No. 764,051. PATENTED JULY 5, 1904.

G. M. HANGER.

HAND PLOW.

APPLICATION FILED MAR. 10, 1904.

NO MODEL.

Fig. 2.

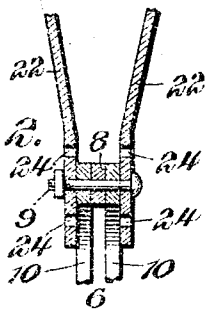
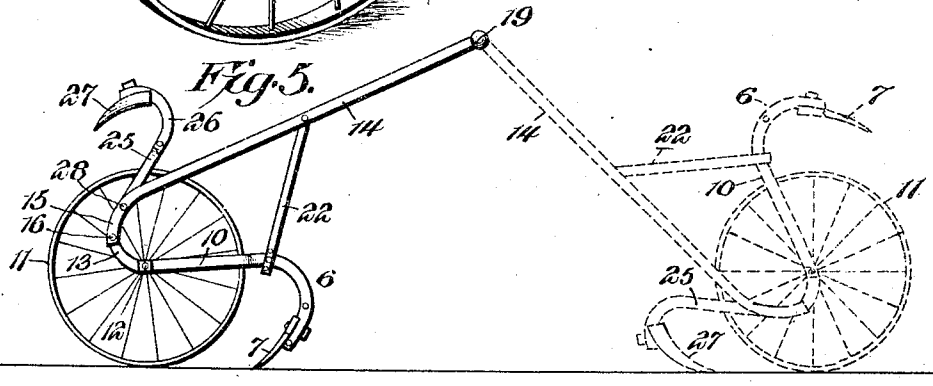


Fig. 1.

Fig. 3.

Fig. 4.

Fig. 5.



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Witnesses

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No. 764,051. Patented July 5, 1904.

UNITED STATES PATENT OFFICE.

GEORGE MINER HANGER, OF BRIDGEWATER, VIRGINIA, ASSIGNOR OF ONE-HALF TO DANIEL S. THOMAS, OF BRIDGEWATER, VIRGINIA.

HAND-PLOW.

SPECIFICATION forming part of Letters Patent No. 764,051, dated July 5, 1904.

Application filed March 10, 1904. Serial No. 197,452. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MINER HANGER, a citizen of the United States, residing at Bridgewater, in the county of Rockingham and State of Virginia, have invented a new and useful Hand-Plow, of which the following is a specification.

This invention relates particularly to improvements in that class of plows operated by manual power; and the object is to provide a structure that can be easily and cheaply manufactured, has a wide range of usefulness, and can be readily changed to suit the character of the work to be performed as well as adjusted to suit the convenience of the operator of the plow.

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

Figure 1 is a perspective view of the plow. Fig. 2 is a detail sectional view through the adjustable connection between the handle-supports and the standard. Fig. 3 is a detail sectional view through the connection between one of the handle members, its support, and the cross-brace. Fig. 4 is a similar view through the connection between the side bars of the standards and one of the handle members, and Fig. 5 is a side elevation illustrating the relation of parts when the different plow elements are in use.

Similar reference-numerals indicate corresponding parts in all the figures of the drawings.

In the embodiment illustrated, a standard is employed having a downturned rear end 6, to which any suitable implement—as, for instance, a cultivator-rake 7—may be attached. This standard comprises side bars, the rear downturned ends of which are held in slightly-spaced relation by suitable collars 8 and are secured together by bolts or fastening devices 9. The forwardly-projecting portions 10 of the side bars are spaced farther apart to accommodate therebetween a ground-wheel 11, which wheel is journaled by a suitable bolt 12 to intermediate parts of the forwardly-projecting portions 10 of the side bars. The front ends of the side bars 10 are upturned, as shown at 13, constituting ears, to which the lower ends of side members or bars 14 of the handles are attached, said lower ends being downturned, as shown at 15, and pivoted to the upstanding portions 13 by removable bolts 16. The side members 14 preferably diverge, and their upper ends are offset to form ears 17, to which is attached a cross handle-bar 18, projecting beyond the side members and having its projecting ends rounded to form handle knobs or grips 19. Between the ends of the side members is located a cross-brace 20, the terminals of which are downturned, as shown at 21, and rest against the inner sides of the members 14. Supporting-braces 22 have their upper ends fitted against the inner sides of the downturned terminals 21 of the brace 20, and through these overlapped portions are passed pivot-bolts 23, that permit a slight swinging movement of the supports 22 and also constitute means for fastening the brace 20 to the side bars of the handles. The supports 22 converge, as shown, and their lower ends are offset slightly, so as to be disposed in substantially parallel relation. These offset terminals are provided with openings 24, adapted to receive one of the connecting-bolts 9 of the side bars of the main standard 6. It will therefore be apparent that the handles may be raised or lowered with respect to the standard.

In connection with this structure there is employed a supplemental standard formed of side bars 25 and comprising an offset free end 26, to which may be attached a suitable ground-engaging implement 27. The side bars 25 have their main portions offset, so as to be spaced farther apart, and these offset portions embrace the wheel and have their free terminals curved and alined with the portions 15 of the side elements of the handles. Bolts 28 detachably secure the side bars 25 to the lower ends of the handle members, and the pivots 16 of said handle members also pass through the free terminals of said

side bars 25. As illustrated particularly in Figs. 1 and 4, the upturned ends of the main standard side bars 10 are embraced by the handle elements and the side bars 25 of the supplemental standard.

It is believed that the operation of this device will be clearly apparent. Two implements of the character desired are secured to the standards. If the cultivator is to be employed, the device is disposed as shown in Figs. 1 and 4, in which case the supplemental standard is elevated and is completely out of the way. On the other hand, if the other implement is to be used the plow is reversed, as indicated in dotted lines in Fig. 5, and in this connection it is desired to call attention to the fact that in both positions the handle-bar 18 will be disposed at the same elevation. Moreover, this will be true without regard to the adjustment between the handle members and the main standard. If the handle is placed nearer the main standard by adjusting the braces 22, the supplemental standard 26 will be moved with the handle and the same relation of parts will always be maintained. If desired, the supplemental standard can be entirely removed with little trouble, as it is only necessary to detach the pivot-bolt 16 and the bolts 28, afterward replacing the former.

It will be apparent that the device can be cheaply manufactured, and experience has proven that the draft or force necessary to propel the plow is comparatively light, due to the particular relation of the parts.

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 my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a hand-plow, the combination with a downturned standard having spaced side arms, of a wheel journaled to and between the side arms, spaced handle members pivoted at their lower ends to the side arms of the standard, a brace connecting the handle members between their ends, supporting-bars, pivots connecting the upper ends of the bars to the handle members, said pivots also constituting means for fastening the cross-brace to said handle members, and means for adjustably fastening the lower ends of the supporting-bars to the standard to permit the adjustment of the handle members toward and from the same.

2. In a hand-plow, the combination with a standard, of a ground-wheel, a handle connected to the standard, and a supplemental standard rigidly secured to the handle.

3. In a hand-plow, the combination with a standard, of a ground-wheel journaled on the standard, a handle pivotally connected to the standard, and a reversible supplemental standard rigidly secured to the handle and movable therewith.

4. In a hand-plow, the combination with a main standard having spaced side bars, of a ground-wheel journaled to and between the side bars, handle members having their lower ends pivoted to the side bars, and a reversible supplemental standard having side bars rigidly attached to the pivoted ends of the handle members.

5. In a hand-plow, the combination with a main standard having spaced side bars, of a ground-wheel journaled to and between the side bars, handle members having their lower ends disposed contiguous to the side bars of the standard, a supplemental standard having side bars that embrace the wheel and are located directly and longitudinally alongside the lower ends of the handle members, fasteners connecting the supplemental standard side bars and the handles and other fastening devices passing through the handle members and the side bars of both standards, said fastening devices and fasteners being independent of the ground-wheel journals.

6. In a hand-plow, the combination with a main standard having a downturned rear end and forwardly-projecting side bars, of a ground-wheel journaled to and between intermediate portions of the side bars, spaced handle-bars having their lower ends located adjacent to the front ends of the side bars, a supplemental standard having side bars that embrace the wheel, said side bars being disposed alongside and rigidly secured to the lower ends of the handle-bars and having their ends located at the ends of the side bars of the main standard, pivots passing through the contiguous ends of the handle-bars and the side bars, and supporting means adjustably connecting the handle-bars and the main standards.

7. In a hand-plow, the combination with a ground-wheel, of a main standard comprising side bars embracing the ground-wheel, the latter having its axle journaled in the side bars at an intermediate point thereof, the front or inner ends of said side bars being upturned, and the outer or rear ends of said side bars being downturned and provided with means for attaching an implement thereto, a handle having its side members or bars downturned and secured to the upturned ends of the side bars of the main standard, a brace connection between the intermediate portions of the side members of the handle and the side bars of the main standard, and a supplemental standard formed of side bars embrac-

ing the wheel and connected respectively to the upturned ends of the side bars of the main standard and to the downturned ends of the side members of the handle, the outer ends of the supplemental standard being provided with means for attaching an implement thereto.

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

GEORGE MINER HANGER.

Witnesses:
JAMES E. GIBBS,
D. S. THOMAS.