

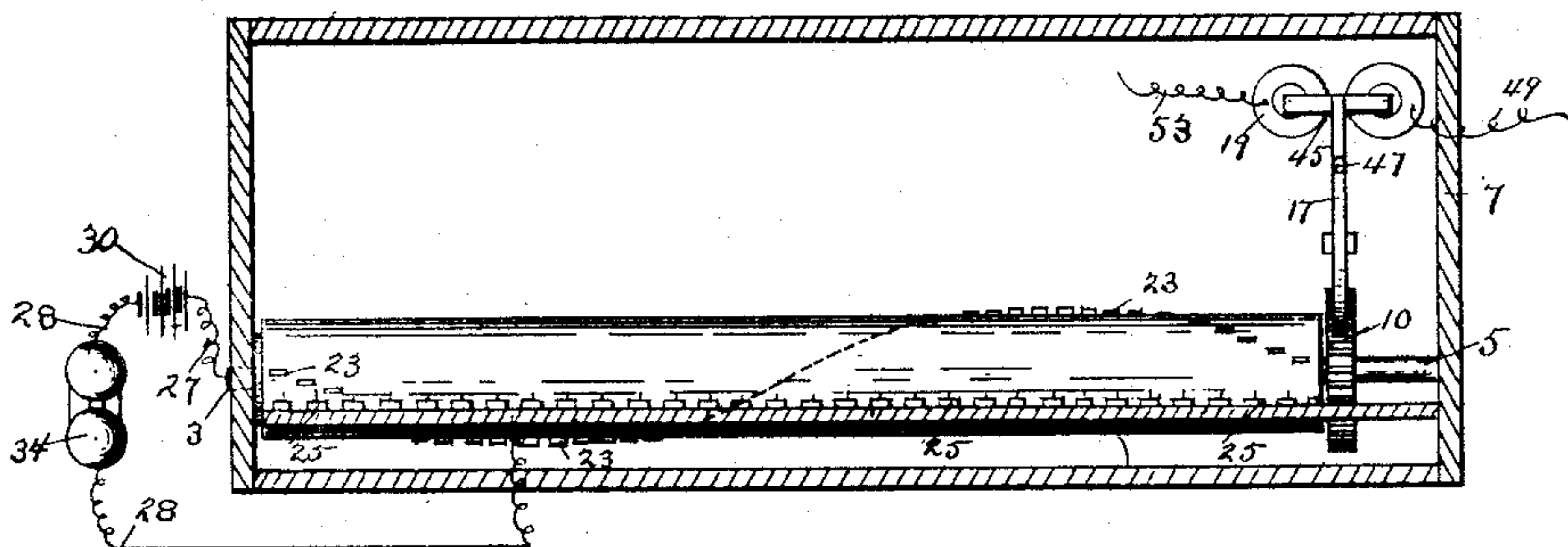
(No Model.)

A. STRIEMER.
ELECTRIC GUEST CALL.

No. 438,653.

Patented Oct. 21, 1890.

Ex. 1



Feb 2

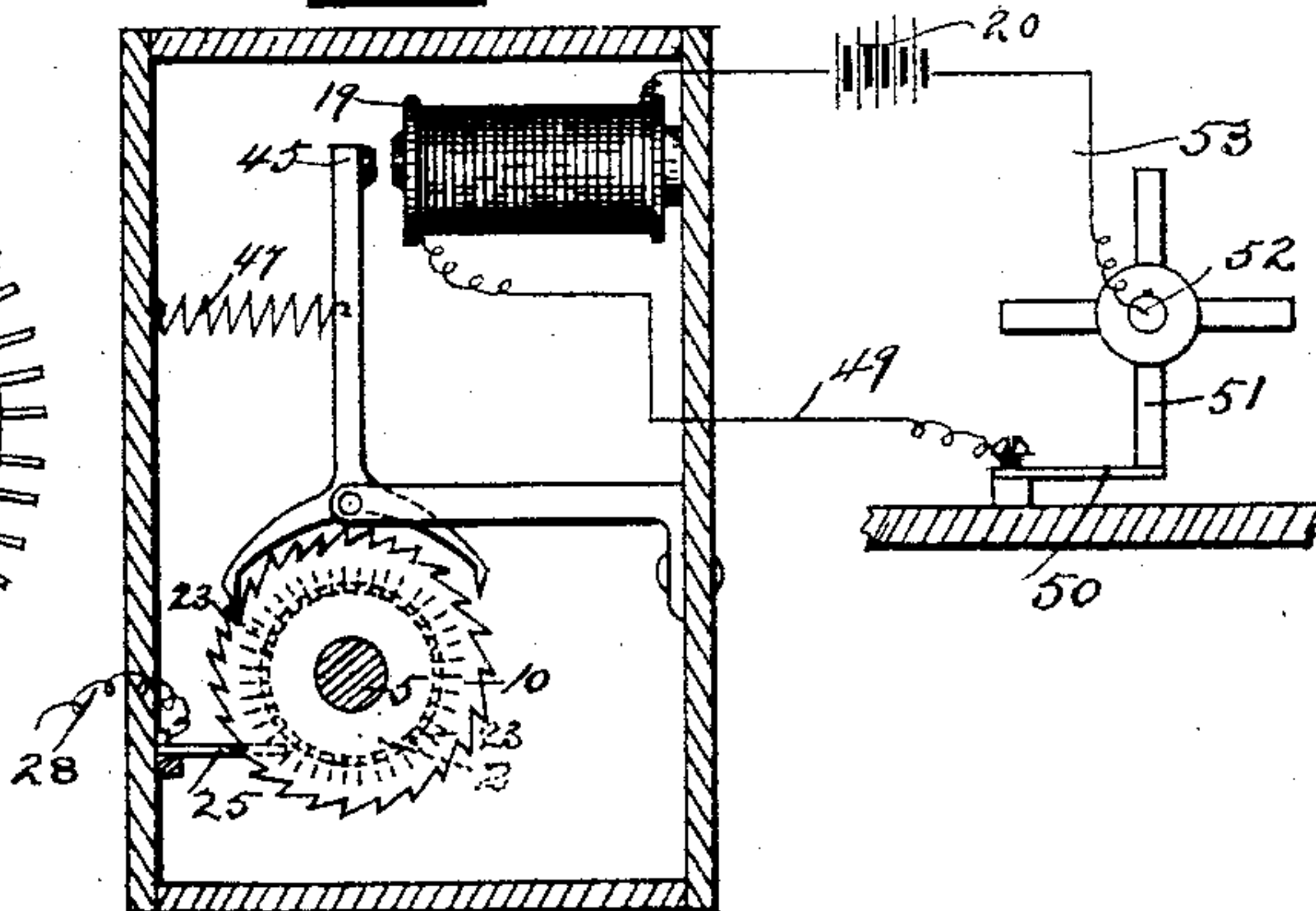


Fig. 3.

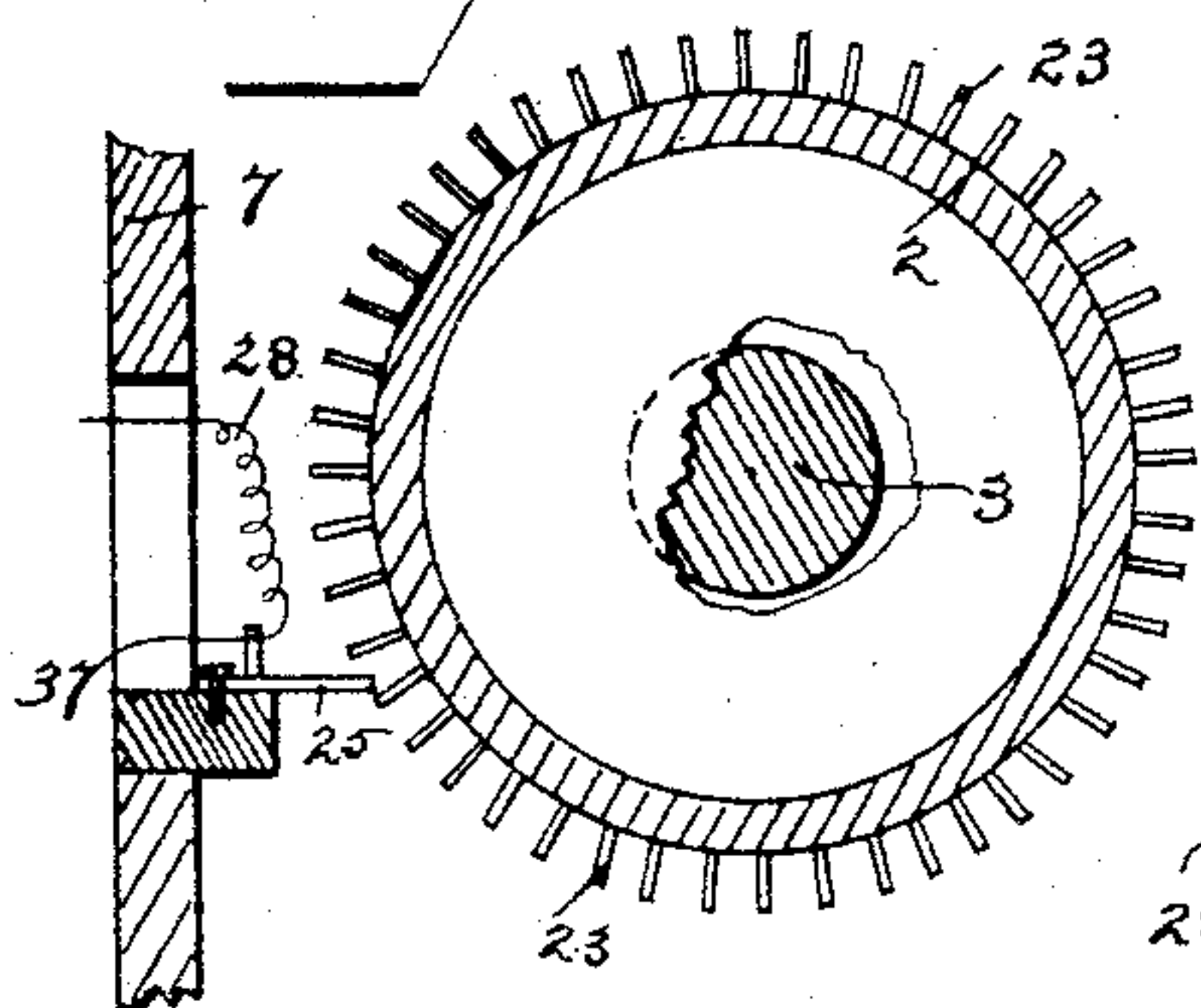
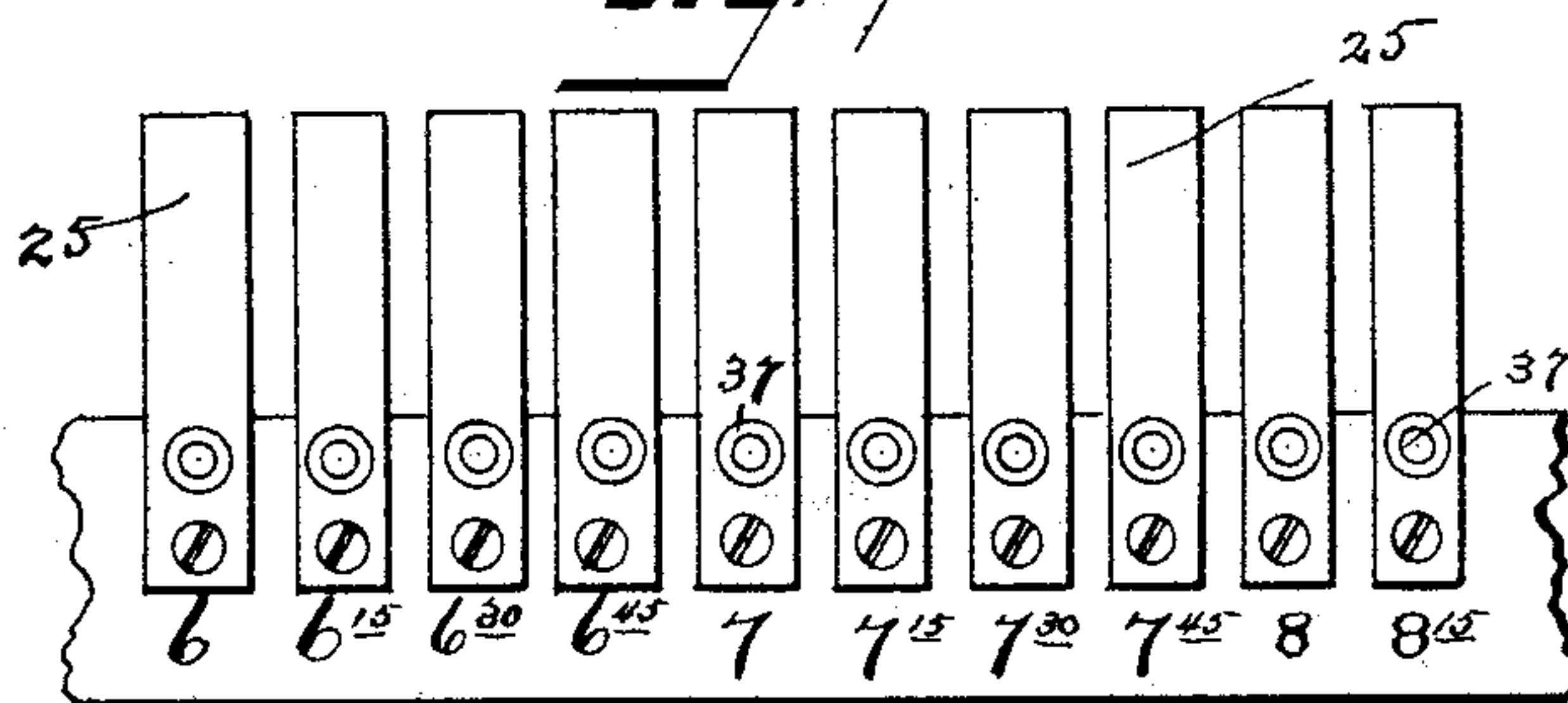


Fig. 4.



Witnesses

Alfred T. Sage

Inventor

Alexander Striemer
by Paul Theron
Attorneys

Attorneys.

UNITED STATES PATENT OFFICE.

ALEXANDER STRIEMER, OF SLEEPY EYE, MINNESOTA.

ELECTRIC GUEST-CALL.

SPECIFICATION forming part of Letters Patent No. 438,653, dated October 21, 1890.

Application filed March 28, 1890. Serial No. 345,797. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER STRIEMER, of Sleepy Eye, in the county of Brown and State of Minnesota, have invented certain new and useful Improvements in Guest-Calls, of which the following is a specification.

My invention relates to devices intended for use in hotels for ringing a bell in any room or apartment automatically at any hour desired; and the invention consists, generally, in a device having a series of circuit making and breaking projections arranged to make and break electric circuits at certain intervals, as desired. The call-bell of any room is adapted to be placed in circuit with such circuit make and break device, so that at the desired hour the bell in the room will be rung for a given time and will then stop ringing. The circuit make and break devices are arranged to conform to uniform divisions of time.

The invention consists, further, in the construction and combination hereinafter described, and particularly pointed out in the claims.

In the accompanying drawings, forming a part of this specification, Figure 1 is an elevation of my improvement with the front walls broken away to show the several parts. Fig. 2 is an end view showing the ratchet-wheel, the bifurcated lever, and the electrical connection with the circuit-closing mechanism. Fig. 3 shows the manner of making the electrical connection of the bell-circuit. Fig. 4 is a detail of the springs, showing manner of arranging them.

In constructing this device I prefer to use a hollow metal cylinder 2, adapted to be rotated upon suitable short shafts 3 and 5, secured thereto and having suitable bearings in the main frame 7 of the device. A ratchet-wheel 10 is turned by the bifurcated ratchet-lever 17, which is moved in one direction by means of the magnet 19 in an electrical circuit with battery 20 and in the other direction by a spring 47. Upon the cylinder 2 is arranged a series of projections 23—one for each division—into which the twenty-four hours may be divided, and arranged so that as the cylinder 2 is rotated each successive projection is brought to the same longitudinal

plane occupied by the preceding projection. Alongside the cylinder 2 is arranged a series of metal springs 25, secured in any suitable manner to the frame 7 and adapted to register with the projections 23 on the cylinder and to be successively struck by said projections as the cylinder 2 is rotated. An electrical circuit is formed by suitable wire 27 from a battery 30 to the cylinder 2 and by wire 28 from the battery 30 to the metal spring 25, to which it is connected by looping the end of the wire over the stud 37 and passing through the room desired, where it is provided with an ordinary electrical call-bell 34.

In constructing this device I prefer to arrange forty-eight of the projections 23 successively one after the other longitudinally of the cylinder 2, forming one complete circuit of said cylinder in passing from one end to the other, thus dividing the circumference of the cylinder into forty-eight equal parts, so that if the cylinder is caused to rotate upon its axis once in twelve hours this division would cause one of the projections 23 to come in contact with the spring 25, adapted to register with it every fifteen minutes, or if the cylinder is caused to rotate once in twenty-four hours then the successive contacts between the projections 23 and springs 25 would be thirty minutes apart. There being the same number of springs or strips 25 as projections 23, I then place the cylinder 2 so as to bring the first projection against the first spring at any desired hour, as six o'clock, and number that spring for that hour and each successive spring fifteen or thirty minutes later, as may correspond with the rotation of the cylinder. In order to operate this cylinder so as to correspond with the time designated by the several contact-springs 25, I provide a magnet 19, adapted to operate the ratchet-lever 17 by making the upper portion 45 of the ratchet-lever the armature of the magnet, so that as an electrical current passes through the magnet the armature 45 is attracted, throwing one arm of the end of the ratchet-lever out and the other in and thereby rotating the cylinder 2 one-half the distance from one notch to the next of the ratchet-wheel 10. When the current is broken, a spring 47 draws the ratchet back to its former

position, completing the step movement of the cylinder and causing one tooth of the wheel 10 to pass. The magnet 19 is arranged in a circuit from the battery 20, one of the wires 5 49 therefrom passing through the magnet 19 and terminating in the contact-spring 50. The other wire 53 from the battery 20 terminates at and has an electrical connection with the metallic circuit maker and breaker 51, which 10 is secured upon a shaft 52, adapted to be rotated by any suitable clock mechanism connected therewith, its time of rotation being arranged to correspond with the construction of the device hereinbefore described, in which 15 case the circuit closer and breaker 51 makes one revolution every hour.

In operation, suppose that any bell 34 is desired to be rung at 8.45. The wire 28, passing through this bell, is electrically connected to 20 the spring representing that hour, which, in the arrangement herein described, where the first spring is set so as to form a contact with the cylinder projection at six o'clock, would be the twelfth spring. Then, when the cyl- 25 inder 2 has revolved so as to bring the twelfth projection 23 in contact with said spring, the circuit will be closed, causing the bell 34 to ring. The ratchet-wheel 10 having the same number of teeth as there are projections 23 30 on the cylinder 2, it is obvious that a connection between one of the projections 23 and one of the springs 25 will be made every fifteen minutes, as the wheel is turned but one tooth by the ratchet-lever at each movement 35 thereof, forward and back, caused by the closing and opening of the circuit by the wheel 51, and this wheel 51 revolving once in every hour causes the circuit to be closed and opened again four times every hour, or 40 once every fifteen minutes.

I claim as my invention—

1. The combination, in an electrical call-bell, of a rotating cylinder having a series of contact-points arranged spirally around said 45 cylinder, a series of contact-springs arranged to be successively engaged by said contact-points, an electrical circuit connected to said cylinder and adapted to be completed through any of said contact-springs, a call-bell ar- 50 ranged in said circuit, and suitable mechanism for causing the rotation of said cylinder,

so that the successive contacts between said contact-points and contact-springs will be at regular intervals of time, for the purpose specified. 55

2. In an electrical call-bell, the combination, with an electrical circuit, of the bell 34, cylinder 2, having a series of contact-points 23, a series of contact-springs 25, representing successively-stated intervals of time, all 60 electrically connected, substantially as described, and an electrically-actuated ratchet controlled by mechanism adapted to regulate the rotation of said cylinder, so that said contact-points will engage said contact-springs 65 successively at such stated intervals of time.

3. The combination, with an electrical circuit having an electric bell arranged therein, of contact-springs 25, adapted to be placed in said circuit, cylinder 2, arranged in said cir- 70 cuit, having a series of projecting contact-points 23 arranged thereon, adapted to engage said contact-springs successively as said cylinder is rotated, ratchet-wheel 10, bifurcated ratchet-lever 17, spring 47, and magnet 19, ar- 75 ranged in an electrical circuit adapted to be closed and opened at stated intervals of time, substantially as described, and for the purpose specified.

4. An electric guest-call comprising call- 80 bells, electric circuits in which said bells are located, a cylinder provided with a series of circuit-closers adapted to close said circuits, a ratchet mechanism for operating said cylinder, a magnet for operating said ratchet 85 mechanism, an electric circuit in which said magnet is located, and means for closing said circuit at stated intervals of time.

5. In a guest-call, the combination, with electric circuits and bells located therein, of 90 mechanism for successively closing said circuits, an electro-magnet for operating said mechanism, an electric circuit in which said magnet is located, and means for closing said last-named circuit at stated intervals of time, 95 substantially as described.

In testimony whereof I have hereunto set my hand this 6th day of March, 1890.

ALEXANDER STRIEMER.

Witnesses:

J. HENRY ZIESKE,
JOHN C. ZIESKE.