

No. 861,204.

PATENTED JULY 23, 1907.

S. M. COLEMAN.

RAILWAY TIE.

APPLICATION FILED MAR. 2, 1907.

FIG. 1

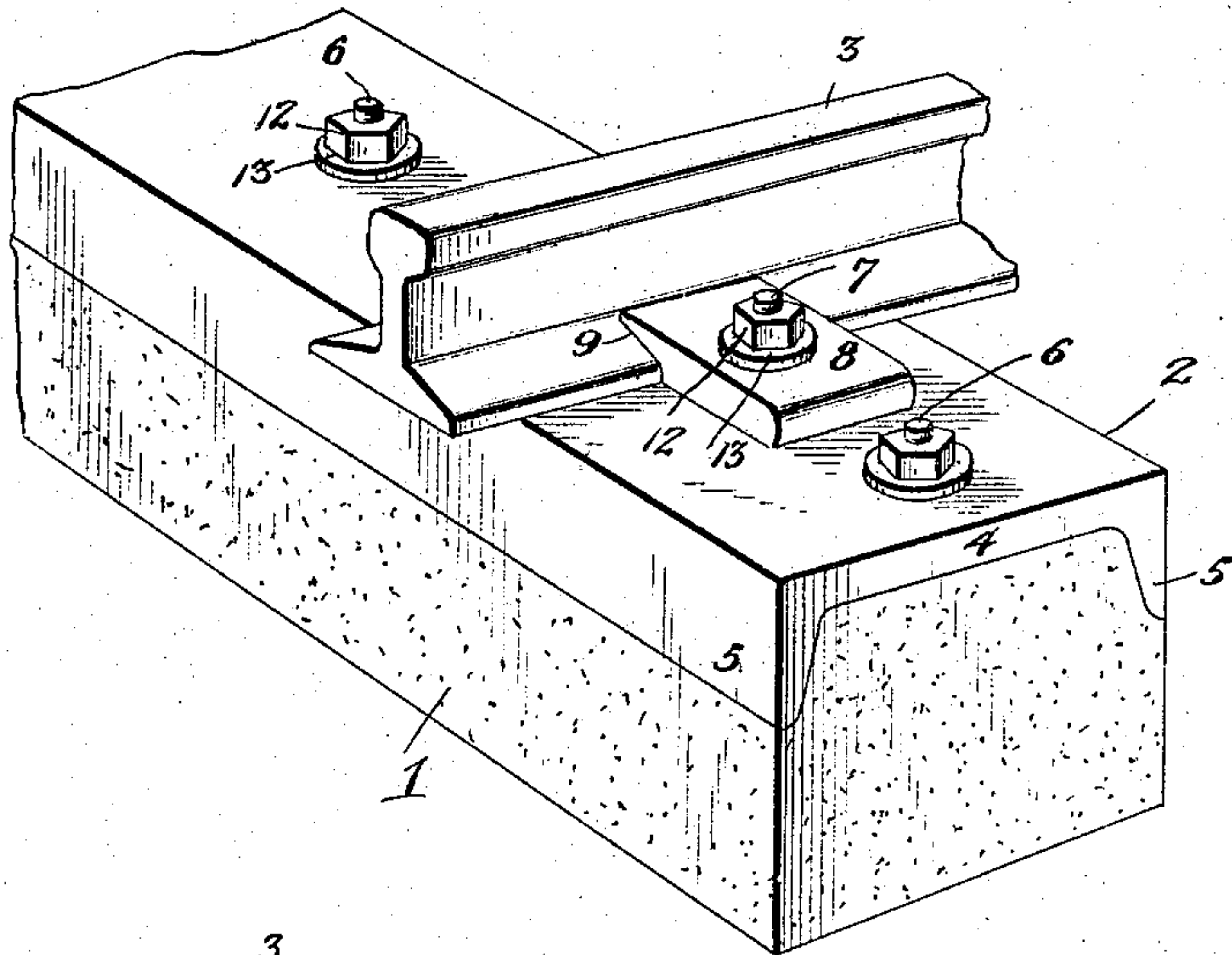


FIG. 2

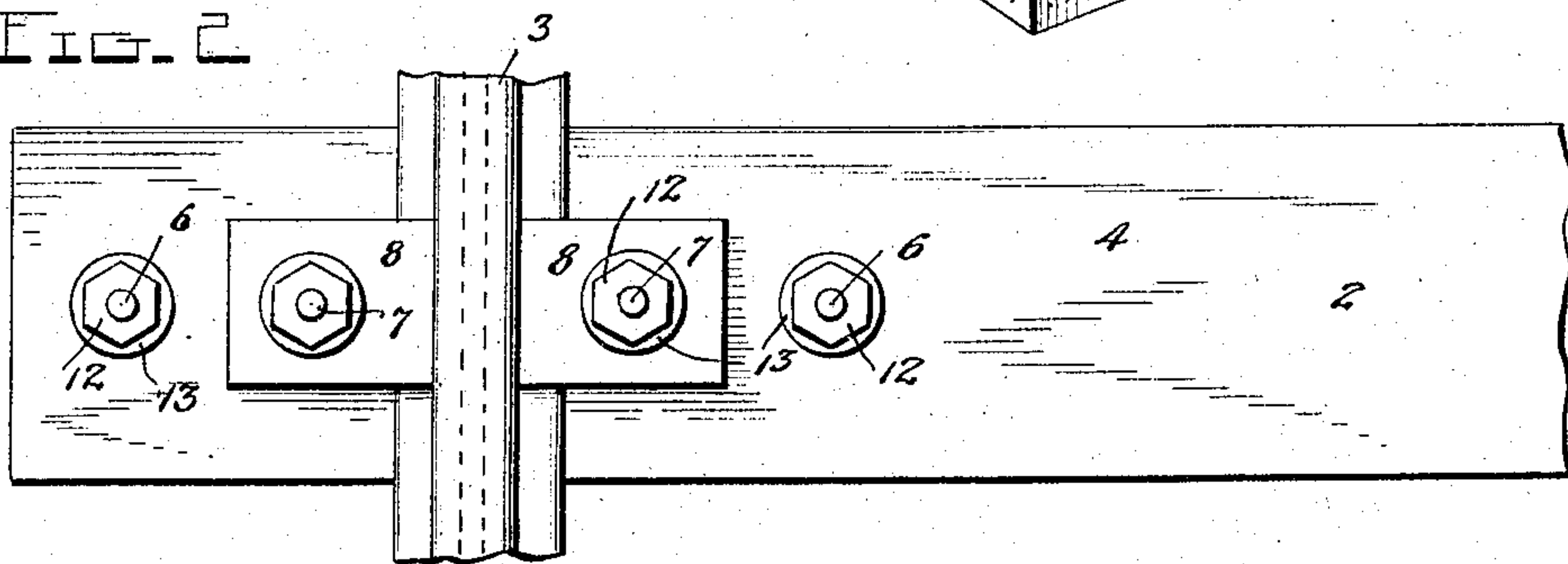


FIG. 3

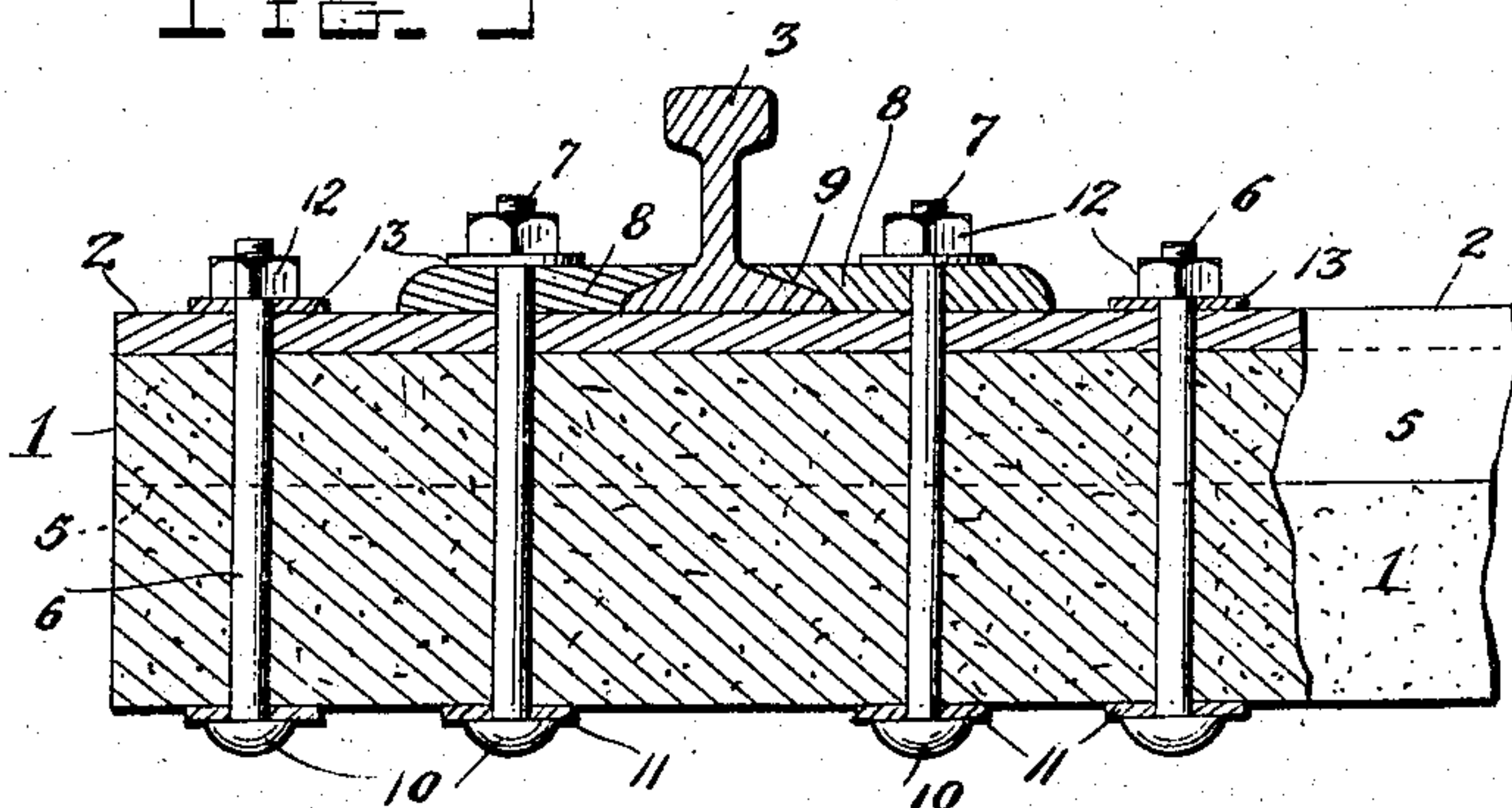
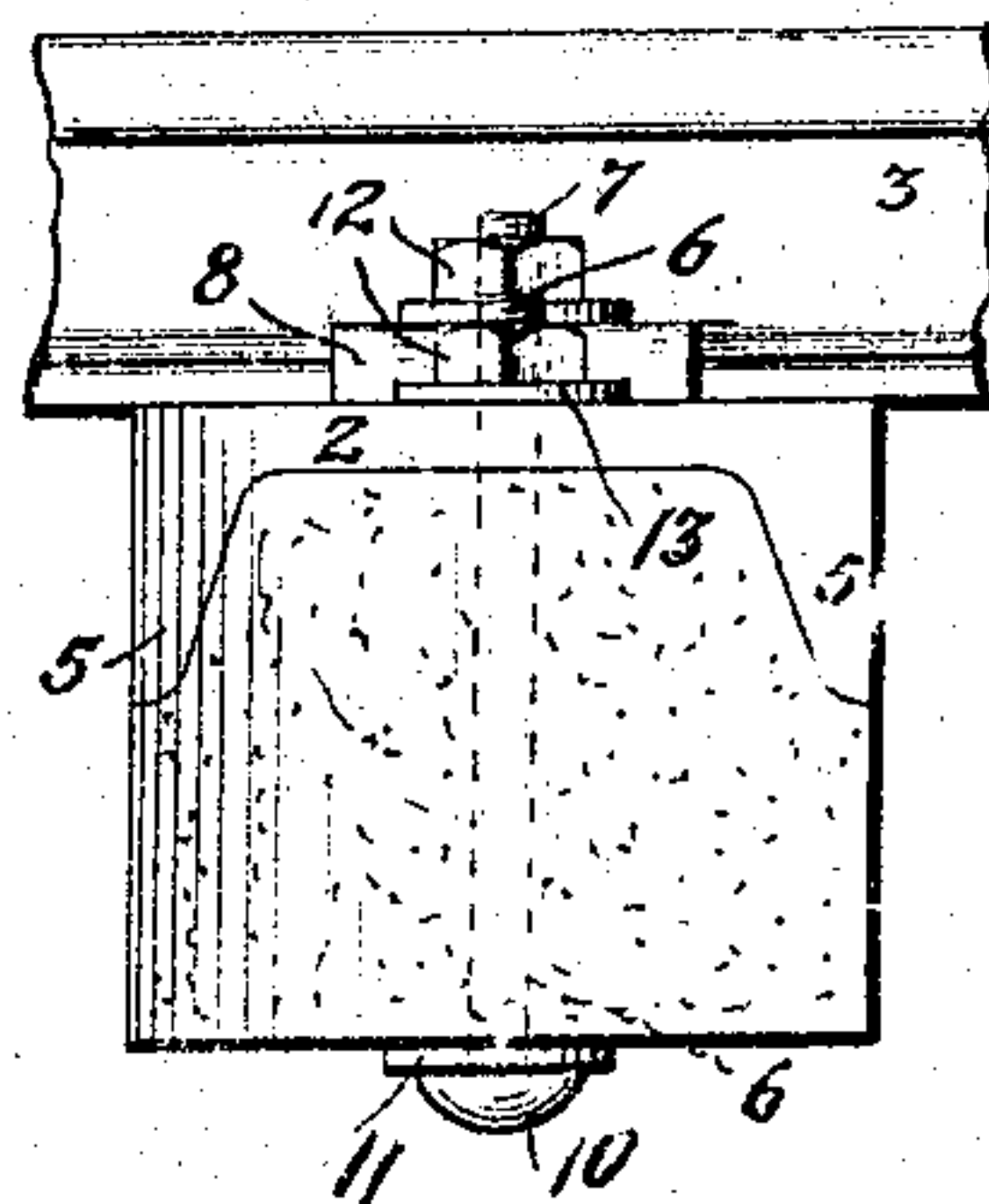


FIG. 4



Inventor

*S. M. Coleman*

Witnesses

*J. B. Greener, Jr.*  
*W. D. Little*

By

*Watson E. Coleman*

Attorney



# UNITED STATES PATENT OFFICE.

SAMUEL M. COLEMAN, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR OF ONE-FOURTH TO MARTIN L. SMITH AND ONE-FOURTH TO SAMUEL E. KIMMEL, BOTH OF JOHNSTOWN, PENNSYLVANIA.

## RAILWAY-TIE.

No. 861,204.

Specification of Letters Patent.

Patented July 23, 1907.

Application filed March 2, 1907. Serial No. 360,204.

*To all whom it may concern:*

Be it known that I, SAMUEL M. COLEMAN, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Railway-Ties, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in railway cross ties and to means for securing track rails thereon.

The object of the invention is to provide a railway cross tie composed of plastic material and metal, which may be produced at a small cost and which will be very strong and durable in use.

The above and other objects are accomplished by the improved construction illustrated in the accompanying drawings, in which

Figure 1 is a perspective of one end of my improved tie showing a track rail secured thereon; Fig. 2 is a top plan view of the same; Fig. 3 is a vertical longitudinal section; and Fig. 4 is an end elevation.

The improved railway cross tie comprises a substantially rectangular body 1 molded of concrete or other suitable plastic material and having secured upon its top a metal plate 2 which forms a chair or seat upon which the track rails 3 may be secured. The metal plate 2 is preferably constructed of a channel beam having a rectangular body portion 4 from the longitudinal edges of which depend right angular flanges 5. The top or upper surface of the plastic body 1 is molded to conform to the bottom or inner surface of the channel beam or plate 2 and these parts are securely fastened together by a series of vertical bolts 6 passed through them. There are preferably four bolts in each series, that is at each end of the tie, and the inner ones 7 of each series not only pass through alining openings in the body 1 and plate 2 but also through openings in track rail securing plates or clips 8 which latter are thereby effectively retained upon the top of the tie. The clips 8 are in the form of metal blocks or plates which have their inner ends or edges 9 shaped to fit the base flanges of the track rails 3 and thus effectively hold the same upon the top of the tie. Each of the bolts 6, 7 has at its lower end a head 10 between which and the bottom of the body 1 is arranged a washer 11. Upon the projecting upper screw threaded ends of said bolts are nuts 12 beneath which are preferably provided washers 13.

From the foregoing taken in connection with the drawings, it will be seen that the provision of the channel beam or bar 2 upon the top of the plastic body 1 of the tie not only serves to greatly strengthen and reinforce said body so as to reduce the danger of its breaking or cracking, but also serves as a strong and durable chair upon which the track rails are firmly supported and secured by the same bolts which unite the plastic body and the channel beam. Furthermore, the depending flanges 5 of the channel beam effectively protect the upper edges of the plastic body and the upper portions of its side faces, so that when it is in position upon the road bed there will be little or no danger of the plastic body being injured.

The simplicity of the construction of the tie permits it to be produced at a comparatively small cost and also renders it exceedingly strong and durable.

While this tie is especially adapted for use on street railways and trolley lines, its use is not limited thereto, as will be obvious, but it may be used on steam railways and the like, where cross ties are employed upon which to lay the rails.

Having thus described my invention what I claim and desire to secure by Letters Patent is:

A railway cross tie comprising a substantially rectangular body of plastic material, a channel metal beam arranged upon the top of said body and forming an integral covering for the entire top of the same, said beam having along its longitudinal edges depending side flanges of less width than the thickness of the plastic body and embedded in the opposite vertical sides of said body, said body and beam being formed with alined vertical apertures extending entirely through the same, rail clamping plates arranged upon the top of said beam and formed with vertical apertures to register or aline with those in said body and said beam, and fastening bolts passed vertically through said alining apertures, said bolts having the heads upon their lower ends engaged with the bottom of said body and their threaded upper ends projecting above the upper surfaces of said rail clamping plates, and nuts upon said threaded ends of the bolts, substantially as set forth.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

SAMUEL M. COLEMAN.

Witnesses:

A. L. HILDEBRAND.  
J. W. FLETCHER.