

No. 776,100.

PATENTED NOV. 29, 1904.

K. WIESER.
TIME FUSE.

APPLICATION FILED OCT. 2, 1903.

NO MODEL.

Fig. 1.

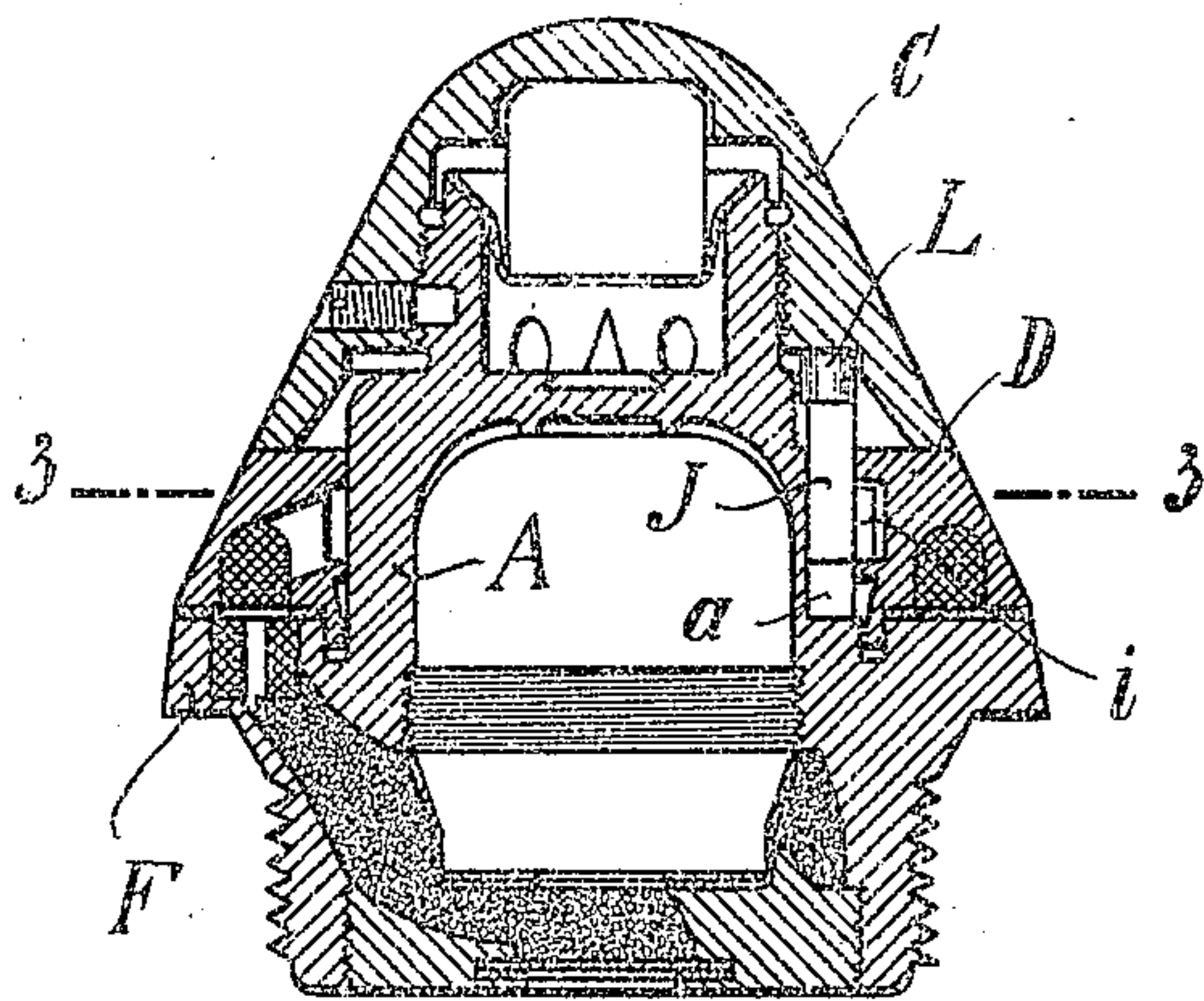


Fig. 2.

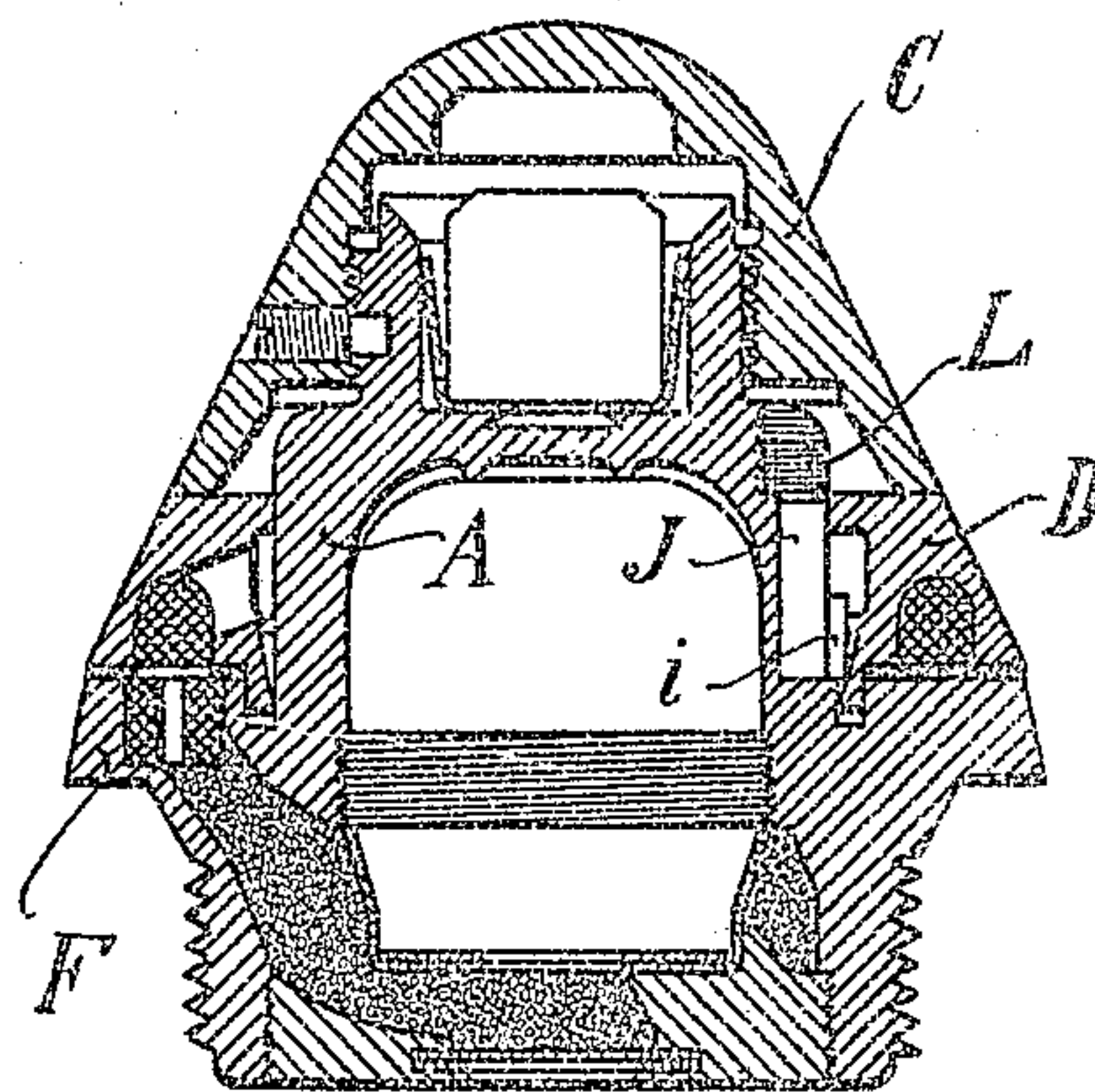


Fig. 3.

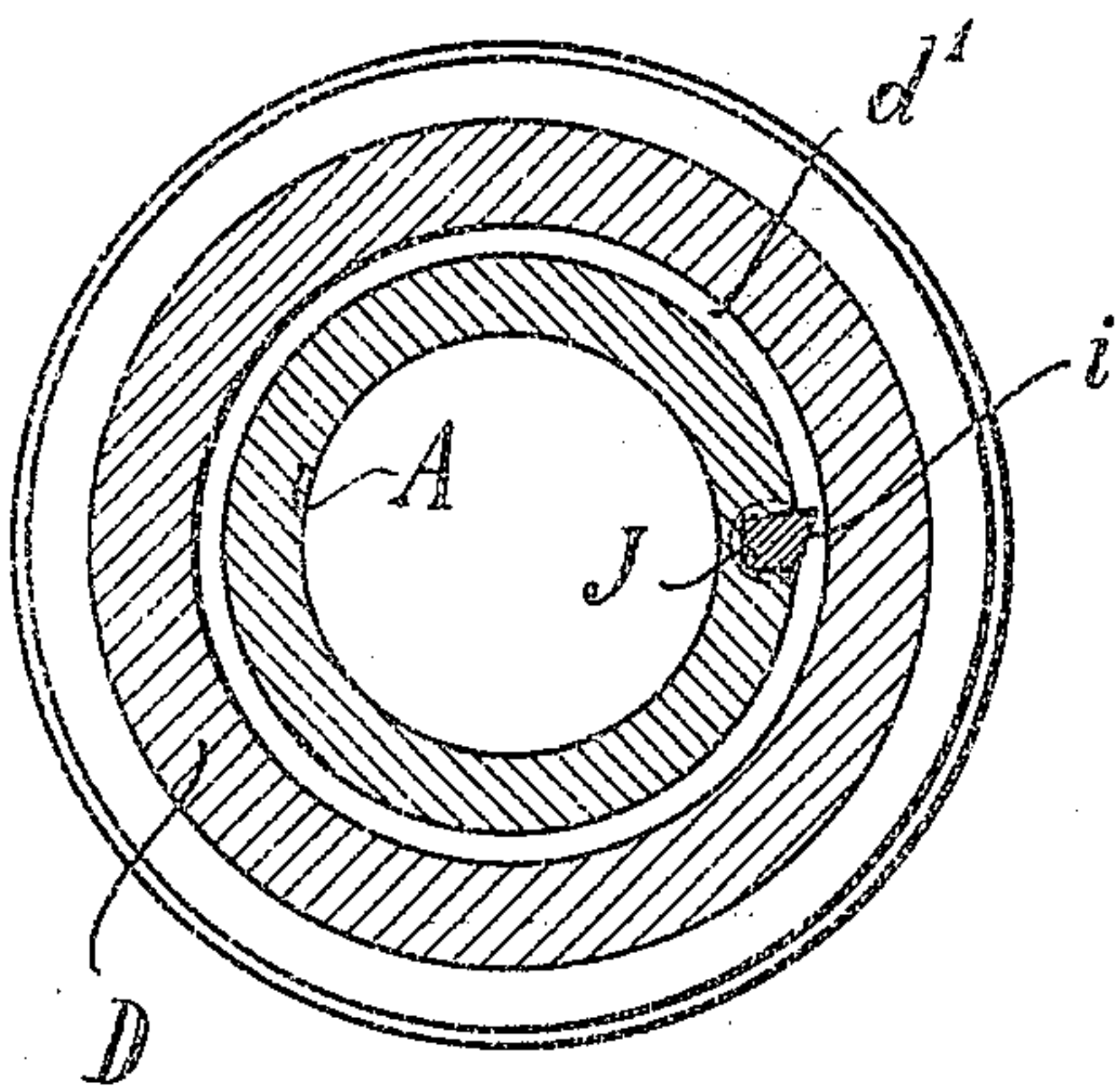
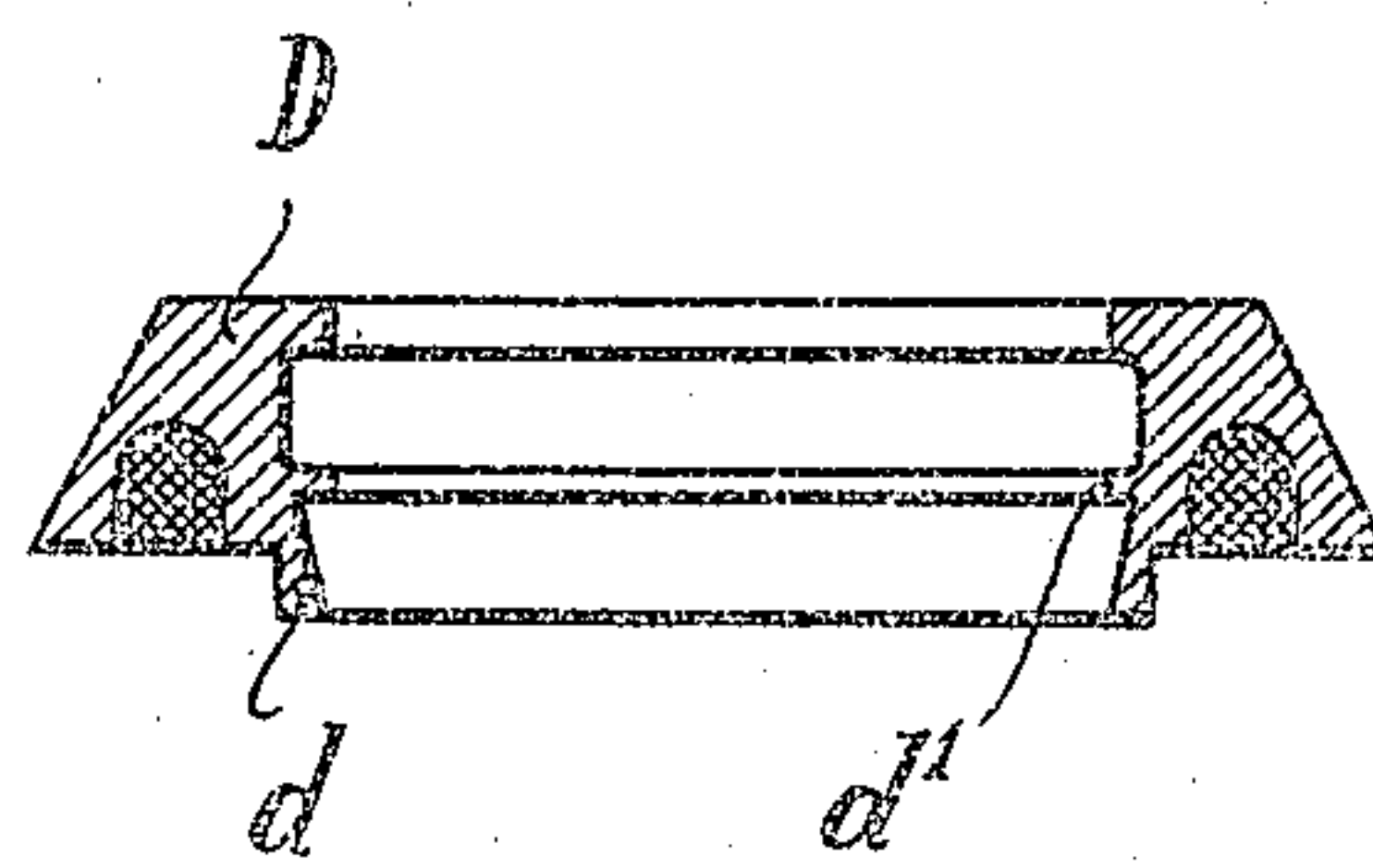


Fig. 4.



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UNITED STATES PATENT OFFICE.

KARL WIESER, OF RÜTTENSCHIED, NEAR ESSEN-ON-THE-RUHR, GERMANY,
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TIME-FUSE.

SPECIFICATION forming part of Letters Patent No. 776,100, dated November 29, 1904.

Application filed October 2, 1903. Serial No. 175,487. (No model.)

To all whom it may concern:

Be it known that I, KARL WIESER, a subject of the Emperor of Germany, and a resident of 34 Friederikenstrasse, Rüttenscheid, near
5 Essen-on-the-Ruhr, Germany, have invented certain new and useful Improvements in Time-Fuses, of which the following is a specification.

The present invention relates to time-fuses in which the setting-piece may readily be
10 turned by hand, and has for its object to secure the time adjustments of a fuse in firing. For this purpose, according to the present invention, one of the two relatively adjustable parts of a fuse is provided with a bolt of hard
15 material movable in the direction of the axis of the fuse, while the other is provided with an annular lip projecting into the path of the bolt or into the path of a portion of its section, so that, upon firing, the bolt, in consequence of its inertia, will cut out a portion of
20 the annular lip and enter the cut thus formed, so as to prevent relative turning between the parts thereafter.

One embodiment of the present invention is shown, by way of example, in the accompanying drawings, in which—

Figures 1 and 2 are longitudinal sections through a fuse, showing the relative positions of the parts before and after firing, respectively. Fig. 3 is a section of a fuse on the
30 line 3 3 of Fig. 1 looking from above. Fig. 4 is a section through the setting-ring.

The general arrangement of the fuse is known, and it will be only necessary to describe the parts which are immediately concerned in the present invention.

Over the fuse-body A is placed the setting-ring D, and upon the upper portion of the fuse-body is screwed the closing-cap c. The
40 setting-ring D, which has an annular extension d projecting into a groove of the fuse-base F, is provided with a comparatively thin annular lip d'. In the fuse-body A and parallel to the longitudinal axis of the fuse is arranged a groove a, the section of which is in
45 part cylindrical and part angular. The cylindrical part of the groove a is formed with incisions in its wall which may be of any suitable kind. In the fuse illustrated in the draw-

ings these incisions are formed by a screw- 50 thread. In the angular portion of the groove a is located a bolt J, constructed of steel or other hard material, the section of which corresponds to that of the groove. A portion i of the bolt J projects beyond the cylindrical 55 rim of the fuse-body, as shown more clearly in Fig. 3. This projecting portion i of the bolt rests upon the annular lip d' before firing. Fitting loosely above the bolt J in the cylindrical portion of the groove a is a cor- 60 respondingly-formed body L of soft and heavy material, such as lead.

When the shot is fired, the bolt J is held back by its inertia and remaining back cuts out a portion of the annular lip d', and enters 65 the recess thus formed with its projection i. By this means the setting-ring will be locked in its previously-adjusted position, so that it cannot be moved from its adjustment by the rotation of the projectile during its flight. 70

The leaden body L increases the cutting force of the bolt J. In addition to this function it serves to hold the bolt in its locking position, since it will be spread out by the impact of the bolt J against the base of its 75 guiding-groove and securely clamped against the walls of the groove. The security of this clamping is materially increased by the incisions already referred to in the upper portion of the groove a and into which the leaden 80 body is pressed.

Having thus described the invention, the following is what is claimed as new therein:

1. In a time-fuse, means for securing the relatively adjustable parts at the time of firing 85 consisting of a bolt movable under its inertia on one of said parts in the direction of the axis of the fuse and metal softer than said bolt on the other of said parts cut into by the bolt at the time of firing, to prevent relative 90 adjustment.

2. In a time-fuse, means for securing the relatively adjustable parts at the time of firing consisting of a bolt movable under its inertia on one of said parts in the direction of the 95 axis of the fuse, metal softer than said bolt on the other of said parts cut into by the bolt at the time of firing, to prevent relative ad-

justment, and means for holding the bolt against movement after it has moved under its inertia.

3. In a time-fuse, means for securing the
5 relatively adjustable parts at the time of firing consisting of a bolt movable under its inertia on one of said parts in the direction of the axis of the fuse, metal softer than said bolt on the other of said parts cut into by the bolt
10 at the time of firing, to prevent relative adjustment, and soft metal movable to spread and hold the bolt against movement after said bolt has moved under its inertia.

4. In a time-fuse, means for securing the
15 relatively adjustable parts at the time of firing consisting of a bolt made of hard material and movable under its inertia on one of said parts in the direction of the axis of the fuse and an annular lip made of soft material carried by
20 the other of said parts and cut by said bolt or a portion thereof at the time of firing, to prevent relative adjustment.

5. In a time-fuse, means for securing the setting-ring against relative movement on the
25 body of the fuse at the time of firing, comprising an annular lip projecting from one of said parts and a bolt mounted on the other of said parts, movable relatively thereto by its own inertia in the direction of the axis of the
30 fuse, at time of firing and having a projection which overhangs the annular lip prior to firing and cuts through said lip and remains in the recess formed therein, when the shot is fired.

6. In a time-fuse, means for securing the setting-ring against relative movement on the
35 body of the fuse at the time of firing, comprising an annular lip projecting from one of said parts, a bolt mounted on the other of
40 said parts, movable relatively thereto by its own inertia in the direction of the axis of the fuse, at time of firing and having a projection which overhangs the annular lip prior to firing and cuts through said lip and remains in

the recess formed therein, when the shot is
45 fired and a body of soft and heavy material located above the bolt to increase the cutting force of the latter.

7. In a time-fuse, means for securing the setting-ring against relative movement on the
50 body of the fuse at the time of firing, comprising an annular lip projecting from one of said parts, a bolt mounted on the other of said parts, movable relatively thereto by its own inertia in the direction of the axis of the
55 fuse, at time of firing and having a projection which overhangs the annular lip prior to firing and cuts through said lip and remains in the recess formed therein, when the shot is
60 fired and a body of soft and heavy material located above the bolt to increase the cutting force of the latter, movable in a groove and wedging therein under the impact of the bolt.

8. In a time-fuse, means for securing the setting-ring against relative movement on the
65 body of the fuse at the time of firing, comprising an annular lip projecting from one of said parts, a bolt mounted on the other of said parts, movable relatively thereto by its own inertia in the direction of the axis of the
70 fuse at time of firing, and having a projection which overhangs the annular lip prior to firing and cuts through said lip and remains in the recess formed therein when the shot is
75 fired, and a body of soft and heavy material located above the bolt to increase the cutting force of the latter movable in a groove and wedging therein under the impact of the bolt; said groove being provided with incisions to
80 increase the holding effect of the body wedged therein.

The foregoing specification signed at Dusseldorf this 17th day of September, 1903.

KARL WIESER.

In presence of—

WILLIAM ESSENWEIN,
PETER LIEBER.