

No. 768,184.

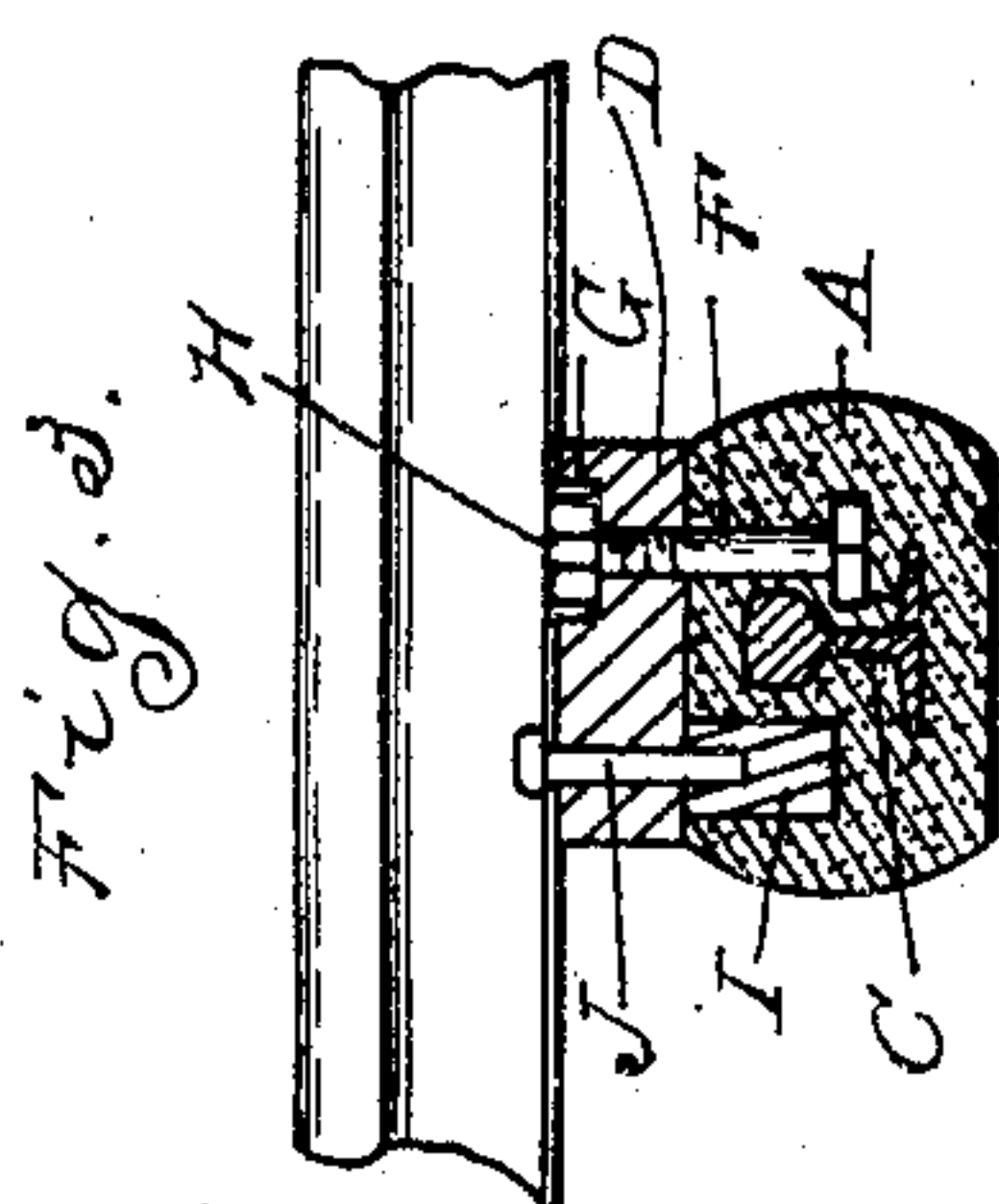
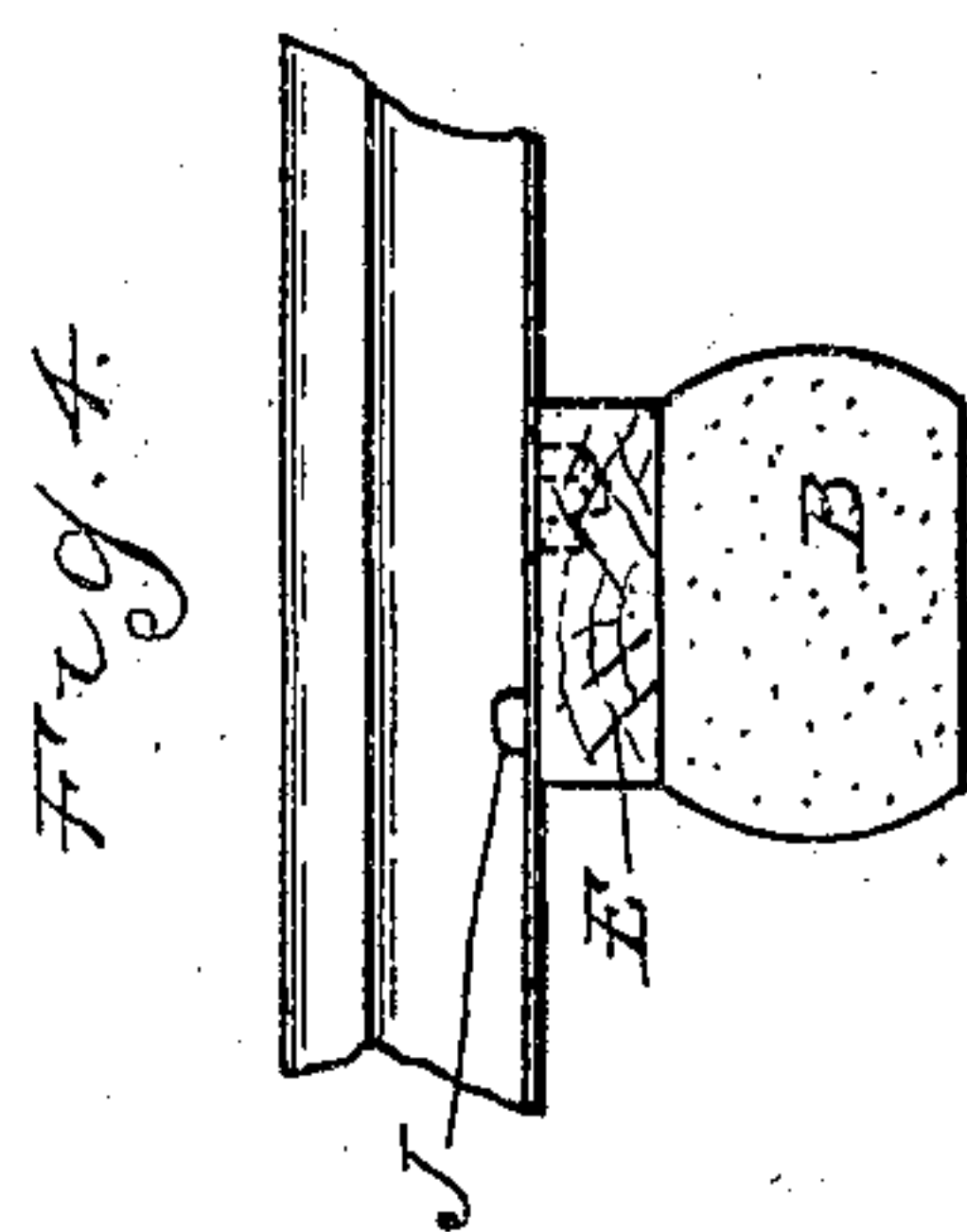
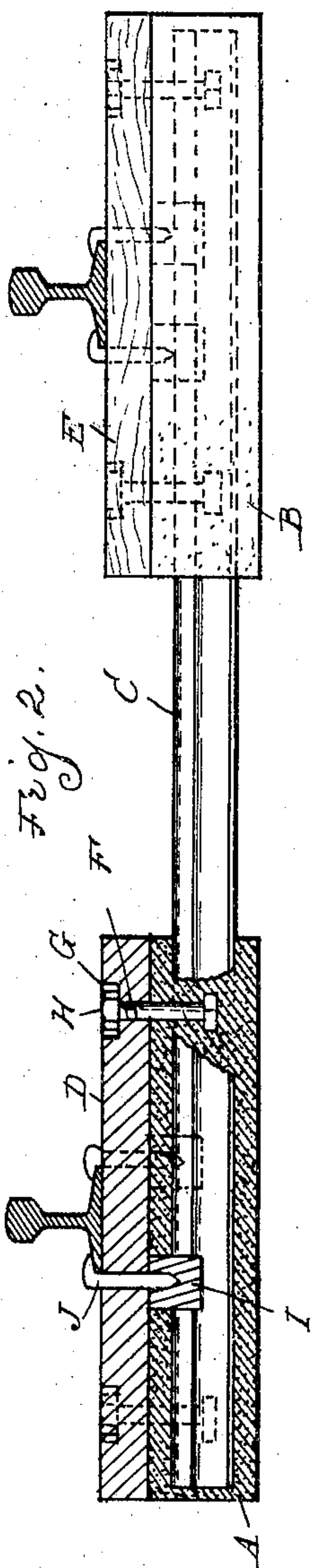
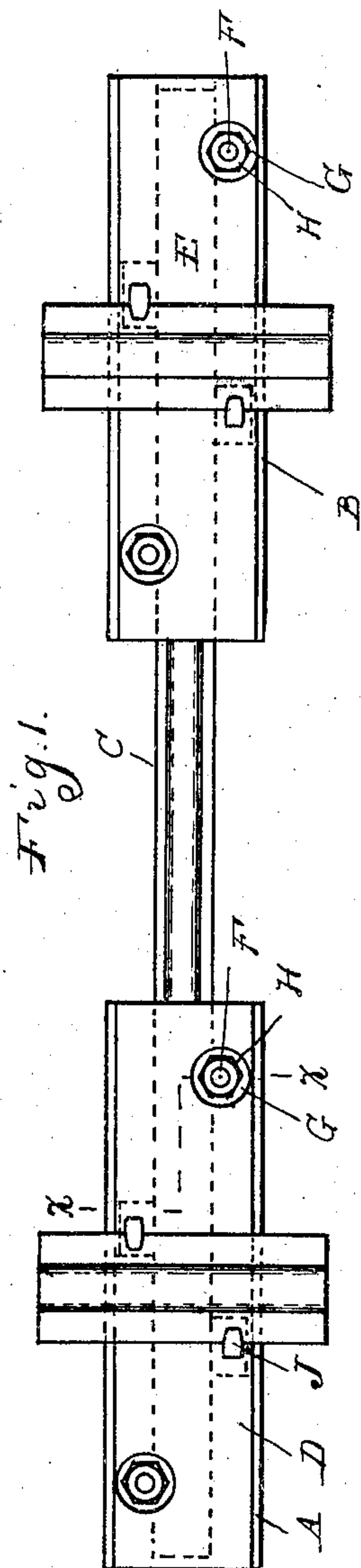
PATENTED AUG. 23, 1904.

G. H. KIMBALL & J. DOYLE.

RAILWAY TIE.

APPLICATION FILED DEC. 22, 1903.

NO MODEL.



WITNESSES

Geo. H. Granger
Jas. P. Barry

BY

INVENTORS
JOHN DOYLE
GEORGE H. KIMBALL
James Williamson ATT'Y.

UNITED STATES PATENT OFFICE.

GEORGE H. KIMBALL, OF DETROIT, AND JOHN DOYLE, OF GRAND RAPIDS, MICHIGAN.

RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 768,184, dated August 23, 1904.

Application filed December 22, 1903. Serial No. 186,218. (No model.)

To all whom it may concern:

Be it known that we, GEORGE H. KIMBALL, residing at Detroit, in the county of Wayne, and JOHN DOYLE, residing at Grand Rapids, in the county of Kent, State of Michigan, citizens of the United States, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to railway-ties; and it consists in the simple and peculiar construction of a tie of this character, as will be more fully hereinafter set forth.

In the drawings, Figure 1 is a plan view of our improved tie. Fig. 2 is a side elevation thereof, partly in section. Fig. 3 is a section taken on line *xx* of Fig. 1. Fig. 4 is a view of the tie in end elevation.

In the construction of our tie we employ, preferably, two sleepers, made of cementitious material, A and B. These are connected in axial alinement by a tie member C. We preferably employ as the tie member a section of an ordinary rail and embed the end portions of the rail in the cement sleepers in the manner indicated.

Arranged upon the upper faces of the sleepers and substantially covering the same are the rail-blocks D and E, which are of some cushioning material, such as wood. These blocks are rigidly connected to the sleepers by means of bolts F, which are embedded within the concrete at the opposite ends of each sleeper and upon opposite sides of the embedded rail, as shown in Fig. 2. The bolts have their threaded ends projecting upwardly within suitable openings G within the blocks, and said recesses are countersunk to receive the nuts H.

To permit the rail to be secured to the tie

described, wooden plugs, as I, are embedded in the cement sleepers in the manner indicated in Fig. 2, the tops of the plugs extending flush with the upper surface of the sleeper. The usual spikes J are driven within these plugs and clamp the rail in place.

From the description of our improved tie it will be observed that a durable and rigid structure is produced and one that may be manufactured at slight cost.

What we claim as our invention is—

1. A railway-tie comprising two separated cement sleepers, and a tie member therefor consisting of a rail of ordinary construction embedded within the sleepers.

2. A railway-tie comprising two separated cement sleepers, and a tie member therefor consisting of a rail of ordinary construction embedded within the sleepers below their tops.

3. A railway-tie comprising two separated cement sleepers, a tie member therefor consisting of a rail of ordinary construction embedded within the sleepers below their tops, cushioning-blocks upon the sleepers, bolts embedded within the sleepers projecting upwardly therefrom through the cushioning-blocks and wooden plugs also embedded in the sleepers adapted to receive the rail-spikes, substantially as shown and described.

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

GEORGE H. KIMBALL.
JOHN DOYLE.

Witnesses to the signature of George H. Kimball:

EMMA I. BARNES,
H. C. SMITH.

Witnesses to the signature of John Doyle:

E. W. TROY,
JOHN W. DOYLE.