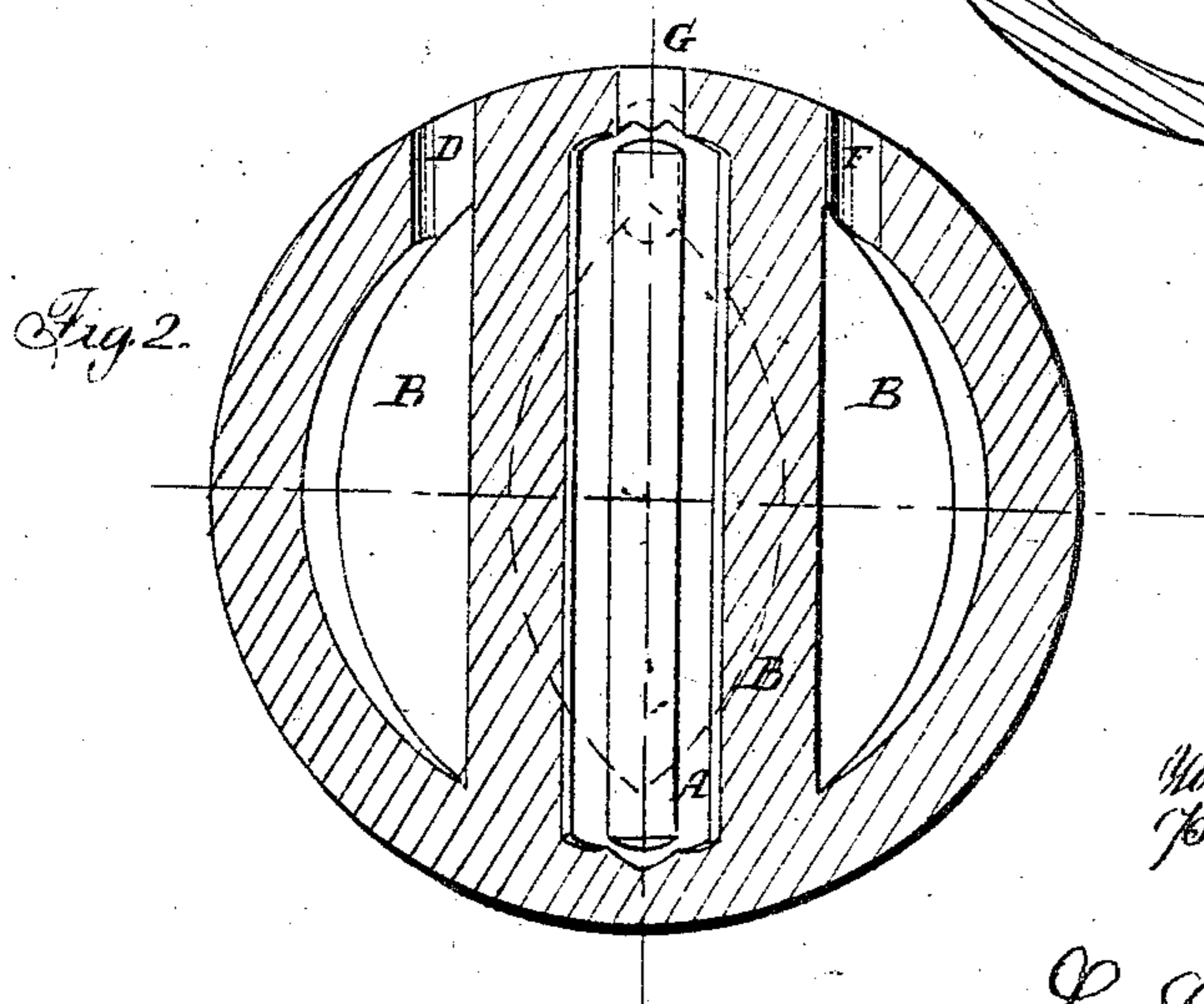
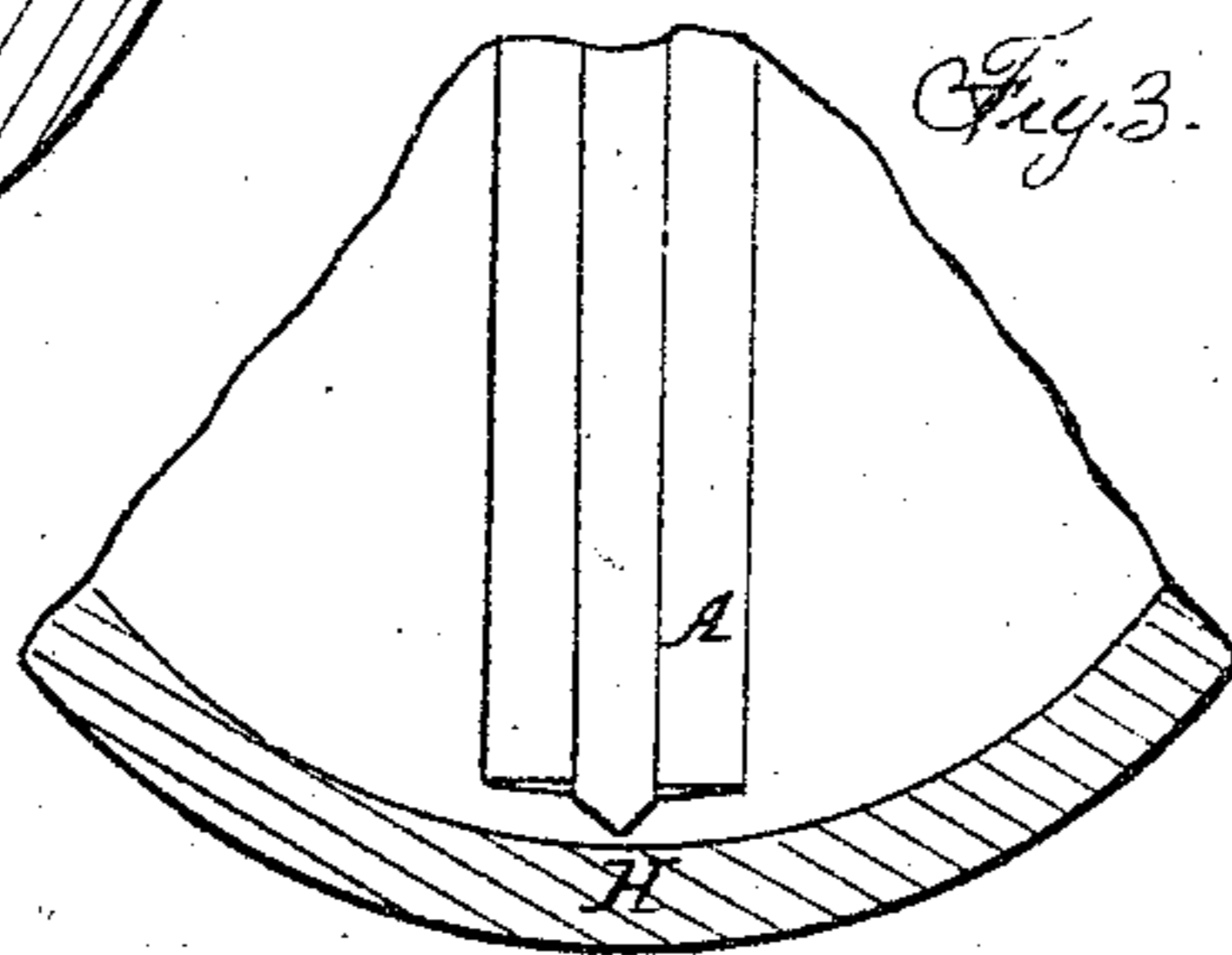
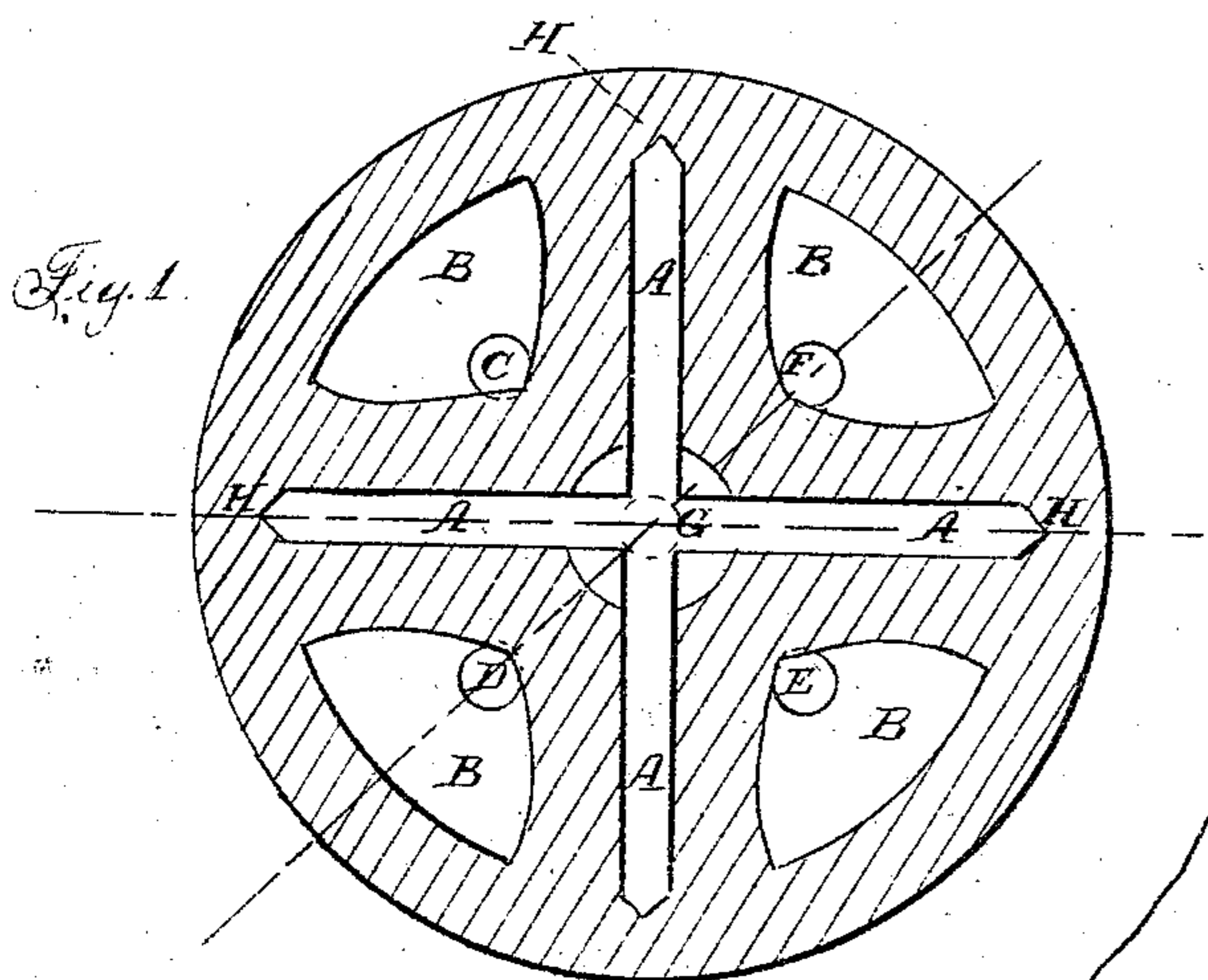


L. E. WILLIAMS.

Shell

No 48,005.

Patented May 30, 1865.



Witnessed
Present

L. Luchs
H. S. Dulaney

Lewis E. Williams
Inventor

By his Atty -

A. Franklin Wright

UNITED STATES PATENT OFFICE.

LEWIS E. WILLIAMS, OF PEEKSKILL, NEW YORK.

IMPROVEMENT IN EXPLOSIVE SHELLS.

Specification forming part of Letters Patent No. 48,005, dated May 10, 1865.

To all whom it may concern:

Be it known that I, LEWIS E. WILLIAMS, of Peekskill, Westchester county, State of New York, have invented new and useful Improvements in Explosive Shells; and I do hereby declare the following to be an exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in one or more center or radial chambers dividing the shell into sections, and other chambers, one in each section, each having an aperture for charging, in which fuses are afterward inserted.

The object of my invention is to produce a number of separate explosions. The first explosion divides the shell into distinct sections. Afterward each section explodes and scatters separately; or the shell may be charged so that the fuses may ignite and explode the sections all together at the same instant of time as one shell.

Figure 1 represents a cross-section of the shell. Fig. 2 is a sectional view of the shell, showing the shape of the chambers lengthwise. Fig. 3 exhibits a sectional view of a center cross-chamber.

I propose making it an eleven-inch shell weighing about one hundred and thirty-nine pounds; empty, one hundred and thirty-one

pounds; weight of powder, eight pounds. The shell is spherical, and has central cross-sections or radial chambers, A A A A, and separate angular chambers B B B B between the cross-sections. It has one or more apertures, C, D, E, F, and G, for charging, and fuses are to be inserted and screwed into the apertures. The center fuse will be larger than the others, so as to time the shell, and to be properly charged to ignite the whole of the fuses simultaneously or separately. The ends of the chambers A extend to a point, H, an angular groove in the outside shell, so that the shell is thinner at the groove H than at any other part, and the bursting will more easily take place at those grooves and explode the shell into sections. I do not, however, wish to limit the bursting of the shell to four parts. I may make four or more cross-sections A, so as to form a multipartite shell.

What I claim as my invention, and desire to secure by Letters Patent, is:—

A series of radial chambers extending from a common central chamber to the inner perimeter of the shot, for the purpose of dividing the interior of the shot into a series of separate and distinct chambers to contain explosive material, substantially as described.

LEWIS E. WILLIAMS.

Witnesses:

J. FRANKLIN REIGART,
JOHN S. HOLLINGSHEAD.