

J. H. SCOTT.

DOSE INDICATOR.

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907,294.

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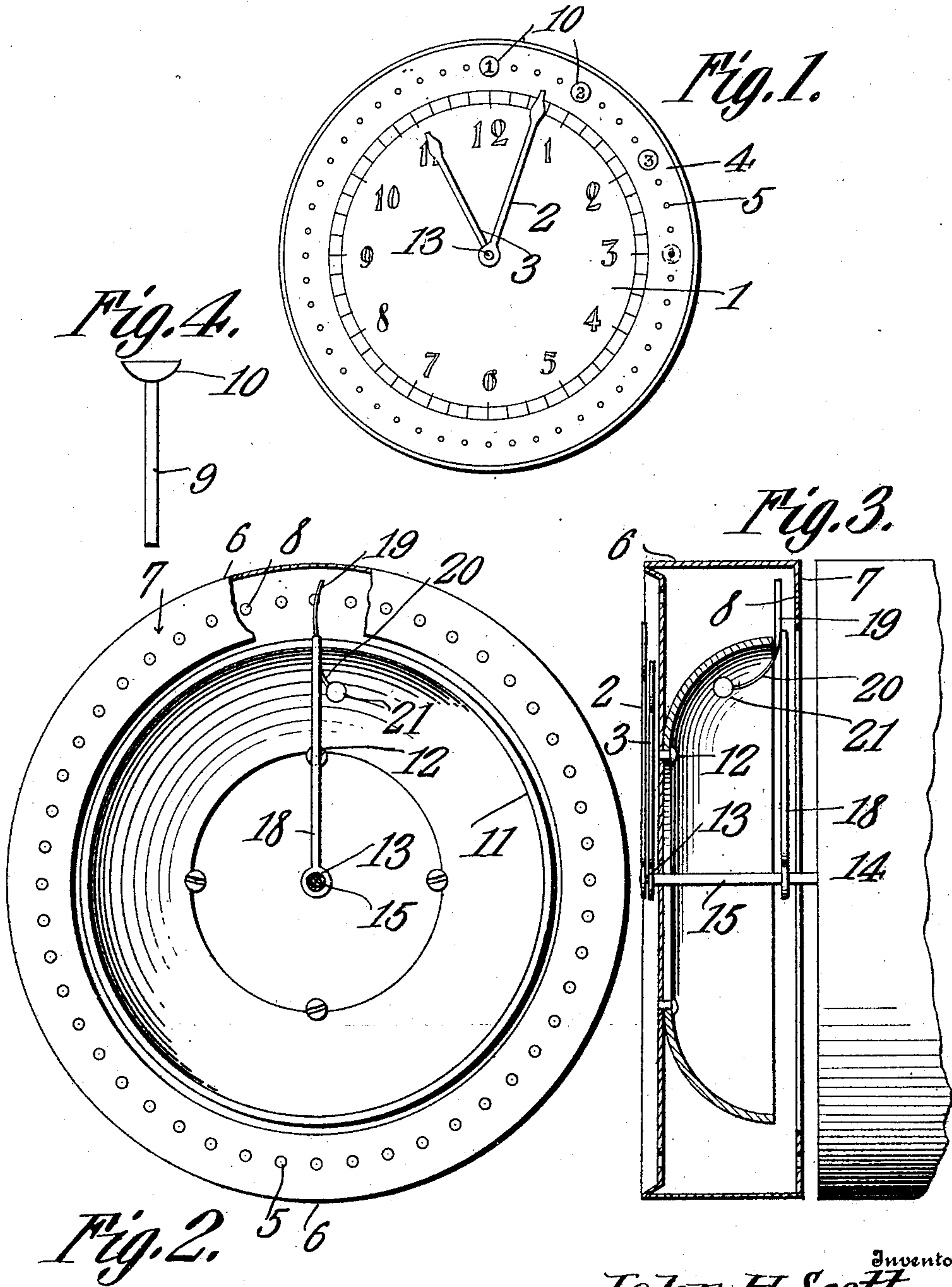


Fig. 2.

Witnesses

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DOSE-INDICATOR.

No. 907,294.

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To all whom it may concern:

Be it known that I, JOHN HAUSER SCOTT, a citizen of the United States, residing at Winston Salem, in the county of Forsyth and State of North Carolina, have invented a new and useful Dose-Indicator, of which the following is a specification.

This invention has reference to improvements in dose indicators, and its object is to provide means whereby a signal is given when the time for the giving of medicine to a patient has arrived.

The invention comprises an attachment for time pieces whereby an alarm and preferably an audible alarm is actuated by the movement of the time indicating hands of the time piece. Appropriately numbered pins or other like devices are employed in connection with the invention and the dial is provided with spaced openings through which the pins may be inserted. Any appropriate spacing of these openings may be adopted, but it will be found in practice that quarter hour spaces will usually be most useful. That portion of the time piece mechanism carrying the hour hand also carries another hand or arm back of the dial so as not to be visible and this hand or arm carries a spring contact capable of being intercepted by an inserted pin, and when this contact is intercepted it actuates a hammer or clapper so that the latter is brought into operative engagement with a suitable bell behind the dial, which bell is so constructed as to give a soft toned alarm.

By using pins having different face designations the alarm apparatus may be used for a number of patients or for the giving of a number of different medicines at different time intervals, and after the alarm has been given and a dose has been administered, the appropriate pin may be advanced so as to come into the path of the arm carrying the bell actuating mechanism after the desired time interval.

The invention will be best understood from a consideration of the following detail description taken in connection with the accompanying drawings forming a part of this specification in which drawings,

Figure 1 is a face view of a clock dial formed in accordance with the present invention. Fig. 2 is a rear view of the same on a somewhat larger scale, with parts in section and broken away, and showing the alarm bell together with the arm carrying the

spring actuated clapper therefor. Fig. 3 is a diametric section through the structure shown in Fig. 2, and Fig. 4 is a detail view of one of the pins.

Referring to the drawings there is shown a clock dial 1 which so far as the time indicating parts of the dial are concerned, may be that usually employed in clocks, and in operative relation with the dial are suitable time indicating hands 2 and 3, the hand 2 being the minute hand, and the hand 3 being the hour hand.

The dial is extended some distance beyond the time indicating portion thereof and between the said time indicating designation and the outer rim of the dial, there is provided an annular space 4, and this portion of the space of the time piece is provided with an annular series of perforations 5 equidistantly spaced and in the particular illustration of the drawing, these spaces are equivalent to quarter-hour movements of the hour hand 3.

The dial 1 forms the front of a cylinder 6, at the rear end of which there is formed an inwardly directed annular flange 7, and through the flange 7 there is produced an annular series of perforations 8 matching the perforations 5 in the dial plate 1.

Adapted to be inserted through the perforations 5 and into the perforations 8 are pins 9 each having a flattened head 10.

Fast to the rear face of the dial plate 1 is a rim bell 11, concentric with the circular series of perforations 5 and 8. This bell may be held in place in any suitable manner as by screws or rivets 12. The time indicating hands of the clock are mounted upon an arbor 13 which is only indicated in the drawing without an attempt to show its actual structure, since this structure may be the same of any ordinary clock, except that it may be somewhat elongated to accommodate the dial structure. The clock works are also simply indicated in the drawing at 14 without any attempt to show structure, and it will be understood that both the clock works and the dial structure will be inclosed in a suitable casing which however, has been omitted from the drawings.

The hour hand 3 is mounted upon the usual sleeve 15 surrounding the arbor 13, and upon this sleeve close to the bell 11 there is made fast an arm 18 projecting radially from the sleeve and carrying at its outer end a spring extension 19 of such

length as to engage a pin 9 when inserted in the perforations 5 and 8, and extending across the intervening space between the dial plate 1 and the flange 7. The arm 18
 5 also carries an elastic stem 20 terminating in a head 21 constituting a bell hammer or clapper and this hammer or clapper is in operative relation to the bell 11. When the spring extension 19 snaps by a pin 9, the
 10 reaction will throw the hammer head 21 against the bell 11, with a gentle impulse, causing the bell to give forth a low unobtrusive tone, but sufficiently distinct to call attention to the attendant. To aid in
 15 keeping down the tone of the bell, the head 21 may be made of some non-metallic material such as wood, or fiber, or leather or the like, so that a delicate blow is given the bell.

20 The head 10 of each pin 9 is made flat or otherwise finished so as to receive some characteristic indication such as a numeral or a letter.

Suppose that a patient is to be given a
 25 certain medicine at 12 o'clock and every three hours thereafter. Then a pin with a suitable characteristic indication on the head, say for example, the numeral 1, is inserted through the perforations 5 and 8
 30 located at the twelve o'clock indication on the dial plate. When the hour hand arrives at 12, the extension 19 of the arm 18 will have engaged the pin and as soon as the hour of twelve arrives, the extension 19 will
 35 snap by the pin and the hammer head 21 will give the bell 11 a gentle tap, causing the said bell to ring, and thus drawing the attention of the attendant to the fact that it is time to give the patient the designated
 40 medicine or some other treatment if such be the arrangement agreed upon. The attendant now removes the pin 1 from the 12 o'clock designation and inserts the pin through the perforations 5 and 8 corre-
 45 sponding to the three o'clock designation of the dial plate. As soon as the hour hand arrives at three o'clock the bell will be again rung and the attendant's attention will be called to the fact that it is time to again give
 50 the medicine or treatment prescribed. Thus the attendant or nurse is audibly warned that the time for treatment or medicine has arrived.

The invention is applicable for use where
 55 the nurse or attendant has charge of two or more patients or where two or more medicines are to be given to a single patient at different time intervals. For instance, let it be supposed, that there are two or more
 60 patients and that one is to receive medicine at twelve o'clock, another at one o'clock, another at two o'clock and so on. Then at the proper intervals on the dial, pins with properly differentiated characteristics, as for
 65 instance pins 1, 2 and 3 will be inserted at the

twelve o'clock position, the one o'clock position and the two o'clock position, and when the bell rings the attendant has but to observe the time and the particular pin designation to note which patient is to receive the
 70 medicine or treatment. Or if the same patient is to receive two different kinds of medicines or treatment, the different pin designations will call the attendant's attention to the particular medicine or treatment
 75 to be given the patient at the time indicated on the dial plate. This characteristic of the invention makes it particularly applicable for use in hospitals or where a number of patients are to be attended by one nurse or
 80 attendant.

The spring extension 19 should be light and be brought into but light engagement with the pins, so as to not interfere to any material extent with the time-keeping quali-
 85 ties of the clock.

It is to be understood that this invention is not limited to the exact details or arrangement of parts shown, since the invention is susceptible of various modifications, as to
 90 structure, material and location of parts without sacrificing any of the advantages of the invention or departing from its salient features.

What is claimed is:—

95 1. In a device of the class described, a radial rotating arm, time-controlled means for rotating the arm, a bell arranged concentric to the cycle of movement of the arm, and a striker carried by the arm and adapted to be
 100 tripped at a predetermined point in the cycle of movement of the arm to sound the bell.

2. In a dose indicator a cylindrical member having one end closed and provided with dial indications and a circumferential series
 105 of spaced perforations and the other end formed with a flange with a like series of matching perforations to the first series of perforations, a clock movement in operative relation to the dial indications, pins adapted
 110 to be inserted through the perforations in the dial end of the cylinder and extending to the flange end thereof, a bell housed in the cylindrical member and a bell clapper or hammer carried by the clock movement and
 115 adapted to engage an inserted pin to store power in said hammer or clapper for causing it to strike the bell at a pre-determined time.

3. A dose indicator comprising a suitable time piece having a dial plate provided with
 120 a circumferential series of perforations exterior to the time piece indicating parts of the dial plate, a bell carried by the dial plate on the rear face thereof, a radial arm carried by the hour hand part of the time indicating
 125 mechanism, one or more pins each provided with a characteristic designation and adapted to the perforations of the dial plate, an elastic extension of the radial arm carried by the clock mechanism and adapted to be en-
 130

gaged by a pin inserted in the perforations in the dial plate, and a bell hammer or clapper carried by said arm and controlled by the elastic extension thereof and inserted pin
5 or pins, said bell clapper being in operative relation to the bell.

4. A dose indicator comprising a suitable time piece, a bell, a radial arm carried by the hour hand to part of the time indicating
10 mechanism and provided with an elastic extension, one or more pins adapted to be placed in the path of the elastic extension of

the arm, and a bell hammer or clapper carried by said arm in operative relation to the bell and controlled by the elastic extension 15 of said arm.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

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Witnesses:

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W. T. PENSY.