

(No Model.)

2 Sheets—Sheet 1.

J. H. WEICHER.  
BOB SLED.

No. 464,927.

Patented Dec. 8, 1891.

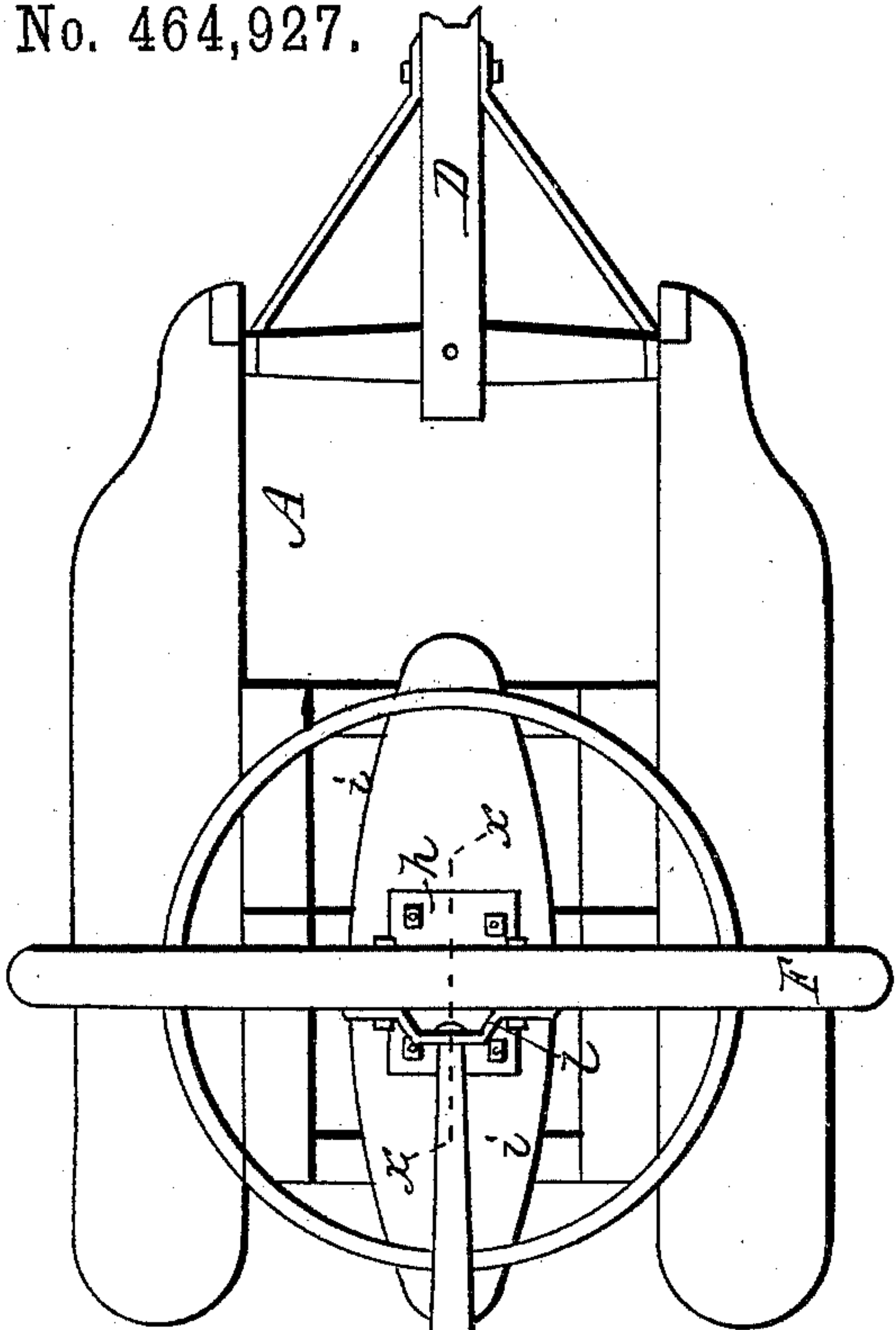


Fig. 1.

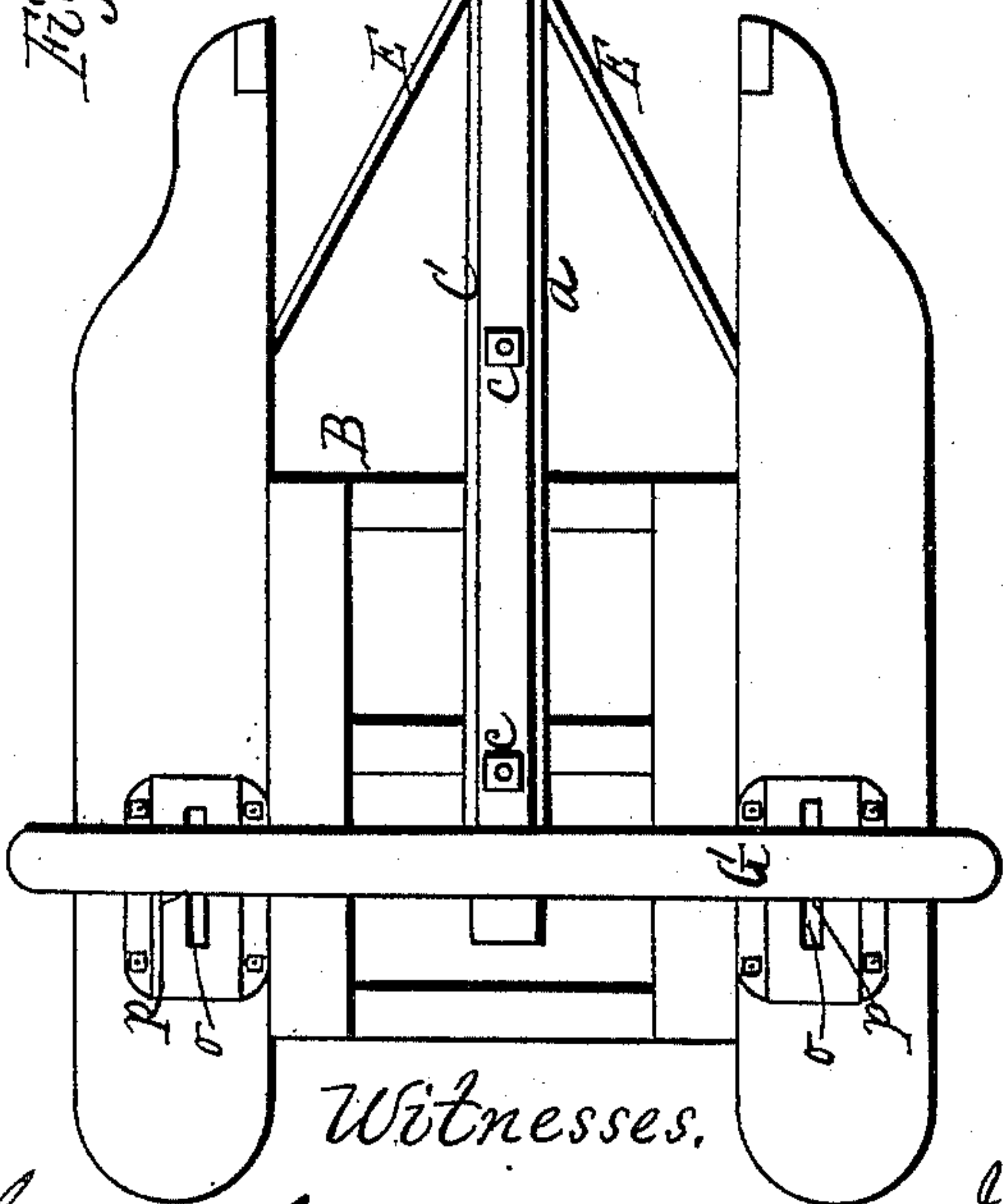
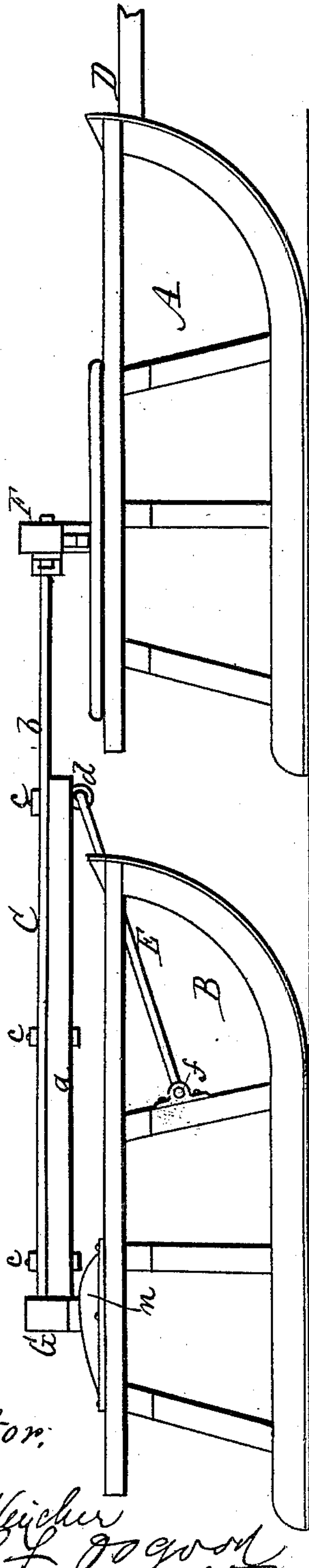


Fig. 2.



Witnesses.

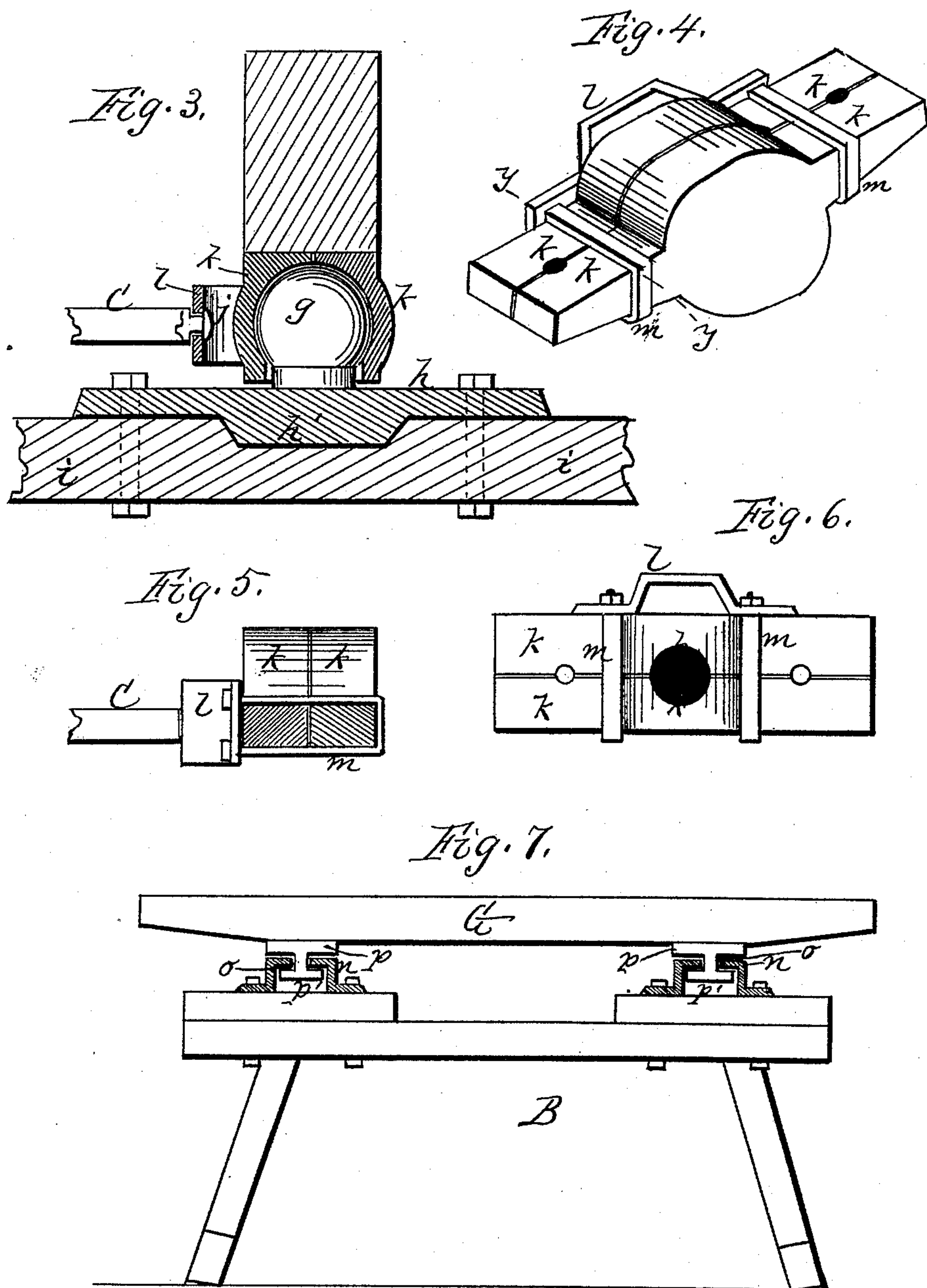
Inventor.

*F. B. Hutchinson*  
*A. S. Smith*  
*John H. Weicher*  
*per R. F. Goodrich*

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H. B. Hutchinson  
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Inventor.  
John H. Weicher  
per R. F. Osgood,  
Atty



# UNITED STATES PATENT OFFICE.

JOHN H. WEICHER, OF PENFIELD, NEW YORK, ASSIGNOR OF ONE-HALF TO  
GEORGE W. CLARK, OF SAME PLACE.

## BOB-SLED.

SPECIFICATION forming part of Letters Patent No. 464,927, dated December 8, 1891.

Application filed August 1, 1891. Serial No. 401,422. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN H. WEICHER, of Penfield, in the county of Monroe and State of New York, have invented a certain new and  
5 useful Improvement in Bob-Sleds; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

10 In this improvement the front bolster is supported by a ball and two half-bearings forming a socket, said half-bearings being united by clips on either side, which also serve as the attachments for the yoke that  
15 holds the front end of the reach. The rear bolster rests and turns on bearings of convex form, which are slotted longitudinally to receive the T-shaped studs on the under side of the bolster. The contact-surfaces on which  
20 the bolster rides are of greater convexity in front than rear to accommodate the turning of the rear sled in passing over inequalities and to compensate for the attachment of the draft-rod to the frame of the runners below  
25 the top of the sled.

The invention consists in the construction and arrangement of the front and rear bearings of the bolsters, as hereinafter described and claimed.

30 In the drawings, Figure 1 is a plan view of a bob-sled showing my improvement. Fig. 2 is a side elevation of the same. Fig. 3 is an enlarged cross-section of the front bolster and its bearing in line *x x* of Fig. 1. Fig. 4  
35 is a perspective view of the two half-sections forming the front bearing. Fig. 5 is a cross-section of one end of the same in line *y y* of Fig. 4 and in line with one of the clips that hold the parts together. Fig. 6 is a bottom  
40 or under side view of the same bearing. Fig. 7 is an enlarged rear elevation of the sled, showing the rear bolster-bearings in cross-section.

A and B indicate the front and rear sleds,  
45 of usual form, and C the reach, which is also of usual form, except that it is straight and consists of two parts *a* and *b*, attached together by bolts *c c* and so arranged that by changing the bolts the reach can be length-  
50 ened or shortened at pleasure.

D is the ordinary tongue or pole, and E is

the rear draft loop or rod, which differs from ordinary devices by being attached at its upper end to the under side of the reach, as shown at *d*, and at its lower end to the front  
55 knees of the rear sled at some distance below the top of the sled, as shown at *f*. By thus attaching the lower end of the rod at a lower point than usual the sled has a freer motion in passing over pitches and inequalities, and in backing the sled there is less liability of the rear sled being tilted up in front. The unequal curvature of the rear bolster-bearings has special reference to this attachment of the draft-rod E.  
65

F indicates the front and G the rear bolsters.

The bearing for the front bolster consists of a ball *g*, forming part of a fixed plate *h*, bolted to the saddle *i* of the sled A, and two  
70 half-sections *k k*, bolted to the bottom of the bolster and provided with a central socket, which rests and turns freely on the ball. On the back of the bearing is a stirrup or yoke *l*, in which is swiveled the front end of the  
75 reach, as shown at *j*. The two sections *k k* and the stirrup *l* are all attached together by loop-shaped clips *m m*, which pass through the ends of the stirrup and under the bearing, the loop embracing the front edges of  
80 the bearing, as shown in Fig. 5. Nuts screw on the rear ends of each, which draw it up tight in place. By this means a secure attachment is made to the two halves of the bearing, and the stirrup is secured by the same means,  
85 and the end of the reach is swiveled to the bearing in a convenient and effective manner. A universal joint is produced which gives ease of movement and prevents strain. The under side of the plate *h* has a projec-  
90 tion or offset *h'*, which sets down into a cavity in the saddle *i*, seating the same and obviating strain on the bolts.

*n n* are the two bearings for the rear bolster, the same consisting of castings bolted on top  
95 of the rear sled. The top surface of each, on which the bolsters rest, is convex, so that as the sled vibrates forward and back the bolster slides over the bearings. The front and rear ends of each bearing have different de-  
100 grees of convexity, the front end being on a smaller radius than the rear one, as shown in



Fig. 2. The necessity of this arises from the attachment of the draft loop or rod below the top of the sled, as shown at *f*. When the front of the sled inclines upward in passing  
5 an ascent, the bolster rides over on the acute curve in front, and when the sled inclines downward on a descent it rides backward on the more obtuse part of the curve. This is done with the minimum amount of friction  
10 and strain. The tops of the bearings are provided with longitudinal slots *o o*, through which pass studs *p p*, attached to the under side of the bolster, said studs having T-shaped heads *p' p'* to prevent withdrawal.

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

1. In a bob-sled, the combination, with the bolster *F* and reach *C*, of the bearing consisting of the plate *h*, provided with the ball *g*,  
20 the two half-sections *k k*, fitted to the ball,

the stirrup *l*, to which the end of the reach is swiveled, and the loop-shaped clips *m m*, attaching the stirrup and half-sections together, as shown and described, and for the purpose 25 specified.

2. In a bob-sled, the combination, with the rear bolster *G*, of the bearings *n n*, attached to the top of the sled, said bearings being convex and of shorter radius in front than in 30 rear, and the studs *p p*, attached to the bolster and passing through slots of the bearings, as shown and described, and for the purpose specified.

In witness whereof I have hereunto signed 35 my name in the presence of two subscribing witnesses.

JOHN H. WEICHER.

Witnesses:

R. F. OSGOOD,  
G. W. CLARK.