

(No Model.)

2 Sheets—Sheet 1.

W. C. DIMMOCK.
STOVE.

No. 557,775.

Patented Apr. 7, 1896.

Fig 1.

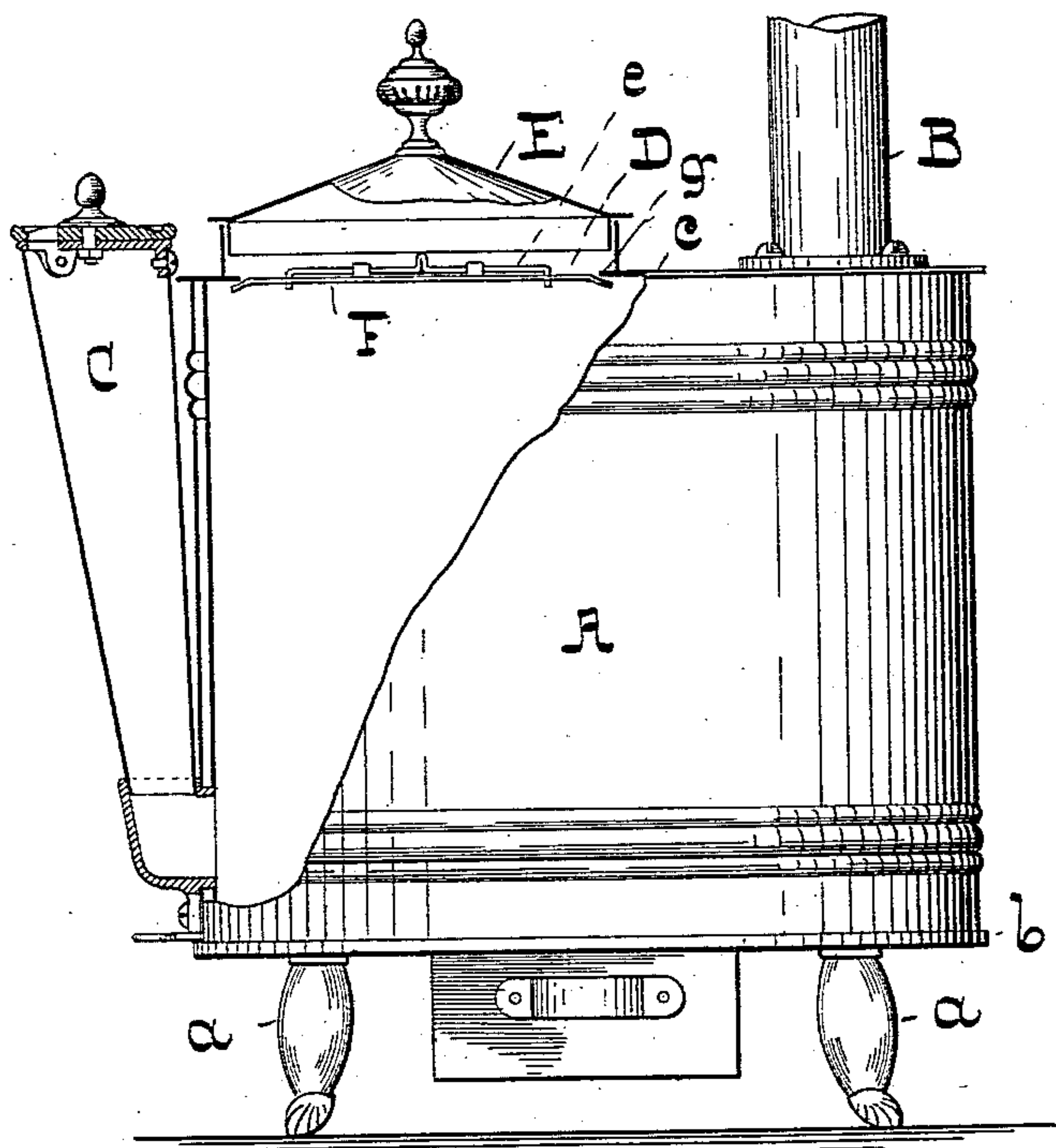
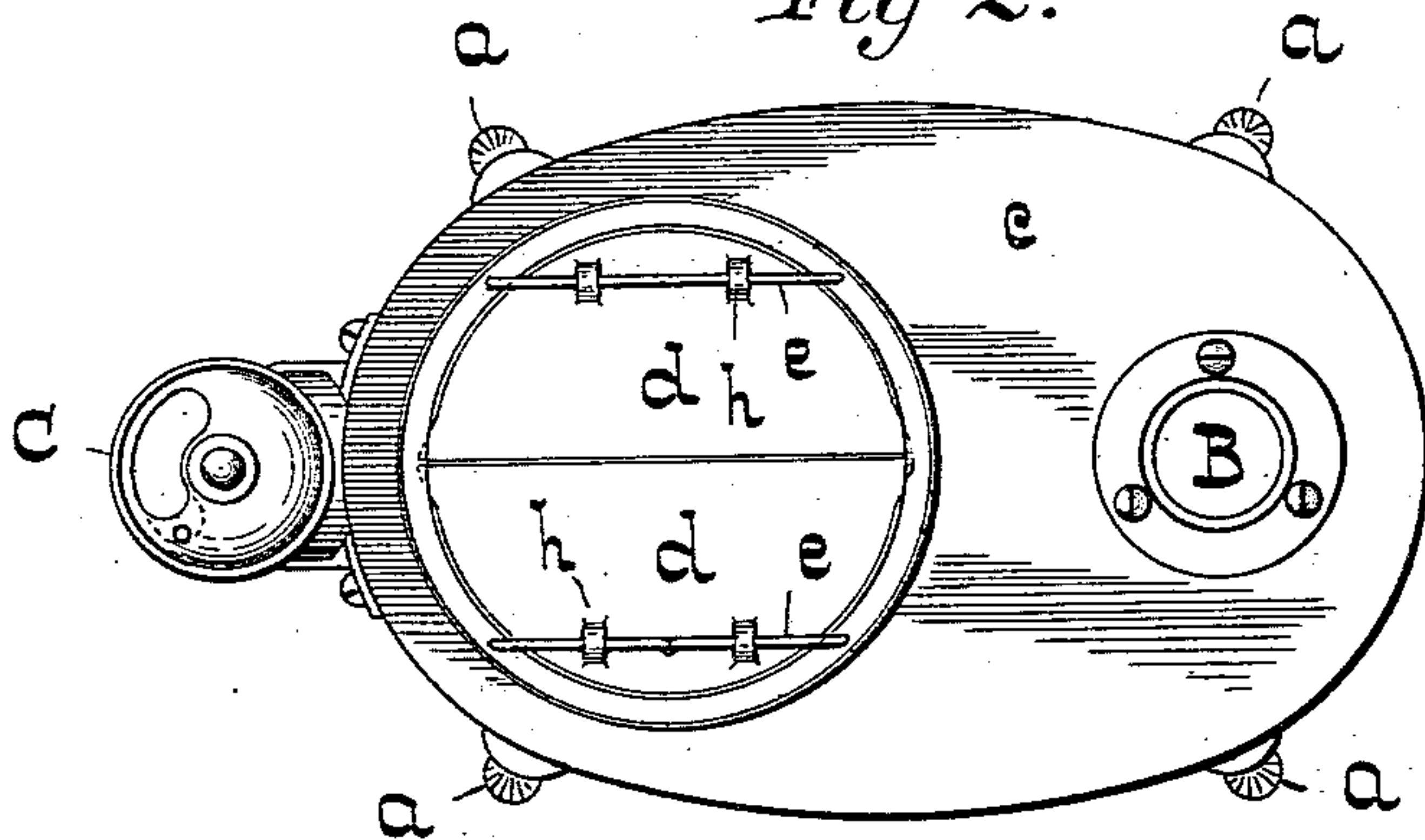


Fig 2.



-WITNESSES-

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Fig 4.

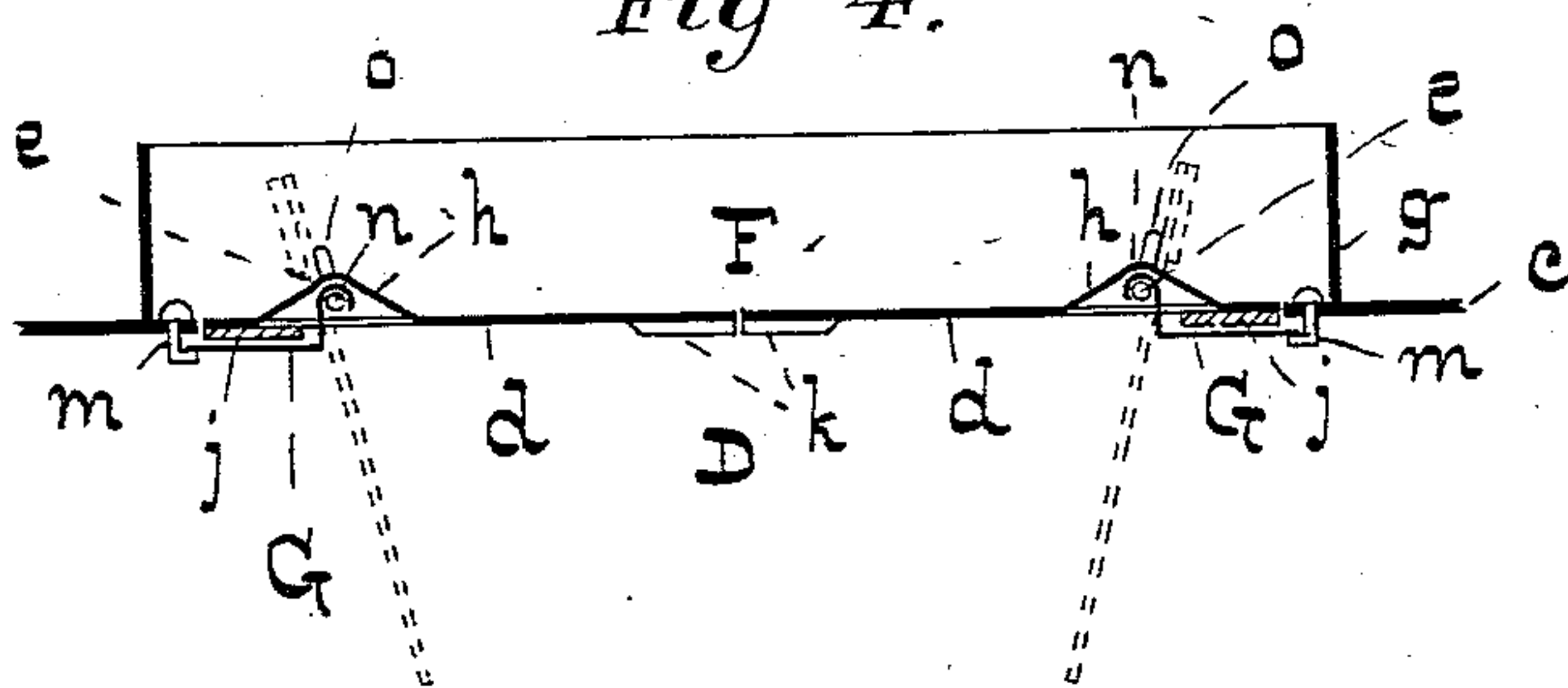


Fig 3.

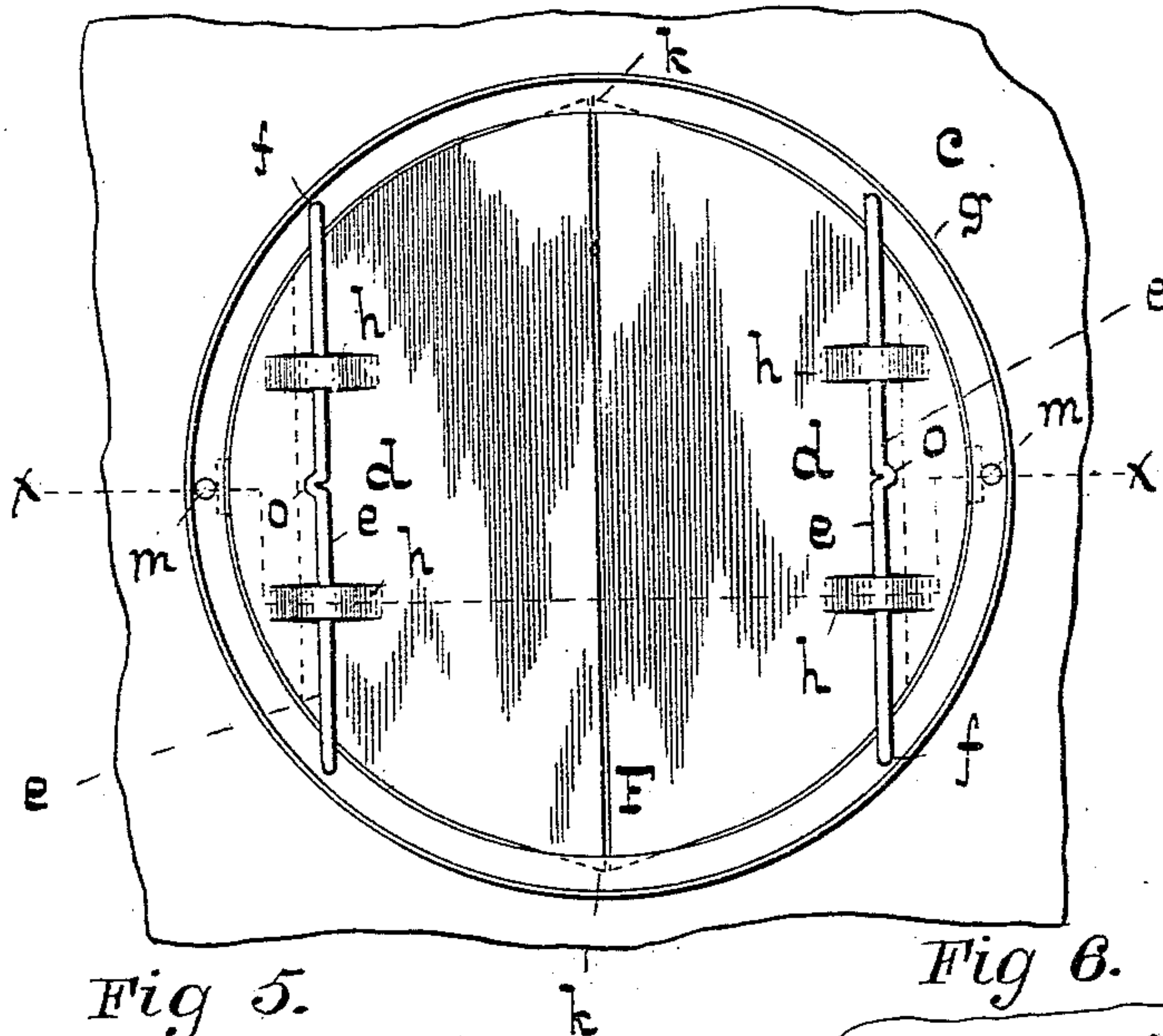


Fig 5.

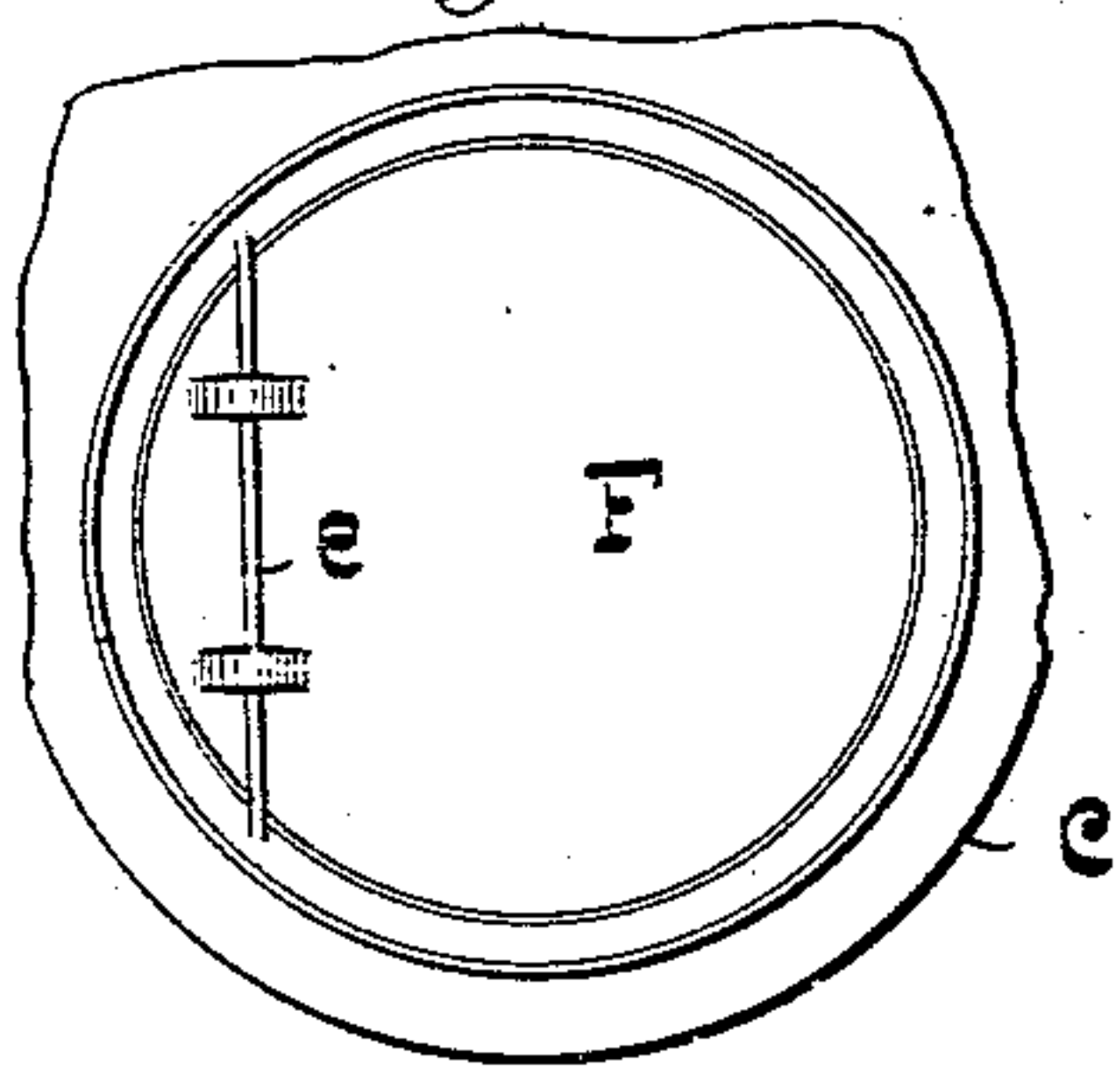
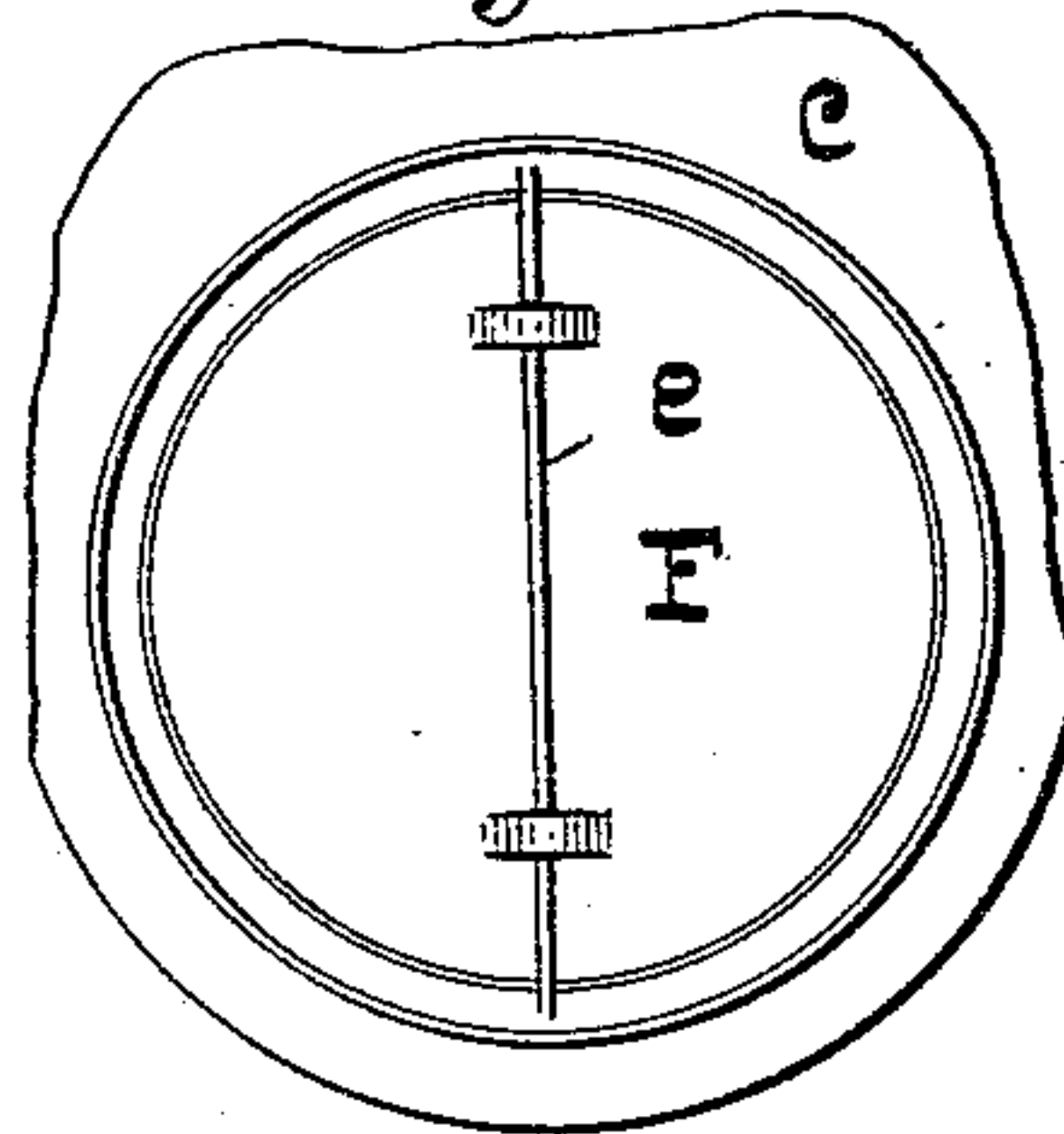


Fig 6.



-WITNESSES-

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UNITED STATES PATENT OFFICE.

WILLIAM C. DIMMOCK, OF BALTIMORE, MARYLAND.

STOVE.

SPECIFICATION forming part of Letters Patent No. 557,775, dated April 7, 1896.

Application filed December 26, 1895. Serial No. 573,245. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. DIMMOCK, of the city of Baltimore, State of Maryland, have invented certain Improvements in Stoves, of which the following is a specification.

This invention relates to certain improvements in what are commonly known as "air-tight" stoves—that is to say, stoves having no grate and in which the fuel, generally wood, is introduced thereto through an opening at the top, which is covered by a removable hood.

Where wood is used as the fuel, the feed-opening must necessarily be of considerable size, and when it is uncovered for the introduction of wood the draft is so interfered with that the smoke, instead of passing up through the stovepipe to the chimney, escapes through the feed-opening to the room.

The object of the present invention is to prevent the issue of smoke from the feed-opening when the hood thereof is removed. With this in view the invention consists in placing within the said feed-opening a yielding trap-door which is normally closed, but which is opened by the weight of the wood in the act of feeding.

In the further description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is an exterior side view of a stove embodying the present improvement with portions thereof torn away to show the interior. Fig. 2 is a top view of Fig. 1. Fig. 3 is an enlarged top view of the invention; and Fig. 4, a section of Fig. 3, taken on the dotted line *x x*. Figs. 5 and 6 illustrate certain modifications in the construction and arrangement of the invention, hereinafter described.

Referring now to Figs. 1, 2, 3, and 4 of the drawings, A is the body of the stove, having the legs *a*. The body is unprovided with a grate, and the bottom plate *b* has a hole therein covered by a sliding plate (not shown) and an ash-drawer underneath.

B is the stovepipe, and C the draft-pipe, which opens into the stove near the bottom thereof, as shown in Fig. 1.

The feed-opening in the top plate *c* is denoted by D and the removable covering-hood by E.

F is a trap-door situated within the feed-opening D. It consists of two semicircular plates *d*, each one of which is supported by a rod *e*, the ends of which enter holes *f* in the top plate *c* and within the flange *g*, which supports the hood E.

The rods *e* are fixed or stationary, the doors swinging on them, and to form simple hinges for this purpose the plates *d*, when made of sheet metal, have hinge members *h*, which are severed at the sides only from the remaining portion of the plates, and the said members forced outward, so as to give space for the passage under them of the rods *e*. (See particularly Figs. 3 and 4.)

The portions of the plates *d* outside of the hinges are furnished with weights *j*, which more than counterbalance the inner portions. The weights keep the doors closed, but allow them to yield when wood is placed upon them.

To prevent the plates *d* from rising at the center or where they come together above a horizontal position, the edges *k* are made to extend under the plate *c*, (see Figs. 3 and 4,) and in order that the said plates may be flush with the plate *c* the corners *k* are offset downward, as shown in Fig. 4.

From the foregoing description it will be understood that while the trap-door F is normally closed it is opened as fuel is inserted through the feed-opening D without any manipulation, and after the wood falls below the door the door automatically assumes its closed condition.

As the plates *d d* are thrown down in the opening of the trap-door their portions exterior of the hinges turn up, as shown in dotted lines in Fig. 4, and thereby expose openings which would, if maintained, destroy the draft through the stovepipe and allow of the issue of smoke to the room. I therefore attach to the hinge-rods *e* the segmental plates G and support their outer or circular edges by means of catches *m*. (See Figs. 3 and 4.) The most convenient way of applying these segmental plates is to provide them with hooks *n*, which are hooked over the rods *e* underneath the hinge members *h* of the plates *d*. (See Fig.

4.) I do not, however, confine myself to the means described for preventing the plates *d* from rising above the plate *c*, nor to the manner of applying the hinged segments *G* to the doors *d* or supporting their outer and circular edges, as many other arrangements and constructions could be employed which would answer the purpose in view equally as well as those herein described.

10 The tilting of the plates *d* beyond a vertical line is prevented by the stops *o*, which are preferably formed by bending the rods *e*, as shown in Figs. 3 and 4.

The main object of this invention being to 15 provide the feed-opening *D* with an automatically-closing trap-door, it is evident that it is not necessary to employ a door in two parts, as described. In Fig. 5 the trap-door consists of a circular disk hinged at one side to the 20 plate *c*. In Fig. 6 the trap-door consists of a single disk hinged at the center and arranged to open as a damper; but it is so balanced that it will naturally assume a horizontal position.

With this arrangement the wood could be introduced at either side of the hinge. This 25 last construction is not, however, considered to be as satisfactory as the others, for the reason that the hinge is in the way of the wood as it is introduced into the feed-opening 30 *D* and also that the balance which serves to

keep the door in a horizontal position could be easily destroyed.

I claim as my invention—

1. In a stove, the top wall or plate having a feed-opening therein, combined with a normally-closed trap-door within the said feed-opening, and a removable covering-plate situated over the said opening, substantially as specified. 35

2. In a stove, the top wall or plate having a feed-opening therein, combined with a normally-closed trap-door in the said feed-opening, the said trap-door consisting of two hinged and counterbalanced plates which meet at the center of the feed-opening, and a removable covering-hood situated over the said opening, substantially as specified. 40 45

3. In a stove having a feed-opening in the upper plate thereof, a yielding trap-door which consists of two semicircular and counterbalanced hinged plates, combined with stationary segmental plates which serve to close the spaces which would be left exteriorly of the hinges in the opening of the door, substantially as specified. 50

WILLIAM C. DIMMOCK.

Witnesses:

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DANL. FISHER.