

No. 771,400.

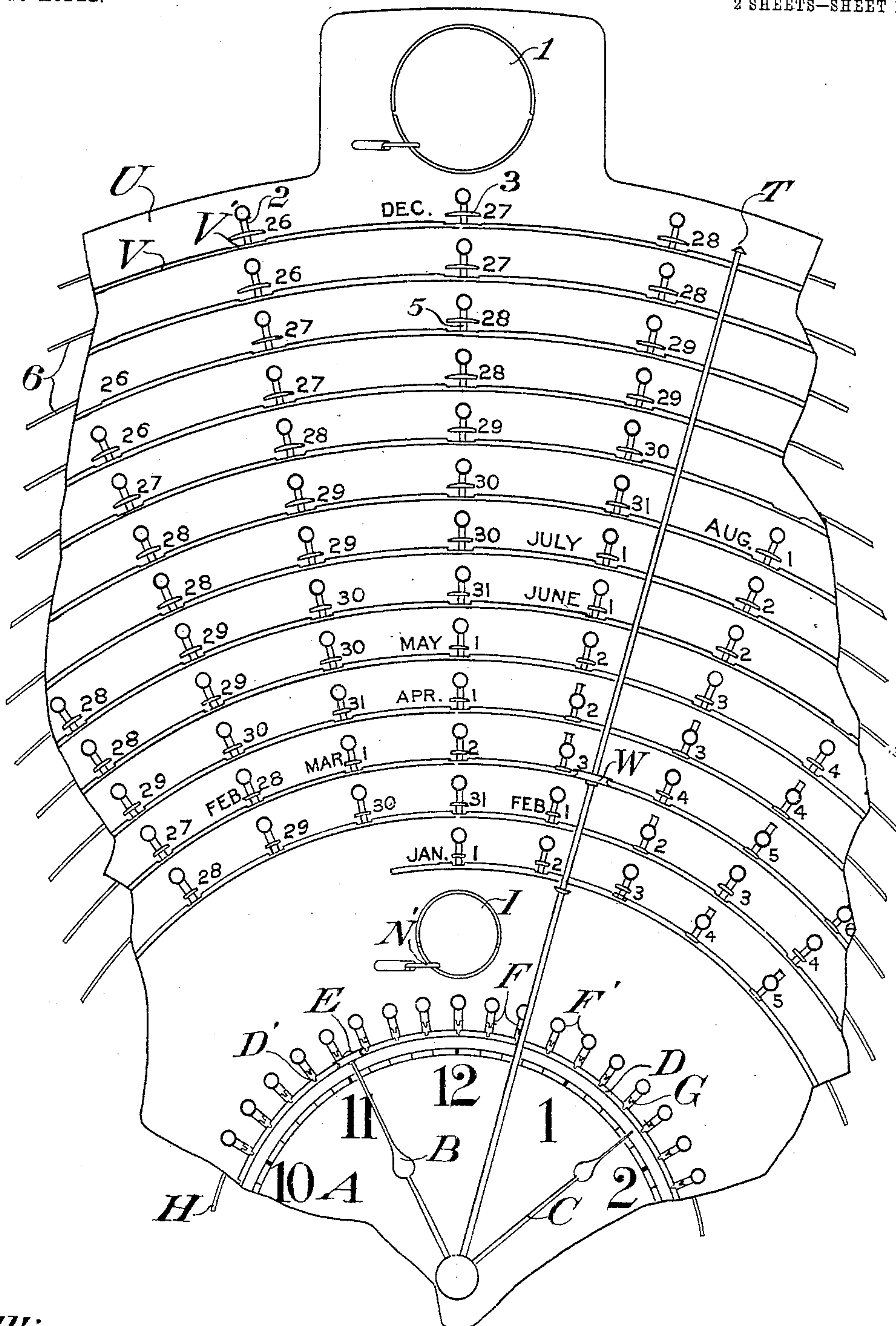
PATENTED OCT. 4, 1904.

E. E. STONE.  
ELECTRIC PROGRAM CLOCK.

APPLICATION FILED MAR. 14, 1904.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:  
Marion Richards.  
Katherine F. Libby.

Fig. 1

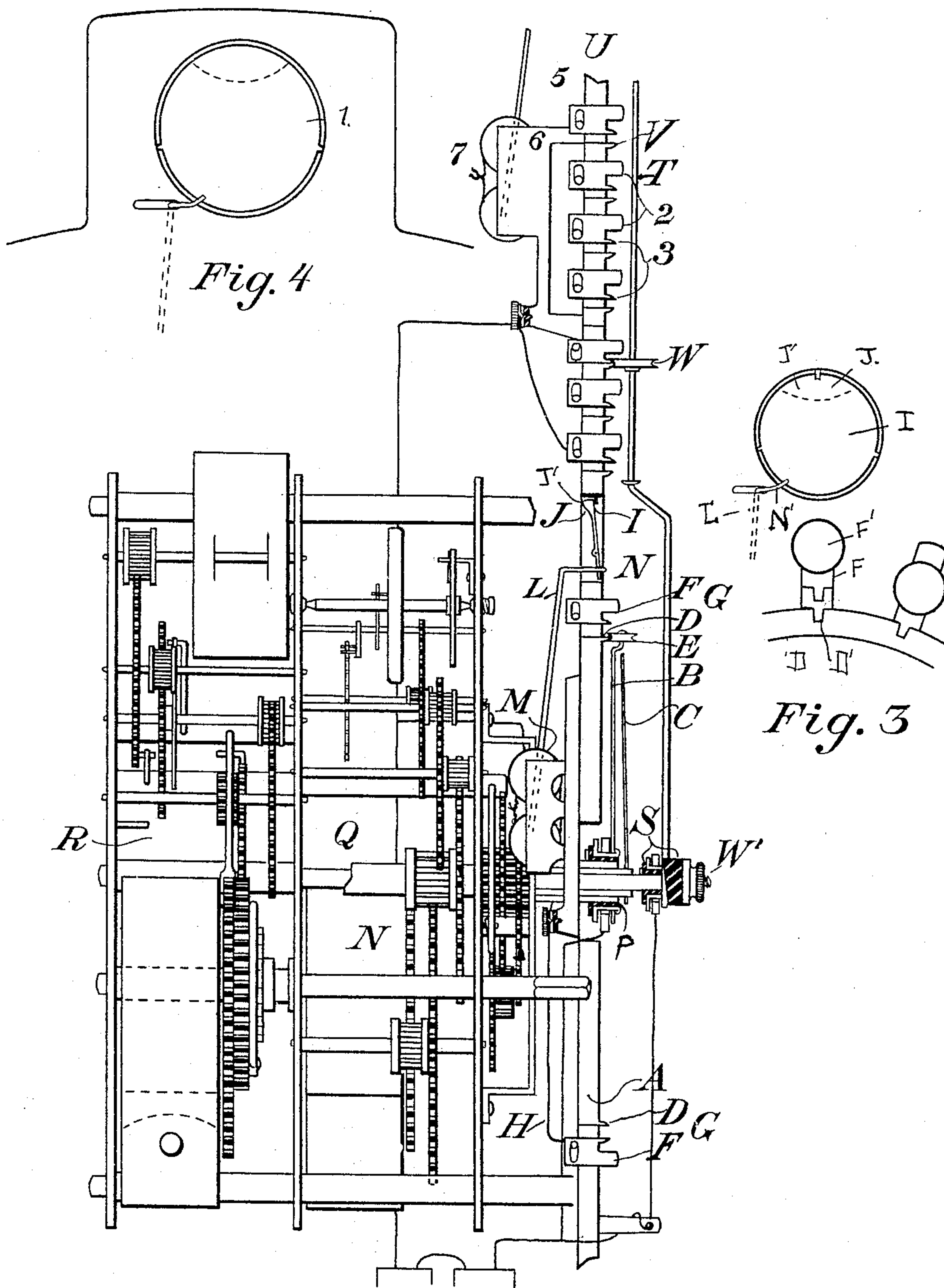
Inventor  
Edward E. Stone  
by  
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2 SHEETS—SHEET 2.



*Witnesses*  
Philip G. Clifford  
Marion Richards.

*Fig. 2*

*Inventor*  
Edward Everett Stone  
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# UNITED STATES PATENT OFFICE.

EDWARD EVERETT STONE, OF PORTLAND, MAINE.

## ELECTRIC PROGRAM-CLOCK.

SPECIFICATION forming part of Letters Patent No. 771,400, dated October 4, 1904.

Application filed March 14, 1904. Serial No. 197,949. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD EVERETT STONE, a citizen of the United States, residing at Portland, in the county of Cumberland and State of Maine, have invented a new and useful Improvement in Clocks, of which the following is a specification.

This invention relates to improvements in clocks, and is designed to provide a clock which will not only designate the time of day and also the day of the month, but at predetermined days and hours show certain indicators or reminders whereby persons looking upon the clock are reminded of some engagement or event to happen and by seeing the indicator so displayed will naturally turn to a memorandum or similar device to ascertain exactly what event is to take place or what appointment or engagement has been made.

Clocks have been previously constructed in which days of the month have been indicated, together with the hours of the day, and also clocks have been constructed where a signal at certain predetermined times is brought into view to suggest that the clock be wound; but I am not aware that clocks embodying the features of this invention have before been made.

In the drawings herewith accompanying and forming part of this application, Figure 1 is a partial view of the face of my improved clock, showing the position of the hour and minute hands, the hour-indicator, the day-hand, and day-indicator. Fig. 2 is a side view of the clock, parts being broken away, showing the mechanism for driving the hour and minute hands, the indicator-hand, and means for operating the indicator. Fig. 3 is a partial front view of the time-dial, showing means for making the electrical contact and the hour-indicator. Fig. 4 is a partial view showing the day-indicator.

In said drawings, A represents the face of a clock which is provided with the usual numerals indicating the hours and minutes.

B and C represent the hour and minute hands, respectively.

Spaced some distance apart from the line containing the figures indicating the hours

and the subdivisions thereof and concentric therewith is placed a raised insulated track D, provided with indentations D' therein. The hour-hand is provided on its outer extremity with a roller or wheel E, provided with a dished or grooved periphery to enable the same to travel over said raised track. The flanges on each side of the groove prevent said wheel from leaving the raised track. Just above said track are a series of slides F, having knobs F' thereon. Said slides are provided with a metallic point which is adapted when the slide is pushed downwardly—that is, toward the raised track—to fit into the indentations D' in the insulated track D, all of which is clearly shown in Fig. 3 in the drawings, and the purpose of which will be hereinafter more fully set forth and described. Connected or attached to said metallic points on the slides F are wires H, which run in any desirable manner to suitable batteries. (Not shown in the drawings.) Placed above said dial is an indicator I, more heavily weighted at the top than at the bottom, as seen at J in Figs. 2 and 3, the natural tendency of the indicator being to tip backwardly, the heavy weighted upper end J' being slightly out of the perpendicular when the indicator is in its normal position. In order to hold this indicator in place, I provide a spring-arm L, which is supported between the poles of the magnet M in any suitable manner, as seen in Fig. 2 of the drawings, said spring-arm being provided with an offset N', which fits over the bottom of the indicator and prevents the same from tipping backwardly until said spring-arm is released by means of an electric current being sent through the poles of said magnet.

The hour and minute hands B and C, respectively, are mounted in the usual manner upon a pinion of the usual class and connected with the ordinary driving mechanism N of said clock. Said hour-hand is carefully insulated from the pinion, as seen at P in Fig. 2.

Q is a shaft running through the pinion operating the hour and minute hands and independent thereof to its driving mechanism R, which in this case is shown as the ordinary "alarm" mechanism, so called, or striking mechanism of a clock and may be attached



to the back of the clock in any suitable manner and is adapted to be wound independently of the ordinary clock driving mechanism. Mounted on this shaft Q and insulated therefrom, as seen at S in Fig. 2, is a hand T, which is hereinafter designated as the "day-hand" and serves to indicate the day of the month.

Above the clock-dial is arranged a dial U, upon which are arranged the days of the month and the months. These are arranged, as seen in Fig. 1, in spiral lines extending around the face of said day-dial, the space devoted to each day being placed a predetermined distance apart from the next preceding or the one following. There is also placed on said dial a raised insulated track V, which track is provided with indentations V' and extends in spiral lines over the day-dial, intersecting the points used to indicate the days of the month. The day-hand T is provided with a wheel W, with a dished or grooved periphery loosely mounted upon said day-hand, so that as the hand travels over the spirally-disposed track the wheel will continuously keep on the track and in so doing will naturally move upwardly toward the end of the hand, as said track is arranged in the form of a spiral on said day-dial. In order to insure the contact of the day-hand and its movable wheel upon the track at all times, said day-hand is securely held upon its pinion in any suitable manner; but in order to prevent any play in the hand I provide a thumb-nut W', which can be screwed up to any degree of tightness. There is also provided at the top of the day-dial an indicator 1 of the same kind and description as indicator I, previously described, and it is operated by independent mechanism, but of substantially the same kind and description as previously described as relating to indicator I.

Arranged on the day-dial and above the tracks are a series of slides 2, carrying on their lower end metallic tips 3, which said tips are adapted to fit into indentations 5 in the track as the occasion requires. Attached to said metallic points on the slides are the wires 6, which run to suitable batteries. (Not shown in the drawings.) Should a person desire to be reminded that a certain engagement has been made or a certain event to take place—as, for instance, on the thirtieth day of July—and desires to be reminded of the same at that time, he pushes downwardly the button, which is placed on the dial near the place where the thirtieth day of July is marked, there being as many buttons on the day-dial as there are days in the year, until the metallic point on the slide fits into the indentations 5 on the track. When the day-hand reaches the spot indicating the thirtieth day of July, the wheel on said hand while passing over the track comes in contact with the metallic tip on the slide which has been pushed downwardly into the

track. Said metallic tip being a good conductor, an electric circuit is thereby made. The current will then be carried through the wires 6 to the magnet 7 at the rear of the face of the clock. The circuit passing through the magnet causes the bent arm to spring away from the indicator. This will enable the weighted end of the indicator to fall backwardly, and by so doing show either a different-colored disk or some printed words thereon, reminding the person that something was to take place at that date. When the hand has traveled past the pin, the circuit is then broken and will be completed only when the wheel on the day-arm travels over a portion of the track where a pin has been pushed downwardly. The track itself being at all times insulated, an electric circuit is only completed when the pin carrying the metallic tip is brought into contact with the wheel on the day-hand, so that as the wheel on the day-hand travels over this metallic portion a circuit is completed. Should it be desired after it has been indicated that a certain event is to happen on a certain day, to fix a time at which the matter indicated therein shall be attended to, the person goes through a similar process with the buttons on the time-dial of the clock, so that the indicator above the clock-dial will be changed, indicating to the person at what time the appointment is to take place.

In said drawings I have shown a specific manner of driving both the hour and minute hands and day-hand; but I do not wish to be limited to the exact driving mechanism therein shown—as, for instance, the day-hand may travel intermittently or continuously, as desired, without departing from the spirit of this invention. It is of course understood that the mechanism will be inclosed in a suitable case of such form and workmanship as to make the whole device attractive and convenient.

The object of my invention is to provide a clock which combines not only a device for telling the time of day, but the day of the month, and also for calling attention to the fact, when desired, that certain engagements or appointments have been made for a certain day and, further, in making a clock that will indicate at specified times, either at the hour or subdivisions thereof, at what time of the day the engagement is to take place.

I do not limit myself to the exact details of construction and arrangement as shown and described, for the same may be varied without departing from the true spirit of my invention.

Having thus described my invention and its use, I claim—

1. In a reminder-clock, in combination, dials having arranged thereon the hours of the day and the days of the month, day, hour and minute hands, mechanisms for driving said hands, raised insulated tracks provided with



indentations on the dials, slides on said dials carrying on their lower end metallic points adapted when pushed downwardly to fit into the indentations in the tracks, the day-hand and hour-hand being provided with wheels adapted to traverse said raised tracks and when brought in contact with said metallic tips to complete an electric circuit and bring into view an indicator.

2. In a reminder-clock, in combination, dials having imprinted thereon the hours of the day and days of the month, day, hour and minute hands, raised insulated tracks provided with indentations on said dials, the tracks on the day-dial being spirally arranged, slides having metallic tips adapted to be pushed downwardly and fit into the indentations in said track, grooved wheels on the hour and day hands adapted to traverse said tracks and when passing over the metallic portions of said slides to complete an electric circuit and bring into view an indicator.

3. In a reminder-clock, in combination, dials having imprinted thereon the hours of the

day and days of the month, raised insulated tracks provided with indentations on said dials, the tracks on said day-dial being spirally arranged thereon, day and month hands actuated by suitable driving mechanisms, wheels mounted on said day and hour hands, said wheels having grooved peripheries and adapted to traverse said raised tracks, the wheel on the day-hand being capable of adjustment to and from the pivot-point as it traverses said raised tracks, slides provided with metallic portions adapted to fit into the indentations in said raised tracks, whereby when said wheels traverse said metallic portions an electric circuit is made and suitable indicators are brought into view.

In testimony whereof I hereto affix my name, in presence of two subscribing witnesses, this 11th day of March, 1904.

EDWARD EVERETT STONE.

In presence of—

NATHAN CLIFFORD,  
CLIFFORD C. LE GROW.