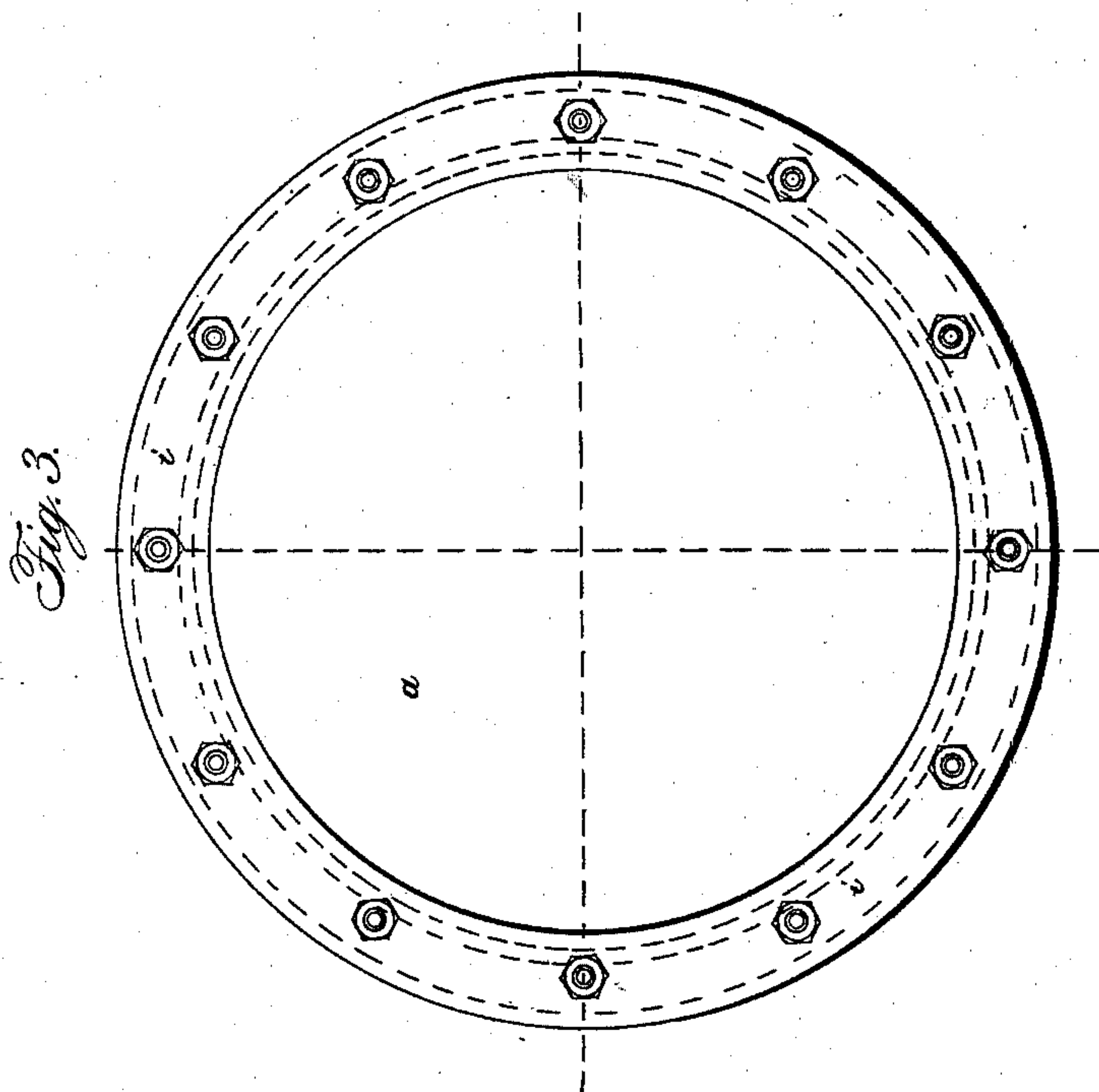
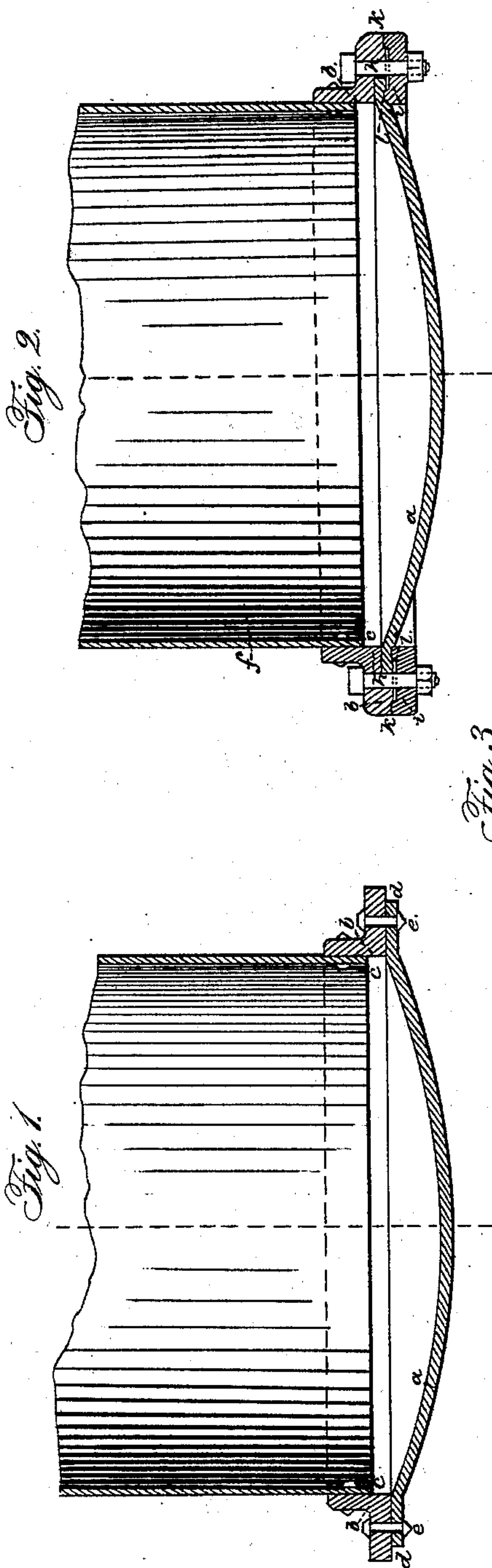


J. G. COLLINS.
Oil Still.

No. { 1,553, {
 32,557. }

Patented June 18, 1861.



Witnesses:

George T. Conner
Hazen. K. Miles

Inventor:

Joseph G. Collins

UNITED STATES PATENT OFFICE.

JOSEPH G. COLLINS, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN MODE OF SECURING BOTTOMS TO STILLS.

Specification forming part of Letters Patent No. 32,557, dated June 18, 1861.

To all whom it may concern:

Be it known that I, JOSEPH G. COLLINS, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful or Improved Method of Securing Bottoms to Stills; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

My invention is especially designed to be applied to stills used in the manufacture of "kerosene-oil."

In Figure 1 of the drawings I give a vertical section of the lower part of a still as now commonly used, showing the usual manner of securing the bottom thereto. Fig. 2 is a vertical section of the lower part of a still, with my improved method of securing the bottom, and Fig. 3 is a bottom plan of the same.

Stills with the bottoms secured as seen in Fig. 1 are subject to a constant leakage. Putting cement in the joint between the bottom *a* and the flange *b*, or calking the joint at *c* and *d*, has been found insufficient to prevent it. When fire is built under the bottom *a*, the expansion of the iron causes the joint to open at *c*, and some of the oil leaks out around the rivet-heads at *e*. Now, my invention is especially designed to stop such leakage, and the manner in which I accomplish it I shall now proceed to describe.

In Fig. 2, *f* is the lower part of the body of the still. *b* is a flange riveted thereto. Instead of securing the bottom *a* to this flange by rivets, as seen in Fig. 1, I have a recess, *h*, formed in the flange *b*, into which recess the bottom *a* is to be fitted, as seen in Fig. 2. I secure the bottom *a* in its place by means of a ring or clamp, *i*, formed as shown in section in Fig. 2, and a plan of it is seen in Fig. 3. Such ring or clamp *i* is fitted into a recess, *k*, on the outside of the flange *b*, and also fitted into a groove or its equivalent, *l*, formed in the bottom *a*, and is made to bear at only those

points, as seen in Fig. 2. This ring may be secured to the flange *b* by either rivets or bolts; but I prefer the latter. The groove *l* in the bottom *a* is placed opposite the inner edge, *c*, of the joint, or as near it as may be, so as to clamp or secure the bottom *a* at that part and prevent the joint at *c* from opening by the expansion of the bottom *a*. The bottom *a* being fitted in the recess *h*, and the manner in which I fit and secure the ring or clamp *i* both to the flange *b* and the bottom *a* prevents any sliding motion of the bottom *a* on the flange *b* on account of the greater expansion of the bottom than the flange. The bolts or rivets pass only through the flange *b* and the ring or clamp *i*, as seen in Fig. 2, and not through the bottom *a*.

There may be various slight modifications in the form and construction of the parts above described; but the object to be accomplished is to clamp or secure the bottom at the inner part of the joint at *c*, so as to prevent a leak from starting; in the next place to so secure the bottom *a* to the flange *b* that the expansion and contraction of the bottom *a* cannot make it slip or move on the flange *b*. The recess *h*, into which the bottom *a* is fitted, prevents any outward movement of the bottom *a* on the flange *b* by expansion, and the ring or clamp *i*, being fitted into the recess *k* on the outside of the flange *b* and into the recess *l* in the bottom *a*, prevents any inward movement of the bottom *a* on the flange *b* by contraction.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is as follows:

The ring or clamp *i*, in combination with the bottom *a* and the flange *b*, each formed and constructed substantially as above described.

JOSEPH G. COLLINS. [L. s.]

Witnesses:

GEORGE N. COMER,
HAZEN H. NILES.