

April 18, 1939.

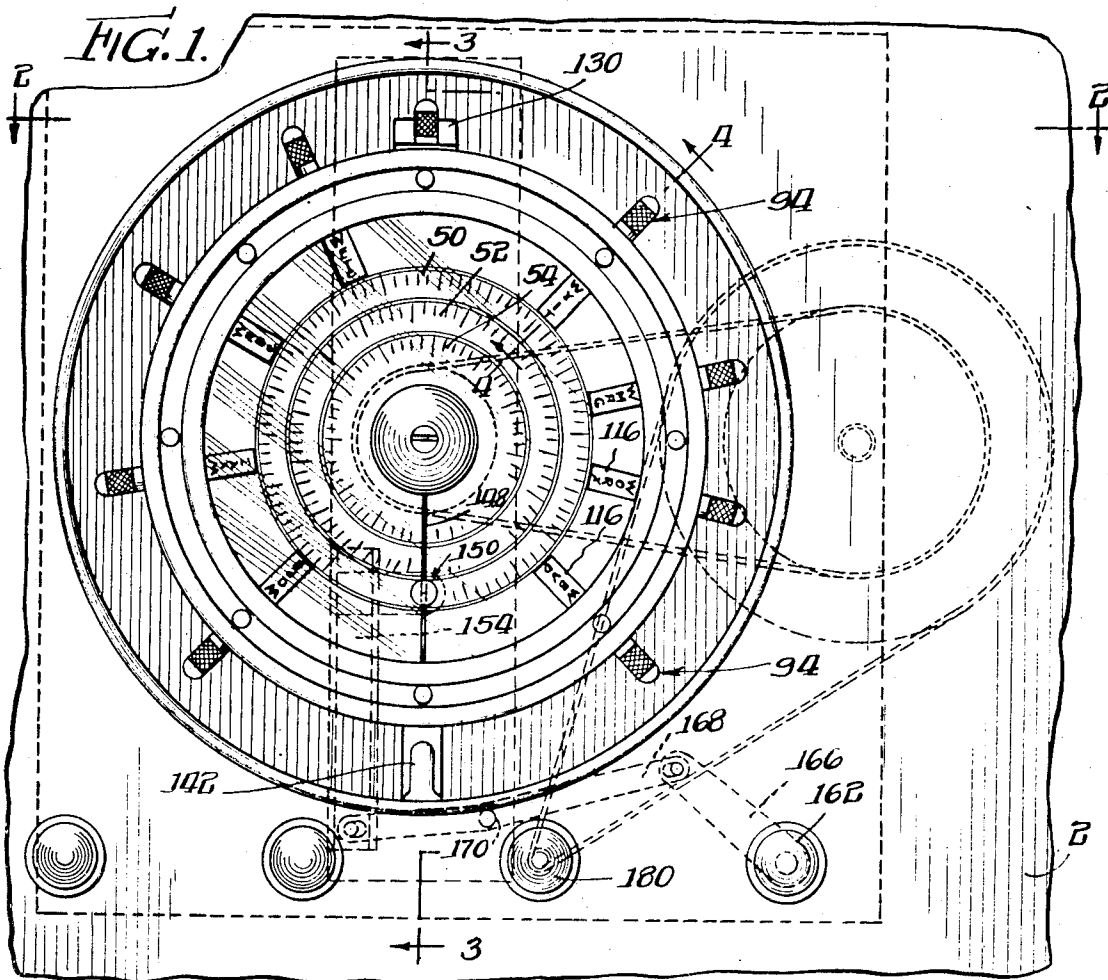
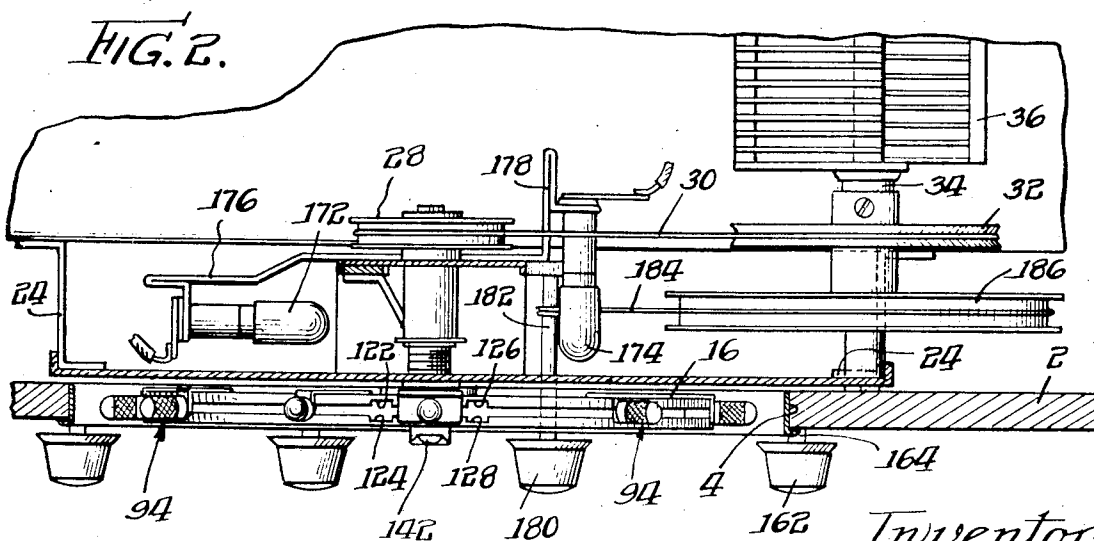
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2,155,101

RADIO DIAL

Filed Aug. 4, 1937

3 Sheets-Sheet 1



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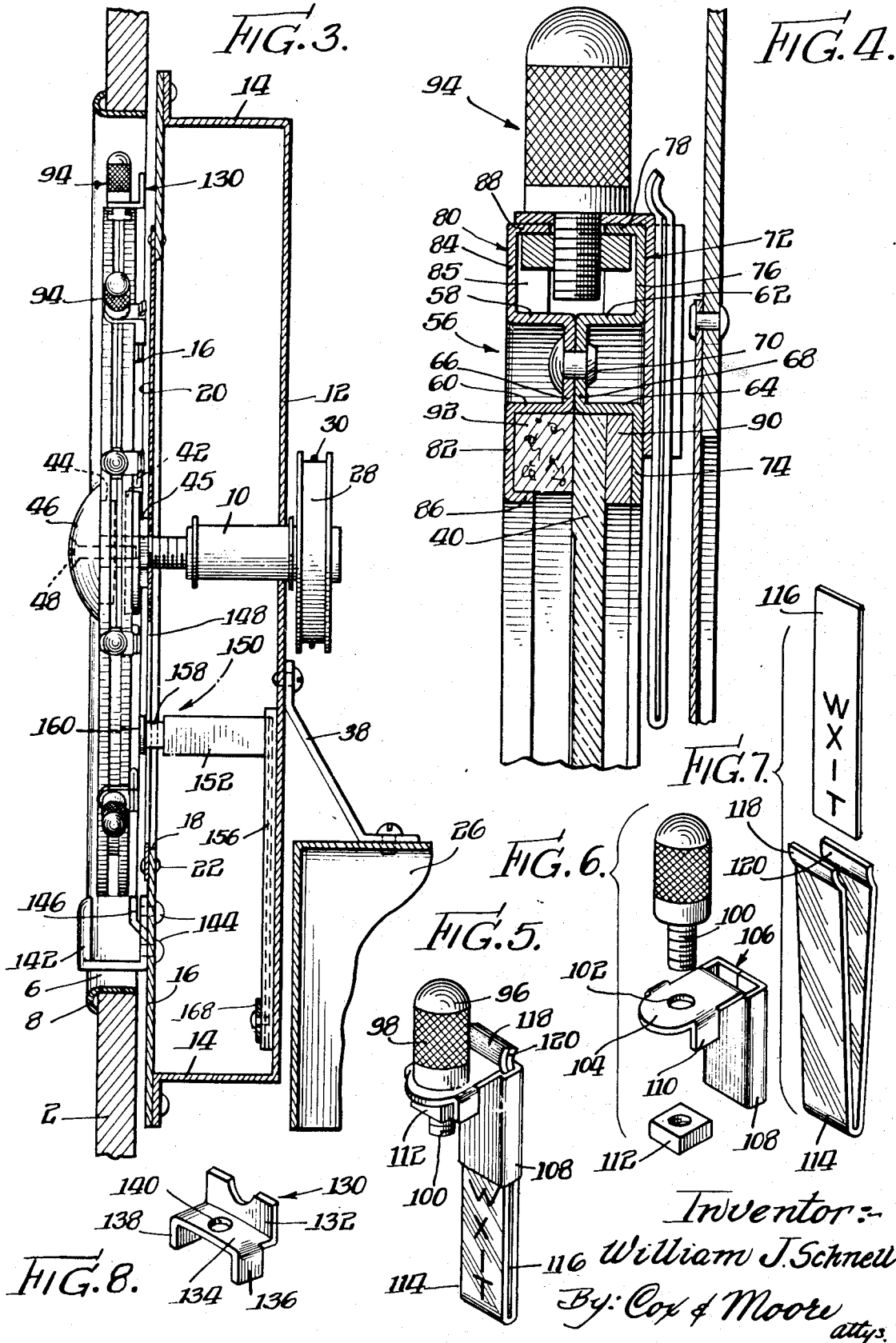
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FIG. 9.

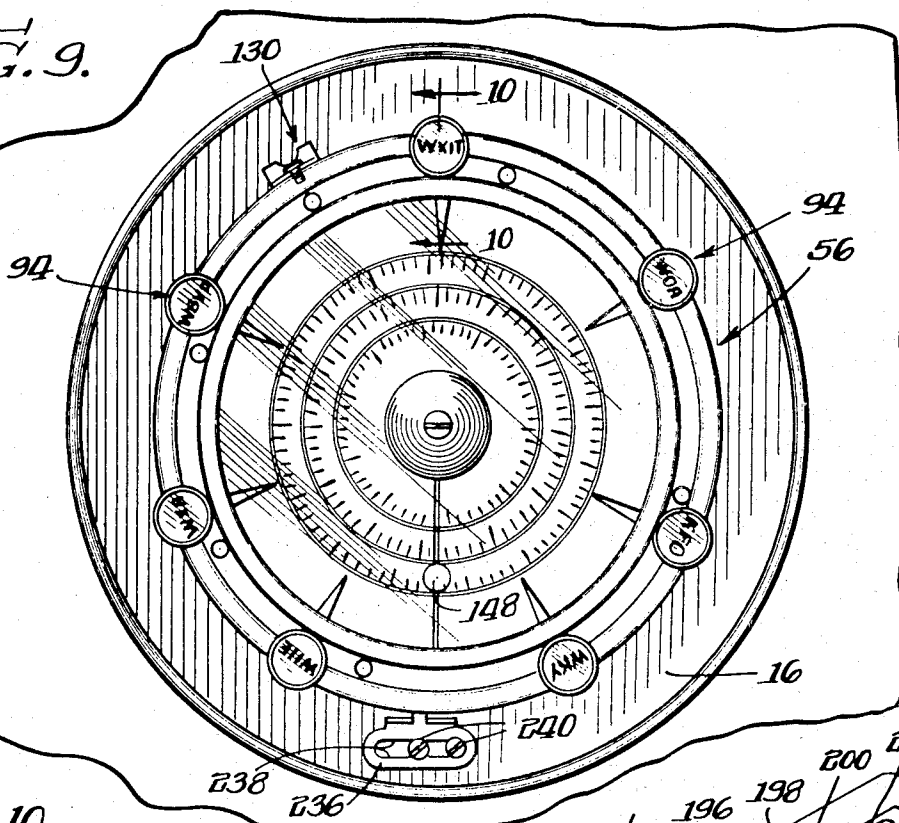


FIG. 10.

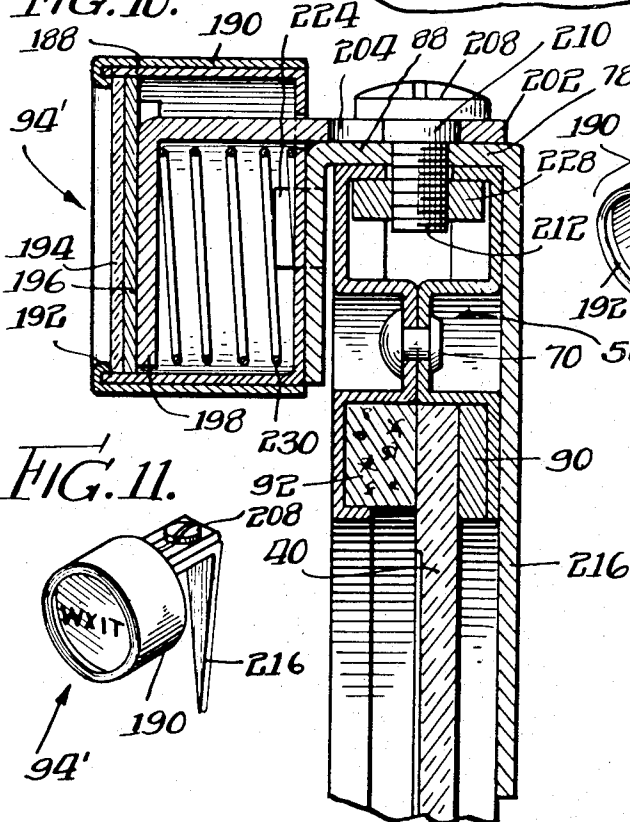


FIG. 12.

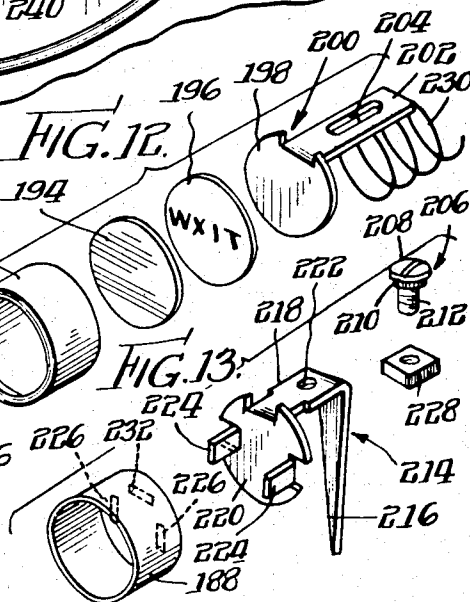


FIG. 13.

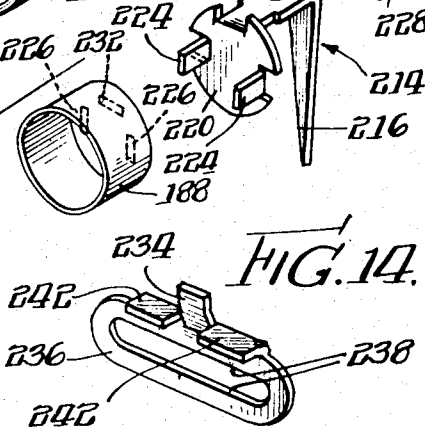
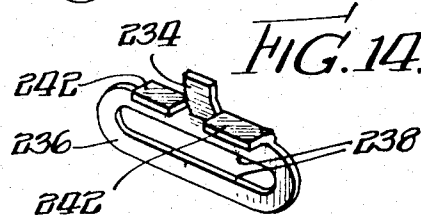


FIG. 14.



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UNITED STATES PATENT OFFICE

2,155,101

RADIO DIAL

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Application August 4, 1937, Serial No. 157,262

13 Claims. (Cl. 116—124.4)

This invention relates to a tuning indicator and dial assembly for radio receivers and the like.

In present-day receivers various tuning aids of the so-called automatic type have been provided, but such aids, by reason of their complexity, high cost, and space requirements, are restricted in use to the larger and more expensive sets. It is accordingly an object of applicant's invention to provide a tuning indicator and dial assembly which shall also be adapted for use with the more inexpensive sets and shall be simple in construction, inexpensive in cost and efficient and reliable in operation.

A further object of applicant's invention is to provide a compact and efficient tuning aid having readily adjustable marking devices for indicating the position to which the tuning element of the receiver should be moved to tune the same to the station represented by indicia inscribed on said marking device.

A further object of applicant's invention is to provide a tuning aid and dial assembly of pleasing appearance, simple and compact construction, providing means for rapidly and precisely tuning the receiver to any one of a number of desired broadcasting stations.

Another object of the invention is to provide a tuning aid providing adjustable station indicating marking devices, the adjustment of which may be accomplished manually without the aid of tools of any kind and from the exterior of the radio receiver with which the tuning aid is associated.

Another object of the invention is to provide a tuning indicator dial assembly having readily detachable and adjustable station indicating marking devices for indicating and controlling the position to which the tuning element of the radio receiver should be moved to tune the receiver to any one of a number of desired broadcasting stations; and wherein any desired number of said marking devices may be associated with the dial assembly as desired.

Another object of the invention is to provide a compact, unitary dial assembly and tuning aid readily associatable with the usual tuning control shaft of any ordinary radio receiver.

Another object of the invention is to provide a tuning aid and dial assembly of the above stated character wherein the dial is provided with a plurality of different band scales with a particularly simple, compact, and efficient means for selectively indicating which of the bands the receiver is tuned to.

Other and further advantages of the invention will be apparent from the following description when taken in connection with the accompanying drawings wherein:

Fig. 1 is a fragmentary front elevation of a radio receiver embodying the invention.

Fig. 2 is a fragmentary horizontal section taken on the line 2—2 of Fig. 1.

Fig. 3 is a fragmentary vertical section taken on the line 3—3 of Fig. 1.

Fig. 4 is an enlarged fragmentary section taken on the line 4—4 of Fig. 1.

Fig. 5 is an enlarged view in perspective of a control and marking device constructed in accordance with the invention.

Fig. 6 is an exploded view in perspective of a portion of the device of Fig. 5.

Fig. 7 is an exploded view in perspective of another portion of the device in Fig. 5.

Fig. 8 is an enlarged view in perspective of a motion limiting device forming part of the invention.

Fig. 9 is a fragmentary front elevation of a radio receiver embodying a modified form of tuning aid and dial assembly constructed in accordance with the invention.

Fig. 10 is an enlarged fragmentary vertical section taken on the line 10—10 of Fig. 9.

Fig. 11 is a view in perspective of a control and marking device employed in connection with the modified form of Fig. 9.

Fig. 12 is an exploded view in perspective of a certain portion of the device of Fig. 11.

Fig. 13 is an exploded view in perspective of other portions of the device of Fig. 11.

Fig. 14 is a view in perspective of a position determining element employed with the modified form of Fig. 9.

As shown in Figs. 1 to 3, the front panel 2 is provided with an opening 4 receiving an escutcheon ring 6 having an outwardly turned flange or lip portion 8 enclosing the edge of the opening.

The tuning control device comprises an operating shaft 10 (Figs. 2 and 3) journaled in a plate 12 having forwardly, then upwardly, projecting supporting portions 14, to the upwardly projecting portions of which is secured in any desired manner a plate 16 adapted to extend behind and cover the opening 4 in the face panel 2. The plate 16 is provided with a central opening 18 (Fig. 3) which is closed by a translucent or transparent, preferably colored, plate 20 secured to the plate adjacent said opening in any desired manner, as for example by rivets 22.

The plate 16, which is preferably opaque, is supported by brackets 24 (Fig. 2) secured to the plate and to the front of the frame or chassis 26 of the radio receiver.

5 The shaft 10 at its inner or rearward end carries an operating pulley 28 which is connected by a belt, string, cord, or like member 30, to a pulley 32 secured to the shaft 34 of the tuning condenser 36 (Fig. 2). The diameter of the pulley 28 is 10 one-half the diameter of the pulley 32 in order that the operating shaft 10 may move through a complete revolution to move the tuning condenser through one-half of a revolution. It will be evident that other motion transmitting mechanisms than the belt and pulleys disclosed may 15 be employed as desired, the form disclosed being merely illustrative.

The plate or bracket 12 upon which the shaft 10 is journaled is additionally supported by a 20 bracing member 38 secured thereto and to the chassis 26 as shown in Fig. 3.

The shaft 10 extends through a suitable opening centrally of the plate 20 and terminates within the plane of the face panel 2 concentrically 25 with the opening 4. A circular dial plate 40 (Fig. 4), preferably of glass or other transparent or translucent material, is mounted upon this extending end of the shaft and for this purpose is provided with a central opening through which 30 the shaft extends. The circular dial plate 40 is secured to the shaft for rotation therewith between a pair of washers 42 and 44, preferably of felt or other suitable material, clamped against the face of the plate by a nut 45 threaded on 35 the extending end of the shaft and by a cap member 46 secured to the end of the shaft by a screw 48. The face of the dial plate is etched with a plurality of (preferably three) circular broadcast scales 50, 52 and 54 (Fig. 1) and to 40 the rim of this plate is clamped a controlling member 56 of the following construction.

This controlling member comprises a pair of interfitting, preferably sheet metal, members having radially disposed annular depressions 45 formed by inwardly bent flanges 58, 60, 62 and 64 joined by flanges 66 and 68 through which spaced rivets or other fastening means 70 are passed to secure the interfitting members. The rear member (designated as 72 in Fig. 3) is provided with 50 an inwardly extending annular flange 74 and an outwardly extending annular flange 76, the latter flange being bent inwardly to form a peripheral flange 78. The forward member (designated by the reference character 80 in Fig. 4) is provided with inwardly and outwardly extending 55 flanges 82 and 84, respectively, the flange 82 being bent inwardly to provide an annular flange 86 and the flange 84 being bent inwardly to form a peripheral flange 88.

60 The dial plate 40 is clamped between the inwardly extending flanges 74 and 82 by a gasket 90 of felt or like material and a gasket 92, preferably of cork, the latter gasket resting upon the annular flange 86 of the member 80. In mounting 65 the glass plate on the control member 56, the same may be placed with the gaskets 90 and 92 between the flanges 74 and 82 and the rivets 70 or other fastening means thereafter applied to cause the gaskets to clampingly engage the rim 70 of the plate 40. The outwardly extending flanges 76, 78, 84 and 88 form an annular way or guide in which may be adjustably mounted any desired number of selectively operable control means or 75 control means or elements 94. Each of the selectively operable

96 knurled as at 98, and a reduced threaded end portion 100. The threaded end portion 100 passes loosely through an opening 102 in the forwardly bent end portion 104. A sheet metal member 106 5 is provided with a downwardly depending box-like structure 108 open at its opposite ends and formed integrally with the end portion 104. The member 106 is preferably formed from a flat strip of sheet metal by first suitably bending the end portion 104 at right angles to the remain- 10 ing portion of the strip and then bending the edges of the remaining portion forwardly and inwardly to form the box-like structure 108. The end portion 104 is formed with means to slidably retain the member 106 in the slot formed 15 by the flanges 78 and 88 of the controlling member 56.

This means preferably comprises a pair of downwardly depending lugs 110 formed integrally with the end portion 104 in alignment with the opening 102 in said end portion. The member 106 is adjustably secured to the controlling member 56 by the selectively operable control means 20 or elements 94. For this purpose a nut 112 is adapted to be received on the threaded end portion 100 of each of the control elements, rotation of the nut relative to the end portion 104 being 25 prevented by the lugs 110.

The box-like structure 108 forming a part of each member 106 is adapted to receive a marking 30 device preferably comprising a folded transparent or translucent strip 114 of any suitable material such as "Pyroxlin" between the folds of which is carried a strip 116 of any transparent or translucent material adapted to be inscribed 35 with indicia representing the call letters of a broadcast station. The folded strip 114 possesses sufficient resiliency to retain itself and the strip 116 in the box-like structure 108. In order to further insure the retention of the folded strip 40 114 and the strip 116 in said box-like structure, the upper free edges of the strip 114 are bent forwardly to provide concave-convex lugs 118 and 120 adapted to engage the forward edge of said structure. The lugs 118 and 120 also provide 45 means to readily lift the strip 114 and the strip 116 out of the member 106.

Means are provided for readily inserting the control means or elements 94 into, or removing them from, the annular way or guide 85. This 50 means comprises, as shown in Fig. 2, recesses or grooves 122, 124, 126 and 128, the grooves 122 and 126 being cut into the edge of the flange 78, and the grooves 124 and 128 being cut into the edge of the flange 88. The grooves 122 and 124 55 are aligned and form an opening into the way or guide 85, which is of a size sufficient to accommodate the spaced depending lugs 110 carried by the end portion 104 of the members 106 and the nuts 112 received between the lugs 110. The 60 grooves 126 and 128 are similarly aligned and form an opening of a similar size, which opening is spaced from the opening formed by the grooves 122 and 124.

Mounted upon the controlling member 56 in 65 the space between these grooves is a movement limiting means or element 130 best shown in Fig. 8. This limiting means or element 130 preferably comprises a small sheet metal member having an upstanding flange 132 and a forwardly 70 projecting flange 134 provided at its opposite edges with integral, downwardly depending lugs 136 and 138 adapted to be slidably received within the slot formed between the flanges 78 and 88. The forwardly extending flange 134 is pro- 75

vided with a central opening 140 adapted to loosely receive the threaded end portion 100 of a finger 96 which, by means of a nut 112, clamps the movement limiting element 130 to the controlling member 56. The lugs 136 and 138, similarly to the lugs 110 of each member 106, are spaced apart a sufficient distance to receive therebetween the nut 112 and prevent its rotation relative to the element 130.

Means are provided for indicating the position to which the controlling member 56 should be moved selectively to tune the radio receiver to each of the stations represented on the marking strip 116. This means comprises a generally U-shaped sheet metal member 142, one leg of which is secured in any desired manner as by screws 144 to the plate 16 below the controlling member 56 in a vertical plane passing through the axis of the shaft 110. The legs of the U-shaped position indicator 142 are spaced apart a sufficient distance to accommodate and permit free movement of the fingers 96 between said legs. The rearward leg of the position indicator 142 is provided with a central struck-out portion forming a forwardly projecting lug 146 adapted to engage an edge of the flange 132 of the limiting element 130 and thereby prevent rotation of the controlling member 56 through a greater angle than 360 degrees and the rotation of the tuning element 36 through a greater angle than 180 degrees. It is evident that such means insures against damaging of the tuning element by a too rapid movement to either extreme position.

The translucent or transparent backing plate 20 is provided with a narrow, vertically disposed slot 148, best shown in Fig. 1, which extends from a point substantially in alignment with the edge of the cap 46 to a point substantially in alignment with the inner circular edge of the controlling member 56. This slot 148 provides a way or guide for a band indicator 150 and a reference line or tuning position indicator for the scales 50, 52 and 54.

The band indicator preferably comprises a pin 152 secured to or formed with a slide plate 154 (Fig. 1) slidably received in and guided by the intumed flanges of a guide plate 156 secured to the supporting plate 12 (Fig. 3). The pin 152 is provided with a reduced portion 158 (Fig. 3) slidably received in and guided by the slot 148 in the plate 20 and is provided at its outer end with a contrastingly colored, preferably white, disk portion 160. The slide plate 154 is reciprocated vertically by a manually operable knob 162 (Figs. 1 and 2) secured on the outer end of a stud shaft 164 passing through the front panel 2 of the radio receiver and carrying on its inner end a crank 166. The crank 166 is pivotally connected by a pin and slot connection to a bell-crank 168 pivoted to the plate 12 as at 170. The bell-crank 168 is pivotally connected at its opposite end by a suitable pin and slot connection to the slide plate 154. It will be evident that as the manually operable knob 162 is oscillated, the disk portion 160 will be moved upwardly and downwardly across the scales 50, 52 and 54.

The manually operable knob 162 also controls through suitable conventional mechanism (not shown) the band selective circuits of the receiver and the movement of the disk-like portion 160 is made to correspond with the selective energization of these band circuits whereby said disk cooperates with the band scales 50, 52 and 54 to

indicate the band to which the receiver is adjusted.

Suitable illuminating means, such as lamps 172 and 174, are mounted on suitable brackets 176 and 178 secured to the rear supporting plate 12 in position behind and within the area of the translucent or transparent back plate 20. These lamps provide means for not only illuminating the scales 50, 52, and 54, but also for illuminating the marking strips 116.

Vernier tuning means are provided comprising a manually operable knob 180 secured to a shaft 182 extending through the front panel 2 of the radio receiver and connected by a string, belt, cord or the like 184 to a large pulley 186 rotatably secured to the shaft 34 of the tuning element (Figs. 1 and 2). Since the shaft 34 is connected to the shaft 10 by the pulleys 28 and 32 and the belt or the like 30, the controlling member 56 and dial plate 40 will follow the movement imparted to the shaft 34 by the manual vernier control knob 180.

The assembling and controlling of the selectively operable control means or elements 94 and their associated marking devices upon the controlling member 56 is accomplished as follows. A strip 116 is first marked with the call letters of a broadcasting station to which it is desired to more or less frequently tune the receiver. This marked strip is then inserted between the folds of the strip 114 and the latter is placed in the box-like structure 108 of a member 106. A finger 96 and its nut 112 is then loosely secured to this member 106. The member 106 is then mounted upon the rim of the controlling member 56 by inserting the downwardly depending lugs 110 of this member and the nut 112, non-rotatably secured therebetween, into the opening provided by the pair of recesses 122, 124, or the pair of recesses 126, 128, in the edge of the flanges 78 and 88, after which the lugs 110 and nut 112 are adjustably moved or slid along the way or guide 85 to a position wherein the center of the marking strip 116 is aligned with the particular scale indication corresponding to the broadcasting station the call letters of which are marked on the strip 116. The finger 96 is then rotated to cause the nut 112 to securely clamp this finger and the marking device to the periphery of the controlling member 56.

Any desired number of selectively operable means or elements 94 and associated marking devices may be similarly mounted on the periphery of the controlling member 56, as best shown in Fig. 1.

The assembling of these elements having been completed, the tuning of the receiver is accomplished as follows. Assuming that it is desired to tune the receiver to a station, the marking device for which lies in a position to the right of the movement limiting element 130 and between this element and the position indicator 142, the upper edge of the selected finger 96 will be engaged by the operator's finger, preferably the index finger, and the controlling member 56 is thereupon rotated in a clockwise direction. As the selected finger 96 approaches the position indicator 142, the operator will place his thumb in engagement with the remote edge of said position indicator across the opening between the legs thereof in position to engage the finger 96 between said legs and stop the controlling member, with the selected marking device in radial alignment with the slot 148, whereby the receiver

will be precisely tuned to the desired selected station.

When tuning the receiver to a station the marking device for which lies to the left of the movement limiting element 130 and between this element and the position indicator 142, the controlling member 56 will be operated by the selected finger 96 in a counterclockwise direction to a position in which said finger lies between the legs of the position indicator 142.

It will be evident that the slot 148 permits a more intense illumination of the scale indication and the marking device to which the receiver is tuned at any instant, thereby giving a selective luminous indication of the station to which the receiver is tuned.

In the form of the invention disclosed in Figs. 9 to 13, each selectively operable control means or element 94' comprises a push button or like depressible member adjustably mounted on the periphery of the controlling member 56. Each of these depressible members comprises a pair of interfitting cups 188 and 190, the cup 190 being provided at its outer edge with a portion rebent to form an annular recess for receiving the outer edge of the cup 188 and a retaining ring 192. Within the cup 188 behind the ring 192 is loosely received a transparent or translucent cover disk 194. A disk 196, of any suitable material adapted to receive indicia representative of a selective broadcasting station, is held in clamping engagement with the inner face of the disk 194 by the depending disk-like portion 198 of an adjustable stop member 200. The stop member 200 has a rearwardly extending portion 202 provided with an elongated slot 204. The slot 204 is adapted to receive a screw 206 having an enlarged head 208, a reduced cylindrical portion 210 and a further reduced threaded end portion 212.

Pointer means 214 comprise a pointer portion 216, a right angularly bent portion 218 and a disk-like depending portion 220. The portion 218 is provided with an opening 222 to loosely receive the threaded portion 212 of the screw 206 and the disk-like portion 220 is provided with forwardly projecting lugs 224 punched from the body of the disk-like portion. The lugs 224 are adapted to be received in suitable slots 226 in the bottom of the cup 188 being bent over the inner face of this bottom of the cup to secure the pointer means 214 thereto.

A nut 228 cooperates with the screw 206 to clamp the selectively operable, depressible member to the peripheral flanges 78 and 88 of the controlling member 56. It should be noted that the axial length of the cylindrical portion 210 of the screw 206 is slightly greater than the thickness of the portion 202 of the stop member 200 in order that this stop member may be moved forwardly and backwardly and may have free sliding movement relative to the controlling member 56. A resilient means, such as a coiled spring 230, is interposed between the disk-like portion 198 of the stop member 200 and the bottom of the cup 188, the forward movement of this member and the disks 194 and 196 being limited by the retaining ring 192 formed on the cup 190.

The selectively operable control means or elements 94' are assembled as follows. The stop member 200 and the spring 230 are first inserted in a cup 188, the rearwardly extending portion 202 passing through a slot 232 in the bottom of the cup. The disk 196, suitably inscribed with

indicia representing the call letters of a desired broadcasting station, and a cover disk 194 are then inserted into the open end of the cup 188 and the cup 190 is then fitted over the cup 188. The screw 206 is then passed through the slot 204 of the stop member and through the opening 222 in the pointer means 214 and loosely threaded into the nut 228. The assembled control means or element 94' is then placed in position on the periphery of the control member 56 and angularly adjusted relative thereto in the manner heretofore described in connection with the form of the invention disclosed in Figs. 1 to 8. The movement limiting element 130, heretofore described, is secured to the rim of the controlling member 56 and this element cooperates with the upwardly and forwardly projecting lug 234 formed integrally with a stop element 236 (Figs. 9 and 14).

The stop element 236 is provided with a slot 238 adapted to slidably engage the shanks of mounting screws 240 (Fig. 9) in order that the stop element may have a precisely determined limited movement relative to the supporting plate 16. The stop element 236 is additionally provided with forwardly projecting lugs 242, one on each side of the upwardly and forwardly projecting lug 234. The length of the slot 238 is such that when an outer edge of one of the lugs 242 is engaged by a depressed pointer 216, said pointer will lie precisely in a vertical plane in alignment with the slot 128. This precise positioning of the depressed points will accordingly be insured regardless of the direction in which the controlling member 56 has been rotated.

It will be further observed that the width of the upwardly and forwardly projecting lug 234 bears such relation to the length of the movement limiting element 130 and the movement of the stop element 236 that regardless of the direction of rotation of the controlling member 56, full movement of the tuning element through an angle of 180 degrees is permitted.

It will be seen from the above description that applicant has provided a tuning indicator and dial assembly adapted for use with the more inexpensive sets, which is simple and inexpensive, efficient and reliable; which provides indicator means for rapidly and precisely tuning the receiver to any one of a number of desired broadcasting stations; and which means is adjustable without the aid of tools and from the exterior of the radio receiver.

Changes may be made in the form, construction and arrangement of the parts without departing from the spirit of the invention or sacrificing any of its attendant advantages, and the right is hereby reserved to make all such changes as fairly fall within the scope of the following claims.

The invention is hereby claimed as follows:

1. In a radio receiver or the like having a tuning element, relatively fixed and movable position indicating elements, the movable one of said elements being provided with broadcast scales, means for connecting said movable element to said tuning element, said movable element comprising a circular plate, a plurality of angularly spaced, radially extending selector fingers adjustably secured to the rim of said plate, a station indicator operatively associated with each selector finger, said selector fingers being adjusted into positions relative to the scale carrying element corresponding to the broadcast positions of the stations represented by said indicators, and a

fixed stop indicator for indicating the position to which said selector fingers should be moved to tune the receiver to the stations represented by said station indicators.

2. In a radio receiver or the like having a tuning element, relatively fixed and movable position indicating elements, the movable one of said elements being provided with broadcast scales, means for connecting said movable element to said tuning element, said movable element comprising a circular plate, an annular member of channel cross section secured to the edge portion of said circular plate and forming a guideway extending peripherally of the circular plate, a plurality of selectively operable, spaced controlling elements releasably secured to said annular member and slidably adjustable within said guideway, station indicators associated with said controlling elements, said controlling elements being adjusted into positions relative to the scale carrying element corresponding to the broadcast positions of the stations represented by said indicators, and a fixed stop indicator for indicating the position to which said controlling elements should be moved to tune the receiver to the stations represented by the station indicators.

3. In a radio receiver or the like having a tuning element, an adjusting shaft operatively connected to said tuning element, a circular dial plate secured to said adjusting shaft, a controlling member secured to the periphery of said dial plate, said controlling member providing an annular guideway, a plurality of selectively operable control elements secured to said controlling member for relative adjustment within said guideway, each of said elements comprising an operating portion adapted to be engaged by the finger of the operator, means extending within said guideway for adjustably clamping said portion to said controlling member, and a portion to detachably receive a station indicator, said control elements being adjustable relative to the dial plate to scale positions corresponding to the broadcasting stations represented by the station indicators, and means for determining the stop position of said dial plate to which said control elements should be moved to tune the receiver to the stations represented thereby.

4. In a radio receiver or the like having a tuning element, an adjusting shaft operatively connected to said tuning element, a circular dial plate secured to the adjusting shaft, a stationary backing plate having a radially extending opening forming pointer means for said dial plate, means connected to the dial plate for operating said tuning element upon movement of said dial plate, selectively operable means for moving said dial plate to selected positions whereby to tune the receiver to the desired stations said dial plate being provided with a plurality of band scales, a band indicator comprising a member slidably received within the opening in said backing plate and manually operable means for selectively adjusting said indicator relative to said band scales for indicating the band to which the receiver is adjusted at any instant.

5. In a radio receiver or the like having a tuning element, an adjusting shaft operatively connected to said tuning element, a circular dial plate secured to the adjusting shaft, a stationary backing plate having a radially extending opening forming pointer means for said dial plate, a controlling member secured to the periphery of said dial plate, said controlling member pro-

viding an annular guideway, a plurality of selectively operable control elements secured to said controlling member for relative adjustment within said guideway, each of said elements comprising an operating portion adapted to be engaged by the finger of the operator, means extending within said guideway for adjustably clamping said portion to said controlling member, and a portion to detachably receive a station indicator, said control elements being adjustable relative to the dial plate to scale positions corresponding to the broadcasting stations represented by the station indicators, and means for determining the stop position of said dial plate to which said control elements should be moved to tune the receiver to the stations represented by the station indicators.

6. In the combination of claim 5 wherein said dial plate is provided with a plurality of band scales, a band indicator comprising a member slidably received within the opening in said backing plate and manually operable means for selectively adjusting said indicator relative to said band scales for indicating the band to which the receiver is adjusted at any instant.

7. In a radio receiver or the like having a tuning element, an adjusting shaft operatively connected to said tuning element, a circular dial plate secured to said adjusting shaft, a controlling member secured to the periphery of said dial plate, said controlling member providing an annular guideway, a plurality of selectively operable control elements associated with said controlling member, each of said control elements comprising a finger portion adapted to extend radially from said controlling member, means for adjustably clamping said finger portion to said controlling member, and a station indicator detachably secured to said finger portion and extending radially of said controlling member, said controlling member having an enlarged opening communicating with said annular guideway for permitting detachment of said control elements from said controlling member, movement limiting means secured to said controlling member, and means for determining the stop position to which said control elements should be moved to tune the receiver to the stations represented thereby, said last mentioned means being adapted to engage said movement limiting means to predetermine the extreme positions of said controlling member and said tuning element.

8. In a radio receiver or the like having a tuning element, an adjusting shaft operatively connected to said tuning element, a circular dial plate secured to said adjusting shaft, a controlling member secured to the periphery of said dial plate, said controlling member providing an annular guideway, a plurality of selectively operable control elements associated with said controlling member, each of said elements comprising an axially depressible member, means extending within the annular guideway in said controlling member for adjustably clamping the depressible member to said controlling member, and a station indicator associated with said depressible member, said control elements being adjustable relative to said dial plate to scale positions corresponding to broadcasting stations represented by the station indicators, and means engageable with an operated control element for determining the stop position of said control elements for tuning the receiver to the stations represented by the station indicators.

9. In a radio receiver or the like having a

tuning element, an adjusting shaft operatively connected to said tuning element, a circular dial plate secured to said adjusting shaft, a controlling member secured to the periphery of said dial plate, said controlling member providing an annular guideway, a plurality of selectively operable control elements associated with said controlling member, each of said control elements comprising a cup, a station indicator in said cup, an operating member depressible parallel to the axis of said controlling member, resilient means interposed between portions of said cup and said depressible member for normally maintaining this member in its inoperative position, and means extending within the annular guideway in the controlling member for adjustably clamping said depressible member thereto, and means having a predetermined limited movement adapted to engage an operated control element for determining the stop position of said controlling member to which said control element should be moved to tune the receiver to the station represented by the station indicator forming a part of said operated control element.

10. In a radio receiver or the like having a tuning element, relatively fixed and movable position indicating elements, the movable one of said elements being provided with broadcast scales, means for connecting said movable element to said tuning element, said movable element comprising a circular plate, an annular member of channel cross section secured to the edge portion of said circular plate and forming a guideway extending peripherally of the circular plate, a plurality of selectively operable, spaced controlling elements releasably secured to said annular member and slidably adjustable within said guideway, station indicators associated with said controlling elements, said controlling elements being adjusted into positions relative to the scale carrying element corresponding to the broadcast positions of the stations represented by said indicators, a fixed stop indicator for indicating the position to which said controlling elements should be moved to tune the receiver to the stations represented by the station indicators, and movement limiting means secured to said annular member and adapted to engage said fixed stop indicator to predetermine the extreme positions of said annular member and said tuning element.

11. In a radio receiver or the like having a tuning element having an adjusting shaft extending therefrom, relatively fixed and movable position indicating elements, the movable element

being provided with broadcast scales, said movable element comprising a circular, light-transmitting plate, a ring secured to the rim of said plate and having a peripherally extending guideway, a plurality of angularly spaced, radially extending selector fingers secured to said ring for adjustment peripherally of said guideway into positions relative to the scale carrying element corresponding to the broadcast positions of selected broadcast stations and a fixed stop indicator extending into the plane of said ring and plate for engagement with the instrumentality employed to operate a selector finger to determine the stop position of the tuning element for tuning the receiver to the broadcast station represented by the selectively operated selector finger.

12. In a radio receiver or the like having a tuning element having an adjusting shaft extending therefrom, relatively fixed and movable position indicating elements, the movable element being provided with broadcast scales, said relatively movable element comprising a circular, light-transmitting plate, a ring secured to the rim of said plate and having a peripherally extending guideway, a plurality of angularly spaced, radially extending selector fingers secured to said ring for adjustment peripherally of said guideway into positions relative to the scale carrying element corresponding to the broadcast positions of selected broadcast stations, a fixed stop indicator extending into the plane of said ring and plate for engagement with the instrumentality employed to operate a selector finger to determine the stop position of the tuning element for tuning the receiver to the broadcast station represented by the selectively operated selector finger, and vernier means for tuning said shaft independently of said selector fingers.

13. In a radio receiver or the like having a tuning element, cooperating and relatively movable scale and pointer elements, one of which is connected to said tuning element, for indicating the position of said tuning element, said scale element comprising a light-transmitting dial plate provided with a plurality of band scales, a backing plate for said dial plate, said backing plate having a slot therein extending transversely of said band scales, a band indicator comprising a member slidably received within the slot in said backing plate and manually operable means for selectively adjusting said band indicator relative to said band scales for indicating the band to which the receiver is adjusted at any instant.

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