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2,803,075

TV PROGRAM SELECTOR

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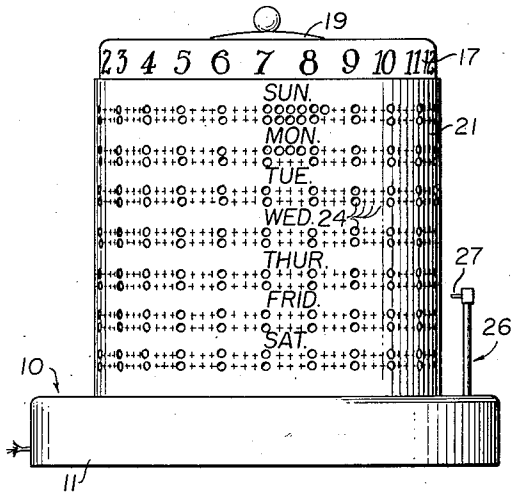


FIG. 1

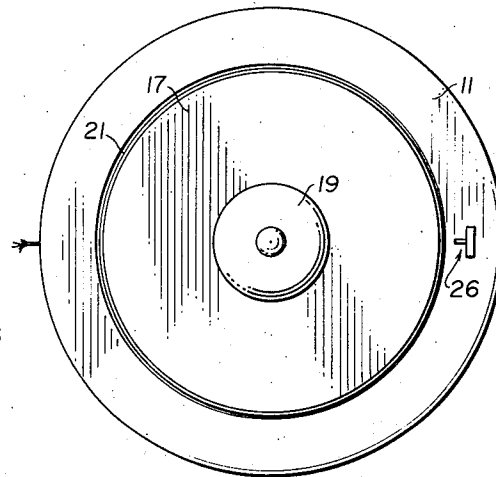


FIG. 2

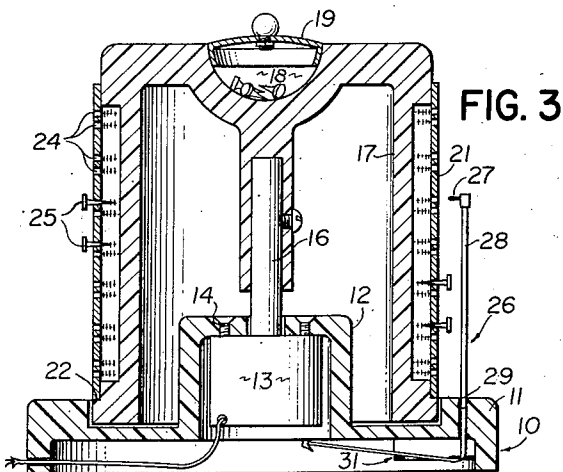


FIG. 3

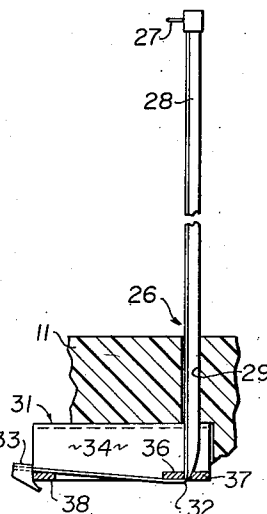


FIG. 4

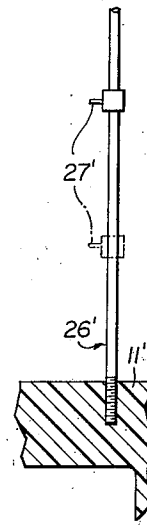


FIG. 5

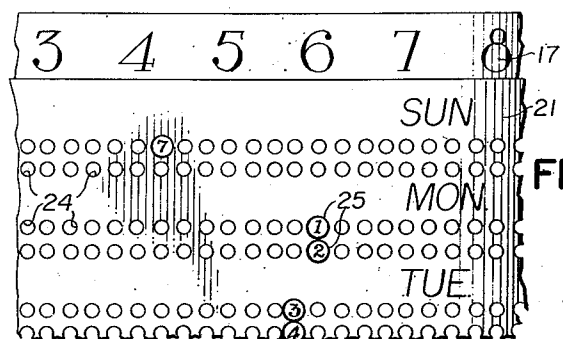


FIG. 6

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1

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TV PROGRAM SELECTOR

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5 Claims. (Cl. 40—68)

This invention relates to indicating devices and particularly to devices for indicating television or radio programs which one may desire to watch or listen to at various times in the course of a day or a succession of days.

The principal object of the invention is to provide an indicating device which may be set in advance to indicate any number of successive programs to be "tuned in" at intervals during a day or succession of days, and which is operable, preferably automatically, to indicate each such program in order during a day. Further objects of the invention are to provide such an indicating device which can be manufactured economically for sale at a reasonable price in retail stores, such as gift and novelty shops, department stores, and the like; which is ornamental and attractive in appearance; and which is simple to set and easy to read with a minimum of manipulation and attention.

While many variants of the present invention for a variety of similar indicating uses are contemplated, the invention is illustrated and more particularly described herein with reference to a specific embodiment particularly designed to be set in advance for indicating a series of successive television programs to be selected in the course of each day for a period of a full week.

The invention is characterized by a cylindrical drum or the like rotatable about its axis and having one set of indicia spaced about its circumference for designating one series of time steps, for example, the hours of a day, and another set of indicia spaced axially along the drum for indicating a second series of time steps, for example, the days of a week. A multiplicity of means, such as holes to receive appropriately marked pegs, are spaced over the surface of the drum corresponding to different times e. g. hours or quarter hours) in the first series of time steps for conveying information associated with each time period in the second series of time steps. By rotating the drum one revolution during the time corresponding to the sum of said first series of time steps, and by providing a stationary pointer or reference point or line, the information which the device has been set to convey may be read directly for each preselected time as it is reached. By providing a clock motor or the like to rotate the drum one revolution during the time corresponding to the sum of the first series of time steps, the device may be made automatically operative.

The foregoing objects, features, and advantages of the invention will be more fully understood from the following detailed description of an embodiment of the invention and from the accompanying drawing in which:

Fig. 1 is an elevational view of an illustrative device embodying the invention;

Fig. 2 is a plan view of the device of Fig. 1;

Fig. 3 is a vertical, sectional view of the device of Fig. 1 taken axially therethrough;

Fig. 4 is a fragmentary view similar to Fig. 3, but

2

on an enlarged scale, showing in greater detail the structure of a reference indicator raised to its highest position;

Fig. 5 is a view similar to Fig. 4 showing a simplified form of reference indicator; and

Fig. 6 is a fragmentary elevational view similar to Fig. 1, but on an enlarged scale, showing how pegs may be inserted in the device of Figs. 1 to 4 to indicate the channel numbers of television stations to be tuned in at desired times during a succession of days.

Referring to the drawing, a hollow pedestal, generally designated 10, may suitably be molded of plastic and may include a hollow base portion 11 and a hollow supporting boss 12 extending upwardly from the base portion. A spring driven or electrically driven clock-type motor 13 may be disposed within the hollow supporting boss 12 and be secured thereto by screws 14 or the like about the upper end thereof.

The motor 13 may have an output shaft 16 rotated by the motor on a vertical axis. The shaft 16 may serve both to support and to drive an annular hub 17, which may surround and be suitably secured to the shaft 16, as shown, for rotation therewith about their vertical axis.

The hub 17 is preferably shaped to define a bowl-like recess 18 adapted to receive a quantity of indicator pegs used in setting the device as hereinafter described. The recess 18 may be provided with any desired type of removable or hinged cover 19.

A cylindrical, metal, indicator drum 21 may be telescopically fitted over and permanently secured to a suitable seat 22 about the periphery of the hub 17, with any desired type of pressed or snap-locking fit or other securing means (not shown). The drum 21 extends downwardly, surrounding and concentric with the boss 12, to a level closely adjacent the base portion 11.

The indicator drum 21 has a multiplicity of means distributed over its surface, in a pattern hereafter described, for releasably holding what may, for want of a better term, be called information elements. In their simplest forms, these means may be round holes 24 through the indicator drum 21, and the information elements may be round, tapered pegs 25 adapted to be inserted in the holes with a wedging fit. The pegs may be provided with flat tops or heads on which information may be inscribed, such, for example, as numerals for identifying television stations by their channel numbers. For this purpose, only zeroes and the integers from 1 to 9 need be used so that a single peg may identify any channel from channel 2 to channel 9 in the present low and high V. H. F. bands, and a plurality of pegs may be used to identify channels 10 to 13 in the V. H. F. band and channels 14 to 83 in the present U. H. F. band.

The holes are distributed over the surface of the indicator drum 21 in circumferentially extending rows, with, for example, ninety-six equally spaced holes in each such row, so that in each row there is one hole for each quarter hour in a twenty-four hour day. The number of circumferential rows of holes may, for example, be 14, arranged in seven pairs of such rows, the rows of each pair being more closely spaced than the distance between pairs to provide a distinct pair of circumferential rows for each day of a calendar week.

The holes in all of the rows are aligned in ninety-six vertical or axially extending rows so that a vertical or axially extending reference line fixed to the base portion 11 of the pedestal 10 will be in alignment with all 14 holes in a vertical or axial row at a given moment as the drum is rotated, and will be in alignment sequentially with each of the ninety-six vertical or axial rows

during one revolution of the indicator drum 21 about its axis.

Numbers 1 to 12 may be inscribed about each segmental half of the hub 17 to designate the hours of a twenty-four hour day, one such numeral being disposed above every fourth vertical or axial row of holes 24 in the indicator drum 21. Also appropriate "A. M." and "P. M." indicia or the like (not shown) may be inscribed on the hub 17, or the hour indicia indicating, say 6:00 P. M. to 6:00 A. M. may be inscribed in black or in a dark color and the remaining hour indicia may be inscribed in a light or bright color to distinguish the night hours from the daylight hours. The names of the seven days of a week may be inscribed immediately above each pair of circumferential holes 24.

A reference indicator, generally designated 26, may be mounted on the base portion 11 of the pedestal 10 for vertical adjustment to dispose a pointer 27 on the end thereof opposite any one of the seven pairs of circumferential rows of holes 24 in the indicator drum 21, or opposite the inscribed indicia indicating each day of a week. The indicator member 26 may comprise a thin, flexible, steel tape 28, slightly bowed in transverse profile to give it a degree of rigidity sufficient for a substantial length thereof to be self-supporting for the height that it may project above the base portion 11 of the pedestal 10. This tape 28 may extend through a slot 29 in the base portion 11, and downwardly below a guide bracket 31, to a sharp bend 32 in the tape. From the bend 32, the tape may extend radially inwardly and slightly upwardly for a distance inside the pedestal 10 to a terminal clip 33.

The bend 32 in the tape may be maintained by a bracket comprising a pair of side plates 34 (only one being shown) having a pair of closely spaced struts 36, 37 joining the bottoms thereof adjacent their outer edge and a single strut 38 joining the bottoms thereof adjacent their inner edge. This bracket may suitably be stamped and formed as a single piece from a sheet of thin metal and may be secured in any desired manner in a fixed position as shown inside the base portion 10 of the pedestal 11. The spacing of the bracket side plates 34 is preferably only slightly greater than the width of the tape 28, and the pair of struts 36, 37 are spaced just far enough apart so that the tape may freely slide longitudinally therebetween. The single strut 38 supports the inward extension of the tape 28 at the angle shown. Friction between the tape 28 and struts 36, 37, 38 is caused by the resistance of the bowed tape to bending at the point 32, and this provides some slight resistance to longitudinal sliding movement of the tape so that it will remain in any position at which such movement may desirably be stopped and, yet, permit the tape to be manually so moved with ease by lifting upwardly or pressing downwardly on the pointer 27. The terminal clip 33 limits such upward movement by engaging the single strut 38 as shown in Fig. 4, and the pointer 27 obviously limits such downward movement by engaging the top surface of the base portion 11 of the pedestal 10.

As will be apparent from the foregoing, the motor 13 may be geared to turn the drum 16, hub 17, and indicator drum 21 one full revolution each 24 hours to move a different one of the vertical or axial rows of holes 24 opposite the stationary reference indicator every quarter hour. Also, the pointer 27 on the tape 28 may be manually raised and lowered once each day of the week so as to designate the circumferential pair of rows of holes corresponding to that day.

Setting the device in advance to indicate, during a week, each television program which a user of the device may wish to view merely involves placing appropriately numbered pegs in holes 24 corresponding to the particular day and time of day when each of the preselected programs will be broadcast. Thus, a peg number 7 may be placed in a hole corresponding to 4:15 P. M. on Sunday to designate channel 7 on which a desired program is to

be broadcast at that time; a pair of pegs numbered 1 and 2 may be placed one above the other in the two holes 24 corresponding to 6:00 P. M. on Monday to designate channel 12 on which a desired program is to be broadcast at that time; a pair of pegs numbered 3 and 4 may be placed one above the other in the two holes corresponding to 5:45 P. M. on Tuesday to designate channel 34 on which a desired program is to be broadcast at that time; etc. By consulting the program listings of major programs commonly published in advance for a full week, all of the programs which a user of the device may wish to view during that week may be set up on the device in the foregoing manner at one time. Additional programs can also be set up during the week, as may be desired, in view of later publicity or late changes in program schedules.

Starting at the beginning of a week with the pointer set at the vertical position corresponding to Sunday, and lowering the pointer manually at the end of each day to the vertical position corresponding to the following day, the automatically driven and timed rotation of the drum 21 causes the peg or pegs corresponding to each preselected program to move to a position opposite the pointer 27 at the time when that program is to be broadcast. Thus, with but one simple, manual adjustment of the position of the pointer 27 each day, all preselected programs during an entire week will be automatically designated at the appropriate time during the week.

As will be apparent to any skilled mechanic, many physical modifications of the above described device may be made without departing from the principles and the spirit and true scope of the present invention. Obviously, for example, the pointer 27 on the reference indicator may be a movable element 27' mounted for vertical travel on a fixed, vertically disposed indicator rod 26' threaded into or otherwise supported on a pedestal base 11'. Without unduly complicating the mechanism, movement of such a pointer 27', or bodily movement of the reference indicator 26 could also readily be made automatic if desired. In the direction of further simplification, on the other hand, a movable or adjustable indicator could be dispensed with, leaving the tape 28 in its uppermost position or substituting an equivalent fixed reference rod 26' or the like, and relying upon the indicia designating the days of the week to identify the circumferential row, or pair of rows, of holes 24 to be observed on any particular day. Also, as will be obvious, the pedestal 10 and related mechanism may be modified to dispose the axis of the drum 21 in a horizontal position rather than a vertical position. All such modifications as would occur to one skilled in the art are contemplated hereby, and the present invention is not to be limited to the particular details of the illustrated embodiment of the invention except to the extent expressly required by the terms of the appended claims.

What is claimed is:

1. A visual program indicator comprising a base, a structure defining a cylindrical surface, said structure being mounted on said base for rotation relative thereto about the cylindrical axis of said structure, a constant speed motor mounted on said base for rotating said structure about said axis relative to said base, a first set of indicia spaced circumferentially about said cylindrical surface for designating one series of time steps, a second set of indicia spaced axially along said surface for designating a second series of time steps, the sum of the time steps in one of said series being included in each step of the other of said series, and a multiplicity of means spaced over said surface for releasably holding any of a set of information elements adapted to convey information to be selectively associated with a time indicated by its location on said surface, said holding means being arranged in axially spaced circumferentially extending rows and circumferentially spaced axially extending rows, there being at least one circumferentially extending row designated by each indicium of said first set of indicia and at least one axially

5

extending row designated by each indicium of said second set of indicia, and a reference indicator mounted on said base for indicating reading positions as said structure is rotated about said axis relative to said base.

2. A visual program indicator according to claim 1 in which said reference indicator comprises a resilient ribbon partially housed within said base with one end thereof projecting vertically therefrom along a line spaced outwardly from said cylindrical surface, a pointer on said one end of said tape, and means in said base holding said tape for longitudinal movement of said one end thereof in an axial direction along said surface from opposite the lowermost to opposite the uppermost of said circumferentially extending rows of element holding means.

3. A visual program indicator according to claim 1 in which said reference indicator comprises a resilient ribbon partially housed within said base with one end thereof projecting vertically therefrom along a line spaced outwardly from said cylindrical surface, a pointer on said one end of said tape, and means in said base holding said tape for longitudinal movement of said one end thereof in an axial direction along said surface from opposite the lowermost to opposite the uppermost of said circumferentially extending rows of element holding means, said ribbon having sufficient stiffness to maintain itself straight over the vertically projecting length thereof and having sufficient resilient flexibility to withstand substantial sharp bending without permanent deformation, and the portion of said ribbon housed within said base extending generally normal to said axis and curving to merge into said vertically projecting portion thereof, and guide means in said base holding the curve in said ribbon to provide frictional resistance to its longitudinal movement for positioning said pointer.

4. A television program selector comprising a base, a structure defining a cylindrical surface, said structure being mounted on said base for rotation relative thereto about the cylindrical axis of said structure, a constant speed motor mounted on said base for rotating said structure about said axis relative to said base, a first set of indicia spaced circumferentially about said cylindrical surface for designating a series of times of day, a second set of indicia spaced axially along said surface for designating different days, and a multiplicity of means spaced over said surface for releasably holding any of a set of informa-

6

tion elements adapted to convey information to be selectively associated with a particular time of a particular day by its location on said surface, said holding means being arranged in axially spaced circumferentially extending rows and circumferentially spaced axially extending rows, there being two of said rows designated by each of said indicium in one of said sets of information elements for receiving a pair of information elements in adjacent positions generally aligned with one indicium in each of said sets, whereby information elements numbered 0 to 9 may be combined to designate any television channel number of one or two digits and may be held on said surface at a point thereon corresponding to any time of any particular day indicated by said sets of indicia.

5. A visual program selector comprising a base, a structure defining a cylindrical surface, said structure being mounted on said base for rotation relative thereto about the cylindrical axis of said structure, a first set of indicia spaced circumferentially about said cylindrical surface for designating one series of time steps, a second set of indicia spaced axially along said surface for designating a second series of time steps, the sum of the time steps in one of said series being included in each step of the other of said series, and a multiplicity of means spaced over said surface for releasably holding any of a set of information elements adapted to convey information to be selectively associated with a time indicated by its location on said surface, said holding means being arranged in axially spaced circumferentially extending rows and circumferentially spaced axially extending rows, there being at least one circumferentially extending row designated by each indicium of said first set of indicia and at least one axially extending row designated by each indicium of said second set of indicia, and a reference indicator mounted on said base for indicating reading positions as said structure is rotated about said axis relative to said base.

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