No. 673,606. Patented May 7, 1901.

G. A. KELLY.

PLOW.

(Application filed Jan. 15, 1901.)

(No Model.)

Fig. 1.

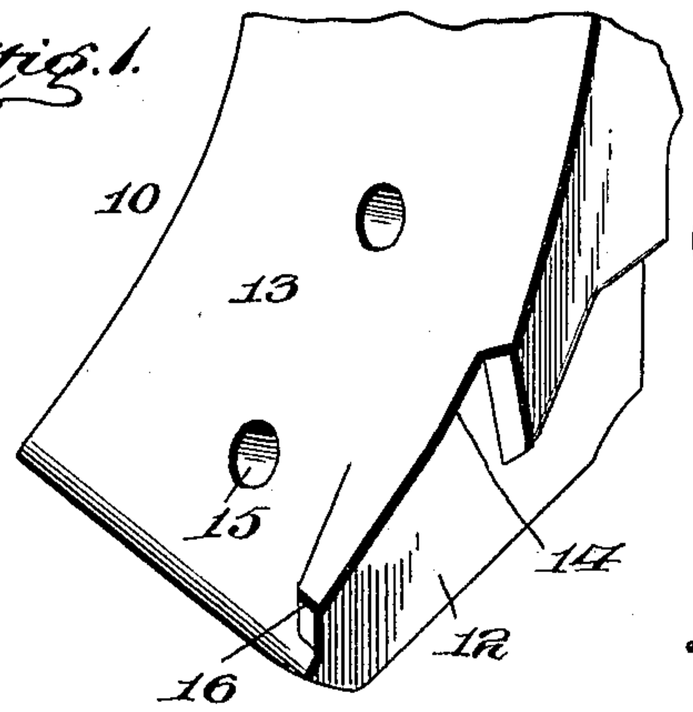


Fig. 2.

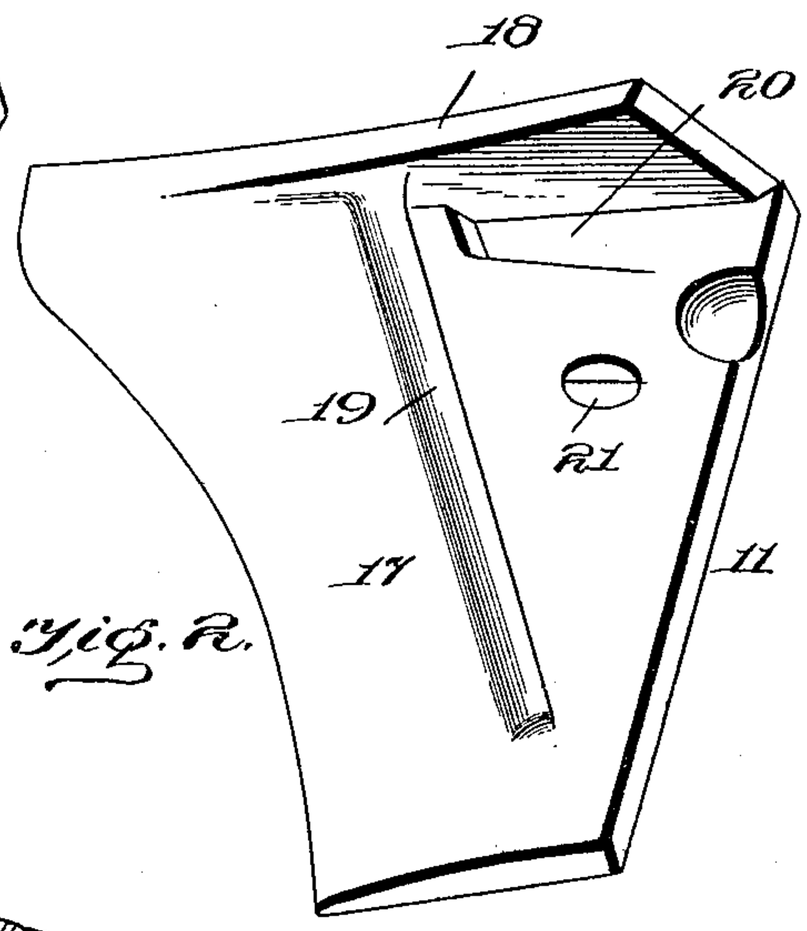


Fig. 3.

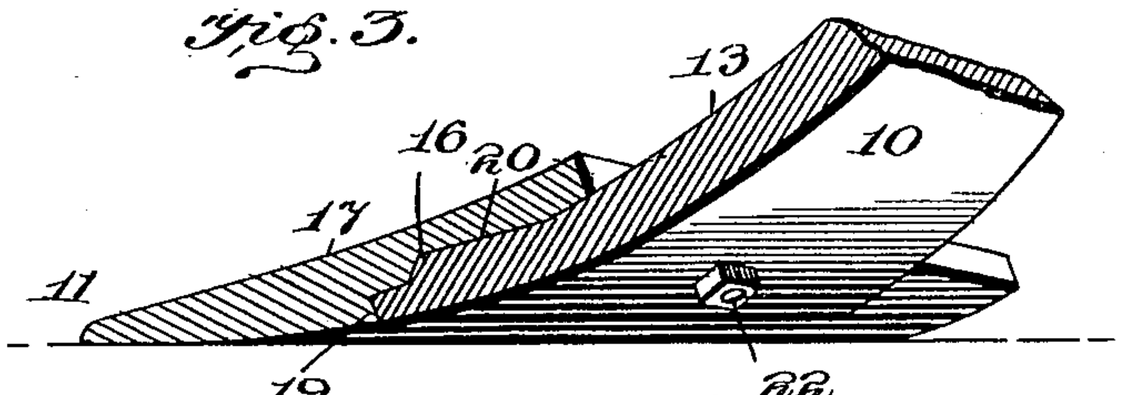


Fig. 4.

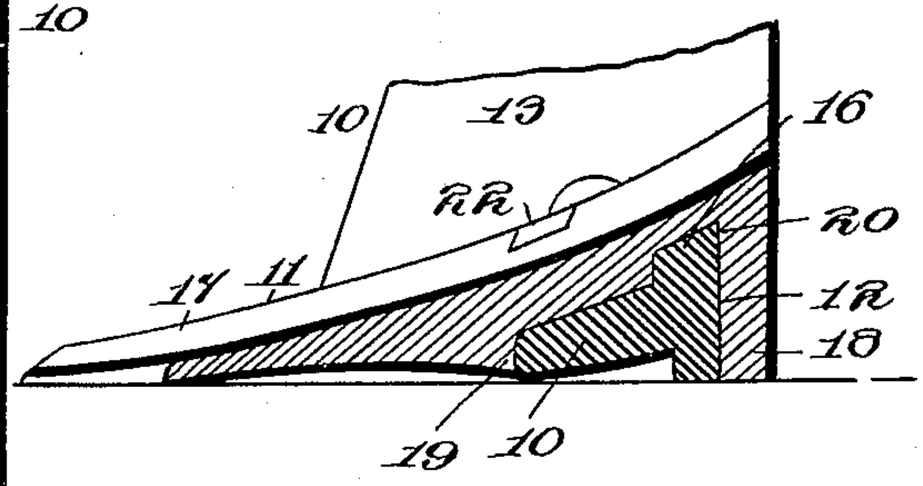
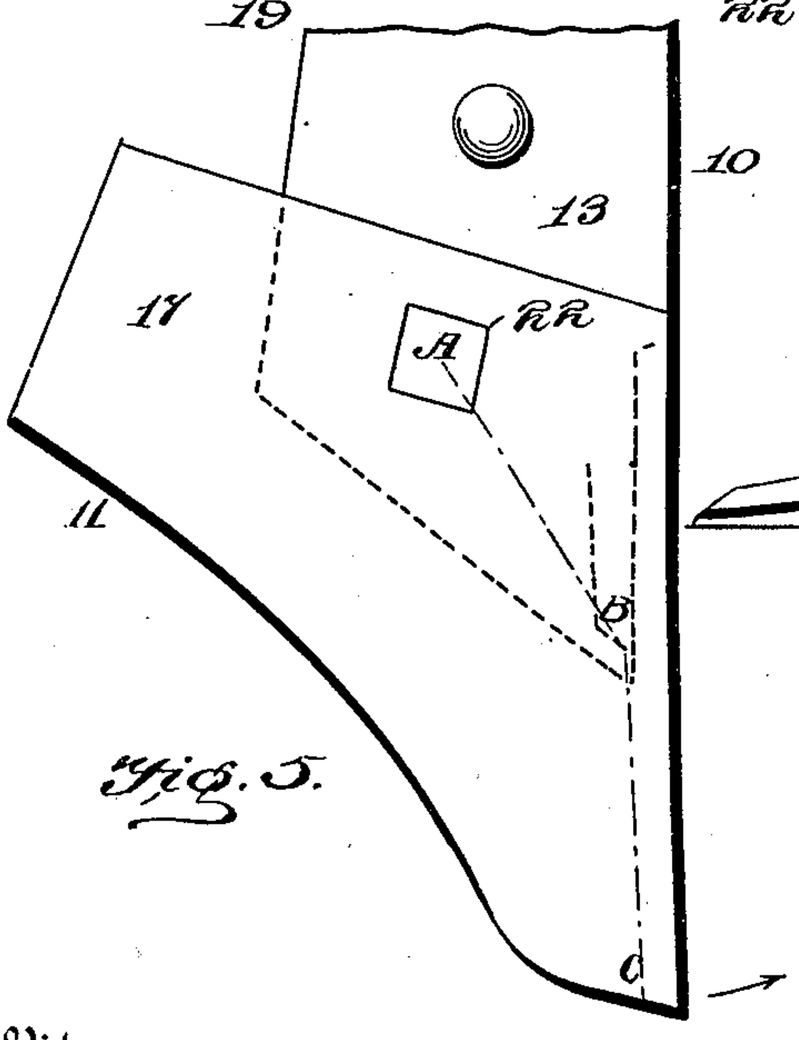


Fig. 5.



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UNITED STATES PATENT OFFICE.

GEORGE ADDISON KELLY, OF LONGVIEW, TEXAS, ASSIGNOR TO G. A. KELLY PLOW COMPANY, OF SAME PLACE.

PLOW.

SPECIFICATION forming part of Letters Patent No. 673,606, dated May 7, 1901.

Application filed January 15, 1901. Serial No. 43,378. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ADDISON 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.

In the usual construction of plows the upper face of the lower end of the standard is smooth and the point or share rests upon it and is bolted thereto. By this arrangement the point is held rigidly upon the standard against relative movement toward the turning side of the plow; but there is nothing, with the exception of the fastening-bolt, that prevents the movement of the point toward the landside. As the point is repeatedly subjected to side draft toward the landside it will be seen that the strain comes entirely upon the bolt. The result is that the bolt is either broken or loosened to such a degree that the efficiency of the plow is greatly impaired. Various attempts have been made to remedy this. For instance, lugs have been provided on the face of the standard contiguous to the bolt-hole, and these lugs were arranged to fit in corresponding notches in the under face of the point. Instead of remedying the defect, however, this provision rather augments it, for two reasons: In the first place the lugs act as a fulcrum, and the distance between the end of the point and the lug being comparatively so much greater than the distance from the lug to the bolt a correspondingly great leverage is provided, and the strain upon the bolt instead of being relieved is increased. Furthermore, the notches are placed directly beneath the working face of the point and greatly weaken the same at the place where the greatest wear and strain are applied, the result being that the point is very liable to be broken upon coming into contact with a hard or immovable substance.

The present invention relates to this art; and the object is to provide means which will rigidly hold the point against independent movement toward the landside of the plow and at the same time will be free from the objections of the above-mentioned means.

The improvement therefore resides in interlocking means carried by the standard and share and arranged at a point as far from the fastening-bolt as possible and as close to the working end of the point, so that the leverage between the bolt and said interlocking means will be as great as possible, and that between the working end of the point and the interlocking means will be correspondingly shortened and decreased. A further feature resides in locating the interlocking means at a point where the share is greatly strengthened, so that there is no weakening of the parts, and the share is capable of as long and severe use as heretofore.

In order that the invention may be readily understood by those skilled in the art, the construction is fully illustrated in the accompanying drawings and described in the following specification. It will be understood, however, that this construction is open to modification within the scope of the claims hereto appended.

In the drawings, Figure 1 is a perspective view of the lower portion of a standard embodying the present invention. Fig. 2 is a perspective view of the coacting plow point or share in reversed position. Fig. 3 is a longitudinal sectional view of the standard and share in coacting relation. Fig. 4 is a vertical cross-sectional view of the same. Fig. 5 is a plan view.

Similar characters of reference designate similar parts throughout the several figures of the drawings.

In illustrating the invention a well-known form of turning-plow is used, the lower portion of the standard only being shown, said standard being designated by the numeral 10. The point or share is designated 11. These may be changed or modified as desired. The standard in the form shown is provided with the usual upright landside-face 12 and the upper curved face 13, their meeting edges being indicated by 14. The point is secured upon the curved face 13, which is therefore provided with the opening 15 for the reception of the fastening-bolt. Projecting from the lower portion of the curved face 13 and adjacent to the meeting edge 14 is an upstanding lug 16, the outer face of which forms a continuation of the upright face 12. This lug is thickest at its lower end and tapers gradually

toward its upper end until its upper surface coincides with that of the face 13. The lower end is also inset slightly from the lower edge of the face 13, so that said edge is continuous from one end to the other.

The point or share 11 comprises the usual working plate 17, having at one edge the landside-flange 18 and on its under side a stop-rib 19. The lower end of the standard fits snugly in the angle thus formed by said landside-flange 18 and stop-rib 19. Arranged in the under side of the point between the landside-flange 18 and the stop-rib 19 and contiguous to said landside-flange is a notch or socket 20, which exactly corresponds to the shape of the lug 16. One of the walls of this notch forms a continuation of the inner face of the landside-flange 18. The point is also provided with the usual bolt-opening 21. The point is applied to the standard in the usual manner. The under side bears directly upon the face 13 of the standard, and the landside-flange fits against the landside-face 12. The standard will thus fit snugly in the angle between the landside-flange 18 and the stop-rib 19 of the point. The openings 15 and 21 will also be in alinement, and a suitable fastening-bolt, as 22, is passed therethrough. At the same time the lug 16 will fit tightly into the corresponding notch 20 of the point and will be held therein by the bolt 22. The result is that the point is rigidly held by the lug against independent movement toward the landside of the plow, and the strain upon the bolt is reduced to a minimum. This is accomplished by placing the lug as far from the fastening-bolt and as close to the point as practicable. In the plan view Fig. 5 is illustrated in a diagrammatical manner the relative position of the parts. As clearly shown, A indicates the position of the fastening-bolt, B of the lug, and C of the working end of the point. The arrow indicates the direction of the strain. It will thus be seen that the line A B is as long as possible, while the line B C is correspondingly shortened. Therefore, assuming the point B as the fulcrum, it will be seen that the leverage of A B is as great as possible, the leverage B C as small as possible, and the strain upon the bolt at A will be the minimum obtainable. A further advantage resides in placing the lug and notch so that they will be adjacent to the landside-flange of the point and between it and the stop-rib, for the reason that both of said elements form strengthening means on both sides of the notch, and thus obviate any liability of the share breaking at this point. Furthermore, by having the lug inset a slight distance from the edge of the standard a continuous smooth edge is provided, against which the share bears, and the socket or notch will be correspondingly removed from the stop-rib, thus insuring the pattern drawing readily from the sand during the molding operation. It will also be observed that the point and standard may be molded and cast in the ordinary way without adding to the cost of the same.

From the foregoing it is thought that the construction, operation, and many advantages of the herein-described invention will be apparent to those skilled in the art without further description, and it will be understood that various changes in the size, shape, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

Having thus described the invention, what I claim is—

1. In a plow, a standard and a share, one of which carries a projection adjacent to the landside of the plow the other being provided with a recess arranged to receive the projection.

2. In a plow, a standard having a projection at its landside edge, and a share having a recess to receive said projection.

3. In a plow, the combination with a standard having a lug projecting from the upper landside edge of the same and contiguous to its lower end, of a share having a socket arranged on its under side contiguous to the landside-flange thereof and arranged to receive the lug of the standard.

4. In a plow, the combination with a standard having a tapering lug projecting from the upper landside edge of the same, of a share having a socket corresponding in shape to and arranged to receive said lug.

5. In a plow, the combination with a standard having a projection upon its upper face, of a share having a landside-flange and a stop-rib arranged in convergent relation, said share being provided with a socket disposed in the angle formed by the convergence of said flange and rib and adapted to receive the projection of the standard.

6. In a plow, the combination with a standard having a tapering lug arranged upon its upper landside edge and inset slightly from its lower end, of a share having a landside-flange and a stop-rib arranged in convergent relation, said share having a socket disposed in the angle formed by the flange and rib, said socket corresponding in shape to and adapted to receive the tapering lug of the standard.

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

GEORGE ADDISON KELLY.

Witnesses:
A. L. TAYLOR,
R. M. KELLY.