May 15, 1951 R. L. SMITH 2,553,482

ELECTRICAL TIME REMINDER FOR VARIOUS PURPOSES

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Fig. 1

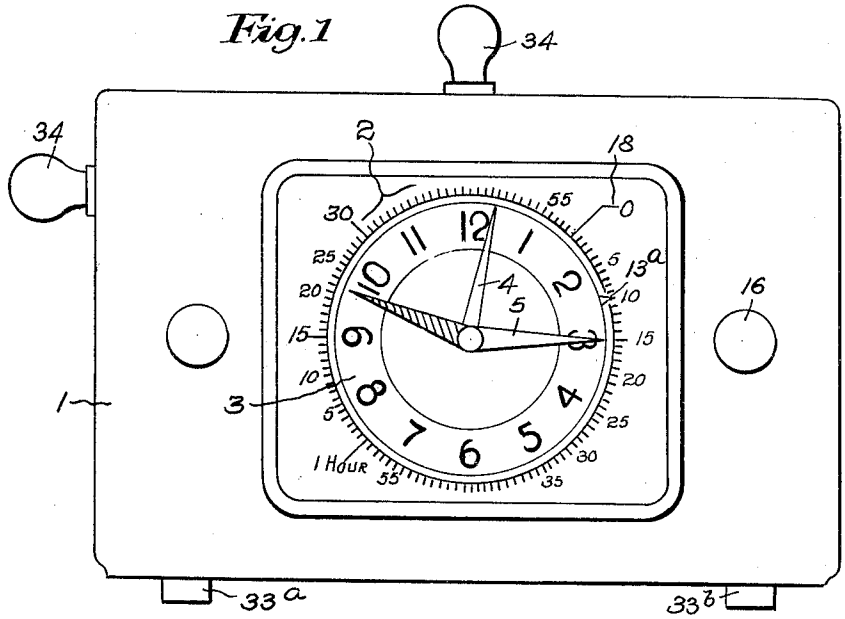


Fig. 2.

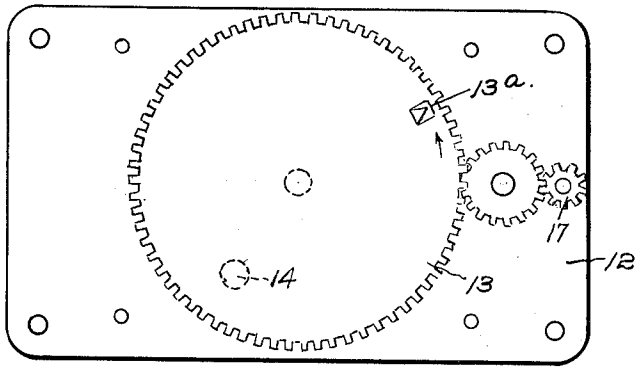
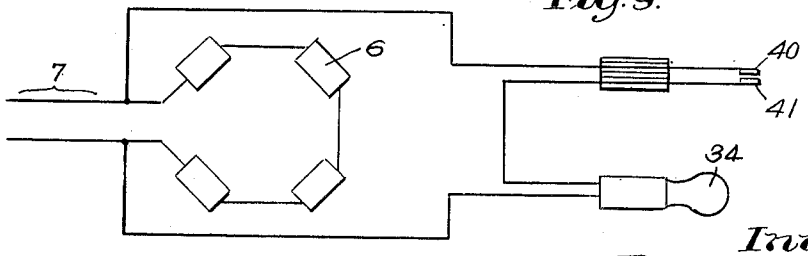


Fig. 9.



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Fig. 3.

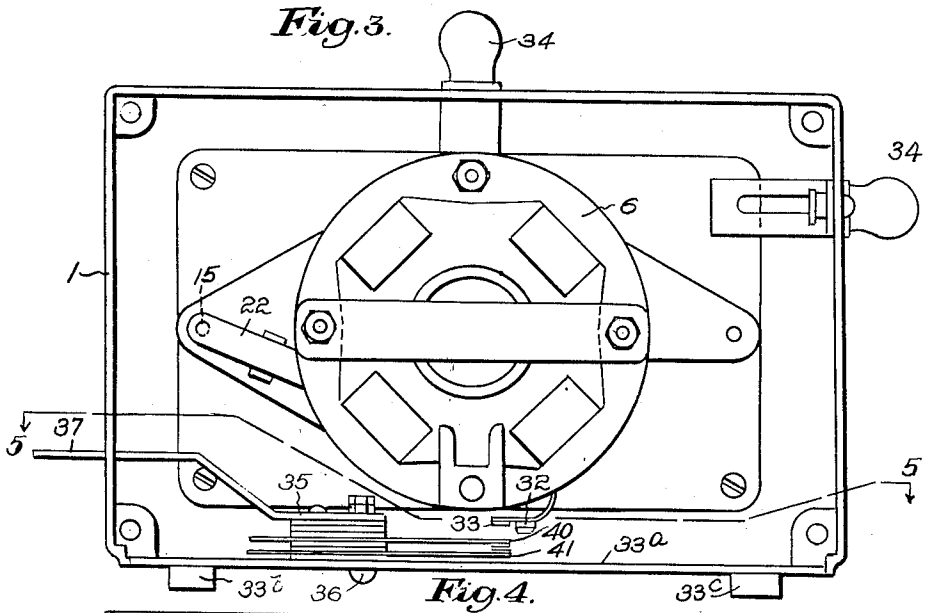


Fig. 4.

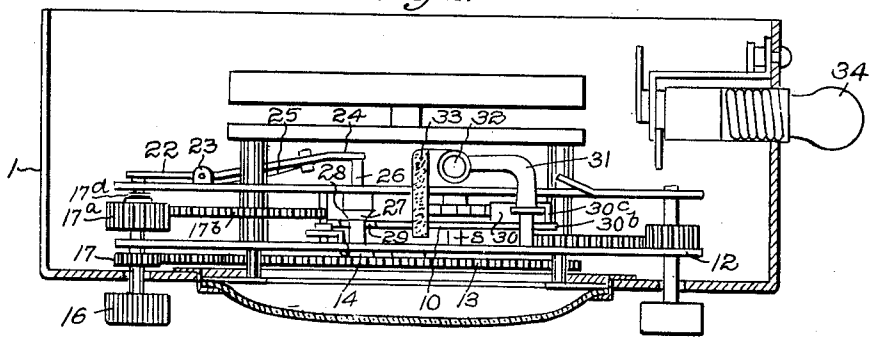
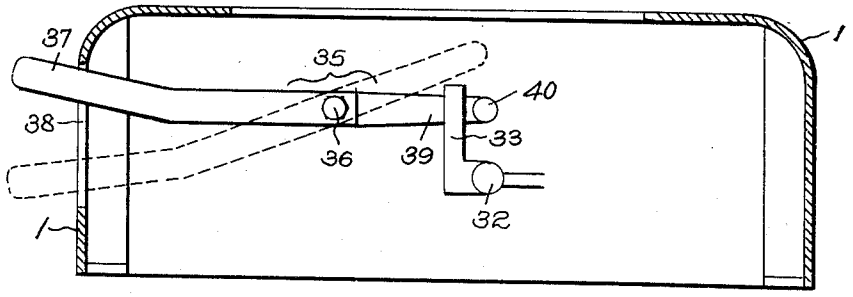


Fig. 5.



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ELECTRICAL TIME REMINDER FOR VARIOUS PURPOSES

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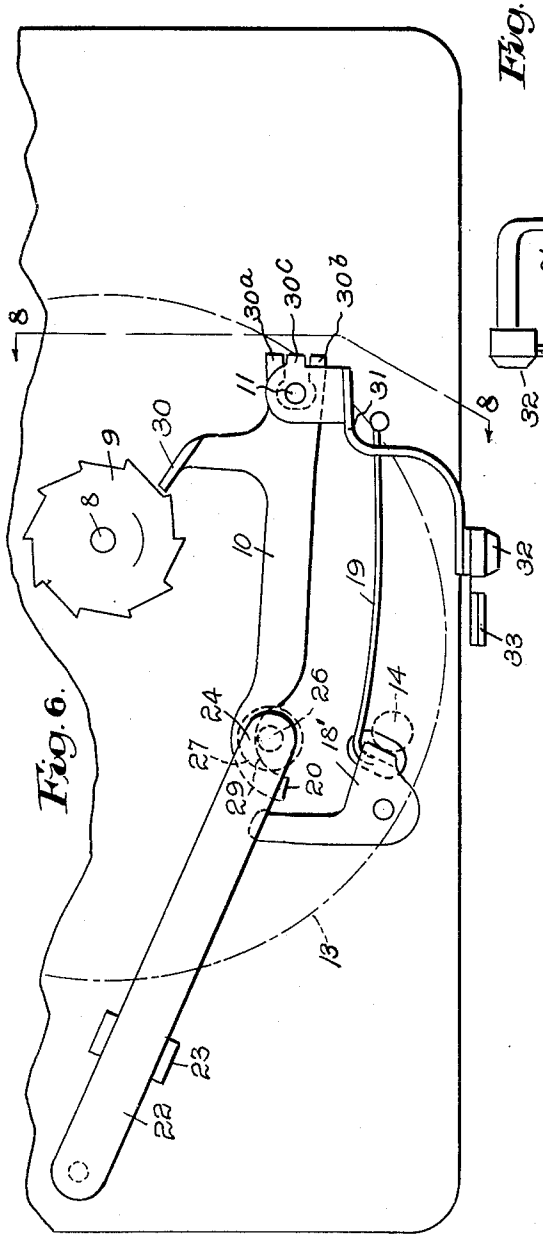


Fig. 6.

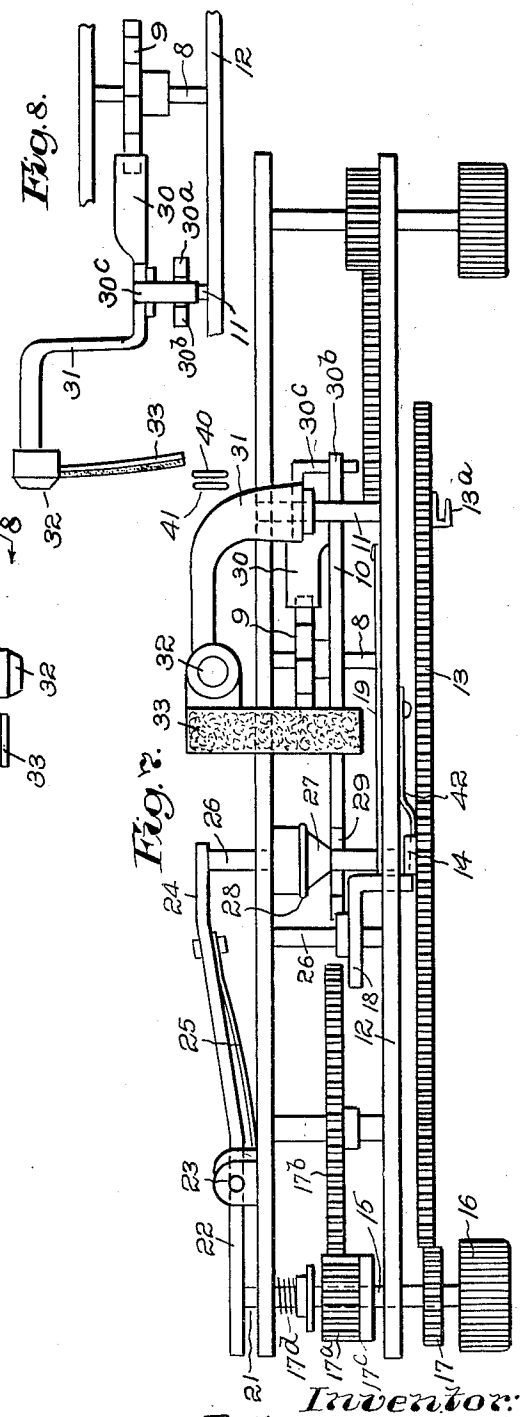


Fig. 8.

Fig. 7.

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ELECTRICAL TIME REMINDER FOR VARIOUS PURPOSES

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Application March 29, 1947, Serial No. 738,169

24 Claims. (Cl. 161—23)

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This invention relates to electrical time reminders for various purposes.

In order that the principle of the invention may be readily understood, I have disclosed a single embodiment thereof in the accompanying drawings, wherein—

Fig. 1 is a front elevation of the time reminder mechanism and showing the face of a clock mechanism to which my invention may be applied;

Fig. 2 is a front elevation of a gear-carrying plate inside the said time reminder mechanism;

Fig. 3 is a rear elevation of the time reminder mechanism, the cover plate having been removed;

Fig. 4 is a view looking inward from the bottom of the said time reminder mechanism, the casing being shown in section;

Fig. 5 is a detail in section on the irregular line 5—5 of Fig. 3;

Fig. 6 is a longitudinal section on the irregular line 6—6 of Fig. 4, but on an enlarged scale;

Fig. 7 is a side elevation of the structure shown in Fig. 6, and on the same scale as Fig. 6;

Fig. 8 is a sectional detail on the line 8—8 of Fig. 4; and

Fig. 9 is a wiring diagram of the electric circuit employed.

The electric time reminder of my invention is provided with a scale indicative of minutes or other divisions of time, and at any position along the scale a pointer is adapted to be manually set to indicate the desired or predetermined number of minutes or other time divisions, at the termination of which predetermined period of time, in accordance with my invention, a rather low, not-unpleasant, non-metallic, clicking sound begins to be continuously repeated at regular intervals, preferably of one second, which sound may, in accordance with my invention, be modulated and/or be supplemented by an intermittently displayed light, such as a tiny neon light, and which sound may then be caused to terminate, the light continuing to function intermittently until it is itself terminated by the user of the electrical time reminder, through manual movement of a suitable knob or the like.

The said scale may be arranged in any suitable form or shape, but desirably and as herein shown it is circular in form and may be marked to indicate any desired total as, for example, substantially two hours. In the disclosed embodiment of the invention the scale begins with zero and the marking continues about the circular scale which is herein marked for minutes up to sixty, extending through one-half the circular scale, and there recommencing at one and continuing up to fifty-five or thereabouts, thus totaling substantially two hours. If desired, the minutes may be marked continuously from one up to the end of the scale.

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My invention is in no wise limited to the use thereof in connection with a clock face, but herein I have represented the circular scale as arranged about an ordinary face of an electrical time clock having hour and minute hands.

The purpose of my invention is to indicate to the user thereof that he or she, or some other person, is to do something or to cease to do something at the end of a predetermined time period. For that purpose the signal, consisting of an intermittently repeated, rather low, clicking sound that may be modulated, or light, or both, begins to function at the end of the predetermined time period for which the pointer has been set and the signal continues to function until the user of the electrical time reminder manually terminates the signal in a manner hereinafter fully disclosed.

While the time reminder of my invention may be put to many different uses, as, for example, in a kitchen as a reminder that some culinary operation is being performed, a very important use is that of indicating the complete passage of the time for which an interview has been accorded by a busy business man who, for example, had granted a caller ten minutes for an interview; or my invention, when in use, constitutes a reminder to the user that he wished to make a telephone call at the end of a certain time period, or that he wished to leave his place of business at the end of the set time period, as, for example, to catch a train or he himself to go to an appointment elsewhere. A further use is to indicate to a public speaker the expiration of the predetermined time for which he or she is to speak. It is unnecessary to indicate the many desirable uses to which the invention may be put.

The clock mechanism itself, excepting for the features of my invention, may be of any suitable character and construction, and need not be herein particularly described. It is adapted to be operated by being plugged into a source of alternating current. The time mechanism, as hereinafter described in sufficient detail, controls, when the invention is in operation, a vibratory or to-and-fro moving member which at the end of the predetermined time period causes a rather low, not-unpleasant, non-metallic, clicking sound that is continuously repeated at regular intervals of preferably one second, until terminated by a manual act of the user. The clicking sound begins very faintly and after a few vibratory or to-and-fro movements, as, for example, two to four such movements, the said sound reaches its maximum, but it may, as hereinafter explained, be modulated or modified while in action. Such sound begins automatically at the termination of the predetermined time period. By the movement of a manually controlled member, to be hereinafter fully described,

such sound becomes supplemented, if desired, by a preferably small neon light which is displayed intermittently, as, for example, each second. If the controlling member be further manually moved, the said sound signal ceases and is entirely replaced by the intermittently displayed light. The user of the device may entirely terminate the signal herein by moving the clock controlling knob.

My invention contemplates and includes the provision of means for causing the said intermittent clicking sound which I have described and/or causing the said light to function intermittently throughout the entire designated period. The sound is produced by a vibratory or to-and-fro moving member which every second or at any other time interval, for which the time reminder may be organized or designed, strikes against a wall of the clock mechanism casing or other sound producing part and which is preferably the bottom wall of the clock casing.

In order to produce a sound of the described nature or character, the casing of the clock mechanism or at least the wall thereof that is to be struck by the tapper or movable arm or vibratory member, is desirably made of wood or of some plastic material such as "Bakelite," and said wall, if it be the bottom wall of the clock mechanism casing, is preferably provided with outwardly extending cleat-like strips or formations to support the clock mechanism casing slightly above the desk or other piece of furniture upon which the clock mechanism casing stands, thus creating a small sounding board against which the tapper member strikes.

Heretofore a clock mechanism has been provided with alarm means to ring a bell once or repeatedly at the termination of some time period or to sound a buzzer, but such alarm clock devices are not suited to the purpose of my invention, partly because of the unpleasant character of the sound and because the sound cannot be modulated, and cannot be supplemented or replaced by a light. My invention, on the contrary, provides a not-unpleasant clicking sound that may be modulated and which may be supplemented or replaced by a light. My invention is contrasted with all previous devices of which I have knowledge by the provision of means for creating the described non-metallic, clicking, modulatable sound and/or the intermittently displayed light which may be a neon light not requiring more than one-quarter watt.

In the preferred use of my invention a knob is used to set the clock mechanism and to set the parts for the beginning of the signal at the end of the predetermined time limit, and a lever is provided, that is moved by the user, to cause the signal to change from the intermittent clicking sound to the intermittent light, and also to modulate the clicking sound. I may within the scope of my invention provide means to terminate the signal manually, but at the same time causing an indication of the time that is elapsing after the signal ceases to function, so that the user of the invention may keep track of the time elapsing after the signal ceases. For this purpose another scale may be provided with the minute indications reversely marked thereon, so that the passage of time may be noted.

The time reminder of my invention need not, for all purposes of my invention, be electrically operated, as a spring motor mechanism may be

provided for creating the sound signals, but an electric mechainsm is preferred.

Referring more particularly to the drawings, wherein one selected embodiment only of the invention is represented, and to which embodiment my invention is in no wise limited, the casing of a clock mechanism is represented at 1 in the several figures, particularly Figs. 1 and 3 to 6.

In order to provide the proper sounding board effect, at least a portion of the casing, herein the bottom wall or surface, as will be more particularly referred to, is composed of non-metallic material, such as plastic material or wood. Upon the front face of the clock casing, shown in Fig. 1, is provided a scale or dial 2 which, while it may be located as desired and may be of any suitable form and extent, is herein shown as circular and surrounds a clock face 3 having hands, such as hour and minute hands 4 and 5, as usual. The clock mechanism, which is preferably electrical, is represented generally at 6 in Fig. 3, and need not be particularly described otherwise than to state that it is provided with a suitable electric motor operated through an electric current obtained by plugging in the wiring 7 to a suitable source of current, preferably alternating.

The said clock mechanism, as best shown in the enlarged view, Fig. 6, is provided with a shaft 8 constantly driven when the current is on and having fast thereon a ratchet 9 by which a to-and-fro motion at a suitable speed is imparted by the teeth of said ratchet to a member 10 herein shown as a lever pivoted at 11 in the casing, and by the to-and-fro or vibratory movement of which the clicking sound is produced, and also the intermittently operated neon or other light is caused to function.

Suitably mounted within the clock casing 1 back of the clock casing 3 is mounted a plate 12, shown separately in Fig. 2, having a ring gear 13 rotatably mounted thereon, as shown also in Fig. 7 upon an enlarged scale. Upon the upper face of said ring gear, as best shown in Fig. 2, is fast a pointer 13a, and upon the opposite face of said ring gear and in proper arcuately-spaced relation to the said pointer 13a, is fast a preferably roll-like lug or projection 14 which initiates the movement of the parts to cause a clicking sound. In the disclosed embodiment of the invention, the pointer 13a and the roll-like lug or projection 14 are spaced 120° apart, so that when the pointer 13a is set at zero, the said lug or projection 14 is directly under six o'clock of the clock face, and when the pointer 13a is set at ten minutes along the scale 2, as in Figs. 1 and 2, the lug or projection 14 is at seven o'clock of the clock face.

In Fig. 1, the pointer has, as just stated, been set at ten minutes and when the parts are in operation the gear 13 travels contraclockwise, viewing Figs. 1 and 2, toward the zero mark, and when the said pointer 13a reaches the zero mark, the said lug or projection 14 will at the same time reach a dog or equivalent member, to be subsequently referred to, and will move such dog so as to initiate the movement of the parts by which the clicking sound signal is caused.

In order to turn manually the gear 13 to set the pointer 13a at the desired position along the scale 2 and to position the lug or projection 14 so that when the pointer has reached the zero mark, the said lug or projection 14 will

move the said dog, the clock mechanism is provided, as best shown in Fig. 7, with a suitably mounted shaft 15 to which both a rotary movement and an axial movement may be imparted by the knob 16. Upon the shaft 15 is fast a pinion 17, shown in Fig. 7, as meshing with the ring gear 13. By turning the knob 16 the ring gear 13 is turned so as to position the pointer 13a at the number of minutes constituting the predetermined period of time and also so as to space the lug or projection 14 the proper distance from the said dog which will be actuated by the lug or projection 14 when the pointer arrives at the zero mark.

In order that the shaft 15 may be turned manually without interfering with or disturbing the clock mechanism, there is provided upon the said shaft 15 a wide gear 17a that meshes with the proper gear 17b of the clock mechanism, and is also provided with a properly mounted slip clutch member 17c, the gear 17a and the clutch member 17c, being yieldingly held in driving relation with each other by a coil spring 17d.

It will be noted from Fig. 1 that the scale 2 is, in the present embodiment of the invention, shown as bearing numerals extending from zero, indicated at 18 in Fig. 1, to the notation "1 hour" marked at a point diametrically opposite to the zero notation. At the notation "1 hour" the numerals are shown as beginning again at 1 and as continuing to the zero mark, or they may terminate short thereof. Each of the small marks upon the scale 2 indicates one minute, in the disclosed embodiment of the invention, and in Fig. 2, where the lug or projection 14 is shown in dotted lines because located at the under side of the gear 13, it is to be understood that the ring gear 13 has been turned to such an extent as to establish a predetermined time limit of ten minutes, at the expiration of which period the clicking sound will begin because the lug or projection 14 will have reached the dog, which is indicated at 18', and will move it to cause or permit the starting of the sound signal. Obviously any predetermined time limit may be set.

Figs. 6 and 7 indicate what may be termed the operating position of the time reminder, by which is meant that the lug or projection 14 has rocked the dog 18 upon its pivot, so as to permit the lever 19 to begin its to-and-fro movement to cause a clicking sound. In the disclosed embodiment of the invention, the movement of the lever 19 is an up and down movement, the upward movement being relatively slow along the face of a tooth of the ratchet 9, and the down movement being relatively quick, when dropping off the tooth.

It is to be understood that there are three possible positions of the lever 19, namely, (1) the operating position, shown in Figs. 6 and 7; (2) the locked position, when the clock mechanism may be operating merely a clock and not as a time reminder, in which position the lever 19 is held in locked position by a cone-like member, to be described; and (3) a position of the lever 19 when the pointer 13a has just been set to indicate the length of the predetermined time period, in which position the tail of the dog 18 engages a part of the lever 19, to be referred to.

In the operating position of the parts, as shown in Figs. 6 and 7, the lug or projection 14 upon the inner face of the ring gear 13 has just come into contact with the said pivoted dog 18, best shown in Figs. 6 and 7, which dog, until it is struck by the said lug or projection 14, is held by a spring arm 19 in contact with the end 20 of the lever 19, which it does in the third position just above referred to.

There will next be described the means employed, in the present embodiment of the invention, to lock and to unlock the lever 19.

Referring more particularly to Fig. 7, the shaft 15 with its knob 16, when pushed axially inward by the user of the time reminder, causes its inner end 21 to engage an arm 22 of a lever pivoted at 23 upon or within the clock casing 1. Said lever has a second arm 24 under and connected to which is a spring 25 engaging at its other end a wall of the clock casing 1. The lever arm 24 bears against the inner end of a short shaft 26 upon which is fast a cone-like formation 27 having at the base thereof an annular flange 28. The said cone 27, which constitutes the locking member for the lever 19, is received within an opening or recess 29 of the said lever 19, and when the parts are positioned as shown in Fig. 7, the lever 19 has been unlocked by the movement of the cone 27 into the position there shown. Thus the said lever 19 has been unlocked and is now permitted to function, that is, to receive its to-and-fro or back-and-forth movement when, at the expiration of the predetermined time limit for which the time reminder has been set, the lug or projection 14 on the ring gear 13 engages and moves the dog 18, so that the tail thereof is disengaged from the end 20 of the lever 19, as shown in Fig. 6.

The locked position of the lever 19 is restored by moving axially inward, viewing Fig. 7, the shaft 15, by the user of the time reminder who, for this purpose, presses inward upon the knob 16. When the knob 16 is thus pushed inward the lever 22, 24 moves the cone 27 downward, viewing Fig. 7, so that the annular flange 28 of the cone 27 passes through the opening or recess 29 of the lever 19 and, by the engagement of the cone 27 with the under face of the said lever 19, the said lever 19 is locked and thereby is terminated any further signalling either through the action of the striking hammer upon the clock casing 1 or through the action of the small neon light, to be subsequently described.

Referring again to the operating position of the parts shown in Figs. 6 and 7, wherein the lug or projection 14 engages the dog 18 and moves its tail out of engagement with the end 20 of the lever 19, it will be understood that the now-released lever 19 is under the control of and will be moved to-and-fro (herein up-and-down) by the constantly rotating ratchet 9 whenever a tooth of such ratchet passes from under the projection arm 30 of the said lever 19 and permits said lever 19 and the parts connected thereto to move or drop quickly so as to make the first sound characteristic of the clicking sound signal.

As best shown in Fig. 6, the lever 19 adjacent its pivot 11 is forked as indicated at 30a, 30b, to receive a projection 30c of a striker arm 31 shaped as best shown in Figs. 6, 7 and 8. Thus all movements of the lever 19 are imparted to the striker arm 31.

The said striker arm is provided with a hammer portion 32 and, closely adjacent thereto, with a pad-like elongated member 33 which is desirably provided with an outer face composed of felt or leather or some other material to absorb or soften sound. The said hammer 32 is positioned

close to a wall of the casing 1, and desirably close to the bottom wall 33a of the casing 1, as best shown in Fig. 3. As there indicated, the outside of said bottom wall 33a of the casing 1 is provided with strips or other suitable formations 33b, 33c, to elevate the bottom of the clock casing 1 slightly above the desk or table upon which the apparatus is supported. In this manner a sounding board effect is produced. In order that the sound may be a non-metallic one the wall 33a is desirably formed of wood or some suitable plastic material.

The action of the ratchet 9 upon the lever 10, when the said lever has been unlocked and has assumed the operating position shown in Fig. 6, is such that the first few to-and-fro movements of the lever 10 impart a relatively faint clicking sound, which sound, however, becomes almost instantly of full strength, and such clicking sound continues of full strength unless and until the user of the time reminder brings into action the means for modulating the sound and, if desired, supplementing and then replacing it by the light signal previously referred to, and which will now be described.

The said light signal emanates from a small bulb indicated in Figs. 1 and 3 at 34, as at the top of the casing 1. Such light 34 may instead be positioned at one side of the casing 1, and is so indicated in Figs. 1, 3 and 4. It is also shown in the diagrammatic view Fig. 9.

A lever intended to be manually operated by the user of the time reminder is indicated at 35 in Figs. 3 and 5. It is pivoted at 36 in the casing and has an arm 37 extending out through the slot or opening 38 in a side wall of the clock casing 1, so as to be moved downwardly viewing Fig. 5, to modulate the clicking sound and, if removed far enough, to cause the neon light to function.

Viewing particularly Fig. 8, it will be noted that the pad face member 33 has a curved or inclined form or position and is so located that when the lever arm 37 is moved toward the dotted line position shown in Fig. 5, the said pad face member 33 touches at first lightly and then, if the lever arm 37 is moved further down, more strongly upon the upper member of a pair of contacts 40, 41 formed upon or carried by or constituting the inner arm of the lever 35, as best shown in Fig. 3. Because of the said inclined form or position of the pad face member 33, it will be evident that as the lever 37, Fig. 5, moves further downward from the position shown in Fig. 8, it will engage more strongly with the overlying contact 40 and press it against contact 41, thereby closing the circuit shown in Fig. 9 and lighting the neon lamp 34, and, if the movement of the lever arm 37 downward is continued further, more and more of the force of the hammer 32 will be absorbed by the pad face member 33 and the clicking sound will become more and more modulated or, if desired, entirely eliminated.

When the lever 35 is positioned as shown in full lines in Fig. 5, the clicking sound only occurs, and such sound is at its maximum. As the lever arm 37 is moved slightly downward, the clicking sound becomes modulated because of the engagement of the inner end of the lever 35 by the pad face member 33 and for a period of time, depending upon the will of the user of the time reminder, both the clicking sound and the light will be respectively heard and seen. Further downward movement of the lever arm 37 causes the clicking sound to cease, but the light signal continues to function intermittently under the action of the moving lever 10, until the knob 16 is pushed inwardly to stop the signalling action.

There is preferably provided a spring indicated at 42 in Fig. 7 to restore the parts to a ready-to-function position so far as the sound signal and the light signal are concerned.

I have referred to several important uses of the invention. Other uses will occur to the users of the time reminder. In addition to those already mentioned, it will be evident that a very desirable use is in connection with radio broadcasting either from a studio or other place. It is, of course, important that all radio programs begin and end precisely at the proper minute or fraction of a minute. With the time reminder herein disclosed, it is possible without making any sound that could be heard by anyone listening in on the program, to indicate by the neon light when a program or some part of a program is to begin or is to end.

In the preferred embodiment of my invention, but a single light 34 need be employed. Such light may be placed at any suitable part of the casing 1. In Fig. 4, as hereinbefore stated, the light 34 is shown as mounted at one side of the casing 1. In Figs. 1 and 3, however, there is indicated a light 34 both at the top and at the side of the casing. It is not necessary, however, that both said lights be connected up to the wiring circuit, but either light may be so connected. The preferable position of the connected-up neon light 34 is at the top of the casing 1, but my invention is in no wise limited to such location.

Having thus described one illustrative embodiment of the invention, it is to be understood that although specific terms are employed, they are used in a generic and descriptive sense and not for purposes of limitation, the scope of the invention being set forth in the following claims.

I claim:

1. A short-period time-reminder for various purposes attached to a small clock mechanism unit having usual operating means, and comprising mechanism applied to said clock unit and supplementary thereto and carried and driven thereby, and including a dial marked with brief time divisions totalling a small part only of the twelve-hour period shown by the clock face and including also an indicator to travel along said dial, said mechanism cooperating with the clock mechanism unit and having means for manually setting said indicator along said dial at any time including the manually set time period, regardless of the actual time indicated by the clock mechanism, thereby to establish a predetermined total time period of short time length, the passing of which total, brief, set-time period is indicated by the progressive travel of said indicator along said dial, and means to cause, beginning at the termination of such short set-time period, an intermittently repeated clicking sound signal markedly distinguished in character from an alarm-clock, metallic, bell-ringing sound and from a buzzer sound, and constituting a low sounding, non-disturbing, time reminder that the total set-time period has elapsed.

2. An electric time reminder in accordance with claim 1, but wherein adjacent to said clock mechanism there is provided a non-metallic sounding-board wall, and wherein the means to cause the said time signal includes a to-and-fro movable hammer member that is caused by the clock mechanism to strike repeatedly against said sounding board to produce said sound signal.

3. An electric time reminder in accordance with claim 1, but wherein adjacent to said clock mechanism there is provided a non-metallic sounding-board wall, and wherein the means to cause the said time signal includes a to-and-fro movable hammer member that is caused by the clock mechanism to strike repeatedly against said sounding board to produce said sound signal, and manually controlled means to stop the movement of said to-and-fro movable member at the will of the user of the said time reminder.

4. An electrical time reminder for various purposes in accordance with claim 1, but wherein the means to produce the said sound signal comprises a casing for said clock mechanism having at least a portion of said casing formed of non-metallic material and a movable member having a hammer positioned close to said non-metallic material, so that in the movement of said member it strikes said non-metallic material and causes the said clicking or snapping sound signal.

5. An electrical time reminder for various purposes in accordance with claim 1, but wherein the means to produce the said sound signal comprises a casing for said clock mechanism, the bottom wall whereof is composed of plastic material and has externally protruding formations to support the said bottom wall slightly above the supporting surface for the clock mechanism, and a member pivotally mounted in said casing above and relatively close to said bottom wall of said casing and having a hammer, and means operated by the clock mechanism to cause said member to move up and down at regular intervals, thereby causing said hammer to strike said bottom wall at repeated, relatively short intervals, thereby producing said sound signal.

6. A short-period time-reminder in accordance with claim 1, but wherein the said dial is positioned concentrically with the usual hour indications on the face of the clock unit.

7. A short-period time-reminder in accordance with claim 1, but wherein means is provided to modulate said sound signal after it has commenced to sound.

8. A short-period time-reminder in accordance with claim 1, but wherein means is provided to cause an intermittently repeated flashing light signal following the termination of said manually-set short-length time period.

9. A short-period time-reminder in accordance with claim 1, but wherein means is provided to supplement said clicking sound signal with an intermittently-repeated flashing light signal.

10. A short-period time-reminder in accordance with claim 1, but wherein means is provided to supplement said signal by an intermittently-repeated, relatively-weak, neon-light signal, and wherein means is provided to terminate said manually-set sound signal while permitting said light signal to continue to function.

11. A short-period time-reminder in accordance with claim 1, but wherein means is provided manually to terminate at the will of the user said sound signal at any time after it has commenced.

12. A short-period time-reminder in accordance with claim 1, but wherein the said dial is positioned outside of and concentrically with the usual hour indications on the face of the clock unit and is marked with minute indications totalling about one hundred and twenty (two hours) encircling the said usual hour indications.

13. A short-period time-reminder in accordance with claim 1, but wherein the said dial is positioned outside of and concentrically with the usual hour indications on the face of the clock unit and is marked with minute indications totalling about one hundred and twenty (two hours) encircling the said usual hour indications, and wherein means is provided permitting the user to shift at will from one of said signals to the other said signal following the termination of the predeterminedly-set short-time period.

14. A short-period time-reminder in accordance with claim 1, but wherein the said dial is positioned concentric with the usual hour indications on the face of the clock unit and is marked to indicate zero, and wherein said indicator in operation travels in a contraclockwise direction along said minute markings from its set position to said zero marking.

15. A short-period time-reminder in accordance with claim 1, but wherein the said dial is positioned outside of and concentrically with the usual hour indications on the face of the clock unit and is marked in a substantially complete circle with minute indications totalling about two hours and along which the indicator travels in a contraclockwise direction after being set at any desired point along said minute markings.

16. An electrical time reminder including an electrically operated clock mechanism, a scale upon said time reminder marked for divisions of time, a pointer adapted to be set along said scale to indicate the expiration of any predetermined period of time, a member adapted to be operatively connected to said clock mechanism and, when so connected, to be moved at time intervals along said scale with said pointer, means under the manual control of the operator to place said member under the control of said clock mechanism, means to cause the functioning upon the expiration of said predetermined period of time of a sound signal repeated at relatively short intervals and also a small electric light signal repeated at relatively short intervals, and means under the manual control of the user of the time reminder to cause the gradual diminution of loudness of said sound signal and simultaneously with such diminution of the sound signal to cause said signal to function intermittently.

17. An electrical time reminder including an electrically operated clock mechanism, a scale upon said time reminder marked for divisions of time, a pointer adapted to be set along said scale to indicate the expiration of any predetermined period of time, a member adapted to be operatively connected to said clock mechanism and, when so connected, to be moved at time intervals along said scale with said pointer, means under the manual control of the operator to place said member under the control of said clock mechanism, means caused to function upon the expiration of said predetermined period of time to make an intermittently repeated clicking sound signal, and means under the manual control of the user of the time reminder to cause the intermittent flashing of a small electric light signal at short intervals, the means to cause the sound signal and the light signal including a lever carrying a striker for causing the sound signal upon striking a sounding surface; said lever having a member to close a circuit to the said electric light signal.

18. An electrical time reminder including an electrically operated clock mechanism, a scale upon said time reminder marked for divisions of time, a pointer adapted to be set along said scale

to indicate the expiration of any predetermined period of time, a member adapted to be operatively connected to said clock mechanism and, when so connected, to be moved at time intervals along said scale with said pointer, means under the manual control of the operator to place said member under the control of said clock mechanism, means caused to function upon the expiration of said predetermined period of time to make an intermittently repeated clicking sound signal, and means under the manual control of the user of the time reminder to cause the intermittent flashing of a small electric light signal at short intervals, the means to cause the sound signal and the light signal including circuit wiring extending to said electric light, and also including a lever carrying a striker to cause said sound signal upon striking a sounding surface and also carrying a circuit closing member to close the circuit to said electric light.

19. An electrical time reminder including an electrically operated clock mechanism, a scale upon said time reminder marked for divisions of time, a pointer adapted to be set along said scale to indicate the expiration of any predetermined period of time, a member adapted to be operatively connected to said clock mechanism and, when so connected, to be moved at time intervals along said scale with said pointer, means under the manual control of the operator to place said member under the control of said clock mechanism, means caused to function upon the expiration of said predetermined period of time to make an intermittently repeated clicking sound signal, and means under the manual control of the user of the time reminder to cause the intermittent flashing of a small electric light signal at short intervals, the means to cause the sound signal and the light signal including circuit wiring extending to said electric light, and also including a lever carrying a striker to cause said sound signal upon striking a sounding surface and also carrying a circuit closing member to close the circuit to said electric light, a pair of contacts included in said circuit wiring, and means under the manual control of the operator to move said pair of contacts, while slightly open, into the path of movement of said circuit closing member.

20. An electrical time reminder including an electrically operated clock mechanism, a scale upon said time reminder marked for divisions of time, a pointer adapted to be set along said scale to indicate the expiration of any predetermined period of time, a member adapted to be operatively connected to said clock mechanism and, when so connected, to be moved at time intervals along said scale with said pointer, means under the manual control of the operator to place said member under the control of said clock mechanism, means caused to function upon the expiration of said predetermined period of time to make an intermittently repeated clicking sound signal, and means under the manual control of the user of the time reminder to cause the intermittent flashing of a small electric light signal at short intervals, the means to cause the sound signal and the light signal including circuit wiring extending to said electric light, and also including a lever carrying a striker to cause said sound signal upon striking a sounding surface and also carrying a circuit closing member to close the circuit to said electric light, a pair of contacts included in said circuit wiring, and means under the manual control of the operator to move said pair of contacts, while slightly open, into the path of movement of said circuit closing member, said means under the manual control of the operator including a lever having an arm extending outwardly into position to be moved by the user of the time reminder and also having an arm carrying said two slightly spaced contacts in circuit with said electric light, and which contacts, upon manual movement of said lever are moved into or out of the range of movement of said circuit closing member of the said lever carrying the striker.

21. A short-period time-reminder clock mechanism unit that is contained in a small casing that may be moved about from place to place as upon the top of a desk or table and plugged into a convenient circuit, said time reminder including a scale concentric with the usual hour markings of the electrically operated clock mechanism to which it is attached, said scale being marked for minute divisions of time totalling at least substantially one hour, a pointer adapted to be set along said scale to indicate the expiration of any predetermined number of minutes marked on said scale, a member adapted to be operatively connected to said clock mechanism and, when so connected, to be moved to minute intervals along said scale with said pointer to indicate the passing of the predetermined number of minutes on said scale, means under the manual control of the operator to place said member under the control of said clock mechanism and to remove it from such control, and means caused to function upon the expiration of said predetermined number of minutes to make an intermittently-repeated clicking sound signal, markedly contrasting in character from an alarm clock, metallic, bell-ringing sound and from a buzzer sound, and from a radio program, and constituting a low sounding, non-disturbing, time reminder that the total set-time period has elapsed.

22. An electrical short-period time-reminder in accordance with claim 21, but wherein means is provided under the manual control of the user to modulate said clicking sound signal.

23. An electrical short-period time-reminder in accordance with claim 21, but wherein means is provided under the manual control of the user to cause the intermittent flashing of a small electric light signal at short intervals upon the termination of the predetermined number of minutes for which the time reminder has been set.

24. An electrical short-period time-reminder in accordance with claim 21, but wherein means is provided under the manual control of the user to cause the intermittent flashing of a small electric light signal at short intervals upon the termination of the predetermined number of minutes for which the time reminder has been set, and wherein means is provided under the manual control of the time-reminder to shift from one of said signals to the other at the end of the predetermined number of minutes marked on the said scale.

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