

No. 838,900.

PATENTED DEC. 18, 1906.

F. L. RAGER.
RAIL CHAIR AND ANTICREEPER.
APPLICATION FILED OCT. 24, 1905.

Fig. 1.

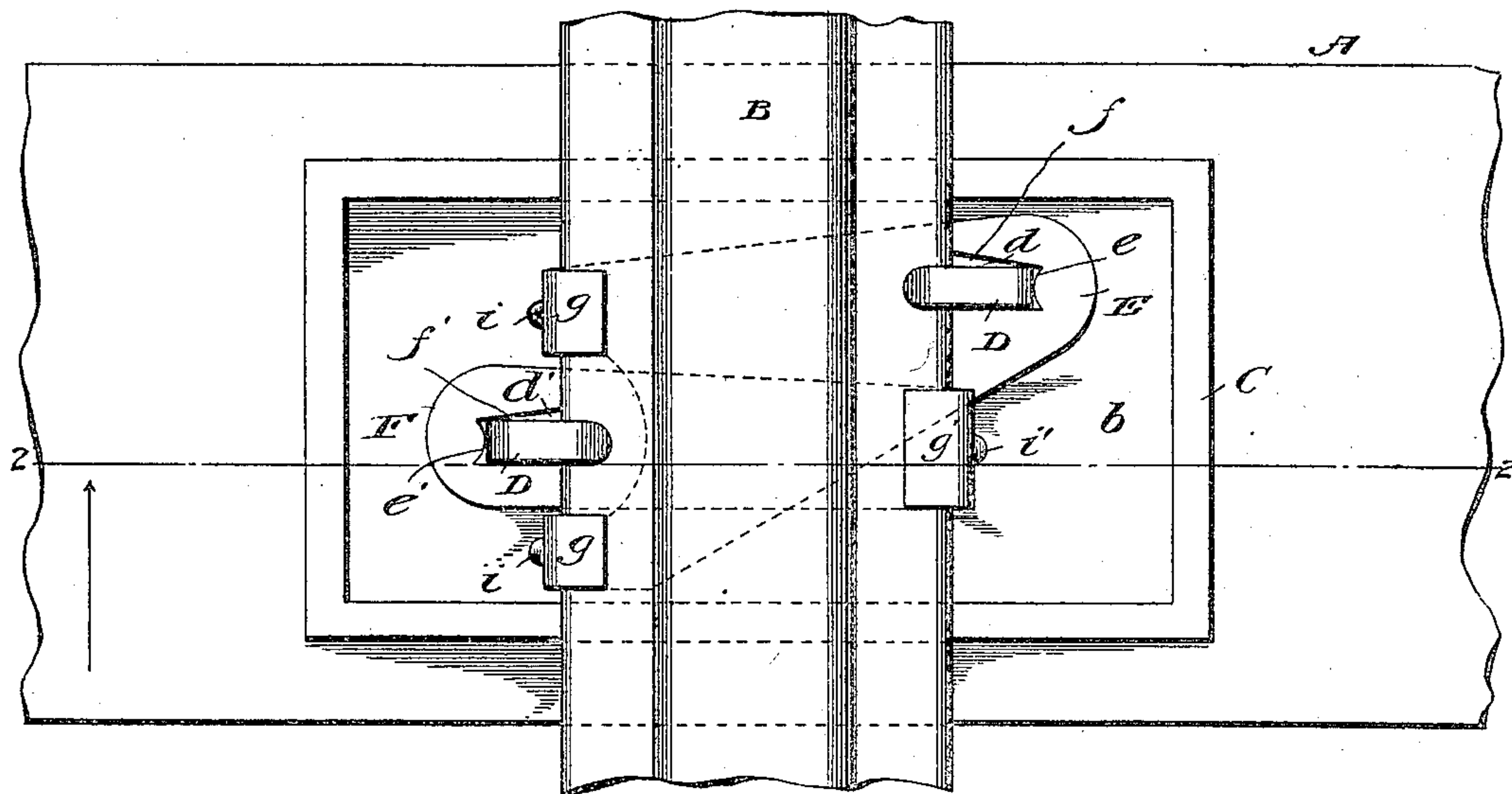


Fig. 2.

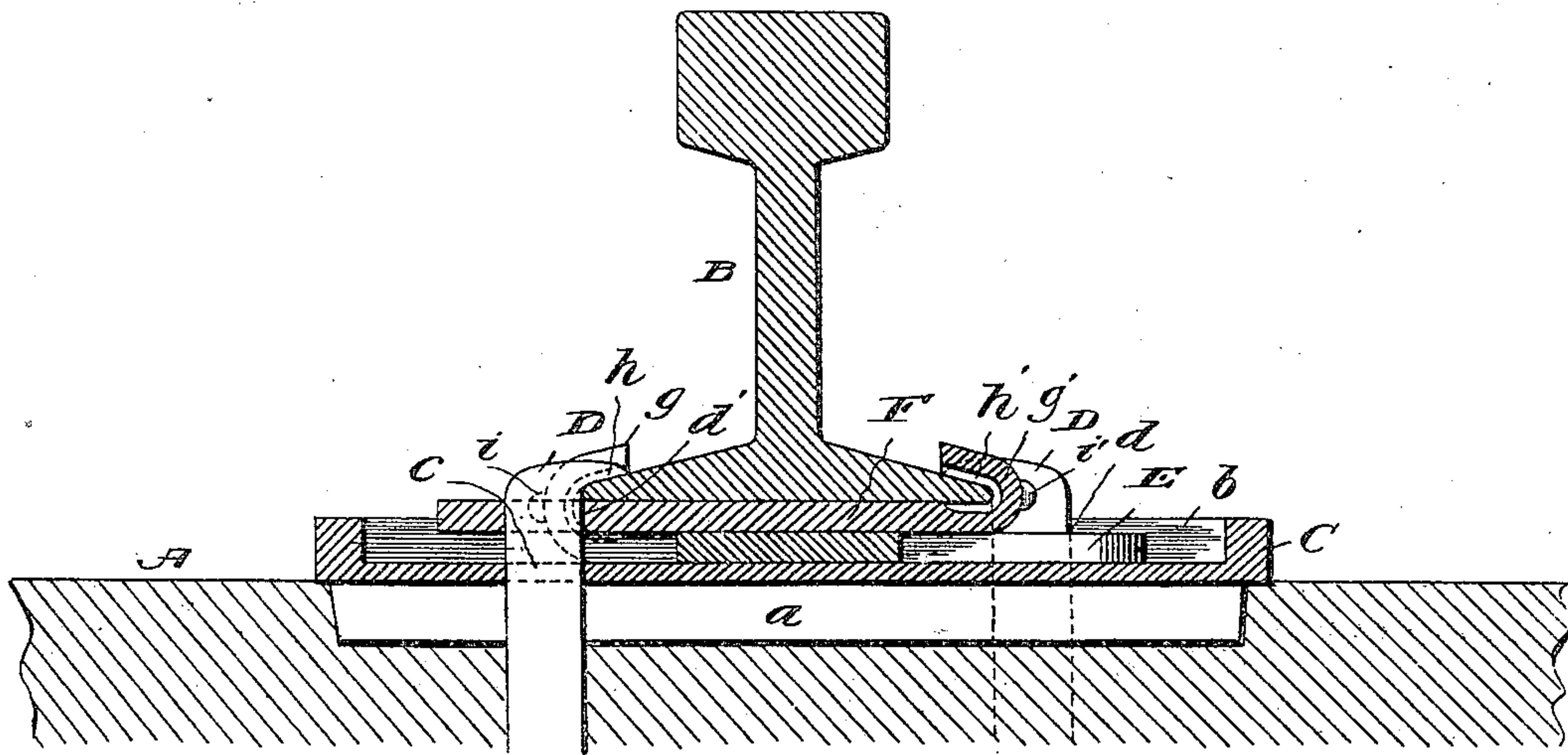


Fig. 3.

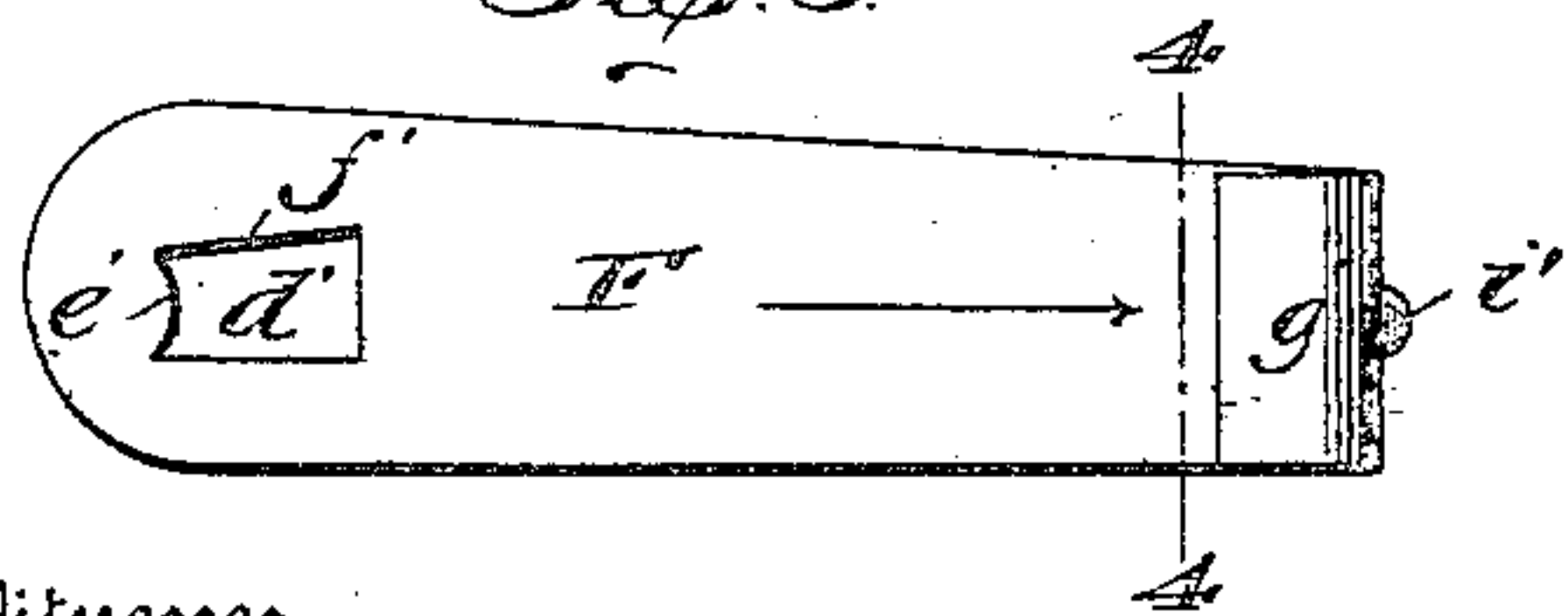


Fig. 4.



Witnesses
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FRANK L. RAGER, OF SALT LAKE CITY, UTAH.

RAIL-CHAIR AND ANTICREEPER.

No. 838,900.

Specification of Letters Patent.

Patented Dec. 18, 1906.

Application filed October 24, 1905. Serial No. 284,197.

To all whom it may concern:

Be it known that I, FRANK L. RAGER, a citizen of the United States, residing at Salt Lake City, in the county of Salt Lake and State of Utah, have invented new and useful Improvements in Rail-Chairs and Anticreepers, of which the following is a specification.

My invention pertains to rail-chairs; and it contemplates the provision of a chair embodying such a construction that the more a rail tends to creep the tighter it will be held to the tie, and this while permitting free expansion and contraction of the rail due to heat and cold and without any tendency of splitting or otherwise weakening the sleepers or ties or affecting the exactness of the track-gage.

With the foregoing in mind the invention will be fully understood from the following description and claims, when taken in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view illustrating the chair constituting the present and preferred embodiment of my invention as properly arranged relative to a sleeper or tie and a rail. Fig. 2 is a transverse vertical section taken in the plane indicated by the line 2 2 of Fig. 1. Fig. 3 is a plan view of one of the rail-holding plates of my improvements, and Fig. 4 is an enlarged detail section taken in the plane indicated by the line 4 4 of Fig. 3 looking toward the right.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which—

A is a railway-tie, which may be and preferably is of wood.

B is a rail which is preferably of the conventional type, and C is the tie-plate which I prefer to employ in the practice of my invention. The said tie-plate is provided with ribs *a*, designed to be driven into the tie with a view of binding the wood fibers together and lending strength to and preventing splitting of the tie, and it is also provided with a countersunk portion *b* and spike-holes *c* at proper points in said portion.

D D are spikes, which may be and preferably are of the kind at present in use.

E is one of my novel rail-holding plates, and F is the other rail-holding plate. The plate E is preferably of the shape shown in Fig. 1 and is arranged directly on the countersunk portion *b* of the tie-plate C. It is provided adjacent to one of its ends with a

spike-hole *d*, having a convex outer end wall *e* and an inclined side wall *f*, and at its opposite end it has two (more or less) loops *g*, designed to receive one edge of the rail-base after the manner shown in Figs. 1 and 2. The inner sides of the bights of the said loops *g* are suitably toothed, as indicated by *h*, so as to enable the same to take secure hold of the rail, and on their outer sides the loops are provided with protuberances *i*, designed to receive the blows of a spike-maul or other device used to drive the teeth *h* into engagement with the edge of the rail-base.

The rail-holding plate F is superposed on the plate E and arranged directly against the bottom of the rail, Fig. 2. This plate F is provided adjacent to one end with a spike-hole *d'*, having a convex outer end wall *e'* and an inclined side wall *f'*, and it is also provided with a loop *g'*. The said loop *g'* is arranged at the opposite end of the plate with reference to the hole *d'* and is interiorly toothed, as indicated by *h'*, in order to enable it to positively engage the edge of the rail-base which it receives. It is also provided on its outer side with a protuberance *i'* for the same purpose as the protuberance *i* before described.

In assembling the parts of my improvements the tie-plate C is secured on the tie A, and the plate E, plate F, and rail B are then placed in the order stated on said tie-plate. The spikes D are then driven home, and the protuberances *i i'* are struck a sufficient number of blows to engage the teeth *h h'* with the opposite edges of the rail-base.

With the parts arranged as stated in the foregoing it will be apparent that the plates E and F are free to move on the smooth surfaces on which they rest, and from this it follows that any tendency of the rail to creep or move longitudinally in one direction will swing one plate on its respective spike and cause the teeth of said plate to more positively engage the rail-base, while any tendency of the rail to creep or move longitudinally in the opposite direction will cause the other plate to swing in the same direction on its spike and result in the teeth of such other plate being more securely engaged with the rail-base. As a result of this the more the rail tends to creep the more securely will it be held against such movement by the plates E and F, which is an important desideratum. It will be noticed, however, that the plates E and F will not interfere with free expansion

and contraction of the rail; also, that said plates will prevent the transmission of longitudinal strain due to creeping or expansion and contraction of the rail to the tie and will
5 contribute materially to the preservation of the exactness of the track-gage.

It will be gathered from the foregoing that ordinary railway-spikes may be employed in the application of my improvements, which
10 contributes materially to the cheapness of such improvements.

I claim—

1. The combination of a railway-rail, a rail-support, rail-holding plates having means for
15 engaging the rail at opposite sides, and spikes connecting the plates and the rail-support and serving as centers for the plates and having heads arranged to engage the base of the rail at opposite sides.

2. The combination of a railway-rail, a tie,
20 a tie-plate secured on the tie and interposed between the same and the rail, and rail-holding plates interposed between the rail and the tie-plate and having different centers of movement and also having means for engag-
25 ing the rail at opposite sides.

3. The combination of a railway-rail, a tie,
30 a tie-plate having spike-holes, rail-holding plates interposed between the rail and the tie-plate and having spike-holes and also having means for engaging the rail at opposite sides, and spikes connecting the rail-holding
35 plates, the tie-plate and the tie and having heads engaging the base of the rail at opposite sides.

4. The combination of a railway-rail, a rail-support, and rail-holding plates connected
40 with the support and having different centers of movement and also having loops toothed at the inner sides of their bights and receiving and engaging the opposite edges of the rail-base.

5. The combination of a railway-rail, a rail-support, rail-holding plates having spike-
45 holes and also having loops the inner sides of

the bights of which are toothed to engage the edges of the rail-base, and spikes extending through the holes of the plates and connecting the said plates to the support.

6. The combination of a railway-rail, a rail-
50 support, a tie-plate secured on the rail-support and having spike-holes, rail-holding plates interposed between the rail and the tie-plate and having spike-holes and also having
55 loops the inner sides of the bights of which are toothed to engage opposite edges of the rail-base, and spikes connecting the rail-holding plates, the tie-plate and the tie, and having heads engaging the base of the rail at
60 opposite sides.

7. The combination of a railway-rail, a tie,
65 a tie-plate having spike-holes, rail-holding plates interposed between the rail and the tie-plate and having spike-holes one side wall of which is inclined and the outer end
70 wall of which is convex, and also having loops the inner sides of the bights of which are toothed to engage the opposite edges of the rail-base, and spikes connecting the rail-holding
75 plates, the tie-plate and the tie, and having heads engaging the base of the rail at opposite sides.

8. The combination of a railway-rail, a rail-support, rail-holding plates interposed be-
80 tween the rail and the rail-support and having spike-holes one side wall of which is inclined and the outer end wall of which is convex, and also having loops the inner sides of the bights of which are toothed to engage opposite edges of the rail-base, and spikes ex-
85 tending through the holes of the plates and connecting the same to the rail-support.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

FRANK L. RAGER.

Witnesses:

HARRY RAGER,

ALFREDO R. TALAMANTES.