C. W. HICKS.

PLOW.

APPLICATION FILED AUG. 21, 1911.

1,034,236. Patented July 30, 1912.

Fig. 1.

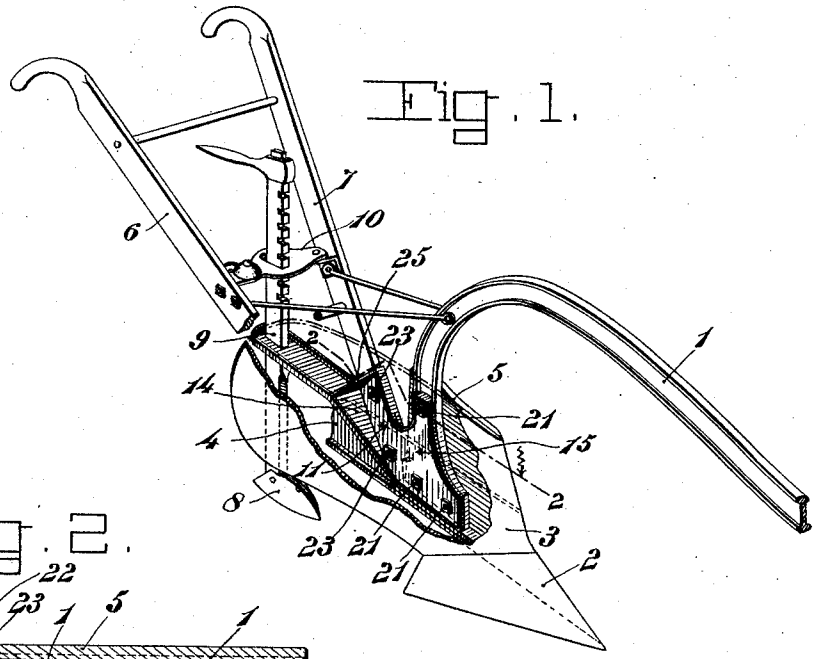


Fig. 2.

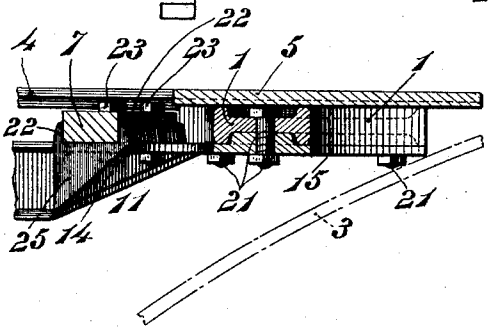
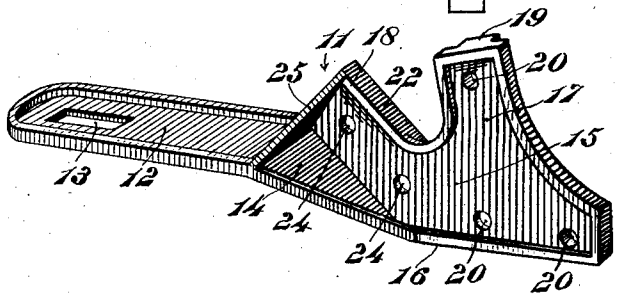


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

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PLOW.

1,034,236. Specification of Letters Patent. Patented July 30, 1912.

Application filed August 21, 1911. Serial No. 645,061.

To all whom it may concern:

Be it known that I, CHARLES W. HICKS, a citizen of the United States, residing at Sutherland, in the county of Hillsboro and State of Florida, have invented new and useful Improvements in Plows, of which the following is a specification.

This invention relates to improvements in plows, and more particularly to an attachment or part which combines the features of a bracket or guide for the vertical bar of a subsoil attachment and of a part of the frame of the plow itself. In this connection reference may be had by way of example to my prior U. S. Patent No. 990,738, of April 25, 1911, wherein there is shown a lower bracket 11 which forms a guide for the bar 6 of the subsoil attachment. In the construction shown in my said patent, the bracket 11 is attached to the landside and a special bracket carried by the mold board is required for the attachment of the handle adjacent the bracket 11. Or, in some cases, depending on the particular type of plow, the handle also may be attached to the landside. One objection to this arrangement is that the form of the bracket for the subsoil bar and the attachment to which the handle is fastened must be varied in accordance with the type of plow to which the subsoil attachment is to be applied, thus adding to the expense of production.

One object of the present invention is to provide an attachment of the character referred to which may be interchangeably applied, without any variation, to plows of different types, including both those with iron beams and the less frequently used constructions which have wooden beams.

The improved attachment has the further advantage of causing all the stresses incident to the use of the subsoil attachment to be taken up by the beam, instead of partly by the beam and partly by the landside or some other part of the plow, as heretofore.

The improved attachment has the further advantage of being intrinsically less expensive than the constructions which it is designed to supplant.

An embodiment of the invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a perspective view of a plow with the present attachment applied thereto, the mold board being partly broken away for clearness of illustration; Fig. 2 is a sectional view on the line 2—2 of Fig. 1; and Fig. 3 is a perspective view of the attachment which forms the subject of the present invention.

Similar characters of reference designate corresponding parts throughout the several views.

In order that the application of the present improvement may be more readily understood, a brief and general enumeration of the essential parts of a plow and subsoil attachment, such as is shown in my prior patent referred to, will be given. These parts are the beam 1; the point 2; the mold board 3; the landside 4; the frog 5, which carries the landside, mold board, and point; the handles 6 and 7; the subsoil blade 8; the bar 9, which carries the subsoil blade; and the upper bracket 10 for said bar.

The attachment which forms the subject of the present invention is shown in detail in Figs. 2 and 3, and is designated generally by the numeral 11. The attachment 11 is preferably in the form of a casting, although its various parts may, if desired, be constructed separately and rigidly connected together. The attachment 11 includes a bracket 12, which has at its rear end a slot 13, and which serves as the lower guide for the bar 9. The bracket 12 projects rearwardly from a forwardly and downwardly inclined flange 14, which projects laterally from a body part 15. The outer edge of the flange 14 inclines downwardly and inwardly toward the landside, thereby giving said flange the form of a triangle, and at its lower end joins with the outer edge of a narrow flange 16, which projects laterally from the lower edge of the part 15 and extends to the forward end of said part. The body part 15 includes an attachment member 17 and a bracket member 18. The attachment member 17 is formed for association with the lower rear end of the beam 1, and has on that face which is adjacent the landside a comparatively wide rib 19, which fits between the flanges of said beam. Through said member 17 are formed the openings 20 to accommodate the bolt and nut fastenings 21, which bind together the frog, the beam, and the attachment 11. It may be noted that the fastenings 21 are the same fastenings which are ordinarily used to connect the beam and the frog, and that the arrangement of the openings 20 is selected with regard to the arrangement of

these fastenings. The bracket member 18 is arranged at the inner side of the flange 14, being disposed at right angles to said flange and in the plane of the member 17. Said bracket member has at its sides flanges 22, and is provided for the attachment of the handle 7. The lower end of the handle 7 fits between the flanges 22, and is secured in position by bolt fastenings 23 which pass alike through openings in said handle and through openings 24 in the member 18. It will, of course, be understood that the inclination of the bracket member 18, and, of course, of the flange 14, is selected with regard to the inclination which may be desired for the handle 7. For the purposes of strength and rigidity, the member 18 is connected to the flange 14, along the junction of the latter and the bracket 12 by a transverse web 25, which is in a plane perpendicular to said flange. The rib 19 corresponds in outline to the lower rear end of the beam 1, and in fitting the attachment to a plow, said rib is fitted conformably between the flanges at the lower rear end of the beam 1 and the attachment is secured by the bolt fastenings 21, as above explained. The rib 19 thus serves as a means for insuring the centering of the attachment, as well as a means for maintaining a rigid association of the attachment and the beam. Thereafter, the attachment and the handle 7 are connected by the bolts 23 in the manner explained, and the bar 9 is inserted through the slot 13. The flanged lower end of the member 17 rests and has a bearing upon the usual blade which is formed at the lower end of the frog 5, and the relation of these parts is a further factor in insuring the rigidity of the connection between the attachment and the beam.

It will be apparent from the foregoing description that the attachment 11 causes all of the stress of the subsoil adjunct to be placed upon the lower portion of the beam, which lower portion is amply sufficient to take up and resist all stresses that may be developed. Furthermore, in view of the fact that the handle 7 is secured by the fastenings 23 directly to the attachment 11 and not to the landside or any other parts of the plow, as heretofore, stresses occurring at the connection of said handle are altogether taken up by the attachment and not by the landside or other parts of the plow, as heretofore.

Owing to the fact that the attachment 11 may be formed as a casting, it will be obvious that it may be produced at a comparatively low cost.

I claim as my invention:

1. As an article of manufacture, an attachment for subsoil plows having a bracket at its rear end which serves as a guide for the subsoil bar and a part in advance of said bracket for attachment to the beam of the plow, the attachment part having its inner face provided with a rib which fits conformably between the flanges of the beam at the lower rear end of the latter.

2. As an article of manufacture, an attachment for subsoil plows having a bracket at its rear end which serves as a guide for the subsoil bar and occupies a horizontal plane, a part in advance of said bracket which includes a vertical member for attachment to the lower rear end of the beam of the plow and a vertical bracket member in the plane of the first-named member and located between the latter and said bracket and to which one of the handles of the plow may be fitted, a flange connecting the bracket member and the bracket, and a web connecting the bracket member and the flange.

3. As an article of manufacture, an attachment for subsoil plows having a bracket at the rear end thereof which serves as a guide for the subsoil bar of the plow, a part in advance of said bracket for attachment to the beam of the plow, and a second part intermediate said bracket and the first-named part having a pair of spaced parallel side flanges between which the lower end of one of the handles of the plow may be fitted.

4. As an article of manufacture, an attachment for subsoil plows having a bracket at the rear end thereof which serves as a guide for the subsoil bar of the plow, a part in advance of said bracket for attachment to the beam of the plow, said part being provided upon its landside face with a rib adapted to fit between the flanges of the beam, and a second part intermediate said bracket and the first-named part for attachment to one of the handles of the plow.

5. As an article of manufacture, an attachment for subsoil plows having a bracket at the rear end thereof which serves as a guide for the subsoil bar of the plow, a part in advance of said bracket for attachment to the beam of the plow, said part being provided upon its landside face with a rib adapted to fit between the flanges of the beam, and a second part intermediate said bracket and the first-named part having a pair of spaced parallel side flanges between which the lower end of one of the handles of the plow may be fitted.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

CHARLES W. HICKS.

Witnesses:
GEO. S. LIVINGSTON,
CHAS. A. ROWE.