Jan. 27, 1953

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2,626,555

TWO-PIECE SHARE

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FIG. 1

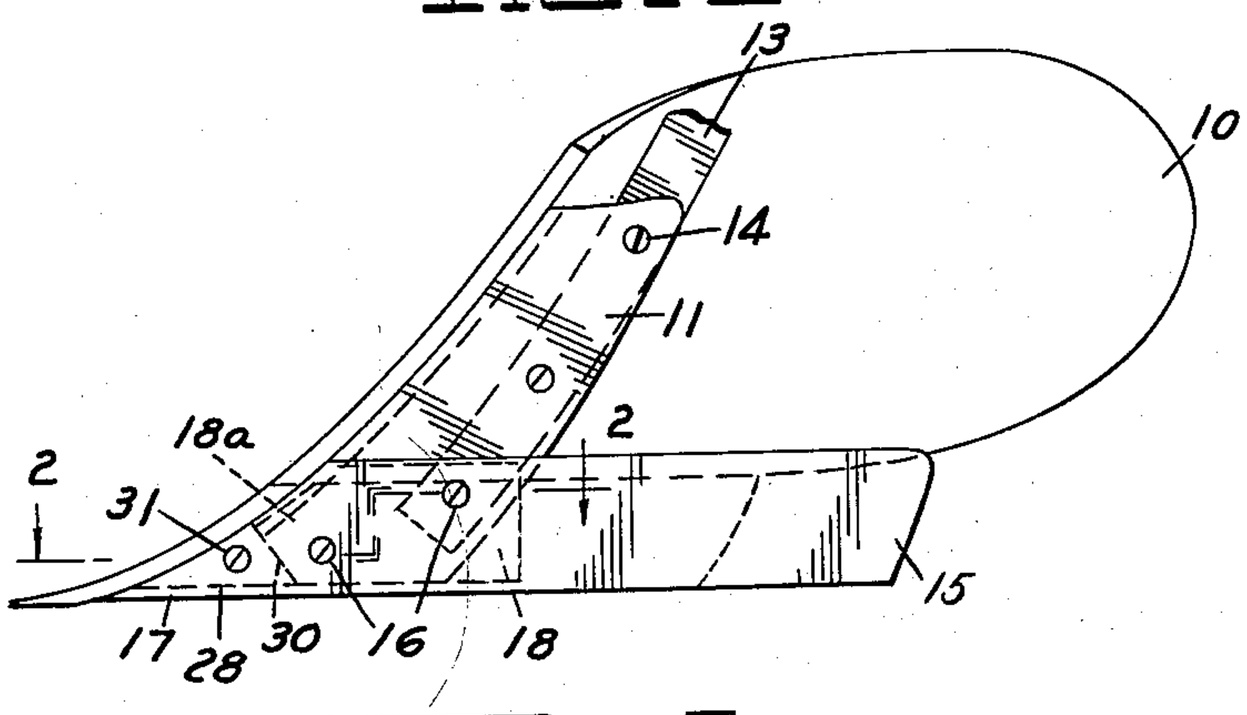


FIG. 2

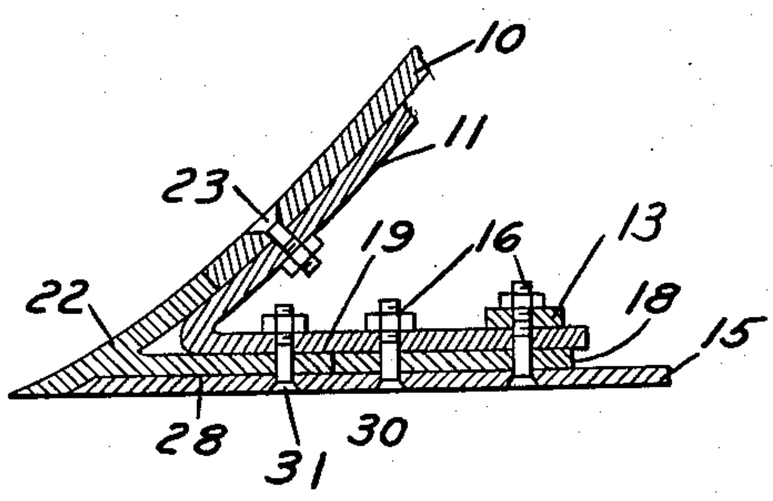


FIG. 4

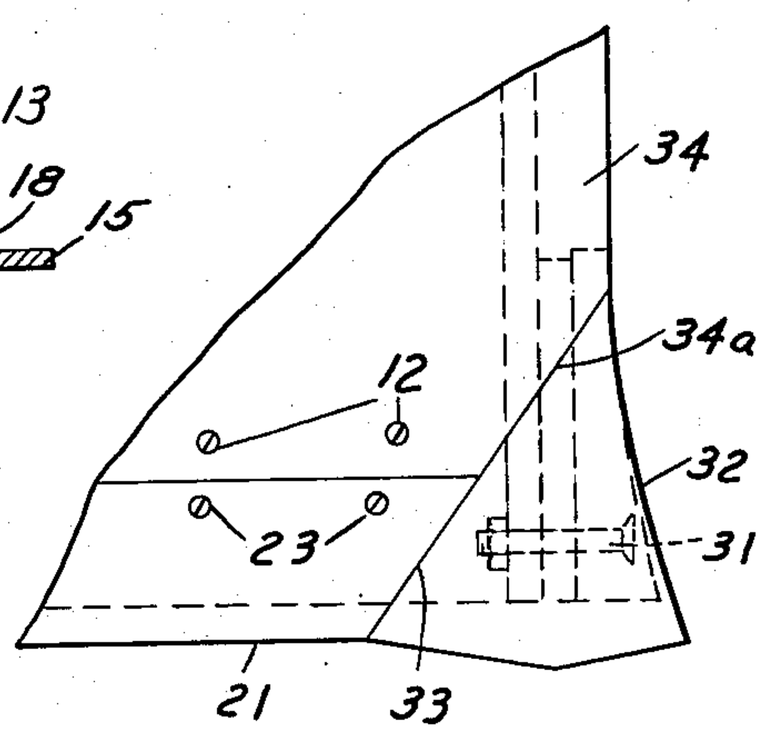
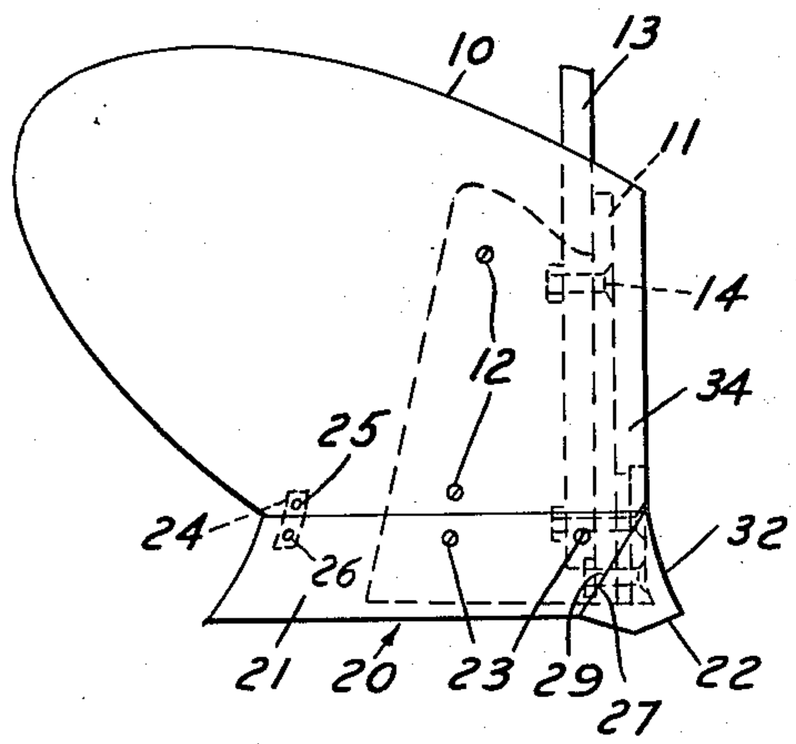


FIG. 3



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TWO-PIECE SHARE

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1 Claim. (Cl. 97—125)

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This invention relates to a two piece share for a moldboard plow wherein the forward portion of the share is readily replaceable for reconditioning the plow.

The share of a moldboard plow is that portion of the plow which cuts into the earth and forms a furrow slice and the life of such share is directly dependent upon the type of soil in which the plow is working. Some soils, such as a sandy soil, are highly abrasive and consequently wear the share and dull the cutting edge rapidly while other soils which contain a large amount of humus material and which are quite moist have a relatively lesser abrasive effect on the share. Regardless of the type of soil in which the plow is working, the useful life of a share before resharpening is required is comparatively short-lived in comparison with other components of the plow. This is particularly true of the front end portion of the share which wears more rapidly than the remainder. Inasmuch as removal and replacement of an entire share for resharpening is time consuming and expensive, there has been a long standing need for a practicable two piece share construction wherein the front portion of the share is readily replaceable when worn at a cost less than that incurred by resharpening the conventional integral share.

Accordingly, it is an object of this invention to provide an improved two piece share construction for a moldboard plow having a low cost, readily removable and replaceable forward portion incorporating all of the fast wearing cutting edges.

Another object of this invention is to provide a two piece share and plow construction wherein the replaceable front portion of the share is securely locked and supported by other components of the plow when assembled therewith to provide a substantially unitary construction.

Still another object of this invention is to provide a two piece share for a moldboard plow wherein the forward portion of the share is secured by a single bolt to the plow and is immovably locked in assembly by other members of such plow.

A further object of this invention is to provide an improved two piece share for a moldboard plow wherein the forward replaceable portion of such share also forms a shin for the moldboard.

The specific nature of this invention, as well as other objects and advantages thereof, will become apparent to those skilled in the art from the following detailed description, taken in conjunction with the attached sheet of drawings on

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which, by way of preferred example only, are illustrated two embodiments of this invention.

On the drawings:

Figure 1 is a side elevational view of a moldboard plow, as viewed from the landside, incorporating the two piece share of this invention.

Figure 2 is an enlarged fragmentary, sectional view taken along the plane 2—2 of Figure 1.

Figure 3 is a front elevational view of Figure 1.

Figure 4 is an enlarged, fragmentary, front elevational view of a moldboard plow showing a modified form of a two piece share embodying this invention.

As shown on the drawings:

In Figure 1 there is shown in assembled relation a moldboard plow provided with a two piece share constructed in accordance with this invention. Such plow comprises the usual compound curved moldboard 10 secured to one face of frog 11 by a pair of bolts 12. A plow beam 13 is secured to frog 11 by a plurality of bolts 14 and a landside 15 is secured to the other face of frog 11 by bolts 16, as best shown in Figures 1 and 2, in opposed relationship to moldboard 10 and such landside is provided with a tapered, extended forward end portion 17. A spacer member 18 comprising a rectangular plate provided with a wedge shaped end 18*a* is, however, placed between frog 11 and landside 15, as best shown in Figure 2, to space such landside from frog 11 thereby providing an opening 19 for a purpose to be later described. Bolts 16 pass through suitable apertures in spacer 18 to secure such spacer between landside 15 and frog 11.

A share 20 comprising a wing portion 21 and a separate point portion 22 is mounted on frog 11 below moldboard 10 as shown in Figure 3. The wing portion 21 is secured to frog 11 by a pair of bolts 23 in abutting relationship with moldboard 10. The rear end of wing portion 21 is secured to moldboard 10 by a strap member 24 secured respectively to moldboard 10 and share portion 21 by bolts 25 and 26. Wing portion 21 is provided with a forward end 27 angularly disposed with respect to the bottom surface of such share portion for a purpose to be later described. It should be mentioned here that portion 21 of share 20 is preferably of a rolled or stamped section cut to the desired length and provided with a suitable transverse curvature so as to blend with the curve of the moldboard 10.

The point portion 22 of share 20 is approximately triangular in shape as best shown in Figure 3. Share point 22 is provided with an integral lug 28, as best shown in Figure 2, and such

lug projects rearwardly from the back surface of point 22. Lug 28 is of generally triangular configuration as shown in Figure 1, and is disposed on point 22 somewhat rearwardly from the tip of point 22 as shown in Figure 2 for a purpose to be presently explained. Lug 28 may be formed separately and welded to point 22 if desired.

When point 22 is assembled to the plow, the rear edge 29 of point 22 abuts the forward end 27 of wing portion 21 as shown in Figure 3. Lug 28 fits within the opening 19 defined by the spaced relationship of frog 11 and landside 15. The lower edge 30 of the wedge shaped end 18*a* of spacer 18 abuts the upper side of the triangular shaped lug 28, as best shown in Figure 1. A bolt 31 inserted through suitable apertures in the extended end portion 17 of landside 15 and through lug 28 and frog 11 removably secures such point to the landside 15 and frog 11. The front surface of point 22 is preferably curved to blend with moldboard 10 and share 20 as shown in Figures 1 and 2. The extended end portion 17 of landside 15 is shaped to abut the underside of the landside edge of point 22 as shown in Figure 2 to firmly support such point. Thus point 22 being in abutting relationship with wing portion 21, and lug 28 of such point abutting spacer 18, and with the landside 15 abutting the edge of point 22, it is obvious that such point is adequately supported to resist the various forces acting against the point. Such point in effect therefore becomes a unitary portion of the plow.

In Figure 4 there is shown a modified form of share 20, wing portion 21 of such share remaining substantially the same in this modification; however, a new share point 32 is provided. Share point 32 differs from point 22 only in that such point is made considerably larger so that the side 33 in abutment with share wing portion 21 extends upwardly into abutting relationship with a modified moldboard 34, which has a triangular portion of the lower forward corner of the moldboard removed to form the angularly disposed edge 34*a*. The enlarged point 32 abuts edge 34*a* and thereby provides a replaceable shin portion for moldboard 34. The other details of construction of point 32 and the manner of securing such point to the plow are identical with that described for the construction shown in Figures 1, 2 and 3, and hence no further description is believed necessary.

From the foregoing description it will appear that both of the modifications shown on the appended drawing are relatively inexpensively fabricated and are adapted for easy mounting on a plow bottom whereby such points may be quickly and conveniently removed from, or secured thereon with the simplest of tools. As the share points are relatively cheaply manufactured, worn points may therefore be replaced with a new point at less cost to the user than the general charge for reconditioning the share. Since the wing portion of the plow share receives relatively little wear in comparison to the point of the share, the two piece share of this invention permits the wing portion to be retained on the plow bottom for the life of several plow points before resharpening of the share wing is necessary. Further economies are effected by the use of the

modified form of plow share point which forms a shin for the moldboard thus in effect providing a replaceable element for that part of the moldboard which is subjected to the most wear, thereby further increasing the effective life of the moldboard.

It will, of course, be understood that various details of construction may be varied through a wide range without departing from the principles of this invention and it is, therefore, not the purpose to limit the patent granted hereon otherwise than necessitated by the scope of the appended claim.

I claim:

A plow construction comprising in combination a frog, said frog having angularly disposed moldboard and landside faces, said moldboard face being arcuately shaped, a landside having a tapered forward end, a plate-like spacer element a curved moldboard having its lower front tip and adjacent landside edge removed to provide a terminal shoulder, means for securing said landside to the landside face of the frog with said spacer element interposed therebetween and spaced rearwardly of said forwardly tapered portion of said landside, thereby defining a recess between said forward tapered portion of the landside and the frog, means for securing said curved moldboard to said arcuate moldboard face of said frog, a share wing, means for securing said share wing to said moldboard face of said frog, said share wing having its forward end spaced rearwardly of the front edge of said frog, a replaceable combined share point and shin element having an arcuate surface blending with the curvature of said moldboard, said element including a lower point portion overlying the forward extremity of the landside and an integral upwardly and rearwardly projecting extension on said element generally overlying the landside to define a shin portion for the moldboard, a rearward lug integrally formed on the rear face of said element adjacent to, but spaced from, the landside edge of said share point, said lug fitting snugly into said recess in flatwise contact with said frog when said element abuts the moldboard face of said frog and contacts the terminal shoulder of said moldboard and said share wing, with said extension overlying said forward tapered portion of said landside and replacing the removed landside edge of said moldboard to provide a removable shin therefor, and bolt means for securing said combined share point and shin element to said moldboard face of said frog.

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