Aug. 11, 1936. H. O. ROOSENSTEIN 2,050,808

TUNING INDICATOR FOR RECEIVER SETS

Filed July 17, 1934

Fig. 1.

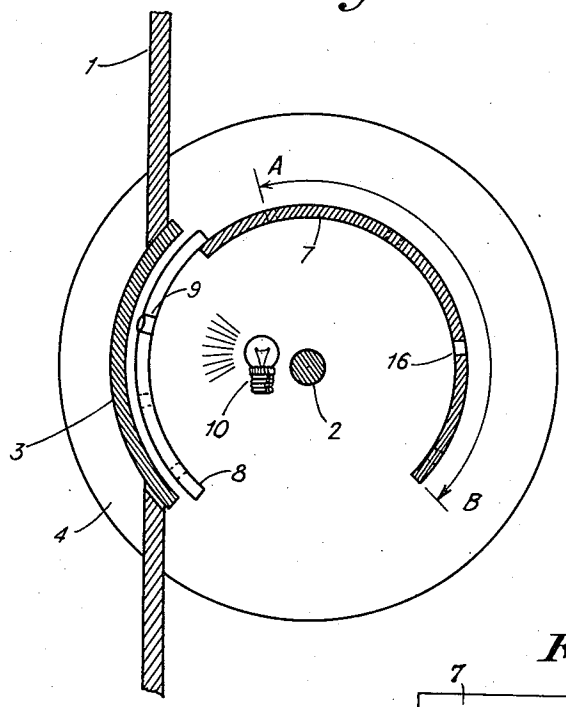


Fig. 3.

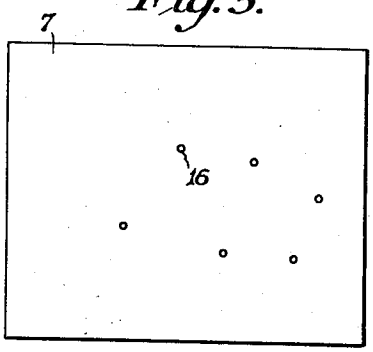
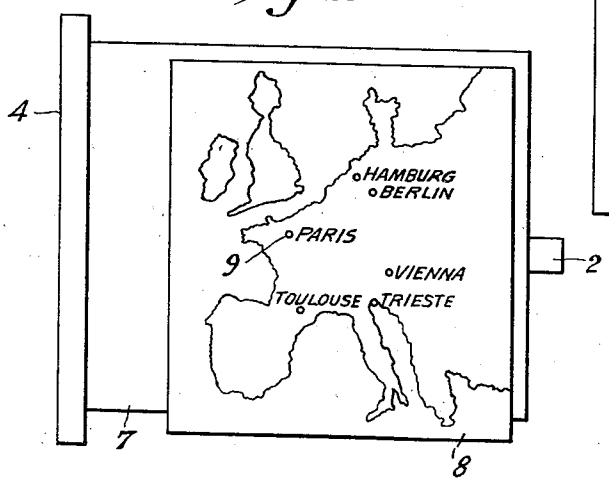


Fig. 2.



INVENTOR
HANS OTTO ROOSENSTEIN
BY H. S. Roosenstein
ATTORNEY

Patented Aug. 11, 1936 2,050,808

UNITED STATES PATENT OFFICE

2,050,808

TUNING INDICATOR FOR RECEIVER SETS

Hans Otto Roosenstein, Berlin, Germany, assignor to Telefunken Gesellschaft für Drahtlose Telegraphie m. b. H., Berlin, Germany, a corporation of Germany

Application July 17, 1934, Serial No. 735,595
In Germany July 18, 1933

3 Claims. (Cl. 116—124.4)

For tuning receiver arrangements for radio signals of all kinds recourse is preferably had to a scale or dial arrangement in which, upon the front panel of the apparatus or at some other suitable place, an opening is provided in addition to a scale with a graduated dial or station designation or the like. The scale serves for the approximate adjustment of the desired station. In order to insure an accurate tuning the tuning knob is turned until through the above-mentioned opening and an aperture provided in the scale disk, the light of a posteriorly mounted lamp is allowed to pass. This scale arrangement involves the drawback that accurate tuning is feasible only when the operator or user of the apparatus is at a definite point, say, exactly in front of the above-mentioned opening, for it will be only in that case that the light-rays issuing from the lamp will impinge upon his eye.

According to this invention it is therefore suggested to provide in lieu of a simple opening, or several openings, means whereby the luminous pencil or ray will be rendered diffuse. The said means may consist of glass beads or ground glass panes or equivalents.

To simplify the task of locating a station, the said elements may be logically distributed upon a station list or sequence in a definite manner. It is recommendable, for instance, to chose an alphabetical order according to station names or else the distribution of the station names over a map. In this latter instance, therefore, at each place of the map where a station to be received is located, there is disposed an element according to this invention (glass bead, ground-glass disk or pane). In order to make conditions so that the said elements will be struck by the light-ray pencil from the posteriorly mounted luminous-ray source only when the receiver happens to be set to the transmitting station designated at the corresponding situation on the map, optical means such as shutters, mirrors, or lenses are actuated by the tuning device which will permit of the light-rays proceeding, or of directing the same the proper way.

One exemplified embodiment of the basic idea of this invention is illustrated in the drawing, in which:

Fig. 1 is a sectional view of the device,

Fig. 2 is a front view of the panel bearing the station names together with the operating knob and a portion of the tuning shaft and,

Fig. 3 is a rear view of the perforated drum carried by the tuning shaft.

Numeral 1 denotes the front panel of the radio receiver at the rear of which the tuning indicator is mounted. Numeral 2 is the rotary spindle of the tuning means such as a rotary condenser, and 3 a transparent plate having the form of a cylindrical segment which covers the station list 8. Numeral 4 designates a flange which is rigidly connected with the plate 7, and which is rotatably arranged on the spindle 2. The plate 7 between the points marked *a* and *b* has holes 16, and the same is entrained (carried along or driven) as the flange 4 rotates. A light-source 10 throws its rays through the holes 16 of the disk 7 upon the inner face of the transparent plate 8 one face of which bears the station names arranged either alphabetically or in the form of a map. Co-ordinated to the station names is an element 9 serving to diffusely distribute the light-ray pencil. The position of the holes 16 in the plate 7 is so chosen that upon the coincidence or registering of a hole 16 and one of the said elements 9, the tuned state for the desired broadcasting station or the like is assured.

In this manner, conditions can be made so that upon rotation of the disk 4 which is operable from the outside through a slot in the front panel, the various station names sequentially become illuminated upon the said map. Hence, errors in the tuning are precluded.

I claim:—

1. In an indicator for a tuning device, the combination of a shaft connected to said device, means for rotating said shaft, a member provided with a plurality of light diffusing portions, a source of illumination and a member connected to said shaft provided with a plurality of apertures each of said apertures being arranged to come in alignment with a different one of said light diffusing portions and said source of illumination.

2. In an indicator for a tuning device, the combination of a shaft connected to said device, means for rotating said shaft, a stationary member provided with a plurality of spaced apart portions formed of ground glass, a member connected to said shaft provided with a plurality of apertures, each of said apertures being arranged to come into alignment with one only of said ground glass portions and means for illuminating the rear surface of said last named member.

3. In an indicator for a tuning device, the combination of a shaft connected to said device, means for rotating said shaft, a stationary member provided with a plurality of apertures, a light diffusing member mounted in each of said apertures, a source of light, and a member connected to said shaft provided with a plurality of apertures, each of said apertures being arranged to transmit light from said source to a different one of said first named apertures at successive tuning positions of said tuning device.

HANS OTTO ROOSENSTEIN.