

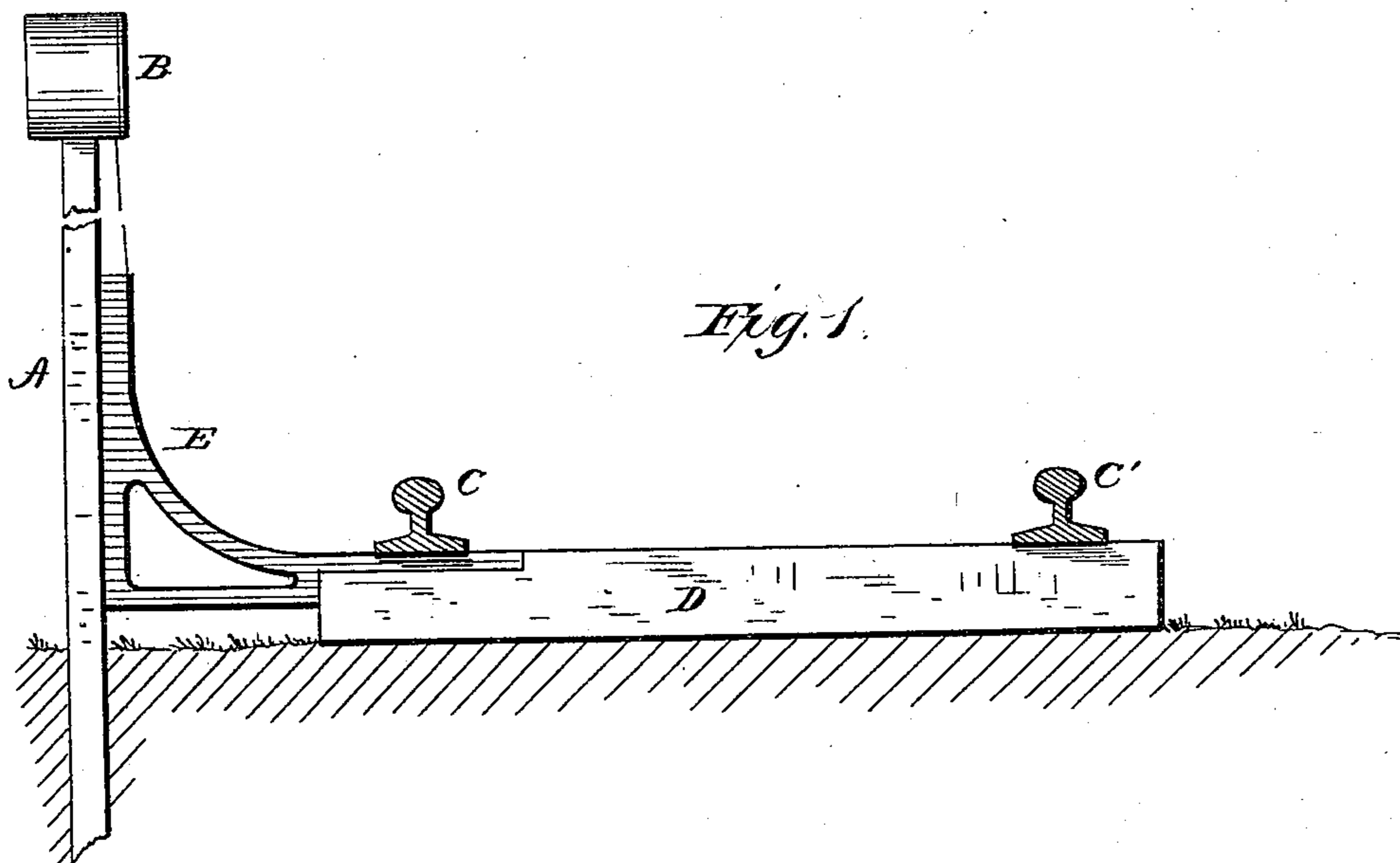
(No Model.)

T. J. POTTINGER.

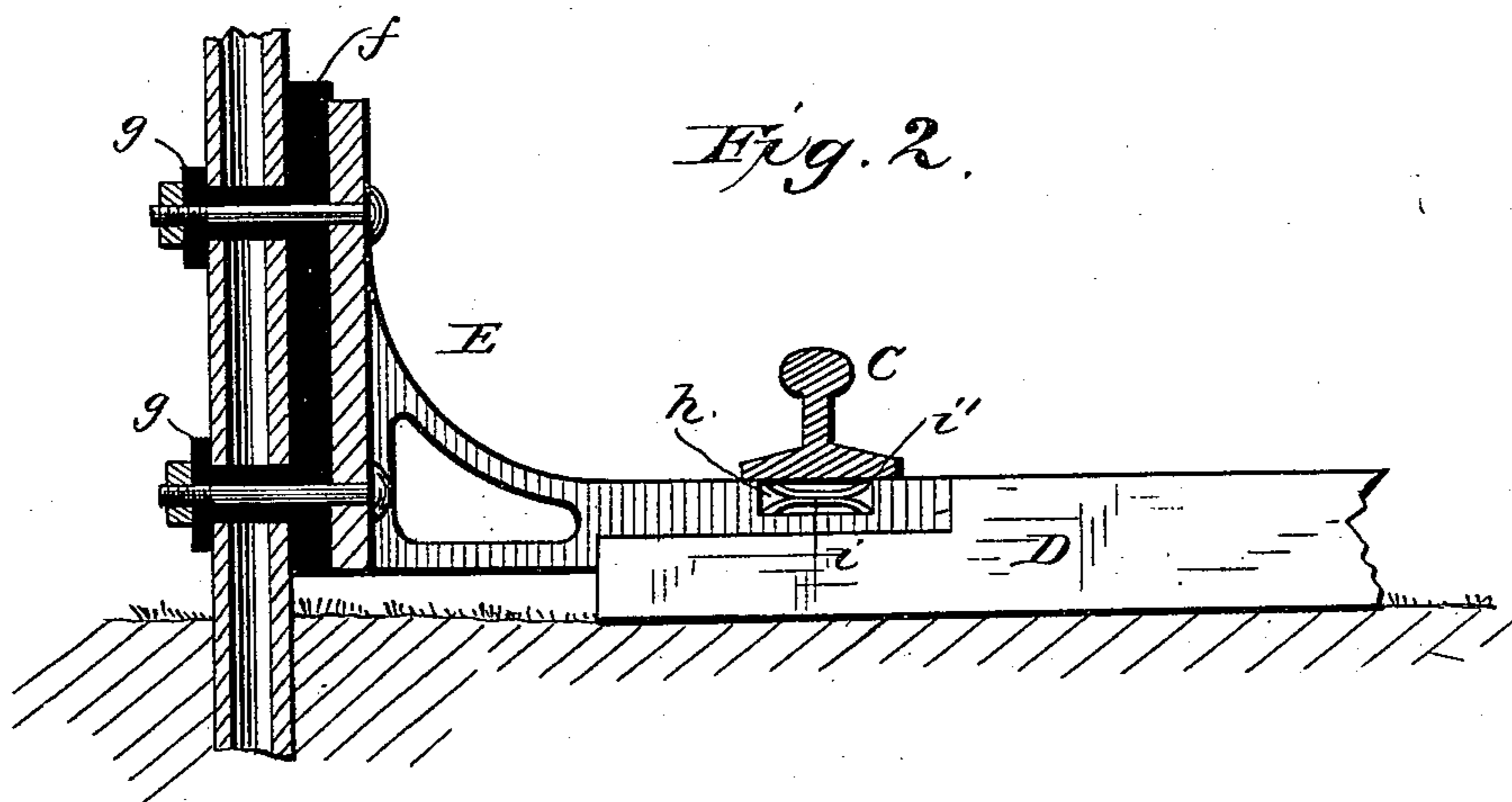
ELECTRICAL CONNECTION FOR RAILWAY SIGNALS.

No. 287,466.

Patented Oct. 30, 1883.



*Fig. 1.*



*Fig. 2.*

WITNESSES

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# UNITED STATES PATENT OFFICE.

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## ELECTRICAL CONNECTION FOR RAILWAY-SIGNALS.

SPECIFICATION forming part of Letters Patent No. 287,466, dated October 30, 1883.

Application filed April 6, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS J. POTTINGER, a citizen of the United States, residing at Louisville, in the county of Jefferson and State of Kentucky, have invented certain new and useful Improvements in Electrical Connections for Railway-Signals, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to means for making electrical connection between the rails of a railway-track and an electrical signal mounted on a post adjacent to the track, its object being to provide a strong and reliable connection, which will serve both as a conductor of electricity and as a means for supporting and steadying the post upon which the signal is mounted.

It has heretofore been customary to use insulated wires for connecting the rails with the signals, and these wires are liable to be broken, and required to be embedded in the ground or otherwise protected against injury. Not an infrequent cause of the breakage of the wires is the swaying or disarrangement of the posts by wind, washing away of the earth, and the upheaval of the ground by frosts.

In providing against both the breakage of electrical connection and the disarrangement of the signal-posts, my invention mainly consists in a metallic bracket having one edge adapted to be secured to and extended along the side of a signal-post and provided with a projecting portion adapted to lie upon a railway-sleeper, under and in contact with a railway-rail supported by said sleeper, or to be connected to the rail independently of the sleeper.

In the accompanying drawings, Figure 1 is a side elevation of a metallic bracket applied to a railway-rail and signal-post according to my invention. Fig. 2 is a similar view, showing the bracket applied to a metallic signal-post, and provided with means for insuring good electrical contact with the rail.

Referring to Fig. 1, the letter A designates the wooden post, having mounted upon its top a signal-box, B, in which is supposed to be inclosed an electrical signal apparatus.

C C' indicate the rails of a railway-track, the rail C being supposed to be one of a line

of rails connected together to act as conductors of electrical currents for operating a railway-signal.

D is a wooden sleeper supporting the opposite rails of the track.

The letter E indicates a metallic bracket, which will usually be formed of cast-iron, approximately in triangular shape, as shown. One of the sides or edges of the bracket is secured longitudinally to the post A by means of suitable bolts, and its upper projecting end is connected with a wire leading into the signal-box. The lower edge of the bracket projects laterally from the post, and the laterally-projecting end of the bracket is laid upon the top of the sleeper, and preferably let flush into the same, so that its upper surface will come into contact with the base of the rail, which also rests upon the sleeper. The spikes which secure the rail to the sleeper may also pass through the end of the bracket, or the bracket may be secured to the sleeper, independently of the rail. In either case the bracket should be firmly secured to the sleeper, in order that it may serve as an efficient brace for the post, to which it is also secured.

If, now, the rails are arranged in insulated sections, as is customary in electrical block signaling, it will be understood that an electrical current sent over the section of rails will also traverse the metallic bracket and find its way through said bracket and the connecting-wire at its upper end to the electrical signal inclosed in the casing B. A very firm and durable electrical connection is thus formed between the rails and signal, and at the same time the signal-post is firmly braced against accidental disarrangement.

In the modification shown in Fig. 2, where a metallic signal-post is used with its foot embedded in the ground, a strip of insulated material, *f*, is interposed between the edge of the bracket and the post, and the bolt-holes of the post are provided with insulating-plugs, through which pass the metallic bolts used in securing the bracket to said post. In this modification the end of the bracket which projects under the rail is provided with a recess, as shown at *h*, in which is arranged a metallic spring, *i*, having at its ends spring-spurs *i'*, which project in opposite directions and come

in contact with both the bottom of the rail and the bottom of the recess, so that the vibration to which the rail is subjected by passing cars will cause these spring-spurs to have a scraping or scratching action on both the rail and bracket, and thus prevent any accumulation of rust and preserve bright and reliable electrical contact.

Having now fully described my invention, I wish it to be understood that I do not confine myself to the particular form of bracket shown in my drawings, and that I may use one or more of such brackets, if found desirable, for each post.

What I claim is—

1. The combination, with the signal-post, the railway-rail, and its supporting-sleeper, of the metallic bracket having one edge secured to said post, and the projecting portion secured to the sleeper and in contact with the rail, substantially as described, and for the purpose set forth.

2. The combination, with the metallic bracket adapted for attachment as the brace of a

signal-post, and the railway-rail arranged over one end of said bracket, of the interposed metallic spring having spurs projected from its ends, substantially as described, and for the purpose set forth.

3. The combination, with the post and rail, of an electric signal supported by the post, the metallic bracket having one edge secured to the post and electrically connected with the signal, and a projecting end in contact with the rail, substantially as described.

4. The combination, with the post, an electrical signal mounted thereon, and the railway-rail, of the metallic bracket, having one edge secured to the post, one end in connection with the signal, and the other end in contact with the rail, substantially as described.

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

THOS. J. POTTINGER.

Witnesses:

W. W. LEGRANDE,  
R. W. WEBB.