(No Model.)

F. ROBBIN.

SLED PROPELLER.

No. 374,428. Patented Dec. 6, 1887.

Fig: 1.

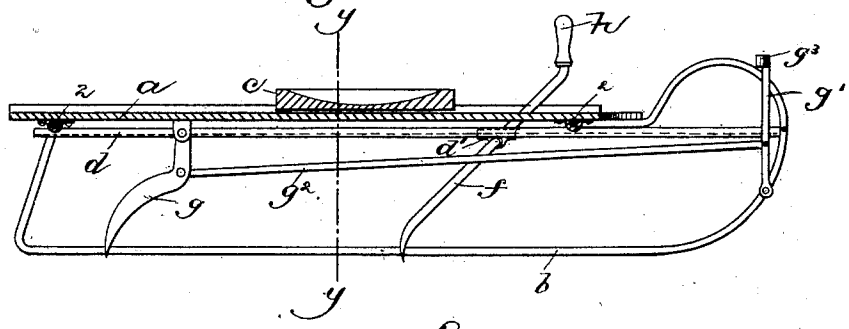


Fig: 5.

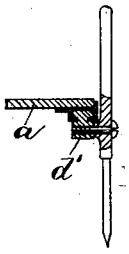


Fig: 2.

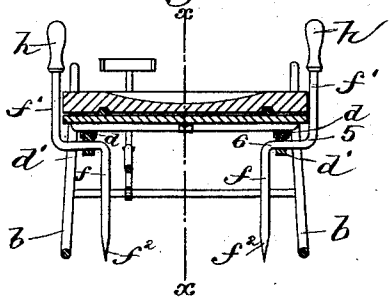


Fig: 3

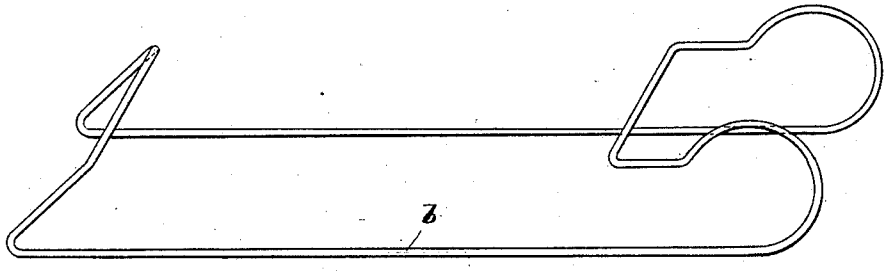
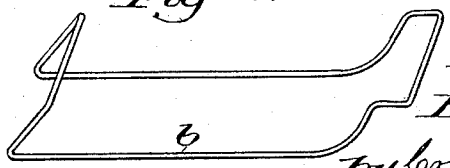


Fig: 4.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRED ROBBIN, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-HALF TO PHILLIP H. YAWMAN AND GUSTAV ERBE, BOTH OF SAME PLACE.

SLED-PROPELLER.

SPECIFICATION forming part of Letters Patent No. 374,428, dated December 6, 1887.

Application filed August 22, 1887. Serial No. 247,559. (No model.)

To all whom it may concern:

Be it known that I, FRED ROBBIN, of Rochester, county of Monroe, and State of New York, have invented an Improvement in Sleds, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to provide a sled with propelling devices adapted to be operated by the hands of the rider.

In accordance with this invention two bars or guideways are placed, one at each side of the sled, upon which are mounted suitable slide-blocks, each adapted to receive and hold an operating-lever, one end of which is preferably bent and sharpened to engage the ice or snow, and the other end is provided with a handle, by which it may be operated. The operating-levers are arranged at an angle with relation to the length of the sled, so that by simply drawing the handle portions thereof toward the rider the opposite end will engage the ice or snow, and then as the slide-blocks are moved upon the bars or guideways the sled will be caused to move ahead. The seat for the rider is also preferably made to slide horizontally. A suitable brake is employed, which may be operated, when desired, by the foot.

Figure 1 shows in horizontal section a sled embodying this invention, the section being taken on the dotted line *x x*, Fig. 2; Fig. 2, a cross-section of the sled on the line *y y*, Fig. 1; Fig. 3, a perspective view of the runners; Fig. 4, a perspective view of another form of frame, and Fig. 5 a modification to be referred to.

The top board, *a*, and the runners *b b*, secured to the top board at 2, form the main frame of the sled, the runners *b b* preferably being made of a single rod or bar of iron bent, as shown in Fig. 3 or 4, to have its ends connected with the top or board at its opposite ends. A seat, *c*, is mounted to slide upon suitable guides fixed at the upper side of the top board, *a*. At each side of the sliding seat, and preferably directly beneath the top board, *a*, is a guide-rail, *d*, which receives a slide-block, *d'*. Each slide-block *d'* receives an operating-lever, *f*, preferably made of a rod or bar of iron or steel bent at right angles, as at 5 and 6, to form a handle portion, *f'*, and also an engaging end or portion, f^2, the bar for a short distance between the bends 5 and 6 being extended horizontally through the said slide-blocks, so as to slide freely therein as the levers are being operated. Each lever *f* has a handle, *h*, and the lower end of each lever is bent and sharpened to engage or cut into the ice or snow.

It will be seen that the rider, sitting upon the seat *c*, placing his feet upon the portion 50 of the frame, which serves as a foot-rest, and grasping the handles *h* of the operating-levers, by simply drawing them toward him causes the sharpened ends f^2 to cut into the ice or snow, and thereafter the slide-blocks will be moved rearwardly, the operation being similar to that of rowing, the result being that the sled is moved ahead or in the direction in which the rider is facing. A brake-lever, *g*, is pivoted to the under side of the top board, *a*, which lever is connected to a pivoted lever, *g'*, by a connecting-rod, g^2. The lever *g'* is preferably pivoted to the runner-frame at the front end of the sled, and its upper end is provided with a pedal, g^3, against which the feet of the rider may be pressed to move said lever, and thereby throw the brake-lever *g* into engagement with the ice or snow.

It is obvious that various forms of brake-levers may be provided; so I do not desire to limit my invention to any particular form of lever. The operating-levers, bent as shown and described, may subserve the purpose of a brake by pulling both handles simultaneously and holding them, and also these levers serve as a steering device, which is effected by pulling one handle only at a time.

In Fig. 5 I have shown the guide-rails for the slide-block *d'* as attached directly to the under side of the top board, *a*, at its outer edge, so that the operating-lever works outside of the runners.

I claim—

1. In a sled, the top board, runners, guide-rails at each side, combined with the slide-blocks mounted thereon, and the pivoted operating-levers, substantially as described.

2. In a sled, the top board and runners, combined with the guide-rails at each side thereof, the slide-blocks mounted on the guide-

rails, and the pivoted operating-levers bent at substantially right angles to present a horizontal bearing portion, an upwardly-extending handle portion, and a downwardly-extending engaging portion, substantially as described.

3. In a sled, the main frame, the guide-rails, slide-blocks, and operating-levers, combined with the sliding seat, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRED ROBBIN.

Witnesses:
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JOSEPH HUBACHEL.