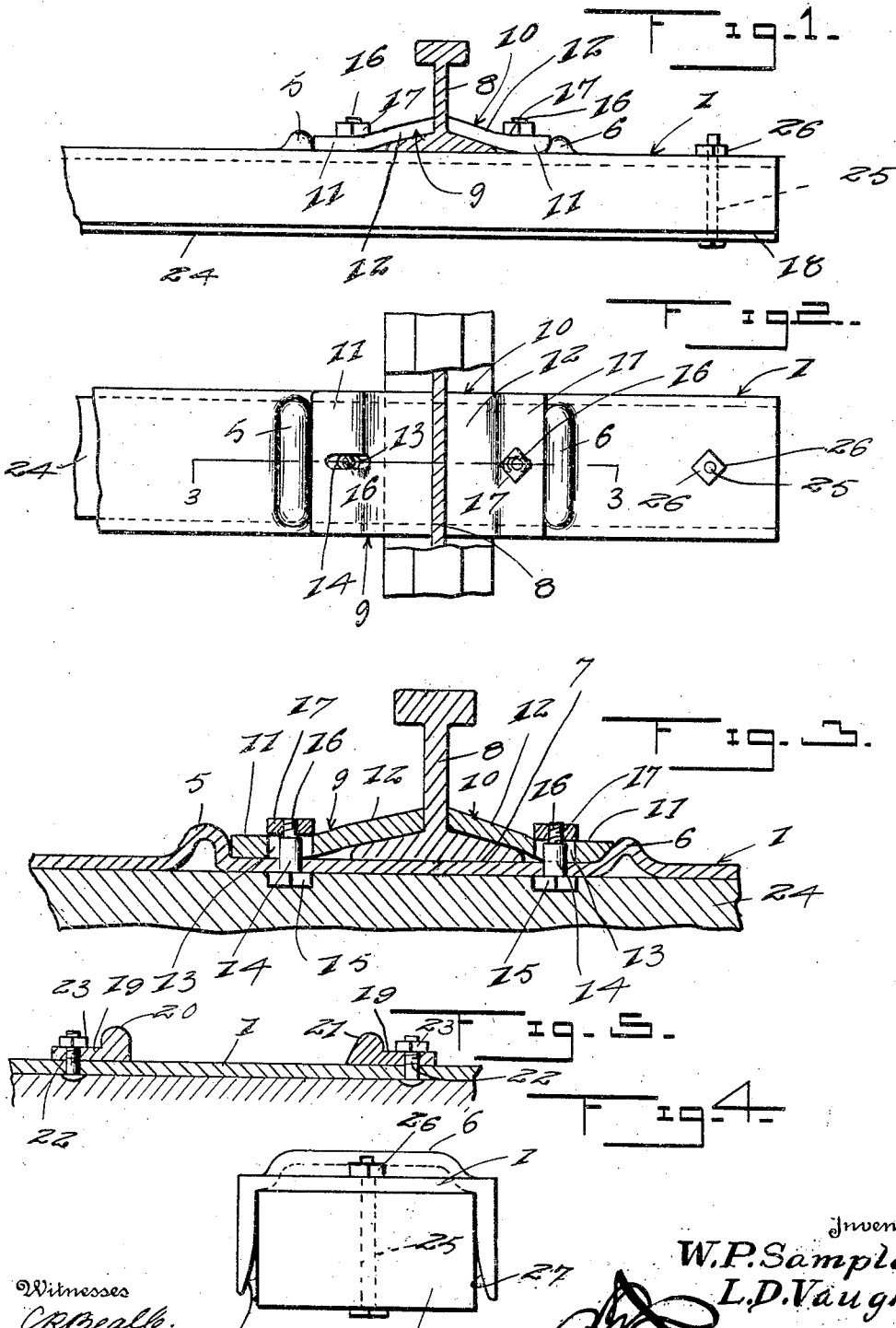


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 RAIL FASTENING DEVICE.
 APPLICATION FILED FEB. 27, 1917.

1,239,321.

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UNITED STATES PATENT OFFICE.

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RAIL-FASTENING DEVICE.

1,239,321.

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To all whom it may concern:

Be it known that we, LORENZO D. VAUGHN and WILLIAM P. SAMPLES, citizens of the United States, residing at Grafton, in the county of Taylor and State of West Virginia, have invented certain new and useful Improvements in Rail-Fastening Devices; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to rail ties designed particularly to be employed for supporting the rails of a mine railway, but it is to be understood that the same can be employed, if desired, for supporting the rails of a railroad engaged in the transportation of passengers and freight; and an object of the invention is the provision of a simple, inexpensive, durable and efficient tie consisting of a hollow body having associated therewith a novel form of rail fastening device that will effectively hold the rails against creeping.

Another object of the invention is the provision of a tie of this nature consisting of a hollow body adapted, when the tie is employed for supporting rails of a railroad engaged in the transportation of passengers and freight, to have a filler positioned therein so as to prevent creeping of the tie.

Other objects will appear and be better understood from that embodiment of our invention of which the following is a specification, reference being had to the accompanying drawing, in which:

Figure 1 is a side elevation of one end of a tie constructed in accordance with the invention,

Fig. 2 is a top plan view of Fig. 1 with the rail and rail-fastening device partially in section,

Fig. 3 is a longitudinal sectional view, taken through one end of the rail tie with a rail thereon, and showing the filler for the tie and the manner of securing the rail to the tie with the improved fastening device,

Fig. 4 is an end elevation of Fig. 1 with the rail removed,

Fig. 5 is a view of a modified form of means for holding the rail clamping plates against horizontal movement.

Referring to the drawing in detail, the numeral 1 designates a rail tie, which is

formed preferably of metal and is hollow and of inverted U-shape in cross section. Only one end of the tie is illustrated in the drawing, and the end illustrated is shown having the upper wall provided, adjacent the terminal, with a pair of transversely extending ribs 5 and 6, the ribs being formed by pressing upwardly portions of the upper wall of the tie, the said ribs defining therebetween a rail seat 7 for the base flange of a rail 8. As shown in Fig. 3, the width of the space between the ribs 5 and 6 exceeds the width of the base flange of the rail, to admit of the insertion of rail clamping plates 9 and 10 between the ribs 5 and 6 the rail 8. Each of the rail-clamping plates includes a horizontal portion 11, which rests on the seat 7, and an angular portion 12 that engages over the adjacent side of the base flange of the rail 8. The horizontal portions 11 of the rail clamping plates are provided with elongated slots 13, which receive the shanks of bolts 14, the mentioned shanks being of substantially elliptical shape in cross section, and are also extended through substantially elliptical shaped openings in the upper wall of the tie 1, so as to prevent turning of the bolts. The lower ends of the shanks of the bolts are provided with heads 15, which engage the under side of the upper wall of the tie 1, and the upper ends of the shanks of the bolts are reduced, as shown at 16, and threaded, and nuts 17 are turned on the reduced ends 16 of the shanks of the bolts and are adjustable against the horizontal portions 12 of the clamping plates 9 and 10. The outer longitudinal edges of the rail-clamping plates 9 and 10 abut against the inner faces of the ribs 5 and 6, and, as shown in Fig. 3, the outer longitudinal edge of the horizontal portion of the clamping plate 10 is provided with an inner bevel, and the inner face of the adjacent rib 6 is inclined upwardly and engages the inner beveled edge of the horizontal portion 11 of the adjacent rail-clamping plate 10. Upon adjustment of the nut 17 against the horizontal portion 11 of the outer rail-clamping plate 10, the mentioned clamping plate 10 will be forced downwardly, and by virtue of the engagement between the inner beveled edge of the horizontal portion and the inclined face in the adjacent rib 6, the outer plate 10 will be moved in the direction of the rail 8 and the

tight engagement between the plate 10 and the rail 8 will be effected.

While not shown in the drawing, it will be understood that the opposite end of the tie 1 will be equipped with ribs and fastening plates identical with the ribs 5 and 6 and clamping plates 9 and 10, shown in the drawing.

In Fig. 5 of the drawing, the tie 1 is shown void of the ribs 5 and 6, and has mounted on the upper wall thereof a pair of spaced plates 19. The plates 19 have their opposed edges provided with transversely extending ribs 20 and 21, which project above the upper surface of the plates 19, and the rib 21 has the inner face thereof beveled and adapted to perform the same function as the beveled face on the rib 6 shown in Fig. 3. The plates 19 are held in operative position, on the upper wall of the tie 1, by means of bolts 22, which extend through the upper wall of the tie and through the plates 19 and have nuts 23 turned on their upper ends and adjustable against the upper faces of the plates 19.

When the tie is employed for supporting rails of a railroad engaged in the transportation of passengers and freight, the same has positioned therewithin a filler 24, which is of rectangular configuration and has its lower side projecting a slight distance below the sides of the tie, as shown more particularly in Figs. 1 and 4, to provide a support for the tie 1. The filler 24 has its upper side provided with recesses which receive the heads of either the bolts 14, shown in Figs. 1, 2 and 3, or the heads of the bolts 22, illustrated in Fig. 5, so as to admit of the upper wall of the tie 1 resting on the upper side of the filler 24. When the filler 24 is placed within the tie body 1, suitable bolts 25 are passed through the filler and the upper wall of the tie 1 and have their upper ends provided with nuts 26, which are adjustable against the upper wall of the tie 1, as shown in Figs. 1, 2 and 4.

As shown in Fig. 4 of the drawings, the lower ends of the inner faces of the sides of the tie 1 are beveled outwardly, so as to fa-

cilitate the operation of positioning the tie over the filler 24.

It will, of course, be understood that various changes can be resorted to in the construction, form and arrangement of the several parts without departing from the spirit and scope of the invention as claimed.

Having thus described our invention what we claim as new, is:

1. A rail tie comprising a body having its upper side provided with a pair of spaced ribs, a pair of rail-clamping plates interposed between the ribs and each having an elongated slot therein, bolts extending through the upper wall of the tie and received by the slots in the rail-clamping plates, nuts fitted on the upper ends of the bolts and adjustable against the rail-clamping plates, one of the rail-clamping plates having one edge thereof provided with an inner bevel, and one of the ribs having its inner face inclined for engaging the beveled edge of the last-mentioned rail-clamping plate, for the purpose specified.

2. A rail tie comprising a body having the upper wall thereof provided with ribs, rail clamping-plates interposed between and engaging the ribs, one of the rail-clamping plates having one edge thereof beveled and the adjacent rib having the inner face thereof inclined for cooperation with the beveled edge on the last-mentioned rail-clamping plate.

3. The combination with a rail tie, of a pair of spaced plates mounted on the tie, ribs formed on the opposed edges of the plates, rail-clamping plates interposed between the ribs and one of the rail clamping plates and the adjacent rib having opposed beveled faces engaging each other, and means for detachably securing the first-mentioned plates to the tie.

In testimony whereof we affix our signatures in presence of two witnesses.

LORENZO D. VAUGHN.
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Witnesses:

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