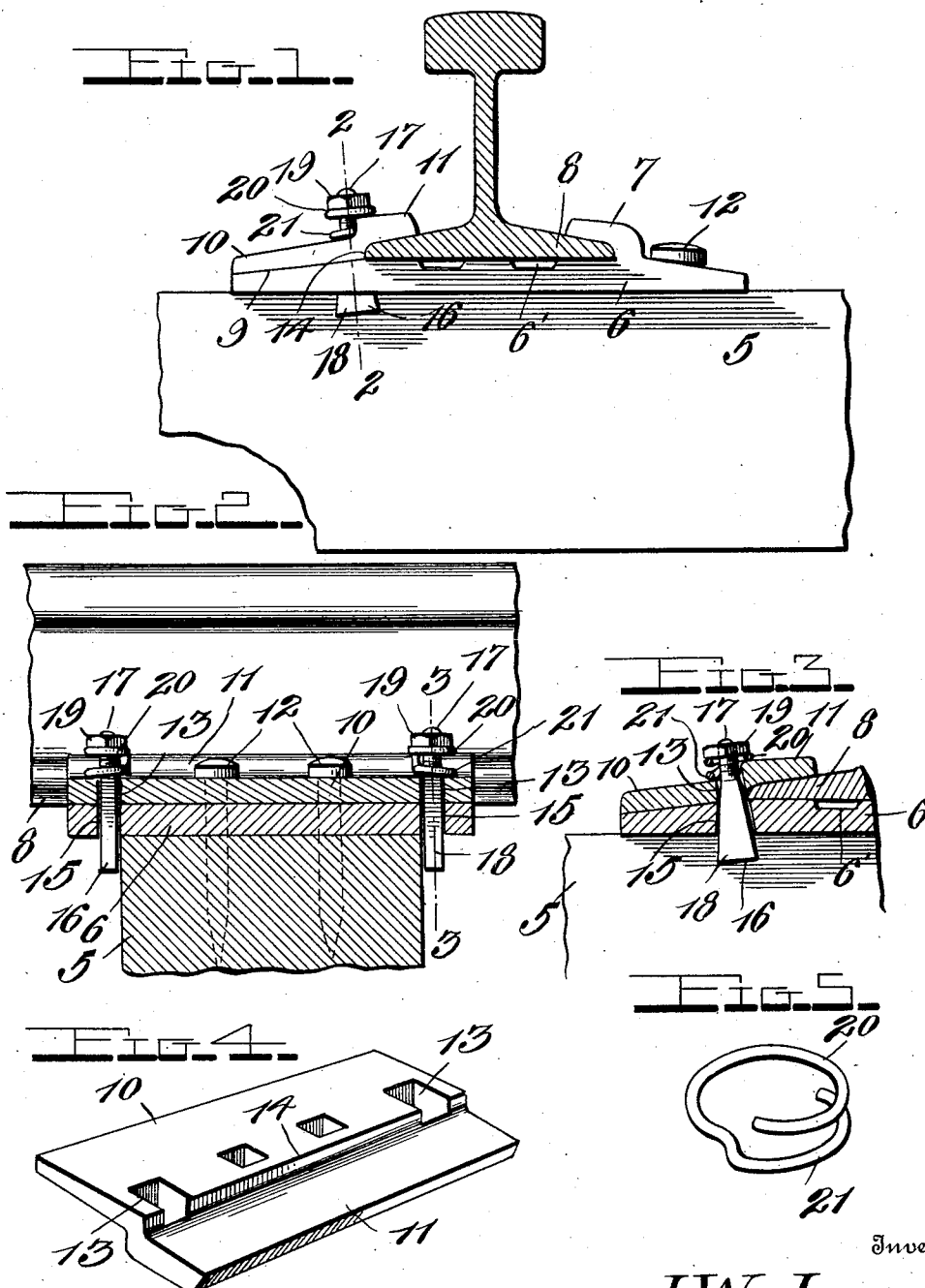


J. W. JONES.
RAIL CLAMPING CHAIR.
APPLICATION FILED MAR. 27, 1911.

998,010.

Patented July 18, 1911.



Witnesses

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JAMES WILLIAM JONES, OF DOUGLAS, ARIZONA TERRITORY.

RAIL-CLAMPING CHAIR.

998,010.

Specification of Letters Patent.

Patented July 18, 1911.

Application filed March 27, 1911. Serial No. 617,100.

To all whom it may concern:

Be it known that I, JAMES W. JONES, a citizen of the United States, residing at Douglas, in the county of Cochise and Territory of Arizona, have invented certain new and useful Improvements in Rail-Clamping Chairs, of which the following is a specification, reference being had to the accompanying drawings.

This invention relates to rail clamps and has for its object to provide a simple and efficient clamp which will securely hold the rails in position on the ties and prevent the same from creeping.

Another object of the invention is to provide a rail clamp which may be easily and quickly applied, one which is extremely strong and durable in practical use and may be manufactured at small cost.

With the above and other objects in view, the invention consists of the novel features of construction, combination and arrangement of parts hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a tie having a rail arranged thereon and my improved clamping device in operative position; Fig. 2 is an enlarged detail section taken on the line 2—2 of Fig. 1; Fig. 3 is a section taken on the line 3—3 of Fig. 2; Fig. 4 is a detail inverted perspective view of the clamping plate; and Fig. 5 is a similar view of the spring locking element.

Referring in detail to the drawing 5 designates the rail tie upon which the chair plate 6 is arranged. This plate is provided adjacent to one of its longitudinal edges with an inwardly extending flange 7 which is adapted for engagement with the base of the rail 8, and extends over the outer edge portion thereof. The opposite longitudinal edge of the chair plate 6 is slightly inclined as designated at 9 and upon the same the clamping plate 10 is arranged. This plate is provided with an offset longitudinal edge 11 for engagement over the inner edge of the rail base. Suitable fastening spikes 12 extend through openings in the chair plate and the clamping plate to secure said chair plate upon the supporting tie. The plate 6 is of greater length than the width of the tie and projects beyond the opposite longitudinal edges thereof.

The clamping plate 10 has an opening 13 in each end thereof which extends through

said plate at the longitudinal shoulder 14 which is formed on the plate by the provision of the offset edge 11. These openings are adapted to aline with the openings 15 which are provided in the chair plate 6. The longitudinal axes of the openings 13 and 15 extend substantially at right angles with relation to the plane of the inclined surface 9 of the chair plate. Through these alined openings the keys 16 are inserted. These keys are inserted from beneath the chair plates, the threaded cylindrical shanks 17 thereof extending above the clamping plate 10. The greater portion of the keys is of rectangular wedge-shape form as indicated at 18, the openings 13 and 15 in the plates 10 and 6 respectively being also rectangular to receive the same. The edge of this key which is disposed adjacent to the rail is adapted to engage with the edge of the base flange of said rail to bind the same against the flange 7 of the chair plate. This key is adapted to be drawn through the openings 13 and 15 to engage the rail base by means of a nut 19 which is threaded upon the cylindrical shank of the key. A coiled resilient wire 20 is also arranged upon this shank beneath the nut and is adapted to frictionally engage the face of the nut and force the same into binding engagement upon the bolt threads. This locking spring consists of a single wire coil and an offset portion of another coil indicated by the numeral 21. This offset coil segment is adapted for engagement with the clamping plate beyond the shoulder 14, the extremity of said segment engaging closely against said shoulder when the nut is screwed into engagement upon the coil. The lower wedge-shaped portion 18 of the key which extends beneath the chair plate engages closely with the side of the rail tie 5, thereby preventing any longitudinal shifting movement of the chair plate upon the tie and relieving the fastening bolts 12 of undue strain. By means of this construction, it will be seen that the keys perform a two-fold function in that they securely clamp the rail at its base between the flange 7 of the chair plate and the clamping plate 10, and also retain the chair plate in position on the tie. The spring wire 20 arranged upon the threaded shank portion of the key beneath the adjusting nut 19 effectually prevents any accidental turning movement of the nut which would loosen the key.

In this manner the key is at all times held in binding engagement with the rail base.

From the foregoing it is believed that the construction and operation of my improved rail clamp will be readily understood. The device is very inexpensive to manufacture, may be easily and quickly applied to the rail tie and very efficiently performs the functions for which it is designed.

10 The chair plate is preferably provided in its central portion with a plurality of grooves or channels 6' so as to permit of a certain amount of flexibility of this portion of the plate. Thus the plate may readily
15 give under the weight of the trains passing over the rails without loosening the clamp.

While I have shown and described the preferred construction and arrangement of the various parts, it will be understood that the
20 device is susceptible of considerable modification without departing from the essential feature or sacrificing any of the advantages of the invention.

25 Having thus described the invention what is claimed is:—

The combination with a tie, of a chair plate secured thereon having a flange adjacent to one of its longitudinal edges for en-

gagement over one edge of the base flange of a rail, said chair extending beyond the op- 30
posite sides of the tie, a clamping plate arranged upon said chair plate and having an offset longitudinal edge to engage over the other edge of the rail base, said offset forming a longitudinal shoulder on the clamping 35
plate, said clamping plate and chair plate having aligned rectangular openings therein at the shoulder of said plate, keys to be inserted through said openings having cylindrical threaded shank portions and rectangular wedge-shaped portions, said wedge 40
portions of the keys extending below the chair plate and engaging with the sides of the tie, nuts threaded upon said shanks, and a spring coil arranged on each of said shanks 45
beneath the nut having an offset end portion to engage with the shoulder of the clamping plate, said nut being adapted to adjust the keys through said openings into binding engagement with the rail base. 50

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

JAMES WILLIAM JONES.

Witnesses:

J. R. HEAD,

A. M. JONES.