

(No Model.)

D. S. HALL.
SLEIGH.

No. 535,003.

Patented Mar. 5, 1895.

Fig. 1.

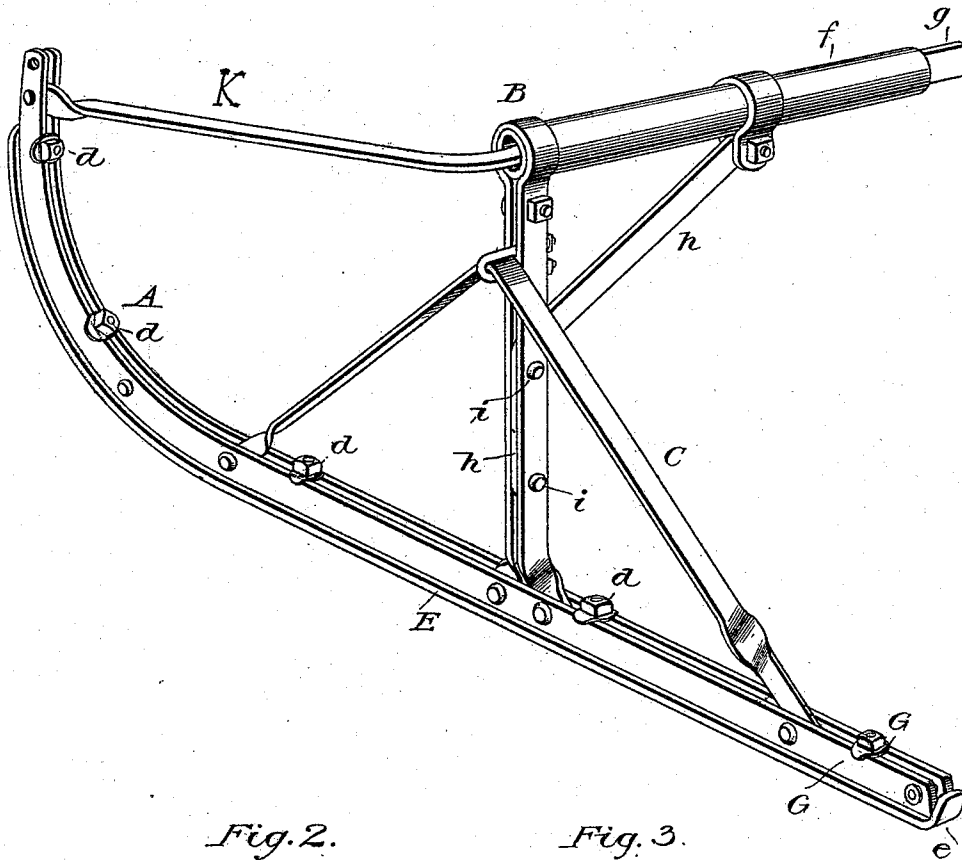


Fig. 2.

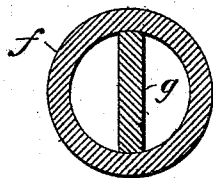
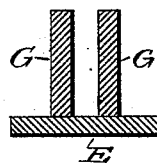


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

DEAN S. HALL, OF CABOT, VERMONT.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 535,003, dated March 5, 1895.

Application filed May 12, 1894. Serial No. 510,974. (No model.)

To all whom it may concern:

Be it known that I, DEAN S. HALL, a citizen of the United States, residing at Cabot, in the county of Washington and State of Vermont, have invented a new and useful Improvement in Sleighs, of which the following is a specification.

My invention relates to improvements in the runners or running gear of sleighs.

The object of my improvements are, first, to use steel or other metal in its original shape without expensive forging in its construction; second, to arrange the parts to obtain the greatest strength for the amount of material used, reducing the cost and weight of the sleigh.

The accompanying drawings are referred to and made a part of this specification.

In the drawings, Figure 1 is a perspective view of one side or one half of one sled of which there are usually two in a set. Fig. 2 shows a cross section of the beam with a stay or vertical support. Fig. 3 is a cross section of the runner and shoe attached.

Similar letters refer to similar parts throughout the several views.

In the drawings, A represents the runner, and G G the two sides of the runner; B, the post; *f*, the beam; C, a brace; *h*, a knee brace; *i i*, rivets passing through the sides of post B and the knee brace.

K represents a rave or brace extending from end of beam *f* to the forward end of runner.

E represents the shoe; *d d*, nuts and bolts holding shoe to runner; *g*, a stay or support in the beam.

Runner A is made of flat steel, or other suitable metal, with two longitudinal parallel sides, G G, curved edgewise to form the rise at the forward end. The sides G G are removed from each other by a space corresponding in width with the thickness of the ends of brace C, and posts B, which are inserted between the two sides of the runner and secured by rivets or studs as shown in Fig. 1. Said space also serves as a recess or aperture through which the bolts *d, d* pass that secure the shoe to the runner.

Post B, of which, there may be one or more, to each runner, is made of one piece of flat steel or other metal doubled together in the form of a loop or clasp in the middle. The

loop is of sufficient size to receive the end of beam *f*, which is inserted therein as shown in Fig. 1 and secured in position by bolt or bolts passing through the two parts of the post directly under the beam. I do not limit myself to this mode of securing the end of the beam in the loop of the post. It may be done by a grip and yoke, if preferred. The two sides of the post do not come in contact with each other under the beam but are left apart sufficiently to allow the loop to be drawn close upon the beam by means of a bolt and nut or other device. The ends of post B extend downward and the two sides of post B below the beam *f* extend parallel to near the ends where they are given a quarter twist that they may be inserted in the space between the sides of runner G G and attached to same as shown in Fig. 1 and held in place by rivets or studs.

Brace C is a piece of steel or other metal with the ends attached to the runner, one in front and the other in rear of the post B in the same manner that the ends of the piece constituting the post are attached to the runner. The brace C is attached to post B immediately under the end of beam by a staple as shown in Fig. 1 or by a link and wedge or in any other equivalent manner.

Shoe E is attached to the runner by bolts passing up between the two sides of the runner and held by nuts as shown in Fig. 1.

The knee brace *h*, also of flat stock bent to an angle edgewise, extends from post B to beam *f* and is attached to beam by a clasp or grip around the beam as shown in Fig. 1 and attached to post between the sides of it extending down the post toward the runner and held rigidly in the post by rivets or bolts *i i*.

Rave or brace K is attached to the runner at the forward end of it and extends back to near the end of beam where it is attached as shown in Fig. 1, or by any other desirable means that shall hold it rigidly at right angles with the beam as a means of guiding the runner.

Beam *f* is a tube with a stay or vertical support *g*. It is thus constructed to combine lightness with strength.

It does not require great skill to construct a sleigh after my invention. An ordinary blacksmith finds no difficulty in making them.

My invention may also be used as a runner attachment to carriages, by using a short piece of the tube or beam *f* to cover the spindle of the axle.

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

1. In a sleigh or sled a post B composed of a single piece of flat steel or other metal doubled together forming an adjustable loop or eye at upper end to receive the end of beam *f* or a section thereof and so constructed that it shall be adjustable and capable of being drawn tight upon said beam by means of a bolt
10 or bolts or grip and yoke or other similar device substantially as described.

2. In a sleigh the combination of runner A composed of two longitudinal parallel sides G G curved edgewise to form the rise at forward

end and intervening space, with the post B 20 and beam *f* or section thereof of metal tube.

3. In a sleigh in combination with runner A and post B the brace C of flat material provided at or near each end with a quarter twist and secured between the two sides of runner 25 G, G, at each end one in front and the other in rear of post B the middle portion being fastened to post B directly below the beam *f* by link or staple or other equivalent device.

4. In a sleigh a beam *f* of metal tubing in 30 which is inserted a flat steel bar or support *g* of suitable length and placed vertical to the strain.

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Witnesses:

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