

J. G. SNYDER.
ANCHOR BLOCK AND RAIL FASTENING FOR RAILROAD RAILS.
APPLICATION FILED MAR. 1, 1911.

1,050,306.

Patented Jan. 14, 1913.

2 SHEETS—SHEET 1.

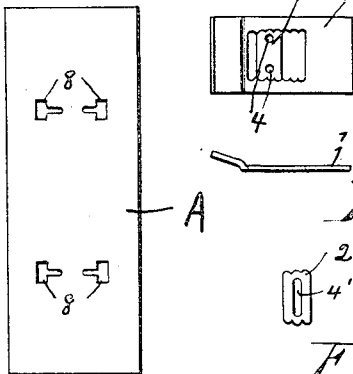
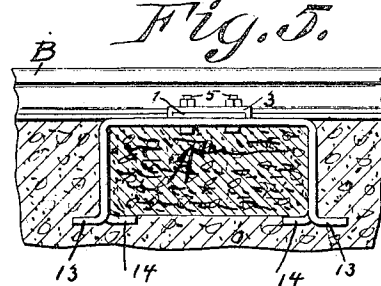
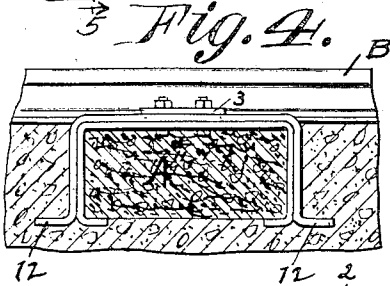
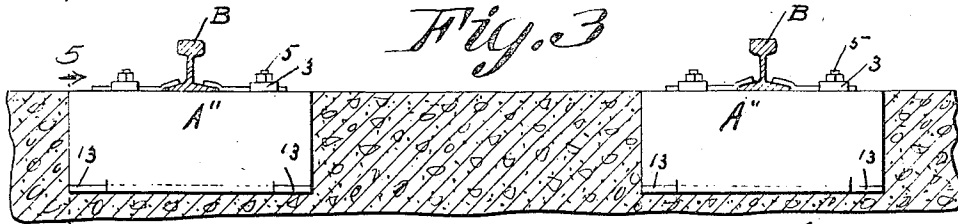
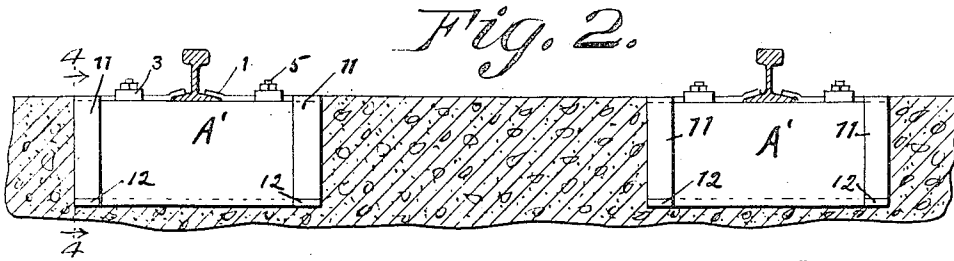


Fig. 7.

Fig. 6.

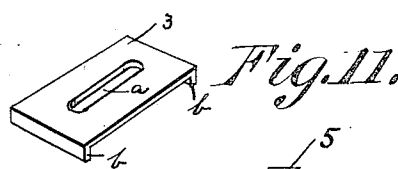


Fig. 11.

Fig. 12.

Fig. 13.

Inventor

John G. Snyder,

By Chas. H. Morgan,
Attorney

Witnesses
Lulu Cunningham
Lucy Kileman

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2 SHEETS-SHEET 2.

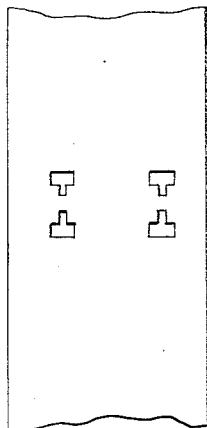
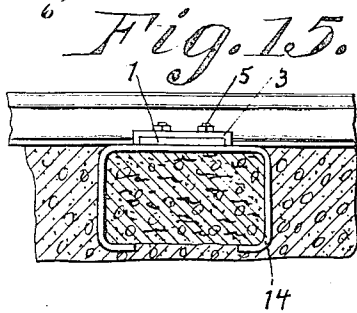
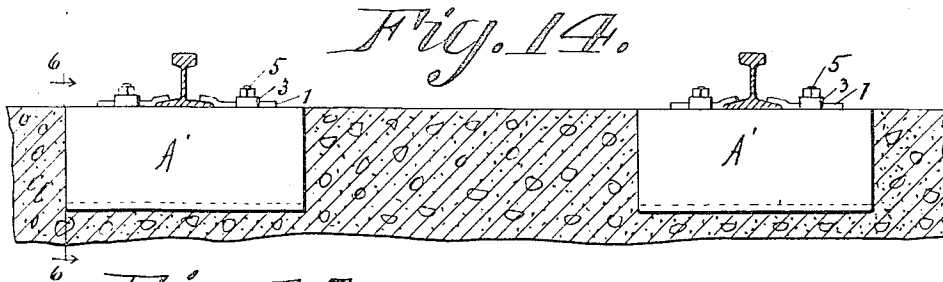
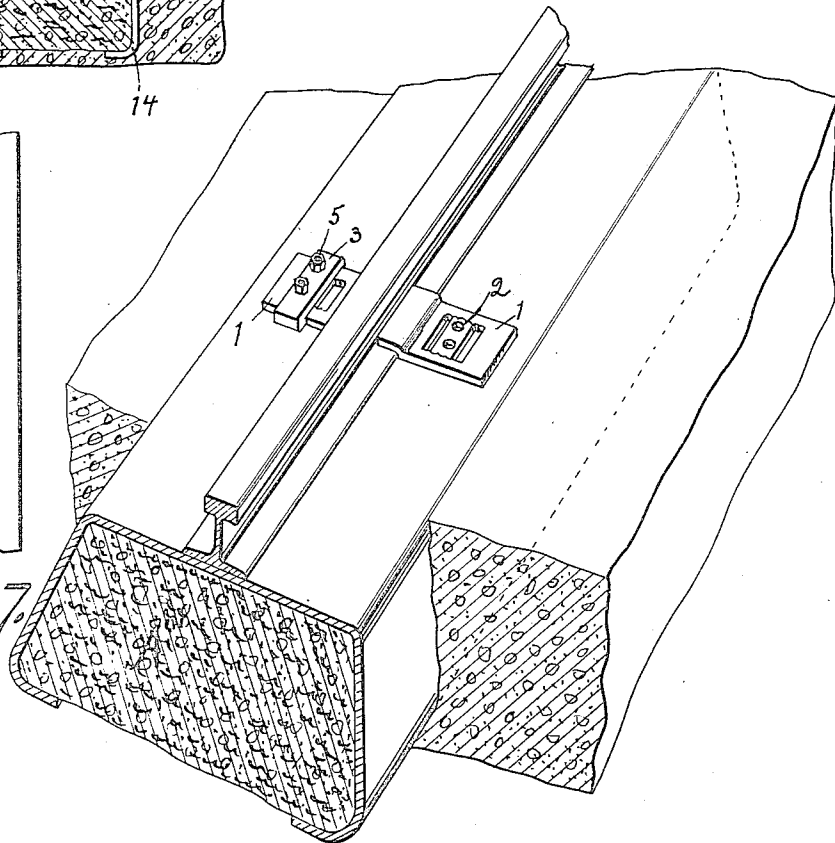


Fig. 16.



Witnesses
Lulu Cunningham
Lucy Blenban.

Inventor
John G. Snyder,
Chas. H. Morgan
Attorney

UNITED STATES PATENT OFFICE.

JOHN G. SNYDER, OF ALTOONA, PENNSYLVANIA.

ANCHOR-BLOCK AND RAIL-FASTENING FOR RAILROAD-RAILS.

1,050,306.

Specification of Letters Patent.

Patented Jan. 14, 1913.

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To all whom it may concern:

Be it known that I, JOHN G. SNYDER, a citizen of the United States, residing at Altoona, in the county of Blair and State of Pennsylvania, have invented new and useful Improvements in Anchor-Blocks and Rail-Fastenings for Railroad-Rails, of which the following is a specification.

The object of my invention is to more securely fasten railroad rails to the road-bed, and especially in places where concrete can be used, such as in subways, tunnels, bridges, or any other place where concrete is used for the road-bed. I do not intend to limit this, however, to the use of concrete, for the anchors may be used in ordinary ballast or any other form of road-bed construction now in use. This might be accomplished by connecting the blocks rigidly together by means of rods, or any other fastening means so as to prevent them from spreading, thereby causing a spreading of the rails.

A further object of my invention is to securely hold the railroad rails to the anchor blocks by means of the device and combination of parts shown in the accompanying drawing, in which—

Figure 1 is a section of track showing an end view of the anchor blocks and rail fastenings. Fig. 2 is a section of track similar to Fig. 1, showing a modified form of anchor block. Fig. 3 shows still another form. Fig. 4 is a section through Fig. 2 on line "4—4" and in the direction shown by the arrow. Fig. 5 is a section on line "5—5" Fig. 3, looking in the direction of the arrow. Fig. 6 is a plan view of the top of the anchor block showing the openings for securing the bolts. Fig. 7 is a plan view of the clip used for fastening the rail to the anchor block. Fig. 8 is a side view of the clip. Figs. 9 and 10 are modified forms of holding plate to be used in connection with the clip. Fig. 11 is a cap plate for holding the parts of the clip together and prevent slipping. Figs. 12 and 13 are details of the bolt used for holding the clip to the anchor block. Fig. 14 is a view similar to Fig. 1, of still another modification of anchor block. Fig. 15 is a section on line "6—6" Fig. 14, looking in the direction of the arrows. Fig. 16 is a perspective view partly in section of still another modification of anchor block. Fig. 17 is a plan view of the openings for the bolts

used in securing the clips which hold the rail in place on the anchor block.

Similar letters and figures refer to similar parts throughout the drawing.

My invention consists of what I call an anchor block which has means for securing the rail securely to its face and hold it positively in position, without danger from loosening or from breaking. This block consists of a shell of metal, preferably steel, varying in thickness according to the use to which it is to be put. This is bent up in substantially the shape shown in the various figures in the drawing, with the bottom part open and the sides turned slightly inward in order to retain the filling, which preferably consists of crushed stone, asphalt or bitumen, or may consist of any other yielding plastic substance that is found to answer the purpose. In order to hold the shell from possible spreading by reason of the weight of the traffic, I preferably employ end gates "9," such as are shown in Fig. 1 of the drawing. These are passed through the casing of the anchor block and bent over at each end. I do not consider these essential to my invention, as the anchor block can be used without them, but merely as an extra precaution against spreading.

In order to firmly hold the anchor block in the road-bed I employ means that will prevent its working out. In Fig. 1 this means consists of inwardly sloping ends. In Fig. 2 it consists of extra straps on each end of the anchor block, as shown at "11" Figs. 2 and 4, which have their ends turned outwardly as shown at "12" in the same figures. These ends "12" are embedded in the ballast and effectually prevent the movement of the anchor block.

In Figs. 3 and 5 the positive means for holding the anchor block consists of splitting the lower portion of the shell to a slight extent and bending the portions "13" outward, while the other portions of the shell of the anchor block are bent inward as at "14." This may be modified by bending the entire portion outward instead of a portion inward and a portion outward.

In Figs. 14 and 15 the means for holding the anchor block in position consists merely of the friction and slight flare to the casing of the anchor block, which in ordinary cases is sufficient to hold it in position as the pressure is all downward.

In Fig. 16 the anchor block is made trapezoidal with the smaller portion at the top, and by reason of its flaring sides effectually prevents movement in an upward direction from the ballast. In this case the anchor block extends longitudinally of the track instead of transversely, as is shown in other figures, but it can readily be understood that this same shape of block could be used in the manner shown in the preceding figures of the drawing, by modifying the openings for the bolts and bolt heads.

The means for fastening the rail to the casing of the anchor block consists of a plate "1," such as shown in Figs. 7 and 8, having an opening in the center. This opening has scalloped or serrated edges into which a piece "2" fits. This piece "2" preferably has two openings for bolts to pass through and these bolts are fastened in the top of the anchor block by means of key-hole slots "8." The head of the bolt is made angular and the shank is slightly flattened near the head, as shown at "6" in Fig. 12. By entering a bolt in each of the key-hole slots "8" and passing a piece "2" over the bolts it will hold them firmly in position and absolutely prevent any movement relative to the rail. The piece "2" is, of course, movable along the bolts so that when the clip "1" is adjusted in position the piece "2" is slid downward along the bolts until its serrations engage the serrations in the edges of the opening of the clip. A cap plate "3" is then placed over the bolts which pass through the slot "9," and this cap piece "3" has downwardly turned ends "b b" which engage the outer edges of the clip "1." A washer is next placed over each of the bolts and the nut screwed down. After these operations are performed the clip is held absolutely rigid and no movement relative to the rail can take place until one or both of the nuts are unscrewed and the locking plate "2" removed. This locking plate "2" may be modified so as to have a slot "4'," such as is shown in Fig. 9, and under certain conditions where only one bolt is needed it may be formed with one bolt hole, as shown at "4'" Fig. 10.

While I do not desire to limit myself to the use of this clip in connection with the anchor block, it is a good form to use, but I

do not wish to limit the use of my anchor block to the combination with this particular form of clip, as any other form of holding clip which will securely fasten the rail to the anchor block may be substituted. In case the anchor block is turned longitudinally of the track it will, of course, be necessary to modify the openings for holding the clips so that they will be longitudinal of the anchor block instead of transverse as in the other cases, otherwise the fastening clips will be just the same in all cases.

What I claim is—

1. In a road bed the combination of a bed of concrete, anchor blocks for supporting a single rail embedded in said concrete, yielding plastic material in said anchor blocks and means for securing the rail to the anchor blocks.

2. In a road bed the combination of a bed of concrete, anchor blocks for supporting a railroad rail embedded in said concrete, a yielding plastic material in said anchor blocks and adjustable clips for securing the rail to the anchor blocks.

3. In a road bed the combination of a bed of concrete, a row of anchor blocks filled with a yielding plastic material embedded in said concrete for supporting a railroad rail, a second row of anchor blocks filled with a yielding plastic material and parallel to said first row, an open space between said rows and means for securing the rails to said anchor blocks.

4. In a road bed the combination of a bed of concrete, a row of anchor blocks filled with a yielding plastic material embedded in said concrete for supporting a railroad rail, a second row of anchor blocks filled with a yielding plastic material and parallel with said first row, an open space between the rows and adjustable clips for securing the rails to the anchor blocks.

5. The combination of an anchor block filled with a yielding plastic material, a bolt, a locking plate carried by said bolt, an adjustable clip and means on said locking plate cooperating with the clip to hold it in any adjusted position.

JOHN G. SNYDER.

Witnesses:

CHAS. H. MORGAN,
LUCY HILEMAN.