J. B. RUBSAM.

PLOW-FENDERS.

No 194,374. Patented Aug. 21, 1877.

Fig. 1.

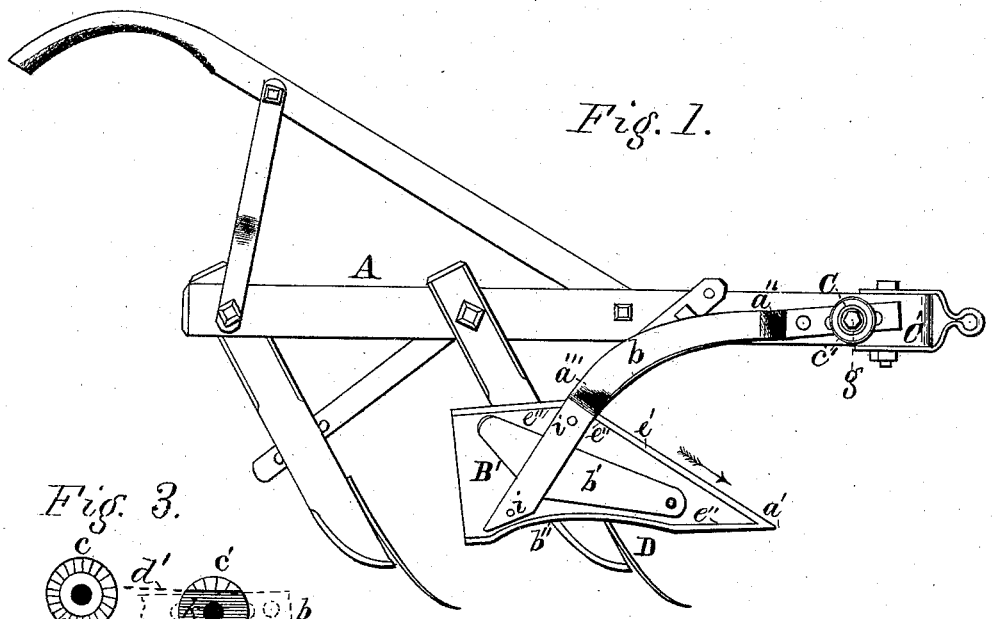


Fig. 3.

Fig. 4.

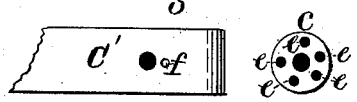
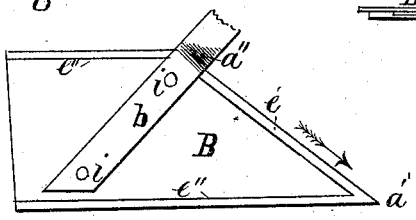


Fig. 2.

Fig. 5.



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UNITED STATES PATENT OFFICE.

JACOB B. RUBSAM, OF SPRINGFIELD, OHIO.

IMPROVEMENT IN PLOW-FENDERS.

Specification forming part of Letters Patent No. **194,374**, dated August 21, 1877; application filed June 29, 1877.

To all whom it may concern:

Be it known that I, JACOB B. RUBSAM, of the city of Springfield, county of Clarke, and State of Ohio, have invented a new and useful Improvement in Plow-Fenders, which improvement is fully set forth in the following specification and accompanying drawings.

Figure 1 is a side elevation of a double-shovel or cultivator plow with my improved fender attached. Fig. 2 is a top view of the same. Fig. 3 shows the inside or connecting-surfaces of the two sections of the double adjustable ratchet-plates. Fig. 4 shows the front end of the plow-beam and the back of section *c* of the adjustable ratchet-plate clamp C. Fig. 5 is a side elevation of a plain fender, with a section of its attached brace.

The object of my invention is to furnish a fender for plows which will not only protect the corn from falling clods, and an excess of dirt turned toward it by the plow, but which will pick up and straighten the blades or leaves and stalks of the down corn as it passes along. To accomplish this I construct my improved fender with a long, sharp, forward angle, sloping upward and backward at an angle of about thirty-five degrees to forty degrees from its point end to the top. It is constructed of thin sheet metal to make it light, and its edges, with the exception of the rear one, are turned over or seamed to stiffen and strengthen it.

In the drawings, A is a double-shovel cultivator-plow; B, the fender, which is shaped like the half-section of a rhomboid divided vertically with a very oblique angle, *a'*, at the point end. Its edges *e''* are entirely seamed around except at the back end.

Two forms of my improved corn-straightening fender are shown, both being attached to the plow in the same manner by a peculiar-shaped brace, *b*, and a double adjustable ratchet-clamp, C.

Fig. 5 represents the plain fender for using when the corn-plants are very small and tender, and require but little if any loose dirt from the plow D.

The fender B', shown in Fig. 1, has a semicircular opening, *b''*, cut out of its bottom edge opposite to the point where the turning earth from the plow D falls against its inside surface. This opening is enlarged or diminished according to the size of the corn-plants and the amount of loose dirt required to cover their roots, by a hinged plate, *b'*, which is pivoted by a rivet through its front end to the fender, and extends back under brace *b* between the two points *i i*, (where it is fastened to the same,) so that it will be held in adjustment between the brace and fender. The spring of the sheet-iron, of which the fender is made, will allow sufficient space for the plate *b'* to operate, however tightly brace *b* may be riveted to it, the plate being also of thin sheet metal. By raising the plate *b'*, which operates as a valve or shut-off, the fine earth (which is always under the coarse) is allowed to pass under the edge of the fender through *b''* to the roots of the corn on the outside. When the corn is large enough (as in a second or third plowing) the plate can be raised to its full height, as shown in Fig. 1.

My fender is supported by a double curved brace, *b*. This brace is bent outward from the upper point of its attachment to the fender with an abrupt curve, *a'''*, so as to allow the corn-blades to be easily released after they have been raised by the point *a'* and passed back along the forward slope *e'* during the passage of the fender along the ground. The brace is partially twisted, and is bent inward toward the plow-beam to the point *a''*, where it is bent at an obtuse angle, and extends forward in a line converging toward the point of the beam. It passes between two ratchet-plates, *c* and *c'*, which, with the bolt *g* passing through them, form the clamp C, by which it is attached to the beam.

By reference to Fig. 2 it will be seen that the serrated line divides the clamp diagonally, so that the proper angles may be given to the brace *b*, which is held between them. This is done by making the under plate *c* thicker at the rear edge, (in the position shown,) and thus giving an inclination to its toothed surface, which operates eccentrically as it is turned on the bolt *g* in adjusting it. The back part of this plate is provided with holes *e e*, into which the stationary pin *f* extends for holding it when adjusted. The brace extends through the gain *k* in the top plate *c'* in the usual manner. By reference to Fig. 3 (dotted lines)

it will be seen that the part *k*, cut out of *c'*, is wider than the brace *b*, so as to allow a slight up and down movement of the fender, in order to allow it to conform to the ground-surface. This I do not, however, claim as my invention, as it has heretofore been in use.

The eccentric construction of the ratchet-clamp C and its double adjustability allow the following points of adjustment for the fender, viz., up and down, and in and out, while the holes in the end of the brace also allow of a forward and backward adjustment. The whole is controlled by the single bolt *g*, which secures it to the plow-beam. The vertical adjustment of the fender will, of course, be governed by the depth of the plow, and its lateral adjustment to suit the size of the shovel.

I claim as my improvement—

1. An improved plow-fender and corn-straightener of semi-rhomboidal shape, with its oblique angle *a'* extended forward on the ground-line, and its front edge *e'* inclined backward from the same at an angle of about thirty-five degrees to forty degrees, substantially as shown and specified, for the purpose hereinbefore set forth.

2. The improved double adjustable ratchet-clamp C, having an eccentric base-plate *c*, provided with holes *e e e*, for adjustment upon pin *f* of beam C', constructed and operated substantially as shown and described, as and for the purpose hereinbefore set forth.

JACOB B. RUBSAM.

Attest:

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