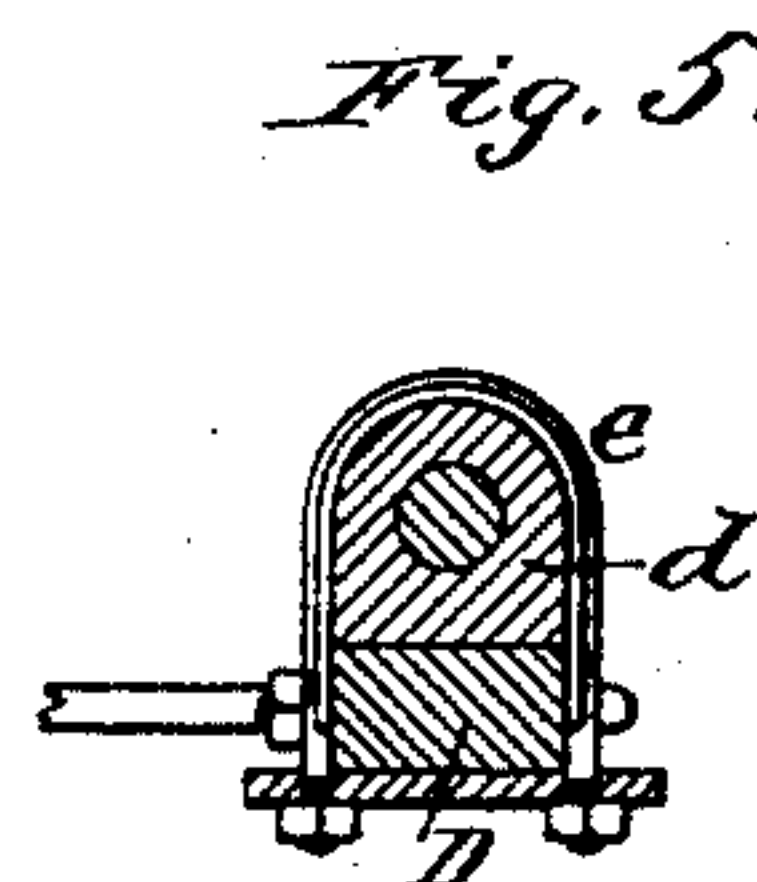
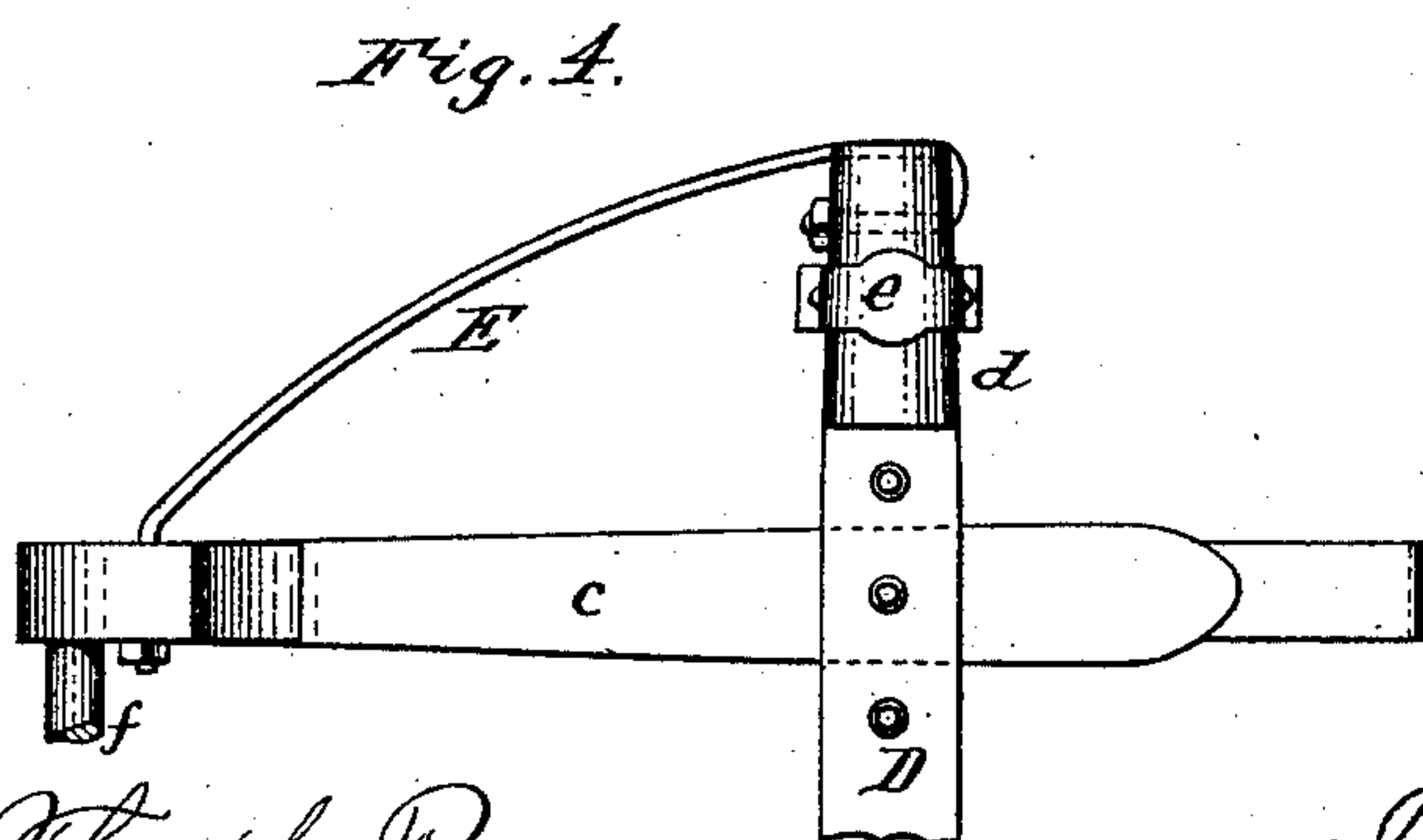
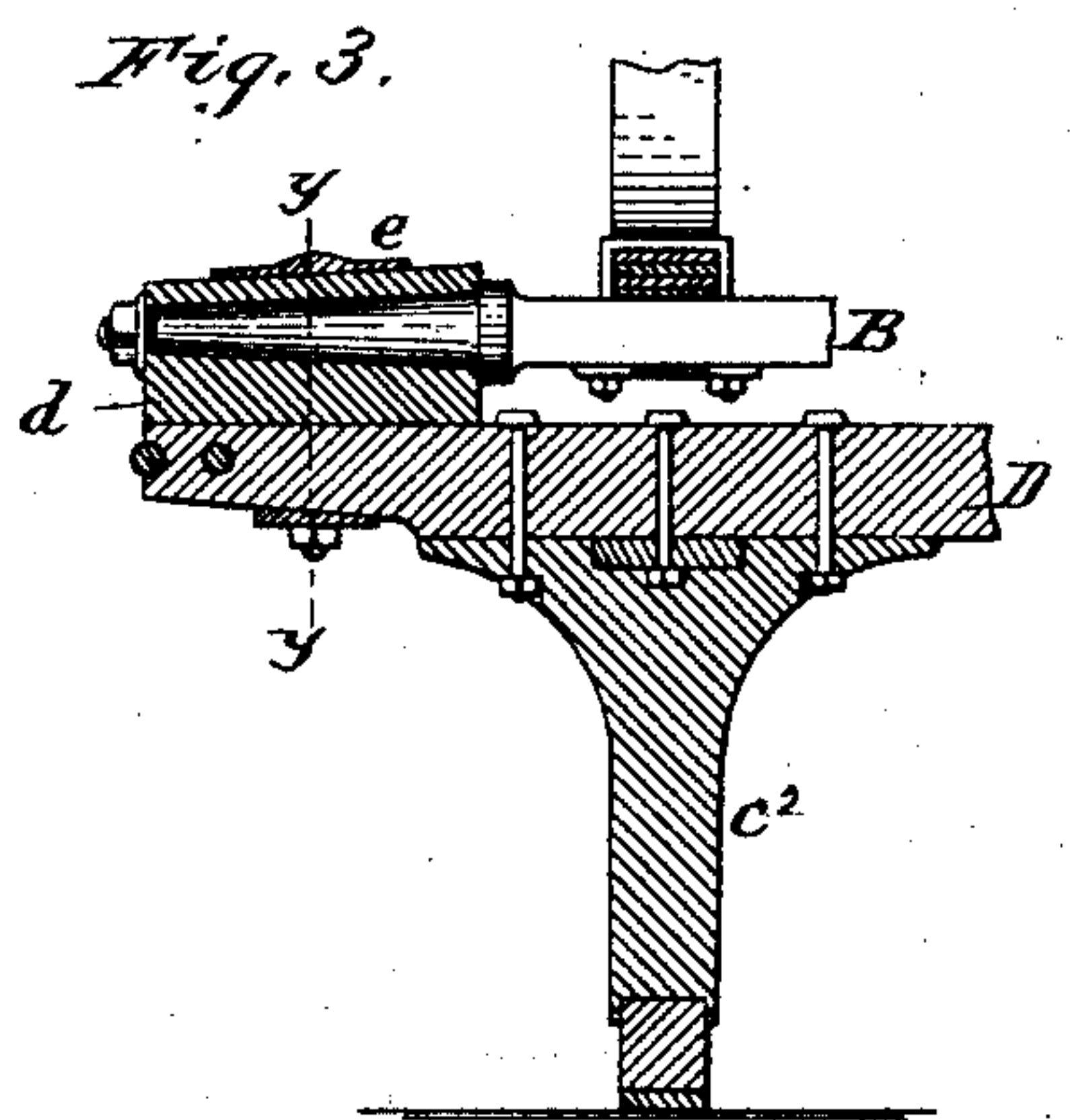
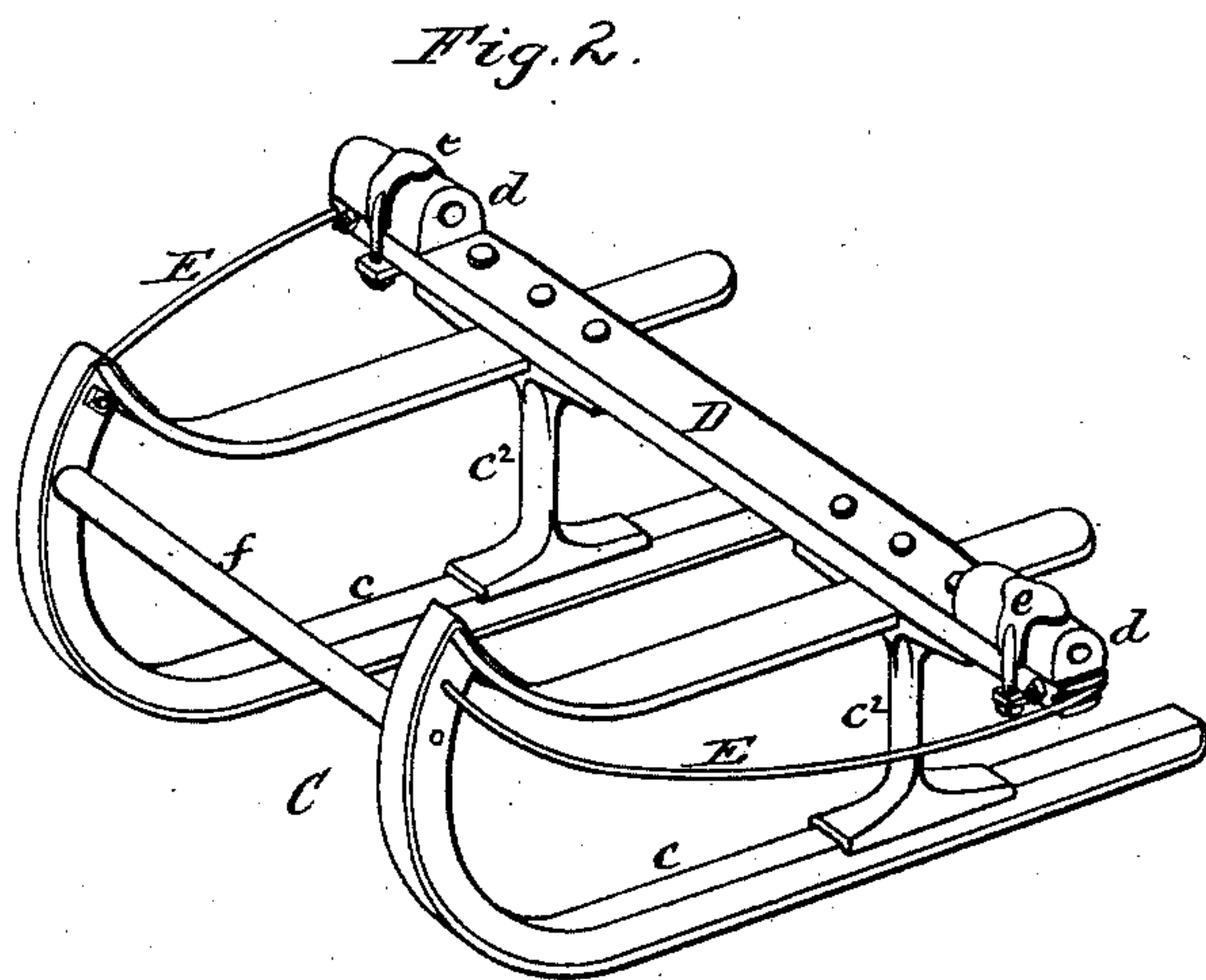
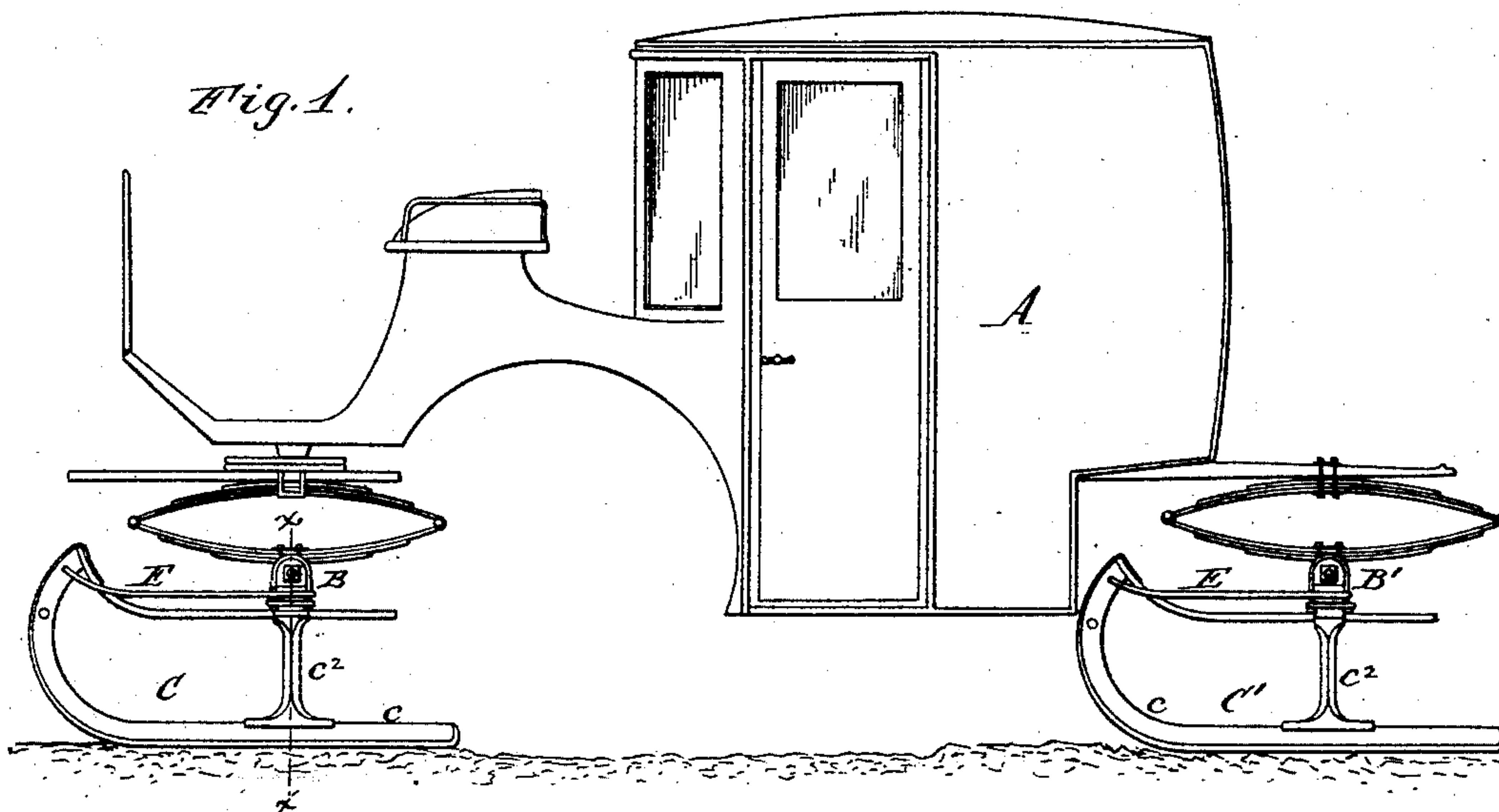


(No Model.)

I. BRONSON.
BOB SLEIGH.

No. 327,227.

Patented Sept. 29, 1885.



Thos. L. Poppe
Geo. C. Pittman } *Witnesses.*

Ira Bronson *Inventor.*
By Wilhelm H. Bonner
Attorneys.

UNITED STATES PATENT OFFICE.

IRA BRONSON, OF LOCKPORT, NEW YORK.

BOB-SLEIGH.

SPECIFICATION forming part of Letters Patent No. 327,227, dated September 29, 1885.

Application filed March 18, 1884. (No model.)

To all whom it may concern:

Be it known that I, IRA BRONSON, of Lockport, in the county of Niagara and State of New York, have invented new and useful Improvements in Bob-Sleighs, of which the following is a specification.

This invention relates to an improvement in that class of bob-sleighs which are adapted to be secured to the running-gear of an ordinary carriage or other vehicle, in the place of the wheels which have previously been removed therefrom, and whereby a carriage or other wheeled vehicle can be readily converted into a sleigh.

The object of my invention is the production of an inexpensive and durable sleigh of this character; and it consists of the improvements which will be hereinafter described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of a carriage-body mounted upon a pair of sleigh-bobs embodying my invention. Fig. 2 is a perspective view of one of the sleigh-bobs. Fig. 3 is a vertical cross-section on line *x x*, Fig. 1, on an enlarged scale. Fig. 4 is a fragmentary top plan view of one of the runners and connecting parts on an enlarged scale. Fig. 5 is a cross-section in line *y y*, Fig. 3.

Like letters of reference denote like parts in the several figures.

A represents the carriage-body, and B B' the front and rear axles.

C represents the front sleigh-bob, and C' the rear bob, supporting, respectively, the front and rear axles, B B'. The bobs C C' each consist of a pair of runners, *c c*, provided with standards or knees *c²*, which support the upper part of each runner-frame. The standards *c²* are preferably made of wrought or malleable iron, and secured at their lower ends to the runners *c* and at their upper ends to a cross-piece or bolster, D. The bolster D extends on either side beyond the runners, and is preferably made of about the same length as an ordinary wagon or carriage axle.

E is a curved rod or fender, which connects the ends of the bolster D to the upper front portions of the runners *c c*, and which is secured at its ends by suitable bolts. *f* is a cross-rod connecting the front portions of the runners *c c* of each bob.

The cross-pieces or bolsters D are provided

on their ends with boxes or bearings *d*, adapted to receive the spindles or journals of the axles of the carriage or wagon. These boxes *d* are constructed of wood or iron, as preferred, and are made with a flat bottom surface, so that they will fit down tightly upon the bolsters D. These boxes are made of such length and so arranged on the bolster D that the threaded ends of the axle-spindles project beyond the boxes and permit of the adjustment of the nuts upon such threaded portions to retain the axles in position upon the bobs and prevent any sidewise movement. The boxes *d* are secured to the cross-pieces or bolsters D by clips *e*, which pass over the boxes *d* and the bolsters D.

When it is desired to place a carriage or wagon upon the runners, the clip *e*, which secures the box *d* to the bolster D on one side of the bob, is loosened and the box *d* removed from the bolster. The carriage is then lifted up, the wheels are removed, and the bobs applied to the axles by slipping the box which is secured to the bob on one journal, then applying the detached box to the other journal of the same axle, and finally securing this box to the bolster D by the clip *e*. The nuts being then applied to the threaded ends of the axle-spindles the bobs are firmly attached to the axles of the carriage or wagon.

The pair of runners of each bob are rigidly connected by the bolster D and rod *f*, whereby both sides of the vehicle are kept at the same level in passing over uneven surfaces, and the pitching incident to use of four separate or disconnected runners is avoided.

It is obvious that the boxes *d* may be rigidly secured to the bolster and constructed with removable caps for the insertion and removal of the axle-spindles.

I claim as my invention—

In a removable sleigh-bob, the combination of the runners *c c*, standards *c²*, fender E, cross-bar *f*, and bolster D, and boxes *d*, removably secured to the bolster D by clips *e*, substantially as set forth.

Witness my hand this 13th day of March, 1884.

IRA BRONSON.

In presence of—

I. A. BRONSON,

D. A. DAVENPORT.