No. 703,510. Patented July 1, 1902.

W. N. WILLIAMS.

SLEIGH RUNNER.

(Application filed Dec. 19, 1901.)

(No Model.)

Fig. 1.

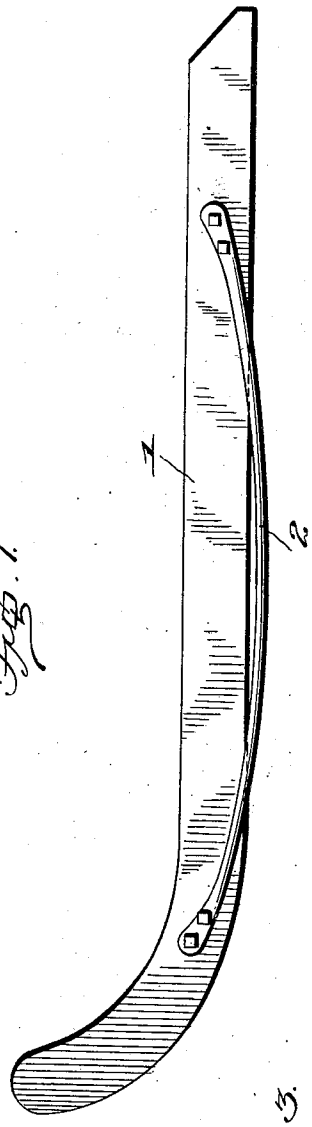


Fig. 2.

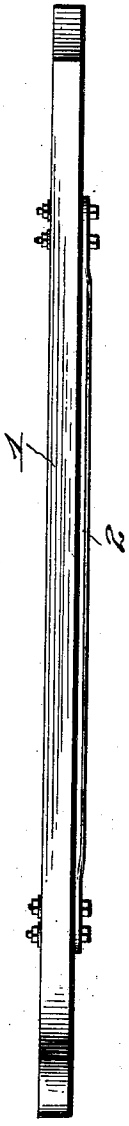


Fig. 3.



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UNITED STATES PATENT OFFICE.

WILLIAM N. WILLIAMS, OF WELCOME, MINNESOTA.

SLEIGH-RUNNER.

SPECIFICATION forming part of Letters Patent No. 703,510, dated July 1, 1902.

Application filed December 19, 1901. Serial No. 86,526. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM N. WILLIAMS, a citizen of the United States, residing at Welcome, in the county of Martin and State of Minnesota, have invented certain new and useful Improvements in Sleigh-Runners; 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.

The invention relates to sleigh-runners.

The object of the invention is to provide a runner with an attachment which shall be simple in construction, durable in use, comparatively inexpensive of production, and easy of application, whereby side or lateral shifting of the runner will be prevented in traveling over hills or inclines or making sharp turns at a great speed.

With these and other objects in view the invention consists of certain novel features of construction, combination, and arrangement of parts, which will be hereinafter more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a side elevation of the sleigh-runner embodying my invention. Fig. 2 is a top plan view, and Fig. 3 is a vertical sectional view showing the position of the spring-bow when the runner is making a turn or rounding a curve and illustrating the dragging action of the bow.

Referring to the drawings, 1 denotes the runner of a sleigh or other vehicle or conveyance, which may be of any well-known or approved construction and which may be equipped with shoes in the usual way.

2 denotes the attachment, which consists of a spring-bow, which, as shown in Fig. 2, is curved outwardly and projects downwardly for one portion of its length, as shown in Fig. 1, so as to be below the lower face or shoe of the runner and has its ends secured by bolts 3 to the inner side of the runner.

The weight of the load when the sleigh is drawn in a semicircular path is thrown to the outside, and by attaching the bows to the inner sides of the runners the bow of the outer runner is caused to spring inwardly from the inner face of the runner, and in doing this exerts a varying drag upon the snow or ice, according to the surface over which the runner is traveling and the speed with which the turn is made. If the spring-bow were secured to the outside of the runner, in turning curves it would be forced against the runner, thus creating a friction against the runner and causing it to stop in its sidewise movement too suddenly, which has been demonstrated in practice to result in the overturning of the load. It will thus be seen that a desirable advantage is gained by securing the spring-bow to the inner side of the runner.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and advantages of the invention will be readily understood without requiring a more extended explanation.

Various changes in the form, proportion, and details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

The combination with a sled-runner, of a bow-spring having its opposite ends secured to the inner surface of the runner and having its body portion curved outwardly with one portion thereof projecting downwardly below the lower surface of the runner, whereby said downwardly-projecting portion is capable of being sprung inwardly toward the said runner when the sled to which it is attached is in the act of turning a curve, substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM N. WILLIAMS.

Witnesses:
A. W. GAMBLE,
FRED FORTMAN.