

No. 725,900.

PATENTED APR. 21, 1903.

J. WEATHERBY, JR.
ELECTRIC TIME CONTROLLER.
APPLICATION FILED AUG. 11, 1902.

NO MODEL.

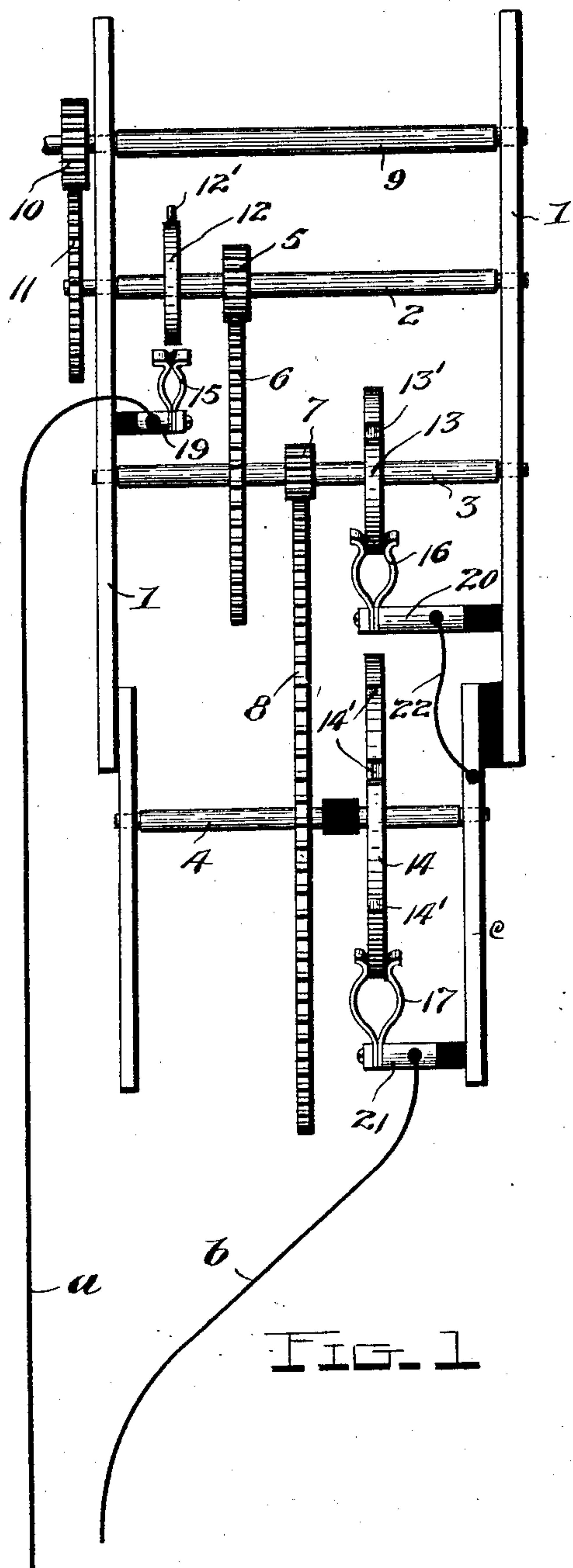


FIG. 2

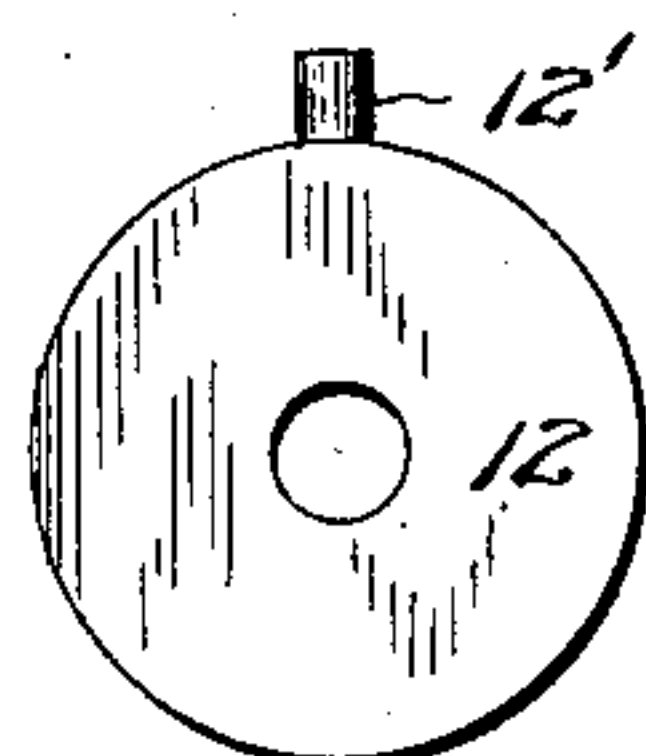


FIG. 3

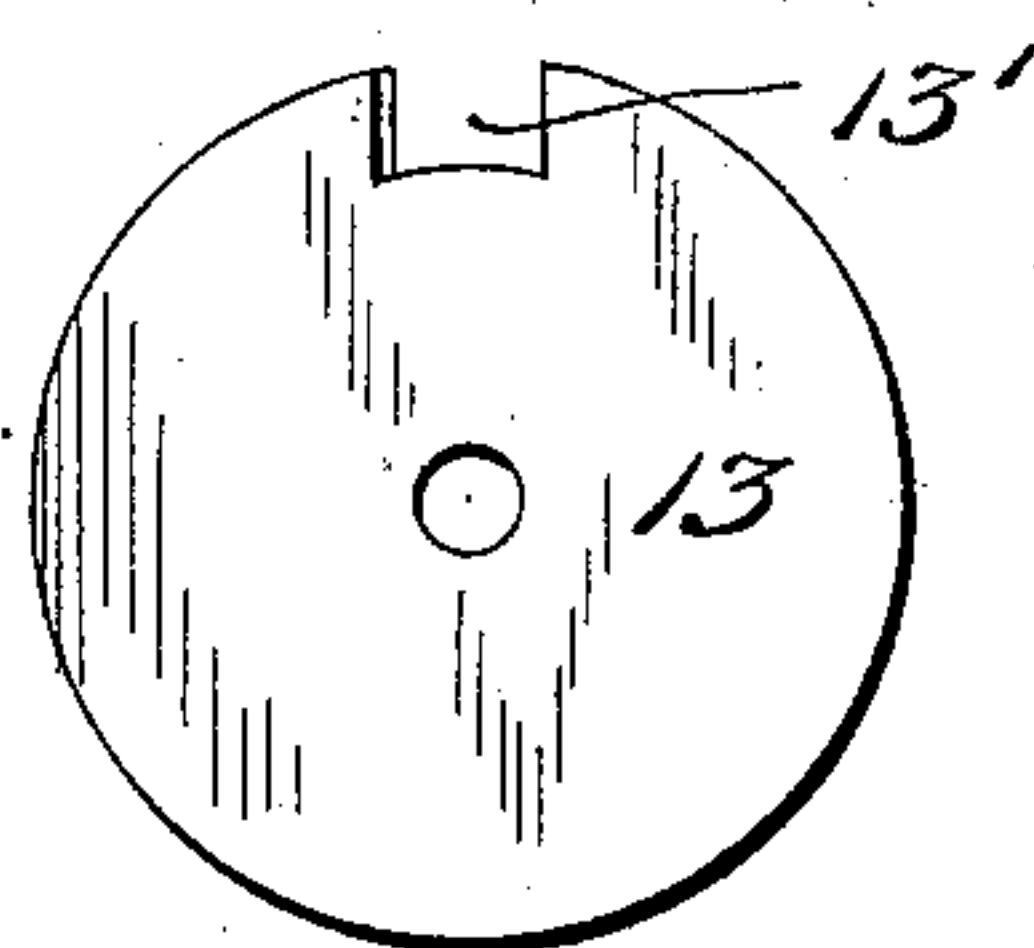
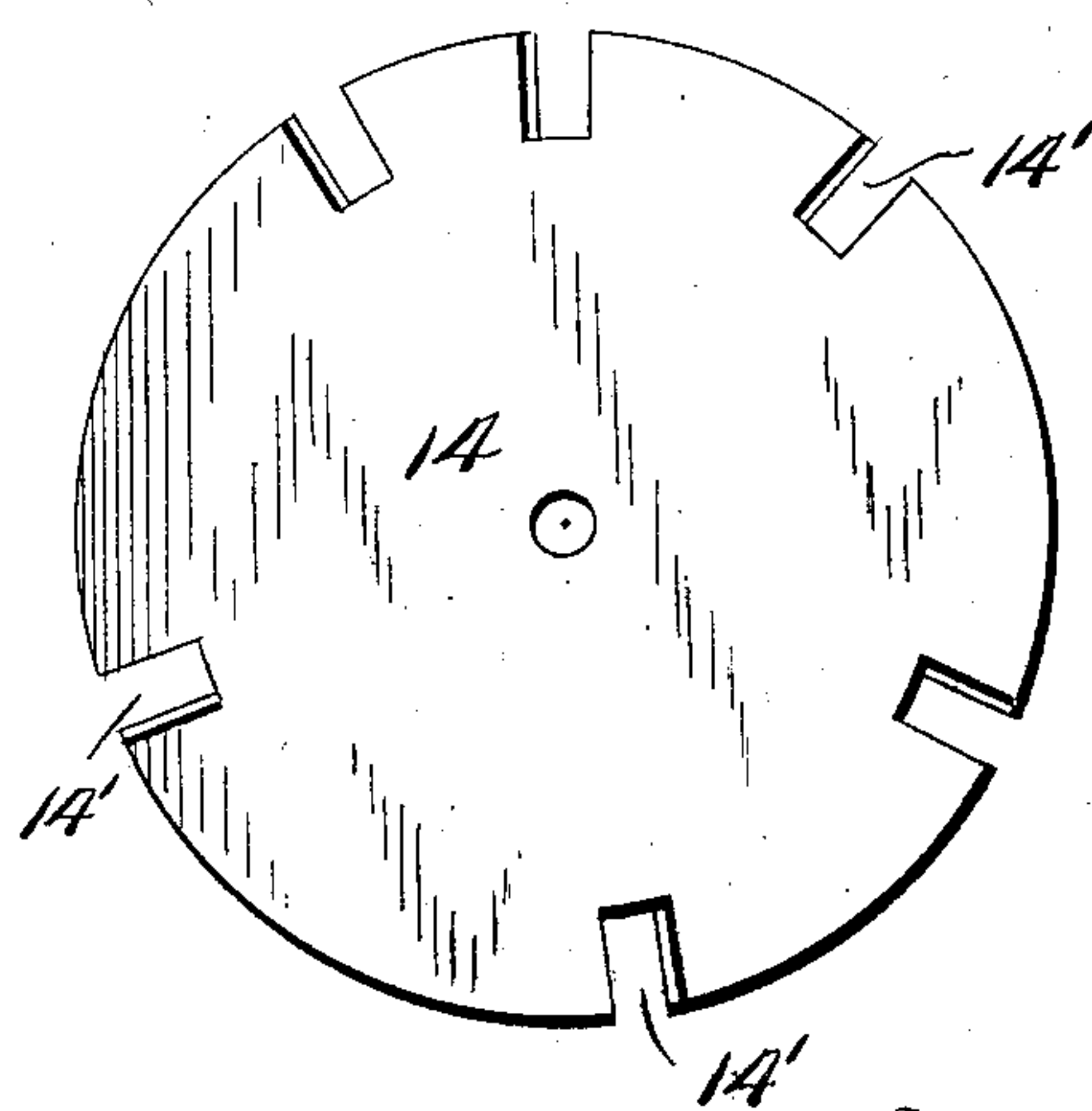


FIG. 4



Inventor

J. Weatherby, Jr.

Witnesses

J. A. Grubauer Jr.
Quinn

By

A. B. Wilson & Co.

Attorneys

UNITED STATES PATENT OFFICE.

JOSEPH WEATHERBY, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
TO S. O. SPRING, OF PEORIA, ILLINOIS.

ELECTRIC TIME-CONTROLLER.

SPECIFICATION forming part of Letters Patent No. 725,900, dated April 21, 1903.

Application filed August 11, 1902. Serial No. 119,294. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH WEATHERBY, Jr., a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Electric-Circuit Controllers; and I do 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.

The invention relates to an electric-circuit controller, and more particularly to a device of this character designed for use in connection with my improved electric protective system described in an application for patent filed simultaneously herewith, Serial No. 119,293, and therein referred to as being designed for the purpose of closing at predetermined intervals of time the shunt-circuit.

The object of the invention is to provide a controller of this character which shall be simple of construction, durable in use, comparatively inexpensive of production, and certain and efficient in action, whereby the shunt-circuit may be closed daily for a certain period—as, for instance, one hour in the morning, say between eight and nine o'clock—to enable a properly-authorized person to enter the safe or vault without sounding an alarm, and after the safe has been opened and has again been closed the circuit will remain open, so that in the event of a person, either authorized or unauthorized, attempting to gain access to the safe or vault an alarm will be sounded. Furthermore, to provide a “week-switch” for preventing the closing of the circuit by the “day-switch” on Sundays, and thus rendering it impossible for an authorized person to open the safe on Sunday at that hour the day-switch closes the circuit daily, and, finally, to provide a “year-switch” which is constructed with blanks or spaces corresponding to the legal holidays of the year, whereby on said holidays the circuit will remain open and the safe or vault be prevented from being entered by an authorized person at that hour in the morning when the safe opens on working days.

With the above and other objects in view, which will readily appear as the nature of

the invention is better understood, said invention consists in certain novel features of construction and combination and arrangement of parts, which will be hereinafter fully described and claimed, and illustrated in the accompanying drawings, in which I have conventionally illustrated the invention, and in which—

Figure 1 is a side elevation of so much of the clock mechanism as is necessary in order to illustrate the invention. Figs. 2, 3, and 4 are views, respectively, of the day, week, and year switches.

a and *b* are the sides of a circuit designed to be closed at predetermined intervals of time and may correspond to and are preferably the sides of the shunt-circuit used in my improved protective system hereinbefore referred to.

1 denotes the frame of the circuit-controller; 2, the day-shaft; 3, the week-shaft, and 4 the year-shaft, each of which is journaled in the side pieces of the frame and is connected by a train of reducing-gearing, (designated by the numerals 5, 6, 7, and 8,) so that the shaft 2, which receives its power from a drive-shaft 9, connected to said shaft 2 by gears 10 and 11, will make a complete revolution once daily, the shaft 3 will make a complete revolution once weekly, and the shaft 4 will make a complete revolution once yearly. The drive-shaft may be operated by any suitable means, and as this means forms no part of the present invention it is not thought necessary to show or describe the same.

The shafts 2, 3, and 4 are provided with, respectively, rotary elements 12, 13, and 14, preferably in the form of disks, and each of which constitutes one part of the day, week, and year switches, the other parts of said switches being preferably in the form of brushes 15, 16, and 17 to coact with the rotary elements and make and break the circuit. The disk 12 is provided with a pin 12', which is adapted to engage the brushes 15, and thus complete the circuit, and as this wheel turns slowly in engagement with the brushes the brushes may be so proportioned as to require at least an hour for the pin to disengage the brushes, thus giving ample time for a properly-authorized person to enter the safe or

vault without sounding an alarm. The disk 13 is provided with a blank 13', which is designed to prevent the closing of the circuit by the brushes 15, being engaged by the pin 12' Sunday mornings. During week days other than legal holidays the brushes 16 are in engagement with the sides of the disk, and the making and breaking of the circuit is effected by the disk 12. The disk 14 is provided with several blanks 14', corresponding in number to the number of legal holidays in the year, so that on those particular holidays the blanks of said disk will be opposite brushes 17, thus preventing closing of the circuit, even though the pin 12' is in engagement with its brush 15. The brushes 15, 16, and 17 are secured to binding-posts 19, 20, and 21, connected to and insulated from the frame. To the binding-post 21 is connected the side *b* of the shunt-circuit, while the side *a* of said circuit is connected to the binding-post 19.

22 denotes a branch wire connected to the binding-post 20 and to the frame at 23.

When the parts are in the position shown in Fig. 1 of the drawings, the circuit is broken. The instant the pin 12' contacts with the brushes 15 and the brushes 16 and 17 are in engagement with the sides of their respective disks the circuit is through the wire *a*, the binding-post 19, the brush 15, disk 12, the gears 5 and 6, the shaft 3, disk 13, the brushes 16, the wire 22, the part *c* of the frame, the shaft 4, the disk 14, the brushes 17, binding-post 21, and the wire *b*. Assuming that it is Sunday morning, the instant the pin 12' of disk 12 contacts with the brushes 15 the brushes 16 arrive opposite the blank or space 13' of the disk 13, so that the circuit, although tending to be closed by the disk 12, remains open by the fact that it is broken between the brushes 16 and the disk 13. Assuming it to be a legal holiday, the instant in the morning that the pin 12' of the disk 12 contacts with the brushes 15 one of the blank spaces 14' of the disk 14 will come opposite the brushes 17, and thus, as in the case of Sundays, the disk 12' will be prevented from

completing the circuit, for the reason that it is broken between disk 14 and brushes 17.

From the foregoing description, taken in connection with the accompanying drawings, it is thought that the construction, mode of operation, and advantages of my improved circuit-controller will be readily apparent without requiring a more extended explanation.

It is of course understood that the controller is adapted to be placed within a safe or vault designed to be protected, and therefore cannot be tampered with by persons on the outside.

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

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination with the supporting-frame, shafts 2, 3 and 4 journaled therein, a shaft 9 geared with the shaft 2 for rotating it, disks 12, 13 and 14 fixed to the shafts 2, 3 and 4, the first-named disk being provided with a pin, and the remaining disks being provided with blanks, brushes located in positions, one to engage said pin and the others to engage the sides of the disks, a train of gearing connecting the shafts 2, 3 and 4, insulated posts 19, 20 and 21 connecting the brushes to the supporting-frame; of wires *a* and *b* one connected to the post 19 and the other to the post 21, and a wire 22 connected to the supporting-frame at 23 and to the post 20, substantially as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOSEPH WEATHERBY, JR.

Witnesses:

J. CHESTER WILSON,
V. V. SHOCKLEY.