

No. 759,905.

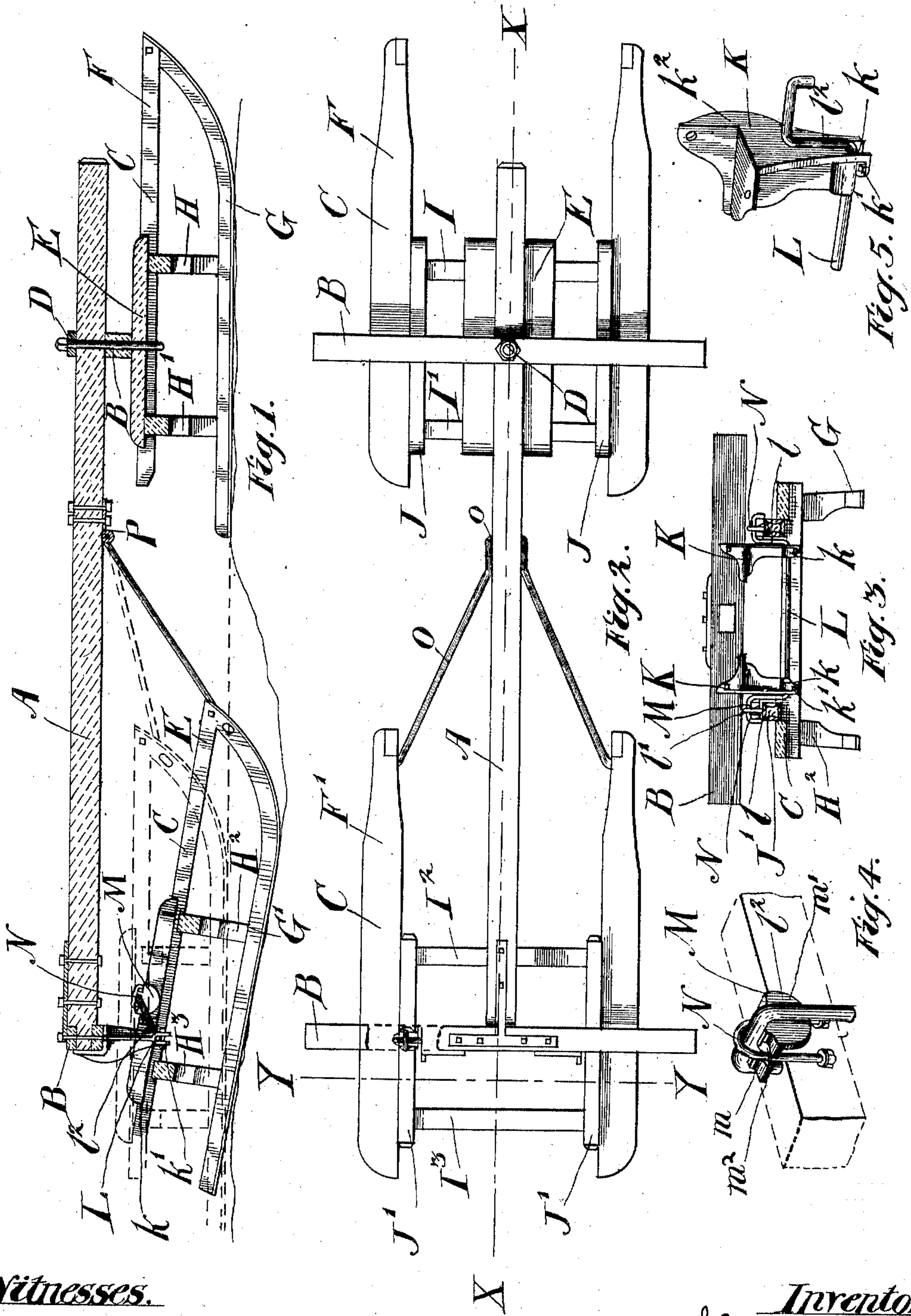
PATENTED MAY 17, 1904.

F. B. McNAMEE.

SLEIGH.

APPLICATION FILED MAY 21, 1903.

NO MODEL.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRANCIS BERNARD McNAMEE, OF WARBURTON, CANADA.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 759,905, dated May 17, 1904.

Application filed May 21, 1903. Serial No. 158,155. (No model.)

To all whom it may concern:

Be it known that I, FRANCIS BERNARD McNAMEE, carpenter, of the village of Warburton, in the county of Leeds, Province of Ontario, Canada, have invented certain new and useful Improvements in Sleighs, of which the following is a specification.

My invention relates to improvements in sleighs, and more particularly to the class of sleighs known as "bob-sleds," in which the body of the sleigh is supported on a forward sled, which is pivotally secured thereto, so as to be capable of turning horizontally, and a rear sled; and the objects of my invention are to devise improved means for securing the rear sled to the body or frame of the bob-sled whereby the effect of uneven roads will be minimized, and, further, the pull will be entirely on the front portion of the rear sled and the tendency of the sled will be to return to the normal position after it has been deflected therefrom by running into an unevenness in the road; and it consists, essentially, of an ordinary pole or reach, the bolster and the front sled secured in the ordinary manner, depending brackets secured to the rear bolster, a shaft rotatably secured in the lower extremities of said brackets, cranks formed at the ends of said shaft, the free ends of said cranks being journaled in suitable bearings secured to the side pieces of the rear sled, a suitable connection secured to the front end of the rear sled and to the pole or reach, the various parts of the device being constructed and arranged in detail as hereinafter more particularly described.

Figure 1 is a sectional elevation of a bob-sled embodying my invention, the line of section being indicated by the line X X in Fig. 2. Fig. 2 is a plan of a bob-sled, a portion of the rear bolsters being broken away to show parts thereunder. Fig. 3 is a sectional elevation of the bob-sled on the line Y Y, Fig. 2. Fig. 4 is a detail perspective view of one of the bearings for securing the crank to the side piece. Fig. 5 is a detail perspective view of one of the brackets.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is the pole or reach of the bob-sled.

B B are the front and rear bolsters, respectively.

C C are the front and rear sleds. The front sled is secured to the reach pivotally by means of a king-bolt D, which passes through the bolster, the reach, and the center piece E of the front sled. The sleds are constructed according to the ordinary practice and consist of the rails F F', the runners G G', the sleigh-knees H H' H² H³, the cross-pieces I I' I² I³, and the side pieces J J'. The rear end of the pole or reach A is rigidly secured to the rear bolster B'.

Having now described the parts of the device which are of ordinary construction, I will proceed to explain the parts which I have invented.

K K are brackets of suitable form, which are secured to the rear bolster by bolts or other suitable means.

L is a shaft which is provided at its ends with cranks l l. This shaft is journaled in suitable bearings k k, formed at the lower extremities of the brackets K. These bearings are preferably open, as shown most clearly in Fig. 5, and the shaft is retained therein by set screws or bolts k'.

M M are bearings which may be of any suitable form, but consist, preferably, of grooved plates m, having depending flanges m' and lateral recesses or grooves m². The horizontal portions l' of the cranks l are adapted to be rotatably held in place by the inverted-U-shaped bolts N N. These bolts pass through the notches m², thence through the side pieces J' J' and are provided with suitable washers and nuts beneath the said side pieces. The outer extremities of the cranks are turned downwardly outside of the bearings M M to prevent lateral motion of the shaft. The vertical portions l² of the cranks l extend close beside the vertical flat face k² of the brackets K.

O is a substantially V-shaped drag-bar, having an integral horizontal portion o, journaled

in a bearing P, which is suitably secured, preferably, to the under side of the reach A. The extremities of this drag-bar are pivotally or rotatably secured to any suitable portion of the runners of the rear sled in advance of the bearings M. The preferable means of securing the ends of the drag-bar is to pass the same through suitable holes formed in the runners near the forward ends thereof and to bend the ends of the drag-bar so as to prevent their being removed.

Having now described the construction of the invention, I will proceed to point out some of its advantages. In the past it was customary to secure the rear sled rigidly to the bolster or in such a manner that it was free to turn through an angle vertically, or, in other words, it was simply supported by any axle or a shaft. The forward end of the rear sled was secured to the reach by a chain or other device, which in order to permit the sled to work freely on an uneven road had to be more or less slack. It will be readily seen that owing to this slackness the pull on the rear sled comes entirely from its connection with the bolster, and only when the sled was in a considerably tilted position did the pull come from the chain secured to the reach. It will thus be seen that when the rear sled ran into an uneven, sticky, or resistable part of the road the pull and load being centered above and at the rear of the foremost portion of the sled pressing the ground the result was a tendency to lift the rear end of the sled and to force the front end into the ground, thereby increasing the pull and acting as a considerable source of wear and tear on the frame of the sleigh. It will now be seen on referring to the above description and the drawings that my device completely obviates these defects. It will be seen at once on referring to Fig. 1 that the tendency of the load is to cause the runners or the rear sled to remain in the horizontal position or to bring it back to the horizontal position after it has tilted. It is also particularly to be noticed that the drag-bar O is rigid and in whatever position the runners may be the drag-bar will always act, so that instead of the pull being communicated from the bolster to the rear portion of the runner it is communicated from the reach to the forward portion of the runner, with evident advantages. My device, it will also be noticed, is extremely simple and cheap in construction and does not add anything appreciable to the cost of the bob-sled.

It may here be mentioned that I do not wish to confine myself to the exact details of construction shown in the drawings and described herein, as of course certain changes might be made therein which would come within the scope of mechanical skill. For example, if

the cross-pieces I² I³ in any sleigh should be too close together to permit of the swing, as shown in the drawings, the crank-shaft might be secured directly beneath the bolster, and the cranks could be made to extend downwardly instead of upwardly, with an exactly equivalent action.

Other changes might be made in the construction without departing from the spirit of my invention.

What I claim as my invention is—

1. In a device of the class described the combination with the reach, the rear bolster and the rear sled, of depending brackets secured to the rear bolster and having flat outer faces, a shaft journaled in bearings formed at the lower extremities of said depending brackets, said shaft having cranks formed integral therewith at the ends thereof, bearings secured to the rear sled in which the horizontal portions of said cranks are journaled, said bearings having downwardly-extending flat portions adjacent to the flat outer face of the brackets, said crank portions of the shaft located between said inner flat faces of the bearings and the outer flat faces of the brackets whereby the swinging motion of the cranks is permitted but longitudinal motion of the shaft is prevented as and for the purpose specified.

2. In a device of the class described the combination with the shaft having cranks formed at its ends, and the side pieces of the rear sled, of a grooved bearing for the horizontal portion of said crank, said bearing having a downwardly-extending flange or apron adapted to abut the inner side of the side piece and downwardly-extending lateral grooves, and a U-shaped bolt adapted to pass over the horizontal portion of the crank, the ends thereof extending through said lateral grooves and through the side pieces and suitable nuts for securing the ends thereof, below the side piece as and for the purpose specified.

3. In a device of the class described a bearing-bracket for the crank-shaft comprising a pair of flat surfaces at right angles, one adapted to abut a vertical side and the other to abut the under side of the rear bolster, an outer vertical flat surface extending downwardly from said first-mentioned surfaces, a U-shaped bearing formed at the lower portion of said bracket, a strengthening-web formed integral with the bearing, the vertical flat outer surface and the horizontal surface as shown and described.

4. In a device of the class described the combination with the rear bolster and the rear sled and the side pieces thereof, of downwardly-extending bearing-brackets secured to the rear bolster and having outer vertical flat surfaces, bearings secured to the side pieces of the rear sled and having downwardly-extending inner

flat vertical surfaces, a shaft journaled in the
bearings of the lower portions of said brack-
ets, cranks formed on the ends of said shaft
and extending upwardly between said verti-
5 cal outer faces of the brackets and the verti-
cal inner faces of the bearings, said cranks
having horizontal portions journaled in said
bearings secured to the side pieces and verti-

cal portions extending downwardly outside of
said bearings as and for the purpose specified. 10

Signed at the village of Warburton this 29th
day of April, 1903.

FRANCIS BERNARD McNAMEE.

Witnesses:

MATTHEW WEBSTER STEACY,
GEORGE WILLIS STEACY.