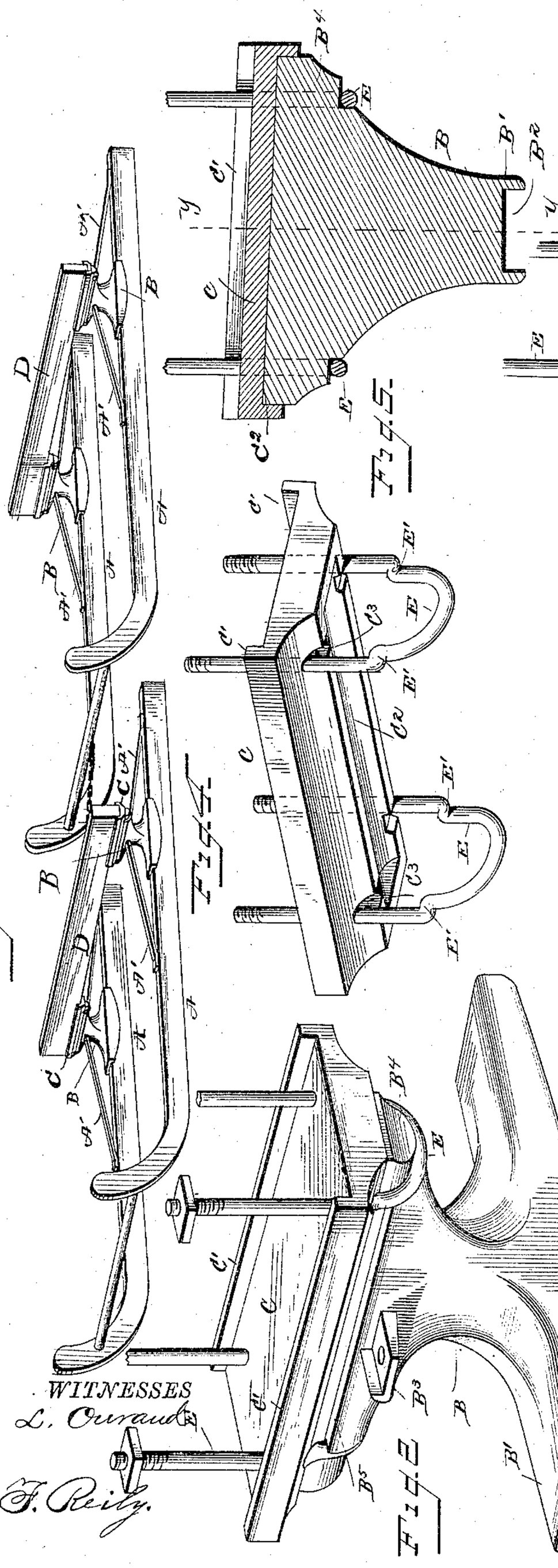
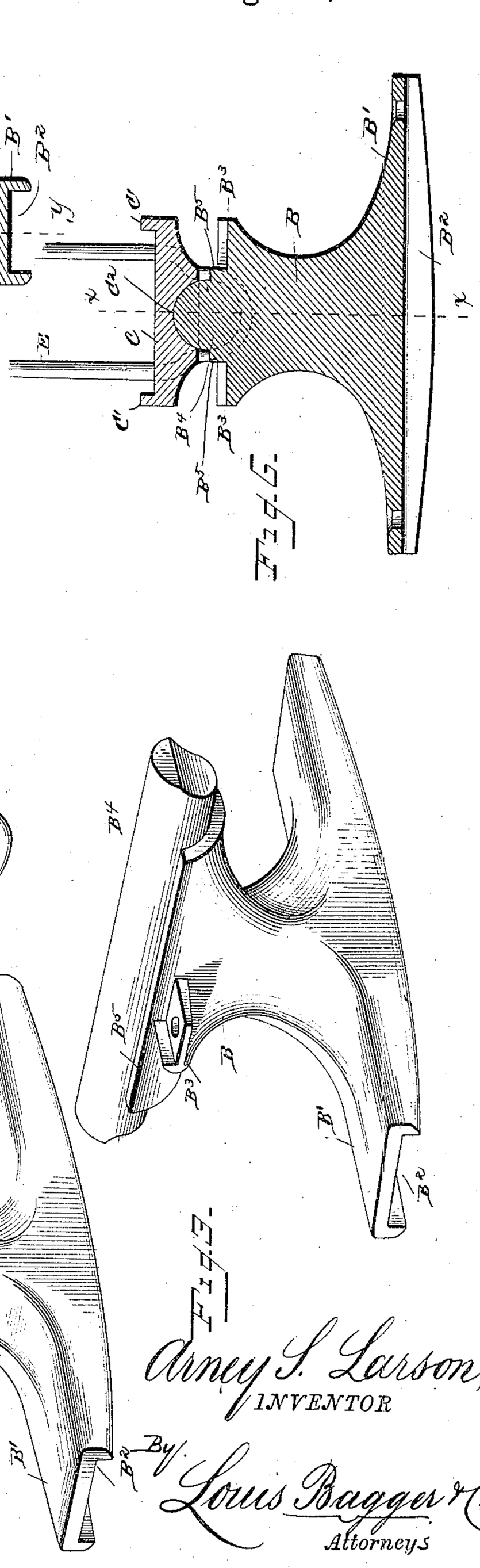
(No Model.)

A. S. LARSON.

SLEIGH KNEE.

No. 324,567. Patented Aug. 18, 1885.





WITNESSES
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UNITED STATES PATENT OFFICE.

ARNEY S. LARSON, OF GENEVA, MINNESOTA.

SLEIGH-KNEE.

SPECIFICATION forming part of Letters Patent No. 324,567, dated August 18, 1885.

Application filed June 15, 1885. (No model.)

To all whom it may concern:

Be it known that I, ARNEY S. LARSON, a citizen of the United States, and a resident of Geneva, in the county of Freeborn and State of Minnesota, 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.

My invention relates to bob-sleighs; and it consists in the improved construction and combination of parts of a sleigh-knee adapted for bob-sleighs, which will be hereinafter fully described, and pointed out in the claims.

Referring to the annexed drawings, Figure 1 is a perspective view of a bob-sleigh provided with my improved sleigh-knee. Fig. 2 is a perspective view of my invention removed from the sleigh. Fig. 3 is a detail view in perspective of the knee proper. Fig. 4 is a similar view of the grooved casting, which is movably secured upon the knee. Fig 5 is a vertical transverse sectional view taken on the plane indicated by line *x x*, Fig. 6; and Fig. 6 is a vertical sectional view taken on the plane indicated by line *y y*, Fig. 5.

The same letters of reference indicate corresponding parts in all the figures.

Referring to the several parts by letter, A A represent the runners of the sleigh, which are of ordinary construction and form no part of my invention.

B indicates the knee proper, which is cast in the form shown, its base B′ being provided on its lower side with the longitudinal recess B^2, to adapt it to fit upon the upper side of the runner, where it is secured in its operative position, the knee being further provided with the projections B^3, to which are secured the upper ends of two braces, A′ A′, which are secured at their lower ends to the runner on opposite sides of the knee, and serve to brace the same firmly.

B^4 represents the head of the knee, which is cast at right angles to the base thereof and on a slight incline toward the inner side of the knee, the said head being circular in cross-section, but formed with the longitudinal shoulders B^5 on each side at such points that more than one-half of the circumference of the head rises above the said shoulders. The extremities of the head extend beyond these shoulders, as shown, for the purpose hereinafter set forth.

C C indicate the grooved castings, upon which the ends of the cross-beams D rest and are secured, the said castings being provided with the upwardly-projecting side flanges, C′, between which the end of the beam fits, and which serve to prevent the same from working loose sidewise. Each casting is provided on its lower side with a longitudinal concave recess, C^2, of such a length and size as to adapt it to receive the upper portion of the head B^4 of the knee B, the casting being also provided with the vertical apertures C^3 at each end, through which pass the clips E E, which secure the ends of the beams upon the upper sides of the castings. These clips E E are formed with the shoulders E′ E′, located at such points that when the casting has been placed upon the knee and the clips adjusted in their operative positions, with their lower central portion encircling the round ends of the knee-head B^4, the shoulders E′ E′ will bear against the lower side of the casting C, so that the nuts upon the ends of the clips may be tightened to bind the ends of the beams firmly in position without binding the ends of the knee-head against the lower side of the casting so as to interfere with the rocking or oscillating motion of the casting upon the rounded knee-head.

From the foregoing description, taken in connection with the accompanying drawings, the construction and operation of my improved sleigh-knee for bob-sleighs will be readily understood without requiring further explanation.

It will be seen that my invention is simple in construction, and therefore not liable to break or get out of order, while at the same time it is very efficient in its operation.

I am aware that a sleigh-knee has been heretofore constructed comprising a base adapted to be secured upon the upper side of the runner, and formed with a rounded head extending at right angles thereto, and rockers or castings which support the ends of the sleigh-beams, and which are secured movably upon

the said rounded heads by means of ordinary clips passing around the ends of the said rounded heads and through the sleigh-beams, and I do not therefore claim such construction broadly; but

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. As an improvement in sleigh-knees, the combination of the knee proper, composed of the base provided on its lower side with the longitudinal groove or recess, the rounded head cast at right angles to the base, and inclined slightly toward the inner side of the same, and having the longitudinal shoulders, arranged as described, the casting having the upwardly-projecting side flanges and the vertical apertures and provided on its lower side with the longitudinal concave recess, and the clips having the shoulders formed thereon, all constructed and arranged to operate in the manner and for the purpose shown and set forth.

2. As an improvement in bob-sleighs, the combination, with the runners, of the knee having the longitudinal recess in the lower side of its base, the side projections, and the inclined rounded head having the longitudinal shoulders, the inclined braces extending from the runner to the side projections of the knee, the casting having the upwardly-projecting side flanges and the vertical apertures and provided on its lower side with the longitudinal concave recess, and the clips having the shoulders formed thereon, all constructed and arranged to operate in the manner and for the purpose shown and set forth.

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

ARNEY S. LARSON.

Witnesses:
ANDREW M. ANDERSON,
JOHN A. VOLD.