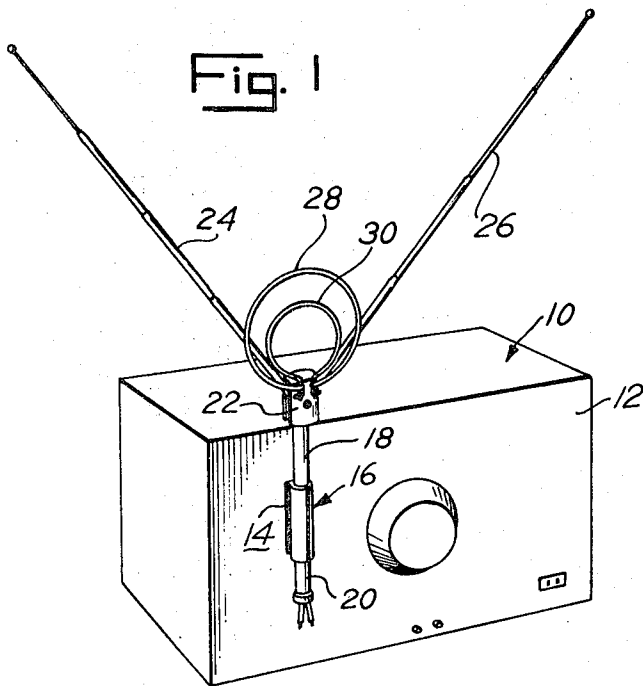
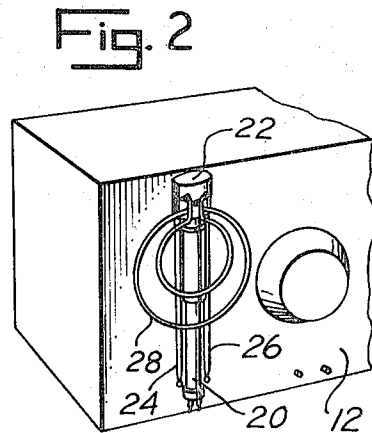
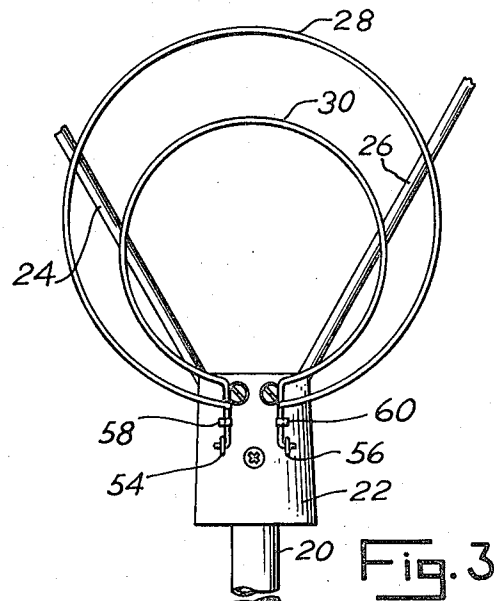
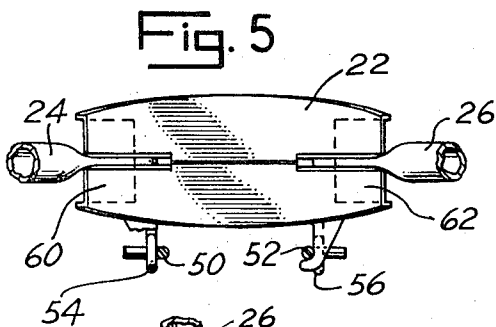
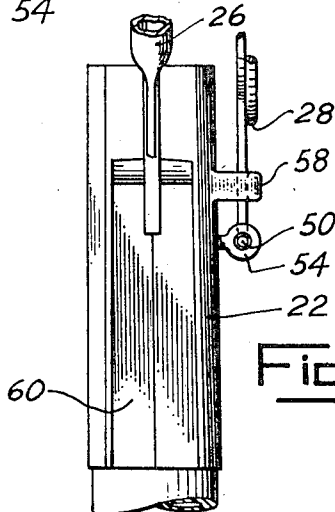
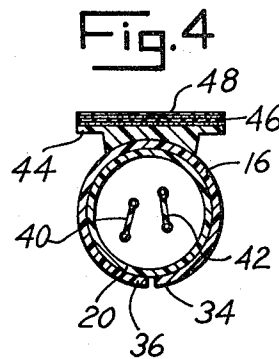
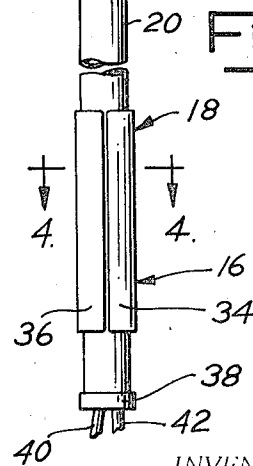


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INDOOR ANTENNA WITH PRESSURE SENSITIVE ADHESIVE MOUNTING  
MEANS FOR ENABLING THE ANTENNA TO BE MOUNTED ON  
WALL SURFACE OR RECEIVER CABINET  
Filed June 4, 1968



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1

3,543,273

**INDOOR ANTENNA WITH PRESSURE SENSITIVE ADHESIVE MOUNTING MEANS FOR ENABLING THE ANTENNA TO BE MOUNTED ON WALL SURFACE OR RECEIVER CABINET**

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5 Claims

**ABSTRACT OF THE DISCLOSURE**

The invention is an improved portable or indoor antenna of the type commonly used with television and radio receivers. The improvement comprises elongated support means having adjustable signal receiving elements at one end thereof and a rotatable tubular member at the other end thereof, and mounting means having at one side thereof a hollow sleeve for frictionally gripping the tubular member for both sliding and rotatable movement there-within and at the other side pressure sensitive adhesive means for enabling the antenna to simply yet securely be mounted on a suitable wall surface of a television or radio receiver. The longitudinal movability of the tubular member within the friction sleeve of the support means, together with the provision of nesting recesses in the head portion of the support means, enables the signal receiving elements to be stowed away behind the receiver when not in use and yet to be easily put into operative position when desired.

**DESCRIPTION OF THE DRAWING**

The several novel features and objects of the invention will appear from the following description and claims, and from the annexed drawings in which like reference numerals designate like parts throughout the several views, and wherein:

FIG. 1 is a perspective view of the rear portion of a television receiver showing the invention in its extended operative position;

FIG. 2 is another perspective view of the rear portion of a television receiver showing the invention in its stowed, inoperative position;

FIG. 3 illustrates one preferred embodiment of the indoor antenna of the invention;

FIG. 4 is a cross-sectional view of the support means and tubular member taken substantially as shown through line 4—4 of FIG. 3;

FIG. 5 is a top view of the head portion of the elongated tubular member; and

FIG. 6 is a side elevational view of the elongated tubular member illustrating the pivoted assembly of the V.H.F. and U.H.F. signal receiving elements.

**DESCRIPTION OF THE INVENTION**

Referring now to the drawing, and more particularly to FIGS. 1, 2 and 3 thereof, a television receiver 10 is shown with the inventive antenna 14 mounted on the rear wall 12 of the receiver. In a manner discussed in greater detail below, the mounting means 16 of the antenna 14 is securely fastened to the wall 12 without the use of any screws or other mechanical fastening devices that extend into the interior of the receiver. The mounting means 16 preferably is made of plastic, metal or the like and is formed with a split sleeve which frictionally grips the elongated tubular member 20 of the support means 18.

Tubular member 20 has at the upper end thereof an enlarged head portion 22 which is pivotally carrying the signal receiving elements of the antenna 14. In the illustrative embodiment of FIGS. 1, 2 and 3, the head portion

2

22 is pivotally connected to the telescoping dipole arms 24 and 26 which receive signals in the very high frequency or V.H.F. range, and to the loops 28 and 30 which receive signals in the ultra high frequency or U.H.F. range.

The lower end of tubular member 20 is provided with a limit or stop flange 38. The latter advantageously is of a greater diameter than the split sleeve mounting means 16 such that the upward travel of the tubular member 20 is restricted when the limit flange 38 comes into abutment with the lowermost edge of mounting means 16. As shown, the elongated member 20 preferably is tubular so that the lead-in wires 40 and 42, connected respectively to the V.H.F. and U.H.F. antenna elements, can be positioned therethrough for electrical connection to the V.H.F. and U.H.F. antenna terminals (not shown) of the television receiver 10.

The novel means for securely mounting the antenna to a wall of the receiver without the use of wall piercing fastening devices is illustrated in FIG. 4 of the drawing. Advantageously the split sleeve mounting means 16 is formed with a flanged portion 44 having a flat or planar surface upon which is positioned a suitable layer of pressure sensitive adhesive material 46. Packaging and handling of the antenna may be facilitated by a sheet of paper 48 or other suitable protective material for the adhesive layer 46. When mounting of the antenna is desired, the protective sheet 48 is removed and the flanged portion 46 is pressed against the wall of the receiver such that the pressure sensitive adhesive layer 46 serves to hold the antenna firmly and securely in place. Preferably, the antenna may be positioned on the rear wall of the receiver at a location such that when the antenna is stowed away in its non-operative position, as illustrated in FIG. 2, it is hidden from view from the front of the receiver.

In the operation of the antenna, the elongated tubular member 20 is frictionally gripped by the split sleeves 34 and 36 of mounting means 16 so as to permit the tubular member to be rotated therewithin or slideably adjusted along the longitudinal axis of mounting means 16, as desired by the operator for proper orientation of the antenna elements. The frictional gripping force of the split sleeves 34 and 36 is such as to permit this rotational and longitudinal adjustment to be made without undue difficulty while, at the same time, maintaining the tubular member 20 firmly in the manually adjusted position.

As shown in FIG. 1 of the drawing, the tubular member 20 may be elevated relative to the mounting means 16 during the operative use of the antenna such that the head portion 22 and the antenna signal receiving elements may be rotated to any desired orientation without limitation from the walls of the television receiver. In this elevated position, the outer ends of the dipole arms 24 and 26 can be manually grasped for the extension or retraction of the arms as desired for optimum V.H.F. signal reception. Also, the rotatability of the tubular support member 20 within the split sleeves of the mounting means 16 permits the dipole arms 24 and 26, as well as the loops 28 and 30 to be angularly adjusted relative to the television receiver for optimization of reception of U.H.F. signals as well as V.H.F. signals.

When use of the antenna is not desired, it may be placed out of sight behind the television receiver as illustrated in FIG. 2 of the drawing. This is effected by retracting the telescopic dipole arms 24 and 26 to their smallest size and by longitudinally sliding the tubular support member downwardly within the mounting means 16 until the lowermost edge of head portion 22 abuts the uppermost edge of mounting means 16.

In addition, in accordance with a feature of this invention, both the U.H.F. and V.H.F. antenna elements are pivotally connected to head portion 22 to permit them to be pivoted downwardly so as to be totally hidden from

3

view from the front of the receiver. This is illustrated in FIG. 2 of the drawing. As better shown in FIGS. 3, 5 and 6, the ends 50 and 52 of the U.H.F. loop 30 are inserted through the eyelets 54 and 56 respectively so as to permit the loop elements 28 and 30 to be pivoted upwardly into operative position or downwardly into the storage position, as desired. Advantageously, the loop ends 50 and 52 are bent into right angles to cause the loop to be resiliently held within the eyelets 54 and 56.

Two pairs of resilient fingers 58 and 60 advantageously may be provided to snugly grasp and hold the ends of the U.H.F. loop when the latter is raised to the upward, operative position.

Similarly, the dipole arms 24 and 26 are pivotally connected to the head portion 22 to permit them to be raised upwardly into operative position or lowered into a storage position. In accordance with a feature of the invention, the opposite side walls of the head portion 22 are provided with suitable recesses 60 and 62 which are of a dimension sufficient to permit the dipole arms to be nested therewithin when the latter are in their storage position.

Those skilled in the art will appreciate that the specific embodiment described herein is merely illustrative of the novel feature of the invention, and that the scope of the invention is not to be limited except as defined by the appended claims.

What is claimed is:

1. An improved portable or indoor antenna for television and radio receivers comprising the combination of
  - (a) elongated support means having adjustable signal receiving elements at one end thereof and a rotatable tubular member at the other end thereof,
  - (b) mounting means having a hollow sleeve for receiving and frictionally gripping said tubular member for sliding and rotatable movement therewithin,
  - (c) and pressure sensitive adhesive means positioned on an exterior wall of said mounting means for enabling said antenna to be fastened to a wall surface of a television or radio receiver.
2. An improved portable or indoor antenna in accord-

4

ance with claim 1 wherein said adjustable signal receiving elements are pivotally mounted to said support means for selective movement to an upward operative position or to a downward storage position.

3. An improved portable or indoor antenna in accordance with claim 2 wherein said support means includes recessed portions for receiving the adjustable signal receiving elements when they are in their storage position.

4. An improved portable or indoor antenna in accordance with claim 1 wherein said mounting means comprises a split sleeve having a pair of spaced apart members adapted to frictionally grip and securely hold the tubular member of the support means therewithin while permitting longitudinal sliding movement and rotation thereof to position the signal receiving elements as desired.

5. An improved portable or indoor antenna in accordance with claim 1 wherein said elongated support means comprises a stop member at its upper end of greater size than said hollow sleeve so as to provide a limit for the downward movement of the tubular member and a stop member at its lower end of greater size than said hollow sleeve so as to provide a limit for the upper movement of the tubular member.

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