C. AINSWORTH.
Harvester.

No. 209,639. Patented Nov. 5, 1878.

Fig. 1.

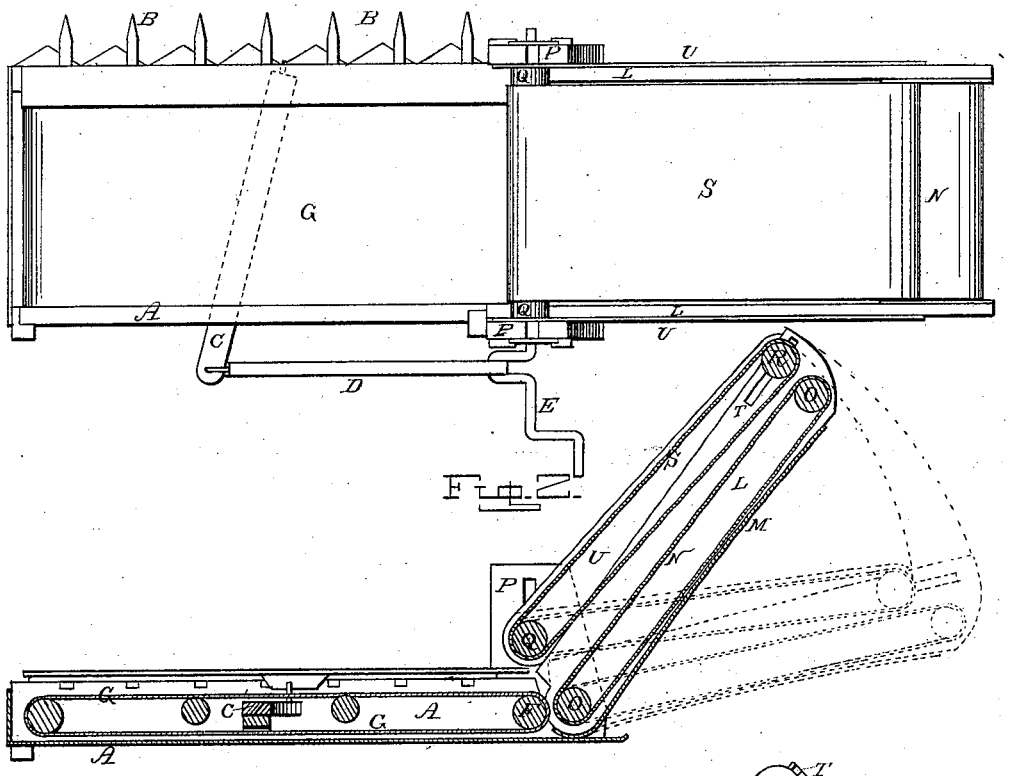


Fig. 2.

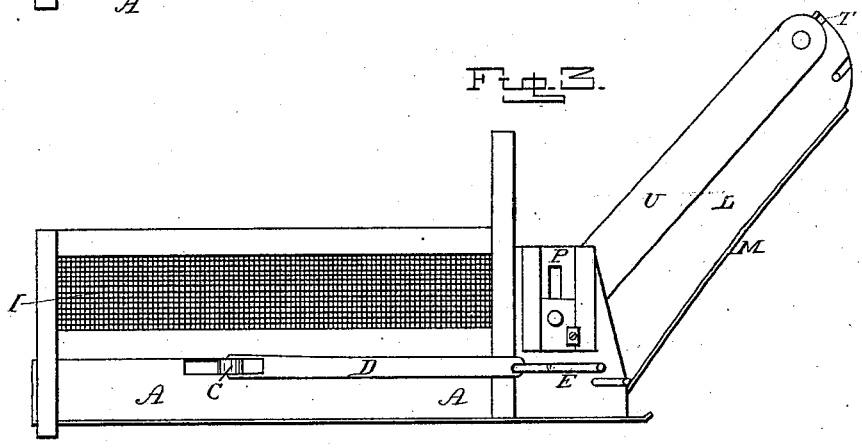
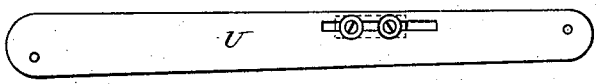


Fig. 4.



Witnesses:
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H. L. D. Haines

Inventor:
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per
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UNITED STATES PATENT OFFICE.

CLARK AINSWORTH, OF MONTICELLO, IOWA.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **209,639**, dated November 5, 1878; application filed October 23, 1878.

To all whom it may concern:

Be it known that I, CLARK AINSWORTH, of Monticello, in the county of Jones and State of Iowa, have invented certain new and useful Improvements in Harvesters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in elevators for mowers and reapers; and it consists in the location of three rollers, over which the endless aprons pass at the joint, and having the parts so constructed that the elevator can be raised or lowered into any desired position without changing the relative positions of any of the rollers, as will be more fully described hereinafter.

Figure 1 is a plan view of my invention. Fig. 2 is a vertical section of the same. Fig. 3 is a rear elevation, and Fig. 4 is a modification.

A represents the bed-frame of the machine, from the front edge of which project the fingers B. A cutter-bar reciprocates between these fingers in the usual manner, being operated by means of the lever C, which is pivoted at any suitable point upon the frame, and has its rear end fastened to the connecting-rod D. This rod has its other end secured to the crank E of the shaft upon which the roller F is secured. The bed-frame A is made in the form of a box, so as to wholly inclose the endless apron G upon all sides except the top, and thus all the unshelled grain is carried forward with the straw to the joint, and instead of being lost upon the ground, as is generally the case, the small grain is dropped into the box and saved. Upon the rear edge of the frame is placed a screen, I, of any suitable construction, which acts as a guard to prevent any of the straw or grain from either falling or being blown off the endless belt before it reaches the elevator.

The elevator-frame consists of the side pieces L and bottom M, and has the two rollers O journaled therein, over which the endless apron N passes. As this elevator-frame is pivoted upon the shaft of the lower roller, it can be raised and lowered to any desired angle. Upon the two inner ends of the elevator-frame A are secured the slotted bearings P, in which is journaled the roller Q. In the upper end of the elevator-frame is a second roller, R, and over these two rollers R and Q passes a third endless belt, S. The upper end of the elevator-frame is provided with slots T, for the shafts of the roller R to move back and forth in, and the shafts of the two rollers R and Q are connected together by pieces U, so as to keep them at a uniform distance, without regard to the angle at which the elevator-frame may be placed. By thus having the upper end of the elevator-frame slotted, and having the shafts of the two rollers connected together, the upper roller alone is made to move as the elevator-frame is adjusted up and down, while the lower roller always retains the same relative position to the two other rollers under any and all circumstances.

The shaft of the lower roller is journaled in boxes which are slotted, so that the roller can be raised or lowered in relation to the other two rollers, as the circumstances of the case may require. When raised upward to a considerable distance above the other two rollers, very heavy and large grain or straw can be carried up constantly on the elevator, without having ever to clean the elevator off, or to pay any further attention to it after it has once been started in operation. When the lower roller can be changed in its position relatively to the other two rollers every time that the elevator-frame is raised upward, the upper roller of the upper carrier-apron is forced downward nearer and nearer to the other two until the space between them becomes so narrow that the apron is constantly clogging, and requires constant attention to keep it open and clean.

Of course, the rollers of the different aprons at the joint of the elevator-frame will be connected to the operating mechanism of the machine in any suitable manner.

If so desired, the slot may be made in the side piece U, instead of in the frame T, as shown in Fig. 4.

Having thus described my invention, I claim—

1. In a hinged elevator, the top apron S, having its upper roller connected to its lower one by rigid connections, the upper roller being

adjusted back and forth by the movement of the frame L up and down, substantially as shown.

2. The hinged elevator-frame, provided with longitudinal slots at its upper end for the shaft of the upper roller to move in, in combination with an upper apron having its rollers united by connecting bars or strips, substantially as specified.

3. The hinged elevator-frame L, having the fixed roller O and sliding roller R at its upper end, in combination with the two rollers O and Q, journaled in the end of the platform-frame A, the roller Q being made adjustable away from the lower apron in the slotted bearings P, substantially as described.

4. In an elevator, the combination of the three rollers, placed together at the joint of the elevator and bed frame, connecting side pieces U, the hinged elevator-frame, and the sliding roller R of the upper apron, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of October, 1878.

CLARK AINSWORTH.

Witnesses:
G. W. BIRDSALL,
GEO. H. JACOBS.