

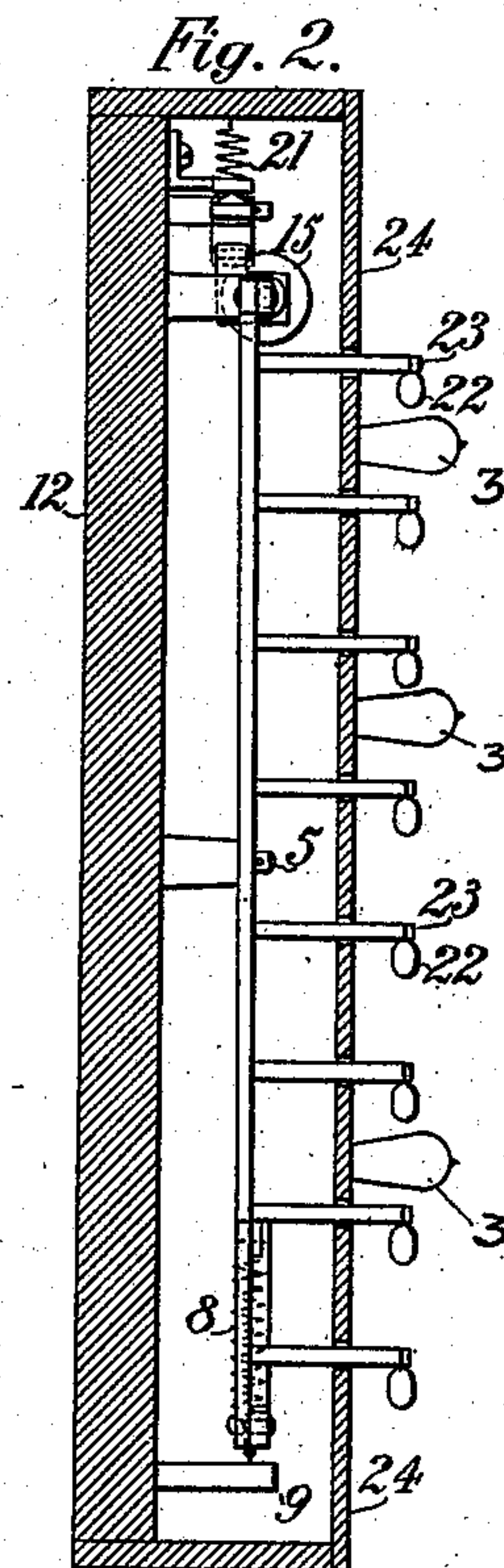
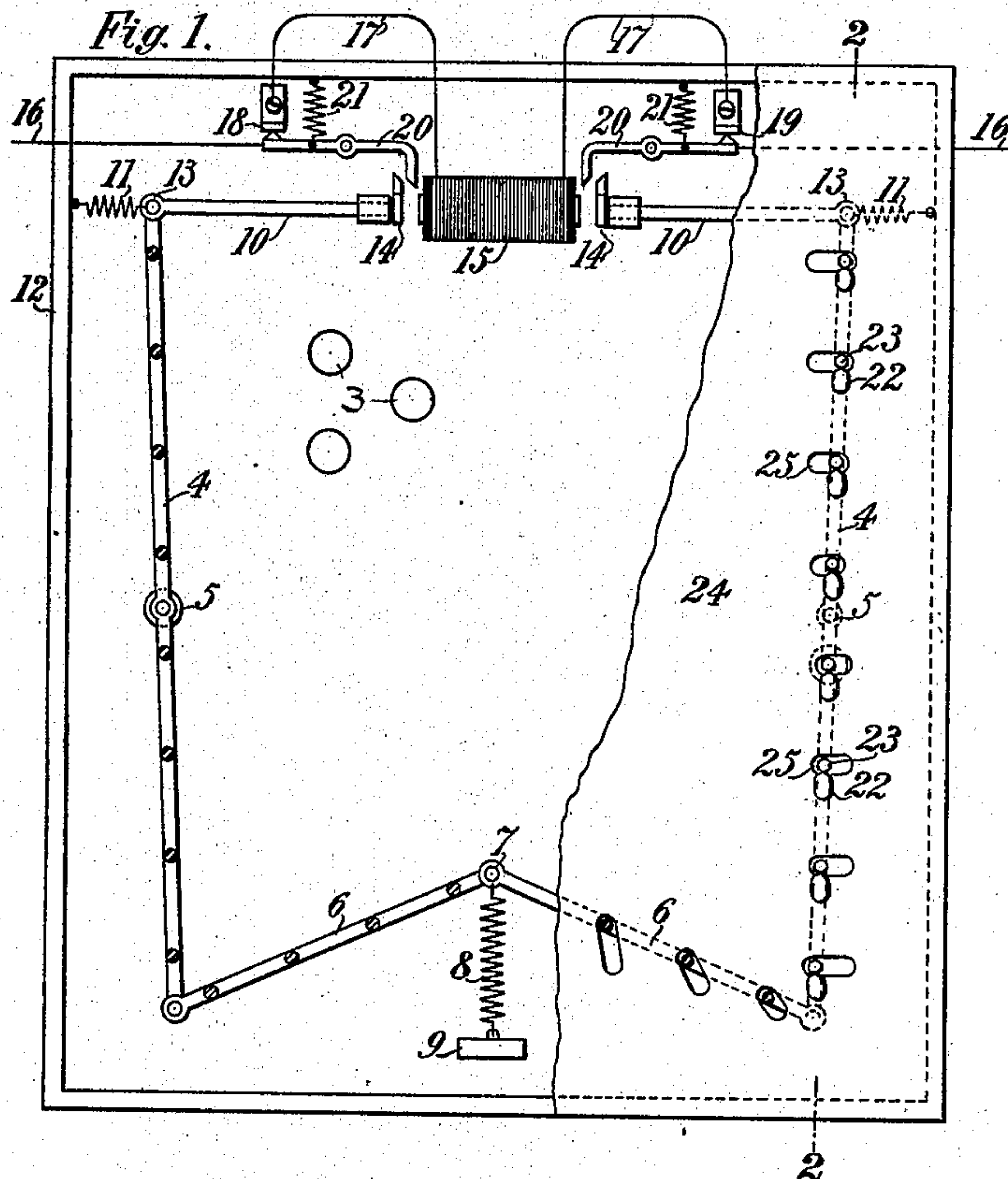
No. 885,127.

PATENTED APR. 21, 1908.

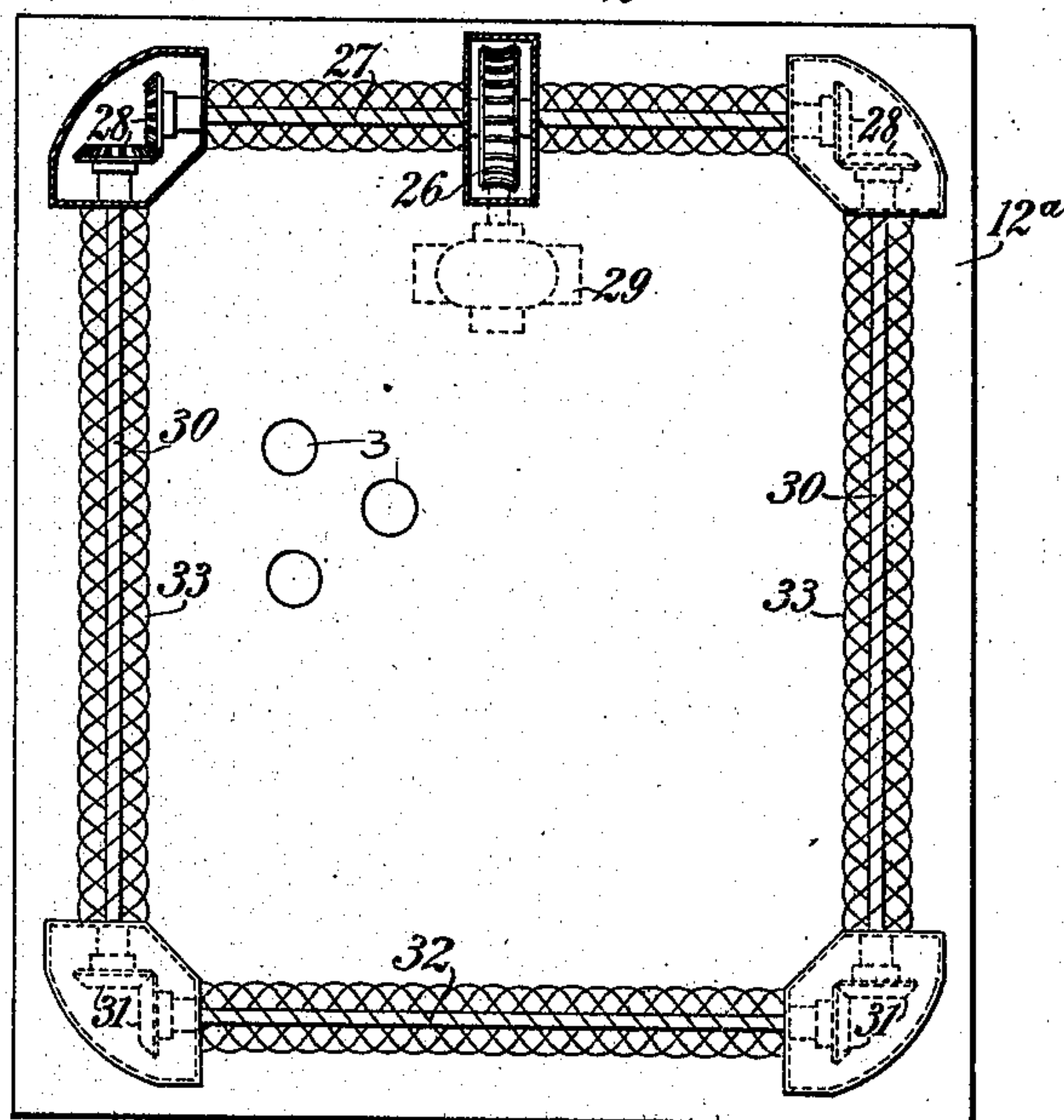
E. L. ZALINSKI.  
ELECTRIC DISPLAY APPARATUS.

APPLICATION FILED OCT. 6, 1904.

2 SHEETS—SHEET 1.



*Fig. 3.*



Witnesses:

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2 SHEETS—SHEET 2.

Fig. 4

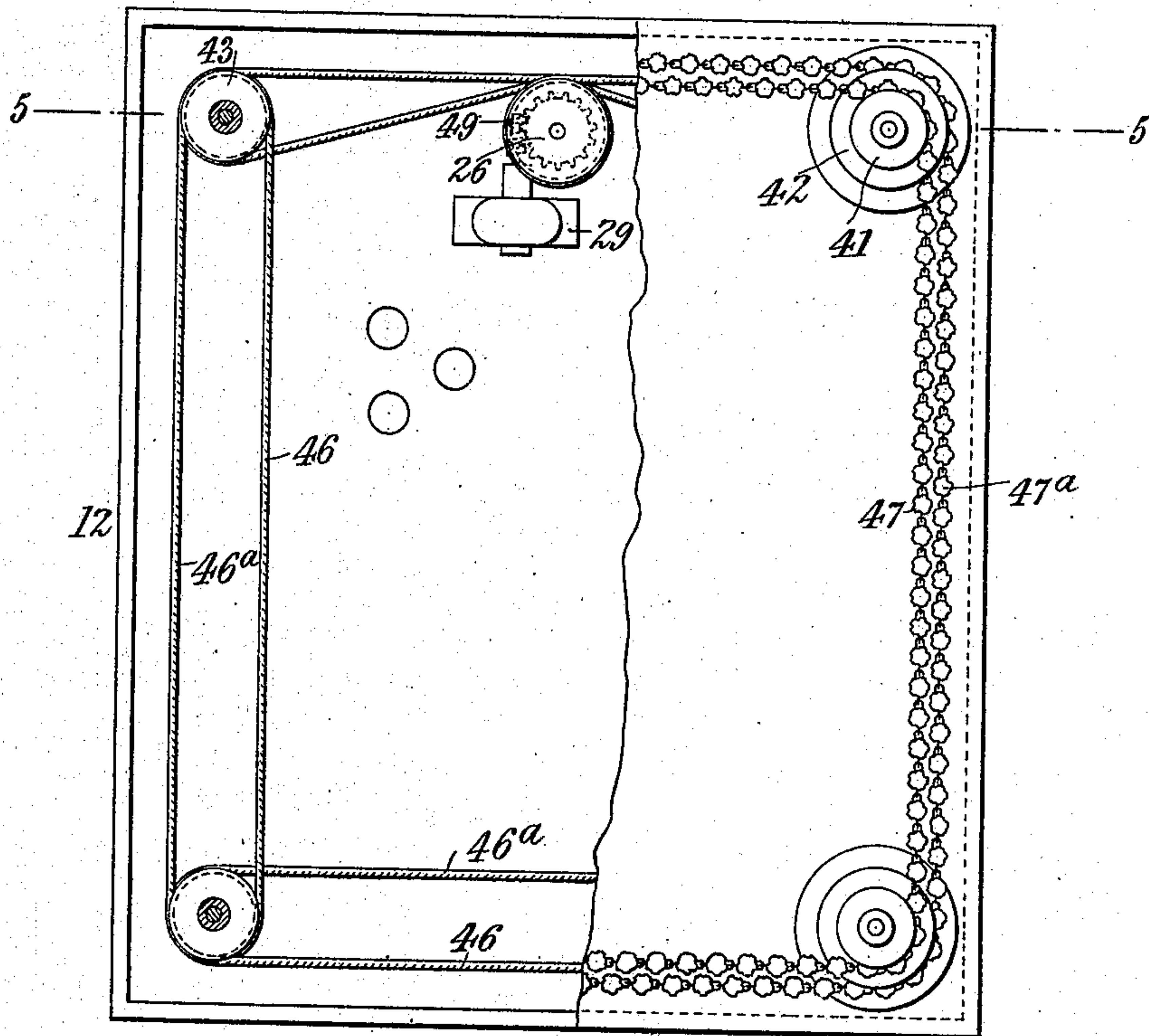


Fig. 5

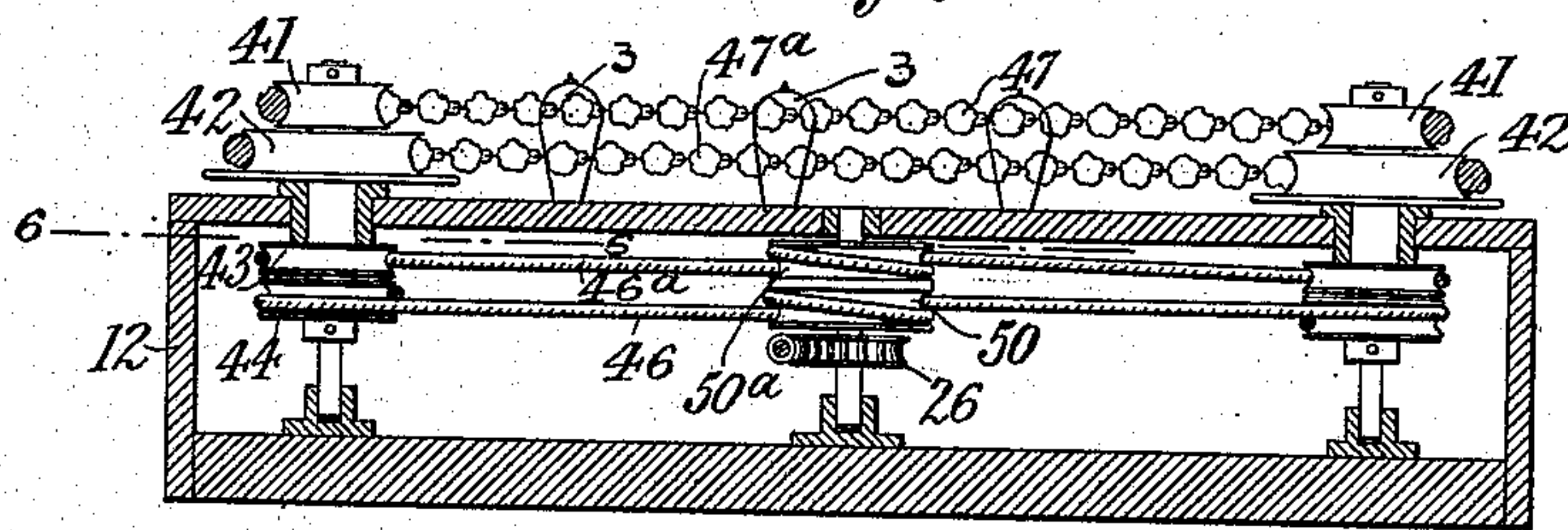
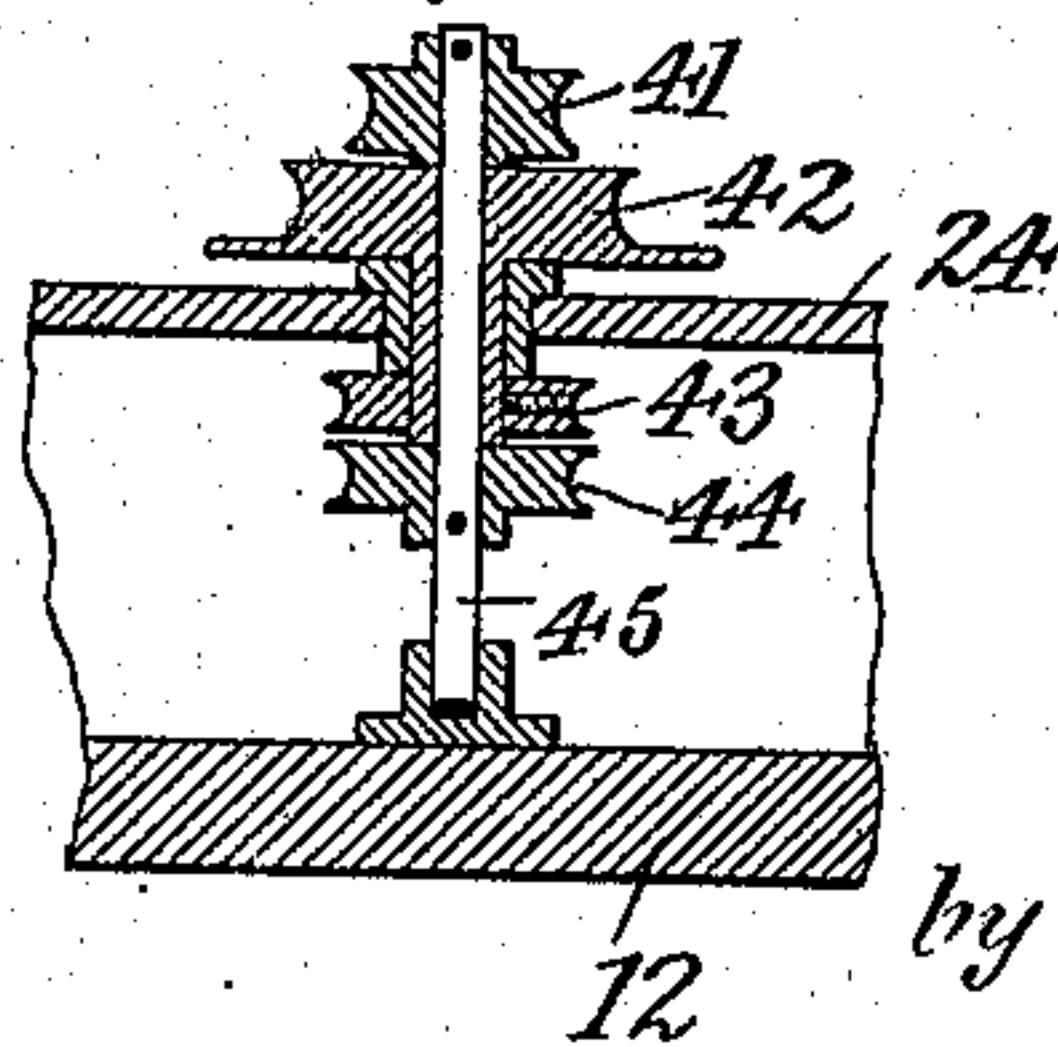


Fig. 6



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# UNITED STATES PATENT OFFICE.

EDMUND L. ZALINSKI, OF NEW YORK, N. Y.

## ELECTRIC DISPLAY APPARATUS.

No. 885,127.

Specification of Letters Patent.

Patented April 21, 1908.

Application filed October 6, 1904. Serial No. 227,360.

*To all whom it may concern:*

Be it known that I, EDMUND L. ZALINSKI, a citizen of the United States, residing in the city, county, and State of New York, have invented certain new and useful Improvements in Electric Display Apparatus, of which the following is a specification.

My invention relates to electric display apparatus, and it consists in certain novel parts and combinations of parts particularly pointed out in the claims concluding this specification.

In the accompanying drawings, Figure 1 is a face view, part of the cover being removed, of apparatus involving my invention; Fig. 2 is a side sectional view of the same on the line 2—2 of Fig. 1; Fig. 3 is a front view of a modified form of such apparatus, partly in section. Figs. 4, 5 and 6 show other modified forms thereof.

Similar reference numerals indicate the same or corresponding parts in the various figures.

The following is a description of the structures shown in the drawing.

In the several illustrated embodiments of my invention, the usual box or housing 2 for the unions and connections of the lamps is provided, the cover of this box having suitable openings therethrough for the lamp sockets which receive the lamps 3, conventionally shown in the drawings.

Referring to Fig. 1, 4—4 are bars pivoted respectively at 5, 5. To the lower ends of these bars are attached by pivots the broken lever 6, 6 pivoted at 7. 8 is a spiral spring constantly tending to depress the joint 7, and 9 is a stationary part to which the spring 8 at its lower end is attached. The bars 4, 4 at their upper ends are provided with extensions 10, 10 pivoted thereto at 13, and 11, 11 are spiral springs at one end attached to the box 12 and at the other end to the pivots 13. 14, 14, are armatures of electro-magnet 15. 16 is a line wire connected with any suitable source of electric energy connected by conductors 17, 17 with magnet 15. When the parts are in the position shown in Fig. 1, current passes from 16 through contact 18, conductor 17, to magnet 15, and thence by conductor 17, contact 19 and conductor 16 to line. When in this position the magnet 15 will attract the armatures 14, 14 and the bevel edges of said armatures will engage with and elevate the pivoted contact breakers 20, 20, thus disrupting the circuit at con-

tacts 18, 19. The springs 11, 11 will then return armatures 14, 14 to the position shown in Fig. 1, and at the same time the springs 21, 21 will elevate the rear ends of circuit breakers 20, 20, again establishing the circuit through magnet 15 and advancing armatures 14, 14 as already described. A vibratory motion is thus communicated to the frame 10, 4, 6, 4, 10. Attached to this frame are a series of reflecting materials such as pendants 22, which may be of cut or broken glass or polished metal, or any other suitable reflectors of light. These pendants are preferably loosely or pivotally connected with studs 23, 23, and by their vibration produce a sparkling and variegated effect. They may be, of course, of any desired or contrasting colors, or of any suitable shape. 24 is a cover inclosing the operating parts and protecting them from the elements and from dust, said cover being provided with openings or slots 25 in the direction of motion of the projections 23, so as not to interfere with their free movement.

A modified construction is shown in Fig. 3 in which the box 12<sup>a</sup> contains a suitable electric or other motor 29 geared to wheel 26, carried on shaft 27, which by miter-gears 28, communicates motion to shafts 30, 30 and then by miter-gears 31, 31 communicates motion to shaft 32. These shafts 27, 30 and 32 are provided with segregated pieces or continuous spirals of suitable reflective material, such as cut glass, colored or otherwise, or bright metal, and the continuous revolution of the said shafts makes of these an attractive and conspicuous feature of an electric sign, by reflecting the light of the lamps composing the same in an intermittent or moving manner.

A modified form of my invention is shown in Figs. 4, 5 and 6, Fig. 4 being a front view (part of the cover being removed at 6—6 Fig 5); Fig. 5 being a sectional view on the lines 5—5, Fig. 4; and Fig. 6 being a detail view in section.

29, Fig. 4, is a suitable motor, preferably an electric motor, driving worm wheel 49, meshing with toothed wheel 26, carried on a suitable shaft, to which shaft is attached (see Fig. 5) pulleys 50 and 50<sup>a</sup>.

46, 46<sup>a</sup> are cords or belts wrapped around the pulleys 50 and 50<sup>a</sup>, transmitting motion to pulleys 43, 44, the belts or cords passing around the said pulleys 43 and 44 in reverse direction, so as to cause them to revolve in



opposite directions, and impart motion in opposite directions to pulleys 41, 42. Fig. 6 shows these four pulleys in cross-section and in detail. The pulley 44 is keyed to spindle 45 to which, at the outer end, the pulley 41 is keyed. The pulley 43 is keyed to a sleeve surrounding, but not attached to, the spindle 45, and at the outer end of said sleeve the pulley 42 is attached. By these means the cords 46 and 46<sup>a</sup> passing around the pulleys 43 and 44 in appropriate directions keep the said pulleys 41 and 42 in continuous rotation in opposite directions.

47 and 47<sup>a</sup> are continuous strings of beads or other suitably-shaped pieces of glass, polished metal, or appropriate material, of any suitable or desired form. These strings passing around the pulleys 41, 42 form a margin or border for the display sign, and being kept in constant motion, add an attractive feature thereto.

It will be observed that the reflectors or reflecting surfaces are maintained at different angles to the lamps, so that these surfaces, being maintained in motion, intermittently reflect the light, giving the appearance of sparkle and movement. It will also be observed that they are arranged at the side of the lamp so as not to obstruct the light, but only to add to the brilliancy and attractiveness of the sign.

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

1. In an electric display apparatus the combination with electric lamps, of reflectors disposed at different angles to the lamps and arranged at the sides thereof, and means for

moving the reflectors to and fro in the plane of said lamps and approaching and receding therefrom.

2. In electric display apparatus the combination with electric lamps, of a frame composed of movable bars, an electromagnet, automatic means for intermittently energizing said magnet, an armature carried by said bars by means of which they are moved, and reflectors mounted on said bars.

3. In electric display apparatus the combination with electric lamps, of a frame composed of movable bars, an electromagnet, automatic means for intermittently energizing said magnet, an armature carried by said bars by means of which they are moved, projections from said bars, a cover provided with slots in the line of motion of said projections, and reflectors mounted on said projections.

4. In electric display apparatus, the combination with electric lamps, of a frame composed of movable bars, an electromagnet, automatic means for intermittently energizing said magnet, an armature carried by said bars by means of which they are moved, projections from said bars, a cover provided with slots in the line of motion of said projections, and reflectors loosely mounted on said projections.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDMUND L. ZALINSKI.

Witnesses:

JAMES A. STRANE,  
JOSEPH FRANCIS.