

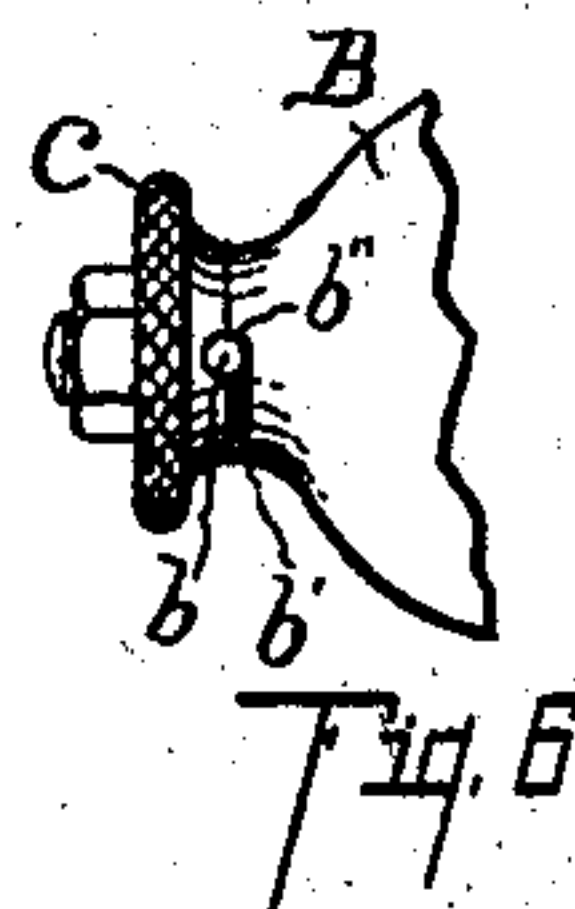
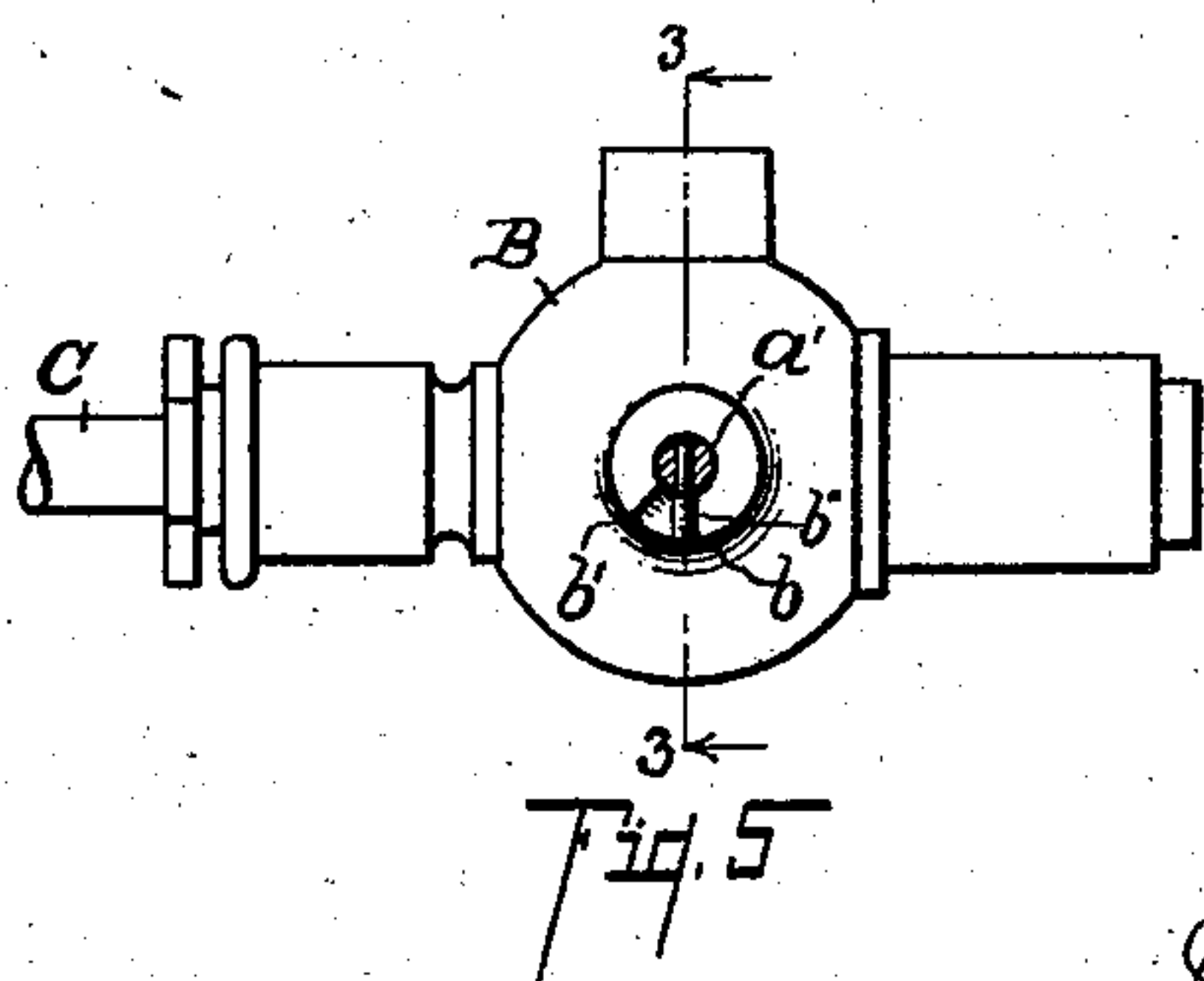
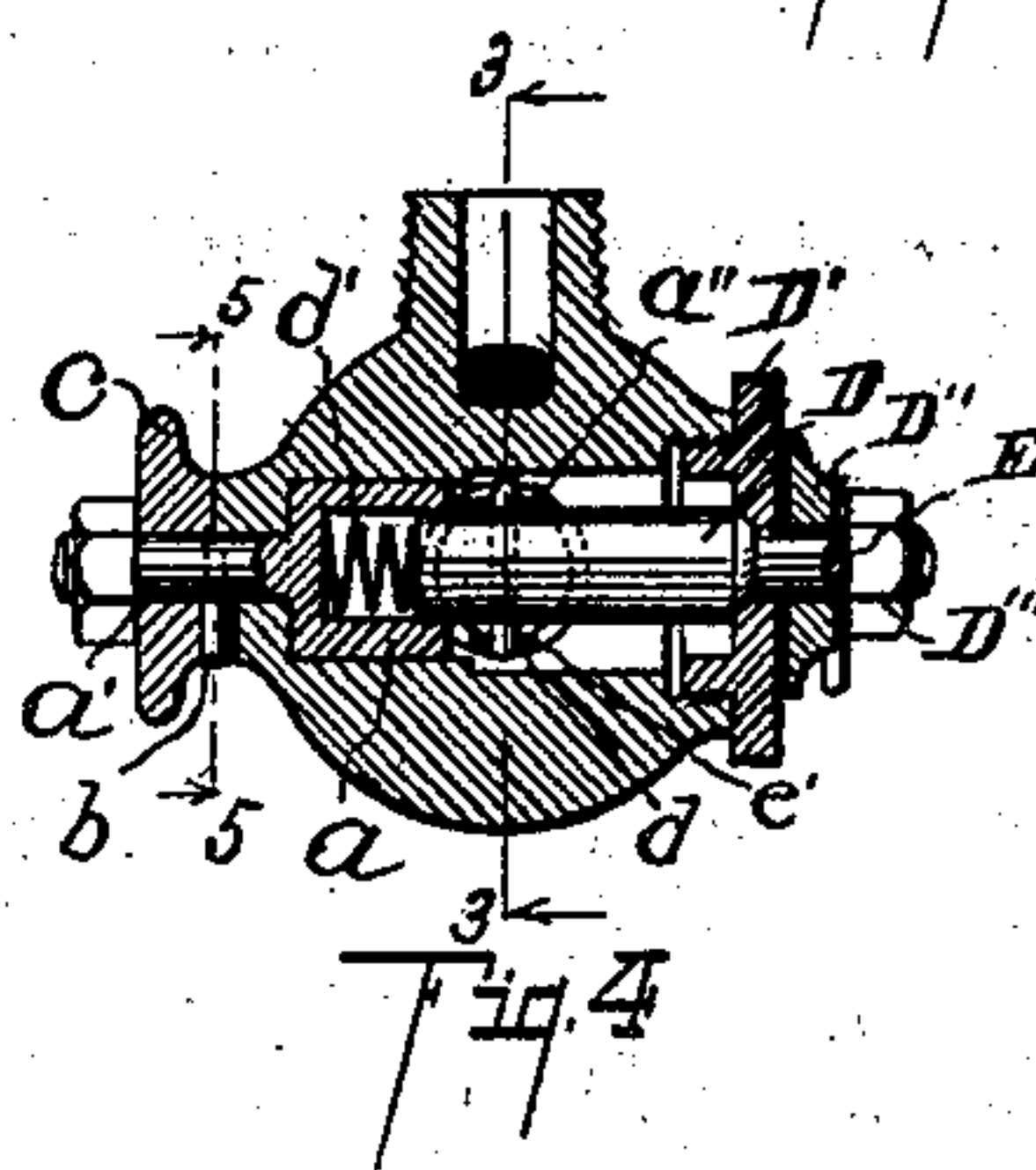
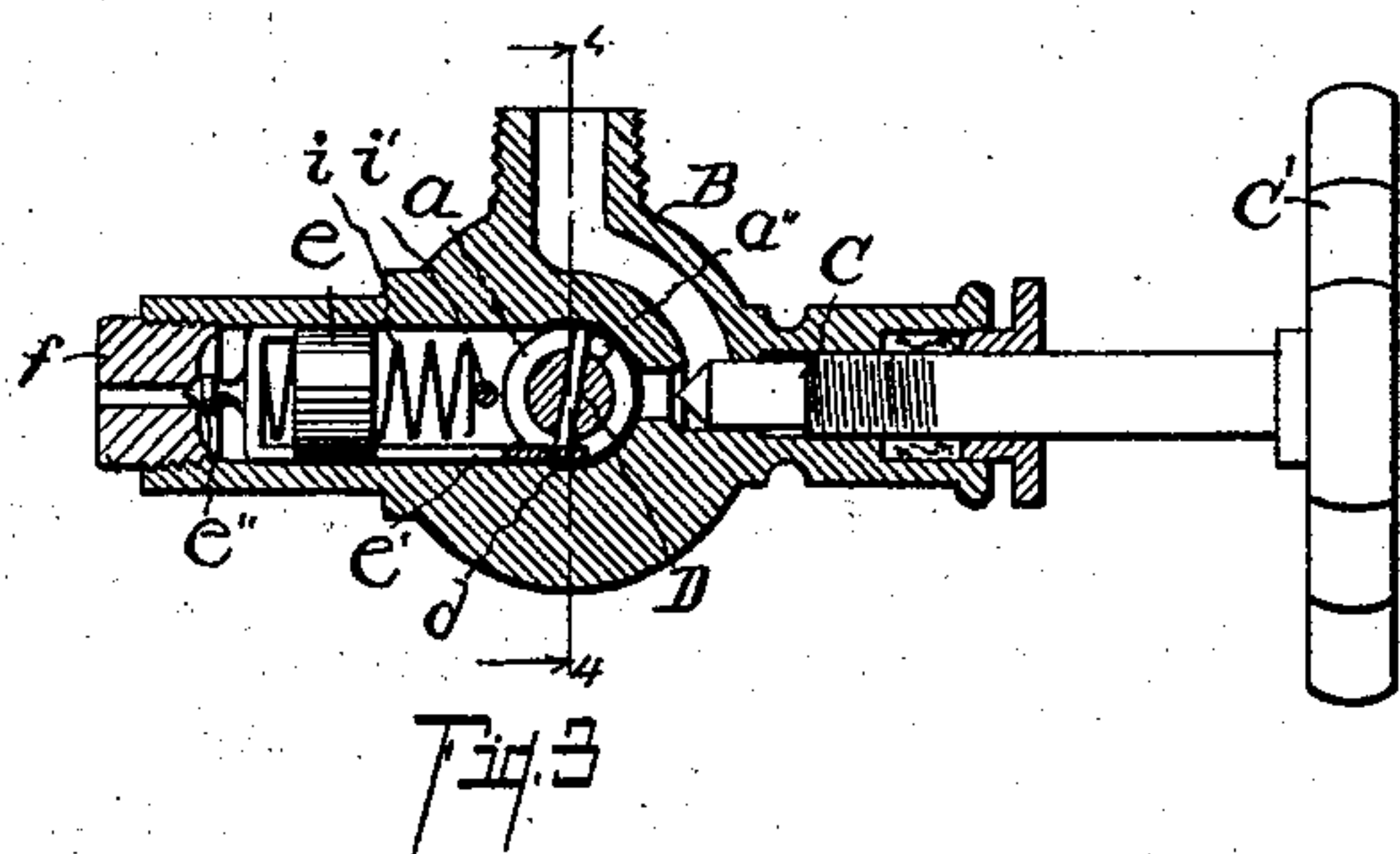
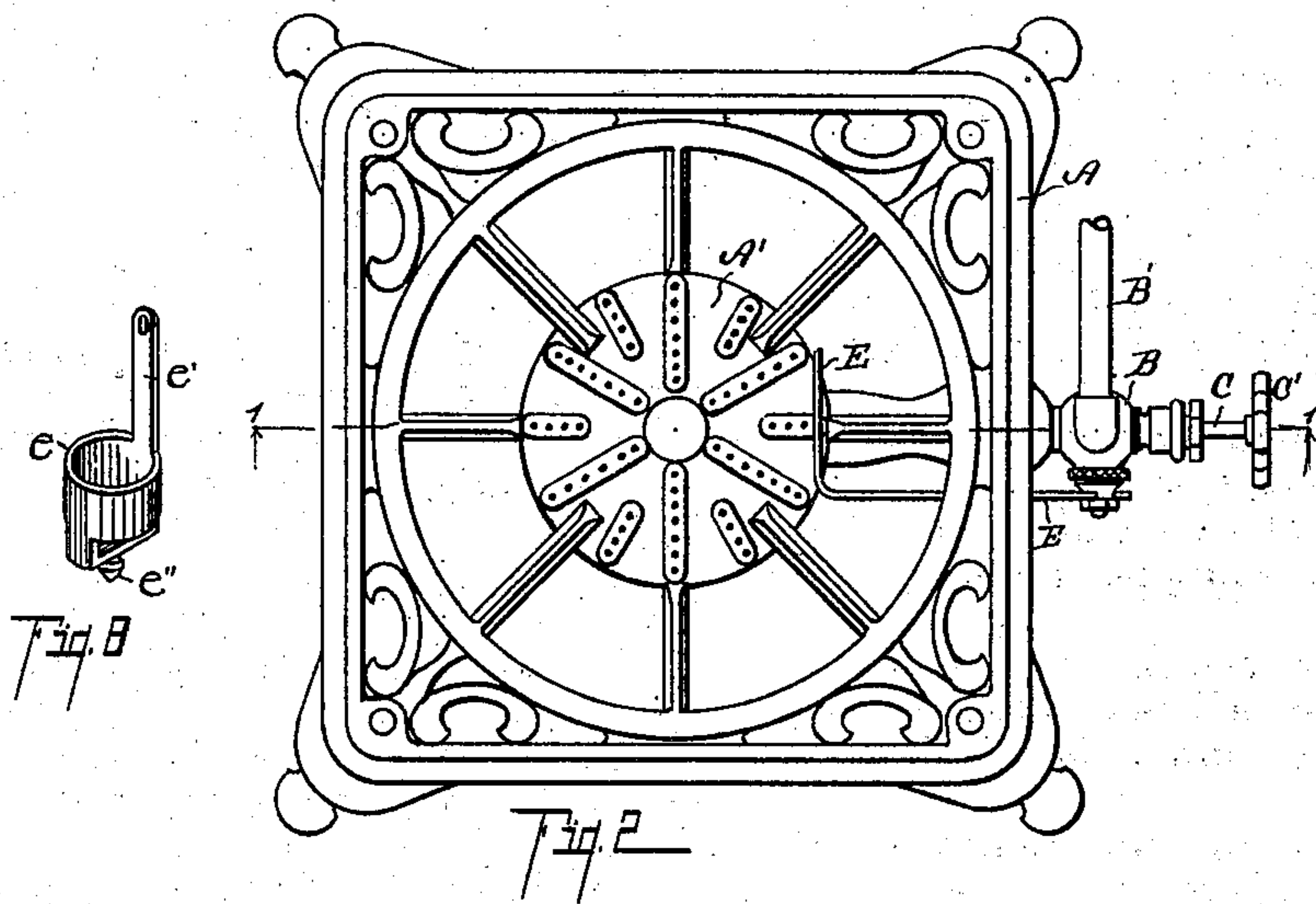
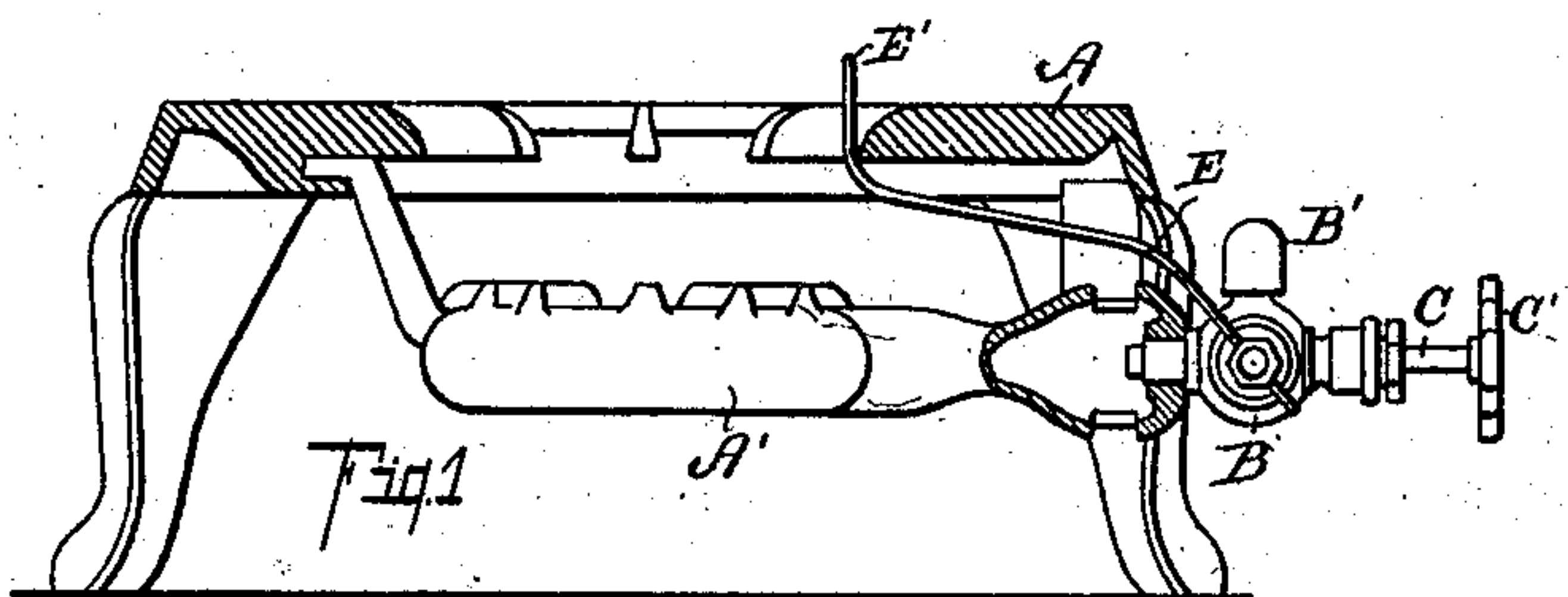
No. 695,637.

Patented Mar. 18, 1902.

M. C. GILBERT.
VALVE FOR GAS BURNERS.

(Application filed Aug. 3, 1901.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

MERITT C. GILBERT, OF BATTLECREEK, MICHIGAN.

VALVE FOR GAS-BURNERS.

SPECIFICATION forming part of Letters Patent No. 695,637, dated March 18, 1902.

Application filed August 3, 1901. Serial No. 70,793. (No model.)

To all whom it may concern:

Be it known that I, MERITT C. GILBERT, a citizen of the United States, residing at the city of Battlecreek, in the county of Calhoun and State of Michigan, have invented certain new and useful Improvements in Valves for Gas-Burners, of which the following is a specification.

This invention relates to improvements in valves for gas-burners, and particularly to automatic cut-off valves for use in that connection, although it is adapted for use in other relations.

The object of the invention is to provide a simple, compact, and efficient automatic cut-off or control for the supply of gas in a gas burner or stove.

Minor objects will definitely appear in the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in this specification.

The invention is clearly defined and pointed out in the claims.

A structure embodying the features of my invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a detail sectional view, taken on line 1 1 of Fig. 2, of a gas-burner and its valve connections embodying the features of my invention, the valve proper being shown in full lines. Fig. 2 is a plan view of a gas-burner and its valve connections embodying the features of my invention. Fig. 3 is a detail longitudinal sectional elevation showing the details of construction, taken on lines 3 3 of Figs. 4 and 5. Fig. 4 is a detail cross-sectional elevation showing the details of construction, taken on line 4 4 of Fig. 3. Fig. 5 is a side elevation view of a valve embodying the features of my invention, taken on line 5 5 of Fig. 4. Fig. 6 is an inverted plan view of a portion of the valve, showing the adjustment of the automatic feature. Fig. 7 is a perspective view of the part *a* of the automatic valve mechanism. Fig. 8 is a perspective view of the part *e* of the automatic valve mechanism.

In the drawings all of the sectional views are taken looking in the direction of the little arrows at the ends of the section-lines, and

similar letters of reference refer to similar parts throughout the several views.

Referring to the lettered parts of the drawings, *A* is the frame or support of the burner; *A'*, the burner proper. These are of the usual form.

B is the valve-casing, and *B'* the gas-supply pipe connected therewith.

C is the main-valve stem, which may be operated independently of the automatic feature, and *C'* the hand-wheel on the end thereof. These may be of any form desired.

The valve-casing contains a T-shaped chamber. The threaded plug *D* closes one arm of the same. A short rock-shaft *D* projects through an opening in the center of the plug. This shaft is shouldered into a suitable seat in the plug, and on its projecting end is a washer *D''*, which is secured to the shaft by a nut *D'''*. Clamped between this washer and nut is the end of a lever *E*, which projects rearwardly and upwardly, so that the end of the same projects above the surface of the burner, grate, or frame, as clearly appears in Fig. 1. The opposite end of the shaft *D* rests in and is adapted to rotate in the end of the hollow shaft *a*, which is seated in the arm of the chamber opposite. This hollow shaft or sleeve *a* has an extension *a'*, which projects from the casing opposite the shaft *D*. Sleeved upon and secured to the projecting end of the stem *a'* is a thumb-nut *c*. Projecting inward from the inner end of the sleeve *a* is a pin *a''*. The pin *a''* is adapted to engage a pin *d*, which passes transversely through the shaft *D*. A coiled spring *d'*, seated in the hollow shaft *a*, holds the shaft *D* in its seat in the plug *D'*. The pin *b* projects from the stem *a'*, and the thumb-nut *c* is notched at *b''* to engage the same. The casing *B* is cut away at *b' b'* to form a slot or way in which this pin can be moved, so that when the thumb-nut *c* is rotated the hollow shaft *a* is also rotated and the projecting pin *a''* thereon will engage with the pin *d* in the shaft *D*, which limits the movement of said shaft.

At right angles to the shaft *D* is a cylindrical pitman *e*. This carries the valve-plug *e''*, which is normally held into a suitable seat in the plug *f* by the coil-spring *i*, which engages and is held in position by the pin *i'*, projecting from the casing *B*. The inner end of

the pitman is a slim arm *e'* and has a perforation near the end of the same in position to be engaged by the pin *d* in the shaft D, so that when the shaft is rotated the pitman will be reciprocated and the valve opened or closed.

Having described my invention in detail, I will now describe its operation.

The main valve C being opened, the gas will fill the valve-casing. When a utensil is placed upon the burner, the lever E will be depressed, and this will rotate the shaft D, which reciprocates the pitman *e* and opens the valve, and when the utensil is removed from the burner the spring returns the valve to its seat and cuts off the supply of gas. The valve may be adjusted by turning the thumb-nut *c*, which limits the movement of the valve, so that the supply of gas will not be entirely cut off from the burner. The adjustment of the valve is readily and easily effected and does not require any particular skill. When desired, the automatic feature may be locked open and the gas controlled entirely by the valve C in the usual manner.

I have described my invention in detail in the form that I believe to be the most practical and satisfactory. I am aware, however, that it is capable of considerable variation without departing from my invention.

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

1. In an automatic cut-off and controlling device for gas-burners, the combination of the casing B, a hand-valve C controlling the same, a T-shaped chamber within the valve, a pitman *e* with an auxiliary valve *e''* on one end to rest against a suitable valve-seat, a spring *i* for holding the same normally against the seat, a rock-shaft D extending through one branch of the T across the center of the same, a lever E connected to said rock-shaft, a sleeve *a* in the opposite branch of said chamber embracing the rock-shaft D, a stop-pin *a''* projecting inwardly from the inner end of the sleeve, a notched thumb-nut or button embracing a pin in the extended end *a'* of the sleeve *a* for adjusting the same, a transverse pin *d* through the rock-shaft D engaging the hole in the end of the pitman *e*, all coacting substantially as described for the purpose specified.

2. In an automatic cut-off and controlling device for gas-burners, the combination of the casing B, a hand-valve C controlling the same, a T-shaped chamber within the valve, a pitman *e* with an auxiliary valve *e''* on one end to rest against a suitable valve-seat, a spring *i* for holding the same normally against

the seat, a rock-shaft D extending through one branch of the T across the center of the same, a lever E connected to said rock-shaft, a sleeve *a* in the opposite branch of said chamber embracing the rock-shaft D, a stop-pin *a''* projecting inwardly from the inner end of the sleeve, a transverse pin *d* through the rock-shaft D engaging the hole in the end of the pitman *e*, all coacting substantially as described for the purpose specified.

3. In an automatic cut-off and controlling device for gas-burners, the combination of the casing B, a T-shaped chamber within the valve, a pitman *e* with an auxiliary valve *e''* on one end to rest against a suitable valve-seat, a spring *i* for holding the same normally against the seat, a rock-shaft D extending through one branch of the T across the center of the same, a lever E connected to said rock-shaft, a sleeve *a* in the opposite branch of said chamber embracing the rock-shaft D, a stop-pin *a''* projecting inwardly from the inner end of the sleeve, a notched thumb-nut or button embracing a pin in the extended end *a'* of the sleeve *a* for adjusting the same, a transverse pin *d* through the rock-shaft D engaging the hole in the end of the pitman *e*, all coacting substantially as described for the purpose specified.

4. In an automatic cut-off and controlling device for gas-burners, the combination of a suitable valve-casing having a T-shaped chamber therein, a valve in the main body of the T having a spring for holding it normally closed and a pitman extending therefrom, a rock-shaft in one branch of the T with a lever extending above the surface of the burner or burner-grate, an adjustable stop to engage the said rock-shaft to hold the valve slightly open and a connection between the rock-shaft and the valve.

5. In an automatic cut-off and controlling device for gas-burners, the combination of a suitable valve-casing having a T-shaped chamber therein, a valve in the main body of the T having a spring for holding it normally closed and a pitman extending therefrom, a rock-shaft in one branch of the T with a lever extending above the surface of the burner or burner-grate, a stop to engage the said rock-shaft to hold the valve slightly open and a connection between the rock-shaft and the valve.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

MERITT C. GILBERT. [L. S.]

Witnesses:

WILL. A. CADY,
WALTER H. NORTH.