

No. 776,955.

PATENTED DEC. 6, 1904.

A. SPERLING.
WINDING INDICATOR.

APPLICATION FILED JAN. 23, 1904.

NO MODEL.

3 SHEETS—SHEET 1.

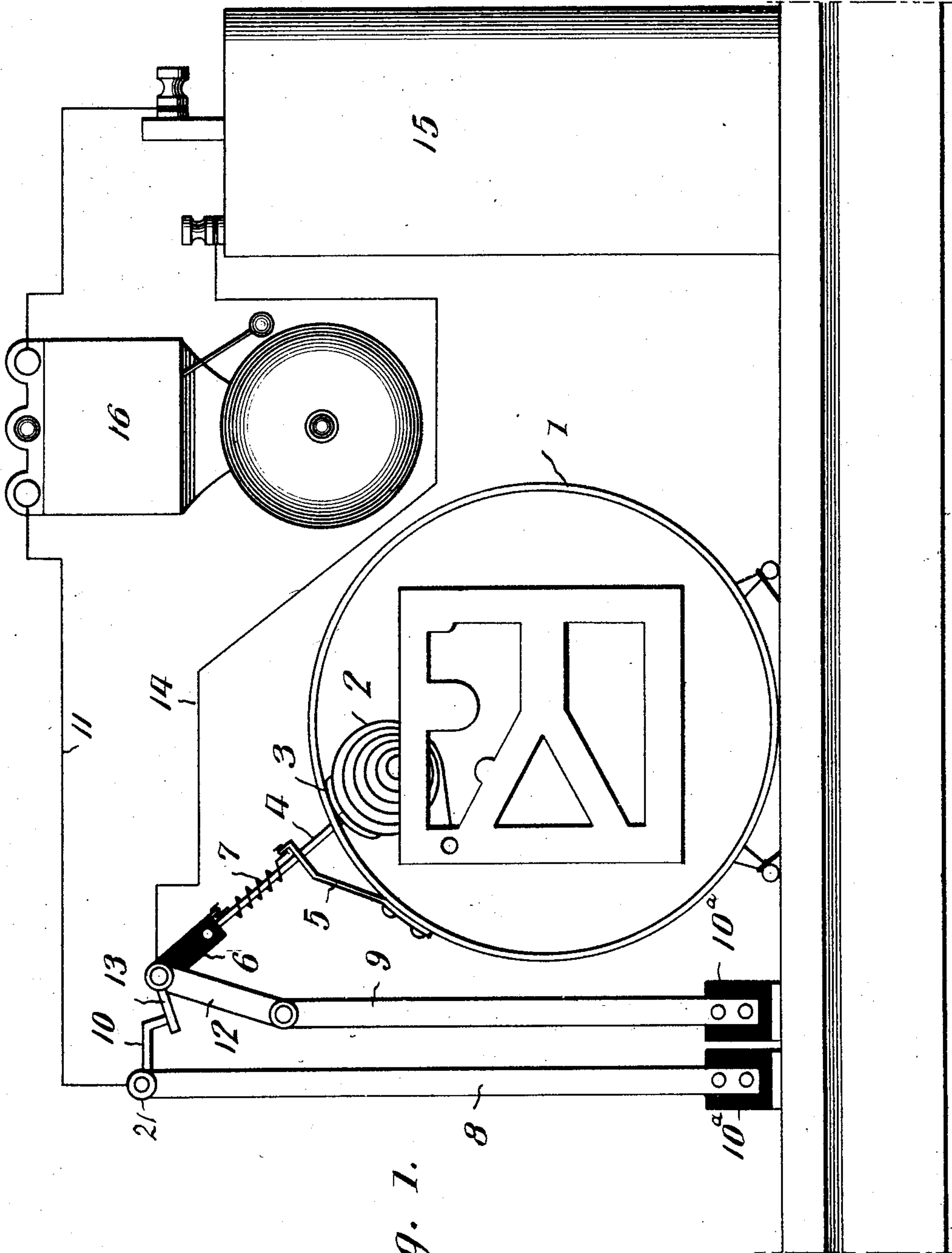


Fig. 1.

WITNESSES:

J. W. Rice
Albert D. Lawson

INVENTOR
Abraham Sperling.

BY
Victor J. Evans
Attorney

No. 776,955.

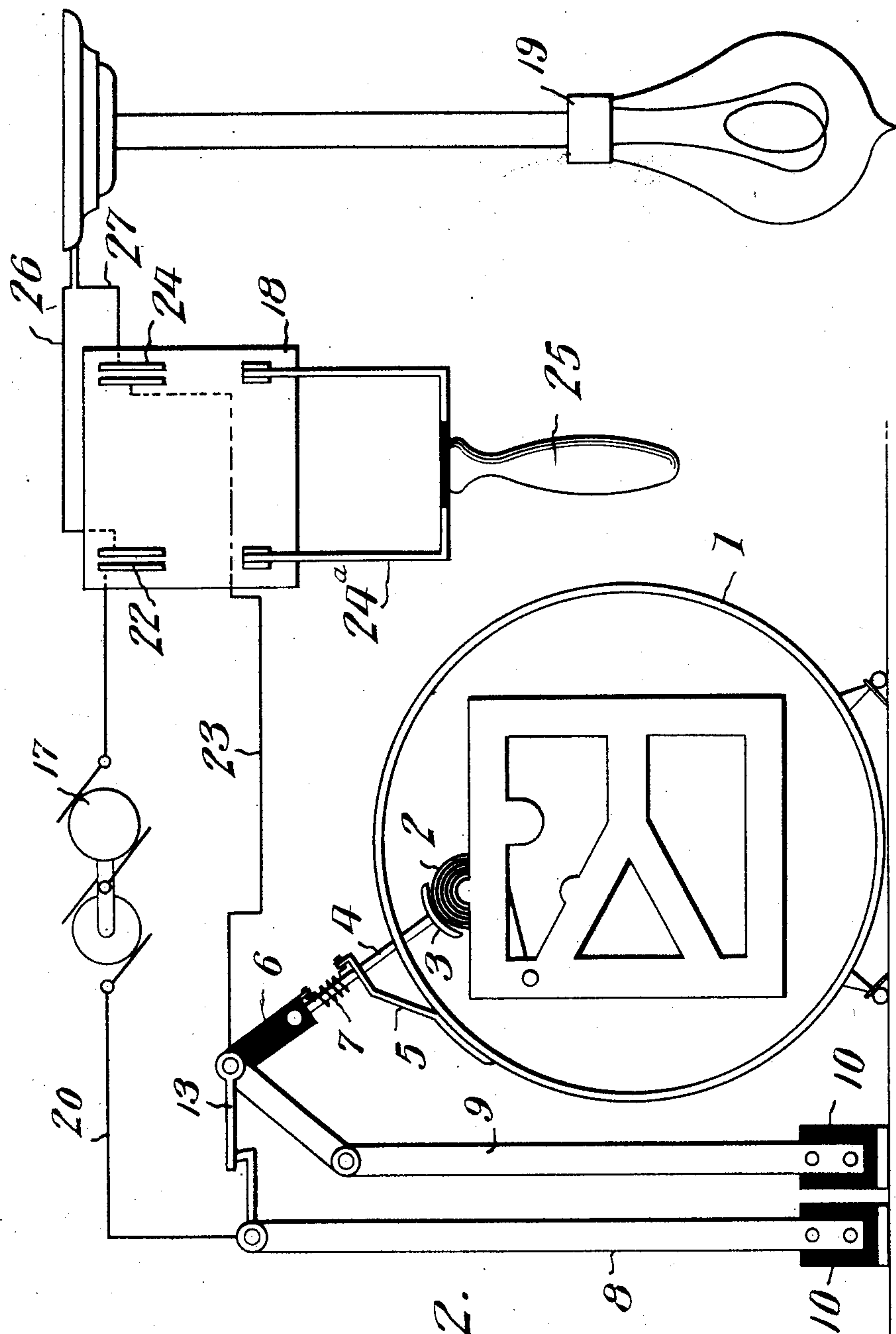
PATENTED DEC. 6, 1904.

A. SPERLING.
WINDING INDICATOR.

APPLICATION FILED JAN. 23, 1904.

NO MODEL.

3 SHEETS—SHEET 2.



WITNESSES:

F. W. Day
Herbert D. Lawson

Fig. 2.

INVENTOR
Abraham Sperling.

BY
Victor J. Evans Attorney

No. 776,955.

PATENTED DEC. 6, 1904.

A. SPERLING.
WINDING INDICATOR.

APPLICATION FILED JAN. 23, 1904.

NO MODEL.

3 SHEETS—SHEET 3.

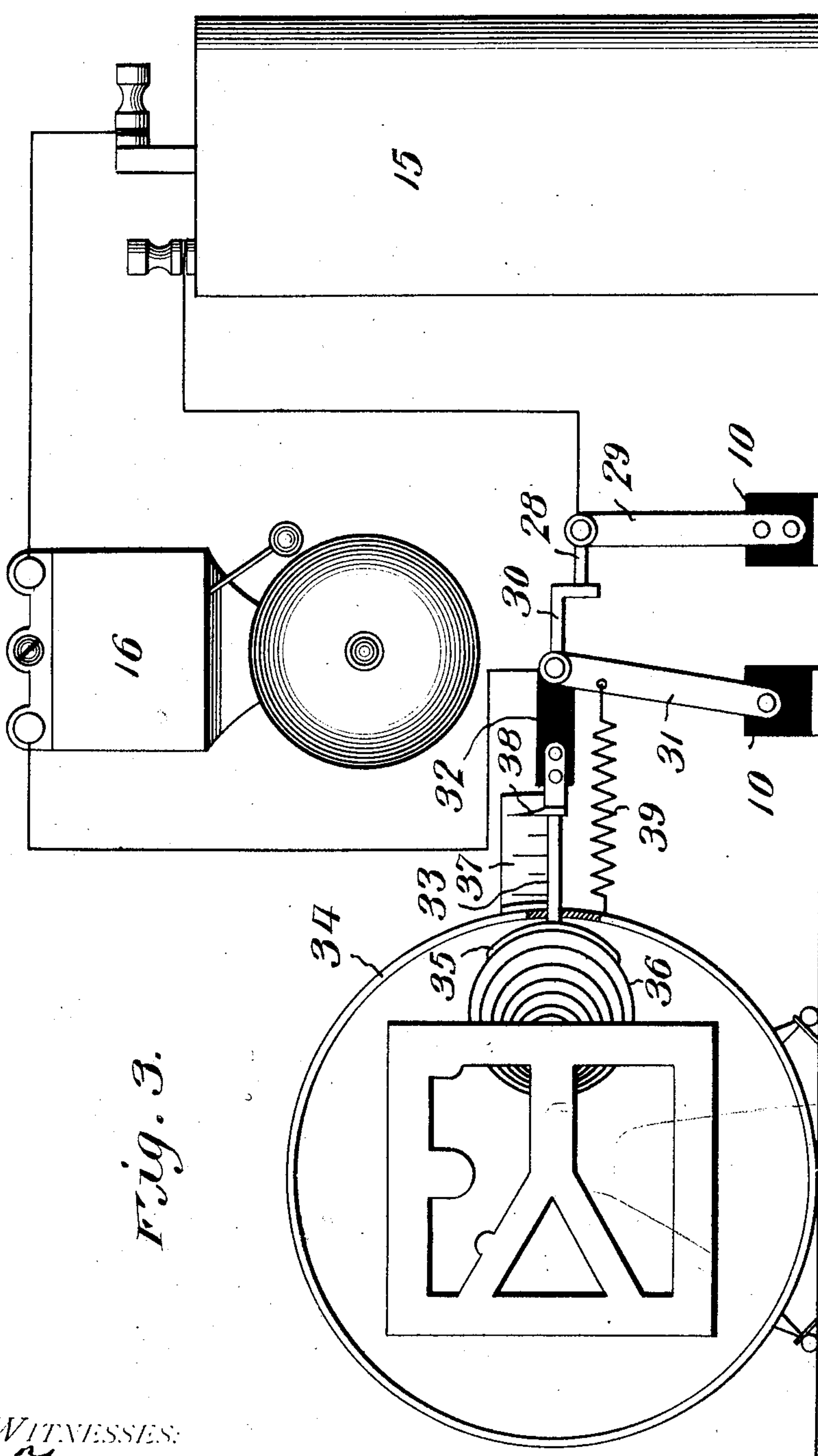


Fig. 3.

WITNESSES:

J. W. Riley.
Herbert D. Lawson.

INVENTOR

Abraham Sperling.

BY

Victor J. Evans
Attorney

UNITED STATES PATENT OFFICE.

ABRAHAM SPERLING, OF NEW ORLEANS, LOUISIANA.

WINDING-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 776,955, dated December 6, 1904.

Application filed January 23, 1904. Serial No. 190,355. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM SPERLING, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented new and useful Improvements in Circuit-Closers, of which the following is a specification.

My invention relates to new and useful improvements in electrical attachments for alarm-clocks, whereby the operation of the alarm mechanism of the clock will result in the making or breaking of the circuit in which a portion of the attachment is included. The device is especially adapted for operating an electric alarm which will be continuously sounded until the alarm mechanism within the clock is reset or for lighting or extinguishing one or more electric lamps included within the circuit.

Another object of the invention is to provide a gage which is connected to the attachment and is adapted to indicate when the alarm of the clock requires rewinding.

With the above and other objects in view the invention consists of a stem slidably mounted in the clock-casing and having a shoe adapted to bear at all times upon the spring of the alarm mechanism within the clock. This stem is connected to a movable contact which is adapted to be shifted from or toward a stationary contact, and both contacts are included within a circuit which includes a source of electricity, and a lamp, alarm, or other device to be operated by a current passing through the circuit.

The invention also consists in the further novel construction and combination of parts hereinafter more fully described and claimed, and illustrated in the accompanying drawings, showing the preferred form of my invention, and in which—

Figure 1 is a diagrammatical view showing my improved apparatus used in connection with a circuit including a bell. Fig. 2 is a similar view of a modified form of apparatus connected to a circuit including a lamp; and Fig. 3 is a view of one form of apparatus connected to an alarm-circuit, said circuit being shown diagrammatically.

Referring to the figures by numerals of

reference, 1 is a clock-casing which can be of any suitable form and is adapted to contain alarm mechanism of any preferred construction and employing a mainspring 2 for operating the alarm. This spring contacts at all times with a curved shoe 3, arranged at the inner end of a stem 4, which is slidably mounted in the casing and within a bracket 5, rigidly secured to the casing. The outer end of stem 4 is pivoted within a link 6, and a spring 7 incloses a portion of the stem and is secured at opposite ends to the link and the bracket, respectively. Standards 8 and 9 are secured to blocks 10^a of insulating material, and extending from standard 8 is a contact 10, electrically connected to one wire 11 of a circuit, while a strip 12 is pivoted to the standard 9 and link 6 and has a movable contact 13 thereon, adapted to be shifted into position against the contact 10. The link 6 is preferably formed of insulating material, and the contact 13 connected thereto is electrically connected to a wire 14 of the circuit referred to. The circuit formed by the two wires 11 and 14 may include a source 15 of electricity and a bell 16, as shown in Fig. 1. In said figure the source is in the form of a battery; but, if desired, the circuit may include a motor-generator 17, as shown in Fig. 2, and a switch 18. Also in lieu of the bell one or more lamps 19 may be included within the circuit. In this view, Fig. 2, I have shown the wires of the circuit connected to the switch in the following manner: The wire 20, extending from the stationary contact 21, is electrically connected to one of a pair of insulated contacts 22, and the wire 23 of the circuit is similarly connected to one of another pair of insulated contacts 24. The contacts of each pair are adapted to be placed in circuit by arms 24^a, pivoted adjacent the contacts and connected together, but insulated from each other. These arms are adapted to be operated by means of a handle 25 connected thereto. The contacts 22 and 24, which are normally removed from the wires 20 and 23, are connected to wires 26 and 27, which include the device or devices to be operated by the current. The contact 21 used in this form of apparatus is preferably so arranged that the outward movement of the movable

contact 13 will break and not make a circuit between wires 20 and 23.

The operation of the forms of apparatus herein described is as follows: The spring of the clock is wound, and mechanism may be provided whereby this spring will unwind at a predetermined time. The spring 7 serves to hold the shoe 3 at all times in contact with the spring 2 of the alarm. It will therefore be seen that with the form of apparatus shown in Fig. 1 when the alarm is wound the contact 13 will be removed from the contact 10 and when the alarm is sounded the expanding-spring 2 will slide the stem 4 outward and complete a circuit between wires 11 and 14 and through the contacts 10 and 13. The bell 16 will thus be sounded continuously until the spring 2 is rewound and the alarm again set. During the winding of the spring shoe 3 will be held in contact therewith by spring 7. By arranging the contacts as shown in Fig. 2 the unwinding of the spring 2 will result in the breaking of the circuit through the wires, and therefore if said circuit includes one or more lamps and the source of electricity it will be seen that the lamps will be promptly extinguished. This construction is shown in Fig. 2, in which a switch 18 is also provided for permitting the lamps to be extinguished at any time prior to the unwinding of the spring 2.

While I have shown a bell included in the circuit illustrated in Fig. 1 and a lamp included in the circuit shown in Fig. 2, it is to be understood that I do not restrict myself in the use of these devices in connection with the apparatus disclosed, for the reason that one may be substituted for the other or both included in each circuit, or, if desired, any other devices may be included within the circuit to adapt them to be operated by the current.

In Fig. 3 is shown an apparatus substantially similar to that hereinbefore described, but which includes a gage for indicating

whether or not the alarm has been wound. By referring to this figure it will be seen that a fixed contact 28 is secured to a standard 29 and that a movable contact 30 is secured to a pivot-strip 31, insulated from the standard 29. This strip is connected, by means of a link 32 of insulating material, with a stem 33, slidably mounted in the clock-casing 34 and having a shoe 35, which bears upon the alarm-spring 36. A bracket 37 is connected to the casing 34 adjacent stem 33 and has graduations thereon. An index 38 is secured to the strip 31 and is adapted to move over the bracket 37. A spring 39 is connected at opposite ends to casing 34 and strip 31 and is adapted to exert an inward pressure upon the stem 33 and its shoe. With this form of apparatus it will be seen that the condition of the spring 26 will be indicated accurately by the position of the index 38 upon bracket 37. Otherwise the operation of the device is exactly similar to that of the apparatus shown in Fig. 1.

Having thus described the invention, what is claimed as new is—

The combination with a clock-casing having a coiled spring therein adapted to automatically unwind; of a stem longitudinally movable within and projecting from the casing, a shoe at one end thereof, a graduated bracket affixed to the casing adjacent the stem, an index upon the stem, a stationary contact, a movable contact connected to the stem, a pivoted strip connected to the stem, a spring secured at opposite ends to said strip and the clock-casing whereby the shoe is held normally in contact with the coiled spring, and an alarm included in a circuit with the contacts and with a source of electricity.

In testimony whereof I affix my signature in presence of two witnesses.

ABRAHAM SPERLING.

Witnesses:

LYTTON BERKSON,
LIONEL GRADWOHL.