

No. 645,181.

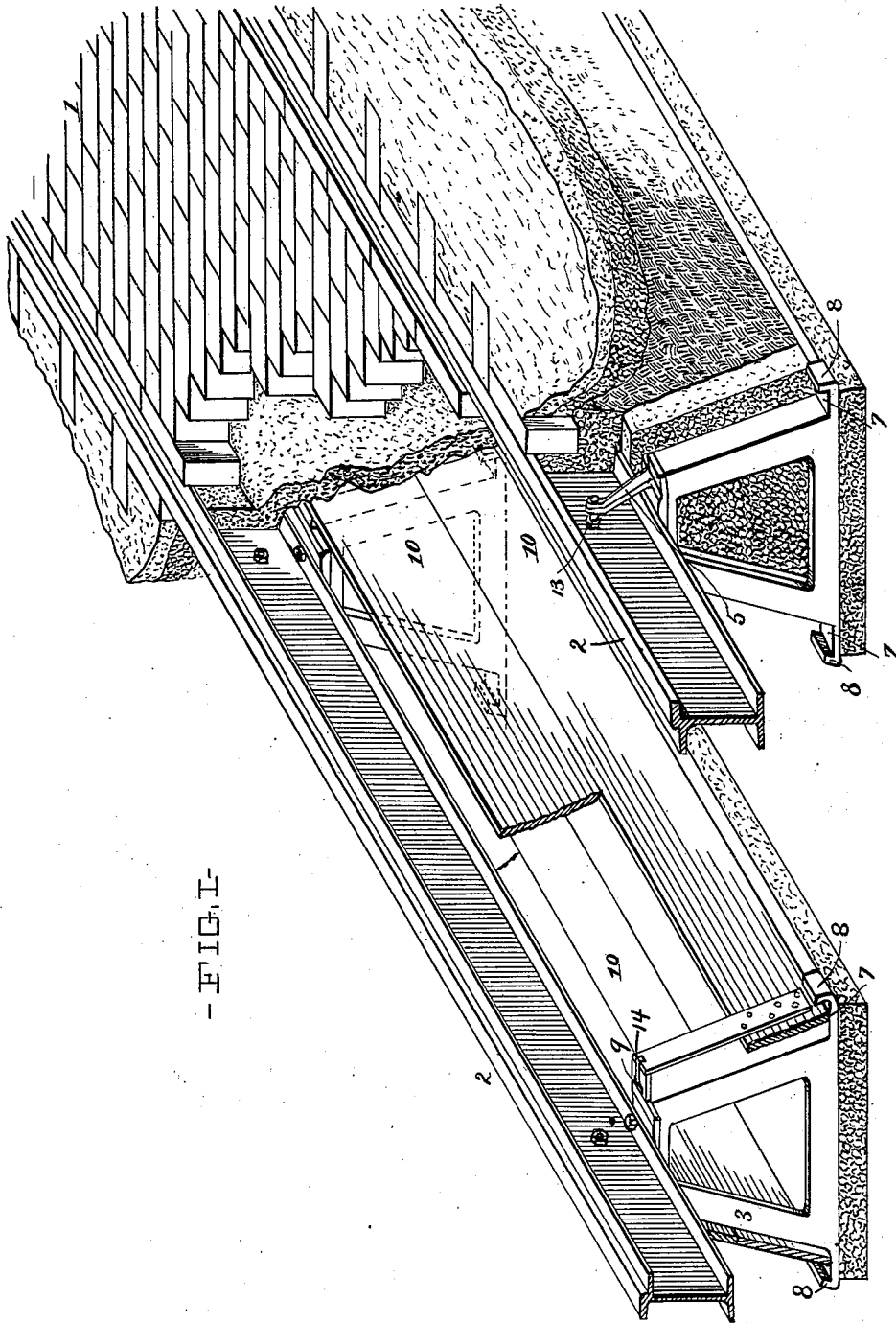
Patented Mar. 13, 1900.

H. B. NICHOLS.
RAILWAY CONSTRUCTION.

(Application filed Sept. 2, 1899.)

(No Model.)

2 Sheets—Sheet 1.



- FIG. 1 -

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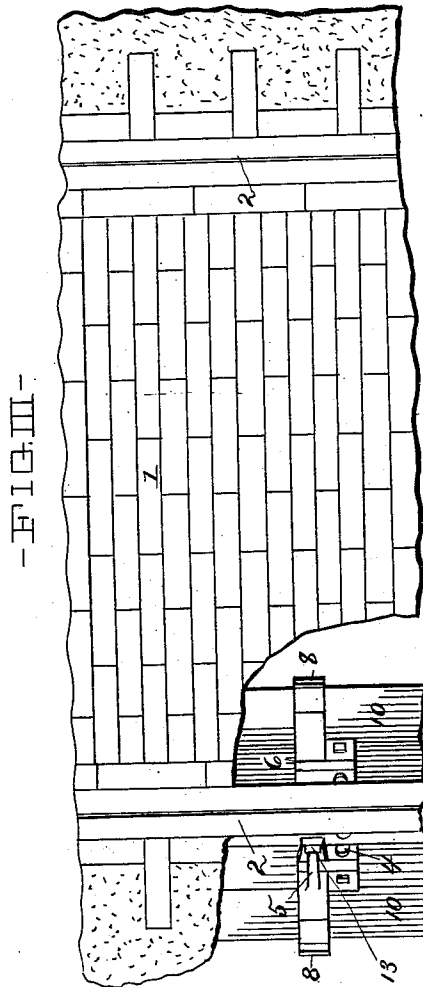
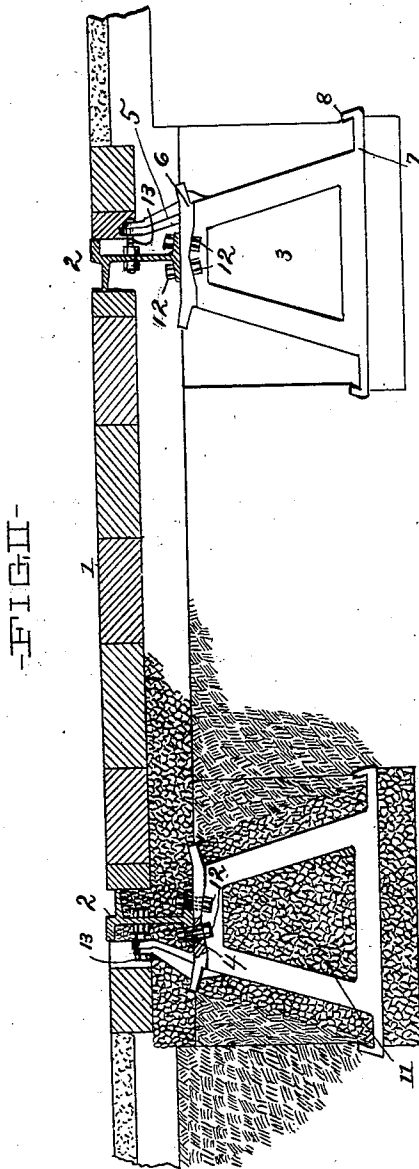
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UNITED STATES PATENT OFFICE.

HENRY B. NICHOLS, OF PHILADELPHIA, PENNSYLVANIA.

RAILWAY CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 645,181, dated March 13, 1900.

Application filed September 2, 1899. Serial No. 729,337. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. NICHOLS, a citizen of the United States of America, residing in the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Railway Construction, of which the following is a specification.

The annexed drawings and the following description set forth in detail one construction embodying the invention, such construction being but one of various forms in which the principle of the invention may be used.

In said drawings, Figure I represents a view in perspective of a railway-track, showing the bed of one rail completed and the bed of the other rail in process of construction; Fig. II, a cross-sectional view of the track, showing one side completed and the other side in course of construction; Fig. III, a plan view of the track, showing the roadway broken away in part to disclose certain features of the construction.

Suitable channels or trenches are excavated in the roadway 1, so that the center lines of said trench will correspond approximately with the gage-line of the rails 2. Metal yokes 3 are placed in each trench at suitable intervals apart, said intervals being about five feet for ordinary construction, the yokes having sloping sides and a flat top that is provided with slotted holes 4 and an upwardly-extending brace 5. Laterally-projecting lugs 6 and 7 are formed on the top and bottom of the yoke, the bottom lugs 7 being provided with an upturned flange 8 and the top lugs with perforations 9. Temporary restraining-walls 10 are secured parallel to the sides of the yoke by means of the lugs, so as to form an inclosed space adapted to receive the cement 11, which is thoroughly compacted around the yoke and under same until the yoke is raised to the required grade. The rail is then secured to the yoke by means of bolts 12, passing through the slotted holes provided in the top thereof, and by means of the set-nuts 13, passing through the web of the rail and the top of the brace. After the rail has been alined and adjusted to its proper gage the space between the top of the yoke and the base of the rail is filled with cement.

By this construction the quantity of con-

crete heretofore required is greatly reduced and the space between the rails is left free from obstruction, so that it can be utilized for various purposes. The rail is rigidly supported and all the metal parts are thoroughly protected, thereby lessening the movement of the rail from expansion and contraction and also reducing the vibration of the rail due to the passing of vehicles, which tends to cause the concrete to crumble and disintegrate.

I claim as my invention—

1. The combination of two or more metal yokes, a correspondingly-shaped monolithic cement stringer extending between and embedding said yokes, and a rail adjustably secured to the yokes and supported by said yokes and stringer, substantially as described.

2. The combination with two or more metal yokes each having a flat top and sloping sides, of a correspondingly-shaped monolithic cement stringer extending between and embedding said yokes, and a rail adjustably secured to the yokes and supported by said yokes and stringer, substantially as described.

3. The combination with a rail of a railway-track, of a monolithic cement stringer supporting said rail, and a metal yoke embedded in said stringer, said yoke having an upwardly-extending brace and slotted holes in its top for adjustably securing said rail to the yoke, substantially as described.

4. The combination with two or more metal yokes, each having a flat top and sloping sides and provided with an upwardly-extending brace, of a correspondingly-shaped monolithic cement stringer extending between and embedding said yokes, and a rail adjustably secured to said yoke and brace and supported by said stringer, substantially as described.

5. The combination with a rail of a railway-track, of a monolithic cement stringer supporting and partly embedding said rail, and a metal yoke embedded in said stringer and adjustably secured to said rail, said yoke having sloping sides provided with outwardly-projecting lugs, and means engaging in said lugs for correspondingly shaping the sides of the stringer, substantially as described.

6. In combination with a rail of a railway-track, a monolithic cement stringer supporting and partly embedding said rail; two or more metal yokes having sloping sides em-

bedded in said stringer and arranged at suitable distances apart, an upwardly-projecting brace and laterally-projecting lugs formed integral with said yoke, means for adjustably securing the rail to said yoke and brace, and a temporary restraining-wall for the cement arranged between the yokes and engaging said lugs, substantially as described.

In testimony whereof I sign this application, in the presence of two witnesses, this 14th day of August, 1899.

HENRY B. NICHOLS.

Witnesses:

GEO. B. TAYLOR,
WM. S. TWINING.