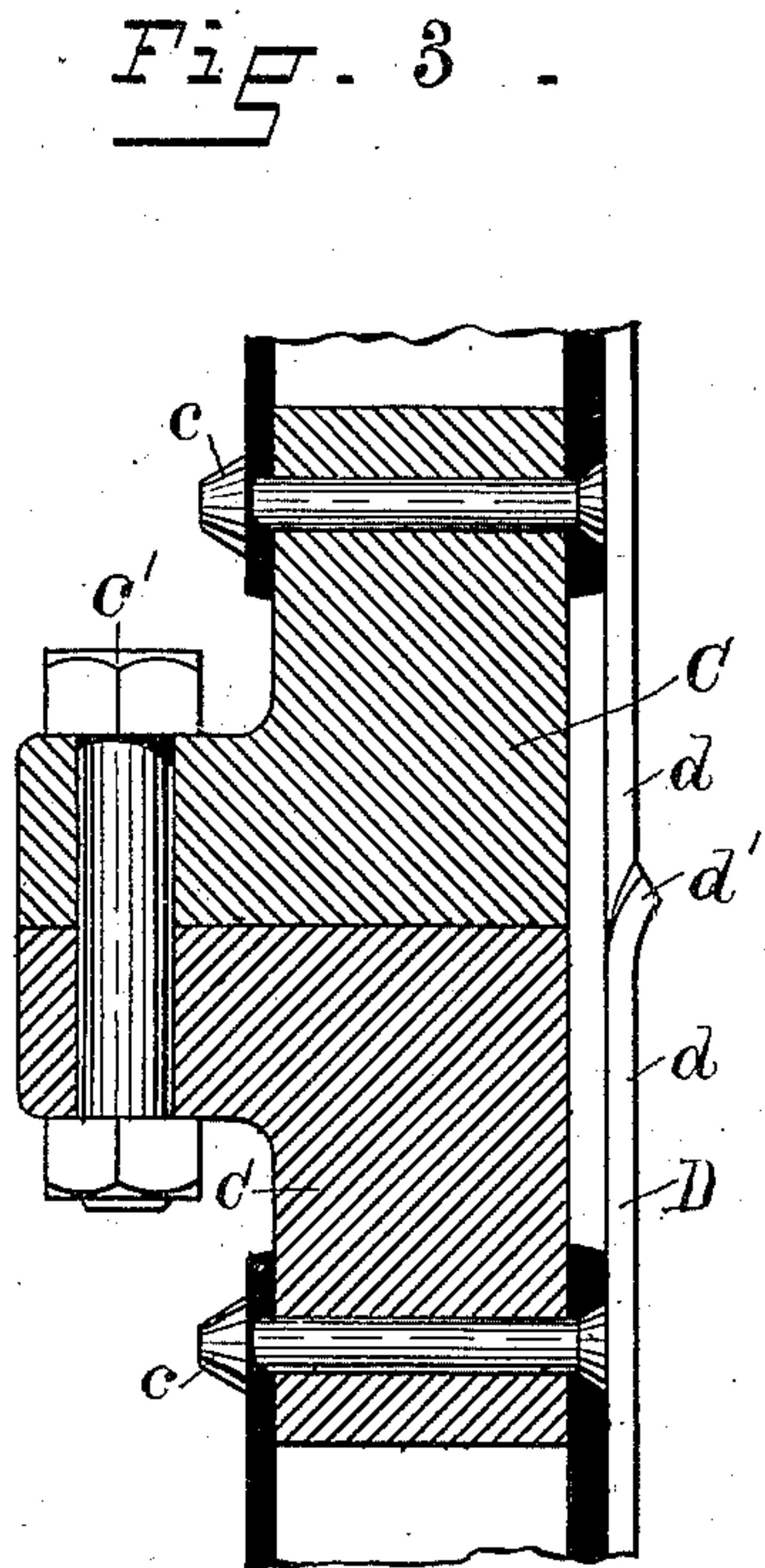
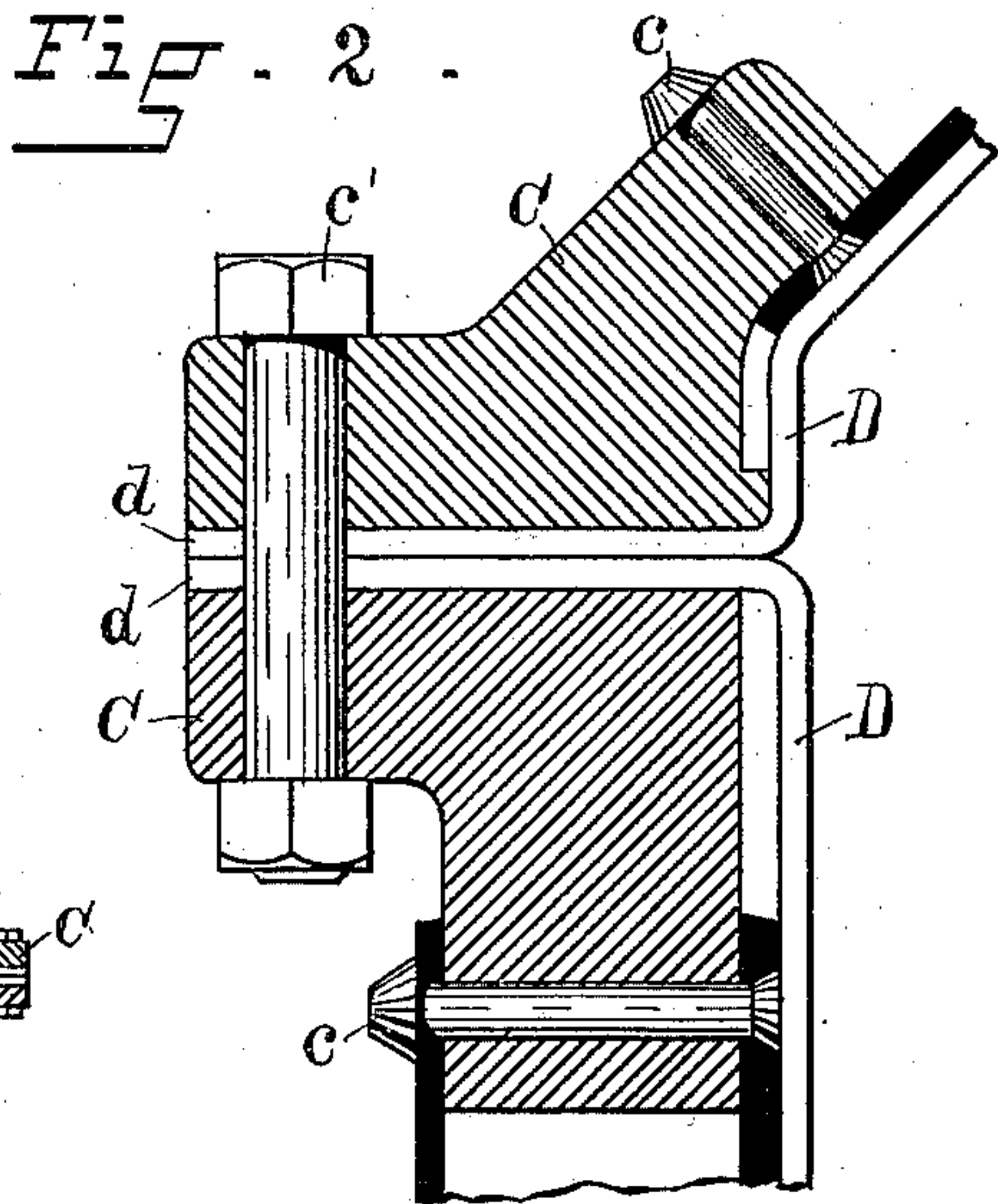
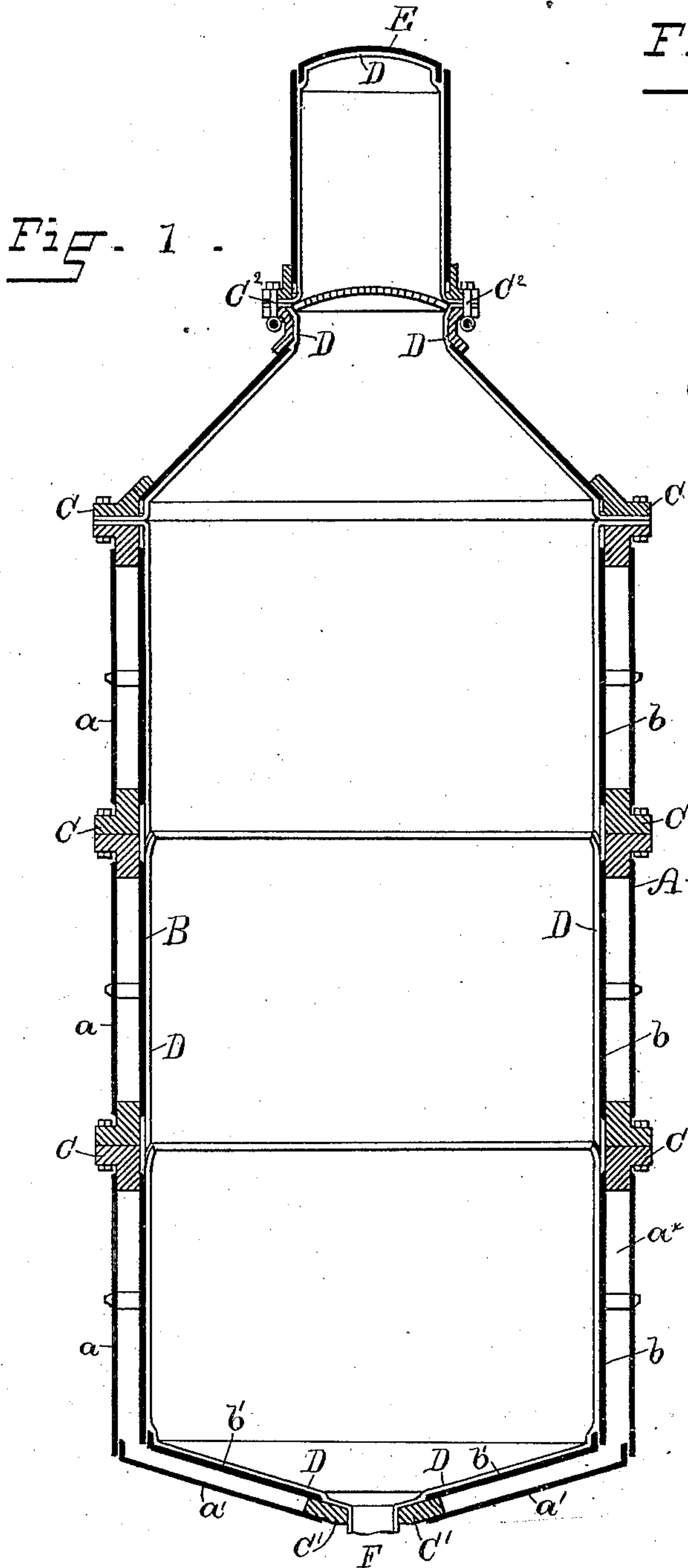


(No Model.)

G. R. PHILLIPS.  
LINING FOR PULP DIGESTERS.

No. 307,587.

Patented Nov. 4, 1884.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE R. PHILLIPS, OF PROVIDENCE, RHODE ISLAND.

## LINING FOR PULP-DIGESTERS.

SPECIFICATION forming part of Letters Patent No. 307,587, dated November 4, 1884.

Application filed May 10, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE R. PHILLIPS, of the city and county of Providence, and State of Rhode Island, have invented a certain new and useful Improvement in Linings for Pulp-Digesters, of which the following is a full, clear description, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of a digester, showing my improved lining as applied thereto. Figs. 2 and 3 are detached sectional views, respectively, of the upper and lower joints, showing the methods of applying the metallic lining.

My invention relates to the digester shown and described in the application for Letters Patent filed of even date herewith by Charles S. Wheelwright, of Providence, Rhode Island, and the object of my invention is to provide a metal lining which shall meet the peculiar requirements of said digester.

In the said drawings, A B designate the inner and outer shells of Wheelwright's digester, which shells are each composed of a number of annular sections, *a a b b*, placed concentrically, so as to inclose a space, *a\**, between them, through which steam circulates.

C C designate rings, which are L-shaped and arranged in pairs, and to which the sections are secured by the bolts *c*, the said rings being secured together by the bolts *c'*. The construction of the digester will be more perfectly understood by reference to the said application of Wheelwright.

D designates my improved lining, which is of any suitable metal, preferably lead or copper. This lining covers the entire interior of

the digester; but as the digester is itself built up of sections, the lining is applied to each section separately, and these separate sections are afterward united so as to form a continuous lining.

I employ two methods of uniting the lining-sections—that shown in Fig. 2 and also that shown in Fig. 3. In Fig. 2 the lining-sections are each made to overlap the upper and lower edges of the shell-section, as at *d*, and when the shell-sections are being put together the surplus portion of the lining is bent over upon the meeting faces of the sections, thereby forming a tight joint between the sections, so as to prevent leakage. In Fig. 3 the upper surplus edge, *d*, is beveled, the under edge is turned inward, and a suitable metal is run in between the two edges, as shown at *d'*, thus also forming a tight joint and preventing leakage. These two methods may be used either separately or in conjunction, as shown in Fig. 1. The lining extends from the cap E to the outlet F, as shown in Fig. 1.

Having thus described my invention, I claim—

The combination, with a digester composed of separate shell-sections, of a lining formed also in separate sections, each of which overlaps the edges of the shell-sections, the said surplus portions being united so as to form tight joints and constitute a continuous lining, as set forth.

GEORGE R. PHILLIPS.

Witnesses:

J. A. MILLER, Jr.,  
M. F. BLIGH.