No. 637,387. Patented Nov. 21, 1899.

J. L. HALL.

PROGRAM ALARM CLOCK.

(Application filed Aug. 17, 1897.)

(No Model.)

Fig. 1.

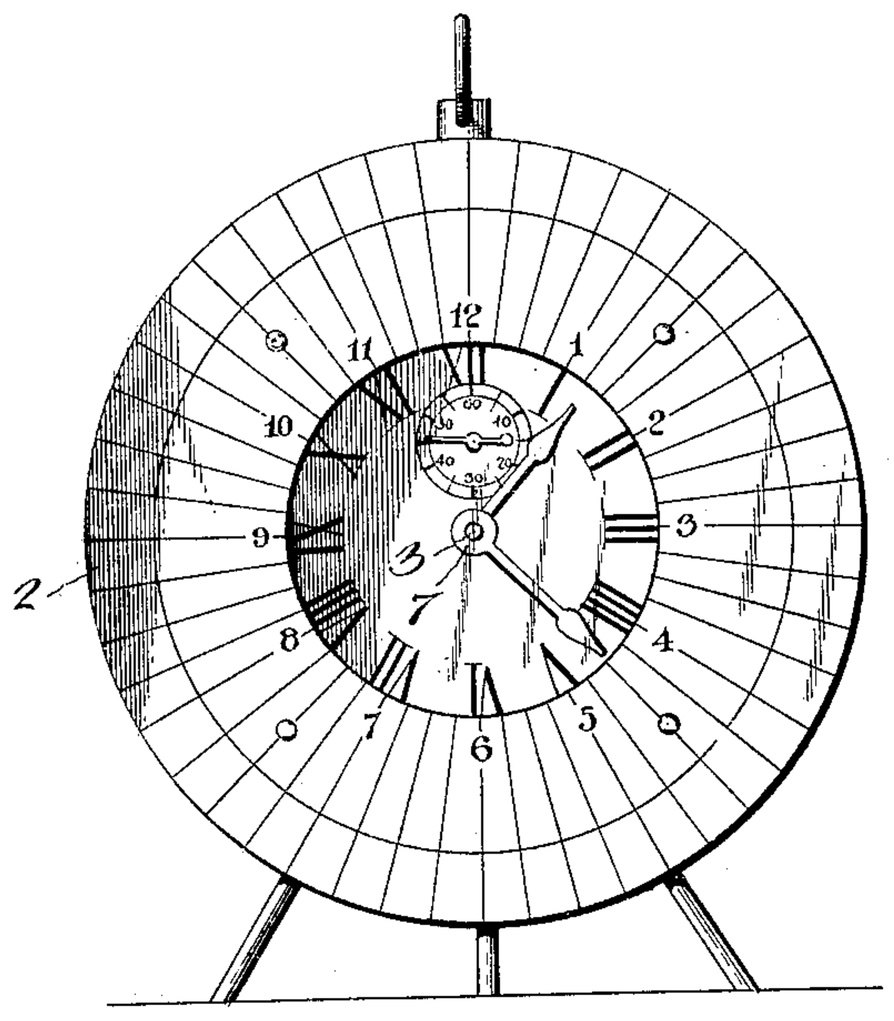


Fig. 2.

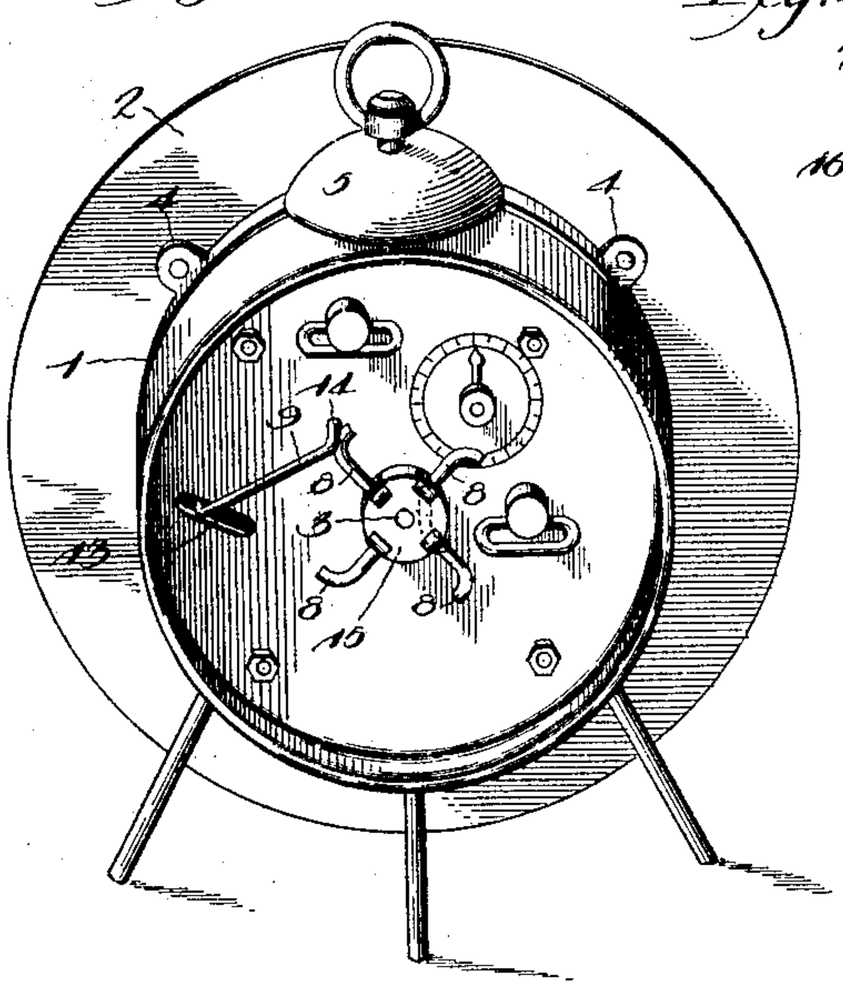


Fig. 4.

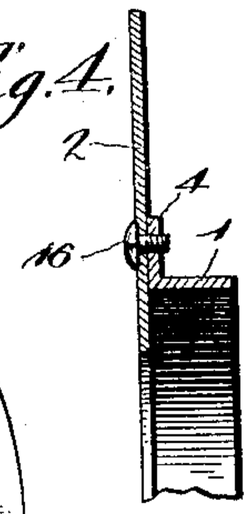
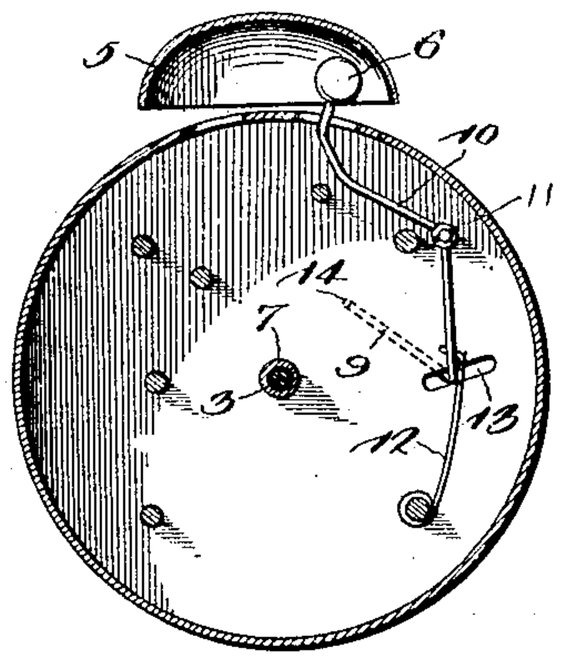


Fig. 3.



Witnesses
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By his Attorneys,
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UNITED STATES PATENT OFFICE.

JOHN L. HALL, OF BROOKVILLE, PENNSYLVANIA.

PROGRAM ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 637,387, dated November 21, 1899.

Application filed August 17, 1897. Serial No. 648,535. (No model.)

To all whom it may concern:

Be it known that I, JOHN L. HALL, of Brookville, in the county of Jefferson and State of Pennsylvania, have invented certain new and useful Improvements in a Combined Memorandum and Alarm Clock; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a memorandum and alarm clock, and has for its object to provide a simple, inexpensive, and efficient device in connection with clock mechanism, constituting a register to indicate duties to be performed at certain intervals, the same being particularly adapted for use by nurses and other attendants to indicate when a patient is to receive doses of different medicines or other treatments, but being also adapted for use by business-men to indicate times of appointments, &c.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a front view of a memorandum and alarm mechanism constructed in accordance with my invention. Fig. 2 is a rear perspective view of the same. Fig. 3 is a partial sectional view of the clock-casing, showing in elevation the means whereby motion is communicated to the signal-bell hammer. Fig. 4 is a detail sectional view of the memorandum-disk and the means for supporting the same, showing a slightly-modified construction of means for connecting said parts.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

Fitted upon the wall of the clock-casing near its front is a band 1, carrying an annular indicator-disk 2, arranged coaxially with the clock-casing, and hence with the hour-hand spindle or arbor 3, the said disk being superficially divided into spaces, which may, as indicated, be separated by radial lines designated by suitable characters, such as numerals, representing hours and fractions of an hour. The disk is so arranged upon the casing of the clock as to cause the registration of its space-designating characters with the hour characters of the clock-face. In the construction illustrated the means of attachment of the graduated disk or scale consists of the above-described band 1, provided with ears 4, secured to the rear surface of said disk by means of rivets or equivalent fastening devices; but other means of attachment, suited to different kinds of clocks, may be employed in this connection.

In practice the graduated disk or memorandum-dial 2 is adapted in the several spaces of its surface to receive memorada indicating medicines to be administered or calling attention to hours, appointments, &c., according to the use of the device, and it is obvious that when the hour-hand of the clock mechanism comes opposite a given space of the dial the memorandum contained within said space is indicated. It is desirable, however, to call attention to the fact that the indicator, consisting of the hour-hand, is opposite a space containing a memorandum, as the memoranda may be arranged in each space or in alternate spaces or only at longer intervals. Therefore in practice I combine with the memorandum device an alarm or signal mechanism, utilizing the ordinary gong 5 and a hammer or knocker 6, arranged in operative relation therewith. I also provide the minute-hand or setting-spindle 7 with one or more trips 8 for actuating an arm 9, forming a part of or attached to a lever 10, which carries said hammer. This lever is fulcrumed at 11 and is yieldingly held in its normal position by means of an actuating-spring 12. The arm 9, which is carried by the free end of the lever, extends through a slot 13 in the rear wall of the casing and is provided with a bearing-finger 14. The parts are so disposed that the bearing-finger is in the path of the trip arm or arms and is repressed thereby in opposition to the tension of the actuating-spring 12, and upon the release of the bearing-finger by the trip-arm the return of the lever to its normal position brings the hammer into contact with the gong. The parts are so related that the signal-bell may be sounded for each space of the graduated or memorandum disk, and as the minute-hand spindle makes one revolution during each hour and as in practice I have found it sufficient to divide each hour-

space of the memorandum-disk into four parts representing quarter-hours I provide the thumb-disk or head 15 on the rear end of the minute-hand spindle or setting-spindle with a plurality of said trip-arms 8, of which four are shown in the drawings, adapted for successive engagement with the trip-finger carried by the signal-hammer lever. Inasmuch, however, as the intervals at which the signal should be sounded varies according to the number and arrangement of the memoranda upon the disk 2, it is desirable to provide for displacing the trip-arms when not required. Therefore in practice I pivot the trip-arms upon said head to adapt them to occupy either the radial positions necessary to cause engagement with the trip-finger or approximately axial positions, whereby the trip-finger is allowed to remain in its normal position. Thus if the signal-bell is to be sounded for each quarter-hour space of the graduated disk all of the trip-arms will be required, whereas for half-hour intervals two of the arms may be swung out of operative position or moved to avoid the trip-finger. When the signal is to be sounded only once in each hour, only one of the trip-arms should occupy an operative or radial position. It will also be understood that the number of arms may be varied to suit the requirements of the signal mechanism in connection with which they are used.

In practice the trip-arms are deflected rearwardly (with relation to the direction of movement) toward their extremities to facilitate the proper repression of the trip-finger as the trip-arms advance, and thus insure an efficient operation of the mechanism.

In Fig. 4 I have shown a connection between the annular memorandum-disk and the support which is attached to the clock-casing whereby said disk may be removed to provide for applying a new disk when one has become useless by changing the memoranda. In this construction the disk is secured to the ears of the supporting band or ring by means of screws 16, extended through the disk and threaded into the openings of the ears.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

Having described my invention, what I claim is—

1. The combination with a clock, of a recording attachment consisting of a band encircling the casing and having outwardly-extending ears, an annular plate fitted against the clock-face to expose the dial and having its inner peripheral edge portion overlapping said band and clock-casing, and having facial spaces corresponding with the divisions of the clock-dial for inscribing memoranda thereon, and means for securing the memoranda-plate to the supporting-band, substantially as described.

2. The combination with a clock, provided with memoranda mechanism to coöperate with the minute-hand, of a spring-actuated lever fulcrumed between its ends within the casing and having a hammer at one end to strike the gong and having its other end portion working through a slot in the rear wall of the casing and recurved forming a trip-arm exterior to the casing, a disk applied to the rear end of the minute-hand spindle, and a plurality of curved trips pivotally connected with the said disk and adapted to engage with the trip-arm, for the purpose described, said trips being rigid and adapted to be turned upon their pivotal connection with the disk to clear the trip-arm, substantially as and for the purpose specified.

3. The combination with a clock provided with an alarm, of alarm-operating mechanism including a shiftably-mounted device adapted normally to effect the action of the alarm when a certain point is reached, and movable positively out of such normal position independent of the action of the clock whereby such point can be passed without operating the alarm, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

JOHN L. HALL.

Witnesses:
FRANK SMITH,
LENO WM. EDWARDS.