

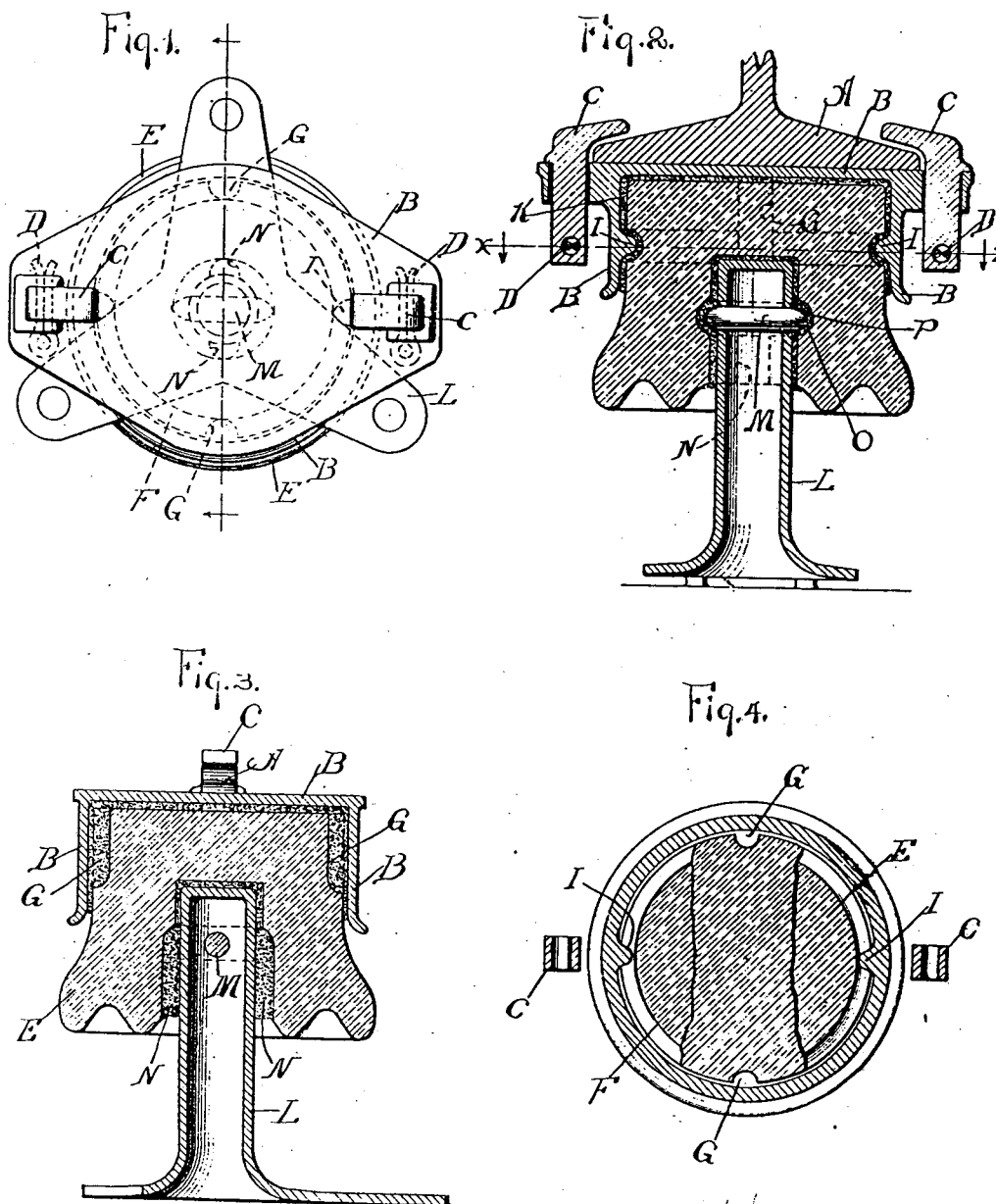
No. 628,667.

C. K. KING & G. A. MEAD.
INSULATED RAIL SUPPORT.

Patented July 11, 1899.

(Application filed May 24, 1899.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES K. KING AND GEORGE A. MEAD, OF MANSFIELD, OHIO.

INSULATED RAIL-SUPPORT.

SPECIFICATION forming part of Letters Patent No. 628,667, dated July 11, 1899.

Application filed May 24, 1899. Serial No. 718,084. (No model.)

To all whom it may concern:

Be it known that we, CHARLES K. KING and GEORGE A. MEAD, citizens of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented a new and useful Insulated Rail-Support, of which the following is a specification.

This invention relates to an insulated rail-support, and is particularly adapted for supporting and insulating a third rail of an electric railway, although it is evident that it may be used for insulating the support of various other electric conductors.

The invention consists substantially in the construction and arrangement hereinafter set forth in the description, and more particularly pointed out in the claims.

Like reference-letters refer to the same parts in the several figures of the drawings, in which—

Figure 1 is a plan or top view of the device. Fig. 2 is a vertical section of the same. Fig. 3 is a vertical section taken at right angles to the plane upon which the section shown in Fig. 2 is taken. Fig. 4 is a horizontal section taken on the line *x x*, Fig. 2.

In the drawings the letter A designates the electric conductor to be supported, which in the form shown is a rail, and more especially a third rail, for carrying the current. This conductor or rail rests on a cap made as a metal casting or in any other suitable manner, and this cap is in the drawings designated by the letter B. The cap is secured to the rail by clamps C C, of which there are preferably two, formed alike. These clamps have stems adapted to pass through vertical apertures in the cap and jaws constructed at an angle to the stems and adapted to overlap the rail and are preferably provided with a shoulder, as shown, to prevent them passing through the aperture in the cap. The stems are made longer than the apertures in the cap and are provided at their lower vertical ends with any suitable device for limiting upward movement and preventing displacement, and a convenient device for this purpose is shown in the drawings, which represent a spring cotter-pin, (designated by the letter D.) The stems of the clamps have a free vertical movement, but are prevented from turning by any suitable means. In the drawings the stems

of the clamp are shown as made angular in cross-section, which is found a convenient form to permit vertical movement while preventing an axial or turning movement; but it is evident that the same result may be accomplished in other ways.

The cap surmounts and is supported upon an insulating-block which is preferably made of porcelain or vitrified clay and may be made of any other suitable insulating material. This insulating-block is designated in the drawings by reference-letter E and may extend up into the cap against the under side thereof and down some little distance below the lower edge of such cap. This block is provided with one or more vertical grooves G and an intersecting horizontal groove F, which latter may extend partially or entirely around the circumference, as desired. The cap is provided with one or more inwardly-projecting lugs or teats I, which are adapted to be inserted through the vertical grooves of the block and then by turning the cap caused to pass down into the horizontal groove F, thereby effecting the locking together of the cap and block. A layer of cement K may be also used, if desired, to secure the block and cap together, so as to prevent any accidental turning with reference to each other after they are in place. The insulated block may itself form a support and rest upon a cross-tie or upon the ground or other support, but usually it is preferable to mount such block upon a standard L. In case the block is mounted upon a standard it is desirable to form a central recess in the block to receive the upper end of the standard and provide the vertical walls of such recess with one or more vertical grooves N and the horizontal groove O, which latter intersects the vertical groove or grooves. The standard may have projecting from near its upper end one or more lugs M, which may be made either by casting the same on the standard or by drilling the latter and inserting a pin, as shown in the drawings. A cement filling P may be also used to connect the standard and insulating-block permanently.

By means of the construction just above described the third rail or other conductor is supported and yet insulated from the ground in an economical and efficient manner and is

clamped to the support by clamps which are secured against axial movement and yet are capable of vertical play, both to facilitate the insertion of the third rail and also to permit certain vertical movements of the rail, which are usually incident to its actual operation and use.

It is manifest that modifications and variations may be made by those skilled in the art in the details of the construction above described without departing from the principle, and we therefore do not wish to be understood as limiting ourselves to the exact construction shown and described.

What we claim, and desire to secure by Letters Patent, is—

1. A support for electric conductors, comprising a cap and an interposed insulating-block suitably secured together, and two clamps secured to the cap and having a vertical play but constructed so as to be incapable of turning; substantially as and for the purpose set forth.

2. A support for electric conductors, comprising a cap, a block of insulating material upon which the cap rests, two clamps carried by the cap and having means for preventing their turning, and an elongated vertical portion to permit of free vertical movement; substantially as and for the purpose set forth.

3. In a support for an electric conductor, the combination with an insulating-support, of a pair of clamping-lugs having jaws to overlap the conductor and vertical portions passing through apertures in the support, and having an angular cross-section, whereby such clamps are permitted a vertical movement and are prevented from turning; substantially as and for the purpose set forth.

4. In a support for electric conductors, the combination of a cap provided with clamping-lugs adapted to clamp such cap to the rail or other conductor, a block of insulating material supporting the same, the cap being provided with one or more lugs and the block of insulating material with one or more vertical

grooves and a horizontal groove, whereby such clamp and block of insulating material are adapted to be connected and locked together; substantially as and for the purpose set forth.

5. In a support for electric conductors, the combination with a standard, a block of insulating material supported thereby, and a superposed cap, of lugs on the standard and cap, and vertical and circular grooves on the insulating-block, adapted to permit the insertion of the lugs and retain the parts in position when connected; substantially as and for the purpose set forth.

6. In a third-rail support, the combination of a standard provided with projecting lugs near its top, a block of insulating material provided with a vertical recess on its under side having one or more vertical grooves formed in the walls of the recess and a horizontal groove in the wall of the same intersecting the vertical groove or grooves, and said block also provided near its upper end with one or more vertical grooves, upon its outer surface, and a horizontal groove intersecting the same, a cap resting on the top of such insulating-block and extending around a portion of the sides thereof, and said cap provided with a teat or teats adapted to be inserted through the vertical groove or grooves and pass into the horizontal groove, and clamps secured to the cap and having an angular cross-section and of a length sufficient to allow vertical play in the apertures formed in the cap for the reception of the vertical portions of the clamps; substantially as and for the purpose set forth.

In witness whereof we have hereunto set our hands, this 19th day of May, 1899, in the presence of the subscribing witnesses.

CHARLES K. KING.
GEORGE A. MEAD.

Witnesses:

H. S. BLACK,
LOUIS P. BENNETT.