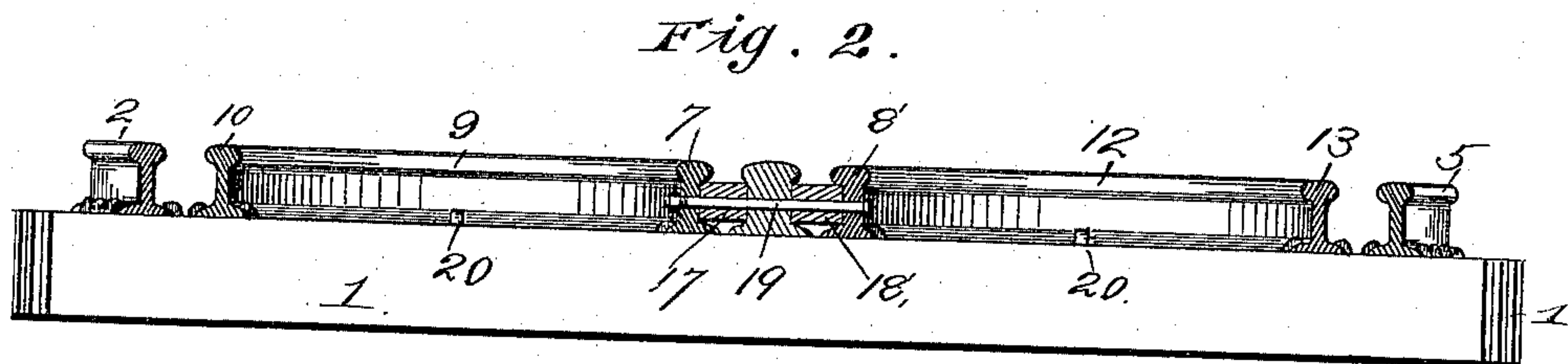
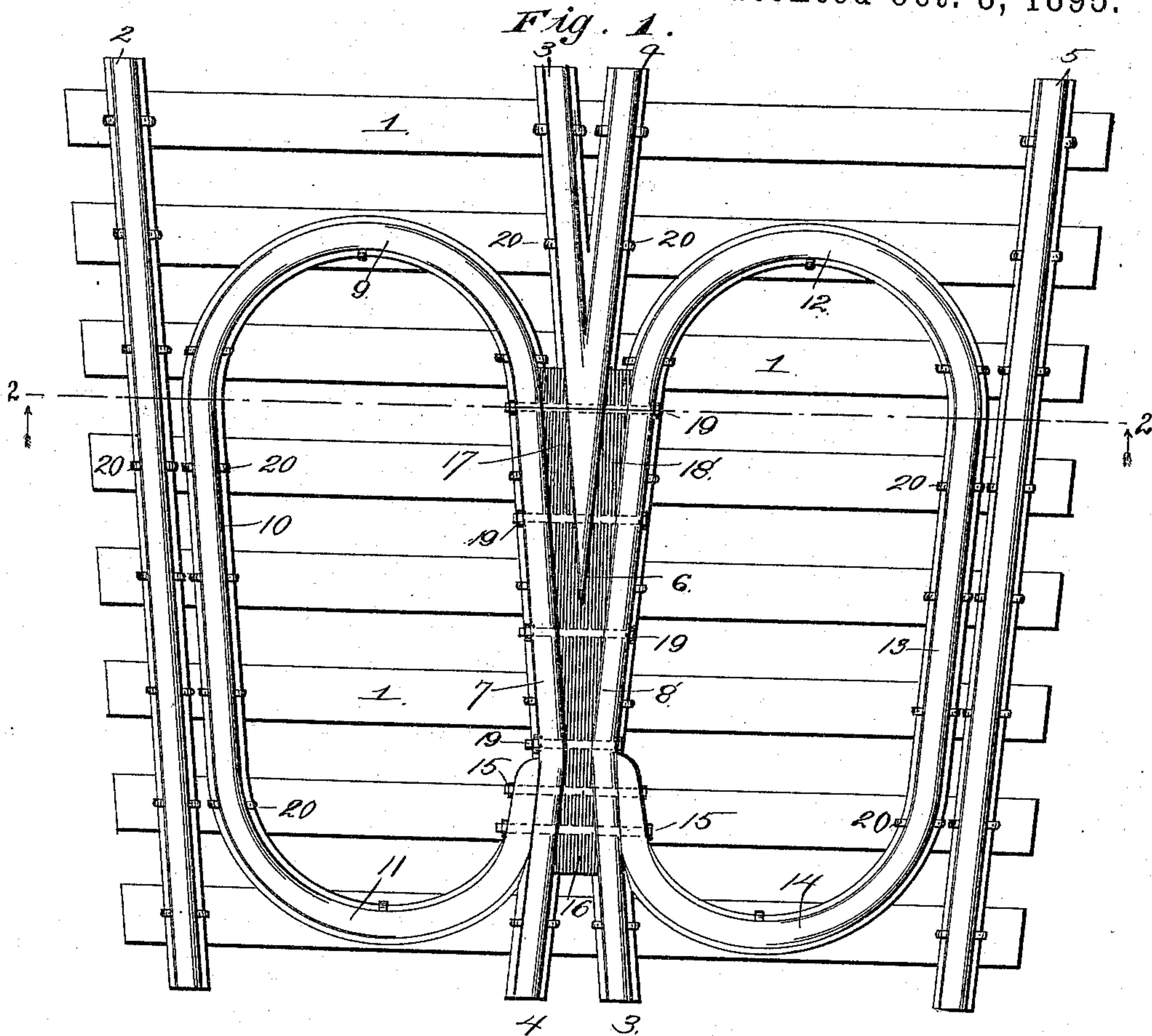


(No Model.)

J. W. THOMAS & S. A. DOUGLAS.
FROG AND GUARD RAIL FOR RAILWAY TRACKS.

No. 547,464.

Patented Oct. 8, 1895.



Witnesses:

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UNITED STATES PATENT OFFICE.

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FROG AND GUARD-RAIL FOR RAILWAY-TRACKS.

SPECIFICATION forming part of Letters Patent No. 547,464, dated October 8, 1895.

Application filed April 5, 1895. Serial No. 544,572. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. THOMAS, of Oregon, Holt county, Missouri, and STEPHEN A. DOUGLAS, of Kansas City, Wyandotte county, Kansas, have invented certain new and useful Improvements in Frogs and Guard-Rails for Railway-Tracks, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part thereof.

Our invention relates to railway-frogs and guard-rails; and the object of the same is to provide a structure of this character which is simple, strong, durable, and inexpensive, and which may be easily and expeditiously secured in operative position.

With this object in view the invention consists in its peculiar and novel features of construction and arrangement, as will hereinafter appear, and be pointed out in the appended claims.

In order that the invention may be fully understood, we will proceed to describe it with reference to the accompanying drawings, in which—

Figure 1 is a plan view of a frog and guard-rails constructed in accordance with our invention. Fig. 2 is a vertical cross-section taken on the line 2 2 of Fig. 1.

In the said drawings, where similar numerals refer to corresponding parts, 1 designates the cross-ties, upon which are mounted the main-track rails 2 and 3 and the side-track rails 4 and 5, the inner side-track rail 4 intersecting the inner main-track rail 3, so that they converge to the point 6 at the heart of the frog, as shown clearly in Fig. 1.

7 and 8 designate guard-rails, respectively, of the inner main rail 3 and the inner side-track rail 4. Said rails extend parallel with the rails 3 and 4, respectively, for a suitable distance, and then diverge, the said diverging portions forming the continuations, respectively, of the rails 4 and 3. At a suitable distance beyond the point 6 of the frog, at opposite sides of the rails 3 and 4, respectively, the rails 7 and 8 diverge, preferably, on curved lines. The rail 7 curves semicircularly outward, as at 9, to a point contiguous to the outer main rail 2, and is then carried parallel

therewith to form the outer guard-rail 10 for a suitable distance. It is then bent semicircularly inward, as shown at 11, and has its end resting against the outer side of the continuation of the inner side-track rail 4. The rail 8 also curves semicircularly outward, as shown at 12, to a point contiguous to the outer side-track rail 5, and is then carried parallel therewith for a suitable distance to form the outer guard-rail 13. It is then bent semicircularly inward, as shown at 14, and its inner end rests against the outer side of the continuation of the inner main rail 3, as clearly shown, and securing the ends of said rails 7 and 8 against the outer sides of their continuations 4 and 3 are transversely-extending bolts 15. Said bolts also clamp firmly between said rails the separating block or casting 16 at one end. Said separating block or casting is bifurcated at its opposite end to form the branch arms 17 and 18, which lie between and separate the guard-rails 7 and 3 and 4 and 8, respectively. Transversely-extending bolts 19, similar to the bolts 15, engage registering passages in said rails and frog-block and clamp them firmly and securely together. The various rails are spiked to the ties, as shown at 20, in the usual manner.

From the foregoing it will be apparent that a solid and substantial structure is provided at the point of intersection of the rails and that the guard-rails are kept from lateral displacement by means of the integral connecting portions 9 and 11 and 12 and 14, respectively.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A combined frog and guard-rail construction, consisting of an outer main-rail and an outer side-track rail, and an inner main-rail and an inner side-track rail, which form a junction, guard-rails extending parallel with the inner main-rail and the inner side-track rail for a suitable distance, and then diverging at one end to form continuations of said rails, and bent at their opposite ends to form outer guard-rails, located contiguous to and parallel with the outer main-track rail and outer side-track rail, respectively, and a bi-

furcated block or casting between said guard-rails and the inner main-track rail and side-track rail, and bolts securing the said block or casting between said bars to form a solid
5 and substantial structure, substantially as set forth.

2. A combined frog and guard-rail construction, consisting of the outer main-rail and the outer side-track rail, and the inner
10 main-rail and the inner side-track rail, which form a junction, and guard-rails 7 and 8 extending parallel to the inner main-rail and the inner side-track rail, respectively, and diverging at a suitable point to form continua-
15 tions of said rails, and bent semicircularly outward, as shown at 9 and 12, respectively, to a point contiguous to the outer main-track rail and the outer side-track rail, and then extending parallel with said outer main-track
20 rail and outer side-track rail to form the outer guard-rails 10 and 13, which at their opposite ends are bent semicircularly inward, as shown

at 11 and 14, respectively, and have their ends bearing against the outer sides of the continuations of the inner main-track rail and
25 the inner side-track rails, and a separating block or casting fitting between the guard-rails 7 and 8, and their continuations 4 and 3, respectively, and the inner main-track and side-track rails, and bolts securing said sup-
30 porting block firmly between the guard-rails 7 and 8 and the rails 3 and 4, and bolts securing the ends of said guard-rails to the continuations of the same, and also extending through the interposed portion of the block
35 or casting, substantially as set forth.

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

JOHN W. THOMAS.

STEPHEN A. DOUGLAS.

Witnesses:

M. R. REMLEY,

S. B. FALOR.