(No Model.)

G. NICHOLS.

SNOW PLOW.

No. 476,063. Patented May 31, 1892.

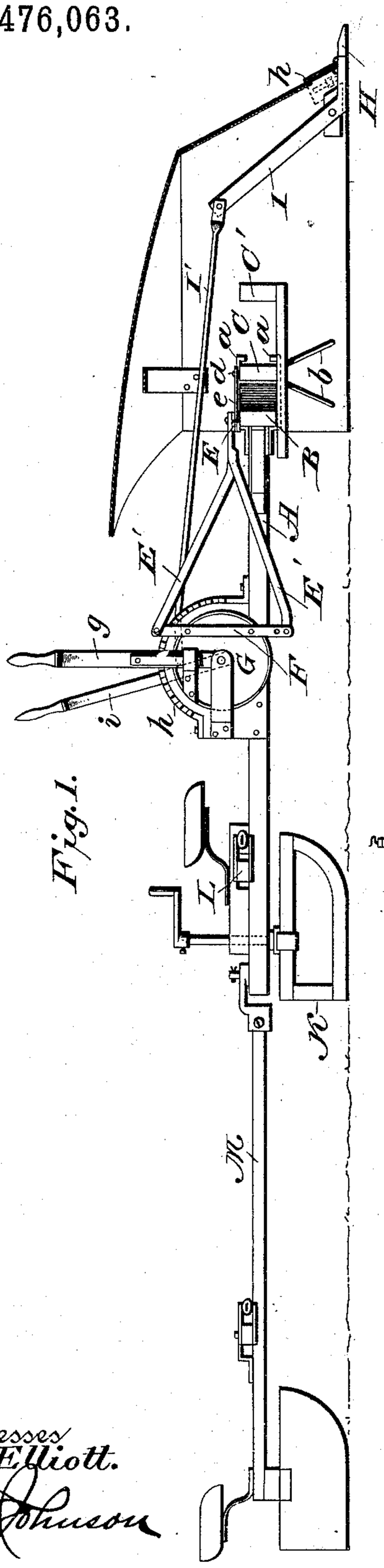

Fig. 1.

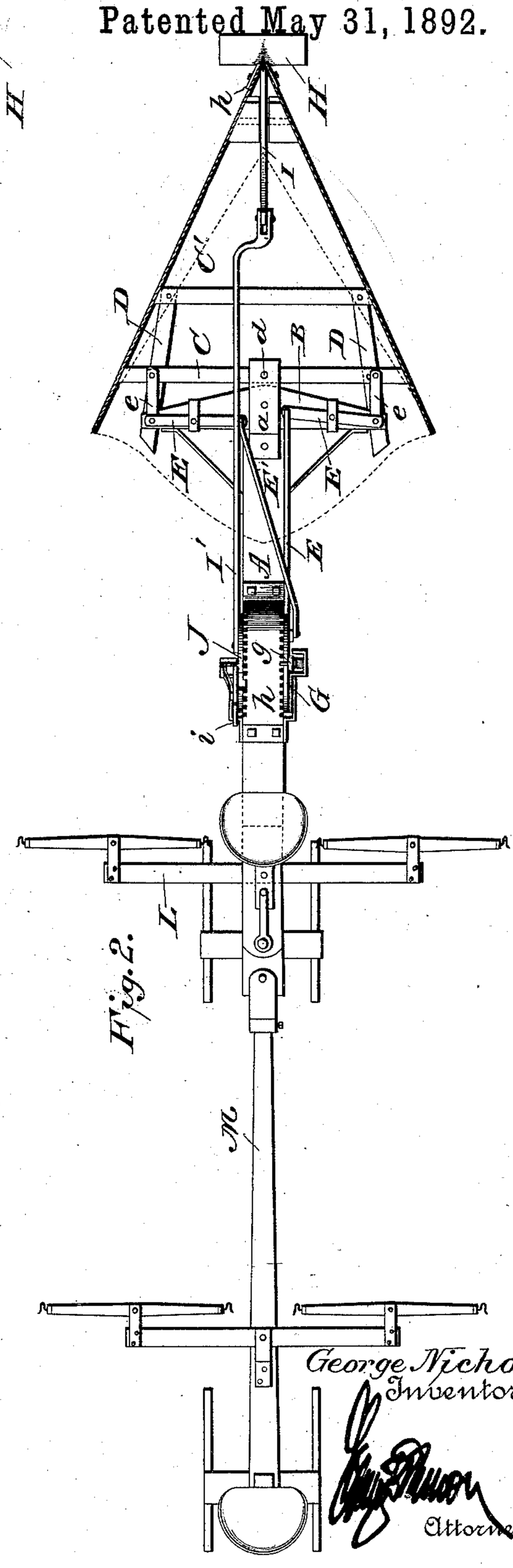

Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE NICHOLS, OF HAILEY, IDAHO.

SNOW-PLOW.

SPECIFICATION forming part of Letters Patent No. 476,063, dated May 31, 1892.

Application filed December 17, 1891. Serial No. 415,386. (No model.)

To all whom it may concern:

Be it known that I, GEORGE NICHOLS, a citizen of the United States of America, residing at Hailey, in the county of Alturas and State of Idaho, have invented certain new and useful Improvements in Snow-Plows; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in snow-plows.

The object of the invention is to provide a snow-plow which is especially adapted for clearing roads, the construction of the parts being such that the horses drawing the plow walk upon the cleared track, the snow-plow proper being provided with means for guiding the same and for adjusting the depth it will enter the snow.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation, the plow being shown in section. Fig. 2 is a plan view, the upper portion of the plow being removed.

A designates the main beam or support, to the front end of which is rigidly attached a cross-bar B, said cross-bar being thoroughly braced to the beam, as shown. From the upper and lower sides of the beam project strips *a a*, between the outer ends of which is pivoted a transverse bar C, the ends of which are rigidly secured to the side pieces of the snow-plow.

In front of the beam C is a beam C′, which is also rigidly secured to the plow, these beams being rigidly connected to each other by rearwardly-diverging strips D D, the rear ends of which lie under the beam B.

From the beams C and C′ extend a sufficient number of braces *b b*, which are attached to or bear against the side pieces of the plow.

Through the plates *a a* and beam C passes a king-bolt *d*, which forms a pivotal connection between the adjustable snow-plow and the beam A, to which it is attached.

Upon the upper side of the transverse beam B is pivotally secured levers E E, the outer ends of which are connected by links *e e* to the beam C, while the inner ends of said levers are connected by suitable bent bars E′ E′ to the ends of a bar F, which is rigidly connected to a disk G, said disk being mounted upon the beam A and provided with a lever *g*, which engages with a permanently-fixed ratchet-plate *h*, so that when the disk G is turned the bar F will be moved therewith and one of the bars E′ will be projected while the other is retracted, so as to properly manipulate the levers E E to move the frame to which the snow-plow is attached by a pull on one side and a push on the other. It will be noted by this construction that the strain on the levers is distributed in changing the direction of the plow.

To the front end of the plow is secured a movable point H, which consists of a laterally-extending plate, wedge-shaped in cross-section, carrying a piece *h*, shaped to correspond with the front end of the plow, said piece being slotted and secured movably by bolts. To the front end of the plow is rigidly connected a rearwardly-inclined bar I, to the upper end of which is secured a rod I′, the rear end of said rod being connected either to the disk J or to the lever *i* above its fulcrum, said lever being adapted to engage with the serrated plate *h*. It will be noted that the operating-levers are in close proximity to each other, and by properly manipulating the lever *i* the point H will be raised or lowered to change the horizontal inclination of the plow, so that it will enter the snow to the desired depth.

K designates a sled-truck, which is pivotally connected near the rear end of the beam A, the bolt forming the connection extending up and being provided with a crank-arm for changing the angle of the same when it is desired to turn corners or change the direction of the plow. In front of this crank-arm is attached the seat upon which the operator sits, and a doubletree L is suitably attached to the frame and provided at its ends with singletrees, so that the horses will work on each side of the beam A and walk on the cleared track as the plow moves forward. In heavy snows a beam or pole M may be con-

nected to the rear end of the beam A, and said beam or pole is supported at its rear end by a sled and carries a driver's seat and doubletree, so that four horses can be used.

The snow-plow is provided with slightly-inclined walls, which are connected to each other by a covering plate, the side walls being adapted to throw the snow equally on each side.

It will be noted that by properly manipulating one of the levers the plow may be adjusted either to the right or left, so as to throw the snow wholly to one side, and when adjusted to such a position one of the sides of the plow will be on the same line as the line of draft, while the other side, which acts as a mold-board, is at an angle thereto.

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

1. In a snow-plow, the combination of the beam A, suitably supported at its rear end and provided at its front end with a cross-beam B, a snow-plow pivotally connected thereto, and levers E E, pivoted to a rigid cross-beam and connected by links to the frame of the snow-plow, said levers being connected by rods to means for manipulating the levers, so that one of the levers will be forced forwardly while the other is drawn rearwardly, substantially as shown, and for the purpose set forth.

2. In a snow-plow, the combination, with the plow and supporting-frame, of a vertically-adjustable point having an upwardly-extending bar I and a rod I′, connected thereto, said rod being connected to a lever, substantially as shown, and for the purpose set forth.

3. In combination with a snow-plow, a point H, having beyond the plow a bent plate with vertical slots, said point having an inwardly-extended portion pivotally secured to the plow proper, and a rod I, adapted to be rocked upon its pivot to raise and lower the point, substantially as set forth.

4. In a snow-plow, the combination of the beam A, having a transverse beam B, and plates *a a*, rigidly secured thereto, the front end of the transverse beam being inclined, as shown, a king-bolt for connecting the snow-plow thereto, levers E E, pivotally attached to the beam B, links *e e*, connecting the same to the frame of the snow-plow, and rods operating the levers in unison, substantially as shown, and for the purpose set forth.

5. In combination with a snow-plow constructed substantially as shown, an auxiliary beam M, adapted to be secured to the main beam A, said beam M carrying a driver's seat, sled, and doubletree, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE NICHOLS.

Witnesses:
W. T. RILEY,
J. C. FOX.