

(No Model.)

2 Sheets—Sheet 1.

W. PETERSEN.

COAL OIL STOVE.

No. 257,378.

Patented May 2, 1882.

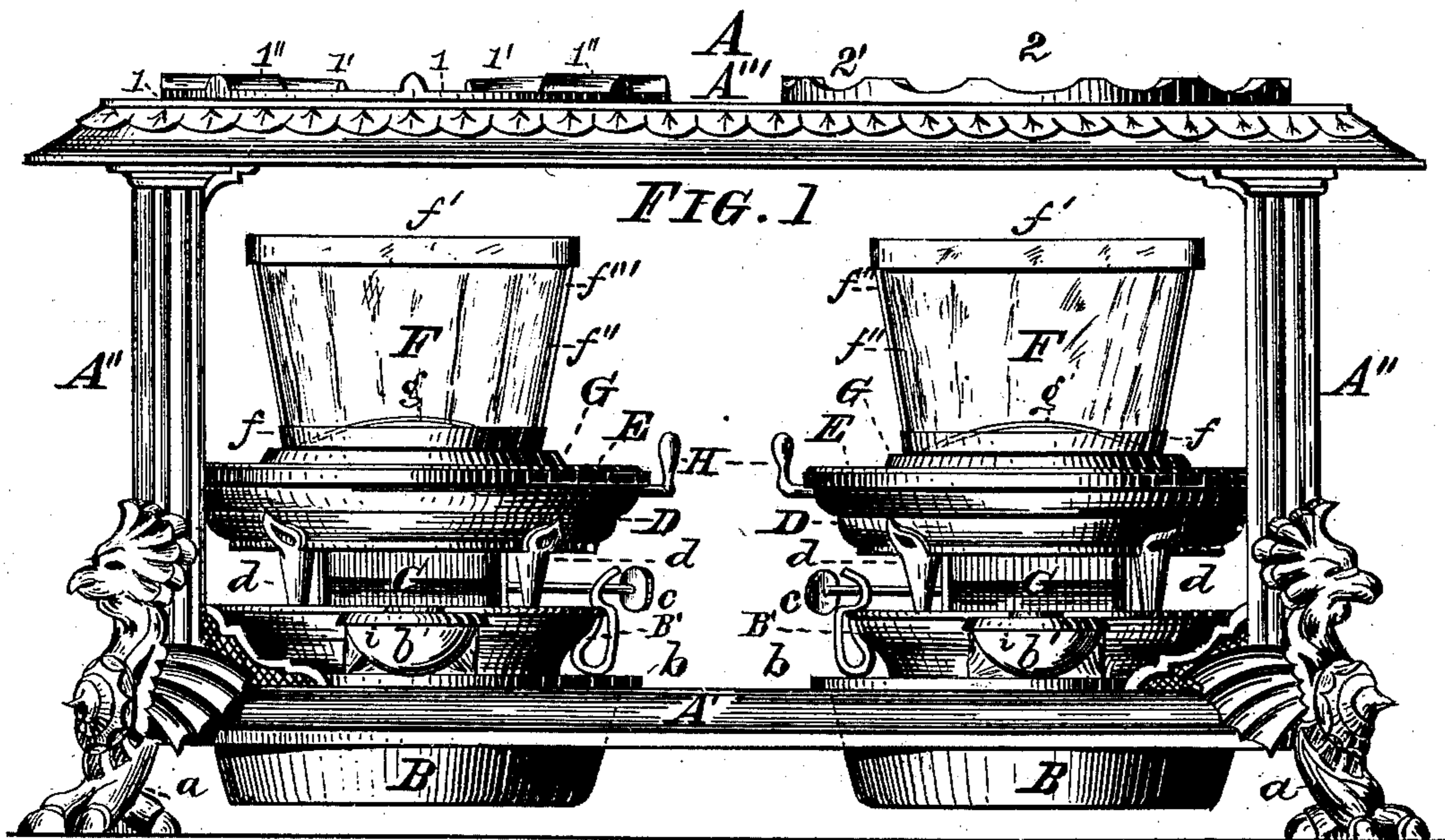
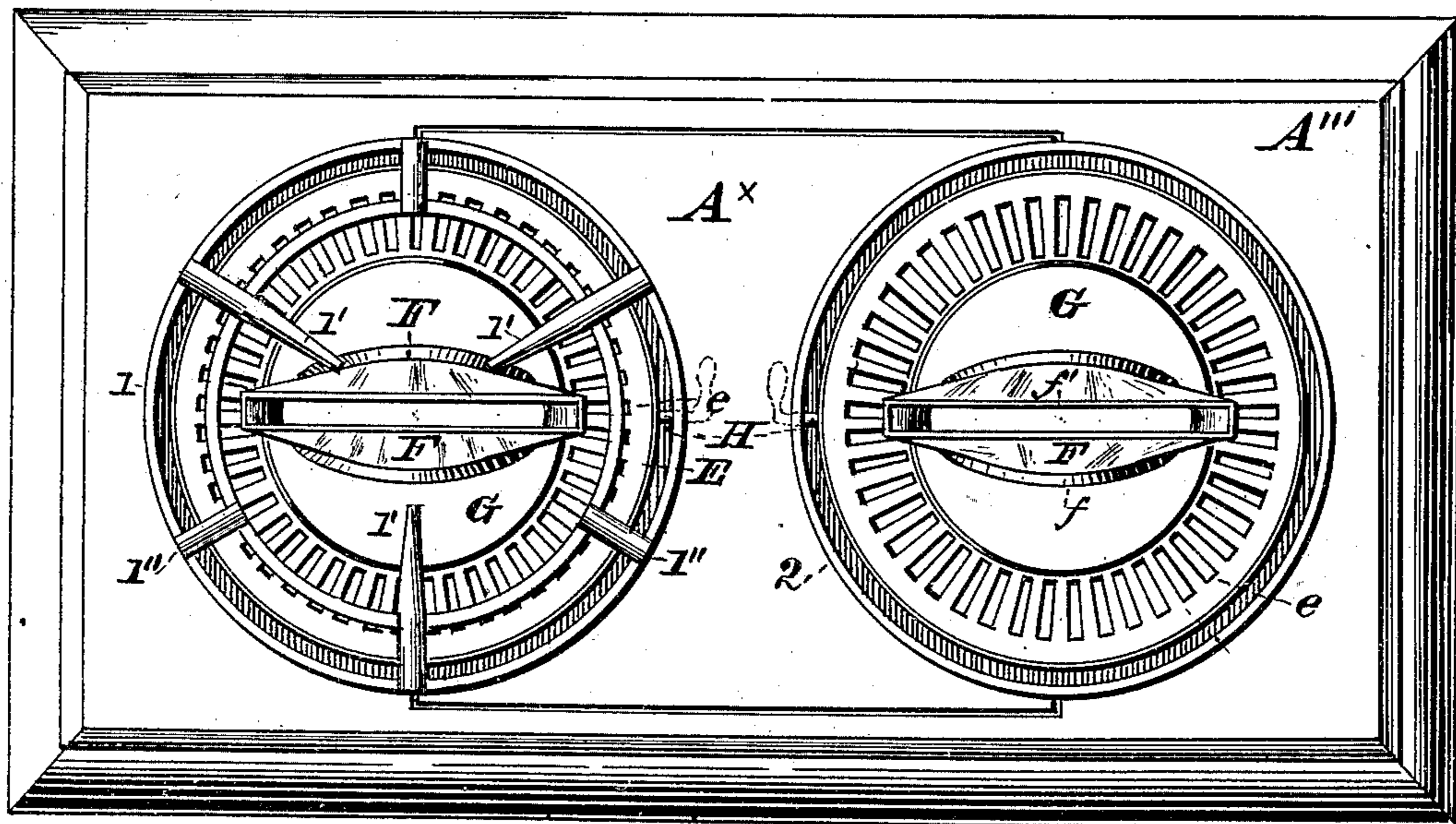


FIG. 2.



Witnesses:

Willie C. Stark.
Joseph P. Wunsch.

Inventor:

Wilhelm Petersen,
by Michael J. Stark
Attorney.

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2 Sheets—Sheet 2.

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FIG. 4.

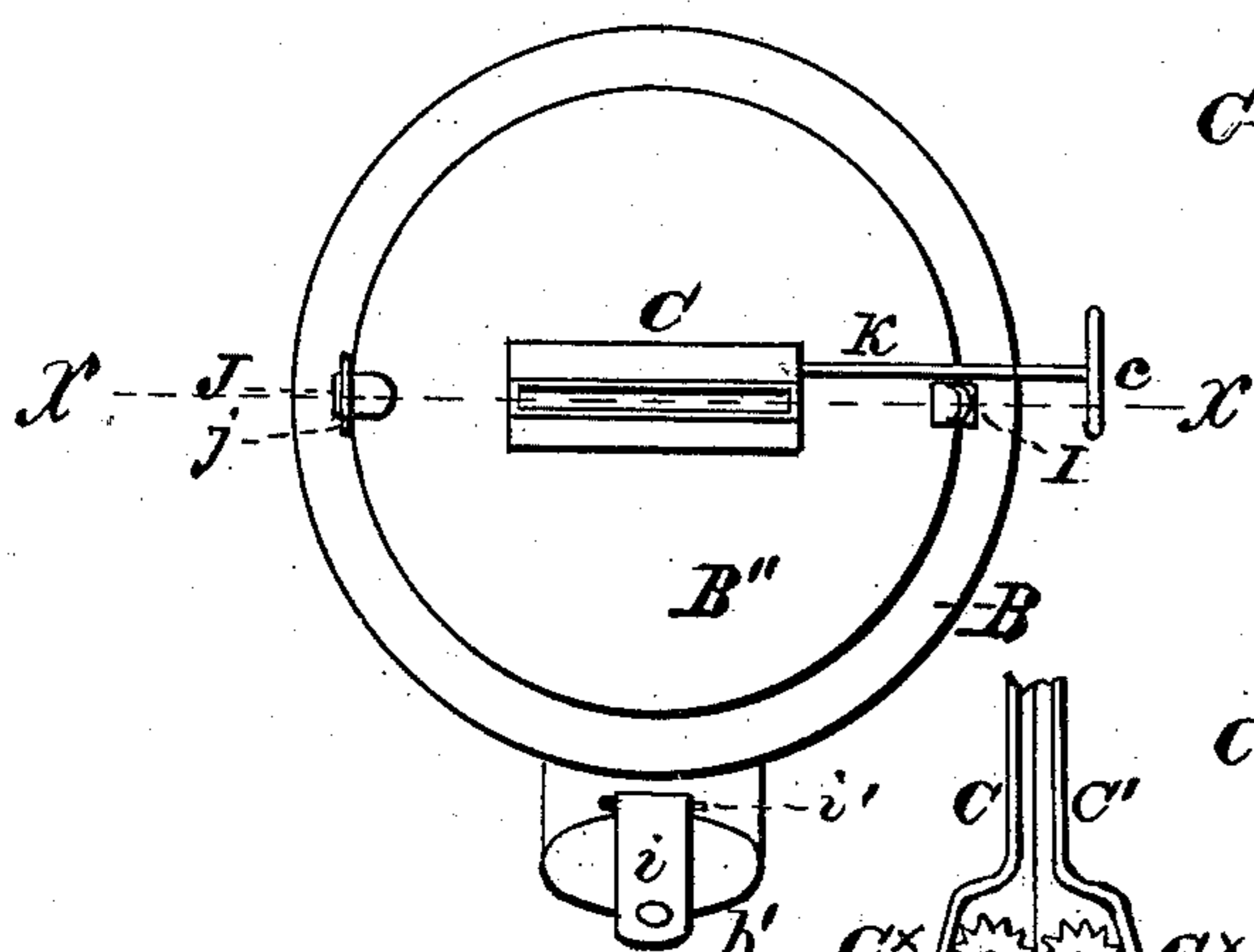


FIG. 5.

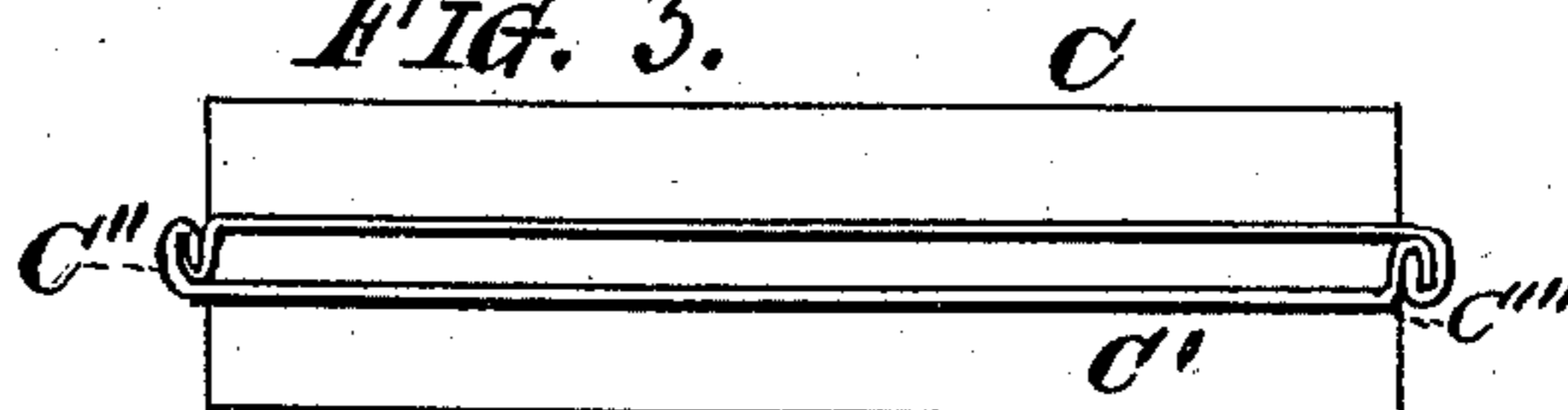


FIG. 6.

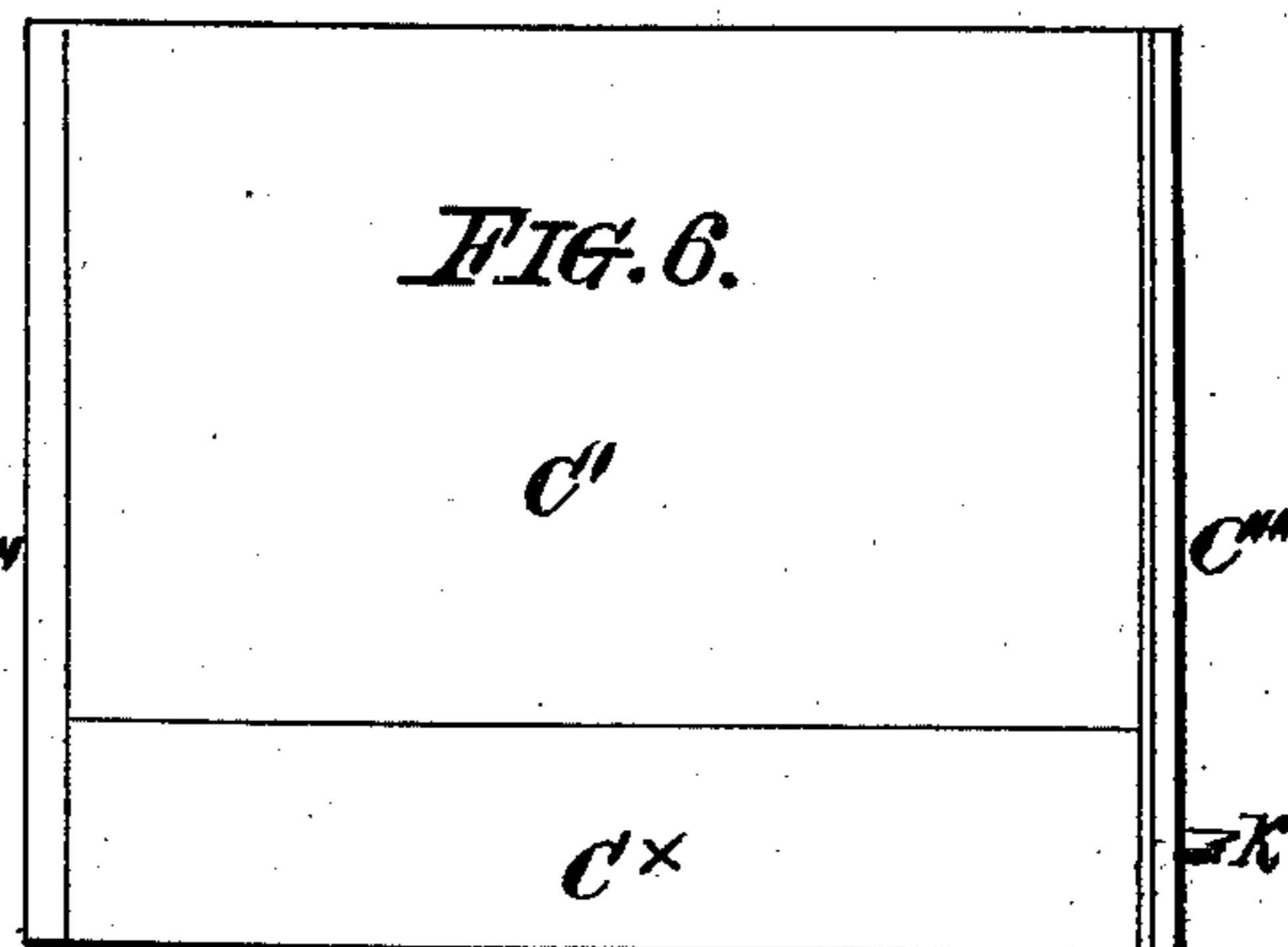


FIG. 7.

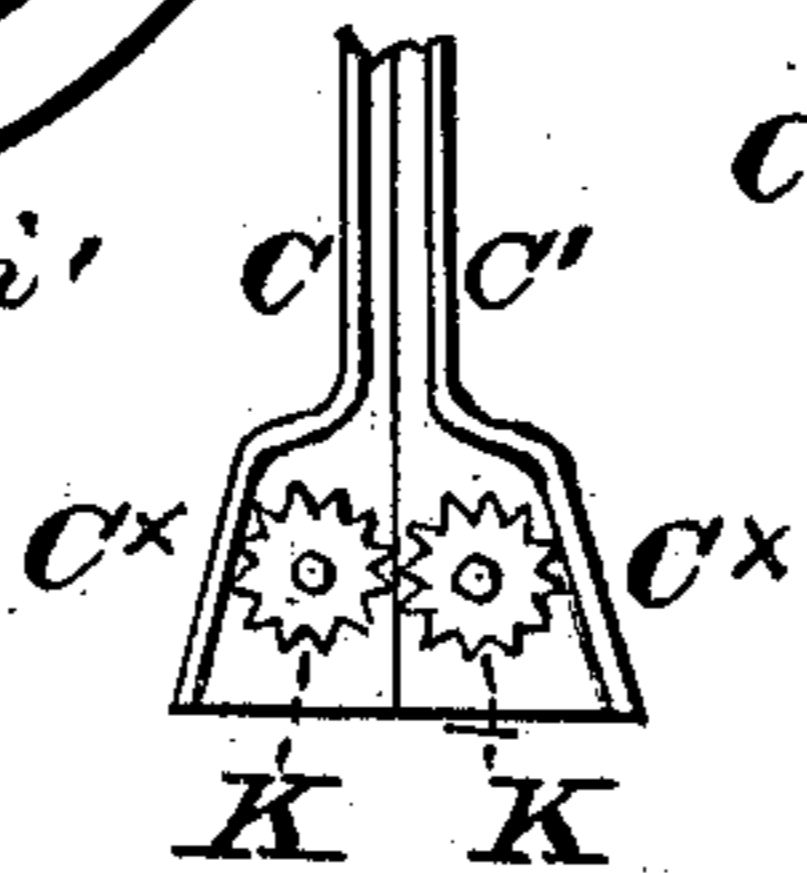


FIG. 3.

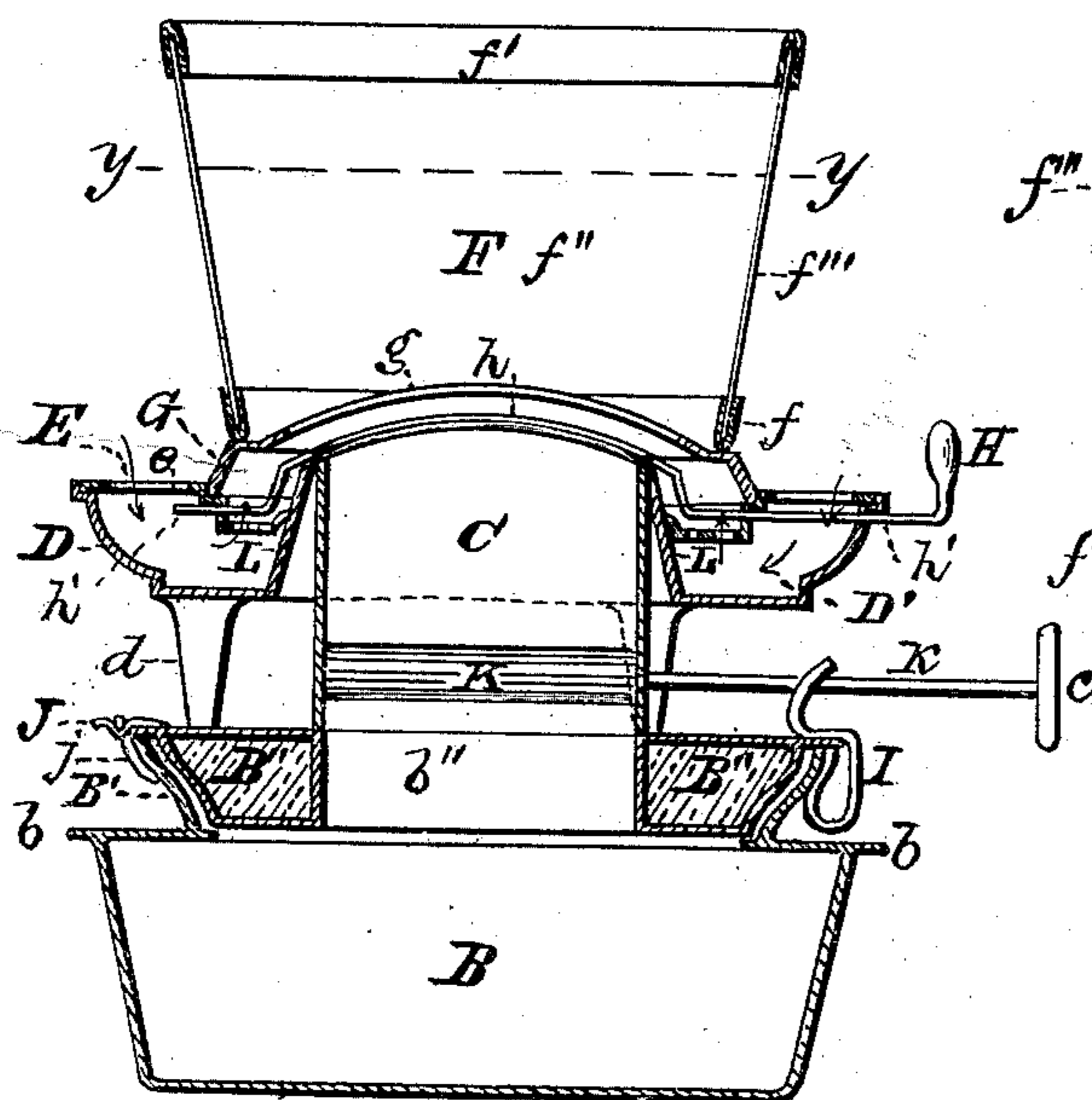


FIG. 8.

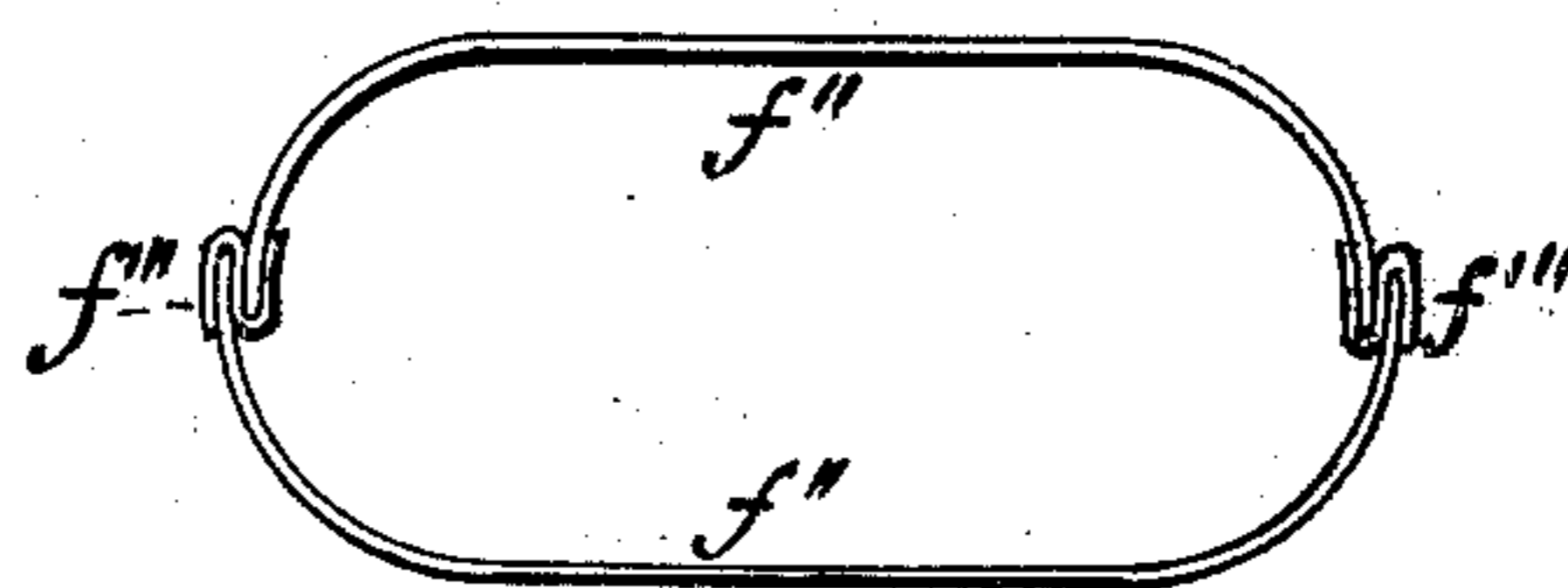


FIG. 9.

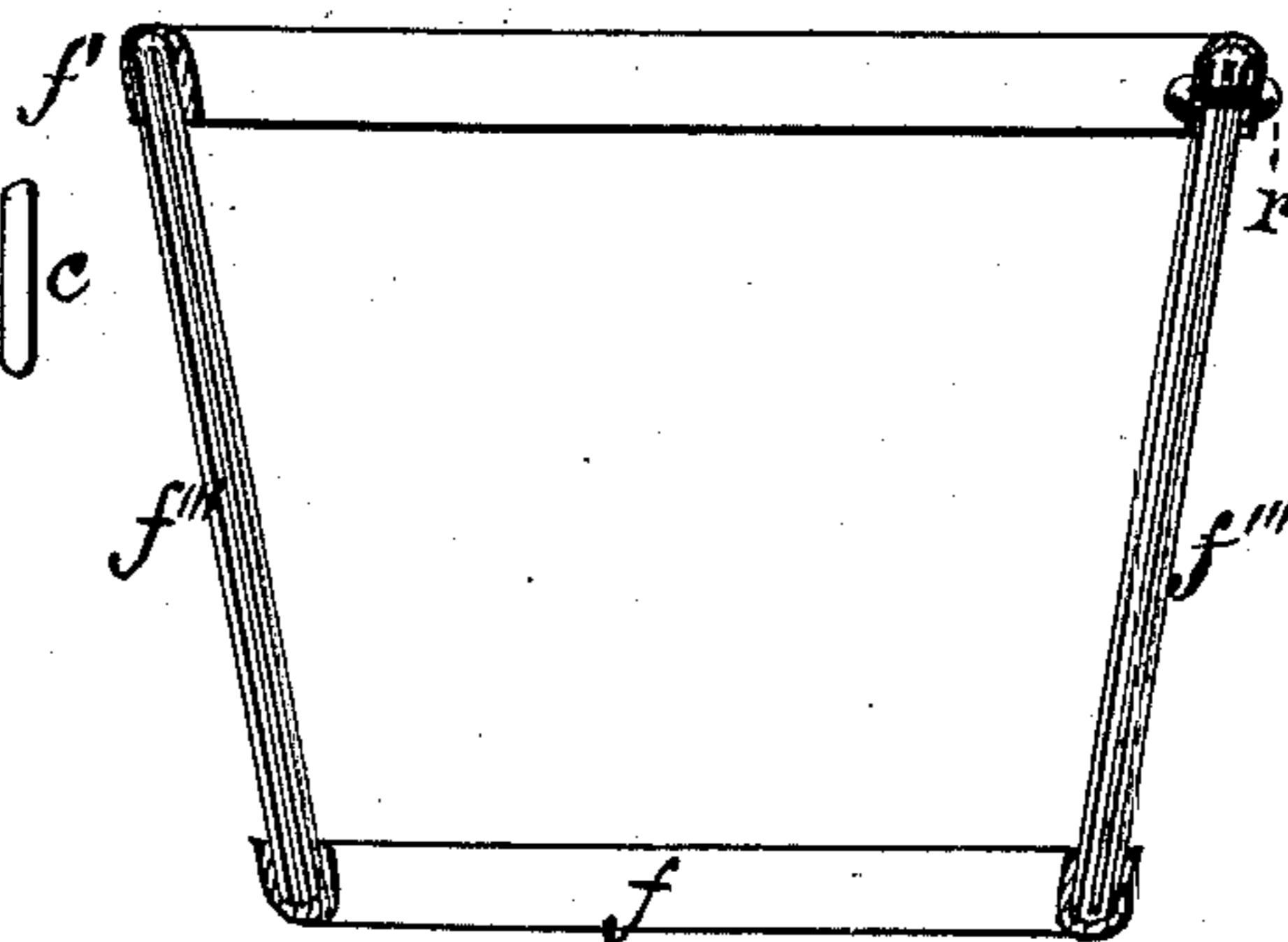
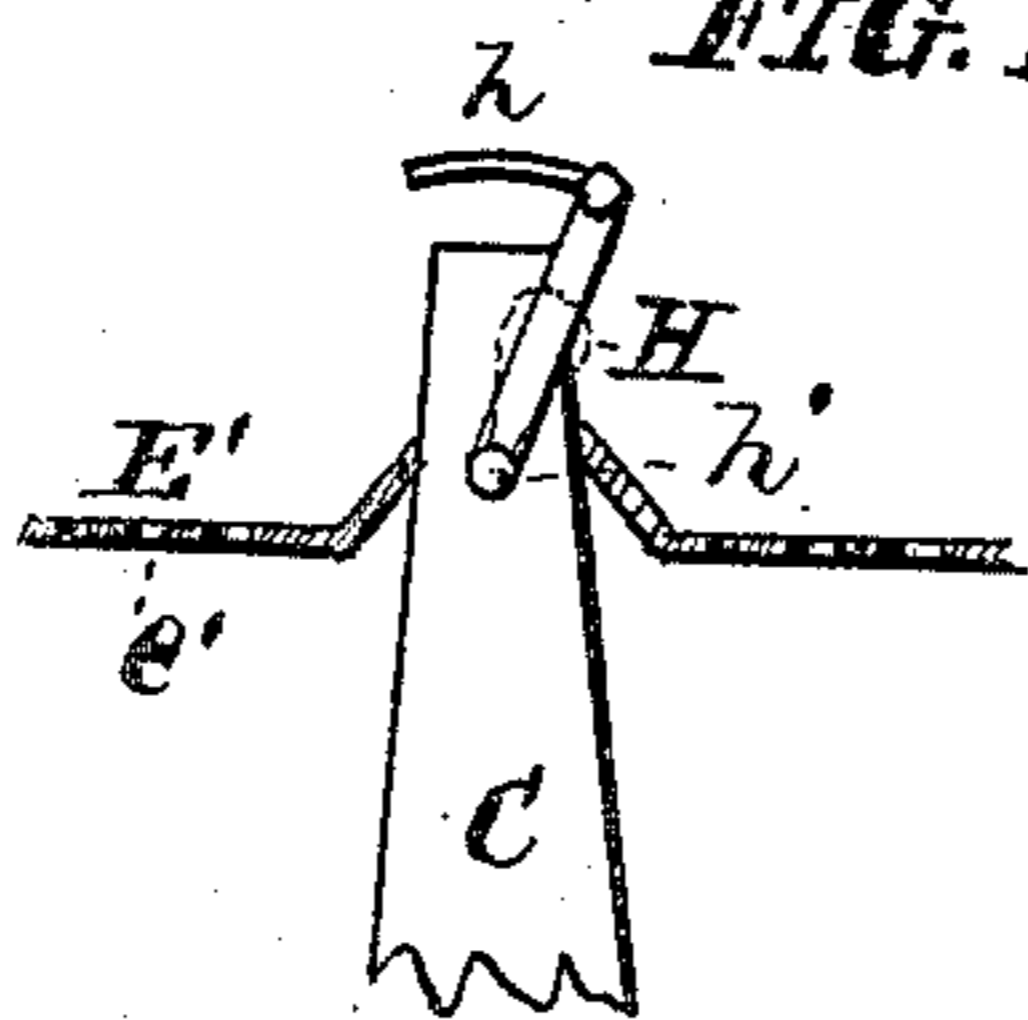


FIG. 10.



Witnesses:

Willie C. Stark.
Joseph P. Wunsch.

Inventor :

Wilhelm Petersen
by Michael J. Stark,
Attorney.

UNITED STATES PATENT OFFICE.

WILHELM PETERSEN, OF BUFFALO, NEW YORK.

COAL-OIL STOVE.

SPECIFICATION forming part of Letters Patent No. 257,378, dated May 2, 1882.

Application filed February 7, 1882. (No model.)

To all whom it may concern:

Be it known that I, WILHELM PETERSEN, of Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements on a Coal-Oil Stove; and I do hereby declare that the following description of my said invention, taken in connection with the accompanying sheets of drawings, forms a full, clear, and exact specification, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has general reference to coal-oil stoves; and it consists essentially in the novel combination of parts and details of construction, as hereinafter first fully set forth and described, and then pointed out in the claims.

In the drawings already referred to, which serve to illustrate my said invention more fully, Figure 1 is an elevation, and Fig. 2 a plan, of my improved coal-oil stove. Fig. 3 is a longitudinal sectional elevation of the oil-reservoir, burner, and chimney. Fig. 4 is a plan of the oil-reservoir and part of the burner. Fig. 5 is a plan, and Fig. 6 an elevation, of the wick-tube. Fig. 7 is a sectional elevation of a portion of the same. Figs. 8 and 9 are detail views of the chimney. Fig. 10 is an elevation of a part of the wick-tube, illustrating the device for extinguishing the flame.

Like parts are designated by corresponding letters of reference in all the figures.

This oil-stove is composed essentially of a suitable and properly constructed and connected frame, A, in metal, having a suitable base-plate, A', four (more or less) uprights or pillars, A'', and the top plate, A''', the pieces being provided with legs a, of convenient and ornamental construction, as clearly shown in Fig. 1. This frame is arranged of a size answering the various requirements of an oil-stove, so as to receive either one, two, or more burners, the base-plate A' and top plate, A''', being provided with a number of holes corresponding with the number of burners employed.

In the holes in the base-plate A' are inserted oil-reservoirs B, having lateral flanges b, resting upon said base-plate A', said reservoirs being provided with a flaring portion, B', fitted with a cover, B'', hinged to the said flaring portion B' by means of a hinge-piece, J, engaging a wire loop, j, on said flaring piece, as clearly

illustrated in Figs. 3 and 4. This cover is locked to the reservoir by means of a spring-catch, I, and it is, if desired, hermetically sealed to the flaring portion B' by means of an elastic packing-ring interposed between the top edge of the flaring portion B' and the lower surface of the cover B'' in any well-known manner, and therefore not deemed necessary to illustrate in the drawings.

The cover B'' consists of a hollow receptacle filled with a non-conducting substance or material, so as to interpose between the flame and the oil-reservoir a stratum capable of arresting the rays of heat, and preventing them from reaching the combustible liquid in the said reservoir. Through the cover B'' is a passage, b'', for the wick, (not shown,) from which said wick passes up through a wick-tube, C, having an adjusting device for said wick, consisting of the usual toothed wheels, K K, placed into the enlarged portion or chamber C* of said wick-tube C, one of said wheels K being fitted to a shaft, k, provided with the usual disk, c, in the well-known manner.

Upon the reservoir, or rather upon the cover B'' of the oil-reservoir, is placed a receptacle, D, containing an air-chamber, D', to supply the burner with the necessary air. This receptacle D is elevated above the cover B'' by the legs d, and it is closed on its upper side by a disk, E, having a large number of perforations, e, as illustrated in Figs. 2 and 3. The bottom of the receptacle is open and provided with a tubular upwardly-projecting part, L, embracing the wick-tube C near its upper end.

In the disk E is a central depression, E', Fig. 10, provided with a suitable number of perforations, e', said depression being constructed to receive a cap, G, having a slotted aperture, g, of the usual construction, the combination being such as to compel the air entering the chamber D' through the apertures e in a downward direction to reverse its course and escape out of the perforations e' in the said depression in an upward direction, thereby preventing a current of air reaching the flame in a direct course.

Upon the cap G is placed a chimney, F, consisting of a metallic frame having two mica sheets forming the transparent portion of the burner-chimney. The frame for this chimney

consists of two U-shaped metallic bands, $f f'$, connected together by two (more or less) inverted S-shaped bands, f''' , into the folds of which the edges of the mica sheets are placed, as illustrated in Fig. 8, and then the bars or bands f''' , with the mica sheets f'' , placed into the open portion of the U-shaped bands $f f'$, the parts being afterward riveted together by means of rivets r , as indicated in Fig. 9. By thus constructing the chimney I am enabled to produce a very strong, substantial, and durable chimney for an oil-stove—a device which has not heretofore been successfully produced. In shape this chimney is a nearly true oval on its lower part, and flattened (and thereby lengthened) on its upper part, the object of which is to cause the flame to spread into a wide and thin sheet, whereby the best heating results are produced and perfect consumption of the fuel attained.

The wick-tube C, heretofore mentioned, consists of two portions, C C', respectively, jointed together longitudinally by overlapping seams C'' C''' (illustrated in detail in Fig. 5) in such manner as to avoid the use of solder or any other fusible fastening which would be liable to destruction from the immense heat produced by the burner.

In coal-oil stoves it is essential that there should be no smell and bad odors arising from the burner after the flame is extinguished, and many attempts have been made to construct devices to attain this result. I have succeeded in producing one that is at once simple, cheap, and as serviceable and efficient as a device of this kind can possibly be made. It consists of a crank-shaft, $h' h'$, Fig. 3, having on its extremity a handle, H, there being secured to the bent portion of said shaft a plate, h , in such manner that when said crank-shaft is revolved by said handle the plate h will cover the wick, and by depriving the same of air instantaneously extinguish the flame and arrest further combustion and smoke. This device, although very simple, is an essential element

in an oil-stove, and prevents a great deal of annoyance and other obvious drawbacks.

To supply the oil-reservoir with the necessary fuel I form a spout, b' , on said reservoir and provide the same with a hinged cap, i , Fig. 4, overlapping the said spout, as shown in Fig. 1.

This device is much more simple and convenient than the usual screw-cap now employed in oil-reservoirs, and presents a larger opening for filling than those caps.

It will be readily observed that by the construction of the stove and burner heretofore described I am enabled to produce a stove of an almost unlimited capacity by a duplication of the burners and reservoirs and a suitable frame for said burners, and that the entire construction is such as to produce a very serviceable article for household and other use.

Having thus fully described my invention, I claim as new and desire to secure to me by Letters Patent of the United States—

1. As an improved article of manufacture, a burner for oil-stoves, lamps, &c., consisting essentially of the oil-reservoir B, having the flaring top portion, B', provided with the cover B'', the receptacle D, provided with the air-chamber D', cover E, with perforations e , and depressed portion E', with perforations e' , cap G, and a suitable chimney, F, the whole being constructed and combined with a wick-tube, substantially in the manner as and for the object specified.

2. In oil lamps or burners, the combination, with the chamber D, having the perforated disk E, provided with central depression, E', of the crank-shaft $h' h'$, with handle H and the plate h , substantially as and for the object stated.

In testimony that I claim the foregoing as my invention I have hereto set my hand in the presence of two subscribing witnesses.

WILH. PETERSEN.

Attest:

MICHAEL J. STARK,
JOHN C. DUERR.