

J. EGBERT.  
Sled-Brakes.

No. 151,578.

Patented June 2, 1874.

Fig. 1.

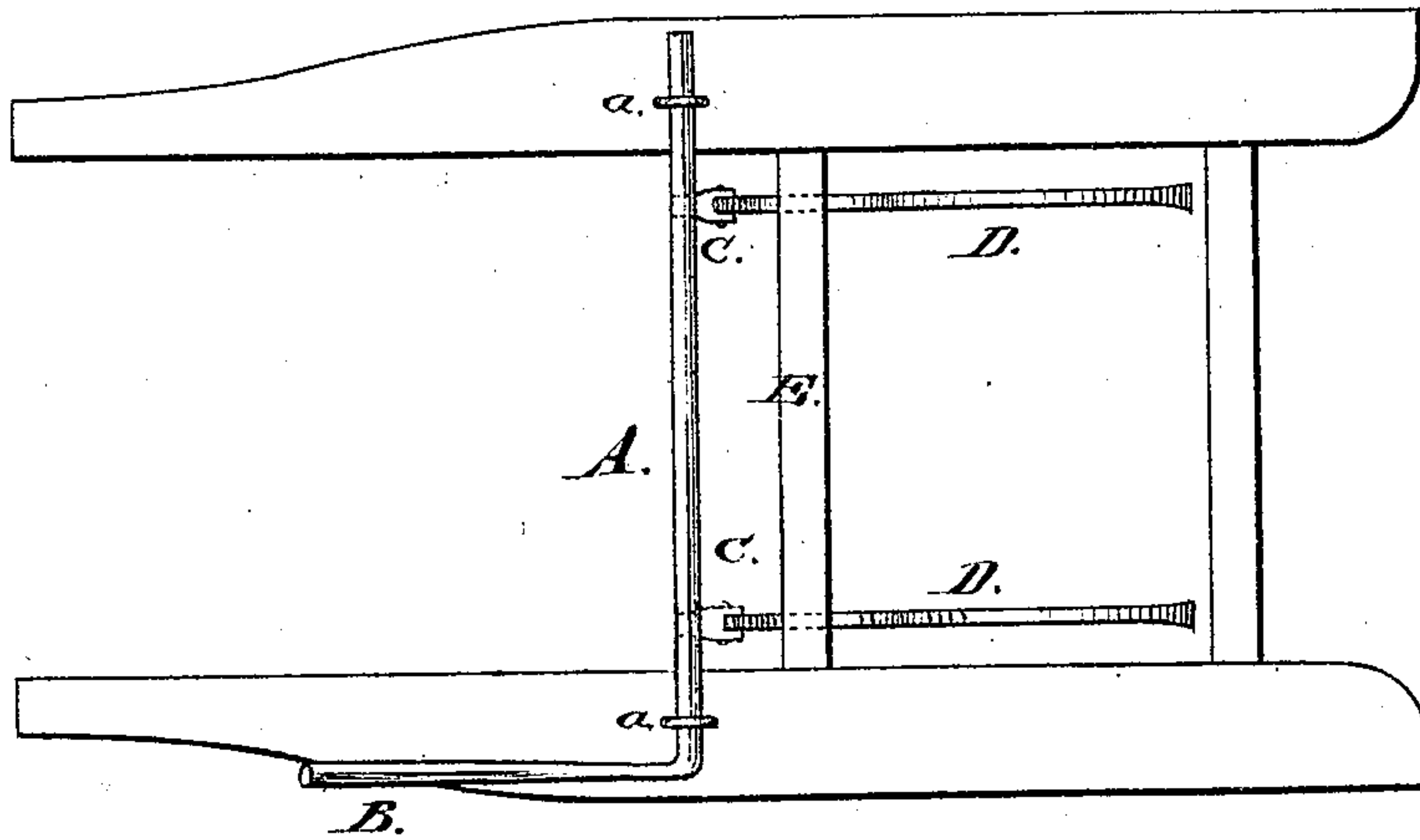


Fig. 2.

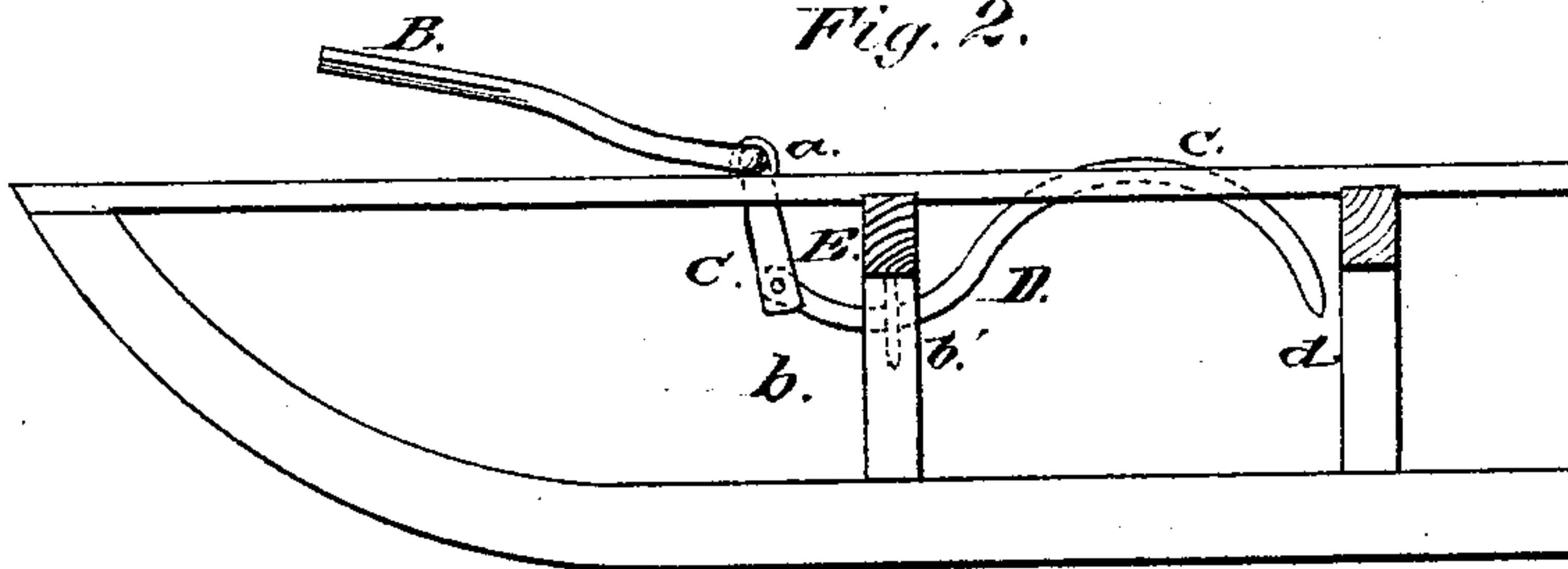
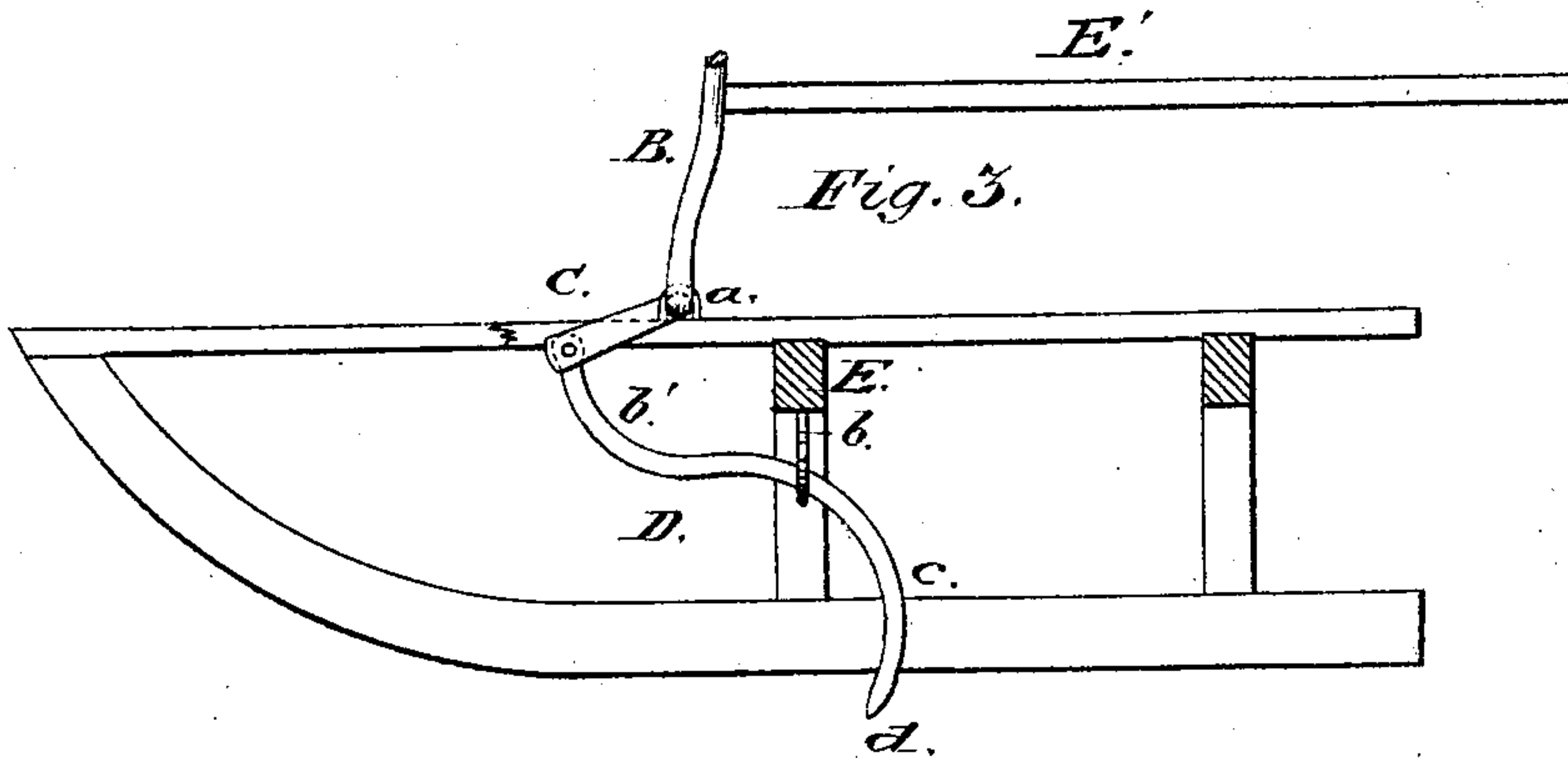


Fig. 3.



Witnesses.  
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D. P. Cowl

Inventor.  
Justus Egbert,  
by  
James L. Norris.  
his atty.

# UNITED STATES PATENT OFFICE,

JUSTUS EGBERT, OF SANDY LAKE TOWNSHIP, MERCER COUNTY, PA.

## IMPROVEMENT IN SLED-BRAKES.

Specification forming part of Letters Patent No. 151,578, dated June 2, 1874; application filed December 29, 1873.

*To all whom it may concern:*

Be it known that I, JUSTUS EGBERT, of Sandy Lake township, in the county of Mercer and State of Pennsylvania, have invented certain new and useful Improvements in Sled-Brakes, of which the following is a specification:

This invention relates to certain improvements in brake mechanism for sleds; and its object is to furnish a device which is simple in construction, and more effective in use than those heretofore constructed; and to this end the invention consists of one or two serpentine or **S**-shaped arms or brake-bars, of the peculiar construction described hereafter, which are pivoted to pendent arms of a rock-shaft, said arms having bifurcated ends, between which the serpentine or **S** arms or bars are secured, in such a manner that the said rock-shaft may be turned or partly revolved by means of a hand-lever, so as to cause the arms or bars to have a simultaneous forward and downward motion, for arresting the sled to which it is attached in passing down steep grades, as will be hereinafter described.

In the accompanying drawings, Figure 1 is a top or plan view of a sled with my invention; Figs. 2 and 3, longitudinal sections with the brake-bars raised and depressed.

The frame of the sled may be of any ordinary construction, and at or near its forward end is arranged a rock-shaft, A, passing transversely across the same, and held in position by bearings *a a*, and is provided at one of its ends with a hand-lever, B, arranged at right angles to the rock-shaft. The shaft A is provided with pendent arms C C, rigidly attached at right angles to the same, and having bifurcated or slotted ends, between which are pivoted the ends of the sliding brake-bars D D. These brake-bars are supported and guided in loops or eyes *b b*, attached to the cross-beam E, and are constructed of a single piece, in a serpentine or **S** shape or form, having an upward curve, *b'*, and a downward curve, *c*, provided with a pointed end, *d*.

By a backward motion of the hand-lever B the serpentine or **S**-shaped arms C are simultaneously caused to move forward and downward, which has the effect of forcing the pointed ends *d* into the ground or snow, and, consequently, arresting the forward motion of the sled.

The important feature of the present inven-

tion consists in the provision of the serpentine or **S**-shaped brake-bars, attached to the rigid pendent arms of the rock-shaft, by which means, by a simple upward or backward movement of the hand-lever B, the said bars are caused to move forward and downward simultaneously, the result being the instant arrest of the forward motion of the sled, by reason of the entrance of the pointed ends *d* of the bars into the ground or snow. The said brake-bars insure a more perfect and immediate arrest of the motion of the sled than if they were constructed of a straight form; and, further, the operator has greater leverage on the said bars, owing to the short distance between the fulcrum of the bars and the point where they are connected with the pendent arms.

A brake mechanism constructed as above described is applicable to sleds of various descriptions, and, when applied to bob-sleighs, I propose to connect the rock-shaft or lever of the forward sleigh-section with the corresponding rock-shaft of the rear section through the medium of a connecting bar or rod, E'. This arrangement of parts will enable the brake-bars of two or more connected sleighs to be operated simultaneously through the medium of the hand-lever on the front sleigh.

I am aware that a sled has been provided with a transverse rock-shaft possessing a lever at one end, and from which extend rearwardly horizontal sliding brake-bars, which engage with the snow or ice when thrown backward by a movement of the rock-shaft, to arrest the movement of the sled, and such I disclaim; but

Having thus described my invention, what I claim is—

The brake-bars D D, having the upward curve *b* and downward curve *c*, in combination with the bifurcated depending arms C C, rock-shaft A, lever B, and guide-loops *b' b'*, all constructed as shown, so that a simultaneous forward and downward vertical motion is imparted to the brake-bars by a movement of the rock-shaft, for the object set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of December, 1873.

JUSTUS EGBERT.

Witnesses:

J. P. HINES,

A. S. THROOP.