

No. 689,457.

Patented Dec. 24, 1901.

J. B. BOISSELOT.

ELECTRIC IGNITER FOR EXPLOSIVE ENGINES.

(Application filed Jan. 2, 1901.)

(No Model.)

Fig. 1.

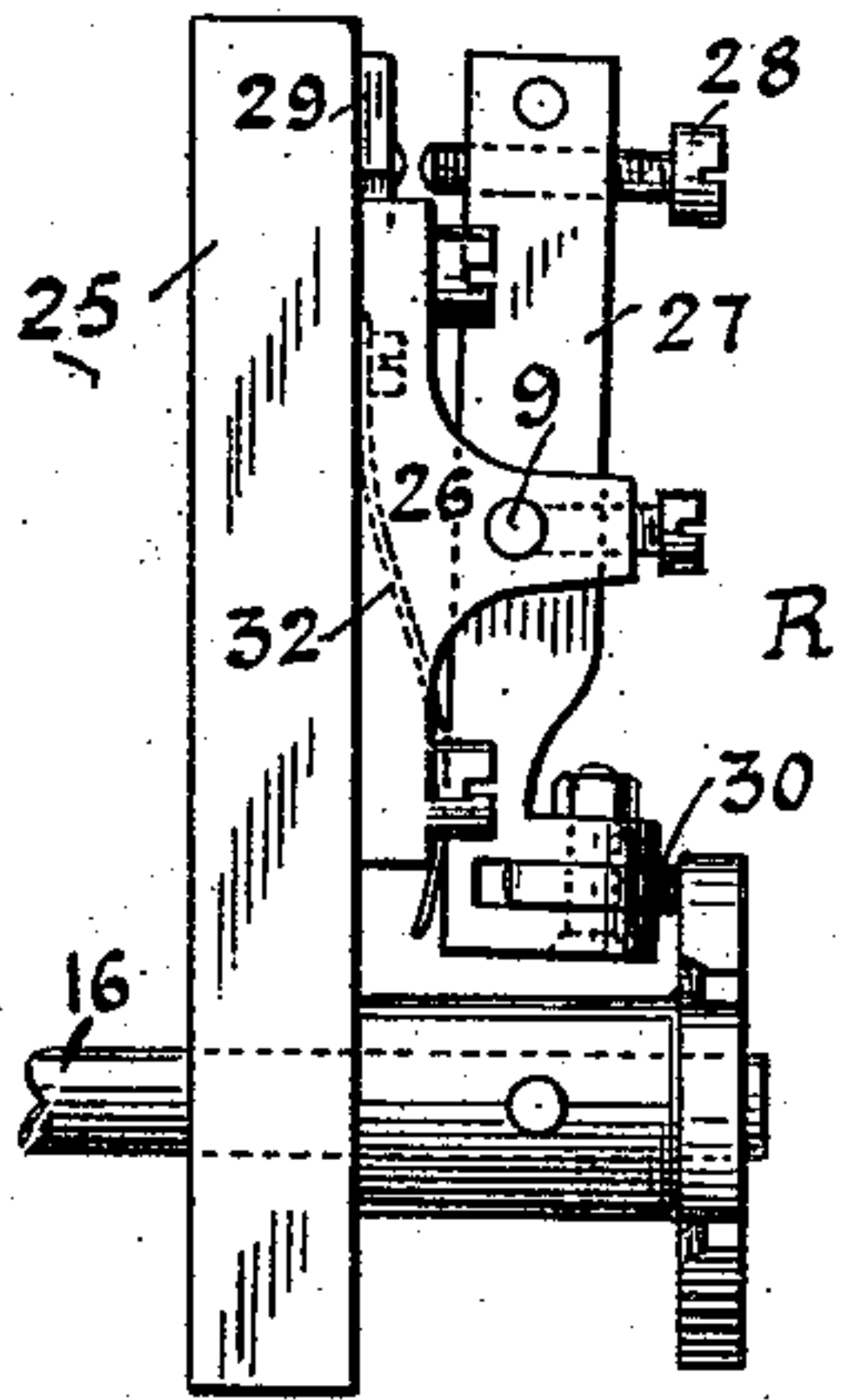


Fig. 2.

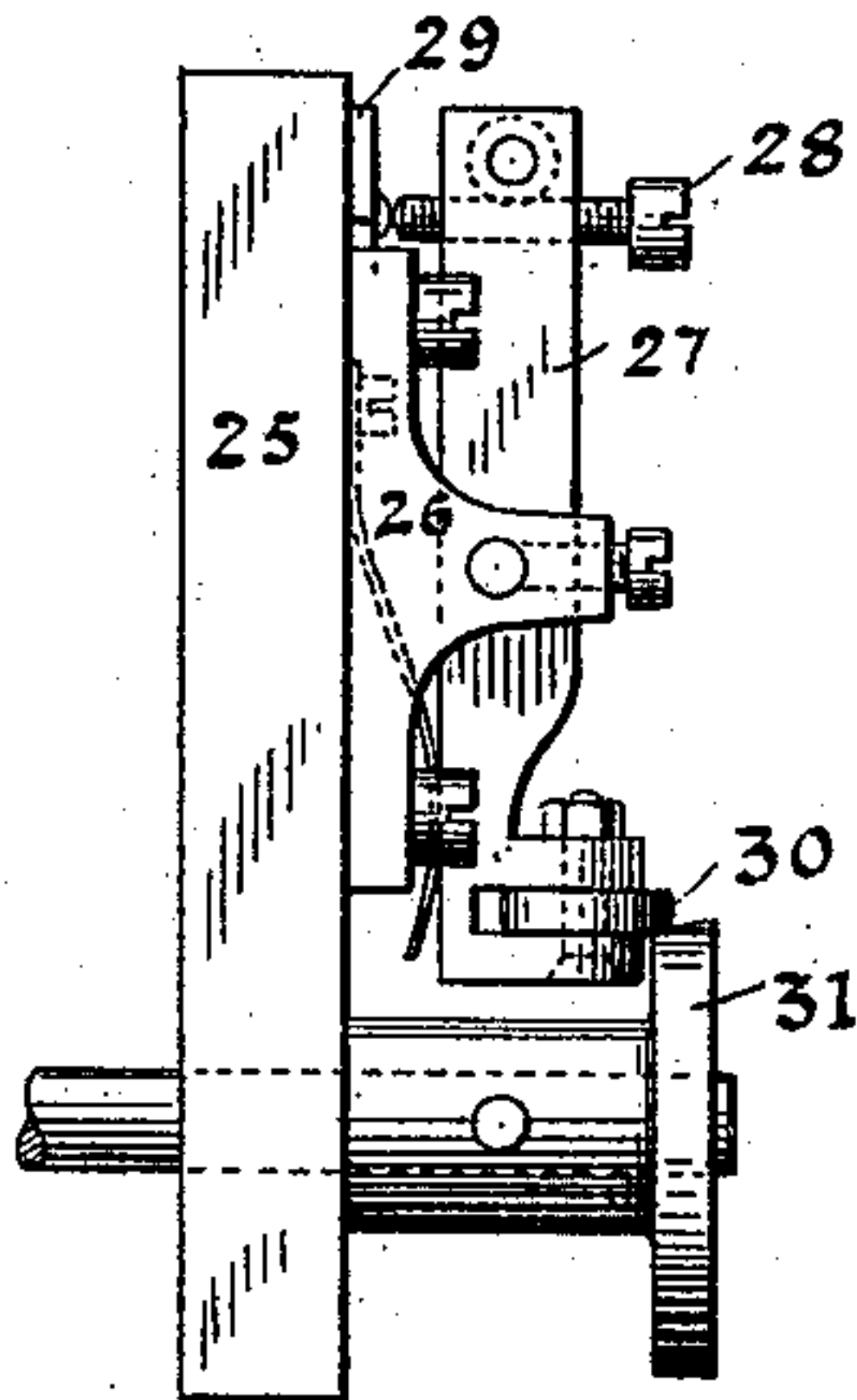


Fig. 3.

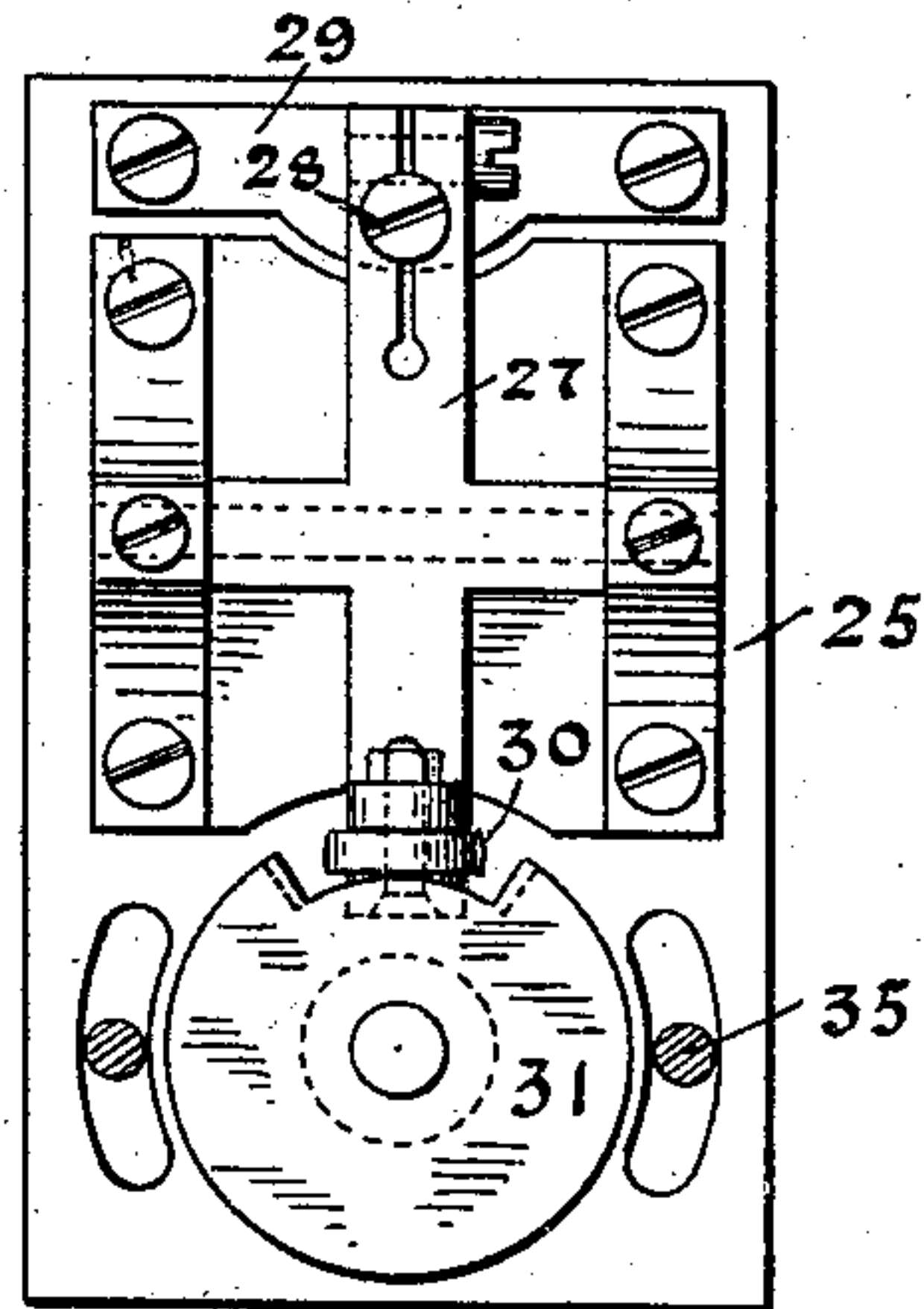


Fig. 4.

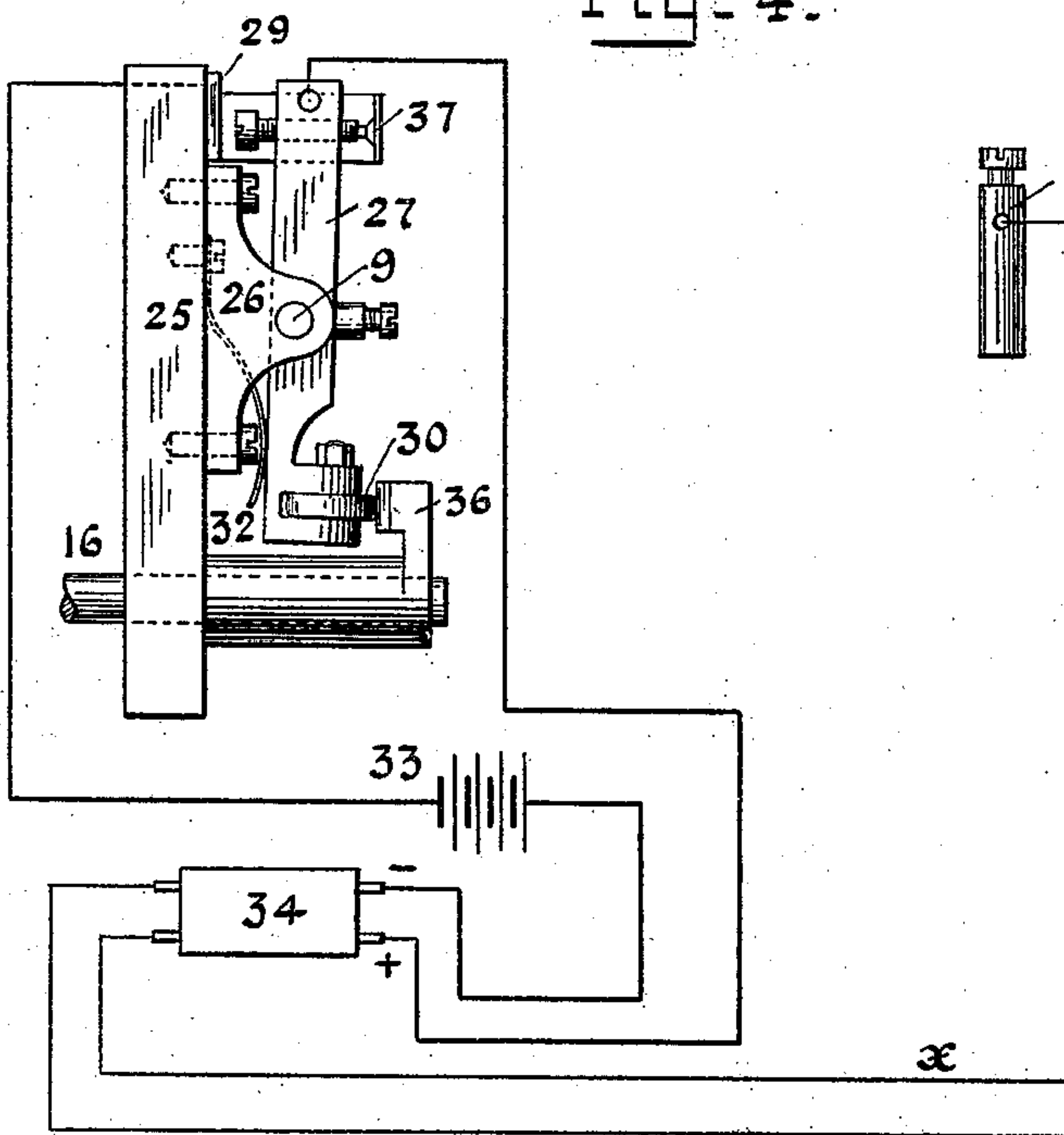
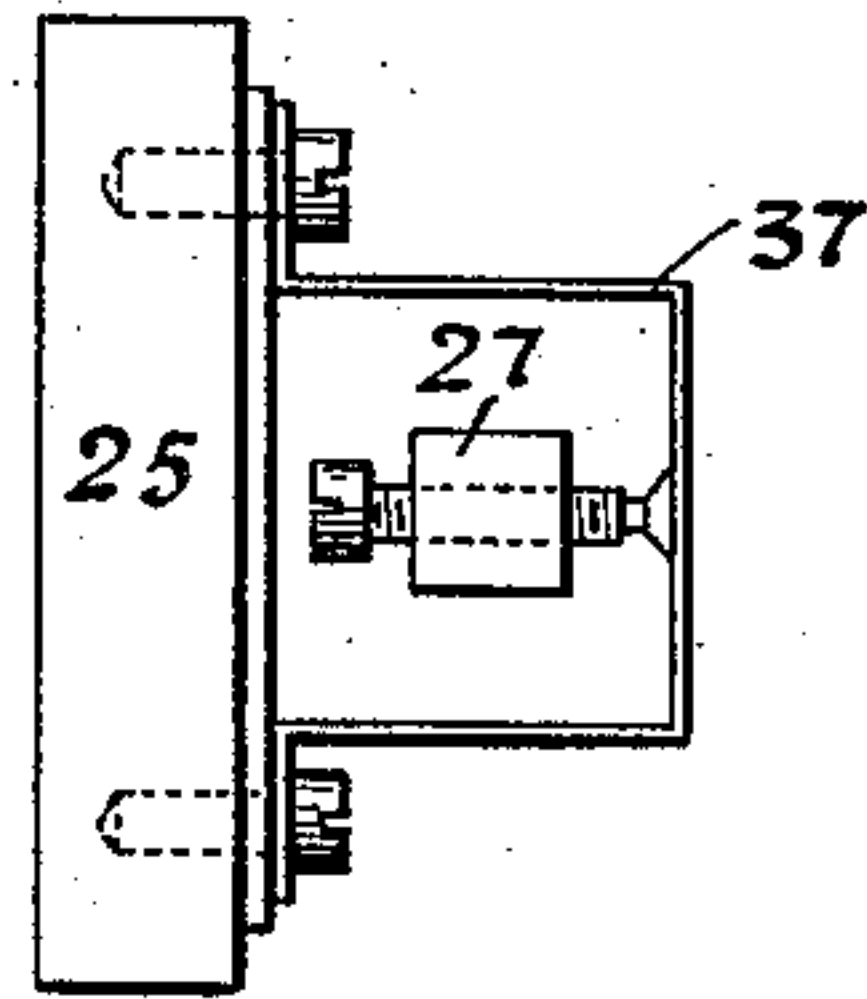


Fig. 5.



Witnesses
Charles Hanemann
Helen Young.

Jean B. Boisselot
Inventor

By His Attorney *Wm. D. Cook*

UNITED STATES PATENT OFFICE.

JEAN B. BOISSELOT, OF NEW YORK, N. Y., ASSIGNOR TO EDUARD VANDER DANE, OF NEW YORK, N. Y.

ELECTRIC IGNITER FOR EXPLOSIVE-ENGINES.

SPECIFICATION forming part of Letters Patent No. 689,457, dated December 24, 1901.

Original application filed October 11, 1900, Serial No. 32,693. Divided and this application filed January 2, 1901. Serial No. 41,792. (No model.)

To all whom it may concern:

Be it known that I, JEAN BAPTISTE BOISSELOT, a citizen of France, residing at No. 402 East One Hundred and Sixteenth street, New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in Electric Igniters for Explosive-Engines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates generally to explosive-motors using any of the well-known hydrocarbons and in which the explosive mixture is ignited by an electric spark and adapted for use in stationary and other motors and automobiles.

It more particularly relates to the sparking or electric igniting regulator or circuit-breaker capable of minute adjustment to govern the time of ignition of the explosive mixture.

The practical embodiment of the improvements is illustrated in the accompanying drawings, in which—

Figures 1 and 2 are side elevations of the igniting-regulator in different positions; Fig. 3, a front view of the same. Fig. 4 is a side elevation of a modified form of the ignition-regulator or circuit-breaker, with the circuits shown connected to the igniting-post. Fig. 5 is a plan view of the same.

The motor with which the improved igniting-regulator or circuit-breaker R is used may be of any suitable form—such, for instance, as that illustrated and described in my pending application, Serial No. 32,693, filed October 11, 1900, of which this is a division.

The sparking-regulator or circuit-breaker R is carried by an insulated block 25, attached to the motor-framework adjacent a shaft 16, rotated by any suitable connection with some moving part of the motor. This block is preferably formed of indurated wood composed of pulverized ebony agglutinated and vulcanized under high pressure and heat with a mixture of beef-blood. The insulated block 25 supports a bracket 26, as shown in Figs. 1 to 4, between the arms of which is mounted a lever 27 on a cross pivot-rod 9 for easy movement. One end of the lever 27 carries a plati-

num-pointed contact-screw 28 to meet a like-pointed terminal provided by the plate. (See Figs. 1 to 3.) The other end of the lever supports an antifriction-roll 30, arranged in the path of a rotating cam 31, secured to the outer end of the shaft 16 and held to duty against the cam by a suitable spring 32, underlying the lever 37. The roll is mounted with its axis at right angles to that of the cam.

To effect the adjustment of the position of the roll of the lever 27 with respect to the configuration of the cam 31 the insulated block 25, with the lever, may be oscillated about the axis of the cam and clamped in place by screw-bolts 35, which pass through curved slots in said block.

In the modified form of circuit-breaker R (shown in Figs. 4 and 5) the direction of movement of the lever 27 is reversed and the cam instead of having a cut-away portion to allow contact of the terminal is provided for by the end of a rotating cam 36. The contact-screw is reversed and the fixed terminal is carried by an overlying bridge-plate 37, which in turn is connected to the plate 29.

The primary circuit (shown in connection with Fig. 4) leads from one pole of the battery or other generator 33 to the terminal plate 29, to the contact-screw 28 when permitted by the shape of the cam 31 and the action of the spring on the lever, thence by the lever to the transformer 34. The other pole of the battery also leads to the transformer. In the induced circuit one wire x leads to the binding-post 5 of any proper igniting-plug, as in my said pending application, and the other to the motor-framework, (represented by the disk y , Fig. 4.)

What I herein claim is—

1. In an explosive-motor, the combination of an insulating-block capable of oscillatory adjustment about a center and having curved slots with engaging clamping-bolts to fix the block in its adjusted position, an electric terminal carried by the block, a pivotally-mounted circuit-breaking lever also carried by the block having at one end a contact and at the opposite end a roll, and a rotating cam engaging said roll for vibrating the lever, as described.

2. In a motor, an insulating-block 25 capable of oscillatory adjustment, carrying a vibratory circuit-breaking lever 27, with a roll 30 mounted axially therein at right angles to the pivotal axis of the lever, in combination
5 with a coacting cam 31, for operating said lever as set forth.

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

JEAN B. BOISSELOT.

Witnesses:

L. RUBEN,
CHAS. W. FORBES.

Correction in Letters Patent No. 689,457.

It is hereby certified that the name of the assignee in Letters Patent No. 689,457, granted December 24, 1901, upon the application of Jean B. Boisselot, of New York, N. Y., for an improvement in "Electric Igniters for Explosive-Engines," was erroneously printed "Eduard Van Dane," whereas said name should have been printed *Eduard Van Dam*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed, countersigned, and sealed this 14th day of January, A. D., 1902.

[SEAL.]

F. L. CAMPBELL,
Assistant Secretary of the Interior.

Countersigned:

F. I. ALLEN,
Commissioner of Patents.