Feb. 27, 1923. 1,446,652

S. MORRIS

ACTUATOR FOR ELECTRIC APPLIANCES

Filed June 21, 1922

FIG. 1.

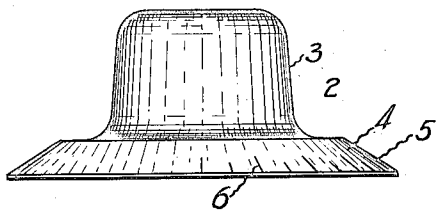



FIG. 3.

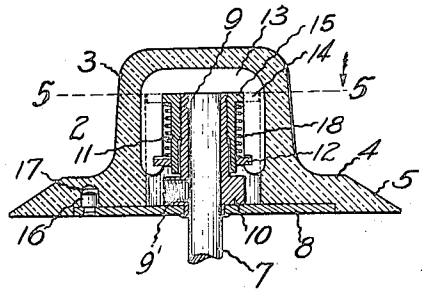



FIG. 2.

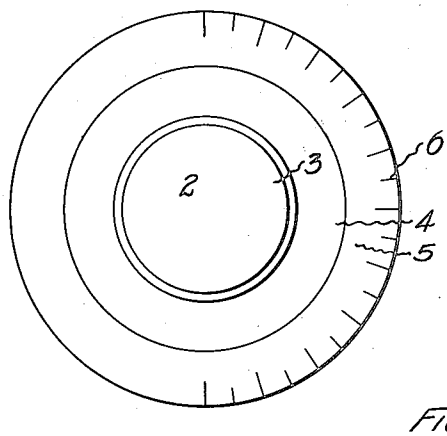



FIG. 4.

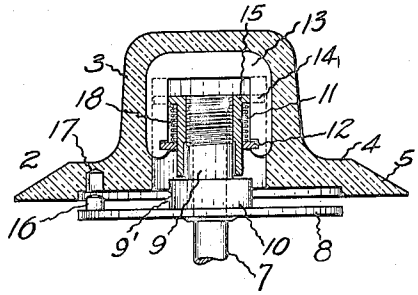
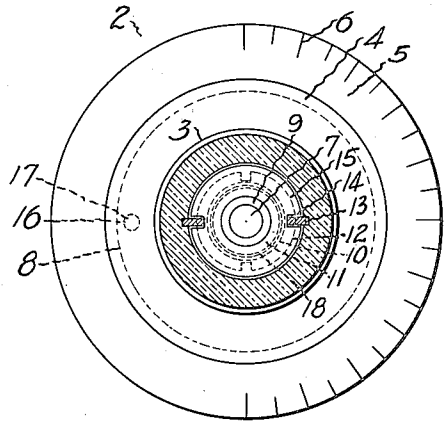



FIG. 5.

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# UNITED STATES PATENT OFFICE.

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## ACTUATOR FOR ELECTRIC APPLIANCES.

Application filed June 21, 1922. Serial No. 569,911.

*To all whom it may concern:*

Be it known that I, SHIRAS MORRIS, a citizen of the United States, residing at 83 Gillette Street, Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Actuators for Electric Appliances, of which the following is a specification.

This invention relates to what might be broadly termed an actuator for an electric appliance, such as is utilized in wireless work. Such an appliance that is in common use involves a spindle which is turned by an actuator or dial.

There is in every day use a wireless cabinet equipped with a spindle with which is associated a knob. This knob in the old structure is attached to its spindle by a binding screw which is exceedingly objectionable in that it left a metal part exposed. It has been essayed to cover the knob by a cap which is usually of the same composition as that of the knob, the two parts being usually detachably associated by interengaging threads so as to present what might be considered a duplex cap or dial for a spindle. I provide an actuator or dial for a spindle in one piece from suitable composition and its exterior has no objectionable projections, yet by virtue of the invention when such an actuator is connected with a spindle, the latter can be rotated readily when desired, for instance in tuning, and it also may be quickly taken from the spindle.

In the drawing accompanying and forming part of the present specification, I have shown in detail one of the many forms of embodiment of the invention which will be set forth fully in the following description. Clearly I am not limited to this exact disclosure. I may depart therefrom in a number of respects within the scope of the invention as defined by the claims following said description.

Referring to the drawing:

Fig. 1 is a side elevation of an actuator involving the invention.

Fig. 2 is a top plan view of the same.

Fig. 3 is a vertical sectional elevation, the actuator being shown in working relation with the spindle.

Fig. 4 is a view resembling somewhat Fig. 3 and illustrating the actuator as about to be separated from its supporting spindle.

Fig. 5 is a horizontal section on the line 5—5 of Fig. 3 looking down.

Like characters refer to like parts throughout the several views.

The actuator or as it might also be considered "dial," may be used to advantage in connection with devices of various kinds such as used in wireless instruments for tuning and like things. It may be of any suitable substance, that shown is denoted in a general way by 2, and is made in one piece preferably of some insulating composition. It comprises a hollow or chambered body 3 having at its lower end the annular flange or bib 4. The upper surface of which is somewhat sloping as at 5 and carries upon it a scale 6. It will be seen that the external surface of the actuator 2 is free of any protrusions and similar things. In other words, the actuator is smooth exteriorly.

I have shown a spindle as 7 which may be one like those usually found on wireless receiving cabinets. Fitted to the upper end portion of said spindle 7 is a disk or flange 8 above which is situated the barrel 9 having the enlarged base portion 10 rigidly connected with the disk or flange 8 practically centrally thereof. The spindle 7, the disk or flange 8 and the barrel 9 generally rotate as one, in that the barrel 9 through its base 10 is connected as by the screw 9' with the spindle 7. Over the barrel 9 is enclosed the sleeve 11, the two parts as shown being in removable threaded engagement. Around the lower portion of the sleeve 11 is the ring 12 which fits notches in the legs of the fork 13 disposed in the inside of the hollow body 3 and generally embedded therein. The flanges of this fork slidingly fit notches 14 in the annular flange 15 at the upper end of the sleeve 11. The disk 8 on the upper side thereof near the periphery is furnished with a pin 16 to detachably enter an opening or socket 17 in the flange or bib portion 4 of the actuator as shown for instance in Fig. 3. Between the ring 12, and the flange 15 is fitted a coiled spring which surrounds the sleeve 11.

The construction described provides an exceedingly simple means by which an actuator or dial can be coupled to a spindle for turning the same, yet which can be un-

coupled when desired, a pin clutch as described presenting a convenient manner of associating operatively the actuator or dial with the spindle.

In Fig. 3 the parts are shown as assembled in active relation, the pin 16 at this time fitting the socket 17 so that when the actuator 2 is turned, it will through the pin 16 rotate or revolve the disk or flange 8 and thus the spindle 7. To take the actuator off its spindle, it is initially lifted as shown in Fig. 4 so that the socket 17 leaves the pin 16 and thus permits the unscrewing of the actuator.

What I claim is:

1. The combination of a spindle, an externally imperforate composition actuator for the said spindle, having a detachable threaded connection therewith, and means separate from the threaded connection, for operating the spindle by and on the operation of the actuator.

2. The combination of a spindle, an externally imperforate actuator for the spindle, having a detachable connection therewith, and means separate from the detachable connection, for uniting the actuator with the spindle whereby operation of the actuator will cause a like operation of the spindle.

3. The combination of a spindle, an externally imperforate actuator having a separable threaded connection with the spindle, and clutch means consisting of a single pin and socket to connect the actuator and the spindle, to cause the rotation of the spindle by the actuator when the clutch parts are in active relation.

4. The combination of a spindle, an externally imperforate actuator having a detachable threaded connection with the spindle, a flange on the spindle furnished with a pin, the actuator having a socket to detachably receive said pin whereby when the pin is in the socket, the spindle can be turned.

5. The combination of a spindle, an externally imperforate actuator having a detachable connection with the spindle, a flange rotative with the spindle and furnished with an upstanding pin, the actuator having a socket to receive the pin.

6. The combination of a spindle, an externally imperforate actuator, having a detachably threaded connection with the spindle. a flange rotative with the spindle and furnished with an upstanding pin, the actuator having a socket to receive the pin.

7. The combination of a spindle, a barrel fitted over the spindle, a screw for connecting the barrel with the spindle, a sleeve in threaded connection with the barrel, an imperforate actuator fitted over the sleeve, the actuator having a socket, and a disk rigid with the barrel and furnished with a pin to enter said socket.

8. The combination of a spindle, a barrel fitted over the spindle, a screw for connecting the barrel with the spindle, a sleeve in threaded connection with the barrel, an imperforate actuator fitted over the sleeve, the actuator having a socket, a disk rigid with the barrel and furnished with a pin to enter said socket, a fork embedded in the interior of the actuator, a washer around the sleeve, the flanges of the fork having notches to receive the washer, the sleeve having a flange notched to receive the flanges of the fork and a coil spring around the sleeve and its terminals engaging the flange and the washer.

In testimony whereof I hereby affix my signature.

SHIRAS MORRIS.

Witnesses:

ROLLIN N. PECK,

SAMEL N. WILLIAMS.