

(No Model.)

P. KELLER.
JOINT FOR RAILS.

No. 581,593.

Patented Apr. 27, 1897.

Fig. 1.

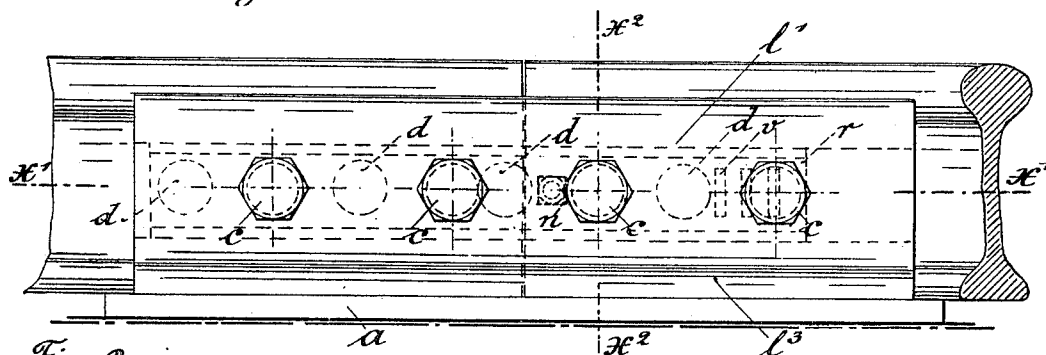


Fig. 2.

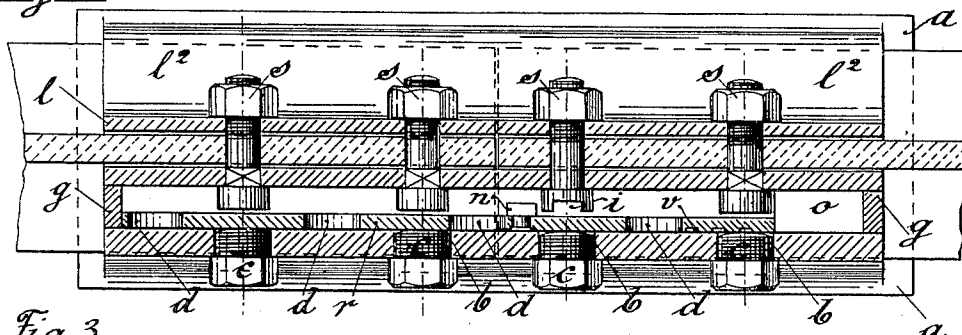


Fig. 3.

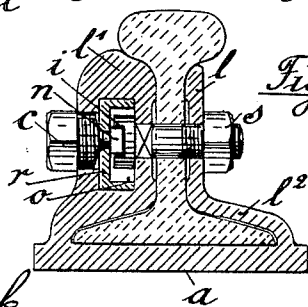
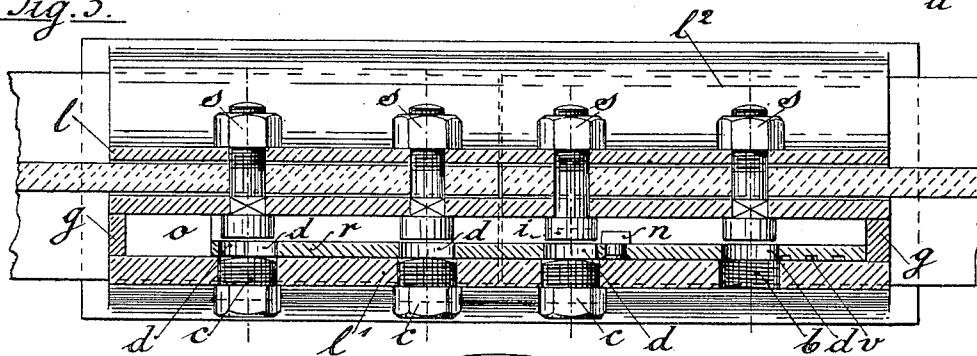


Fig. 4.

Witnesses:

Hamann Queck
May Erson Corfitt

Inventor:

Paul Keller

UNITED STATES PATENT OFFICE.

PAUL KELLER, OF ZWICKAU, GERMANY.

JOINT FOR RAILS.

SPECIFICATION forming part of Letters Patent No. 581,593, dated April 27, 1897.

Application filed October 15, 1896. Serial No. 608,957. (No model.)

To all whom it may concern:

Be it known that I, PAUL KELLER, a subject of the King of Saxony, residing at Zwickau, in the Kingdom of Saxony and German Empire, have invented new and useful Improvements in Joints for Rails, of which the following is a specification.

This invention relates to a joint for the rails of railroads, field-roads, mining-roads, and the like in which the ends of the rails are fastened between flanges which are formed in one piece with the base-plate, serving as a support for the rails and secured to the tie, so that the rails are inclosed in a shoe.

The invention consists in providing the shoe with a locking-bolt whereby the rail-joint is secured, so that it is impossible for uninitiated persons—that is, persons not acquainted with the arrangement—to disconnect the joint.

The invention is illustrated in the annexed drawings, in which—

Figure 1 is a side elevation of the joint with locking device. Fig. 2 is a horizontal section along $x' x'$, Fig. 1, with the locking device in locking position. Fig. 3 is a view like Fig. 2 with the locking device in position to allow a disconnection of the joint. Fig. 4 is a cross-section along $x^2 x^2$, Fig. 1.

The flanges l and l' are united in one piece with the base-plate a by means of the parts P and P' , extending over the rail-base, so that a shoe is formed which can be slipped over the rails or into which these can be inserted, after which a fastening by screws or bolts s is effected.

To secure the joint against improper loosening, the rear flange l' , Figs. 1 to 4, is hollowed or chambered, as at o , along its entire length, in which chamber is located a movable bolt, latch, or slide r , and in the outer wall of the flange-chamber are provided holes b directly opposite the fastening-screws s , which holes b can be closed by screws or bolts c , provided with hexagonal or angular heads. In the bolt r there are also holes d , the spaces between which correspond with the spaces between the flange-holes b . The bolt r also has a projection or lug n , which when the bolt is moved to the left, Fig. 2, rests in front of the head of a screw s . In this position of the bolt the holes d of the latter lie to one side of the screws s . A sliding of the bolt to the right is

not possible, since thereby the lug n would come into contact with the head of that screw s lying to the right of such lug. Said head is provided with a slit i , corresponding to the thickness of the lug n , and the screw itself is rotatably seated. If the latter is given a quarter-turn, so that the slit comes to rest opposite the lug n , the bolt r can be shifted to the position shown in Fig. 3, the lug passing the slit, and in such position the holes d of the bolt come behind the heads of screws s and in front of the flange-holes b . If now the screws c are removed, as shown at the right in Fig. 3, the screws s after removal of their nuts can be taken out through the holes b , after which the joint is loosened. The bolt r can also be provided with several lugs n , and of course in such case several screws s have their heads correspondingly slitted. To more readily effect shifting of bolt r from the outside, the latter is provided at a suitable point opposite a flange-opening with depressions or roughenings v —as, for example, in the drawings opposite the extreme right-hand opening—and in these depressions a hold can be obtained by a suitable tool, as a screw-driver, nail, or the like to effect shifting of the bolt.

To close the flange-chamber suitable pieces g , Figs. 2 and 3, are applied and suitably secured after the bolt r is in place.

If the joining of rails has been effected as seen in Fig. 2, a disconnection cannot readily result, as the screws s because of the closure by bolt r cannot be drawn out. It is first necessary to properly set one or more screws s and to remove a certain screw c from the rear flange l' and then to shift the bolt r before a loosening or removal of the fastening-screws s is possible. This arrangement thus offers ample security against the destruction or tearing up of rails and should be especially advantageous—as, for example, for military roads during war time.

What I claim as new, and desire to secure by Letters Patent, is—

1. A rail-joint shoe comprising a base-plate and flanges, and screws s for engaging the rail and flanges, one of the flanges being chambered and provided with holes in the outer wall corresponding to the screws, and plugs or screws c for closing said holes, com-

bined with a sliding bolt *r* in the chamber provided with holes *d* suitably spaced so that the screws *s* can only be removed when the bolt-holes *d* correspond with the flange-holes *b*, said bolt *r* being provided with one or more projections or lugs *n* in proximity to the heads of the screws *s* and said heads being slitted to allow the passage of the lugs when the screws have been turned or adjusted substantially as described.

2. A rail-joint shoe comprising a base-plate and flanges, and bolts *s* for engaging the rail and flanges, one of said flanges being chambered and provided with holes *b* opposite the

bolt-holes, in combination with a sliding bolt *r* arranged in the chamber and provided with holes adapted to be thrown into and out of register with the holes *b*, and means for locking said bolt against endwise movement, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

PAUL KELLER.

Witnesses:

HERMANN QUECK,
MAY EDSON SCOFIELD.