

(No Model.)

C. NICHOLS.  
BOB SLEIGH.

No. 436,257.

Patented Sept. 9, 1890.

Fig. 1.

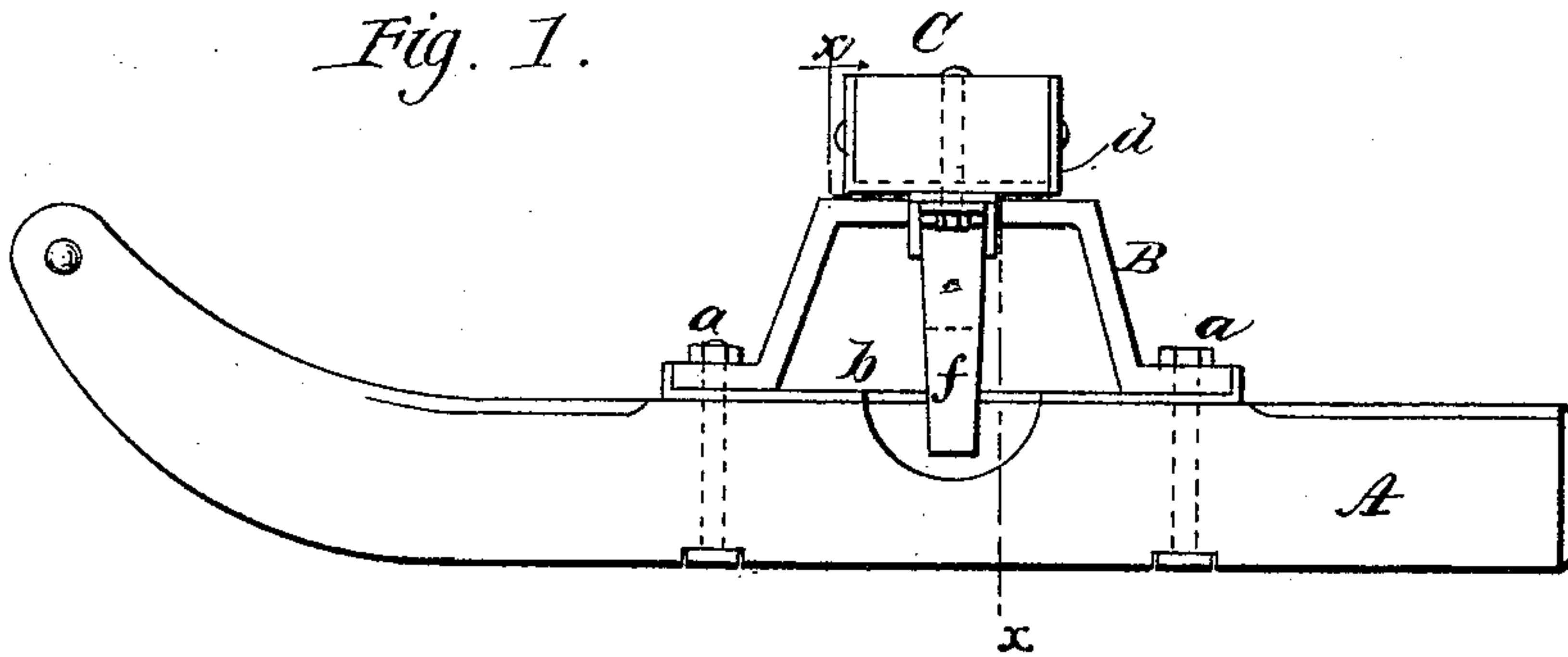


Fig. 2.

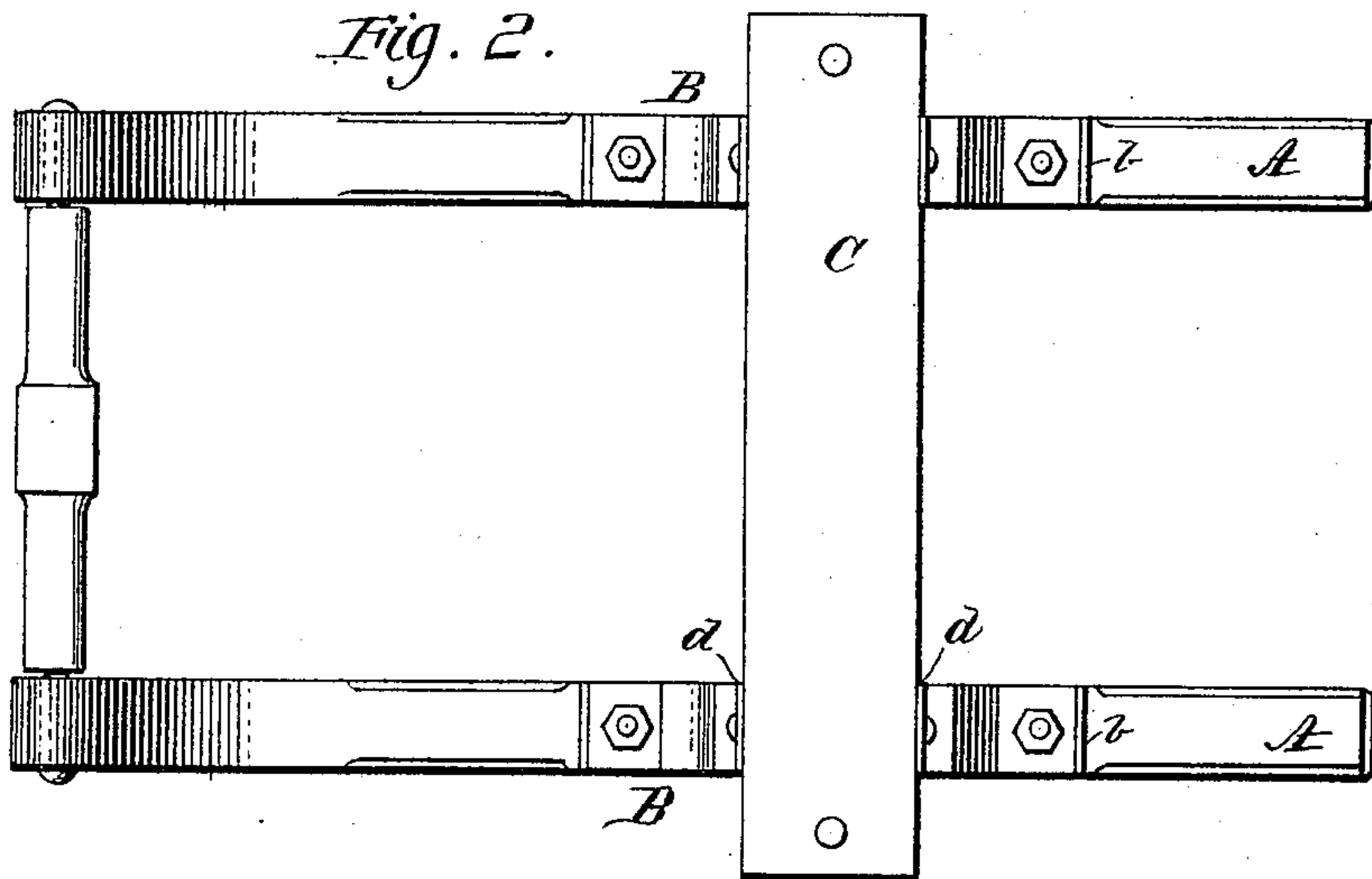
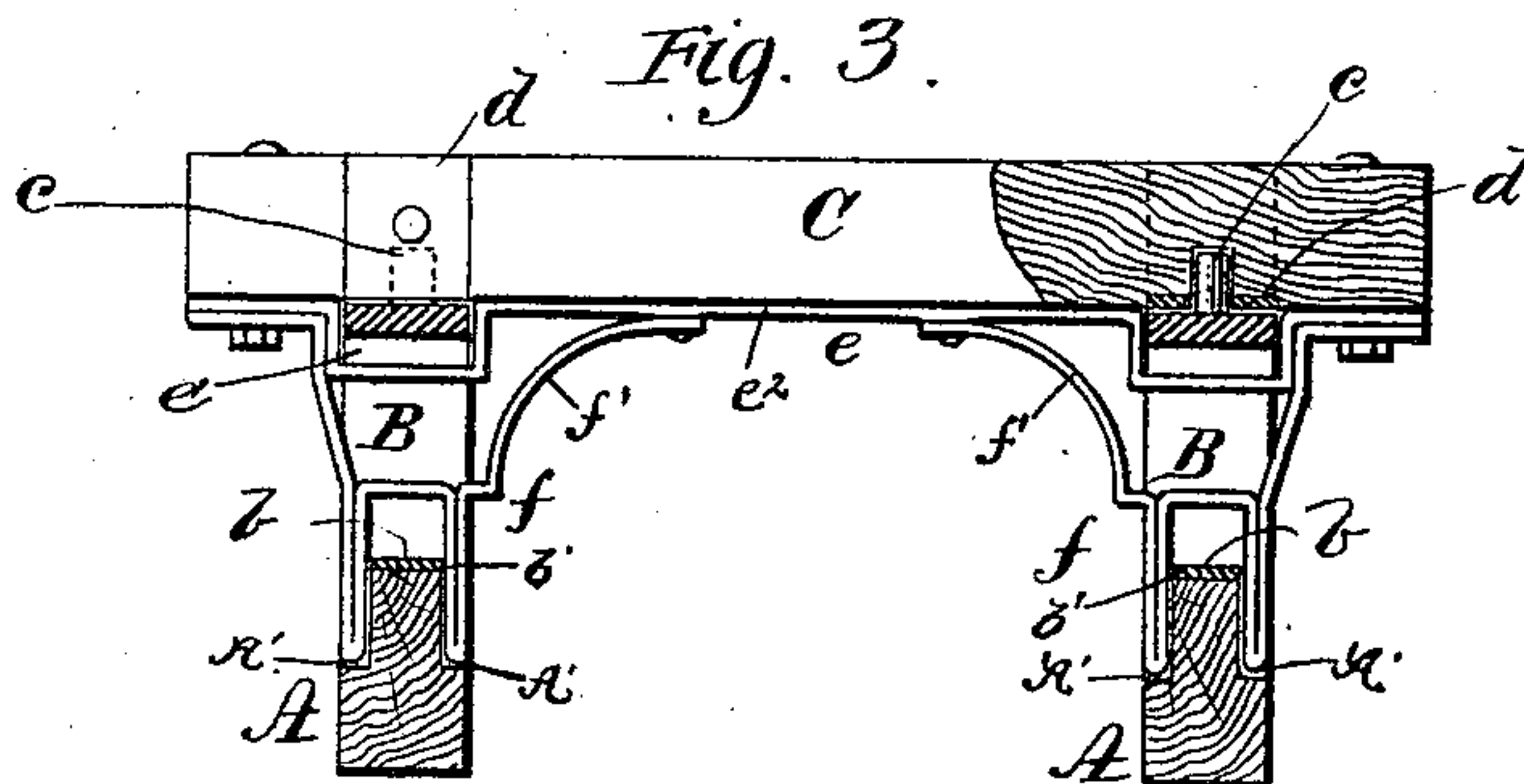


Fig. 3.



WITNESSES:

*J. H. Clark.*  
*C. Sedgwick*

INVENTOR:

*C. Nichols*

BY

*Munn & Co.*

ATTORNEYS

# UNITED STATES PATENT OFFICE.

CYVETOUS NICHOLS, OF HELENA, MONTANA.

## BOB-SLEIGH.

SPECIFICATION forming part of Letters Patent No. 436,257, dated September 9, 1890.

Application filed March 25, 1890. Serial No. 345,244. (No model.)

*To all whom it may concern:*

Be it known that I, CYVETOUS NICHOLS, of Helena, in the county of Lewis and Clarke and State of Montana, have invented new and useful Improvements in Bob-Sleighs, of which the following is a specification, reference being had to the annexed drawings, forming a part thereof, in which—

Figure 1 is a side elevation of my improved bob-sleigh. Fig. 2 is a plan view, and Fig. 3 is a vertical transverse section taken on line *x x* in Fig. 1.

Similar letters of reference indicate corresponding parts in all the views.

The object of my invention is to construct a bob-sleigh in which the runners will be flexible and free to move so as to conform to the unevenness of the ground and at the same time to furnish two bearings upon the sleigh-runner, one on either side of the central point of the runner.

My invention consists in the construction and arrangement of parts hereinafter described and claimed.

To the runners *A* are secured knees *B*, which bear upon the top of the runners at two points on opposite sides of the center thereof so as to distribute the load upon the runner.

The knees *B* are secured to the runners by bolts *a*, also by a plate *b*, having right-angled ends, which clamp the extremities of the knees.

The knees *B* are provided on their flat upper faces with studs *c*, which are received in holes in the beam *C*, and to the under surface of the beam near the ends thereof are secured apertured plates *d*, which loosely receive the studs *C*. To the under surface of the beam *C* is secured a cast or forged double standard *e*, which is offset or recessed, as shown at *e'*, where it extends under each of the knees *B*. It is also provided with two downwardly-projecting forked arms *f*, which are oppositely arranged with respect to each other, and which are adapted to embrace the upper portion of the runners *A* and prevent them from moving laterally.

The sides of the runners are recessed, as

shown at *A'*, and the edges of the plates *b* are cut away at *b'* to correspond therewith, the forks *f* embracing the runners at said recesses, so that their outer faces will lie flush with the inner and outer sides of the runners, as best shown in Fig. 2. Arranged in this way, each runner *A* is free to move independently of the other, and the load is distributed to two points upon the runner, thereby permitting of lighter construction, at the same time increasing the strength of the sleigh. If the standards are to be cast, then instead of forming them in one piece I cast them separate; but when formed of wrought-iron they are formed as a double standard, as illustrated in the drawings. In both instances, however, the upper ends of the standards are flat and bolted to the lower face of the beam *C*, and their upper ends are recessed, as at *e'*, for the passage of the upper sections of the knees and forked at their lower ends to embrace the runners. When made of wrought metal, the double standard is formed as follows: A flat bar *e<sup>2</sup>* is offset near both ends, as at *e' e'*, and the ends of two other bars *f' f'* are riveted or bolted to the said bar at opposite sides of said offsets *e'*, the said two bars being bent between their ends to form the forks *f* to embrace the runners.

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

1. The combination, with the runners and the knees, each provided on its upper face with a stud *c*, of the beam *C*, apertured near its ends for the studs, and the standards bolted to the lower face of the beam and provided at their upper ends with recesses to receive the upper parts of the knees and forked at their lower ends to embrace the runners, substantially as set forth.

2. In a bob-sled, a double standard *e*, comprising the bar *e<sup>2</sup>*, having offsets *e' e'* near its ends, and the bars *f' f'*, each secured at its ends to the bar *e<sup>2</sup>* at opposite sides of the respective offsets and bent upward between their ends to form the forks *f f*, substantially as set forth.

3. The combination, with the runners A A, recessed in both sides, as at A' A', and provided with knees B, each having a stud c on its upper face, of the beam C, having apertures for the said studs, and the standards  
5 bolted at their upper ends to the beam and provided with recesses e' e' at their upper ends and forked at their lower ends, the lower forked ends entering the recesses A' flush with the sides thereof, substantially as set forth.

CYVETOUS NICHOLS.

Witnesses:

F. H. CROWELL,

A. W. MARKLEY.