

(No Model.)

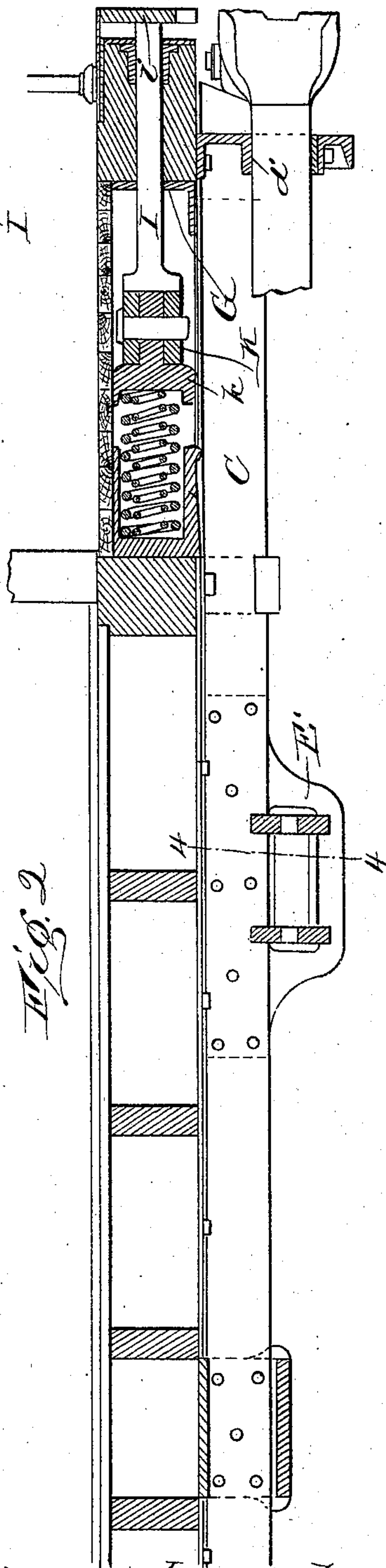
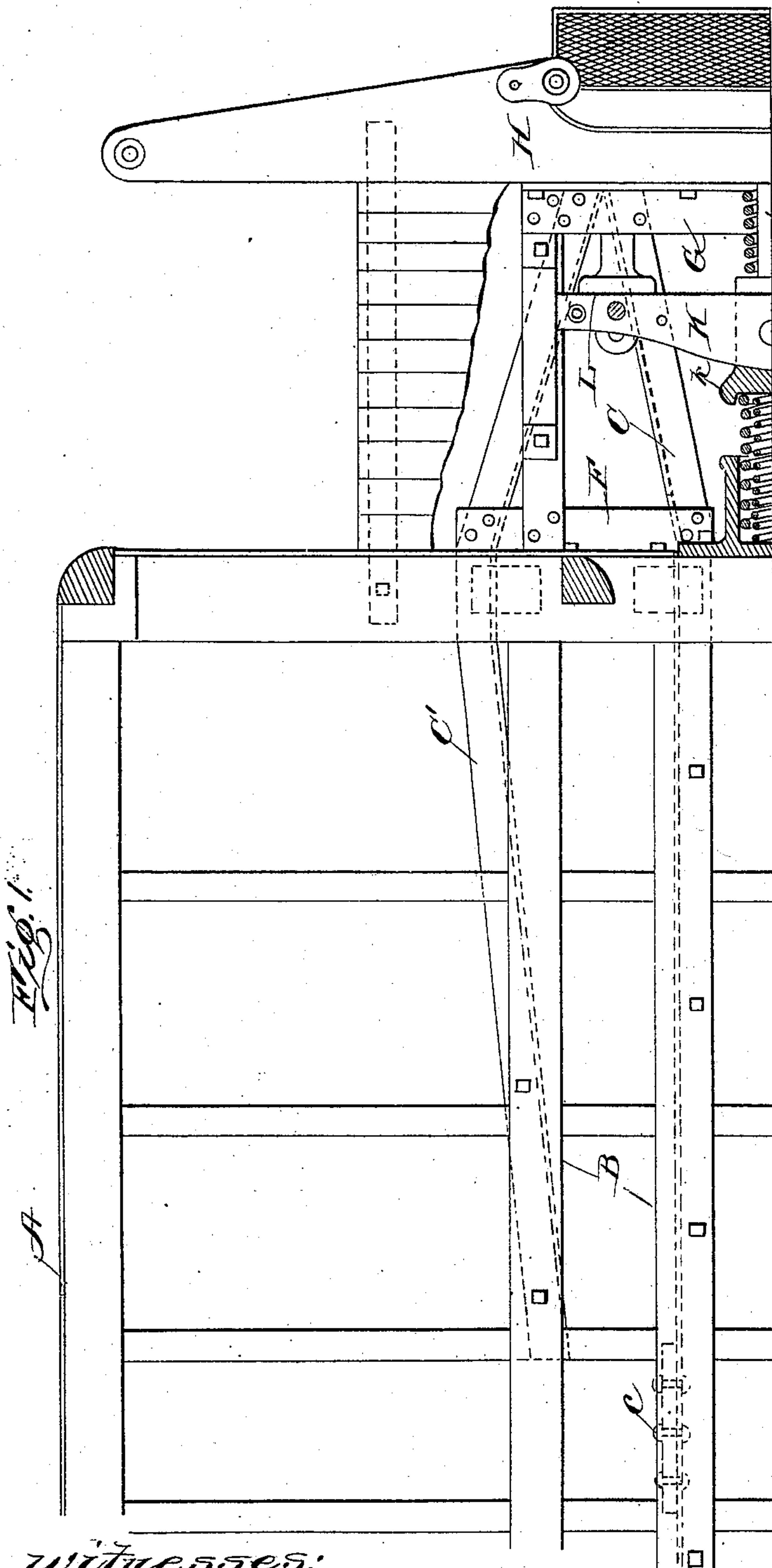
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H. H. SESSIONS.

METALLIC PLATFORM AND BUFFER FOR RAILWAY CARS.

No. 575,994.

Patented Jan. 26, 1897.



witnesses:  
J. M. Fowler Jr.  
A. J. Stuart.

Inventor  
Henry H. Sessions,  
by *Chas. O. Church*  
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(No Model.)

4 Sheets—Sheet 2.

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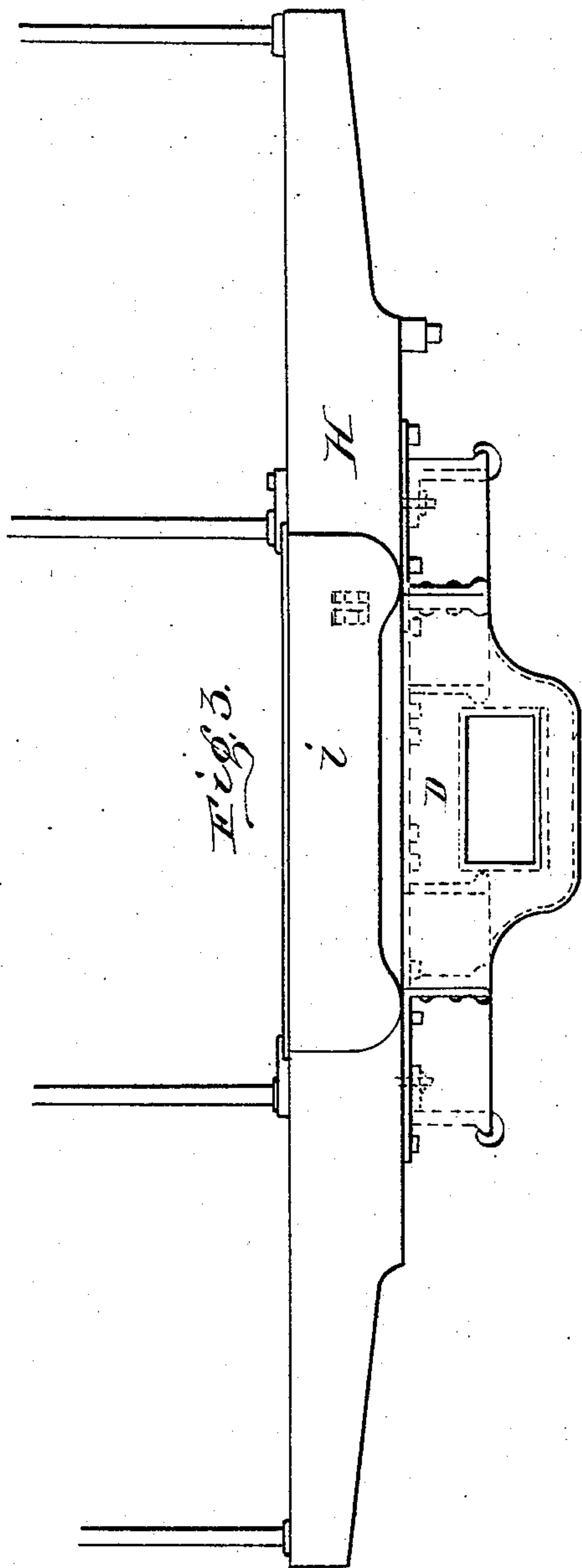


Fig. 3.

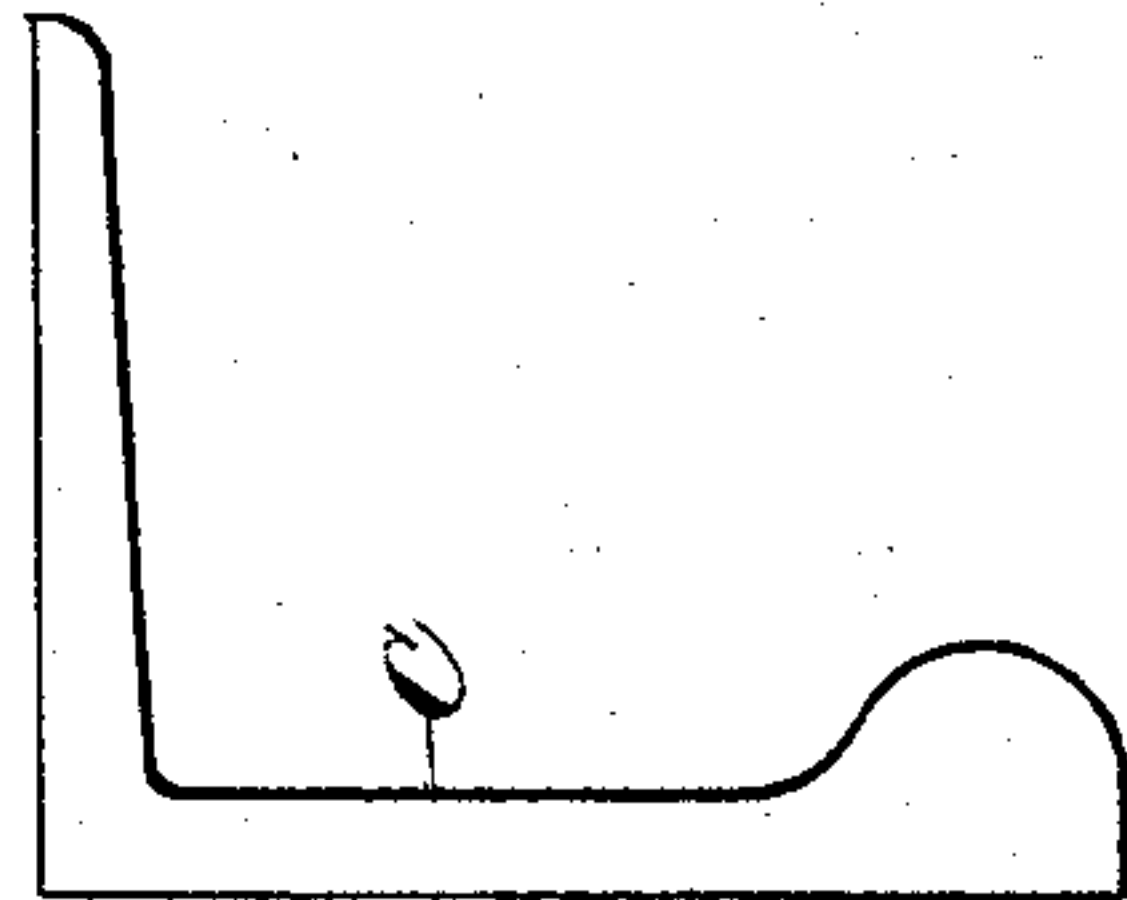


Fig. 11.

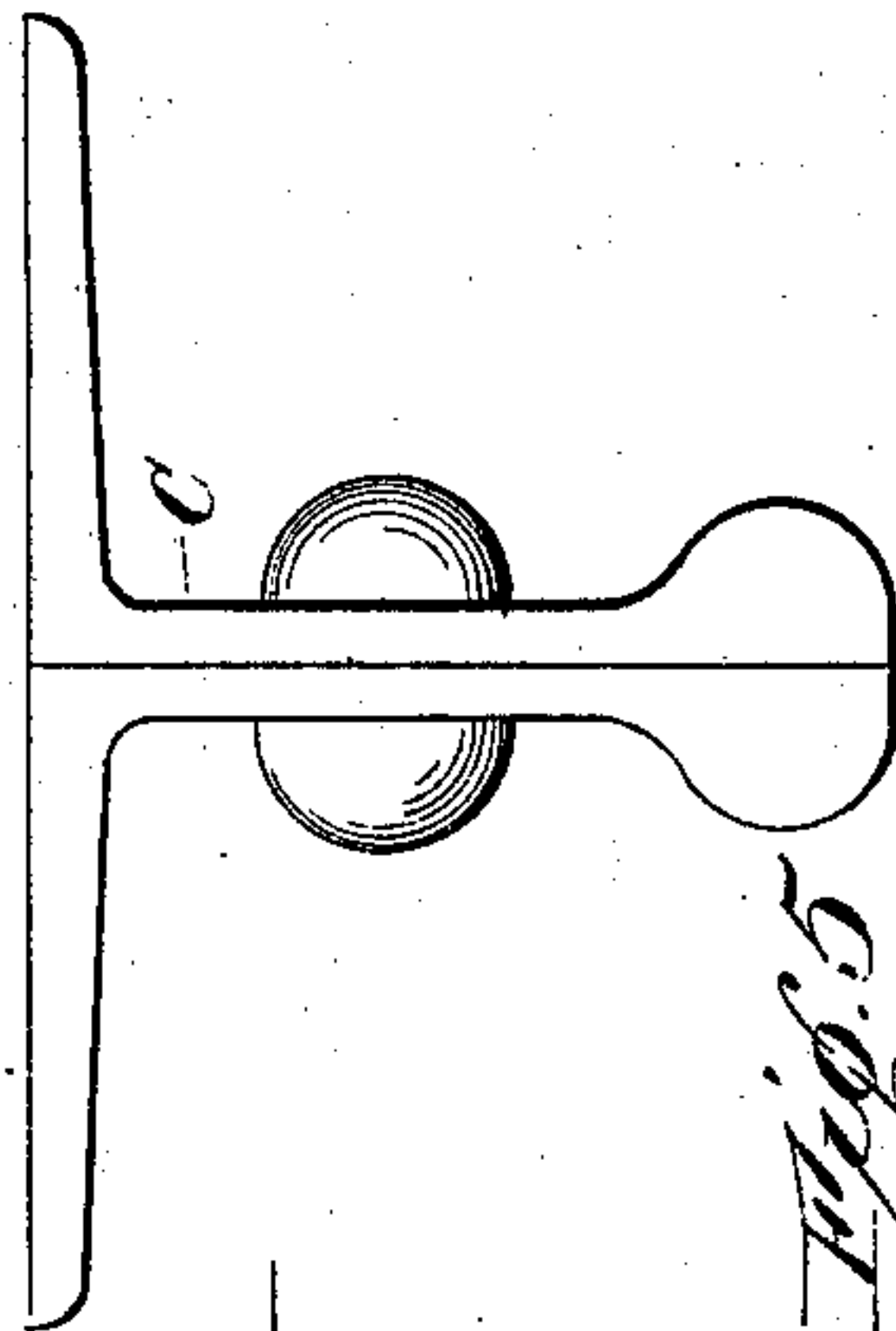


Fig. 10.

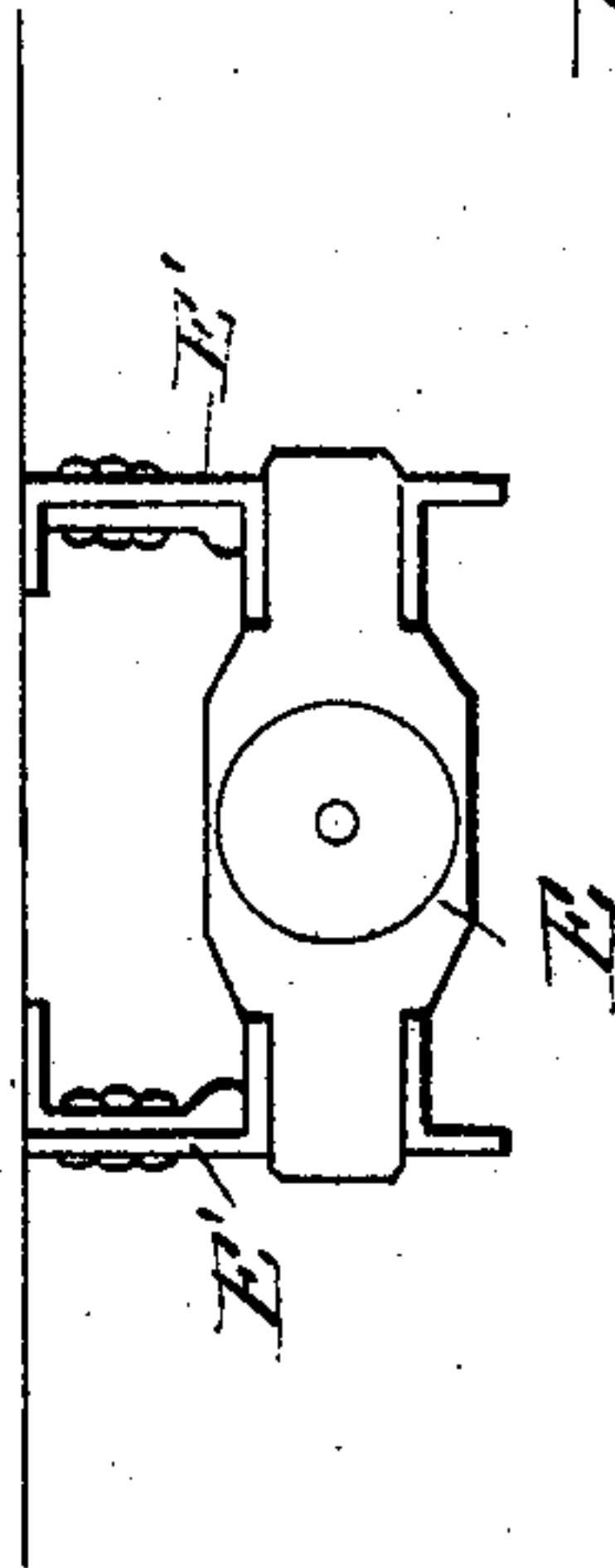
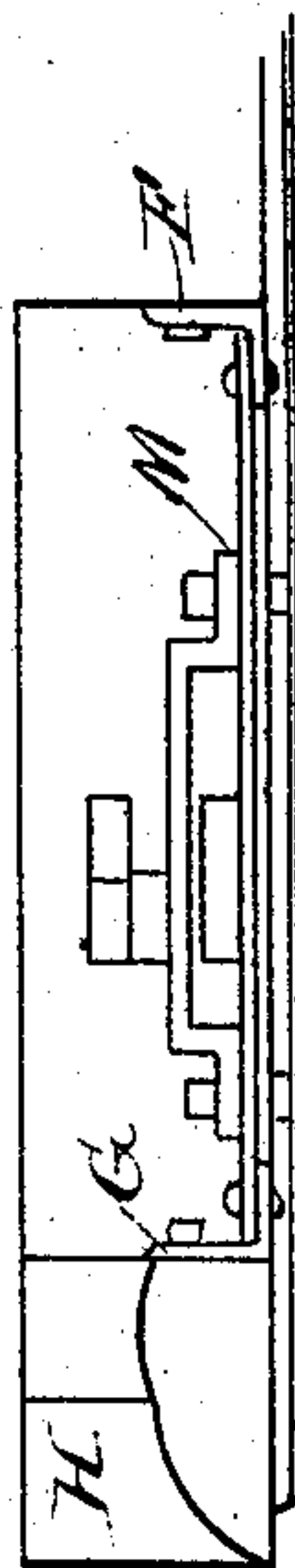


Fig. 4.

Fig. 5.



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(No Model.)

4 Sheets—Sheet 3.

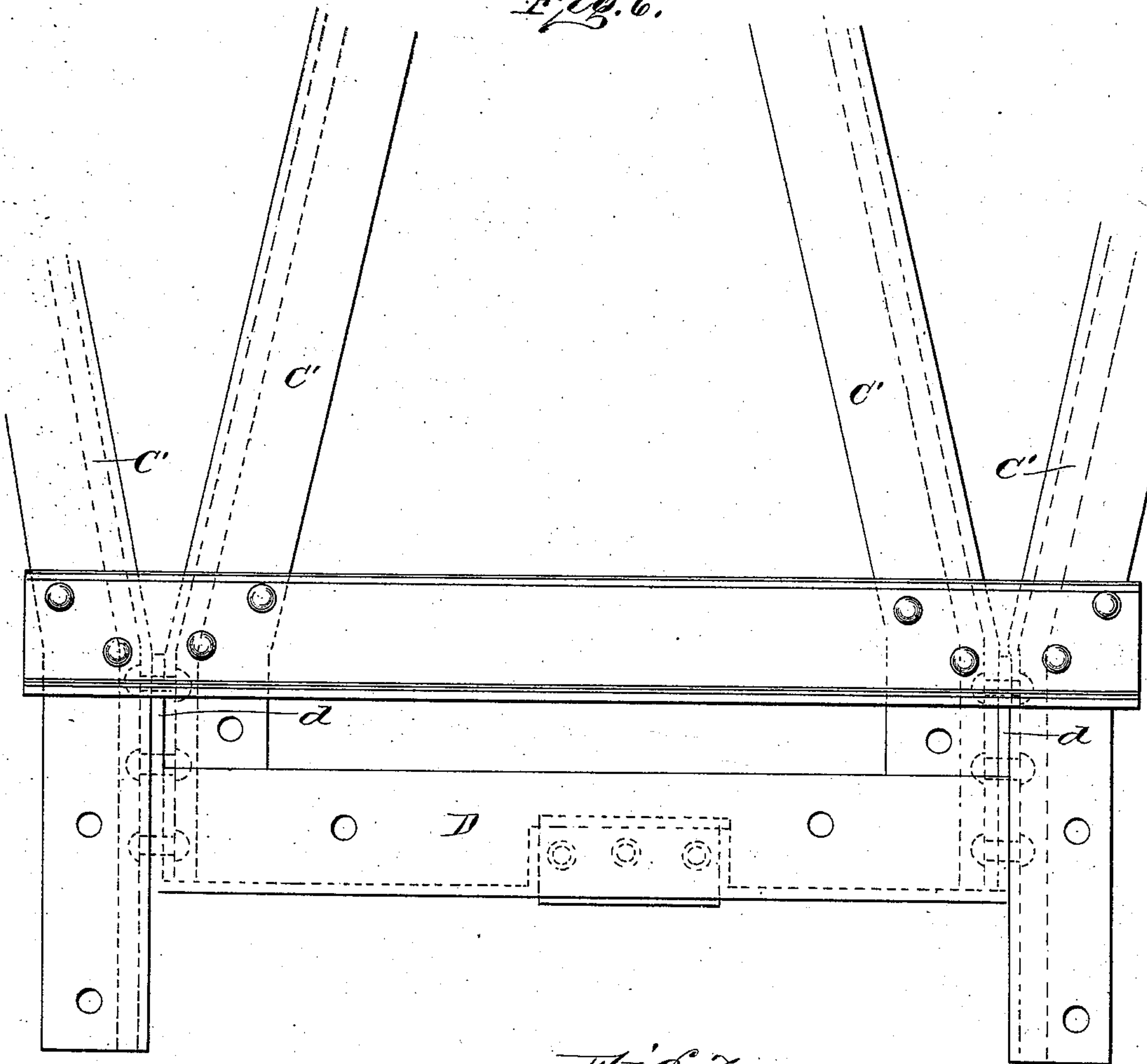
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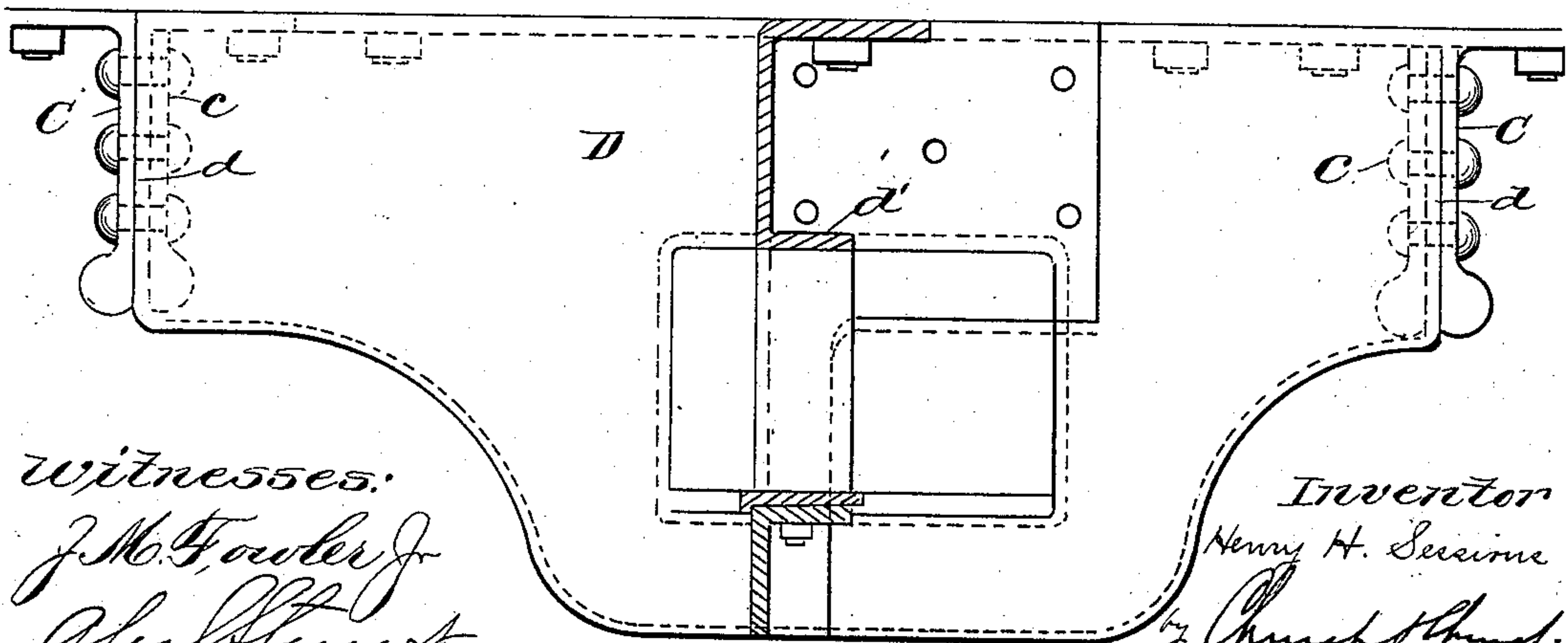
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*Fig. 6.*



*Fig. 7.*



*witnesses:*

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(No Model.)

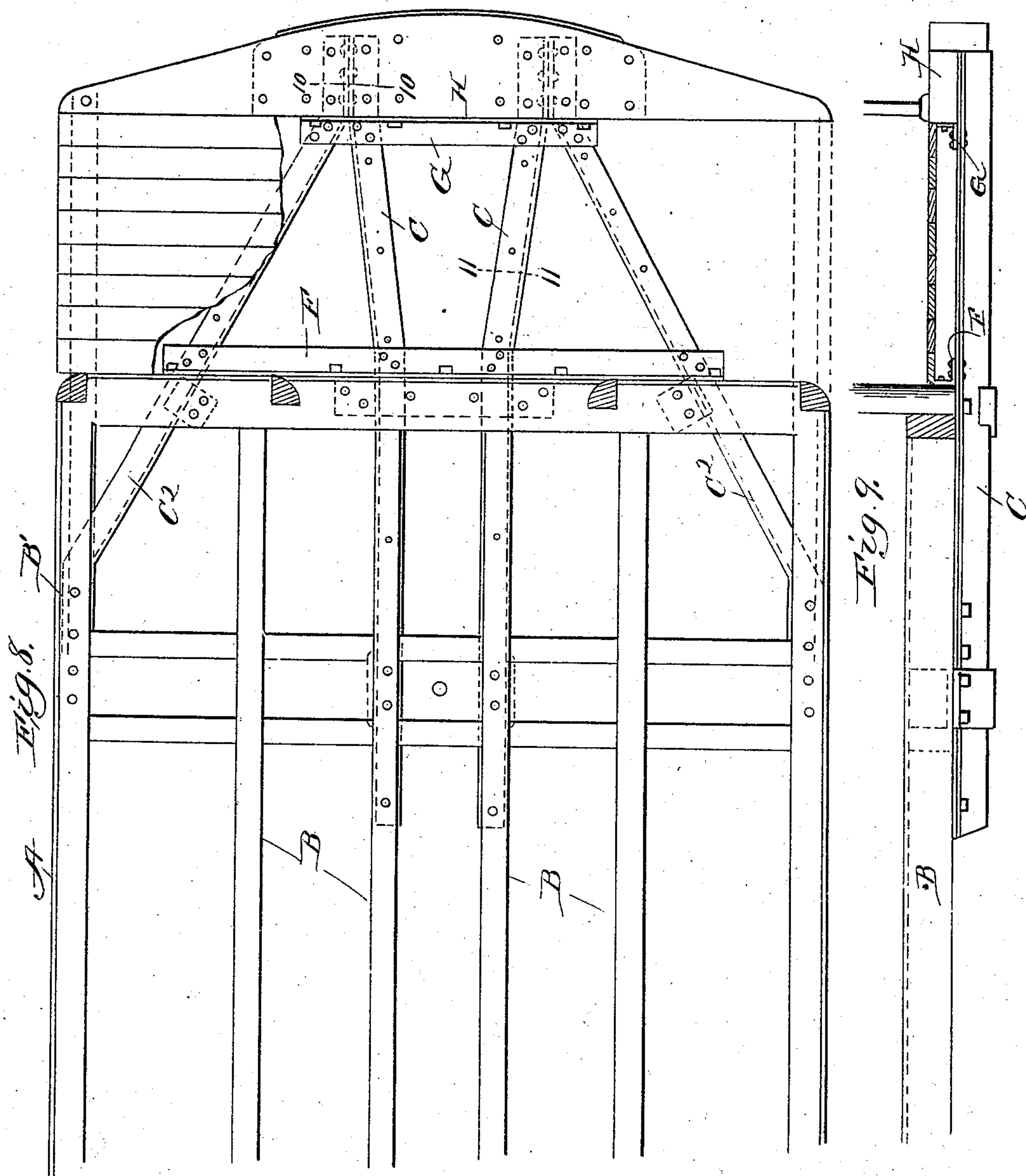
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# UNITED STATES PATENT OFFICE.

HENRY H. SESSIONS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE STANDARD COUPLER COMPANY, OF NEW YORK, N. Y.

## METALLIC PLATFORM AND BUFFER FOR RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 575,994, dated January 26, 1897.

Application filed August 20, 1896. Serial No. 603,385. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY H. SESSIONS, of Chicago, in the county of Cook, State of Illinois, have invented certain new and useful  
5 Improvements in Metallic Platforms and Buffers for Railway-Cars; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming  
10 a part of this specification, and to the letters of reference marked thereon.

This invention has for its object to provide an improved framing for the platforms of railway-cars, together with an improved construction of buffing mechanism particularly  
15 adapted for use on steam-railway cars.

In this class of vehicles, designed for carrying passengers especially, the effect of side or lateral strains on the platform has always  
20 been the cause of serious annoyance and a source of expense and accident. This is especially so with the wide and inclosed platforms, such as are used in the vestibule-car construction, the springing of the platform  
25 at its outer end when passing around curves or when the cars lurch heavily on rough tracks being sufficient, with the ordinary constructions, to tear asunder the joints of the framework and cabinet-work of the vestibule.

The prime object of the present invention is to overcome this difficulty and to provide a structure which will be rigid against lateral strain and at the same time afford the maximum resistance to buffing strains, all as will  
35 be hereinafter particularly set forth.

Referring to the accompanying drawings, Figure 1 is a top plan view, partly in section, taken through one-half of one end of a car, showing the framing of a platform and buffer  
40 mechanism. Fig. 2 is a view looking at the left-hand side of Fig. 1 and with the coupler-head and draw-bar shown in place and partly broken away. Fig. 3 is an elevation looking at the end of Fig. 1. Fig. 4 is a detail section on the line 4 4, Fig. 2. Fig. 5 is a detail  
45 sectional elevation showing the end of the equalizer and its keeper. Fig. 6 is an enlarged detail top plan view of the forward ends of the trusses and the front carrier-yoke. Fig. 7 is a detail front elevation of the front  
50 carrier-yoke and showing also its shape in

cross-section at the center. Fig. 8 is a top plan view of a modified form of truss-frame. Fig. 9 is a side elevation of the same. Fig. 10 is a section on the line 10 10, Fig. 8. Fig. 11 is a section on the line 11 11, Fig. 8.

Like letters of reference in the several figures indicate the same parts.

Generally speaking, this invention consists in forming the supporting-beams for the platform in the form of lateral trusses, that is to say, the platform-supporting beams where they project beyond the framing of the car-body proper extend at an angle to each other and are firmly anchored together, thereby  
60 forming trusses which are rigid against lateral springing or movement, and in carrying the invention into practice it is quite immaterial what particular form of car-framing is employed either for the car-body or for the platform, but in the preferred construction, and as shown in the drawings, the car-body is provided with a framing A of any usual construction, but having longitudinal sills B extending therethrough to afford a firm anchorage for the platform-truss framing and draft mechanism. Such sills are in common use at present and hence need no particular description.

The platform-framing is preferably supported by angle-bars of the bulb type and commonly known as "bulb" angle-bars, and I prefer to employ two of such angle-bars on each side of the center or line of draft. These angle-bars are lettered C C' in the drawings, and the central bulb angle-bars C, forming the draft-beams proper, extend backward through the transoms of the car-body, that is to say, between the upper and lower members of the transom, and are anchored to them in a secure manner. They are also securely fastened at their rear ends by bolts or rivets to the longitudinal middle sills of the car-body, as at c, this union being preferably located well back from the end, so as to afford a secure fastening. The outer members C' also extend back beneath the car-body, but need not of necessity pass through the transoms and need not of necessity be anchored to them, as the strain due to draft is borne by the central bars. They are, however, extended backward and anchored to the body-



framing of the car in any suitable manner. For instance, as shown in Fig. 1, they are extended backward through the transom and are bolted to the outer longitudinal sills B of the car-body, while in the modified arrangement shown in Fig. 8 they are extended rearwardly and anchored to the side sills of the car-body, as shown at B', and do not extend through the transom.

Forward of the end sills of the car-body the bulb angle-bars are deflected laterally and those on each side of the central line are preferably brought close together at their ends and united rigidly by bolts or otherwise, so as to form an effectual truss. This construction leaves the central portion of the platform open for the reception of the buffing and draft mechanism, and in order to support the latter I preferably mount rigidly on the ends of the bulb angle-bars C or trusses a front carrier-yoke D, Figs. 6 and 7, formed of pressed steel, with rearwardly-extending flanges, the flanges *d* on the ends being passed between the ends of the truss angle-bars C and held by the rivets or bolts uniting these parts. A central opening is formed in the carrier-plate with rearwardly-extending flanges *d'*, through which opening the draw-bar of the draft mechanism passes and works.

The rear end of the draw-bar may be and preferably is connected to the central or draft rods before mentioned by means of a movable yoke E, Fig. 4, working in openings in a bracket E', united rigidly to the central bar C by bolts or otherwise well back within the car-body.

The truss angle-bars are further united, those on each side of the center by flat or angle bars F, located immediately in front of the end sill of the car and in position to have their upwardly-extending flanges united to said sill, and also by similar bars G, immediately in rear of the buffer-beam, the latter bar G extending across and uniting all of the truss-beams and serving as an effectual abutment for the buffer-beam, (lettered H.)

The buffer-beam H is supported in front of this bar G on the forwardly-projecting ends of the truss-beams C', and is held in place by bolts or otherwise in the usual manner.

Working through the buffer-beam are the buffer-rods I, carrying the buffer-plate *i* at their forward ends and taking a bearing against the equalizing-bar K, centrally pivoted to a spring-pressed head *k*, as usual. The buffer-rods I are pivotally connected to the ends of the equalizing-bar, but take a flat bearing thereon when pressed rearwardly, as shown at L, Fig. 1, the front edge of the equalizing-bar being made substantially straight for this purpose. Thus the face-plate or buffer proper will be restored to its normal position without other means. The ends of the equalizing-bar may be guided and supported on plates and bearings M, Fig. 5, whereby its movement is restrained and its alinement preserved.

In Fig. 8 it will be seen that the outer truss-bar (lettered C<sup>2</sup> in this instance) extends in substantially straight lines, but at an angle to the longitudinal center of the car from their front ends to the point where they are united to the side sills, which construction has some advantages, in that it provides a longer brace and overcomes the necessity of bending the bars at their center.

As before stated, I prefer to employ in the platform-framing what are known as "bulb" angle-bars, that is to say, angle-bars having a longitudinal bead or enlargement on one of the wings; but I do not wish to be understood as limiting myself thereto nor to any particular manner or means for uniting the angle-bars themselves or uniting the angle-bars to the sills of the car or to the particular manner of supporting said bars by means of brackets and otherwise, as such detail construction may be similar in all respects to the ordinary car construction, wherein metal frames are employed.

Having thus described my invention, what I claim as new is—

1. In a car structure, the combination with the body-framing, of the platform-framing formed by lateral trusses projecting from the car-framing, the members composing the trusses being arranged at an angle with relation to each other and having their ends brought into proximity to each other, substantially as described.

2. In a structure, such as described, the combination with the framing for the car-body having the end sill, of the beams forming the framing for the platform extending on both sides of said end sill, united by the car-framing at their inner ends and having their outer ends extended at an angle to the said sill brought into proximity to each other and united to form trusses for arresting lateral distortions; substantially as described.

3. In a structure, such as described, the combination with the framing for the car-body, the bars forming the framing for the platform having their outer portions arranged angularly with relation to each other and their ends brought into proximity and united to form trusses and the bars uniting said bars adjacent the body-framing; substantially as described.

4. In a structure, such as described, the combination with the framing for the car-body, the bars forming the framing for the platform having their inner ends united to the body-framing and their outer ends brought into proximity and united to form trusses and a bar extending between and uniting the ends of the trusses; substantially as described.

5. In a structure, such as described, the combination with the framing for the car-body, of the bars united thereto and projecting therefrom with their ends brought into proximity and united to form trusses, the draft-beam supported on the ends of said bars and a connecting-bar immediately in



rear of said beam rigidly affixed to the trusses; substantially as described.

5 6. In a structure, such as described, the combination with the framing of the car-body, the bars projecting therefrom and united thereto having their extremities arranged at an angle to each other to form trusses, and a buffer-beam supported on said trusses, of a vertically-arranged front carrier-yoke 10 having flanged ends uniting the ends of said trusses; substantially as described.

15 7. In a structure such as described, the combination with the framing for the car-body having the centrally-arranged longitudinal sills, the bars forming extensions of said sills having their inner ends united thereto and their outer ends deflected away from each other and the outer bars united at their inner ends to said body-framing and having 20 their outer ends deflected toward each other and connected to the central bars, the buffer-beam supported on the ends of said bars and the buffer mechanism supported in a vertical plane extending between the central bars; 25 substantially as described.

30 8. In a structure, such as described, the combination with the car-body framing having the centrally-arranged longitudinal sills, the bars connected at their inner ends to said sills and having their outer ends deflected away from each other, the outer bars having

their inner ends connected to said car-body framing and their outer ends deflected toward each other, the front carrier-yoke connecting the ends of said bars to form connected trusses, 35 of the draft mechanism supported on said carrier-yoke between the central bars; substantially as described.

9. In a structure, such as described, the combination with the framing for the car-body having the centrally-arranged longitudinal sills and end sills, of the trusses formed by bars connected at their inner ends to said longitudinal beam supported on the ends of said trusses, the angle-bar connecting said 40 trusses and forming a seat for the buffer-beam and the angle-bars connecting said trusses and seating against the framing and the car-body; substantially as described.

10. In a structure, such as described, the 50 combination with the framing for the car-body and platform framing, of the front carrier-yoke having the rearwardly-extending flanges united to the platform-framing and the central opening for the draft mechanism 55 having rearwardly-extending flanges; substantially as described.

HENRY H. SESSIONS.

Witnesses:

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