No. 658,018. Patented Sept. 18, 1900.

F. NEUGEBAUER.

COIN CONTROLLED X-RAY APPARATUS.

(Application filed Jan. 25, 1900.)

(No Model.) 2 Sheets—Sheet 1.

FIG. 3.

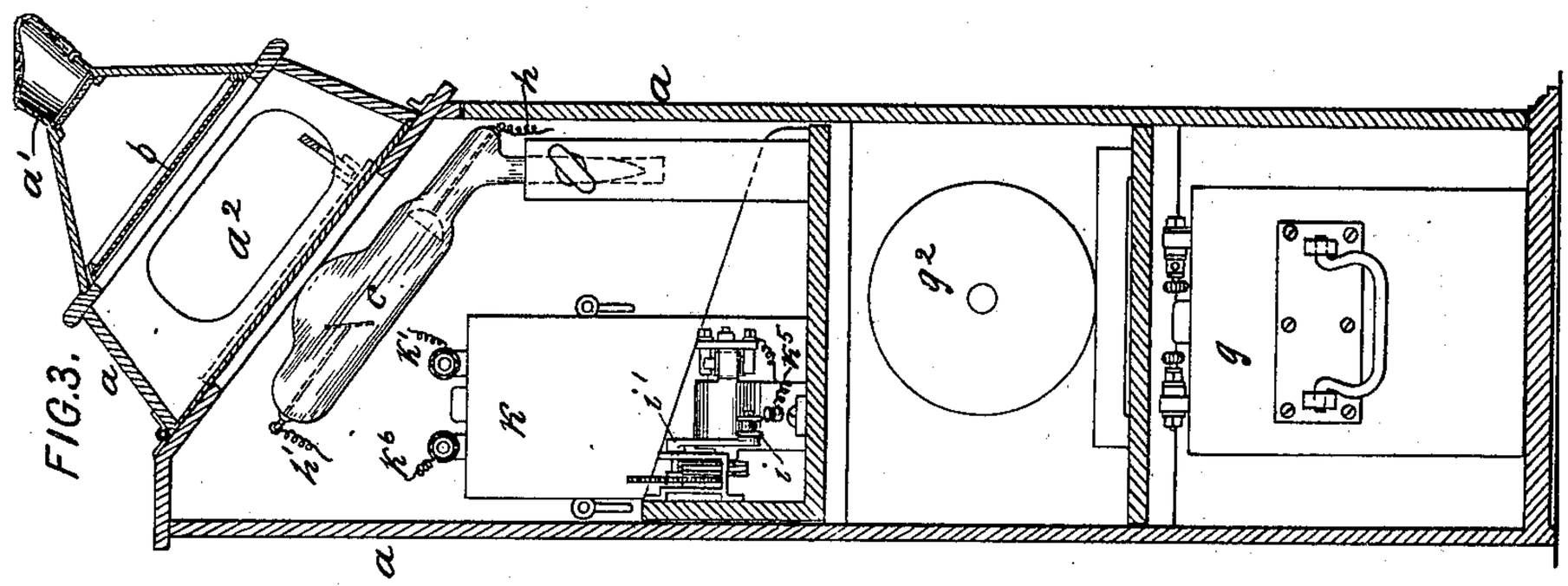


FIG. 2.

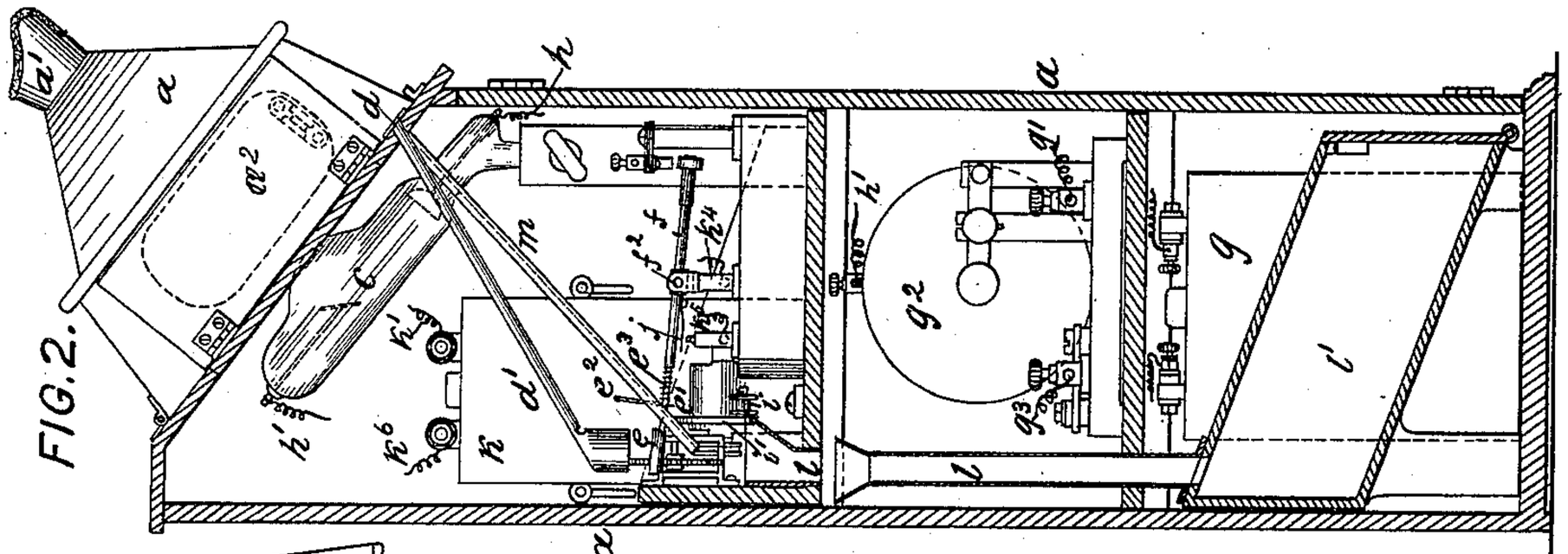
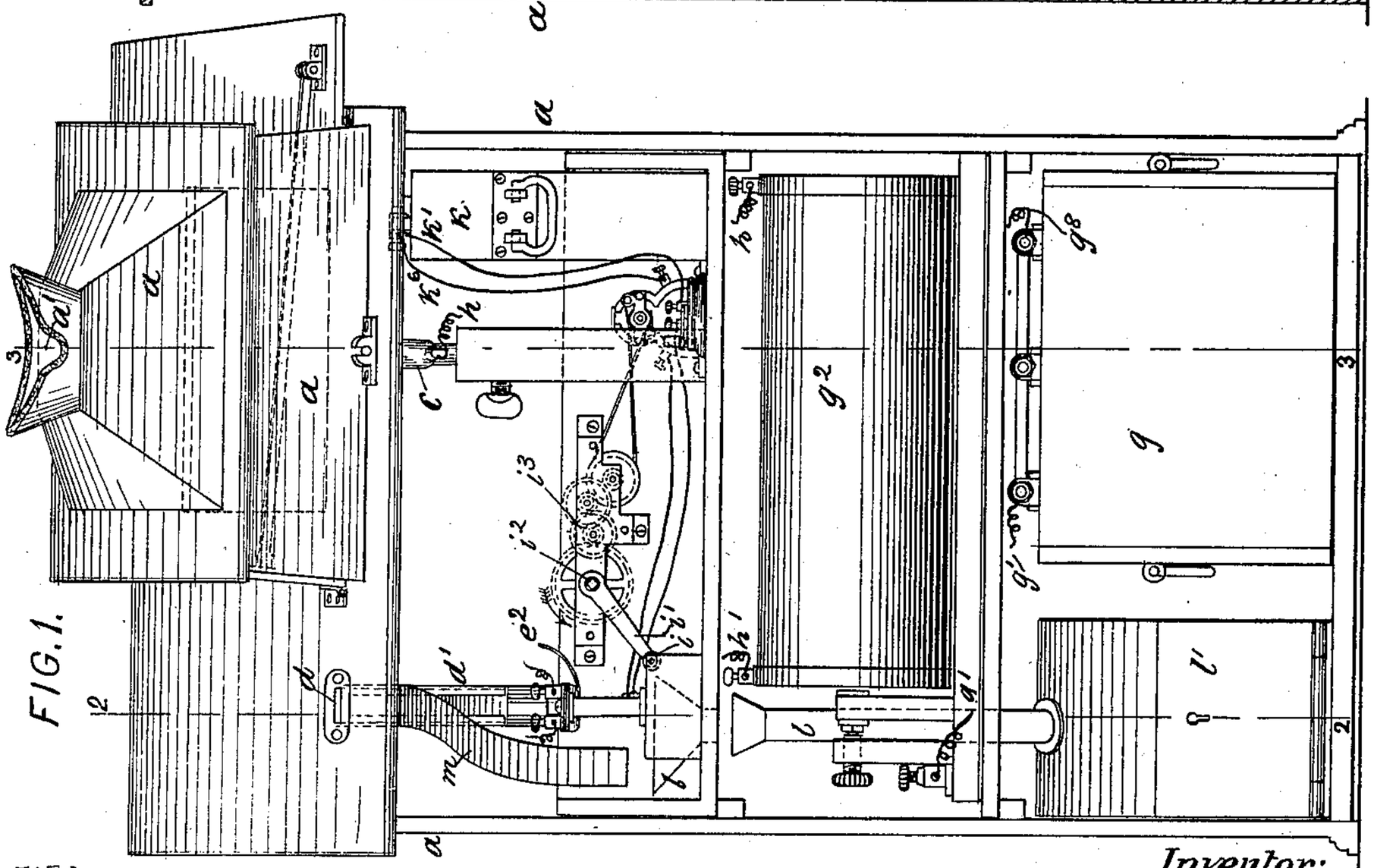


FIG. 1.



Witnesses:
John Becker.
William Miller.

Inventor:
Fritz Neugebauer
by his attorneys
Roeder & Briesen

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FIG. 5.

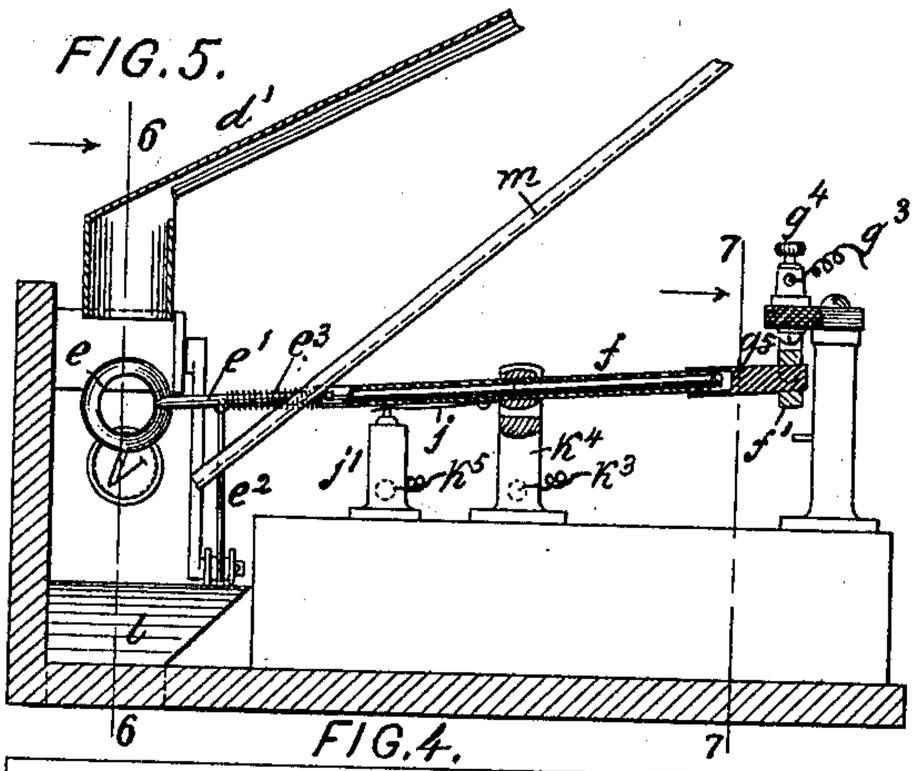


FIG. 4.

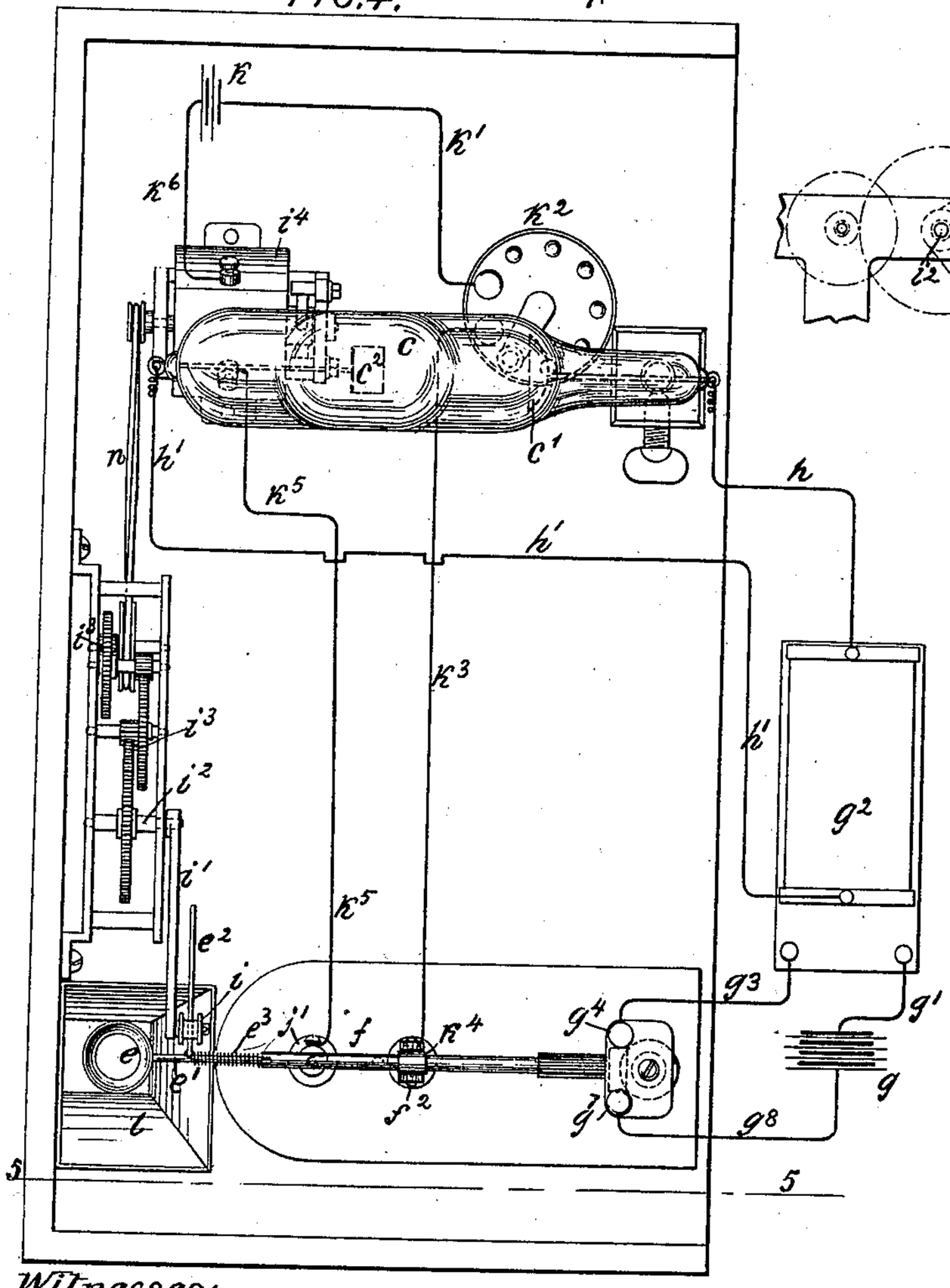


FIG. 7.

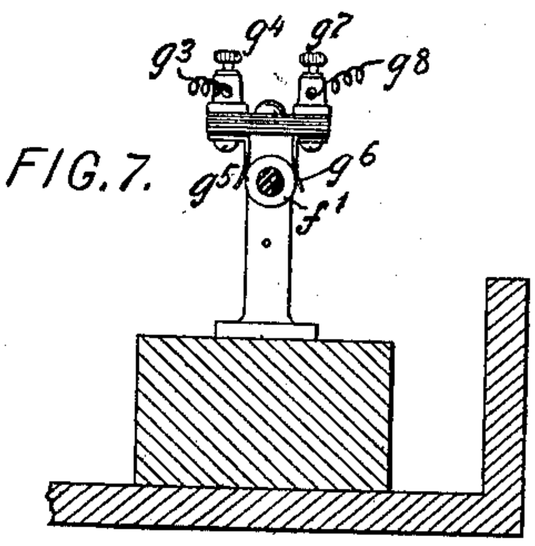
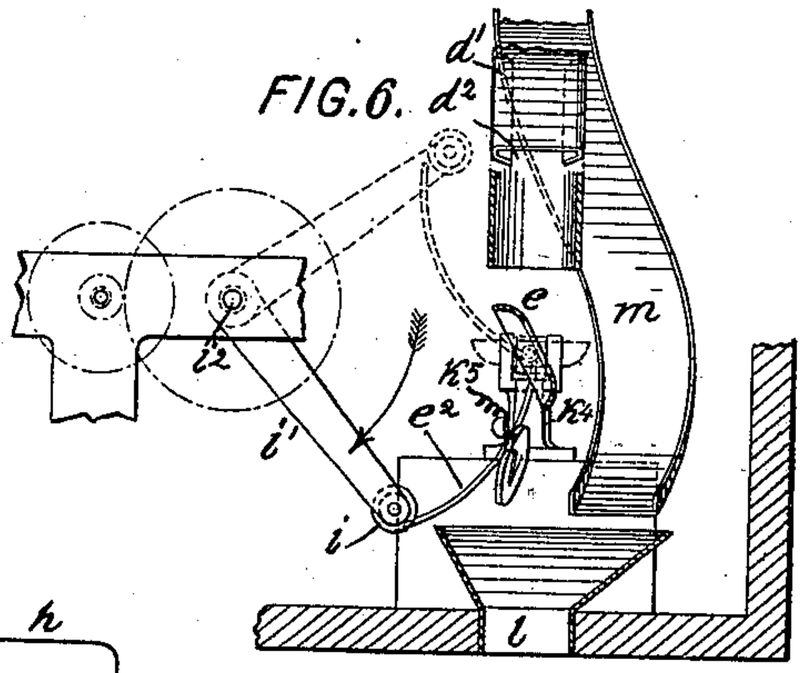


FIG. 6.



Witnesses:
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William Miller.

Inventor:
Fritz Neugebauer
by his attorneys
Roeder & Briesen

UNITED STATES PATENT OFFICE

FRITZ NEUGEBAUER, OF NEW YORK, N. Y.

COIN-CONTROLLED X-RAY APPARATUS.

SPECIFICATION forming part of Letters Patent No. 658,018, dated September 18, 1900.

Application filed January 25, 1900. Serial No. 2,728. (No model.)

To all whom it may concern:

Be it known that I, FRITZ NEUGEBAUER, a citizen of Germany, and a resident of New York city, county and State of New York, have invented certain new and useful Improvements in Coin-Controlled X-Ray Apparatus, of which the following is a specification.

This invention relates to an X-ray apparatus so constructed that upon the introduction of the proper coin the current will be conducted to the bulb, so as to effect an exposure for a predetermined period of time. The apparatus is actuated by the weight of the coin, which upon falling into a pan will swing a lever to make two contacts. The first contact will send the current through the bulb, while the second contact will place in circuit a motor, which at the proper time will tilt the pan, discharge the coin, and thus relieve the lever, which will return to its normal position.

In the accompanying drawings, Figure 1 is a front elevation of my improved apparatus with the front removed; Fig. 2, a section on line 2 2, Fig. 1; Fig. 3, a section on line 3 3, Fig. 1; Fig. 4, a plan of the upper compartment of the apparatus; Fig. 5, a section on line 5 5, Fig. 4; Fig. 6, a section on line 6 6, Fig. 5; and Fig. 7, a section on line 7 7, Fig. 5.

The letter a represents the case of an X-ray apparatus, of which a' is the sight-opening, b the fluoroscope, a^2 the opening for the introduction of the object to be inspected, and c the bulb, all as usual.

d is the coin-slot, and d' the chute which conveys the coin to a pan e, having, preferably, a perforation, so that coins of smaller dimensions than those desired will fall through without actuating the apparatus. The pan e is secured to a stem e', rotatable in a tubular two-armed lever f, fulcrumed to a post k^4 at f^2 and constituting a double circuit-closer. When the lever f is swung down at its pan end by the weight of the coin, two circuits will be closed. One of these circuits causes the current to be sent to the bulb c, so as to form the X-rays, while the other current places in circuit a motor that will tilt the pan and cause the discharge of the coin after the time set for the exhibition has expired. In this way the lever when released will right itself, the contacts will be broken, and the apparatus will be set ready for the introduction of the next coin.

The circuit for creating the X-rays is as follows: from battery g by wire g' to induction-coil g^2, wire g^3 to post g^4 and contact g^5, thence by contact-maker f' on end of lever f to contact g^6, post g^7, and wire g^8, back to the battery. The induced current will travel as follows: from coil g^2 to wire h, anode c', cathode c^2, and wire h', back to coil g^2. When the lever f is righted, the contact between the parts g^5 g^6 is broken by reason of the withdrawal of the contact-maker f', and the current will cease to flow to the bulb c.

In order to tilt the pan e, I employ the following construction: From the stem e' of the pan e projects laterally an arm e^2, influenced by a spring e^3. The arm e^2 is adapted to be engaged by a pin or a roller i on the end of a crank-arm i', mounted on spindle i^2. This spindle is adapted to be driven by a train of gearing i^3 from a motor i^4, the train being so arranged as to cause a complete rotation of arm i' and a consequent exposure for a predetermined length of time.

The operation is as follows: Upon the introduction of the coin and a consequent tilting of lever f the latter will close contacts j j' and the current will travel as follows: from a battery k to wire k', rheostat k^2, wire k^3, post k^4, lever f, contacts j j', wire k^5, motor i^4, and wire k^6 to battery. The motor by belt n will drive the train i^3 and the latter will rotate the crank-arm i'. This arm will depress arm e^2, Fig. 6, against action of spring e^3, so as to tilt the pan e and drop the coin into the receiving-funnel l, that conveys it to the cash-box l'. After the crank-arm i' has cleared the arm e^2 the pan e is righted by the spring e^3, and the lever f, being relieved from the weight of the coin, will resume its original position by being overbalanced at its rear end. Thus the contacts j j' will be broken, the motor i^4 will be thrown out of circuit, and the crank-arm i' will be arrested until the apparatus is again set in motion by the introduction of another coin.

As an additional precaution against actuating the machine by small coins, &c., the chute d' is slotted, as at d^2, Fig. 6, so that

such small coins will drop through said slot and upon an auxiliary chute *m*, that conveys them directly to the funnel *l*.

What I claim is—

1. In a coin-controlled X-ray apparatus, the combination of a lever adapted to be tilted by the weight of a coin, with a pair of contacts adapted to be closed by the lever, one contact being adapted to place the bulb in circuit, and the other contact being adapted to place a motor in circuit, combined with means actuated by the motor for dislodging the coin, substantially as specified.

2. In a coin-controlled X-ray apparatus, the combination of a lever with a tilting pan carried thereby, a motor adapted to be placed in circuit by the turning of the lever, and means actuated by the motor for tilting the pan, substantially as specified.

3. In a coin-controlled X-ray apparatus, the combination of a lever with a spring-actuated tilting pan carried thereby, an arm movable with the pan, a motor adapted to be placed in circuit by the turning of the lever, and means actuated by the motor for engaging the arm and tilting the pan, substantially as specified.

Signed by me at New York city, county and State of New York, this 23d day of January, 1900.

FRITZ NEUGEBAUER.

Witnesses:
FR. DISTELHORST,
F. v. BRIESEN.