

No. 771,510.

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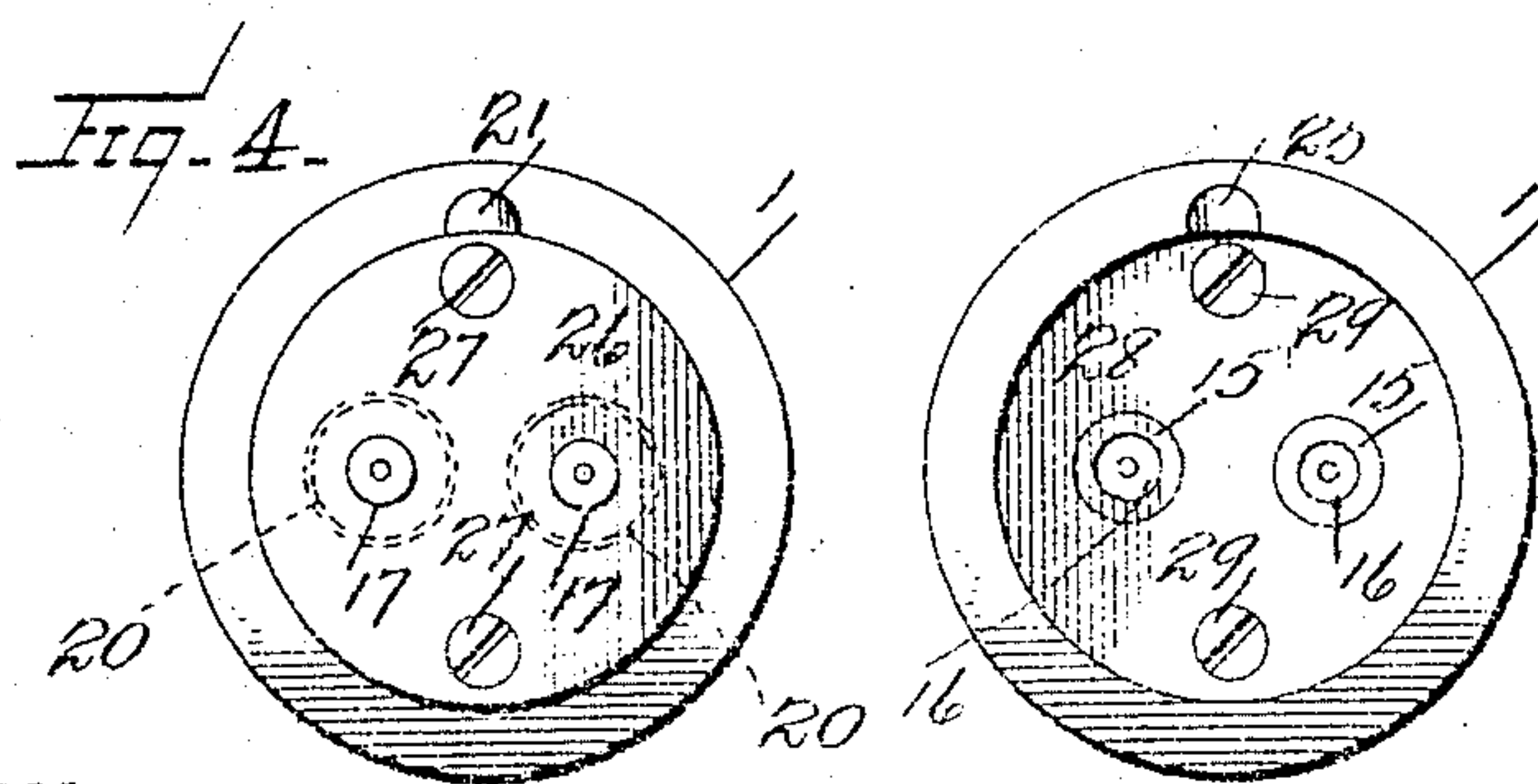
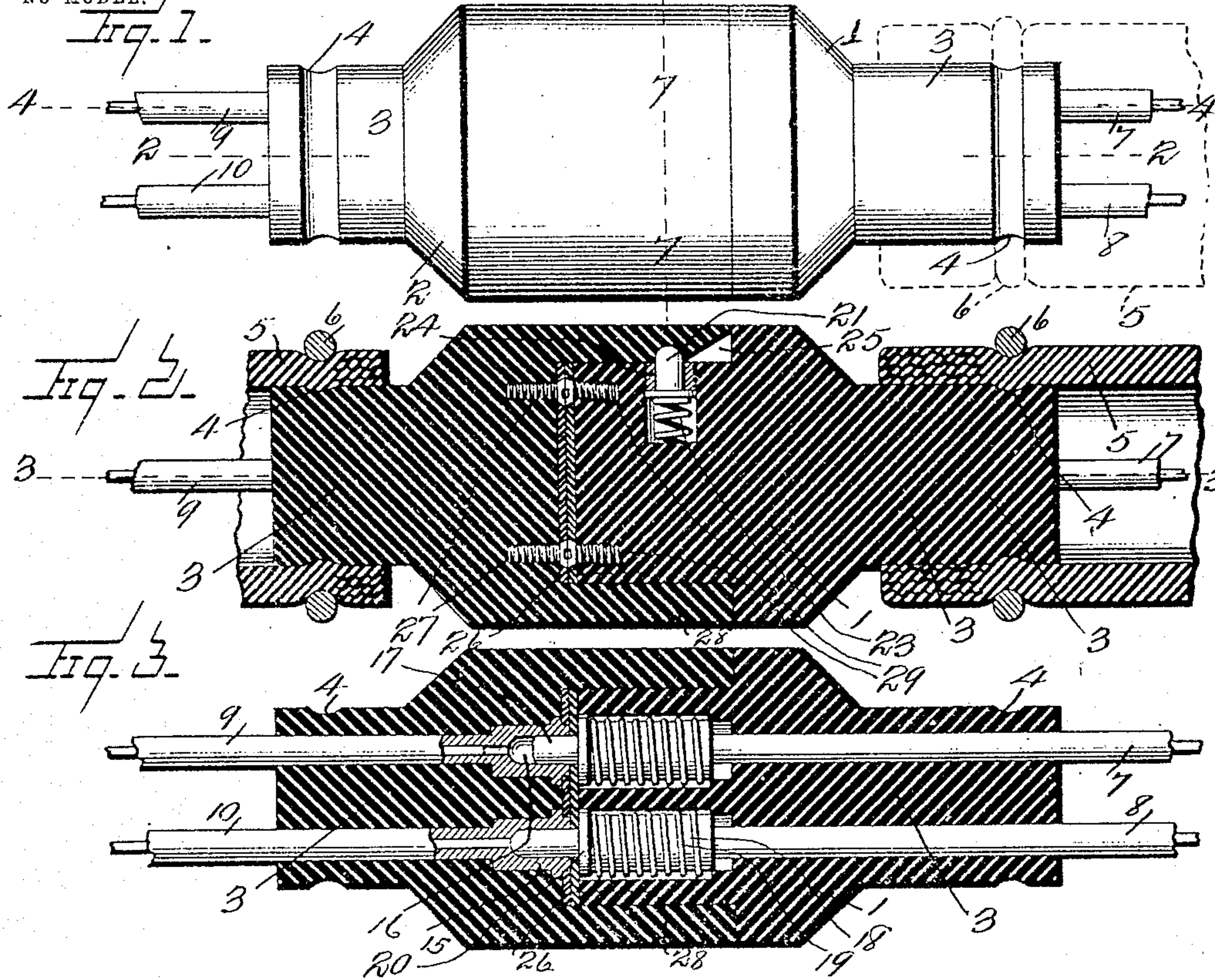
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J. G. THOMAS & D. E. LEWIS.

SAFETY COUPLING FOR ELECTRICAL WIRES CONNECTING RAILWAY COACHES.

APPLICATION FILED OCT. 2, 1903.

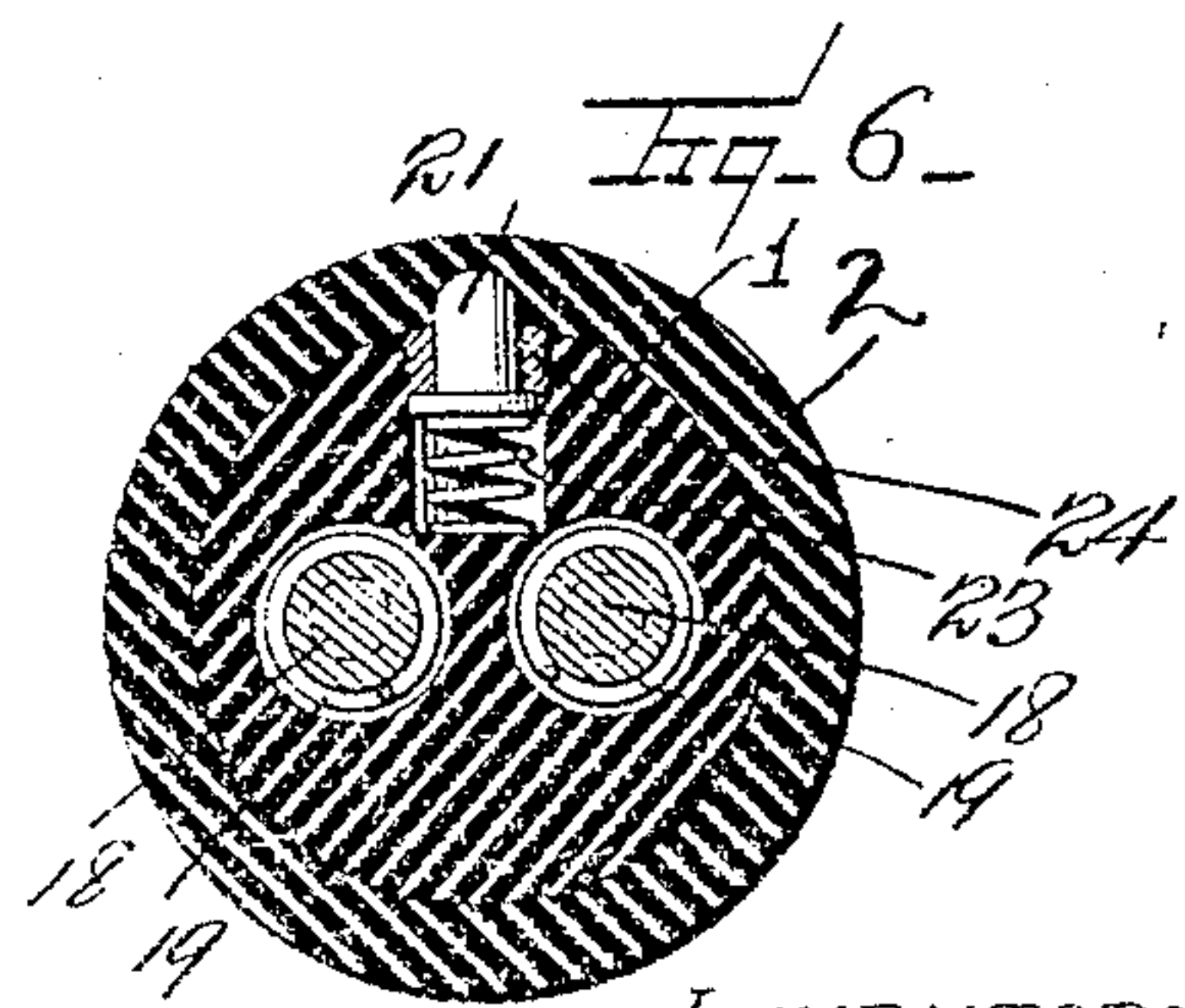
NO MODEL.



WITNESSES:
W. F. N. 1074.
L. E. Berkeley.

Fig. 5.

Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN G. THOMAS AND DAVID E. LEWIS, OF SCRANTON, PENNSYLVANIA.

SAFETY-COUPLING FOR ELECTRICAL WIRES CONNECTING RAILWAY-COACHES.

SPECIFICATION forming part of Letters Patent No. 771,510, dated October 4, 1904.

Application filed October 2, 1903. Serial No. 175,415. (No model.)

To all whom it may concern:

Be it known that we, JOHN G. THOMAS and DAVID E. LEWIS, citizens of the United States, residing at Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Safety-Couplings for Electrical Wires Connecting Railway-Coaches, of which the following is a specification.

This invention relates to couplings for electric wires, and has for its objects to provide a coupling that may be forcibly separated by a longitudinal strain without injuring the same and to provide means for coupling the electric wires joining two coupled railway-coaches, to couple wires for the purpose of electric lighting all of the cars of a train where the dynamo or other source of electric current is in the locomotive or other part of the train, and other objects, as are herein specified, and pointed out in the claims.

To these ends the invention consists of the construction, arrangement, and combination of parts as herein specified, and illustrated in the drawings, in which—

Figure 1 is a view in elevation illustrating the coupling. Fig. 2 is a sectional view on the line 2 2 of Fig. 1. Fig. 3 is a sectional view on the line corresponding to the line 3 3 of Fig. 2, parts of the interior mechanism being in elevation. Fig. 4 illustrates the inner end of one of the members. Fig. 5 illustrates the inner end of the opposite member. Fig. 6 is a section on the line 7 7 of Fig. 1, with the said coupling in the position illustrated in Fig. 2. Fig. 7 is a small view illustrating the application of the coupling in use.

Similar characters of reference denote like and corresponding parts throughout the several views.

In the drawings, 1 designates the male member of our coupling, and 2 the female member, to which it is to be fitted, the respective parts being constructed of insulation material—such as vulcanite, gutta-percha, porcelain, or the like. Each is provided with a shank 3, having a groove 4, being adapted to receive and have connected to them hose-pipes 5 5, tied with wires or other bands 6 6, the said hose-pipes having incased within

them pairs of electric wires 7 and 8 and 9 and 10. The hose-pipes are coupled to iron pipes 11 11 by connections 12 12, the said iron pipes leading to the inside of the railway-coaches, (designated at 13 and 14.) The wires 9 and 10 each terminate in a socket member 15, having a cylindrical socket 16, while the wires 7 and 8 each terminate in a nipple 17, integrally made with a shank 18, into which the wires are secured. The shank 18 is provided with a coiled spring 19, impinging against a collar 20 and arranged to compress the nipples 17 into close contact with the corresponding sockets 16. The parts are held together by a blind-catch 21, arranged to be compressed into engagement with the cavity 22 by means of a coiled spring setting into a cavity 23. The catch member 21 is secured in its position by means of a threaded collar 24, through which the nipple of the catch 21 freely slides. A sloping approach 25 permits of the parts being snapped together by endwise compression. An insulation-disk 26 lines the face of the female member and is secured thereto by means of screws 27. A similar insulation-disk 28 lines the corresponding face of the male member and is secured thereto by means of screws 29.

The operation of the device is readily understood. When two railway-coaches are coupled into the same train by the usual method of coupling, the electrical wiring of each coach, being conducted to the exterior of the car through pipes 11 and continued through the hose-pipes 5 5, may be brought into electrical connections by compressing the members 1 and 2 of the disconnect ends together until they snap into position. When the cars are uncoupled, the tension on the hose-pipe and wire are sufficient to pull the connected members 1 and 2 apart without injuring the construction thereof, because the pressure in pulling apart is sufficient to drive the member 21 downward against the tension of its spring until the nipple thereof clears the highest part of the slope 25.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. In a coupling for electrical wires of the

kind described, a pair of members made from insulating material, one of said members having a central projection, and the other a cylindrical flange adapted to encompass the central projection of the first member, electrical wires extending into each of said members, socket members on the ends of the wires in one of the said parts, and nipples adapted to fit into said sockets arranged in the other of said members, springs adapted to compress said nipple members into the sockets aforesaid when the main members are brought together and means for locking the main members together, substantially as specified.

2. In the coupling for electric wires of the kind described, a pair of members of insulating material, one of the said members having a central projection, an insulating-plate fastened on the end of the projection, electric wires run in one end of the said member, nipples slidable in the said member and through

the insulating-plate, springs for normally projecting the said nipples through the plate, a spring-pressed catch mounted in the member and slidable transversely therein, the opposite member having a recess to receive the projection, an insulating-plate secured to the wall of the recess to be contacted by the insulating-plate of the opposite member, sockets embedded in the recessed member extending through the insulating-plates thereof and electric wires connected to the said sockets and a shoulder on the recessed member for engaging the catch of the opposite member.

In testimony whereof we affix our signatures in presence of two witnesses.

JOHN G. THOMAS.
DAVID E. LEWIS.

Witnesses:

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D. B. REPLOGLE.