R. M. KELLY.

PLOW.

APPLICATION FILED AUG. 21, 1919.

1,327,562.

Patented Jan. 6, 1920.

Fig. 1.

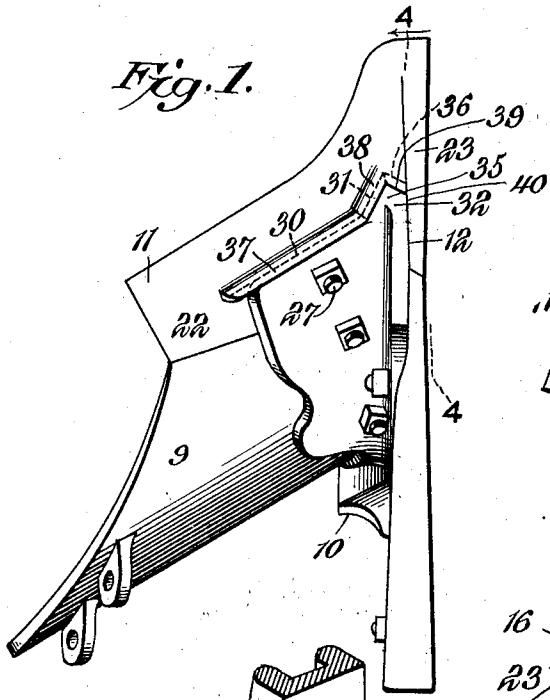


Fig. 3.

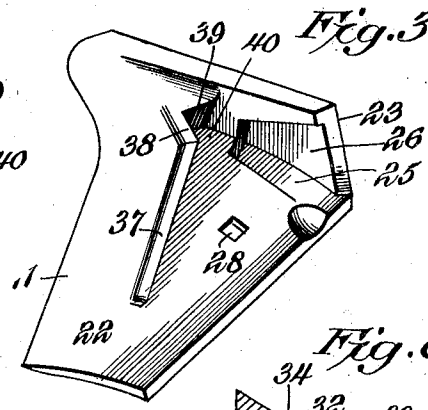


Fig. 8.

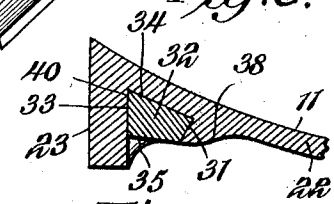


Fig. 5.

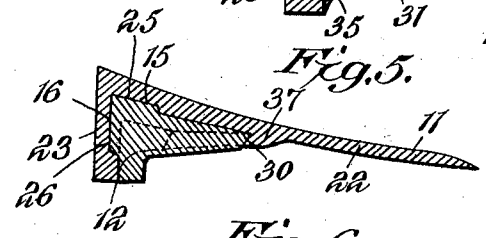


Fig. 2.

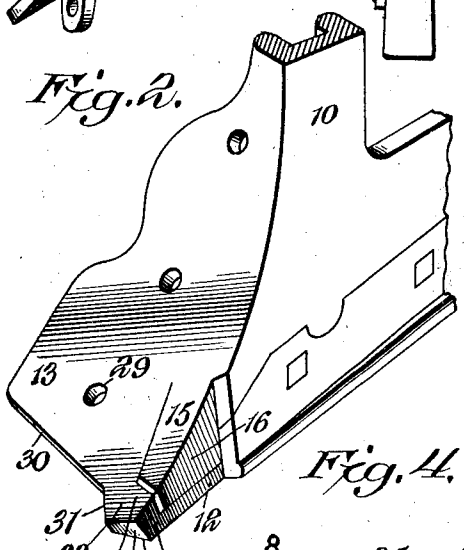


Fig. 6.

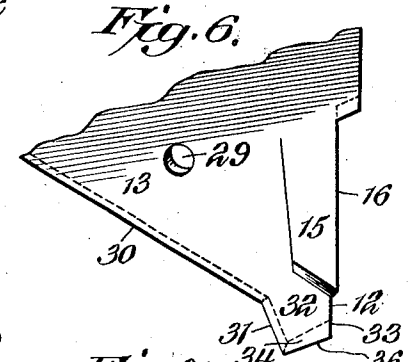


Fig. 4.

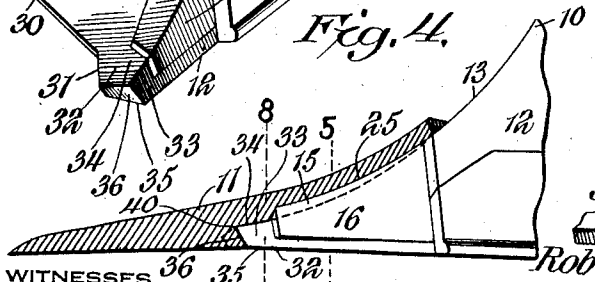
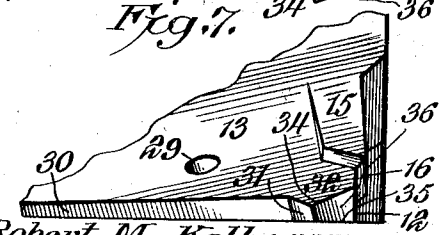


Fig. 7.



WITNESSES

Howard D. Orr.

J. P. Smith.

Robert M. Kelly, INVENTOR,

BY E. G. Siggers

ATTORNEY

UNITED STATES PATENT OFFICE.

ROBERT MARVIN KELLY, OF LONGVIEW, TEXAS, ASSIGNOR TO G. A. KELLY PLOW COMPANY, OF LONGVIEW, TEXAS, A CORPORATION OF TEXAS.

PLOW.

1,327,562. Specification of Letters Patent. Patented Jan. 6, 1920.

Application filed August 21, 1919. Serial No. 318,972.

To all whom it may concern:

Be it known that I, ROBERT M. KELLY, a citizen of the United States, residing at Longview, in the county of Gregg and State of Texas, have invented a new and useful Plow, of which the following is a specification.

This invention relates to improvements in plows of the type employing a moldboard and plowpoint or share bolted to a standard; and is an improvement upon patents numbered 974,675 and 974,676, issued to me November 1, 1910.

In said patents I have disclosed improvements for interlocking the plowpoint or share to the standard, consisting of tapering projections provided on the top and landside faces of the standard to fit correspondingly shaped recesses or sockets of the plowpoint or share, whereby the fastening bolt which secures the plowpoint or share to the standard will be relieved of strain. While the improvements disclosed in said patents have been found to be efficient for the purpose indicated, further experiment and use have demonstrated the necessity of an improvement to supplement the action of said elements.

To this end, I now construct the lower end of the frog or foot of the standard so that it provides or forms a projecting nose, said nose being in the shape of a trapezium in cross section, and having its front wall and one of its side walls beveled downwardly as well as toward the landside face, said nose coöperating with a correspondingly-shaped recess or socket in the underside of the plowpoint or share, whereby upon applying the share or point to the frog or foot of the standard, with said nose fitting in said socket, and drawing in place the bolt that connects the plowpoint or share to the standard, the point or share is forced firmly into place and held securely while in use.

The invention consists in the novel construction hereinafter specifically described, and pointed out in the appended claims.

In the accompanying drawing, which shows the preferred embodiment of the invention—

Figure 1 is a bottom plan view illustrating the standard moldboard and plowpoint, and particularly disclosing the improved interlocking connection between the foot or frog of the standard, and the plowpoint or share;

Fig. 2 is a perspective view showing the lower portion of the standard and part of the landside, the plowpoint and moldboard being omitted;

Fig. 3 is a perspective view of the plowpoint or share looking at the underside;

Fig. 4 is a longitudinal section on the line 4—4 in Fig. 1;

Fig. 5 is a transverse section on the line 5—5 of Fig. 4;

Fig. 6 is a plan view on a somewhat enlarged scale of a portion of the frog or foot of the standard, the dotted line indicating the beveling of the edge of the frog or foot;

Fig. 7 is a front view on an enlarged scale of the frog or foot of the standard showing the shape of the nose;

Fig. 8 is a transverse section on the line 8—8 of Fig. 4.

Like numerals of reference designate corresponding parts in the several figures of the drawing.

As some of the features disclosed in the drawing are common to the construction of my former Patent No. 974,676, I will use the same reference numerals in referring thereto, making, however, only a general reference to the old elements.

9 designates the moldboard, 10 the lower portion of the standard, and 11 the plowpoint or share of an ordinary turning plow. With the exception of the particular interlocking connection between the plowpoint or share and the standard, these elements may be of the usual or any preferred construction.

The standard is provided with the usual upright landside face 12, and the upper curved face 13, the latter being known as the frog or foot of the standard 10.

The plowpoint or share 11 comprises the usual blade portion 22, which has at one edge the depending approximately vertical landside plate or flange 23. It has a bolt hole 28, adapted to register with the bolt hole 29 provided in the frog or foot 13, and a bolt 27 is passed through the registering bolt holes and is provided at its lower end with a nut for securing it in place.

It will be understood that unless some provision were made for interlocking the

plowpoint or share to the frog or foot of the standard, all the strain would be placed upon the bolt, which would soon work loose.

In my former Patent No. 974,676, I provide a tapering projection consisting of a transversely inclined top portion 15, and an approximately vertical depending portion 16, said portions being spaced from the front end of the standard, and adapted to engage in a socket provided on the underside of the plowpoint or share, said socket consisting of angularly related portions 25 and 26. Many years' use of this construction has proved its efficiency for the purpose, though it has been demonstrated that additional preventive means is necessary to insure the absolute interlocking of the plowpoint to the frog or foot of the standard, and take up all strain on the bolt 27 connecting the plowpoint or share to the frog or foot of the standard.

In my previous patents, no provision was made for utilizing the point or nose of the frog or foot as an interlocking means. This is provided for by the present invention, which will now be referred to.

The frog or foot 13 of the standard has its front edge 30 inclined forwardly from the furrow side of the plow toward the landside, and is beveled inwardly or undercut, as indicated by the dotted lines in Fig. 6. This front edge joins with or merges into the inclined side wall 31 of the nose 32. This side wall 31 is also beveled inwardly or undercut as indicated by the dotted lines in Fig. 6. The nose is of the construction shown clearly in Figs. 2, 7 and 8, and is trapezium shaped in cross section, one side wall 33 being a continuation of the landside face 12 of the standard, and therefore approximately vertical. As previously stated, the other side wall 31 is inclined. The top and bottom walls 34, 35 are continuations of the upper and lower faces of the frog or foot portion of the standard.

This construction and arrangement provides a nose which has its greatest height or thickness at the landside end and decreases in height or thickness toward the furrow end, and moreover presents a construction which decreases in width toward its front end. The front wall 36 of the nose is inclined downwardly or undercut, and is also inclined rearwardly toward its landside end, as shown in Fig. 6.

The plowpoint or share 11 is provided on its underside with an inclined flange 37, which leads from a point spaced from the furrow end of the plowpoint or share to a point at one side of and in advance of and spaced from the recesses 25, 26. This flange is undercut as shown, and has its inner end continued and bent at an angle, as shown at 38, to form one side wall of a recess or socket 40 provided in the plowpoint or share in advance of the recesses 25, 26. The opposite side wall is formed by the landside flange 23 of the plowpoint, and the back or inner wall 39 connects the two walls 23 and 38, thereby defining a socket or recess having three walls which is designed for the reception of the nose 32 of the frog or foot. The wall 38 of said recess or socket is undercut, and this is also true of the back or inner wall 39, the latter being inclined to exactly fit the front wall 36 of the nose.

In applying the plowpoint or share in place, the nose will ride against the inclined flange 37, and is guided thereby into the recess formed by the walls 23, 38 and 39, the front beveled edge 30 of the frog or foot fitting the flange 37, while the beveled edges of the walls 31 and 36 are caused to engage the undercut walls 38 and 39 of the socket. The engagement of these elements is very clearly shown in Figs. 1, 4, 5 and 8 of the drawings. When the plowpoint or share is fitted in place, it is impossible to move it in any direction except forwardly, and resistance to forward movement is taken care of by the engagement of the bolt. During plowing the strain on the plowpoint or share is rearwardly, upwardly and laterally. These strains are all resisted and provided against by the interlocking connection between the plowpoint or share and the frog or foot of the standard which has been described.

By the construction shown, full provision is made for relieving from strain the fastening bolt which connects the plowpoint or share to the standard, and yet there is no marked modification in the construction of either the plowpoint or share or in the frog or foot of the standard. It requires no skill to mount the plowpoint or share in position and such strains as the plowpoint or share may be subjected to are distributed to a number of points and not imposed on one part or element. The construction can be readily manufactured without any great change in the patterns that were used in making my former patented plow.

What I claim is:—

1. In a plow, a standard having a frog provided with a projecting nose of trapezium shaped in cross section, and which tapers toward its outer end, said nose being defined by one side wall which is a continuation of the landside face of the standard, another side wall which extends out from the front edge of the frog and is inclined toward the landside edge, a top wall which is a continuation of the upper face of the frog, and a bottom wall which is a continuation of the bottom face of the frog, whereby the nose is greater in height or thickness at the landside end, and the front wall of the nose is beveled rearwardly from the smaller end to the larger end, and is also

beveled inwardly from the top wall to the bottom wall, the second-mentioned side wall being also beveled inwardly from the top of the bottom wall, and a plowpoint having a flange on its underside extending in an inclined line and joined with and forming one wall of a socket provided near the landside edge of the point, said socket having three walls, one of which is the landside flange of the point, the other two walls being undercut and inclined to conform with the walls of the nose.

2. In a plow, a standard having a frog provided with a front inclined beveled edge, and a projecting nose having its inner side wall inclined and beveled inwardly and merging into the inclined front edge of the frog, said nose being trapezium shaped in cross section having its greatest height or thickness at the landside face of the standard and decreasing in height or thickness toward the other end of the nose, the front wall of said nose being beveled rearwardly and downwardly, and a plowpoint having an inclined flange on its underside with its wall undercut, said flange having an inclined continuation at its end nearest to the landside, which continuation forms one wall of a three-wall socket, the other walls being provided by the landside flange of the point and by an undercut wall which is shaped to agree with the front wall of the nose.

3. In a plow, a plowpoint having an inclined flange leading inwardly from the furrow end thereof, and having its other end provided with an inclined continuation which forms one side wall of a three-wall socket, said socket having its other side wall provided by the landside flange of the point, a standard having a frog provided with a front inclined edge, and a nose projecting from the frog and having the shape of a trapezium in cross section, said front edge of the frog fitting the flange of the point while the nose fits the walls of said socket.

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

ROBERT MARVIN KELLY.

Witnesses:
A. V. GOYNE,
S. H. SALE.