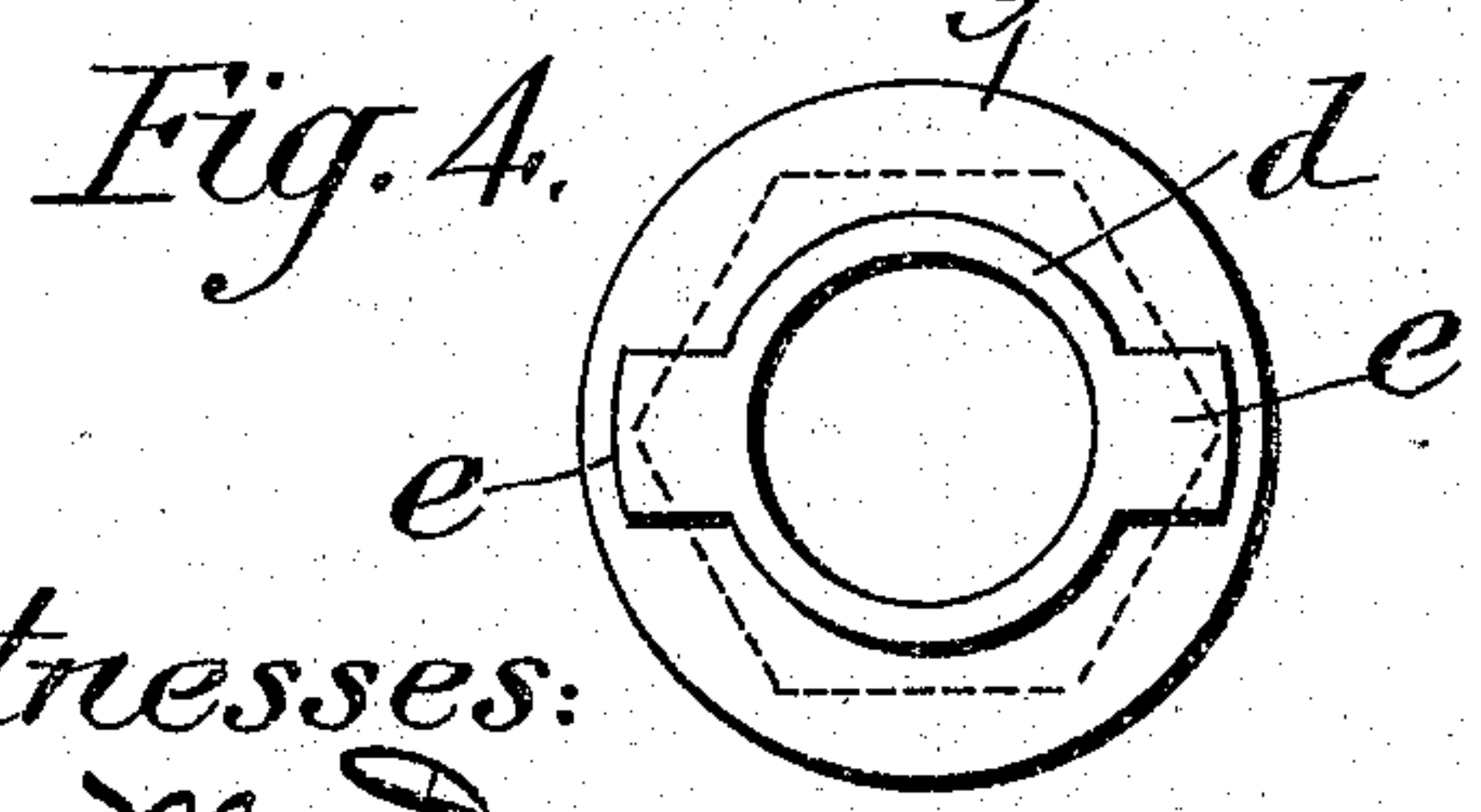
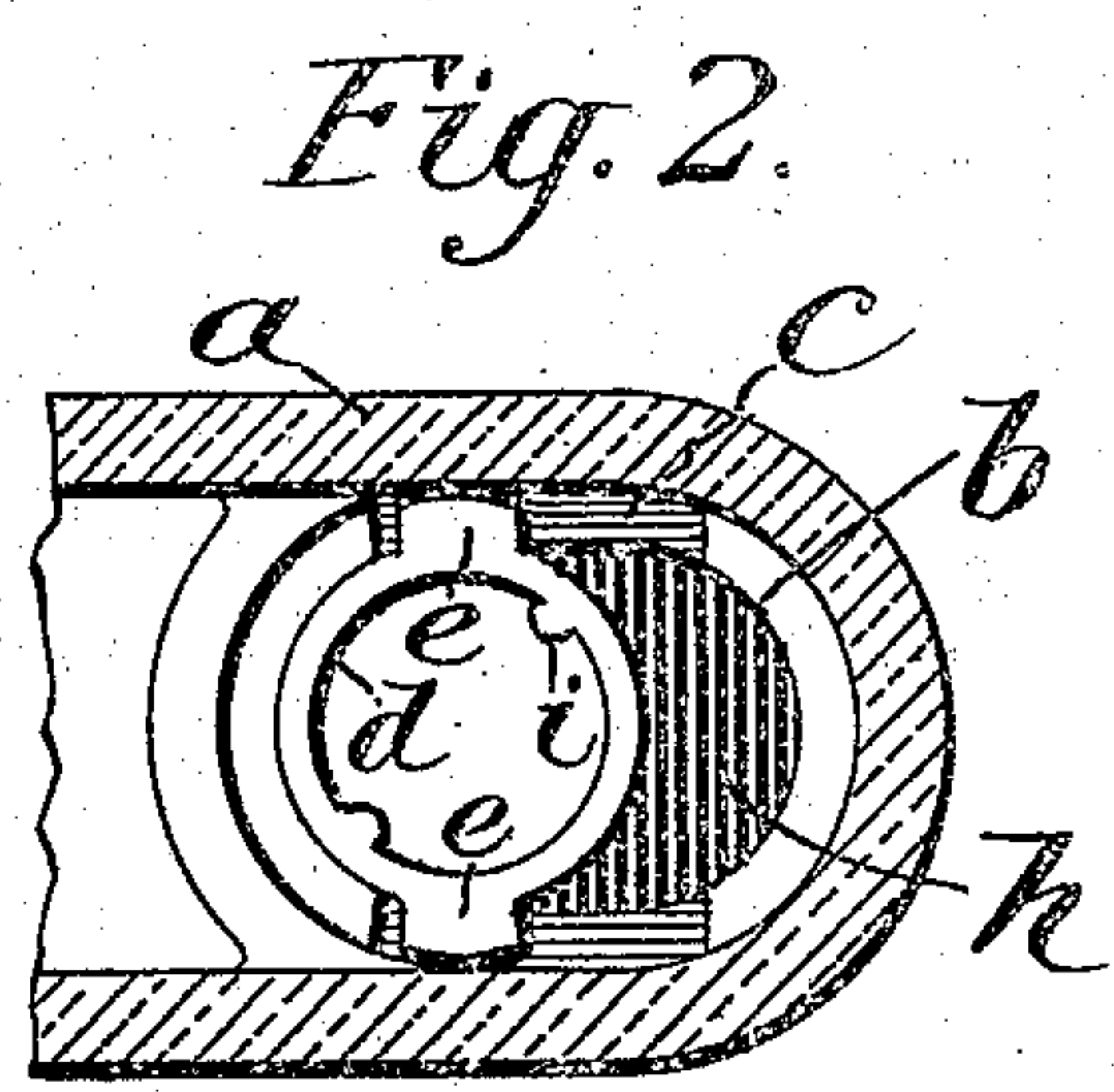
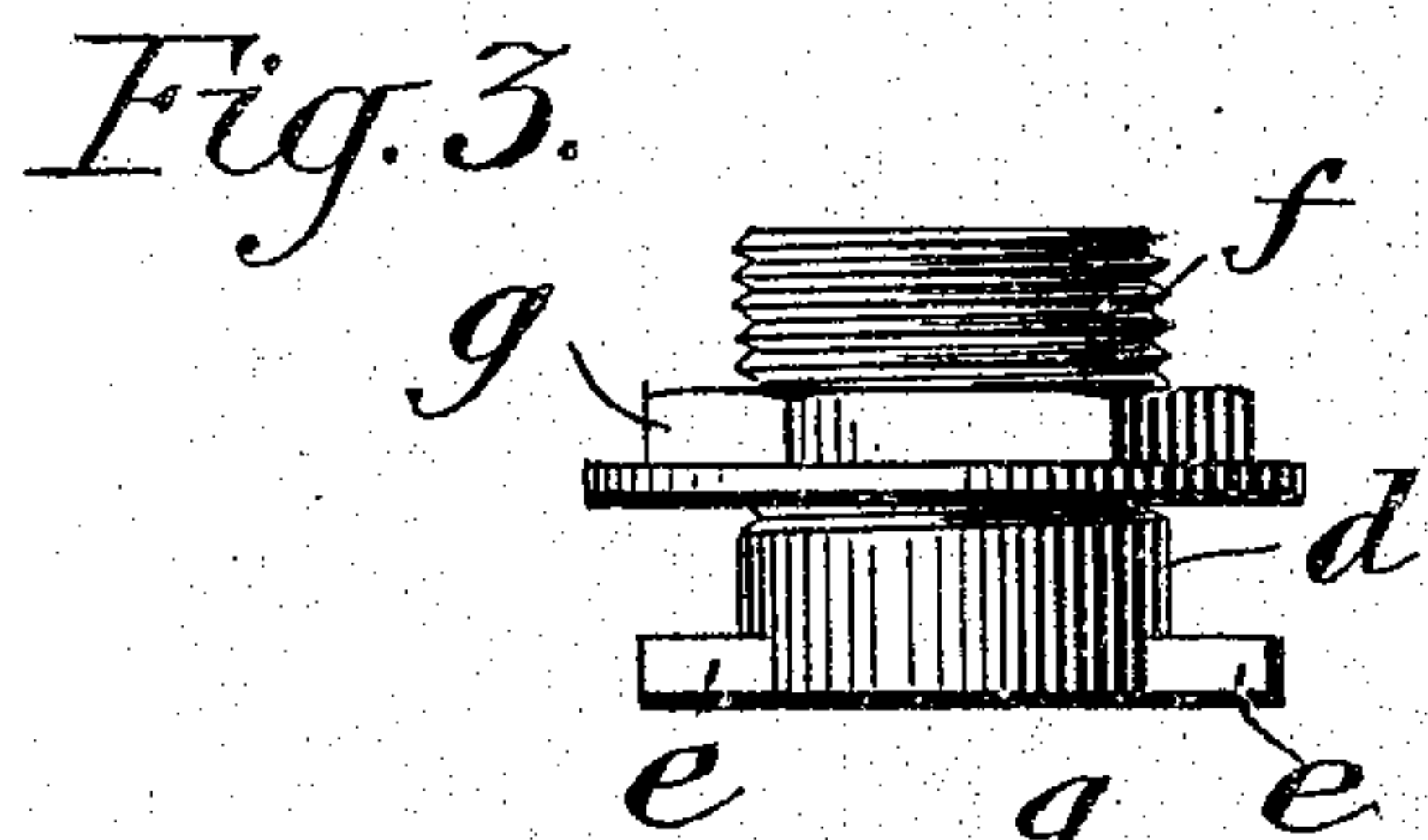
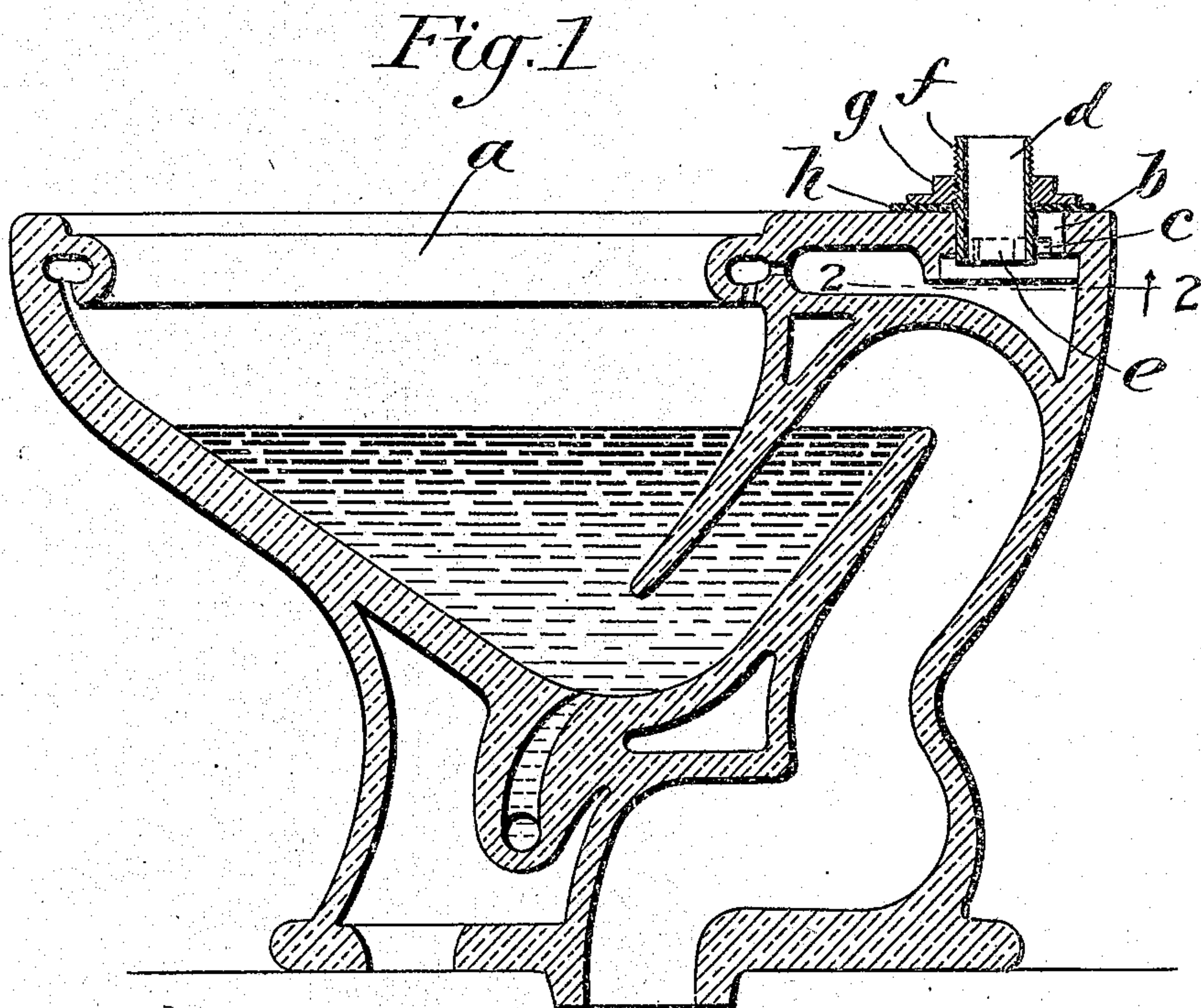


H. S. MADDOCK.
WATER CLOSET COUPLING.
APPLICATION FILED JULY 25, 1908.

936,919.

Patented Oct. 12, 1909.



Witnesses:
N. M. Down
[Signature]

Inventor:
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By *[Signature]* Attorney

UNITED STATES PATENT OFFICE.

HARRY S. MADDOCK, OF TRENTON, NEW JERSEY, ASSIGNOR TO THOMAS MADDOCK'S SONS CO., OF TRENTON, NEW JERSEY, A CORPORATION OF NEW JERSEY.

WATER-CLOSET COUPLING.

936,919.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed July 25, 1908. Serial No. 445,390.

To all whom it may concern:

Be it known that I, HARRY S. MADDOCK, a citizen of the United States, residing at Trenton, county of Mercer, State of New Jersey, have invented certain new and useful Improvements in Water-Closet Couplings; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to couplings for the flush pipes of water closets and has for its object to provide a simple, cheap and efficient coupling between the closet bowl and the water supply pipe, that will permit the bowl to be accurately connected with said pipe without bending or deforming the latter, and to this end said coupling comprises an elongated water inlet opening in the bowl, a nipple adjustable longitudinally of said opening and means for locking said nipple to the bowl in adjusted relation in said opening, and preferably there is provided a packing gasket, of rubber or the like, surrounding the nipple and covering the portions of the opening in the bowl not occupied by the nipple.

A convenient and approved form of the invention is illustrated in the accompanying drawings, in which:

Figure 1 is a vertical longitudinal section of a siphon jet closet having the improved coupling applied thereto. Fig. 2 is a horizontal section on line 2—2 of Fig. 1 looking in the direction of the arrow. Fig. 3 is an enlarged detail of the coupling nipple in side elevation. Fig. 4 is a bottom plan view of the same.

Referring to the drawings, *a* indicates the bowl of a water closet of the siphon jet type which is provided at the rear of its upper face with a water inlet opening *b* having a diameter longitudinally of the bowl considerably greater than the diameter transversely of said bowl so that said opening is of generally elliptical form, viz: elongated in a direction toward the rear of the bowl. The lower edge of the rim of said opening is preferably provided with diametrically opposite recesses *c*, the purpose of which will be explained later.

Occupying the opening *b* is a short pipe section or nipple *d* of a diameter somewhat less than the shorter or transverse diameter

of said opening. Oppositely disposed on the lower end of said nipple are two lateral lugs *e*, *e*, which are adapted to engage the recesses *c*, *c*, and assist in locking the nipple to the bowl. Said recesses *c*, *c* are considerably longer than the lugs *e*, *e* are wide, to permit the latter to engage the said recess in all adjusted positions of the nipple. The upper end of the nipple is externally screw-threaded to receive a clamping nut *g* which is provided with a basal flange of sufficient diameter to cover the opening *b* when said nut is set down on the top of the bowl to secure the nipple in place.

In order to make an absolutely tight joint between the nut and the bowl and to seal the portions of the opening *b* surrounding the nipple *d* a packing ring or washer *h* of rubber, or other suitable material, is applied about said nipple below said nut and is clamped firmly against the bowl and over the opening *b* when the nut *g* is screwed down on nipple *d*.

In the forms of closets heretofore employed, to connect the flush pipe to the bowl, the latter is fixed in the position on the floor determined by the setting of the soil pipe. The vertical position of the flush pipe is however fixed by the location of the flush tank and the lower end of the flush pipe seldom registers accurately with the inlet opening or coupling nipple in the bowl. Therefore it has been necessary generally to bend the inlet pipe to bring its lower end in exact vertical registry with the inlet to the bowl, or to provide a double elbow between the supply pipe and the bowl, both of which expedients are obviously objectionable. By means of the present invention no distortion of the inlet pipe is required, nor are extra bends or elbows required to make the coupling between the flush pipe and the bowl, and moreover a careful adjustment of the relative positions of the soil pipe and the flush tank is no longer necessary.

It will be noted that when the closet is set in the position determined by the location of the soil pipe, and the flush tank is secured to the wall or other support back of the bowl, the flush pipe is then dropped vertically from the tank, and nipple *d*, is adjusted longitudinally in the opening *b* until it lies directly below the end of the flush pipe which may then be accurately connected to said nipple by any of the customary forms

of joints or pipe couplings, after which the nut *g* is set down on the threads of said nipple *d* until said nipple is securely locked to the bowl and washer *h* is clamped over the opening *b*. It will be noted that the nipple *d* moves freely in the opening *b* until the nut *g* is tightened, but when this is done the lugs *e, e* bind against the recessed shoulders of the rim around the opening, and lock the nipple rigidly in position. The nipple *d* may be readily removed from or applied to the bowl by turning said nipple until the lugs *e, e* lie in the longer diameter of the opening *b*, as will be apparent from an inspection of Fig. 2. To permit said nipple to be turned in the opening *b* without applying a wrench to the threaded end of said nipple the interior of the latter may be conveniently provided with two or more lugs *i, i* to be engaged by a spanner or other special tool.

What I claim is:—

1. A water closet bowl having an elongated water inlet opening, in combination with a coupling nipple adjustable longitudinally of said opening, and means for locking said nipple to the bowl in adjusted relation in said opening.

2. A water closet bowl having an elongated water inlet opening, in combination with a coupling nipple adjustable longitudinally of said opening, a packing gasket surrounding the nipple and covering the

portion of the inlet opening not occupied by said nipple, and means for locking said nipple to the bowl in adjusted relation in said opening.

3. A water closet bowl having an elongated water inlet opening, in combination with a coupling nipple adjustable longitudinally of said opening, said nipple having lateral lugs to engage the lower rim at the sides of said opening and having exterior screw threads on its outer end, a nut engaging the threaded end of said nipple, and a packing gasket surrounding said nipple and adapted to be clamped between said nut and the bowl to cover said opening.

4. A water closet bowl having an elongated water inlet opening, in combination with a coupling nipple having lateral lugs on its lower end to engage the under sides of the rim surrounding said opening, a nut on said nipple to clamp the same in the desired position longitudinally of the opening and a packing gasket surrounding said nipple and adapted to be clamped over said opening in the several adjusted positions of said nipple.

In testimony whereof I affix my signature, in presence of two witnesses.

HARRY S. MADDOCK.

Witnesses:

H. S. MADDOCK, Jr.,
CHAS. J. BOHLINGER.