H. F. GOETZ.

METHOD OF PRODUCING SHEET METAL FUSE PLUG CONTACTS.

APPLICATION FILED SEPT. 28, 1917. RENEWED SEPT. 14, 1918.

1,282,567.

Patented Oct. 22, 1918.

Fig. 1.

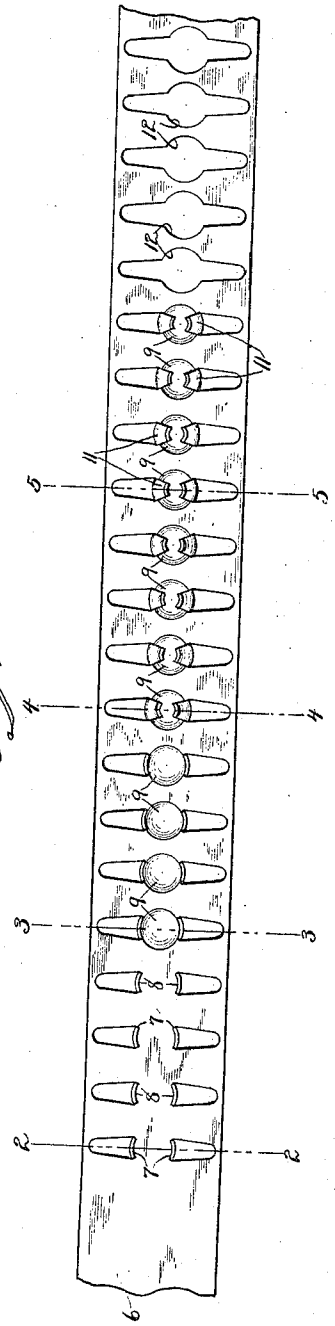


Fig. 2.

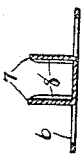


Fig. 3.

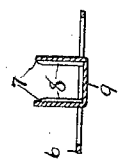


Fig. 4.

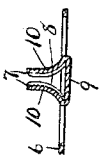


Fig. 5.

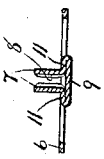


Fig. 6.

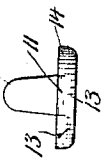
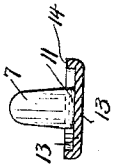


Fig. 7.



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UNITED STATES PATENT OFFICE.

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METHOD OF PRODUCING SHEET-METAL FUSE-PLUG CONTACTS.

1,282,567. Specification of Letters Patent. Patented Oct. 22, 1918.

Application filed September 28, 1917, Serial No. 193,811. Renewed September 14, 1918. Serial No. 254,124.

To all whom it may concern:

Be it known that I, HENRY F. GOETZ, a citizen of the United States, residing at Waterbury, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Methods of Producing Sheet-Metal Fuse-Plug Contacts; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a plan view of a sheet-metal strip showing the several operations performed upon it, for the production of sheet-metal fuse-plug contacts in accordance with my improved method.

Fig. 2 a transverse sectional view on the line 2—2 of Fig. 1.

Fig. 3 a similar view on the line 3—3 of Fig. 1.

Fig. 4 a similar view on the line 4—4 of Fig. 1.

Fig. 5 a similar view on the line 5—5 of Fig. 1.

Fig. 6 a detached view in side elevation of one of the contacts on an enlarged scale.

Fig. 7 a transverse sectional view thereof taken between the prongs.

My invention relates to an improved method of producing sheet-metal fuse-plug contacts, the object being to produce at a low cost of manufacture, a fuse-plug contact which may be depended upon to set itself firmly and so insure a good contact.

With these ends in view, my invention consists in a method having certain steps as will be hereinafter described and pointed out in the claim.

In carrying out my improved method, as herein shown, a sheet-metal strip 6 of suitable width and weight, is subjected to the action of four different dies. The first die cuts out the two corresponding blunt-ended prongs 7 and lifts them into parallel positions at right angles to the plane of the strip, as shown in Fig. 2, the inner or butt-ends of the said prongs being at the same time concavo-convexed in cross-section as at 8, and being spaced apart just to the degree required for the formation of the contact-head between them. The next die sets the metal between the concave inner faces of the bases of the prongs downward to produce a shallow cup 9 concentric with the convex outer faces of the butt or inner ends of the prongs, and at least as deep as the metal is thick, if not deeper. The next die operates to draw the prongs partly together as at 10 in Fig. 4, whereby they are inwardly bowed and their blunt outer ends brought substantially into their final positions. The next die completes the bending of the prongs, their butt-ends being set inward as at 11 directly upon the inner face of the cup 9 as shown in Fig. 5, whereby each prong is bent at a right angle to its initial length, with the result that the butt-ends of the prospective prongs extend toward each other from the opposite edges of the cup and the outer ends of the prongs extend parallel with each other and at right angles to the plane of the cup. The next die operates to cut out the cup 9 from the blank, on the curved lines 12 of Fig. 1, whereby the said cup is transformed into the head 13 of the finished contact, the flange 14 of the said head being at least flush with the exposed faces of the bases 11 of the prongs so that the contact when once placed in a fuse-plug will not rock on the said bases and so impair the efficiency of the contact and possibly ruin the plug.

As shown in Fig. 1, the blank exhibits, in quadruple, the four phases of the method. This is not necessary, but results from the simultaneous use of the four dies which are spaced sufficiently far apart in the die-head for clearance, as well as for convenience. Under this arrangement each die performs its particular function every time the press is operated.

I claim:—

A method of producing sheet-metal fuse-plug contacts, consisting in subjecting a sheet-metal blank to the action of dies; first, to cut out two corresponding prongs and bend them toward each other into planes at right angles to the plane of the blank; second, to cup the the metal lying between the inner faces of the inner ends of the said prongs; third, to inwardly bow the prongs toward each other over the said cup, fourth,

to set the inner ends of the bowed prongs inward into line with each other and upon the inner face of the cup and to bend the outer ends of the prongs at right angles to their inner ends; and finally to cut out the said cup from the blank.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

HENRY F. GOETZ.

Witnesses:
L. E. BREEN,
GEO. H. BUTLER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."