Dec. 19, 1922. 1,439,222.

J. C. BOHMKER.

DETACHABLE PLOWSHARE.

FILED MAY 14, 1920.

Fig. 1.

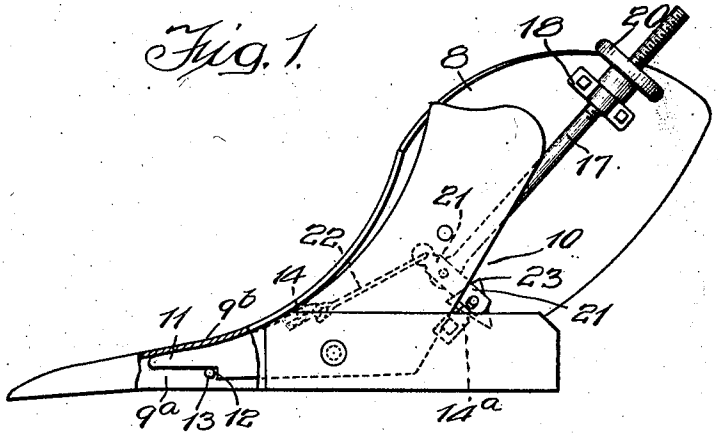


Fig. 2.

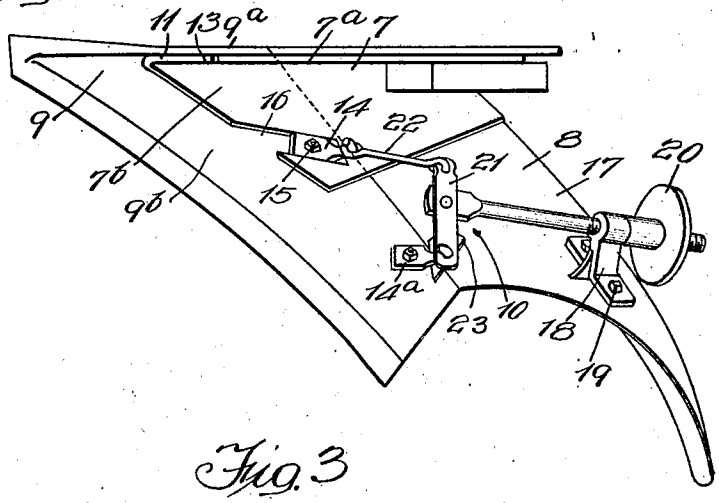
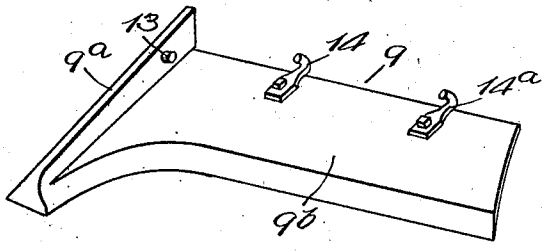


Fig. 3.



Witnesses:
W. F. Kilroy
Harry R. L. White

Inventor:
John C. Bohmker
By Miller Chrisdahl & Parker
Attys

Patented Dec. 19, 1922. 1,439,222

UNITED STATES PATENT OFFICE.

JOHN C. BOHMKER, OF BRADLEY, ILLINOIS, ASSIGNOR TO SEARS, ROEBUCK AND CO., OF CHICAGO, ILLINOIS, A CORPORATION OF NEW YORK.

DETACHABLE PLOWSHARE.

Application filed May 14, 1920. Serial No. 381,467.

To all whom it may concern:

Be it known that I, JOHN C. BOHMKER, a citizen of the United States, residing at Bradley, in the county of Kankakee and State of Illinois, have invented certain new and useful Improvements in Detachable Plowshares, of which the following is a specification.

The invention relates to plow shares of the type adapted to be detached from the plow for the purposes of renewal, resharpening and the like; and the object of the invention is to provide improved means for securing the share in operative position.

More specifically, the invention has for its aim the provision of securing means of the character indicated which is of extremely simple construction so that it may be cheaply manufactured and which at the same time is capable of quick and easy operation in securing or detaching the share, while serving to effectively maintain the parts in operative association.

The object of the invention thus generally stated, together with other and ancillary advantages which will be apparent from the following description, may be attained by the construction and arrangement shown in the accompanying drawings forming part hereof, in which Figure 1 is a fragmentary side elevation of a plow equipped with my invention. Fig. 2 is an underside plan view of the plow. Fig. 3 is a perspective view of the share detached.

In the drawings, 7 designates a frog which is, generally speaking, of the usual construction and adapted to be secured in any suitable way (not shown) to the supporting beam of the plow. 8 designates the mold board of the plow, which is secured upon the frog in any suitable and well known manner, and 9 indicates the plow share which is adapted to operatively engage with the frog and to be secured in position with reference thereto and with reference to the mold board 8 by means of a securing device designated generally by the numeral 10.

The frog 7 is angular in form, comprising a landside portion 7^a and a flat or plate portion 7^b. At its forward end the frog is provided with a toe 11, being for this purpose cut away at its lower forward edge as at 12.

The share 9 comprises a landside portion or flange 9^a and a share blade 9^b, and is adapted to fit over the frog 7, with the toe 11 entered between the share blade 9^b and a stud 13 projecting laterally from the inner side of the landside portion 9^a. It will be seen that by reason of the peculiar coaction of the toe with the inclined under surface of the share blade, the upper surface of the toe being correspondingly inclined, the rearward movement of the share with reference to the frog will effect a wedging engagement of the frog between the share blade and the stud 13.

The share blade as shown in Fig. 2 is arranged to overlie the plate 7^b of the frog, and the securing means 10 is adapted to connect the share blade with the mold board and the frog. To this end, the share blade is provided upon its under surface with a pair of hook members 14 and 14^a rigidly secured in position as by means of bolts 15 and extending in an upward and rearward direction. For receiving the member 14 the plate 7^b of the frog is provided with a suitably disposed notch 16 adapted to neatly receive the hook member 14. Said member is bent to provide a space between it and the under surface of the share blade, to receive a portion of the plate 7^b projecting beyond the lower edge of the mold board.

The securing means 10 comprises a screw-threaded member or tension rod 17 mounted in a bearing bracket 18 which is secured upon the under side of the mold board at the upper end thereof, as by means of bolts 19. A knurled hand wheel 20 is threaded onto the end of the rod 17 and is adapted to engage with the bearing bracket 18 to effect the rearward movement of the rod. At its forward end the rod is pivotally connected with a lever member 21 midway between the ends thereof, one end of said lever being apertured so as to be adapted to detachably engage with the hook member 14^a. At its opposite end the lever 21 carries a link 22, the free end of which is adapted to detachably engage the hook member 14 upon the share blade. It will be seen that by operating the knurled wheel 20 upon the tension rod, the share blade will be drawn rearwardly with reference to the frog 7 and into operative engagement with the mold board 8. For the purpose of maintaining the mold board and share blade in the proper rela-

tive positions, a guide block 23 is provided upon the underside of the mold board, adjacent the hook member 14ª, which block has a portion projecting beyond the forward edge of the mold board so as to guide the share blade as it is drawn rearward into operative association with the mold board. The hook member 14ª, like the member 14, is bent so as to receive between it and the share blade said projecting end of the guide block.

It will be apparent that by properly proportioning the parts, the degree of pull exerted by the securing means 10 upon the respective hooks 14 and 14ª may be distributed as desired. In the present embodiment of the invention it will be noted that the pivotal connection of the rod 17 with the lever 21 is such as to accomplish a greater pull upon the hook member 14 so as to insure the firm engagement of the share with the toe of the frog as well as the proper alinement of the share blade with the mold board.

It will be seen that I have produced a detachable plow share of a very practical character. The securing means is of a very simple construction so that the cost of manufacture is reduced to a minimum, and at the same time it is possible to rigidly secure the plow share in position with reference to the frog and the mold board. Moreover it will be seen that when it is desired to detach the plow share this may be readily accomplished by a mere rotation of the knurled wheel 20 sufficient to permit of the disengagement of the link 22 from the hook member 14 and of the lever 21 from the hook member 14ª.

I claim as my invention:

1. The combination in a plow, of a frog, a mold board rigid with the frog, a share having a share blade and a landside adapted to engage with the frog, and a means providing a quick detachable connection between the share, the mold board and the frog, said means comprising a rod carried by the mold board and having means for moving the same longitudinally, a lever pivoted between its ends to said rod, a pair of hook members rigidly secured to the share blade upon the underside thereof and near its upper edge, said frog having a downwardly opening notch therein for receiving one of said hook members and said mold board having a part secured thereto for insertion between the other one of said hook members and the share blade, said hook members projecting at their free ends downwardly away from the adjacent upper edge of the share blade whereby to receive between them and the share blade the frog on the one hand and said part of the mold board on the other hand, and means detachably securing the opposite ends of said lever to said hook members.

2. In a plow, the combination with a frog, and a mold board secured thereto, said mold board having a projecting guide block, of a plow share having a pair of upwardly extending hooks secured thereto, one of said hooks lapping under the edge of the frog and the other hook lapping under the edge of the guide block, whereby said frog and said guide block are confined between the hooks and the share, and a tensioning device mounted on the mold board and including a lever connected at its opposite ends to said hooks respectively.

In testimony whereof, I have hereunto set my hand.

JOHN C. BOHMKER.