No. 840,087. PATENTED JAN. 1, 1907.

H. C. PEALOW.

CONTACT SHOE FOR ELECTRIC RAILWAYS.

APPLICATION FILED NOV. 9, 1905.

Fig 1.

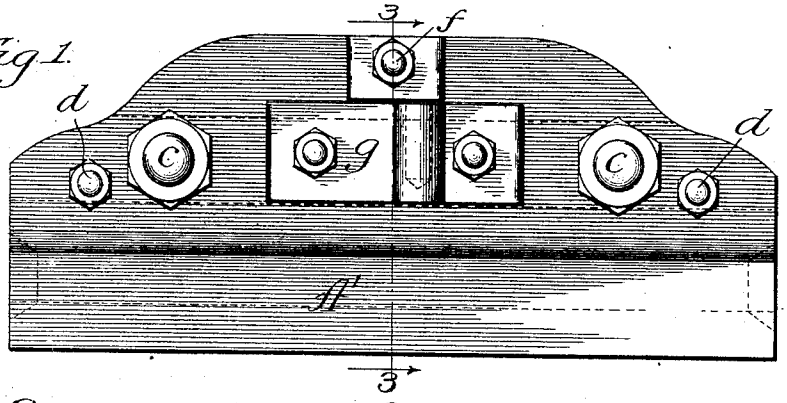


Fig 2.

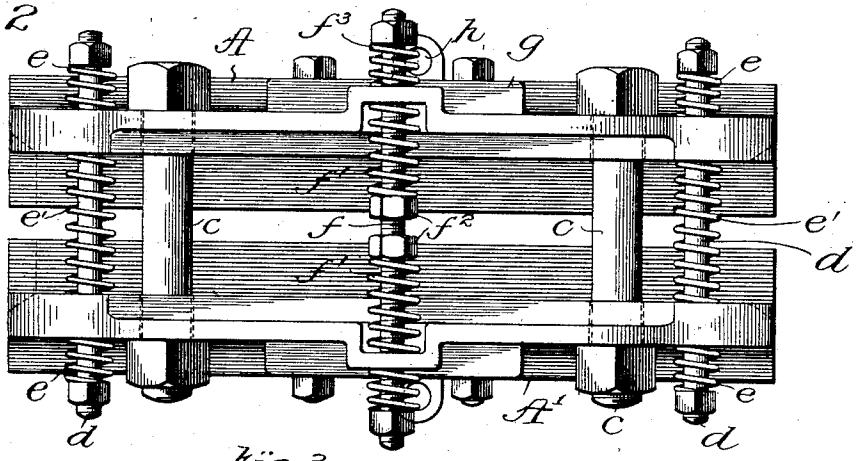


Fig 3.

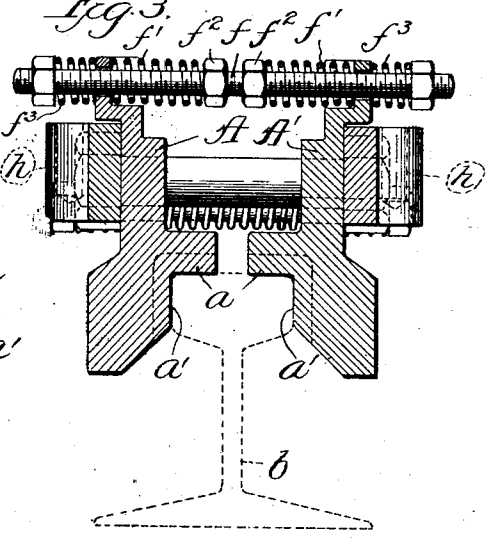
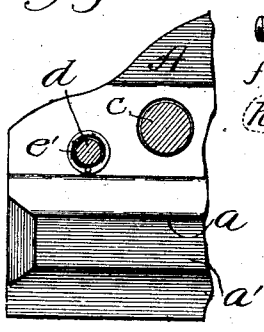


Fig 4.



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CONTACT-SHOE FOR ELECTRIC RAILWAYS.

No. 840,087. Specification of Letters Patent. Patented Jan. 1, 1907.

Application filed November 9, 1905. Serial No. 286,457.

To all whom it may concern:

Be it known that I, HENRY C. PEALOW, a citizen of the United States, residing at Batavia, in the county of Kane and State of Illinois, have invented a certain new and useful Improvement in Contact-Shoes for Electric Railways, of which the following is a full, clear, concise, and exact description.

My invention relates to contact devices or shoes for electric railways; and its object is to provide a contact device that will closely engage both the top and side of the ordinary conductor or third rail, and at the same time adjust itself to any inequalities in said conductor.

As is well known, the form of shoe in common use, which merely engages the top of the rail, is likely to prove inefficient under certain conditions—as, for instance, when the rail is covered with a thin coating of ice. Under such circumstances one portion of the conductor is usually, if not always, free from such obstruction. For that reason I preferably mount, on opposite sides of the rail, a pair of shoes in parallel relation, having jaws or contacting surfaces engaging the top and both sides of the rail, thus insuring an engagement of said contact device with a clear or unobstructed portion of the conductor. My invention thus provides a simple contact device capable of use with the ordinary form of third rail, and which is efficient under all the conditions met with in actual service,

I will more fully describe my invention by reference to the accompanying drawings, in which—

Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a plan view thereof. Fig. 3 is a cross-section on the line 3 3 of Fig. 1, and Fig. 4 is a fragmentary view, in side elevation, of the inner and lower portion of one end of the contact-shoe of my invention.

Similar letters refer to similar parts throughout the several views.

The shoes A A′, in the preferred form of my invention illustrated in the drawings, extend longitudinally on opposite sides of the conductor or third rail *b*. These shoes are held in parallel relation upon bolts *c c*, preferably located one at each end of the device. The shoes A A′ are adjustable toward and from each other on said bolts.

Parallel transverse bolts *d d*, one at each end of the contact device, project loosely through the shoes just above the contact-jaws of the same. Compression-springs, carried by the projecting ends of the bolts *d d* between the outer surfaces of the shoes and nuts on the ends of the bolts, tend to press the contact-jaws toward each other against the cushioning-springs *e′ e′*, carried upon the rods *e e* between the inner faces of the shoes. A transverse bolt *f*, extending loosely through the middle of the contact device, near the upper edge thereof, also carries compression-springs *f′ f′*, which tend to space apart the upper end of the shoes and to hold said shoes in parallel vertical planes. Nuts f^2 f^2, adjustable on the threaded bolt *f* for the purpose of varying the tension of the springs *f′ f′*, form seats for one end of each of said springs, the other ends thereof bearing against the inner face of the corresponding shoe. The projecting ends of the bolt *f* are provided with cushioning-springs f^3 f^3. The combined effect of all the springs is to hold the shoes in such relation that their entire contact-surfaces are pressed firmly against the rail, and at the same time are freely adjustable toward and from each other on the bolts *c c* without a tendency to bind on the same. Shoes mounted in such manner readily adjust themselves to any inequalities in the rail.

The contact-jaw of each of the shoes A A′ preferably consist of angularly-disposed flanges *a a′*, thus conforming in contour to the top and side portion of the ordinary T-rail. The ends of the jaws or contact portions of the shoes are beveled outwardly, as shown more clearly in Fig. 4, in order that the shoes may readily ride over any inequalities in the rail.

Plates *g g*, secured to the shoes by bolts or in any other suitable manner, are provided with bosses which receive the contact-terminals *h h*.

It will be understood that the contact device constituting my invention will be supported below the car truck or body in any well-known or suitable manner in position to engage the conductor or third rail.

Having described my invention, I claim—

1. A contact device for the third rail of an electric railway comprising a pair of oppositely-mounted shoes, the contact-surface of each shoe having a contour conforming to one side and a portion of the top of the rail, and spring mechanism for producing a constant engagement of said shoes with the rail.

2. A contact device for the third rail of an

electric railway comprising a pair of oppositely-mounted shoes having angular-shaped lower portions adapted to engage the top and both sides of the rail, a series of horizontal bolts connecting said shoes, and springs carried by said bolts for producing a constant contact of said shoes with the rail.

3. In a contact device for the third rail of an electric railway, a pair of parallel shoes extending on opposite sides of the rail, each shoe having a contact-face conforming to the contour of the top and one side of the rail, said faces at the ends of the shoes being beveled outwardly, transverse bolts upon which said shoes are slidably mounted, and yielding means for holding said shoes in contact with the rail.

4. The combination with the third rail of an electric railway, of a pair of shoes disposed on opposite sides of the rail, each shoe having a contact-surface engaging the corresponding side and top portion of the rail, a horizontal member upon which said shoes are adjustable, upper and lower rods passing loosely through said shoes, springs carried by the upper rod between the shoes, and spacing apart the upper ends of the same, compression-springs carried by the projecting ends of the lower rod tending to press the shoes into firm contact with the rail, and cushioning-springs carried respectively upon the projecting ends of the upper rod and intermediate the shoes on the lower rod.

In witness whereof I hereunto subscribe my name this 6th day of November, A. D. 1905.

HENRY C. PEALOW.

Witnesses:

ALFRED H. MOORE,

DE WITT C. TANNER.