

L. F. PARKHURST & H. G. WEEKS.
ELECTRIC OVEN.

APPLICATION FILED SEPT. 27, 1909.

968,683.

Patented Aug. 30, 1910.

2 SHEETS—SHEET 1.

Fig. 1.
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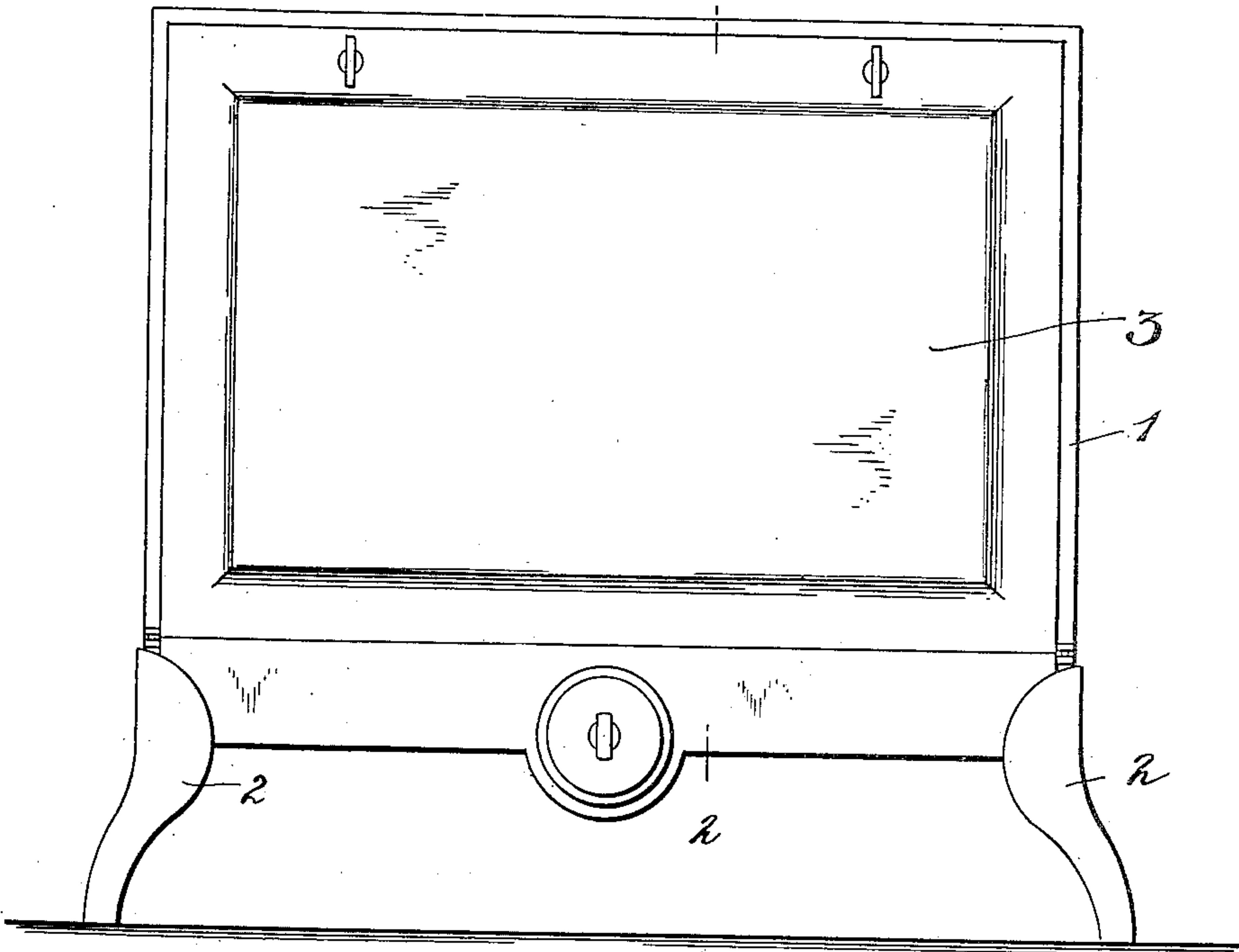


Fig. 3.

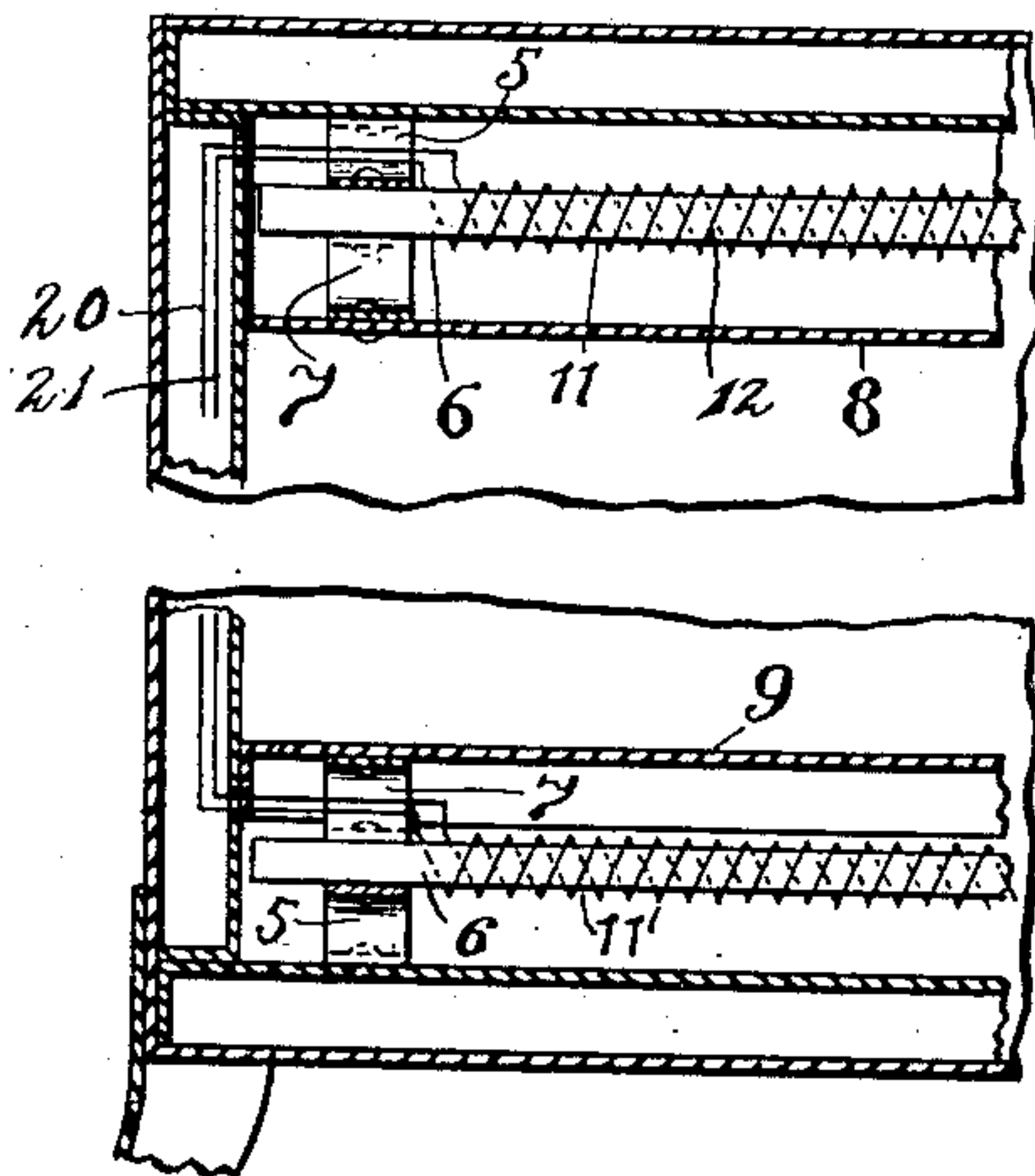
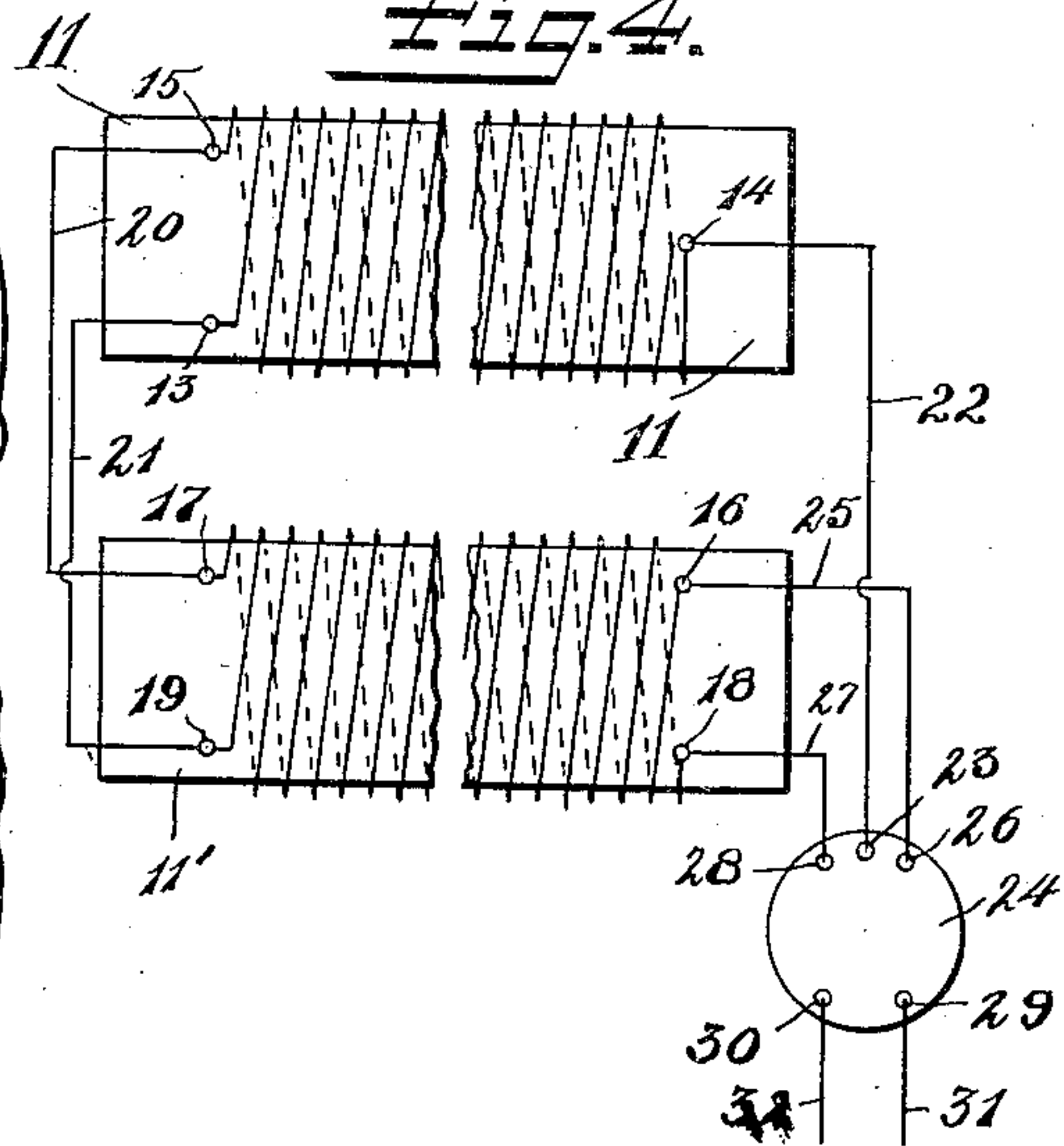


Fig. 4.



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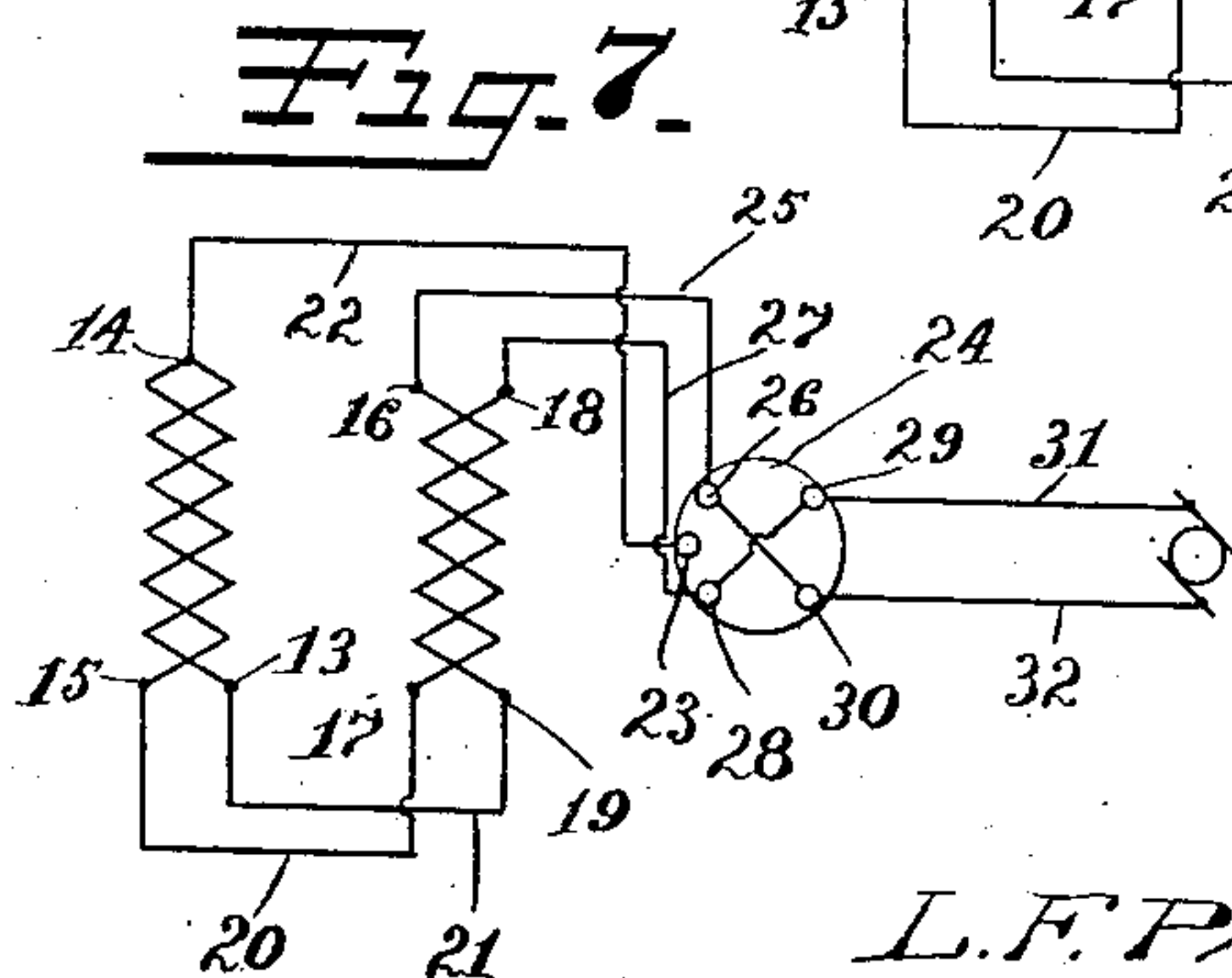
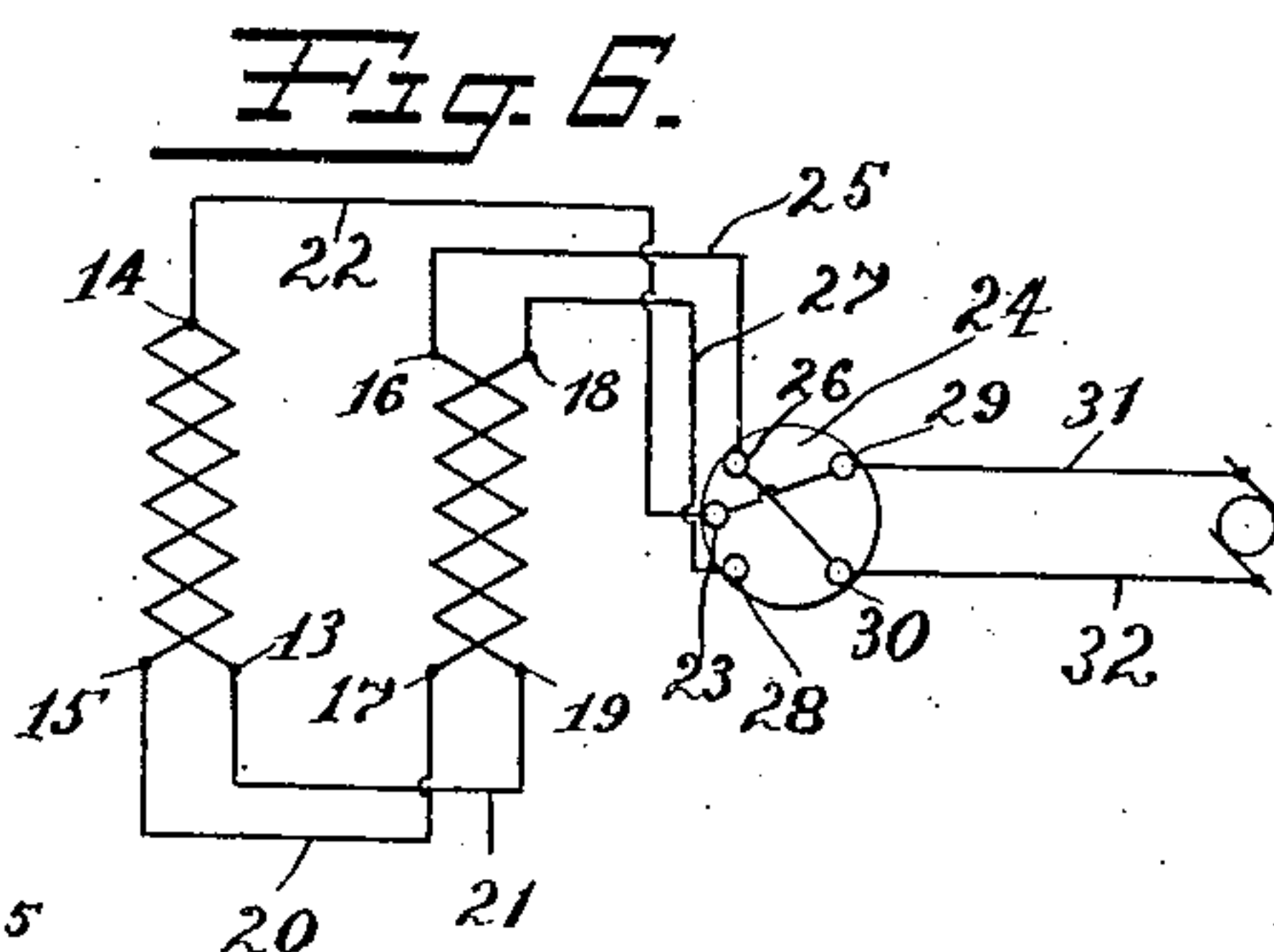
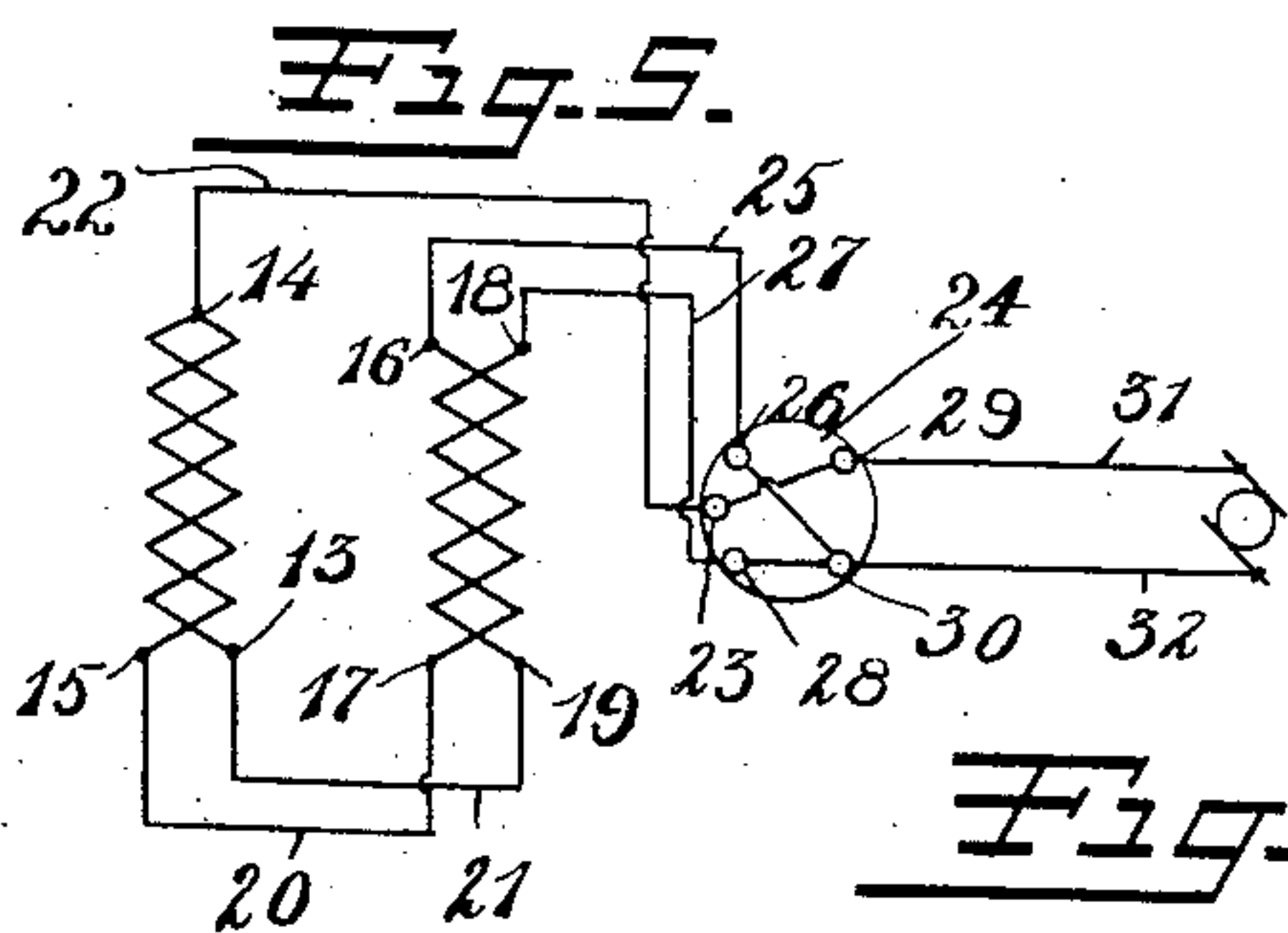
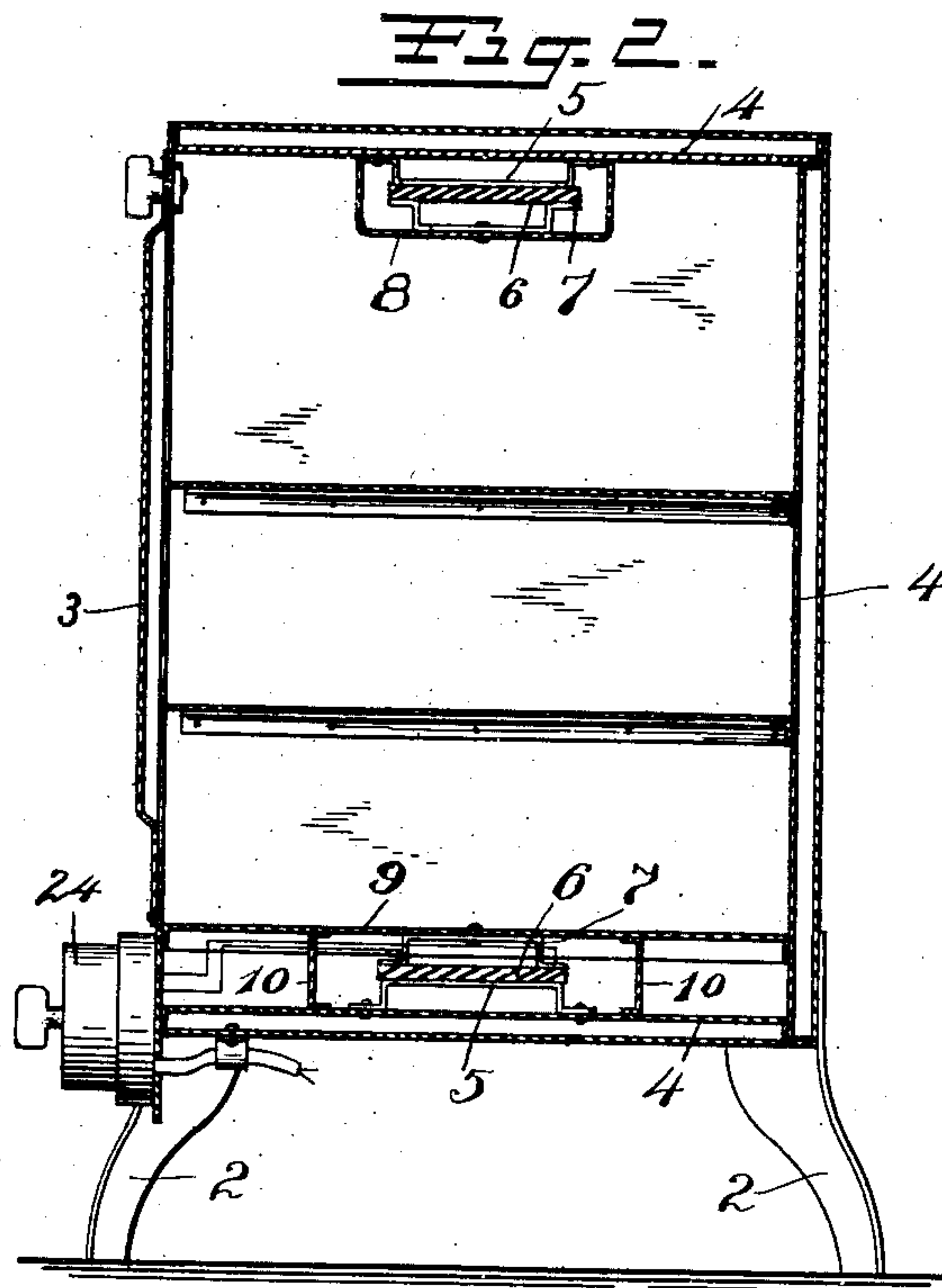
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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ELECTRIC OVEN.

968,683.

Specification of Letters Patent.

Patented Aug. 30, 1910.

Application filed September 27, 1909. Serial No. 519,813.

To all whom it may concern:

Be it known that we, LEON F. PARKHURST and HARRY G. WEEKS, citizens of the United States, residing at Binghamton, Broome county, New York, have invented certain new and useful Improvements in Electric Ovens, of which the following is a full, clear, and exact description.

Our invention relates to an electrically heated oven, the object of the invention being to provide a construction wherein the electric heating units may be readily assembled and removed and to provide heating units and supports therefor adapted to be applied to various forms of electric ovens in common use.

A further object of the invention is to provide in connection with the heating units a three heat switch, by which three separate degrees of temperature may be produced in the oven.

A further object is to so arrange this switch that it may serve as a convenient terminal block for the leading-in wires and for the connections with the heating units.

With these and other objects in view, as will appear from the detailed description following hereafter, our invention consists in the construction and arrangement of parts, a preferred embodiment of which is illustrated in the accompanying drawings, in which,

Figure 1 is a front elevation of an oven embodying our invention showing the combined switch and terminal block attached thereto. Fig. 2 is a vertical sectional view on the line 2—2 Fig. 1. Fig. 3 is a broken sectional view at right angles to the sectional line of Fig. 2, showing the arrangement of the electric connections with the heating unit. Fig. 4 is a diagrammatic view of the heating units and the connections thereof with the switch and terminal block. Figs. 5, 6 and 7 are diagrammatic views respectively showing the different positions of the switch in combination with the electric connections to the heating units to produce the different degrees of heat.

The embodiment of our invention herein selected for illustration comprises the oven 1 having the supporting legs 2 and the usual door 3. The walls of the oven may be insulated in any usual and well-known manner as, for example, by the insulating pans 4, Fig. 2, located at the bottom, top, sides and

back respectively. Secured to the supporting pans 4 at the top and bottom respectively are supporting brackets 5, to which the heat units 6 are attached. Projecting thereto with the supporting brackets 5 are supports 7. Over the top support 7 and covering the heat unit is a shield 8 which may be perforated for the egress of heat from the units to the oven and serves to protect the unit as well as the hand of the user from injury. Upon the lower support 7 is secured a bottom shelf 9 of the oven which may be additionally supported by the members 10 mounted on the bottom pan 4.

As shown in Fig. 3, the heat units consist of the similar flat slabs for the top and bottom unit respectively, which may be of insulating material as asbestos board or may be of metal coated with insulating material. Upon these slabs are wound the resistance wires 12, which in the form here shown are arranged in double spirals with two of their terminals located at the same end of the supporting slab. The windings on the slab 11, for example, consist of a single length of wire extending from one terminal post 13 at one end of the slab to and around a terminal post 14 at the opposite end thereof, returning in a second spiral to the terminal post 15. The windings of the slab 11' consist of separate lengths of wire, one extending from the terminal post 16 to the terminal post 17 and the other from the terminal post 18 to the terminal post 19. Connecting wires 20 and 21 connect the terminals 15 and 17; and 13 and 19 respectively. From the terminal post 14, a connecting wire 22 extends to the binding post 23 of the switch 24. From the terminal post 16 connecting wire 25 extends to the terminal post 26 of the switch and from the terminal post 18 a connecting wire 27 extends to the binding post 28 of the switch. To the binding posts 29 and 30 respectively are connected the leading-in wires 31 and 32.

When the switch is in the position illustrated in Fig. 5, the current will pass in from the leading-in wire 32 to wire 25, terminal 16 of the resistance wire connected therewith to terminal 17, from said unit by the connecting wire 20 to terminal point 15 of unit 11 to terminal 14, wire 22, switch terminal 23, to lead-out wire 31, while at

the same time current will pass from switch terminal 28, connecting wire 27, unit terminal 18 through resistance wire connected therewith, unit terminal 19, connecting wire 21, unit terminal 13, resistance wire connected therewith, unit terminal 14, connecting wire 22, switch terminal 23 to switch terminal 29 and leading-out wire 31.

By the multiple series connection just described, the highest possible heat in the heating units may be obtained.

With the switch in the position indicated in Fig. 6 and by following out the connection in similar manner, a single series connection is secured through the two heating units, thereby securing a medium heat in the oven.

With the switch in the position indicated in Fig. 7, and by following out the connections therein indicated, the units will be found in series connection, thereby producing low heat in the oven.

The switch 24 may be located at any convenient point upon the oven but preferably so positioned that one half of same projects beyond the adjacent edge of the oven, as indicated in Fig. 2, whereby the connection of the leading-in wires with the switch may be facilitated and the switch serves the additional function of a terminal block.

While we have herein described a particular embodiment of our invention, the same may be altered in detail and relative arrangement of parts without departing from the spirit or scope thereof.

What we claim is:

1. An electric oven comprising electric heating units attached to the top and bot-

tom thereof respectively, a removable shield plate for protecting said upper unit and an oven shelf supported upon and overlying and protecting said lower unit.

2. An electric oven having removable heat insulating pans adjacent the walls thereof, heat units each comprising a supporting slab of insulating material and a resistance wire wound thereon mounted upon and supported by said pans and shield plates supported upon said heat units and arranged to protect the hands of the user from contact therewith.

3. An electric oven having heat insulating pans arranged adjacent the walls thereof, electric heating units attached to said pans, an electric switch and connections leading from said heating units between said pans and walls to said switch, said switch being constructed and arranged to serve also as a terminal block for the leading-in wires.

4. An electric oven comprising heat insulating walls, electric heating units attached to the upper and lower of said walls, a shield plate secured to and covering said upper heat unit, an oven shelf secured to and overlying said lower unit, a switch, and electric connections passing from said units and within said insulating pans at the sides of said oven and below said lower shield plate to said switch, said switch being arranged to serve as a terminal block for the leading-in wires.

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Witnesses:

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Corrections in Letters Patent No. 968,683.

It is hereby certified that in Letters Patent No. 968,683, granted August 30, 1910, upon the application of Leon F. Parkhurst and Harry G. Weeks, of Binghamton, New York, for an improvement in "Electric Ovens," errors appear in the printed specification requiring correction as follows: Page 1, line 73, after the word "slabs" the reference-numerals and word *11 and 11'* should be inserted, and same page, line 109, after the word "terminal" the word *point* should be inserted; and that the said Letters Patent should be read with these corrections therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 20th day of September, A. D., 1910.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.