

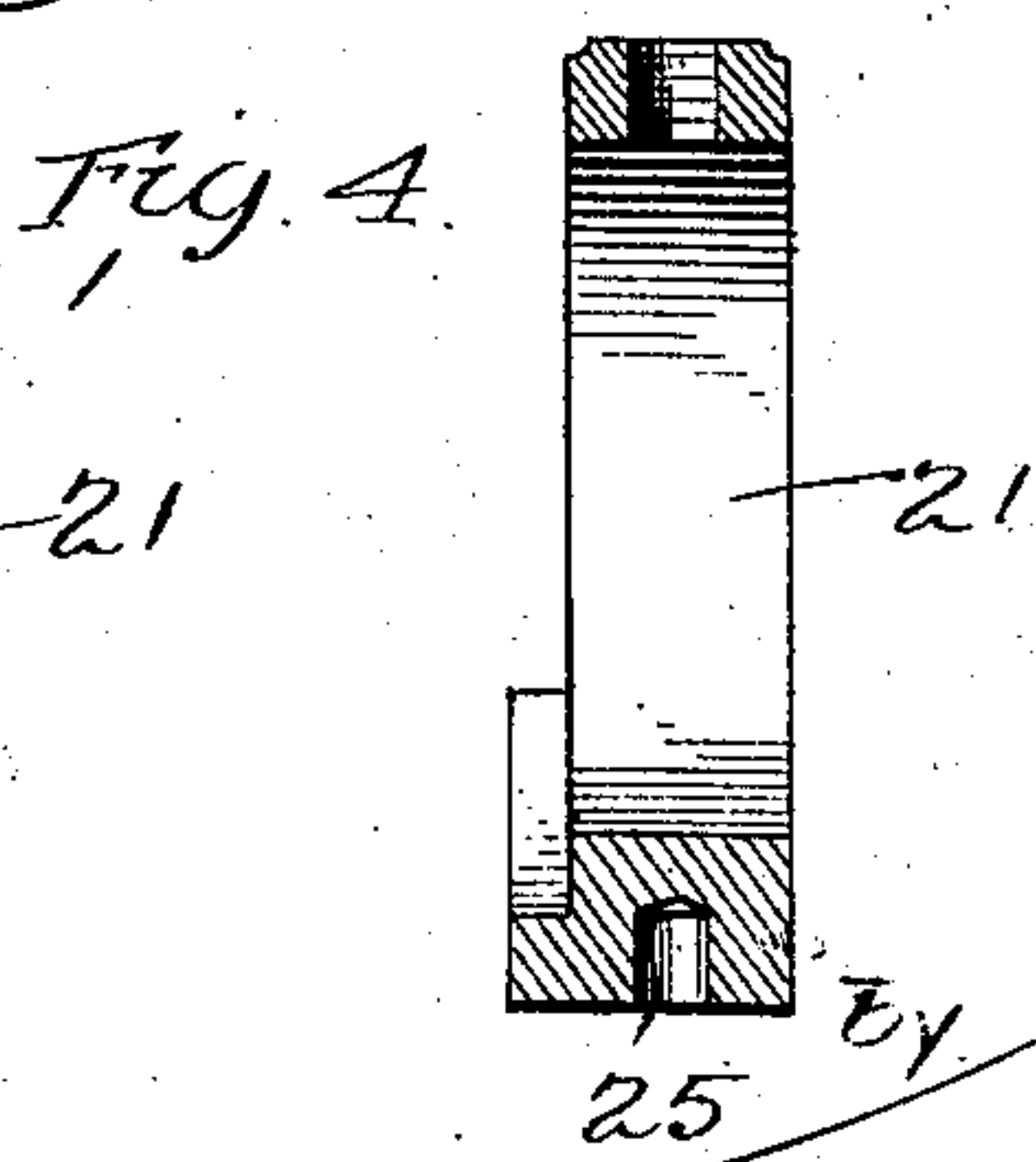
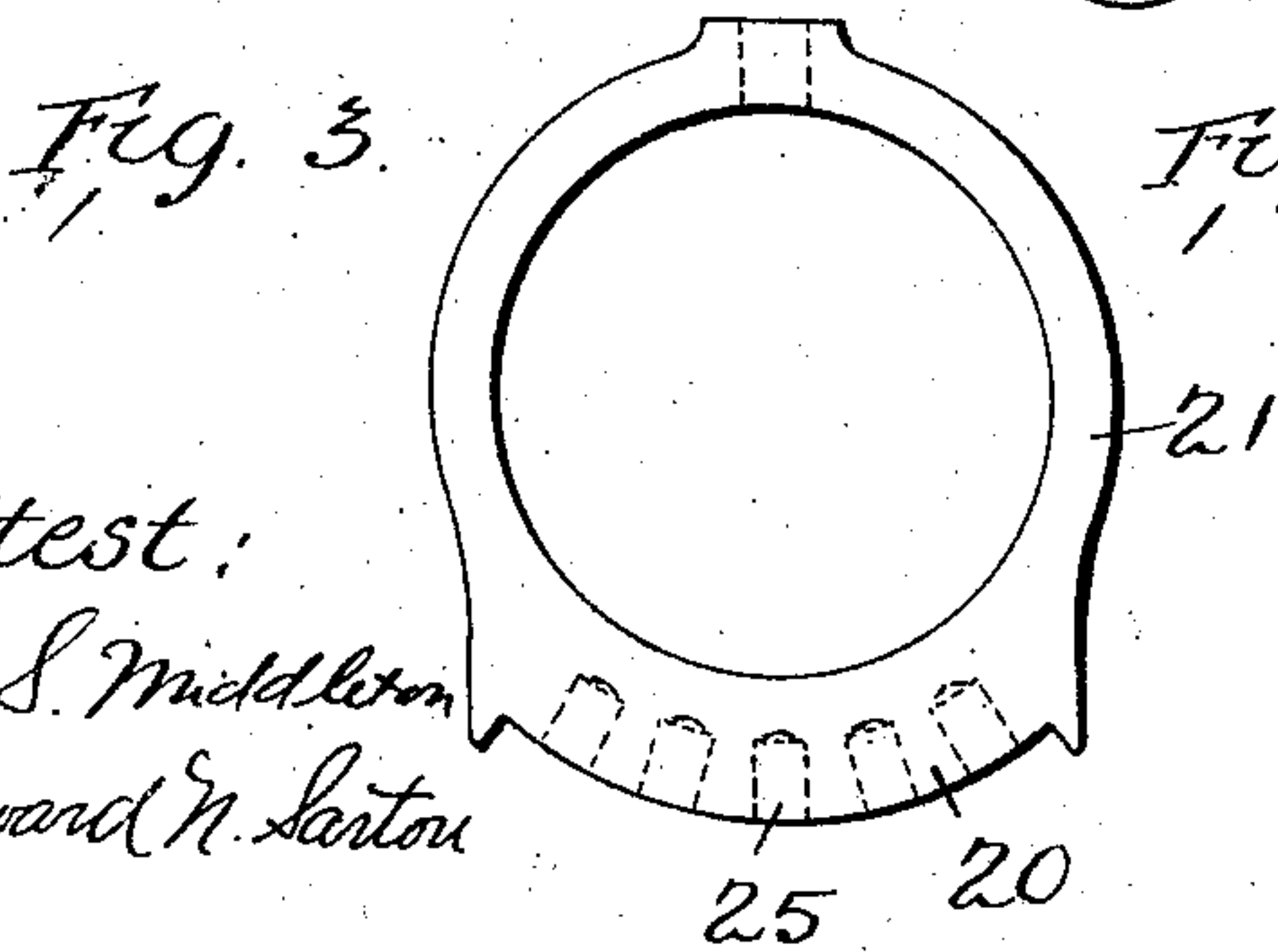
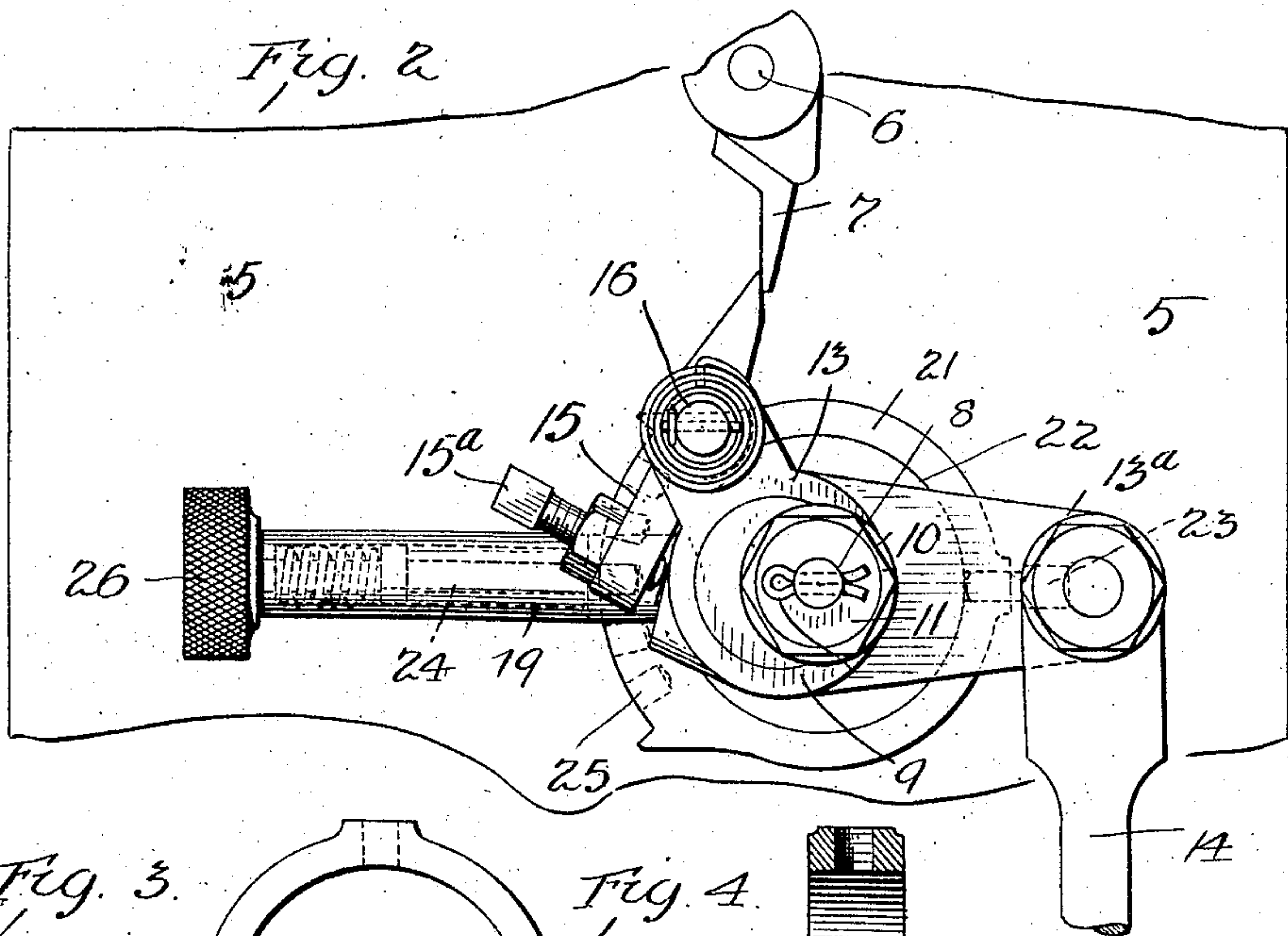
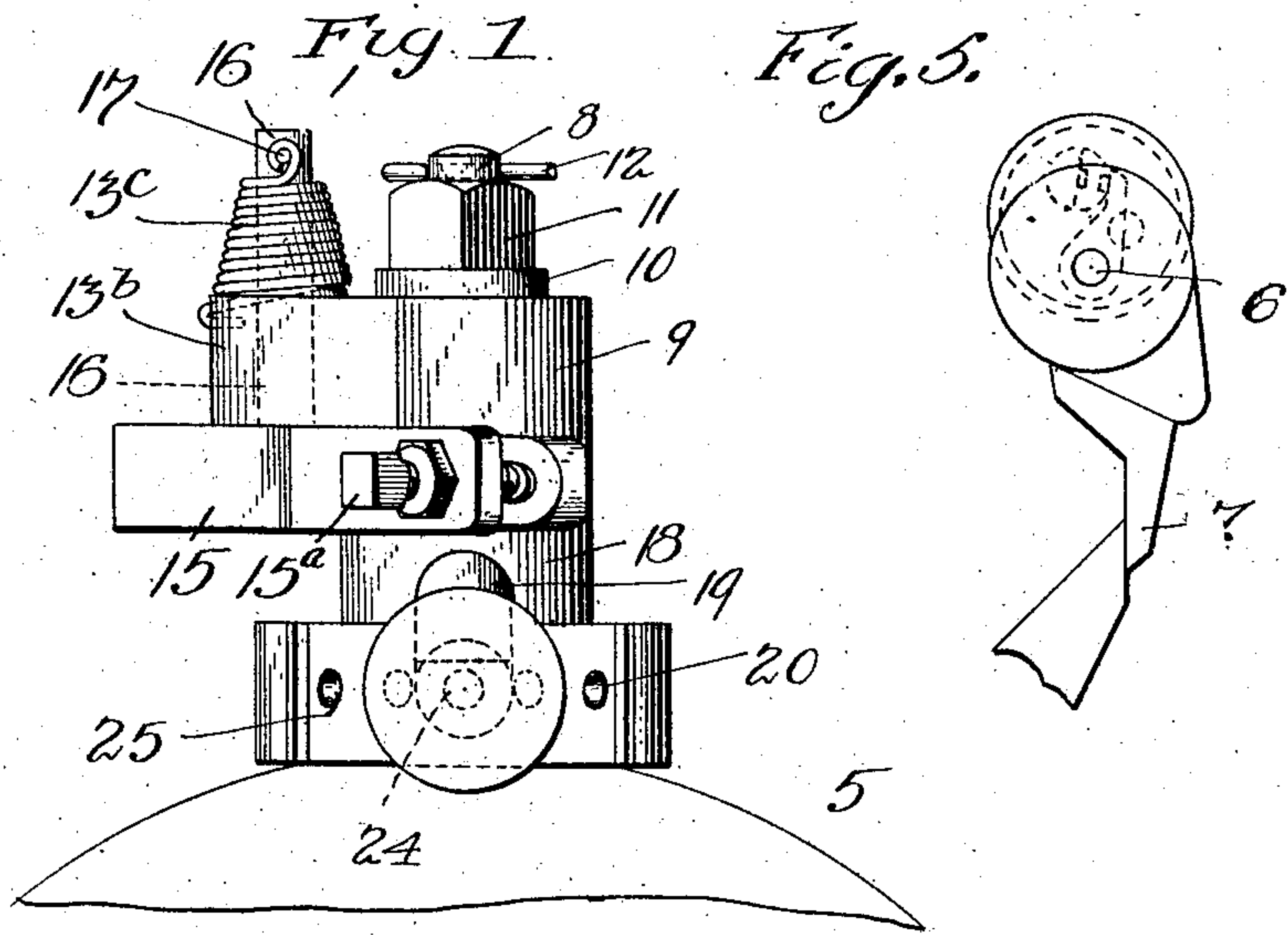
No. 849,797.

PATENTED APR. 9, 1907.

E. P. LAMB.

IGNITER FOR EXPLOSIVE ENGINES.

APPLICATION FILED JUNE 1, 1906. RENEWED NOV. 27, 1906.



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UNITED STATES PATENT OFFICE.

ELDEN P. LAMB, OF ROCKLAND, MAINE, ASSIGNOR TO CAMDEN ANCHOR-ROCKLAND MACHINE CO., OF ROCKLAND, MAINE.

IGNITER FOR EXPLOSIVE-ENGINES.

No. 849,797.

Specification of Letters Patent.

Patented April 9, 1907.

Application filed June 1, 1905. Renewed November 27, 1906. Serial No. 345,353.

To all whom it may concern:

Be it known that I, ELDEN P. LAMB, a citizen of the United States, residing at Rockland, Maine, have invented certain new and useful Improvements in Igniters for Explosive-Engines, of which the following is a specification.

The present invention relates to improvements in means for operating the electric igniters or sparkers of explosive-engines.

The objects of the invention are to produce an extremely simple, durable, and efficient construction which shall be reliable in operation and capable of ready adjustment while the engine is running for varying the time of producing the spark.

With these and other objects in view the invention includes the various features of construction and arrangement of parts hereinafter described, and particularly pointed out in the claims.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a plan view, Fig. 2 a front, and Figs. 3, 4, and 5 are details.

Referring by reference characters to the drawings, the numeral 5 designates that portion of the cylinder of an explosive-engine which is provided with the igniter. The igniter or contact-arms are, however, not described herein or shown in the drawings, as they form no part of the present invention. In the wall 5 is journaled a rock-shaft 6 under spring tension, which carries on its inner end the usual movable contact and on its outer end a finger 7, whereby the movable contact is operated.

A bolt or axle 8 is rigidly secured to the wall 5 in any suitable manner, and upon this pin is rotatably mounted an eccentric sleeve 9, secured in place by a washer 10 and nut 11. If desired, the nut may be held against jarring loose by a split pin 12. A rock-arm 13 is journaled on the eccentric sleeve, and one end 13^a is adapted for connection with the operating-rod 14, extended to and reciprocated by any suitable moving part of the engine in the manner well understood by those skilled in the art.

A trip-dog 15 is pivotally carried by the rock-arm 13, preferably by having a laterally-extending pivot or shaft 16 journaled in a

suitable bearing in the projecting part 13^b of the arm 13. This part 13^b preferably has a conical lug or extension 13^c, which is encircled by a similarly-shaped coiled spring, one end of which may be tapped into or otherwise secured to the arm, while its other end is secured to the shaft 16. A convenient manner of effecting the connection is by hooking the end of the spring around the pin 17, which is inserted through the shaft 16.

The eccentric sleeve is provided with an annular flange or collar 18, from which projects an arm 19, which serves as a handle by which the eccentric sleeve may be rotated, and thus the timing of the spark effected. The arm 19 carries means for effecting a locking engagement with a segment 20, rigidly connected to the face of the cylinder. This segment is shown as formed on a ring 21, clamped to a boss 22 on the cylinder by a set-screw 23. The engaging means may conveniently consist of a spring-pressed plunger 24, guided in a longitudinal passage in the arm, which is shown as overhanging the segment for this purpose. The segment is provided with a plurality of recesses 25 to receive the inner end of the plunger, the outer end of which has a suitable head or button 26. It is also desirable to provide means for adjusting the trip-dog 15, and such means may consist of a set-screw 15^a, passing through the rear end of the dog and bearing against a projection on the rock-arm 13.

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

1. In an electric igniter for explosive-engines, the combination with the latch for operating the movable electrode, of means for tripping such latch comprising a pin carried by the cylinder, an eccentric sleeve journaled on said pin, a segment adjustably clamped to the cylinder and having a series of radial recesses, an arm carried by said eccentric sleeve, a spring-pin carried by said arm for engaging the recesses in the segment, and a trip-lever mounted to oscillate on said eccentric sleeve, substantially as described.

2. In an explosive-engine a movable electrode-operating latch, a circular boss on the cylinder in proximity thereto, a ring clamped to said boss and having radial recesses, a pin

projecting centrally of said boss, an eccentric sleeve journaled on said pin, a handle projecting from said sleeve having a spring-pin for engaging said recesses, a rocking trip-
5 lever journaled on said eccentric sleeve, and a trip-dog carried by said trip-lever, substantially as described.

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

ELDEN P. LAMB.

Witnesses:

S. T. KIMBALL,
JOHN BIRD.