

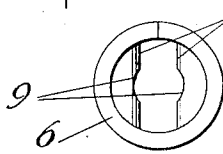
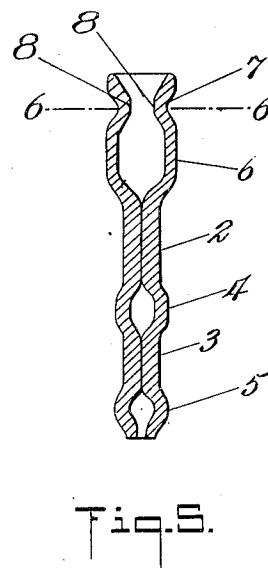
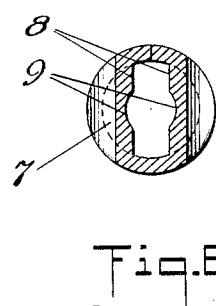
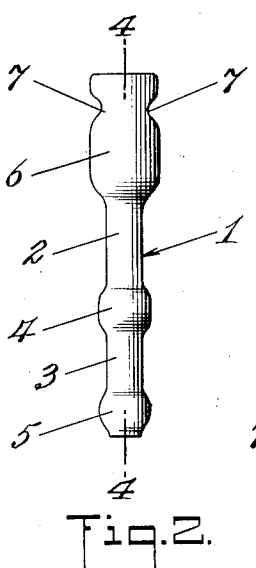
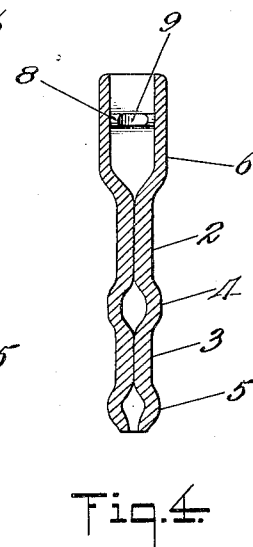
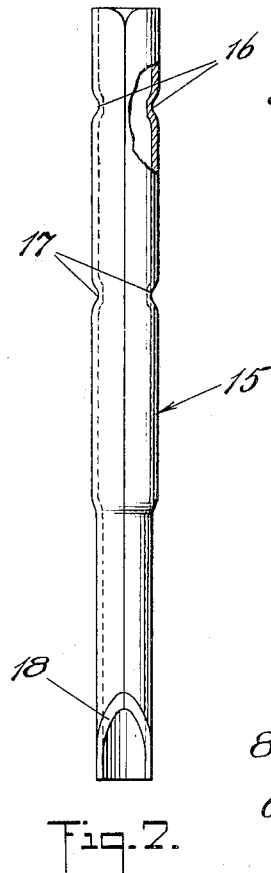
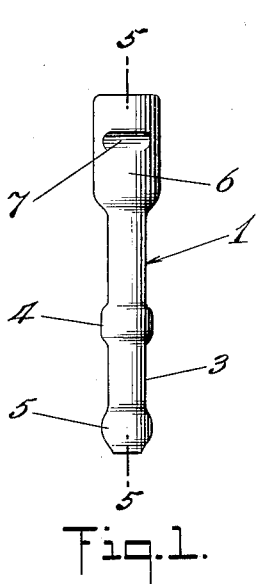
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SOCKET PIN

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2,339,174

SOCKET PIN

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3 Claims. (Cl. 173—361)

This invention relates to metallic contact pins and more particularly for socket pins which serve to retain and make contact with the projecting contact pins of radio tubes and it is an object of this invention to provide a socket pin of the type described which is of a novel construction providing an opening of predetermined size for the reception of a contact pin, such as the pin of a radio tube or an electrical connection, and which can be readily and efficiently manufactured in quantities which are uniform as to desired dimensions.

In the drawing, which illustrates a preferred modification of a socket pin in accordance with this invention—

Figures 1 and 2 are views in elevation of a socket pin in accordance with this invention, the socket pin being shown in Figure 2 as rotated 90 degrees about its longitudinal axis from its position in Figure 1;

Figure 3 is a top plan view of the socket pin shown in Figures 1 and 2, drawn to a larger scale;

Figure 4 is a vertical sectional view taken as on line 4—4 of Figure 2;

Figure 5 is a vertical sectional view taken as on line 5—5 of Figure 1;

Figure 6 is a transverse sectional view taken as on line 6—6 of Figure 5 and drawn to a larger scale; and

Figure 7 is a view partly in elevation and partly in section of a socket pin in accordance with this invention and of modified construction.

Socket pins in accordance with this invention are formed of a continuous strip of suitable metal which is folded over to form a tube and the tube then swaged to form the socket pin shank or stem of the desired size and shape. The swaging operation also reduces the diameter of the radio pin receiving portion of the socket pin to the desired diameter and tapers an end thereof where one socket pin is attached to the preceding socket pin formed of the strip. After removal of the preceding socket pin the radio pin receiving portion of the following socket pin is opened up by the insertion of a mandrel of the desired dimensions into the radio pin receiving portion. With the mandrel retained in the radio pin receiving portion, diametrically opposed nicking dies engage the radio pin receiving portion and indent the socket pin so as to reduce its internal dimension between the dies to the diameter of the mandrel at that point. The operation and machine for forming the socket pin are not further disclosed in this application as they form the

subject-matter of the co-pending application Serial No. 404,939, filed July 31, 1941, which issued August 10, 1943, as Patent No. 2,326,660 and of which application this application is a continuation in part.

As shown in the drawing, the tube of which the socket pin is formed is swaged to form a shank or stem 1 having solid portions 2, 3 and hollow portions 4, 5 forming enlargements in the stem 1 which permit of the socket pin being secured in a mount. The enlarged portion 5 is at the end of the stem and provides means for attaching a wire to the stem. The socket pin is also formed with a cylindrical pin receiving portion 6 which is the same diameter as the tube from which the socket pin is formed and which is indented or nicked as at 7 at diametrically opposite portions thereof a short distance from the open end of the pin receiving portion 6.

The indentations 7 being made by tapering punches which press the wall of the socket pin against a cylindrical mandrel which are tapered and produce projections 8 which extend inwardly into the pin receiving opening of the socket pin. The projections 8 are recessed, as at 9, where the socket pin wall was in direct contact with the mandrel. The projections 8 form a substantially rectangular opening in the pin receiving portion with the centrally positioned recesses 9 defining a circular opening of the exact diameter of the mandrel.

In Figure 7 there is shown a socket pin 10 of a modified construction suitable for use where there is liability to sudden shock or excessive vibration. In this construction there is provided a tubular shank portion and a tubular pin receiving portion. The tubular pin receiving portion is of sufficient length to receive the axially spaced indentations 16 and 17 which form inwardly extending projections similar to the projections 8 of Figures 1 to 6 but spaced so as to engage a suitable pin at two zones in its length and thus rigidly secure the inserted pin in position. The free end of the stem may be cut away as at 18, so as to permit of readily soldering a wire thereto.

The swaging of tube of which the socket pin is formed and the resilience of the metal causes the pin receiving portion to tend to retain its shape and resist opening when a contact pin is inserted therein while the indentations give a pressure upon the inserted pin which tends to frictionally retain the inserted pin in position.

What is claimed is:

1. In a swaged socket pin, a tubular pin receiving portion having transversely arranged inward-

ly extending projections, said projections having their adjacent end portions parallel.

2. In a swaged socket pin, a tubular pin receiving portion having transversely arranged inwardly extending projections, said projections having their adjacent end portions parallel and their center portions recessed to provide an opening of predetermined size.

3. In a swaged socket pin, a tubular pin receiving portion having transversely arranged inwardly extending projections, said projections having their adjacent end portions parallel and their center portions recessed to provide a substantially circular opening of predetermined diameter.

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