(No Model.) 2 Sheets—Sheet 1.

W. H. DURFEE

SIDE HILL PLOW.

No. 258,288. Patented May 23. 1882.

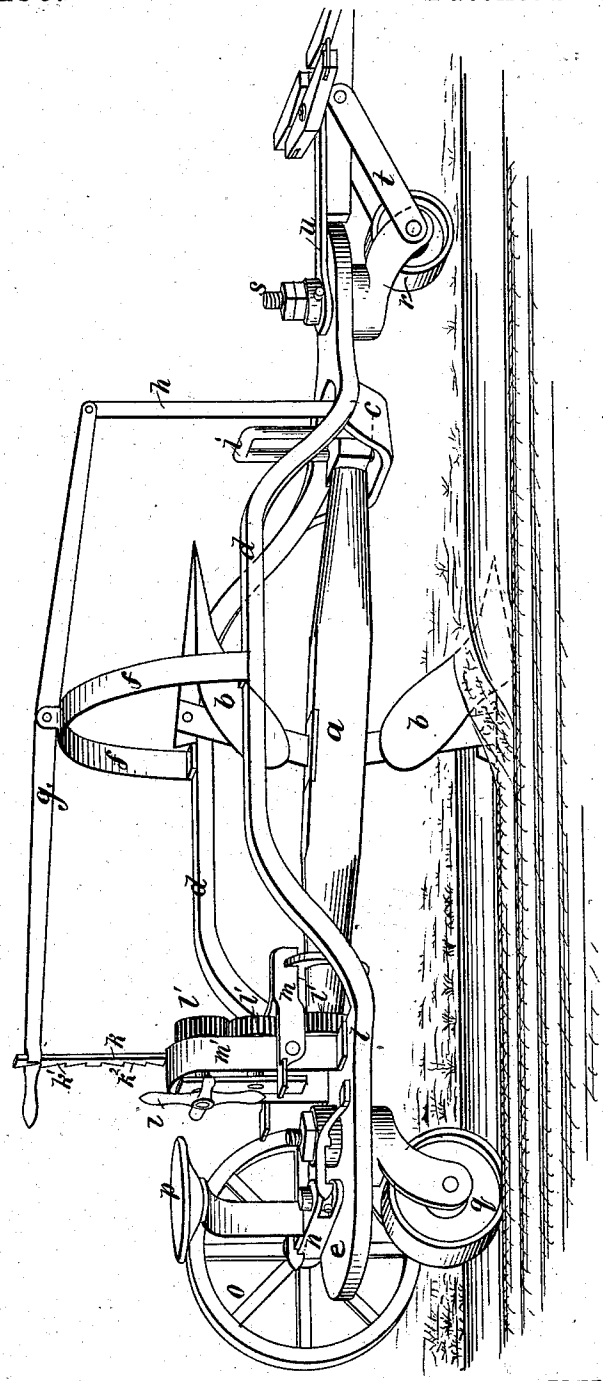


Fig. 1.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

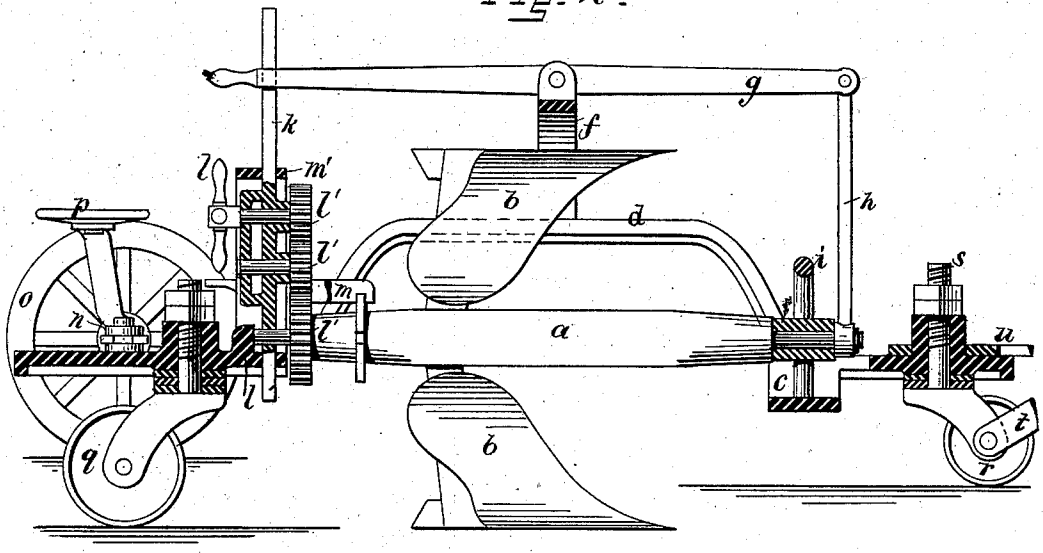


Fig. 3.

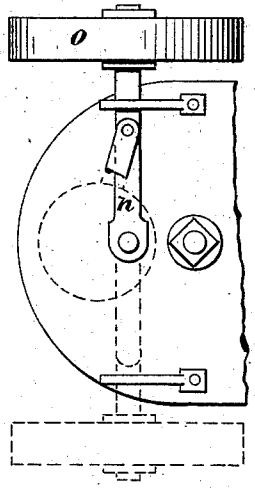
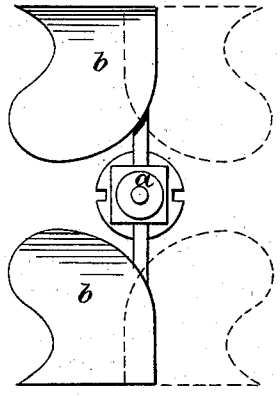


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM H. DURFEE, OF FALL RIVER, MASSACHUSETTS.

SIDE-HILL PLOW.

SPECIFICATION forming part of Letters Patent No. 258,288, dated May 23, 1882.

Application filed February 20, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DURFEE, formerly of Martinez, Contra Costa county, in the State of California, but now of Fall River, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Side-Hill Plows; and I hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification.

This invention has reference to improvements in what are known as "side-hill plows;" and it consists in the peculiar construction of the frame, the running-gear, and the devices for regulating the depth of the furrow, as will be more fully set forth hereinafter.

Figure 1 is a perspective view of my improved side-hill plow, showing the same in operation. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a top view of the rear end of the plow-frame, showing the side wheel as placed on one side in solid and on the opposite side in broken lines. Fig. 4 is an end view of the plows supported on a shaft placed in the center of the frame, arranged to turn and place either of the two plows into the ground.

The object of this invention is to so construct a side-hill plow that large plows may be used adapted for two or more horses and be quickly and easily handled.

Another object of this invention is to enable the plow to be readily reversed.

In the drawings, *a* is a plow-beam, provided with two plows and supported in journals, one at each end. *b b* are the two plows. The plow-beam *a* is suspended in a stirrup-shaped bearing, *c*, forming part of the forward end of the frame.

d d are two curved connecting-bars. These bars are curved both outward and upward, so as to allow plows of large dimension to be swung within the frame.

e is the rear platform, on which the driver's seat and regulating devices are placed.

f is the connecting-arch by which the two side bars, *d d*, are connected, and on which the fulcrum of the lever *g* is supported.

h is a connecting-link connecting the forward end of the plow-beam with the lever *g*.

i is a staple, in which the forward end of the plow-beam is secured, and which allows the same to be raised and lowered.

k is the rack-bar, provided with two sets of ratchets, the upper, *k'*, having the shoulders upward to support the lever *g* and hold the plow fairly in the furrow, while the lower, k^2, has the shoulders downward to support the lever *g* and raise the ends of the plow.

l is a hand-wheel connected with the pinions *l' l'*, by which the plow-beam is turned.

m is a bifurcated locking-lever, hinged to the frame *m'* and provided with two foot-treadles. This locking-lever engages with a notched ring on the plow-beam, so that the same can be firmly locked with either of the plows in the ground, or with both held horizontally.

n is a pivoted axle, secured to a stout pin in the center of the rear end of the plow-frame. On this axle the side wheel, *o*, is placed, so that the same can be swung from one side to the other. On each side is a stout latch or other suitable device, by which the axle is firmly held at either side of the plow desired.

p is the driver's seat, supported on a bracket pivoted on the axle *n* in such a manner that the seat can be adjusted nearer to or farther from the foot-treadles on the bifurcated locking-lever *m*.

q is the rear wheel; or a pair of wheels may be used to support the rear end of the plow.

r is the front wheel, placed in a bracketed bearing, so that the wheel is in front of the swivel-shaft *s*. The object of this arrangement is to raise the side wheel, *o*, off the ground when the front wheel, *r*, is turned toward the side on which the side wheel, *o*, is secured, and thus allow the same to be swung onto the other side when the direction of the plow is reversed, and to facilitate this raising the tongue is connected with the axle of the front wheel, *r*, by the braces *t*, and a bar, *u*, is connected with the tongue and loosely with the swivel-shaft *s* by means of a ring and set-screw. When the horses turn the plow at the end of a furrow the act of turning raises the side wheel.

The frame resting on the wheels *q* and *r* can be raised or lowered either by inserting washers or by two nuts arranged to turn on the spindles, which have to be threaded for this purpose, as is usual in plows and other agricultural machines.

By this peculiar and novel construction large plows can be readily handled by the driver without leaving his seat, and the plow can be easily reversed without any additional help, and deep and large furrows can be easily turned with the necessary number of horses and a large amount of work performed by one man.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a side-hill plow, the combination, with the plow-beam *a*, of the frame *e*, forming the rear, and the frame *c*, forming the front, of the machine, the curved connecting-bars *d d*, and the arch *f*, constructed to allow the plows to be turned within the frame, as described.

2. The combination, with the plow-beam *a* and frame *e*, of the locking-lever *m*, the notched ring, the hand-wheel, and the pinions *l' l'*, adapted to turn the plow-beam, as described.

3. The combination, with the plow-frame, of the side wheel, *o*, secured to the pivoted axle *n*, and means for securing the axle in place and of turning it to change the side wheel from one side to the other, as described.

4. The combination, with the frame and the pivotally-secured side wheel, *o*, of the front wheel, *r*, swivel *s*, brace *t*, and tongue-plates *u*, all arranged and operating substantially as described.

5. The combination, with the frame *e* and pivoted axle *n*, of the seat *p*, adapted to turn with the axle, as described.

In witness whereof I have hereunto set my hand.

WM. H. DURFEE.

Witnesses:

J. A. MILLER, Jr.,

H. J. MILLER.