

(No Model.)

J. R. CAMPBELL.
SHOE FOR SLED RUNNERS.

No. 409,317.

Patented Aug. 20, 1889.

Fig. 1.

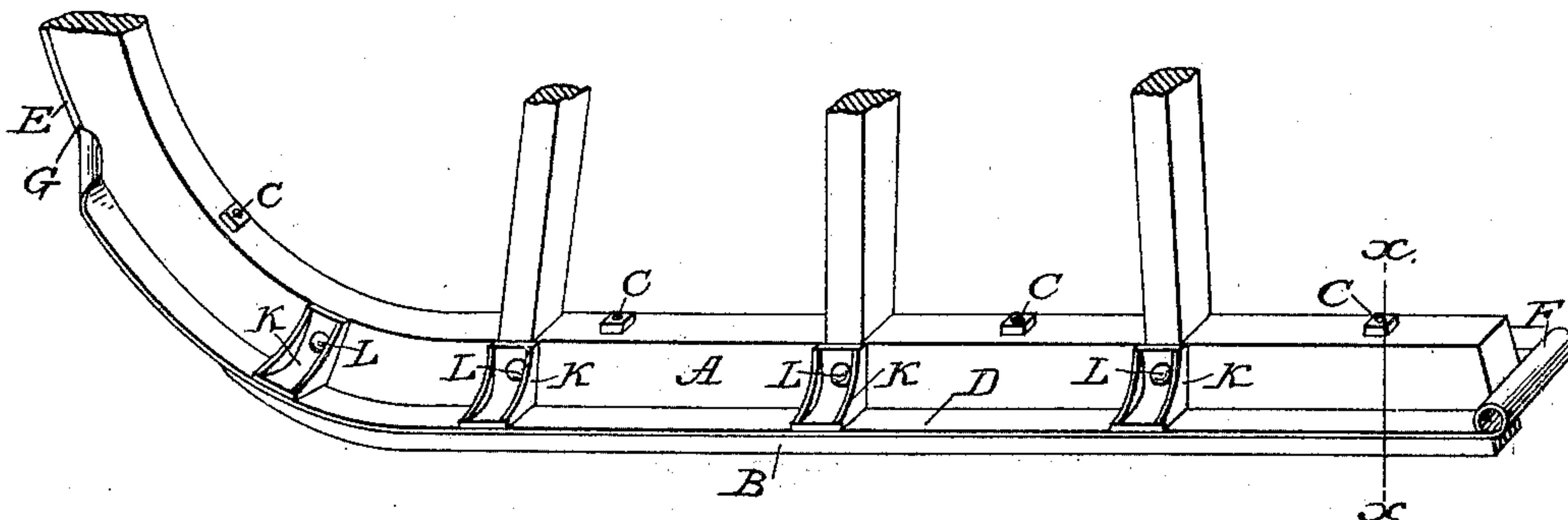


Fig. 2.

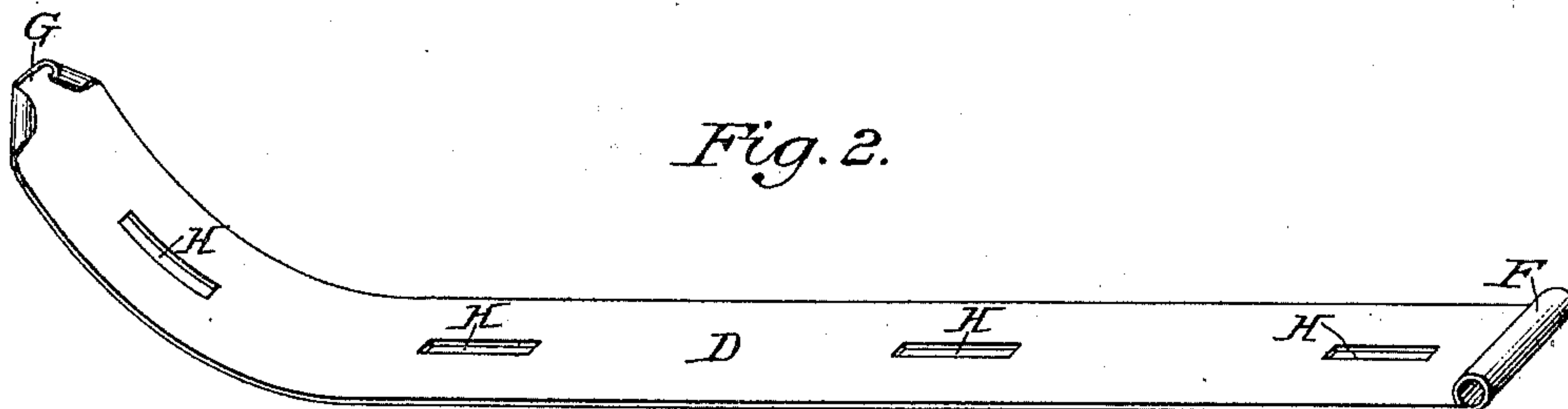
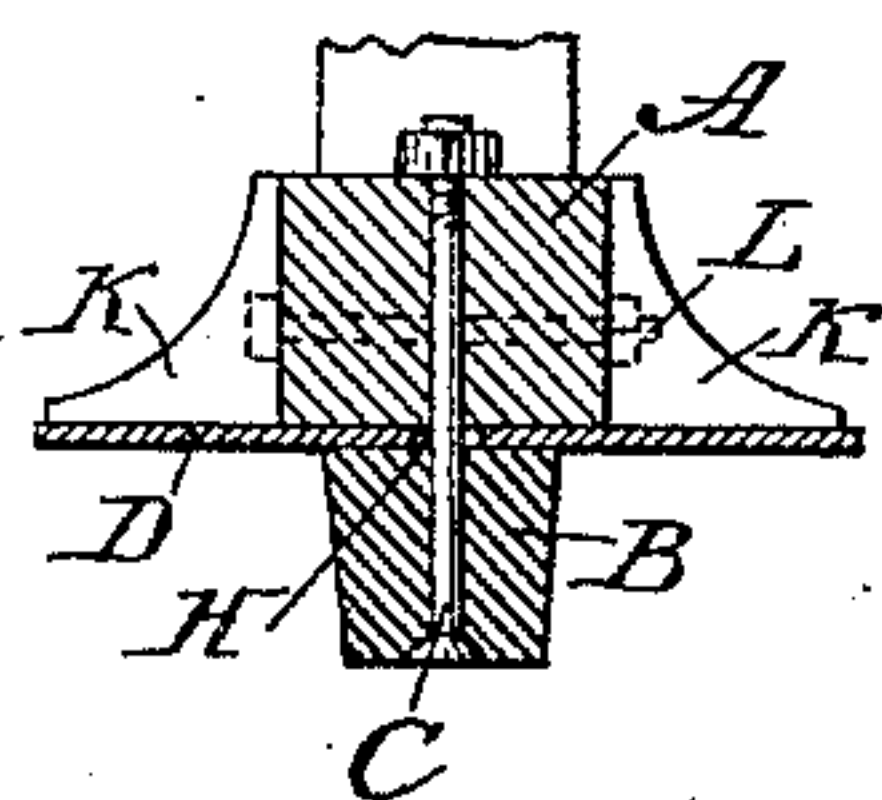


Fig. 3.



Attest:

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UNITED STATES PATENT OFFICE.

JOHN R. CAMPBELL, OF CLYDE, MINNESOTA.

SHOE FOR SLED-RUNNERS.

SPECIFICATION forming part of Letters Patent No. 409,317, dated August 20, 1889.

Application filed June 10, 1889. Serial No. 313,646. (No model.)

To all whom it may concern:

Be it known that I, JOHN R. CAMPBELL, of Clyde, in the county of Winona and State of Minnesota, have invented certain new and useful Improvements in Snow-Shoes for Sleigh-Runners; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention relates to the application and use of snow-shoes upon sleigh-runners, and has for its object to produce an improved snow-shoe adapted to prevent the runner from sinking in soft deep snow, and which may be readily attached to the runner of any ordinary sleigh without requiring any change in its form or construction.

It consists in the improved form of snow-shoe hereinafter described, and in its combination with the runner and ordinary shoe of the sleigh, substantially in manner as set forth and claimed.

In the accompanying drawings, Figure 1 is a view in perspective of the runner of a sleigh having my invention applied thereto; Fig. 2, a perspective view of my improved sleigh snow-shoe detached, and Fig. 3 a cross-section in line *xx* of Fig. 1.

A represents an ordinary sleigh-runner of any approved style or form, provided, as is customary, with a metallic shoe B, extending longitudinally under the bottom thereof to form its bearing and wearing surface. This metallic bearing-shoe B is secured to the runner in the customary manner by means of bolts C, placed at suitable intervals to pass through the shoe and runner, the head of the bolt being countersunk in the shoe, as shown in Fig. 3.

D represents my improved snow-shoe designed as an auxiliary appliance which, without interference with the use and operation of the regular runner-shoe B upon hard and icy roads, will, when attached to the runner, come into play to support it in soft deep snow, wherein the sleigh would otherwise so sink as to greatly impede or prevent its progress. This improved snow-shoe D is constructed of a long flat strip of iron or steel of suitable proportions, which for the runner of an ordi-

nary one-team sleigh may be about eight inches in width and three-sixteenths of an inch in thickness, and of a length to extend from the heel of the runner forward far enough to pass under the "bang-iron" E (see Fig. 1) at the front end thereof. The rear end of this shoe D is preferably bent over upon its upper face to stiffen it transversely and form a cylindrical finishing-piece F, and the two corners at its front end are also bent over upon the upper face, each in a diagonal line at an angle of about forty-five degrees, leaving an intermediate plain interval G (see Fig. 2) to bear against the runner. A series of apertures or slots H H are pierced centrally in the iron to correspond with the bolt-holes in the runner, and are severally elongated to permit of its ready adjustment to any runner and insure the registry of the bolts with the apertures.

In applying my invention to a sleigh the bolts confining the ordinary shoe B and the lower end of the bang-iron E upon the runner A are loosened and removed and the sleigh overturned. The fore end of the snow-shoe D is then fitted upon the runner so that its rear end shall overlap the end of the runner and its front end, fitting the curve thereof, will pass under the bang-iron. The ordinary shoe B is then fitted over and upon the snow-shoe in the same position relatively to the runner as it occupied before, so that it may be held and confined as before by the bolts passing through the original bolt-holes, the slots in the snow-shoe permitting these bolts to pass through it to reach said holes. By this means the snow-shoe is firmly held and confined between the runner and the bearing-shoe, as shown in Fig. 3 of the drawings, and is overlapped at its front end by the lower end of the bang-iron and secured thereat by the bolts which confine it.

On a hard bearing the sleigh will run, as usual, upon the narrow shoe B; but when this outer shoe sinks in soft snow the broad bearing of the snow-shoe D will come into play to support the sleigh.

I contemplate the application of detachable brackets K K in pairs on each side of the runner as a re-enforce and support for the upper side of the snow-shoe D to prevent it from bending up, each pair of brackets being con-

fined by a single bolt L extending transversely through the runner and brackets. (See dotted lines, Fig. 3.)

I claim as my invention—

5 1. The combination, with the sleigh-runner, its narrow bearing-shoe, and the bolts confining said shoe to the runner, of an independent wide metallic plate interposed as a snow-shoe between the runner and its bearing-shoe
10 to extend the length thereof and having elongated apertures formed longitudinally therein to register with the bolt-holes in the runner, substantially in the manner and for the purpose herein set forth.

15 2. The combination, with a sleigh-runner and its narrow bearing-shoe, of an independ-

ent wide metallic plate interposed as a snow-shoe between the runner and its bearing-shoe, bolts confining the bearing-shoe and interposed snow-shoe jointly to the runner, and 20 lateral brackets secured to the runner to bear upon and re-enforce the top of the snow-shoe, substantially in the manner and for the purpose herein set forth.

In testimony whereof I have signed my name 25 to this specification in the presence of two subscribing witnesses.

JOHN R. CAMPBELL.

Witnesses:

GEORGE PFEFFERKORN,
OTTO PFEFFERKORN.