

(No Model.)

2 Sheets—Sheet 1.

W. F. HEAD.  
RAIL FOR CARRIAGE SEATS.

No. 418,460.

Patented Dec. 31, 1889.

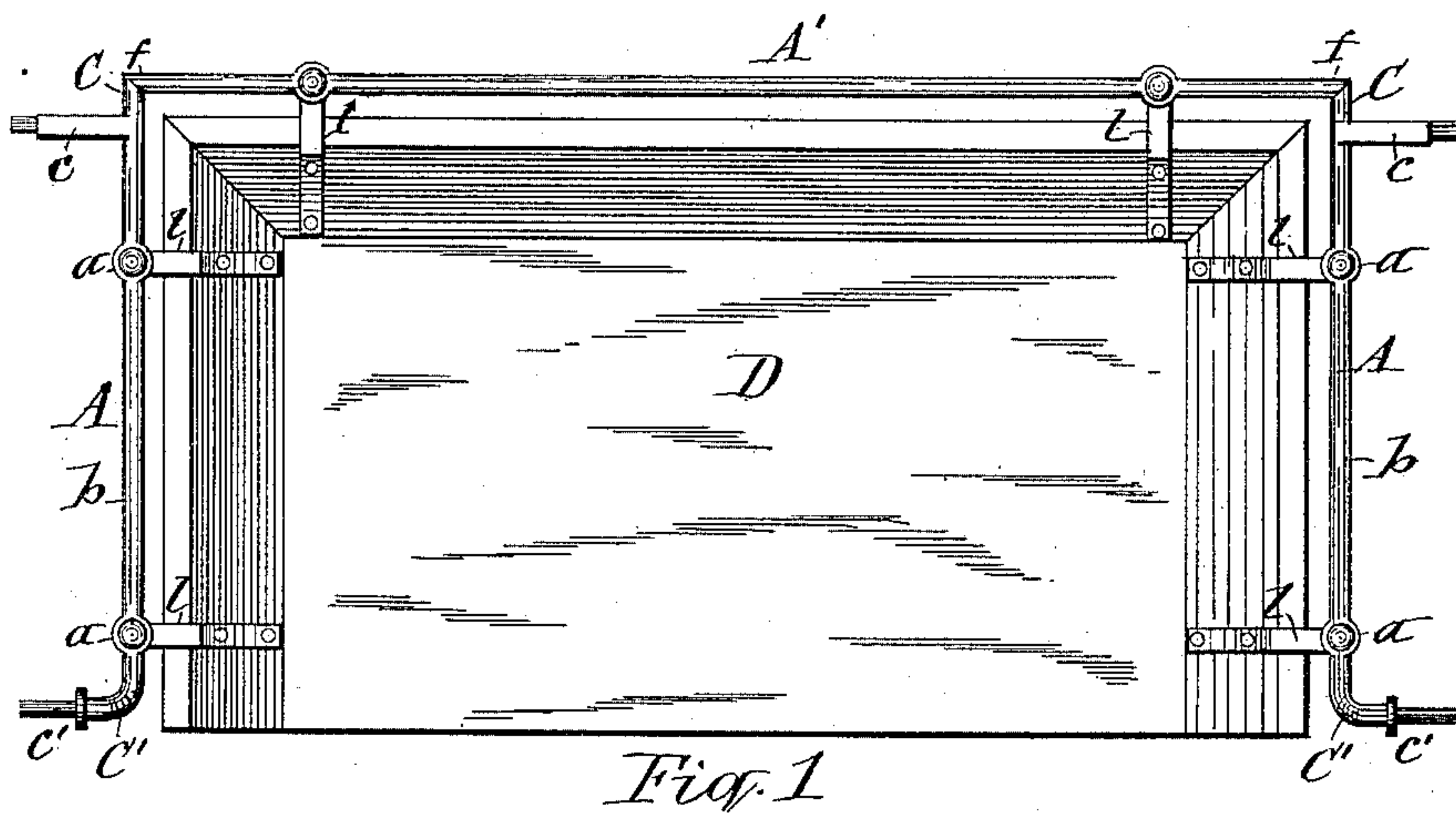


Fig. 1

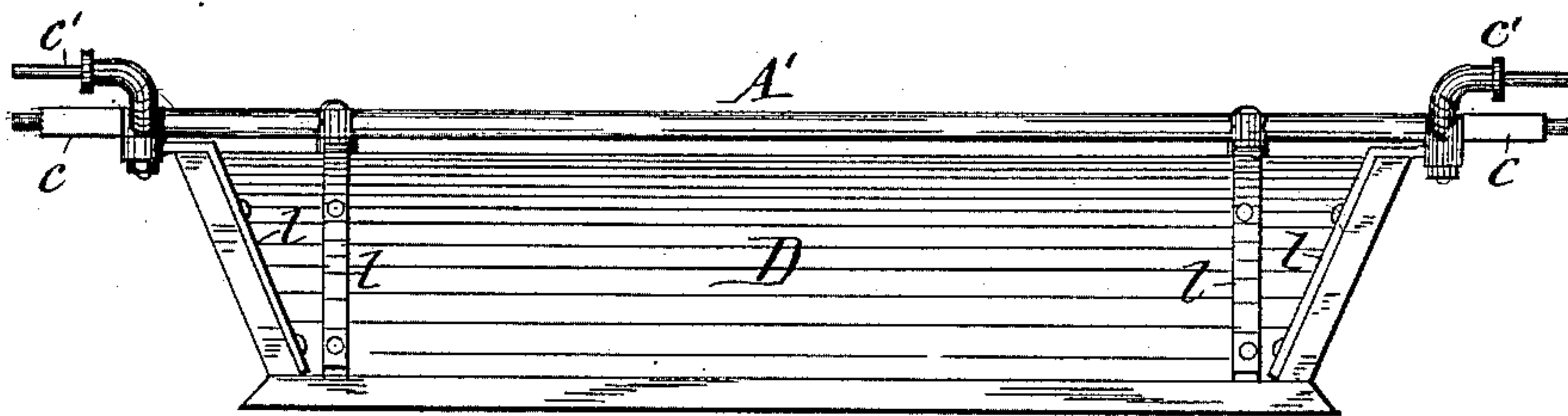


Fig. 2

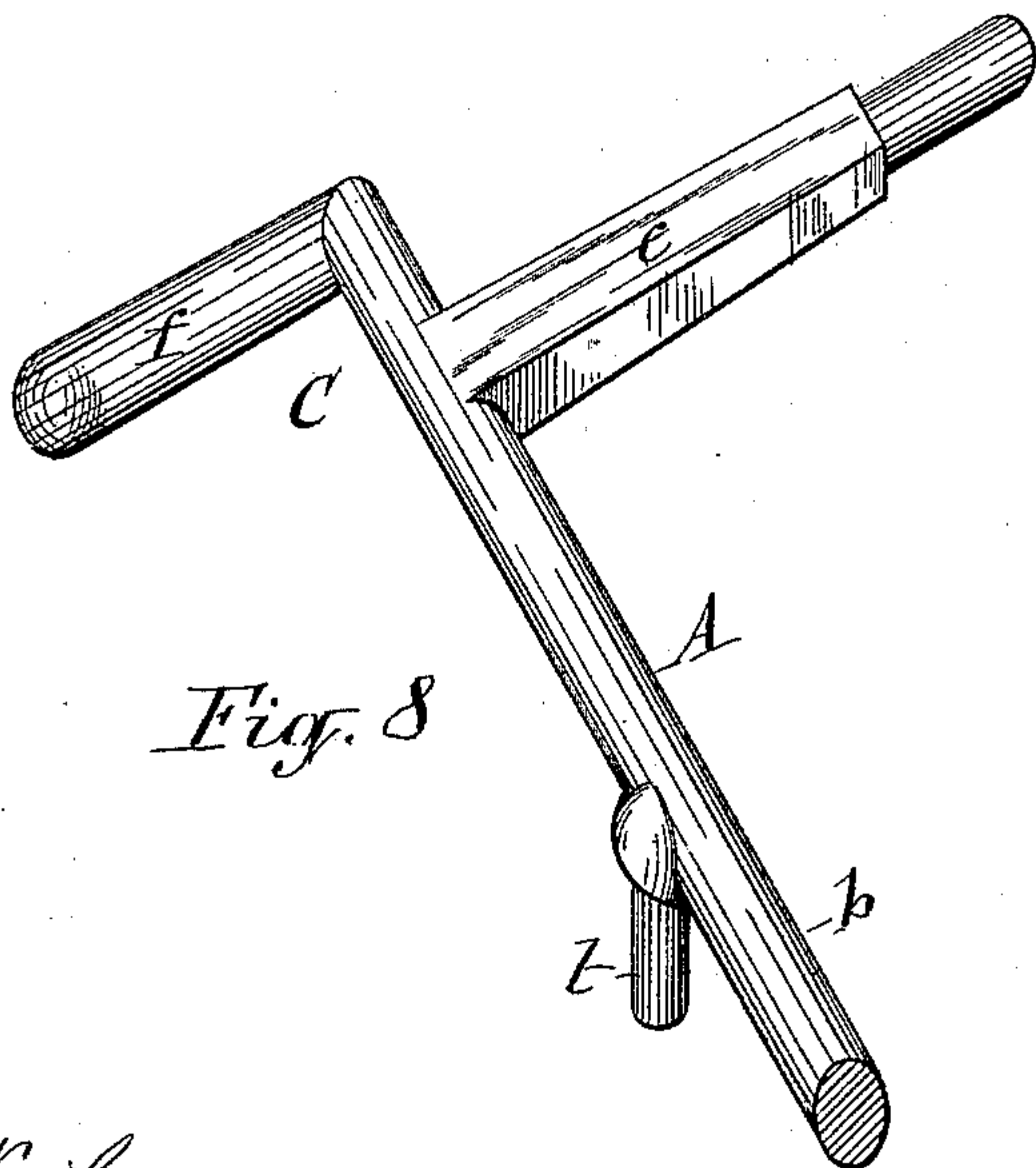


Fig. 8

WITNESSES:

A. F. Walz  
M. W. Dewey

INVENTOR

William F. Head  
BY  
Snell & Benedict  
his ATTORNEYS

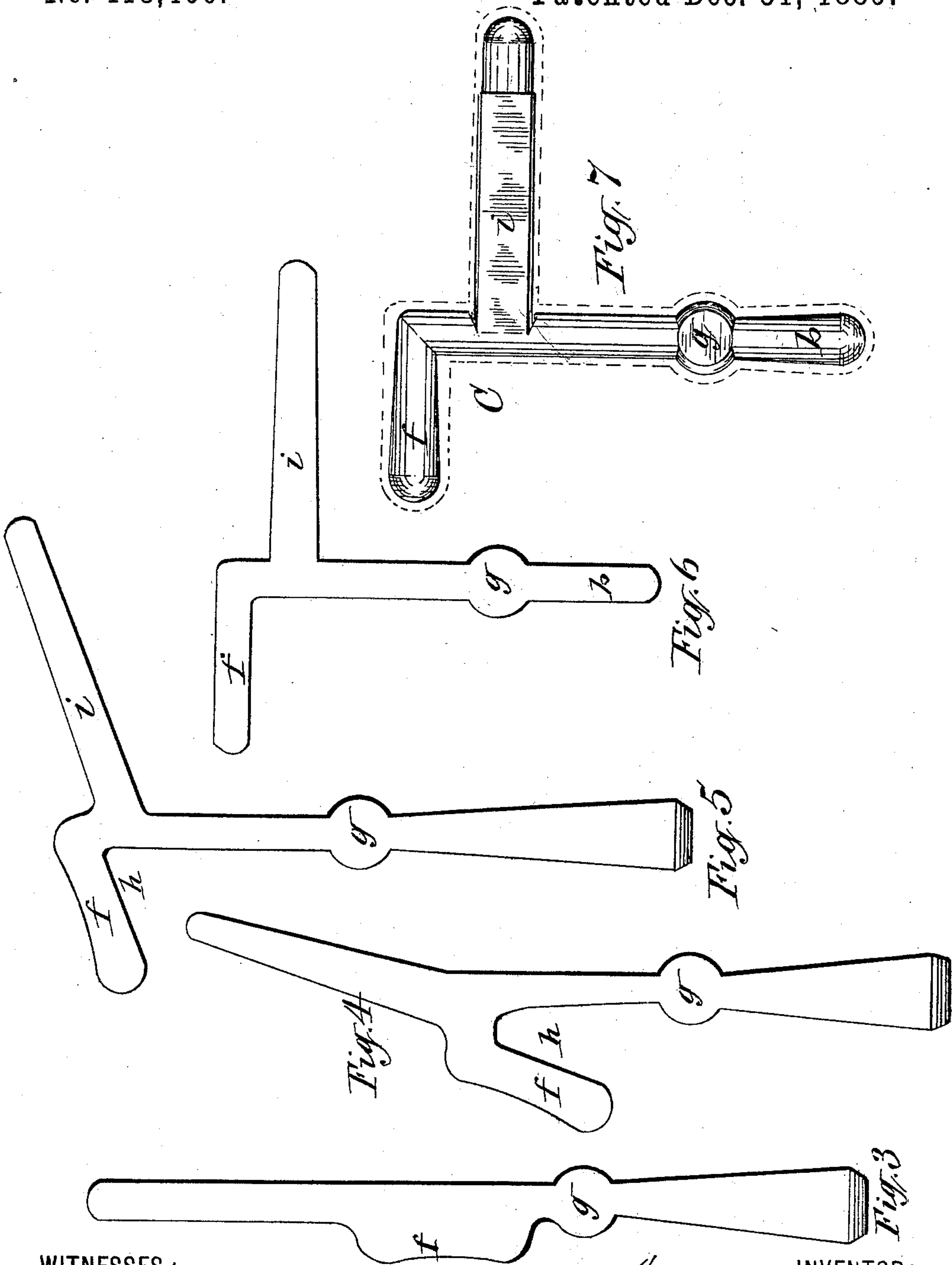
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A. F. Wälz,  
M. W. Dewey.

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Shull, & Benedict  
his ATTORNEYS.



# UNITED STATES PATENT OFFICE.

WILLIAM F. HEAD, OF CORTLAND, NEW YORK, ASSIGNOR TO HIMSELF,  
CURTIS L. KINNEY, AND EDWARD D. BARKER, OF SAME PLACE.

## RAIL FOR CARRIAGE-SEATS.

SPECIFICATION forming part of Letters Patent No. 418,460, dated December 31, 1889.

Application filed June 7, 1889. Serial No. 313,431. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM F. HEAD, of Cortland, in the county of Cortland and State of New York, have invented certain new and  
5 useful Improvements in the Manufacture of Shifting-Rails for Carriage-Seats; and I do hereby declare that the following is full, clear, and exact description of the invention, which will enable others skilled in the art to which it  
10 appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

15 This invention relates to the manufacture of the so-called "shifting-rails" of carriage-seats, which rails are extended along the sides and back of the seat a short distance outside of the top thereof and support the top of the carriage; and the invention consists in an improved method of forming the corner-sections and side rails of said shifting-rail, as hereinafter fully described, and specifically  
20 set forth in the claim.

25 In the annexed drawings, Figure 1 is a plan view of a carriage-seat with the shifting-rail attached thereto. Fig. 2 is a front view of the same. Figs. 3, 4, 5, 6, and 7 are plan views of the blank from which the corner-section of the shifting-rail is formed, and showing the different forms produced by the successive steps of the process of manufacture; and Fig. 8 is a detached perspective  
30 view of a modification of the corner-section of the shifting-rail.

Similar letters of reference indicate corresponding parts.

35 A A and A' represent, respectively, the two side rails and back rail of the shifting-rail surrounding the top of the seat D, as hereinbefore stated, and secured to metallic brackets *ll*, attached to the seat in the usual and well-known manner.

45 My invention pertains, specially, to the construction of the side rail A, which is composed of the following integrally-united parts, viz: the central section *b*, front end section C', formed with the laterally-extending arm *c'*, rear end or corner section C, formed  
50 with the stub *f*, by which it is welded to the

back rail A', and with the laterally-extending arm *c* and attaching-eyes *a a* at the junction of the central section *b* with the end sections C' C.

Prior to my present invention it has been  
55 customary to form the central section *b* with the eyes *a a* and with a stub extending from the rear eye, and the corner section C was formed with a short stub in front of the arm *c*, and the two parts *b* and C were united by  
60 welding the said stubs to each other. In practice I have found it very difficult to effect a good weld so near to the arm *c* and eye *a*, and owing to the shortness of the distance from the eye *a* to the rearend of the side rail  
65 very little opportunity is afforded for either drawing out or upsetting the iron to obtain the exact length required of the said portion of the side rail.

The object of this invention is to overcome  
70 said difficulties; and to that end my invention consists, essentially, in forging the two sections C' C each with one of the attaching lugs or eyes *a a* and with a portion of the central section *b*, and then welding the said  
75 portions of the central section to each other. The said end sections I produce by the forging process hereinafter described, and inasmuch as there is a considerable distance between the two attaching-eyes *a a* of the side rail  
80 A, I am enabled to form the two end sections C' C, with portions of the central section *b*, of ample length to facilitate the welding of the same to each other, and in such a manner as to bring the eyes *a a* the requisite distance  
85 apart, and by joining the aforesaid parts at a point between the attaching-eyes *a a* said joint is carried between two supports on the seat, and is consequently greatly relieved from the strain incident to the weight of the  
90 carriage-top mounted on the usual arms *c c'* of the side rail A.

The front end section C', I forge in the usual manner, with the exception that I form it with only a portion of the central section  
95 *b*. The corner-section or rear end section C of the side rail A, I form by forging a blank with a prolonged main portion, which constitutes a part of the side rail A, said main portion being terminated with a welding-stub  
100



5 *b*, which is in line with the main portion, and  
 by which it is to be joined to a portion of the  
 central section *b*, formed integral with the  
 front section *C'*. On the opposite end of the  
 10 aforesaid main portion of the blank I forge  
 the arm *i* and the welding-stub *f*, extending  
 in opposite directions therefrom, as shown in  
 Fig. 6 of the drawings. To produce this blank  
 and finish the same, I preferably resort to the  
 15 following preliminary steps and final steps  
 in the process of manufacturing the corner-  
 section *C*, to wit: I first forge a blank with  
 the side enlargement *f* on the central portion  
 thereof, and with the approximately-cylin-  
 20 drical enlargement *g* near one end of the en-  
 largement *f*, as shown in Fig. 3 of the draw-  
 ings. I next split the enlargement *f* longi-  
 tudinally from one end part way the length  
 thereof, as shown in Fig. 4 of the drawings.  
 25 I then spread the cleft *h* of the enlargement  
*f* from the main portion of the blank and bend  
 toward the opposite side of the latter the end  
 portion *i* adjacent to the fixed end of the afore-  
 said enlargement, as illustrated in Fig. 5 of  
 30 the drawings. I then bend the portions *f* and  
*i* still farther, so as to set them at right angles  
 to and in opposite directions from the main  
 portion of the blank, as shown in Fig. 6 of  
 the drawings, and in this condition I place  
 35 the blank between suitable dies of a drop-  
 press, and by the impact of said dies I round  
 the edges of the blank, as represented in Fig.  
 7 of the drawings. The portion *i* forms the  
 arm *c* for supporting the carriage-top. The  
 stub *b* constitutes a portion of the central sec-  
 tion of the side rail *A* and is welded onto the  
 portion of the central section formed integral  
 with the front end section *C'*. The portion *f*  
 forms a stub by which the corner-section *C*

is welded onto the back rail *A'*. The cylin- 40  
 drical enlargements *g g* may be drilled ver-  
 tically with holes for the reception of bolts  
 or rivets by which to attach the side rail *A*  
 to the brackets *l l* on the seat *D*; or the side 45  
 rail may be formed with downward-project-  
 ing lugs *t*, as shown in Fig. 8 of the drawings,  
 for attaching the side rail to the aforesaid  
 brackets.

Having described my invention, what I  
 claim as new, and desire to secure by Letters 50  
 Patent, is—

In the manufacture of shifting-rails for  
 carriage-seats, the method of forming the  
 corner-section *C*, consisting in, first, forging  
 the blank, Fig. 3, with the side enlargement *f* 55  
 on the central portion thereof and with the  
 approximately-cylindrical enlargement *g* near  
 one end of the aforesaid side enlargement;  
 secondly, splitting the side enlargement *f* lon-  
 gitudinally from one end partly the length 60  
 thereof; thirdly, spreading the cleft *h* of the  
 enlargement *f* from the main portion of the  
 blank and bending toward the opposite side  
 of the latter the end portion *i* adjacent to the  
 fixed end of the aforesaid enlargement; 65  
 fourthly, setting the portions *f* and *i* at right  
 angles to and in opposite directions from the  
 main portion of the blank; fifthly, rounding  
 the edges of the blank by subjecting the same  
 to the pressure of the dies of a drop-press, 70  
 substantially as set forth.

In testimony whereof I have hereunto signed  
 my name this 5th day of June, 1889.

WILLIAM F. HEAD. [L. S.]

Witnesses:

R. H. DUELL,  
 WM. CORCORAN.