W. J. WILSON.

SLED PROPELLER.

APPLICATION FILED NOV. 21, 1908.

927,912. Patented July 13, 1909.

Fig. 1.

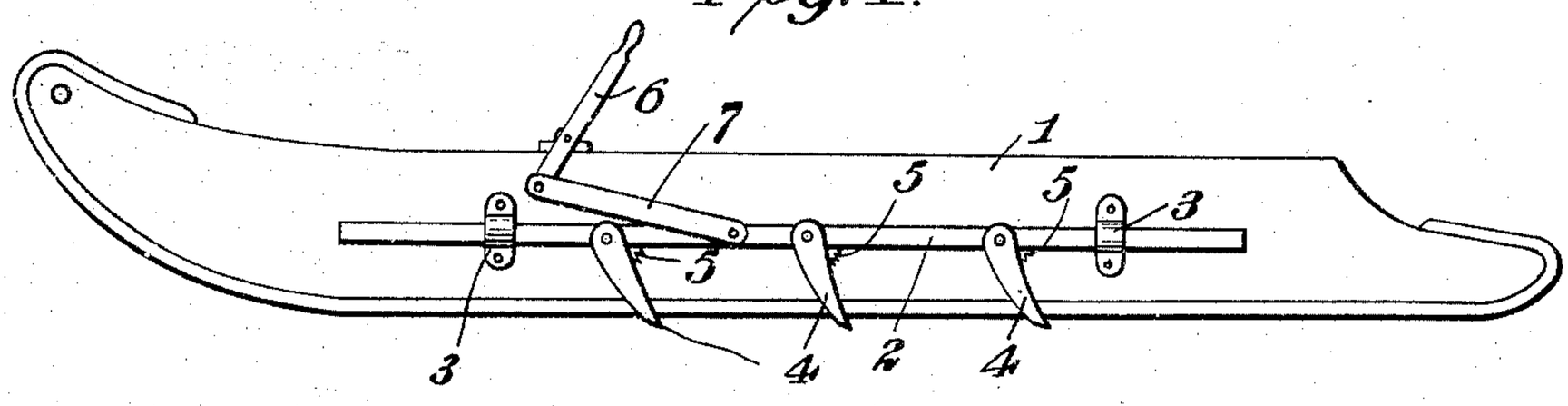


Fig. 2.

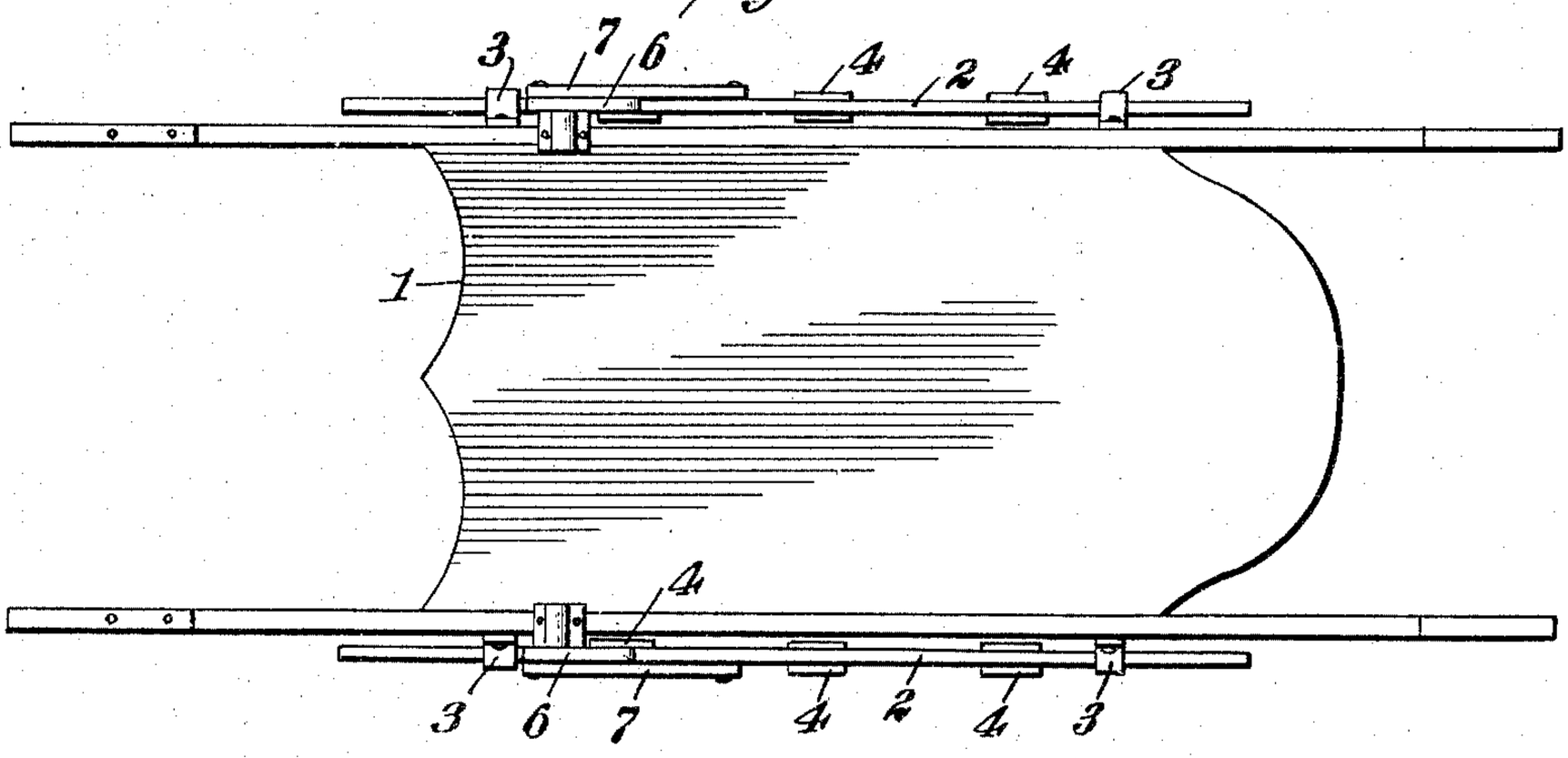
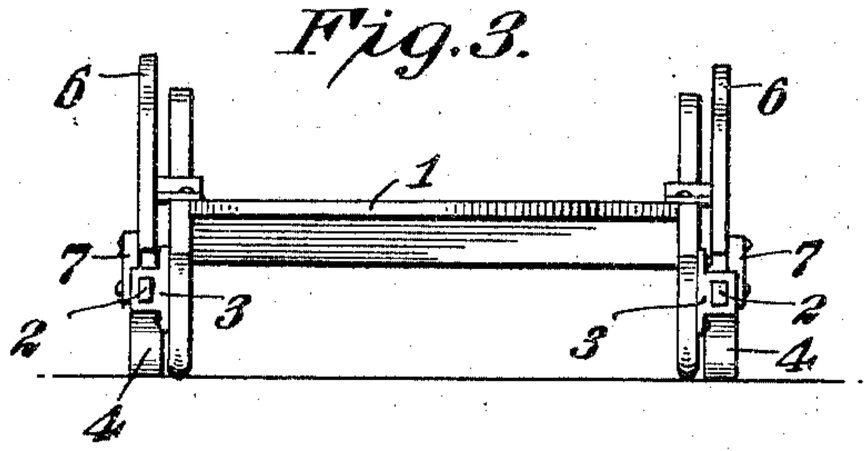


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM J. WILSON, OF OSBORNE, KANSAS.

SLED-PROPELLER.

No. 927,912. Specification of Letters Patent. Patented July 13, 1909.

Application filed November 21, 1908. Serial No. 463,937.

To all whom it may concern:

Be it known that I, WILLIAM J. WILSON, citizen of the United States, residing at Osborne, in the county of Osborne and State of Kansas, have invented certain new and useful Improvements in Sled-Propellers, of which the following is a specification.

The present invention has for its object to supply novel actuating means for the propelling of sleds, thereby preventing the exposure commonly experienced by children using the feet for driving the sleds over icy surfaces, and also producing a saving in foot covering and wholly obviating the ailments traceable to children operating sleds by bringing the foot in contact with the surface over which the sled is traveling.

In accordance with this invention the sled is equipped with spurs or teeth so arranged as to make positive engagement with the icy surface, said spurs or teeth being operable by manual power, thereby preventing contact of the feet or other part of the body with the icy surface.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and conditions by changes in the construction and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which:

Figure 1 is a side view of a sled equipped with operating means embodying the invention. Fig. 2 is a top plan view. Fig. 3 is a rear view.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The sled 1 may be of any make or pattern generally employed by children for gliding over icy surfaces. A bar 2 is provided at each side of the sled and is mounted to receive a reciprocating movement. Suitable bearings 3 receive and direct the bars 2 in their reciprocating movements and retain the same in place. A series of spurs or teeth 4 are pivoted at their upper ends to each of the bars 2 and incline rearwardly and downwardly so as to make positive engagement at their lower ends with the icy surface. The lower ends of the spurs or teeth 2 are pointed so as to bite into the surface and prevent slipping. A spring 5 is interposed between each tooth or spur 4 and the supporting bar 2 and exerts a pressure to hold the lower end of the tooth in contact with the surface. By providing a series of teeth or spurs some one or all of them will engage with the surface thereby insuring positive application of the force expended for propelling the sled.

The bars 2 are adapted to be operated in any manner and in practice are alternately moved so that when one set of teeth is returned to position to engage the surface, the other set of teeth is in active operation to impart propulsive force to the sled. For convenience and simplicity of operation a hand lever 6 is provided for each of the bars 2 and is pivoted between its ends to the sled and its lower end is connected by means of a link 7 with the bar 2. Upon oscillating or moving the levers 6 backward and forward the bars 2 have a reciprocating movement imparted thereto with the result that the teeth or spurs 4 are alternately carried forward and then moved rearwardly. By reason of the inclination of the spurs or teeth 4 their lower ends ride over the icy surface upon the forward movement of the bars 2 and as said bars 2 are moved rearwardly, the lower ends of the spurs or teeth 4 bite into the surface and remain relatively stationary, thereby resulting in a forward movement of the sled as will be readily understood.

Having thus described the invention, what is claimed as new is:

1. In a device as specified, the combination with a sled, of straps positioned in spaced relation against the opposite outer faces of the sides of the sled, bars mounted in said straps for horizontal reciprocation, pluralities of teeth pivotally disposed on said bars in spaced relation to one another and depended therefrom, springs interposed between the rear edges of said teeth and the under face of said bars for the purpose of depressing said teeth, hand-levers pivotally disposed upon the sides of said sled adjacent the forward end thereof and links connected between intermediate points on said bars and the lower extremities of said levers for the purpose of reciprocating said bars.

2. The combination with a sled, of a bar longitudinally mounted against the side of said

sled, straps positioned on the side of said sled for engagement with said bar, a plurality of spaced teeth carried by said bar and pivotally depended therefrom, springs interposed between said teeth and said bar for tensionally engaging said teeth against the ground a link carried by said bar and a hand-lever fulcrumed upon the side of said sled and connected to said bar through said link to reciprocate the same.

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

WILLIAM J. WILSON. [L. S.]

Witnesses:

B. J. ROY,

E. R. HAHN.