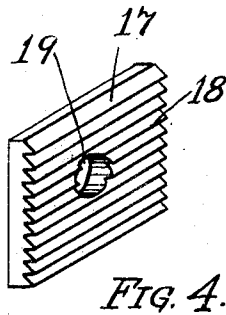
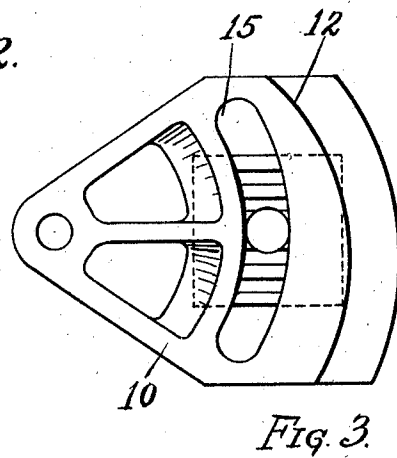
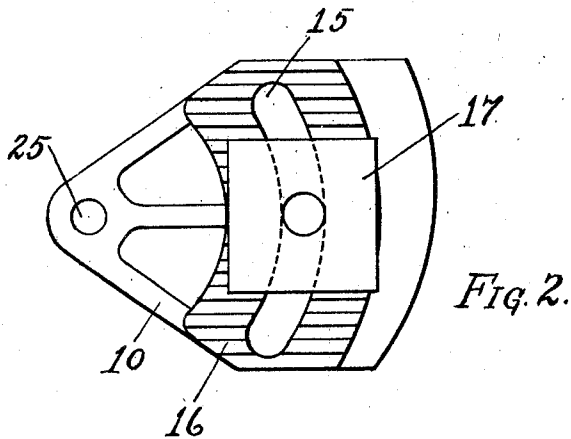
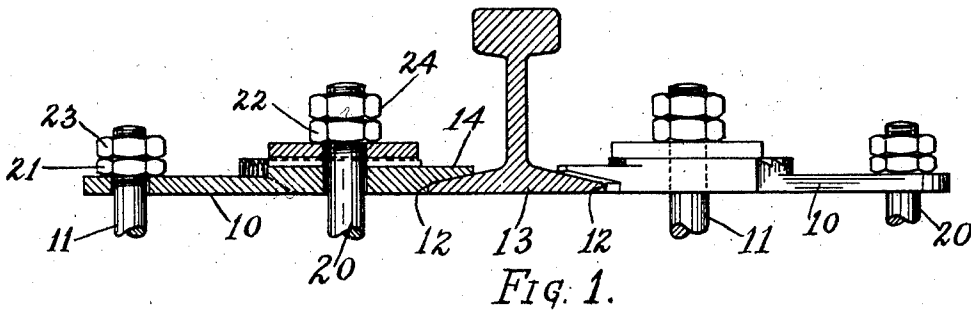


W. W. HOLLAND.
RAIL FASTENER.
APPLICATION FILED APR. 5, 1911.

1,044,178.

Patented Nov. 12, 1912.

2 SHEETS—SHEET 1.



WITNESSES:

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2 SHEETS—SHEET 2.

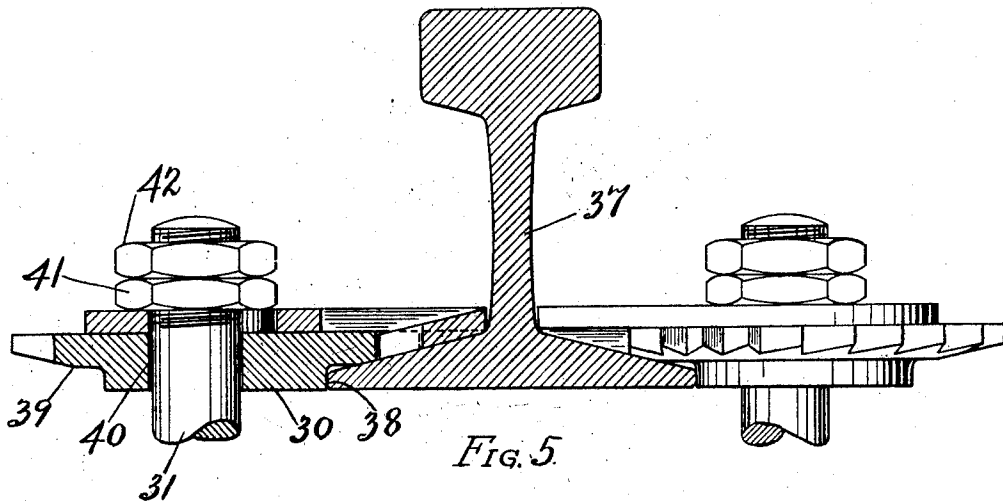


FIG. 5.

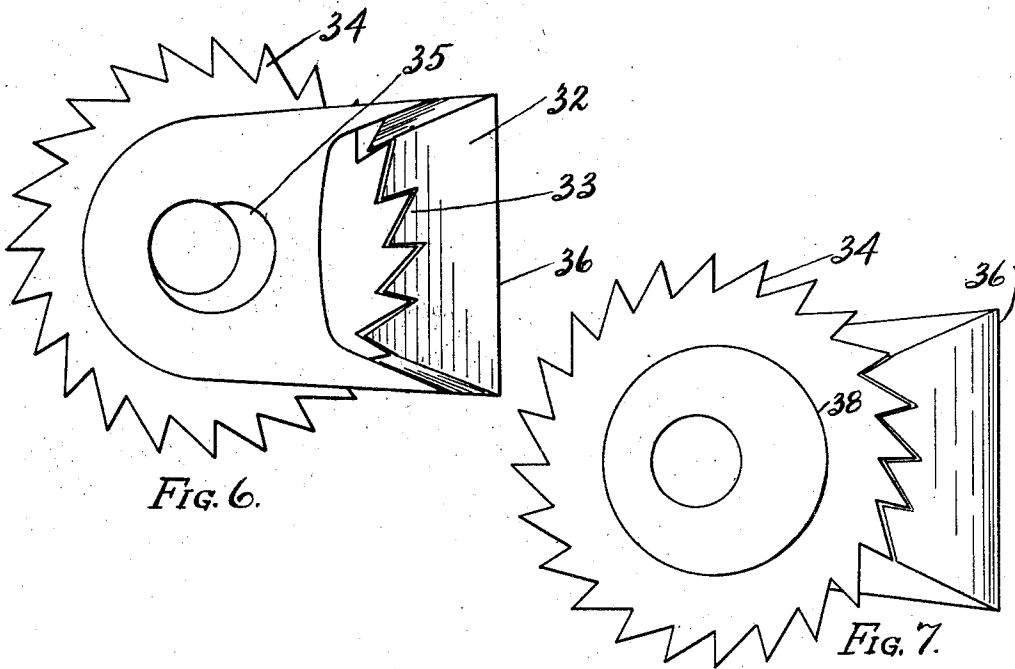


FIG. 6.

FIG. 7.

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UNITED STATES PATENT OFFICE.

WILLIAM W. HOLLAND, OF ROLAND PARK, MARYLAND.

RAIL-FASTENER.

1,044,178.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed April 5, 1911. Serial No. 619,185.

To all whom it may concern:

Be it known that I, WILLIAM W. HOLLAND, a citizen of the United States of America, residing at Roland Park, in the county of Baltimore and State of Maryland, have invented certain new and useful Improvements in Rail-Fasteners, of which the following is a specification.

The object of my invention is to provide a new and improved fastener having the combined functions of holding a rail and adjusting it to secure the desired alinement.

The device consists of an angularly adjustable member having an eccentric surface for engaging the side of a rail to aline it. In its preferred form, it embodies, in addition to the eccentric surface, a flange which takes over the rail flange to hold the rail in adjusted position.

Two-rail fasteners, embodying the various features of my invention, are shown in the accompanying drawings.

Figure 1 is a transverse vertical section of a rail, showing one fastener in section and another in elevation. Fig. 2 is a top plan of the cam or plate and toothed block. Fig. 3 is a bottom plan of the same. Fig. 4 is a perspective of the toothed or serrated block. Fig. 5 shows another embodiment of my invention. It is a vertical section through a rail, showing one fastener in elevation and another one in central cross-section. Fig. 6 is a top plan of the eccentric plate or cam used in this fastener with the holding block. Fig. 7 is a bottom plan of the same.

My rail fastener or alining device consists of a cam or plate 10 which is preferably placed upon the rail support or tie and pivoted thereto by a bolt 11 having a suitable bearing in the plate. On its lower face this plate or cam is provided with an eccentric surface or shoulder 12 (see Figs. 1 and 3) adapted to engage the lateral edge or surface of the usual bottom rail flange 13. Beyond the eccentric surface, the edge of the plate is formed into a flange 14 which engages the upper surface of the rail flange and serves to hold the rail in position when alined. Between the pivot and the eccentric surface, the plate or cam 10 is slotted at 15 concentrically with the pivot 11, and the upper surface of the plate adjacent this slot is toothed or serrated at 16. A block 17, provided with similar serrations 18 to cooperate with those on the plate and apertured at 19 to receive a bolt which will also pass through the slot

15, is placed upon the top of the plate with its teeth or serrations cooperating with those of the plate. A bolt 20 is suitably embedded in the tie and passes upward through the slot 15 and through the hole 19 in the block. Both bolts 11 and 20 are threaded near their upper extremities and each is provided with a nut 21 and 22 and a lock nut 23 and 24.

The operation of the device is easily understood from the drawings and description thereof. The bolts 11 and 20 are suitably placed in each tie on each side of each rail. A plate 10 is placed on each side of each rail on each tie, the bolt 11 passing through the pivot hole 25 of the corresponding plate, and the bolt 20 through the slot 15. The block 17 is passed over the bolt 20 and allowed to rest loosely with its serrations 18 in contact with the serrations 16 of the plate. The nuts 21, 22, 23 and 24 are screwed down over their respective bolts to a suitable position out of engagement with the plate and block. The plate 10, having its eccentric surface 12 in contact with the side face of the bottom flange 13 of the rail, is rotated, the eccentricity of the surface serving to move the rail laterally until the desired alinement is obtained. Then the nuts are tightened,—first those numbered 21 and 22, and then the lock nuts 23 and 24. Thus we have the rail rigidly secured in position by means of a device which not only serves to hold it, but to adjust it as to its alinement. Such adjustment may be altered whenever it is found necessary from any cause as wearing or drawing of the rail.

In Figs. 5, 6 and 7 I have shown one of the many possible variations of my device. It consists of an eccentric plate 30 pivoted upon a bolt 31 which is made fast in the tie. In this case, instead of serrating the top surface of the plate, I have provided it with serrated edges, and instead of the block 17, I have supplied block 32 which is serrated or toothed at 33 to engage the teeth 34 on the plate or cam 30. The block is slotted at 35 to provide for the variation in radius of the plate, the pivot 31 of which is eccentrically placed. To prevent rotation of the block, it is provided with a flat surface 36 to bear against the web 37 of the rail. The plate 30 is similar to the plate 10, just described, in that it has an eccentric surface 38 to engage the lateral faces of the bottom web of the rail, and a flange 39 to take over such web to hold the rail in adjusted position. This

modification is particularly adapted for use where the rails are close together, as where a guard rail is necessary or in the narrow angles of switches. Its operation is apparent. Each tie is provided with bolts 31 on each side of each rail. The plates 39 are placed with a bolt 31 passing through the aperture 40 of each. Blocks 32 are placed one on top of each plate with the slot 35 registering with the aperture 40 in the plate. The plate is rotated until the desired alignment of the rail is secured, when the block is depressed, bringing its teeth into engagement with the teeth 34 of the plate, and its surface 36 into engagement with the web 37 of the rail. The nuts 41 and 42 are tightened on the end of the bolt, being brought down against the block so that it is immovable and the flange 39 of the plate is drawn against the flange of the rail. When the parts are thus placed, the rail is secured against play, but it may be easily adjusted at a moment's notice.

I have thus described, in detail, two em-

bodiments of my invention in order that its operation may be clearly understood. However, the specific terms herein are used in their descriptive rather than in their limiting sense and the scope of the invention is defined in the following claim:

In a rail fastener, a combination with a support, a cam member pivotally mounted on the support, the cam member being slotted concentrically with the pivot and provided with an eccentric positioning surface and a flange to engage the rail; the cam having a toothed portion adjacent the slot, a corresponding toothed block apertured to receive a bolt, the latter serving to press the block against the cam to hold the latter in a position of angular adjustment about its pivot.

Signed by me at Baltimore, Maryland, this 30th day of March, A. D. 1911.

WILLIAM W. HOLLAND.

Witnesses:

EDWARD L. BASH,
EDWIN F. SAMUELS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."