

No. 704,745.

Patented July 15, 1902.

A. M. HEWETT.
GAS BURNER.

(Application filed Aug. 26, 1901.)

(No Model.)

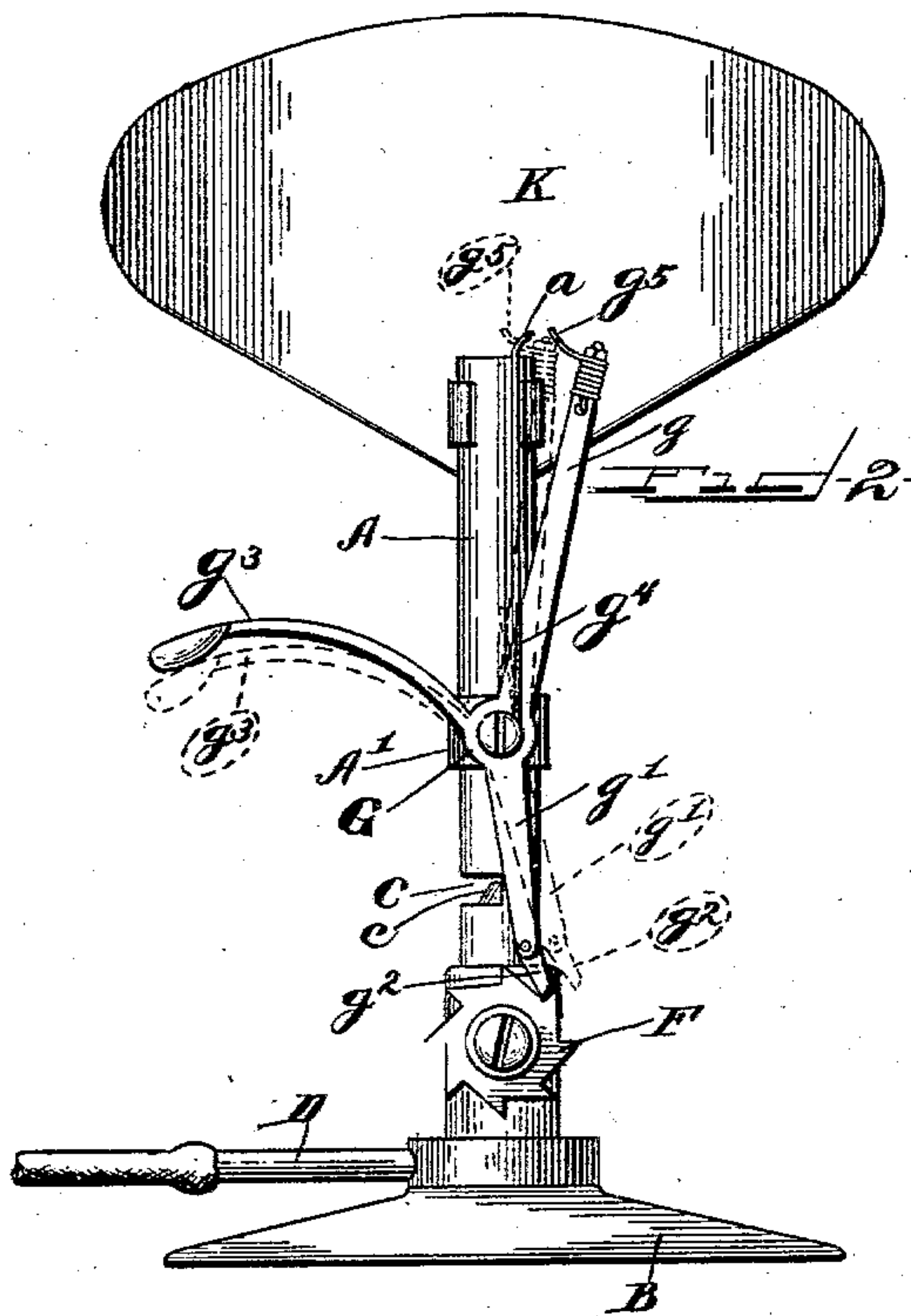
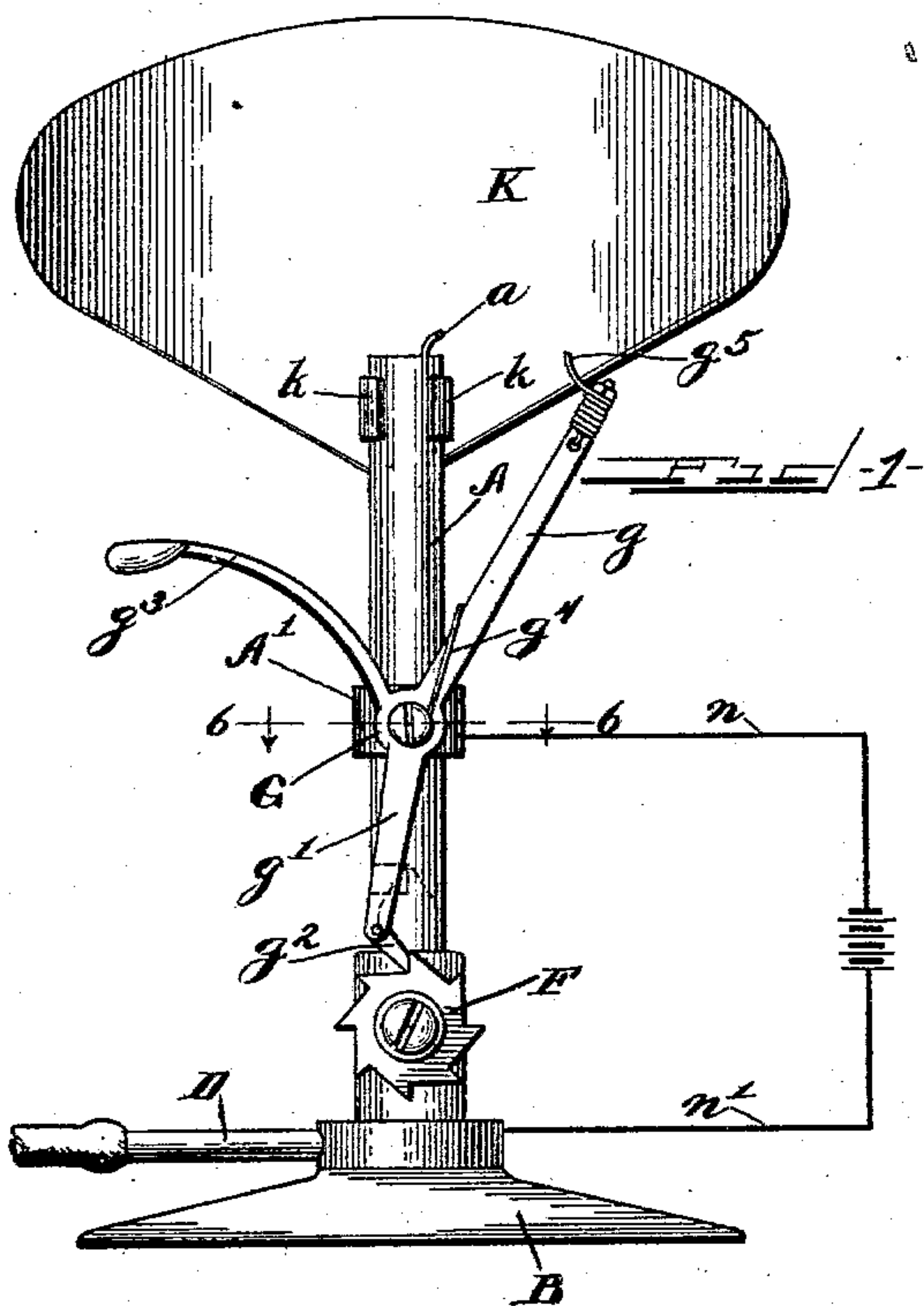


Fig. 3-

Fig. 4-

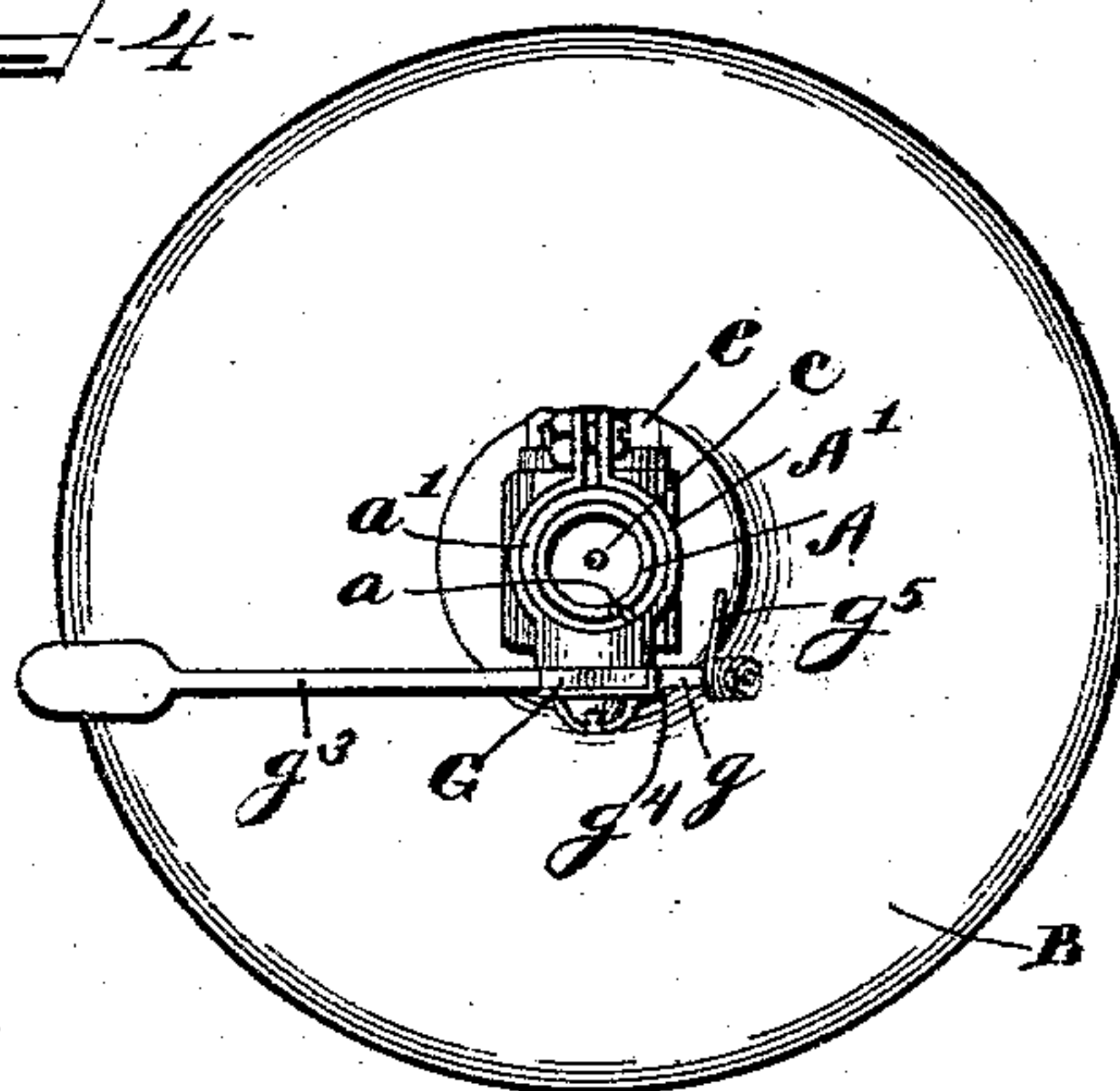
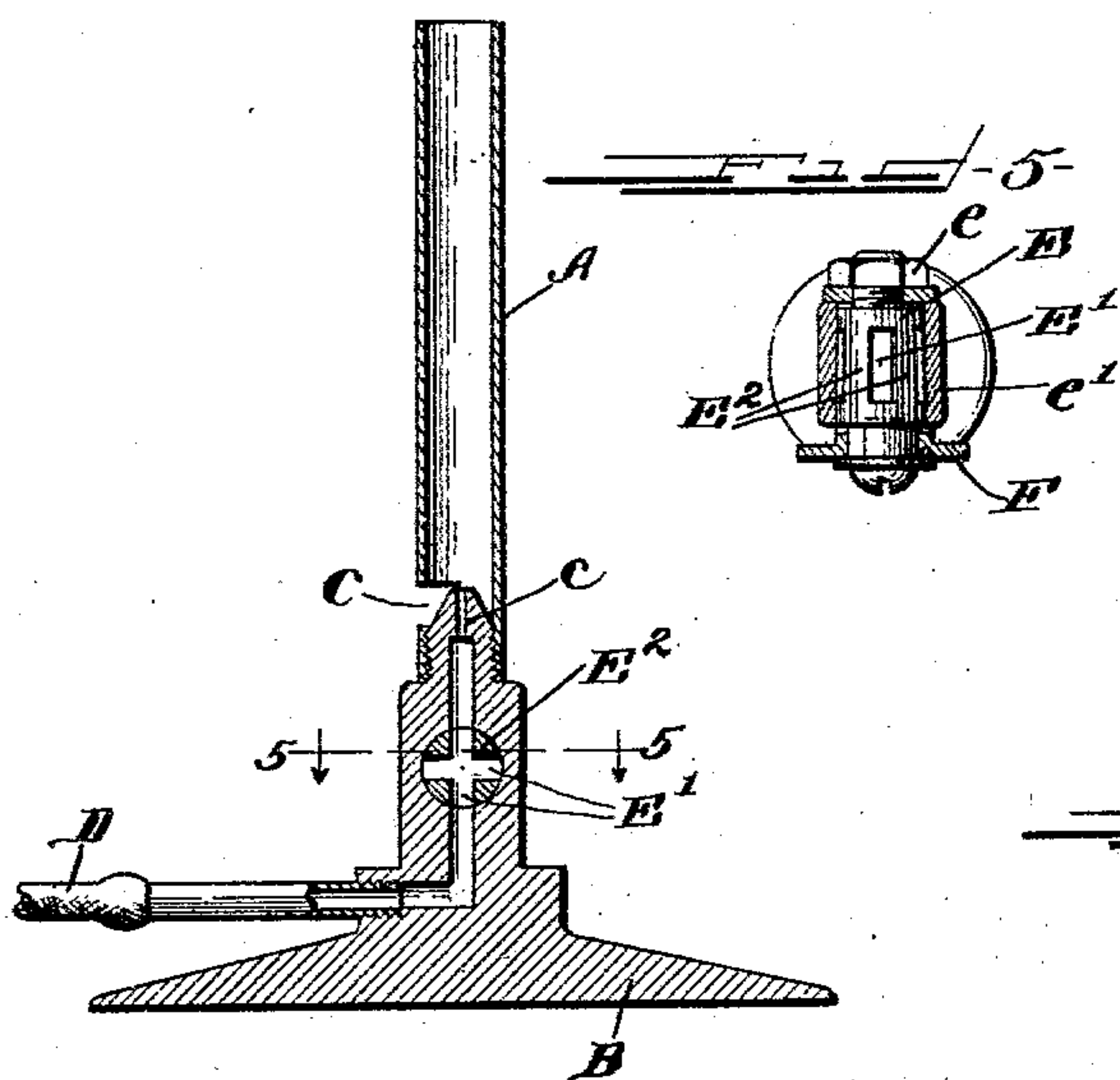


Fig. 6-

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GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 704,745, dated July 15, 1902.

Application filed August 26, 1901. Serial No. 73,230. (No model.)

To all whom it may concern:

Be it known that I, ASHLEY M. HEWETT, a citizen of the United States of America, residing in Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Gas-Burners, of which the following is a description.

My invention relates particularly to that class of gas-burners generally known as "Bunsen" burners, and has for its object improved means for controlling the flow of gas to said burner and igniting the same.

To this end my invention consists in the novel construction, arrangement, and combination of parts shown and described, and more particularly pointed out in the claims.

In the drawings, wherein like reference-letters indicate like or corresponding parts, Figure 1 is an elevation of my improvement. Fig. 2 is a similar elevation showing the parts in a slightly different position, dot lines showing the position of the parts the moment the gas is lighted. Fig. 3 is a vertical section of my improvement. Fig. 4 is a top plan view of the same. Fig. 5 is a transverse section in line 5 5 of Fig. 3, and Fig. 6 is a similar section in line 6 6 of Fig. 1.

In the drawings, A represents the upright stem of a Bunsen burner, provided at its top with a metallic extension a .

B is the base of the burner, provided with the usual air-port C.

c is the duct conducting the gas to the stem.

D is the pipe conducting the gas to the burner.

E is a valve extending transversely through the base B or in an equivalent position and secured in such position in any suitable manner—as, for example, by the screw-threaded nut e . The valve E closely fits within the walls e' and is provided with diametrical ports E' , extending through the valve and preferably at right angles to one another. By this construction the valve is divided into four ports E' , separated by walls E^2 . The ports and the walls alternate with one another. Upon the end of the valve E is fixed a ratchet-wheel F, provided with a number of teeth corresponding with the number of ports and walls of the valve.

G is a bell-crank lever pivotally supported

upon a collar A' , supported upon the stem A at a distance from the valve E. The collar is insulated from the stem by any suitable material, as by a layer of asbestos a' . The arm g of the bell-crank G is extended, so that in its oscillation it will pass in proximity to the upper part of the stem A, and is provided with a contact-wire g^5 , arranged to contact with the extension a as the lever is operated. A spring g^4 tends to hold the lever in position shown in Fig. 1. The arm g' of the bell-crank extends downward in line with the ratchet F and is provided with a detent or pawl g^2 , arranged to engage with the teeth of the ratchet F when arm is moved forward, but to ride over the teeth when the arm is released and assumes the normal position, as shown in Fig. 1. The wires $n n'$ extend to the sleeve or collar A' and to any suitable point on the base or stem of the body and are connected with a suitable electrical source for the purpose stated. The arm G should be suitably insulated from the stem A or its connecting parts, and for this purpose the detent or pawl g^2 may be made of suitable non-conducting material—such, for example, as hard rubber, glass, or equivalent material for the purpose named—or other well-known means may be employed for the same purpose. The force necessary to operate the device is not great, and consequently the wear will be insignificant.

The operation of the device is as follows, the parts being in the position shown in Fig. 1: One of the walls E^2 , closing the valve preventing the escape of gas from the burner, upon depressing the lever g^3 the parts assume the position shown in Fig. 2 in which the valve is rotated as shown bringing the port E' in position to permit the flow of gas to the burner. As the bell-crank lever is still further depressed, as shown in dotted lines, the extension g^5 contacts with the extension a , closing the electrical circuit. Upon further compressing the lever the part g^5 passes by and is released from the part a , causing a spark, which ignites the gas. Upon releasing the bell-crank the spring g^4 causes the parts to assume their normal position, as shown in Fig. 1. When it is desired to extinguish the burner, a similar operation moves

the valve about again, bringing one of the walls E^2 in position to close the valve, and thus extinguish the burner.

5 K is a wind-guard of the usual construction, provided with spring-arms k k , adapted to embrace the upper part of the stem A and retain the guard in position.

After having thus described my improvement it is obvious that various immaterial
10 modifications may be made without departing from the spirit of my invention. Hence I do not wish to be understood as limiting myself to the exact form or construction shown.

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

1. A burner comprising a stem A, provided with a rotatable valve E, having a ratchet-
20 wheel F, secured thereto, in combination with a bell-crank lever G, insulated from the stem and pivotally supported thereon at a distance from the valve, one arm of the lever being provided with a pawl adapted to engage the
25 ratchet F, and the other arm adapted in its

movement to contact with the stem near the igniting-point, an electric circuit, the stem and lever being electrically connected to make and break the circuit as the lever is oscillated.

2. A burner comprising a stem A, provided with a rotatable valve E, constructed with alternate ports and walls, and having a ratchet-wheel F secured thereto, provided with teeth corresponding in number with the
35 number of ports and walls, in combination with a bell-crank lever G, insulated from the stem and pivotally supported thereon at a distance from the valve, one arm of the lever being provided with a pawl arranged to en-
40 gage the ratchet F, and the other arm adapted in its movement to contact with the stem near the igniting-point, an electric circuit, the stem and lever being electrically connected to make and break the circuit as the
45 lever is oscillated.

ASHLEY M. HEWETT.

In presence of—

JOHN W. HILL,

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