

(No Model.)

C. WHEELER, Jr.
SELF BINDING HARVESTER.

No. 261,285.

Patented July 18, 1882.

Fig. 1.

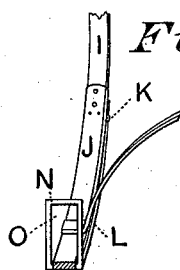
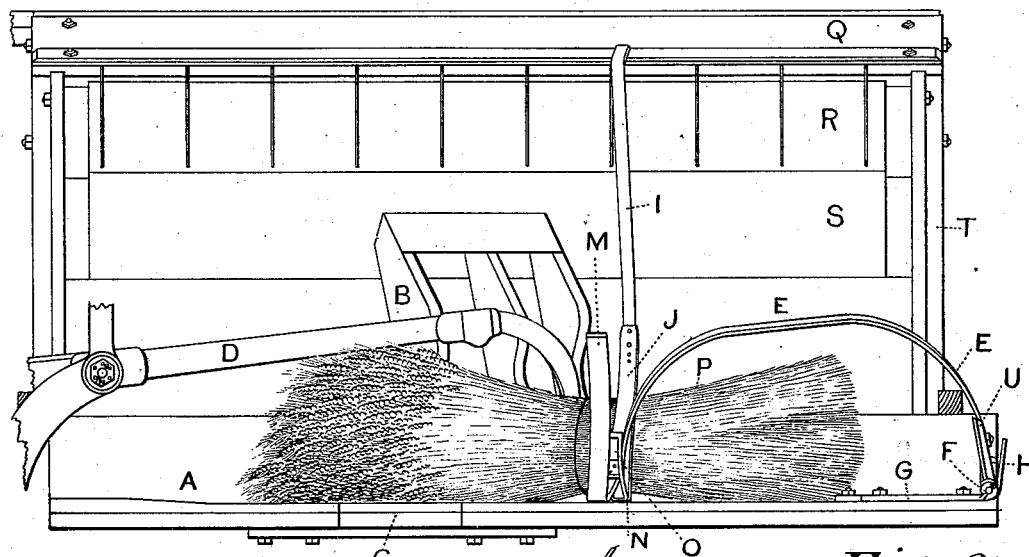


Fig. 3.

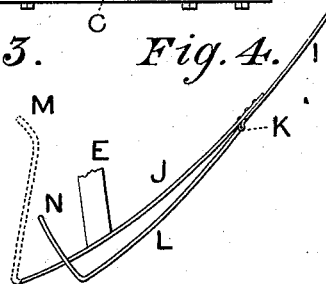
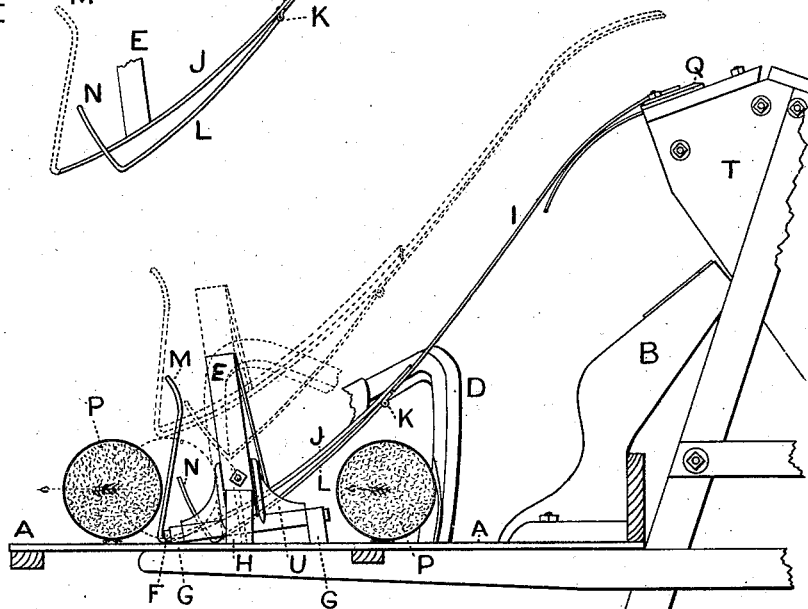


Fig. 4.

Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

CYRENUS WHEELER, JR., OF AUBURN, NEW YORK.

SELF-BINDING HARVESTER.

SPECIFICATION forming part of Letters Patent No. 261,285, dated July 18, 1882.

Application filed October 29, 1881. (No model.)

To all whom it may concern:

Be it known that I, CYRENUS WHEELER, Jr., a citizen of the United States, residing at Auburn, in the county of Cayuga and State of New York, have invented certain new and useful Improvements in Self-Binding Harvesters, of which the following is a specification.

My invention relates to improvements in self-binding harvesters in which an automatic bundle arrester or separator acts in conjunction with a vertically-swinging and horizontally-oscillating binder-arm, the construction and functions of which latter are fully set forth in other applications filed by me; and it consists in the peculiar bundle-arresting mechanism hereinafter described, and particularly pointed out in the claims.

The object of my improvement is to present a self acting and interposing device between the bound bundle and the cord or wire and the binder-arm during the return movement of the latter, as well as to secure the effectual separation of the bundles after being bound upon the binding-table, and also to effectually prevent the crowding back or return of the bundle against the accumulating grain composing the succeeding bundle. This return is liable to occur by reason of an upward deflection of the outer end of the binder-table, or by the jar of the machine while at work, or by an entangled condition of the grain.

I attain the objects mentioned by the mechanism illustrated in the accompanying drawings.

Figure 1 is an elevation of my improvement, looking toward the discharging side of the binder. Fig. 2 is an elevation of the same, looking from the front or cutting side of the harvester. Fig. 3 is a front view, partly in section, of the bundle-arrester; and Fig. 4 is a side view, partly in section, of the same.

Similar letters refer to similar parts throughout the several views.

A represents the binder-table, having brackets B and a curved slot corresponding to the track of the point of the binder-arm D in its outward movement.

G G are straps of iron bolted to the front end of the binder-table A, near its outer edge, which straps have eyes for the passage of the pivot-pin F.

Between the straps G G, and pivoted there-

to at a slight angle by means of the pivot-piece F, is the piece U, to which is bolted the bent connecting-piece E.

Bolted to the table A, between the straps G G and under the piece U, is the upwardly-projecting stop or preventer-piece H, which has a slight forward deflection, as the necessities of the case may require. The object of the piece H is to prevent the bent connecting-piece E from being thrown over beyond its pivot, thus keeping it in a position from which it may be assured of falling into place by its own gravity when not otherwise acted upon by its connecting parts.

To the rear end of the bent connecting-piece E, and in a position just forward of the slot in the table A, is fastened the bundle arresting or separating arm J. This arm or separator J has an upwardly-bent foot, M, and also a long upwardly-inclined controlling strap or piece, I, which strap is riveted at one end to said arm J, as shown, or it may be a continuation thereof. The arresting or separating arm J has hinged to its under side, at K, a secondary arresting-arm, L, which also has an upwardly-bent foot, N, in which is formed a slot, O. Through the slot O passes the main bundle arresting or separating arm J, so that if the arm J should fail of action from any cause a corresponding effectual action may be assured by the secondary arrester, L. The secondary arresting-arm, L, is kept in working position and prevented from swinging beyond its hinged point by the upper wall of the slot O falling or striking against the surface of the arm J when the latter is raised. The object of this arrangement will be fully set forth in describing the operation of the invention.

The long upwardly-inclined controlling-piece I, which is shown fastened at its lower end to the arresting-arm J near the hinge K, acts, in conjunction with the binder-arm D, as a controller of the grain falling from the elevating-aprons R S, and keeps it in place while the bundle is being formed and bound.

When the lower ends of the bundle-arresters J and L rest upon the table A the inner or upper end of the controller-piece I rests upon the top of the frame-work of the harvester at Q, the end of the strap I being bent to conform to the angle of the frame at that point.

Having thus described the details of the con-

struction of my improvement, I will now explain its mode of operation. The binder-arm D being at its highest point and carrying the cord or wire for binding upon the outside of the accumulated grain, descends and encircles the bundle with the said cord or wire. Thence by its horizontal movement it crowds the bundle outward or toward the outer side of the binder-table, as indicated in Fig. 2, in which P is the bundle, the arrows indicating the direction of the movements of both the binder-arm and the bundle. As the bundle P is thus crowded outward it comes in contact with the under side of the arm L and raises both it and the arm J sufficiently to allow of its passing beyond the bent slotted foot N. The arm L then falls by its own gravity and the foot N serves to prevent any retrograde movement of the bundle P. At this time the bundle presses against the under side of the arm J, and as it is pushed outward by the binder-arm elevates said arm J and allows the foot N to act freely as a separating device between said bundle and any straws from the grain accumulating to form the succeeding bundle. This position and operation are clearly shown by the dotted lines in Fig. 2. As the bundle, still continuing its progress, passes from under the foot M of the arrester J the latter falls by its gravity upon the binding-table, thus interposing, in connection with the aforementioned hinged arrester L, an effectual barrier against the return of the bundle, which might otherwise be caused by the return movement of the binder-arm, carrying with it the wire or cord. These working parts are supported and kept in proper place by the bent connecting-piece E, pivoted at F, as already described.

Having thus described the construction and

operation of my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination of the vertically-oscillating and horizontally-swinging binder-arm with the vertically-moving bundle-arresting arm J, having a bent foot, M, and pivoted connecting-piece E, substantially as described.

2. The combination of the vertically-oscillating and horizontally-swinging binder-arm with two vertically-swinging bundle-arresting arms, one hinged to the under side of the other and each provided with an upwardly-bent foot, the foot of the lower hinged arm moving in an arc inside of the other foot and having a slot for the passage of the upper arm through it, substantially as described.

3. The combination of the pivoted bundle-arresting arm having a bent foot and a secondary arresting-arm hinged thereto and having a slotted bent foot, with the upwardly-inclined controller-piece I, substantially as described.

4. The combination, with the binder-table, of the vertically-swinging bundle-arrester, the pivoted bar E, and the stop H, substantially as and for the purpose described.

5. The combination of the binder-table, the vertically-oscillating and horizontally-swinging binder-arm, the pivoted bundle-arresting arm having a bent foot, the hinged secondary arresting-arm having a slotted bent foot, the controller-piece I, pivoted arm E, and stop H, the whole combined for joint operation, substantially as described.

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Witnesses:

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