May 10, 1938. R. D. MURO 2,117,203

KNOB LOCK

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Fig. 1.

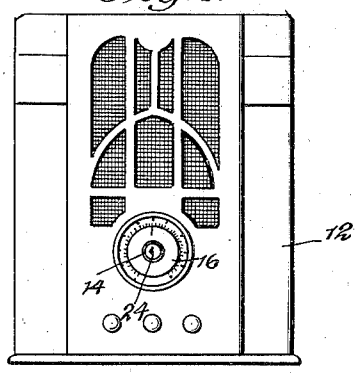


Fig. 5.

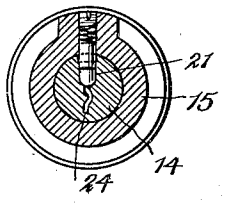


Fig. 2.

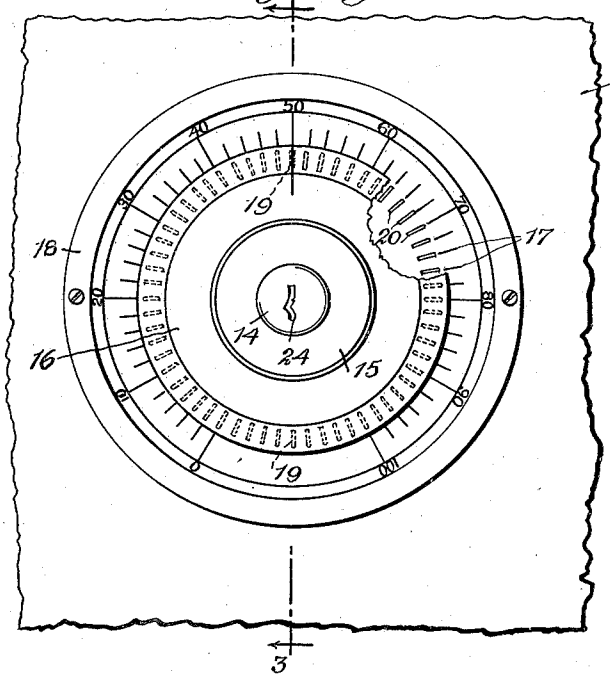


Fig. 3.

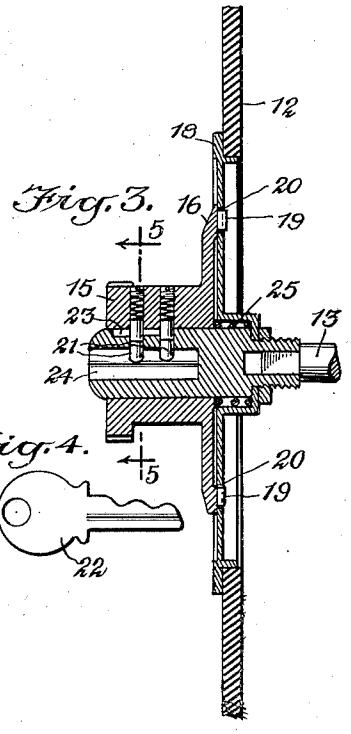


Fig. 4.

WITNESSES

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Fig. 6.

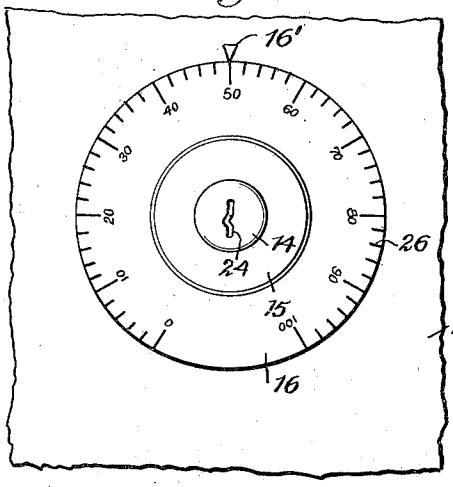


Fig. 7.

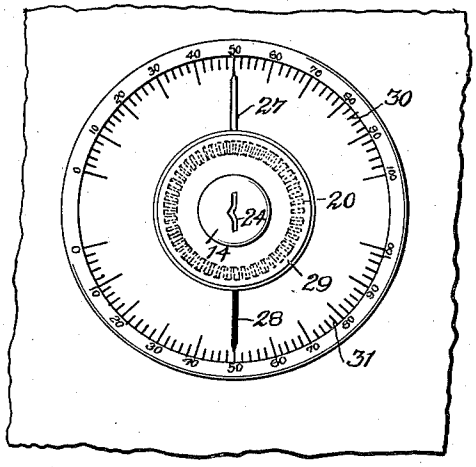


Fig. 8.

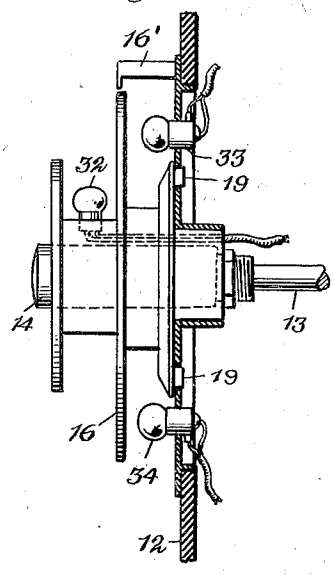
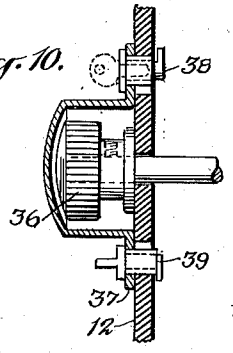


Fig. 10.



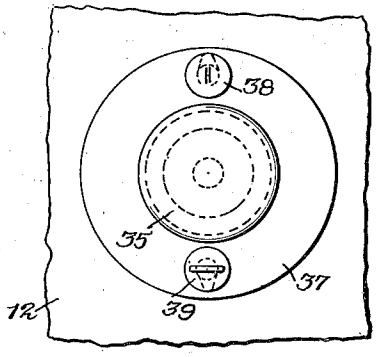
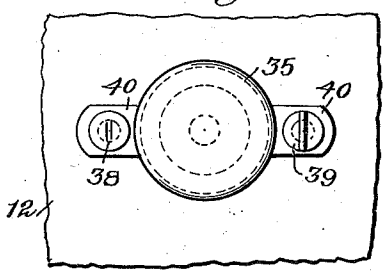


Fig. 9.

Fig. 11.



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UNITED STATES PATENT OFFICE

2,117,203

KNOB LOCK

Raul Diez Muro, Habana, Cuba

Application August 22, 1936, Serial No. 97,326

3 Claims. (Cl. 70—216)

This invention relates to radio sets and more particularly to radio receiving sets, an object of the invention being to provide means which prevents manipulation of a set except by an authorized person; in other words, my invention includes locking means which permits the locking of the set with any desired station tuned in so that after tuning the set cannot be tampered with.

It is a well-known fact, particularly in public places, that radio sets after being properly set to the stations desired are tampered with, and it is also well known that in certain places radio sets, due to vibration, are caused to become improperly tuned after once being set and it is the main purpose of my invention to provide locking means so that a set can be locked in any tuned position desired.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, all of which will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings—

Figure 1 is a view in front elevation illustrating a radio receiving set;

Fig. 2 is a view in front elevation illustrating a form of dial with portions broken away;

Fig. 3 is a view in longitudinal section on the line 3—3 of Fig. 2;

Fig. 4 is a view in elevation of a key to operate the lock shown in Figs. 2 and 3;

Fig. 5 is a view in transverse section on the line 5—5 of Fig. 3;

Figs. 6, 7, 8, 9, 10, and 11 are views illustrating modifications.

Referring more particularly to Figs. 1 to 5 inclusive of the drawings, 12 represents the casing of a radio receiving set which is provided with the ordinary shaft 13 controlling the variable condenser and commonly known in the trade as the tuning shaft. To the shaft 13 a barrel 14 is coupled and around the barrel a knob 15 is mounted to turn and also to move longitudinally within certain limits. The knob 15 carries a circular dial 16 which registers with a scale 17 on a plate 18, and this plate has fixed relation to the radio casing 12. The dial 16 is provided with any desired number of teeth 19 which are adapted to be positioned in slots 20 in the plate 18 and it is to be understood that these slots register with the scale 17.

The barrel 14 and knob 15 constitute, in effect, the barrel and casing of a lock having spring-pressed pin tumblers 21, which are controlled by a removable key 22, and these pin tumblers 21 extend across a longitudinal groove 23 in the barrel 14 so that when the pin tumblers are operated by the key 22 in an ordinary key-hole 24, they will permit the knob 15 to move outwardly, but will key in the groove 23 so as to prevent any independent turning movement of the knob relative to the barrel. A coil spring 25 around the barrel 14 exerts outward pressure on the knob 15 so that when the key causes the tumblers to properly register the spring 25 will move the knob 15 outwardly and cause the teeth 19 of the dial 16 to move out of the slots 20. When the knob is in this position it can be turned to turn the shaft to tune the set to any station desired, and when the proper tuning is accomplished the knob is pushed inwardly to cause the teeth 19 to enter the slots 20 and then the key 22 is withdrawn, and the pin tumblers will securely hold the parts against movement. Thus it will be seen that in order to change the tuning of the set it is necessary to insert the proper key and thus only an authorized person can change the tuning of the set.

Fig. 6 is a view in front elevation, simply illustrating the fact that instead of providing the scale on a fixed part of the casing 12, a scale given the reference character 26 may be provided on the dial 16 and register with a fixed pointer 16'.

Fig. 7 is a view in front elevation, which merely illustrates the idea that instead of the ordinary form of dial, as above explained, a pair of pointers 27 and 28 may be provided on the dial 29, corresponding to dial 16, and register with fixed scales 30 and 31 indicating long and short wave lengths.

Fig. 8 is a view in sectional elevation illustrating an arrangement of electric lamps 32, 33, and 34, disclosing the idea that when the dial 16 is opaque the lamp 32 may be employed, and when the dial is translucent the lamps 33 and 34 may be employed to illuminate the same.

Figs. 9 and 10 are views in elevation illustrating a removable hood 35 which may be used to cover any knob 36 of the set, and this hood 35 has a circular flange 37 which is secured by locks 38 and 39 to the casing 12. One of these locks, preferably the lock 38, constitutes a key lock so that it is necessary to use the proper key to remove the hood.

Fig. 11 illustrates the same general idea as that shown in Figs. 9 and 10 except that instead of having the flange 37 the hood 35 is provided with perforated tongues 40 which are secured to the casing 12 by the locks 38 and 39.

It is understood that it is my intention to

cover broadly the idea of providing means to so lock a radio receiving set that it cannot be manipulated except by an authorized person, and while I have illustrated and described what I believe to be preferred embodiments of my invention, it is obvious that various slight changes may be made with regard to the form and arrangement of parts without departing from my invention and hence I do not limit myself to the precise details set forth but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the claims.

I claim:

1. An apparatus of the character described, including a shaft, a barrel coupled to the shaft, a knob on the barrel, pin tumblers operatively connecting the barrel and the knob, said barrel having a key-hole slot therein, a fixed part, and interlocking devices between the knob and the fixed part held in immovable engagement by the pin tumblers.

2. An apparatus of the character described, including a shaft, a barrel coupled to the shaft, a knob on the barrel, pin tumblers operatively connecting the barrel and the knob, said barrel having a key-hole slot therein, a fixed part, interlocking devices between the knob and the fixed part held in immovable engagement by the pin tumblers, said barrel having a longitudinal groove therein, and a spring engaging the knob and adapted to move the same to cause the interlocking devices to separate when the pin tumblers are operated by the proper key.

3. A device of the character described, including a barrel, a knob on the barrel, key-controlled locking means between the barrel and the knob, a fixed plate having slots therein, a dial fixed to the knob, a tooth on the dial adapted to enter any of said slots, and means permitting longitudinal movement of the knob on the barrel when a key is in the lock.

RAUL DIEZ MURO.