

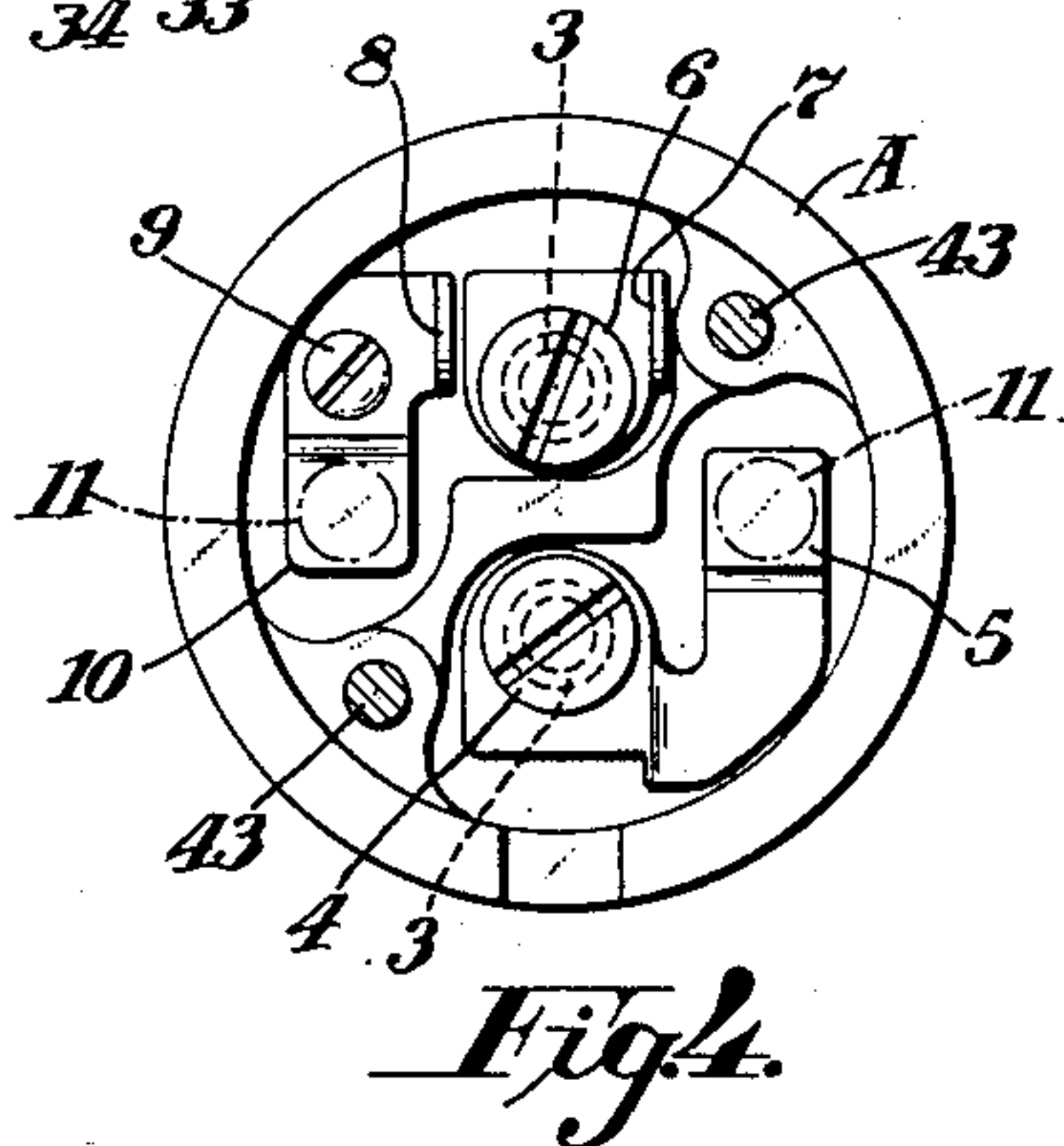
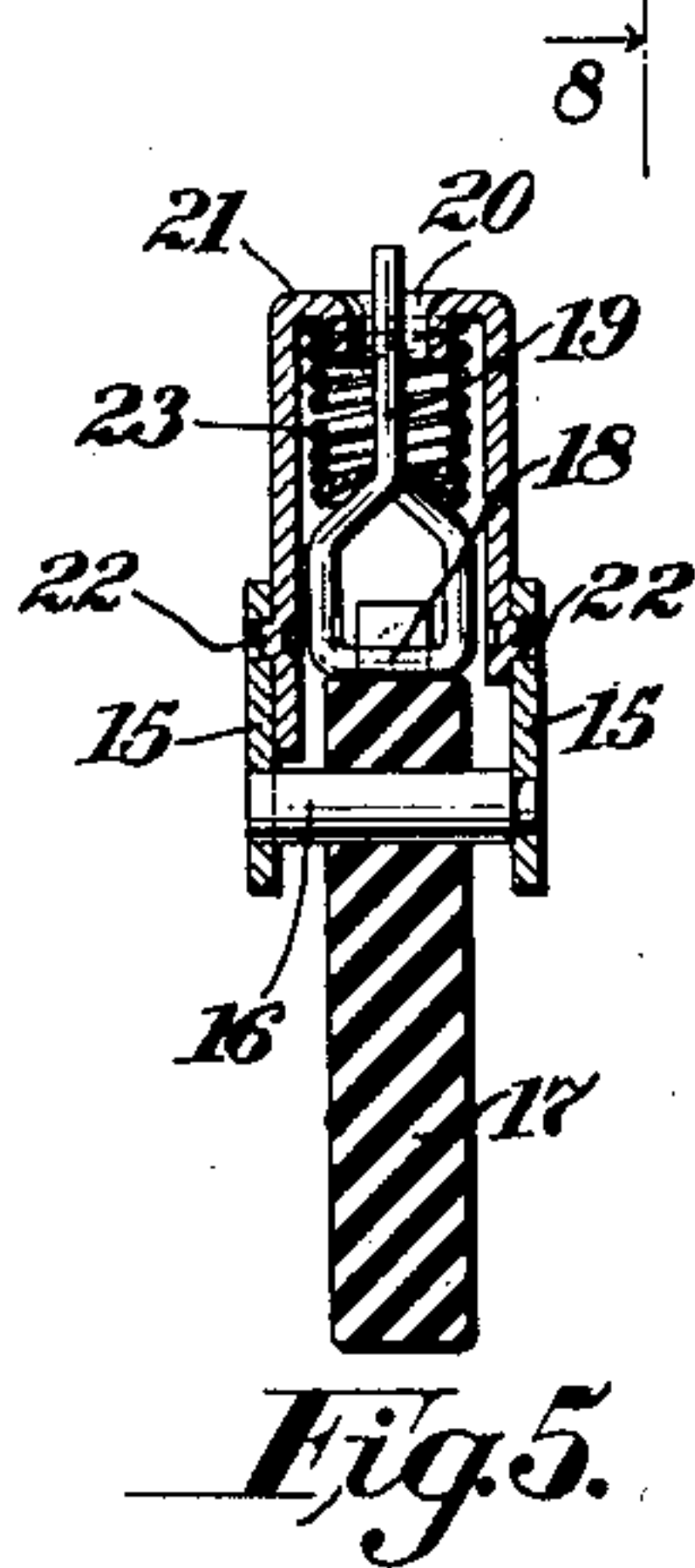
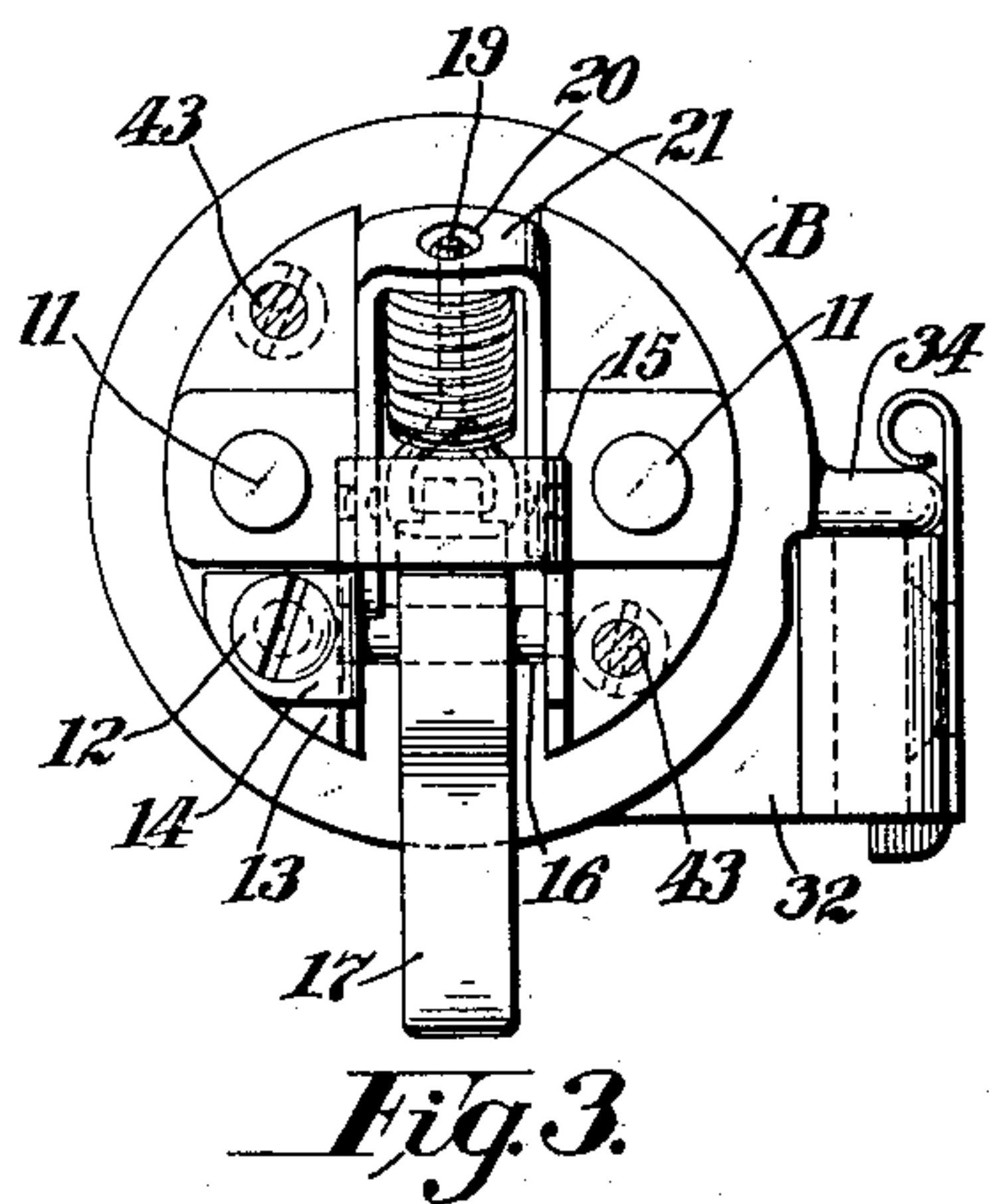
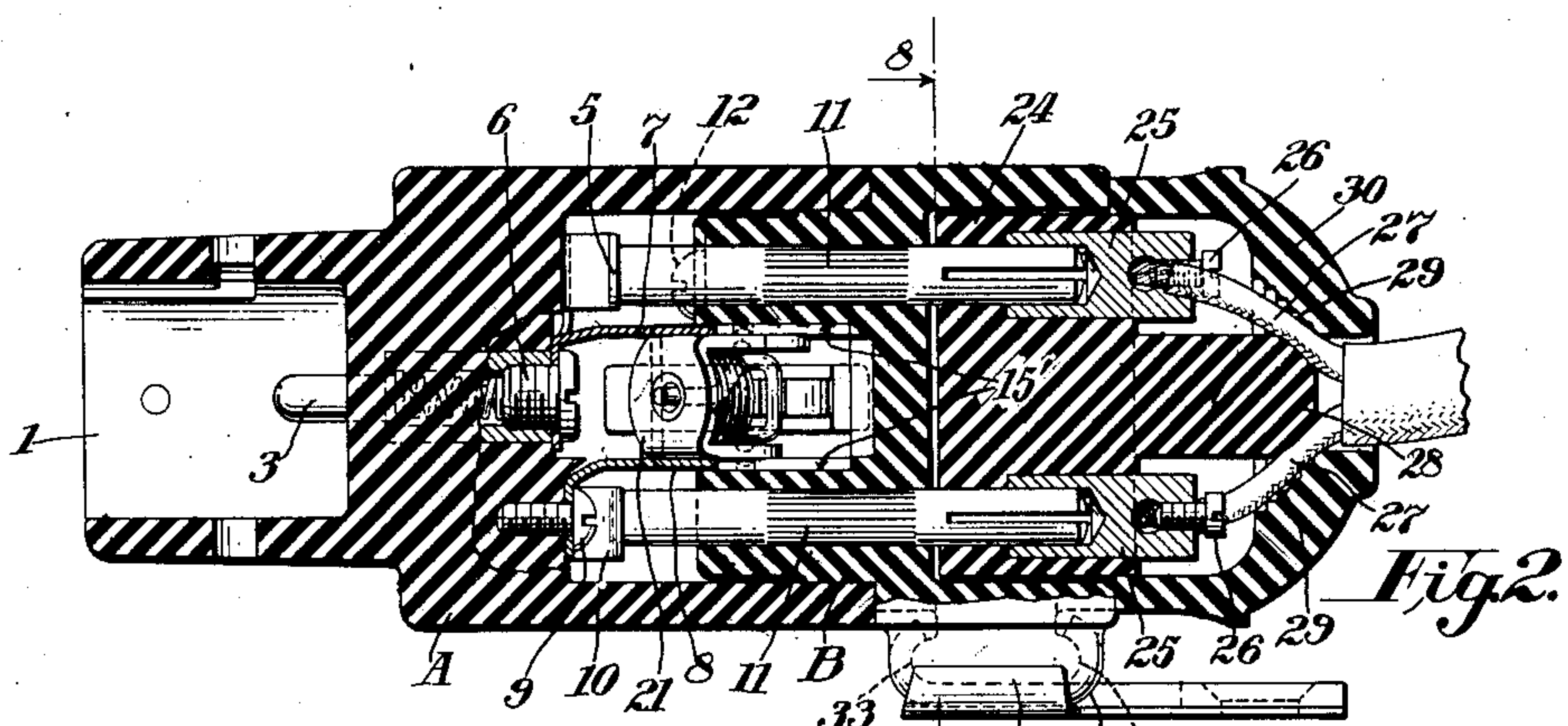
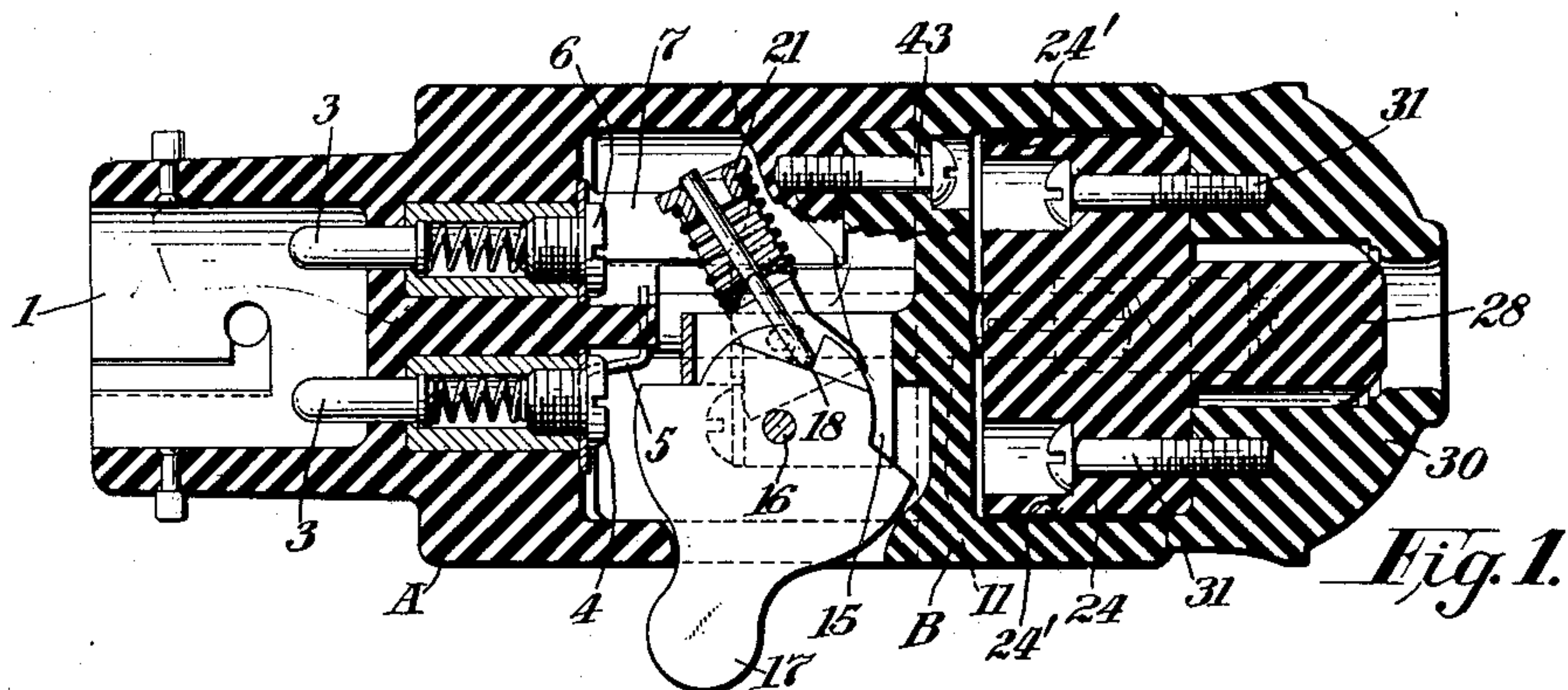
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2,148,875

ELECTRIC LAMP SOCKET AND PLUG CONNECTOR

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## UNITED STATES PATENT OFFICE

2,148,875

ELECTRIC LAMP SOCKET AND PLUG  
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6 Claims. (Cl. 173—346)

The user of a sewing machine having an electric lamp mounted thereon is occasionally desirous of using the lamp as a portable or trouble lamp to assist in finding articles dropped upon the floor and for other purposes.

An object of the invention is to provide an electric lamp-socket of the non-metallic shell type which is of simplified construction and the parts of which may be readily manufactured and assembled at low cost.

With the above and other objects in view, as will hereinafter appear, the invention comprises the devices, combinations, and arrangements of parts hereinafter set forth and illustrated in the accompanying drawing of a preferred embodiment of the invention, from which the several features of the invention and the advantages attained thereby will be readily understood by those skilled in the art.

In the accompanying drawing, Fig. 1 is a longitudinal axial section in a vertical plane of an electric lamp-socket embodying the invention. Fig. 2 is a longitudinal axial section of the lamp-socket in a horizontal plane. Fig. 3 is an inner end-view of the part of the lamp-socket which carries the movable contact element of the switch. Fig. 4 is an inner end view of the mating part of the lamp-socket which carries the stationary contact elements of the switch. Fig. 5 is a section of the switch operating mechanism.

The lamp-socket preferably comprises telescoping parts A and B. The part A, which is essentially a shell preferably molded of Bakelite, has a cylindrical socket 1 for reception of the conventional lamp-base 2. The usual spring-pin inserts 3, 3, are provided to conduct the electric current to the lamp-base contacts. Connected to one of the spring-pin inserts 3, by means of the screw 4, Fig. 4, is a current lead-in leaf-spring contact member 5. Connected to the other spring-pin contact 3, by means of the screw 6, is the stationary switch-contact 7. A second stationary switch-contact 8, spaced from and parallel to the stationary switch-contact 7, is secured by the screw 9 to the body of the part A and terminates at its other end in a current lead-in leaf-spring contact 10.

The part B, which telescopes with the shell part A, is also preferably molded of Bakelite and comprises a cylindrical body having the diametrically opposed plug-connector pin inserts 11, 11, molded therein. When the part B is secured to and in telescoping relation with the part A, the pins 11 engage and conduct the electric current

through the body B to the current lead-in contacts 5 and 10 carried by the part A.

Secured by the screw 12 to the seat 13 on the part B is the lip 14 of a U-shaped yoke 15 the spaced side members of which are received in the diametrical slot 15' in the part B and carry the fulcrum support pin 16 for the finger-lever 17. The notched inner end of the finger lever 17 is engaged by the head 18 of a guide-pin 19 which is slidably received at its other end in an aperture 20 in the U-shaped movable switch-contact member 21, the legs of which are struck-out to form trunnion portions 22, 22, Fig. 5, pivotally received in coaxial apertures in the side plates of the U-shaped support 15. The compression spring 23 surrounding the guide-pin 19 between the head 18 and the bridging member of the movable contact 21, completes the toggle-device by which the movable contact member 21 is actuated to carry it into and out of bridging contact relation with the stationary contacts 7 and 8; the construction being similar to that disclosed in U. S. Patent to Perkins, No. 1,853,365, of April 5, 1932. It will be observed that the plug-connector pins 11, 11 are insulated from the movable elements of the switch-mechanism which are carried by the part B.

The part B is preferably formed in its head end with a cylindrical plug-receiving cavity 24 which houses the projecting split-ends of the connector pins 11 and telescopically receives the cylindrical plug 24 of molded Bakelite carrying the metal female connector inserts 25 which receive the connector pins 11 and carry terminal screws 26 for binding the conductor wires 27 thereto. The plug body 24 is formed with a projection 28 which presses the conductors 27 against the roughened inner surfaces 29 of the cap 30 secured to the body 24 by the screws 31, thereby relieving the binding screw-connections 26 of strain.

Having thus set forth the nature of the invention what I claim herein is:—

1. An electric lamp-socket comprising a cylindrical body-member of insulating material, a pair of current-supply conductor pins carried by and passing through said body-member parallel to the longitudinal axis of the latter, a toggle-switch mechanism mounted on said body-member between and insulated from said current supply pins and including a movable bridging contact switch-member, a second body-member telescopically receiving said first mentioned body-member and formed with a lamp-base-receiving cavity, counter-contacts mounted in said



second body-member in position to be engaged by said current supply pins when said body-members are in assembled relation, and a pair of spaced stationary switch-contacts mounted in said second mentioned body-member in position to be engaged by said bridging contact switch-member.

2. An electric lamp-socket having a cylindrical body-member of insulating material, a pair of current conductor pin inserts extending longitudinally through said body-member, a toggle switch mechanism mounted on said body-member between said pins and insulated therefrom, a cylindrical shell member of insulating material telescopically receiving said body-member and having a lamp-base-receiving cavity, stationary contacts carried by said shell in cooperative relation with said toggle switch mechanism, counter-contact carried by said shell and engaged by said pin inserts, and lamp-base-engaging contacts carried by said shell and connected in circuit with said stationary and counter-contacts.

3. An electric lamp-socket comprising a cylindrical body-member of insulating material, a pair of current-supply conductor pins carried by and passing through said body-member parallel to the longitudinal axis of the latter, a switch mechanism mounted on said body-member between and insulated from said current-supply pins and including a movable bridging contact switch-member, a second body-member telescopically receiving said first mentioned body-member and formed with a lamp-base-receiving cavity, counter-contacts mounted in said second body-member in position to be engaged by said current-supply pins when said body-members are in assembled relation, a pair of spaced stationary switch-contacts mounted in said second mentioned body-member in position to be engaged by said bridging contact switch-member, and a third body-member having female current-supply inserts detachably connected to said conductor pins.

4. An electric lamp-socket comprising a cylindrical shell body-member of molded insulating material formed at one end with a lamp-base-receiving cavity, a pair of lamp-base-engaging contacts in said cavity, a pair of spaced stationary switch-contacts and a pair of stationary current-receiving contacts mounted in said shell member and connected in series relation with said lamp-

base-engaging contacts, a complementary molded body-member telescopically received by said shell body-member, current-conductors carried by said complementary body-member and engaging the current-receiving contacts in said shell body-member, and a movable switch contact-member mounted on said complementary body-member in insulated relation with said current-conductors and adapted to bridge said stationary switch contacts.

5. An electric lamp-socket comprising, a cylindrical body-member of insulating material having a cylindrical plug-receiving cavity at one end and a diametrical slot at its other end, a pair of parallel conductor pins passing longitudinally through said body-member at opposite sides of said slot and projecting into said cylindrical cavity, a switch mechanism including a movable switch-contact mounted in said slot in insulated relation with said conductor pins, a cylindrical shell-member telescopically receiving the diametrically slotted end of said body-member, stationary switch contacts mounted in said shell-member in position to be engaged by said movable switch-contact, counter-contacts in said shell-member engaged by said conductor pins, lamp-contacts carried by said shell-member and connected in series relation with said switch- and counter-contacts, and a line-connector plug in said plug-receiving cavity.

6. An electric lamp-socket comprising two separable telescopically interfitting body-members of insulating material, lamp-base-engaging contacts and switch-contacts mounted on one of said body-members, a movable switch-mechanism mounted on the other of said body-members in cooperative relation with said switch-contacts, a pair of plug-connector contact elements mounted on said last-mentioned body-member in insulated relation with said movable switch-mechanism, contacts on said first mentioned body-member engaged by said plug-connector contact elements, the plug-connector elements, the contacts engaged thereby, the switch contacts and lamp-base-engaging contacts being connected in series circuit relation, and a plug-connector member having current-supply terminals quick-detachably engaging said plug-connector contact elements.

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