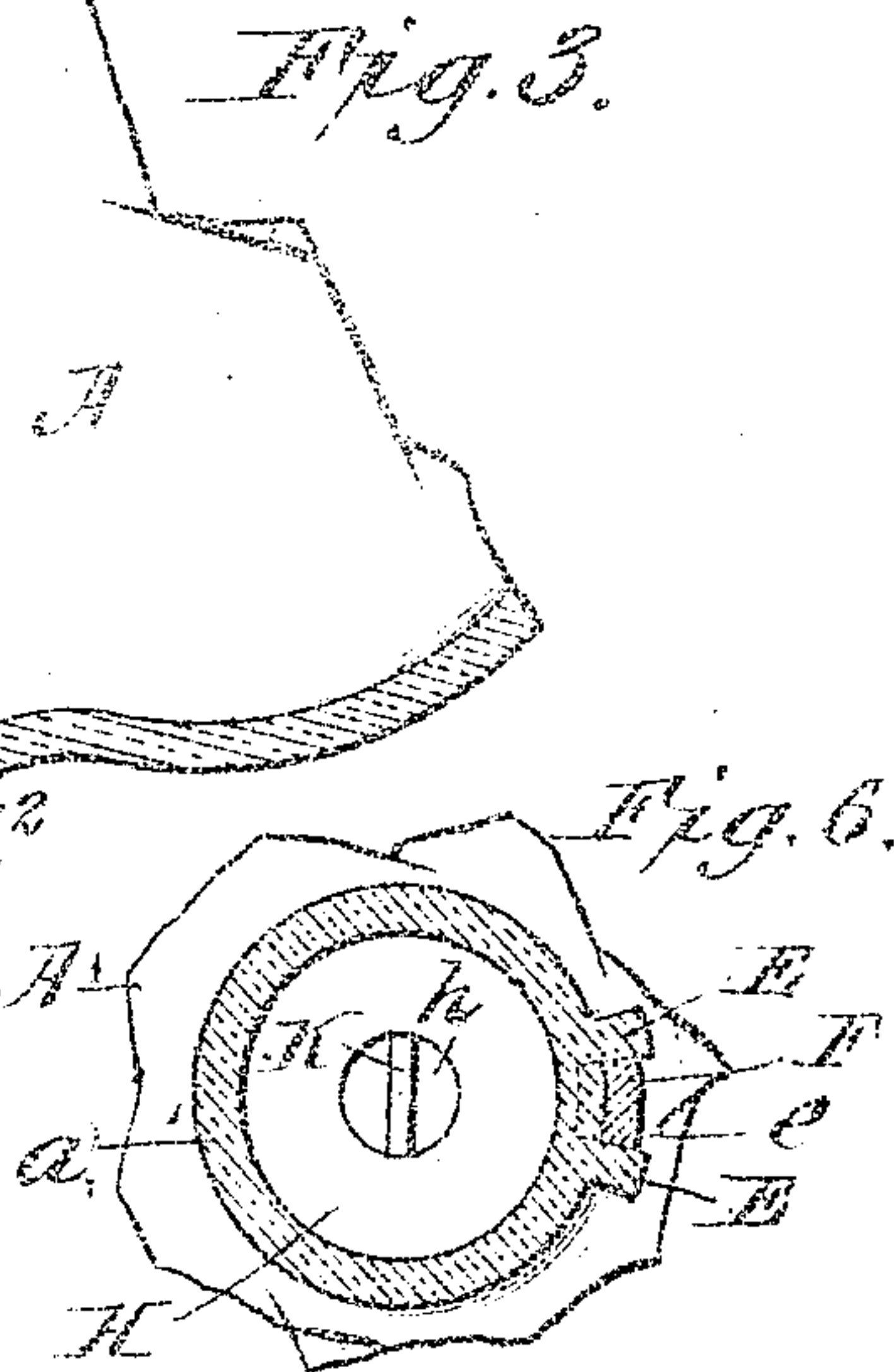
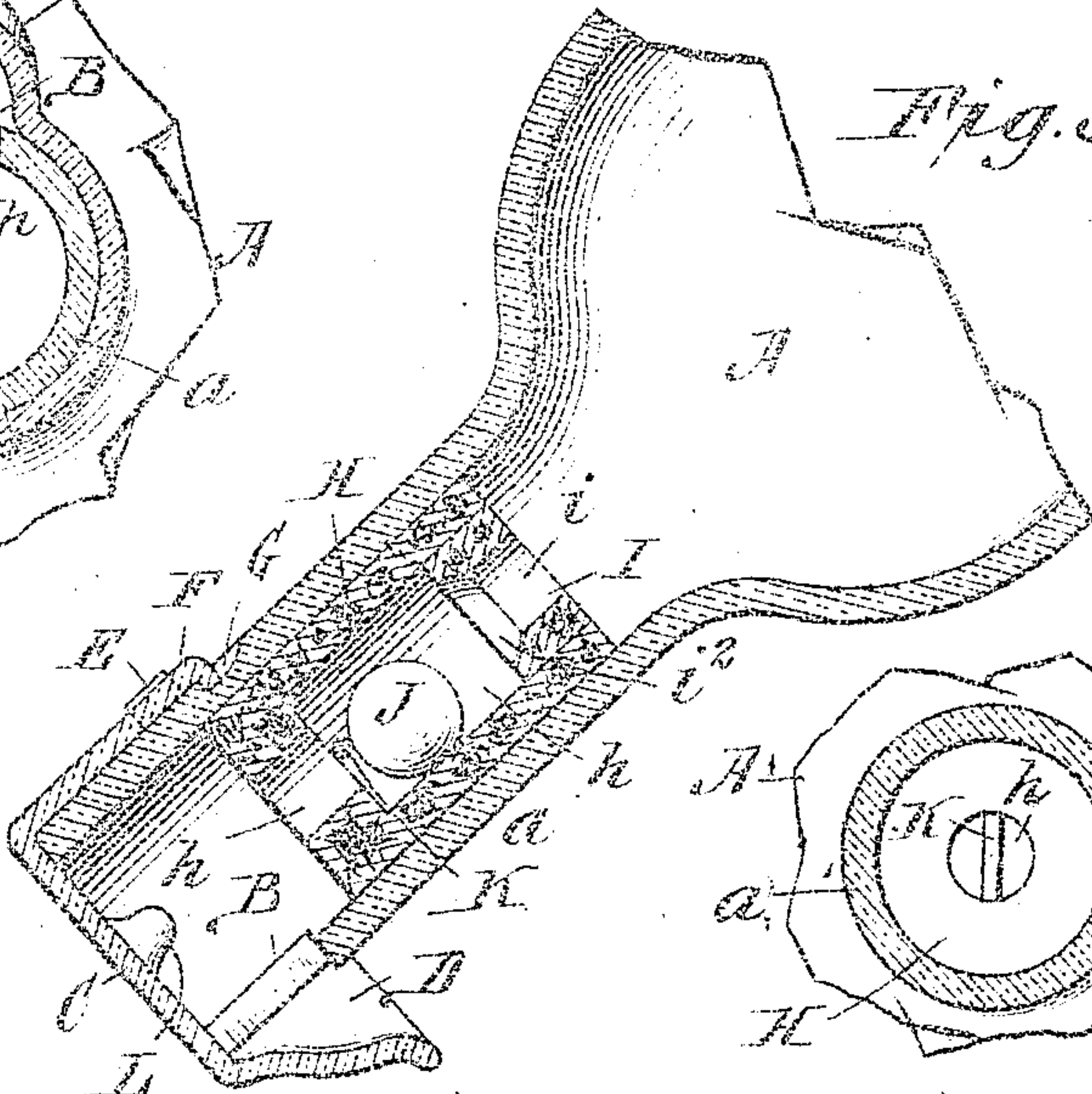
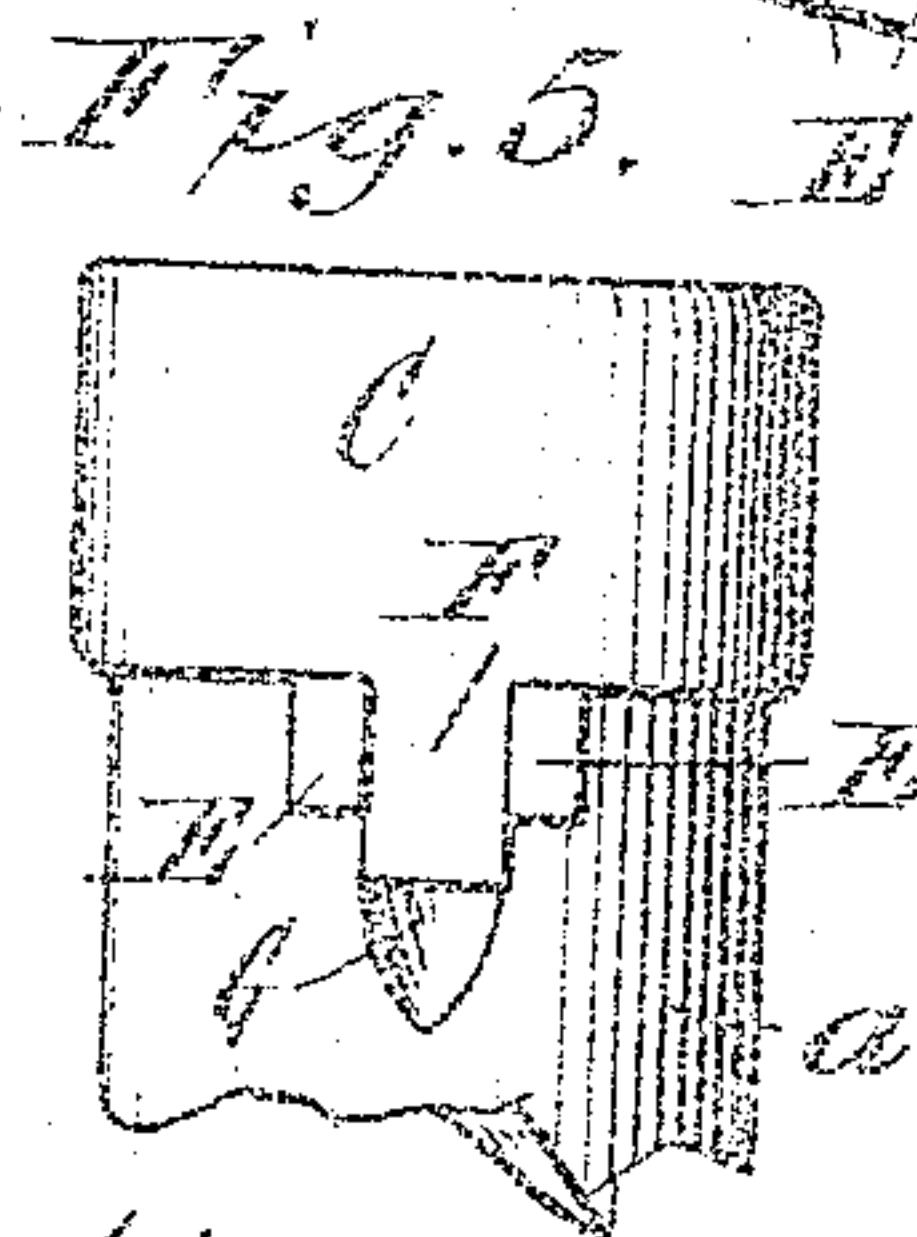
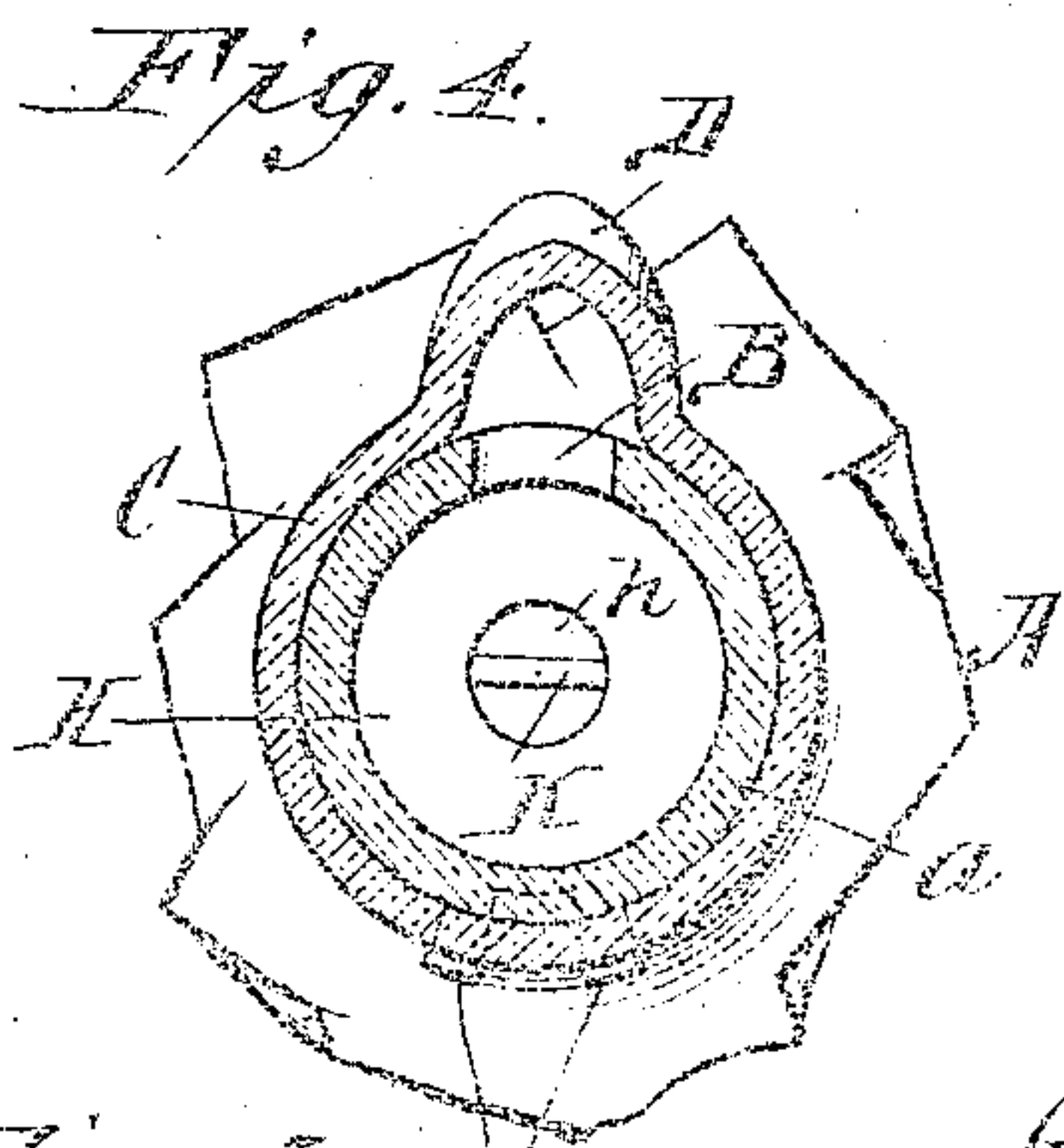
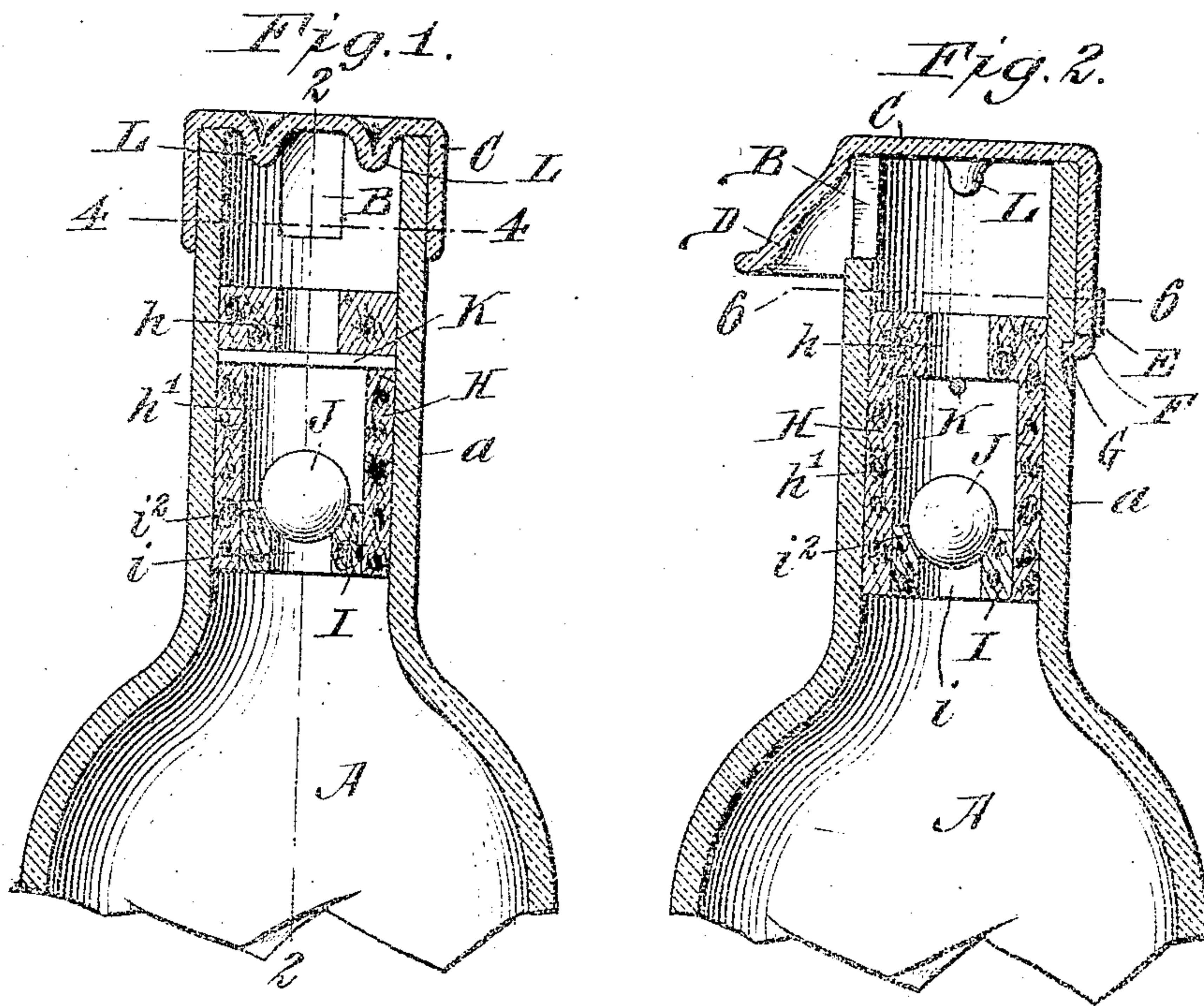


F. SCHMITZ & W. SHANAHAN.
NON-REFILLABLE BOTTLE.

APPLICATION FILED FEB. 1, 1908.

914,885.

Patented Mar. 9, 1909.



Witnesses:
Harry D. Rapp.
Christ Feinle Jr.

Frank Schmitz,
William Shanahan, } Inventors
By Emil Neubast, Attorney.

UNITED STATES PATENT OFFICE.

FRANK SCHMITZ AND WILLIAM SHANAHAN, OF DEPEW, NEW YORK.

NON-REFILLABLE BOTTLE.

No. 914,885.

Specification of Letters Patent.

Patented March 9, 1909.

Application filed February 1, 1908. Serial No. 413,895.

To all whom it may concern:

Be it known that we, FRANK SCHMITZ and WILLIAM SHANAHAN, citizens of the United States, residing at Depew, in the county of Erie and State of New York, have invented certain new and useful Improvements in Non-Refillable Bottles, of which the following is a specification.

This invention relates to non-refillable bottles, and it has for its object the provision of a simple valve-controlled stopper adapted to be inserted into the neck of a bottle and a cap-guard so constructed as to prevent tampering with said valve-controlled stopper.

It also has for its object the production of a non-refillable bottle of simple construction and one which is inexpensive to manufacture.

Our invention consists in the construction, arrangement and combination of parts to be hereinafter described and particularly pointed out in the subjoined claims.

In the drawings,—Figure 1 is a central vertical section through the upper end of a bottle equipped with our invention. Fig. 2 is a similar section taken on line 2—2, Fig. 1. Fig. 3 is a section also taken on line 2—2, Fig. 1, showing the bottle inverted. Fig. 4 is a cross-section taken on line 4—4, Fig. 1. Fig. 5 is a side elevation of the upper end of the bottle-neck. Fig. 6 is a cross-section taken on line 6—6, Fig. 2.

In the embodiment of our invention shown in the drawings, in which similar characters of reference refer to similar parts in the several figures, A represents the bottle and *a* the neck thereof. The neck is formed with a liquid-escape or outlet opening B at its upper end, and applied to said end is a guard-cap C which is preferably made of glass and is of a size to fit the bottle-neck; it having at one side a downwardly opening spout D which is in line with the opening B in the bottle-neck, so that when the bottle is inverted, the contents thereof can pass out said opening and be delivered from the spout to the receptacle to receive it. The bottle-neck at a point diametrically opposite the opening B is provided with two outstanding lugs E separated by an intervening space *e* and said guard-cap has at its lower edge a lip F which fits between the lugs E and has its extremity bent into a depression G formed in the outer surface of the bottle-neck beneath the space intervening between the lugs E. It is, of course, understood that in order to secure

the guard-cap to the neck of the bottle, the lip F at the lower end thereof is heated after the cap is placed in position and bent into the depression G, so that in order to remove the cap, it would be necessary to destroy it or break away the lower end of the lip F; and when either of these are done, it will be apparent that the bottle has been tampered with, with a view of refilling.

Within the neck of the bottle is a stopper H which is preferably formed of cork and bored out in two sizes, as at *h*, *h'*, to provide a valve-chamber, into the lower end of which a valve-seat I is placed. By preference said valve-seat is also made of cork and its center opening *i* is enlarged at its upper end by concaving it; as at *i'*, and against said concaved upper end a spherical valve J is seated. Said valve therefore, closes inwardly to prevent liquid being poured into the bottle. The smaller bore *h* of the stopper merely serves as a liquid-passage and arranged centrally underneath said passage is a guard-pin K against which the spherical valve J strikes and which acts to prevent said valve seating itself against the lower end of the bore *h* to close the same. Assurance is therefore had that the passage *h* will at all times be open to the free flow of liquid from the bottle when the latter is inverted.

If for any reason the stopper works itself upward, closing of the passage *h* is impossible, since the guard-cap C is provided with a plurality of depending teats L, against the lower ends of which the upper end of the stopper would strike, and therefore the free flow of liquid from the bottle would at all times be assured; since the stopper could not be forced against the flat inner face of the cap and the passage *h* would be in communication with the space between said teats and thus allow the flow of liquid out the opening B and over the end of the spout D.

Having thus described our invention, what we claim is.—

1. In a non-refillable bottle, the combination with a bottle-neck having a liquid-escape opening in its side-wall, of a valve-controlled stopper in said bottle-neck, a guard-cap closing the upper end of said bottle-neck and provided with a downwardly opening discharge spout in line with said liquid-escape opening, and teats depending into the bottle-neck against which said stopper is adapted to strike when forced upward in the bottle-neck.

2. In a non-refillable bottle, the combination of a bottle-neck having a liquid-escape opening in its side wall, a pair of lugs on its outer surface separated by an intervening space and a depression beneath said intervening space, a valve-controlled stopper held within the bottle-neck, and a guard-cap provided with a downwardly opening discharge-spout arranged in line with said liquid-escape opening and a lip depending from the lower edge of said cap and held between said lugs

with the extremity thereof bent into said depression.

In testimony whereof, we have affixed our signatures in the presence of two subscribing witnesses.

FRANK SCHMITZ.
WILLIAM SHANAHAN.

Witnesses:

EMIL NEUHART,
ELLA C. PLUECKHAHN.