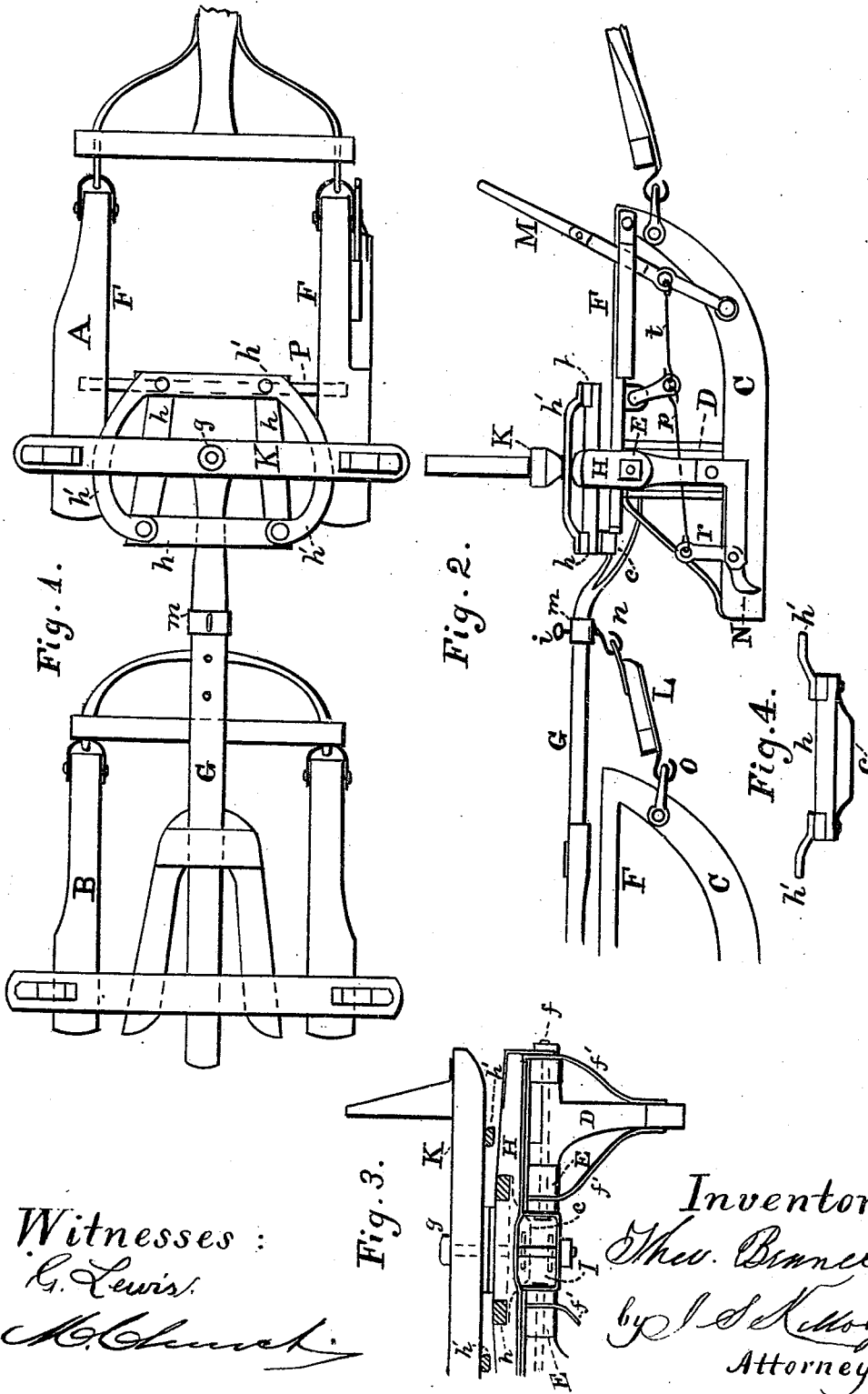


T. BRUNER.
BOB-SLED COUPLING.

No. 187,213.

Patented Feb. 13, 1877.



Witnesses:
G. Lewis.
M. Church.

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UNITED STATES PATENT OFFICE.

THEODOR BRUNER, OF RICHFIELD, MINNESOTA.

IMPROVEMENT IN BOB-SLED COUPLINGS.

Specification forming part of Letters Patent No. 187,213, dated February 13, 1877; application filed September 20, 1876.

To all whom it may concern:

Be it known that I, THEODOR BRUNER, of Richfield, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Sleighs; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, which form a part of this specification, like letters designating like parts in the several figures of said drawing.

My invention relates to bob-sleds; and consists in certain improvements in the construction of such sleighs, as hereinafter set forth and described.

In the accompanying drawing, forming part of the specification herein, Figure 1 is a plan view of my improved sleigh. Fig. 2 is a side view of same. Fig. 3 is a back view, illustrating the cross-beam and eyelet for the reach. Fig. 4 is a rear view of frame *h*, herein described, detached.

In the said drawing, A and B designate two sleds, each being formed chiefly of two runners, C, the upright pieces D supporting a cross-beam, E, and the horizontal pieces F connecting cross-beam and runners, as shown. The cross beam E of the forward sled A is divided into two parts, leaving an opening at the center for the forward end of the reach G, the said two parts of the cross-beam being strengthened in position by rods *f* and the braces *f'*. A cross-bar, H, is placed above said cross-beam, and secured thereto, the loop or eyelet I within the opening being firmly fixed to said cross-bar and cross-beam, and having coupled within it the forward end of the reach G, by means of the king-bolt, *g*, passing through and securing the parts, as shown. A frame, *h*, having a loop, *c*, is fixed to the bar H, serves as a guard for the reach G, and is provided with a curved iron brace, *h'*, which supports the bolster K in position.

The forward end of the reach G is bifur-

cated, the upper prong passing through a loop, *c*, secured to the frame *h*, and both prongs being coupled to the sled A, within the eyelet I, by the bolt *g*. Thus the end of the reach is protected within the eyelet I, and allowed a movement during the turning of the sleds. The rear sled B also has its cross-beam divided at the center, the parts being iron-bound and braced.

The reach G, passing from the forward to the rear sled, has a slide, *m*, upon it, for the purpose of lengthening the sleigh by extending the reach, the said slide being adjustably fixed in place by means of a bolt, *i*, and apertures in the reach G. The said slide has a hook, *n*, which couples with the draft reach or frame L, the latter connecting with the runners of the rear sled by the two clevises O, so that by adjusting the slide *m* on the reach G the main sleigh may be lengthened or shortened, as desired.

The sleigh is provided with a brake, secured to the forward sled, and operated by the hand-lever M, the said lever being of important use in ascending or descending a hill. The hooks N are pivoted to the runners, as shown, and have the arms *r* connected by rods *p* with the looped ends, turned downward, of the rod P crossing the sled, and being connected with the lever M by rod *t*, so that by a movement of lever M the points of the hooks N are driven into the roadway, or raised therefrom, as desired.

Having described my invention, I claim—

In the construction shown, the frame *h*, provided with curved iron braces *h'*, and the loop *c*, in combination with the bifurcated reach G, the latter being coupled, as shown, in the eyelet I in the cross-beam E, as and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

THEODOR BRUNER.

Witnesses:

THOMAS RICHARDSON,
JOHN J. SALDEN.