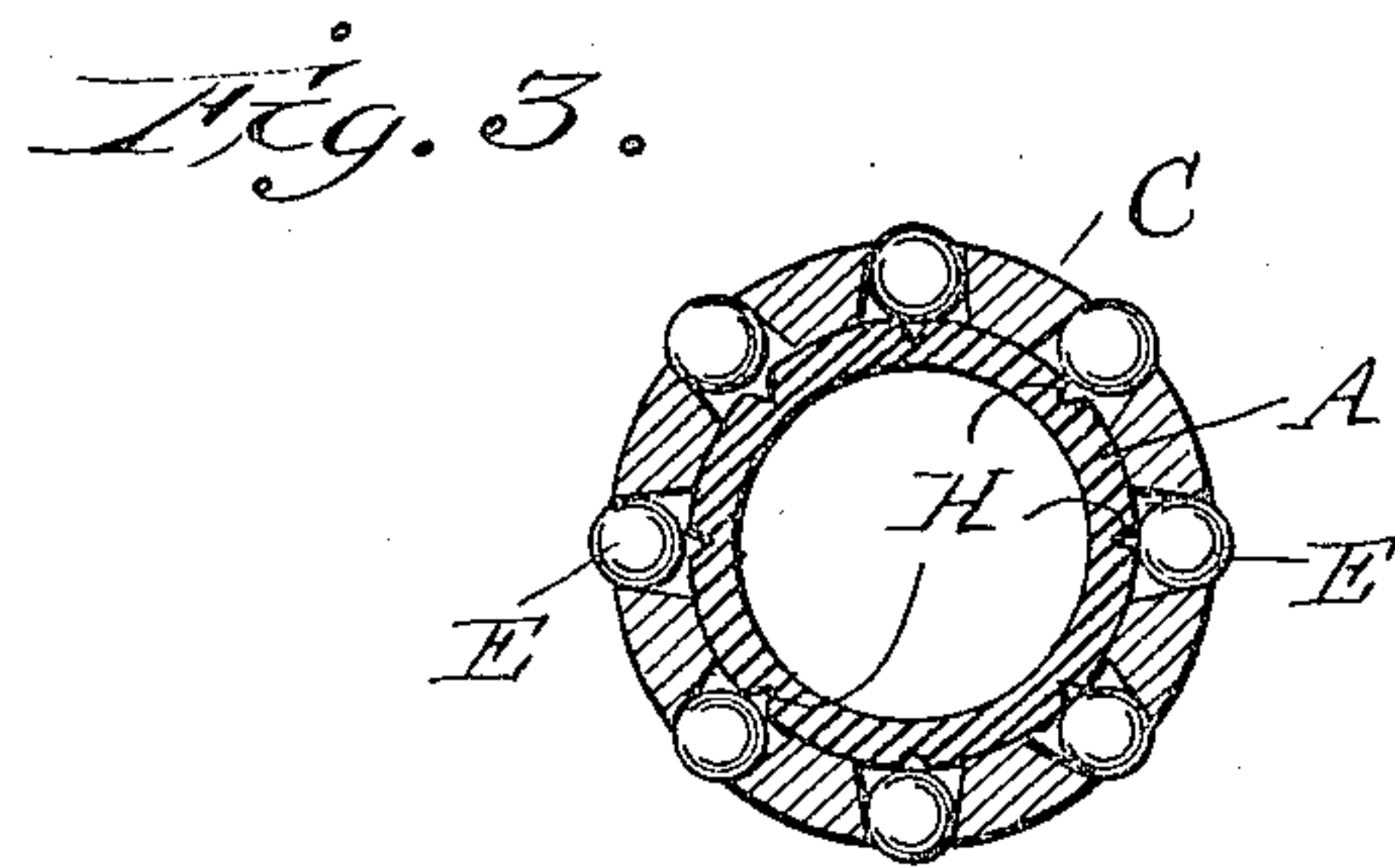
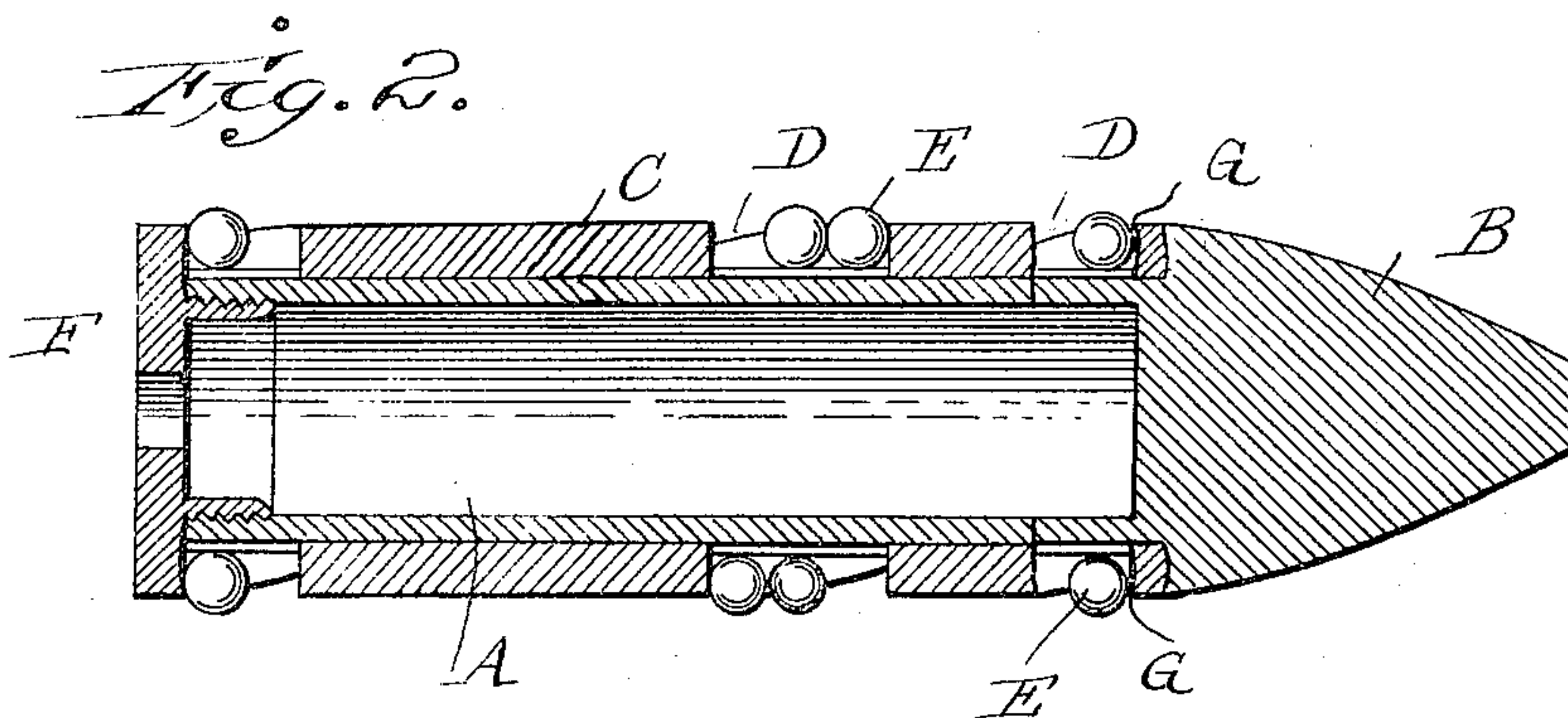
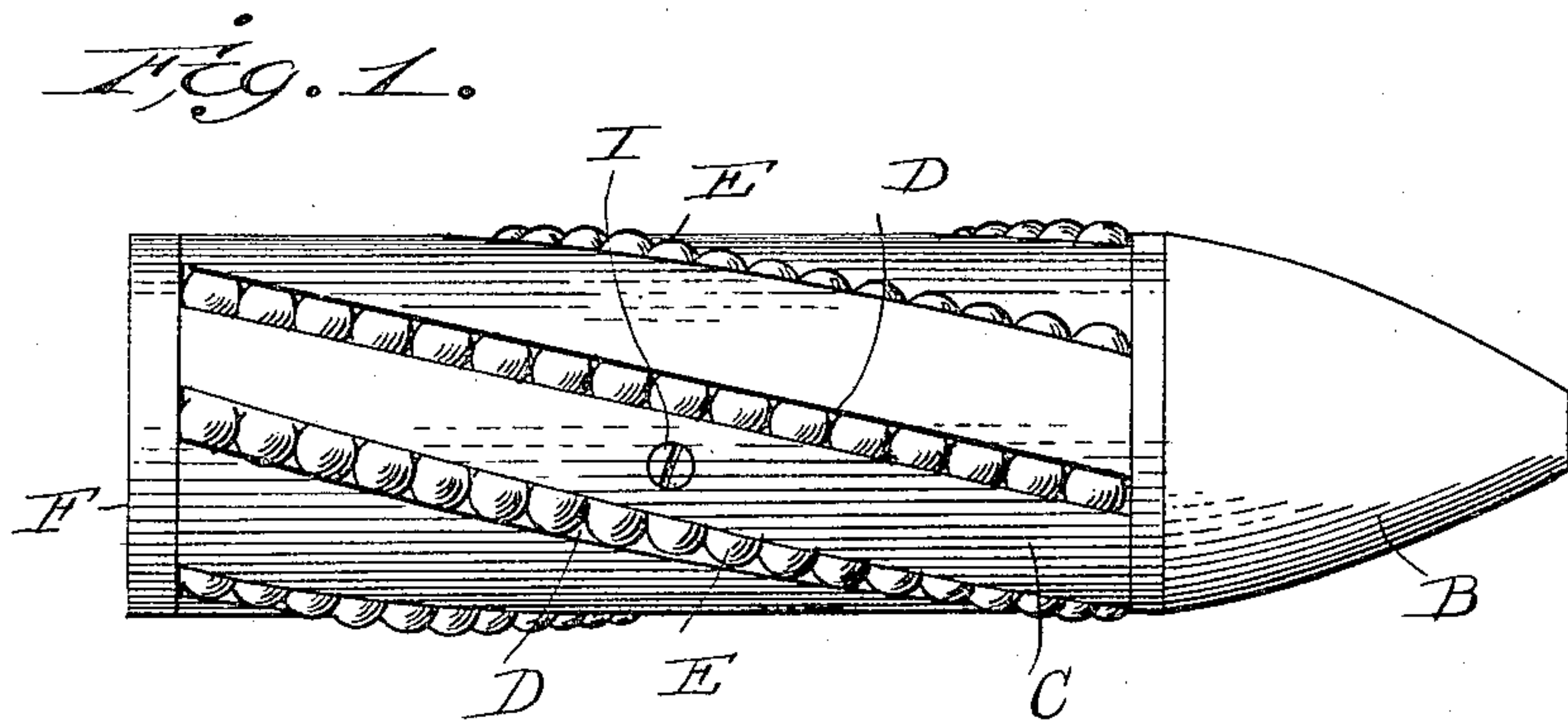


No. 791,679.

PATENTED JUNE 6, 1905.

J. M. EDMUNDS.
PROJECTILE.
APPLICATION FILED MAR. 28, 1904.



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN MARION EDMUNDS, OF NEW YORK, N. Y.

PROJECTILE.

SPECIFICATION forming part of Letters Patent No. 791,679, dated June 6, 1905.

Application filed March 28, 1904. Serial No. 200,393.

To all whom it may concern:

Be it known that I, JOHN MARION EDMUNDS, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Projectiles, of which the following is a specification.

This invention has reference to projectiles; and it is an object thereof to so construct the same as to reduce friction while the projectile passes through the bore of the gun and to also render the rifling of the bore of the gun unnecessary.

Another object is to increase the destructive qualities of the projectile; and still another object is to so construct such projectile as that it may receive a rotary motion while passing through the rifling.

An embodiment of the present invention is illustrated by the accompanying sheet of drawings, whereon—

Figure 1 illustrates an elevational view of a projectile. Fig. 2 is a sectional elevation of the same, and Fig. 3 illustrates a transverse section thereof.

Similar characters of reference indicate corresponding parts in the various figures.

The solid bullet end of the projectile is indicated by B, from which extends and which may be integral therewith a shell A. This shell in the present instance may be provided on its exterior with a plurality of longitudinally-disposed grooves H, which in the present instance may be V-shaped and which may so extend down into the wall of said shell A as to weaken the same and permit such shell to burst and fly apart when subjected to the severe internal strain resulting from the explosion. Surrounding the shell A, which is provided with a chamber to receive an explosive, is a jacket C, which in the present instance is provided with series of elongated slots D, formed, preferably, obliquely to the longitudinal axis of said jacket, and which in the present instance are preferably undercut, so as to retain series of balls E, which are adapted to turn in the grooves H and a part of whose surface extends out beyond the wall of the jacket C.

The jacket C may be provided with a collar G, which forms a wall or an abutment at one end of the various slots D for the purpose of holding the balls in place when the jacket is being placed upon the shell A, and for the purpose of holding said jacket and balls against longitudinal movement I provide a cap F, having a screw-threaded collar fitted into the interior of the shell.

For the purpose of preventing the jacket from slipping around on the shell I insert a set-screw I through said jacket and which may either bind on the surface of the shell A or be screw-threaded into an opening formed therein.

It will now be observed that I have provided a shell having a plurality of grooves formed therein and by which said shell is weakened, so that such shell may break into designated segments or parts when the projectile is discharged. It will also be noted that the jacket will also be rent asunder by the explosion, breaking the shell, whereby the various balls which in the first instance serve as antifriction-balls may now become effective as destructive media.

I do not limit my invention to any particular number of grooves or slots or the manner of forming the same nor material in the construction of the different parts or balls. The balls may also be used for solid shot.

While in Fig. 3 it is shown that the balls turn in the grooves H, it is obvious that I may permit them to turn on the periphery of the shell A between the slots H or in any other manner desired.

I deem it a potent feature of this invention to provide a shell with a series of grooves so formed and of such configuration as will aid in weakening the shell, and thus render it highly susceptible to fracture at the instance of explosion.

Having thus described my invention, I claim—

1. A projectile comprising a shell weakened by a series of elongated grooves, a jacket surrounding the shell and provided with slots, series of balls confined in said slots and means to hold the jacket in place on the shell.

2. A projectile comprising a shell provided with a powder-chamber and weakened by a series of grooves running along the longitudinal axis of the shell, a jacket surrounding the shell and provided with undercut slots, series of balls adapted to turn in said grooves and which are confined in said slots, means to hold the jacket and balls on the shell, and a set-screw to lock said jacket to said shell.

3. A projectile comprising a shell weakened at various points by series of grooves running along the longitudinal axis of the shell and which grooves are V-shaped, a jacket surrounding said shell and provided with a plurality of obliquely-disposed slots, series of balls adapted to turn in said slots

and upon said shell, and means to hold the jacket in place on said shell.

4. A projectile comprising a shell whose wall is weakened by a series of grooves formed therein, a jacket surrounding said shell and provided with obliquely-arranged slots running from end to end, a series of balls in each slot and adapted to turn upon said shell, a plug-screw threaded into said shell and adapted to hold the jacket against longitudinal movement, and means to prevent the jacket from slipping around on the shell.

JOHN MARION EDMUNDS.

Witnesses:

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