E. Myers.

Harvester Dropper.

No. 98090. Patented. Dec. 21. 1869.

Fig. 1

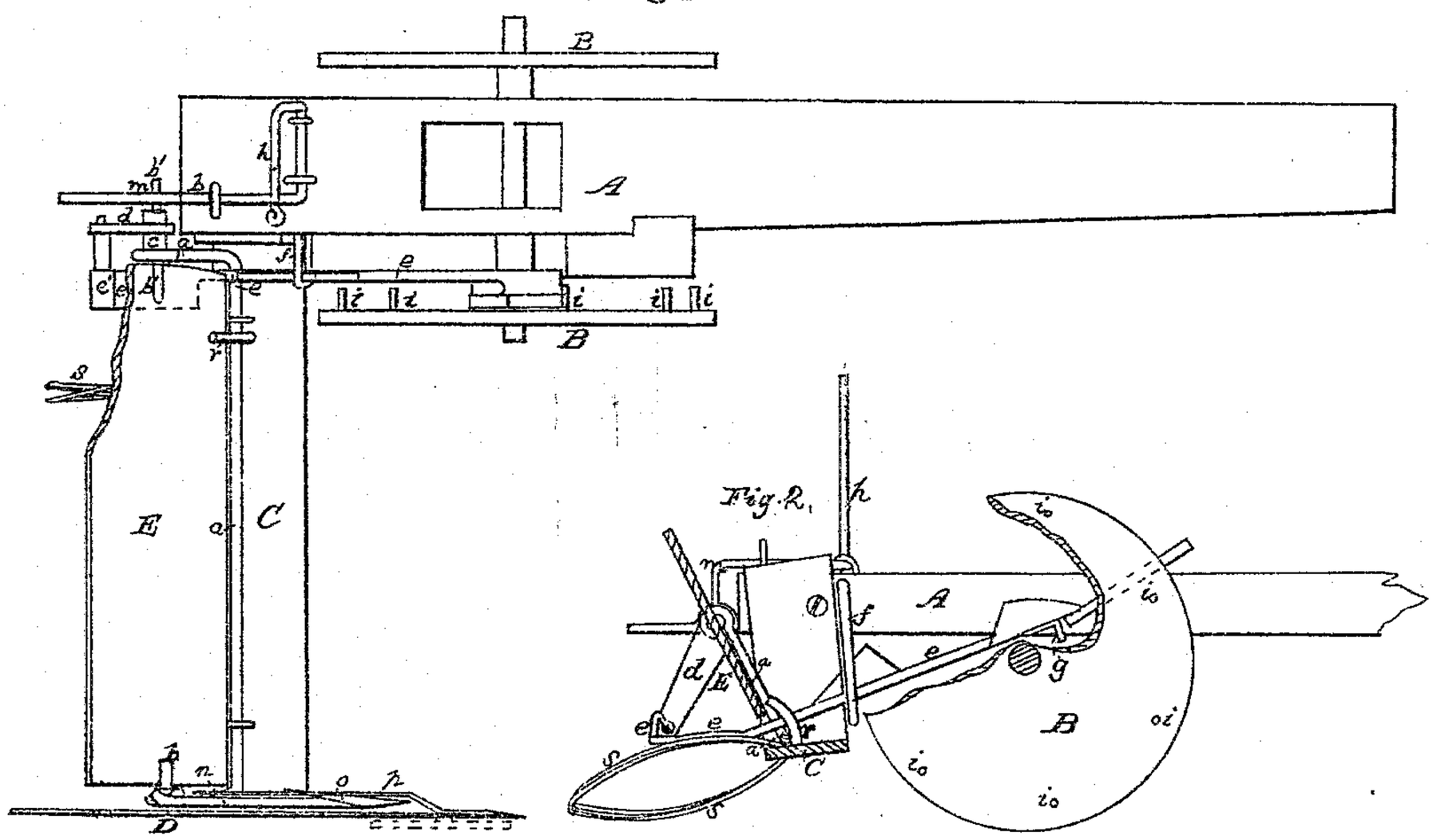
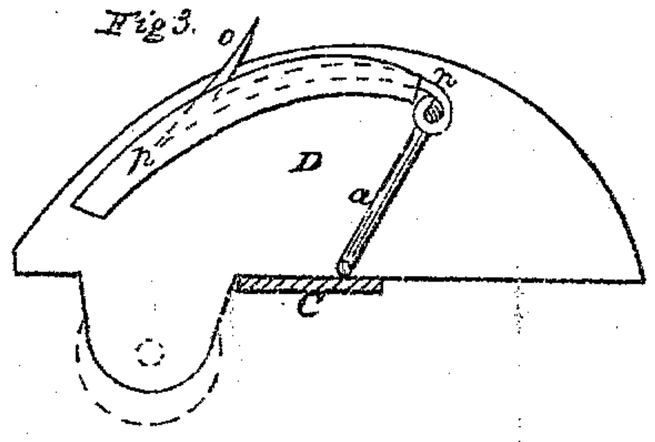


Fig. 2.

Fig 3.



Witnesses.

Harry King

Leopold Deed

Inventor.

E. Myers

per Alexander Gunson

Atty

UNITED STATES PATENT OFFICE.

EPHRAIM MYERS, OF CREAGERSTOWN, MARYLAND.

IMPROVEMENT IN HARVESTER-DROPPERS.

Specification forming part of Letters Patent No. **98,090,** dated December 21, 1869; antedated December 4, 1869.

To all whom it may concern:

Be it known that I, EPHRAIM MYERS, of Creagerstown, in the county of Frederick, and in the State of Maryland, have invented a certain new and useful Improvement in Automatic Grain-Dropper for Harvesters; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in the construction and general arrangement of an automatic grain-dropper for harvesters by the use of which the grain will be deposited at any place desired by the operator.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, which form a part of this specification, and in which—

Figure 1 is a plan view of the grain-dropper. Fig. 2 is a side view of the same, part of one wheel being removed; and Fig. 3 is an inside view of the dividing-board.

A represents the main frame of a harvester; B B, its wheels; C, the finger-bar, and D the dividing-board.

At or near the rear edge of the finger-bar C is pivoted a frame, *a*, made of metal, and extending the whole length of the finger-bar, the sides of said frame extending to a suitable height, and having between their upper ends a grain-board, E. This grain-board, which is made of light board, properly bound to prevent it from splitting, or of any other suitable material, is provided with journals *b b'* exactly at the center of its ends which journals have their bearings in the upper ends of the sides of said frame.

The journal or axle *b'* at the inner end of the grain-board E extends through the side of the frame *a;* and on this journal, outside of the frame, is placed a loose collar, *c*, having an arm, *d*, to the outer end of which a bar or lever, *e*, is pivoted. The arm *d* is of such length that the point where the bar *e* is pivoted to the same will be beyond or outside of the edge of the grain-board E, when the grain-board is turned down on said bar, and the bar *e* is at its pivot-point provided with a latch, *e'*, which holds the edge of said grain-board. The bar *e* extends forward under the grain-board, and just inside of the side of the frame *a*, then passes through a guide or loop, *f*, on the side of the frame. Its front end is on the under side provided with a hook, *g*, or catch, and one of the wheels B is on one side, at suitable intervals, provided with pins *i i*, on which the hook *g* catches.

On the rear end of the frame is placed a lever, *h*, one end of which extends beyond the frame, and is provided with a hook, *m*, which is so placed as to catch on the journal *b'* when the grain-board is raised. This lever *h* may, of course, be of any suitable construction, and placed at any point on the frame, only so that its hook *m* is in position to catch on and hold the journal mentioned.

To the upper end of the outer side of the frame *a* is attached a curved arm, *n*, which is bent forward, and runs along or near the edge of the dividing-board D. This arm is provided with one or more hooks, *o o*, so as to catch and pull down any grain that might hang over the dividing-board instead of on the grain-board, and also to assist in dropping the grain which falls near the edge of the grain-board, as this does not fall of itself as readily as nearer the center when the grain leans outward.

On the dividing-board is placed a shield, *p*, of the same form as the arm *n*, said arm passing between this shield and the dividing-board, the shield preventing any grain from falling between and in any way clogging the same.

In Fig. 1 I have represented the machine as ready to receive the grain to form a sheaf. It will be seen that the frame *a* is raised to a proper angle from the finger-bar, being held there by the hook *m* on the lever *h*, the lower edge of the grain-board resting against a pin, *r*, or other suitable obstacle on the finger-bar, so as to be in proper position to receive the grain. The weight of the bar *e* brings the arm *d* outward or backward from the center of the grain-board.

When, now, sufficient grain has been cut to form a sheaf, the operator, by the use of the lever *h*, releases the hook *m* from the journal *b'*, which lets the grain-board and frame fall, depositing the grain in one heap. By this

motion the arm *d* becomes extended to its full length, and the outer edge of the grain-board is caught by the latch *e'*. Almost at the same instant the hook *g* on the front end of the bar *e* is caught by one of the pins *i* on the wheel, which carries said bar upward and forward. This motion of the bar *e* draws the rear end of the arm *d* forward, which, of course, will raise the frame *a* and grain-board E. The latch *e'* in the meantime, having hold of the edge of the grain-board, turns the same around so that all the grain will fall off.

It might thus be said that the grain-board has three distinct and separate movements at the same time—namely, the falling, rising, and turning—because it is at the very instant when it falls that it commences its upward and rotating movement.

When the bar *e* has been carried forward far enough to raise the frame and grain-board to their original position, the hook *g* is released from the pin *i* by the end of the bar *e* striking a slide or other suitable obstruction in front of the main axle. By this time the grain-board E has passed over one or more springs or inclined planes, *s*, attached to the rear end of the finger-bar, which brings it up again in the first position and prevents it from sliding back, and the hook *m* on the lever *h* has caught on the journal *b'*, as before, holding the frame and grain-board up ready for the next sheaf. While the next sheaf is forming on the grain-board the arm *d* will, by the jostling of the machine over the ground and the friction of its lower end on the stubble, together with the weight of the bar *e*, be brought behind the center of the grain-board, as before described, thus placing the bar *e* in position to drop down and be caught by one of the pins *i* when the sheaf has been dropped.

The front end of the bar *e*, on the upper side, I make of such form that when the bar has been carried up and forward and released from its pin the next pin will not catch on the same, but cause the bar to slide back.

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

1. The arrangement, with a harvester, of the grain-board E, hung by journals *b b'* in the frame *a* in such a manner that the said grain-board shall have the three distinct and separate motions of falling, rising, and turning almost at the same time, substantially as and for the purposes herein set forth.

2. In combination with the frame *a* and grain-board E, the collar *c*, placed on the journal *b'*, and having an arm, *d*, to the outer end of which the bar *e* is pivoted, all substantially as and for the purposes herein set forth.

3. The bar *e*, constructed as described, and provided at its rear end, where it is pivoted to the arm *d*, with a latch, *e'*, and on the under side of its front end with a hook, *g*, to catch on the pins *i i* of the wheel B, substantially as and for the purposes herein set forth.

4. The lever *h*, extending in the rear of the harvester, and provided with a hook, *m*, substantially as and for the purposes herein set forth.

5. The curved arm *n*, attached to the frame *a*, as described, and provided with one or more hooks, *o o*, said arm operating at or near the upper edge of the dividing-board D, substantially as and for the purposes herein set forth.

6. In combination with the arm *n*, having one or more hooks, *o*, the shield *p*, attached to the dividing-board D, substantially as and for the purposes herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 3d day of March, 1869.

EPHRAIM MYERS.

Witnesses:

LEOPOLD EVERT,

J. A. HURDES.