

D. M. PFAUTZ & J. L. LUCKENBACH.  
 LATERALLY ADJUSTABLE RAIL CLAMP.  
 APPLICATION FILED JUNE 29, 1908.

915,376.

Patented Mar. 16, 1909.

Fig. 1.

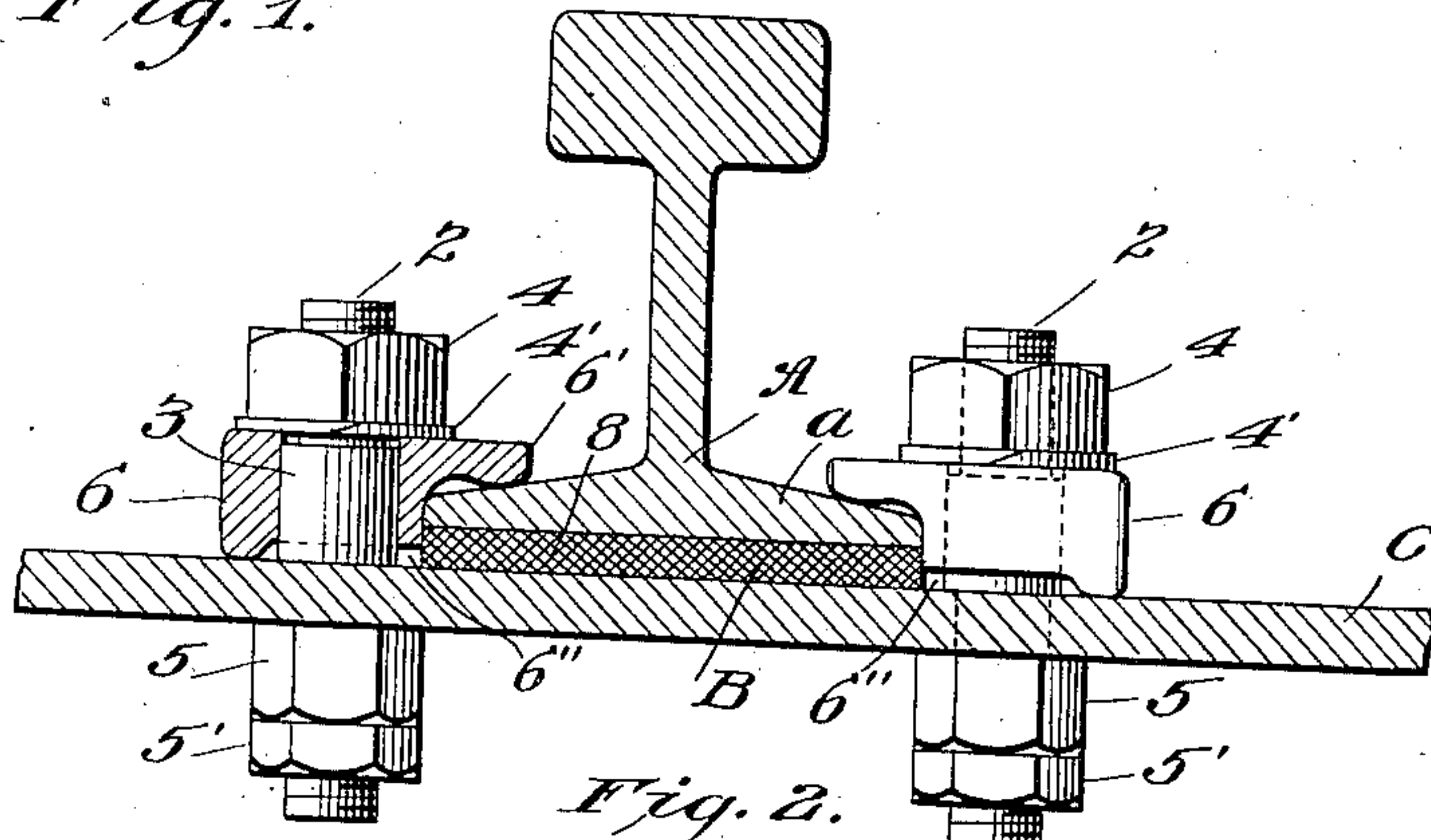


Fig. 2.

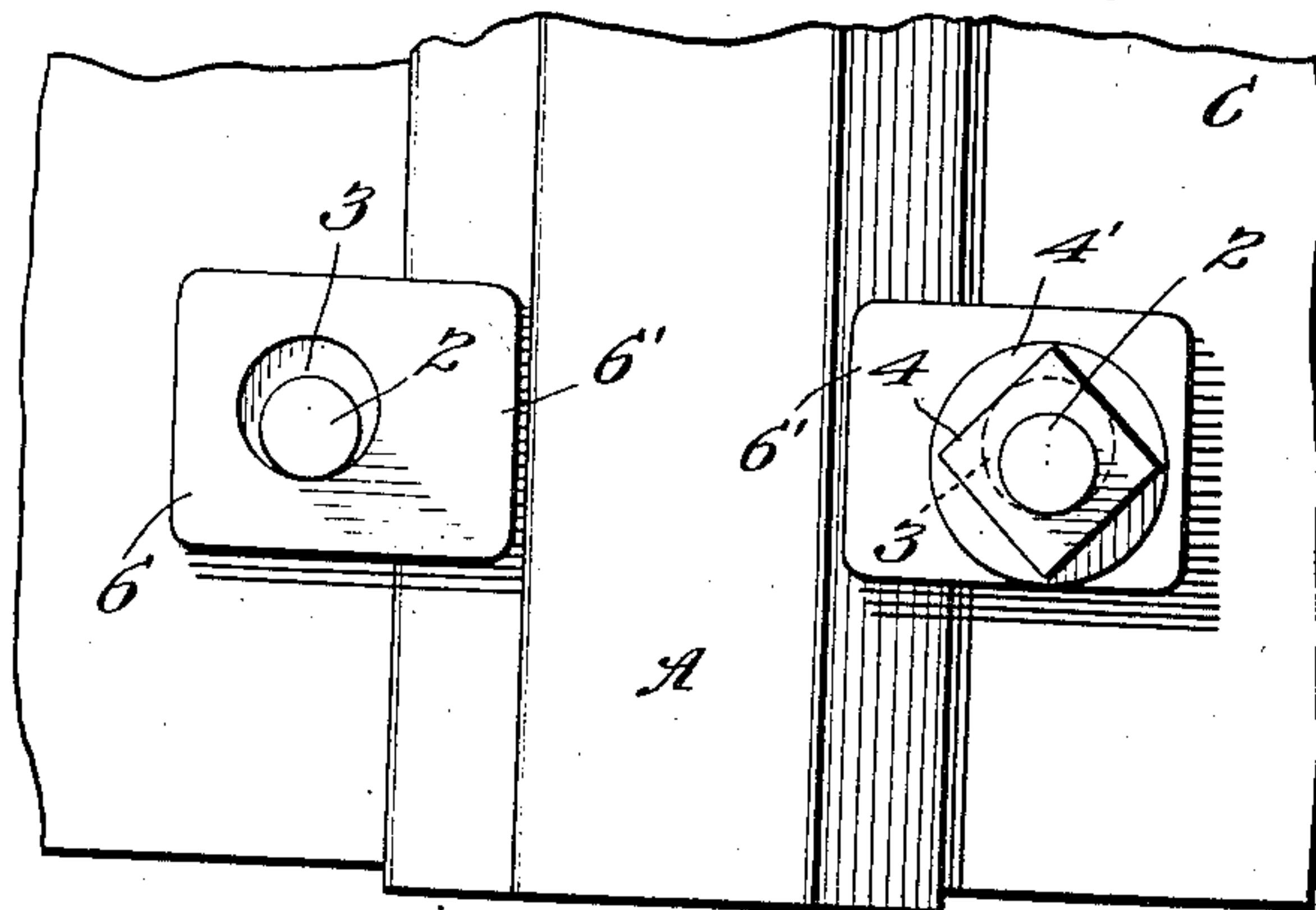


Fig. 3.

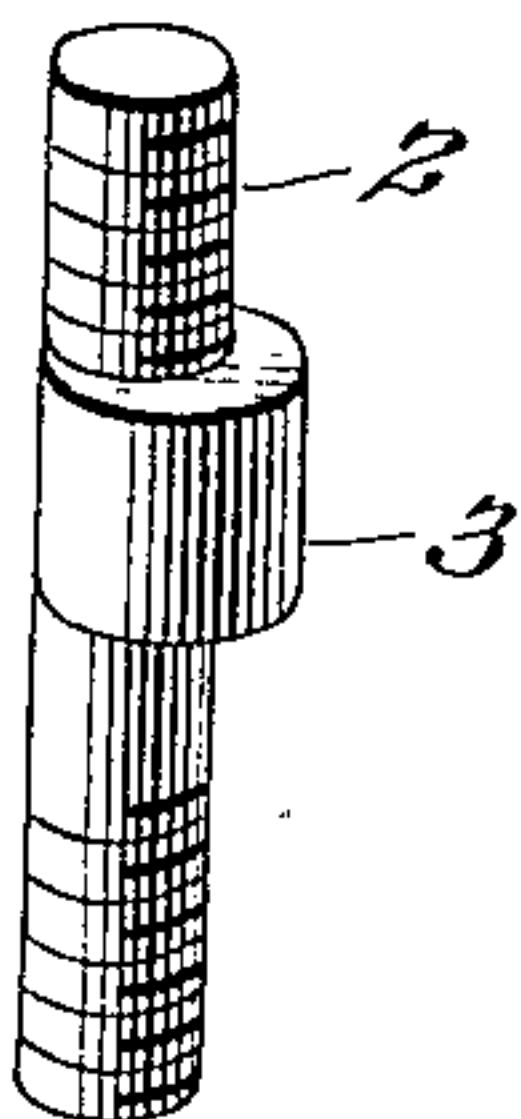
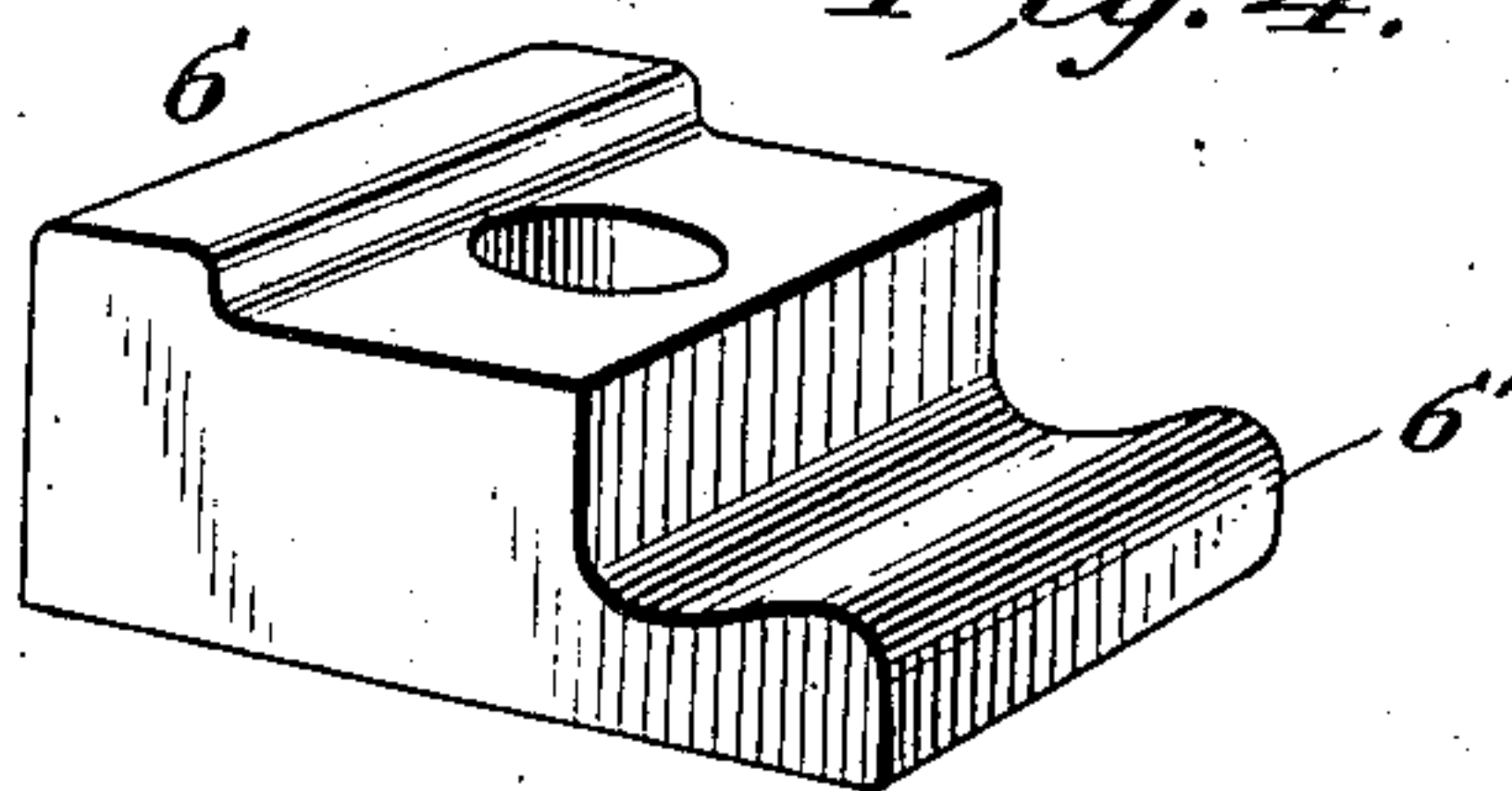


Fig. 4.



Witnesses  
*M. C. Lyddane*  
*J. O. L. Mulholland*

Inventors  
*Daniel M. Pfautz and*  
*John Lewis Luckenbach*

By

*Joshua R. N. Pomeroy*

Attorney



# UNITED STATES PATENT OFFICE.

DANIEL M. PFAUTZ AND JOHN LEWIS LUCKENBACH, OF PHILADELPHIA, PENNSYLVANIA,  
ASSIGNORS TO THE AMERICAN SUSPENSION RAILWAY COMPANY, OF PHILADELPHIA,  
PENNSYLVANIA.

## LATERALLY-ADJUSTABLE RAIL-CLAMP.

No. 915,376.

Specification of Letters Patent.

Patented March 16, 1909.

Application filed June 29, 1908. Serial No. 440,809.

*To all whom it may concern:*

Be it known that we, DANIEL M. PFAUTZ and JOHN LEWIS LUCKENBACH, citizens of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Laterally-Adjustable Rail-Clamps, of which the following is a specification.

Our invention relates to rail fastening devices whereby a rail is held down upon its bed-plate or sleeper, and particularly the invention relates to rail bolts or clamps, and attachments thereto designed with especial reference to the attachments of track rails to elevated structures.

The object of our invention is to provide a clamping bolt with means whereby a rail may not only be rigidly held down upon its bed-plate, but whereby it may be laterally adjusted to laterally shift and adjust the rail into proper alinement.

Our invention consists in a rail bolt provided with a vertically acting clamping means, and with an eccentrically actuated, laterally shiftable rail-base clip.

In the accompanying drawings Figure 1, is a transverse section of a rail and bed-plate, the clamping bolts being shown in elevation. Fig. 2, is a plan view of the same, one nut being removed. Fig. 3, is a detail perspective of the bolt shank used in the form shown in Fig. 1. Fig. 4, is an inverted perspective of a rail clamp.

Like reference characters throughout the several views designate like parts.

In the figures A designates a rail; B, a sound-deadening pad; and C, a bed-plate, forming part of an elevated structure on which a rail is supported. All of these elements are of any ordinary or desired construction and are only shown in order to illustrate the application of our invention.

The shank 2, of one form of our clamping bolt is shown in Fig. 3. It is screw threaded at its ends and has formed on it the eccentrically projecting portion 3 or shoulder. A nut 4, and a washer 4', are screwed upon the upper end of the shank 2, and double nuts 5, 5', screwed upon the lower end against the underside of the bed-plate C.

Surrounding the eccentric shoulder 3, of the bolt shank and engaging therewith, is a rail-engaging clip 6 which is rectangular in plan and has a passage through it for the

bolt. The clamp is formed at one side with a projecting flange 6', which extends over and contacts with the upper face of the rail base *a*. The underside of this flange is preferably cut out at its junction with the body of the clip, and slightly rounded as this gives it a better bearing surface on the rail base. The underface of the clip is also cut away from the front to the rear as shown at 6'', thus allowing the clip to yield somewhat so that a better holding action is secured.

It will be seen that with the above construction, we have provided a rail clamp having a rail-engaging element, namely, the clip 6, with its flange 6', and a lateral adjusting element—that is the eccentric projection 3, engaging with the rail clamping element to force it laterally outward or inward against or from the rail.

The operation of the device is obvious. By turning up the nut 5, to its full extent, and turning down the nut 4, upon the sleeve, the flange 6' of clip 6 is forced downward on the base flange of the rail. If it is necessary to realine the rail or to shift it laterally, the nuts 4 and 5, are loosened slightly and the bolt 2, turned by means of the nut 5, which as before stated is tight on the bolt shank. It is obvious of course, that either nut 4, or nut 5, may be tight upon the shank, and be used for turning it, or that either of the nuts might be made in one piece with the bolt shank, and thus form a head whereby it could be turned. The turning of the bolt in one or the other direction by means of the eccentric 3 wedges the rail clip laterally inward or outward, and the turning of the eccentric bolts on opposite sides of the rail in accord with each other, will shift the rail laterally to a degree depending upon the amount of rotation given to the bolt or the size of the eccentric 3.

The advantages of our invention are many as by its means rails may be securely clamped to iron structures and at the same time provision be made for a lateral adjustment of the rail at any time needed, the rail being thus capable of alinement with the next rail or adjusted for distance from the parallel rail. This was not heretofore possible with any construction known to us where bolts were used upon iron structures, it being impossible to laterally adjust a bolt in its bolt hole where the surrounding material is of a rigid character.



While we have shown and described our rail clamping device with particular reference to clamping track rails, we wish it of course understood that we may apply our invention to any other clamping purpose to which it is applicable, without departing from the spirit of our invention.

Having thus described our invention which we claim as new and desire to secure by Letters Patent is:

1. A rail clamp having a rail engaging clip and a bolt eccentrically engaging with said clip to force it laterally outward or inward.
2. A rail clamp having a rail engaging clip and a laterally adjusting bolt passing through the clip, said bolt having an eccentric portion made integral therewith, engaging with a rail clip to force the latter outward or inward.
3. A rail clamp having a rail engaging clip provided with a bolt passing therethrough and a bolt having an enlarged shoulder thereon circular in plan and eccentric to the shaft of the bolt, said shoulder adapted to engage with the clip to be forced laterally outward or inward.
4. A rail clamp comprising a rail bolt having a shank, a rail clip contacting with the side of the rail through which the bolt passes, nuts on said shank, and an eccentric shoulder integral with the shank engaging with the clip to force it laterally when the bolt is turned.
5. A rail clamp comprising a bolt, having a shank, nuts on the shank and both ends thereof, said shank being formed with an eccentric shoulder, whose periphery is circu-

lar in plan but eccentric to the axis of the bolt, in combination with a clip having a passage surrounding the eccentric shoulder and contacting therewith, the clip being provided with a projecting portion adapted to contact with the base of a rail.

6. A rail clamp comprising a bolt having a shank, nuts on the shank at both ends thereof, said shank being formed with a shoulder whose periphery is circular in plan but eccentric to the axis of the bolt, in combination with a rectangular clip having a passage therethrough, the walls of said passage engaging with the eccentric portion of the bolt, said clip having at one side a projecting flange adapted to engage with the upper face of a rail base.

7. A rail clamp comprising a bolt and nuts on both ends thereof, said bolt being formed with a shoulder whose periphery is circular in plan but eccentric to the axis of the bolt, in combination with the rectangular clip having a passage therethrough the walls of said passage engaging with the eccentric shoulder of the bolt, said clip having at one side a projecting flange adapted to engage with the upper face of the rail base, the under side of said flange being rounded laterally and cut away at its junction with the body of the clip.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

DANIEL M. PFAUTZ.

JOHN LEWIS LUCKENBACH.

Witnesses:

J. A. L. MULHALL,

FREDERIC B. WRIGHT.