

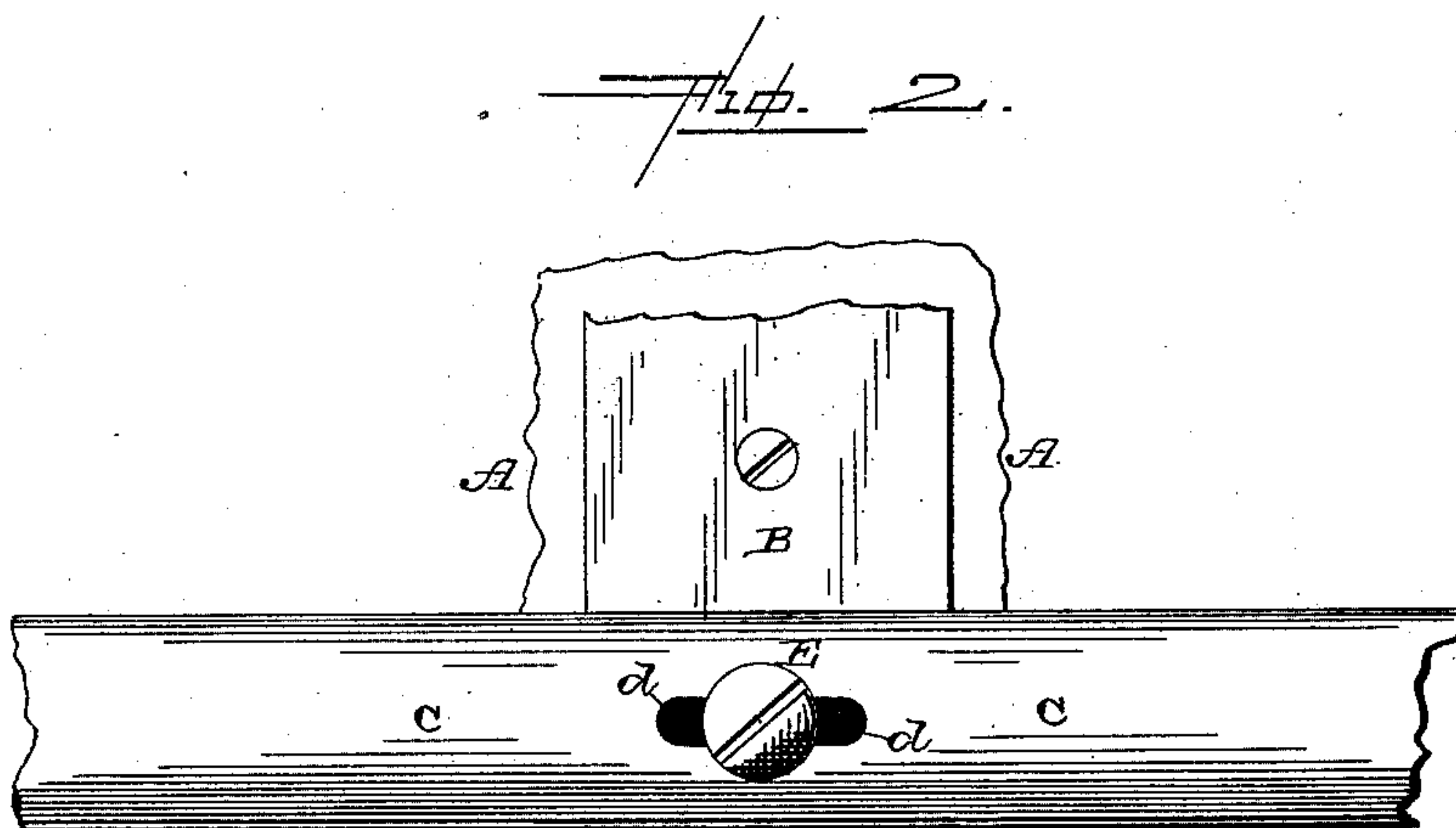
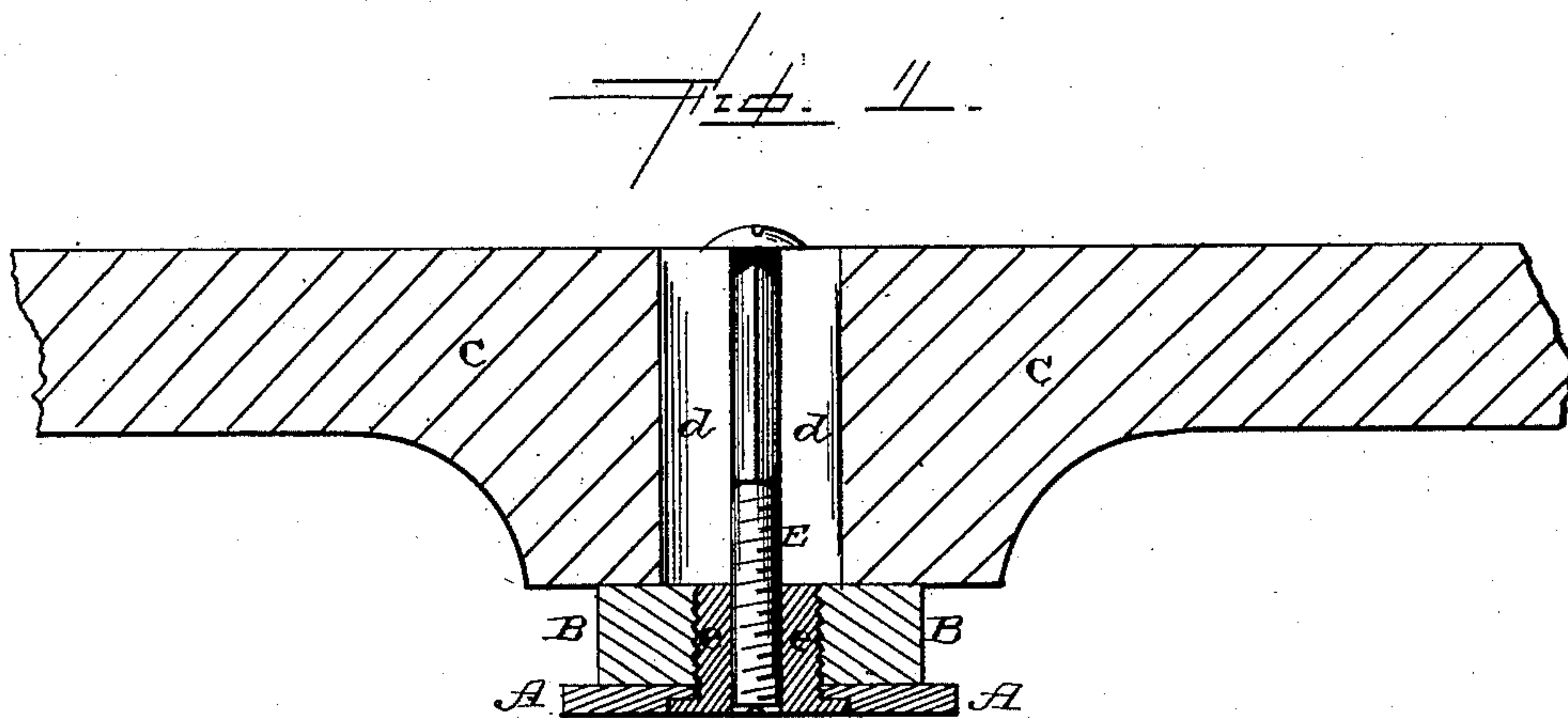
(No Model.)

J. W. JOHNSON.

TOBOGGAN.

No. 353,309.

Patented Nov. 30, 1886.



WITNESSES.

L. F. Gardner
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UNITED STATES PATENT OFFICE.

JOHN W. JOHNSON, OF BURLINGTON, VERMONT.

TOBOGGAN.

SPECIFICATION forming part of Letters Patent No. 353,309, dated November 30, 1886.

Application filed April 23, 1886. Serial No. 199,757. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. JOHNSON, a citizen of the United States, residing at Burlington, in the county of Chittenden and State of Vermont, have invented certain new and useful Improvements in Toboggans, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My invention relates to an improvement in the mode of securing the side raves or bars to the toboggan by which the longitudinal support and strength of the toboggan is effectually secured without affecting or in any way interfering with its perfect elasticity; and it consists in passing the bolt which connects the rave with the toboggan through a longitudinal slot in the rave, thereby allowing the bolt to freely move longitudinally within the rave, according as the surface of the toboggan is curved to correspond with any depressions or changes in the surface of the slide.

While I do not limit myself to the character or form of the bolt used, I prefer that it should be headed at the top and screw into a nut whose lower face is flush with the under surface of the toboggan, and that the bolt should pass through the ends of the cross-pieces of the toboggan.

30 The device is simple, and as constructed the bolt has sufficient longitudinal play in the slot in the rave without detriment to the perfect reliability of the fastening.

In the drawings, in which similar letters indicate like parts, Figure 1 is a vertical longitudinal section. Fig. 2 is a plan view of the same.

A represents the bottom or longitudinal of the toboggan; B, one of the cross-braces, and C one of the side raves or bars. At the point of the attachment of the rave C to the toboggan A, preferably directly above the ends of

the cross-braces B, an elongated slot, *d*, is cut through the rave of a width sufficient to allow the fastening-bolt E to be passed through the rave into the cross-piece and screw into the nut *e* (which is sunk into the under face of the toboggan) as far as the head of the bolt E will permit, so that when the bolt is properly secured to the nut *e* the rave C is firmly held to the brace B, and thus to the toboggan, without limiting the elastic or yielding movement of the bottom or longitudinal A, as the slot *d* in the rave, through which the bolt E passes, allows the bolt all the longitudinal movement required by the toboggan in conforming itself to the undulations in the surface over which it slides, and at the same time firmly confines the rave to the toboggan.

It is apparent that any form of bolt can be used for attaching the rave to the toboggan, provided it is made to pass through an elongated slot, *d*, in the rave and then properly headed, so that it confines the rave reliably to the toboggan, care being taken not to allow its lower extremity to project below the under surface of the toboggan or that of the nut *e*.

What I claim, and desire to secure by Letters Patent, is—

1. The side rave, C, of a toboggan provided with an elongated slot, *d*, for the passage of the fastening-bolt, thereby allowing free longitudinal play to the bolt, and thus permit the bending of the bottom A independent of the rave, substantially as described.

2. In a toboggan, the combination of the slotted rave C, bolt E, and longitudinal A, substantially as herein described.

In testimony whereof I do affix my signature in presence of two witnesses.

JOHN W. JOHNSON.

Witnesses:

CHARLES E. ALLEN,
GEO. W. CAMPBELL.