

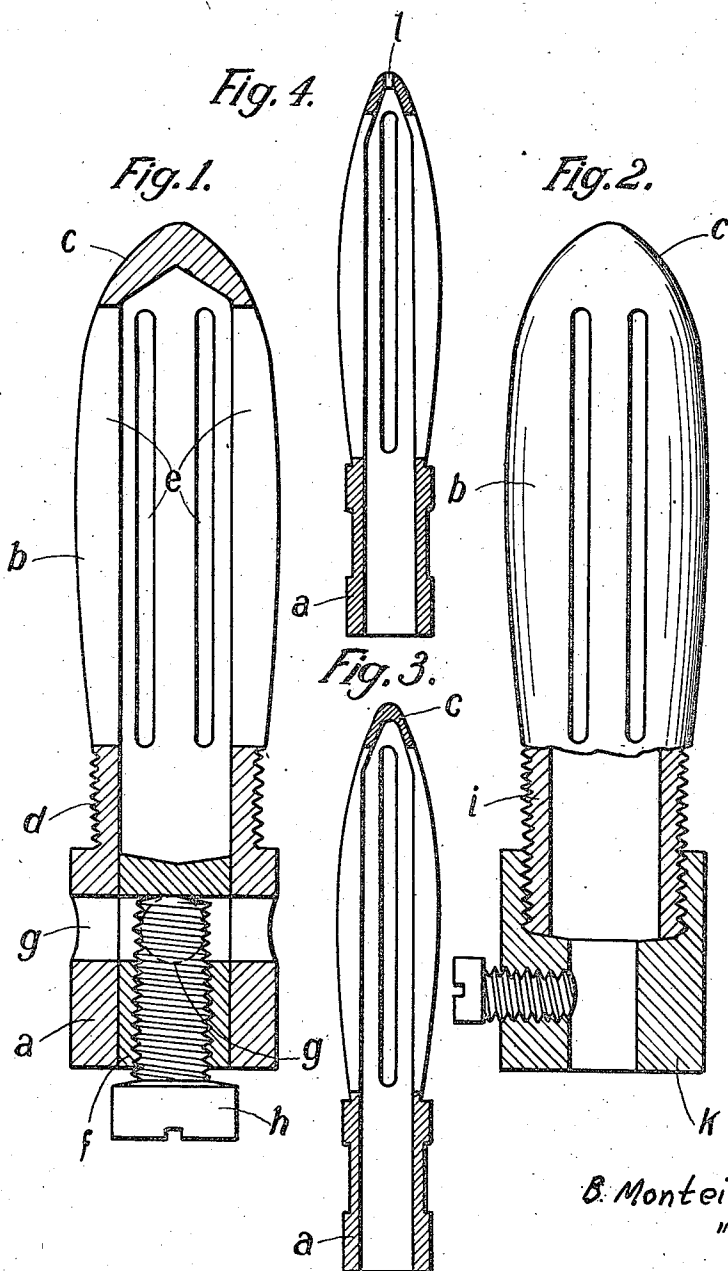
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METHOD OF MANUFACTURING ELECTRIC CONTACT PLUGS

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METHOD OF MANUFACTURING ELECTRIC CONTACT PLUGS.

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Contact plugs for cylindrical sockets have been known heretofore having male parts formed of a tube the walls of which are separated by longitudinally extended radial slots into narrow lamellæ hanging together at their ends. In shaping these plugs the fore ends of the metal shanks were contracted on a press and then the lamellæ were bulged out by an axial thrust. This process was employed whether a regular tube was used or whether a solid rod was bored out either partly or on its whole length so as to form a tube before separating the lamellæ.

The object of the present invention is a process for manufacturing contact-plugs for cylindrical sockets characterized in that the thickness of the lamellæ is determined by a boring extended from the back end unto nearly the fore end of the plug. In this way it is possible to produce without any contracting operation plugs having lamellæ hanging together and having a fore end of any desired shape, which shape may be given previously on the lathe and be that best suited for a good contact. The thrusting operation is eliminated and the mechanical operations are greatly simplified and cheapened.

It must be mentioned here, that for currents of greater intensity conical plugs fitting into conical sockets have been proposed. In this case with the view of obtaining a resilient contact both plug and socket were also provided with longitudinally extended radial slots but the diameter of the corresponding socket had to be chosen very exact because if the diameter of the socket did not fit rather closely a bad contact would be the result. With plugs according to the present invention however the diameters of the corresponding sockets may vary within certain limits without impairing the contact and therefore such plugs are better suited in cases where sockets and plugs are of different origin.

Therefore and according to the present invention the method of manufacturing electrical contact plugs appertaining to cylindrical sockets and having a plurality of resilient arcuated narrow plates separated by radial slots but still cohering at their fore ends consists of forming the same out of a solid blank by first turning the outside of

the blank to form same arcuate, then boring an axial hole up to an end of said blank for determining the thickness of lamellæ to be formed and finally cutting longitudinal extending radial slots to form lamellæ.

The annexed drawing represents some working examples of plugs manufactured according to the present process.

Fig. 1 and Fig. 2 are sectional elevations of plugs combined with sockets for fixing an electrical conductor and Figs. 3 and 4 are sectional elevations of plugs for radio plants.

Fig. 1 is a plug for powerful electric currents.

This plug has been obtained of solid brass wire. After having shaped the outside of the plug on the lathe by giving a predetermined curving to the contact portions *b* and to the fore-end *c* and after having made the thread *d* a hole is drilled almost on the whole length of the plug said hole beginning at the rear end that is at the socket *a* and extending close up to the fore end *c*. After forming lamellæ by means of slots *e*, in my case six, a prop *f* having the hole *g* for introducing the wires and provided with the thread for a set screw *h* is forced into the socket end. The plug presents therefore a hollow space enclosed by the lamellæ which are hanging together at their both ends. There is no tension whatever in the metal so that the outside shape of a number of plugs is perfectly alike which is not the case with plugs obtained by the thrust process.

Fig. 2 represents a second working form of the plug. The general shape of the contact portion that is of the hollow space enclosed by the lamellæ is exactly the same as in Fig. 1. The base of this plug however is threaded at *i* and is screwed into a socket *k* which is provided with an axial hole for the wire. Also in this plug the bore on which the thickness and the resilience of the lamellæ is depending is extended from the rear to the fore end close up to the point *c*.

The plug represented in Fig. 3 is especially suited for radio plants and is mostly embedded in radio lamp sockets. The bore as in the first two figures is likewise begun at the base *a* and extended to the point *c*. No prop is needed here.

The plug represented in Fig. 4 is distin-

guished from that in Fig. 3 in that it has a perforation 7 at the point into which a wire may be introduced and soldered fast.

Having thus described my invention, what I claim is:

In manufacturing electrical contact plugs appertaining to cylindrical sockets and having a plurality of resilient arcuated narrow plates separated by radial slots but still cohering at their fore ends, the method of

forming the same out of a solid blank by first turning the outside of the blank to form same arcuate, then boring an axial hole up to an end of said blank for determining the thickness of lamellæ to be formed and finally cutting longitudinal extending radial slots to form lamellæ.

In testimony whereof I affix my signature.

BERTRAND MONTEIL.