No. 667,558. Patented Feb. 5, 1901.

J. R. McWANE.

HILLSIDE PLOW.

(Application filed Sept. 6, 1900.)

(No Model.)

Fig. 1.

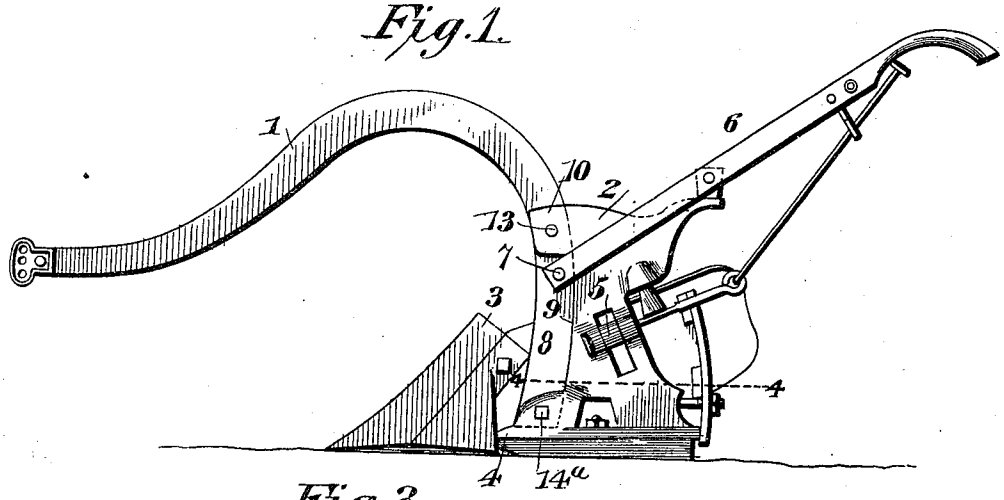


Fig. 3.

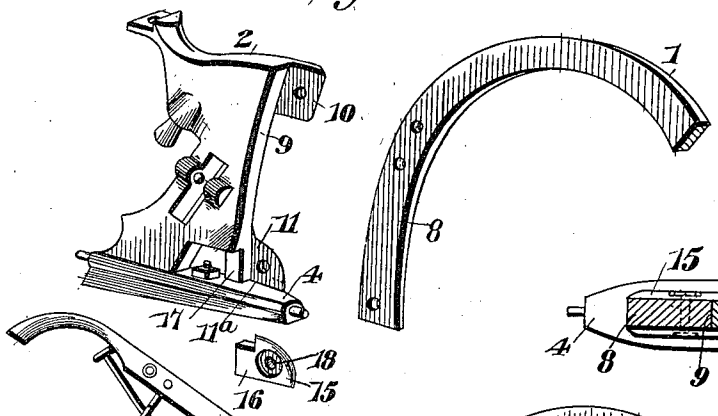


Fig. 4.

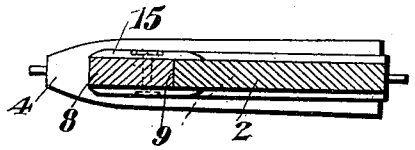
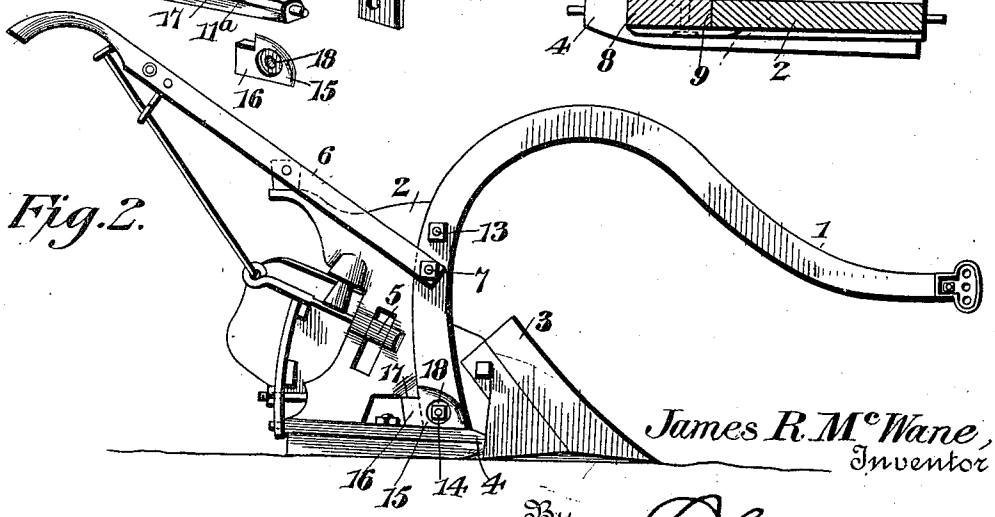


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES R. MCWANE, OF LYNCHBURG, VIRGINIA.

HILLSIDE-PLOW.

SPECIFICATION forming part of Letters Patent No. 667,558, dated February 5, 1901.

Application filed September 6, 1900. Serial No. 29,210. (No model.)

To all whom it may concern:

Be it known that I, JAMES R. MCWANE, a citizen of the United States, residing at Lynchburg, in the county of Campbell and State of Virginia, have invented a new and useful Hillside-Plow, of which the following is a specification.

This invention relates to hillside or reversible plows, and has special reference to the beam-fitting therefor to provide a structure of sufficient strength for hillside-work without liability of breakage of the beam, while also providing a sufficient clearance to obviate the choking or clogging of the plow in foul or weedy land.

To this end the invention primarily contemplates improved means for associating a curved or gooseneck steel beam with the cast standard of a hillside or reversible plow, so as to obviate the objections which exist to the ordinary wooden or iron beam hillside-plows.

A further object is to provide an improved fitting between the beam and the standard, whereby the parts may be readily replaced or interchanged.

Heretofore two principal objections have existed to the ordinary wooden-beam hillside-plow. One of these objections is that the beam is very likely to break in the heavy hillside, work, and as a matter of fact does eventually wear out or become so brittle as to be unfit for use. A further objection to wooden-beam hillside-plows is that the beam is always fastened to the standard so low in front as to leave very little clearance, and thereby rendering the plow liable to ready choking in foul or weedy land. These disadvantages of the ordinary wooden-beam hillside-plow have been partially overcome by what is commonly known in the art as the "iron-beam hillside-plow;" but with an iron beam such as is now in use it is impossible from a practical standpoint to get the requisite clearance in front without making the beam too heavy for economical manufacture, and, besides, the ordinary iron beam is more liable to breakage than a steel beam. While steel beams have been considered and utilized in connection with hillside-plows, so as to overcome the objection of the iron and wooden beams readily breaking, still the straight steel beam, such as used, is open to the same objection as the wooden and iron beams in the particular of not leaving the necessary clearance in front.

The present invention obviates all of the difficulties mentioned by associating a curved or gooseneck steel beam with the standard of a hillside or reversible plow in the novel manner herein set forth.

With these and many other objects in view which will more readily appear to those familiar with the art as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

While the essential features of the invention involved in the detachable connection between the gooseneck steel beam and the standard are necessarily susceptible to modification without departing from the spirit or scope of the invention, still the preferred embodiment of the improvements is shown in the accompanying drawings, in which—

Figure 1 is an elevation of a hillside-plow embodying the improvement contemplated by the present invention. Fig. 2 is a similar view showing the plow from the opposite side. Fig. 3 is a detail in perspective showing in unassembled relation the matching portions of the standard and the rear leg of the curved or gooseneck steel beam. Fig. 4 is a cross-sectional view on the line 4 4 of Fig. 1, showing the flush-fitting relation of the beam and the standard with which it is associated.

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

In carrying out the present invention it is the purpose to provide a connection between the steel beam and the standard involving no change in the ordinary parts of the plow except the standard. In fact the present invention admits of the use of all of the ordinary parts, except the standard, of a hillside or reversible plow, and therefore the wearing parts of the curved or gooseneck steel-beam plow are interchangeable with the wearing parts of the old objectionable wooden-beam plow. Hence for illustrative purposes there is shown in the drawings a type of hillside-plow with the curved or gooseneck steel beam, (designated by the numeral 1.) The

said plow, in addition to the beam 1, which in the present invention is really an attachment therefor, includes in its general organization the upright standard or standard-casting 2, the reversible plow proper, (designated by the numeral 3,) which is pivotally hung upon the foot 4 at the lower end of the standard, so as to be capable of being swung to either side of the same in the usual way, and the locking device 5, supported by the standard and coöperating with the plow proper, 3, to provide for fastening the same in its operative position at either side of the standard. These are the usual parts or appurtenances of a hillside or reversible plow, and as no special claim is made thereto in the present application further detailed description thereof seems unnecessary, it being sufficient to state that the said elements or parts of the plow are manipulated in the usual way and operate in the ordinary manner of a hillside-plow. The standard 2 also supports the usual plow-handles 6, which, however, are designed to have a bolt or equivalent connection 7 at their front lower ends with the pendent curved leg portion 8 at the rear end of the curved or gooseneck steel beam 1.

To provide for carrying out the present invention—that is, to effect the necessary union between the curved or gooseneck steel beam 1 and the standard or standard-casting 2—the latter is cut away or formed at the front upright edge thereof with a curved beam-receiving seat 9, which receives in flush-fitting relation the rear pendent leg portion 8 of the curved or gooseneck beam 1. The said beam-receiving seat 9 is formed in the process of casting the standard.

As shown in the drawings, the seat 9 is preferably of the rabbeted formation and includes a pair of forwardly-projecting holding-ears 10 and 11, projecting beyond one edge of the standard 2 and at one side thereof, the said ears 10 and 11 being respectively located at the upper and lower ends of the seat 9. The lower holding-ear rises from the upper side of the foot 4 of the standard, and thus provides at the lower end of the seat 9 a side inclosed recess or socket 11^a, in which closely and snugly fits the extreme lower end of the pendent leg portion 8 of the beam 1. It will thus be seen that to provide for the fitting of the curved or gooseneck beam to the standard it is only necessary to make a new standard or to form an old standard with the seat described, inasmuch as the wearing parts remain the same in the plow; but in order to secure a proper connection between the beam and the standard without interfering with the use of the plow the portion of the standard fitting the seat 9 is forged to the same thickness as the standard, particularly at the point where the moldboard touches the standard upon the sides thereof. Therefore the beam may be properly said to fit within its seat 9 in flush relation to the side faces of the standard.

Upper and lower securing-bolts 13 and 14, respectively, pass through the upper and lower holding-ears 10 and 11 and the leg portion 8 of the beam fitting against the said ears, and the lower of said bolts 14 also passes through a separate wear-plate 15, having a heel 16, seated in the notch 17, formed in one side of the standard, at the lower end thereof, immediately above the foot 4 and fitting against the side of the beam-leg 8, at the extreme lower end thereof, and in opposition to the lower holding-ear 11. The said separate wear-plate 15 is formed in its outer face with a socket 18 to receive the end of the lower bolt 14, while the head 14^a of said bolt is squared and countersunk within the lower holding-ear 11, thus providing a construction in which both the head and nut of the bolt are seated flush within the parts engaged thereby, so as to prevent wearing of the nut or unscrewing of the bolt by the friction of the land. Besides, the construction described provides an effective and secure fastening for the lower end of the leg portion of the beam. It will be further observed that the leg portion 8 of the steel beam 1 preferably tapers toward its extreme lower end to tightly fit within the recess or socket 11^a at one side of the lower holding-ear 11, and also inasmuch as the pendent leg portion 8 of the beam lies at the front edge of the standard the same constitutes a protective steel facing therefor.

From the foregoing it is thought that the construction and advantages of the herein-described improvements in hillside-plows will be readily apparent to those skilled in the art without further description, and it will be understood that various changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. In a hillside-plow, the combination of the standard, and the reversible plow, with a beam connected with the standard, and extending along and fitting against the front edge thereof so as to constitute a protective facing for said front edge.

2. In a hillside-plow, the combination of a standard, and the reversible plow, with a gooseneck steel beam detachably connected to the standard and disposed wholly in advance of the front edge thereof, and fitted against said front edge so as to constitute a protective facing therefor.

3. In a hillside-plow, the combination of the usual standard, and the reversible plow carried thereby, with a gooseneck steel beam detachably connected to the standard, and extending along the entire front edge thereof and fitted against said front edge and in flush relation therewith.

4. In a hillside-plow, the combination of the usual standard provided at its front edge with a beam-receiving seat, and the reversible

plow carried by the standard, with a curved or gooseneck steel beam, having its pendent leg portion detachably fitted in said seat in flush relation to both of the side faces of the standard, said leg portion of the beam being disposed wholly in advance of the front edge of the standard.

5. In a plow of the class described, the combination of the standard provided at the front edge thereof above its foot portion with a longitudinal beam-receiving seat having a plurality of holding-ears, and a beam having a pendent leg portion fitting within said seat and detachably secured to said holding-ears.

6. In a plow of the class described, the combination of the standard provided at the front edge thereof, above its foot portion, with a beam-receiving seat having forwardly-projecting holding-ears arranged at the same side of the standard, a beam having a pendent leg portion fitting in said seat and detachably secured to said holding-ears, and a separate wear-plate for the lowermost securing-bolt.

7. In a plow of the class described, the standard provided at the front edge, above its foot portion, with a longitudinal beam-receiving seat having forwardly-projecting holding-ears at the same side of the standard, a beam having a pendent leg portion fitting in said seat against the holding-ears, bolts connecting the beam with the holding-ears, and a separate wear-plate for the lower bolt, said wear-plate being held against one side of the lower end portion of the beam, and having an interlocking connection with the standard.

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

JAMES R. McWANE.

Witnesses:
JOHN H. SIGGERS,
FLORENCE E. WALTER.