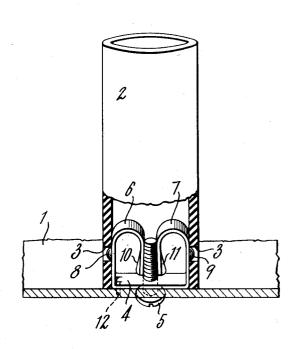
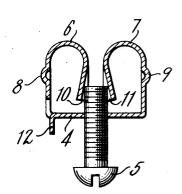
## W. R. ALLEN, 3D

MOUNTING FOR TUBULAR ARTICLES
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## UNITED STATES PATENT OFFICE

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## MOUNTING FOR TUBULAR ARTICLES

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2 Claims. (Cl. 287-20)

This invention relates to fastening devices and more particularly to a device for securing a tubular object in perpendicular relation to a flat surface.

In the construction of radio apparatus it is necessary to attach many tubular coil forms to the base or chassis member. Formerly these coil forms were provided with diametrically spaced threaded posts which were riveted to one end of the coil form. The posts added to the expense of the coil structure and necessitated two holes in the radio chassis to receive the posts plus the assembly operations of threading a nut on each post and tightening down. The invention herein described provides a sheet metal clip which may be economically produced in large quantities and which requires only a single assembly operation to secure a coil form to a radio chassis.

An object of this invention is therefore to pro-20 vide an improved fastening device which is more simple in construction and more economical to produce.

Another object is to provide an improved fastening device which is more efficient in operation and more convenient in assembly operations.

Still another object is to provide an improved fastening device which is more readily attached and detached from associated structures.

Other objects and advantages will in part be specifically stated and in part be obvious when the following specification is read in connection with the drawing in which:

Fig. 1 is a perspective view of a coil form broken away to illustrate the operation of the attaching clip; Fig. 2 is a cross section of the clip illustrating the action of the attaching screw.

Referring in more detail to Fig. 1, the numeral represents a fragmentary portion of a radio chassis. A coil form 2 is provided with diametrically spaced perforations 3. The attaching clip is formed of resilient sheet metal and comprises a U-shaped stamping having the web portion perforated with a threaded opening to receive a screw 5 and arms 6 and 7 which are bent inwardly and downwardly in opposing relation. As best illustrated in Fig. 2, a small nib 8 is stamped on the arm 6 and a similar nib 9 is stamped on the

While the foregoing is the preferred construction, it will be obvious that a frictional engagement may be provided between the arms 6 and 7 and the inner surface of the coil form 2. The

ends of the arms 6 and 7 are dished as at 10 and 11 and cooperate to form a tapering cuplike guide surface for the end of screw 5. A locating finger 12 may be provided on one of the arms to cooperate with a slot on the chassis to seat the 5 clip 4 and prevent its turning during the assembly process.

In the assembly operation the clip 4 is seated and a coil form 2 is slipped over it. At this time the coil form fits on easily since the resilience 10 of the clip allows the arms 6 and 7 to be forced together. The screw 5 is threaded through the web portion of the clip 4 and as the end rises it engages the guide surfaces 10 and 11 to force the arms 6 and 1 outwardly. The nibs 8 and 9 are 15 thus forced firmly into the perforations 3 of the coil form to form a locking engagement therewith. In this manner coil forms may easily and quickly be attached to a radio chassis and conveniently removed for inspection or replacement. 20 The invention is not limited to radio use however, but may be advantageously employed wherever a tubular article is to be attached to a flat surface in this manner.

It will be apparent that many changes and 25 modifications may be made in the invention by anyone skilled in the art, without departing from the spirit and scope of the invention as set forth in the following claims.

I claim:-

1. In a device for securing tubular articles, the combination of an article having spaced recesses, a securing means comprising a clip having a web portion with a threaded opening therein, expansible arms at the extremities of said web portion having their free ends depending adjacent said threaded opening, lug means on said arms adapted to seat in the recesses of said article, and a threaded member projecting through said web opening and engaging the depending ends 40 of said arms.

2. In a device for securing tubular articles, the combination of an article having spaced recesses, a securing means comprising a clip having a web portion with a threaded opening therein, expansible arms at the extremities of said web portion having their free ends depending adjacent said threaded opening, a tongue struck out of an arm and extending below said web member, lug means on said arms adapted to seat in the recesses of said article, and a threaded member projecting through said web opening and engaging the depending ends of said arms.

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