

(No Model.)

J. E. HAMILTON.  
ELECTRICAL GAS LIGHTER.

No. 482,172.

Patented Sept. 6, 1892.

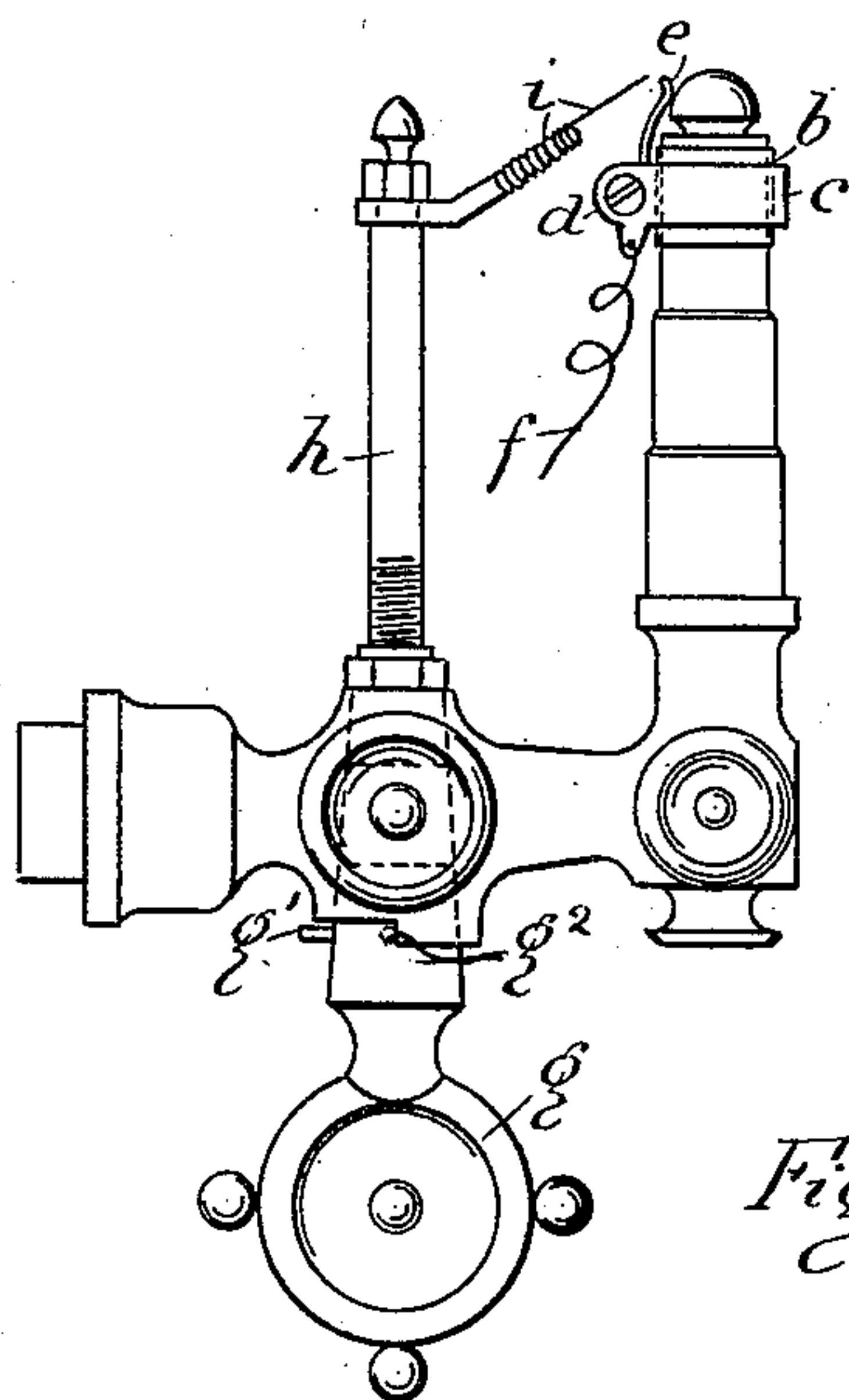


Fig. 1.

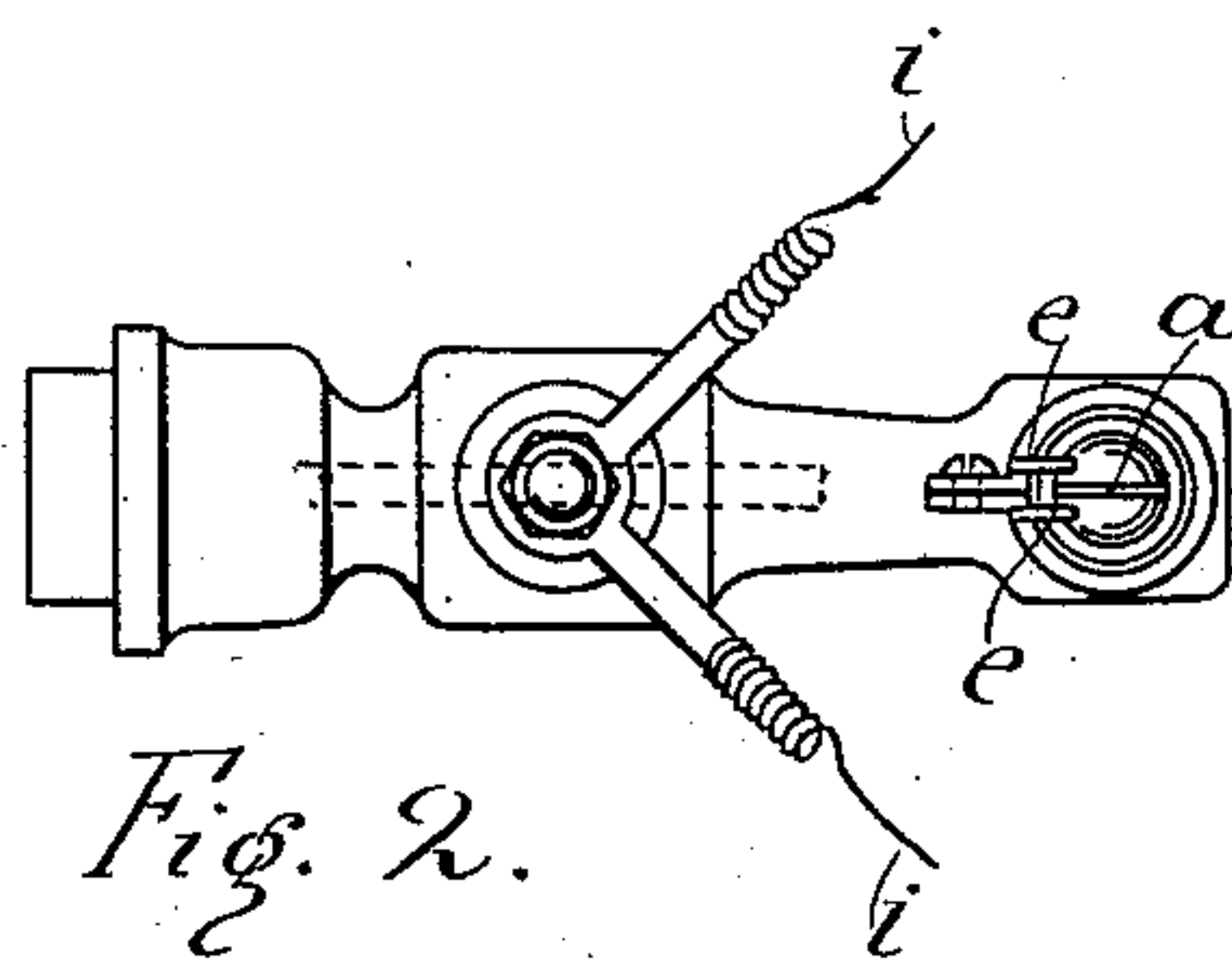


Fig. 2.

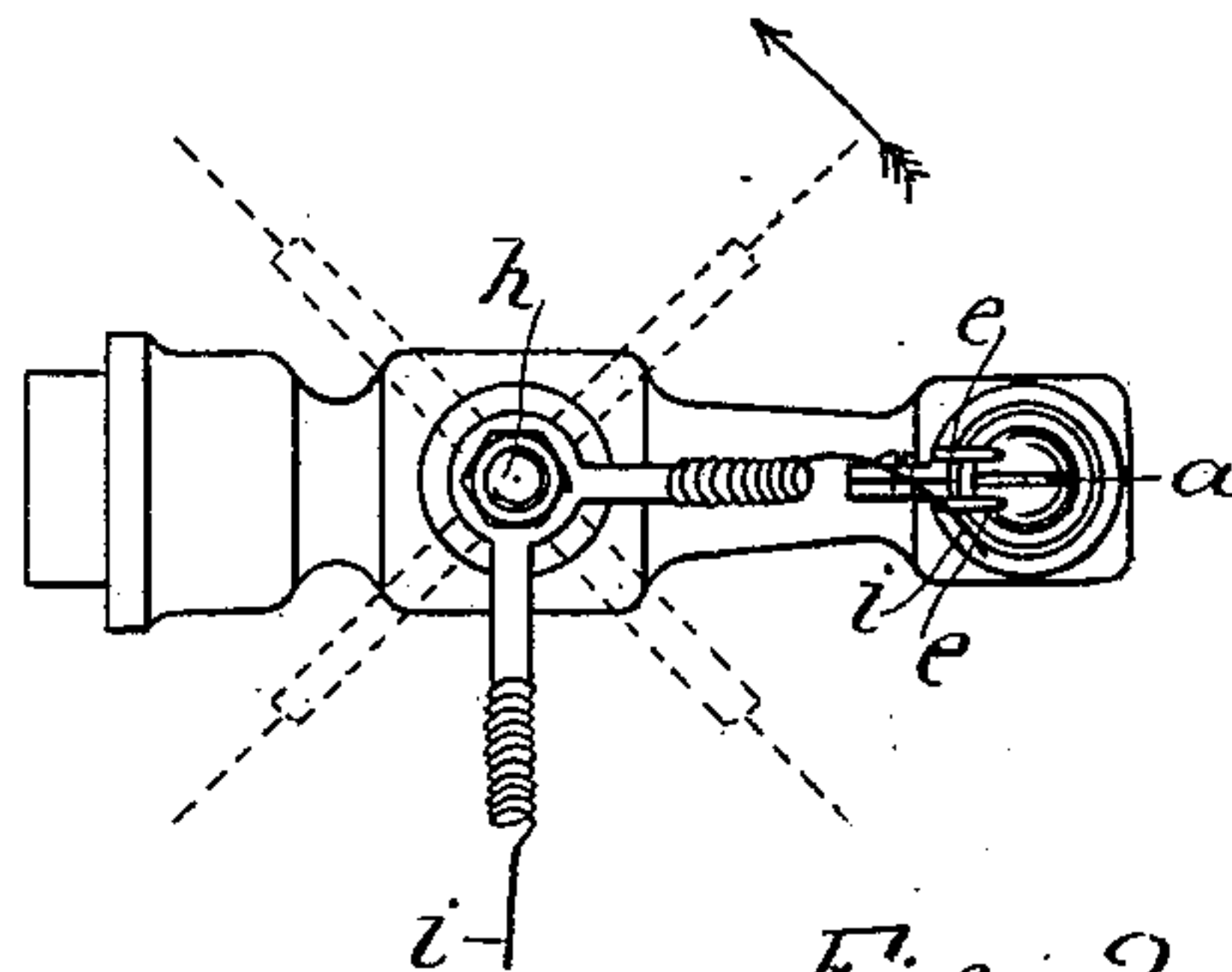


Fig. 3.

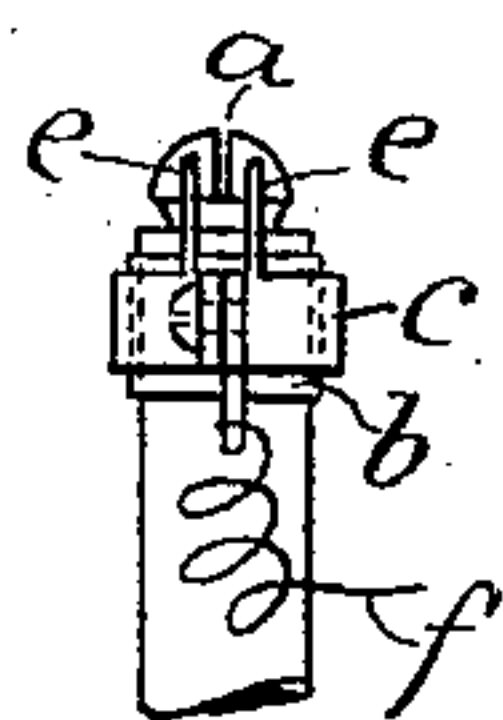


Fig. 4.

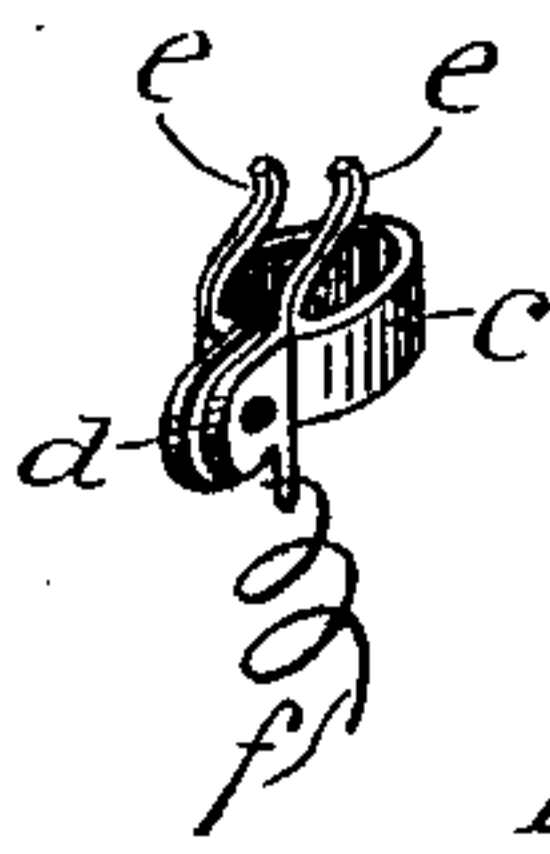


Fig. 5.

Witnesses  
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# UNITED STATES PATENT OFFICE.

JAMES E. HAMILTON, OF CHICAGO, ILLINOIS.

## ELECTRICAL GAS-LIGHTER.

SPECIFICATION forming part of Letters Patent No. 482,172, dated September 6, 1892.

Application filed March 11, 1892. Serial No. 424,527. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES E. HAMILTON, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Electric Gas-Lighters, which are fully set forth in the following specification, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 shows my improved electric gas-lighter in side elevation as applied, the gas being ignited. Fig. 2 shows Fig. 1 in plan view. Fig. 3 shows in plan view the motion of the mechanism in lighting the gas. Fig. 4 shows the upper end of the burner and its attached mechanism in rear view. Fig. 5 shows the insulated collar and its parts in perspective.

Like letters refer to like parts.

The object of my invention is to produce an electric gas-lighting mechanism which may be attached to any ordinary gas-burner which shall be operated in the same way as an ordinary gas-burner, the cock turning either way to ignite or to cut off the gas, it being provided with the usual stop, which allows its semi-revolution.

The construction of the present electric gas-lighter is more or less complex and requires some instruction to use it satisfactorily, because the gas-cock must make only a quarter-revolution, or else the cock is made to rotate continuously in one way only, and by that means provided with mechanism which will light and extinguish the gas.

In my device no complex mechanism or instruction to use it is necessary, and in order to attain said desirable ends I construct my said new device in substantially the following manner, namely: The slot *a* of the gas-burner is parallel to a plane passing through it and the axis of the cock *g*. On the shaft which holds said burner is mounted a band *c*, which is insulated from said shaft by any suitable insulator *b*. Said band is open and provided with lugs *d*, through which a screw or rivet passes to bind it on its shaft. On each end of said band and on each side of its slot and the slot *a* are spurs *e*, and on the opposite edge of said band is a spur, to which the circuit-wire *f* is attached.

On the cock *g* and axial therewith is mounted a shaft *h*, carrying at its upper end a pair of arms about at right angles to each other, which carry spring-wipers *i*, provided with straight outer ends, the coiled ends of said wipers being slipped on said arms. Said arms are fixed on the shaft *h*, so as to include equal angles on each side of a plane passing through the axes of said burner and shaft *h* when the cock *g* is fully open and will stand wholly on one or the other sides of said plane when the said cock is closed, as indicated by the broken outlines, showing said arms in such positions in Fig. 3. In said Fig. 3 both arms were on the lower side of said plane, but are shown to have been moved by turning the cock *g* far enough to let gas escape and to bring one of said wipers *i* in contact with the lower (or to it nearer) spur *e*. As the wiper *i* in its motion (indicated by the arrow) finally passes beyond said spur *e* an electric spark is produced, which passes into the plane of the now escaping gas, which is thereby ignited, the position of said parts in their action thus causing an unfailing result not attained in other forms of this class of construction. When the cock *g* is turned fully open, the wipers *i* assume the position shown in Fig. 2. By means of this mechanism the gas may also be turned down very low without closing the circuit, which is at times also desirable. The spur *g'* and stop *g''* to the cock *g* are of the usual construction.

What I claim is—

1. In an electric gas-lighting device, the combination, with a cock carrying a shaft parallel to the axis of said cock, provided with a pair of arms carrying reciprocating wipers moving in a horizontal plane, of an insulated spur near the slot of a gas-burner, substantially as specified.

2. In an electric gas-lighting device, the combination, with a gas-burner with insulated spurs on each side of the slot thereof, of a shaft on the end of the gas-cock parallel with its axis and revolving therewith, provided with an arm carrying a wiper adapted to make and break contact with said spurs, substantially as specified.

3. In an electric gas-lighting device, the combination, with a burner with insulated spurs on each side of the slot thereof, of a cock



with a shaft on its end axial and revolving therewith, provided with a pair of arms carrying wipers adapted to make and break contact with said spurs, substantially as specified.

- 5 4. In an electric gas-lighting device, the combination, with a gas-cock adapted to make the usual half-revolution, surmounted by a shaft axial and revolving therewith, and pro-

vided with arms carrying wipers, of a burner and insulated spurs on each side of its slot, to operate substantially as specified.

JAMES E. HAMILTON.

Witnesses:

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