Nov. 17, 1942. J. P. CLUETT 2,302,296

CONTROL ATTACHMENT

Filed Dec. 22, 1941

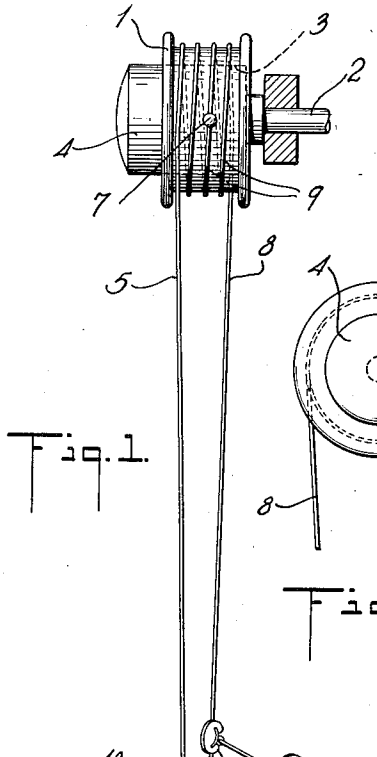


Fig. 1.

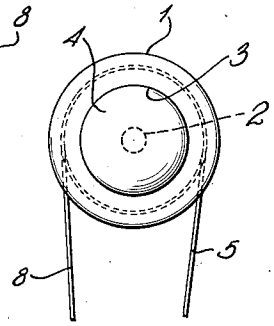


Fig. 2.

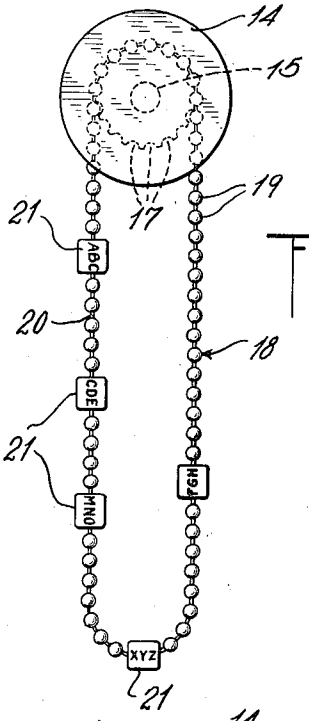


Fig. 4.

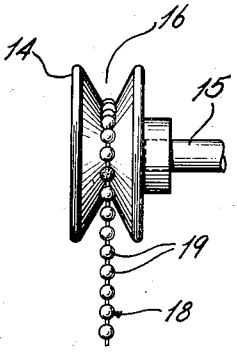


Fig. 6.

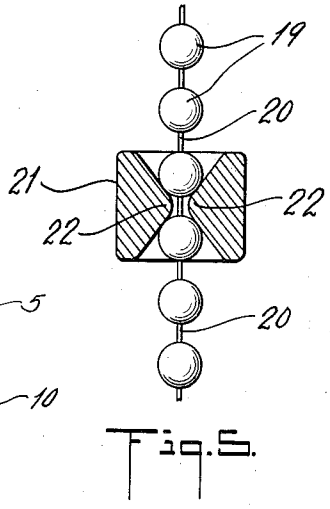


Fig. 5.

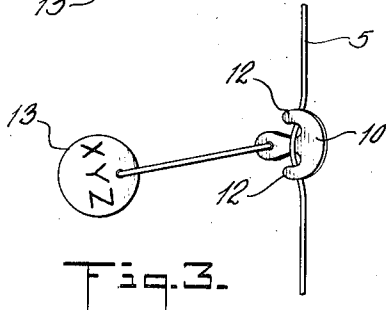


Fig. 3.

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CONTROL ATTACHMENT

John P. Cluett, Greenwich, Conn.

Continuation of application Serial No. 387,796, April 10, 1941. This application December 22, 1941, Serial No. 423,931

6 Claims. (Cl. 74—10)

The invention aims to provide a control attachment for radio tuning and like purposes which may be readily installed and operated in simple and accurate manner to tune the radio to different stations. Further objects and advantages of the invention will be in part obvious and in part specifically referred to in the specification hereinafter contained which, taken in conjunction with the drawing, discloses a preferred form of attachment capable of operating in accordance with the invention.

In the drawing—

Fig. 1 is a side elevation of a control attachment constructed in accordance with the invention, and shown in operative position connected to the tuning control knob of a radio set.

Fig. 2 is a front elevation of the upper portion of the attachment shown in Fig. 1.

Fig. 3 is a perspective side view.

Fig. 4 is a side elevation showing a somewhat modified form of the invention.

Fig. 5 is a detail section of the form of marker shown in Fig. 4.

Fig. 6 is an end elevation of the control knob or drum shown in Fig. 4.

In accordance with the invention I provide a drum 1 which is attached in suitable manner to a rotary control spindle 2, which latter may be understood as controlling the setting of a variable condenser (not shown) such as is used in radio receiving sets. In the illustrated form the drum 1 may be understood as having a contractible bore 3 which is frictionally engageable with the rotary control knob 4 attached to shaft 2, the drum 1 being preferably made of elastic rubber-like material so that it may be readily forced into gripping contact with the knob 4.

A flexible strand 5 of any appropriate material has turns 6 thereof wound around the drum 1, and is preferably secured to the drum by a stud 7, in such manner that as the strand 5 is tensioned or pulled, the drum 1 and control shaft 2 are rotated in one direction. Preferably a second similar strand 8 has similar turns 9 wound about the drum 1 and fastened by the stud 7, in such manner that when strand 8 is tensioned or pulled, drum 1 and shaft 2 will be rotated in the opposite direction and more of strand 5 will be wound up to a corresponding extent upon drum 1.

To indicate different desired angular settings or positions of the drum, markers 10 may be adjustably positioned at points spaced along one or both of the strands 5 and 8, and the strands 5 and 8 are preferably joined as indicated at 11 to form a loop. As shown in Fig. 3, the markers 10 may be provided with hooks 12 engaging the strand 5 and holding the marker adjustably in position on it, and tabs 13 may be attached to the markers as shown, to designate the various stations to be tuned in. To calibrate the attachment the shaft 2 will be set in the usual manner for station XYZ, for example, and then as indicated in Fig. 1, the marker 10 corresponding to this station will be positioned at the extremity 11 of the loop formed by strands 5 and 8, when the strands 5 and 8 are pulled taut at the location from which it is desired to make remote adjustments in tuning. Once the marker corresponding to station XYZ has been adjusted as above described, the receiving set may be thereafter tuned to station XYZ by tensioning or pulling on the corresponding marker 10 or its tab 13, until such marker is located at the extremity 11 of the loop, and likewise as to the other markers 10 indicated in Fig. 1, once they have been initially adjusted as above described. So long as the attachment is operated from the same remote point, pulling the marker out to the extremity 11 of the loop will always position such marker at a predetermined distance from the drum 1, and with definite lengths of the turns 6 and 9 wound about the drum, so that the operation of tuning to a desired station for which the attachment is set, is simple and reliable. The attachment may be readily adjusted to tune for different stations, or for operation from different remote points, by adjusting the positions of the markers 10 and lengthening or shortening the strands 5 and 8 if needed.

In Figs. 4 to 6 I have shown a somewhat modified form of the invention wherein a control knob or drum 14, fixed to a control spindle 15, is constructed somewhat like a sheave, having a peripheral groove 16 provided at its bottom with an annular series of pockets 17. The flexible strand in this embodiment of the invention takes the form of an endless belt or chain 18 which may be of known bead chain construction, having ball-shaped portions 19 slightly spaced and connected by links 20. The endless chain 18 need be merely hung upon the knob 14 so as to peripherally engage the latter with its balls 20 fitting in the pocket 17. The markers 21 as shown in Fig. 5, may consist of rings of elastic rubber-like material which are threaded onto the chain 18 before the ends of the latter are joined, the inner walls 22 of the rings frictionally holding the markers in position as shown in Fig. 5. Thus any one of the markers may be grapsed and

pulled out to the extremity of the loop of the chain, acting as selectively operable pull members as previously described. The markers 21 are frictionally held in position but may be forced from one position to another when the settings are to be changed. For purposes of checking proper position of chain 18 on knob 14, one of the pockets 17 and one of the balls 19 may be especially marked, as by distinctive coloring, so that in placing the chain in position the operator engages these marker parts with each other.

While the invention has been disclosed as carried out by attachments of the above described specific constructions, it should be understood that changes may be made therein without departing from the invention in its broader aspects, within the scope of the appended claims.

This application is a continuation of my copending prior application Serial Number 387,796, filed April 10, 1941, entitled "Remote control attachment."

I claim:

1. A control attachment for radio tuning and like purposes, including a drum constructed and arranged to actuate a rotary control spindle, a flexible strand having a portion thereof peripherally engaging said drum to rotate the latter when the strand is tensioned, said strand having a length thereof which extends from said first mentioned portion and is provided with markers spaced along its length to indicate different angular positions of said drum when said strand is tensioned to position different markers selectively at a predetermined distance from said drum, said markers being constructed and arranged to act as selectively operable pull members for tensioning said strand to selectively position one of said markers at the aforesaid predetermined distance from said drum.

2. A control attachment for radio tuning and like purposes, including a drum constructed and arranged to actuate a rotary control spindle, flexible strands having portions thereof peripherally engaging said drum to rotate the latter in opposite directions when said strands are selectively tensioned, at least one of said strands being provided with markers spaced along its length to indicate different angular positions of said drum when said last mentioned strand is tensioned to position different markers selectively at a predetermined distance from said drum, said markers being constructed and arranged to act as selectively operable pull members for tensioning said strand to selectively position one of said markers at the aforesaid predetermined distance from said drum.

3. A control attachment for radio tuning and like purposes, including a drum constructed and arranged to actuate a rotary control spindle, flexible strands having portions thereof peripherally engaging said drum to rotate the latter in opposite directions when said strands are selectively tensioned, portions of said strands remote from the drum being joined to form a loop, and markers spaced along said loop to indicate different angular positions of said drum, whereby said loop may be tensioned to selectively position different markers at the extremity of the loop and thereby determine the setting of said drum, said markers being constructed and arranged to act as selectively operable pull members for tensioning said strand to selectively position one of said markers at the extremity of said loop.

4. A control attachment for radio tuning and like purposes, including a drum having a contractible bore frictionally engageable with a rotary control knob, flexible strands having portions thereof peripherally engaging the drum to rotate the latter in opposite directions when said strands are selectively tensioned, portions of said strands remote from the drum being joined to form a loop, and markers spaced along said loop to indicate different angular positions of said drum, whereby said loop may be tensioned to selectively position different markers at the extremity of the loop and thereby determine the setting of said drum.

5. A control attachment as specified in claim 3 wherein said strands are joined to form an endless belt having one bight thereof engaging said drum.

6. A control attachment as specified in claim 3 wherein said strands are in the form of an endless beaded chain with one bight thereof engaging said drum, said drum being provided with pockets meshing with said beads, and said markers enclosing and being in frictional engagement with said chain.

JOHN P. CLUETT.