

No. 837,769.

PATENTED DEC. 4, 1906.

H. ALLEN.
RAIL CLAMPING DEVICE.
APPLICATION FILED MAR. 23, 1906.

Fig. 1.

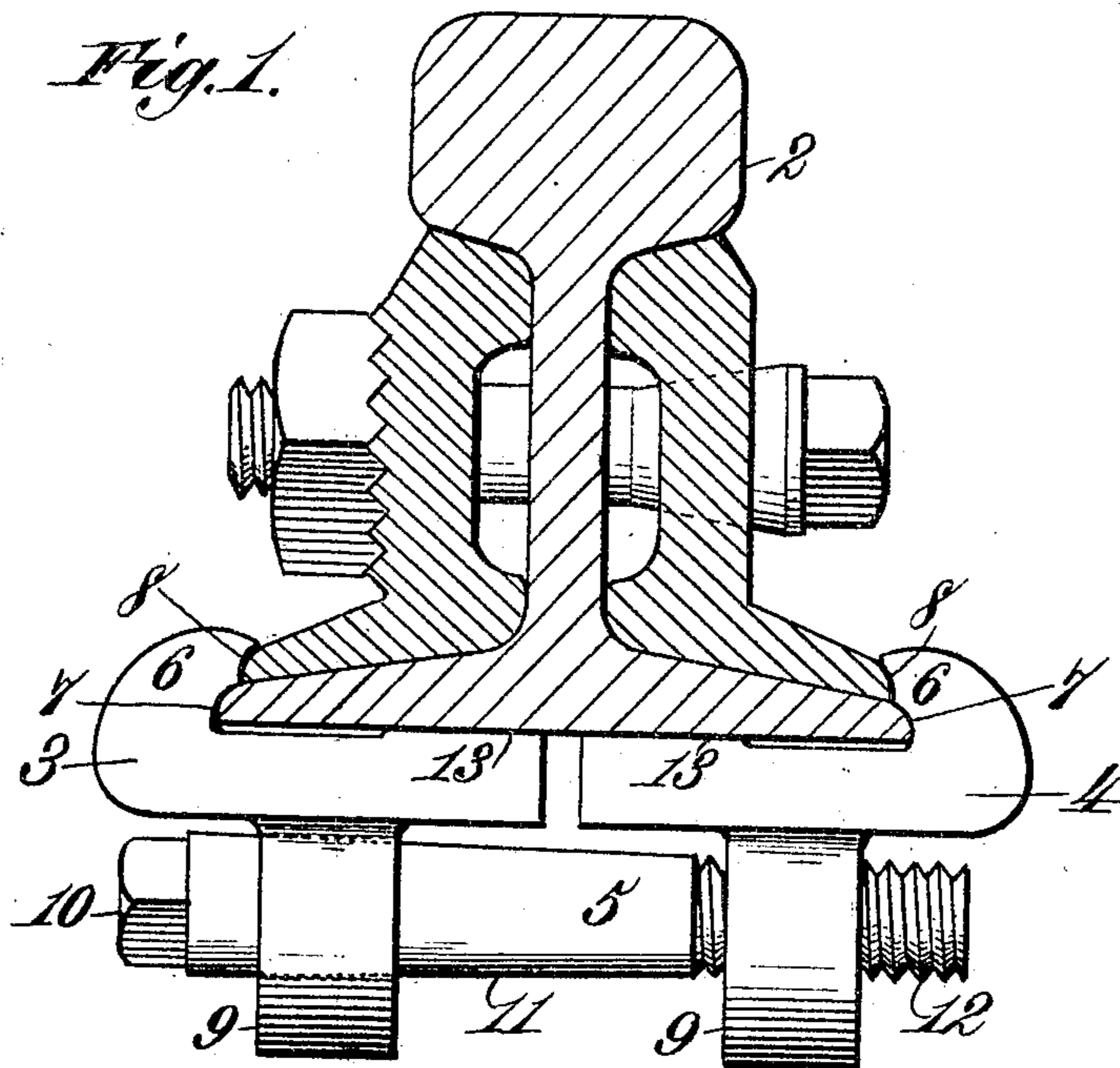


Fig. 2.

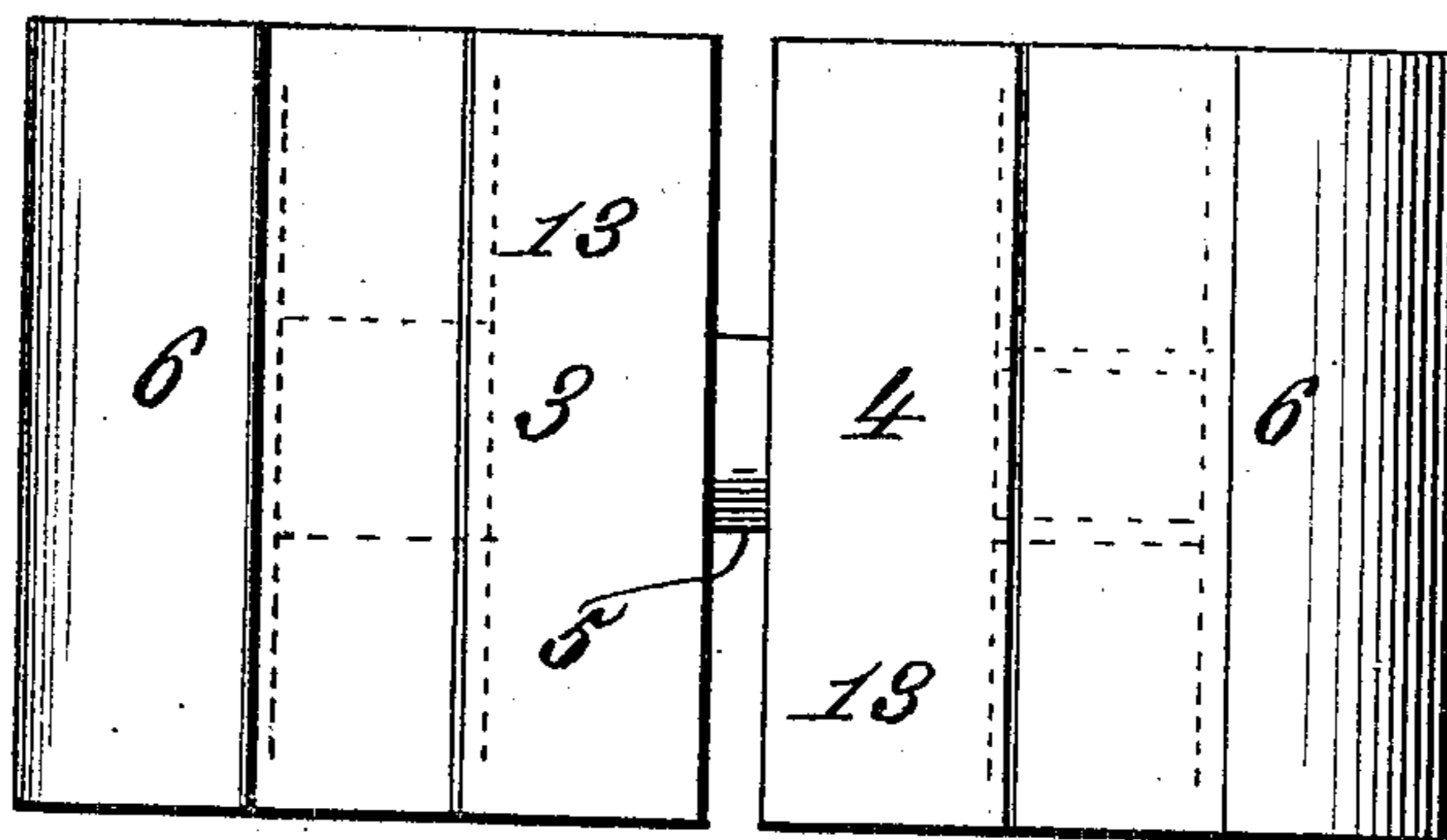
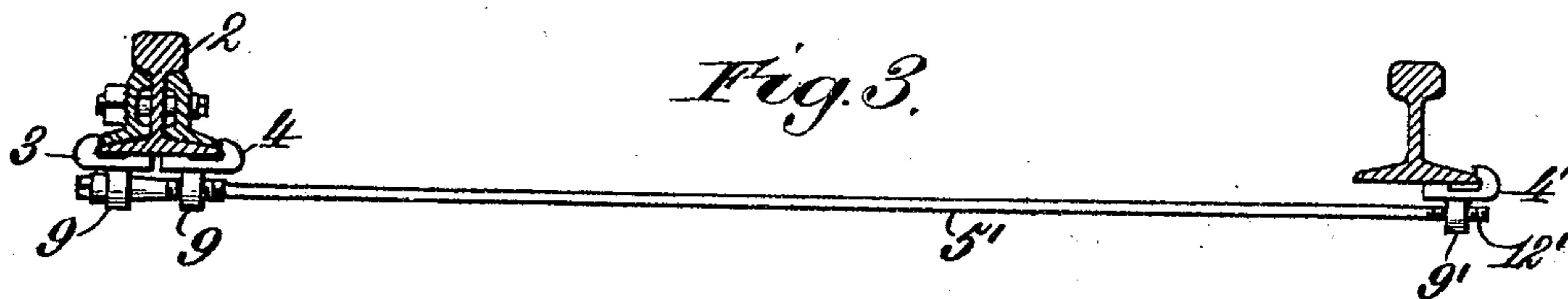


Fig. 3.



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UNITED STATES PATENT OFFICE.

HOSEA ALLEN, OF OIL CITY, PENNSYLVANIA.

RAIL-CLAMPING DEVICE.

No. 837,769.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed March 23, 1906. Serial No. 307,634.

To all whom it may concern:

Be it known that I, HOSEA ALLEN, a citizen of the United States, residing at Oil City, in the county of Venango and State of Pennsylvania, have invented new and useful Improvements in Rail-Clamping Devices, of which the following is a specification.

This invention relates to rail-clamping devices, the object of the invention being to provide an effective article of this character for holding the rails in absolute alinement or for holding such rails in true parallelism with other rails, which two series of rails form a track.

A device including the invention involves two or more, usually three, sections, the number of sections depending upon the particular use to which the device is put. When a device is used solely with two abutting rails to hold them in alinement, there will be two of these sections, while where it is desired to hold said rails in parallel relation with an opposite rail a third section is employed. The number of the sections, therefore, is not essential. In connection with the sections I provide a means for drawing them firmly together and of such a character that when the device is set the sections thereof cannot be accidentally separated, which is an important consideration, owing to the jar and shock to which the device is subjected when in use.

From what has been already stated it will be obvious that the clamping device may involve two sections or three sections. The said clamping device may, as also stated, be employed for holding two rail-sections in alinement or may be utilized for holding one rail in parallelism with the opposite rail. In each of these cases I may employ a clamping device of two sections. When the clamping device composed of two sections holds opposite rails in parallelism, one section of said clamping device may operate directly in connection with one rail and the opposite clamping device will operate in connection with the opposite rail.

In the drawings accompanying and forming a part of this specification I show certain advantageous embodiments of the invention, which to enable those skilled in the art to practice said invention I will set forth fully in the following description, while the novelty of such invention will be included in the claims succeeding said description.

Referring to the drawings, Figure 1 is a cross-sectional view of a rail, showing a

clamping device in elevation connected therewith, which clamping device is constructed in accordance with my invention. Fig. 2 is a top plan view of the clamping device shown in the preceding figure. Fig. 3 is a view corresponding to Fig. 1 and showing a slight modification.

Like characters refer to like parts throughout the several figures.

A clamping device involving my invention may be composed of two or more sections. When I provide more than two of these sections, they are generally three in number, two being on one side of a track and usually embracing two abutting rails, while a third section is at the opposite side of said track. Where only two sections are used, they grip abutting or substantially abutting rails and in this way act somewhat as a chair. In the latter case the device serves to hold the abutting rails in line, while in the other use the opposite rails are held in parallelism.

In Figs. 1 and 2, showing the clamping device as composed solely of two sections, these sections fit against abutting rails, as 2, at the joint thereof. The outer section is denoted by 3 and the inner section by 4, and said two sections are drawn into clamping engagement with the rails by a bolt, as 5, of novel and advantageous construction, as will hereinafter appear. As will be obvious, I might employ one section, as 3, with one rail and another section, as 4, with an opposite rail and connect them together by a long bolt constructed just exactly like the bolt 5. The bodies of the two sections 3 and 4 are of substantially plate form and they have hooks, as 6, along their outer upper sides to overlie the opposite sides of the bases of the rails. The hooks are shown as having grooves 7 and 8, the lower grooves 7 being adapted to receive the base or bases of the rails, while the upper grooves 8 are adapted to receive corresponding portions of fish-plates when the clamping device is used at a joint. The sections 3 and 4 have pendent ears or flanges, each designated by 9, on the under sides thereof and located substantially centrally of the width of the respective parts. The sections 3 and 4 are drawn together by a draft applied to the ears or flanges 9. By locating these flanges or ears in the manner set forth there is no tendency to tip the sections when the same are drawn together. The bolt is shown as having at one end thereof a head 10. This is shown as being

on the outer side of the rail 2. It may be located upon the inner side of said rail, in which case the section 3, which I have denominated the "outer" section, will be the inner section of the clamp. This head 10 may be of any desirable character, although it is of such a form as to be readily engaged by a wrench, a square shape, as shown, being satisfactory for the purpose. Beyond the head the bolt is inwardly tapered, as at 11, and beyond the tapered portion said bolt is threaded, as at 12, for connection with the inner section 4. The tapered portion 11 of the bolt has a bearing or seat within a plain perforation in the flange or ear 9 of the outer section 3. It therefore follows that when the bolt is turned to the right in the present instance it is given an endwise movement, so that said bolt being connected with the inner section 4 the two sections will be drawn together in a powerful positive manner to bring them in solid relation with the rail or rails. The bolt 5 may be connected with the inner section 4 in any desirable manner. In the present case, however, the pendent ear or lug 9 of the inner section 4 has an internally-threaded perforation to receive the threaded portion 12 of the bolt, by reason of which said inner section 4 or pendent ear 9 thereof constitutes a nut for the bolt.

It will be assumed that the parts are assembled and that the two sections 3 and 4 thereof have been hooked over abutting rails 2 and that it is desired to set the clamp. To do this, the bolt 5 is turned to the right, and as it is thus turned it is given an endwise movement to bring the two sections 3 and 4 toward each other in the manner hereinbefore set forth. When these sections are set, it is practically impossible to accidentally loosen them, although they can be freely separated from the rails by turning the bolt 5 to the left with a wrench. On the upper inner sides of the two sections 3 and 4 are vertical ridges or ribs, as 13, which engage against the under side of a rail or rails. These ridges also adapt the clamping devices to the rails, even where there are imperfections in the bases of the latter.

In Fig. 3 I have shown a third section, as 4', which coöperates with sections, as 3 and 4. The pendent lug 9' of the section 4' is adapted to receive the threaded end 12' of an elongated bolt 5'. With this exception the construction shown in Fig. 3 is the same as that shown in Figs. 1 and 2. When the sections 3 and 4 in Fig. 3 are drawn toward each other by the turning of the bolt 5', the section 4' is drawn toward the sections 3 and 4. In some cases I may, if desired, dispense with the section 4 shown in Fig. 3.

What I claim is—

1. A rail-clamping device involving a plurality of sections and a bolt having a tapered portion and connected with one of the sec-

tions, the other having a perforation to receive said tapered portion, the wall of the perforation wholly surrounding said tapered portion, and the bolt when turned serving to draw said sections toward each other.

2. A rail-clamping device involving sections having pendent ears, one of which is internally threaded, and a bolt in threaded engagement with said threaded ear, said bolt having a tapered portion extending through a perforation in the other ear.

3. A rail-clamp involving a plurality of sections, and a bolt having a wrench-head at one end, a threaded portion at the opposite end and an inwardly-tapered portion between said head and threaded portion, the threaded portion having a threaded engagement with one of the sections and the other section, having a bearing for the tapered portion and which entirely surrounds said tapered portion, whereby when the bolt is turned the two sections will be drawn toward each other.

4. A clamping device comprising a plurality of sections having pendent flanges located substantially centrally of the width of the respective sections, one of the flanges being threaded and the other having a plain perforation, and a bolt provided with an inwardly-tapered portion to enter said plain perforation, said bolt having a threaded portion to engage the threads of the threaded flange.

5. A rail-clamping device comprising a plurality of sections having vertical ribs on their upper inner sides, and pendent flanges substantially centrally of the width of their under sides, one of the flanges having an internally-threaded perforation and the other flange having a plain perforation, and a bolt provided with an inwardly-tapered portion to fit the plain perforation and with a threaded portion to engage the threads of said threaded flange.

6. A rail-clamping device including a plurality of sections, and a tapered bolt for drawing the sections together when the said bolt is turned, the clamping device having an opening the wall of which entirely surrounds the tapered portion of the bolt and in which said tapered portion is wedged on said turning motion.

7. A rail-clamping device including a plurality of sections, each composed of a body provided with an upturned hook, and a tapered bolt situated below the respective bodies, for drawing said sections together when said bolt is turned.

8. A rail-clamping device including a plurality of sections and a bolt having a wedge bearing against one of the sections and coöperative with the other section, said bolt when turned serving to draw the sections toward each other in a direction corresponding with the longitudinal axis of the bolt.

9. A rail-clamping device including two

sections, a tapered bolt for drawing the sections toward each other, a third section separate from the other sections, the bolt having an extension to cooperate with the said third section for drawing the latter toward the said two sections when the bolt is turned.

10. A rail-clamping device including two sections, one having a perforation, a bolt having a tapered portion to be wedged in said perforation, said bolt cooperating with the other section to draw the latter toward the companion section when the bolt is turned, and a third section, said bolt having a screw-threaded portion to engage the third section to draw said third section toward the other sections when the bolt is turned.

11. A rail-clamping device including two sections, one of which has a perforation and the other a screw-threaded portion, a bolt having a tapered portion to be wedged in said perforation and having a threaded portion to engage the threaded portion of said section to draw the sections toward each other when the bolt is turned, and a third section having

a screw-threaded portion, the bolt having a second threaded portion to engage the threaded portion of said third section to draw the latter toward said companion section when the bolt is turned.

12. A rail-clamping device including a plurality of sections, one of which has an opening, a bolt having a tapered portion extending through and to be wedged in said opening, the other section being directly screw-threaded and the bolt having a threaded portion to engage the said screw-threaded portion to draw the sections toward each other in a direction corresponding with the longitudinal axis of said bolt when the latter is turned.

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

HOSEA ALLEN.

Witnesses:

HEATH SUTHERLAND,
CHAS. S. HYER.