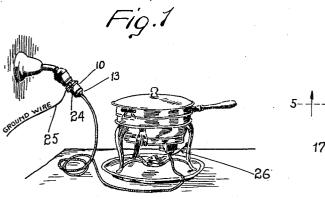
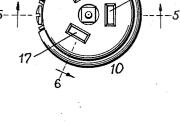
#### G. P. KNAPP. SEPARABLE ATTACHMENT PLUG. APPLICATION FILED JAN. 11, 1915.

1,179,728.

Patented Apr. 18, 1916.

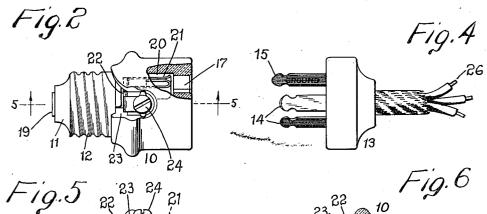
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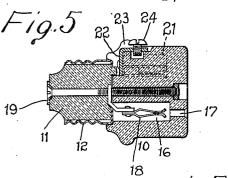


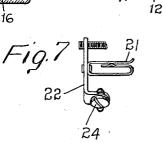


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WITNESSES: Homesde E. M. Culre

INVENTOR George P. Knapp By A. M. Booter ATTORNEY

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# NITED STATES PATENT OFFICE

## CEORGE P. KNAPP, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO HARVEY HUBBELL, INCORPORATED, OF BRIDGEPORT, CONNECTICUT, A CORPORATION OF CONNECTICUT.

#### SEPARABLE ATTACHMENT-PLUG.

1,179,728.

#### Specification of Letters Patent. Patented Apr. 18, 1916.

### Application filed January 11, 1915. Serial No. 1,500.

To all whom it may concern:

Be it known that I, George P. KNAPP, a citizen of the United States, residing at Bridgeport, county of Fairfield, State of Connecticut, have invented an Improvement in Separable Attachment-Plugs, of which the following is a specification.

This invention has for its object to provide a portable separable attachment plug

- .o especially adapted for use in connection with electric implements, as chafing dishes, sad irons, &c., or wherever a light is used in connection with a machine or mechanism and there is danger of metal parts likely to be handled by the operator becoming
- charged with the current owing to a crossing of wires, short circuiting or any mishap likely to happen in connection with electrical wiring, which shall entirely do away with this danger by providing the cap with
- a supplemental knife blade contact and the base with a corresponding supplemental pair of contact plates which are connected with a binding screw for the attachment of 5 a ground wire.
- In the accompanying drawing forming a part of this specification, Figure 1 is a perspective view illustrating the use of my novel plug in connection with a chafing dish;
- o Fig. 2 an elevation of the base and end block assembled; Fig. 3 a bottom plan view of the base; Fig. 4 an elevation of the cap detached; Fig. 5 a section on the line 5-5 in Figs. 2 and 3 looking in the direction of
- 5 the arrows; Fig. 6 a section on the line 6-6 in Fig. 3, looking in the direction of the arrows, and Fig. 7 is a view of the sup-plemental contact plates and the binding screw
- 10 denotes the base and 11 the end block, both made of insulating material, 12 the screw shell and 13 the cap. A three-wire cable leads from the cap to the implement, machine or mechanism where the current is
- 15 used. Two of the wires are connected respectively to knife blade contacts 14, and the third wire is connected within the cap with a supplemental knife blade contact 15. The base is provided with two chambers 16 hav-
- 30 ing contracted passages 17 leading thereto through the bottom. In each of the cham-bers there is a pair of contact plates 18 which are adapted to be engaged by knife blade contacts 14 when they are pressed in
- is through the passages. One pair of these

contact plates is electrically connected with the screw shell, see Fig. 6, the other pair being electrically connected with the center contact 19, see Fig. 5. The base is also provided with a chamber 20 having a contracted 60 passage 17 leading thereto through the bottom. In this chamber there is a pair of contact plates 21 which are adapted to be engaged by supplemental knife blade contact 15 when it is pressed in through the corre- 65 sponding passage. The arrangement of the chambers in the base, the contact plates therein and the contracted passages leading thereto of course corresponds with the arrangement of the knife blade contacts on the 70 cap. The special arrangement is not essential but it is essential that the contact blade and the corresponding contact plates be so arranged that the knife blade contacts can only enter the passages when the supple-75 mental knife blade contact is in alinement with the passage leading to chamber 20, and in order to simplify the engagement of the cap with the base, that is to assist in alining knife blade contacts 14 and 15 with 80 the corresponding passages, I preferably make supplemental knife blade contact 15 slightly longer than knife blade contacts 14. I also preferably use substantially the arrangement of knife blade contacts and the 85 corresponding passages illustrated in Figs. 3 and 4.

Contact plates 21 are secured to a plate 22 which extends outward through a recess 23 in the base and is provided with an exterior 90 binding screw 24 to which a ground wire 25 may be attached, as in Fig. 1. The wire in the cable which is connected with supplemental knife blade contact 15 and which for convenience I will indicate specifically by 26, 95 leads out from the cable preferably at the point of attachment of the cable to the implement, machine or mechanism, see Fig. 1, and is attached to some portion of the implement, machine or mechanism that is likely 100 to become charged with the current.

Having thus described my invention I claim:

A portable separable attachment plug comprising a plug base having chambers 105 leading in from one end and provided with contracted entrance passages, said base being provided with a center contact, and an end block provided with a shell contact, contact members in independent chambers 110

of said base and connected with the center contact and shell contact respectively, a ground contact plate attached to said base and leading from one of said chambers to 5 the exterior of the base, said plate having an exterior binding screw, a ground contact lo-cated within an independent chamber of said base and connected with said contact plate, and a cap having contact blades and a 10 separate ground contact blade shaped to en-

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ter the contracted passages of said cham-bers, the ground contact blade being longer

than the remaining contact blades. In testimony whereof I affix my signature in presence of two witnesses.

GEORGE P. KNAPP.

Witnesses: H. W. MEADE, E. M. CULVER.