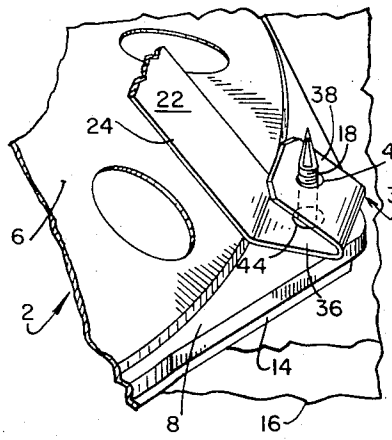
Feb. 20, 1968 G. P. WHITNEY 3,369,784

MOUNTING ASSEMBLY

Filed Jan. 12, 1966

FIG. 3



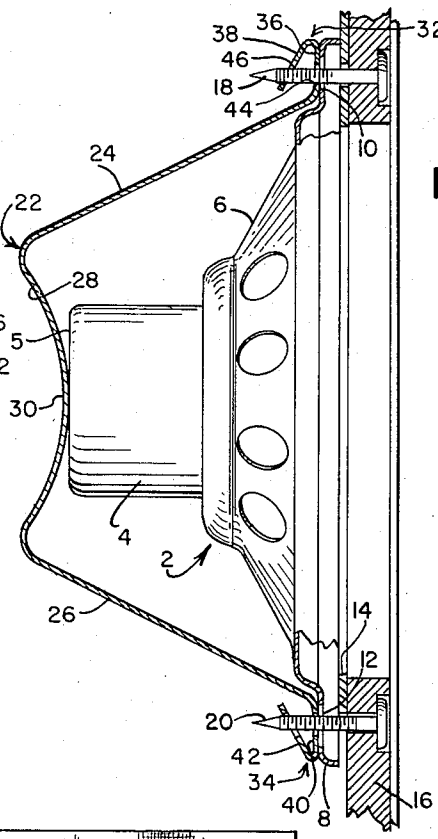


FIG. 1

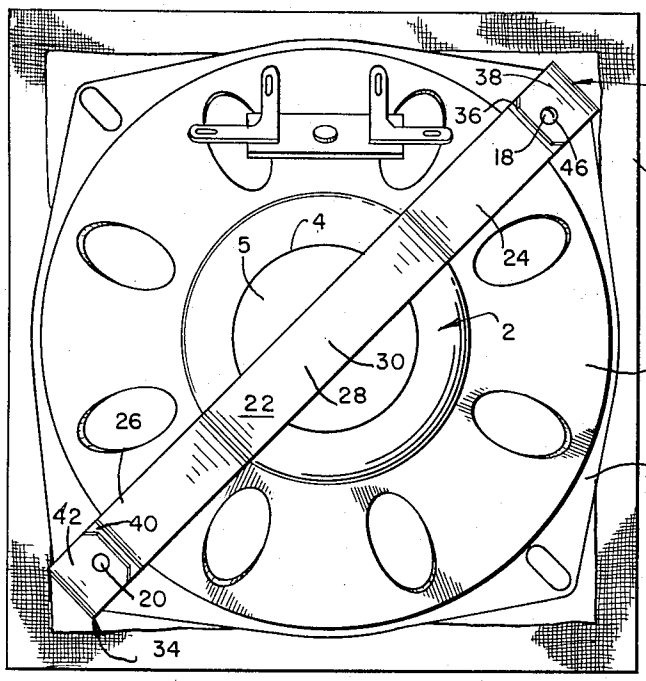


FIG. 2

Inventor
GEORGE P. WHITNEY

BY
Mueller, Aichele & Rauner

ATTYS.

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MOUNTING ASSEMBLY

George P. Whitney, Villa Park, Ill., assignor to Motorola, Inc., Franklin Park, Ill., a corporation of Illinois

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ABSTRACT OF THE DISCLOSURE

The assembly comprises a spring device having flanges to attach to studs extending through a baffle upon which a loudspeaker is to be mounted. A portion resiliently bearing against the rear face of the speaker is attached to the flanges by a set of legs to draw the speaker tightly against the baffle.

In prior art devices, loudspeakers have been mounted on the baffle by attaching nuts to threaded studs connected to the baffle and passing through two or more holes in the rim of the loudspeaker. When one side of a speaker is attached by use of a power driver to draw down the first nut with sufficient torque, that side can exert pressure on the speaker gasket to thereby crush it and possibly imbed the speaker rim into the baffle. Further, when the other side of the speaker is subsequently attached, also by means of a nut, the pressure exerted at that side may cause the loudspeaker rim to bend and become distorted. Such deformation of the frame can contribute to inferior sound reproduction by the speaker.

An object of this invention is to provide a simple and inexpensive device to secure a loudspeaker to a baffle in such a manner that the entire assembly may take place rapidly to expedite manufacture of electronic sound equipment.

A further object is to obviate damage to a speaker or its baffle during the fastening procedure.

In summary, a spring device encircles the loudspeaker, the ends of which are fastened to the baffle and the center portion of which bears against the rear face of the loudspeaker. In a specific form, a spring device having a pair of legs straddles the loudspeaker which is to be mounted. The apex of a saddle-shaped portion connecting the legs exerts a force against the rear face of the field coil housing to draw the loudspeaker against the baffle. A flange connected to the extremity of each leg is provided with a pair of fingers each having a hole so that the flanges may be fastened to a pair of studs previously attached to the baffle. Each flange is constructed in such a manner that when the fingers are released from a flexed position they bear against the studs to thereby secure the spring device to the baffle. Since the saddle-shaped portion exerts pressure at the center of the rear face of the field coil housing, the pressure exerted on the baffle during the fastening procedure and thereafter is equalized around the periphery of the loudspeaker to minimize possibility of damage to the loudspeaker itself or its baffle.

Further objects, features and advantages will be apparent from a consideration of the following description taken in connection with the accompanying drawings in which:

FIG. 1 is a side elevation view showing the loudspeaker, baffle, gasket and spring device securing the loudspeaker to the baffle;

FIG. 2 is a back plan view of the device shown in FIG. 1; and

FIG. 3 is a partial perspective view of the flange fastened to the baffle stud.

In the drawings, loudspeaker **2** comprises a metal housing **4** surrounding the field coil, a truncated conical enclosure **6** which protects the speaker diaphragm and a rim

8 integrally connected to enclosure **6**. As shown, four holes are available on rim **8** for attachment purposes, but only holes **10** and **12** are utilized in this embodiment. A gasket **14** is cemented onto rim **8** and extends slightly beyond the rim to provide protection for the speaker against vibrations. Loudspeaker **2** lies on baffle **16** in a manner such that a pair of studs **18** and **20**, either threaded or plain, and attached to baffle **16**, extend through holes **10** and **12** respectively.

Spring device **22** is comprised of a pair of legs **24** and **26** connected by a saddle-shaped portion **28** having an apex **30** and a pair of flanges **32** and **34** attached respectively to the extremities of the legs. Flange **32** is comprised of finger **36** and finger **38**, the former being attached to leg **24** and in a similar fashion finger **40** of flange **34** is attached to leg **26**. Fingers **36** and **38** extend outwardly in a rest position but may be flexed toward one another so that hole **44** in finger **36** and hole **46** in finger **38** are lined up with one another. In such a flexed position, V-shaped flange **32** is placed in a manner such that stud **18** extends through holes **44** and **46**. Since fingers **36** and **38** are springy enough to return to their rest position when flange **32** is released, the fingers bear against the grooved surface of stud **18** to fasten flange **32** thereto. Flange **34** is fastened to stud **20** in a like manner to thereby secure spring device **22** to baffle **16**. In a rest position, apex **30** of saddle-shaped portion **28** is deeper than the position shown. Thus, when spring device **22** is secured to baffle **16**, apex **30** bears against rear face **5** of metal housing **4** to thereby draw the loudspeaker tightly against the baffle. In a preferred embodiment spring device **22** is constructed from a single strip of metal or other material having a degree of flexibility and bent in appropriate places to provide flanges **32** and **34**, legs **24** and **26**, and saddle-shaped portion **28** as shown in the drawings.

A workman could secure spring device **22** simply by flexing fingers **36** and **38** of flange **32** together with one hand, flexing fingers **40** and **42** with the other hand and placing the flanges so that they engage studs **18** and **20** respectively. The flanges could be secured consecutively or simultaneously, but in either case the pressure on baffle **16** arises from the force exerted by saddle-shaped portion **28** at the center of rear face **5** and thus the pressure is distributed along the periphery of gasket **14**. This provides an advantage over prior art attachment devices whereby one portion of the speaker has been mounted on the baffle by use of a power driver to draw down a nut on a threaded fastener with the result that that portion could crush the gasket and become imbedded in the baffle; also by attaching subsequent portions, distortion of one or more of the speaker parts could result. However, use of the present invention distributes the force on the gasket and the baffle so that none of the foregoing occur. A further advantage of the present invention is that it is compatible with the location of holes in and the shape of existing loudspeakers. Also, the entire assembly may take place in a matter of seconds.

I claim:

1. The combination of: a loudspeaker having a face and an apertured rim, a baffle having a pair of studs extending through the apertures in said rim, a gasket positioned between said face and said baffle to limit vibrations of said loudspeaker, an arch-shaped spring device comprising a pair of legs straddling said loudspeaker each having an extremity, said spring device further comprising a saddle-shaped portion connecting said legs and resiliently bearing against said loudspeaker, said device further comprising a pair of V-shaped flanges each having a pair of outwardly extending fingers, each of said flanges being individually attached to the extremity of an associated one of said legs, the pair of fingers of each flange each having a hole lo-

cated to receive an associated stud when such fingers are flexed toward one another, the pair of fingers in each of said flanges being outwardly biased upon release so that said flanges are respectively clamped to associated ones of said studs for drawing said loudspeaker against said baffle.

2. In a loudspeaker assembly having a loudspeaker with a first face disposed on a baffle and a second opposing face, at least one stud extending from the baffle, a spring device for retaining the loudspeaker on the baffle including in combination; an arch-shaped spring device comprising a pair of legs straddling said loudspeaker each having an extremity, a portion connecting said legs for resiliently bearing against the second face of the loudspeaker, means at the extremity of one of said legs for attachment to the baffle, means at the extremity at the other of said legs having a pair of outwardly extending and outwardly biased fingers, each of said fingers having a hole located to receive the stud when such fingers are flexed toward one another, said pair of fingers being outwardly biased upon release for engaging the stud and drawing the loudspeaker against the baffle.

3. The loudspeaker mounting assembly in claim 1 in which said spring device comprises a single strip of flexible material bent to form said pair of legs, said saddle-shaped portion and said flanges.

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ROY D. FRAZIER, *Primary Examiner.*

J. F. FOSS, *Assistant Examiner.*