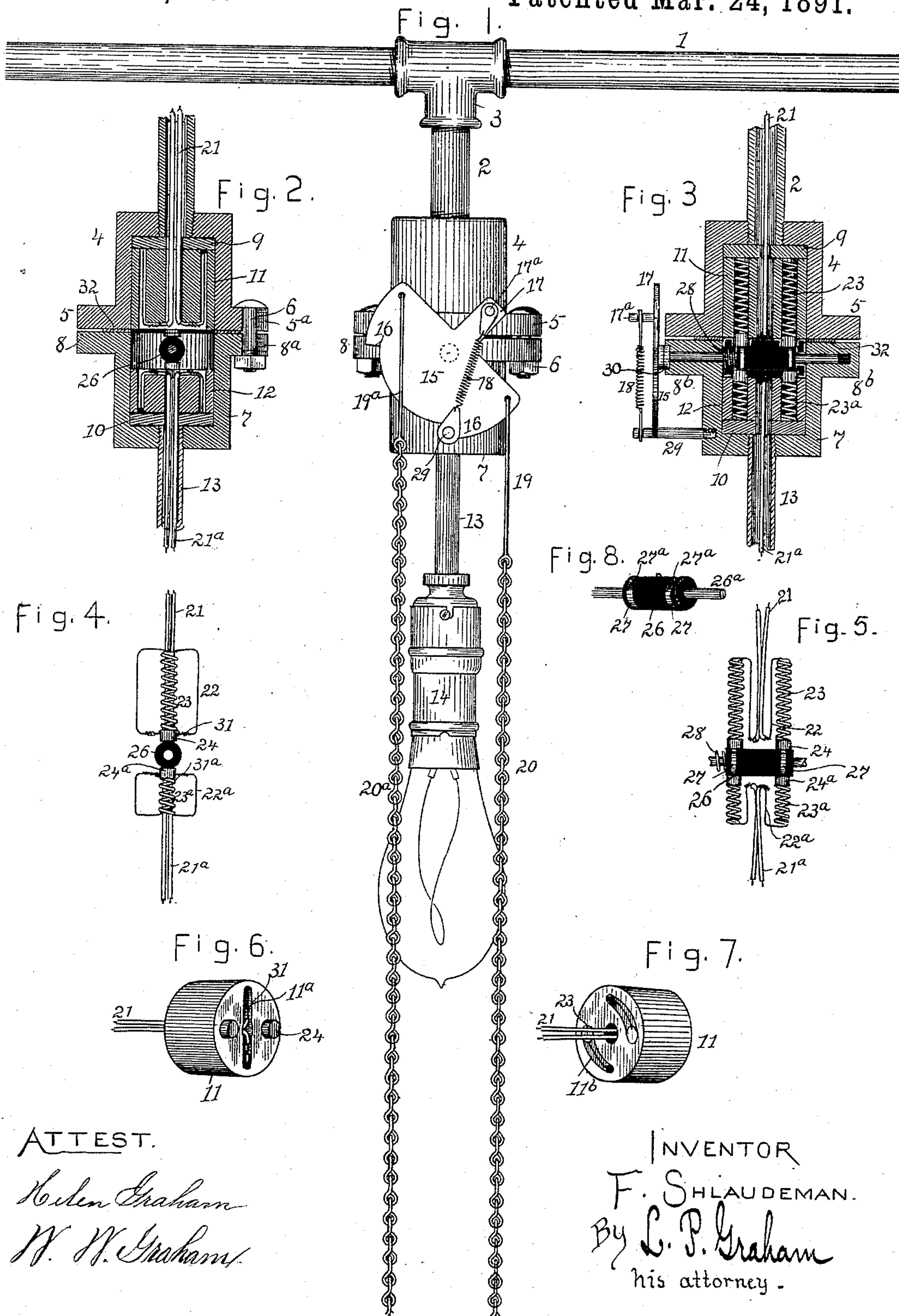


(No Model.)

F. SHLAUDEMANN.  
WATER PROOF COMBINED COUPLING AND CUT-OUT FOR ELECTRIC  
CIRCUITS.

No. 448,679.

Patented Mar. 24, 1891.



ATTEST.

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# UNITED STATES PATENT OFFICE.

FRANK SHLAUDEMANN, OF DECATUR, ILLINOIS.

WATER-PROOF COMBINED COUPLING AND CUT-OUT FOR ELECTRIC CIRCUITS.

SPECIFICATION forming part of Letters Patent No. 448,679, dated March 24, 1891.

Application filed November 3, 1890. Serial No. 370,162. (No model.)

*To all whom it may concern.*

Be it known that I, FRANK SHLAUDEMANN, of Decatur, in the county of Macon and State of Illinois, have invented certain new and useful Improvements in Water-Proof Combined Couplings and Cut-Outs for Electric Circuits, of which the following is a specification.

This invention relates to water-proof couplings and cut-outs for electric circuits; and it consists in the details of construction and combinations of parts hereinafter set forth and claimed.

In the drawings accompanying and forming a part of this specification, Figure 1 is an external representation of a coupling and switch constructed in accordance with my invention. Fig. 2 is a vertical section of the coupling and switch shown in Fig. 1 on a plane parallel with the plane of such figure. Fig. 3 is a similar section taken on a plane at right angles to the plane of Fig. 2. Fig. 4 is a diagram of the circuit independent of its surroundings, the point of sight being the same as in Fig. 2; and Fig. 5 is a similar diagram from the same point of sight as Fig. 3. Fig. 6 is a perspective view of a side and face or outer end of an insulating guide-block. Fig. 7 is a perspective view of the side and rear or inner end of the insulating guide-block. Fig. 8 is a perspective view of the cut-out cylinder.

The pipe 1 is water-proof, and it contains circuit-wires which extend through lateral 2 and a T 3, or through an L, as the case may be. Socket 4 is fitted on lateral 2, and it has the flanges 5, slotted at 5<sup>a</sup>, to admit coupling-bolts 6. The socket 7 has flanges 8, slotted at 8<sup>a</sup>, to conform to slots in flanges 5.

9 and 10 are insulating-washers in the inner ends of sockets 4 and 7, respectively.

11 and 12 are insulating guide-blocks for circuit-wire terminals, the one in socket 4 and the other in socket 7.

13 is a water-proof pipe extending from socket 7 and carrying circuit-wires to a lamp 14 or other objective point. Plate 15 is fixed on the shaft 26<sup>a</sup> of cut-out cylinder 26. Its lower surface is curved concentric with the shaft. It has the stop projections 16 16, and also has the upward extension 17, provided with pin 17<sup>a</sup>. The pin 29 projects from socket 7, forming a stop for plate 15, and spring 18 connects with such pin and with

pin 17<sup>a</sup>. Rods 19 and 19<sup>a</sup> connect one with each upper corner of plate 15, and chains 20 20<sup>a</sup> depend from the rods to an easily-accessible point. The circuit-wires 21 extend through a central hole in guide-block 11 and connect on the face of such block with wires 22. Wires 22 return each through a separate side hole in the guide-block and connect at the inner end of such block with elastic spiral coils 23. The coils each extend through a separate side hole in the guide-block and terminate in bearings 24, which rest against the cut-out cylinder. On the opposite side of the cut-out cylinder bearings 24<sup>a</sup> continue the circuit to coils 23<sup>a</sup>, connecting-wires 22<sup>a</sup>, and circuit-wire 21<sup>a</sup>, all of which are arranged in block 12, as the corresponding parts are arranged in block 11. The cylinder 26 is an insulator; but it has the conducting-rings 27 in line with the terminals of the circuit-wires. The rings have segments depressed, as seen at 27<sup>a</sup> in Fig. 8. The rings are narrower than the faces of terminals 24, and when the cylinder is turned with the depressed segments of conductors presented to the terminals the faces or bearings thereof rest on the insulator out of contact with the conductor. The shaft of the cut-out cylinder has bearings 8<sup>b</sup> in the flanges of socket 7, and the cylinder is secured to the shaft by a pin or similar means. A gasket 30 surrounds the cylinder-shaft and fits between the plate and the flange. A spring 28 bears against an end of the cylinder, and by forcing the shaft inward holds the gasket in close contact with its bearings and excludes moisture. In Fig. 4 31 and 31<sup>a</sup> show the junctions between circuit-wires and the wires that connect with the coils, such junctions being made on the easily-accessible faces of the guide-blocks. The rubber gasket 32 fits between the flanges, and when the flanges are drawn together by securing-bolts forms a moisture-excluding joint.

A description has been given of but one line of circuit-wire and one guide-block, for the reason that the disposition of both circuit-wires is the same, though separate, and the only difference in the guide-blocks is the comparative shortness of 12, which is so made as to leave space for the cut-out cylinder.

The cut-out cylinder is operated by the chains in an obvious manner, and the spring



18 acts to complete a shift after the same is more than half completed.

I claim—

1. The combination, with the two sockets, 5 the interposed gasket, and the coupling-bolts, of the cut-out cylinder having bearings in one of the two sockets, a gasket around the projecting end of the cylinder-shaft, a spring bearing against the cylinder and acting indi- 10 rectly on the gasket thereof, and circuit-wire terminals bearing against the cylinder on opposite sides of the same, as set forth.

2. In electric cut-outs, the combination of the insulating-cylinder, the conducting-rings 15 in the cylinder, having segments depressed, and circuit-terminals, wider than the conduct-

ing-rings, bearing against the cylinder in line with the rings, as set forth.

3. In electrical cut-outs, the combination of the cut-out cylinder, the plate 15 on the shaft 20 thereof, having the stop projections 16 16 and the extension 17, the pin 17<sup>a</sup>, projecting from the extension 17, the stop-pin 29, the spring connecting pins 17 and 29, and the lines connected with the plate at opposite sides there- 25 of, as set forth.

In testimony whereof I sign my name in the presence of two subscribing witnesses.

FRANK SHLAUDEMANN.

Attest:

I. D. WALKER,

WILLIAM GRAHAM.