

(No Model.)

3 Sheets—Sheet 1.

W. Y. FISHER.  
SNOW PLOW.

No. 469,937.

Patented Mar. 1, 1892.

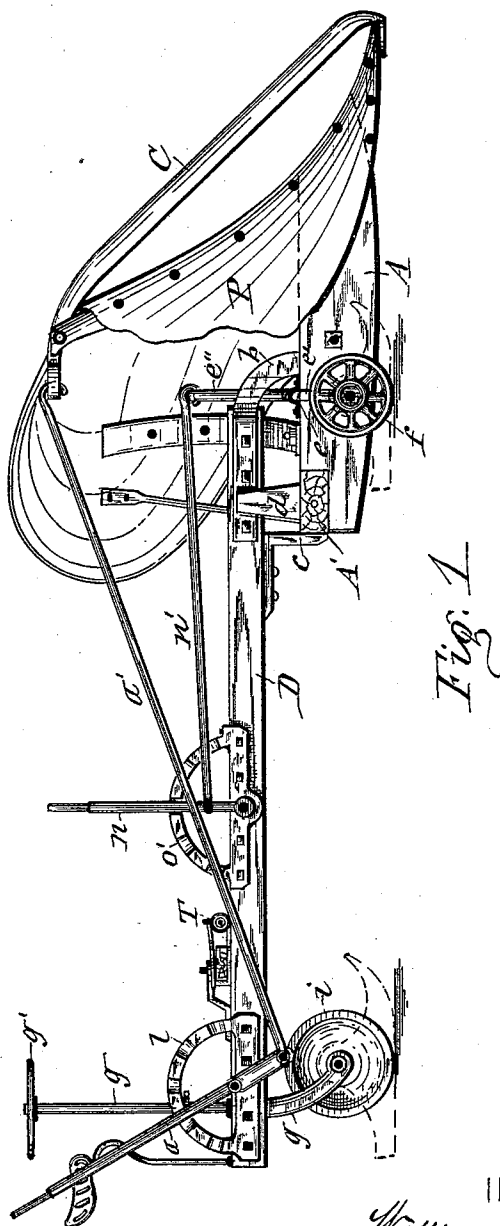


Fig. 1

WITNESSES:

H. E. Bates.

Mark W. Dewey

INVENTOR:

William Y. Fisher

By *Smith, Laess & Smith*  
his ATTORNEYS.

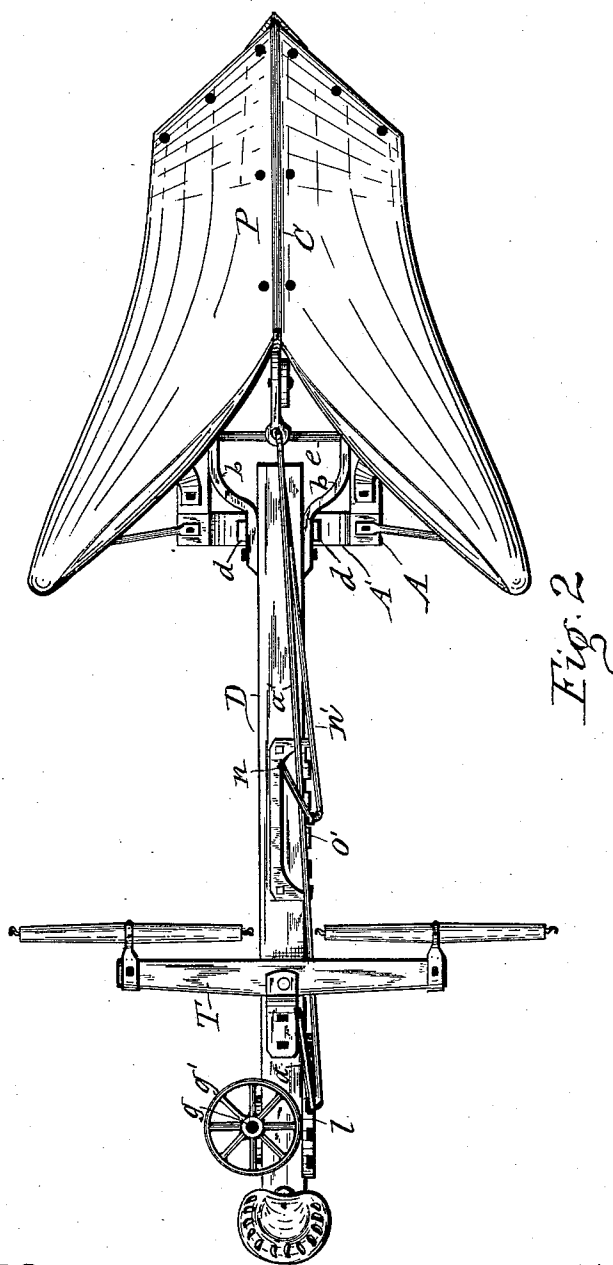
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WITNESSES:

H. E. Bates.

Mark W. Dewey

INVENTOR:

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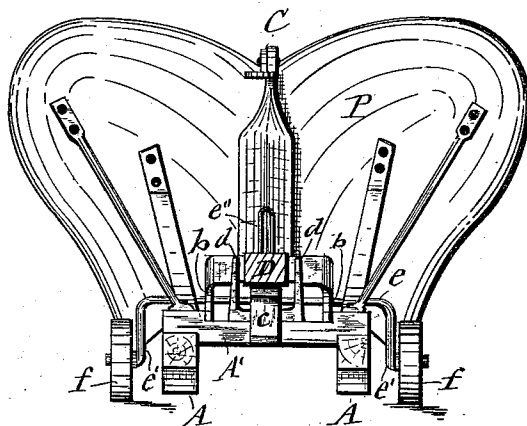
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3 Sheets—Sheet 3.

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*Fig. 3*

WITNESSES:

*H. E. Bates.*

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INVENTOR:

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*By Hull, Lasso & Hull*  
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# UNITED STATES PATENT OFFICE.

WILLIAM Y. FISHER, OF BIG TIMBER, MONTANA.

## SNOW-PLOW.

SPECIFICATION forming part of Letters Patent No. 469,937, dated March 1, 1892.

Application filed November 2, 1891. Serial No. 410,609. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM Y. FISHER, of Big Timber, in the county of Park, in the State of Montana, have invented new and useful Improvements in Snow-Plows, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to a snow-plow designed to operate in advance of the horses which propel the same, the horses being thus relieved of the impediment presented by deep snow and also of the danger of being injured by the crust of ice which is frequently formed on top of snow, and at the same time the horses obtain a firmer foothold on the ground; and the invention consists, essentially, of a push frame or pole, the plow attached to the front end of said frame or pole, and horse-hitching devices on the rear end of the frame or pole to accommodate at the rear of the plow the horses for propelling the same, all as hereinafter more fully described, and specifically set forth in the claims.

In the annexed drawings, Figure 1 is a side elevation of a snow-plow embodying my invention, part of one side of the plow being broken away to show its connection with the push frame or pole. Fig. 2 is a plan view of the same, and Fig. 3 is a rear end view of the plow detached from the push frame or pole.

Similar letters of reference indicate corresponding parts.

P represents the snow-plow, which is rigidly mounted on a frame A, preferably of the shape of two stout sleigh-runners united at the rear end by a cross-bar A'. This frame is hung on an axle *e*, formed with downwardly-extending crank-arms *e' e'*, to the free end of which are connected either wheels *ff*, as shown by full lines, or runners, as indicated by dotted lines in Fig. 1 of the drawings. Said wheels or runners thus carry the rear end of the plow. Another crank-arm *e''* extends upward from the axle *e* for the purpose hereinafter explained.

To enable the plow to more readily break through a crust of ice on the top of the snow, I attach to said plow a colter C.

D denotes the push-frame, which may consist of a single beam of the form of a wagon-pole. This frame or pole extends rearward

from the plow and is connected thereto by means of stout arms *b b*, rigidly attached to the front end of the frame or pole and pivotally connected to the frame A. The pole D lies across the top of the rear end of the frame A, and to the under side of the pole is affixed a shoulder *c*, by which it bears against the rear end of said frame. To brace the frame A laterally in its connection with the pole D, I attach to the top of the former two rigid guides *d d*, bearing on opposite sides of the pole.

To the rear end of the push frame or pole D is pivoted the steering-post *g*, which is provided on its upper end with a hand-wheel *g'*, by which to govern it in its position. To the foot of this post is connected either a steering-wheel *h* or a sled-runner, as may be deemed best adapted for the surface upon which it is to run.

T represents a doubletree, which is connected to the rear end portion of the push frame or pole D for hitching thereto the horses which are to propel the snow-plow. I do not, however, limit myself to the use of the doubletree, inasmuch as the push-frame D may be made of such a form as to permit of the use of other horse-hitching devices. The essential feature is the accommodation of the horses at the rear of the plow P and in the path prepared by the plow.

*a* represents a lever pivoted to the rear portion of the frame or pole D and connected to the upper end of the colter C by a rod *a'*. By operating this lever the snow-plow is caused to rock endwise on its connection with the frame or pole D, and in this manner the point or front end of the plow can be raised or lowered, as may be desired. A notched quadrant *l*, attached to the pole D and engaging the lever, holds the lever in its requisite position. Another lever *n* is fulcrumed on the rear portion of the pole D and connected to the crank-arm *e''* of the axle *e* by a rod *n'*. By means of said lever the axle can be turned to carry the downwardly-extending crank-arms *e' e'* thereof into different angles of inclination, and thereby raise or lower the frame A, on which the snow-plow is mounted. The lever engaging a toothed quadrant *o'* on the pole D retains the lever *n* in its desired position.

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

1. A snow-plow mounted on the axle of carrying-wheels, in combination with a push-frame extending rearward from the plow to accommodate the horses at the rear of the plow, and a lever pivoted to said push-frame and connected to the plow to raise and lower the point thereof, as set forth.

2. The combination, with a snow-plow, of an axle extended across and connected to said plow and formed with crank-arms extending downward from the plow, wheels or runners on said crank-arms, a crank-arm extending upward from said axle, a push-frame extending rearward from the plow, and a lever fulcrumed on said frame and connected to the aforesaid upwardly-extending crank-arm, as set forth.

3. The combination, with the snow-plow P, mounted on the axle, of carrying wheels or runners, and the push-frame D, extending

rearward from said plow, the colter C, rigidly secured to the plow, the lever *a*, pivoted to the push-frame, and the rod *a'*, connecting said lever to the upper end of the colter, substantially as described and shown, for the purpose set forth.

4. The combination, with the frame A, hung near its rear end on the axle of carrying wheels or runners, and the snow-plow P, mounted on said frame, of the pole D, having rigid arms *b b* extending therefrom and pivotally connected to the frame A, the shoulder *c*, fixed to the pole and abutting against the rear end of said frame, and guides *d d*, secured to the frame at opposite sides of the pole, substantially as described and shown.

In testimony whereof I have hereunto signed my name this 24th day of October, 1891.

WILLIAM Y. FISHER. [L. S.]

Witnesses:

NORMAN ARMSTRONG,  
ALLAN R. JOY.