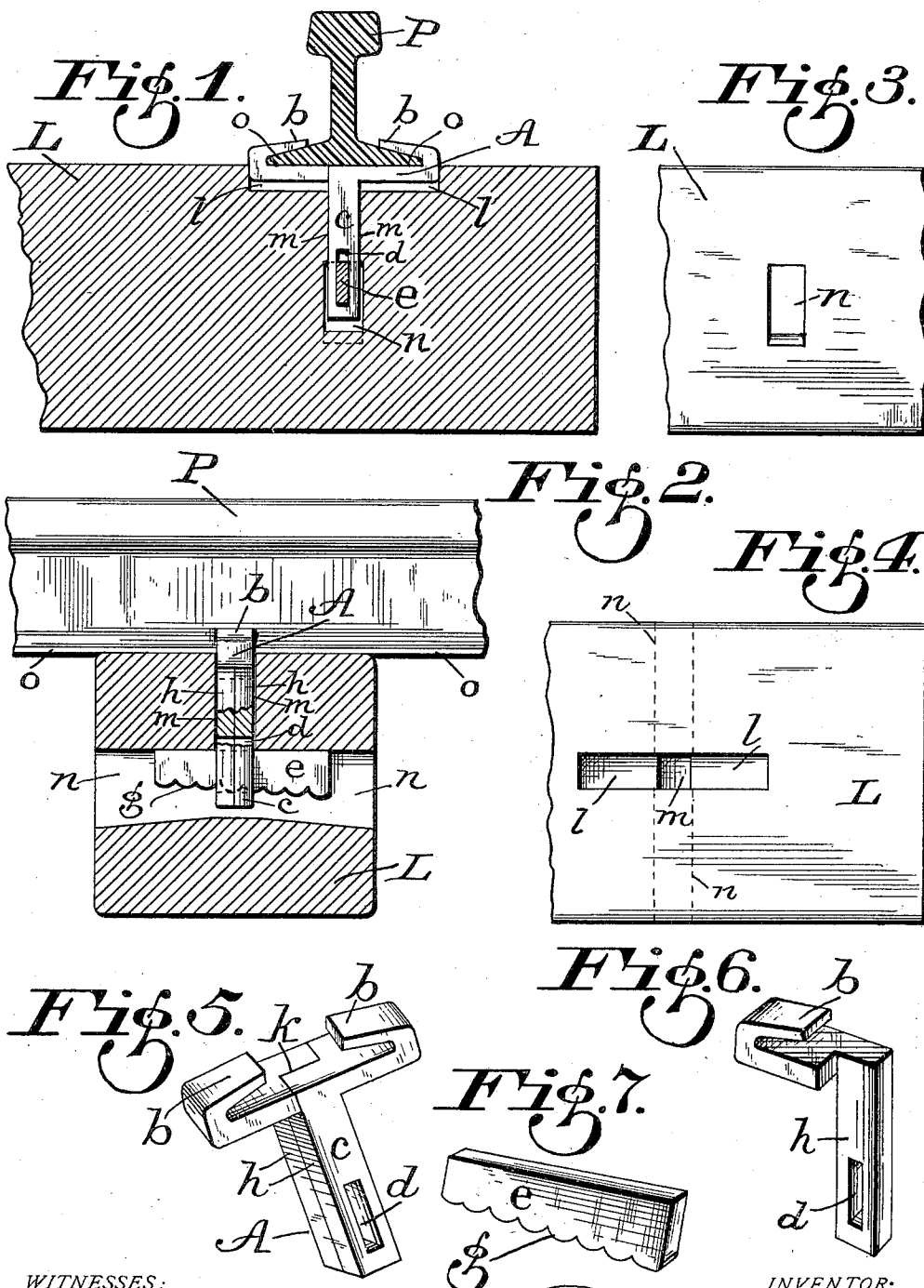


R. A. ARGABRIGHT.
COMBINED LOCKING CLAMP AND RAILWAY TIE FOR TRACK RAILS.
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WITNESSES:
Bernard M. Focke.
Marc R. Thomas.

INVENTOR:
Ralph A. Argabright,
BY
Frank M. Burnham
ATTORNEY.

UNITED STATES PATENT OFFICE.

RALPH A. ARGABRIGHT, OF DAYTON, OHIO.

COMBINED LOCKING-CLAMP AND RAILWAY-TIE FOR TRACK-RAILS.

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To all whom it may concern:

Be it known that I, RALPH A. ARGABRIGHT, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have invented certain new and useful Improvements in a Combined Locking-Clamp and Railway-Tie for Track-Rails, of which the following is a specification.

My invention relates to a "combined locking clamp and railway tie for track rails."

Some of the principal objects and advantages of this invention consist in providing a more effective locking or fastening means, for securely connecting track-rails in position on the ties of railways, that will dispense with all objectionable, dangerous and insecure forms of bolts and nuts, and spikes;—thereby preventing spreading of the rails and avoiding the numerous horrible disasters caused by the same. Also, in providing a fastening means for track-rails that is readily attachable to, or detachable from, the rail and tie, thereby allowing for the relaying of new rails in place of worn or useless ones. Also, in providing a track-rail fastening means which will allow for contraction and expansion, and permit of the taking up of all slack. Also, in providing a track-rail fastener not affected by atmospheric conditions. Also, in providing a locking means for a railway rail, in which the tie is so constructed as to constitute an important feature of the combination, and form a direct connection between the rail and tie;—not alone a wooden tie, but those constructed out of any suitable material,—such as steel, composition, concrete, etc.

Further objects are to provide the above referred to tie and rail of simple construction, composed of few parts; strong and durable; which can be quickly placed in position or removed therefrom with little labor and expense; and can be manufactured at a minimum cost and therefore is quite inexpensive.

This invention consists essentially, referring briefly and in general terms to the various parts or mechanical elements comprising the same;—of the sectional locking-clamp for gripping the rail; the railway-tie adapted to hold and support said sectional locking-clamp; the wedge shaped key for

removably retaining said locking-clamp in position in said tie; and the very peculiar construction, arrangement and combination of these several parts, also the minor details thereof, which will hereinafter be fully and specifically described, and set forth in the subjoined claims all in accordance with the statutes in such cases made and provided therefor.

Referring to the accompanying drawings constituting a formal part of the specification, and illustrating one form for carrying out the objects and principles of my invention, and wherein the same reference letters are utilized to indicate or point out the same parts, wherever occurring throughout the several views; Figure 1 is a transverse section through a rail and vertical longitudinal section through a broken away portion of a railway-tie, showing the locking clamp in operative position, thus disclosing the application of my invention. Fig. 2 is a cross section through a railway tie, showing a broken away portion of a rail and the locking clamp and its key in operative position. Fig. 3 is a side elevation of a broken away portion of the tie, showing one of the transverse key openings therein. Fig. 4 is a plan view of a broken away portion of the tie showing the recess and socket which receives the locking-clamp. Fig. 5 is a perspective view of the locking-clamp; Fig. 6 is a perspective view of one of the locking-clamp sections or halves; and Fig. 7 is a perspective view of the wedge shaped key.

In describing my said invention specifically, and referring in detail to the various mechanical parts or features of construction which in combination make up my combined locking-clamp and railway-tie for track rails, as pointed out in the drawings by means of the reference characters as aforesaid:—A refers to the locking-clamp, which in practice is intended to be constructed out of suitable metal, preferably malleable-iron or steel; and provided with peculiarly formed clamping-hooks *b* extending laterally from the angularly shaped shank *c*;—that is, said shank is rectangular in cross section or when viewed from the end,—and has the slotted key opening *d* therein; adapted to receive the wedge shaped

key *e*, one edge of which is flat and straight, while the opposite edge *g* is preferably somewhat serrated or ragged, so as to form a gripping surface as clearly shown in Figs. 2 and 7;—and will be fully referred to hereinafter. Said locking-clamp,—which is approximately in form of the letter T in outline,—comprises the locking-sections or halves *h*, which are identically alike in shape and construction one with the other, and similar to clamp A,—excepting that said sections or halves each carry only one of the clamping hooks *b*: one of said sections being fully shown in Fig. 6; and when both halves are assembled or placed together so as to complete clamp A, will form an interlocking-joint *k* as shown in Fig. 5.

Cross-tie L is intended to be preferably constructed out of any hard, strong, durable material impervious to water or atmospheric conditions, such as metal or composition; and is provided with a horizontal recess *l* from which depends a vertical socket *m*, which meets and forms a juncture with the transverse key-ways or passages *n* extending from each side of said tie, each having a level or flat ceiling or top, and an inclined floor or base, thus adapting said ways or passages for the ready removal as well as the reception of key *e*, and the retaining of the same in operative position;—as shown in Fig. 2, said ways each being in outline of the approximate contour of key *e*.

When locking-clamp A is placed in position in laying or building the railway, the opening or mouth of its clamping-hooks *b* being of the same contour or outline as the base-flanges *o*, of track-rail P;—see Figs. 1 and 2;—said hooks will readily adjust themselves to the flanges of said rail;—which rests solidly across recess *l*, and top of tie L by which said rail is supported; and said hooks will now be located and held in horizontal recess *l* and shank *c* of said locking-clamp will rest securely in socket *m* of said tie, the slotted key opening *d* of which coming in line with transverse key-ways or passage *n*, will allow of key *e*,—through the medium of said ways or passages,—being inserted in said key opening of shank *c* until wedged therein; by reason of its top edge bearing and clinging against the ceiling of transverse passages *n*, while its ragged edge *g* will grip and bind against the bottom of slot or opening *d*,—which may be somewhat rough if so desired;—said key being preferably constructed out of a metal somewhat softer than the material out of which hooks *b* are constructed. It will readily be understood and appreciated, that by making recess *l* sufficiently deep to leave a space between its floor and clamping-hooks *b*; and making shank *c* of a length to leave a space below it, also a space above

key *e*, in slot *d*, when in position; as fully and clearly shown in Figs. 1 and 2; should there be any slack or contraction which might loosen the rail, it can readily be taken up by forcing said key farther in its opening in said shank, until it is wedged sufficiently tight, when hooks *b* will again grip and hold rail P rigidly in position; and as shank *c* is rectangular in form the same as socket *m*; and as clamping-hooks *b* are firmly held in recess *l*, any lateral shifting or swaying of the rail will be prevented. It will further be noted that clamp A is so constructed that when in operative position it forms a locking-clamp; also, that by reason of there being two transverse-ways *n* extending one on each side of shank *c*, so as to form an entrance or mouth on each side of the tie, key *e* can also be forced out of opening *d*, (the same as when forced in it), and all the parts disconnected in relaying new rails or ties—or for any purpose desired.

Having now described my combined locking-clamp and railway-tie for track-rails, in connection with the illustrations,—as my invention and as new—I claim:—

1. In a combined locking-clamp and railway-tie for track rails; the combination of a locking-clamp comprising clamping-hooks uniting in a single shank having a slotted opening therein and of approximate T-shape; a wedge shaped key adapted to rest in said opening; and a tie formed with a recess, and socket of the same contour as said shank, and having transverse-ways therein,—for the reception of said clamp and key;—all substantially in the manner and for the purposes described.

2. The combination in the herein referred to railway device; of a clamp provided with a locking-joint, and having clamping hooks and a key opening; a key adapted to be inserted and removed from said opening; and a cross-tie having a recess, a vertical socket also transverse passages therein adapted to removably receive and lock said clamp and key in position therein; all substantially as and for the purposes described.

3. The herein referred to fastening device for railways, comprising a locking-clamp provided with a shank having a key opening therein and formed in sections, each section having a clamping-hook; a key having a straight and an inclined edge thereto and adapted for said opening; and a tie formed with a recess and a socket of the same contour as said hooks and shank for holding same, also having transverse ways constituting passages for said key, all substantially as described.

4. The combination in a fastening means for track-rails; of a locking clamp provided with clamping-hooks and an angular

shaped shank having a slot therein, and
formed in halves connected by a locking
joint; a wedge shaped key having a ragged
edge adapted to rest in said slot; and a
5 railway tie provided with a recess adapted
to receive said clamping hooks, an angular
shaped socket adapted to receive said shank,
and transverse passages adapted for the re-

ception and removal of said key; all sub-
stantially as and for the purposes described. 10

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

RALPH A. ARGABRIGHT.

Witnesses:

BERNARD M. FOCKE,

MALCOLM J. ALTSCHUL.

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