

(No Model.)

O. MUELLER.
IGNITER FOR EXPLOSIVE ENGINES.

No. 582,540.

Patented May 11, 1897.

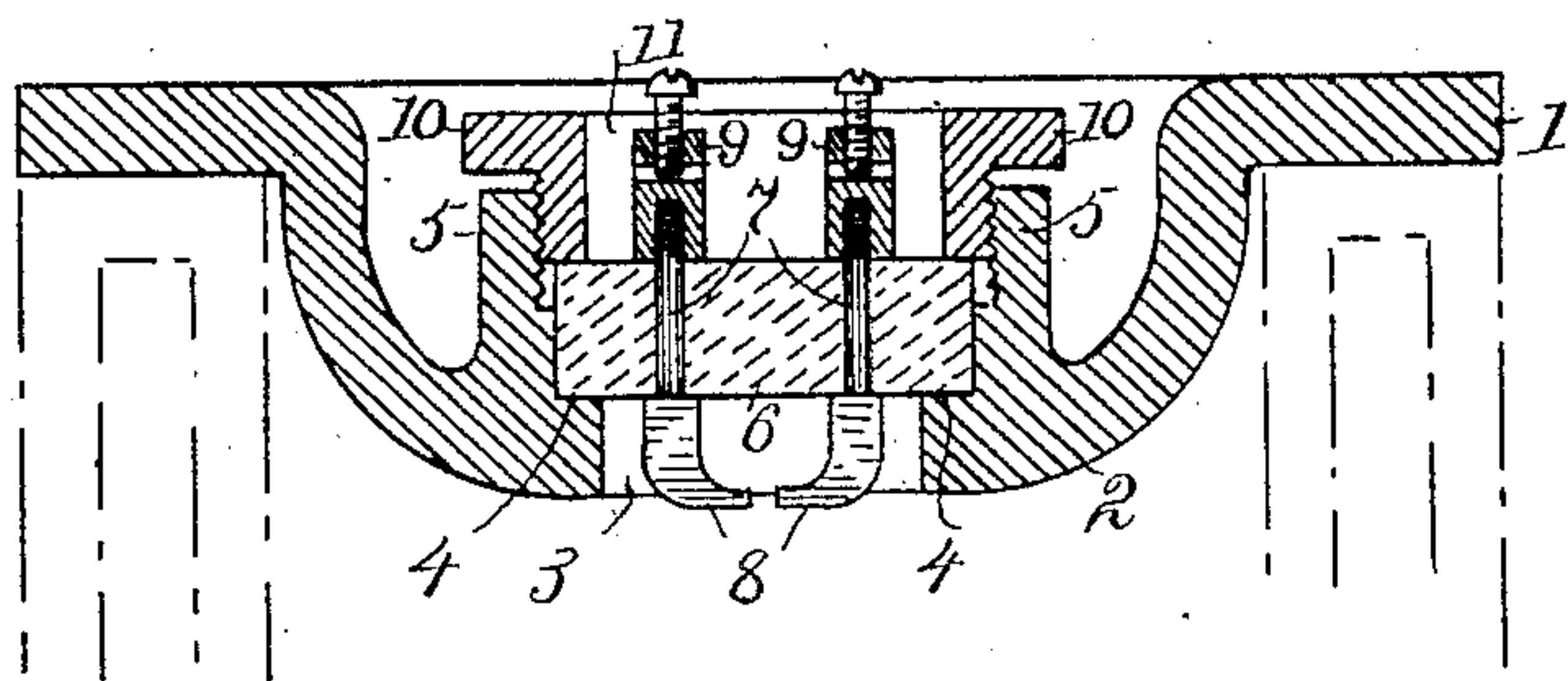


Fig. 1.

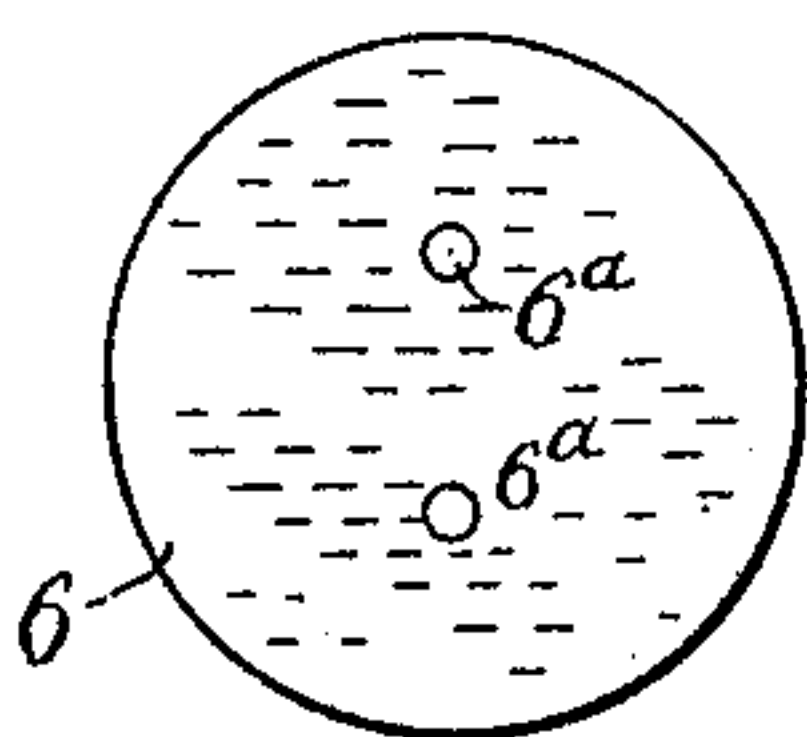


Fig. 2.

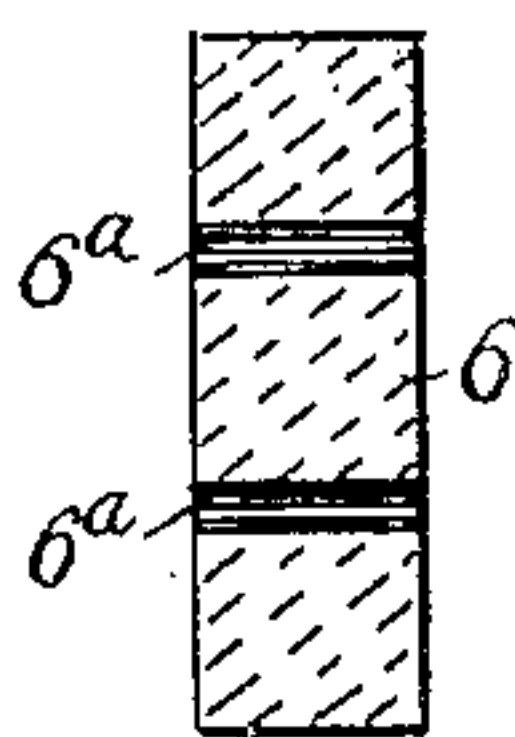


Fig. 3.

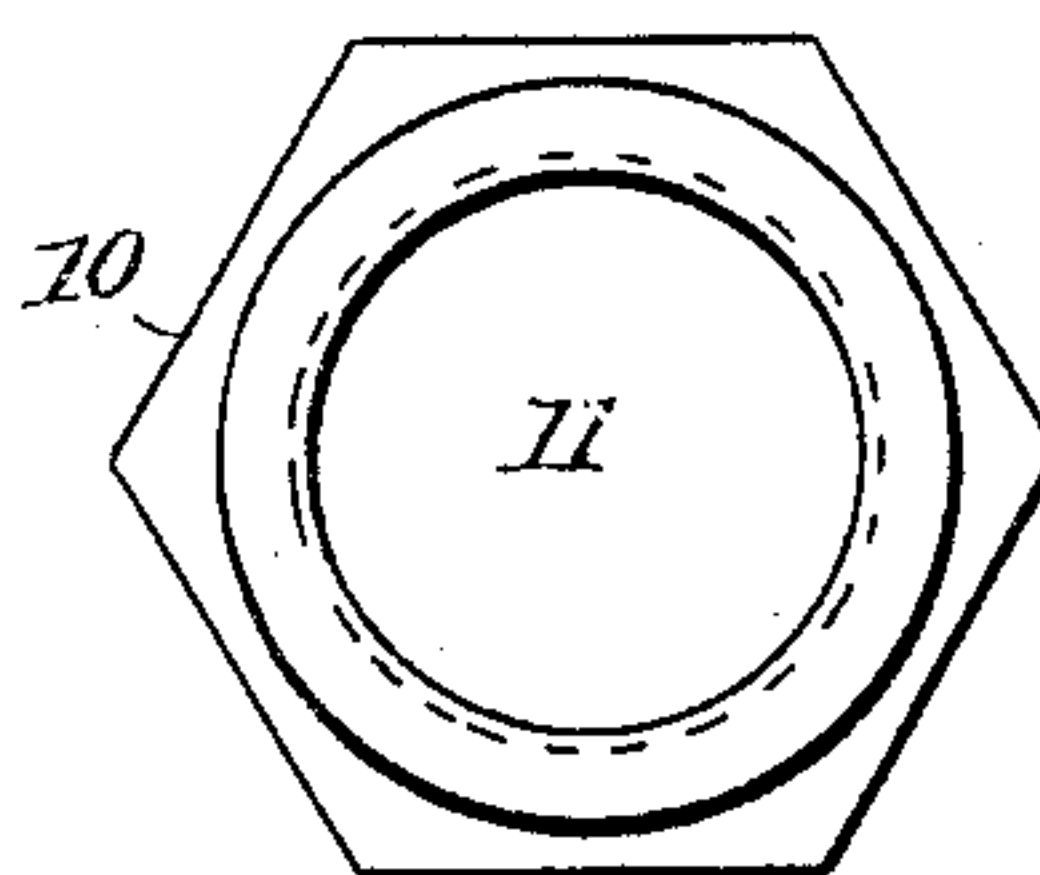


Fig. 4.

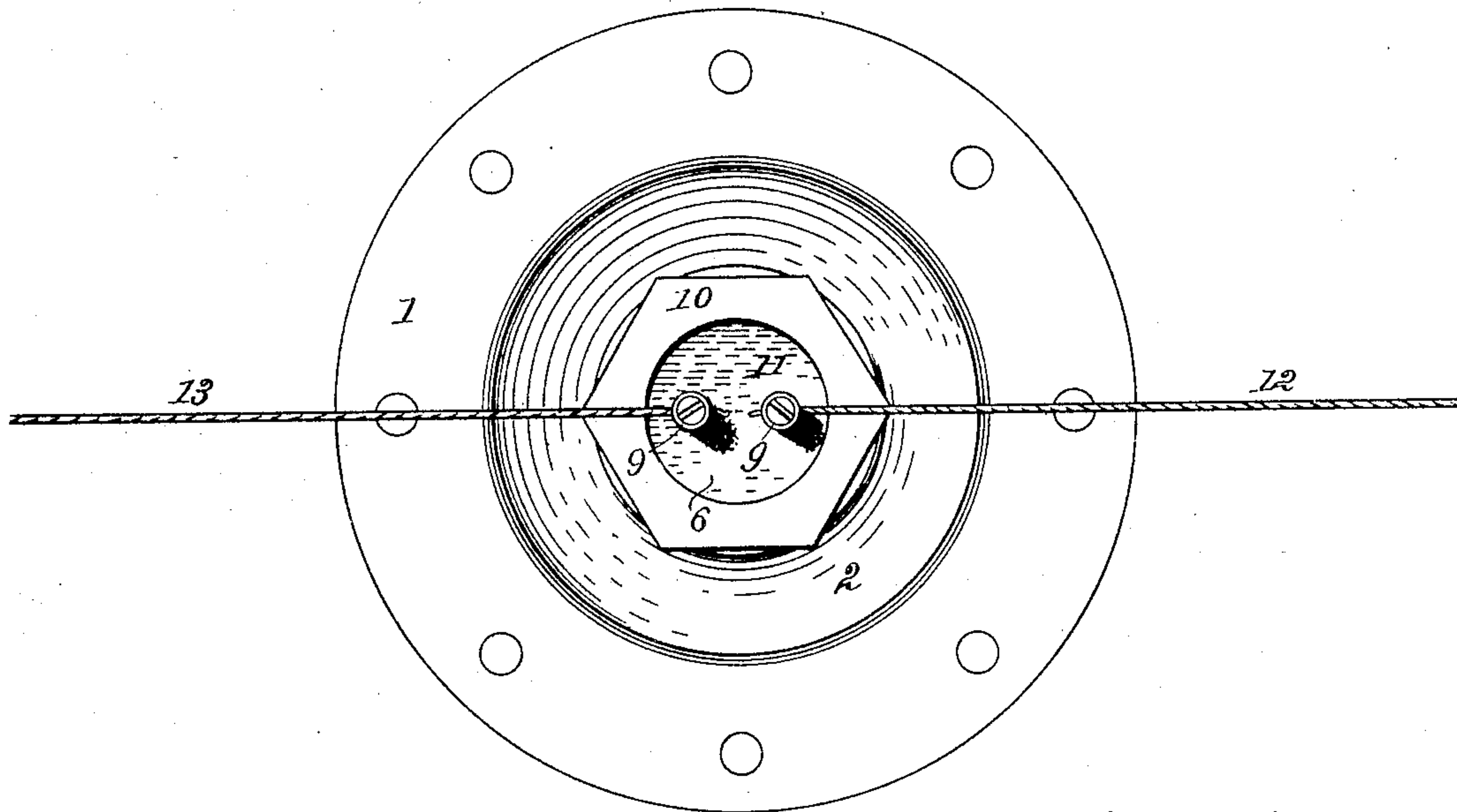


Fig. 5.

ATTEST
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UNITED STATES PATENT OFFICE.

OSCAR MUELLER, OF DECATUR, ILLINOIS.

IGNITER FOR EXPLOSIVE-ENGINES.

SPECIFICATION forming part of Letters Patent No. 582,540, dated May 11, 1897.

Application filed July 22, 1896. Serial No. 600,168. (No model.)

To all whom it may concern:

Be it known that I, OSCAR MUELLER, of Decatur, in the county of Macon and State of Illinois, have invented certain new and useful
5 Improvements in Igniters for Explosive-Engines, of which the following is a specification.

This invention is designed to supply simplified and improved means for igniting the explosive of a gas or other explosive engine
10 through the instrumentality of an electric spark. It is embodied in the structure hereinafter described, and it is defined in the appended claims.

In the drawings forming part of this specification, Figure 1 is a central section through
15 a head of a gas-engine cylinder constructed and equipped in accordance with my invention. Fig. 2 is a face view of a non-conductor disk made of glass, marble, or some other
20 substance of considerable strength. Fig. 3 is a section through the disk shown in Fig. 2. Fig. 4 is a representation of an annular nut with its inner end presented to view. Fig. 5
25 is a face view of the outer side of the cylinder-head with the igniter applied thereto and supplied with electric wires.

In constructing an igniter in accordance with my invention the cylinder-head (designated by 1 in the drawings) is recessed or
30 dished, as shown at 2, and it has a central circular opening at 3. An annular seat 4 is formed in the wall of the opening, and an interiorly-screw-threaded rim 5 projects outward from the seat. A disk 6 of some firm
35 non-conducting material is placed on the seat 4, thereby closing opening 3, and it is securely held against the seat by nut 10. The nut is annular, it is exteriorly threaded over a part of its outer surface, and it has a wrench-seat,
40 preferably external, which enables it to be screwed into the rim and against the disk.

The disk has two holes, (shown at 6 in Figs. 2 and 3,) such holes being parallel with the axis of the disk on opposite sides thereof and
45 about midway between the axis and the perimeter. Pole-pieces, as 8, have shanks 7, that extend through the holes of the disk, and such shanks are threaded on their extended ends to screw into binding-posts 9. The binding-
50 posts are accessible through opening 11

in nut 10, and wires, as 12 and 13, connect the posts with a battery or other developer of electricity.

The pole-pieces are presented one toward the other in proper position to create a spark
55 when a current is developed, and the spark is applied directly to the explosive in the cylinder.

The igniter may be detached from the cylinder-head without detaching the head from
60 the cylinder, and the cylinder-head may be detached from the cylinder without affecting the igniter.

It is not impossible that each pole-piece should be set in a separate disk or the equivalent thereof and the disks be each secured
65 in the head in the manner described, and while this modification would not be so desirable as the form described it is included in the broad idea of the invention.
70

What I claim as new, and desire to secure by Letters Patent, is—

1. An igniter for explosive-engines comprising a cylinder-head having an opening with a seat formed therein and a threaded rim
75 encircling and extending outward from the seat, a non-conductor disk bearing against the seat and closing the opening, an annular nut screwed into the rim and against the disk, and a circuit-wire connected with a pole-piece
80 that extends through the disk, substantially as set forth.

2. An igniter for explosive-engines comprising a cylinder-head having an opening with a seat formed therein and a threaded rim
85 encircling and extending outward from the seat, a non-conductor disk bearing against the seat and closing the opening, an annular nut screwed into the rim and against the disk, pole-pieces having shanks extended through
90 holes in the disk and connected with binding-posts outside the same, and circuit-wires connected with the binding-posts through the annular nut, substantially as set forth.

In testimony whereof I sign my name in the
95 presence of two subscribing witnesses.

OSCAR MUELLER.

Attest:

MINNIE HOIT,
ALBERT H. BARBER.