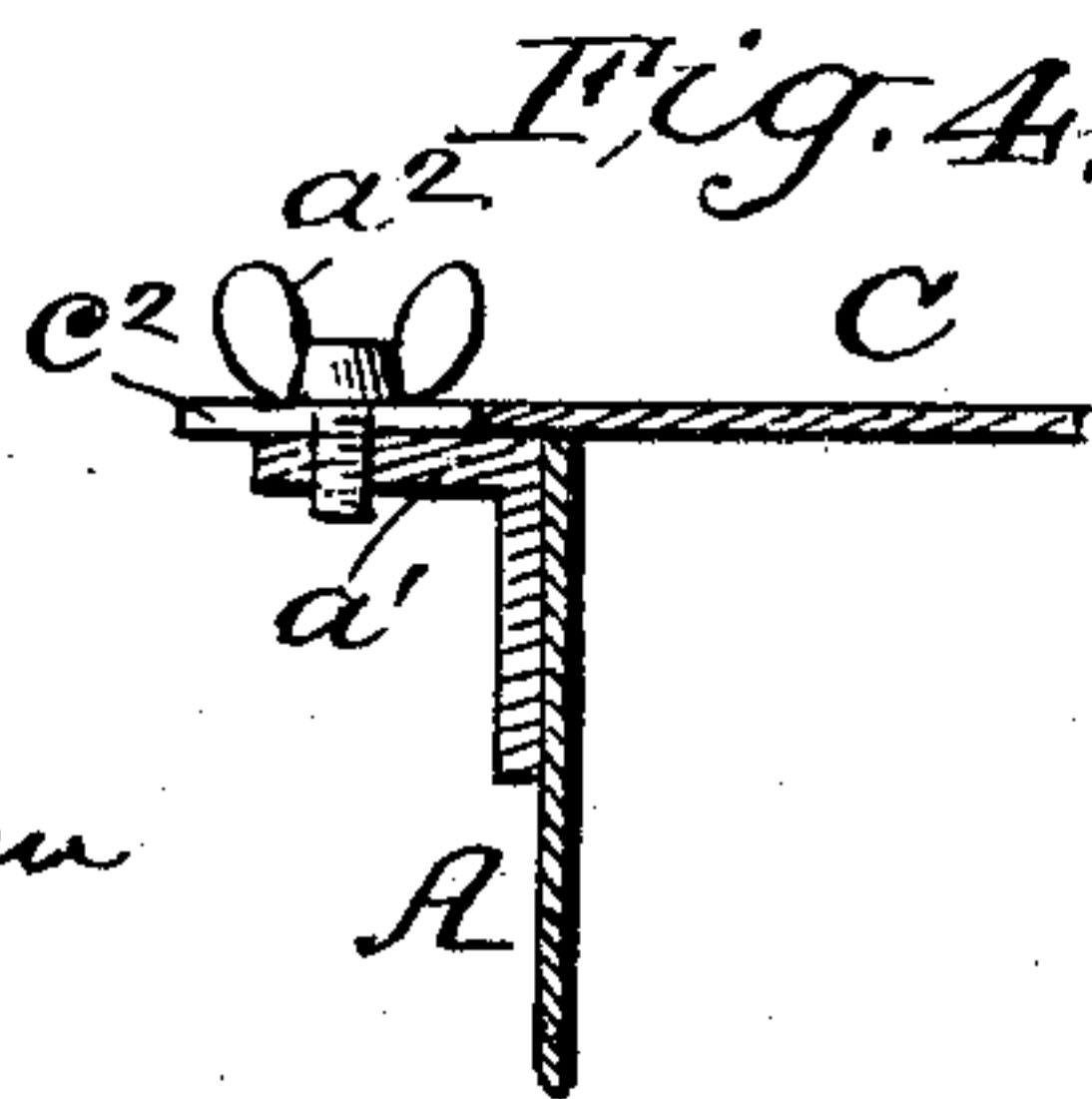
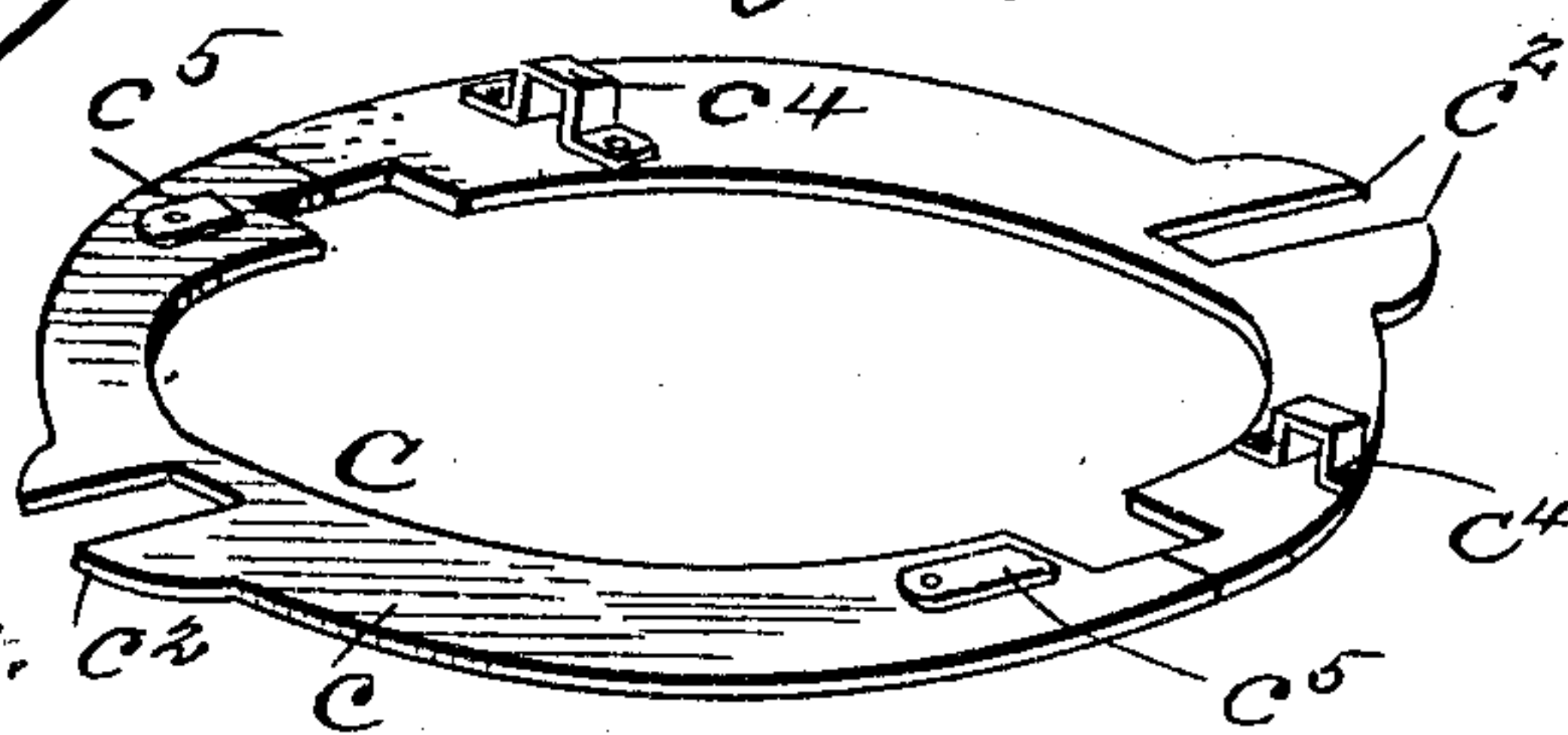
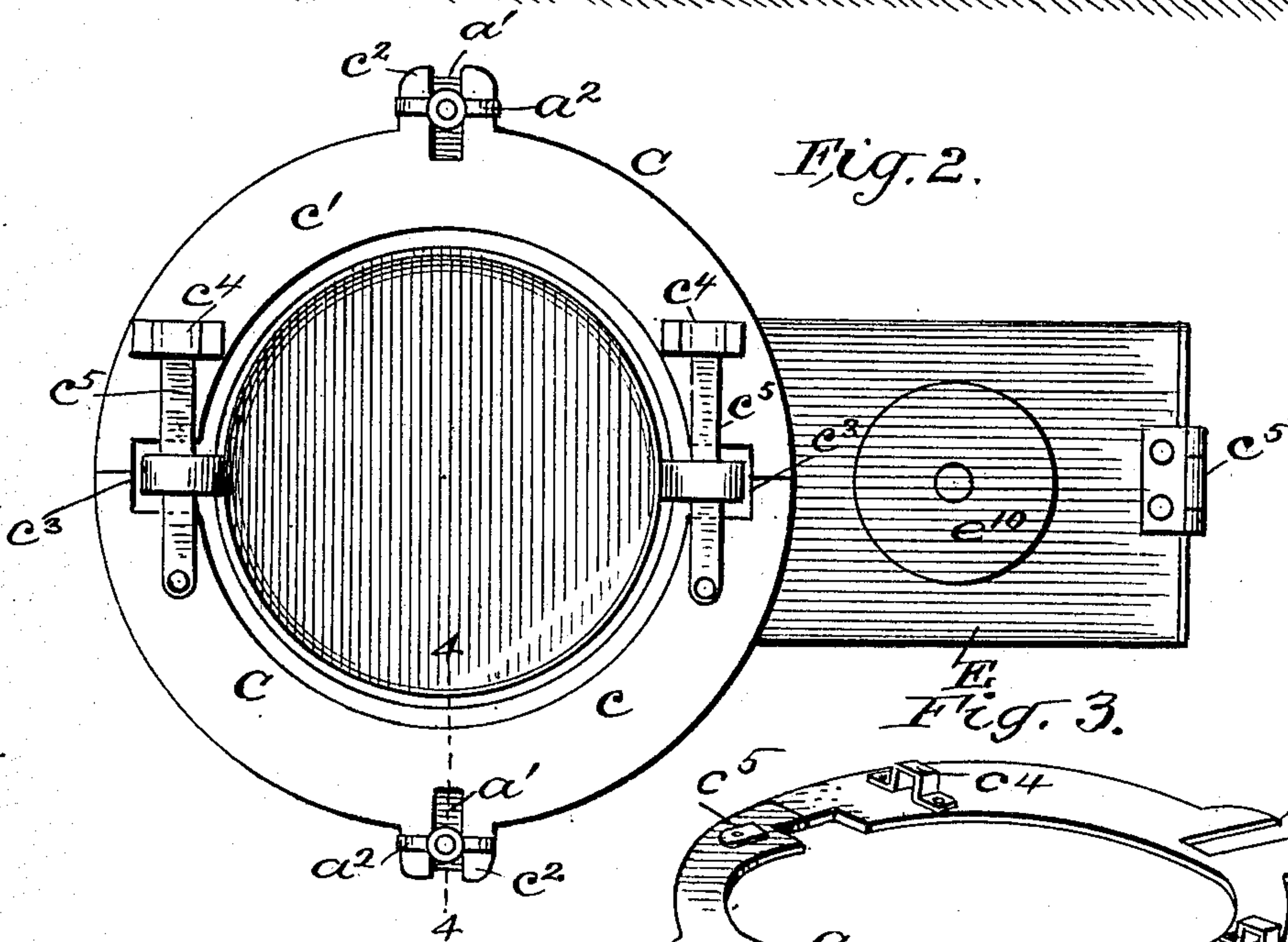
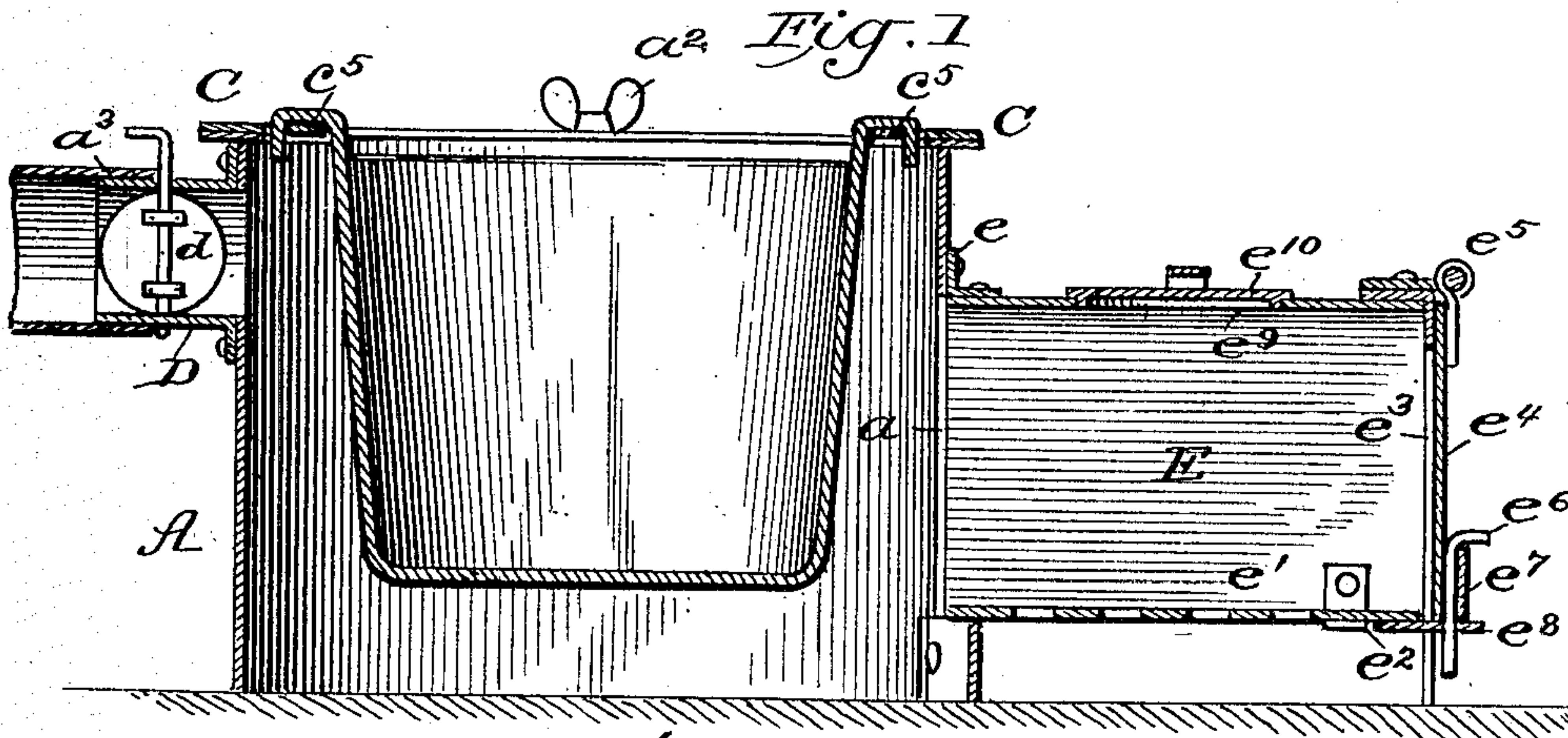


No. 860,466.

PATENTED JULY 16, 1907.

W. J. HATCHER & J. W. CRIM.  
FURNACE.

APPLICATION FILED JAN. 6, 1906.



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# UNITED STATES PATENT OFFICE.

WILLIAM J. HATCHER AND JOHN WALTER CRIM, OF JOHNSTON, SOUTH CAROLINA.

## FURNACE.

No. 860,466.

Specification of Letters Patent.

Patented July 16, 1907.

Application filed January 6, 1906. Serial No. 294,952.

*To all whom it may concern:*

Be it known that we, WILLIAM J. HATCHER and JOHN WALTER CRIM, citizens of the United States, and residents of Johnston, in the county of Edgefield and State of South Carolina, have invented certain new and useful Improvements in Furnaces, of which the following is a specification.

Our invention is an improvement in furnaces, and consists in certain novel constructions, and combinations of parts hereinafter described and claimed.

Referring to the drawing forming a part hereof Figure 1 is a vertical longitudinal section of my invention. Fig. 2 is a top plan view. Fig. 3 is a perspective view of the ring halves and Fig. 4 is a section on the line 4—4 of Fig. 2.

In the practical application of our invention, we provide a cylindrical casing A provided with a square opening *a*, through that part of the cylindrical surface which we will hereafter designate as the front. Lugs *a'*, are arranged on the sides of the casing at the upper edge thereof and are provided with set-screws *a''*.

A ring C having a mean diameter equal to the diameter of the casing and comprising the halves *c* and *c'* rests upon the upper edge of the casing and each of the halves is provided with a notched lug *c''* for engaging the set screw on the lug on the casing. The inner sides of the adjacent ends of the ring halves are notched as at *c'''* to receive the ears of a wash pot adapted to rest upon the ring. Loops *c''''* are secured to the upper faces of the ends of one ring half, and are engaged by bars *c'''''* secured to the ends of the other ring half. In placing the ring upon the casing, each half is placed thereon with the ends of the bars engaging the loops, after which the halves are pushed together thus forcing the bars into the loops. The bar passes across the inner part of the opening formed by the notches, thus serving as a support for the ears of the pot. A smoke vent *a'''* is arranged in the rear face of the casing, and a pipe D is secured to the edges of the vent. A damper *d* may, if desired, be arranged within the smoke pipe.

A fire box E is secured to the edges of the rectangular opening in the front of the casing, by means of angle plates *e*, and is provided with a grate bar *e'* resting upon supports *e''* in the interior of the fire box. An opening *e'''*, is arranged in the free end of the fire box, and a door *e''''* hinged to the upper face of the fire box as at *e'''''* is adapted to close the opening of the fire box proper, and is secured in its closed position by a pin *e''''''* sliding in a staple *e'''''''* and engaging an eye *e''''''''* on the grate bar.

The space below the grate bar may be provided with a damper, or may be left open as desired, and on the upper face of the fire box we provide a circular opening *e'''''''''* having thereover a cap *e''''''''''* of ordinary construction.

When the wash pot is placed upon the ring, the body of the pot will be almost completely inclosed within the cylindrical casing, only about two inches of the top of the body being visible. The bottom of the pot will reach within about four inches of the bottom of the heat box, leaving only sufficient room for the heat and smoke to pass therearound. The casing is made preferably of sheet metal and the pot supporting ring is preferably of cast iron and about three inches wide, thus leaving about 1½ inches space between the pot and the cylinder, and giving the pot all the benefit of the heat. The ring fits closely around the pot closing the opening between the side of the pot and the side of the casing. The circular opening in the fire box, is adapted to receive an ordinary cooking pot, and the upper surface of the fire box being flat forms an excellent surface for heating irons.

It will be evident that by our construction of furnace we provide an efficient heating means, requiring but a small amount of fuel and adapted for use in or out of doors. For out of door use it is unnecessary to have a bottom or casing in the furnace.

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is—

1. In a furnace, the combination with a wash pot of a cylindrical casing for receiving said pot, and provided with an opening, lugs on the upper edges of the casing at the sides thereof, set-screws on the lugs, a ring comprising halves resting on the upper edge of the casing, and provided with notches on the inner sides of the adjacent ends of the ring halves for receiving the ears of the pot, loops secured to the ends of one of the ring halves, bars secured to the ends of the other ring half for engaging the loops, lugs on the ring halves for engagement by the set-screws, a smoke vent at the rear of the casing, and a fire box secured to the edges of the opening in the casing.

2. In a furnace the combination with a wash pot of a cylindrical casing for receiving said pot and provided with an opening, a ring comprising halves resting on the upper edge of the casing and provided with notches on the inner sides of adjacent ends of the halves for receiving the ears of the pot, means for adjustably securing the ring to the casing, loops secured to the ends of one of the ring halves, bars secured to the ends of the other ring half for engaging the loop, a smoke vent at the rear of the casing, and a fire box secured to the edges of the casing.

3. In a furnace, the combination with a wash pot of a cylindrical casing for receiving said pot, provided with an opening in its front, a two part ring resting on the upper part of the casing and provided with openings for receiving the ears of the pot, means for adjustably securing the ring to the casing, means for adjusting the parts of the rings with respect to each other, a smoke vent in the casing, a fire box secured to the edges of the openings in the casing.

4. In a furnace, the combination with a wash pot of a cylindrical casing for receiving said pot, and provided with an opening in its front, a two part ring resting on the edges of the casing, means for adjustably securing the ring to the casing, means for adjusting the parts of the ring with respect to each other, a smoke vent in the cas-



ing, an open-ended fire box secured to the edges of the opening in the casing, and a grate bar supported within the fire box.

5 In a furnace, the combination with a wash pot of a cylindrical casing for receiving a pot, a two part ring resting on the upper edge of the casing for supporting the pot, means for adjusting the parts of the ring to close the opening between the pot and the casing, a smoke vent in the rear face of the casing, a fire box secured to the front of the casing, and communicating therewith, and a door hinged to the free end of the fire box.

10 6. In a furnace, the combination with a wash pot of a cylindrical casing for receiving said pot, a two part ring resting on the upper edge of the casing, means for adjusting the parts of the ring with respect to each other, a smoke vent at the rear of the casing, a fire box at the front of the casing, and communicating therewith, and a grate bar supported within the fire box.

15 7. In a furnace, the combination with a wash pot of the casing for receiving said pot, means on the casing for supporting the pot, means for adjusting the supporting means for different sized pots, a smoke vent in the casing, and a fire box at the opposite side of the casing from the smoke vent and communicating with the casing.

20 8. In a furnace, the combination with a wash pot of the casing, means on the casing for supporting the pot,

means for adjusting the supporting means to close the opening between the casing and the pot, a smoke vent on one side of the casing, and a fire box at the opposite side of the casing and communicating therewith.

30 9. In a furnace, the combination with a wash pot of a cylindrical casing for receiving the pot, means resting on the upper edge of the casing for supporting the pot and comprising a two part ring, means for adjustably securing the ring to the casing, and means for adjusting the parts of the ring towards and from each other.

35 10. In a furnace, the combination with a wash pot, of a casing for receiving said wash pot, means resting on the upper edge of the casing for receiving the pot, and comprising a two part ring, and means for adjusting the parts of the ring towards and from each other.

40 11. In a furnace, the combination with a wash pot having oppositely arranged ears, of a casing for receiving the pot, and a ring for supporting the said pot resting upon the edge of the casing and having means for engaging the ears.

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Witnesses:

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