Jan. 1, 1952 R. F. SAMBLESON 2,581,207

TOUCH ADJUSTMENT FOR ELECTRIC CONTROL DEVICES

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Fig. 1.

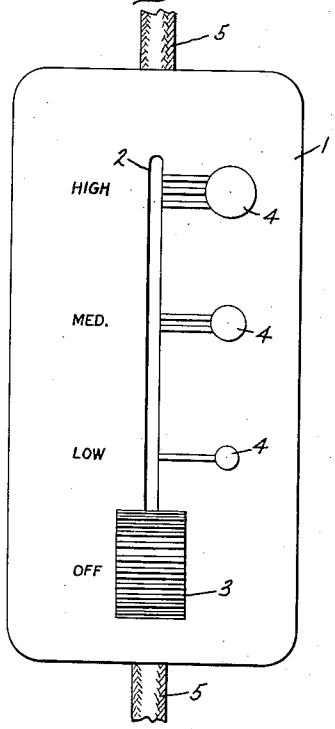
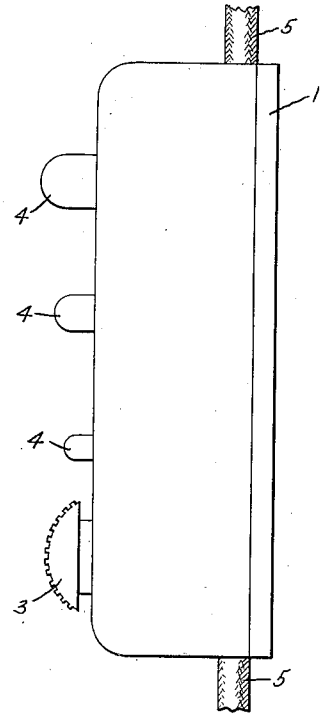


Fig. 2.



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TOUCH ADJUSTMENT FOR ELECTRIC CONTROL DEVICES

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2 Claims. (Cl. 116—114)

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My invention relates to electric control devices and, more particularly, to casings for electric control devices which have a manually adjusted operating member, the setting of which may be made by sense of touch.

In certain applications of electric control devices, such as multiple position switches, variable rheostats, and the like, it is desirable that the operator be able to set the operating member to any of its positions by the sense of touch without the use of sight, light for seeing, or without diverting his eyes from other important use. Persons requiring such touch-positionable electric controls might be, for example, people who are blind, patients using electric heating pads or the like at night, or operators of certain trucks, boats, and airplanes in which pump or fan motors must be run at variable speeds.

In the past, various positions or stations along the path of the operating members of some electric control devices have been marked by a varying number of small uniform bumps on the control device casings. However, it is difficult for an operator to set the operating member of such a device by sense of touch, because he must take time to feel out and count each of the total number of bumps at each position.

An object of my invention is to provide a new and improved means whereby the operating member of an electric control device may be set to any of its positions by the sense of touch.

A further object of my invention is to provide a casing for electric control devices having manually adjusted operating members which makes possible quick and accurate setting of the operating member by sense of touch.

In carrying out my invention, I provide a number of projections of progressively varying transverse cross-sectional area and elevation fastened to or made integral with the casing along the path of the operating member of an electric control device. In the devices where the operating member moves through a given number of operating positions, I provide a projection of different transverse cross-sectional area and elevation adjacent to each position of the operating member, the transverse cross-sectional area and elevation of the projections being greater, for instance, at positions of greater resistance or more current flow, depending upon the application of the control device. In devices where the operating member moves smoothly through an infinite number of positions, I provide a number of projections, say four or eight, adjacent to the path of the operating member dividing the total

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travel of the operating member into, say four or eight, equal portions. By knowing how the transverse cross-sectional area and elevation of the projections varies along the path of the operating member, the operator can easily adjust the setting of the operating member by sense of touch.

For a better understanding of my invention and its further objects and advantages, reference should now be had to the following description and to the drawing showing one embodiment of my invention, in which Fig. 1 is a front view of an electric control device, in this illustration a switch, embodying my invention; and Fig. 2 is a side view of the same switch.

In Figs. 1 and 2, a multiple position switch is shown comprising a body 1 having a slot 2 wherein an operating member 3 may be manually moved to any of the indicated positions—"off," "low," "medium," or "high." The internal working parts of the switch form no part of this invention and are, therefore, not shown. Raised projections 4 are spaced at the various operating positions of the operating member 3 and adjacent to the slot 2. Each of the raised projections 4' is of a different transverse cross-sectional area and elevation, being correspondingly larger in transverse cross-sectional area and higher at positions of the operating member 3 which produce progressively larger values of the controlled characteristic or circuit component; e. g., temperature of a heating device, speed of a motor, current or voltage of an electric circuit. Electric cord 5 is shown entering the switch from some source of power (not shown) and continuing from the switch to some piece of electrical equipment (not shown) for which an operating characteristic or circuit component is to be controlled by the switch.

In use, the operating member 3 is manually pushed in a longitudinal direction within slot 2 and aligned at the desired position by feeling the nearest raised projection 4. If, for instance, it is desired to set the controlled characteristic or circuit component at the medium level, the operating means 3 is pushed within slot 2 until it is ascertained by feel that the operating means 3 rests opposite the particular raised projection which is of medium size with respect to all of the projections 4.

My invention, then, provides a simple and convenient means to position the operating member of an electric control device by sense of touch, and while the present invention has been described by reference to a particular embodiment

thereof, it will be understood that numerous modifications may be made by those skilled in the art without actually departing from the invention. I, therefore, aim in the appended claims to cover all such equivalent variations as come within the true spirit and scope of the foregoing disclosure.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. A casing for an electrical control device having a manually positionable operating member movable along a predetermined path between extreme positions corresponding to minimum and maximum values of the controlled quantity, and having raised projections of progressively varying elevation located adjacent to said path and arranged in order with the projection of minimum elevation located at the control position corresponding to minimum value of the controlled quantity and the projection of maximum elevation located at the position corresponding to maximum value of the controlled quantity to provide setting of said operating member for a desired value of the controlled quantity by the sense of feel.

2. A casing for an electrical control device having a manually positionable operating member movable along a predetermined path between extreme positions corresponding to minimum and maximum values of the controlled quantity, and having raised projections of progressively varying transverse cross-sectional area and elevation located adjacent to said path and arranged in order with the projection of minimum size in transverse cross-sectional area and elevation located at the control position corresponding to minimum value of the controlled quantity and the projection of maximum transverse cross-sectional area and elevation located at the position corresponding to maximum value of the controlled quantity to provide setting of said operating member for a dseired value of the controlled quantity by the sense of feel.

ROBERT F. SAMBLESON.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
Re. 19,200	Meuer	June 5, 1934
1,815,635	Peterson	July 21, 1931