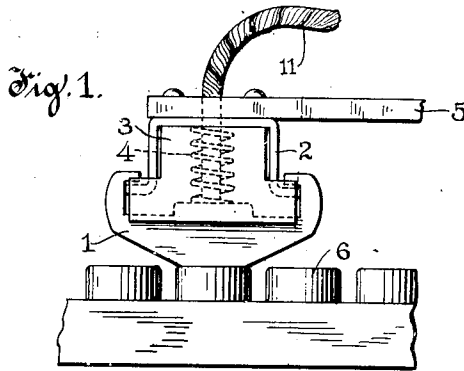
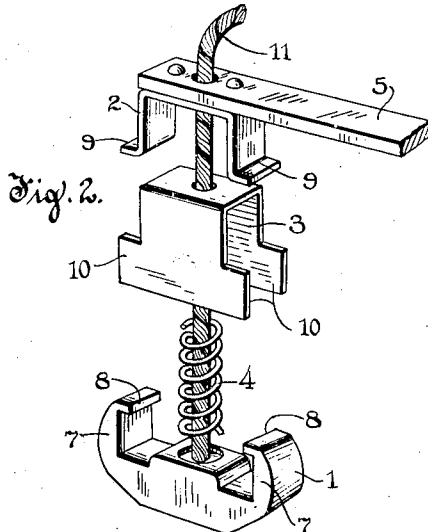
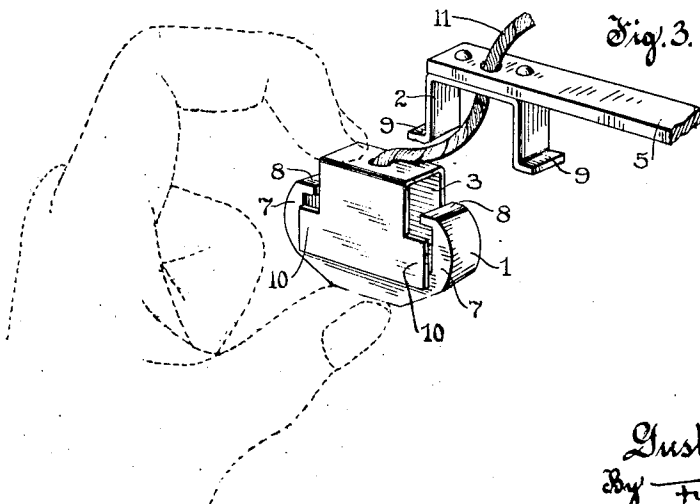


G. B. REISBACH.
CONTACT DEVICE.
APPLICATION FILED MAR. 16, 1916.

1,328,450.

Patented Jan. 20, 1920.



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CONTACT DEVICE.

1,328,450.

Specification of Letters Patent.

Patented Jan. 20, 1920.

Application filed March 16, 1916. Serial No. 84,695.

To all whom it may concern:

Be it known that I, GUSTAVE B. REISBACH, a citizen of the United States, residing at Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented new and useful Improvements in Contact Devices, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

This invention relates to improvements in contact devices.

It has among its objects to provide a simple, rugged and durable contact device, particularly adapted for sliding engagement with cooperating contacts, said device to have a contact shoe free to adjust itself to the surfaces of its cooperating contacts.

A further object is to provide a simple, rugged and inexpensive contact device, the parts of which may be readily assembled and likewise readily disassembled for repair or renewal of its contact shoe.

The accompanying drawing illustrates one embodiment of the invention and will now be described.

In the drawing,

Figure 1 is a front elevation of the contact device illustrating the same employed for sliding contact.

Fig. 2 is an exploded view in perspective of the contact device shown in Fig. 1 and,

Fig. 3 is a perspective view illustrating the manner of assembly and disassembly of the parts shown in Fig. 2.

The contact device as illustrated includes a contact shoe 1, members 2 and 3 constituting a holder therefor and a spring 4 serving to yieldingly hold the contact shoe in engagement with its cooperating contact surfaces and to retain said shoe and members 2 and 3 in assembled relation. As shown in Fig. 1 the contact device is mounted on a supporting member 5 and is slidable over a series of contacts 6.

More specifically describing the aforesaid parts in connection with Figs. 2 and 3, the contact shoe comprises an elongated member having its opposite ends provided with upward extensions 7, each having an inward projection 8 at its extremity. The members 2 and 3 are both substantially of inverted U-shape and are formed of sheet metal. The member 2 is riveted or otherwise secured to the member 5 and has its extremi-

ties bent outwardly to form lateral projections 9 to hook under the projections 8 of the contact shoe 1 to support and prevent endwise movement of the latter. The member 3 is arranged to straddle or engage the contact 1 on opposite sides and has both of its legs provided with oppositely disposed lateral extensions 10. This member is located between contact shoe 1 and member 2 at right angles to the latter and is so proportioned that when in abutment with member 2 its extensions 10 will overlap the vertical faces of both the member 2 and the shoe 1. The spring 4 is located between the contact shoe 1 and member 3 to bias the same apart and as shown in Fig. 1 it biases the contact 1 downwardly and the member 3 upwardly to abut member 2, thereby locking the parts in assembled relation.

To detach the contact shoe 1 from the member 2 the member 3 is moved downwardly relative to the member 2 against the action of spring 4 to clear its extensions 10 from projections 9. This produces slots (Fig. 3) between the under sides of projections 8 of shoe 1 and the upper edges of extensions 10 whereby the shoe 1 and member 3 can then be moved sidewise to release the same from member 2. This is obvious from Fig. 3 in which a hand (indicated by dotted lines) is shown compressing the member 3 and contact shoe 1 toward each other against the action of spring 4.

As will now be apparent, in assembling the contact device it is only necessary to place the contact shoe 1 and member 3 in the relation shown in Fig. 3, then move both of the same sidewise into engagement with the member 2 until vertically aligned therewith and finally release members 1 and 3 for locking action of spring 4.

In practice, the extensions 7 of contact shoe 1 are made of sufficient length to permit considerable upward movement of the contact 1 relative to the member 2. As shown in Fig. 1 the device is so arranged that when the contact shoe is in engagement with the contacts 6 its projections 8 will be raised out of engagement with the projections 9 of member 2. The spring 4 will therefore act as a yielding fulcrum for contact 1 and it will be observed that the contact is free to adjust itself either upwardly or downwardly or to rock endwise upon the end of spring 4. If desired, the

contact may also be permitted to rock side-wise by making the distance between the legs of member 3 slightly greater than the width of the contact. The contact shoe may, in practice, be conveniently formed from cross sections of channel bars and, as will be apparent, they may thus be made very rugged and durable. The ends of the shoe are preferably beveled to facilitate the passage thereof over its cooperating contacts and said shoe is preferably provided with a flexible lead 11 whereby it may be directly connected in circuit. As shown, the end of lead 11 is projected into the shoe and soldered thereto while said lead is then passed through openings in members 2, 3 and 5 to upper side of the latter member.

It is, of course, to be understood that the device illustrated and described may be modified without departing from the scope of the appended claims.

What I claim as new and desire to secure by Letters Patent is:

1. A contact device comprising a contact shoe, a holder therefor, said shoe and holder having engaging parts to restrain lateral play of the former while permitting perpendicular play thereof, and resilient means opposing the latter play of said shoe, said shoe and said holder being adapted for relative positioning against the action of said resilient means to free certain of said engaging parts for permitting removal of said shoe from said holder.

2. A contact device comprising a shoe, a holder therefor, said shoe and holder having engaging parts to restrain lateral play of the former while permitting a rocking and perpendicular play thereof, and resilient means opposing said permitted plays of said shoe, said shoe and said holder being adapted for relative positioning against the action of said means to free certain of said engaging parts for enabling withdrawal of said shoe from said holder.

3. A contact device comprising a shoe, a holder therefor having shoulders to restrain the play of said shoe in all directions in one plane while permitting play thereof in perpendicular planes, said shoe and said holder when in a given relation being readily separable, and a spring interposed between said shoe and said holder to bias the same out of said relation and to yieldingly hold said shoe in working relation with respect to said holder.

4. A contact device comprising a shoe, a holder therefor having shoulders to restrain the play of said shoe in one plane, said shoe and said holder when in a given relation being readily separable, and a spring interposed between said shoe and said holder to bias the same out of said relation, said shoe having a play in a plane perpendicular to the former and also a rocking play and said

spring further serving to oppose such plays of said shoe.

5. A contact device comprising a contact shoe, a holder having a plurality of parts interlocking with one another and with said shoe, said shoe and holder in a given relation of the interlocking parts thereof being readily separable and resilient means biasing said shoe and holder to a non-separable relation.

6. A contact device comprising a contact shoe, a holder therefor having a plurality of parts interlocking with one another and with said shoe, and a spring inclosed by said holder to retain said shoe and holder in assembled relation and to yieldingly retain said shoe in working relation with respect to said holder, said shoe and a part of said holder being adjustable against the action of said spring to free certain of said interlocking parts for ready removal of said shoe.

7. A contact device comprising a contact shoe and a holder having a member interlocking with said shoe to restrain the same against longitudinal movement and to limit downward movement thereof and a second member having parts interlocking with said former member and with said shoe to prevent lateral movement of said shoe and a spring to retain said shoe and both of said members in interlocking relation, said shoe and said latter member being relatively adjustable against the action of said spring to release the interlocking parts of said latter member from said former member to permit ready removal of said shoe.

8. A contact device comprising a contact shoe, and a holder having a member interlocking with said shoe to restrain the same against longitudinal movement and to limit downward movement thereof and a second member having parts interlocking with said former member and with said shoe to prevent lateral movement of said shoe, said shoe and said latter member being relatively adjustable to permit ready separation of said shoe from said members and reassembly thereof and a spring associated with said shoe and the members of said holder to retain the same in assembled relation, said spring also serving as a pressure spring for said contact shoe.

9. A contact device comprising a contact shoe provided with opposed hooked lugs, a holder provided with opposed projections for engagement by said lugs to restrain movement of said shoe in opposite directions while permitting play thereof in a direction normal thereto, and further provided with a separate bifurcated member straddling said shoe to restrain lateral play thereof and to secure said shoe to said holder subject to withdrawal upon predetermined relative positioning of said shoe and holder

parts, and resilient means biasing said parts against such positioning.

10. A contact device comprising a contact shoe, a plurality of separable interlocked members providing a holder for said shoe, said members cooperating while interlocked to prevent removal of said shoe therefrom but permitting a play of said shoe relative thereto and a spring interposed between said shoe and certain of said members to yieldingly hold the former in a given position relative to the latter and to releasably hold said members in interlocked relation, said shoe being readily removable upon separation of said members.

11. A contact device comprising a contact shoe, a plurality of separable interlocked members providing a holder for said shoe, said members respectively preventing lateral

and longitudinal movements of said shoe and cooperating while interlocked to prevent removal of said shoe therefrom but permitting a perpendicular movement of said shoe, and a spring interposed between said shoe and certain of said members to yieldingly hold the former in a given position relative to the latter and to hold said members in interlocked relation, said members being releasable from one another against the action of said spring to permit ready removal of said shoe.

In witness whereof, I have hereunto subscribed my name.

GUSTAVE B. REISBACH.

Witnesses:

O. A. KELLER,
LOUIS F. RADMER.