

C. H. CORNELL.
RAILWAY FASTENING.
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928,231.

Patented July 13, 1909.

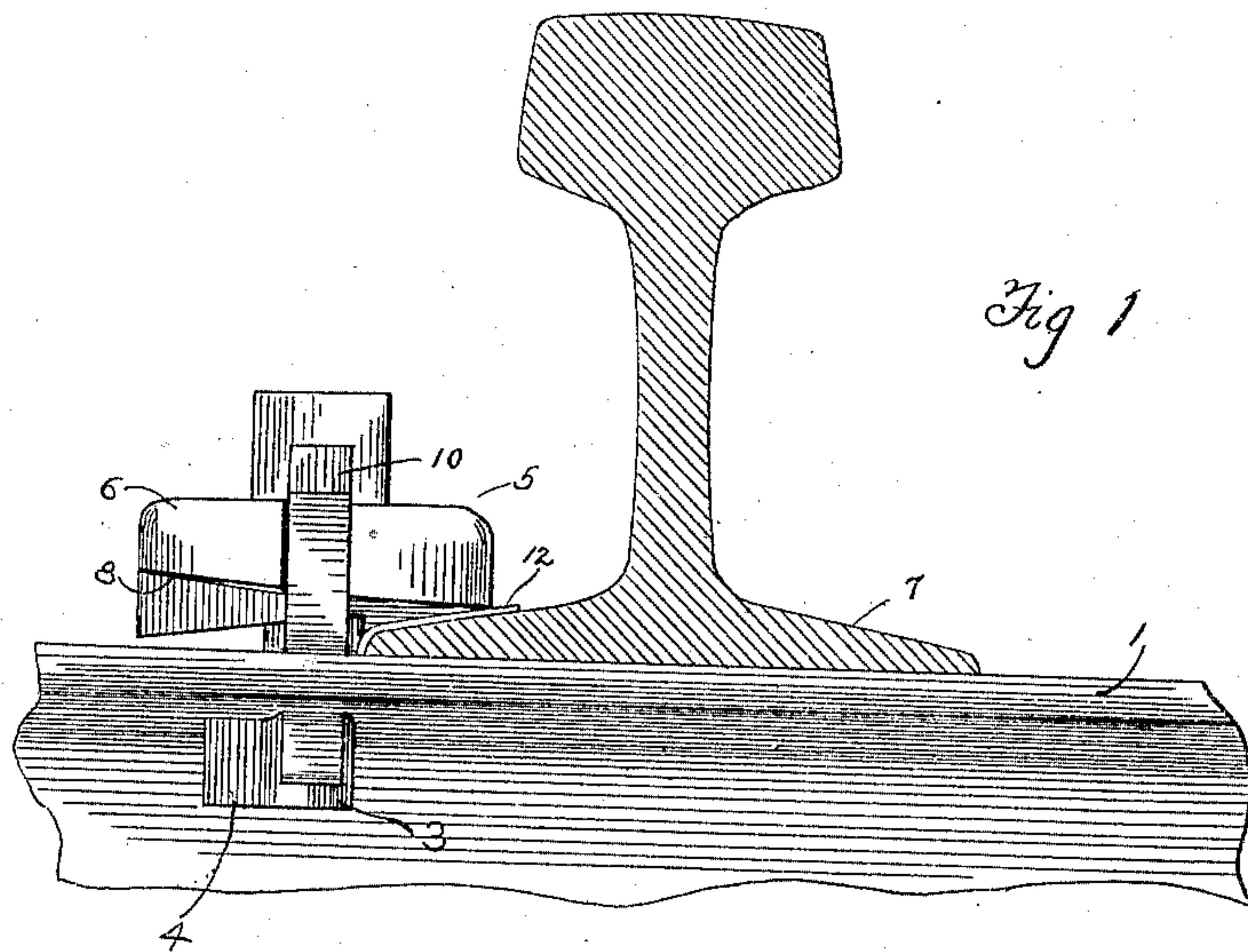


Fig 1

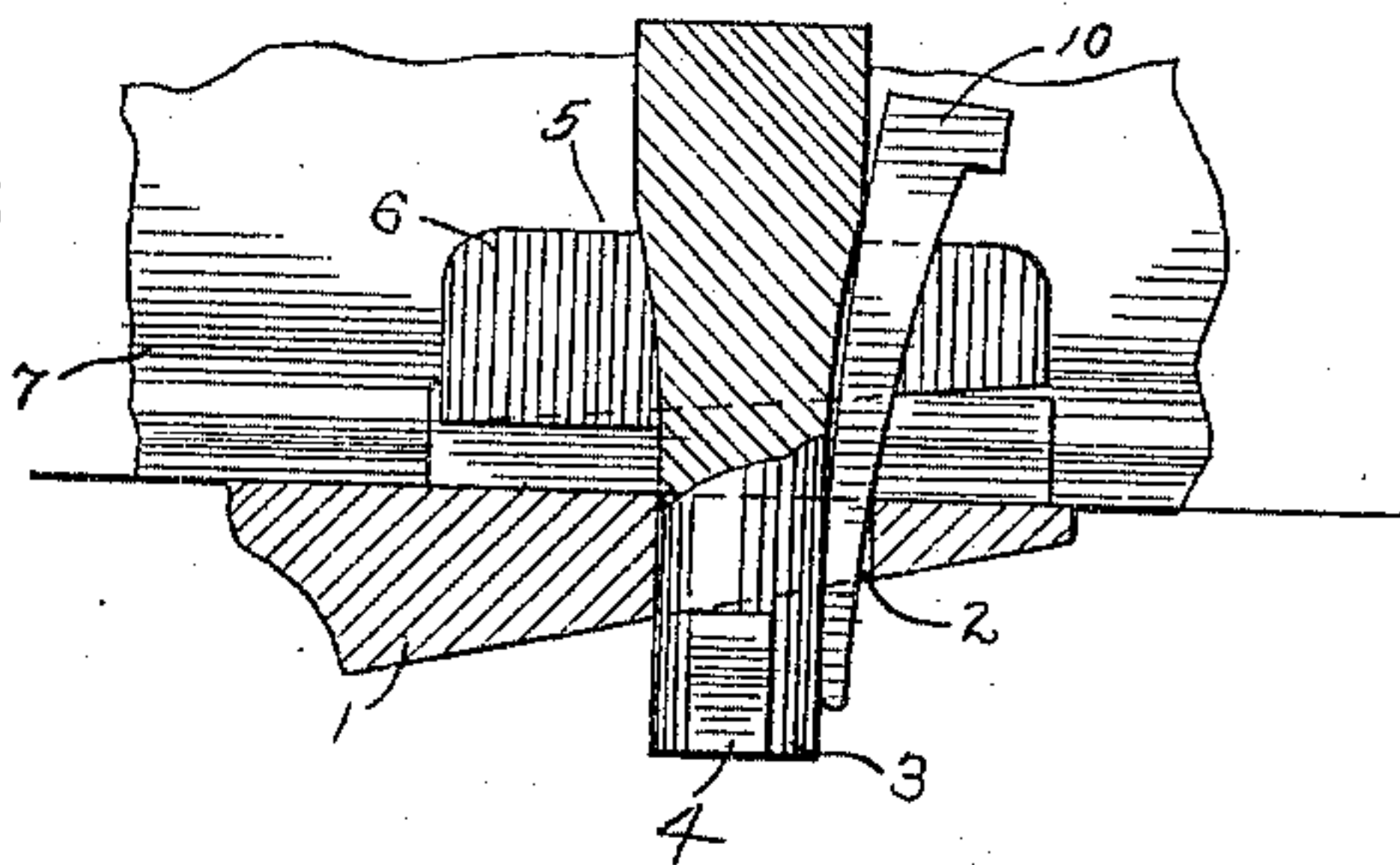


Fig 3

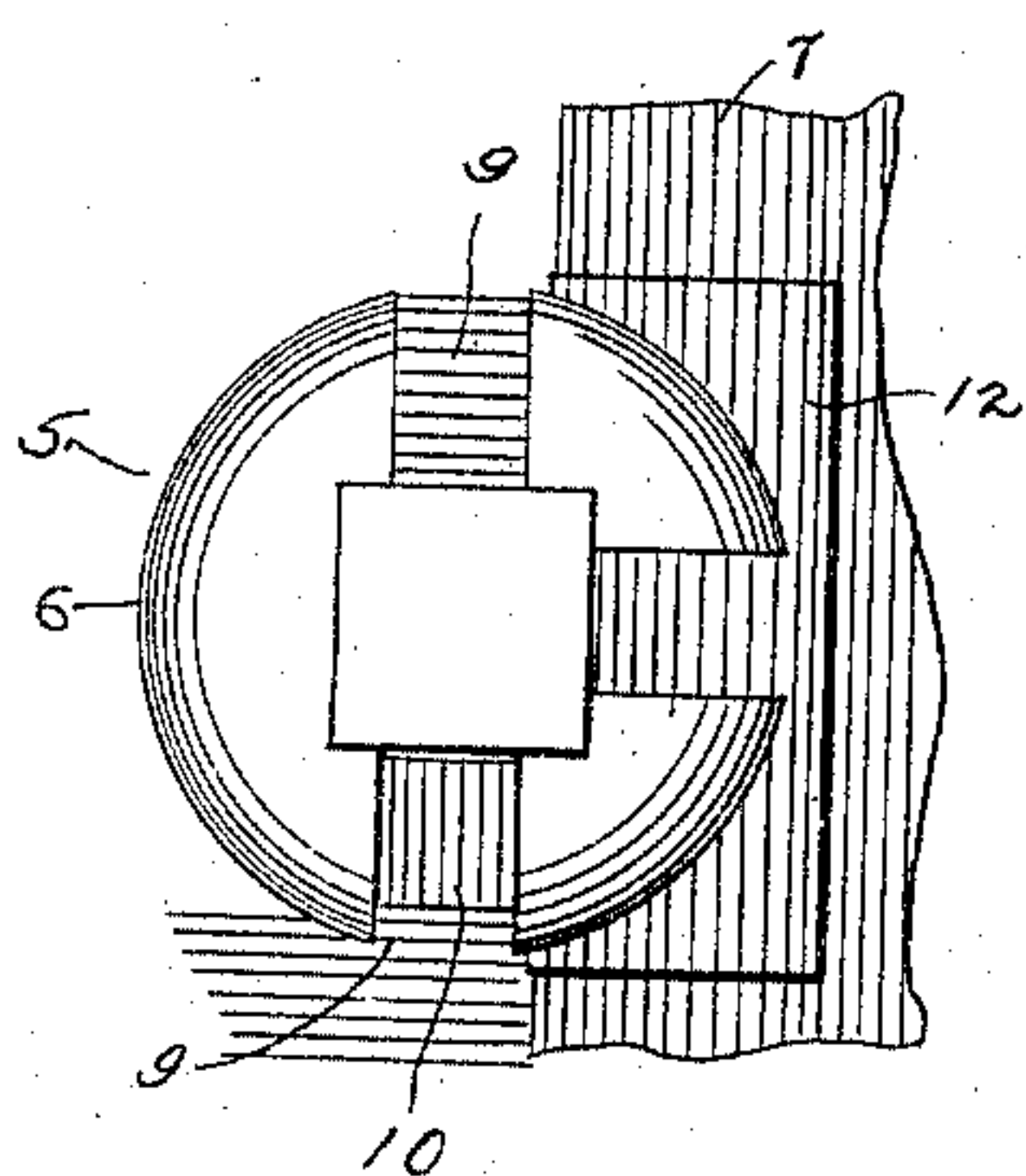


Fig 2

Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES H. CORNELL, OF VALENTINE, NEBRASKA.

RAILWAY-FASTENING.

No. 928,231.

Specification of Letters Patent.

Patented July 13, 1909.

Original application filed May 16, 1908, Serial No. 433,243. Divided and this application filed November 6, 1908.
Serial No. 461,403.

To all whom it may concern:

Be it known that I, CHARLES H. CORNELL, a citizen of the United States, residing at Valentine, in the county of Cherry and State of Nebraska, have invented certain new and useful Improvements in Railway-Fastenings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to rail fastenings for railway tracks, and is a divisional application upon my original application filed May 16, 1908, Serial No. 433,243.

It has for its object to provide an improved fastening which is inexpensive and may be quickly adjusted because it does not require the use of screws, spikes or rivets.

Another object is to provide a fastening bolt which may be adjusted to have the proper clamping action and locked at that point even though the proper clamping point on any two bolts should not be the same.

Further objects of the invention will become apparent from the following description.

It is obvious that the construction of bolt illustrated and described herein as applied to railway rails and ties may also be used for securing parts of other metal construction work such as steel framework for fire-proof buildings, steel bridgework, viaducts, etc.

The invention contemplates the use of integral bolts provided with laterally extending lugs formed at their lower ends and heads adapted to clamp upon a part to be fastened. The shanks of the bolts with their lugs are passed through key slots with said lugs engaging the under face of the part in which the slots are formed. If said under face is beveled, the turning of the bolts with their lugs riding upon said beveled surface, will give the desired clamping action. Where the lower face of the slotted part is not beveled, I provide the heads of the bolts with spiral cam-shaped under faces which produce the desired clamping effect when said bolts are turned. It will be understood, of course, that the spiral cam-shaped heads may be used when the surface of the slotted part engaged by the lugs is also beveled, the result being that the clamping action is ob-

tained by turning the bolts a much less degree than is required when either the lower face of the slotted part is not beveled or the under faces of the heads are not cam-shaped.

The invention consists further in the features of construction and combinations of parts hereinafter described and specified in the claims.

In the accompanying drawings, illustrating the preferred embodiment of my invention: Figure 1 is a broken side view of a tie and rail fastened together with a bolt provided with a series of notches in the edge of its head through which a locking pin is inserted into the extension of the key slot in the tie. Fig. 2 is a plan view thereof. Fig. 3 is a vertical section taken through the key slot.

Referring more particularly to the drawings, the upper flange of an eye beam tie 1, of the usual construction, is provided with key slots 2 through which are passed the shanks 3 and radially projecting lugs 4 of the fastening bolts 5. The head 6 of each bolt is adapted to engage and clamp upon the foot of the rail 7. The under faces of said heads may be spirally cam-shaped as at 8. The head of the bolt is provided with a series of radial notches 9 through one of which the locking pin 10 may be inserted into the extension of the key slot 2. Because of the repetition of the notches at intervals in the head, one of them will always be in alinement with the extension of the key slot when the bolt is set in clamping position.

A washer 12 may be interposed between the foot of the rail and the head of the bolt, if desired, to fill in any adjustments intermediate of the notches or to take up wear. For this purpose the washers employed may be of different thicknesses. The bolts may be made of any suitable substance such as wood, vulcanized rubber, papier-mâché or like materials which will deaden sound, the latter being particularly adapted for use on elevated railways.

I claim:

1. The combination, with a part having a key slot therein, of another part to be secured thereto, and a bolt comprising a shank with a lug on its end adapted to be passed through said slot and engage the face of the first mentioned part when the bolt is turned, a head on said bolt adapted to engage and

clamp upon the second part, said head having a series of radial notches therein, and a pin adapted to engage one of said notches and the extension of the key slot for the purpose specified.

2. The combination, with a part having a key slot therein, of another part to be secured thereto, and a bolt comprising a shank with a lug on its end adapted to be passed through said slot and engage the face of the first mentioned part when the bolt is turned, a head on said bolt provided with a spiral cam-shaped under face adapted to engage and clamp upon the second part, said head having a series of radial notches therein, and a pin adapted to engage one of said notches and the extension of the key slot for the purpose specified.

3. The combination, with a part having a beveled face and a key slot therein, of another part to be secured thereto, a bolt comprising a shank with a laterally extending lug at its end adapted to be passed through said slot and engage the beveled face of the first mentioned part, and a head adapted to engage and clamp upon the second part, said head having a series of radial notches therein, and a pin adapted to engage one of said notches and the extension of the key slot for the purpose specified.

4. The combination, with a tie having a key slot therein, of a rail, and a bolt comprising a shank with a lug on its end adapted to be passed through said slot and engage the under face of the tie when the bolt is

turned, a head on said bolt adapted to engage and clamp upon the foot of the rail, said head having a series of radial notches therein, and a pin adapted to engage one of said notches and the extension of the key slot for the purpose specified.

5. The combination, with a tie having a key slot therein, of a rail, and a bolt comprising a shank with a lug on its end adapted to be passed through said slot and engage the under face of the tie when the bolt is turned, a head on said bolt provided with a spiral cam-shaped under face adapted to engage and clamp upon the foot of the rail, said head having a series of radial notches therein, and a pin adapted to engage one of said notches and the extension of the key slot for the purpose specified.

6. The combination, with a tie having a beveled under face and a key slot therein, of a rail, a bolt comprising a shank with a laterally extending lug at its end adapted to be passed through said slot and engage the under face of the tie, and a head adapted to engage and clamp upon the foot of the rail, said head having a series of radial notches therein, and a pin adapted to engage one of said notches and the extension of the key slot for the purpose specified.

In testimony whereof I affix my signature, in presence of two witnesses.

CHARLES H. CORNELL.

Witnesses:

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M. V. NICHOLSON.