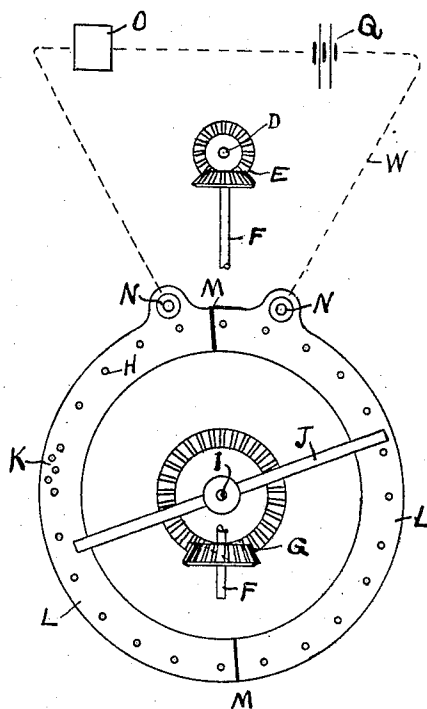
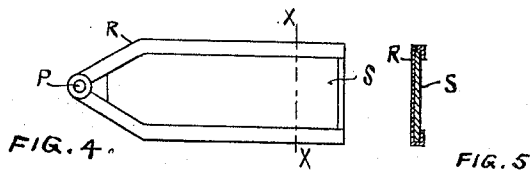
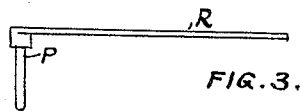
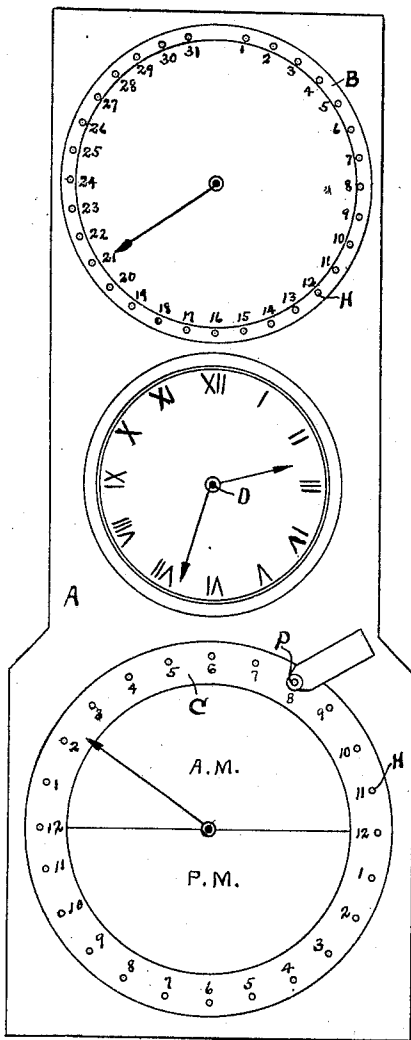


C. B. GARTRELL.
ALARM CLOCK.

Patented Feb. 2, 1897.



WITNESS :

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INVENTOR

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UNITED STATES PATENT OFFICE.

CHARLES B. GARTRELL, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
JOHN J. LUCK, OF AURORA, ILLINOIS.

ALARM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 576,528, dated February 2, 1897.

Application filed March 23, 1896. Serial No. 584,418. (No model.)

To all whom it may concern:

Be it known that I, CHARLES B. GARTRELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Alarm-Clocks, of which the following is a specification.

My invention relates to clocks for sounding an alarm at certain hours or days for the purpose of calling attention at proper intervals to certain memoranda attached to the clock, and has for its object a form of construction that will obviate the multiplicity of parts now used in such clocks. A secondary object is improvement in the manner of connecting the memoranda to the alarm-indicator.

In the accompanying drawings, Figure 1 is an outline front view of a clock arranged according to my method. Fig. 2 is a rear diagrammatic view of the operating mechanism. Fig. 3 is a side elevation of a memorandum-carrying pin. Fig. 4 is a bottom view of the same, and Fig. 5 is a section on line X X of Fig. 4.

In the said drawings, A is a clock provided with a register for the days of the month at B and divisions for the twenty-four hours of the day at C. At each of these divisions for both the days and the hours is a hole H for the reception of a memorandum-carrying pin P. In the divisions at C the drawings show only one hole at each hour, but it is intended to make these holes nearer together, so as to give one for each fifteen minutes, as is shown at K in Fig. 2. At the back of the hour-spindle D is a pair of bevel-gears E, which communicate motion through the shaft F and gears G to the spindle I, on which is mounted the double arm J. The ratio of the gearing between D and I is such that the latter, and consequently the arm J, revolves once in twenty-four hours. The ring shown at C in Fig. 1 is a facing that covers a metal ring L, made up of two halves insulated from each other at M. On each half of the ring L is a binding-post N, from which a wire runs through the bell O and the battery Q. The ring L is so located with reference to the arm J that the pins P will, when placed in the

holes H, stand in the path of the long arm of J and be touched by it in passing. The short arm of J moves in contact with the ring L at a point inside of the circle of holes H, and consequently does not touch the pins P.

Each of the pins P, of which there will be a number, is provided with an arm R, which is made of sheet metal bent into the form shown in Figs. 3, 4, and 5. In the channels left under the arm R is slipped a celluloid or other sheet S, on which is written the memorandum to which attention is to be called.

The construction described for the hour indications also applies to the indications for the days of the month, except that the arm J for the latter case will revolve once in a month instead of once in every twenty-four hours.

Supposing an appointment which it is desirable to remember is made for four p. m. on the 25th of the month, then the operation is as follows: A memorandum of the appointment is made on the sheet S, which is slipped into the arm R, and the pin P is then put into the hole H opposite the number "25" in the upper dial B. When the 25th is reached, an alarm will be rung in the manner to be described for the hours, when the pin P is removed and placed in the hole marked "4" in the lower half of the lower dial C. When the long arm of J, which is set to correspond with the hour-hand of the clock, reaches the hole "4," it will come into contact with the end of the pin P that projects through the ring L. This will produce an electrical contact that will permit the current to enter one half of the ring L through the wire W and binding-post N, whence it passes through the pin P and arm J to the other half of L, whence it passes out through the other binding-post and the bell O to the battery Q.

What I claim is—

1. In combination with a clock, an arm arranged to revolve once in a given interval of time, a bisected ring over which said arm moves and with which one end of said arm is in contact, a series of holes in said ring, memorandum-carrying pins adapted to be inserted in said holes so as to be in the path of the other end of said arm, and electrical con-

nections from each half of said ring whereby the passing of said arm over said pin will cause an alarm to be rung.

2. In combination with a clock, a bisected
5 ring provided with holes for the reception of pins, insulating material between the halves of said ring, an arm arranged to revolve in a given interval of time and adapted to engage pins in said holes; and electrical connections to each half of said ring.

3. In combination with a clock, a bisected
10 ring the halves of which are insulated from

each other, holes in said ring, memorandum-carrying pins in said holes, an arm adapted to revolve in a given period of time and to
15 engage pins in said holes, and means whereby the engagement of said arm with said pins will produce an electrical connection between the halves of said ring.

CHARLES B. GARTRELL.

Witnesses:

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