

(No Model.)

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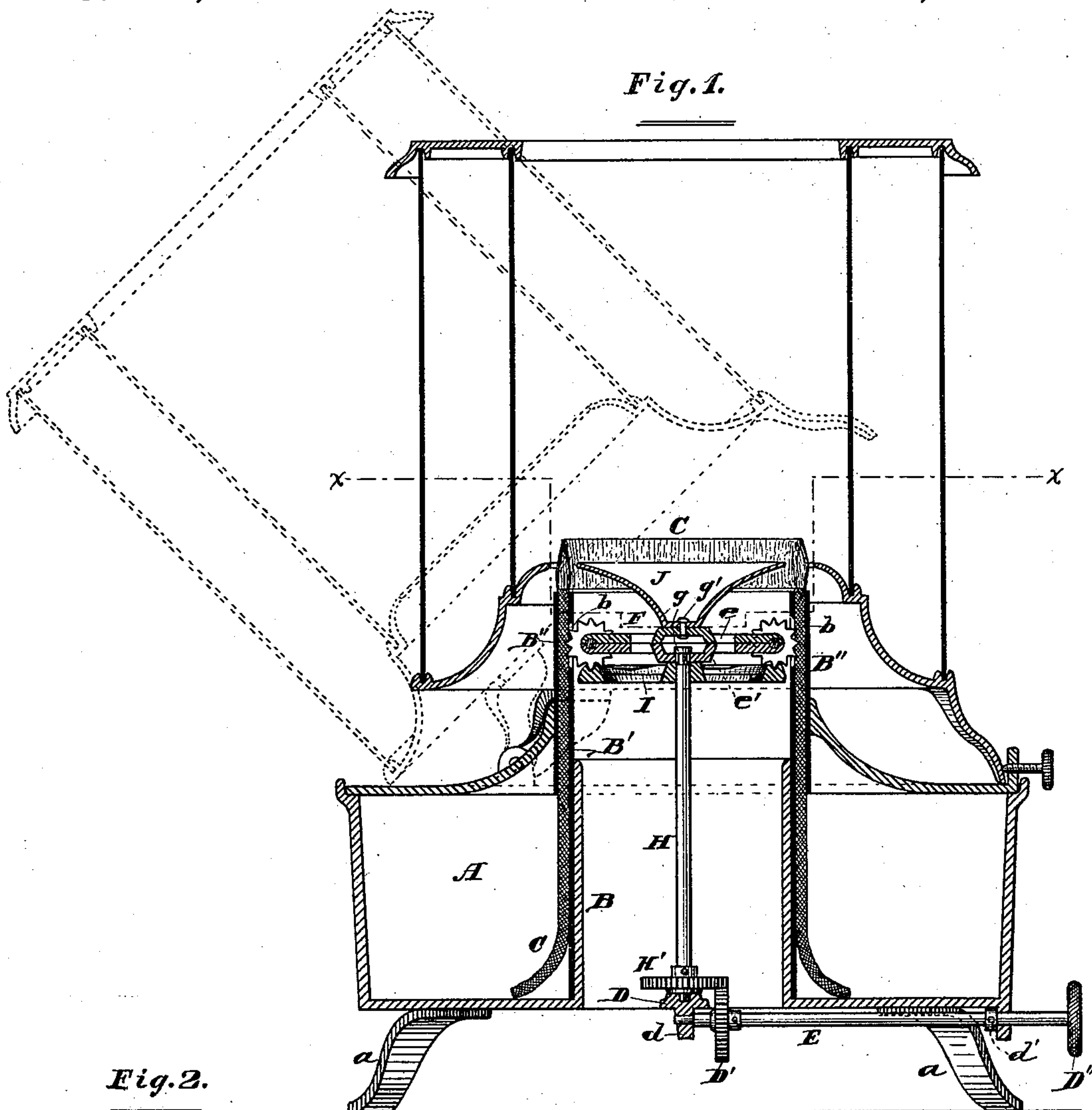
J. H. HOLMGREEN.

## Wick Raiser for Lamp Stoves.

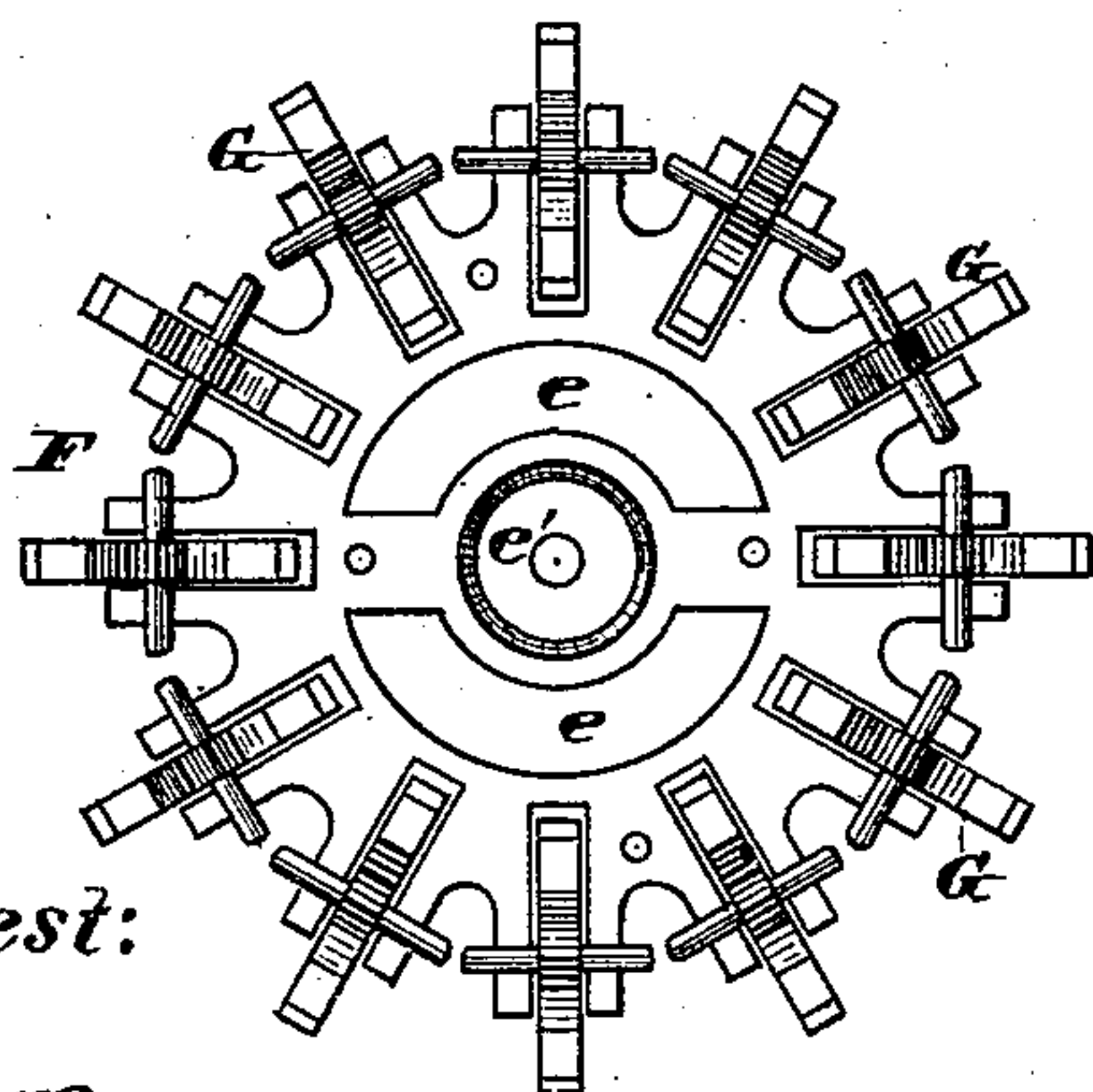
**No. 233,856.**

**Patented Nov. 2, 1880.**

*Fig. 1.*



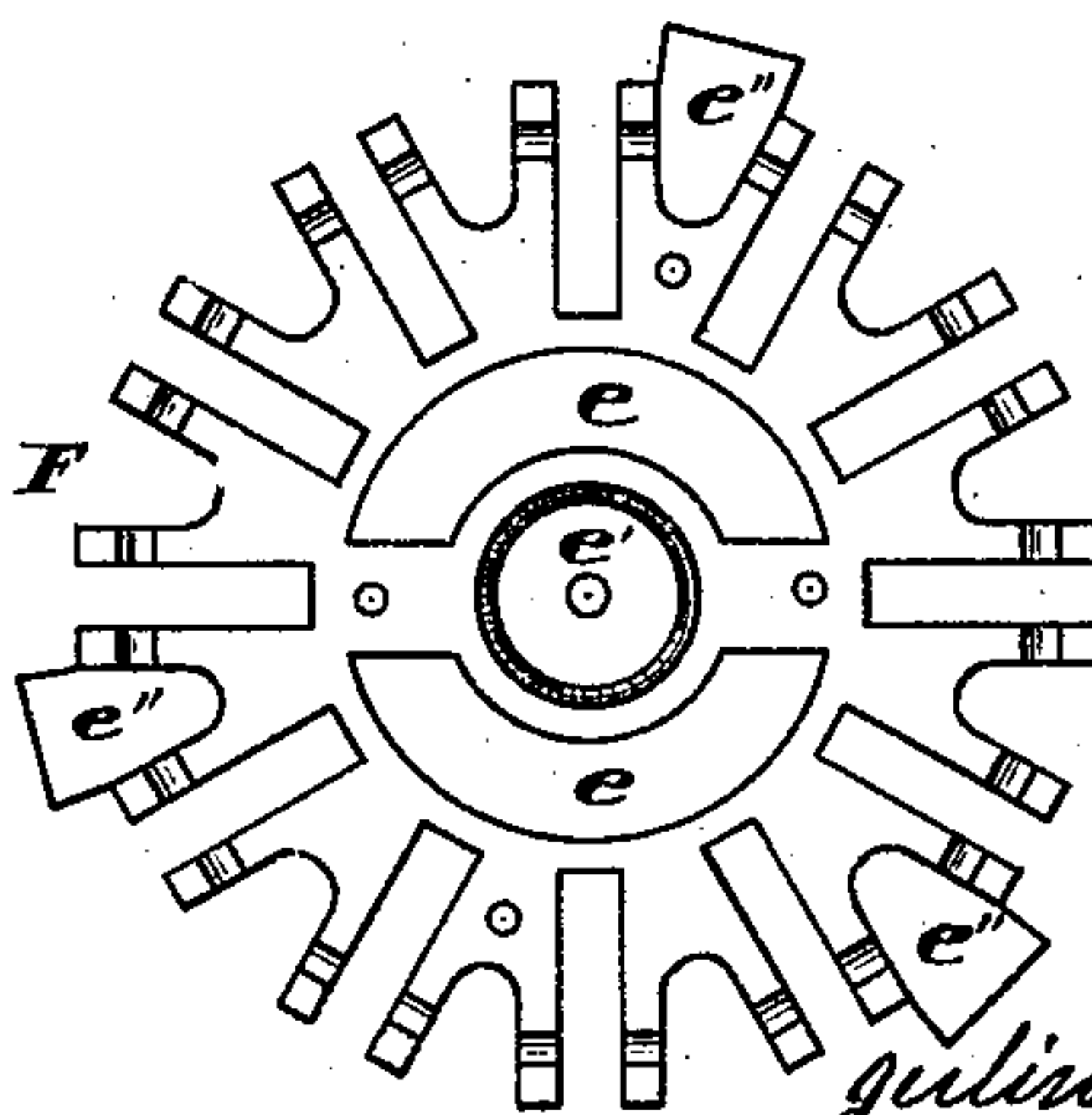
**Fig. 2.**



*Attest:*

W. L. Ryker.

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*Fig. 3.*

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(No Model.)

2 Sheets—Sheet 2.

J. H. HOLMGREEN.  
Wick Raiser for Lamp Stoves.  
No. 233,856. Patented Nov. 2, 1880.

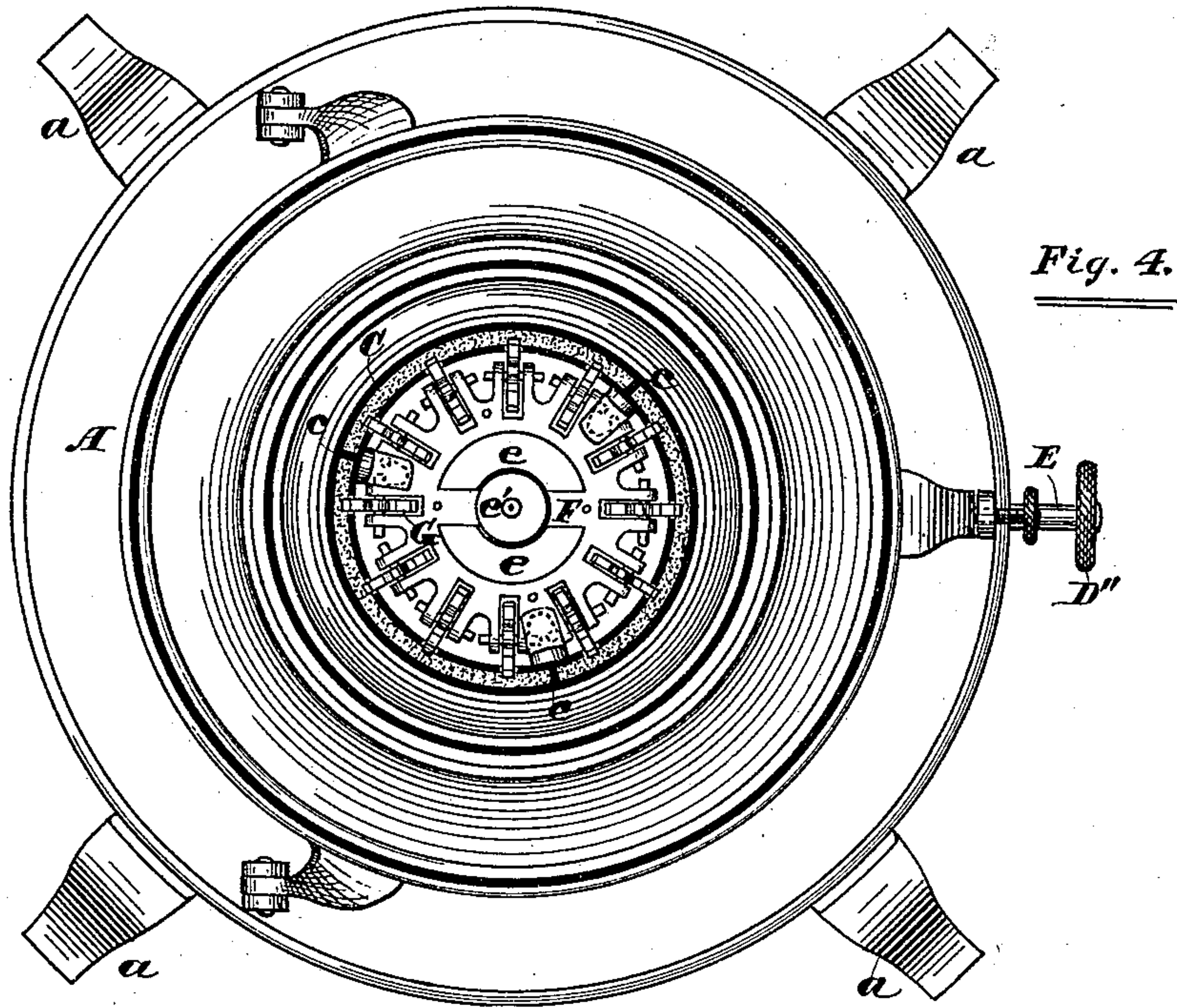


Fig. 4.

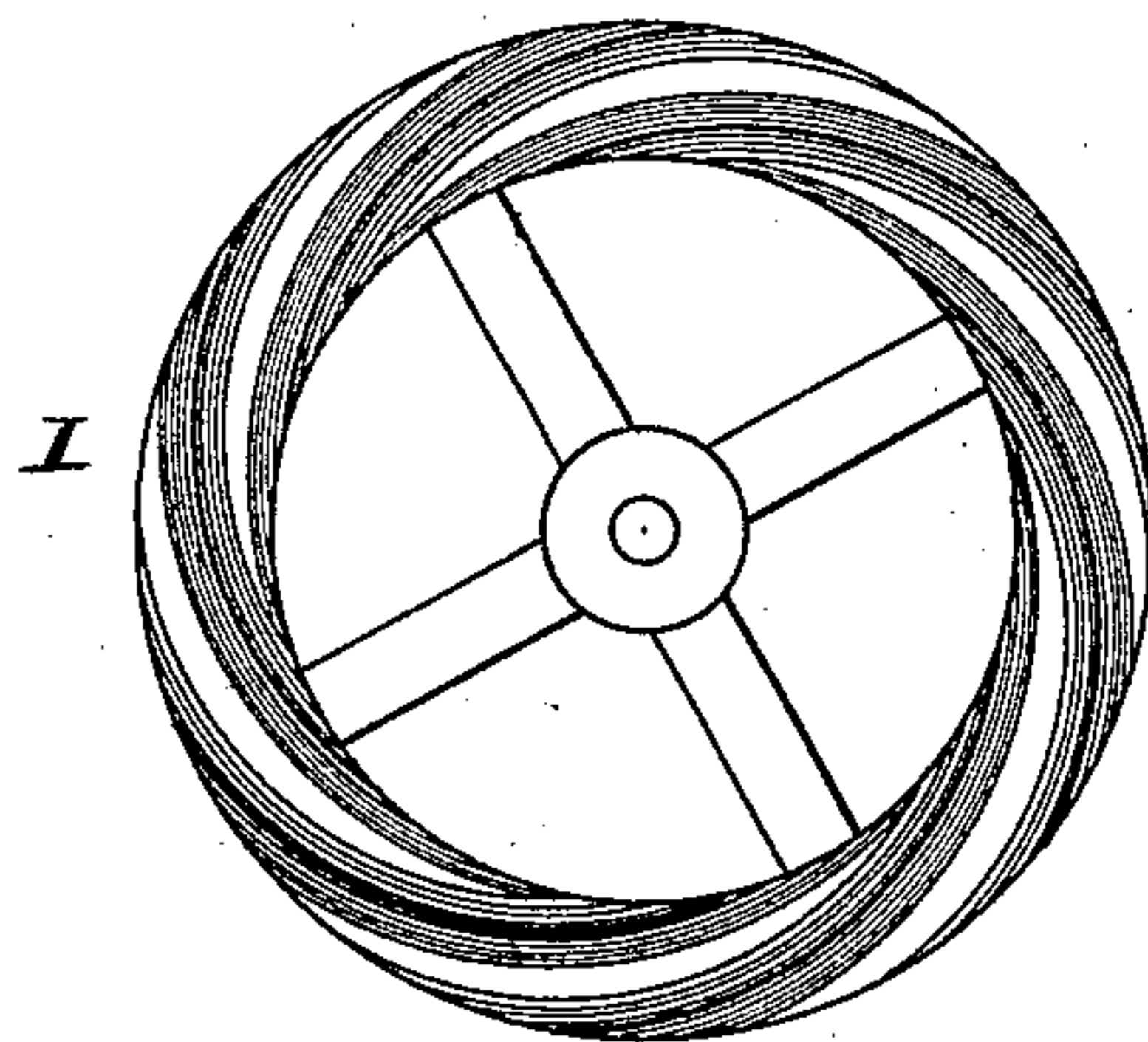


Fig. 5.

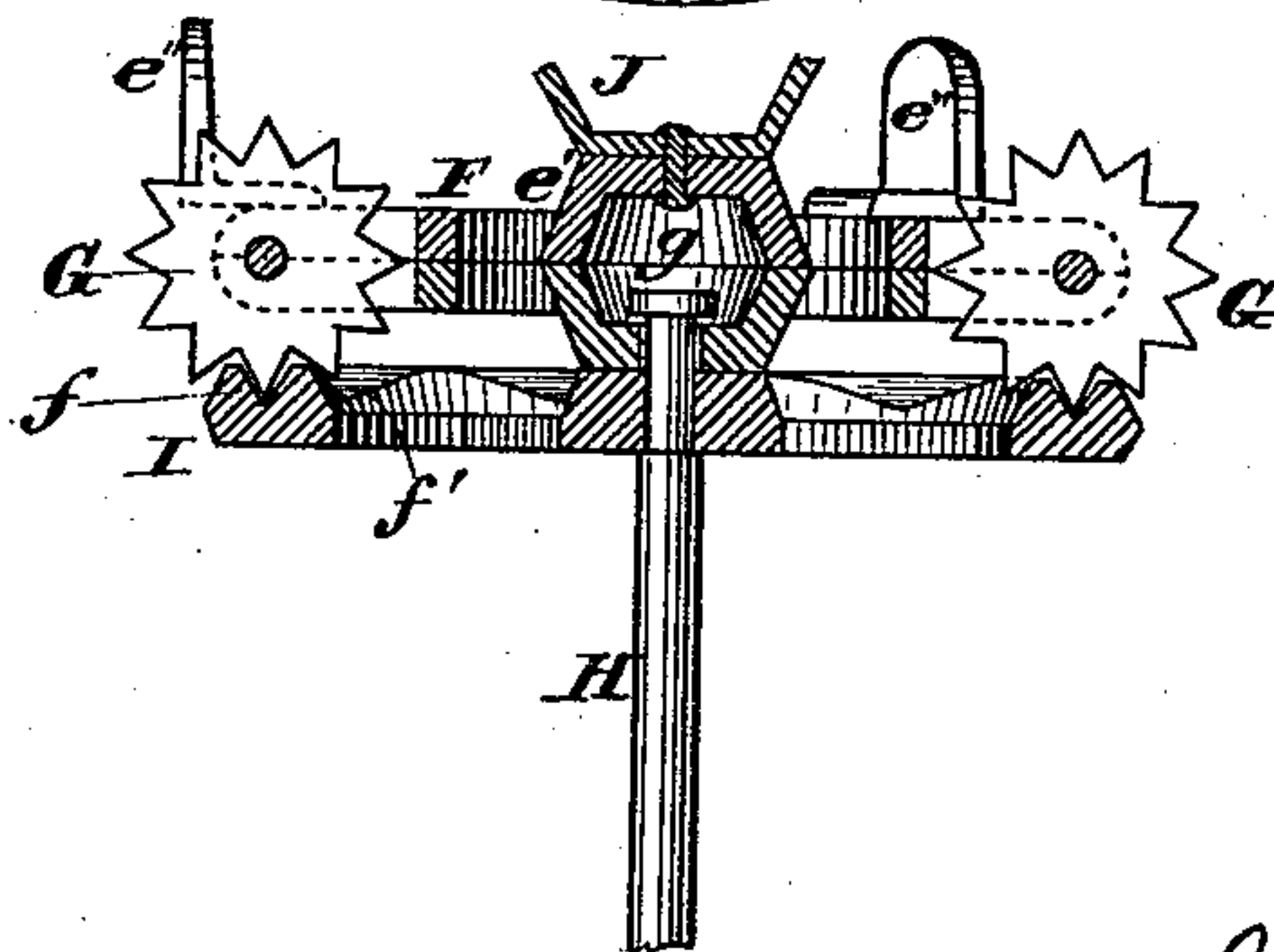


Fig. 6.

Attest:

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# UNITED STATES PATENT OFFICE.

JULIUS H. HOLMGREEN, OF CHICAGO, ILLINOIS, ASSIGNOR TO ALLAN T. BENNETT, OF SAME PLACE.

## WICK-RAISER FOR LAMP-STOVES.

SPECIFICATION forming part of Letters Patent No. 233,856, dated November 2, 1880.

Application filed July 26, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, JULIUS H. HOLMGREEN, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful  
5 Improvements in Mechanism for Adjusting Tubular Wicks in Kerosene Stoves or Lamps, of which the following, in connection with the accompanying drawings, is a specification.

In the drawings, Figure 1 is a vertical central section of a stove embodying my invention; Fig. 2, a top view of the lower plate, forming a part of the wick-regulating mechanism; Fig. 3, a bottom view of the upper one of the said plates. Fig. 4 is a cross-section in the plane of the line *x x* of Fig. 1. Fig. 5 is a top view of the scroll gear-wheel, and Fig. 6 is a vertical central section through the upper part of the wick-adjusting mechanism.

Like letters of reference indicate like parts.  
20 My invention relates to the means employed for adjusting tubular wicks; and it consists in the certain novel features of construction hereinafter set forth.

A represents the oil-fount or lower part or  
25 base of the stove, which I support, by preference, upon four legs, *a a a a*, instead of upon only three, as has been customary heretofore, four making a much more secure support and preventing accidental tipping or tilting with  
30 more certainty than three, though I do not consider this feature of construction essential to those constituting my invention, and have mentioned it only to suggest what I regard as the most desirable way of supporting the stove.

35 B is the lower part of the wick-tube, which consists of a tubular part, projecting upward from the bottom of the fount A, and open at the top and at the bottom, as shown.

40 B' is a tubular shell or extension, surrounding the part B, and *b b* are slots near the upper end of the part B'.

C is the wick which surrounds the part B', as shown, and B'' is a tubular shell or shield surrounding the upper part of the wick.

45 The purpose of the slots *b b* will be hereinafter explained.

I deem it preferable, but not essential, to use a wick made in vertical sections, and to separate these sections by means of dividing-walls *c c*, arranged between the parts B' and B'', as indicated in Fig. 4.

With the exception of the slots *b b* and walls *c c*, the wick-tube may be made and used in the usual manner. The walls *c c*, however, have no necessary connection with the means  
55 employed for raising and lowering the wick, as will hereinafter appear.

I will now describe the means I employ for regulating or adjusting the wick.

D is a cross-bar extending across the opening in the lower end of the tube B, and *d* is a hanger or lug depending from the bar D.

E is a horizontal shaft, the inner end of which turns in the lug *d* and the outer part of which turns in a bearing at *d'*, as is clearly indicated in Fig. 1.

F is a plate or disk having therein the openings *e e* and the central hub, *e'*, and *e'' e''* are lugs or ears extending upward from the said plate.

G G are spurred wheels, set vertically in  
70 planes radial to the part F. The spindles or axles of the wheels G G have bearings in the plate F and extend beyond the perimeter thereof, as indicated. When in position for  
75 use the plate F is arranged horizontally across the tubular space in the upper part of the wick-tube, and may be secured in position there by fastening the lugs or ears *e'' e''* to the part B', or in any suitable way. When the  
80 plate F is thus arranged the spurs of the wheels G G project into the slots *b b*, and consequently into the wick when the latter is arranged in its place. These spurs also project  
85 below the plate F, as shown.

H is a vertical shaft, the lower end of which bears on the cross-bar D and the upper end of which turns in the hub or center *e'* of the plate F.

H' is a cogged wheel rigidly mounted on the  
90 lower part of the shaft H. On the shaft E is a cogged wheel, D', arranged to engage the wheel H', and on the outer or exposed end of the same shaft is a thumb-wheel or milled disk, D''.

I is a scroll-wheel rigidly mounted on the  
95 upper part of the shaft H. The upper face of this wheel has eccentric grooves and ribs *f f'*, adapted and arranged to engage and rotate the wheels G G when the wheel I is turned in  
100 either direction, and to rotate the wheel I it is only necessary to turn the wheel D'', as will



be perceived from the foregoing description and on reference to Fig. 1. As the wheels G G engage the wick, it follows that it may be raised and lowered evenly and with certainty by turning the wheel D'' for that purpose.

It will be observed by referring to Fig. 5 that the scroll-wheel I has spokes radiating from a hub, thus leaving spaces or openings for the air to pass upward through the wick-tube, although the said wheel is arranged horizontally across the interior of the tube, as shown in Fig. 1.

For the purpose of facilitating construction I deem it preferable to make the plate F in two parts, in a way substantially the same as splitting the said plate horizontally about midway between its upper and lower sides. The axles or spindles of the wheels G G may then easily be arranged in their bearings and confined therein by fastening the two parts of the plate F together. In Figs. 2 and 3 a face view of these parts of the plate F is shown, the upper face of the lower half being shown in Fig. 2 and the lower face of the upper half being shown in Fig. 3; or the representation is the same as if the upper half were turned over from the lower half. By making the plate F in two parts in this manner I am also enabled to make the hub e' hollow, and to head the upper end of the shaft H, as shown at g, and to rivet the deflector J to the upper part of the hub, as shown at g', these attachments being made, of course, before the parts of the plate F are fastened together. By this means the operation of connecting the shaft H and the deflector to their respective parts is greatly facilitated, and the said shaft and the deflector are securely retained in their proper places. I do not here intend, however, to be restricted to a plate, F, made in two parts, although I deem that mode of construction preferable for the reasons now set forth.

I prefer to make the wick in vertical sections, for the reason that it may be more cheaply and conveniently applied when so made, and these parts, when arranged together about the wick-tube, constitute a tubular wick and possess all the advantages and none of the disadvantages of tubular wicks.

While I have here illustrated my invention in connection with an oil-stove, it is obvious that those features of construction which constitute my invention may, in like manner, be applied to lamps adapted for tubular wicks; and I do not here intend to restrict myself to my invention either for use in stoves alone or in lamps alone; neither do I here intend to restrict myself to any particular means for rotating the scroll-wheel I. It is also obvious that the slots b b are not absolutely essential, as the shell B' need extend only to the part now slotted, and so expose the wick to the spurs.

I am aware that scroll-wheels substantially like that herein shown and described have been made and used before my present inven-

tion, and I do not, therefore, here intend to claim the same, broadly; but, so far as I am aware, they have not heretofore been combined with a series of spurred wheels having sharp or pointed spurs adapted and arranged to enter or engage tubular wicks for the purpose of regulating the latter.

I am also aware that a rotary barrel containing an internal screw adapted and arranged to rotate a series of vertical wheels having spurs entering a tubular wick has also heretofore been employed in such a combination for the purpose of regulating the height of the wick, and I do not, therefore, here intend to claim such.

I am also aware that a vertical shaft having on it a screw or worm has heretofore been employed to rotate a series of spurred wheels arranged to engage a tubular wick, and I do not, therefore, here intend to claim that means for rotating the spur-wheels for the purposes herein set forth.

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

1. The combination, substantially as specified, of the rotary disk-shaped and open scroll-wheel I, having eccentric grooves and ribs *ff'* on its working-face and around its open part, the vertically and radially arranged series of spurred wheels G G, and a tubular wick-holder adapted to hold the wick in contact with the spurs of the wheels G G, all in combination with each other and with means for rotating the said scroll-wheel, for the purposes set forth.

2. The plate or disk F, having therein the openings e e, and made in two horizontally-arranged separable parts, the spurred vertical and radial wheels G G, having bearings between the said two parts, the tubular wick-holder adapted to receive the spurs of the said wheels, the open rotary scroll-wheel I, arranged to engage the said spurred wheels, and means for rotating the said scroll-wheel, all combined with each other, substantially as and for the purposes specified.

3. The vertically and radially arranged spurred wheels G G, the open horizontally-arranged plate F, furnishing fixed bearing for the said wheels, the tubular wick-tube adapted to receive the spurs of the said wheels, the open scroll-wheel I, horizontally arranged and having on its working-face the eccentric grooves and ribs *ff'*, arranged to engage the spurs of the wheels G G, the vertical shaft H, carrying the wheel H' and having a bearing in the plate F and cross-bar D, and the horizontal shaft E, carrying the wheels D' and D'', all combined substantially as and for the purposes specified.

JULIUS H. HOLMGREEN.

Witnesses:

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J. W. NICHOLS.