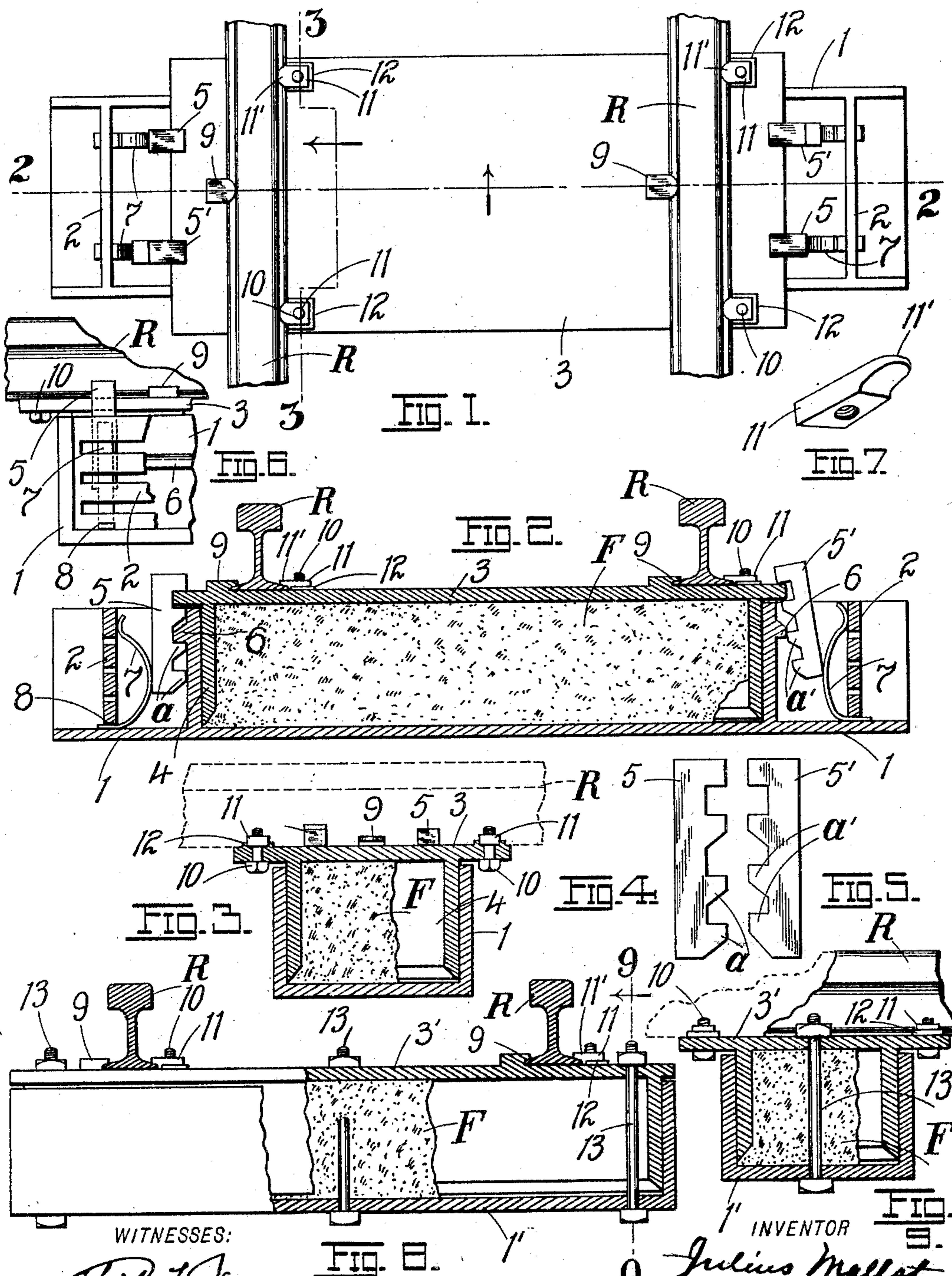


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J. MALLAT.
METAL RAILWAY TIE.
APPLICATION FILED FEB. 15, 1904.

NO MODEL.



WITNESSES:

Chas. J. Hanna
M. D. Whitcomb

INVENTOR
Julius Mallat
BY
Emil Storck
ATTORNEY

UNITED STATES PATENT OFFICE.

JULIUS MALLAT, OF ST. LOUIS, MISSOURI.

METAL RAILWAY-TIE.

SPECIFICATION forming part of Letters Patent No. 758,993, dated May 3, 1904.

Application filed February 15, 1904. Serial No. 193,605. (No model.)

To all whom it may concern:

Be it known that I, JULIUS MALLAT, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Metal Railway-Ties, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in metal railway-ties; and it consists in the novel construction of tie more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a top plan of my improved tie. Fig. 2 is a middle vertical longitudinal section on line 2 2 of Fig. 1. Fig. 3 is a transverse vertical section on the broken line 3 3 of Fig. 1. Fig. 4 is a plan of one of the locking-latches. Fig. 5 is a plan of a second locking-latch. Fig. 6 is a half end elevation of the tie. Fig. 7 is a perspective of one of the lock-nuts. Fig. 8 is a combined longitudinal section and elevation of a modified form of tie, and Fig. 9 is a transverse vertical section on line 9 9 of Fig. 8.

The object of my invention is to construct a metal tie which shall be elastic and yielding to the rolling-stock passing over the same, one which will require a minimum amount of attention and repair after once laid, one which shall be cheap and durable, and one possessing further and other advantages better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, 1 represents an oblong rectangular box or receptacle whose side walls extend a suitable distance beyond the end walls, said extensions confining between them transverse partitions or abutments 2, preferably made open or slotted, as shown. The open top of the box is adapted to be closed by a lid or cover 3, overlapping both the side and end walls, (to keep out rain, sleet, and snow,) the cover being provided with a depending rim 4, which telescopes with the vertical walls of the box, the edges of the rim being beveled or sharp to better cut into the filling F, previously packed into the box 1. The filling may be any suitable

earthy material—such as cinders, limestone, natural calcareous deposit, and the like—so long as it possesses the quality of elasticity.

Adapted to be suspended from the overhanging ends of the lid 3 are toothed latches 5 5', which, though of the same length, have their teeth spaced at different distances from their respective centers of suspension or oscillation, so that when two such latches are suspended from the same plane the teeth *a a* of one will be slightly below the teeth *a' a'* of the other. (Compare Figs. 4 and 5.) Disposed along each end wall of the box 1, below the upper edge thereof, is a rib or ledge 6, with which one or the other of the teeth *a* or *a'* of the respective latches engages, the engagement being effected by a flexed spring 7, interposed between the abutment 2 and the latch, the base of the spring being inserted through an opening 8, formed in the abutment for its reception, Fig. 6. Of course the particular tooth which the spring 7 thus forces into engagement with the rib 6 will depend on the elevation of the lid 3, and this elevation in turn will depend on the amount of compression to which the filling F has been subjected during the construction of the track. If, for example, a latch 5 is initially locked to the rib 6 for a given settling of the lid, then at some future time as the rolling-stock passes over the track the filling will be further compressed, thus allowing the lid to further settle down over the box when the latches 5' 5' will be forced into engagement with the ribs 6 and lock the cover to the box. I preferably dispose the latches 5 5' at diagonal opposite corners of the box, Fig. 1, so that there will be at least two points at which the lid will be locked to the box. In Figs. 1 and 2 the latches while disengaged are in position for immediate engagement with the ribs 6 the moment there is any further settling of the lid under a heavy load. Of course the moment the latches 5' 5' are locked the lid will remain in a permanent locked position at all points.

Each lid has formed integrally therewith on opposite sides of its center a lug 9 for embracing the outside flange of one rail R and the inside flange of the other rail, and the

overlapping sides of the lid are provided with bolt-holes for the reception of bolts 10, whose screw-threaded ends are screwed into and through the lock-nuts 11, each nut having a lip 11' for overlapping the flange on the opposite side of the rail. The nut 11 is prevented from turning by the circumscribing ridge 12, which, as shown, encircles three sides of the nut.

10 In lieu of securing the lid to the box by means of the locking-latches, as shown, I may dispense with the abutments 2, springs 7, and latches 5, proportionately enlarging the box longitudinally, telescoping the cover into it, 15 and securing the parts by a series of centrally-disposed bolts 13 13, as clearly shown in the modifications in Figs. 8 and 9, where 1' represents the box and 3' the lid or cover, the tie in other respects being the same as already 20 described.

I may of course change the details of construction without in any wise departing from either the nature or spirit of my invention.

Having described my invention, what I 25 claim is—

1. A tie comprising a suitable box or receptacle, a cover overlapping the vertical walls thereof, a rim on said cover telescoping with the vertical walls of the receptacle, means for 30 locking the cover to the receptacle, and rail-securing devices on the cover, substantially as set forth.

2. A tie comprising a suitable box or receptacle, a cover overlapping the vertical walls

thereof, a rim on the cover telescoping with 35 the vertical walls of the receptacle, toothed latches depending from the ends of the cover, ribs on the end walls of the receptacle, and springs for forcing the latches into engagement with the ribs, substantially as set forth. 40

3. A tie comprising a suitable box or receptacle, a cover overlapping the vertical walls thereof, a rim on the cover telescoping with the vertical walls of the receptacle, toothed 45 latches depending from the ends of the cover, ribs on the end walls of the receptacle, abutments on the box removed a suitable distance from the end walls thereof, a suitable spring interposed between said abutments and latches for forcing the latter into engagement with 50 the ribs aforesaid, thereby locking the parts, substantially as set forth.

4. In a tie, a suitable receptacle, a cover for the same, lugs formed integrally with the cover for engaging the flange on one side of 55 the rail, nuts having lips for engaging the flange on the opposite side of the rail, and a circumscribing ridge for each nut formed on the cover to prevent turning of said nut, and suitable bolts for securing the nuts to the 60 cover, substantially as set forth.

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

JULIUS MALLAT.

Witnesses:

EMIL STAREK,
MARY D. WHITCOMB.