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MOUNTING BRACKET FOR TRIMMER POTENTIOMETERS OR THE LIKE

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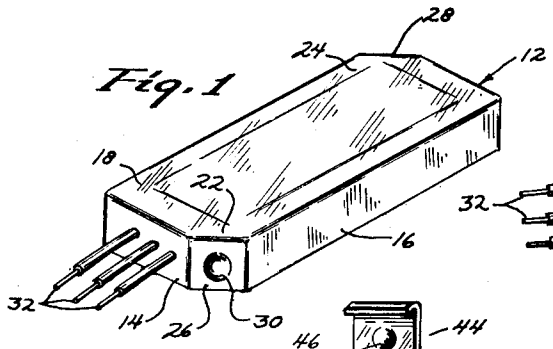


Fig. 1

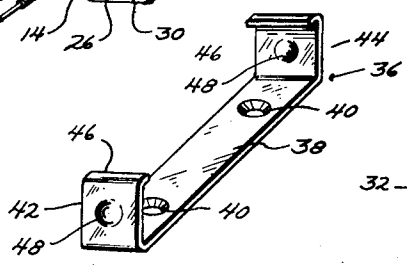


Fig. 2

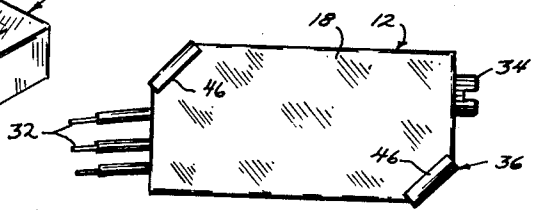


Fig. 4

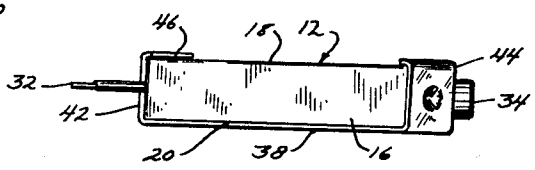


Fig. 5

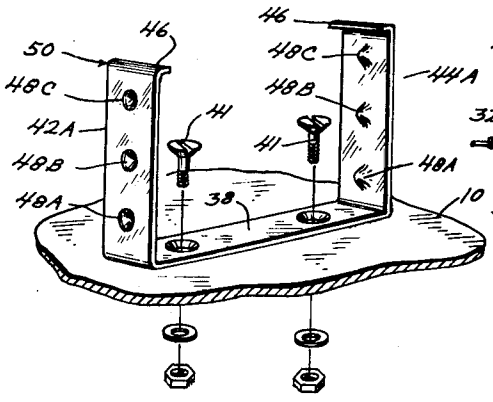


Fig. 3

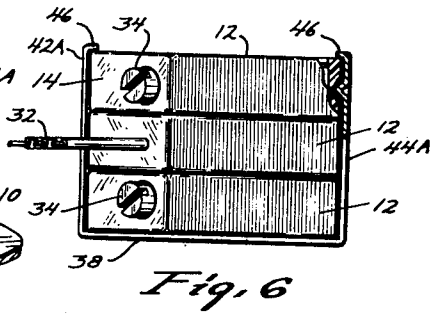


Fig. 6

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MOUNTING BRACKET FOR TRIMMER POTENTIOMETERS OR THE LIKE

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10 Claims. (Cl. 211—49)

Trimmer potentiometers and related components are normally secured to a chassis deck in their operational environments by means of an auxiliary mounting bracket. These mounting brackets often have movable components which must be manipulated to secure a trimmer potentiometer therein. These movable components add to the expense of the brackets and are sometimes tedious to actuate. Since potentiometer housing and the like vary in design, these brackets sometimes serve to interfere with the external electrical leads of the unit.

Therefore, a principal object of this invention is to provide a mounting bracket for trimmer potentiometers or the like which can grasp a potentiometer housing without actuating any movable parts and which will not interfere with the external electrical leads of the potentiometer.

A still further object of this invention is to provide such a mounting bracket which requires no mounting holes in the potentiometer, but which effects its grasp on the potentiometer housing by interlocking itself on interlocking surfaces on the housing.

A still further object of this invention is to provide a mounting bracket for trimmer potentiometers or the like that can accommodate and hold a plurality of potentiometer units.

Still further objects of this invention are to provide a mounting bracket for trimmer potentiometers or the like that is economical in manufacture, durable in use, and refined in appearance.

These and other objects will be apparent to those skilled in the art.

This invention consists in the construction, arrangements, and combination, of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, specifically pointed out in the claims, and illustrated in the accompanying drawing, in which:

FIGURE 1 is a perspective view of the potentiometer housing used in conjunction with the mounting bracket of this invention;

FIGURE 2 is a perspective view of the mounting bracket of this invention;

FIGURE 3 is a perspective view of an alternate form of mounting bracket;

FIGURE 4 is the top plan view of a potentiometer housing mounted in one of the mounting brackets of FIGURE 2 or 3;

FIGURE 5 is a side elevational view of the potentiometer of FIGURE 1 mounted in the mounting bracket of FIGURE 2; and

FIGURE 6 is an oblique elevational view of three potentiometers of the type shown in FIGURE 1 mounted in the mounting bracket of FIGURE 3.

The numeral **10** generally designates a supporting deck upon which the mounting brackets normally would be secured. A potentiometer housing **12** is generally rectangular in shape and includes ends **14**, sides **16**, top **18** and bottom **20**. Two diagonally opposite corner portions **22** and **24** include vertical diagonally disposed surfaces **26** and **28**, respectively, which dwell in a plane disposed at approximately a 45 degree angle with respect to the planes of the ends **14** and sides **16**. Inwardly extending arcuate indentations **30** appear in the center of each of

the diagonally disposed surfaces **26** and **28**. The potentiometer housing includes the customary leads **32** extending from one end thereof with a horizontally disposed leadscrew **34** rotatably mounted therein.

A mounting bracket **36** includes a center horizontal bar portion **38** which has a length substantially equal to the distance between the two diagonally disposed surfaces **26** and **28**. Apertures **40** are located in spaced relation on bar portion **38** to receive nut and bolt assemblies **41** which are used to effect the connection of the mounting bracket **36** to the supporting deck **10**. Vertical upstanding end portions **42** and **44** extend upwardly in parallel fashion from the opposite ends of the center bar portion **38**. It will be noted that the planes of upstanding end portions **42** and **44** are disposed at an oblique angle with respect to the longitudinal axis of the center bar portion **38**. Inwardly extending lips **46** protrude from the upper ends of the upstanding end portions **42** and **44**. Inwardly extending indentations **48**, which are complementary in shape to the arcuate indentations **30** in the diagonally disposed surfaces **26** and **28**, appear in each of the upstanding end portions **42** and **44**.

An alternate form of mounting bracket **36** is shown by the mounting bracket **50** in FIGURE 3. Upstanding end portions **42A** and **44A** of mounting bracket **50** are similar to the upstanding portions **42** and **44**, respectively, of mounting bracket **36** except that the end portions **42** and **44** have a greater vertical height. In addition, instead of having only one inwardly extending indentation **48** as was found in the upwardly end portions **42** and **44** in mounting bracket **36**, the end portions **42A** and **44A** of mounting bracket **50** have a plurality of inwardly extending indentations **48A**, **48B** and **48C**. The indentations in each upstanding end portion are similarly positioned.

It is preferred that each of the mounting brackets **36** and **50** have some resilient characteristics and are preferably made of a single piece of material.

After the bracket **36** has been secured to the deck **10** in the manner described, the potentiometer housing **12** can be inserted in a diagonal direction with respect to the mounting bracket so that the diagonally disposed surfaces **26** and **28** of the housing register with the upstanding ends **42** and **44**, respectively, of the mounting bracket. As the housing **12** is being moved into this position, the indentations **48** in the upstanding ends **42** and **44** of the mounting bracket will engage the surfaces **26** and **28** of the housing and cause the upstanding ends to momentarily be forced outwardly. However, as soon as the indentations **30** in the surfaces **26** and **28** register with the indentations **48** in the upstanding ends **42** and **44**, the upstanding ends will snap back to their normal vertical position as the indentations **48** move into the indentations **30** of the housing. Thus, the potentiometer housing **12** can be easily and quickly inserted in the mounting bracket **36** and its removal therefrom can be effected by merely reversing the above described process.

The mounting bracket **50** is utilized in the same manner as the bracket **36**, except that a plurality of potentiometers can be secured therein by virtue of the extended length of the upstanding ends of the bracket and the plurality of indentations in each upstanding end. It will be noted that the spacing between the indentations **48A**, **48B** and **48C** in mounting bracket **50** is such that potentiometers mounted between the upstanding ends will rest one upon the other.

The elimination of mounting holes in the potentiometer housing will permit more room within the housing for component mechanisms, thereby permitting miniaturization of the unit, or allowing a longer mandrel for better resolution and higher values per case size. Such elimina-

tion also alleviates terminal disfiguration when the leads extend through the housing end, thereby permitting simplicity of design and alleviating some housing sealing problems.

From the foregoing, it is seen that this invention will accomplish at least all of its stated objectives.

Some changes may be made in the construction and arrangement of my mounting bracket for trimmer potentiometers or the like 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.

I claim:

1. In combination,
a housing member being substantially rectangular in shape and having side and end portions, and at least two diagonally opposite corner portions,
said corner portions being shaped on a biased plane to present a surface diagonally disposed to said side and end portions,
a mounting bracket, comprising,
a horizontal bar extending across said housing member from one corner portion to the other,
upstanding ends on said horizontal bar in frictional engagement with the diagonally disposed surfaces on said housing,
and means for securing said mounting bracket to a supporting deck.

2. The combination of claim 1 wherein said upstanding end portions and said diagonally disposed surfaces have interlocking surface elements.

3. The combination of claim 1 wherein lip portions extend inwardly over the housing member from the free ends of said upstanding end portions.

4. The combination of claim 1 wherein said housing member includes operable components which extend from one end thereof.

5. The combination of claim 1 wherein at least one housing member identical to said first-mentioned housing member is placed in a stacked position thereon, and said upstanding end portions frictionally engage the diagonally disposed surfaces on said housing members.

6. The combination of claim 1 wherein said upstanding end portions and said diagonally disposed surfaces have interlocking surface elements comprised of complementary shaped indentations.

7. In combination,
a housing member being substantially rectangular in shape and having side and end portions, and at least two diagonally opposite corner portions,
said corner portions being shaped on a biased plane to present a surface diagonally disposed to said side and end portions,
means extending outwardly through each of said end portions over a substantial area thereby presenting an irregular outer surface on said end portions,
a mounting bracket, comprising,
a horizontal bar extending across said housing member from one corner portion to the other,

upstanding ends on said horizontal bar in frictional engagement with the diagonally disposed surfaces on said housing,
and means for securing said mounting bracket to a supporting deck.

8. An electrical assembly, comprising in combination,
an elongated electrical housing member being substantially rectangular in shape and having side and end portions, and at least two diagonally opposite corner portions,
said corner portions being shaped on a biased plane to present a surface diagonally disposed to said side and end portions,
electrical control means extending outwardly from each of said end portions over a substantial area thereby presenting an irregular outer surface on said end portions,
a mounting bracket, comprising,
a horizontal bar extending across said housing member from one corner portion to the other,
upstanding ends on said horizontal bar in frictional engagement with the diagonally disposed surfaces on said housing,
and means for securing said mounting bracket to a supporting deck.

9. In combination,
a housing member being substantially rectangular in shape and having side and end portions, and at least two diagonally opposite corner portions,
said corner portions being shaped on a biased plane to present a surface diagonally disposed to said side and end portions,
a mounting bracket, comprising,
a horizontal bar extending across said housing member from one corner portion to the other,
upstanding ends on said horizontal bar in frictional engagement with the diagonally disposed surfaces on said housing,
and means for securing said mounting bracket to a supporting deck,
said end portions and side portions of said housing when assembled with said mounting bracket being completely exposed and accessible.

10. The structure of claim 9 wherein said mounting bracket is only adapted to contact said housing at said corner portions, along the bottom side thereof and on the top side adjacent said corner portions.

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