would be likely to break it from the machine; but when constructed as described the carrier will rest upon and slide over the ground until the machine has righted itself, and during the progressive movement of the machine the driver may, by the use of the hand-lever R, raise the carrier over obstructions. A coil-spring attached to and about the shaft D, and resting on the pin *i*, will assist in raising the carrier after it has been dropped to discharge the gathered sheaves.

For convenience and safety when moving the machine on the highway or through fence-gates, the carrier may be removed by taking out the bolt *h* and drawing the shaft G out of the shaft D, so that no part of the sheaf-carrier may extend beyond the limit of the binder.

When the carrier is up, as shown in Fig. 1, the link *d* and lever *f* will fall in line, forming a lock, by which the carrier is held up with its burden of sheaves without the assistance of the operator.

The operation of my invention is as follows: When a desired number of sheaves have been dropped from the binder to the carrier, the operator will raise the foot he has in the loop of the foot-board *f*, and by so doing will raise the lever *f*, which will allow the shaft D to rock in its bearings on the frame-pieces B and B', throwing the crank P forward and upward, allowing the slatted platform to fall to the ground, (see Fig. 2,) and the forward section L' to fall to a position nearly vertical, shortening the carrier, and while taking this position the sheaves will be ejected from the carrier, the end-board T acting as a push-board to start the sheaves from the dropper. It will be noticed that the movement of the carrier when released by the operator is downward and forward while the front end moves upward, the forward movement in excess of the progressive movement of the machine. After the sheaves have been discharged by pressing the foot down on the foot-board *f* the dropper may be raised into position, as shown in Fig. 1. The spring N will greatly assist in raising the dropper from the ground.

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

1. The combination, with a harvester-frame, of a shaft journaled in bearings on the front

side of the frame, and having a crank-bend, substantially as described, at a point outside of said frame, a sheaf-carrier secured to the shaft at a point outside of the bend therein, an arm secured to said shaft, a foot-lever, and a link connecting the arm and foot-lever, substantially as set forth.

2. The combination, with a hollow shaft mounted on a harvester-frame, and a lever and intermediate connections for rocking said shaft, of a shaft, G, one end of which is removably secured within the outer end of the hollow shaft, and a sheaf-carrier rigidly secured to said shaft-G.

3. The combination, with a harvester-frame, a shaft journaled in bearings on the front end of said frame and having a crank-bend therein at a point outside of the bearings on the frame, and devices for turning the shaft, of a sheaf-carrier rigidly secured to the shaft at a point outside of the bend, the above parts being arranged substantially as set forth, whereby the movement of the dropping-table will be downward and forward, substantially as described.

4. The combination, with a harvester-frame, of a shaft journaled in bearings on said frame, a sheaf-carrier secured thereto, the said shaft having a crank-bend at a point between the bearings on the main frame and the sheaf-carrier, and means for rocking the shaft, whereby the carrier is given a forward movement as the shaft is turned to dump the carrier, substantially as set forth.

5. The combination, with a harvester-frame, of a shaft having a crank-bend therein and supported in bearings, one of which is open and the other constructed to permit the outer end of the shaft to be elevated, a sheaf-carrier secured to said shaft, and means for rocking the shaft, substantially as set forth.

6. The combination, with a harvester-frame, of a shaft journaled thereto and having a crank-bend, the latter being located at a point outside of shaft-bearings on the harvester-frame, and a sheaf-carrier secured to the shaft at a point outside of the bend, the arm E, link *d*, bell-crank F, link *d'*, and lever *f*, substantially as and for the purpose described.

In testimony whereof I have hereunto set my hand this 17th day of August, A. D. 1885.

JACOB MILLER.

Witnesses:

W. K. MILLER,
CHAS. R. MILLER.