W. J. RODGERS.

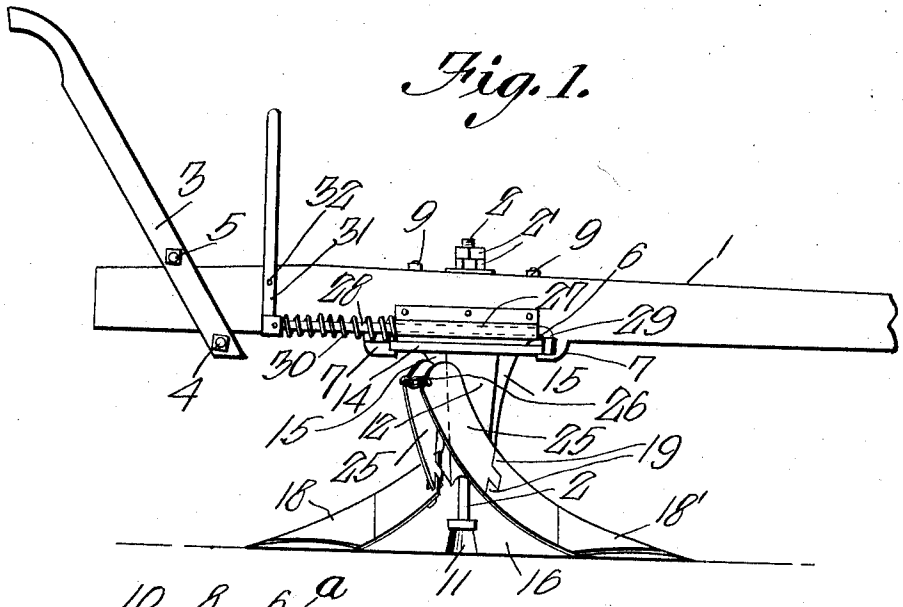
REVERSIBLE PLOW.

APPLICATION FILED JULY 26, 1911.

1,039,808.

Patented Oct. 1, 1912.

Fig. 1.



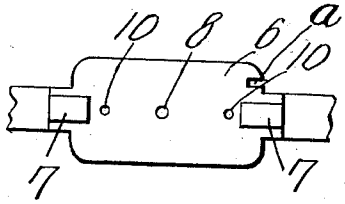


Fig. 3.

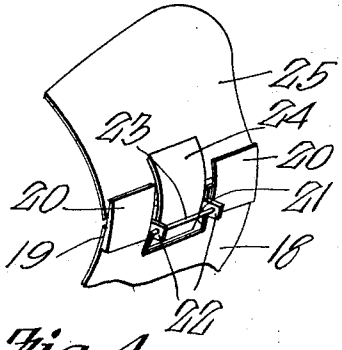


Fig. 4.

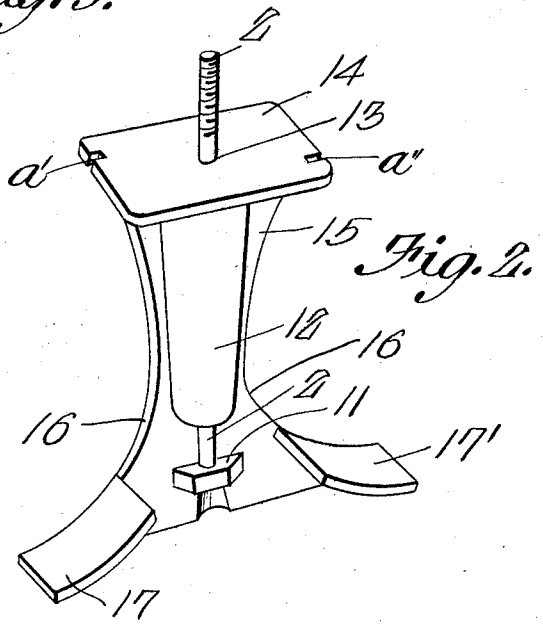


Fig. 2.

Witnesses

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UNITED STATES PATENT OFFICE.

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REVERSIBLE PLOW.

1,039,808. Specification of Letters Patent. Patented Oct. 1, 1912.

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To all whom it may concern:

Be it known that I, WILLIAM J. RODGERS, a citizen of the United States, residing at Beeville, in the county of Bee and State of Texas, have invented a new and useful Reversible Plow, of which the following is a specification.

The present invention relates to improvements in reversible plows, the primary object of the invention being the provision of a novel form of mold board extension carried by each mold board, the same being hingedly connected thereto, said extensions being connected at their upper ends by means of a flexible or chain connection, which provides a means to relieve the entire strain upon the hinge connections when the forward mold board extension is in alinement with the mold board of its forward plow, the rear extension assuming a position in connection with the chain to brace the forward extension.

A further object of this invention is the provision of a plow beam having disposed in front of the handles thereof, a pivotally or rotary mounted standard, provided with oppositely disposed curved share attaching plates, the upper end of said standard and the underside of the beam being provided with alining plates of sufficient width and length and of identical shape and plan to produce a rigid and braced joint at such point, in combination with a locking means operable from the handles of the plow for permitting the standard carrying the plow shares and mold boards to be rotated or reversed when desired.

With the foregoing and other objects in view which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that changes in the precise embodiment of invention herein disclosed can be made within the scope of what is claimed without departing from the spirit of the invention.

In the drawings—Figure 1 is a side elevation of the complete plow. Fig. 2 is a perspective view of the standard for carrying the plow share and mold board. Fig. 3 is a bottom plan view of the connecting and bracing plates carried at the pivotal point of the standard and by the underside of the beam. Fig. 4 is a perspective view of the rear portion of a plow share and a mold board, showing the swinging or hinged connection therebetween.

Referring to the drawings, the numeral 1 designates the plow beam, having a stem 2 pivotally mounted intermediate of its ends and extending therebelow, the purpose of which will presently appear, while secured to the plow beam are the handles 3, the same being held in a rigid position thereon by means of the bolts 4 and 5.

Secured to the underside of the plow beam equidistant upon opposite sides of the bolt or pivot 2, is a bracing and holding plate 6, provided with the cleats or lips 7 depending from the front and rear ends thereof, centrally and below the plow beam 1, the said plate 6 being provided with a central aperture 8 through which the pin or pivot 2 is adapted to pass and be permitted to rotate, the bolts 9 passing through the beam and fitting the apertures 10 in said plate to retain the plate rigidly to the beam, as clearly shown in Fig. 1.

The stem, pivot or pin 2 projects downwardly and has its lower end seated within the eyed lug 11 and through the standard 12, the upper end of the same projecting through the aperture 13 of the plate 14, which is identical in plan and of the same size as the plate 6, the same being integral with the plate 15 and projecting from the lower end thereof. This particular construction is clearly shown in Fig. 2 wherein the various parts are cast or wrought in one piece with the stem or pivot removably mounted therein so as to rotatably support the said standard to the beam as clearly shown in Fig. 1. Formed integral with the curved portions 16 of the standard, are the two curved plates 17, which are adapted to have secured thereto, the two oppositely disposed plow points 18 and 18′, the extreme rear end of either one of which, is adapted to aline with the vertical dotted line shown in Fig. 1 and be in front of the fulcrum point of the handles 3, whereby the said handles may be pressed downwardly upon using the extreme rear point of contact of the point 18 or 18′ with the ground as a fulcrum, so that the said plow may be tilted with comparative ease and thus render this form of plow a very practical device and one readily operated by a single operator.

As clearly shown in detail in Fig. 4, the shares 18 or 18′ are provided with the two lugs 19 having the bracing plates 20 secured

thereto at the rear and projecting beyond the upper edge, and providing the slot 21 having the oppositely disposed eyed lugs 22 for the reception of the hinge pin 23 of the plate 24 carrying its respective mold board 25, said mold board thus being hingedly and swingingly connected to the upper end of its respective share 18 or 18′, so that the same may assume the positions as clearly shown in Fig. 1 and be held relatively to each other by means of the flexible or chain connection 26.

It is evident that by hinging the mold board extensions 25, as clearly shown, that they will assume the position as shown in Fig. 1 when in operation, that is when the plow share 18′ is in operable relation to the ground, its mold board extension 25 will lean rearwardly and aline with its mold board, the same being forced in such position by means of the slice of earth passing thereagainst. The consequent action upon the rear mold board extension 25 is to cause the same due to the chain 26 to assume a position substantially at right angles to its mold board, the chain thus assisting in relieving the strain upon the hinge joints of the respective mold board extensions 25 with their mold boards, while permitting the extensions to assume proper positions due to the reversing of the plow. By this means it will be seen that the standard may be rotated and carry therewith the oppositely disposed plow shares and mold boards, and that the lower line thereof will follow the straight or horizontal line as indicated in Fig. 1 and make this plow especially desirable for plowing soil in irrigated land where it is desired to turn the furrows in one direction to avoid a water furrow or deep furrow in the center of the land, or to plow along a hillside where "a land" cannot be taken. The pivot or pin 2 is locked to the beam by means of the two nuts 2′ as clearly shown, by which means the same may be readily removed when necessary.

As noted each of the respective plates 6 and 14 are provided with apertures a, and a' and a'', respectively, whereby the said plates may be locked relatively to each other so as to retain the plow points in the proper position as shown in Fig. 1, the casing 27 being disposed upon one side of the beam and having mounted slidably therein the bar 28, whose forward end 29 is hooked and adapted to normally seat within the aperture a of the stationary plate 6 and one of the apertures a' or a'' of the rotatable plate 14, thereby locking the same in one of the two positions when necessary. In order to hold the said hooked end in proper locked position, a spring 30 is employed as shown in Fig. 1 and to operate the said locking device so that the plow points may be rotated when desired, a lever 31 is fulcrumed at 32 in a position readily accessible to the plowman.

By making the plates 6 and 14 relatively long and wide, it will be noted that the pivot 2 and the main standard is braced against any torsional strain either longitudinally of the beam or transversely thereof, and that a very rigid joint is provided, the lip 7 assisting in retaining the said plates relative to each other both during the rotation thereof or when in a fixed position. It will also be noted that by the proper manipulation of the lever 31, that the locking end 29 of the rod 28 is released from engagement with the plate 14 so that the plow may be reversed upon their pivots 2 and again locked in the desired position, thus making a very simple and durable construction with but few working parts, and a reversible plow that is easily manipulated, and especially desirable for use in irrigated lands.

What is claimed is:

In a device of the class described, a beam; a standard rotatable upon the beam; means for holding the standard against rotation; oppositely extended mold boards secured to the standard; vertically swinging extensions pivoted to the adjacent ends of the mold boards for individual swinging movement; and a flexible connection between the free ends of the extensions; each extension standing approximately at right angles to its supporting mold board when the other extension is alined with its supporting mold board, whereby the angularly disposed extension will act as a brace for the other extension.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

WILLIAM J. RODGERS.

Witnesses:
A. A. OSTREICHER,
W. H. EVANS.