A. A. ABBOTT.

Sleighs.

No. 166,055. Patented July 27, 1875.

Fig. 1

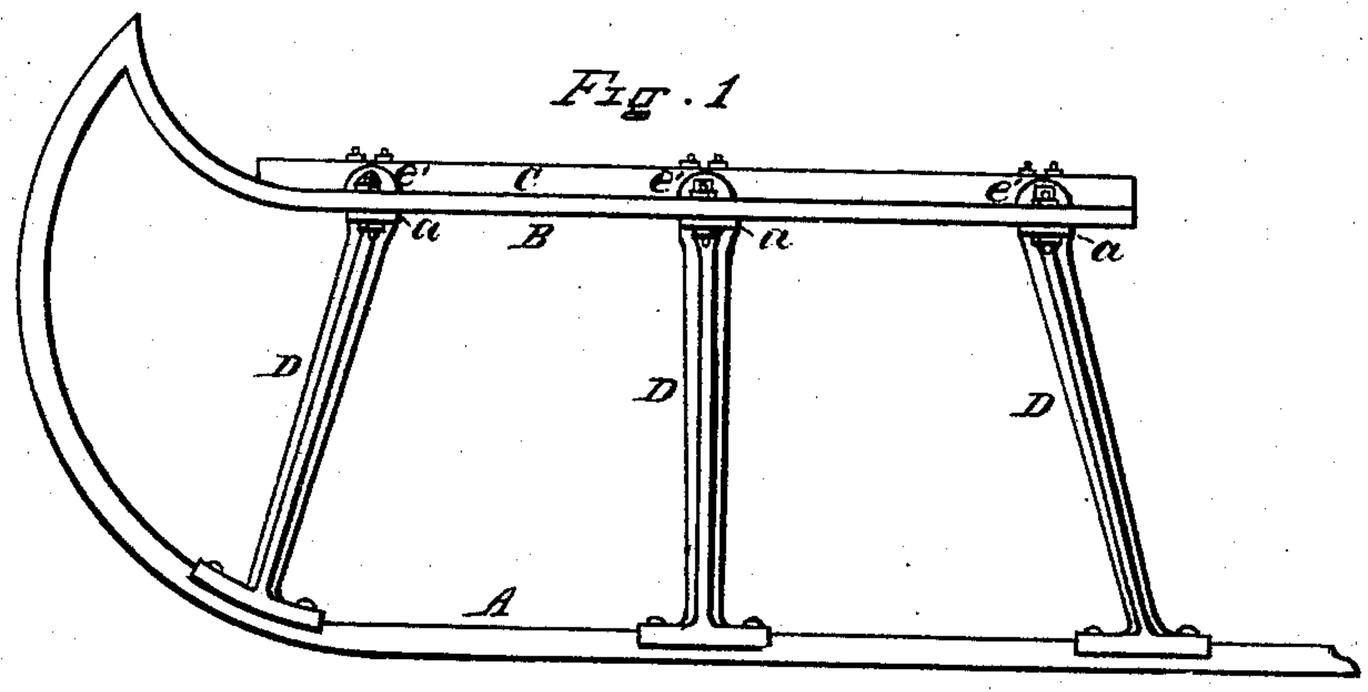


Fig. 2

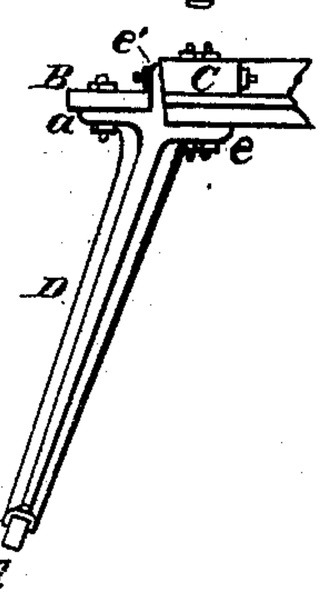
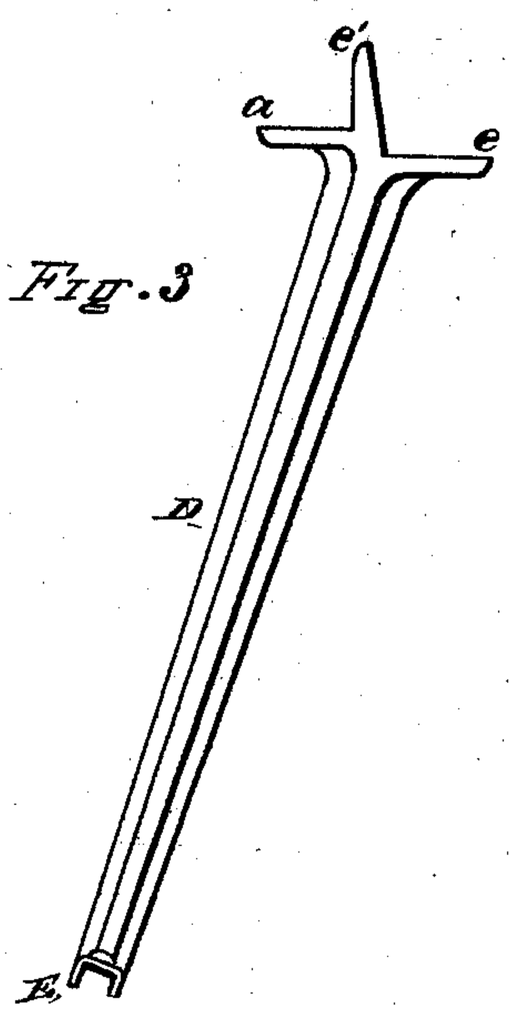


Fig. 3



WITNESSES.

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ARTHUR A. ABBOTT, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SLEIGHS.

Specification forming part of Letters Patent No. **166,055**, dated July 27, 1875; application filed April 27, 1875.

To all whom it may concern:

Be it known that I, ARTHUR A. ABBOTT, of Chicago, in the county of Cook and State of Illinois, have invented a new, useful, and Improved Cast-Iron Sleigh-Knee, of which the following is a full, clear, and exact description, which will enable others skilled in the art to which my invention appertains to make and use the same, reference being had to the accompanying drawing, forming a part hereof, and in which—

Figure 1 is a side elevation of a part of a sleigh provided with knees embodying my invention; Fig. 2, an end elevation of the same, and Fig. 3 an enlarged representation of one of the knees.

Like letters of reference indicate like parts.

In the drawing, A represents one of the runners, which are made preferably of wood. B is a rave, also preferably made of wood. C is the frame to which the body is attached. D D are the knees. *a* is a flange or shoulder extending outwardly from the upper part of the knee, and *e* is a like projection extending inwardly therefrom. These projections extend horizontally, while the knee is inclined in the usual manner, as represented in Figs. 2 and 3, and I deem it preferable to extend the outer shoulder from a point somewhat higher than that from which the inner shoulder extends, as shown. *e'* is a projection extending vertically, or nearly so, from the junction of the parts *a* and *e* with the main part of the knee. E is a socket to receive the upper edge of the runner.

The knees now described may be applied to use as follows: The knees are arranged on the runners in the manner represented, and firmly attached thereto by means of screws, bolts, or other suitable fastening. The parts *a a* serve as supports or brackets for the raves, and the latter are firmly attached thereto by means of bolts and nuts, as represented in Figs. 1 and 2. The frame is arranged on the extensions *e e*, which support it, and the parts *e' e'* prevent a lateral movement of the frame. The frame should be secured in place by means of bolts passing vertically through it and the part *e*, and horizontally through it and the part *e'*, as shown. The part *e'* should also be inclined, as shown, and the frame correspondingly beveled, so that the frame may be readily arranged in its proper position. The projection *e'* also prevents the inward lateral movement of the rave. The lateral movement of the frame will also be prevented independently of the projection *e'*, for the reason that a shoulder is presented to the outer edges or sides of the frame by arranging the part *a* above the part *e*, as shown. The knee, including all the parts shown in Fig. 3, is cast in one piece.

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

A sleigh-knee consisting of a standard provided with the socket E to receive the runner, the outward projection *a* to support the raves, the inward projection *e* to support the body of the sleigh, and the intermediate upright projection *e'*, all cast in one piece, and having substantially the form and construction herein described and shown.

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