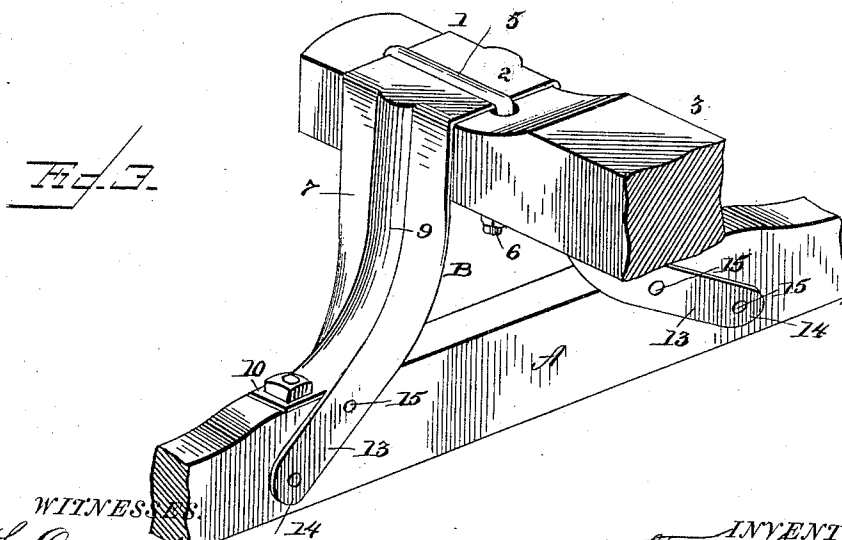
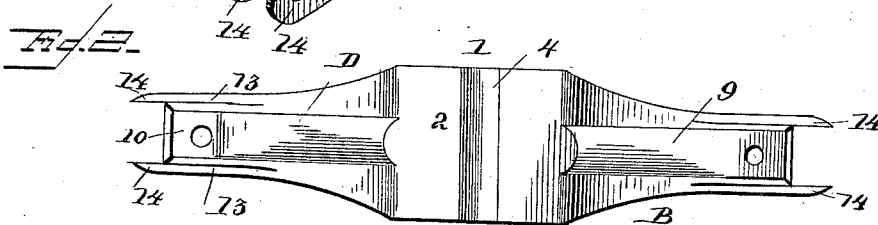
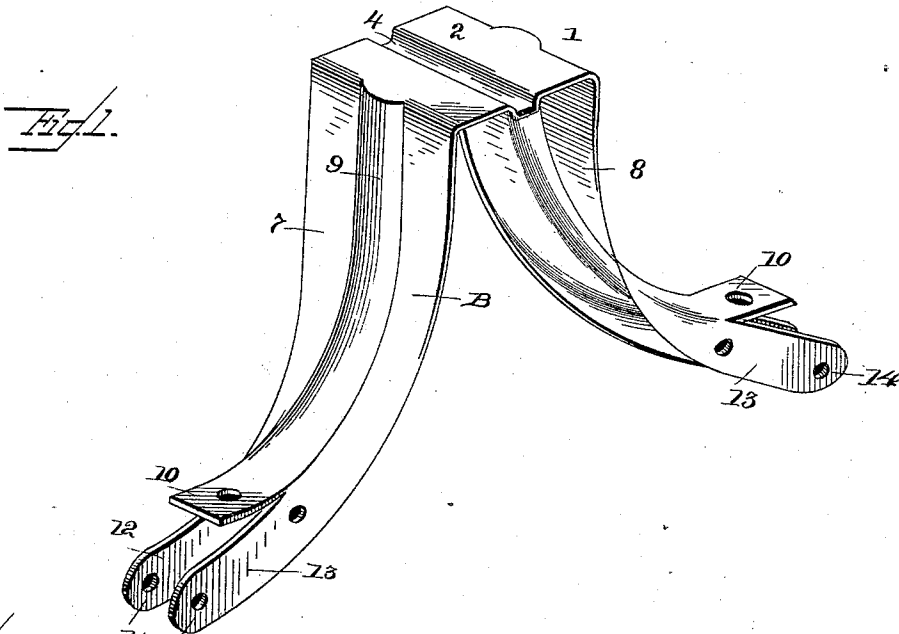


(No Model.)

T. G. MANDT.
SLEIGH KNEE.

No. 399,913.

Patented Mar. 19, 1889.



WITNESSES:
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UNITED STATES PATENT OFFICE.

TARGE G. MANDT, OF STOUGHTON, WISCONSIN.

SLEIGH-KNEE.

SPECIFICATION forming part of Letters Patent No. 399,913, dated March 19, 1889.

Application filed December 22, 1888. Serial No. 294,358. (No model.)

To all whom it may concern:

Be it known that I, TARGE G. MANDT, a citizen of the United States, and a resident of Stoughton, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in Sleigh - Knees; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to sleigh-knees, and is designed as an improvement upon a knee for bob-sleds for which Letters Patent of the United States were granted me November 30, 1886, and numbered 353,569.

The object is to produce a sleigh-knee which, while being constructed of comparatively light material, will be found exceedingly strong and durable in use, and can be secured to the runner of a sleigh in such a manner that it will be prevented from working loose from any cause. Furthermore, to produce a knee the construction being of sufficient simplicity to admit of its being made with ordinary tools at a slight expense and at a small amount of labor.

With these objects in view the invention consists in a sleigh-knee provided at its upper end with a recess through which the cross-tie of the sleigh-body extends, and its lower ends with lips resting against and secured to each side of the sleigh-runner to hold the knee in place thereon. Furthermore, in the various novel details of construction, as will be hereinafter fully described in the specification, illustrated in the drawings, and pointed out in the claims.

In the accompanying drawings, forming part of this specification, and in which like letters of reference indicate corresponding parts, Figure 1 is a perspective view of the knee. Fig. 2 is a top plan view of the same, and Fig. 3 is a perspective view showing the knee secured in place upon the sleigh-runner and the cross-piece in place.

Referring to the drawings, A designates the runner of a sleigh, upon which is mounted the

knee B. This knee may be constructed of any suitable material, but preferably, in this instance, of steel, the top 1 being formed with a flat portion, 2, of sufficient width to accommodate the cross-beam 3, which is secured upon its under side and upon which the sleigh-body rests. The center of the top of this flat portion is formed with a groove, 4, through which passes a U-shaped bolt, 5, extending through the said cross-beam and secured in place by means of nuts 6. The object for having this groove in the top of the knee is to present a level surface, so as to admit of a rave being secured thereto, if necessary. The metal on each side of this top is bent down to form two arms, 7 and 8, the center of the metal being raised to form a strengthening-ridge, 9, for giving greater strength and spring to the knee. This ridge terminates in a tongue, 10, through which passes a bolt, 11, for securing it upon the top of the runner. The metal on each side of this ridge is bent down and forms two flanges, 12 and 13, terminating in lips 14, which are bent down and bear against the runner, and are rigidly secured in place thereon by means of rivets 15.

The object for having both the tongue 10 and the lips 14 is that, should the bolt 11 passing through the said tongue work loose from any cause, the runner will still be held rigid by means of the rivets which pass through the lips, and, by forming the sides of the knee with the strengthening-ridge before referred to, the knee will have greater strength and spring than were the metal flat.

It will thus be seen that by constructing a sleigh-knee in this manner an exceedingly simple, light, and durable knee is produced, which will be held upon the sleigh-runner without the possibility of its working loose from any cause.

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

1. A sleigh-knee constructed with a flat top provided with a central groove and two arms, the center portion of which is formed with a strengthening-ridge terminating in a tongue resting upon the top of the runner, the sides of the arms being bent down to form flanges ter-

minating in lips which rest against and are secured to each side of the sleigh-runner, substantially as described.

2. The combination, with a sleigh-knee constructed with a flat top provided with a central groove and two arms, the center portion of which is formed with a strengthening-ridge terminating in a tongue resting upon the top of the runner, the sides of the arms being bent down to form flanges terminating in lips which rest against and are secured to

each side of the sleigh-runner, of a U-shaped bolt which fits in the central groove in the top and engages the cross-tie under the said flat portion, substantially as described.

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

TARGE G. MANDT.

Witnesses:

T. C. LUND,

U. C. HEGELMEYER.