Aug. 26, 1952 M. SPIRT ET AL 2,608,657

TELEVISION ANTENNA

Filed April 14, 1950

Fig. 1.

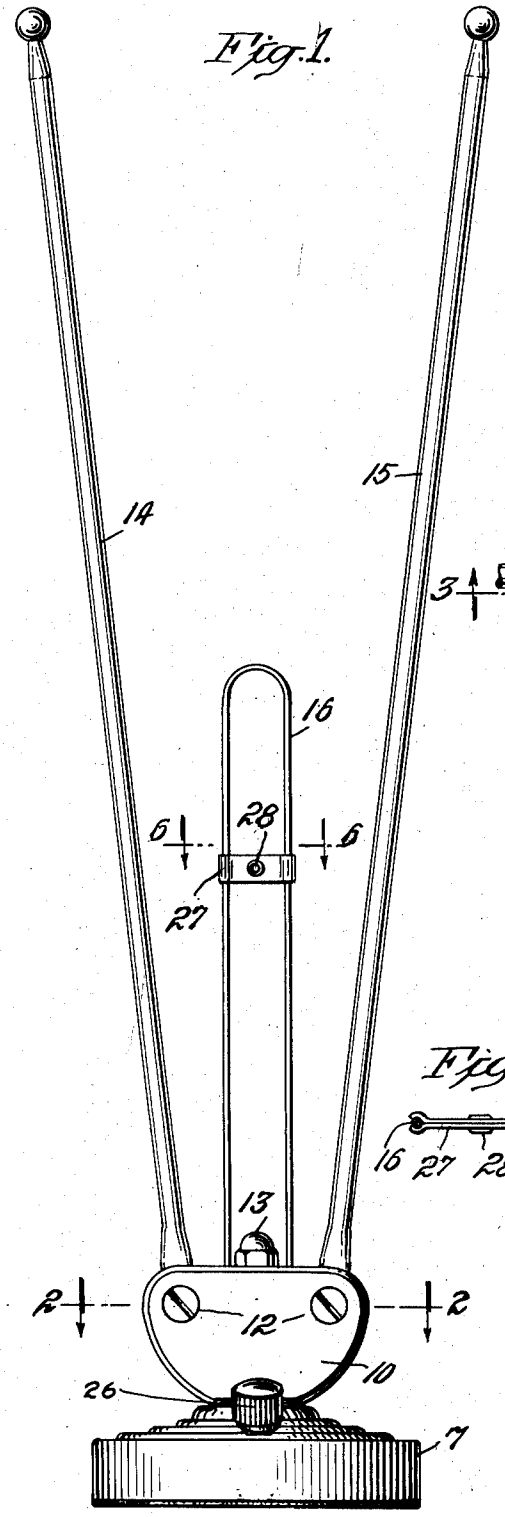


Fig. 3.

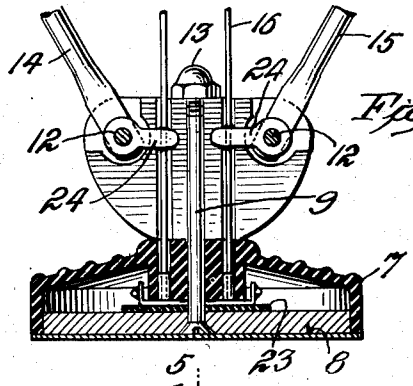


Fig. 2.

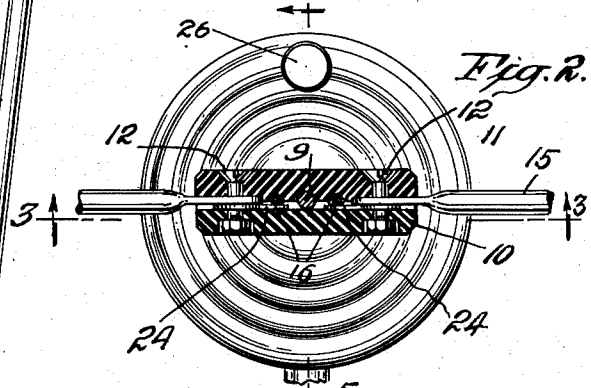


Fig. 4.

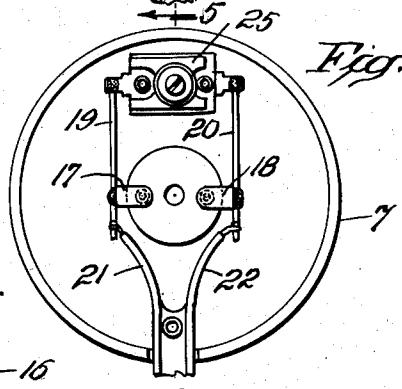


Fig. 6.

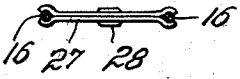
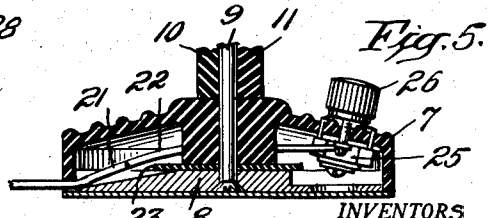


Fig. 5.



INVENTORS
MILTON SPIRT
BY JEROME GOLOMAN

Philip J. O'Brien
ATTORNEY

Patented Aug. 26, 1952 2,608,657

UNITED STATES PATENT OFFICE

2,608,657

TELEVISION ANTENNA

Milton Spirt and Jerome Goldman, New York, N. Y.; said Goldman assignor to said Spirt

Application April 14, 1950, Serial No. 155,826

2 Claims. (Cl. 250—33)

1

The invention herein disclosed relates to television antennae and the objects of the invention, generally, are to provide a more effective antenna for indoor use and one which can be tuned and adjusted to best suit local conditions under which a television set is operating.

Special objects of the invention are to provide such an antenna in a relatively inexpensive but at the same time, attractive form suitable for use in a room with the television set.

Other important objects of the invention are to provide an antenna construction which will be readily understandable by the average television operator and easily adjustable to obtain the best reception results.

Other desirable objects attained by the invention are set forth or will appear in the source of the following specification.

The drawing accompanying and forming part of the specification illustrates a present practical embodiment of the invention. Structure, however, may be modified and changed as regards the immediate illustration, all within the true intent and broad scope of the invention as hereinafter defined and claimed.

Fig. 1 in the drawing is a front elevation of one of the new antennae;

Fig. 2 is a broken horizontal cross sectional view of the same on substantially the plane of line 2—2 of Fig. 1;

Fig. 3 is a broken vertical sectional view on substantially the plane of line 3—3 of Fig. 2;

Fig. 4 is a bottom plan view of the insulating base showing the connections inside the same after removal of the bottom plate;

Fig. 5 is a broken vertical sectional view on substantially the plane of line 5—5 of Fig. 2;

Fig. 6 is an enlarged sectional detail on substantially the plane of line 6—6 of Fig. 1.

The base of the device consists of a hollow cover portion 7 and a relatively heavy bottom plate 8 secured thereto by an upright through screw 9.

The latter also secures in place the upstanding pair of insulating plates 10, 11, secured together in face-to-face relation by the through screws 12.

The hold-down screw 9 extends up between the insulating plates 10, 11, and has a cap nut 13 engaged on the upper end of the same, securing the pair of plates down on top of the hollow insulating base member 7.

The dipole arms or horns 14, 15, are pivotally and frictionally gripped between the upstanding plates 10, 11, on the fastening screws 12 so that

2

they may be shifted and held in different angular positions.

Between the antenna arms is located an upstanding impedance wire loop 16 extending down between the insulating plates 10, 11, and having the lower ends of the same, as shown in Fig. 4, connected by tabs 17, 18, with wires 19, 20, which serve as soldering terminals for the paired conductors 21, 22, which are connected with the television set.

An insulating washer 23 interposed between the wiring tabs 17, 18, and the metallic base plate 8, avoids the possibility of short circuiting the impedance loop.

The lower portion of the impedance loop is utilized to provide the connections to the antenna arms through the provision of tabs 24, Figs. 2 and 3, on the clamping screws 12 which at one end contact the lower ends of the arms and at the other end contact the wire forming the loop 16.

To enable sharp tuning for fringe reception conditions and the like, a small tuning condenser 25 is located in the hollow insulating base 7, directly connected as shown in Fig. 4, with the terminal wires 19, 20, and having an adjusting knob 26 on the top of the base.

The effective length of the impedance loop 16 is made variable, in the illustration, by an adjustable shorting bar consisting of a pair of metal straps 27 riveted together at 28 and clampingly engaged at opposite ends over the side wires of the loop 16. This shorting bar may be readily slid up and down over the loop to effect best reception results.

The separate adjustments of the trimming condenser and loop shorting bar, together with angular adjustments of the dipole arms and rotation of the antenna as a whole, enable accurate and effective tuning for accomplishing reception under difficult or unusual conditions.

The dipole arms may be of constant length, as shown, or, if desired, these may be of telescopic construction, providing this additional feature of possible adjustment.

The complete device consists of but relatively few, sturdy and easily assembled parts and hence can be produced at low cost. The various adjustments disclosed provide for effective reception under unusual or difficult conditions.

What is claimed is:

1. A television antenna comprising a supporting base having upstanding insulating plates in face-to-face relation, dipole arms having the inner ends of the same pivotally held between said upstanding base plates, an upstanding, in-

verted, U-shaped loop having the sides of the same clamped between said upstanding base plates in position between the inner ends of the dipole arms, screws extending through said base plates and through the inner ends of said dipole arms, said screws clamping the two base plates together and supporting the dipole arms in pivoted relation between the base plates and tabs engaged on said screws between the base plates, said tabs bearing against the inner, pivotally supported ends of the dipole arms and extending inwardly into engagement over the sides of the upstanding loop and whereby said same screws secure said tabs in place and electrically connect the inner ends of the dipole arms with the sides of said upstanding loop.

2. A television antenna comprising a supporting base having upstanding insulating plates in face-to-face relation, dipole arms having the inner ends of the same pivotally held between said upstanding base plates, an upstanding, inverted, U-shaped loop having the sides of the same clamped between said upstanding base plates in position between the inner ends of the dipole arms, screws extending through said base plates and through the inner ends of said dipole arms, said screws clamping the two base plates together and supporting the dipole arms in pivoted relation between the base plates and tabs engaged on said screws between the base plates, said tabs bearing against the inner, pivotally supported ends of the dipole arms and extending inwardly into engagement over the sides of the upstanding loop and whereby said same screws secure said tabs in place and electrically connect the inner ends of the dipole arms with the sides of said upstanding loop, wiring tabs on the lower ends of the sides of said loop, a trimming condenser and electrical connections extending from said wiring tabs to said trimming condenser and thereby supporting said condenser from and electrically connecting the same with said loop.

MILTON SPIRT.
JEROME GOLDMAN.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,177,416	Alford	Oct. 24, 1939
2,259,628	Fener et al.	Oct. 21, 1941
2,521,798	Leonard	Sept. 12, 1950
2,558,487	Hills	June 26, 1951
2,582,634	Jones	Jan. 15, 1952

OTHER REFERENCES

Radio and Television Retailing, August 1949, page 24.

Radio and Television Retailing, September 1949, page 87.