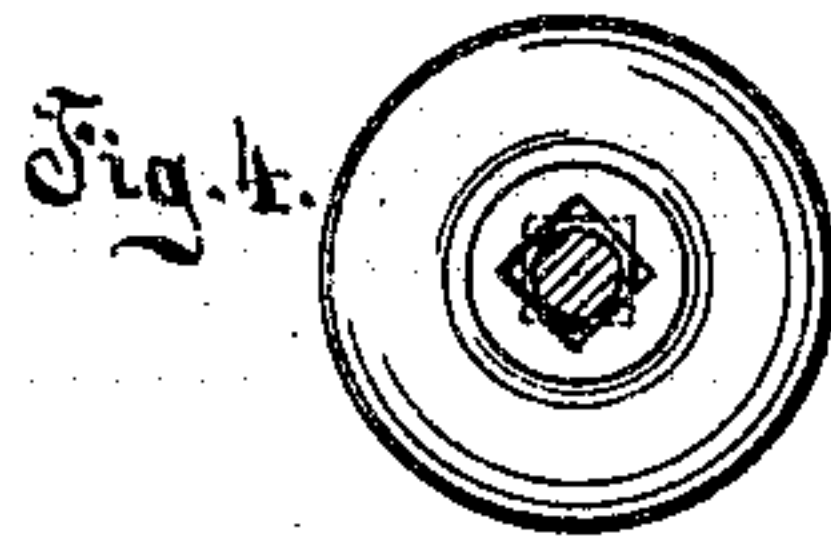
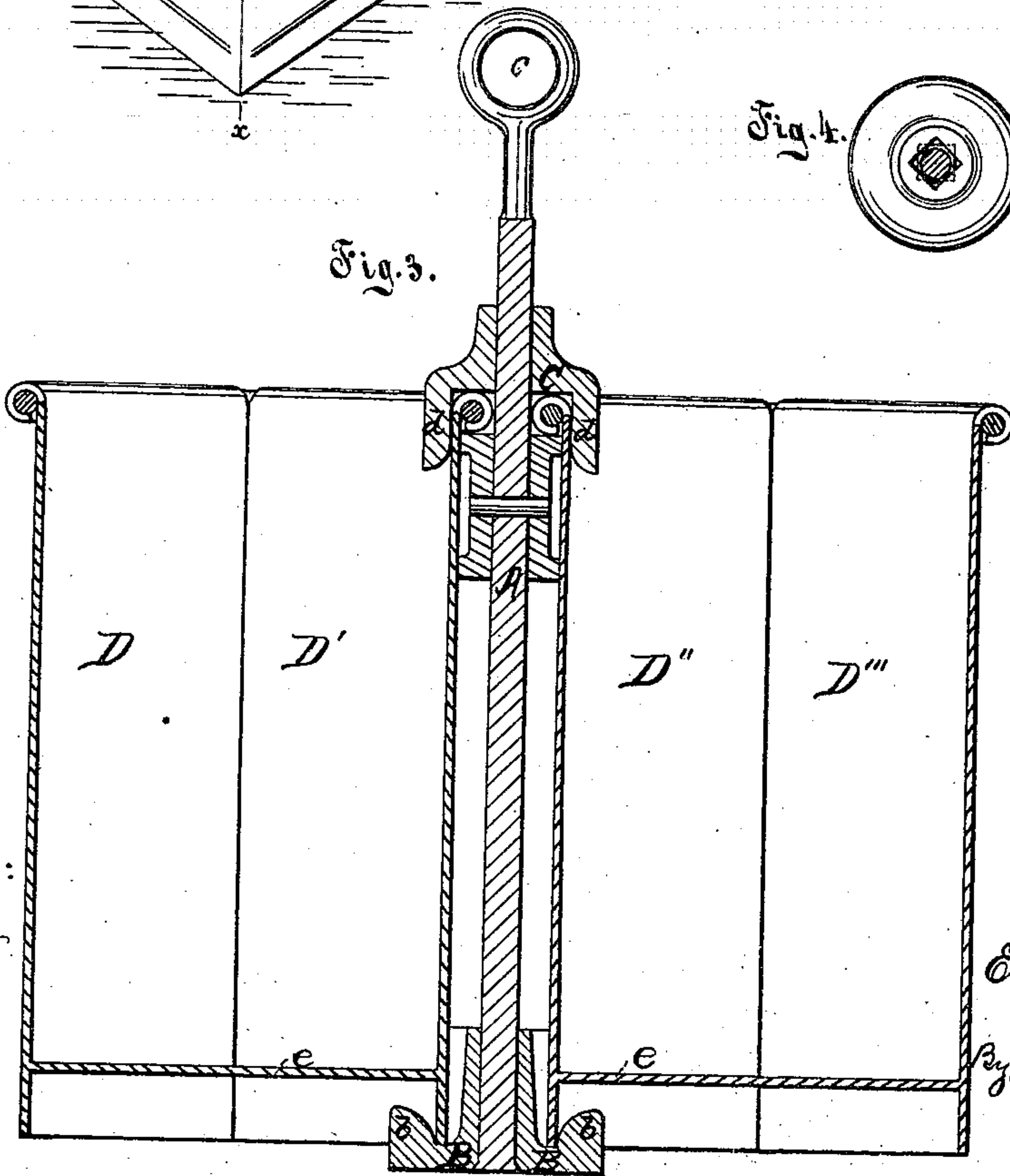
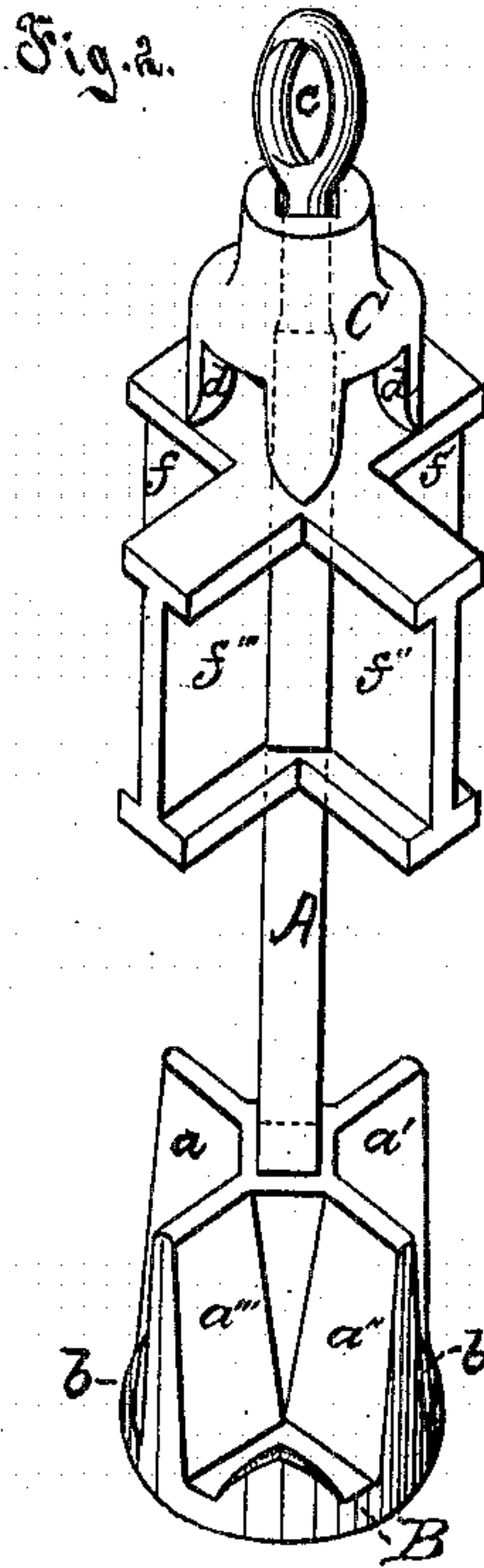
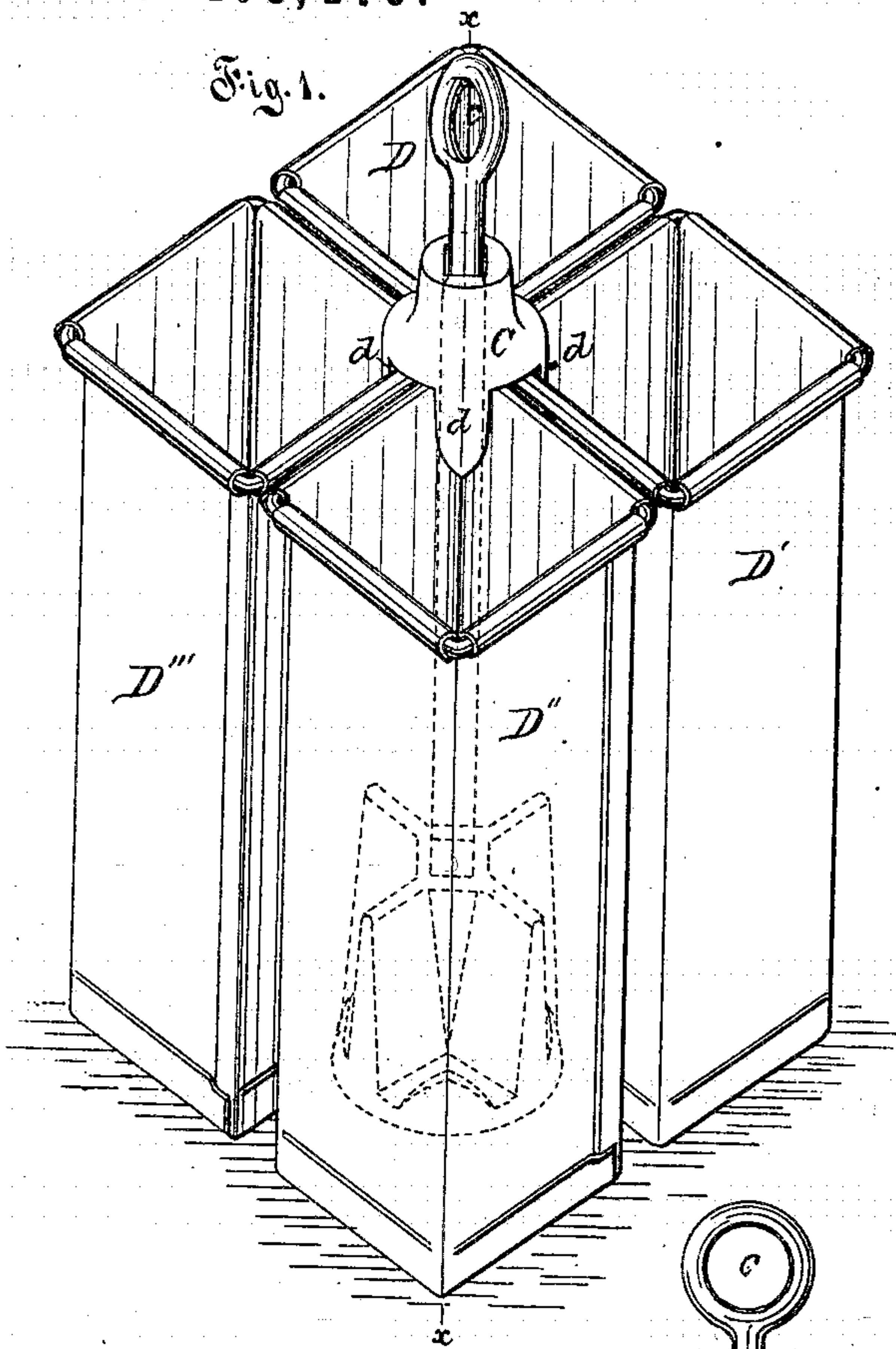


E. BURGIN.

GRAPPLING-INSTRUMENTS FOR HANDLING CANS IN MAKING ICE.

No. 193,479.

Patented July 24, 1877.



Witnesses:

Theodore Hoster.

B. S. Clark.

Inventor:

Emil Burgin

By H. H. H. H.
his atty.

UNITED STATES PATENT OFFICE.

EMIL BÜRGIN, OF BASIL, SWITZERLAND.

IMPROVEMENT IN GRAPPLING-INSTRUMENTS FOR HANDLING CANS IN MAKING ICE.

Specification forming part of Letters Patent No. 193,479, dated July 24, 1877; application filed April 5, 1877.

To all whom it may concern:

Be it known that I, EMIL BÜRGIN, of Basil, Switzerland, have invented a new and useful Grappling-Instrument for Handling Cans or Vessels, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same.

The object of my grappling instrument is to enable a workman, by means of a windlass, a derrick, or similar mechanism, to remove at a single operation several of the cans; and consists of the device herein described, and shown in the drawings.

This invention is applicable to handling and removing cans in many of the industrial arts. I will mention, for example, the handling of cans for containing the water used for the manufacture of ice.

Figure 1 is a perspective view of four metal cans or vessels held in the grasp of my grappling-instrument. Fig. 2 is a similar view of the grappling-instrument itself; Fig. 3, a vertical sectional view of the cans and grappling-instrument cut on line *x x*, Fig. 1; and Fig. 4 is a top view of the part marked C in the other figures.

A is a rod, and B is a circular platform, secured to the lower end of the said rods. *a a' a'' a'''* are division plates or broad arms that rise from the platform. Between each two of these plates there is, on the platform and rising from its periphery, a projection, *b*. The upper end of the rod A is provided with a loop hook or ring, *c*.

C is a collar or sleeve, fitted to slide on the rod A. Extending downward from its under face are arms or projections, marked *d*, four in number, equidistant from each other around the collar, corresponding to the four projections *a* on the platform B. When the body of the rod A and the hole through the collar C is made square, the upper end of the rod may be made round by taking off the corners, leaving shoulders at the corners, so that, when the collar C is slid up off from the square portion and turned one-eighth round, it will rest on the said corner-shoulders; or any other

suitable device may be used to hold the collar up when lifted from the cans.

D D' D'' D''' are square metal cans or vessels. They are made with sunken bottoms *e*, of course leaving the walls projecting somewhat below the said bottoms. *f f' f'' f'''* are arms or division-plates extending radially from a central hub, secured to the rod A at a distance from the platform B about corresponding to the height of the cans D. The use of these arms is recommended; but they are not essential.

The cans, four in number, are placed upon the platform B, all cornering on the center rod A, the lower inner corner of each resting on the platform, and the projections *b* extending upward within the walls of the cans at the corners underneath the sunken bottoms, whereby all the cans are held securely on the platform. Then the collar C, which had been slid upon the rod A out of the way of the cans, is dropped down upon them, one of the projections *d* passing into the corner of each can. It is evident that the cans are now all securely clamped together, so that they may be lifted and moved together by taking hold of the ring *c*; also, that they may be liberated and detached from the clamp and from one another by simply sliding the collar C upon the rod A. This apparatus obviates the necessity of having handles in the cans, which would take up room. It also enables a workman to handle several cans at a time as readily as he could handle a single one without it.

It is obvious that this grappling apparatus may be constructed to hold less or more than four cans by varying the form of the platform and collar, and, if need, by the form of cans. It is also evident that, if the arms or plates *f* were removed, the cans would be still held in place on the platform by the collar C; but for convenience in placing and arranging the cans on the platform B and within the grasp of the collar C, I usually make my apparatus with these arms *f* attached to the rod A. So, also, the division-plates marked

a are convenient and useful; but they are not essential, and their form and size may be varied. These division-plates, as well as plates *f*, serve the purpose of keeping the cans separated.

What I claim, and desire to secure by Letters Patent, is—

A grappling apparatus consisting of the rod A, the platform B, provided with the projections *b*, and the sliding collar C, provided

with the projections *d*, all constructed and combined substantially as and for the purpose described.

Witness my hand this 2d day of April, 1877.

EMIL BÜRGIN.

Witnesses:

B. S. CLARK,
M. F. CLIFTON.