

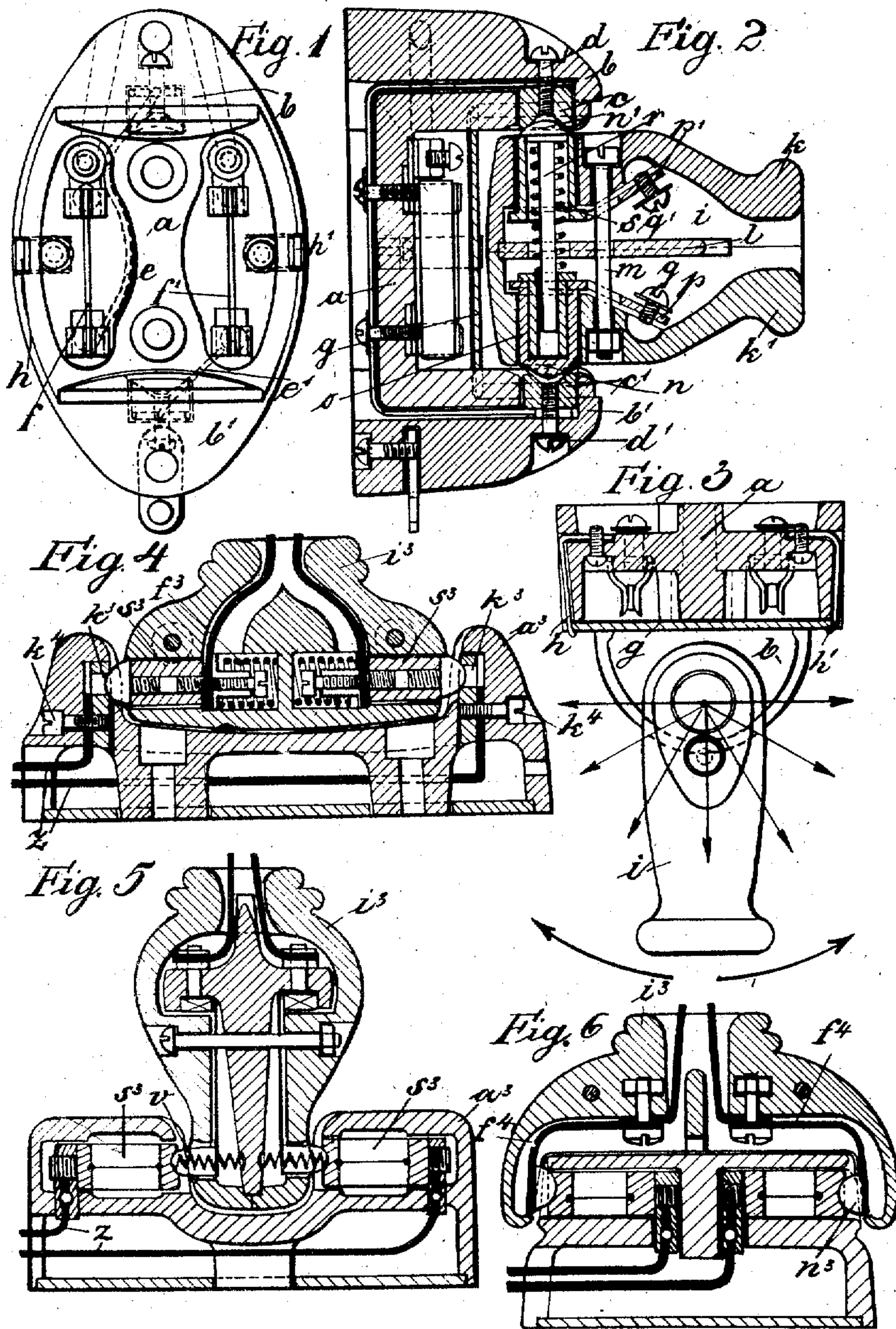
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PATENTED JULY 30, 1907.

W. KREINSEN.

CONTACT DEVICE WITH A SWINGING PLUG FOR ELECTRICAL CIRCUITS.

APPLICATION FILED JUNE 11, 1906.



Witnesses:

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UNITED STATES PATENT OFFICE

WILHELM KREINSEN, OF BURBACH-ON-THE-SAAR, GERMANY.

CONTACT DEVICE WITH A SWINGING PLUG FOR ELECTRICAL CIRCUITS.

No. 861,468.

Specification of Letters Patent.

Patented July 30, 1907.

Application filed June 11, 1906. Serial No. 321,190.

To all whom it may concern:

Be it known that I, WILHELM KREINSEN, electrician, a subject of the Emperor of Germany, and a resident of 40 Wilhelmstrasse, in Burbach-on-the-Saar, Germany, have invented new and useful Improvements in Contact Devices with a Swinging Plug for Electrical Circuits, of which the following is a specification.

Contact devices (wall contacts) for electric circuits which allow the plug, inserted in the axial opposite contact of the contact box, to be moved up and down 90° are known. By further turning the plug upwards the same however releases itself if pulled the slightest amount.

This invention which relates to a contact box and is represented in the accompanying drawing by six different forms of construction, differs from the known devices in that the plug *i* after being inserted (not hung) in the contact box *a* can first of all be swung in the direction of the arrows (Figure 3) to the right hand side and vice versa through an arc of 180° while in constant contact, without the plug being able to release itself in a central position. The contact box may hereby be fixed in a vertical or horizontal position. Such a swinging of the plug *i* always take the same direction to which the lamp or cable leading to the place of current consumption is pulled.

The object of this construction is to prevent the wiring, the plug or the whole contact box from being torn off the wall which was often the case with the known contact boxes when inadvertently violently pulling at the lamps or motor cable.

In order that my invention may be more clearly understood, I have appended hereunto a sheet of drawings.

Fig. 1 shows a front elevation of a contact box, supposing said box is fitted to a wall. Fig. 2 a side sectional elevation of contact box with plug in position. Fig. 3 a plan of the same. Figs. 4, 5, and 6 several different ways of fixing my device to different types of contact boxes.

The contact box *a* (Fig. 1) is constructed for this purpose in the shape of an oval box for receiving the separated fuses. As will be seen in Fig. 1 and 2 this oval box *a* is furnished with two suitably shaped projections *b* and *b*¹, in the axial opposite bores of which a funnel shaped bored contact bolt *c* and *c*¹ is inserted and fixed by means of the screws *d* and *d*¹. Each of these bolts is connected up to a fuse *f*, *f*¹ by a connecting wire *e* and *e*¹.

The cavities for the fuses are closed by a closing plate *g* which is common to them both, and fixed by two clamp springs *h* and *h*¹.

The plug *i* is correspondingly shaped to the contact box *a* and is shown in section in Fig. 2, while Fig. 3 is

a plan of the same. The plug consists of the upper cap *k*, and the lower cap *k*¹, both of which are divided by a pass and dividing plate *l*, and kept in an immovable position to each other by the bolt screw *m*. Screwed in a bore of the lower cap *k*¹ is a contact bolt *n*, in which an isolating box *o* is inserted. The bolt *n* is further furnished with the small contact plate *p* with the adjusting screw *q*. The upper capsule half *k* is also provided with the contact bolt *n*¹ with the guide pin *r* which projects into the bore of the isolating box *o* of the lower capsule *k*¹. The bolt *n*¹ is also provided with a small contact plate *p*¹ with the adjusting screw *q*¹. In order to press these two contact bolts *n* and *n*¹ with their half round heads away from each other a spiral spring *s*, which exerts a constant pressure on the upper and lower contact bolts *n* and *n*¹, is placed over the guide pin *r*.

If the plug *i* is pushed in between the contact bolts *c* and *c*¹ of the contact box *a*, then the contact bolts *n* and *n*¹ are pressed by the spring *s* with a constant pressure in the funnel shaped cavities and thus contact between the contact box *a* and the plug *i* is effected.

Should one unintentionally pull the plug violently then the spring *s* yields to the corresponding tension and direction, and the plug *i* is forced out of the contact box without damaging any parts.

In consequence of the contacts of the contact box *a* having a ring shaped bore, and the contacts of the plug *i* a curved surface, and said contacts lying axially after the insertion of the plug, the latter can be turned on the pin *r* to the right hand and left hand side through an arc of 180° or more when the contact box is in a vertical or horizontal position.

Besides this hereinbefore mentioned construction the plug contact can, while retaining the swinging system, be so constructed that roller shaped cartridge fuses arranged parallel to each other in the contact box (Fig. 4) could be used instead of the lamellar fuses. In Fig. 5 this arrangement is such that these cartridges are for example embedded in an axial direction in the plug, and pressed up against the small contact plates in the contact box by the spiral spring *s*. In this construction (see Fig. 4-6) *a* is the contact box in which the contact pieces *k*² are laid, the latter being held in the contact box by the adjusting screws *k*³ which also clamp the conducting wire *Z*. *i*² is the plug, in the separate bores of which the roller shaped cartridge fuses *s*² with concave heads are pressed up against the contact pieces *k*² by the springs *f*². The arrangement shown in Fig. 5 is the opposite: the fuse cartridges *s*² being placed in the contact box which is also the case in Fig. 6. The contact in Fig. 6 is however effected by the two springs *f*⁴ which are fixed in the plug and furnished with concave contact block *n*².

Having fully described my invention, what I claim and desire to secure by Letters Patent is:

A contact device for electrical conduits comprising, in combination, the contact box *a*, two oppositely arranged
5 contact bolts or pieces *c* and *c'* in said contact box, said contact pieces having funnel shaped bores to receive the concave shaped heads of the contact bolts *n*, *n'*, a spring *s* destined to hold said contact bolts apart, in order to allow the plug to make a turning movement of 180° correspond-
10 ing to that of the attached cable as well as to permit the

plug to be automatically released without damaging any part in the event of a violent pull taking place, substantially as described and shown and for the purpose set forth.

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

WILHELM KREINSEN.

Witnesses:

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LOUIS VANDORN.