

(No Model.)

R. N. PRATT.
COCK.

No. 477,606.

Patented June 21, 1892.

Fig. 1

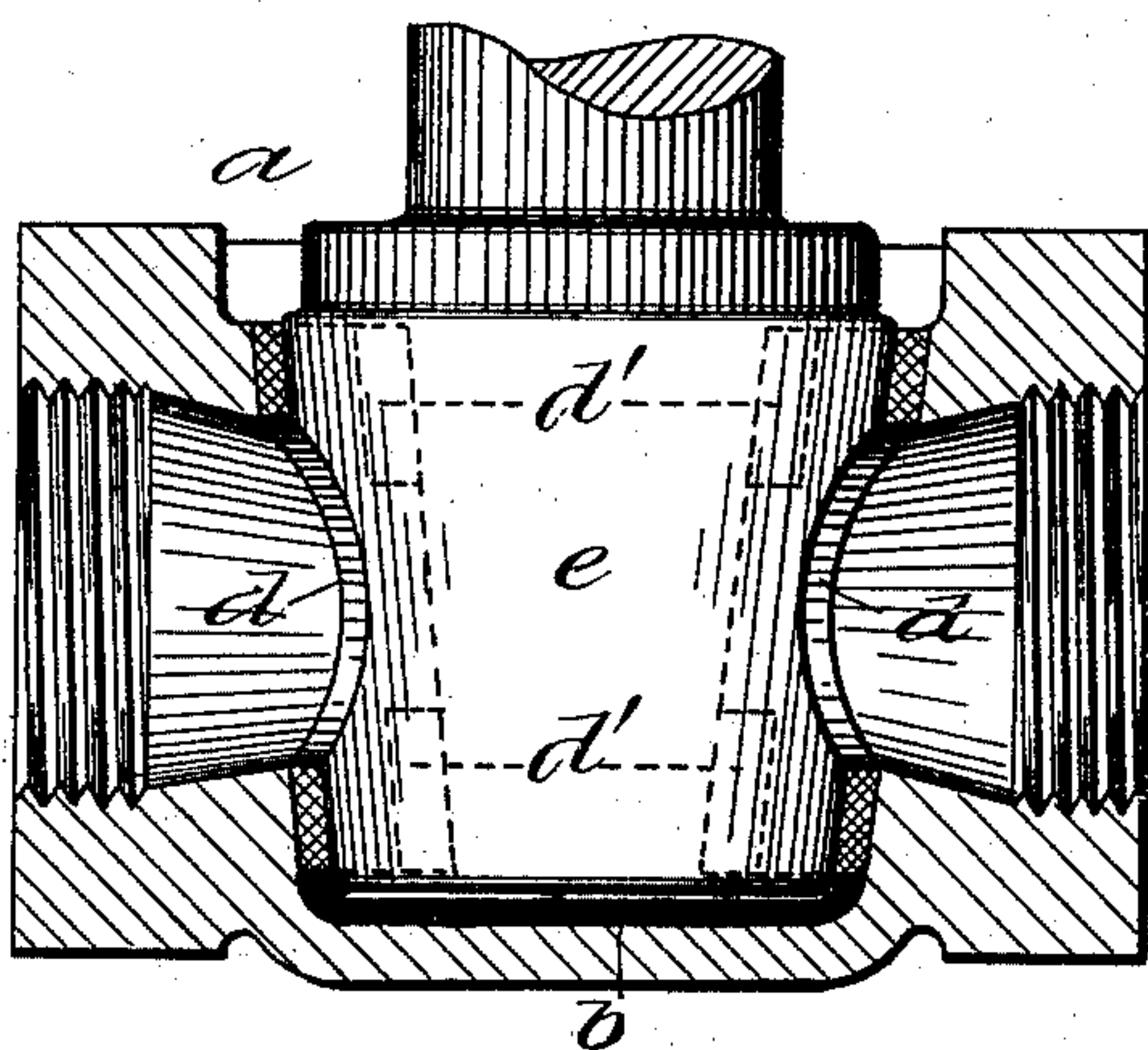


Fig. 3

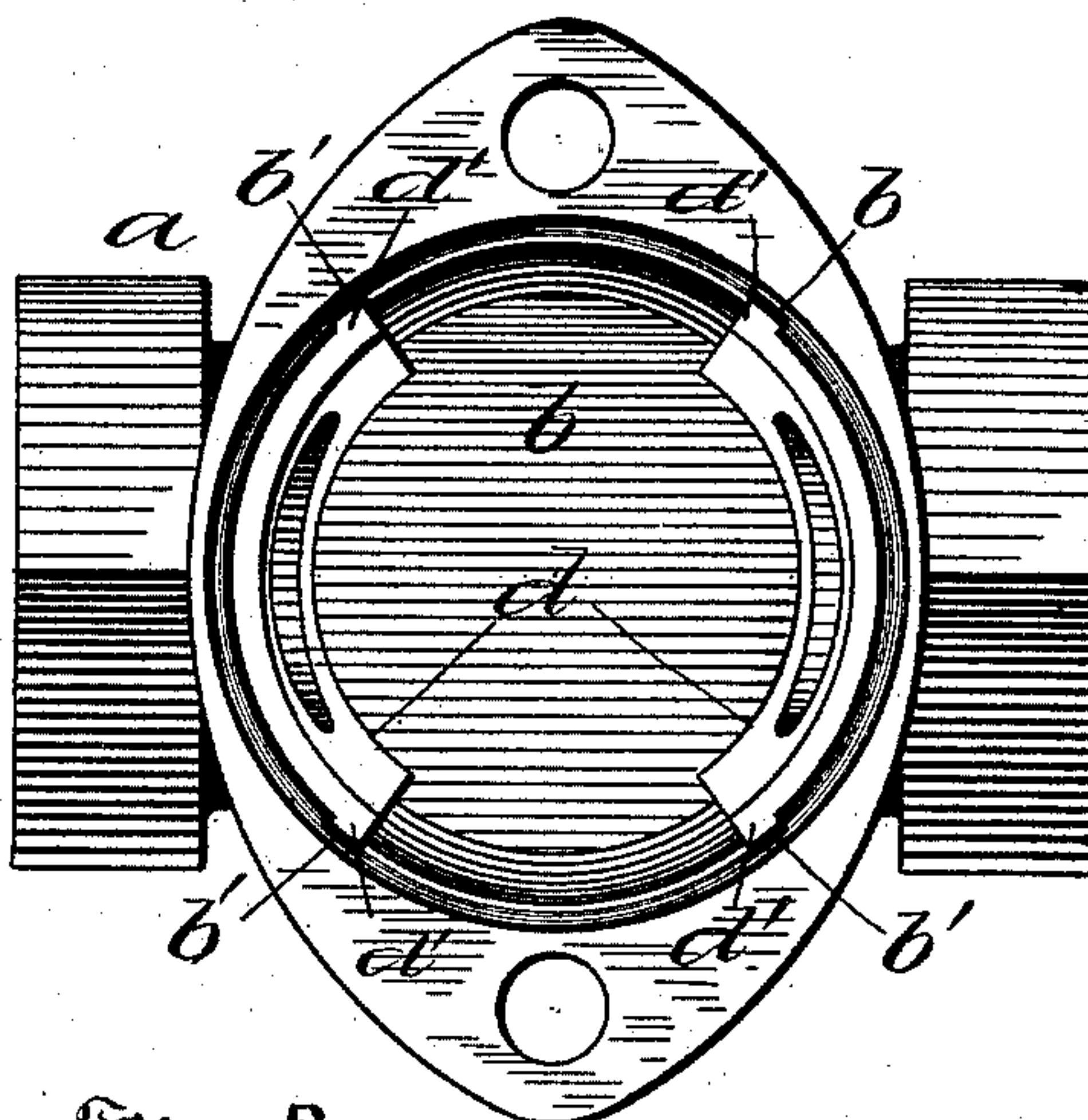


Fig. 2

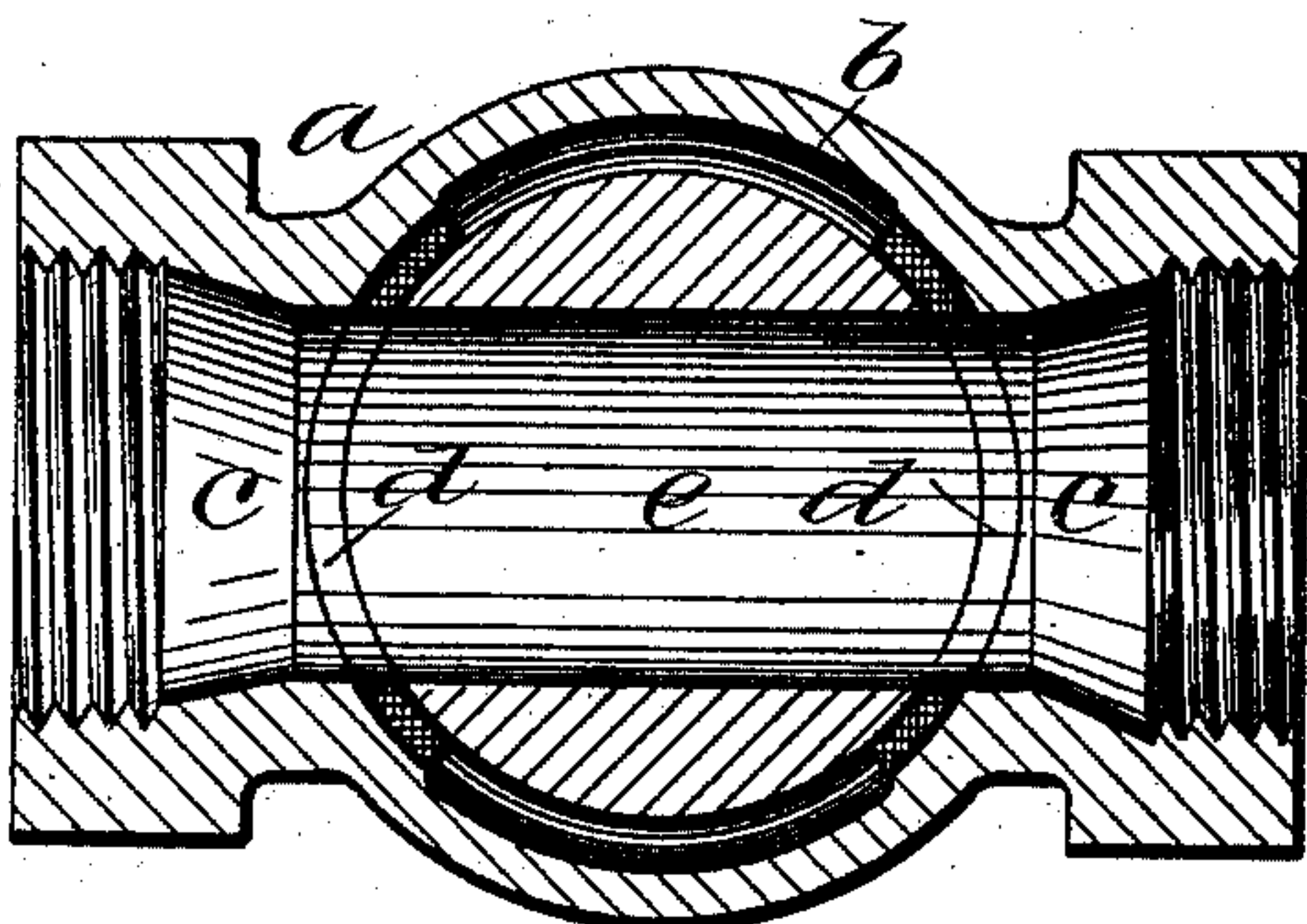


Fig. 5

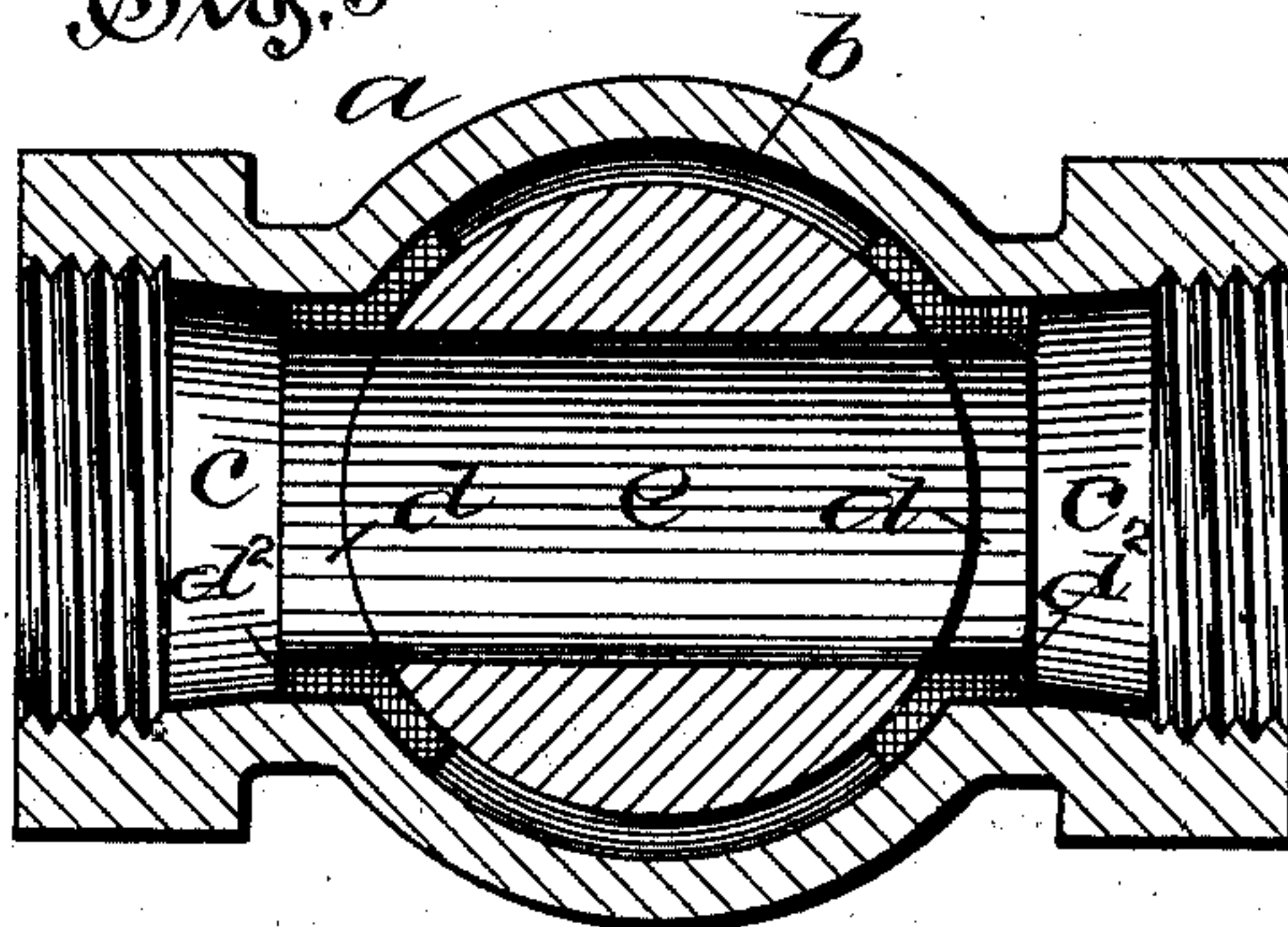


Fig. 4

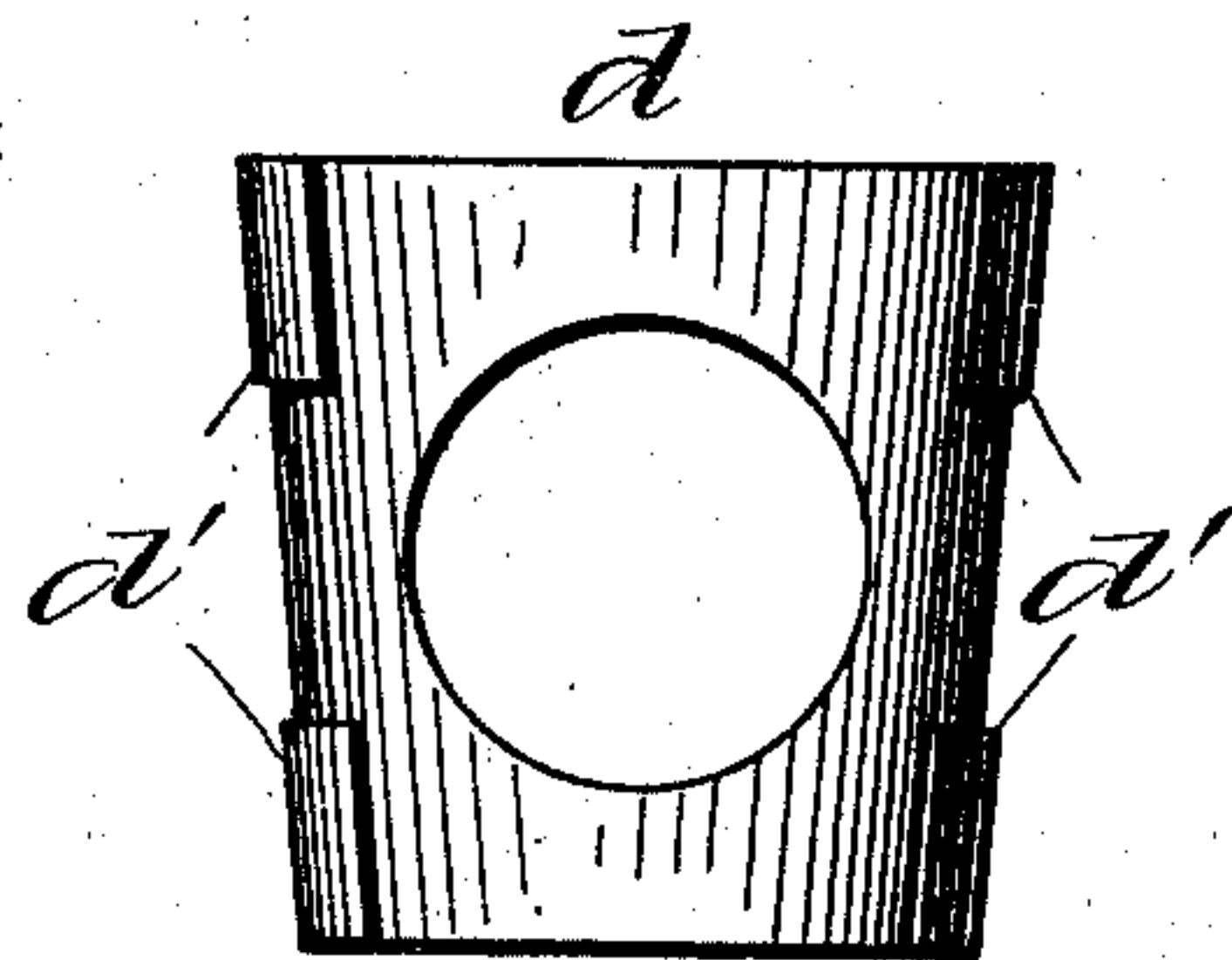
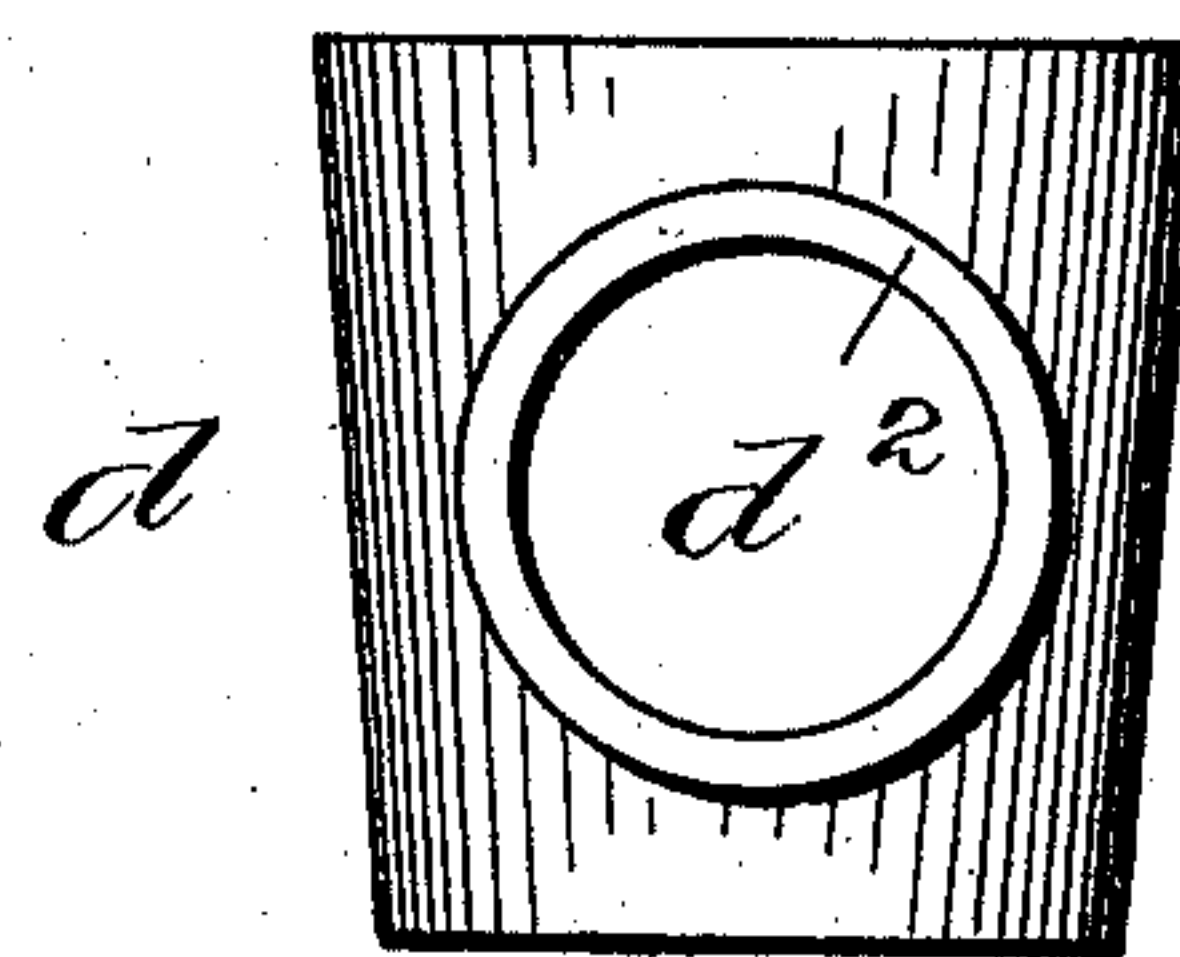


Fig. 6



Witnesses;

C. B. Jenkins.
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UNITED STATES PATENT OFFICE.

RUFUS N. PRATT, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE PRATT & CADY COMPANY, OF SAME PLACE.

COCK.

SPECIFICATION forming part of Letters Patent No. 477,606, dated June 21, 1892.

Application filed July 23, 1891. Serial No. 400,487. (No model.)

To all whom it may concern:

Be it known that I, RUFUS N. PRATT, a citizen of the United States, residing at Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Cocks, of which the following is a full, clear, and exact specification.

This invention relates to the class of cocks for stopping or regulating the flow of hot or cold liquids or vapors which can be repaired without being removed from their connections.

The object of the invention is to provide a cock of this class which is simple and cheap in construction and which is provided on the interior of the barrel with cheap interchangeable cheek-pieces, which can be easily and quickly inserted to or removed from place for cleaning, repairing, or renewing when they become worn so that the cock leaks.

Referring to the accompanying drawings, Figure 1 is a longitudinal vertical section of the cock. Fig. 2 is a horizontal section. Fig. 3 is a plan of the body. Fig. 4 is a face view of one of the removable cheek-pieces. Fig. 5 is a horizontal section of the cock, showing the cheek-pieces held in place in a modified manner; and Fig. 6 is a face view of a cheek-piece used with the latter construction.

In the views the letter *a* indicates the body of a closed cock, which is cast to shape of any suitable metal, with a cylindrical barrel or plug-chamber *b*, from which open ports *c* to the ends, that are provided with a screw or with flanges for attachment to the mains or pipes of the system in which the cock is to be located.

Upon each side of the interior of the barrel *b*, adjacent to the ports, are loosely placed cheek or lining pieces *d*, that each have an opening approximately the same size as the ports and are curved and tapered on the same lines as the interior of the barrel. These pieces are preferably made of asbestos fiber and rubber gum vulcanized and solidified under suitable heat and pressure, so that they become very hard and will retain their shape under all the degrees of heat to which the ordinary cock is subjected.

The tapered cylindrical plug *e*, having the usual fluid-way, is made considerably smaller

than the diameter of the opening in the barrel of the cock and fits the cheek-pieces quite closely when it is held in the barrel by any common form of gland. In order to prevent these cheek-pieces *d* from turning out of position with the rotation of the plug in the form shown in Figs. 1, 2, and 3, they are thickened, or raised projections, ribs, or lugs *d'* are made on the convex side, which lugs fit into mortises or grooves *b'* in the walls of the barrel of the cock. Of course, if desired, this may be reversed and the lugs may be cast on the body and made to fit into grooves formed in the cheek-pieces. In the form illustrated in Fig. 5 these cheek-pieces are provided with a raised hub *d²* on the back around the fluid opening, which hub is adapted to fit into the port when the pieces are in position to prevent their dislocation when the plug is turned. These hubs may be made of metal and molded into the pieces, so as to protect the edges of the opening, as well as hold the piece in place, without departing from the invention.

The construction herein described renders the manufacture of these cocks very cheap, as there are no parts which require to be carefully ground or fitted to insure a tight joint, and the cheek-pieces, which are cheaply made and occupy but little space, so that a number can be kept on hand, are easily and quickly removed by any one when they become so worn that the cock leaks, the pieces being simply dropped into place and held from turning by the projecting portions on their back surface, no special fitting or grinding being required to insure their proper fitting with relation to each plug to make the cock tight. As the cheek-pieces do not extend entirely around the body, there is but little friction on the plug, and any dirt or grit which might be carried around by the plug past the packing will be deposited in the space between the body and the plug.

I claim as my invention—

1. A rotary-plug fluid-cock having a body with a frusto-conical plug-chamber, cheek-pieces larger than the ports, curved to conform to the interior of the chamber, loosely placed therein adjacent to the ports, and a solid rotary tapered plug smaller in diameter than

the plug-chamber, fitting the cheek-pieces at all times and holding them in place, substantially as specified.

2. A rotary-plug fluid-cock having a body
5 with a frusto-conical plug-chamber, cheek-pieces larger than the ports curved to conform to the interior of the chamber adjacent to the ports, loosely placed in the chamber and held from displacement by ribs or lugs pro-

jecting into recesses, and a solid rotary tapered plug smaller in diameter than the plug-chamber, fitting the cheek-pieces at all times and holding them in place, substantially as specified.

RUFUS N. PRATT.

Witnesses:

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H. R. WILLIAMS.