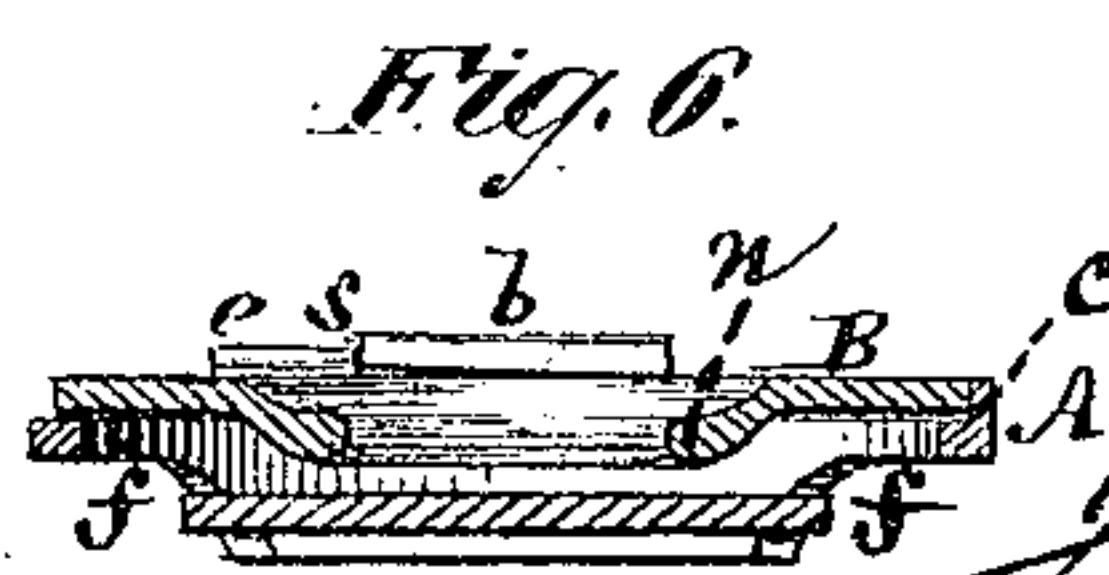
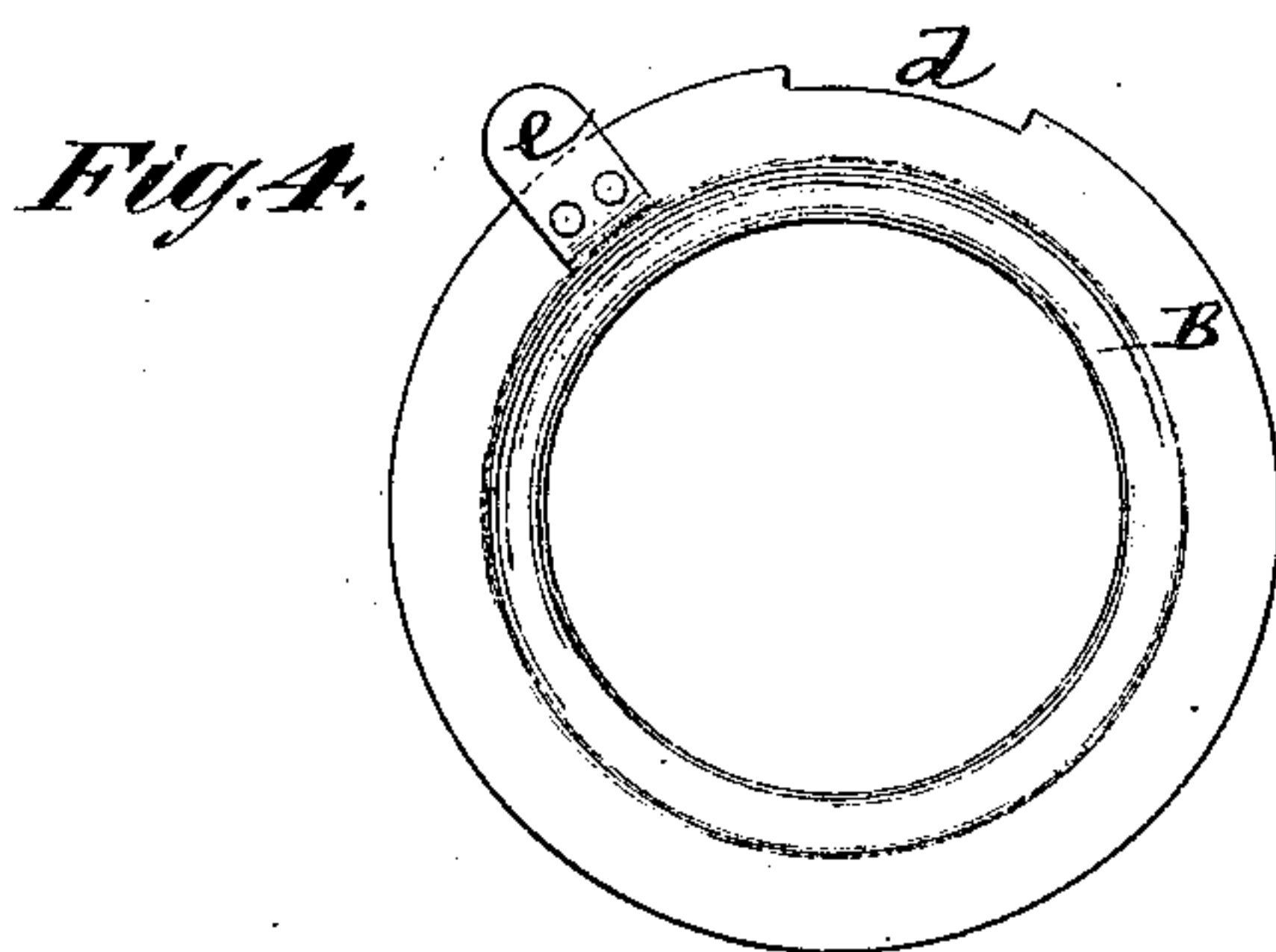
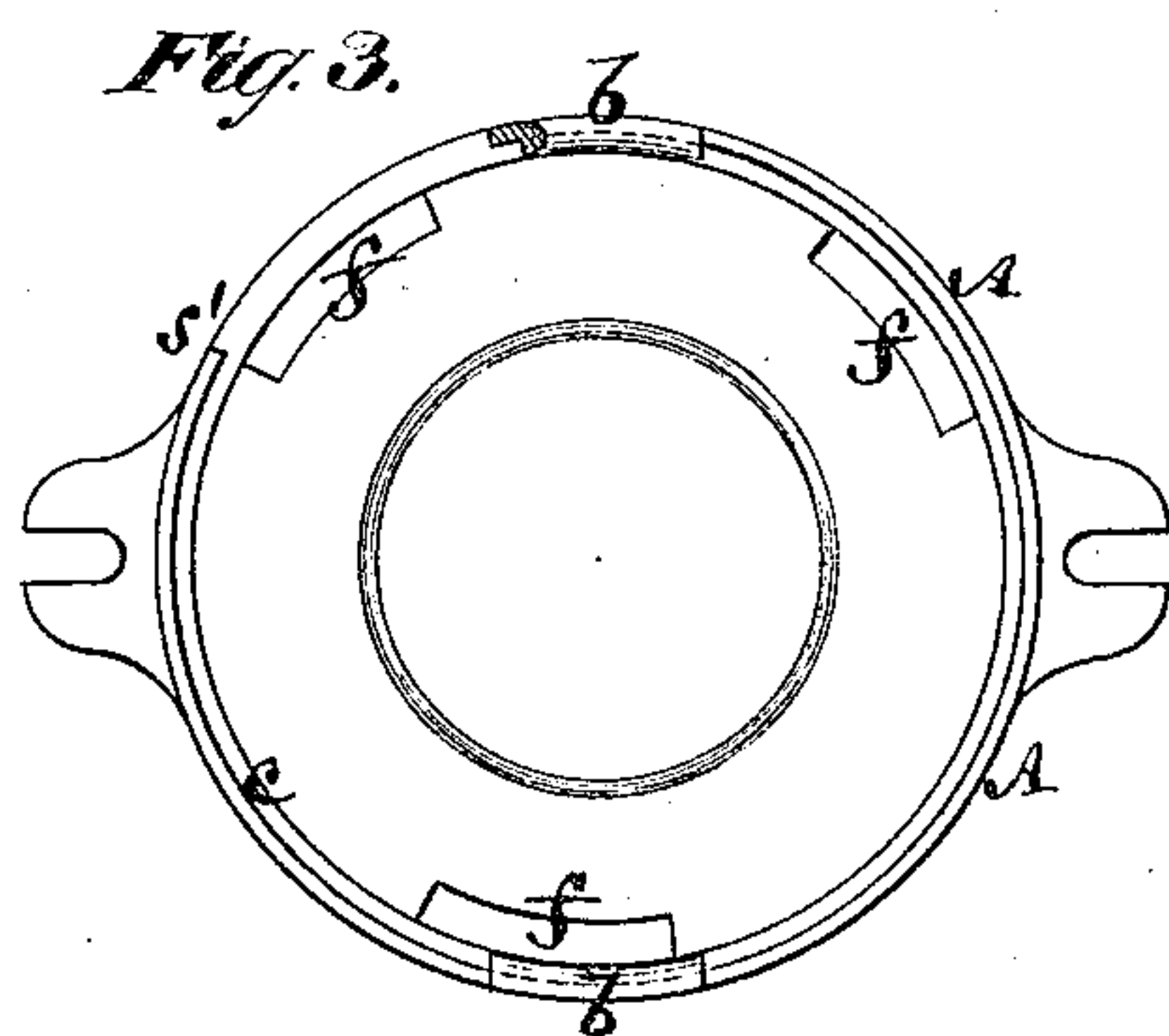
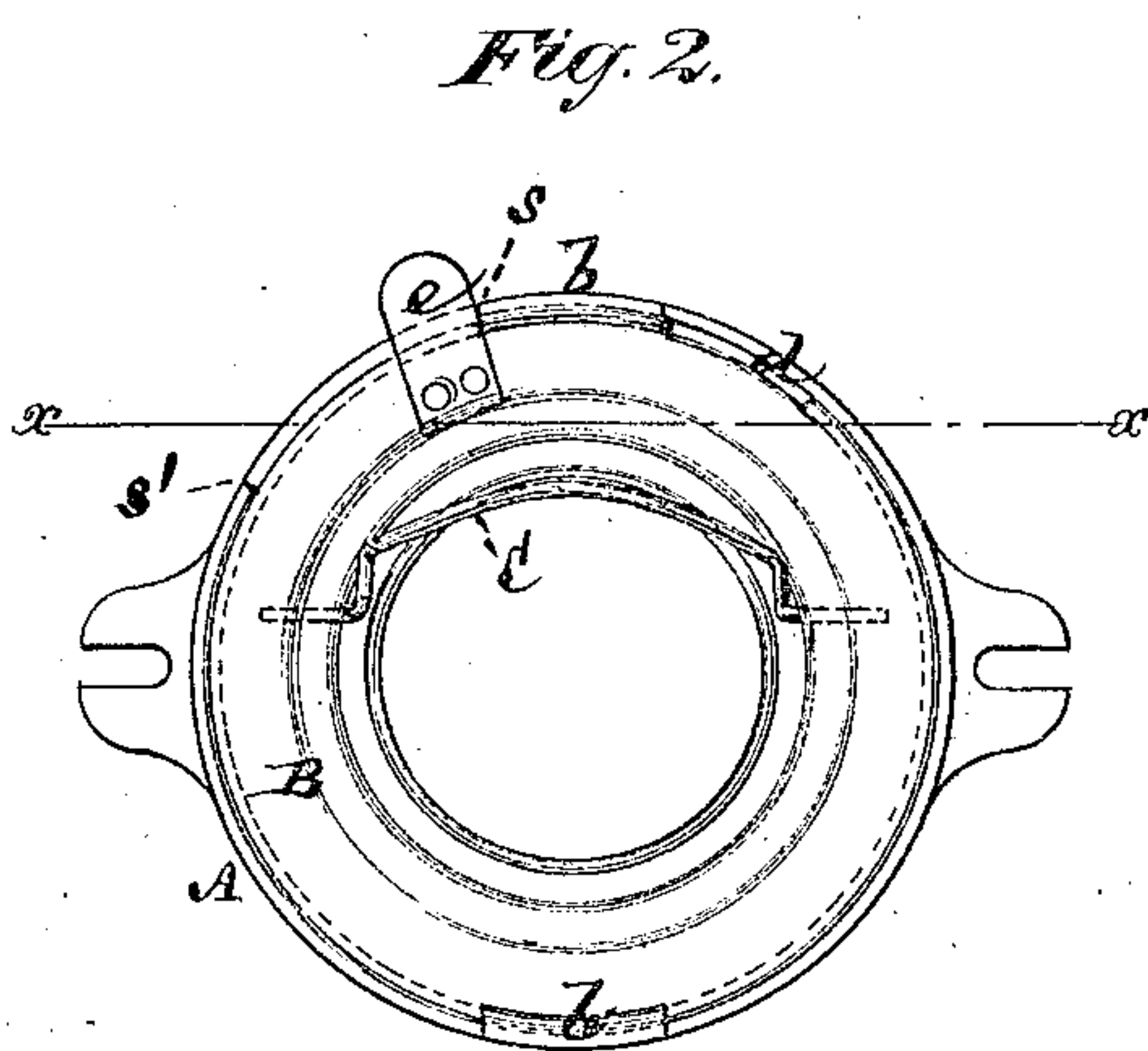
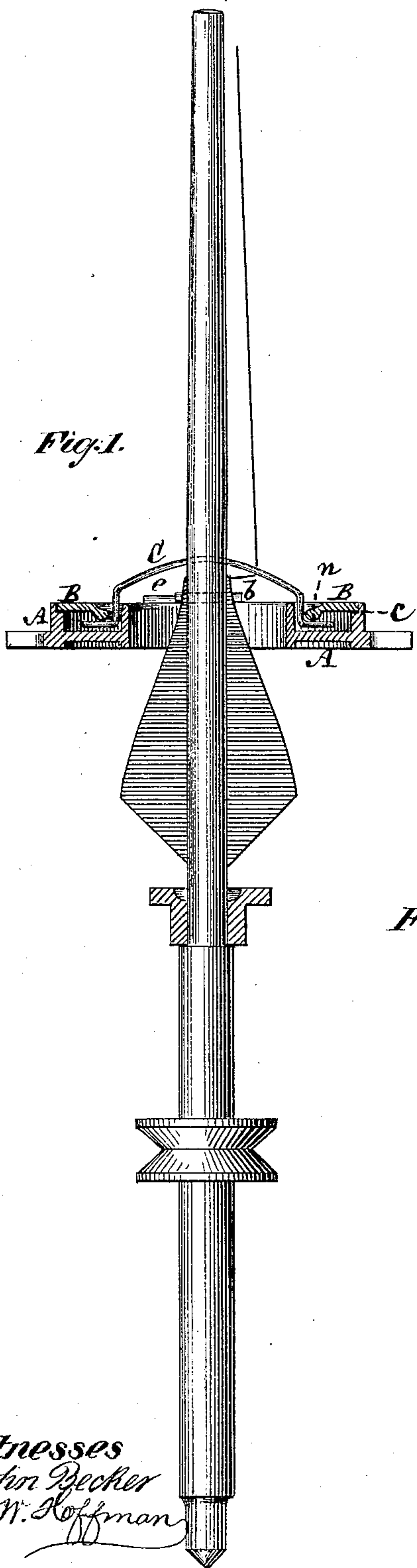


J. G. LAMB.  
Spinning-Rings.

No. 164,309.

Patented June 8, 1875.



Witnesses  
John Decker  
C. W. Hoffman

J. G. Lamb  
by his Attorneys  
Brown & Allen



# UNITED STATES PATENT OFFICE

JOSEPH G. LAMB, OF NORWICH, CONNECTICUT.

## IMPROVEMENT IN SPINNING-RINGS.

Specification forming part of Letters Patent No. **164,309**, dated June 8, 1875; application filed April 19, 1875.

*To all whom it may concern:*

Be it known that I, JOSEPH G. LAMB, of Norwich, in the county of New London and State of Connecticut, have invented certain new and useful Improvements in the Rings of Ring Spinning-Frames; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification.

This invention more particularly relates to rings adapted to that kind of traveler which is the subject of Letters Patent No. 66,104, issued June 25, 1867, to Henry T. Potter, of Norwich Town, Connecticut, such traveler consisting of a transverse bar, which rotates freely within the ring, and in contact with the spindle or the yarn, so as to direct the latter to the spindle at a uniform angle and tension, and which bar has its end bearings retained by an upper overlapping portion of the ring.

In the use of such transverse-bar travelers, and rings therefor, without exclusive regard to any particular one, there are practical difficulties and objections which it is the object of my invention to avoid. Thus, owing to the peculiar form of the rings adapted to the transverse-bar travelers, as heretofore constructed, said rings have been very expensive and difficult to temper at the parts exposed to friction without cracking or warping the rings. Likewise, there has been much inconvenience in inserting new travelers, especially when the latter are of wire too thick to admit of their being sprung into the rings, and more particularly as regards those wire travelers which are bent at sharp angles, or curved either inwardly or outwardly; and even when the traveler is made of wire the size of which admits of its being sprung to its place in the ring, such traveler is liable to be permanently injured by crimping or breaking, and there is no small difficulty in removing parts of a broken traveler that may have fallen into the ring, and in getting at the interior of the latter for cleaning or other purposes. Furthermore, when spinning staples like jute, hemp, flax, or any foul stock, such rings have been liable to clog with dirt, for which there has been no adequate relief or escape.

These difficulties are obviated or reduced by

my invention, which consists in a novel construction of the ring, which is composed of an under exterior shell and an annular upper or inner hardened plate resting within the shell, with a free space between said plate and the upper surface of the bottom of the shell for the ends of the rotating-bar traveler, said shell and plate locking together, as hereinafter described.

Figure 1 represents a sectional elevation of my invention as applied to a cop-spindle, but which is equally applicable to a spindle having either two or one head bobbins. Fig. 2 is a plan of the improved ring with the rotating traveler therein. Fig. 3 is a plan of the under or outer or shell portion of the ring detached; Fig. 4, a plan of the annular plate detached; Fig. 5, a vertical or transverse section of the latter, and Fig. 6 a transverse section of the entire ring on the line *x x*.

A in the drawing represents the under and exterior shell portion of the ring. This shell may be made of unhardened cast-iron, or any cheap metal, and may be firmly secured to the ring-rail by screws or otherwise. Its upper edge is provided with two or more inwardly-overlapping lugs, *b b*, or latches controlled by springs may be substituted for the lugs, which serve to hold the annular plate hereinafter described to its place within the shell. B is the upper and inner loosely-fitting movable annular plate, which alone requires to be hardened, and may be cheaply struck out of any suitable metal of the shape required for its combination with the shell A, said annular plate being constructed so that it may enter within an annular rabbet, *C*, in the shell A by slipping it under the one lug *b*, and dropping it by means of a recess, *d*, in its edge past the opposite lug *b*, after which the annular plate may be turned—as, for instance, by a handling projection, *e*, to lock it by the lugs within the shell, such projection also serving as a stop when moved up to a shoulder, *s*, and preventing the annular plate from being carried forward by the revolving wire traveler C; likewise serving as a stop by striking another shoulder, *s'*, on the shell, when the annular plate is turned in a reverse direction—that is, into an unlocking position—for the purpose of removing it. The one of these stopping-shoulders may be formed

by one of the lugs *b*, or it may be distinct therefrom. When a spring-catch is employed in place of the lugs *b*, the recess *d* in the annular plate may be dispensed with.

Inasmuch as the plate B has a raised position within the shell A by reason of its support on the rabbet *c*, a clear space is established within the shell under the annular plate for the free movements of the ends of the traveler, and to reduce friction it is preferred to strike up a bead, *n*, on the under side of the annular plate at its inner edge for the ends of the traveler to rub against.

One or more openings, *f*, are made through the lower portion of the shell A, and extend into the bottom plate thereof, so as to permit

of dirt dropping down within the shell, and of being thrown out therefrom by the centrifugal action of the rotating traveler.

I claim—

The shell or lower and outer section A of the ring, provided on its upper edge with overlapping lugs or catches and shoulders, in combination with the annular plate B, provided with a projection, *e*, and a bar-traveler arranged within the ring, substantially as described.

JOSEPH G. LAMB.

Witnesses:

T. WALTER SWAN,  
GEORGE T. JONES.