(No Model.)

J. KINNEY.

BOB SLED.

No. 303,863. Patented Aug. 19, 1884.

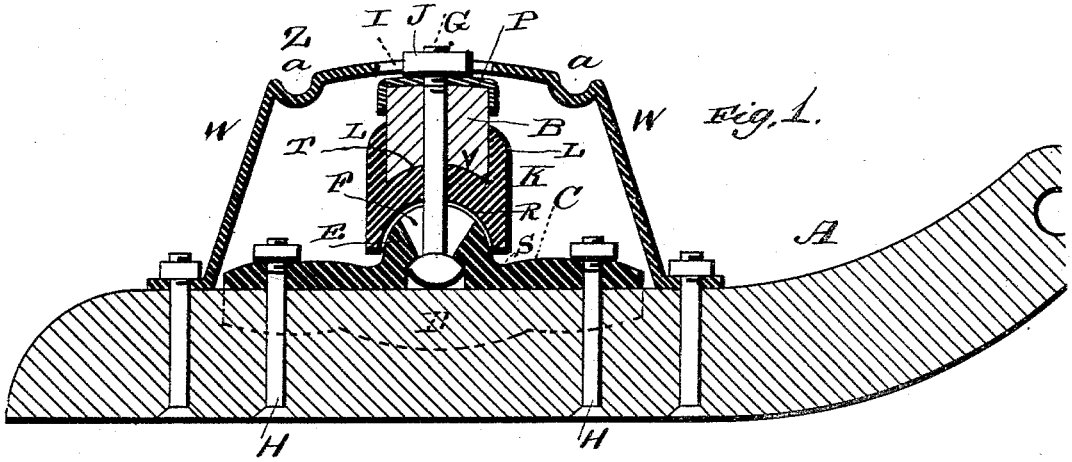

Fig. 1.

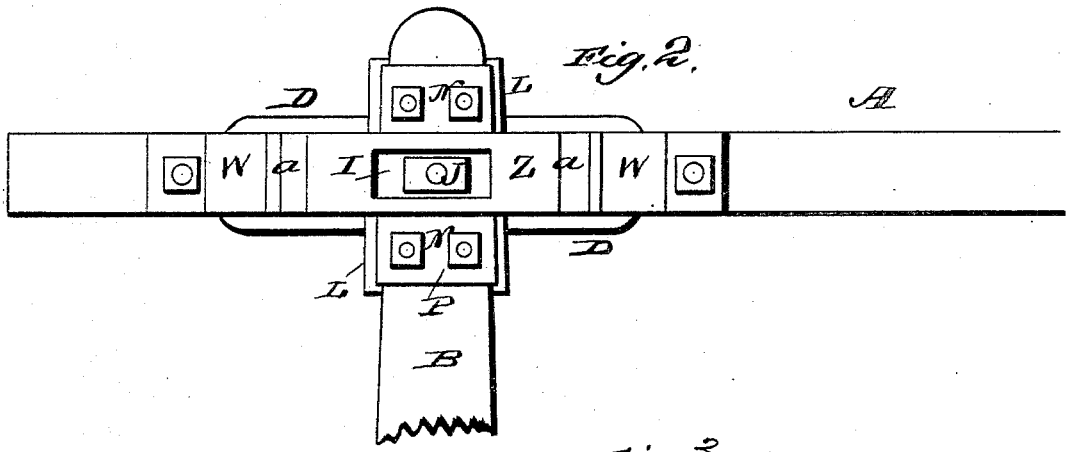

Fig. 2.

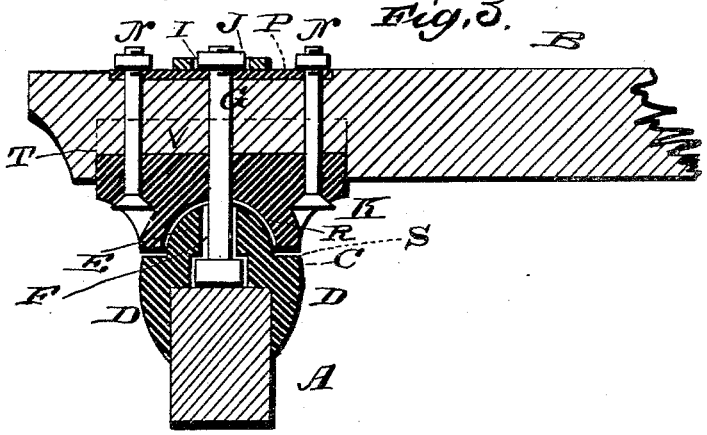

Fig. 3.

WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES KINNEY, OF CUMBERLAND, WISCONSIN.

BOB-SLED.

SPECIFICATION forming part of Letters Patent No. 303,863, dated August 19, 1884.

Application filed March 31, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES KINNEY, a citizen of the United States, residing at Cumberland, in the county of Barron and State of Wisconsin, have invented certain new and useful Improvements in Bob-Sleighs; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a vertical sectional view of my device. Fig. 2 is a top or plan view of the same, and Fig. 3 is a transverse sectional view.

This invention has relation to bob-sleds especially designed for use in connection with heavy or lumber sleighs, although it can be applied with advantage to light sleighs.

The invention consists in the construction and novel arrangement of the laterally-flanged runner-saddle, having a slotted spherical bearing on its top, a concave bearing adapted to engage the spherical bearing, and flanged to seat the beam, the runner-bolt, and the arc-form bridge-rave slotted to allow the rocking motion of the runner, all as hereinafter set forth.

In the accompanying drawings, the letter A designates the runner, and B the beam, of the bob-sled. On the runner is seated the saddle-casting C, which is formed with lateral flanges D, and a spherical bearing, E, on its top. The casting is slotted through the spherical bearing, as shown at F, to allow the play of the main bolt G in the rocking motion of the runner. The saddle C is secured to the runner by bolts H.

K represents a cast bearing-plate, which is secured to the transverse beam above the runner. This plate is flanged at L, to embrace the beam in front and in rear, and it is secured to the beam by bolts N, which pass through the casting and through the convex plate P on the top of the beam, as shown. This casting is formed with a spherically-concave bearing, R, in its base portion, which is designed to correspond with the convex bearing E of the saddle-casting on the runner, which is engaged thereby. The marginal ledge or shoulder S of the spherical bearing E is designed to form a stop to prevent the runner from leaning too much in any of its movements. In order to bring the load near the runner, which is advisable in heavy sleighs, as well as to strengthen the connection between the beam and the cast bearing-plate K, a concave or transversely-arched recess is cut in the under side of the beam, as shown at T, and the top of the casting is similarly arched to fit in this recess neatly, as shown at V. The main bolt extends through the upper beam-plate, P, and the nut J is turned on its upper end.

Z indicates the arched rave, which is formed of broad wrought-iron bar, and its end portions are bent downward to provide the knees W, which are bolted to the runner. Just above the bends of the knees, at the ends of the arch of the rave, are formed short bends or bearings *a*, which are adapted to facilitate the use of skids in loading, the ends of the skids working in these bends, as upon bearings. At the center of the arch of the rave is formed the longitudinal slot I, which spaces the nut of the main bolt, and is of sufficient length to allow the sled to rock freely under the beam. In this construction the weight of the load is on the ball-bearings of the runners, and is applied directly over them through the beam.

The runners are designed to have a certain amount of independent rocking action, both directly and obliquely, which is of importance in securing ease of movement, not only in starting the sleigh when loaded, but in keeping it properly moving in the road.

Cross-chains are generally employed between the front and rear sleds, and in starting a heavy load an oblique draft is applied, operating, first, upon one front runner and then upon the opposite rear runner, and in this way a heavy load can be started, which could not be moved if all the draft were applied to all the runners at once; and, when in motion, the capability of the runners to rock in the oblique direction gives them yielding character, which enables them to keep the road, while a more positive and rigid construction would cause the sled to cut out of the road and upset the load, or become fastened in an embankment or drift.

Having described this invention, what I claim, and desire to secure by Letters Patent, is—

1. In a bob-sled, the combination, with the cast runner-saddle having a slotted spherical bearing on its top, of the cast concave bearing-plate adapted to engage said spherical bearing, and flanged to seat the beam, the runner-bolt, and the arc-form bridge-rave, slotted to allow the rocking motion of the runner, substantially as specified.

2. In a bob-sled, the combination, with a concave bearing-plate flanged to seat the beam, of a cast runner-saddle having a slotted spherical bearing on its top, and the main bolt connecting the beam and runner, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES KINNEY.

Witnesses:
L. L. GUNDERSON,
BENNIE JOHNSON.