

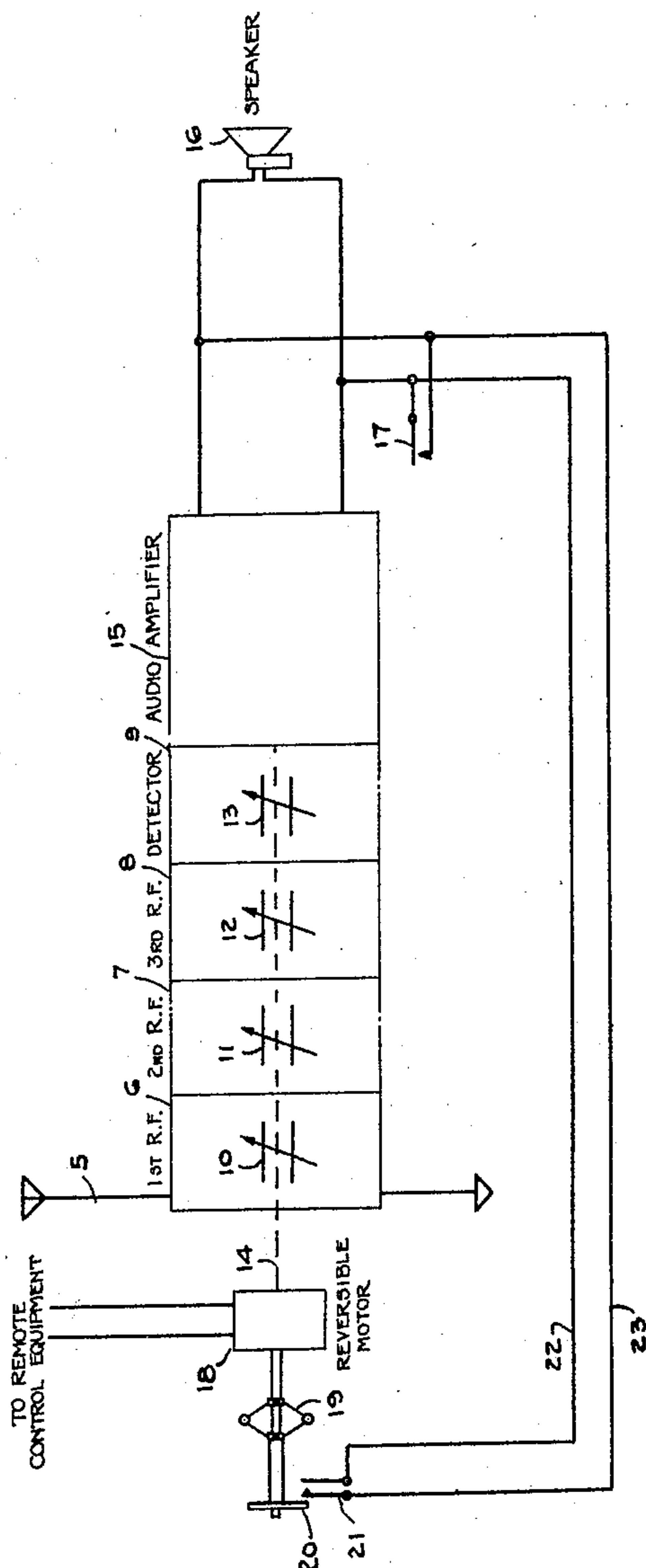
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REMOTELY CONTROLLED RADIO RECEIVING SYSTEM

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REMOTELY CONTROLLED RADIO RECEIVING SYSTEM

Application filed September 5, 1929. Serial No. 390,529.

This invention relates to signalling systems and more particularly to radio receiving systems in which a radio receiver is controlled from a remote point.

5 In radio receivers and especially those provided with automatic means for maintaining the signal volume at a predetermined level, it is desirable to provide means for disabling the loud speaker during the tuning of the re-
10 ceiver from one station to another so that the back-ground noises and mutilated signals will not be reproduced. This result is especially desirable when the radio receiver is tuned or adjusted by equipment controlled
15 from a remote point.

In accordance with the present invention means are provided in a remotely controlled radio receiving system for disabling either a
20 portion of the radio receiver or the loud speaker during the period that the radio receiver is being tuned. A further feature of the invention includes means governed by the motor utilized to effect the remote control
25 of the radio receiver for disabling the loud speaker or the radio receiver during the tuning operation.

The drawing diagrammatically represents a remotely controlled radio receiving system in which the radio receiver of the type
30 similar to that more completely disclosed in my co-pending application Serial No. 374,309, filed July 28, 1929, is provided with an antenna 5, three tuned radio frequency stages and a detector stage in cascade, respectively
35 designated 6, 7, 8 and 9, each of which stages is tuned by one of the condenser units 10, 11, 12 and 13 by a common shaft 14. The output of the detector 9 is coupled to an audio amplifier 15 which may include one or more
40 audio amplifying stages linked in cascade and connected to a loud speaker 16.

The shaft 14 of the multi-unit tuning condenser may be adjusted manually to effect the
45 desired tuning of the radio receiver in which case a manual key 17 located at the receiver may be closed to short circuit the loud speaker 16 during the tuning operation. However, the present arrangement is particularly
50 adapted for a system in which the shaft 14 of the multi-unit condenser is actuated by a

reversible motor 18 controlled from a remote point in a manner similar to that disclosed in the patent to Winfred T. Powell, No. 1,738,262, granted December 3, 1929. In the
55 last mentioned application, a motor such as 18, actuated either clockwise or counterclockwise under the control of adjustable equipment at one or more remote control stations, rotates the shaft 14 of the multi-unit con-
60 denser to any desired position to effect the desired tuning of the radio receiver.

In accordance with the present invention means are provided for disabling the loud speaker of a remotely controlled radio re-
65 ceiver during the tuning operation, which in the preferred form includes a fly ball governor 19 mounted on the shaft of the motor or actuated thereby so that as the motor ro-
70 tates the member 20 controlled by the governor will close the contacts 21 thereby short circuiting the loud speaker 16 over conduc-
75 tors 22 and 23.

The radio receiver herein disclosed may or may not be provided with means for auto-
80 matically maintaining the signal volume at a predetermined level such as is disclosed in my co-pending application, and although the invention has been shown applied to a
85 radio receiver of the tuned radio frequency type, it is also applicable to other types of radio receivers.

The present disclosure is for purposes of illustration only and it will be understood
90 that there may be many modifications and variations in the present invention without departing from the spirit thereof.

What I claim is:

1. In a remotely controlled radio receiving system, a radio receiver having a tuning control and a loud speaker connected thereto, a
95 motor for actuating said tuning control, means at a remote point for effecting the operation of said motor, and means including a centrifugal governor actuated by said mo-
100 tor for silencing the loud speaker during the tuning operation.

2. In a remotely controlled radio receiving system, a radio receiver having a tuning control and having a loud speaker connected
105 thereto, a motor for actuating said tuning

control, means at a remote point for effecting the operation of said motor, a centrifugal governor actuated by said motor, and means controlled by said governor for short circuiting said loud speaker during the tuning operation.

3. In a remotely controlled radio receiving system, a radio receiver having a tuning control, a loud speaker connected to said radio receiver by a pair of conductors, a rotary motor including a rotatable shaft for actuating said tuning control, means at a remote point for effecting rotation of said motor, a normally open switch connected across said conductors, and means actuated by said shaft for closing said switch during the operation of said motor.

4. In a remotely controlled radio receiving system, a radio receiver having a tuning control, a loud speaker connected to said radio receiver by a pair of conductors, a rotary motor including a rotatable shaft for actuating said tuning control, means at a remote point for effecting rotation of said motor, and a normally open switch connected across said conductors, said shaft serving to close said switch during the operation of said motor.

5. In a remotely controlled radio receiving system, a radio receiver having a tuning element and a loud speaker electrically connected to said radio receiver, a rotary motor for progressively actuating said tuning element, sources of energizing potentials connected to said radio receiver at all times during the operation thereof, means at a remote point for effecting the operation of said motor, and disabling means connected across said loud speaker by the rotation of said motor.

6. In a remotely controlled radio receiving system, a radio receiver having a tuning element and having a loud speaker connected thereto, a rotary motor for actuating said tuning element, means at a remote point for effecting the rotation of said motor, and means including a circuit connected across said loud speaker by the rotation of said motor for silencing the loud speaker during the tuning operation.

7. The method of operating a radio receiver and audio frequency translating means electrically connected thereto, which comprises continuously varying the tuning of the radio receiver from one wave length to any one of a plurality of desired wave lengths, by a progressive uninterrupted adjusting movement controlled from a remote point, and silencing the audio frequency translating means in response to a condition established and maintained in response to the adjusting movement while maintaining all of said radio receiver completely energized.

8. The method of operating a radio receiver and audio frequency translating means

electrically connected thereto, which comprises continuously and electrically varying the tuning of the radio receiver from one wave length to any one of a plurality of desired wave lengths by a progressive uninterrupted adjusting rotary movement controlled from a remote point, and silencing the audio frequency translating means in response to a condition established and maintained as a result of the continuance of the adjusting movement while maintaining said radio receiver completely operative.

9. The method of operating a radio receiver and a loud speaker electrically connected thereto, which comprises continuously varying the tuning of the radio receiver from one wave length to any one of a plurality of desired wave lengths, by a progressive uninterrupted adjusting movement controlled from a remote point, and effecting the silencing of the loud speaker in response to a condition established and maintained as a result of the adjusting movement by short circuiting said loud speaker while maintaining the radio receiver completely energized.

10. The method of operating a radio receiver connected to a current source, and audio frequency translating means connected to said radio receiver, which comprises continuously varying the tuning of the radio receiver from one wave length to any one of a plurality of desired wave lengths, by a progressive uninterrupted adjusting movement controlled from a remote point, and electrically effecting the silencing of the audio frequency translating means in response to a condition established and maintained by the adjusting movement while maintaining all connections of the current source to said radio receiver.

11. In a remotely controlled radio receiving system a radio receiver having a tuning element and audio frequency translating means electrically connected to said radio receiver, operating means for progressively actuating said tuning element, sources of energizing potentials connected to said radio receiver at all times during the operation thereof, means at a remote point for controlling the operation of said operating means, and means maintained effective only in response to the uninterrupted actuation of said tuning element for silencing said audio frequency translating means.

In witness whereof, I hereunto subscribe my name this 3rd day of September A. D. 1929.

VIRGIL M. GRAHAM.