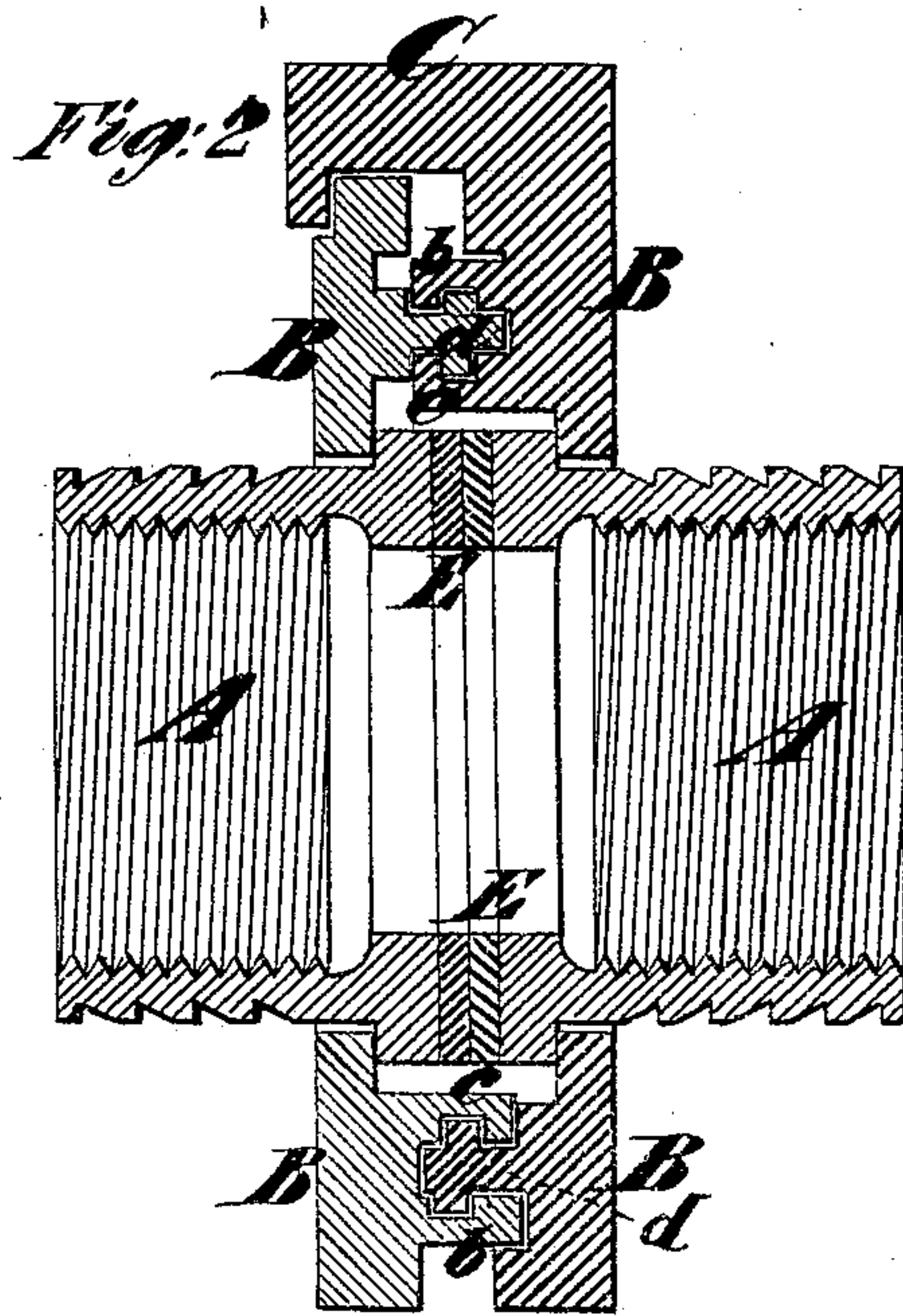
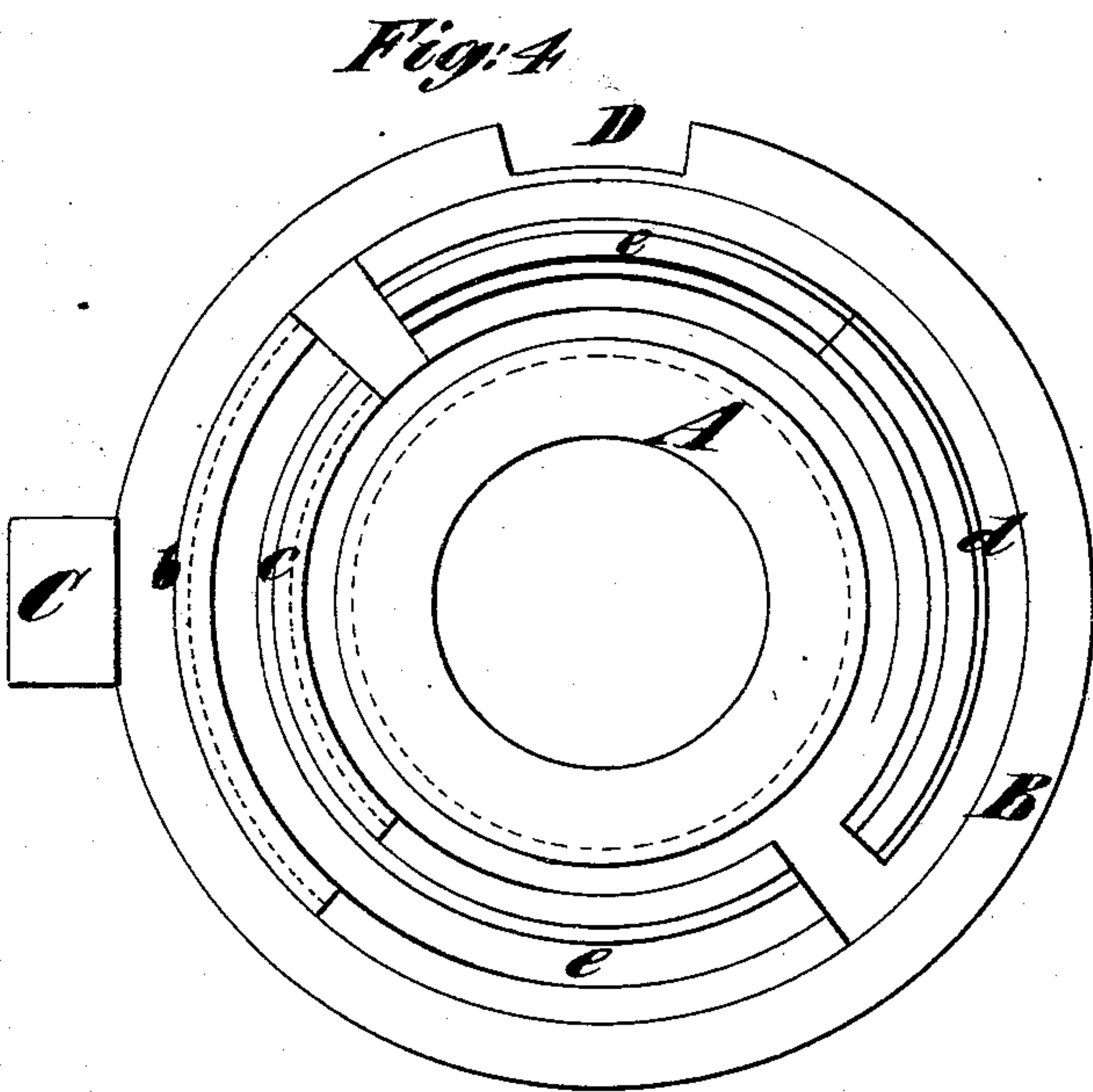
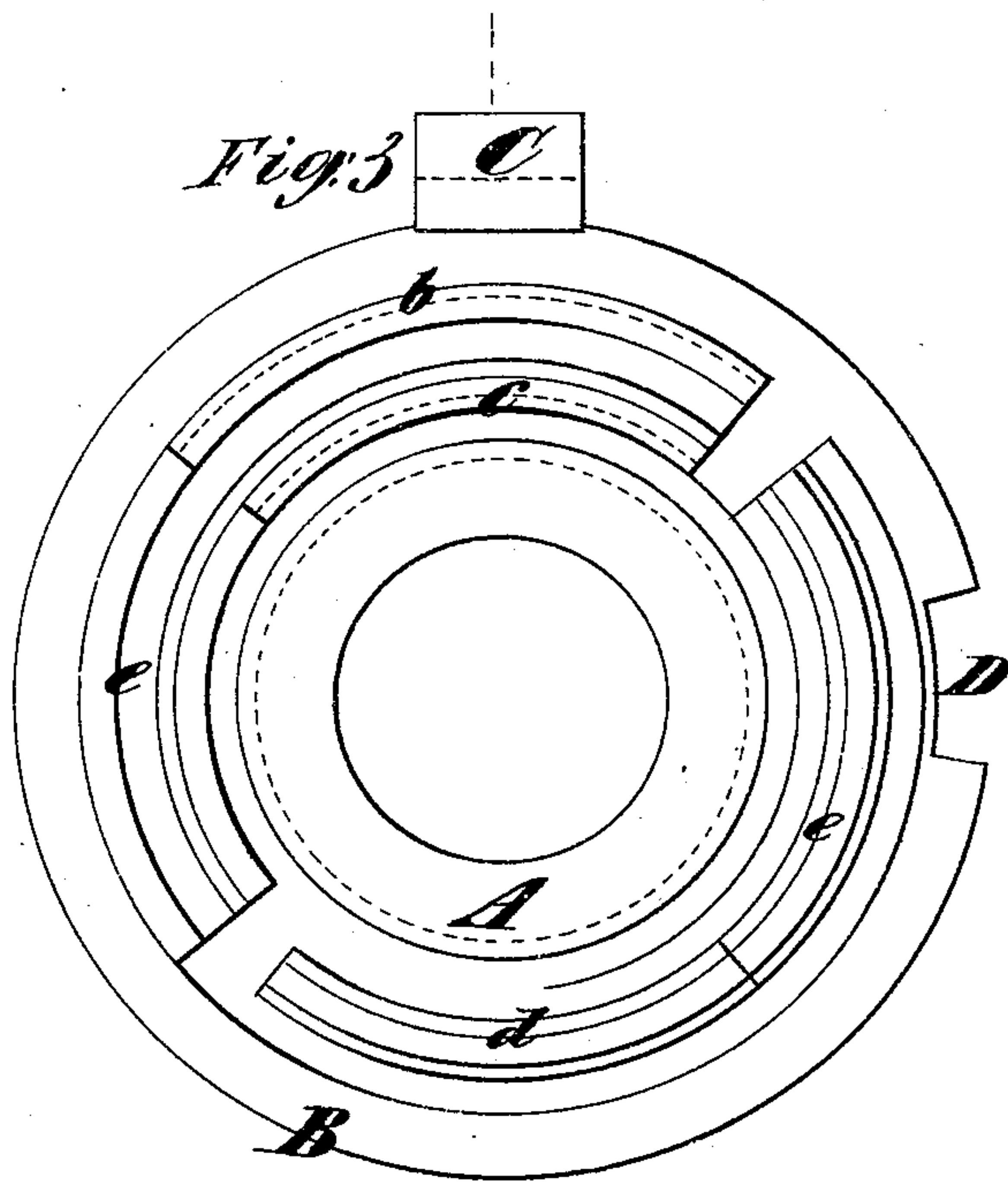
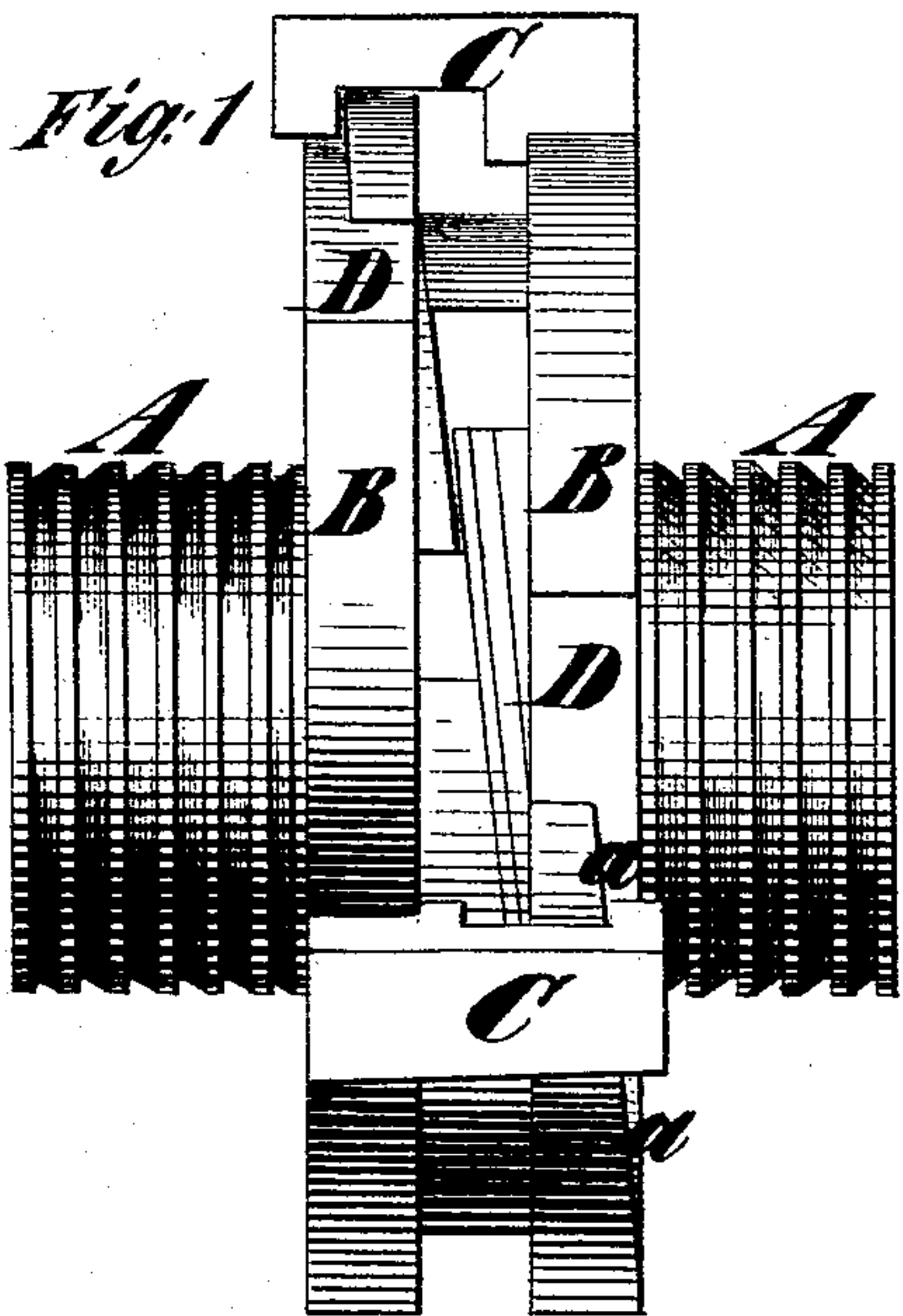


D. ASHWORTH.
Pipe-Couplings.

No. 144,943.

Patented Nov. 25, 1873.



Witnesses:
Michael Ryan
Fred Haynes

Daniel Ashworth
by his Attorneys
Rount & Allen

UNITED STATES PATENT OFFICE.

DANIEL ASHWORTH, OF WAPPINGER'S FALLS, NEW YORK.

IMPROVEMENT IN PIPE-COUPINGS.

Specification forming part of Letters Patent No. 144,943, dated November 25, 1873; application filed October 17, 1873.

To all whom it may concern:

Be it known that I, DANIEL ASHWORTH, of Wappinger's Falls, in the county of Dutchess and State of New York, have invented an Improved Coupling for Hose and Pipe, of which the following is a specification:

The invention consists in a novel and simple construction of a coupling, whereby both parts are made alike, and, while the sections or lengths of hose or pipe are secured very effectually together, provision is still afforded for coupling and uncoupling them expeditiously.

In the accompanying drawing, Figure 1 is a side view of the improved coupling. Fig. 2 is a longitudinal section of the same, and Figs. 3 and 4 are face views of the two parts of the coupling.

Similar letters of reference indicate corresponding parts in all the figures.

A A are the two nipples, which are applied to the pipes or sections of hose to be coupled. They have collars on their opposite ends, and in rear of these have a series of ribs provided on them to enable hose to be fastened to them by binding it on with wire or cord. In their interiors are screw-threads, which serve to attach them to the ends of the rigid pipes to be coupled. Washers E E, which are furnished on the adjacent faces of the collars, serve to seal the joint so as to prevent leakage.

The coupling devices consist of a pair of annular disks, B B, which are of a size to fit loosely upon the nipples behind their collars, and have their faces formed to interlock each into the other. From the outer edge of each disk there projects a hook-shaped lug, C, and in suitable relation to this is a notch, D, slightly larger in width. Leading from one side of this notch there is on the back of each disk an inclined surface, *a*, which resembles a section of screw-thread. The hooked end of the lug of each disk is passed through the notch D in the other end, and is then slipped over the incline *a* leading therefrom, and forced onward till the two nipples are drawn tightly together.

Although but a single lug, notch, and incline is furnished on each plate, several series of these might be used.

In order to couple the pipes the more securely, I furnish the faces of the disks with other interlocking lugs, which I will now describe.

There is on the face of each disk a pair of parallel segmental lugs, *b* and *c*, and a single opposite segmental lug, *d*. The lug *b* has a single female screw-thread, extending along its inner side, and the lug *c* has a corresponding male thread on its outer side. These two lugs of each disk receive between them the lug *d* of the other disk, which lug has a male thread on its outer side to fit the female thread in the lug *b*, and a female thread on its inner side for the male thread on the lug *c*. These segmental lugs *b*, *c*, and *d* center the two disks together, as well as draw them toward one another. To all these lead what may be termed paths, *e e*, that guide the several lugs into their fellows. The two disks are exactly alike in every respect.

To couple two pipes together by this coupling, the two nipples are secured to them, and the two disks are fitted together with the hooked lugs C C in the notches D D, and the lugs *b b*, *c c*, and *d d* in position to engage with one another. The lugs C serve as handles, whereby the disks may be turned to cause the several lugs to work on the screw-threads or inclines of their fellows, and draw the collars on the nipples A A snugly together, so as to preclude leakage.

To uncouple them, the disks are simply turned to withdraw the lugs *b*, *c*, and *d* from their fellows, and to bring each lug C opposite the notch D in the opposite plate; then the pipes may be pulled apart.

As the movement necessary to connect and disconnect the disks is very slight, the operation can be performed very expeditiously.

What I claim as my invention is—

1. The combination of the disks B B, each having one or more hook-shaped lugs, C, projecting from its face, notches D for the reception of the corresponding lugs C on its fellow, and external inclines *a* leading therefrom, substantially as and for the purpose herein set forth.

2. The combination, with the system of hook-shaped lugs C C, the notches D D, and inclines *a a*, of the segmental screw-threaded lugs *b* and *c* on each disk and their fellow lug D on the other disk, essentially as and for the purpose specified.

DANIEL ASHWORTH.

Witnesses:

JAMES THRELFALL,
WILLIAM BOGLE.