(No Model.)

W. WEBSTER.

ATTACHMENT FOR GRAIN DRILLS.

No. 489,353. Patented Jan. 3, 1893.

Fig. 1.

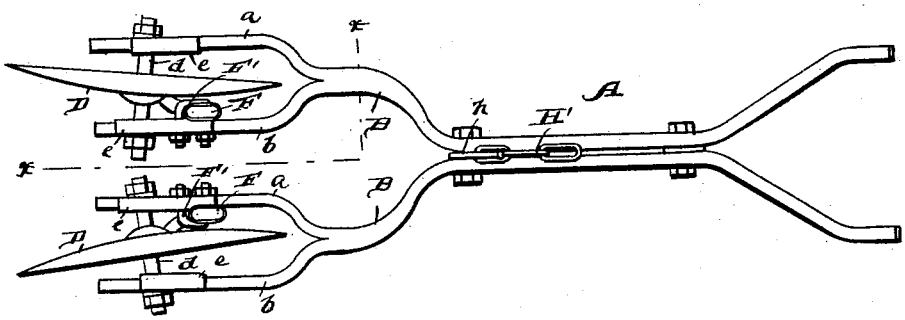


Fig. 2.

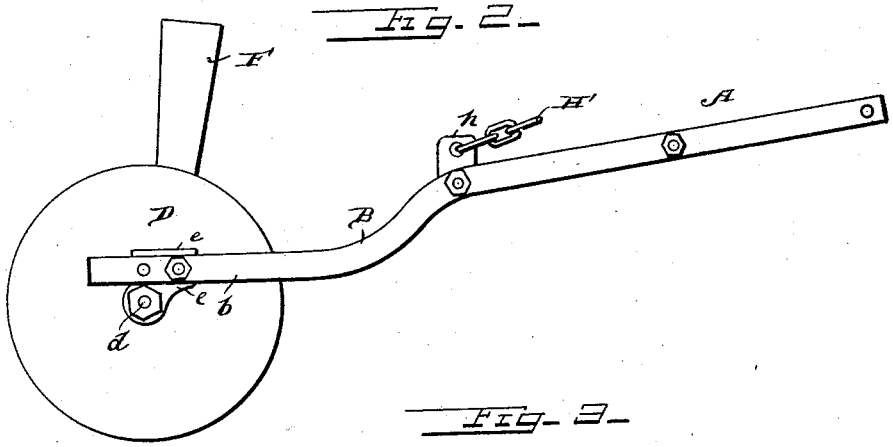
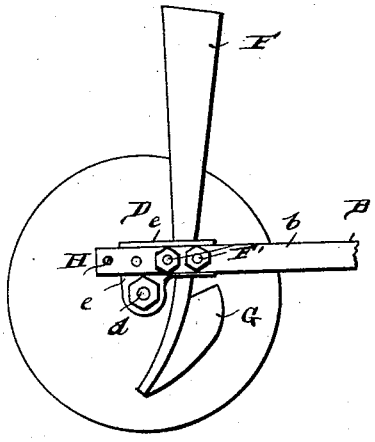


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

WARREN WEBSTER, OF CARNEIRO, KANSAS.

ATTACHMENT FOR GRAIN-DRILLS.

SPECIFICATION forming part of Letters Patent No. 489,353, dated January 3, 1893.

Application filed June 9, 1892. Serial No. 436,135. (No model.)

To all whom it may concern:

Be it known that I, WARREN WEBSTER, a citizen of the United States, and a resident of Carneiro, in the county of Ellsworth and State of Kansas, have invented certain new and useful Improvements in Attachments for Grain-Drills; and I do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a top plan view. Fig. 2 is a side view and Fig. 3 is a sectional detail view on line *x x*, of Fig. 1.

This invention has relation to certain new and useful improvements in seed drill attachments, and consists in the novel construction and combination of parts, all as hereinafter specified.

In the accompanying drawings, the letter A designates the draw bar of the attachment, which is preferably of metal, and forked at its forward end for attachment to the drill frame (not shown). Said bar is also forked at its rear portion, forming arms B, which are curved laterally and downwardly, and are in turn each forked or bifurcated to form arms *a*, *a*, and *b*, *b*. Usually, as shown, said bar is formed in two pieces, bolted or otherwise suitably secured together, each piece being curved outwardly and downwardly to form the arms B.

D, D, designate rotary disks or colters which are mounted on short axles *d*, *d*, one of which is journaled between each pair of arms *a*, *a*, and *b*, *b*, in brackets *e*, which are adjustably secured to said arms. The disks or colters D, D, are of dished or concave form, and as their axles *d*, *d*, are journaled in oblique position, they occupy a converging position with relation to each other, as shown, which avoids side draft. By varying the adjustment of the brackets *e* on the arms, the disks may be set at different angles, as may be necessary or desirable.

F, F, designate the grain spouts, one at each side, and clipped or otherwise suitable secured to the arms *a* and *b*. Said spouts at their lower ends are turned or curved rearwardly, which prevents their becoming clogged with dirt, or other obstruction with which they are liable to come in contact. A cutter G is also secured to each at the lower front portion, which serves to assist the disks in opening the drills, the lower portions of the spouts lying close to the wheels. By reversing the clips F′ which hold the said spouts to the arms *a* and *b*, said spouts may be held to the rear of the short axles, instead of forward thereof, as shown.

In the rear end portion of each of the inner arms *a* and *b*, is a perforation H through which may be inserted a bolt for the attachment of a shoe or runner drill (not shown). On the bar A is a lug *h* having therein an aperture to which is connected one end of a chain H′, the other end being designed to be attached to a lever on the frame, for the purpose of raising the attachment from the ground.

The operation will be readily understood. The disks or colters D, D, together with the cutters G, open the drills, into which the grain drops from the spouts F, F.

Having described this invention, what I claim as new, and desire to secure by Letters Patent is:—

1. The herein described seed drill attachment for grain drills, said attachment comprising the drag bar formed in two parts, spread at their front and rear portions, said rear portions being each curved laterally and downwardly, and bifurcated, the short axles journaled in said bifurcations, the disks or colters carried by said axles, and the grain spouts adjacent to said disks or colters, substantially as specified.

2. The combination with the drag bar A, formed in two parts secured together at their intermediate portions, and curved laterally and downwardly at their rear portions to form the arms B, B, each of said arms being bifurcated, the short axles journaled in adjustable brackets carried by said bifurcations, the concavo-convex disks or colters carried by said axles, the grain spouts adjustably clipped to said bifurcated portions, said spouts being turned rearwardly at their lower ends, and cutters secured to said spouts, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WARREN WEBSTER.

Witnesses:
BRUCE HAMILTON,
JACOB H. DEARICH.