

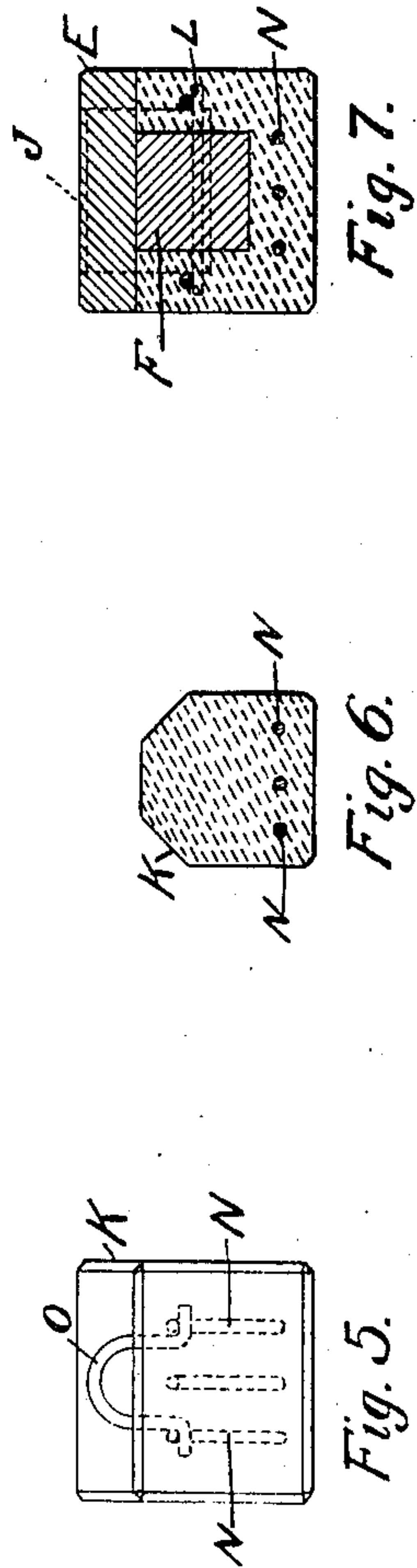
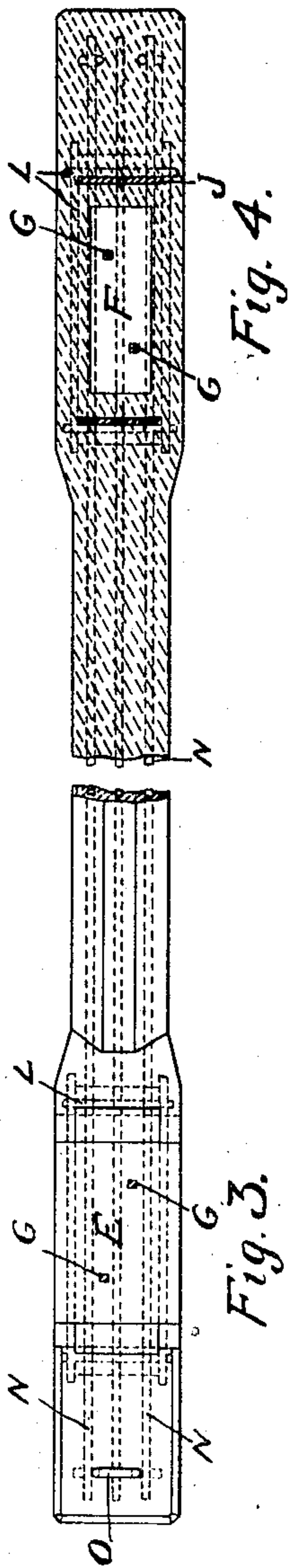
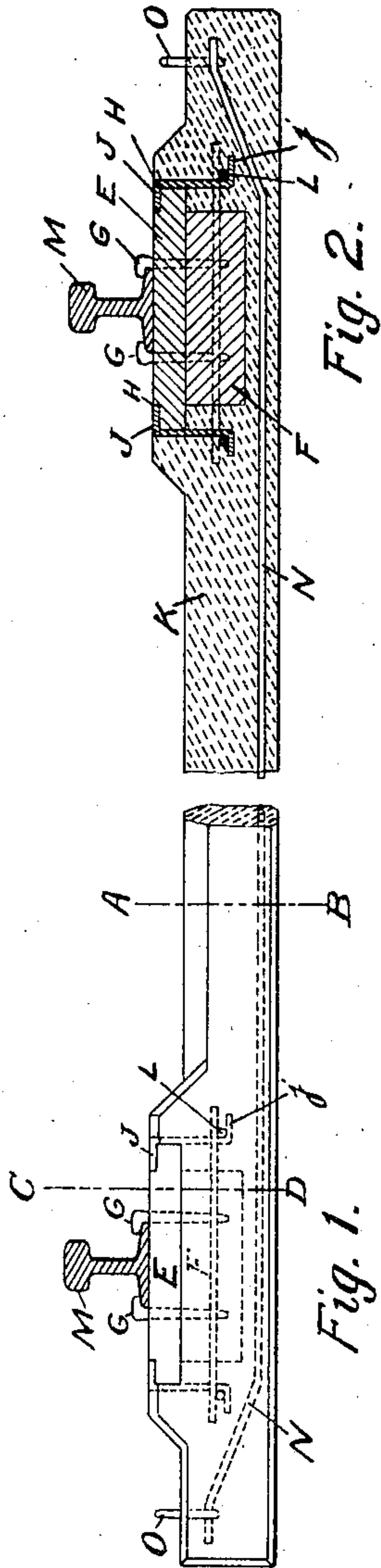
No. 862,263.

PATENTED AUG. 6, 1907.

J. MacMARTIN.

RAILWAY TIE.

APPLICATION FILED APR. 15, 1907.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES MACMARTIN, OF ALBANY, NEW YORK.

RAILWAY-TIE.

No. 862,263.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed April 15, 1907. Serial No. 368,229.

To all whom it may concern:

Be it known that JAMES MACMARTIN, a citizen of the United States, residing at the city of Albany, in the county of Albany and State of New York, has in-
5 vented certain new and useful Improvements in Railway-Ties, of which the following is a specification.

My invention relates to improvements in concrete railway ties, and the object of my invention is to provide a reinforced concrete tie, so constructed that the
10 rails may be moved from the position in which they are first secured, when desired, and the spikes used for holding the rails may be driven into a tie at any required point, together with such other elements and combinations as are hereinafter more particularly set
15 forth. I accomplish this object by means of the mechanism illustrated in the accompanying drawing, in which:

Figure 1 is an elevation. Fig. 2 is a longitudinal section. Fig. 3 is a plan. Fig. 4 is a horizontal section. Fig. 5 is an end elevation. Fig. 6 is a cross
20 section along the lines A—B, on Fig. 1. Fig. 7 is a cross section along the lines C—D on Fig. 1.

Similar letters refer to similar parts throughout the several views.

25 It is often necessary in railway service to move the rails laterally, and for that reason I deem it advisable to have the material into which the spikes, used for holding the rails in place, are inserted to be such that they may be driven in without first drilling a hole,
30 and for this reason, as well as for the additional advantage obtained because of the less noise attendant in the passage of a train than when the rail is laid directly on stone or concrete, I place a block, E, immediately beneath the rail and into which the spikes are driven.

35 Into a concrete tie, K, molded preferably in the form shown in Fig. 1 I place a small block, F, and resting thereupon I place a larger block, E. The block, E, preferably, extends beyond the edges of the block, F, and is, preferably, provided with an offset, H, at each
40 side, into which fit the upper ends of the Z-plates, J, J. The offset, H, being a sufficient depth from the upper surface of the block, E, to cause the top of the Z-plates, J, J, when placed in position to be flush with the upper surface of the block. The lower ends of the Z-plates, J,
45 are embedded in the concrete and resting upon their horizontal end projections, j, j, respectively, I preferably place the short rods, L, L, which rods are also embedded in the concrete.

The rail, M, is secured by the spikes, G, or other
50 suitable retaining device, which may be driven through the block, E, into the block, F, and when desired the spikes may be withdrawn and there is plenty of oppor-

tunity for causing them to again penetrate the block and retain the rail in a position different from that first occupied by it.

55 It will be readily seen that the lower block, F, need be of very limited extent in each direction, since it is only necessary to make it large enough to receive the spikes, G, which, because of the nature of their use, do not require very great size to admit of such lateral
60 change of tracks as is ordinarily necessary. The upper block, E, is larger, not thick, and therefore the expense of these blocks is very small and their utility is such that they answer the same purpose that a heavy and expensive tie would provide. The lower block, F, being
65 entirely protected from the weather and the elements would be practically indestructible, and the upper block, E, may be replaced when desired without great difficulty or expense.

For the purpose of reinforcing the concrete I preferably place a series of rods, N, running lengthwise of
70 the tie, slightly separated from each other, and preferably placed near the bottom of the tie, as shown in Figs. 6 and 7. These rods may be engaged at each end of the tie by a bail or handle, O, as shown in Fig. 5, which
75 passes through a portion of the concrete so that it extends above the same, forming a means for lifting the tie into place.

I do not wish to limit myself to the location of the reinforcing rods, N, near the bottom of the tie, with
80 their ends extending diagonally toward the upper surface and brought in contact with the bails, O, O, nor to the number of said rods, as these features may be varied without departing from my invention.

What I claim as my invention and desire to secure
85 by Letters Patent is:

1. Railway rails; spikes for securing them to the ties; a railway tie comprising concrete, reinforcing rods therein; a wooden block embedded in said concrete; a wooden
90 block larger than and resting upon said embedded block and secured in said concrete; said smaller block so placed beneath the larger block that the spikes employed for securing said rails shall pass through the larger and into the smaller of said blocks.

2. In a railway tie comprising concrete, reinforcing rods
95 embedded therein; a block embedded in said concrete; a handle at each end of said tie, substantially as described.

3. A railway tie comprising concrete; a block embedded therein; a larger block superimposed upon said embedded
100 block; Z-plates engaging said larger block embedded in said concrete; reinforcing rods extending through said tie, substantially as described.

In testimony whereof I have affixed my signature in presence of two witnesses.

JAMES MACMARTIN.

Witnesses:

FREDERICK W. CAMERON,
LOTTIE PRIOR.