No. 670,363. Patented Mar. 19, 1901.

W. WALKER, JR.

ELECTRICAL COUPLING OR TERMINAL.

(Application filed Sept. 15, 1900.)

(No Model.)

Fig. 1.

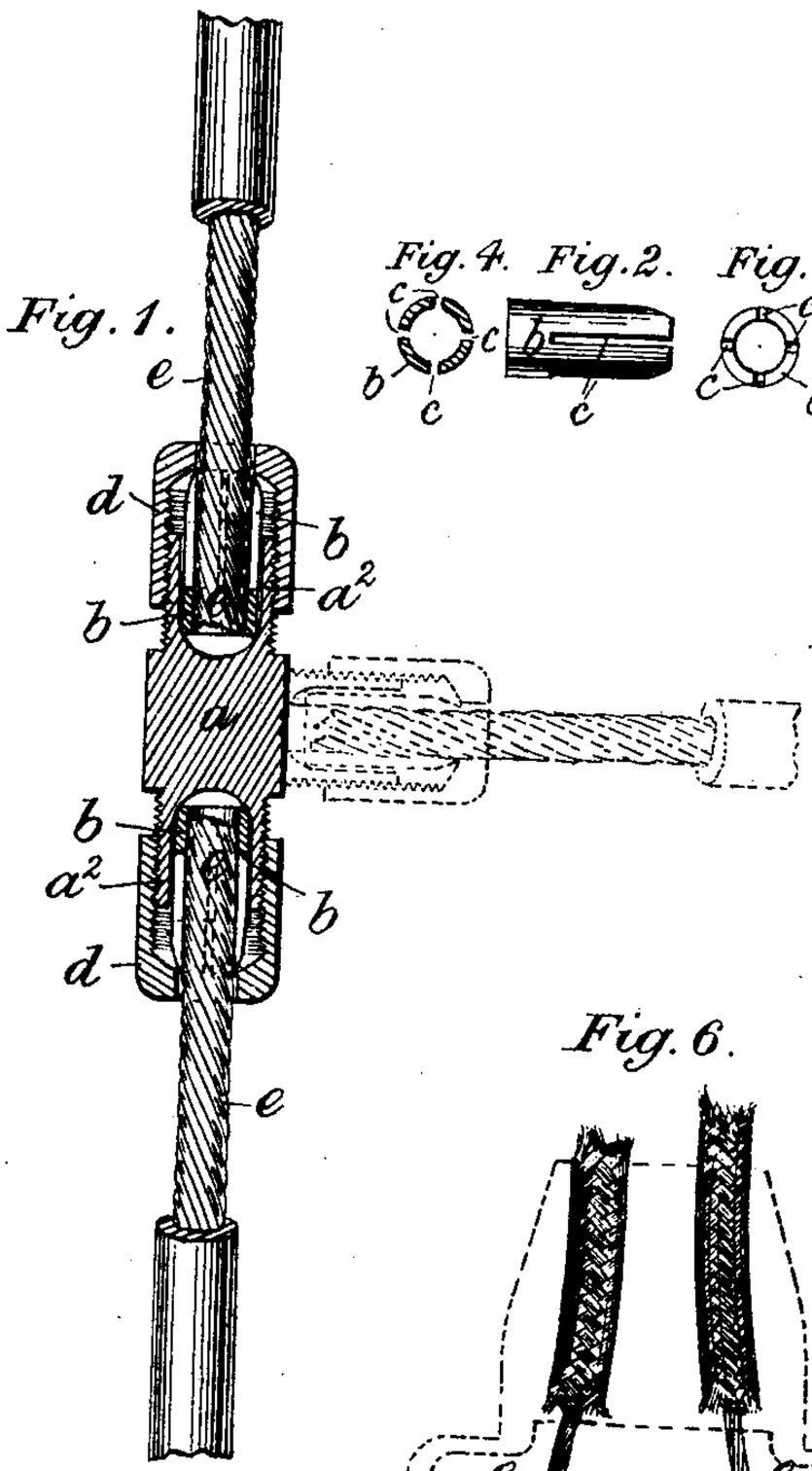


Fig. 4.

Fig. 2.

Fig. 3.

Fig. 5.

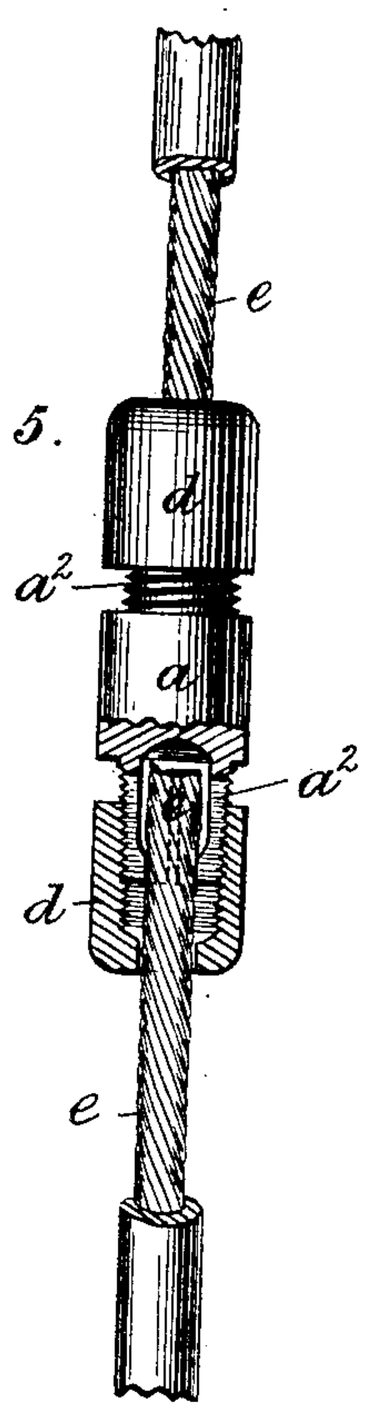
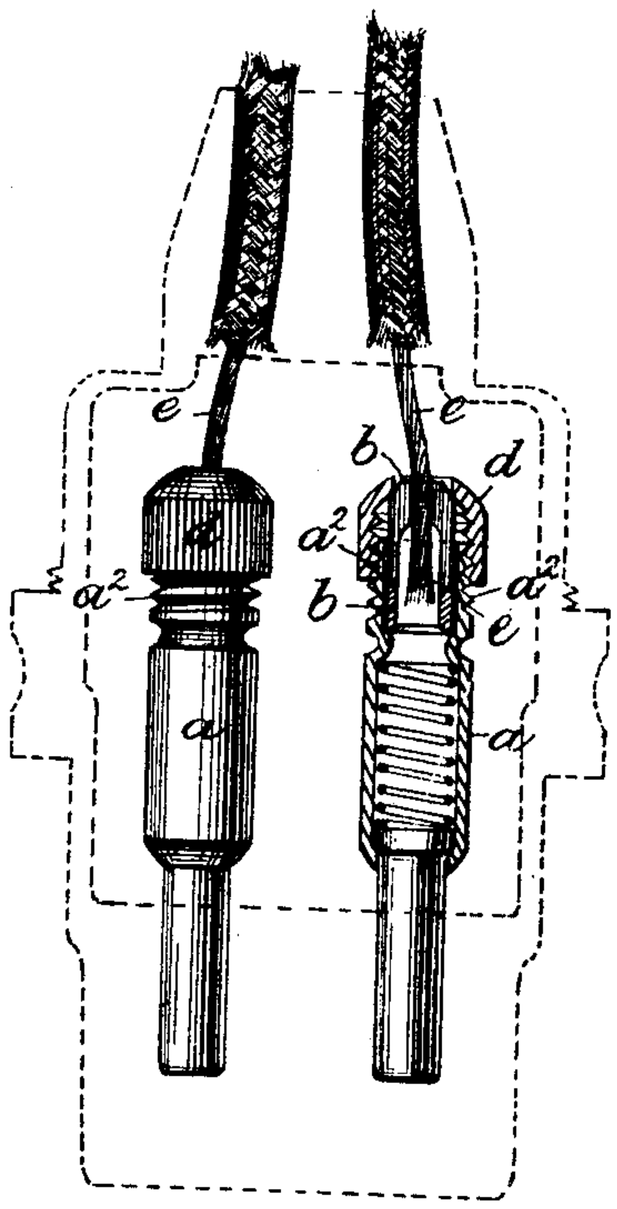


Fig. 6.



Witnesses;—

Richard Skerrett

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UNITED STATES PATENT OFFICE.

WILLIAM WALKER, JR., OF BIRMINGHAM, ENGLAND.

ELECTRICAL COUPLING OR TERMINAL.

SPECIFICATION forming part of Letters Patent No. 670,363, dated March 19, 1901.

Application filed September 15, 1900. Serial No. 30,128. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WALKER, the younger, a subject of the Queen of Great Britain, residing at No. 32 City road, Edgbaston, Birmingham, England, have invented certain new and useful Improvements in Electrical Couplings or Terminals, of which the following is a specification.

My invention consists of the improvements hereinafter described in electrical couplings and terminals, the said improvements having for their object to dispense with the side binding-screws ordinarily employed in electrical couplings and terminals and to effect a better electrical connection than is obtained in couplings and terminals having side binding-screws.

The said invention is applicable to the spring-plunger terminals of electrical incandescent or glow lamp holders as well as to other electrical terminals.

I will describe my invention in connection with the accompanying drawings, of which—

Figure 1 represents in longitudinal section an electrical coupling constructed according to my invention for connecting two ends of an electrical conductor. Figs. 2, 3, and 4 represent in side elevation, end elevation, and cross-section, respectively, one of the parts of the coupling, Fig. 1, detached. Fig. 5 represents, partly in elevation and partly in longitudinal section, a modified coupling. Fig. 6 represents the two plunger-terminals, one in elevation and the other in vertical section, of an electrical incandescent or glow lamp holder to which my invention is applied, the said holder being indicated in dotted lines.

The same letters of reference indicate the same parts in the several figures of the drawings.

Referring to Figs. 1, 2, 3, and 4, the body *a* of the coupling has its two ends a^2 a^2 made hollow or tubular and screw-threaded externally. Into the hollow or tubular ends a^2 a^2 an elastic grip *b* (shown separately in Figs. 2, 3, and 4) is placed. The elastic grip *b* consists of a short metallic tube having one or a series of longitudinal slits, (marked *c c c c* in Figs. 2, 3, and 4.) I prefer to employ four equidistant slits, as represented, the said slits extending through the greater part of the length of the grip *b*. The end of the slit part of the elastic grip *b* is made conoidal or taper. The conoidal or taper ends of the elastic grips *b b* project from the tubular ends a^2 of the body *a* of the coupling. Onto the externally-threaded ends a^2 of the body *a* of the coupling screw collars or sleeves *d* take, the outer ends of the said screw collars or sleeves being contracted for engaging with the conoidal or taper end of the elastic grip *b*.

In use the screw collar or sleeve *d* is passed onto the end of the electrical conductor, and the said end is passed into the elastic grip *b*. The screw collar or sleeve *d* is then engaged or screwed on the screwed end a^2 of the body *a* of the coupling. By the screwing on of the screw collar or sleeve *d* the outer end of the said collar or sleeve, acting on the conoidal or taper end of the elastic grip *b*, closes the said grip on the electrical conductor *e* with such tightness that a practically perfect electrical connection is effected and danger of accidental withdrawal of the conductor from the coupling obviated.

I have represented in Fig. 1 a coupling for connecting two ends of a single conductor. Where one, two, or more branch conductors are to be used, I make the body of the coupling of a T shape, as is indicated in dotted lines in Fig. 1, or of a cruciform or other shape, so as to permit of the connecting up of the several conductors.

By making the externally-threaded ends a^2 of the body *a* of the coupling slightly taper and slit longitudinally after the manner of the elastic grip *b*, Figs. 2, 3, and 4, and with a contracted mouth or end, as is represented in Fig. 5, the elastic grip *b* may be dispensed with; but I prefer to employ the elastic grip *b* as represented in Figs. 1, 2, 3, and 4.

In Fig. 6 I have indicated in dotted lines the holder of an electrical incandescent or glow lamp and have represented in full lines the spring-plunger terminals of the said holder, the said terminals being constructed according to my invention. The tubular body of each spring-plunger is marked *a*, and the parts for gripping the conducting-wire *e*, which resemble one-half of the coupling, Figs. 1, 2, 3, and 4, are marked with the same letters of reference as corresponding parts in

the said Figs. 1, 2, 3, and 4. The action of the grips in the spring-plunger terminals, Fig. 6, differs in no essential respects from the action of the gripping parts in the coupling, Figs. 1, 2, 3, and 4.

The application of my invention to terminals other than spring-plunger terminals differs in no essential respect from its application to a spring-plunger terminal, as hereinbefore described.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. An electrical coupling consisting of a body having a bore at one end thereof extending part way into the same, said end being externally threaded, a longitudinally-slitted tapered sleeve fitted in said bore, and a nut having a contracted portion to engage the tapered part of said sleeve in engagement with the threaded end of the body.

2. An electrical coupling consisting of a body having bores at its ends extending part way into the same, said ends being externally threaded, longitudinally-slitted tapered sleeves fitted in said bores and their bores being of a uniform diameter throughout their lengths, and nuts having contracted portions to engage the tapered parts of said sleeves in engagement respectively with the threaded ends of said body.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM WALKER, JUNR.

Witnesses:

RICHARD SKERRETT,

WILLIAM JAMES BOWKER.