

(No Model.)

2 Sheets—Sheet 1.

W. ROBINSON.  
CAR FRAME.

No. 493,876.

Patented Mar. 21, 1893.

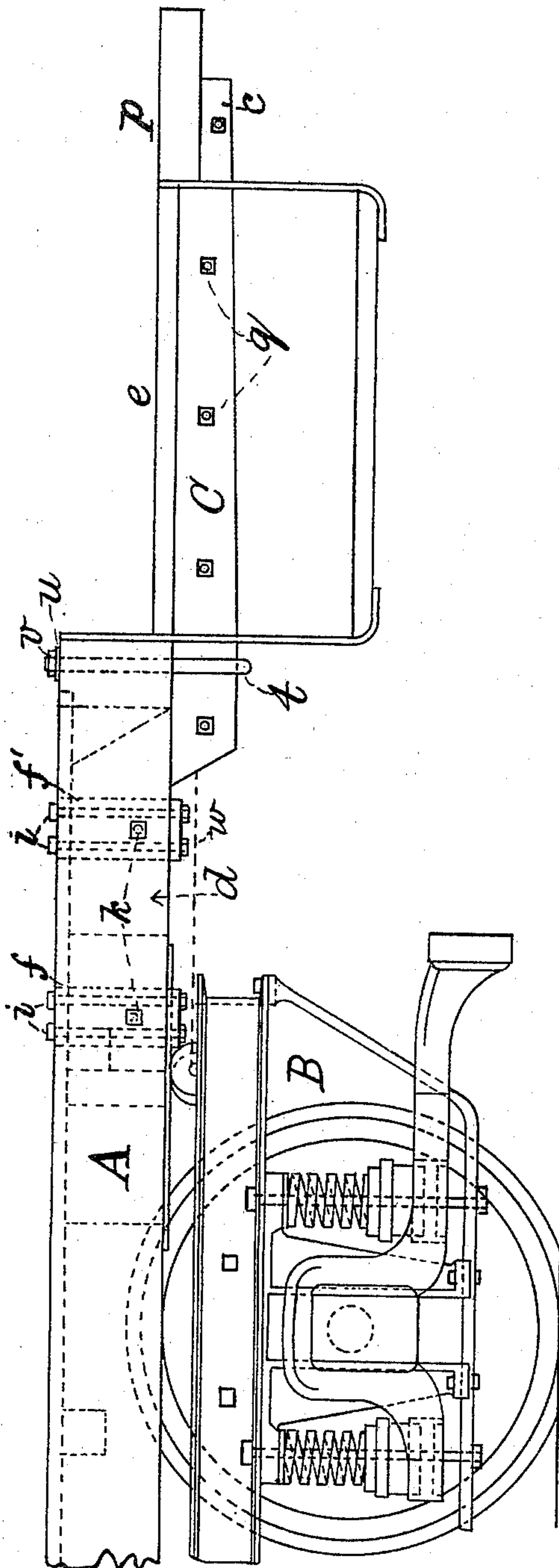


Fig. 1.

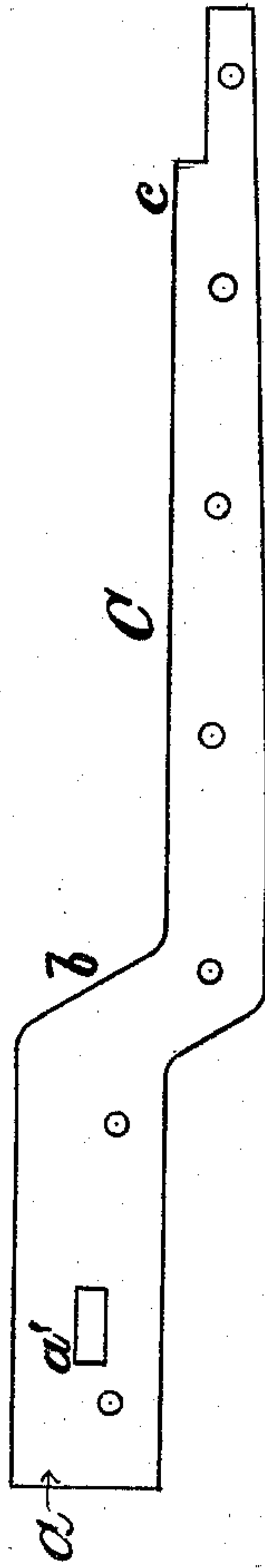


Fig. 2.

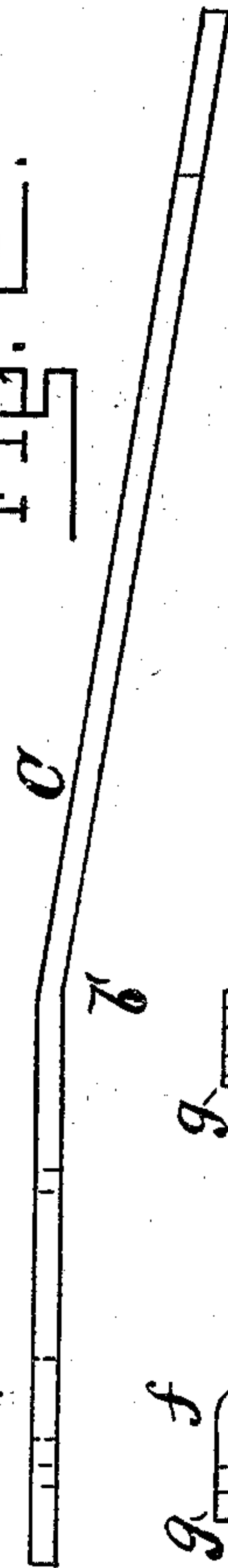


Fig. 3.

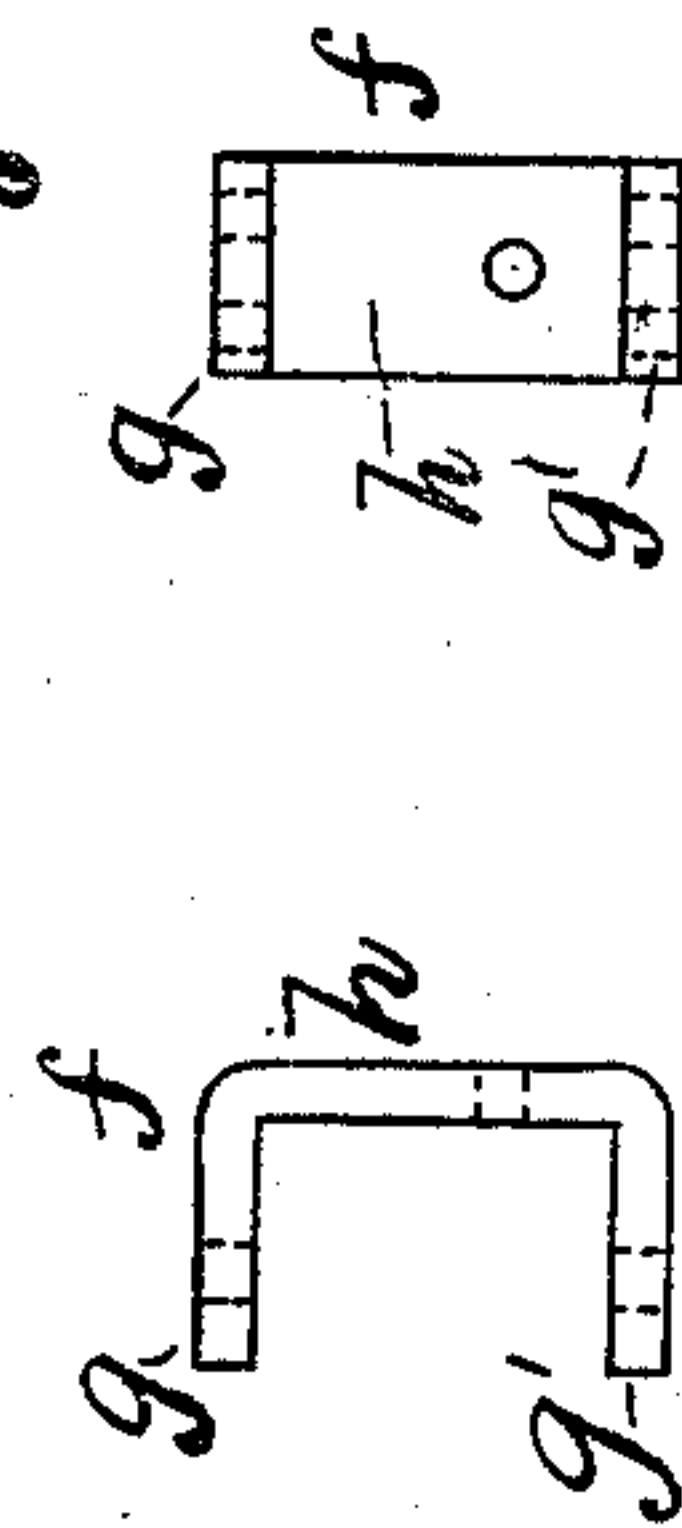


Fig. 4.

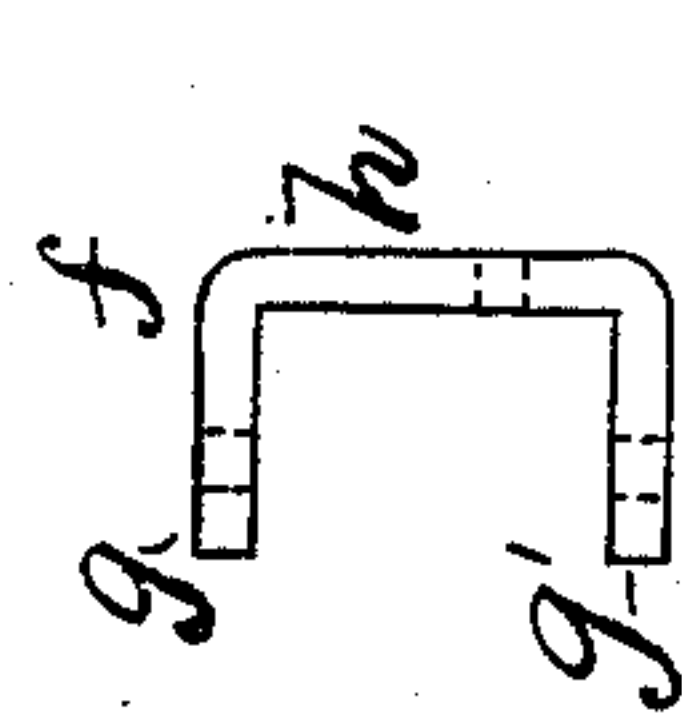


Fig. 5.

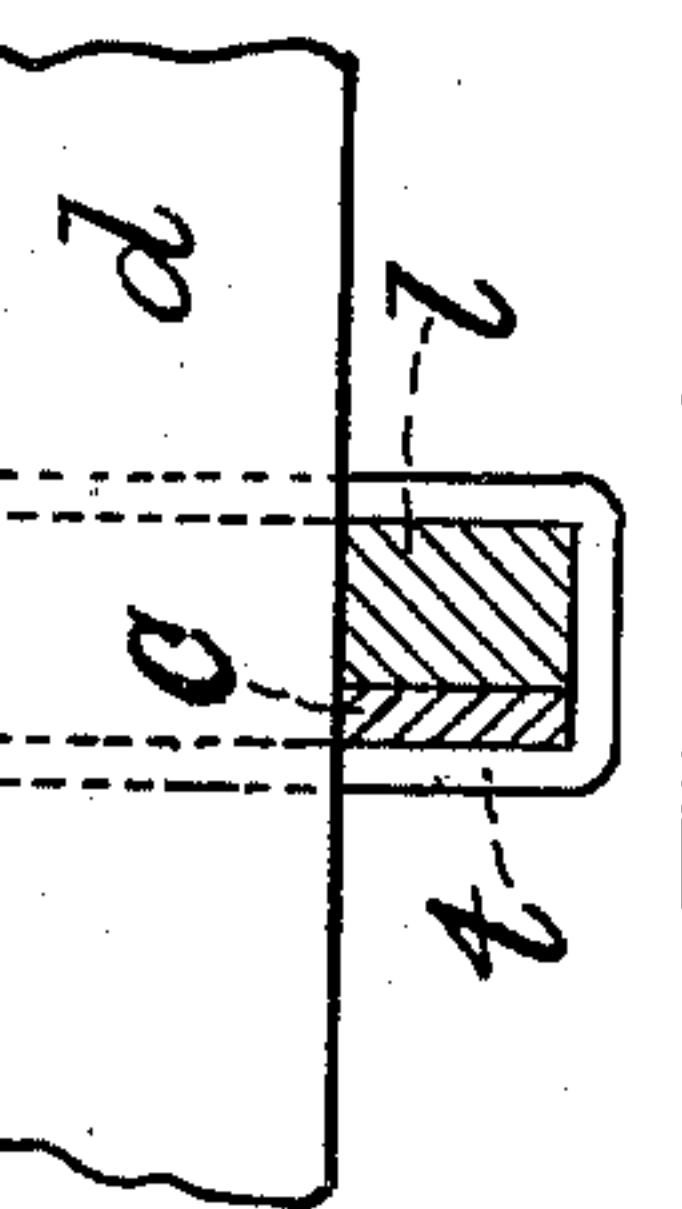


Fig. 6.

WITNESSES

Arthur S. Davis

C. E. Grant.

INVENTOR

Wm. Robinson.

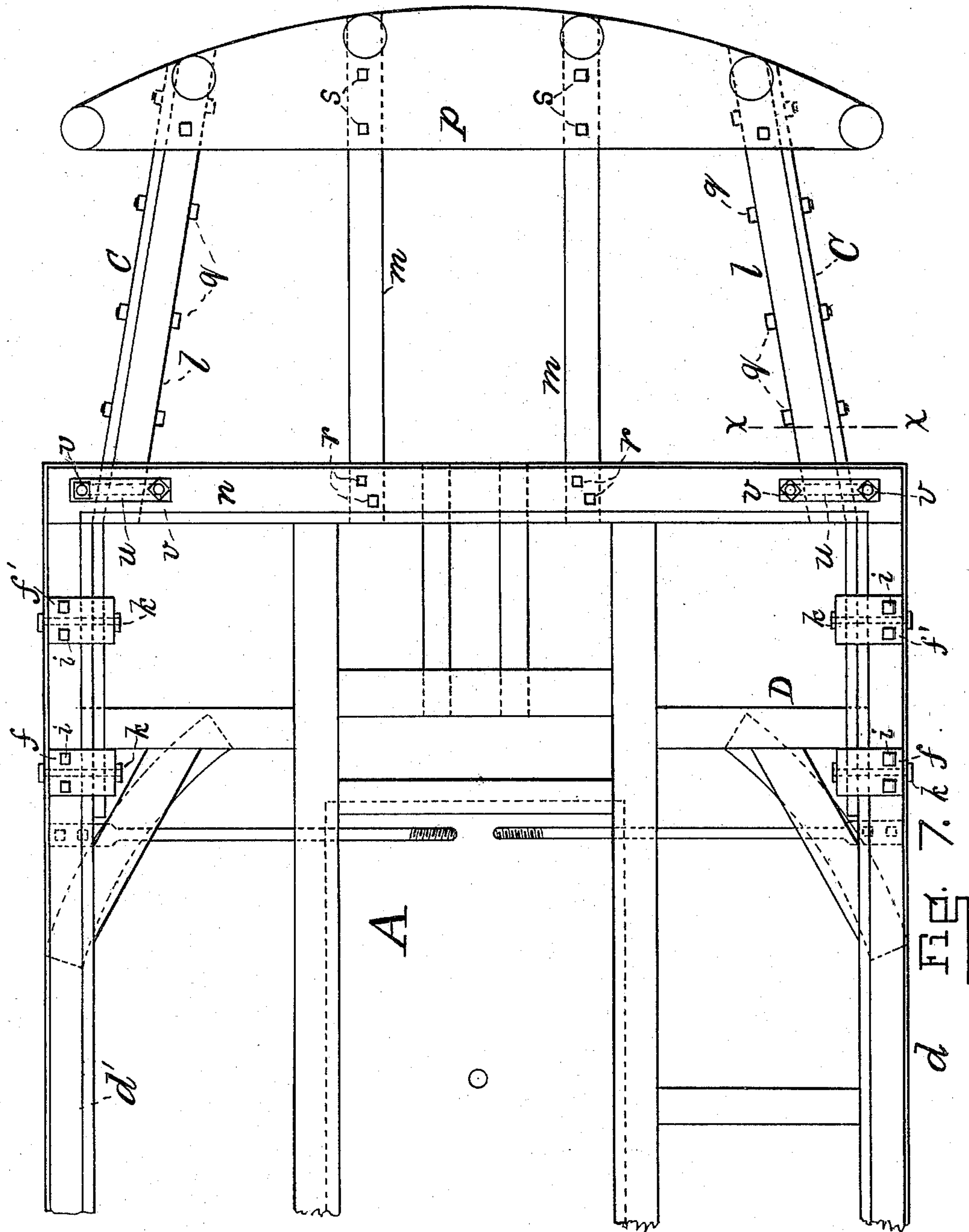
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Arthur S. Davis  
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INVENTOR

W. Robinson.



# UNITED STATES PATENT OFFICE.

WILLIAM ROBINSON, OF BOSTON, MASSACHUSETTS.

## CAR-FRAME.

SPECIFICATION forming part of Letters Patent No. 493,876, dated March 21, 1893.

Application filed July 8, 1892. Serial No. 439,332. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM ROBINSON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Car-Frames, of which the following is a specification.

In street cars, as usually built, the deep platform supports extend back under the frame of the car so far as to make it impossible to operate a swiveling truck under the car, near its end, below these supports, without either using very small wheels or raising the car to an undesirable or impracticable height for convenient street service.

The object of my invention is to produce a car framing which shall obviate the above indicated objections.

The nature of my invention will be understood from the description which follows, reference being had to the accompanying drawings, which form a part of this specification, in which—

Figure 1 is a side elevation of a portion of the floor framing of a street car, mounted on a swiveling truck, the whole illustrating my invention. Fig. 2 is a side elevation of the platform support; Fig. 3 a top view of the same; Fig. 4 a cross section at  $x, x$ , Fig. 7, showing details of the platform support. Fig. 5 is a side view and Fig. 6 a face view of clamps which hold the platform support in position, and Fig. 7 is a plan view of one end of the floor framing of a car, illustrating my invention.

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

A shows the bottom or floor framing of a railway car and B a portion of a swiveling truck of any usual or suitable construction, arranged under said floor framing A, near the end of the car.

C is the platform support, made preferably of a flat plate of steel having its greatest width in a vertical position. The plate C has its inner end  $a$  bent upwardly as shown at  $b$ , and this inner end  $a$  of said plate C rises up just inside of the car sill  $d$  and is secured to said sill, as shown in Figs. 1 and 7, while the outer end  $c$  of said plate C supports the platform  $e$ .

In order to give the platform support C a

perfectly solid bearing I use the clamps  $f, f'$  (preferably made of steel or iron). The clamp  $f$  has its ends  $g, g'$  bent over at right angles to its stem  $h$  as shown in Figs. 5 and 6. The bent ends of the clamp  $f$  pass above and below the plate C, near its inner end  $a$ , and also above and below the sill  $d$ , securing said end  $a$  of said plate C in proper position against said sill. In like manner, the clamp  $f'$ , placed as near as practicable to the bend  $b$  of the plate C, clamps said plate to said sill, at a point near the end of said sill and toward the center of said plate C, as shown. The clamps  $f, f'$  are secured in position by the bolts  $i$  passing vertically through said clamps and the sill  $d$ , and by the bolts  $k$ , passing through the clamps  $f, f'$ , plate C and sill  $d$  in a horizontal direction. Thus the plate C is firmly secured to said sill  $d$  by said clamps and bolts, so that it cannot move in any direction.

It will be observed that a plate or platform support C is secured to each of the outer sills  $d, d'$  of the car frame A (see Fig. 7.), the outer ends of these two plates forming a support for the platform  $e$ . It is evident that when weight or pressure comes upon the platform  $e$  the downward pressure of the plates C is supported by the lower ends  $g'$  of the clamps  $f'$  while the upward pressure of the inner ends  $a$  of the plates C is resisted by the upper ends  $g$  of the clamps  $f$ .

The platform end timber  $p$  is, of course, supported by the plates C at their outer ends. The platform timbers  $l$  are secured to the plates C by the bolts  $q$  and have their inner ends secured to the end sill  $n$ , while the intermediate platform supports  $m, m$ , have their inner ends secured to said end sill  $n$  by the bolts  $r$ . The outer ends of said timbers  $m$  are secured to the platform end timber  $p$  by the bolts  $s$ , as shown.

The timbers  $l, m$ , afford a convenient base to which the platform  $e$  and platform timber  $p$  are secured by wood screws or bolts.

The clamps  $t$  pass around and under the plates C and timbers  $l$  and up through the end sill  $n$ , where they are secured in position by the plates  $u$  and nuts  $v$ , as shown. These clamps  $t$ , it will be observed, coming as they do, close to the platform, aid materially in



supporting the plates C and through them, the platform.

In the description thus far it has been assumed that the bottom of the inner end of the plate C is flush with the bottom of the sill *d*; but it is evident that the bottom of the inner end of said plate C may come somewhat below the bottom of the sill *d*, for instance, to the position shown by the dotted line *w*, provided that it shall not come low enough to interfere with the free movement of the truck B.

When the plate C comes between the side of the sill *d* and the end of a cross timber, as D, then the mortise hole *a'* is cut through the plate C, and through this hole the end of the timber D is firmly secured in position.

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

1. The car frame A provided with platform supports C attached thereto, said supports having the lower surface of their inner ends flush, or nearly so, with the bottom of the car frame, substantially as described.

2. A car frame provided with platform supports attached thereto, said supports having the lower surface of their inner ends flush, or nearly so, with the bottom of the car frame and the lower surface of their outer ends on a lower plane than the bottom of the car frame, substantially as described.

3. In a railway car, platform supports con-

sisting essentially of metal plates bent in a vertical plane, the inner ends of said platform supports being higher than the outer ends thereof, substantially as described.

4. The combination, substantially as described, of the car frame A, the metal platform supports C having their inner ends bent upwardly, and the clamps *f, f'* securing said platform supports to the car sills *d, d'*, above the bottoms of said sills.

5. The combination, substantially as described, of the metal platform support C having its inward end bent upwardly, the clamp *f* supporting and securing the inner end of said platform support to the car frame, back of the end sill, and the clamp *t* securing said platform support to the end sill *n*.

6. The combination, substantially as described, of the metal platform supports C bent in a vertical plane, the inner ends thereof secured to the car frame A, the timbers *l* bolted to the outer ends of said platform supports C, the platform end timber *p* secured to said timbers *l*, the intermediate timbers *m* secured to the end sill *n* and to the platform end timber *p*, and the platform *e* resting upon and secured to said timbers *l, m*.

WILLIAM ROBINSON.

Witnesses:

ARTHUR T. HITCHINGS,  
C. E. GRANT.