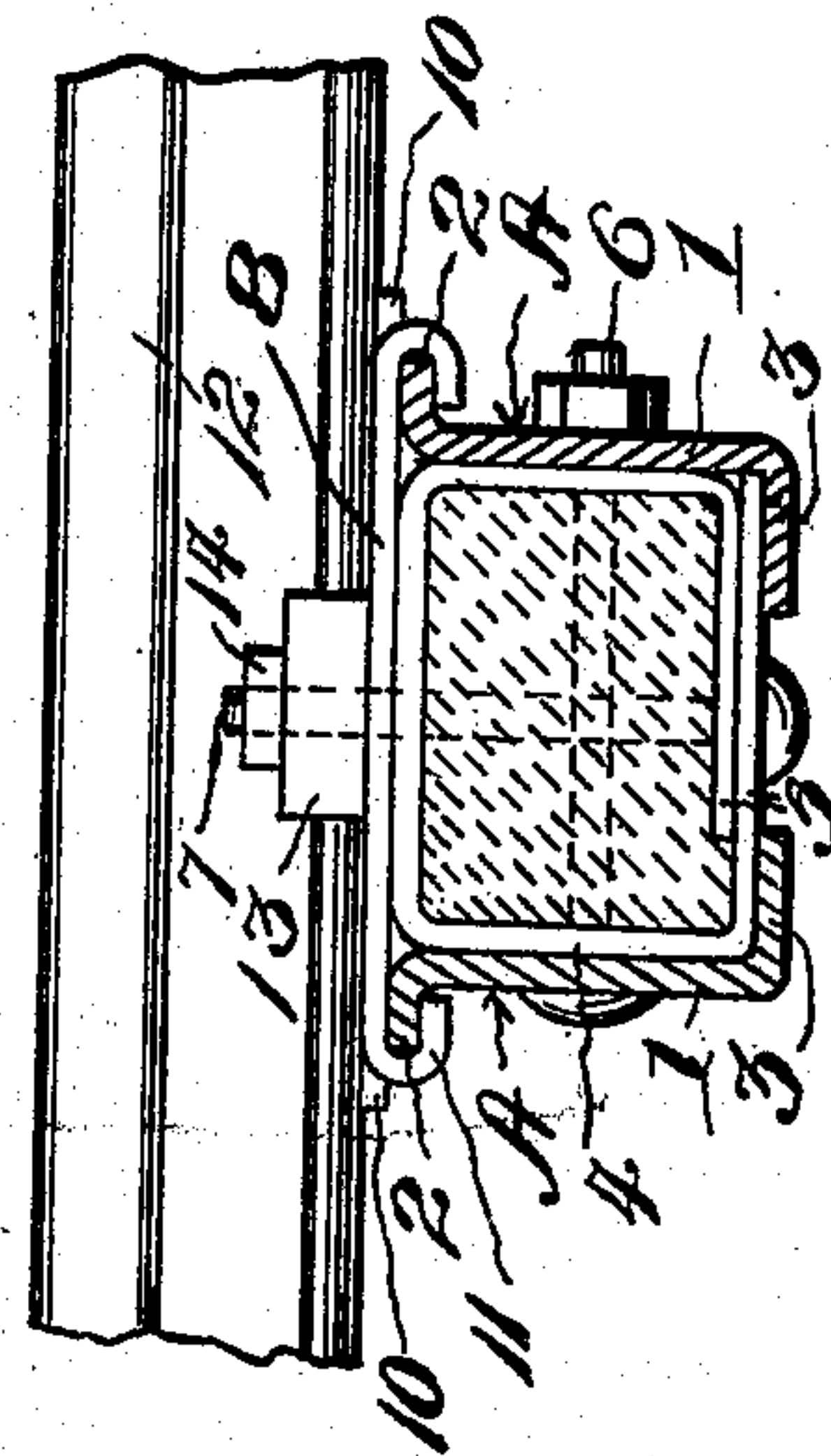
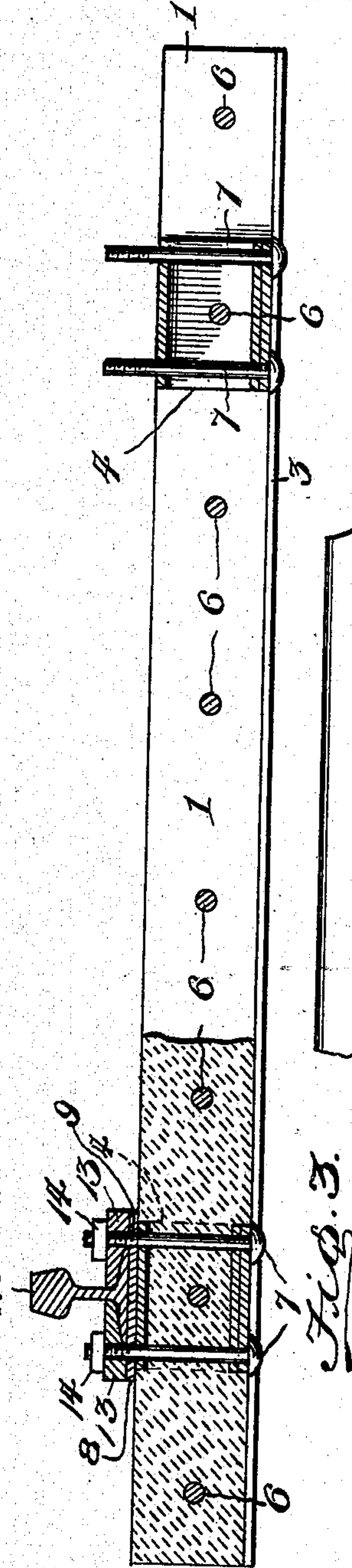
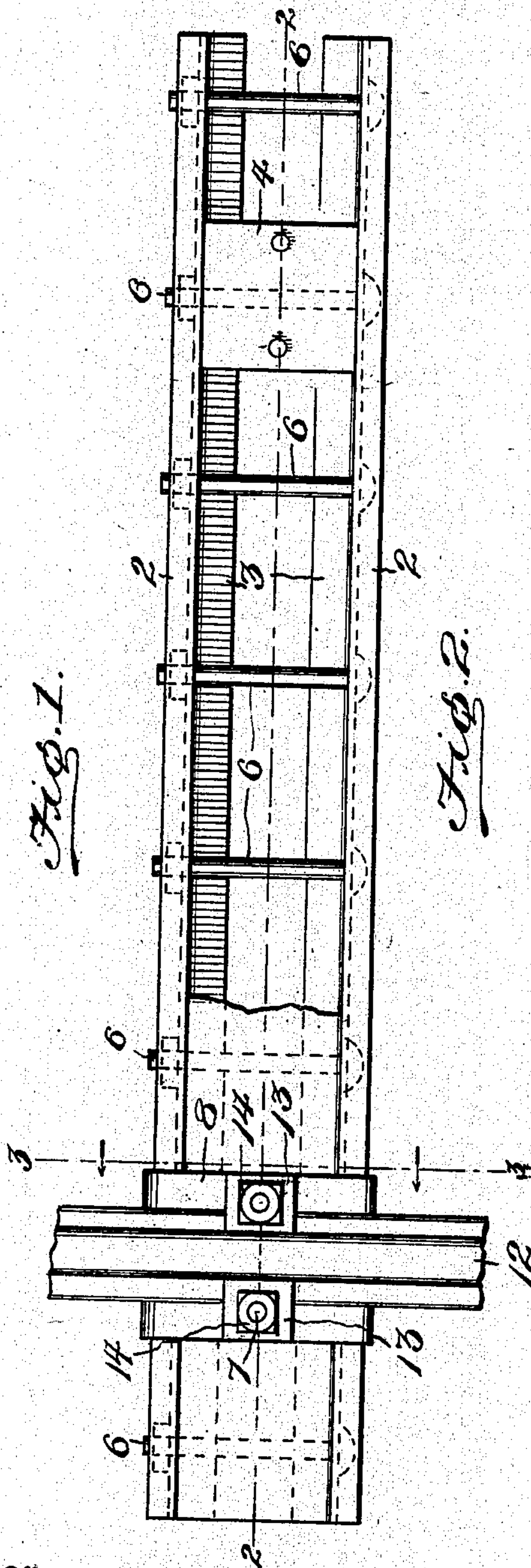


E. N. DAVIS.
RAILWAY TIE.
APPLICATION FILED AUG. 21, 1907.

900,086.

Patented Oct. 6, 1908.



Witnesses

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UNITED STATES PATENT OFFICE.

EDWIN N. DAVIS, OF LODI, WISCONSIN.

RAILWAY-TIE.

No. 900,086.

Specification of Letters Patent.

Patented Oct. 6, 1908.

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To all whom it may concern:

Be it known that I, EDWIN N. DAVIS, a citizen of the United States, residing at Lodi, in the county of Columbia and State of Wisconsin, have invented new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention relates to composite railroad ties, constructed of angle steel with a filling of cement; and it has for its objects to provide a tie of this class which shall possess superior advantages in point of simplicity, durability and general efficiency.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawing has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawing, Figure 1 is a top plan view of a railroad tie constructed in accordance with the invention, but with the filling applied to one end only. Fig. 2 is a longitudinal sectional view taken on the plane indicated by the line 2—2 in Fig. 1. Fig. 3 is a transverse sectional view taken on the plane indicated by the line 3—3 in Fig. 1.

Corresponding parts in the several figures are denoted by like characters of reference.

The body of the improved railroad tie is composed of two angle plates A—A, preferably of steel, each of said plates comprising a vertical body portion 1 provided at its upper and lower edges with oppositely extending flanges 2—3; the upper flanges being extended outward from the body of the tie, and the lower flanges being extended inwardly, toward each other. The plates A—A are properly spaced apart by sleeves 4 of approximately rectangular cross-section; said sleeves being formed of strips of sheet metal, bent in the proper shape, and having overlapping ends 5—5 which are placed downward, the lapped portions of the sleeves being supported upon the lower flanges 3—3 of the body plates, as will be clearly seen in Fig. 3. The body plates are connected with each

other by means of fastening members such as bolts 6, extending horizontally through the vertical portions or webs of the body plates; one such bolt being passed through each of the spacing sleeves, which latter will thus be firmly connected with the body plates.

After placing the body plates, properly connected and spaced apart, in position, preferably upon the road bed, the tie is filled with a plastic composition containing cement in suitable proportion, said composition, which is generically known as concrete, being permitted to settle and harden. It will be understood that the ties may be sunk beneath the surface of the road bed, so that the surrounding dirt will assist in forming a mold for the concrete; by thus sinking or embedding the ties, subsequent ballasting may also be to some extent avoided.

Before the application of the filling, each of the spacing sleeves is provided with two vertically disposed bolts 7, the threaded ends of which project upward a suitable distance, and said bolts being suitably spaced apart to admit the rail flange between them. Rail supporting plates 8 are provided with apertures 9 to engage the bolts 7, and said plates are provided with terminal notches 10 forming lugs 11 which are bent beneath the upper flanges 2 of the body members of the tie, upon which the supporting plates will thus be firmly secured, directly above and in contact with the spacing sleeves. The rails, one of which is shown at 12, are then placed in position, said rails being secured in position by means of clips 13 and nuts 14 applied to the upper ends of the bolts 7.

By the construction herein described, a composite tie is provided, possessing in an eminent degree the requisites of strength, durability, and ability to resist the crushing strain to which they will be subjected in practice. An important advantage of the improved tie resides in the facility with which it may be transported; the body members being capable of being nested together in small compass, while the spacing sleeves and the supporting plate occupy relatively small space. The expense of transporting ties to their destination will be comparatively small. The improved ties may be very readily assembled and placed in position; and when properly made they will be practically indestructible.

Having thus fully described the invention, what is claimed as new is:—

1. A railroad tie comprising body plates having flanges at their upper and lower edges, spacing sleeves having overlapping ends supported upon the lower flanges, connecting bolts, and a filling of plastic material. 20
2. A railroad tie comprising body plates having oppositely extending flanges at their upper and lower edges, spacing sleeves interposed between the plates and having overlapped ends, pairs of bolts extending vertically through the spacing sleeves, connecting bolts extending horizontally through the sleeves and the body plates, a filling of plastic material, and rail supporting plates engaging the vertical bolts and having downturned lugs engaging the upper flanges of the body plates. 25
3. A railroad tie comprising body plates having oppositely extending flanges at their upper and lower edges, spacing sleeves interposed between the plates and having overlapped ends, pairs of bolts extending vertically through the spacing sleeves, connecting bolts extending through the body plates and the spacing sleeves, and rail supporting plates engaging the vertical bolts and having downturned lugs engaging the upper flanges of the body plates. 30

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

EDWIN N. DAVIS.

Witnesses:

E. F. VANDERPOEL,
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