No. 650,938. Patented June 5, 1900.

F. A. HUNTER & F. BOWEN.

DISK ATTACHMENT FOR CORN PLANTERS.

(Application filed Oct. 26, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

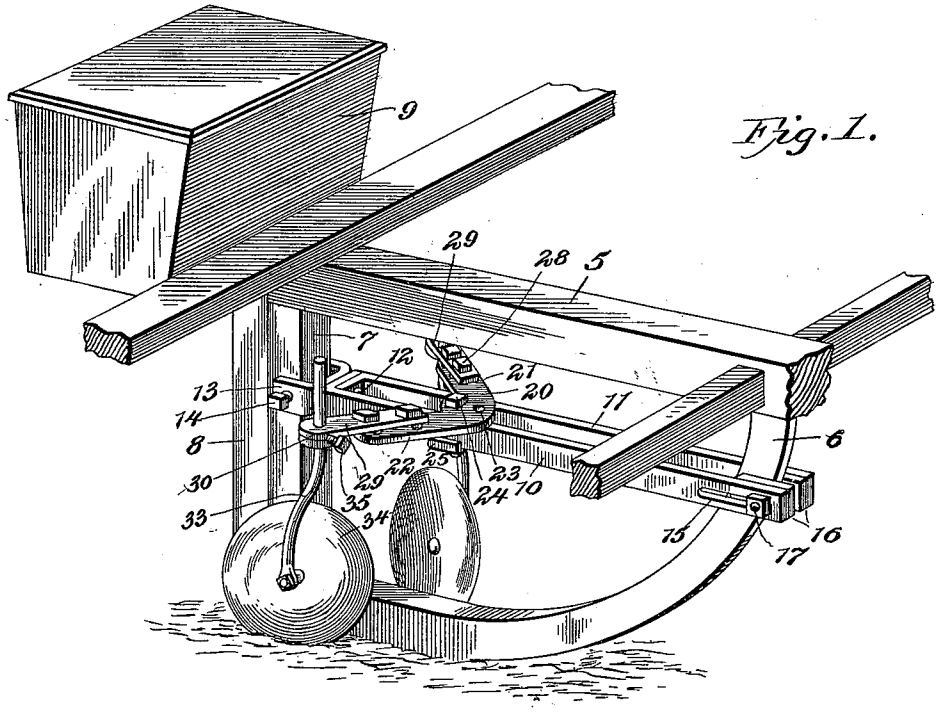
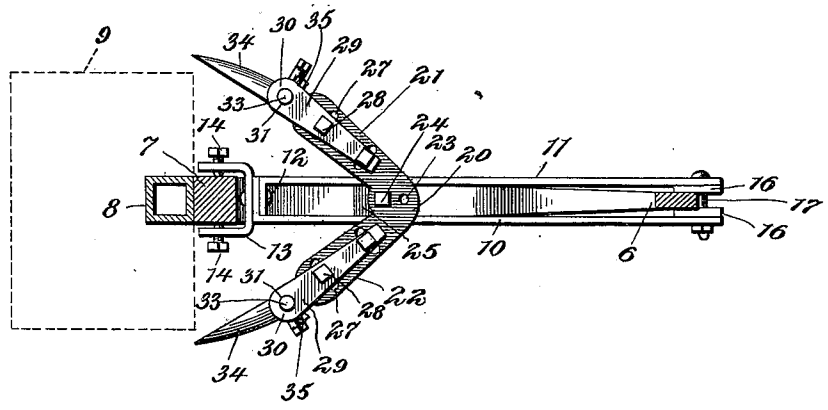


Fig. 2.



Witnesses
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Fred A. Hunter and Frank Bowen, Inventors
By their Attorneys,
C. A. Snow & Co.

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Fig. 3.

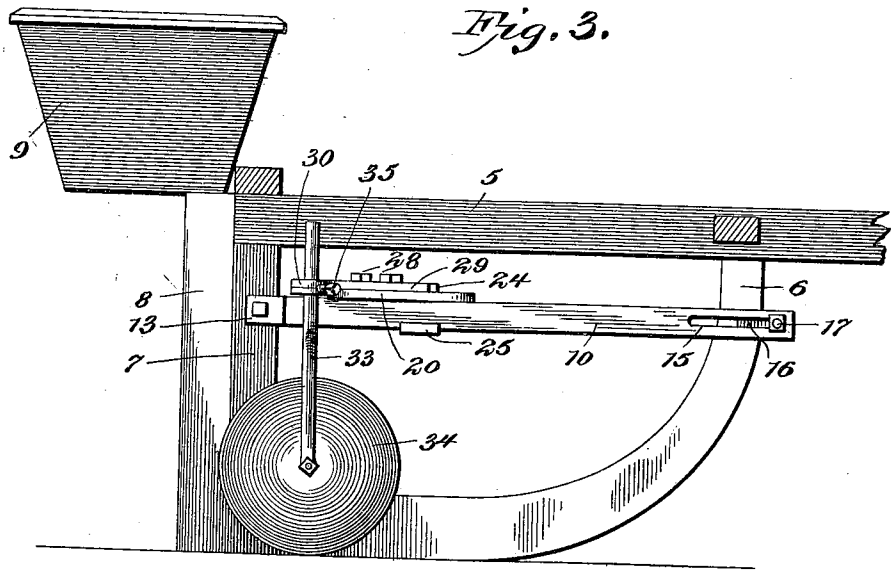


Fig. 5.

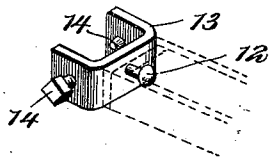


Fig. 4.

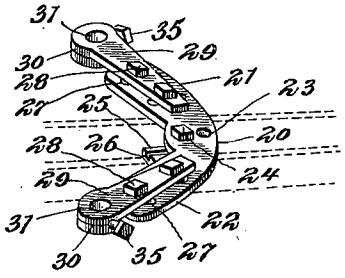
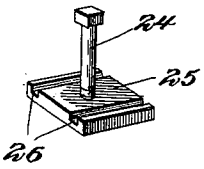


Fig. 6.



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UNITED STATES PATENT OFFICE.

FRED A. HUNTER AND FRANK BOWEN, OF HURDLAND, MISSOURI.

DISK ATTACHMENT FOR CORN-PLANTERS.

SPECIFICATION forming part of Letters Patent No. 650,938, dated June 5, 1900.

Application filed October 26, 1899. Serial No. 734,834. (No model.)

To all whom it may concern.

Be it known that we, FRED A. HUNTER and FRANK BOWEN, citizens of the United States, residing at Hurdland, in the county of Knox and State of Missouri, have invented a new and useful Disk Attachment for Corn-Planters, of which the following is a specification.

This invention relates to planters in general, and more particularly to that class employing a furrow-opener; and it has for its object to provide means for ridging and cultivating the ground to any extent or depth desired and in which this means is adjustably and removably connected in order that it may be adapted for the different conditions. It has been found that in the employment of a device of this nature it is often desired to adjust the height of the covering-disks, to adjust their angle, and to vary their positions with respect to the furrow-opener to variously treat the ground, and the present construction permits of these different adjustments.

In the drawings forming a portion of this specification and in which similar numerals of reference designate like and corresponding parts in the several views, Figure 1 is a perspective view showing a portion of a planter and the arrangement of the construction of this invention in its operative position. Fig. 2 is a horizontal section of Fig. 1, taken through the grain-chute, the hanger, and the shoe directly below the sill of the planter. Fig. 3 is a side elevation of Fig. 1 and showing the disks adjusted to lie parallel with the furrow-opener and with their lower edges in the same plane. Fig. 4 is a detail perspective of the adjustable bracket through the medium of which the disks are held to the supporting-beam. Fig. 5 is a perspective view of the clamping mechanism at the rear end of the disk-supporting beam. Fig. 6 is a detail perspective of the clamping-plate by means of which the disk-bracket is held to the disk-supporting beam.

Referring now to the drawings, 5 represents a sill of the frame of a planter, to the forward portion of which is secured the upper end of an arc-shaped furrow-opening shoe 6, which curves downwardly and rearwardly, the rearward portion being flat and broadened and fixed to a hanger 7, connected with the sill. In the rear of this hanger 7 is the usual grain-chute 8, leading from the hopper 9, into which the grain is placed and from which it is fed in any desired manner. The covering-disks employed in this construction are suspended from the furrow-opener 6 and the hanger 7 through the medium of a supporting-beam comprising two elements 10 and 11, arranged parallel and having their rear ends bent inwardly and riveted or otherwise fastened together. To the rear end of this beam, and preferably by means of the rivet 12, which holds the elements 10 and 11 of the supporting-beam together, is fastened a U-shaped clamping-plate 13, the ends of which are disposed upon opposite sides of the hanger 7 and are provided with set-screws 14, passed through threaded openings therein and adapted for engagement with the hanger to hold the plate 13 and the adjacent end of the beam at different elevations with respect thereto.

In the outer ends of the elements 10 and 11 of the supporting-beam are formed longitudinal horizontal slots 15, registering with similar slots in clamping-faces 16, secured to the inner faces of the elements 10 and 11 by means of the clamping-bolt 17 passed therethrough. The bolt 17 is slidable in the slots 15, and thus may the clamping-faces 16 be adjusted longitudinally of the supporting-beam in order to grip the furrow-opener 6 at different elevations of the beam. In this construction it will be seen that the beam may be adjusted to lie at various elevations, and also at different angles, and may be firmly held in its various positions.

A disk-bracket is provided for the covering-disks and consists of a plate 20, having arms 21 and 22 extending substantially at right angles to each other and having perforations 23 therein for the reception of a clamping screw or bolt 24, adapted to be passed therethrough, and between the elements 10 and 11 of the supporting-beam and through a perforation in a clamping-plate 25 upon the under side of the beam. This plate 25 has longitudinal slots 26 therein to receive the elements 10 and 11 of the supporting-beam to prevent rotation of the plate during the adjustment of the bolt or screw 24.

In each of the arms 21 and 22 is formed a plurality of perforations 27, adapted to ad-

justably receive clamping-bolts 28, passed through plates 29, disposed upon the upper surfaces of said arms. The outer ends of these plates 29 are enlarged, as shown at 30, and are provided with vertical perforations 31, forming bearings for the stems 33 of covering-disks 34 of the usual construction, these stems being bent outwardly to permit various adjustments of the disks, which latter are held fixedly with respect to the plates 29 through the medium of set-screws 35 engaging the stem 33. As shown in the drawings, the perforations 27 are in the nature of transverse segmental slots, which thus permit adjustment of the plates 29 transversely of the arms 21 and 22. With this arrangement of bracket, it will be seen that the plates 29 may be adjusted to lie at various angles to the disk-supporting beam and that the plate 20 may be adjusted longitudinally of the supporting-beam to correspondingly move the disks, that the beam may be raised or lowered to vary the vertical positions of the disks, that the stems 33 may be vertically and rotatably adjusted in their bearings, and that when desired the plate 20 may be reversed to project the disks forwardly of the furrow-opener. With this construction it will be seen that the disks may be employed to assist in opening the furrow, that they may be adjusted to form a ridge in advance of the furrow-opener, and that they may be employed to cover behind the furrow-opener, or they may lie parallel with the latter and have a harrow effect.

It will of course be understood that in practice the specific shape and construction of the various parts of the device may be varied and that the mechanism described may be employed in any connection with which it is adapted without departing from the spirit of the invention.

What is claimed is—

1. The combination with a furrow-opener and a hanger attached thereto at the rear thereof, of a disk-supporting beam adjustably connected with the furrow-opener and the hanger to lie at various angles and elevations, and disks carried by the beam.

2. The combination with a furrow-opener and a hanger connected thereto at the rear thereof, of a disk-supporting beam adjustably connected with the furrow-opener and the hanger and adapted for adjustment to lie at various angles and heights with respect thereto, and disks adjustably connected with the beam.

3. In a planter, the combination with a disk-supporting beam adapted for bodily adjustment to lie at various heights and angles, of a plate adjustably connected with the beam, and disks carried by the plate and adapted for adjustment with respect thereto to lie at various heights and angles with respect to the plate.

4. In a planter, the combination with a disk-supporting beam adapted for adjustment to lie at various heights and angles, of a reversible plate adjustably connected with the beam, and disks carried by the plate and adjustable with respect thereto.

5. In a planter, the combination with a disk-supporting beam, of a disk-plate comprising two arms lying at an angle, disks adjustably connected with the extremities of said arms, and means for clamping the plate adjustably to the beam, said plate being reversible to project its arms forwardly or rearwardly of the beam.

6. In a planter, the combination with a bifurcated supporting-beam adapted for adjustment to lie at various heights and angles, of a reversible plate mounted upon the beam, a clamping-plate adapted to exert a clamping action upon the beam in connection with the first-named plate, said clamping-plate having slots to receive the bifurcations of the beam, additional plates adjustably connected with the first-named plate, and disks connected with said additional plates and adapted for adjustment with respect thereto to lie at various angles and heights.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

FRED A. HUNTER.
FRANK BOWEN.

Witnesses:
S. C. SURRY,
B. H. BOWEN.