

[54] **BUILT-IN TELEVISION TIMER AND LOCKING MECHANISM**  
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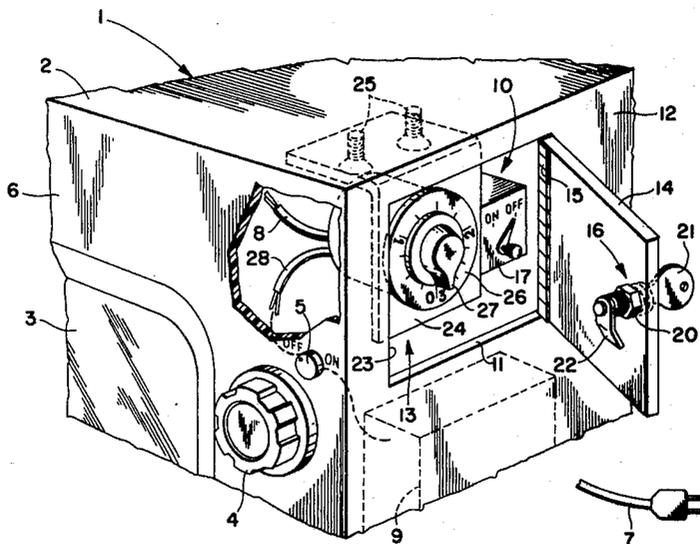
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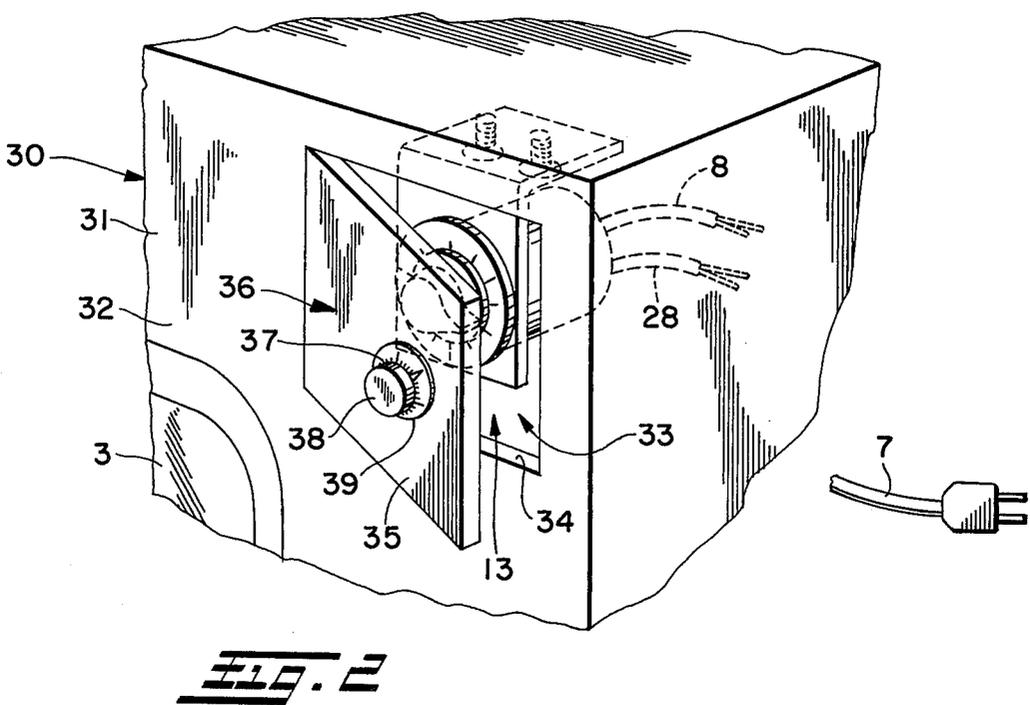
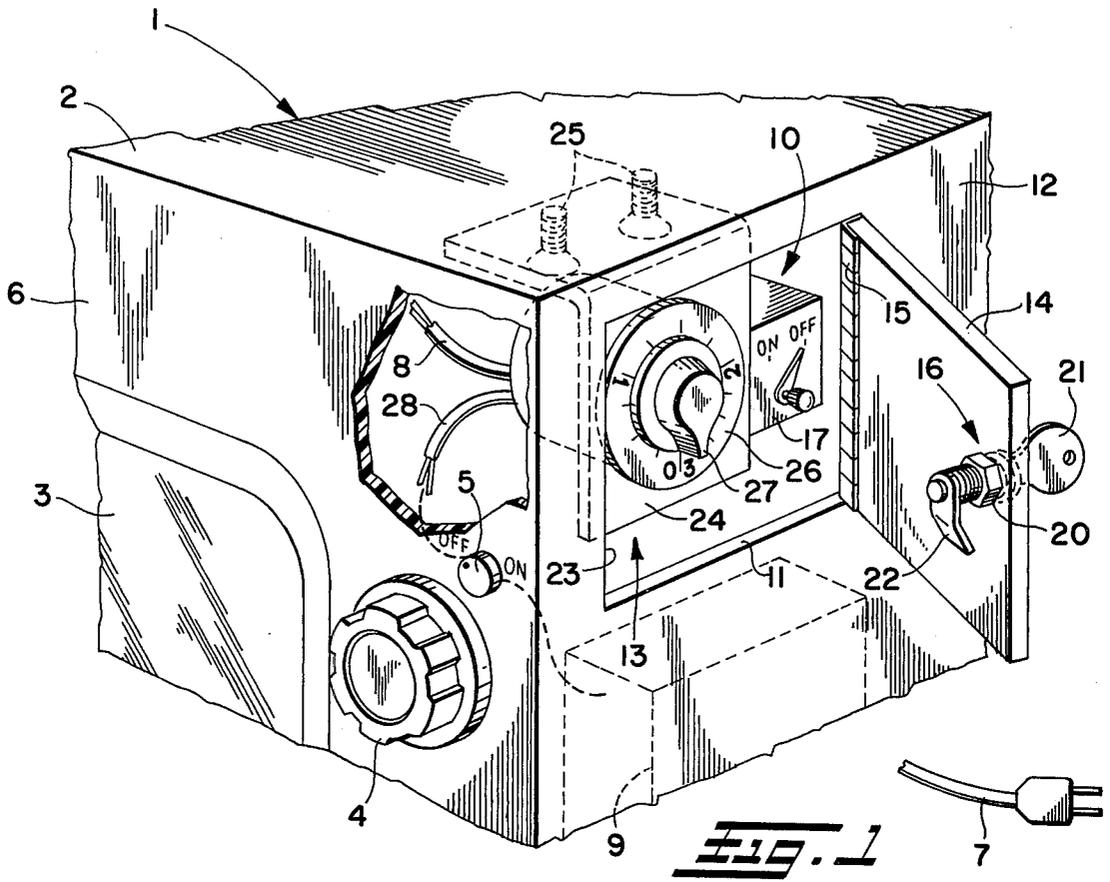
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[57] **ABSTRACT**

A timer mechanism is supported relative to the television cabinet for controlling the operational circuitry of the television, whereby the duration of television operation is controlled by the timer. Means are provided for locking the timer after it is set to preclude readjustment thereof without unlocking the same, and a timer bypass switch may be used to enable normal television operation without the timer.

**10 Claims, 2 Drawing Figures**





## BUILT-IN TELEVISION TIMER AND LOCKING MECHANISM

### BACKGROUND OF THE INVENTION

This patent application is a continuation-in-part of my copending patent application Ser. No. 361,450, filed May 18, 1973, now U.S. Pat. No. 3,833,779 for "Television Timer to Regulate Television Viewing Time."

This invention relates to a timer for controlling operation of a television, and more particularly relates to such a timer located relative to the cabinet of a television and preferably built into the same.

As indicated in my copending patent application, electrical appliances, such as, for example, televisions and the like, while often providing a source of entertainment and educational information, tend to become addictive, especially to children. Therefore, a television viewer may spend large amounts of time gazing at the television to the detriment of more important tasks. Moreover, television has become a source of arguments between parents and children, the latter desiring to extend their viewing time while the former preferring a more constructive usage of time.

Although coin-controlled televisions have been used in the past, such prior art devices are not usually built into the television. Moreover, such devices are not intended for easy adjustment of variable television operating durations, nor do they provide for operator control thereof.

In the instant invention means are provided for absolute control of operational time of a television, or the like, whereby such appliance is capable of energization only under the control of the timer mechanism. Thus, in one embodiment the timer is connected between the main electrical power cord to the television and the operational circuitry thereof to control potential energization of the latter for respective durations set on the timer dial. Alternatively, the timer may be connected to the operational circuitry of the television to otherwise preclude partial or complete energization thereof unless the timer itself is running or it may be connected in electrical series with the television on-off switch. In either embodiment, when the time set on the timer dial expires, the television will be de-energized. A mechanism for locking the timer, either by precluding access to the same or by locking the adjustable dial thereof, prevents adjustment of the dial in the duration set thereon unless such locking mechanism is unlocked. Moreover, if desired, a bypass switch may be provided for bypassing the timer circuit to permit normal television operation under the control of the conventional on-off switch thereof, such bypass switch also being capable of locking by the aforementioned locking mechanism.

### SUMMARY OF THE INVENTION

Accordingly, a primary object of the invention is to provide a television control improved in the noted respect.

Another object of the invention is to provide for absolute control of television operating time.

An additional object of the invention is to provide a built-in control for absolute control of television operating time.

A further object of the invention is to provide a built-in timer mechanism for absolute control of operating

time of the television including a means for locking such timer mechanism and a means for bypassing the timer mechanism circuitry.

Still another object of the invention is to provide a built-in means to control operational time of the television while preventing the adjustment of such time duration.

These and other objects and advantages of the present invention will become apparent as the following description proceeds.

To the accomplishment of the foregoing and related ends, the invention, then, comprises the features hereinafter fully described, the following description and the annexed drawing setting forth in detail certain illustrative embodiments of the invention, these being indicative, however, of but several of the various ways in which the principles of the invention may be employed.

### BRIEF DESCRIPTION OF THE DRAWING

In the annexed drawing:

FIG. 1 is an isometric view, partially broken away, of a portion of a television cabinet having a timer located in the side thereof; and

FIG. 2 is an isometric view of a portion of a television cabinet having a timer mechanism in the front thereof.

### DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now more specifically to the drawing wherein like reference numerals refer to like elements in the several figures, and particularly to FIG. 1, a television is generally indicated at 1. The television includes a television cabinet 2, conventional viewing screen 3, a channel selector switch 4, and an on-off switch 5 located on the front face 6 thereof. In the television cabinet, is the conventional operational circuitry 9 for the television, which normally effects production of a pictorial display on the viewing screen 3 in response to a power input and an input either from an antenna or from a cable system. The power input is conventionally provided from an external source, such as, for example, a conventional electrical outlet to which the pigtail 7 of the main electric power cord 8 is connected.

A timer compartment 10 has an access opening 11 located in the side face or wall 12 of the television cabinet, and a conventional timer mechanism, such as an electric or spring operated timer that opens and closes one or more pairs of electric contacts, generally indicated at 13 is positioned within such compartment. The access opening 11 of the compartment 10 is closed by a door 14 attached, for example, to the television cabinet by a piano hinge 15, and a locking mechanism generally indicated at 16 may be used to lock the door in closed position to preclude access to the timer. The timer 13 also may include a timer bypass switch 17, if desired.

The locking mechanism 16 includes a conventional key type lock 20 having a removable key 21 for operating a latch member 22. The latch member may be turned by the key to lock behind a latching bar 23 formed either as a separate element, not shown, or by the interior surface of the side face 12 of the television cabinet.

The timer mechanism 13 is a conventional device and may be operated electrically from the power supplied on the electric power cord 8, or, alternatively,

may be spring operated. The timer is positioned in the timer compartment 10 on a support bracket 24, which may be attached to the television cabinet by support screws 25. The front face of the timer 13 includes a time indicating dial 26, calibrated, for example, in hours, and an adjustable time setting mechanism 27, which may be adjusted to determine the actual time and length of the duration for which a connection is made by the timer between the electric power cord 8 and the controlled power lead 28 connected, for example, from the timer via the on-off switch 5 to the operational circuitry 9 of the television.

The timer bypass switch 17 is located adjacent the timer mechanism 13 and may be either a part thereof or a separate element for bypassing the timer circuitry if desired, to open and to close the electric contacts therein. Thus, when the timer bypass switch is set, for example, to the "on" position, the only connection between the electric power cord 8 and the controlled power lead 28 can be made through the timer circuitry itself; and by setting such bypass switch to the "off" position, a direct connection is made between such electric power cord and controlled power lead bypassing the timer circuitry in one method of operating the television since the on-off switch 5 is in series with the controlled power lead 28 and the operational circuitry 9, whenever a connection is provided by the timer or timer bypass switch to the controlled power lead, the on-off switch may be or may have previously been manually turned to the on condition turning on the television.

Turning now more particularly to FIG. 2, the television 30 includes a television cabinet 31 with a viewing screen 3 located in the front face 32 thereof. A timer compartment 33 having an access opening 34 closed by a door 35 is located in the front face 32 of the television cabinet 31. A timer mechanism 13, similar to the timer mechanism discussed above, is located within the timer compartment 33, and such timer mechanism has an input from the television electric power cord 8 and an output provided on the controlled power lead 28, which is preferably connected to provide for energization of the television operational circuitry, not shown.

The locking mechanism 36 includes a combination lock 37 having an adjustable dial 38 and a relatively fixed scale 39. The latch member, not shown, may be operated by movement of the scale member 39 after the combination has first been properly operated by manipulation of the dial 38, or, alternatively, a separate latch member operating handle may be provided to operate the latch member after the combination has been properly operated.

Although in the above two embodiments of the invention the timer is preferably located entirely interiorly of the television cabinet and is capable of being locked after adjustment by the closing and locking of the timer compartment door, an alternative arrangement could easily be made, whereby the timer dial is always accessible, although being operable only when either a key type or combination type lock is properly operated. In such modification the timer dial and setting mechanism may be accessibly located on either the front or side face of the television cabinet with the locking mechanism therefor being preferably proximately located thereto.

Although conventional timers usually have sufficient capacity to handle the normal voltages and currents re-

quired by televisions, it may be desirable to utilize low voltage controls. In such an arrangement, the power from an electrical receptacle may be applied through the television pigtail 7 to the operational circuitry thereof, and a conventional low voltage control circuit may be located in the latter being operably controlled by the timer mechanism 13. Alternatively, the timer mechanism 13 may be located in series connection with the television on-off switch 5.

In operation of the television under absolute control of the timer mechanism 13, the timer bypass switch is set in the on position, and the timer setting mechanism 27 is adjusted to a given time indicated on the dial 26 to provide a duration for which the television may be operated by the on-off switch 5. The door 14 to the timer compartment 10 may then be closed and locked by either the key lock 20 or the combination lock 37, and in the former case the key is preferably removed. Thus, access to the timer mechanism 13 is precluded, and at the expiration of the time set thereon the television will be deenergized and will not be able to be operated until the access door is unlocked and opened and either the timer mechanism is reset or the timer bypass switch 17 is set to the off position. When the timer mechanism 13 is operating, a connection is provided between the electric power cord 8 and the controlled power lead 28 by electric contacts in the timer, and the duration of such connection is determined by the time set on the timer. Such connection may also be made by setting the bypass switch 17 to the "off" position. The television is then potentially operable as determined by the position of the on-off switch 5, assuming that the pigtail 7 is plugged into a conventional electrical receptacle.

Although the timer mechanism 13 in the timer compartment 10 is illustrated as a single timer having an hourly scale, such timer may alternatively be a conventional 24 hour timer having one or more elements for making and disconnecting the connection between the electrical power cord 8 and controlled power lead 28. Moreover, plural timers may be used in order to energize and to de-energize the television operational circuitry at the times desired.

It should now be understood that the instant invention provides for absolute control of television viewing time by an adjustable built-in timer which is capable of being easily locked, for example, by the viewer's parent.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. In a television including a cabinet housing operational circuitry responsive to electric power supplied on an input power cord from an external source and a viewing screen on which a pictorial display is normally produced by said operational circuitry, the improvement comprising:

means for absolute control of such television to determine the length and time of the duration of potential television operation, including timer means for providing an electrical connection between said operational circuitry and said input power cord for energization of the former when the latter is connected to such external source to effect normally production of such pictorial display on said viewing screen, the length and time of the du-

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ration of such energization being adjustably controlled by setting of said timer means:  
 means for mounting said timer means in a relatively fixed position with respect to said cabinet to provide readily for accessibility to said timer means for setting thereof, and  
 adjustable means for locking said timer means to preclude setting thereof, said adjustable means including a lock capable of selective adjustment to a first condition precluding setting of said timer means and a second condition permitting setting of said timer means,  
 whereby when said timer means is set for a duration of a specific length to occur at a specific time and locked and the input power cord is coupled to a source of electric energy, the television is potentially operable only for the duration which the timer means provides said connection for energization of said operational circuitry.

2. The device of claim 1, wherein said cabinet includes a compartment having an access opening, a door attached to said cabinet, said door being adjustable between an open position permitting access to said timer compartment and a closed position precluding access to said timer compartment, said timer means being located in said timer compartment, and said adjustable means for locking comprising a lock for locking said

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door in closed position.

3. The device of claim 2, wherein said lock comprises a key lock.

4. The device of claim 3, further comprising a latching bar cooperating with a latching member of said lock to secure said door in closed position.

5. The device of claim 2, wherein said lock comprises a combination lock.

6. The device of claim 2, wherein said access opening for said compartment is located in a side wall of said cabinet.

7. The device of claim 2, wherein said access opening for said compartment is located in the front wall of said cabinet.

8. The device of claim 1, wherein said television operational circuitry includes an on-off switch, and said timer means is connected in electrical series with said on-off switch.

9. The device of claim 1, wherein said timer is connected in electrical series between said input power cord and said operational circuitry to provide a direct connection therebetween.

10. The device of claim 1, further comprising a bypass switch for bypassing the circuitry of said timer means.

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