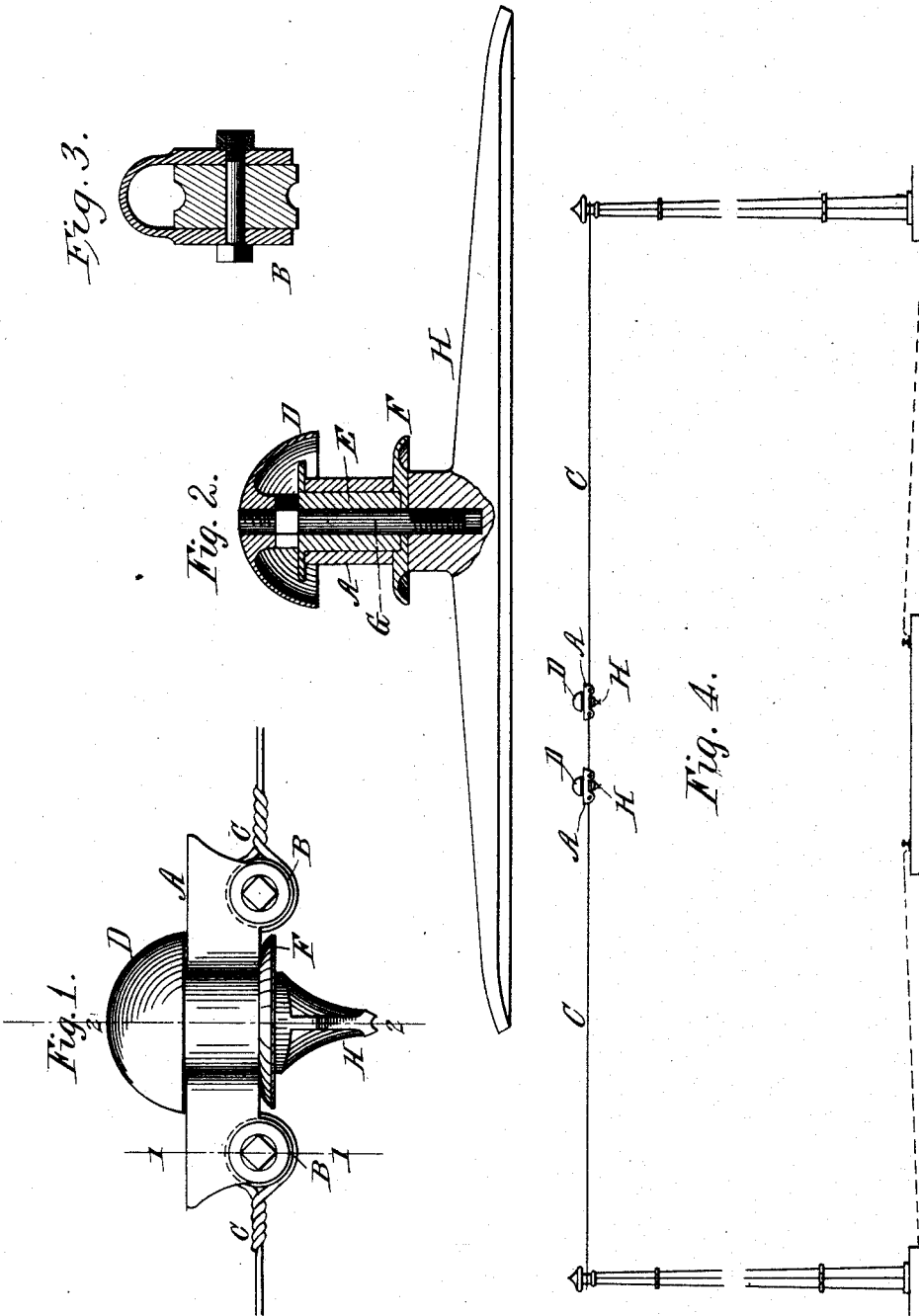


(No Model.)

E. P. MORRIS.
SUSPENSION FOR TROLLEY WIRES.

No. 428,930.

Patented May 27, 1890.



Witnesses:
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Inventor:
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UNITED STATES PATENT OFFICE.

ELMER P. MORRIS, OF CINCINNATI, OHIO.

SUSPENSION FOR TROLLEY-WIRES.

SPECIFICATION forming part of Letters Patent No. 428,930, dated May 27, 1890.

Application filed January 6, 1890. Serial No. 336,056. (No model.)

To all whom it may concern:

Be it known that I, ELMER P. MORRIS, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a certain new and useful Improvement in Suspensions for Trolley-Wires in Electric Roads, of which the following is a specification.

My improvement consists in a novel construction of such suspensions by which better insulation is secured and a considerable portion of the bulk and weight essential to the suspensions heretofore used is dispensed with.

In the drawings, Figure 1 is a perspective view of one of my improved suspensions; Fig. 2, a cross-section on the line 2 2 of Fig. 1; Fig. 3, a section on the line 1 1 of Fig. 1, and Fig. 4 a view showing two of my suspensions in position upon the trolley-wires.

A represents a roof or casing, preferably of metal; B B, insulating-spools, which may be of any suitable non-conducting material; C C, suspension-wires for the hangers, secured to the insulating-spools; D, an insulating-cap; E, an insulating-bushing; F, an insulating-washer, and G a bolt taking through the casing A, bushing E, and washer F, and into a wire-carrying ear H. The cap, bushing, and ear are of the usual construction.

The casing A takes over and covers the insulating-spools and takes around the insulating-bushing, thus serving to protect the spools from rain, sleet, or snow, and avoiding the imperfect insulation resulting from moisture or ice. It also serves to support the ear which carries the trolley-wire. The lightness and compactness of construction which this method of insulating permits of is a great advantage in the construction of street-railways.

I claim as my invention—

1. The combination, in suspensions for trolley-lines, of an inclosing-case, a wire-carrying ear suspended therefrom, and insulating-spools mounted in the inclosing-case, substantially as and for the purposes specified.

2. The combination, in suspensions for trolley-lines, of an inclosing-case, an insulated wire-carrying ear suspended therefrom, and insulating-spools mounted in the inclosing-case, substantially as and for the purposes specified.

ELMER P. MORRIS.

Witnesses:

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