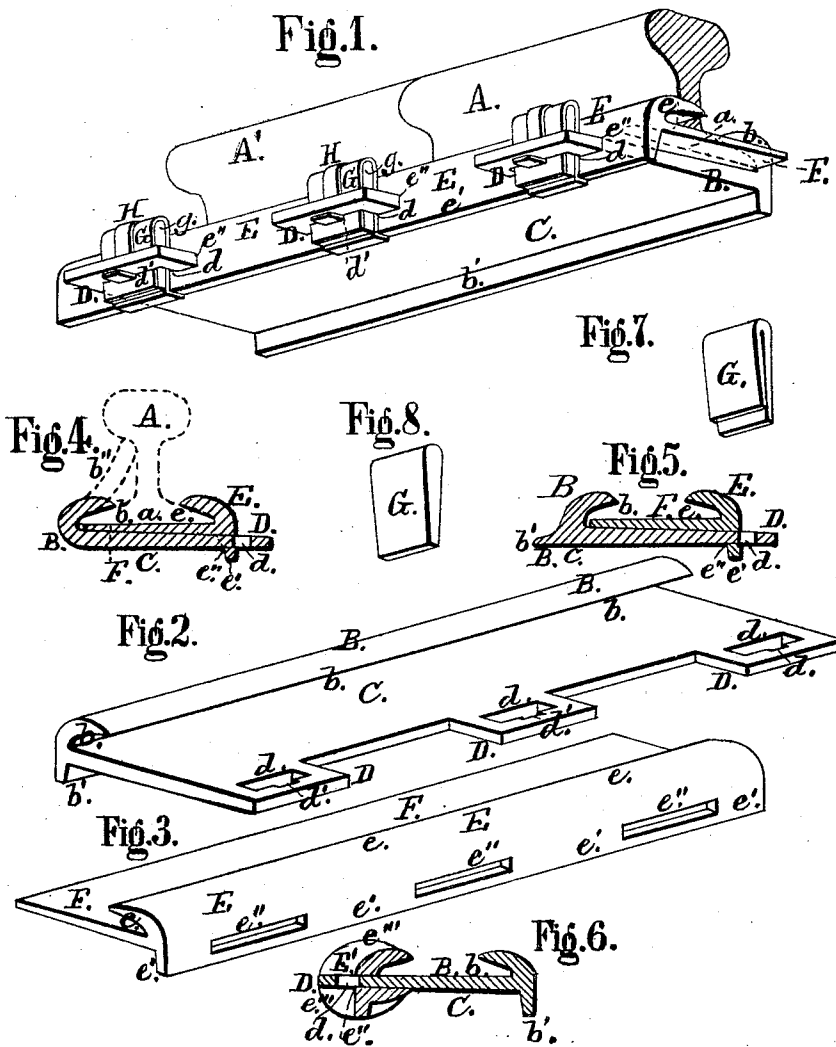


A. M. ROUSE.
Railway Rail Fastenings.

No. 145,015.

Patented Nov. 25, 1873.



ATTEST:

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UNITED STATES PATENT OFFICE.

ALBION M. ROUSE, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN RAILWAY-RAIL FASTENINGS.

Specification forming part of Letters Patent No. **145,015**, dated November 25, 1873; application filed May 19, 1873.

To all whom it may concern:

Be it known that I, ALBION M. ROUSE, of St. Louis, St. Louis county, Missouri, have invented a certain Improvement in Railway-Rail Fastenings, of which the following is a specification:

The first part of my improvement consists in two clamping-jaws, (with wedge-formed soles,) that, being drawn together upon the rail, simultaneously close upon the base of the rail vertically and laterally. The second part of my improvement consists in the combination with such jaws of slotted lugs upon one of them, which pass through slots in the down-turned rib of the other jaw, and are held by wedges passing through the lugs. The third part of my improvement consists in the construction of the wedges by which the jaws are held together. This wedge has a U-shaped piece of metal inclosing a plate of india-rubber or other elastic substance. The fourth part of my improvement consists in the wedge-lock, which is a strip of metal passing through the mortise and over the thick end of the wedge, and forms a lock by having its ends bent over the wedge-top and under the slotted lug on the sole-plate of the jaw.

Figure 1 is an under perspective view of my improvement. Figs. 2 and 3 are top perspective views of the two jaws. Figs. 4, 5, and 6 show modifications in transverse section. Figs. 7 and 8 are modifications of the wedge.

A A' are portions of or ends of two rails. B is a jaw having a lip, *b*, fitting the side and top of the rail-base *a* upon one side. *b'* is a rib serving to stiffen the plate. The sole C of the jaw B is made wedge-formed in transverse section, as shown. At the thinner edge of the sole C are projections or lugs D, having vertical slots *d*, to receive wedges, by which the jaws are secured together. The jaw E has a sole-plate, F, substantially similar to C, but having no lugs at its edge. *e* is a lip taking over the opposite side of the rail-base to that of *b*. *e'* is a down-turned rib or flange stiffening the jaw. This flange has horizontal slots, *e''*, through which pass the lugs D of the jaw B. The wedge in its preferred form, as shown in Fig. 1, has a U-shaped piece of metal, G, inclosing a pad of india-rubber or other elastic substance, *g*, giving to the wedge compressi-

bility and expansibility. H is the locking-strap, which is simply a strip of flat metal, which is passed through a suitable notch, *d'*, in the slot *d*, and has its upper and lower ends, respectively, bent over the top of the wedge G and beneath the lug D. The wedge G may also be locked by bending one or both sides of its metallic piece beneath the lug. The modification of the wedge shown in Fig. 7 has a longitudinal split open at the bottom to allow the points of its leaves to be spread out beneath the lug and form a lock. In Fig. 8 is shown a solid wedge, which, with the lock H, would form a reliable fastening to the jaws, but this wedge, like that shown in Fig. 7, does not possess the advantage of elasticity as that in Fig. 1. In Fig. 4 the rib *b'* is dispensed with, while in the modification shown in Fig. 5 the rib *b'* is turned out horizontally to increase the side bearing when the coupling is used as a chair upon a tie. In Fig. 6 is shown a modification, in which, in place of the jaw E, are used a number of cast-metal clamps, E', one to each lug. The clamp has an under jaw taking beneath the sole C, and an upper jaw taking over one side of the base *a*, and having a slot, *e''*, for the passage of the lug D. This clamp has marginal or other ribs or flanges, *e'''*, to give strength. The fastening may be placed between two ties or upon a tie, but the former position is preferable. When made in the form shown in Fig. 1 and placed upon a tie the ribs *b'* and *e'* may be let down into the tie, or a filling piece of wood may be inserted between the ribs to render the bottom flat.

After a rail-fastening has been in use some time attrition of the rail ends causes some looseness in the coupling, and if the soles C and F were not wedge-formed the closing of the jaws together would only tighten them upon the sides of the rail base, and not remove the vertical looseness, but with the corresponding wedge-formed soles the space occupied by the rail end is lessened vertically as well as transversely, so as to make a proper fit by merely driving the vertical wedges G. The jaws B E, provided with wedge-formed soles C F, may be secured together in other ways besides that shown—for instance, the jaws may be held together by bolts passing through or beneath the rail, or by spikes, and would operate in the

same manner in enabling the fit to be made tight vertically, as well as laterally, by forcing the jaws together, but the first-described method is held to be much preferable to these modified ways.

In the modification shown in Fig. 4, b'' is a brace, which is inclined upward and inward to the outer side of the rail. This brace is so arranged as to come in contact with the web of the rail a little in advance of the main part of the jaw reaching its place thereon, so that it will be under some degree of tension when the jaws are closed upon the rail ends.

I claim as my invention—

1. The combination of the jaws B E when provided with wedge-formed sole-plates C F,

arranged and operating substantially as and for the purpose set forth.

2. In combination with the jaws B E, the slotted lugs D and slotted rib or flange e' for securing the jaws together, substantially as set forth.

3. The elastic wedge G g , arranged substantially as set forth.

4. The combination of jaws B E, lugs D, wedge G, and locking-strip H, substantially as and for the purpose set forth.

ALBION M. ROUSE.

Witnesses:

SAML. KNIGHT,
ROBERT BURNS.