

(No Model.)

F. W. HOFELE.
SLED.

No. 397,081.

Patented Jan. 29, 1889.

Fig. 1.

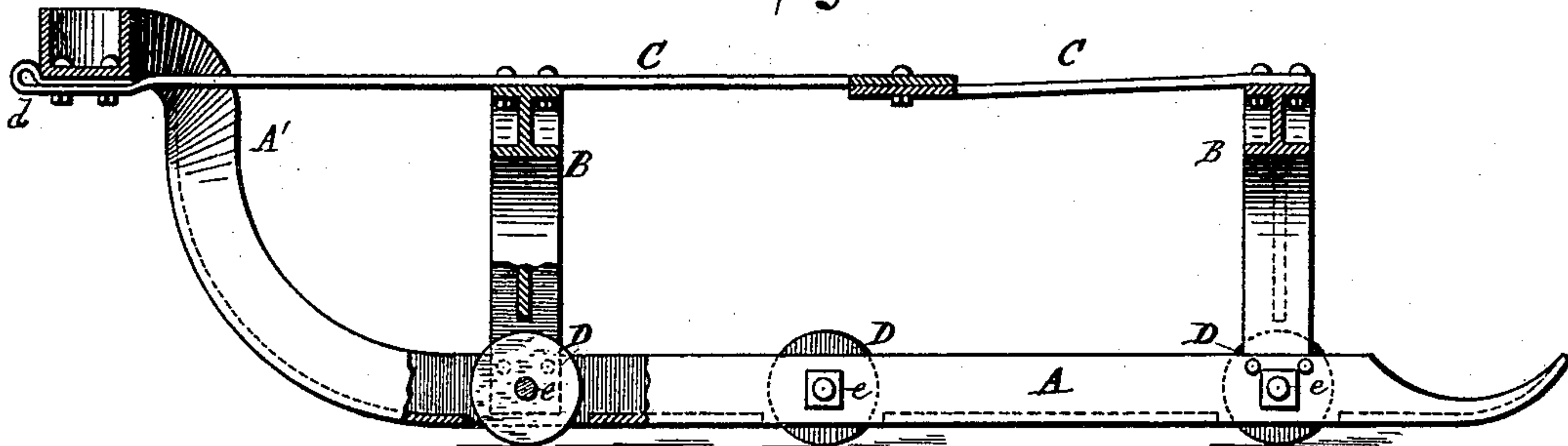


Fig. 2.

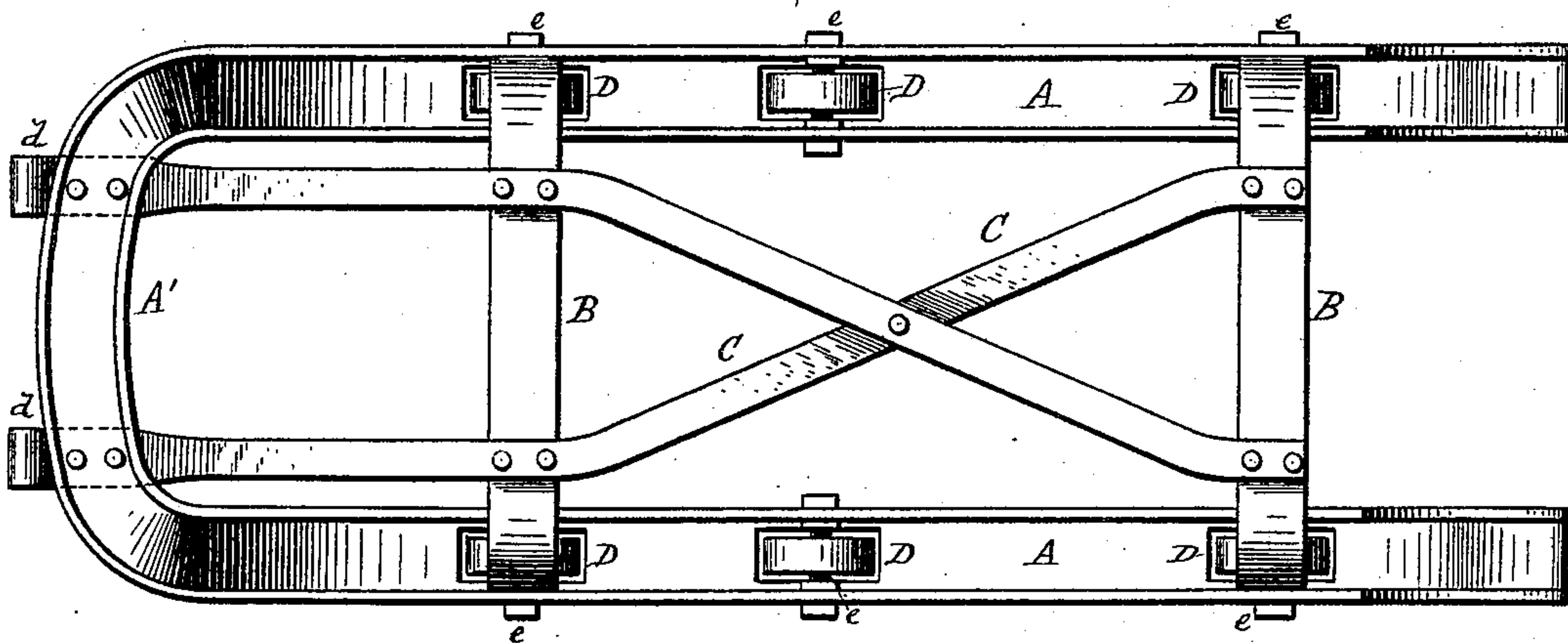


Fig. 4.

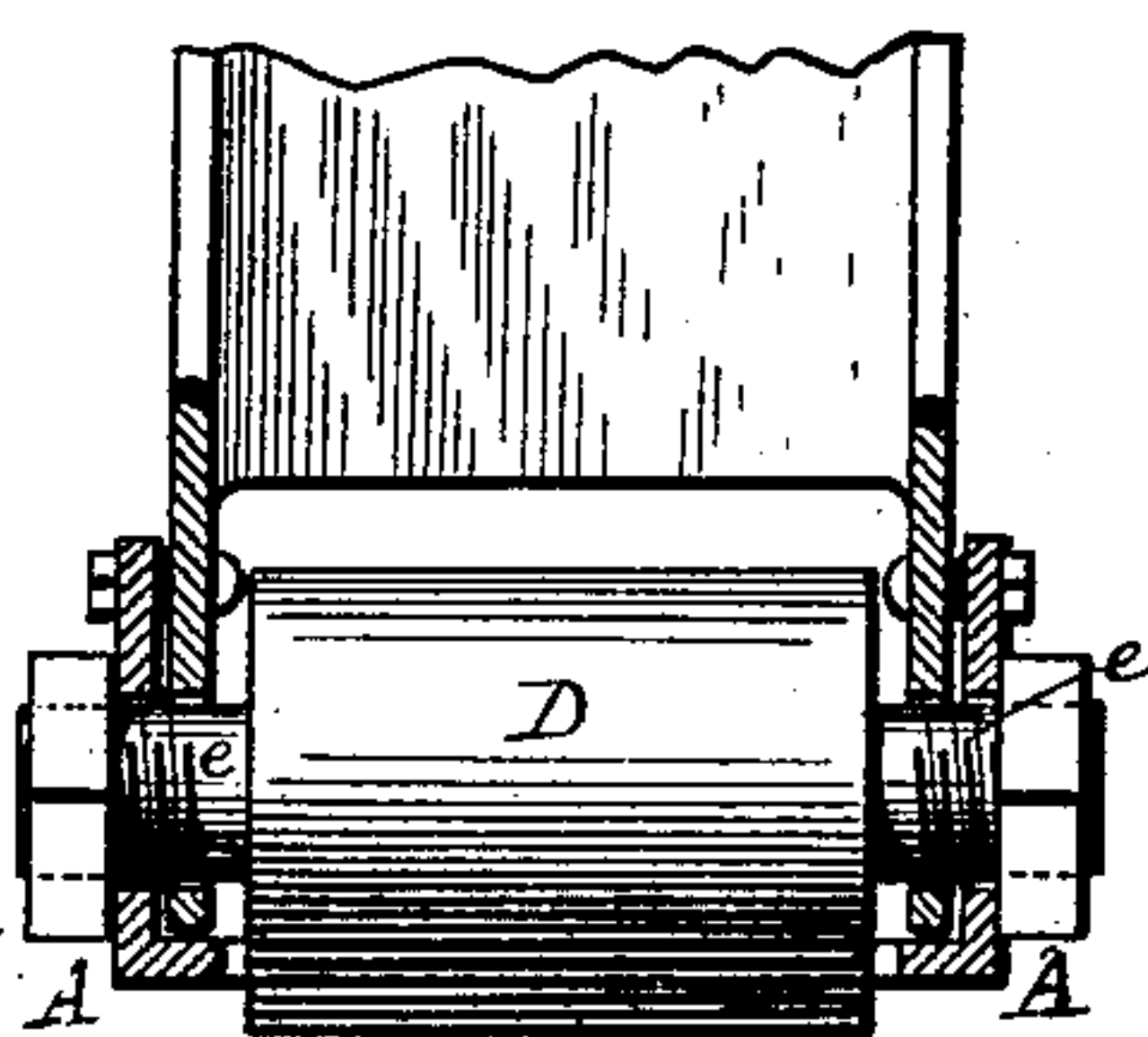


Fig. 3.

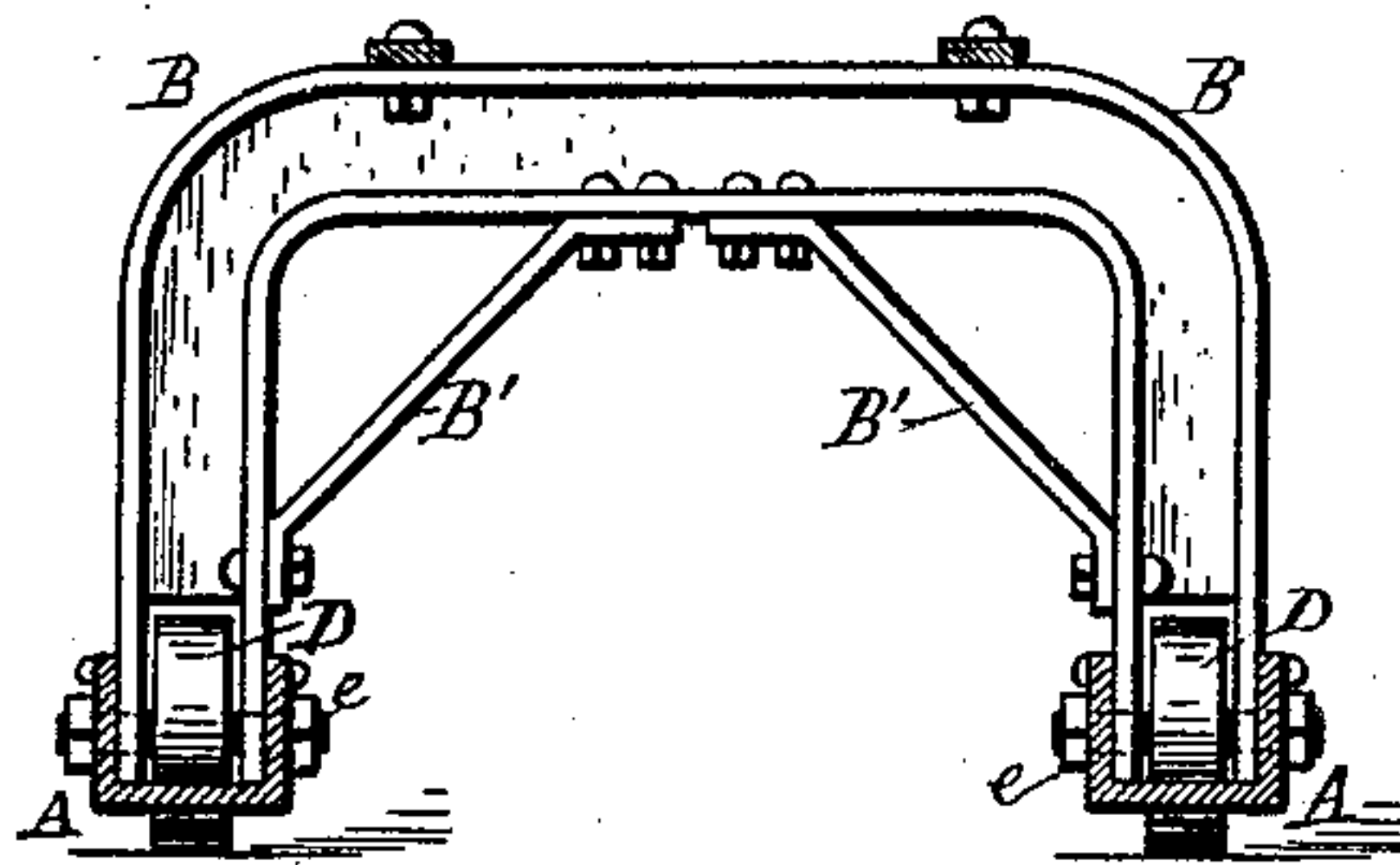
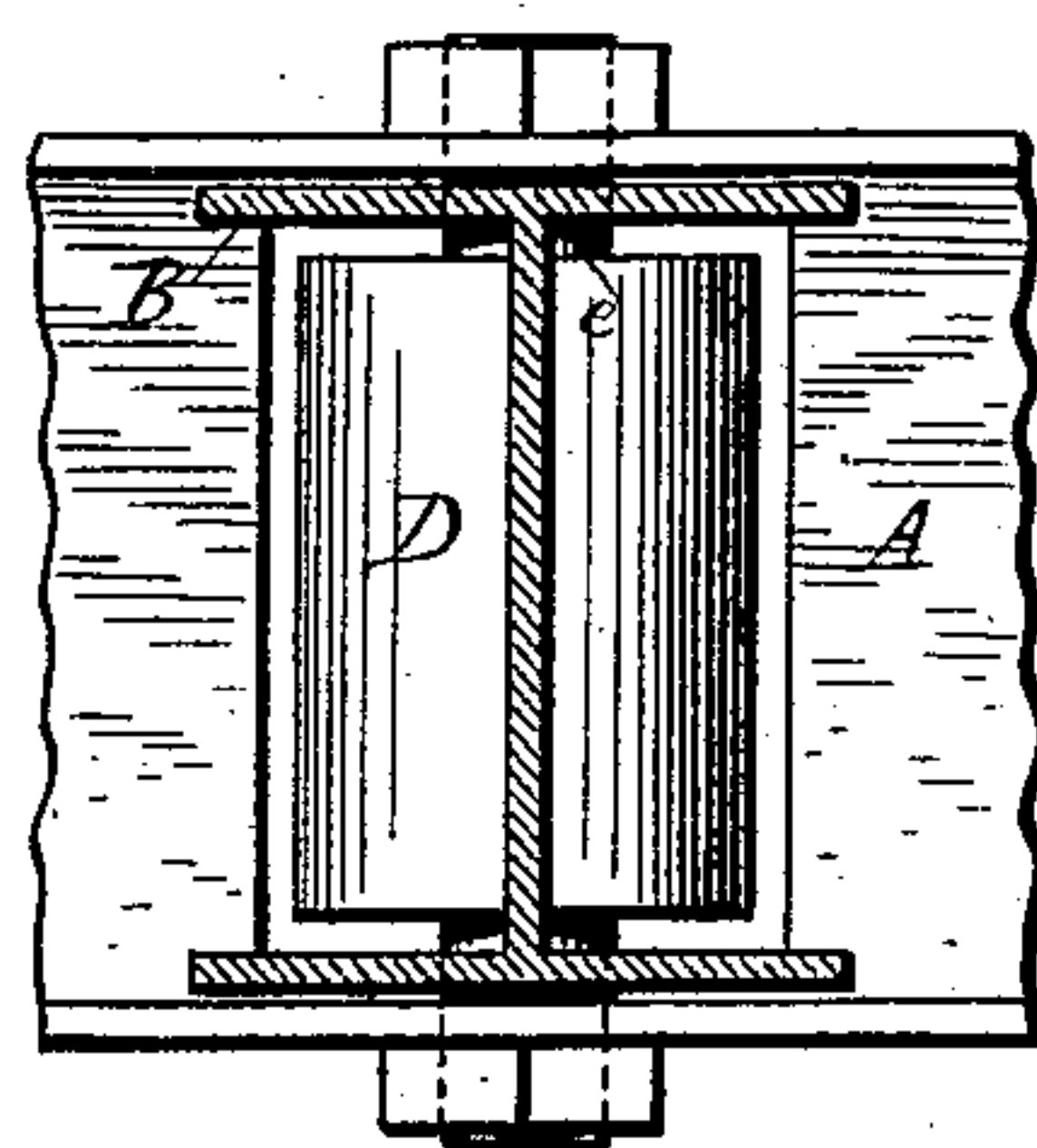


Fig. 5.



WITNESSES:

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FERDINAND W. HOFELE, OF NEW YORK, N. Y., ASSIGNOR TO ALLEN & CO., OF SAME PLACE.

SLED.

SPECIFICATION forming part of Letters Patent No. 397,081, dated January 29, 1889.

Application filed April 5, 1888. Serial No. 269,666. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND W. HOFELE, of the city, county, and State of New York, have invented certain new and useful Improvements in Runner-Frames for Sleds, of which the following is a specification.

This invention relates to an improved runner-frame for sleds which are intended to support heavy loads, such as machinery and the like; and the invention consists of a runner-frame for sleds composed of runners of U-shaped cross-section, connected by an upwardly-bent bow-shaped front, said runners being provided at two or more points with rollers that project through openings of the runners, and connected by U-shaped braces of double-T-shaped cross-section, which are attached to the runners and provided with recesses in their webs for the rollers. The braces and bow-shaped front of the runners are connected by diagonal pieces, which are attached to the braces and bow of the runners.

In the accompanying drawings, Figure 1 represents a vertical longitudinal section of my improved runner-frame for sleds. Fig. 2 is a plan; Fig. 3, a vertical transverse section of the same; and Figs. 4 and 5 are details of the rollers applied to the runners.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A A represent the runners of my improved runner-frame for sleds. These runners are made of U-shaped cross-section and connected at their front ends by an upwardly-bent bow-shaped front piece, A', which is preferably made integral with the runners.

The runners A A are connected by transverse braces B B of inverted-U shape, which braces are made of double-T-shaped cross-section and attached by rivets, screw-bolts, or otherwise at their lower ends to the flanges of the runners A A. The angular portions of the transverse braces B B are re-enforced by inclined stays B', which are riveted to the inner and lower parts of the braces, as shown in Fig. 3. The top parts of the braces B B are connected by diagonal pieces C C, which are extended to the bow-shaped front A' and

riveted to the under side of the same, the front ends of the pieces C being doubled up, so as to form eyes *d d* for applying the shafts of the sled. This feature is more specifically claimed in a concurrent application filed at the same date herewith.

As the sled is intended more especially for supporting heavy bodies—such as fire-engines and the like, which have to be removed from the engine-house into the street—the runners are provided, preferably at the points at which the yoke-shaped braces B B are riveted to the runners A A, and at one or more intermediate points of the runners, with rollers D D, that project through openings of the runners slightly below the same and turn on transverse pivots *e*, that are attached by screw-bolts and nuts, which pass through the side flanges of the runners and the ends of the recessed double-T-shaped braces B B, as shown in Figs. 3 and 4. The web of the braces B at the lower ends of the same is recessed to provide the required space for the rollers. When the sled with its load is to be moved from the engine-house to the street, the rollers facilitate the motion of the same until the snow-covered ground is reached, while when on the snow-covered ground they interfere but little with the runners on the same.

By arranging the rollers in the runners heavy loads can be quickly and easily transferred from the building in which they are located to the snow-covered street, which without the same could not be accomplished except by employing extra teams of horses for pulling the sled and its load into the street, which would be very inconvenient and cause a considerable loss of time.

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

1. A runner-frame for sleds, composed of parallel runners connected by an upwardly-bent bow-shaped front, said runners and front being made of U-shaped cross-section, yoke-shaped transverse braces attached to said runners and made of double-T-shaped cross-section, and diagonal stiffening-pieces connecting the top of the braces and extended to the bow-shaped front, substantially as set forth.

2. The combination of U-shaped runners
having openings, transverse T-shaped braces
attached to the runners and having recessed
webs at their lower ends, and rollers pivoted
5 to transverse bolts and extending into the re-
cesses of the braces and through the openings
of the runners, substantially as set forth.

In testimony that I claim the foregoing as
my invention I have signed my name in pres-
ence of two subscribing witnesses.

FERDINAND W. HOFELE.

Witnesses:

SIDNEY MANN,
CARL KARP.