

(No Model.)

2 Sheets—Sheet 1.

A. B. BLACK.
SNOW PLOW.

No. 573,854.

Patented Dec. 29, 1896.

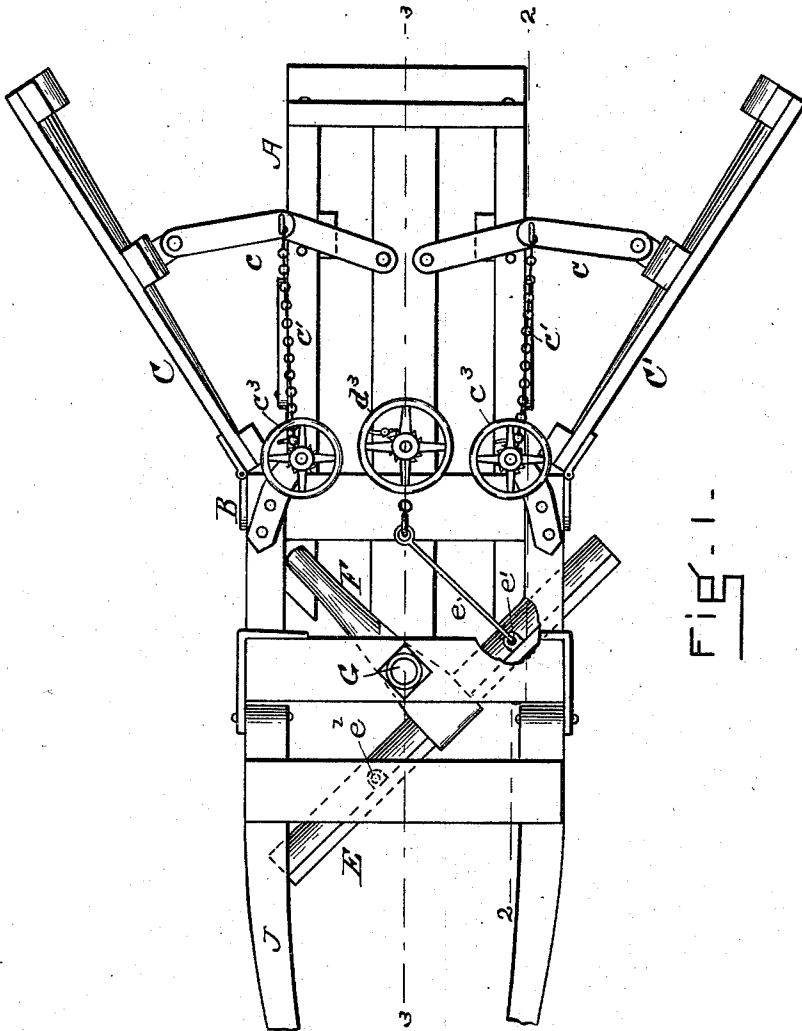


FIG. 1.

WITNESSES

E. A. Guild
J. W. Dolen.

INVENTOR

Albert B. Black
J. R. O. G. G. G.
his attorney

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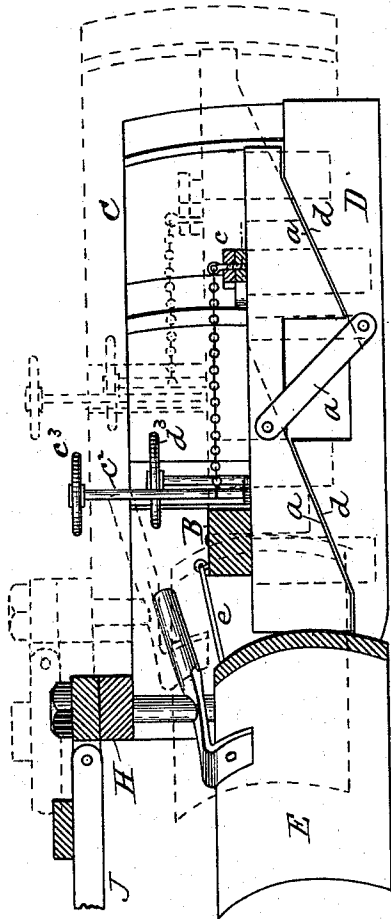


FIG. 2.

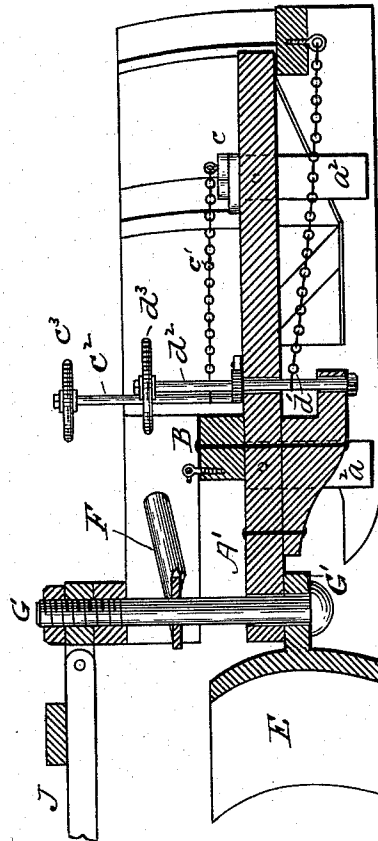


FIG. 3.

WITNESSES

E. A. Guild
J. W. Dolan.

INVENTOR

Albert B. Black
by George O. G. G. G.
his attorney

UNITED STATES PATENT OFFICE.

ALBERT B. BLACK, OF LEXINGTON, MASSACHUSETTS.

SNOW-PLOW.

SPECIFICATION forming part of Letters Patent No. 573,854, dated December 29, 1896.

Application filed July 30, 1896. Serial No. 601,004. (No model.)

To all whom it may concern:

Be it known that I, ALBERT B. BLACK, of Lexington, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Snow-Plows, of which the following is a specification.

My invention relates especially to that class of snow-plows which are provided with two wings, one on each side, for the purpose of throwing snow both to the right and the left; and it consists, chiefly, in providing a snow-plow with a pilot which can be turned about a central vertical pivot, so as to throw the snow either to the right or left of the plow, as may be desired.

It also consists in certain details of construction hereinbelow referred to.

My invention will be understood by reference to the drawings, in which—

Figure 1 is a plan of a plow embodying my invention, Fig. 2 being a longitudinal section on line 2 2 of Fig. 1, and Fig. 3 a longitudinal section on line 3 3 of Fig. 1.

A is a frame, practically rectangular in shape, having at each front corner a post B, to which is hinged the front end of a wing C C'. The position of these wings is preferably controlled by toggle-arms c, operated by a chain c', wound upon a shaft c², operated by a hand-wheel c³, this construction being such that by turning one of the hand-wheels c³ its wing C C' will be thrown out at an angle to the center line of the plow and will be held there until the chain c' is released by the hand-wheel, when the pressure of the snow will tend to close the wing against the body or frame of the plow. This is a simple means for operating the wings. In order to lock these parts in proper position, it is best to provide each shaft c² with a suitable pawl and ratchet, so that when the wheel has been turned into a proper position to throw out its wing the pawl may be engaged with the ratchet and hold the chain in place. This structure A B C C', I prefer to mount upon a pair of runners D, in order that when the plow is being transported it may be carried without undue friction. For this purpose I provide the runners with two inclines d upon their upper surface, and I also provide the frame A of the plow with corresponding inclines a and preferably join the two together

by links a'. I also connect the plow and the sled or runners with a chain connection d', operated by a shaft d² and hand-wheel d³, (see Fig. 3,) this mechanism being such that upon turning the hand-wheel d³ the chain d' is wound upon the shaft and draws the sled D forward with relation to the frame A, this act sliding the inclines a up the corresponding inclines d, thus lifting the frame and plow onto the runners, as shown in dotted lines in Fig. 2. It is also desirable that the frame and runners should be provided with guides to act with the links a' in steadying the sled and plow. I have shown such guides a² attached to and projecting downward from the frame A, so that as the plow moves with relation to the sled its movements will be guided upon the outside by the links a' and upon the inside by the guides a².

From the front end of the frame A projects a bar A', upon the under side of which is pivoted an adjustable moldboard E. This moldboard is preferably curved in shape, as shown more especially in Figs. 2 and 3, and is provided with a lever-handle F. A hook e is provided, attached to the frame A and adapted to engage with eyes e' e² on said moldboard, the purpose of this construction being to lock the moldboard either in the position shown in Fig. 1 or in a position at right angles thereto, it being possible by unhooking the hook e to turn the plow about its pivot G by means of a handle-lever F, so that the hook e may be hooked into the eye e². By this means the plow is made either a right-hand or a left-hand plow, as desired. Moreover, by closing one of the wings C and adjusting the pilot as shown in Fig. 1 it will be seen that there may be made practically a plow having one straight side.

The moldboard E is preferably pivoted as shown—that is to say, a bolt G passes down through the draw-beam H and whiffletree h and also through the beam A' and the tail-piece or eye G' of the pilot.

The main advantages of this plow are that it may be used either as a double plow, having its moldboard thrown to the right or left, as desired, or it may be used as a right or left handed straight-sided plow, and in either case it may be raised upon the sled or runners by very little expenditure of power. Upon

releasing the shaft d^2 the plow will be pulled down upon the ground the instant any draft is put upon the shafts J.

It is evident that the number of inclines may be increased or diminished according to the size of the plow and that, if preferred, friction-rolls may be substituted for the inclines upon the plow, the purpose being to cause the plow to travel up an incline in rising upon the runners.

The moldboard above described should be of sufficient length to throw out a furrow at least the width of the body of the plow, each of the adjustable side wings in turn being adapted to form, in a sense, a continuation of the moldboard and finish the work which it begins. For this purpose, while the moldboard is best made curved in vertical section, it should be substantially straight in horizontal section rather than angular, as with a pilot.

What I claim as my invention is—

1. The adjustable plow above described consisting of a supporting-frame having two adjustable wings, one on each side thereof and a pivoted moldboard straight in horizontal section and longer than the frame of the plow is wide and adapted to be swung either to the right or left and when so swung to form a wall at an angle to the length of the plow, all as set forth.

2. The adjustable plow above described

consisting of a supporting-frame having two adjustable side wings and a moldboard pivotally hung in front thereof and adapted to be swung to form a continuation of either of said wings, in combination with runners and means whereby said adjustable plow may be lifted upon said runners, as and for the purposes described.

3. The snow-plow and runners connected together in substantially the manner above described, said runners being provided with inclines upon their upper surface and the frame of said snow-plow being provided with inclines upon its under surface corresponding with said runner-inclines, in combination with mechanism substantially as described whereby said runners and plow are moved with relation to each other and said plow is lifted upon said runners, as set forth.

4. In combination, a snow-plow and runners, each provided with two or more inclines adapted to cooperate in the manner described and means whereby said inclines may be moved with relation to each other, as set forth.

In testimony whereof I have set my hand this 24th day of July, 1896.

ALBERT B. BLACK.

Witnesses:

GEORGE O. G. COALE,
E. A. GUILD.