

C. B. SILK.
RAIL FASTENING.
APPLICATION FILED JULY 23, 1910.

990,670.

Patented Apr. 25, 1911.

Fig. 1

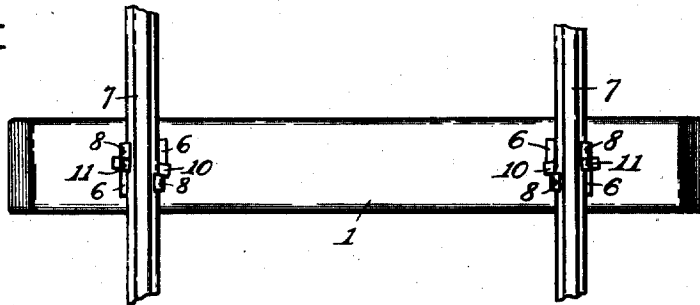


Fig. 2

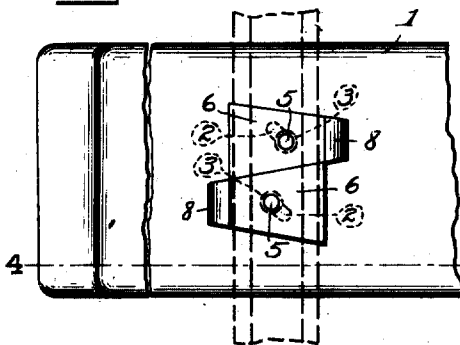


Fig. 3

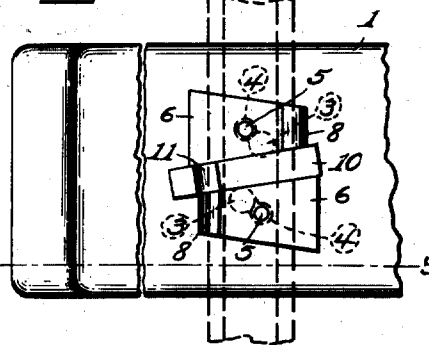


Fig. 4

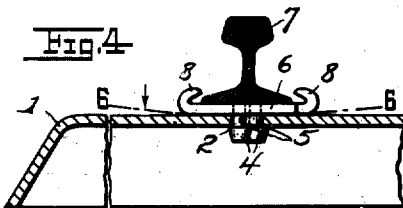


Fig. 5

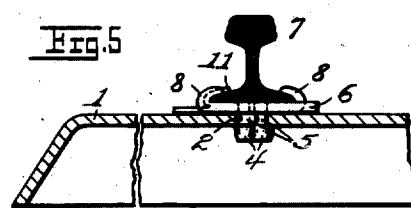


Fig. 6

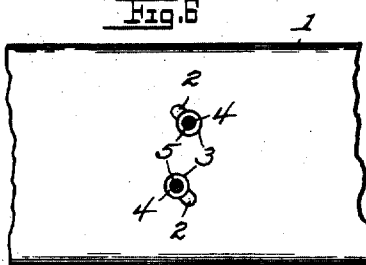
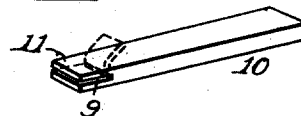


Fig. 7



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RAIL-FASTENING.

990,670.

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To all whom it may concern:

Be it known that I, CHARLES B. SILK, a citizen of the United States of America, and resident of Massillon, county of Stark, and State of Ohio, have invented certain new and useful Improvements in Rail-Fastenings, of which the following is a specification.

This invention relates to improvements in rail-fastenings, and more particularly to means for fastening railway-rails in place; and it consists in the particular construction, arrangement and combination of parts which will hereinafter be fully described.

The primary object of the invention is to provide simple and inexpensive means whereby railway rails may be securely fastened in place upon metallic or similar cross-ties.

A further object is to provide a fastening means of the character mentioned which may be readily adjusted from time to time to compensate for any wear which may occur.

In describing the invention in detail, reference is herein had to the accompanying drawing, forming a part of this specification, in which—

Figure 1 is a top plan view of a cross-tie, showing rails secured thereto by means of my said invention; Fig. 2 is an enlarged top plan view of the adjustable rail-chair sections, the same being shown in rail-receiving position; Fig. 3 is a similar view showing said sections in rail-gripping position; Fig. 4 is a longitudinal section on the line 4—4, Fig. 2, showing a rail seated on the chair sections; Fig. 5 is a similar section on the line 5—5, Fig. 3, showing a rail seated on the chair sections; Fig. 6 is a horizontal section on the line 6—6, Fig. 4; and Fig. 7 is a detail perspective view of the key.

Referring to said drawing, in which like designating characters distinguish like parts throughout the several views—1 indicates a cross-tie which may be made of metal, concrete, or other appropriate material, being preferably of a hollow rectangular type, as shown. Provided in the upper face of said tie and extending diagonally across the median line of the rail to be mounted thereon and at a predetermined distance apart are two parallel slots 2, each of which terminates at one end, said ends being opposite

in the two slots, in an enlarged aperture 3. The head 4 of a downwardly-extending stud 5 is projected through each aperture 3, said apertures being of a size which will just admit of the passage therethrough of said heads. Each of said studs is carried by the under side of the flat body portion of a chair-section 6 adapted for having a rail 7 mounted thereon.

Each of the chair sections 6 terminates at one end in an upwardly and inwardly inclined hook or clamp 8 adapted for gripping engagement with the base of a rail 7. Said chair sections are mounted upon the tie in oppositely disposed relation and have their adjacent edges inclined so as to preferably lie in parallel alinement, and so as to coincide when they occupy extended positions, as shown in Fig. 2. For the purpose of rendering said sections interchangeable, the opposite edges of each are both inclined toward the end which bears the hook 8, giving said section a tapered form. When said sections 6 occupy positions in extended relation, as shown in Figs. 2 and 4,—that is, in the positions in which they are initially mounted upon the tie 1—the hooks 8 are separated a distance which affords ready access of a rail 7 to a seating position. When the rail has been seated, as shown in Fig. 4, the chair sections are each driven inward, causing the studs 5 carried thereby to move forward along their respective slots 2 until the hooks 8 assume clamping engagement with the opposite sides of the rail base, as shown in Figs. 3 and 5. In so moving along said slots, the chair sections are forced apart, leaving an open space between the adjacent edges thereof. Then, for the purpose of securely maintaining said chair-sections in their adjusted positions, a slightly tapered wedge or key 10 is driven into said open space, as shown in Figs. 3 and 5. A horizontally disposed kerf 9 is preferably provided in the tapered or smaller end of said key, as is clearly shown in Fig. 7. When the key has been driven into place, the upper tongue 11 is turned back into clamping engagement with the rail base.

As is apparent, when it is desired to readjust the parts composing the fastening hereinbefore described, as for compensating for wear taken place, the chair sections may be driven up into closer engagement with the rail-base, the key driven forward, and the

tongue 11 bent into close engagement with said rail base.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a cross-tie of a hollow type having a pair of diagonally directed slots in its top adjacent to each end thereof, of a headed stud movable in each of said slots, a rail-chair section in fixed relation to each stud, each of said sections having a terminal hook adapted for engaging a rail base, and means for maintaining said sections in adjusted rail clamping position.

2. The combination with a cross-tie of a hollow type having a pair of diagonally directed slots in its top adjacent to each end thereof, of a headed stud movable in each of said slots, a rail-chair section in fixed relation to each stud, said sections having their adjacent edges inclined and lying in substantially parallel alignment, a terminal hook formed on each of said sections, said hooks being disposed in opposing relation, and means for maintaining said sections in adjusted clamping engagement with a railway-rail mounted thereon.

3. The combination with a cross-tie of a hollow type having a pair of diagonally directed slots in its top adjacent to each end thereof, of a headed stud movable in each of said slots, a pair of oppositely disposed interchangeable rail-chair sections to which said studs are fixed, a terminal hook formed on each section, and means for maintaining said sections in fixed relation to a railway rail mounted thereon.

4. The combination with a cross-tie of a hollow type having a pair of diagonally directed substantially parallel slots in its top adjacent to one end thereof, of a headed stud movable in each of said slots, a pair of oppositely disposed interchangeable rail-chair sections to which said studs are fixed, a terminal hook formed on each of said sections, a key for maintaining said sections in fixed relation to a railway rail mounted thereon, and means for maintaining said key in place.

5. The combination with a cross-tie of a hollow type having a pair of diagonally directed substantially parallel slots in its top adjacent to one end thereof, of a rail-chair section mounted over each slot and having a headed stud projected downward through said slot and movable therein, a hook formed on one end of each section, the sections being disposed substantially parallel to each other and in opposing relation, and a key adapted for insertion between said sections to hold the latter in adjusted relation to a rail mounted thereon between the opposing hooks.

6. The combination with a cross-tie of a hollow type having a pair of diagonally di-

rected substantially parallel slots in its top adjacent to one end thereof, each of said slots terminating at one end in an enlarged aperture, of a rail-chair section mounted over each slot and having a headed stud projected downward through and movable in said slot, the head of said stud being initially inserted through said aperture, a hook formed upon one end of each of said sections, said sections being disposed in opposing relation, and a key interposed between said sections whereby the latter are maintained in adjusted position with respect to a rail mounted thereon.

7. The combination with a cross-tie of a hollow type having a pair of diagonally directed substantially parallel slots in its top adjacent to one end thereof, of a tapered rail-chair section mounted over each slot and having a headed stud projected downward through and movable in said slot, a hook formed on one end of each section, the sections being disposed in opposing relation, and a key interposed between said sections for maintaining the latter in adjusted relation to a rail mounted thereon.

8. The combination with a cross-tie of a hollow type having a pair of diagonally directed substantially parallel slots in its top adjacent to one end thereof, of a rail-chair section mounted over each slot and having a headed stud projected downward through and movable in said slot, said section having its opposite edges symmetrically inclined toward one end, a return hook formed on said end, said sections being disposed in opposing relation, and a key interposed between said sections for maintaining the latter in a position wherein their hooks clamp the opposite edges of the base of a rail mounted thereon.

9. The combination with a cross-tie of a hollow type having a pair of diagonally directed substantially parallel slots in its top adjacent to one end thereof, of a rail-chair section mounted over each slot and having a headed stud projected downward through and movable in said slot, said section having its opposite edges symmetrically inclined toward one end, a hook formed upon the smaller end of each section, said sections being disposed in opposing relation and adapted, when occupying extended positions, to unobstructedly receive a rail-base between the hooks thereof, and, when in adjusted positions, to have their hooks in clamping engagement with said rail-base, and means for maintaining said sections in adjusted positions.

10. The combination with a cross-tie of a hollow type having a pair of diagonally directed substantially parallel slots in its top adjacent to one end thereof, of a rail-chair section mounted over each slot and having a headed stud projected downward through

and movable in said slot, said section having its opposite edges symmetrically inclined toward one end, a hook formed upon the smaller end of each section, said sections
 5 being disposed in opposing relation and adapted, when occupying extended positions, to unobstructedly receive a rail-base between the hooks thereof, and, when in ad-
 10 justed positions, to have their hooks in clamping engagement with said rail-base, and a key for maintaining said sections in adjusted positions.

11. The combination with a cross-tie of a hollow type having a pair of diagonally di-
 15 rected substantially parallel slots in its top adjacent to one end thereof, of a rail-chair section mounted over each slot and having a
 20 headed stud projected downward through and movable in said slot, said section hav- ing its opposite edges symmetrically in-
 25 cined toward one end, a hook formed upon the smaller end of each section, said sections being disposed in opposing relation and adapted, when occupying extended positions, to unobstructedly receive a rail-base between the hooks thereof, and, when in adjusted positions, to have their hooks in clamping engagement with said rail-base, and a key

interposed between said sections for main-
 30 taining the latter in adjusted positions.

12. The combination with a cross-tie of a
 hollow type having a pair of diagonally di-
 35 rected substantially parallel slots in its top adjacent to one end thereof, of a rail-chair section mounted over each slot and having a
 40 headed stud projected downward through and movable in said slot, said section having its opposite edges symmetrically inclined to-
 ward one end, a hook formed upon the smaller end of each section, said sections be-
 45 ing disposed in opposing relation and adapted, when occupying extended positions, to unobstructedly receive a rail-base between the hooks thereof, and, when in adjusted po-
 50 sitions, to have their hooks in clamping en- gagement with said rail-base, a key inter-
 posed between said sections for maintaining the latter in adjusted positions, and means whereby said key is secured against retrac-
 55 tion.

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

CHARLES B. SILK.

Witnesses:

LIONEL W. YOUNG,
 ABE S. JONES.