

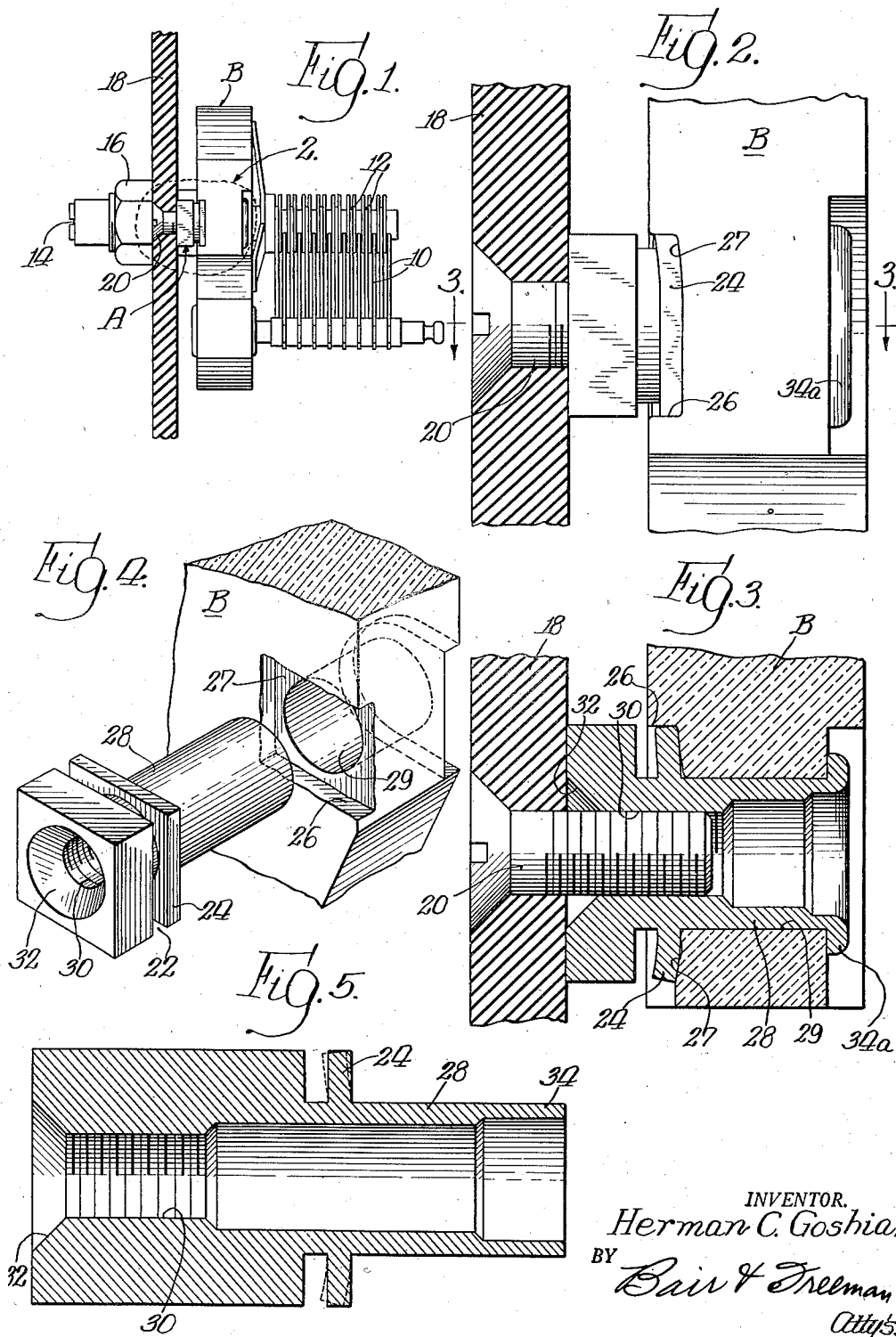
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MOUNTING MEANS

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MOUNTING MEANS

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My invention relates to a mounting means for a frangible element such as a porcelain or insulating base of a radio condenser, the mounting means including a mounting post which is so constructed as to relieve the strains normally imposed by such a post on the frangible element when the post is riveted or (in the case of a tubular post) flared to retain the post in position. Heretofore solid metal posts have been used as a mounting means for pieces of insulation such as the porcelain or "Lavite" mounting base of a radio condenser but when these posts are riveted or flared into an assembled position, they throw considerable strain on the insulation and result in cracking a relatively high percentage of them so that they are unusable.

The primary object of this invention is to minimize the strain yet provide a rigid attachment of the mounting post to the insulation and thus reduce "rejects" to a minimum.

More specifically my object is to form a mounting post with a relatively thin flange that serves to engage the surface of the insulation and, since the post is of metal, such flange has a satisfactory degree of resiliency to permit it to conform to the surface of the insulation as pressure is applied and thereafter rigidly retained by such resiliency when the post is riveted or flared to retain it in position.

A further object is to provide a mounting post which is inexpensive to manufacture, as by screw machine, and economical to assemble with relation to insulation, as by a single punch-press operation performing the riveting or flaring operation.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts thereof whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawing, wherein:

Fig. 1 is a side elevation of a radio condenser of the air dielectric type having the usual fixed and movable plates for adjustment, my mounting means being applied thereto by way of illustration and the condenser being shown as mounted on a panel.

Fig. 2 is an enlarged side elevation of the portion of Fig. 1 shown within the circle 2 to illustrate how the flange of my mounting post conforms to a surface against which it is assembled.

Fig. 3 is a sectional view on the line 3—3 of Fig. 2.

Fig. 4 is an exploded perspective view showing

a mounting post embodying my invention and a portion of a mounting base for a condenser or the like with which it is to be assembled, and

Fig. 5 is a sectional view through the mounting post, before it is assembled as in Fig. 3.

On the accompanying drawing, I have used the reference character A to indicate a mounting post and B a mounting base. The base B is illustrated as part of a radio condenser having the usual stationary plates 10 and movable plates 12 for adjusting the capacity of the condenser. The condenser shown is an "air trimmer" and may be set by a screw driver coacting with a slot 14 and the setting then locked by lock nut 15 which, however, forms no part of my present invention.

The base B is usually made of porcelain, Lavite or the like and is therefore more or less frangible. The problem arises as to how to mount the base B as an a panel 18 in such a manner that the person installing the condenser on the panel cannot crack the base B as in the case of an installation wherein the base is merely bolted against the panel. If metal mounting posts such as A are rigidly secured to the base B, then they may in turn be secured to the panel 18 as by screws 20 as shown in Fig. 3 without excessive tightening of the screws resulting in breakage of the base. The problem arises at the factory however, as to how to mount the post A on the base B to prevent fracturing the base.

In order to minimize the possibility of fracture, I provide the post A with a groove 22 which leaves a relatively thin flange 24 for contact with the base B. The post A is preferably square or at least a shape other-than-round so that it can be locked against turning relative to the base B as by the flange 24 fitting a socket 26 of the base. This socket is substantially the same shape as the outline of the flange or at least coacts with the flange in such manner as to prevent rotation after the post is mounted.

The post A may be formed of square stock in a screw machine which forms the groove 22 as well as forming the portion of the post beyond the flange 24 tubular, such portion being designated 28. The interior of the post is threaded at 30 to receive the screw 20 and counter-sunk as at 32 to facilitate entry of the screw into the post. The terminal end of the tubular portion 28 of the post A is relatively thin as shown at 34 in Fig. 5. This portion is adapted to be flared or peened as shown at 34a in Fig. 3 for retaining the post in mounted position on the base B. During the flaring operation, the post is forced

into the socket 26 with considerable pressure so that after the flare is formed, the post will be mounted without any end play and actually with the flange 24 partially conforming to the surface 27, bending back slightly wherever there are points of greater pressure. The bending of the various portions of the flange is illustrated by dotted lines in Fig. 5, these portions conforming to the final position as shown in Figs. 2 and 3.

The flange 24, it will be obvious from the foregoing description, performs an important function in relieving strain and equalizing what strain there is on the surface 27 of the socket 26. Thus the irregularities formed in molding the base B are taken care of, yet the post may be rigidly mounted with the assurance that it will remain rigid even under considerable turning strain of the screw 20. The solidity of the mounting post is not unsatisfactorily decreased by the formation of the groove 22 therein and the groove may be readily formed without additional machining operations by merely adding an appropriate cutter to the automatic screw machine that forms it. In actual commercial use, I have found that the flange reduces breakage and thus rejections of the bases B so that rejects are less than 5 per cent of the rejects encountered with mounting posts which do not have the groove. The mounting post disclosed, therefore, effects a considerable saving in both labor and material that is otherwise lost in rejects.

Although porcelain and Lavite have been mentioned as the type of insulation on which the post is mounted, it can be mounted on any insulating or frangible material such as Bakelite or glass and the desirable results still obtained. Likewise, the post can be solid instead of tubular and riveted rather than flared to retain it in position.

Changes of this character and many others may be made in the construction, shape and arrangement of my mounting post without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope without sacrificing any of the advantage thereof.

What I claim as my invention and desire to secure by Letters Patent of the United States is:

1. A mounting means for radio condensers and the like comprising a metal mounting post having a tubular portion to extend through the mounting base of the condenser and a shoulder to engage the surface of the base, said shoulder being in the form of a relatively thin flange to permit the same to conform to the surface of said base when pressed thereagainst, the terminal end of said tubular portion being flared to retain said mounting post rigidly mounted in relation to said base and said flange under pressure against said surface.

2. A mounting means for frangible elements comprising a metal mounting post having a tubular portion to extend through the frangible element and a shoulder to engage the surface thereof, said shoulder being in the form of a thin, single thickness flange to permit the same to partially conform to a surface of the frangible element when pressed thereagainst, the terminal end of said tubular portion being flared under tension to rigidly retain said mounting post.

3. Mounting means of the character disclosed for a frangible element or the like comprising a metal post of other-than-round shape having one end threaded and the other end tubular, the transition to the tubular portion constituting a shoulder having an other-than-round outline, an annular groove in said post spaced from said shoulder to form a relatively thin flange between the shoulder and the groove with one surface of the flange constituting said shoulder, the frangible element having an opening therethrough and a socket surrounding said opening, said opening receiving said tubular portion, and said shoulder seating against the bottom surface of said socket and engaging an edge of said socket to prevent turning of the post relative to the frangible element, the terminal end of said tubular portion being flared to retain the mounting post on the frangible element with said flange under pressure against said bottom of said socket and partially conforming to the shape of said surface.

4. Mounting means of the character disclosed for a frangible element or the like comprising a metal post having one end tubular, the transition to the tubular portion constituting a shoulder, an annular groove in said post spaced from said shoulder to form a relatively thin flange between the shoulder and the groove, the frangible element having an opening therethrough, said opening receiving said tubular portion and said shoulder seating against a surface of said element, the terminal end of said tubular portion being flared to rigidly retain the mounting post on the frangible element with said flange partially conforming to the shape of said surface.

5. Mounting means of the character disclosed for frangible elements comprising a mounting post having a portion to extend through an opening of the frangible element and a shoulder to engage the surface of the frangible element, said mounting post having a groove therearound and a shoulder spaced from said groove to form a thin, single-thickness flange for engagement against said frangible element, the terminal end of said mounting post being displaced to retain said mounting post in relation to said frangible element without fracturing the same with said flange under pressure against said surface and partially conforming thereto.

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