

(No Model.)

A. F. PINE.
SLEIGH.

No. 479,154.

Patented July 19, 1892.

Fig. 1.

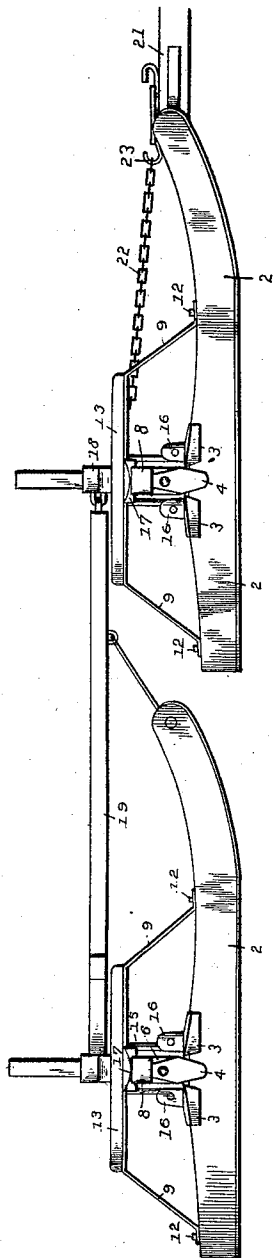


Fig. 2.

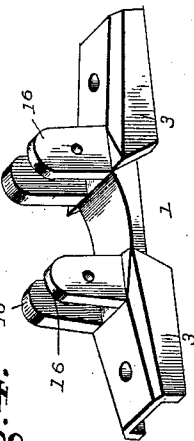


Fig. 3.

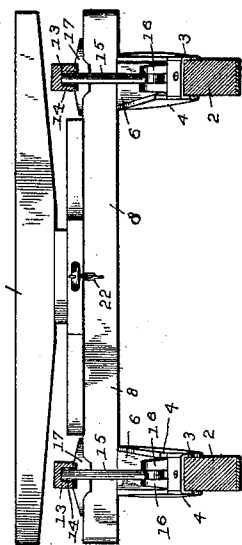


Fig. 4.

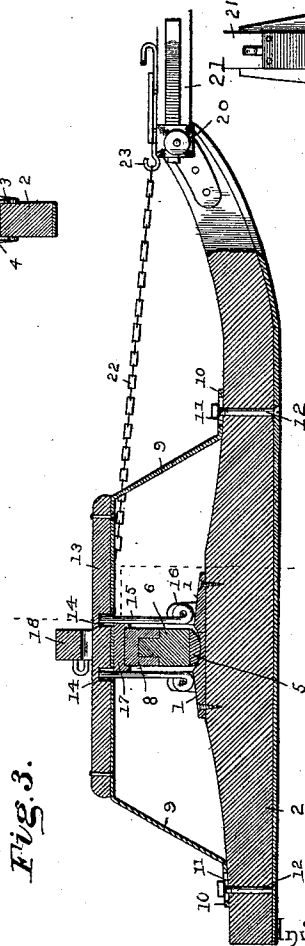


Fig. 5.

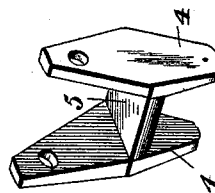


Fig. 6.



Witnesses

J. Ulke, Jr.
H. H. Riley

By his Attorneys,

Arthur F. Pine.
C. Snow & Co.

UNITED STATES PATENT OFFICE

ARTHUR F. PINE, OF ANTIGO, WISCONSIN, ASSIGNOR OF ONE-HALF TO
HENRY LEIBER, OF SAME PLACE.

SLEIGH.

SPECIFICATION forming part of Letters Patent No. 479,154, dated July 19, 1892.

Application filed March 14, 1892. Serial No. 424,892. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR F. PINE, a citizen of the United States, residing at Antigo, in the county of Langlade and State of Wisconsin, have invented a new and useful Sleigh, of which the following is a specification.

The invention relates to improvements in sleighs.

The object of the present invention is to simplify and improve the construction of sleighs, more especially the sleigh-knee, and to enable the runner to have a free and easy motion independent of the knees to enable the sleigh to move readily over rough surfaces.

A further object of the invention is to prevent the draft, when the vehicle is loaded, causing the body to be thrown rearward, as is often the case where sleigh-knees that permit free motion of the runners are employed.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and particularly pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation of a sleigh constructed in accordance with this invention. Fig. 2 is a transverse sectional view. Fig. 3 is a longitudinal sectional view taken through the runners. Fig. 4 is a detail perspective view of one of the bearing-plates. Fig. 5 is a similar view of one of the journal-plates. Fig. 6 is a detail view.

Like numerals of reference indicate corresponding parts in all the figures.

1 designates a bearing-plate, which is arranged on the upper edge of a runner 2, and which is provided at opposite sides with depending flanges 3, arranged on the sides of the runner and extending inward from the ends of the bearing-plate and forming stops for extensions 4 of a journal-plate 5, which is secured to a sleigh-knee 6. The bearing-plate 1 is secured by screws or bolts to the runner and is provided on its upper face with a concave bearing 7, adapted to receive the lower end of the journal-plate, which is convex, whereby a free and easy bearing between the sleigh-knee and the runner is provided. The

knee 6 is secured to a beam 8 in the usual manner, and the runner is connected with the beam by a brace 9, having its ends 10 provided with slots 11 and secured by bolts 12, arranged in the slots, whereby the brace will permit a movement of the runner. The brace is strengthened at its top by a cleat 13, which, together with the brace, is provided with openings 14, in which are loosely arranged the upper ends of rods 15. The lower ends of the rods 15 are enlarged and provided with perforations and are pivoted between upwardly-extending ears 16, formed integral with the bearing-plate and arranged on opposite sides or ends of the bearing-surface of the plate 1. The rods are retained in the openings and held against lateral and longitudinal movement independent of the knee by a plate 17, secured to the upper face of the beam 8 and provided at opposite sides with recesses to receive the rods. It will thus be seen that the runners are permitted a free and independent motion to enable them to readily pass over rough surfaces. The beam of the front bob is pivotally connected with a bolster 18, and is also connected by a reach 19 with the bolster of the rear bob. In order to make the draft central and to prevent the body of the sleigh being thrown rearward by a heavy load, the beam of the front runners is connected with the cross-bar 20 of the tongue 21 by a chain 22. The chain 22 has its front end attached to the cross-bar of the tongue by a hook 23 and is adapted to be readily adjusted to preserve the desired relative position of the parts. The rear or inner end of the chain may be attached to the reach, to the beam, or to some other convenient point.

What I claim is—

1. In a sleigh, the combination of a runner, a bearing-plate secured to the runner and provided with ears arranged on opposite sides of its bearing-surface, a knee, and rods arranged on opposite sides of the knee and having their lower ends pivoted between the ears and their upper ends loosely secured, substantially as described.

2. In a sleigh, the combination of a runner, a bearing-plate provided with depending flanges and having perforated ears arranged

at opposite sides of its bearing-surface, a knee,
a journal-plate mounted on the bearing-plate
and provided with depending extensions ar-
ranged between the flanges, and the rods ar-
5 ranged on opposite sides of the knee and hav-
ing their lower ends pivoted between their
ears and their upper ends rigidly secured,
substantially as described.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in 10
the presence of two witnesses.

ARTHUR F. PINE.

Witnesses:

JOHN McKENNA,
S. K. STRONG.