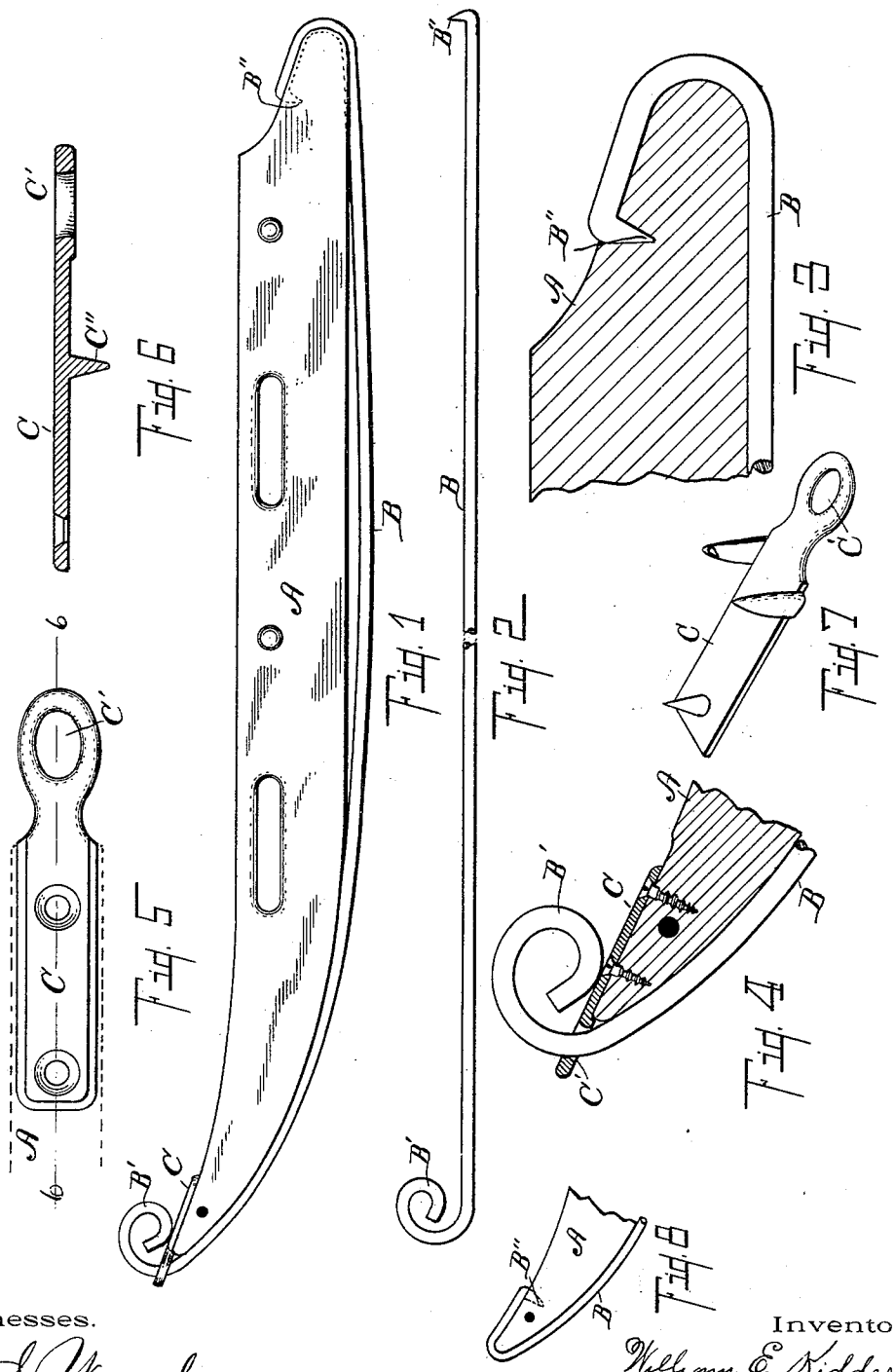
No. 630,810. Patented Aug. 8, 1899.

W. E. KIDDER.

HAND SLED.

(Application filed May 29, 1897.)

(No Model.)



Witnesses.

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UNITED STATES PATENT OFFICE.

WILLIAM E. KIDDER, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO THE KALAMAZOO SLED COMPANY, OF SAME PLACE.

HAND-SLED.

SPECIFICATION forming part of Letters Patent No. 630,810, dated August 8, 1899.

Application filed May 29, 1897. Serial No. 638,826. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. KIDDER, a citizen of the United States, residing at the city of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented a certain new and useful Improvement in Hand-Sleds, of which the following is a specification.

My invention relates to improvements in hand-sleds.

The invention relates more particularly to a new and improved sled-runner and means of attaching the shoe thereto.

The objects of my invention are, first, to simplify the construction of sled-runners and shoes; second, to provide improved means of securing the shoe to a sled-runner, and, third, to provide improved means of securing the shoe to a sled-runner.

Further objects will definitely appear in the detailed description.

I accomplish the objects of my invention by the devices and means described in the following specification, pointed out in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a sled-runner embodying the features of my invention. Fig. 2 is a detail view of the shoe for sled-runners broken in sections, showing its form before it is attached to the runner. Fig. 3 is an enlarged detail longitudinal sectional view of the heel of the runner, showing the relation of the shoe thereto. Fig. 4 is an enlarged detail longitudinal sectional view of the nose of the runner, showing the relation of the shoe and attaching means thereto. Fig. 5 is an enlarged detail plan view of the attaching-plate on the nose of the runner. Fig. 6 is an enlarged detail sectional view of a modified construction of attaching-plate, taken on line 6 6 of Fig. 5. Fig. 7 is an inverted detail perspective view of another modification of the attaching-plate, showing the plate, where screws, nails, or similar attaching means are entirely dispensed with. Fig. 8 is a detail view of the modified attachment of shoe to the runner-nose.

In the drawings similar letters of reference refer to similar parts throughout the several views.

A is an ordinary board runner, which is grooved near the nose and at the heel for the reception of the shoe for a sled of the coaster variety.

B is the shoe, which is a round rod turned into an eye or loop B′ at the front end and with a spur or claw B″ at the rear end.

C is a plate which is secured to the nose of the runner by suitable means and projects beyond the same and contains an aperture C′, through which the shoe B passes. The plate C is secured in place either by screws or by a spur C″ and a screw, as indicated in Fig. 6, or by a spur and clamping-wings to each side, as indicated in Fig. 7, or in any other convenient way. A very slight attachment is sufficient for the plate in the structure illustrated, as the loop retains it.

In putting the device together the plate C is first secured to the nose of the runner. The shoe B is then inserted through the aperture C′ and drawn down until the loop B′ rests firmly upon the plate C, when the shoe B, which is a round rod, is bent around from the nose of the runner to the heel of the same and is folded into the groove on the heel of the runner and the spur B″ driven into the upper side of the heel, which retains the same securely. The shoe is retained upon the runner so securely that it is impossible to remove it without splitting or breaking the runner, and consequently forms a perfect attachment between the runner and the shoe.

The shoe B curves out from the under side of the runner a little distance, which causes the shoe to act as a spring as well as a shoe, making the sled a very easy-running one.

The fastening of the shoe to the runner could of course be reversed, with the claw or spur B″ at the front, or claws could be used at both ends. However, this would not be so desirable a construction as the one here shown, because the loop for the attachment of the sled-rope would be necessarily different and not so ornamental.

From the description above given it will be observed that the structure of my improved sled can be considerably varied in its details without departing from my invention. There are other variations than those I have distinctly enumerated which would no doubt oc-

cur to the mind of a person skilled in the art to which my invention appertains. The shoe could no doubt be applied to other runners than board runners in this way by adapting the same to receive it. It is not deemed necessary to illustrate these various modifications and variations because they are so numerous and because they come within the scope of any skilled mechanic. The construction as I have shown it is superior in every detail and possesses great merit in economy of construction and in the superior utility of the sled itself.

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

1. In a sled the runner A slightly grooved toward its nose and on its heel; the plate C secured to the nose thereof having a perforation C′ therethrough; a shoe consisting of a round rod, with a loop or eye B′ turned in one end, inserted through the aperture C′ in the plate and extended around the runner and folded over the heel of the same and secured thereto by suitable spur B″ on the end thereof, all coacting together substantially as described for the purpose specified.

2. In a sled the runner A, slightly grooved toward its nose; the plate C secured to the nose thereof having a perforation C′ therethrough; a shoe consisting of a round rod, with a loop or eye B′ turned in one end, inserted through the aperture C′ in the plate and extended around the runner and secured at the heel by suitable means, for the purpose specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

WILLIAM E. KIDDER. [L. S.]

Witnesses:
W. S. WOOD,
JOHN W. ADAMS.