

(No Model.)

R. T. WHITE.

STREET RAILWAY CONSTRUCTION.

No. 375,853.

Patented Jan. 3, 1888.

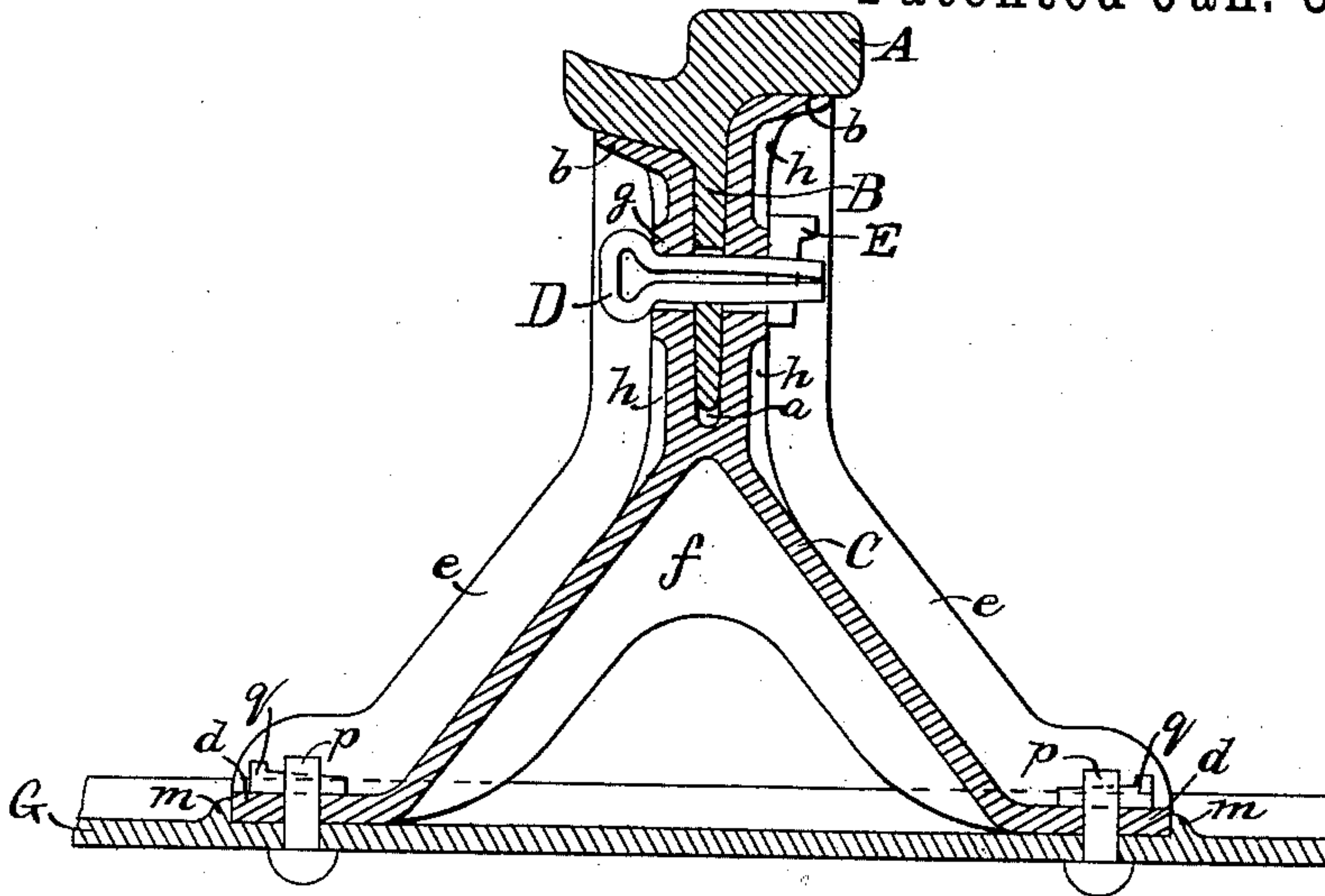


FIG. 1.

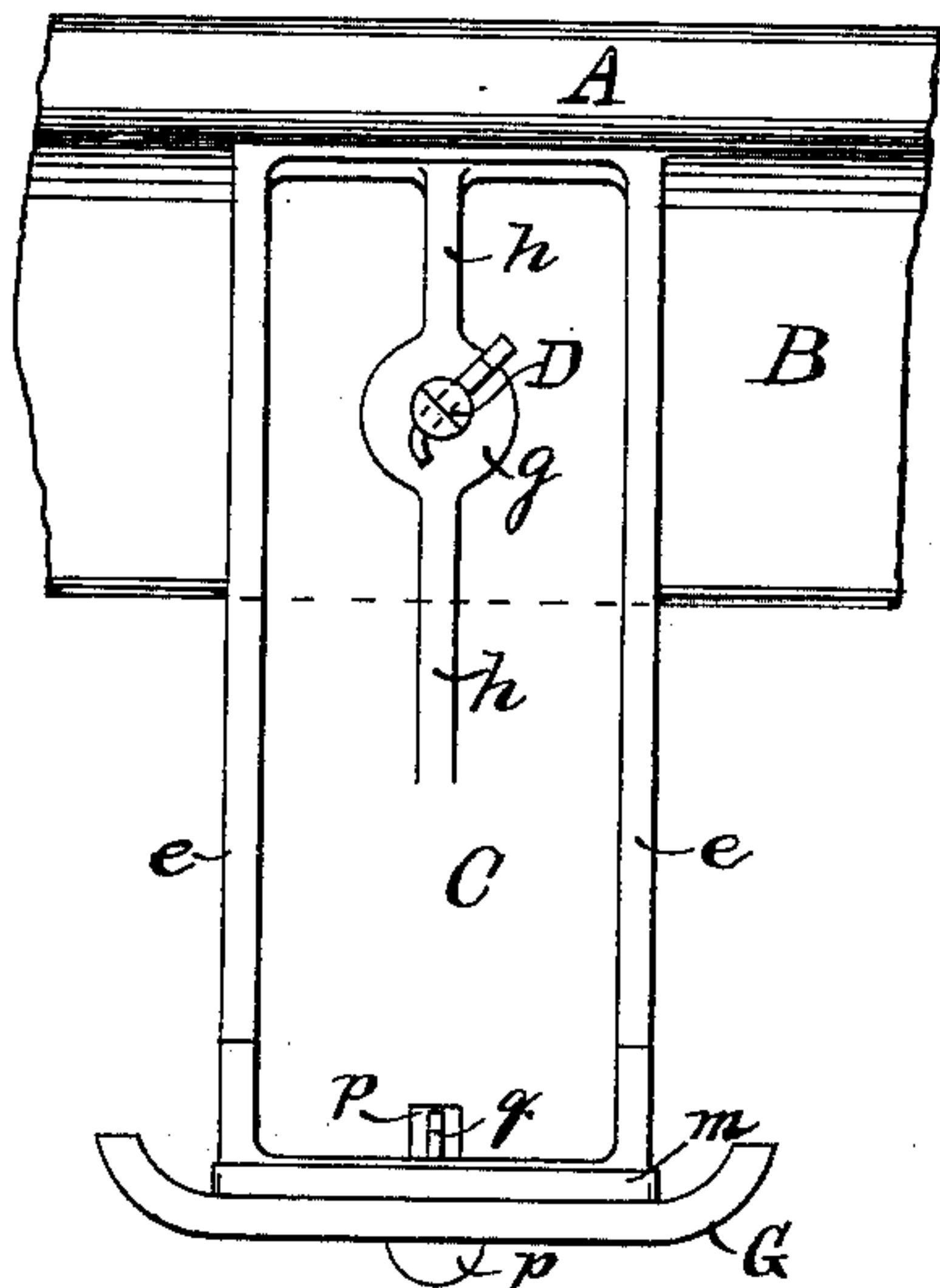


FIG. 2.

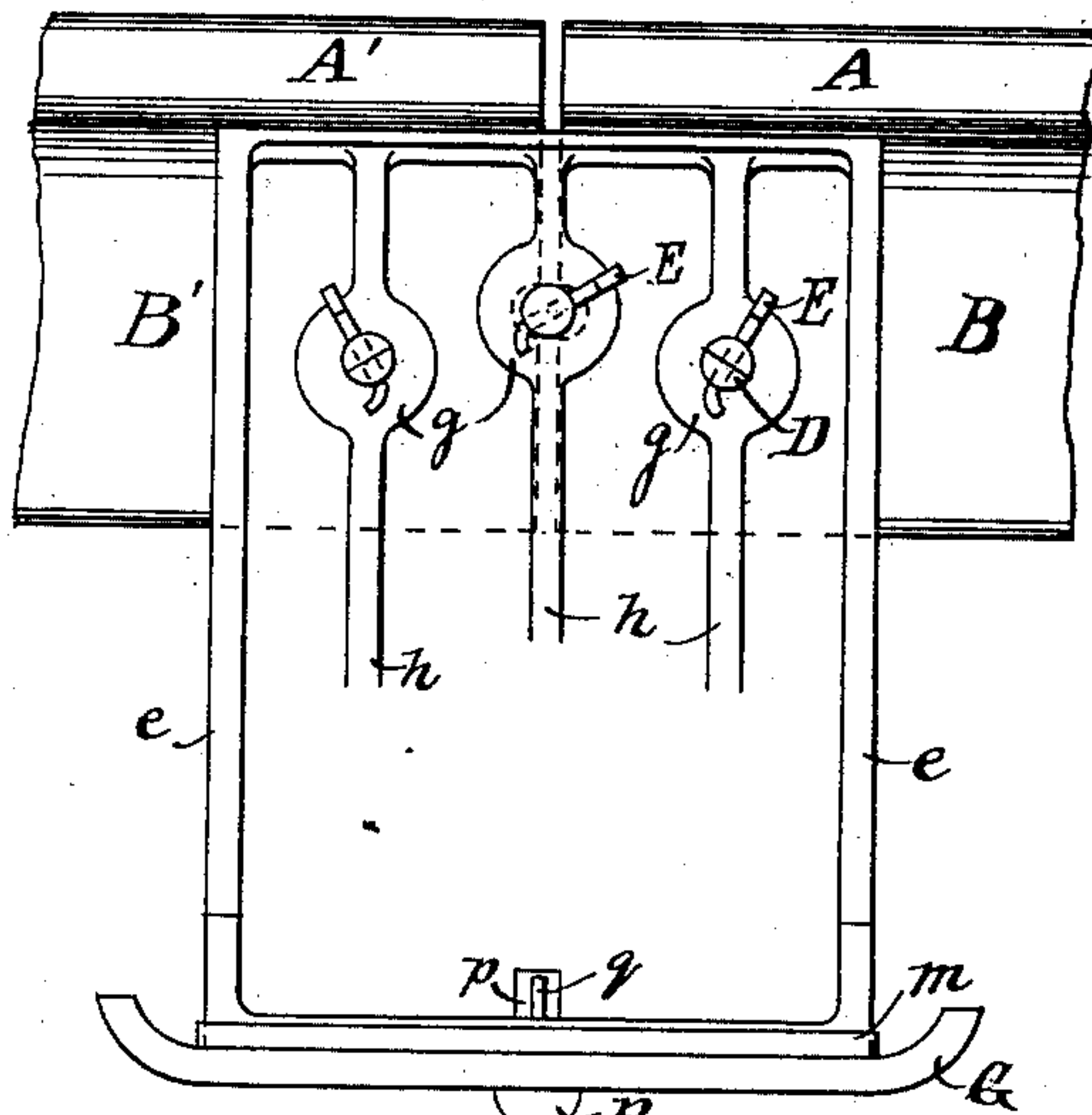


FIG. 3.

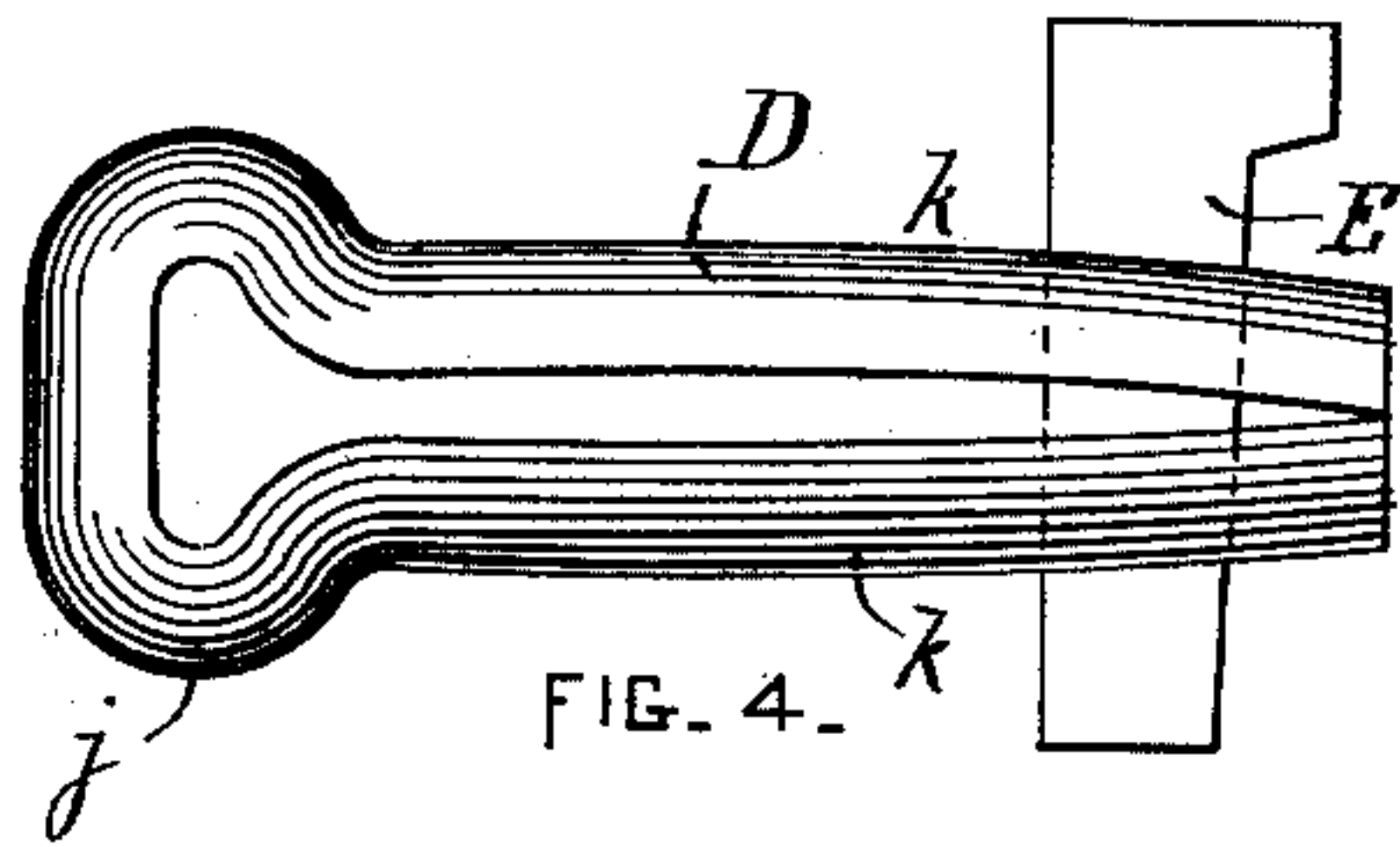


FIG. 4.

WITNESSES:

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# UNITED STATES PATENT OFFICE.

REYNOLDS T. WHITE, OF BOSTON, MASSACHUSETTS.

## STREET-RAILWAY CONSTRUCTION.

SPECIFICATION forming part of Letters Patent No. 375,853, dated January 3, 1888.

Application filed October 24, 1887. Serial No. 253,161. (No model.)

*To all whom it may concern:*

Be it known that I, REYNOLDS T. WHITE, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Street-Railway Construction, of which the following is a specification.

The object of my invention is to construct a substantial street-railway road-bed at a very low cost.

My invention consists in the peculiar construction of chairs to support and hold a rail having a rib at or near its center on the under side, and in key-bolts for securing the same together; also, in the construction of a chair to hold the ends of two adjacent rails, all as herein fully described, and pointed out in the claims.

Referring to the accompanying drawings, Figure 1 represents a central vertical cross-section through a rail and chair embodying my invention. Fig. 2 is a side view of the same. Fig. 3 is a side view of a chair for securing the ends of two adjacent rails. Fig. 4 is a view of a key-bolt for securing the rails into the chairs.

A represents a rail, which may be of any desired form of tread, and provided with a rib, B, at or near its center on its under side.

C is a chair, cast in one piece and provided at its upper end with a suitable opening, *a*, to receive the rib of the rail, and flanges *b* for the rail to rest upon. The lower portion of the chair is spread transversely and of sufficient width to insure stiffness to the track, the outer ends, *d*, being formed flat to fit upon the sleeper. Flanges *e e* extend from the top to bottom at the side of the chair, and flanges *f* are formed on the inside between the extended portion. (See Fig. 1.)

Around the bolt-holes a small boss, *g*, is provided, with a rib, *h*, extending above and below the same, as shown.

To secure the rails in the chairs, I employ a key-bolt, D, of the form shown in Fig. 4—that is, a bolt made of half-round iron, bent to form a head, *j*, and the extended portions *k* meeting at their ends, but with a space, *l*, left between them from the end to the head *j*, so that when the bolt is inserted in the hole it will act as a spring and draw the rail down solid upon its bed. A keyway is provided near the end of the bolt D, into which the key E is driven, as shown.

In Fig. 3 I have shown a chair to receive the ends of two adjacent rails, A A'. This chair is the same as the one before described, with the exception of being wider, and provided with two bolt-holes for securing the rails in the chair. A bolt-hole is also provided in the center of the chair at or about the height of the center of the rib of the rail. The ends of the ribs of the rails are provided with half-round recesses, through which the central bolt passes, thus preventing the extreme ends of the rails from being bent out of shape. Sufficient space is left in the bolt-holes and between the joints of the rails to allow for the expansion and contraction of the metal.

I prefer to secure the chairs to iron sleepers G, provided with lips *m*, the space between the lips being equal to the width of the chair. The sides of the sleeper are turned up, so as to allow it to be tamped or bedded easily. After the chair has been placed in position on the sleeper, it is secured by key-bolts *p* and keys *q*.

I do not herein claim the matter of the spring key-bolt, as shown in Fig. 4, but reserve the same as the subject of a future application.

What I claim as my invention is—

1. A chair cast in one piece and provided at its upper end with a suitable opening to receive the rib of the rails, said rails being held near their ends by means of key-bolts passing through the chair and through the webs of the rails, and at their end passing through the chair and between the ends of the rails, substantially as and for the purposes set forth.

2. A chair cast in one piece and provided at its upper end with a suitable opening to receive the rib of the rail, and flanges for the rail to rest upon and spread transversely at its lower end, in combination with a metallic sleeper provided with lips *m* and turned-up sides, substantially as and for the purposes set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

REYNOLDS T. WHITE.

Witnesses:

HENRY W. FOLSOM,  
SIDNEY WETMORE.