(No Model.)

S. LEGREID.

BOB SLED.

No. 428,845. Patented May 27, 1890.

Fig. 1.

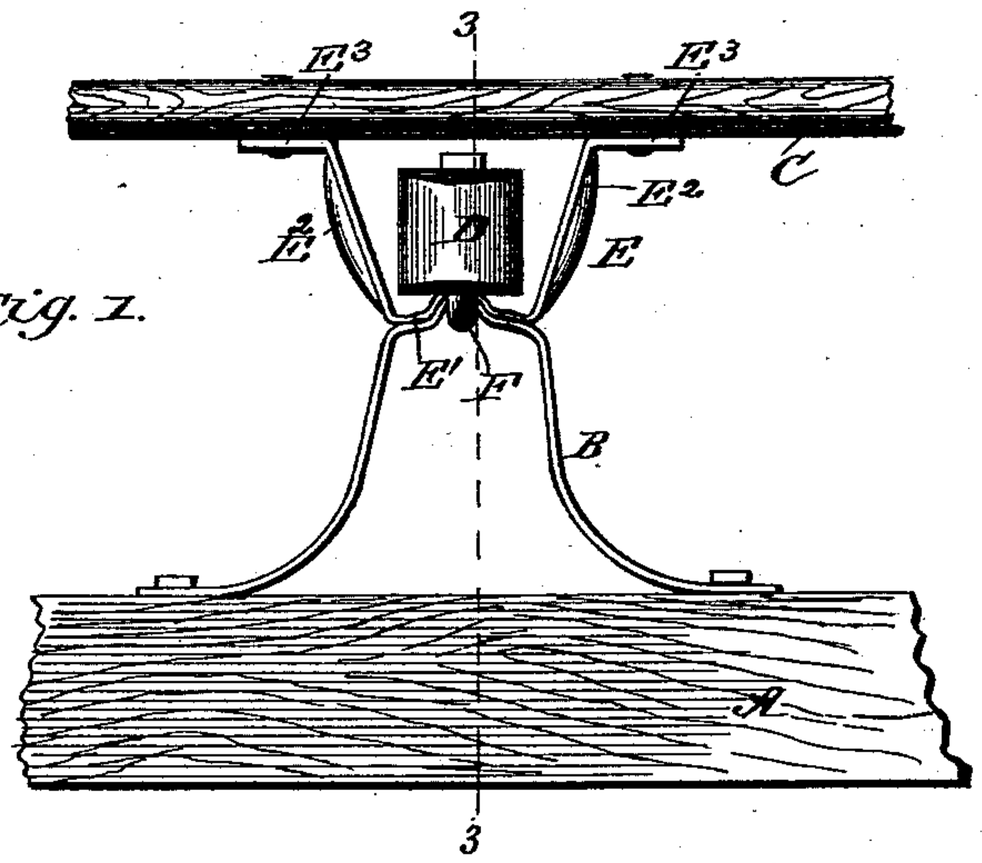


Fig. 2.

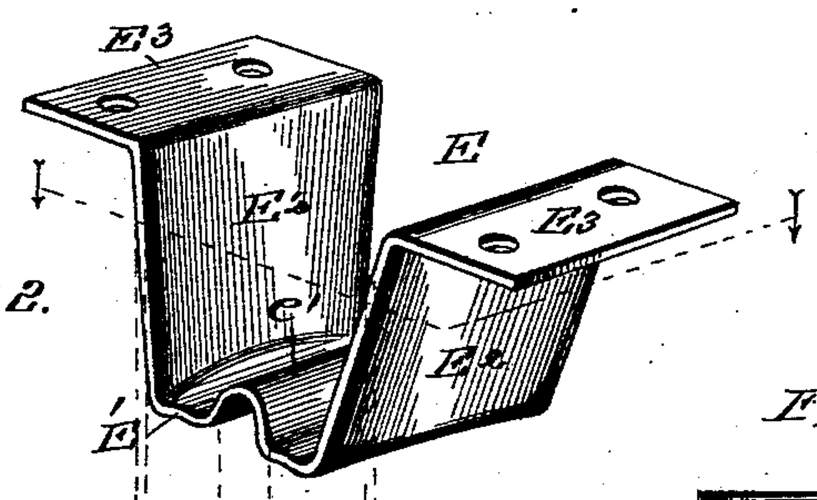


Fig. 5.

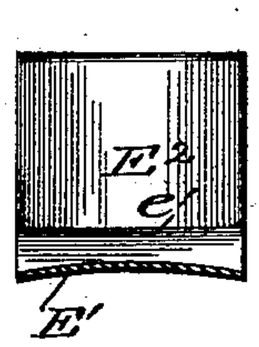


Fig. 4.

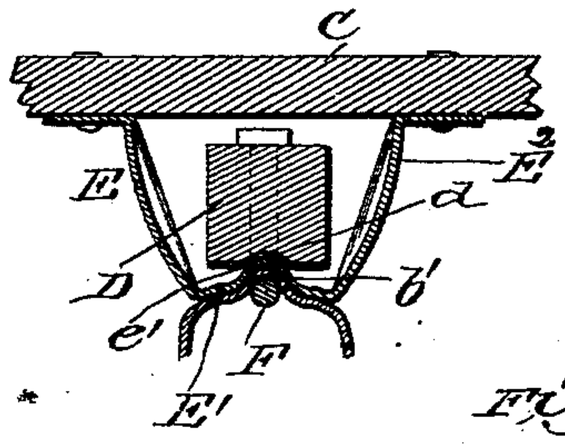
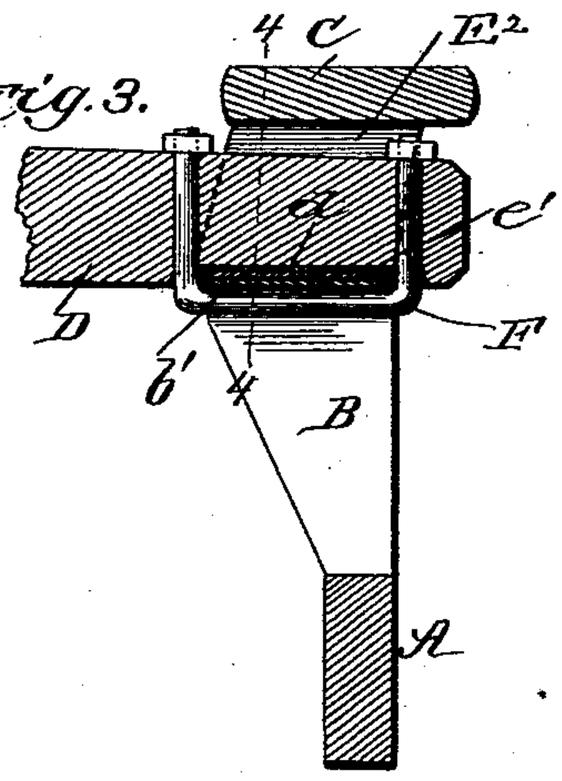


Fig. 3.



WITNESSES:
Fred G. Dieterich
P. B. Turpin.

INVENTOR:
Sven Legreid.
BY Munn & Co
ATTORNEYS

UNITED STATES PATENT OFFICE.

SVEN LEGREID, OF STOUGHTON, WISCONSIN.

BOB-SLED.

SPECIFICATION forming part of Letters Patent No. 428,845, dated May 27, 1890.

Application filed January 4, 1890. Serial No. 335,929. (No model.)

To all whom it may concern:

Be it known that I, SVEN LEGREID, of Stoughton, in the county of Dane and State of Wisconsin, have invented a new and useful Improvement in Bob-Sleds, of which the following is a specification.

This invention is an improvement in bob-sleds, being an improvement in the rave attachment thereof, whereby to simplify and strengthen such rave attachment; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a side view of a part of a sled provided with my improvements. Fig. 2 shows the rave attachment in detail. Fig. 3 is a section about line 3 3 of Fig. 1. Fig. 4 is a section on about line 4 4 of Fig. 3, and Fig. 5 is a section on about line 5 5 of Fig. 2.

The runner A, knee B, rave C, and beam D are clearly shown, and may, except in the particulars hereinafter described, be of ordinary construction.

The construction of the rave attachment, as before indicated, forms an important feature of this invention. In proceeding to a description of the details of construction of such part it may be stated that it is quite desirable to construct such part of the lightest metal possible consistent with the requisite strength. To such end thin plate steel and iron is quite desirable; but the inability thereof to stand great endwise strain or pressure prevents its use, except it be braced or re-enforced. By my invention I seek to so arrange or construct the rave attachment that it will have the necessary strength and enable the practical use of metal too thin to be otherwise used for the manufacture of the rave attachment.

The rave attachment E is shown as formed with a base portion E′, upright portions E^2, and top ears E^3, on which ears the rave is supported and secured. The base portion E′ rests upon and is adapted to the upper end of the knee, being in the construction shown provided centrally with a cross flute or rib e', curved upwardly, as shown, and receiving the rib or flute b' on the top of the knee. The beam D fits in the attachment E, and is preferably provided in its under side with a groove d, which partially receives and fits upon the rib e', the beam being secured by the beam-clip F, which fits under the flute or rib b' of the knee and its arms pass on opposite sides of the base of attachment E through the beam and are secured. This construction permits the beam to oscillate as desired, and at the same time effects a secure connection between the knee B and the rave attachment E, such parts B and E being formed separately, as shown and before described.

I make the knee of plate metal, iron or steel being preferred, and mold or press it into the desired shape.

As a distinctive feature of the rave attachment, I make its uprights, also its base portion, except the central rib-like part of the latter, curved in cross-section, such curving effecting a bracing of the metal, which greatly increases its strength and strain-resisting powers. This is particularly so of the uprights E^2 of the attachment, the crosswise curving or arching of which renders them much stronger and more able to bear endwise pressure than if they were left flat across. It will also be seen that the construction for securing the knee, beam, and attachment strengthens instead of weakens the knee, and is so formed as to permit the desired oscillation of the beam under the rave.

Manifestly the base portion of the attachment E can be molded or pressed to fit the upper part of sled-knees. It matters not what shape such knees may have at the top.

It will be noticed that my rave attachment inclines outward toward its upper end. The purpose of this construction is to support the rave out as far as practically possible, so that the end of the beam will not project beyond the side of the rave and catch in obstructions at the side of the sled.

Having thus described my invention, what I claim as new is—

1. In a sled, a rave attachment formed from a plate of metal and having a part or parts curved in cross-section, as and for the purposes set forth.

2. In a sled, a rave attachment having its base portion adapted to the upper end of a sled-knee and having its upright portions curved or arched in cross-section, substantially as set forth.

3. In a sled, the combination of the knee,

the rave, the rave attachment, the beam supported in said attachment, and the beam-clevis connecting such beam, rave attachment, and knee, substantially as set forth.

4. In a sled, the combination of the knee having rib or flute b', the rave attachment having rib or flute e' fitted to rib or flute b', the beam, and the beam-clevis, arranged and operating substantially as set forth.

5. In a sled, the combination of the rave attachment supporting the rave at its upper end and inclining outward toward such end, and the beam supported at its end in said rave attachment, substantially as set forth.

6. The improvement in sleds, substantially as herein described, consisting of the knee having its top provided with rib or flute b', the rave, the rave attachment having its base provided with rib or flute e', fitted to flute b', and having its upright portions curved or arched in cross-section and inclined outward toward its upper end, the beam fitted at its end in said attachment, and the beam-clevis, all constructed, arranged, and operating substantially as and for the purposes set forth.

SVEN LEGREID.

Witnesses:
THORVALD C. LUND,
OSWALD F. KROPP.