

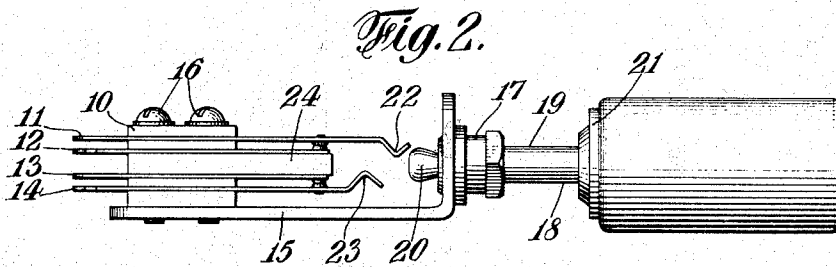
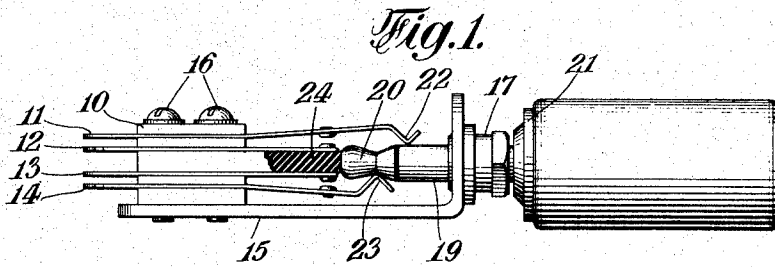
Feb. 10, 1925.

1,526,102

R. L. TAFT

CONSTRUCTION FOR JACKS AND THE LIKE

Filed June 2, 1922



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UNITED STATES PATENT OFFICE.

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CONSTRUCTION FOR JACKS AND THE LIKE.

Application filed June 2, 1922. Serial No. 565,449.

To all whom it may concern:

Be it known that I, RYLAND L. TAFT, a citizen of the United States, and a resident of Providence, in the county of Providence and State of Rhode Island, have invented an Improvement in Construction for Jacks and the like, of which the following is a specification.

This invention relates to construction for jacks, particularly to such apparatus as adapted to cooperate with a plug for forming connections in electric circuits.

One of the objects thereof is to provide a construction of the above nature which is particularly adapted to receive a plug and make contact therewith in a thoroughly dependable and efficient manner. Another object is to provide a construction of the above nature which will form a reliable contact with a plug in such a manner as to avoid danger of undesirable contacts such as might interfere with the proper operation of a jack. Other objects will be in part obvious or in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangements of parts as will be exemplified in the structure to be hereinafter described and the scope of the application of which will be indicated in the following claims.

In the accompanying drawing, in which is shown one of the various possible embodiments of this invention,

Figure 1 is a side elevation of a jack showing a plug in position, certain parts being cut away for clearness; and

Figure 2 is a view corresponding to that shown in Fig. 1 showing the plug partly removed.

Similar reference characters refer to similar parts in both views of the drawing.

Referring now to the drawing in detail, there is shown an insulating base or supporting member 10 preferably built up of a plurality of superimposed layers of non-conductive material, such as hard rubber, between the successive layers of which are held a plurality of spring contact members such as 11, 12, 13 and 14. Resting against the bottom of the insulating member 10 is an arm 15 into which are threaded screws, such as 16, which pass through member 10, conductors 11, 12, 13 and 14, and securely clamp these

parts together and in tight relation to the arm 15. The screws 16 passing through the spring contacts 11, 12, 13 and 14 are insulated therefrom in any suitable manner and thus the spring contacts are effectually insulated one from the other and from the arm 15.

At the right-hand end of arm 15 is secured a supporting and guiding sleeve 17 through which a plug 18 is adapted to be received and which is so positioned as to guide the plug into engagement with the spring contacts of the jack, as will be hereinafter described.

In Fig. 2 the plug, which in this instance comprises a sleeve contact 19 and a tip contact 20 insulated from each other and mounted upon a suitable support as 21, is shown partially withdrawn from the jack. In this position with the plug removed the spring contacts 11 and 12 of the jack are in electrical contact through their contact points, as are the spring contacts 13 and 14. Adjacent its end contact 11 is provided with an inwardly bent portion 22 and contact 14 is provided with a similar portion 23. As the plug is thrust into the jack to the position shown in Fig. 1, the sleeve 17 guides the plug between the springs 11 and 14 and the bent portions 22 and 23 sliding over the plug cause separating of the springs 11 and 14 and their disengagement from the contacts 12 and 13. Then, as shown in Fig. 1, contacts 11 and 14 are pressed by their springing action into firm contact with the sleeve 19 and the tip 20 respectively.

Projecting from the insulating supporting member 10 and substantially in line with the opening of sleeve 17 through which the plug is inserted is a member 24 which is preferably of insulating material formed integrally with one of the layers of insulating material comprising the supporting member 10. In this instance member 24 is positioned between the two contacts 12 and 13 and is of sufficient length to extend beyond their ends as shown. Thus, when the plug is inserted between the contacts 11 and 14 the member 24 forms a safe stop to limit the movement of the plug and there is no danger of the tip 20 coming into contact with the ends of the contacts 12 and 13. In this manner the plug is always inserted to a distance sufficient to make contact with the spring contacts 11 and

14 and the danger of short-circuiting due to contact of the plug with other spring contacts of the jack is avoided.

5 It will thus be seen that there is herein provided an apparatus which embodies the various features of this invention, which apparatus in its action attains the various objects of the invention and is well adapted to meet the requirements of practical use.

10 As many possible embodiments may be made of the above invention and as many changes might be made in the embodiment herein set forth, it is to be understood that all matter herein set forth or shown in the 15 accompanying drawings is to be interpreted as illustrative and not in a limiting sense.

I claim as my invention:

1. In construction for jacks and the like, in combination, a jack adapted to receive 20 a plug and insulating means on said jack in substantial alignment with said plug adapted to form a stop to limit the movement of said plug into said jack.

2. In construction for jacks and the like, in combination, a jack adapted to receive 25 a plug and having a plurality of spring contacts one of which is adapted to make contact with said plug and a stop device positioned upon said jack adapted to engage 30 said plug adjacent the end thereof and to prevent contact of said plug with others of said spring contacts.

3. In construction for jacks and the like, in combination, a jack adapted to receive 35 a plug and having a pair of contact members one of which is adapted to make contact with said plug and means mounted upon said jack in substantial alignment with said plug adapted to form a substantially 40 rigid stop to prevent contact of said other contact member with said plug.

4. In construction for jacks and the like, in combination, a jack adapted to receive 45 a plug, said jack having a block of insulating material supporting a contact member adapted to make contact with said plug,

said insulating block being extended into the path of movement of said plug to form a stop therefor.

5. In construction for jacks and the like, 50 in combination, a jack adapted to receive a plug, said jack having a plurality of spring contacts and insulating members therebetween, one of said insulating members being extended into the path of move- 55 ment of said plug to form a stop therefor.

6. In construction for jacks and the like, in combination a jack adapted to receive 60 a plug, contact members upon said jack positioned substantially in line with the path of movement of said plug into said jack and not adapted to make contact with said plug, contact members upon said jack adapted to make contact with said plug, 65 and insulating means upon said jack positioned in line with the path of movement of said plug into said jack adapted to engage the end of said plug forming a stop there- 70 for to prevent contact of said plug with said first contact members and permit contact of said plug with said second contact members.

7. In construction for jacks and the like, in combination, a jack adapted to receive 75 a plug, a pair of contact members upon said jack adapted to contact said plug to complete an electric circuit through said jack and through said plug, a second pair of contact members upon said jack substan- 80 tially in line with the path of movement of said plug adapted to make contact with said first pair of contact members and not adapted to make contact with said plug, and an insulating member positioned between 85 said second pair of contact members, adapted to form a stop for said plug to prevent contact thereof with said second pair of contact members.

In testimony whereof, I have signed my name to this specification this 23rd day of 90 May 1922.

RYLAND L. TAFT.