

(No Model.)

C. G. PERKINS.

APPARATUS FOR CARBONIZING INCANDESCENTS.

No. 287,315.

Patented Oct. 23, 1883.

Fig. 1.

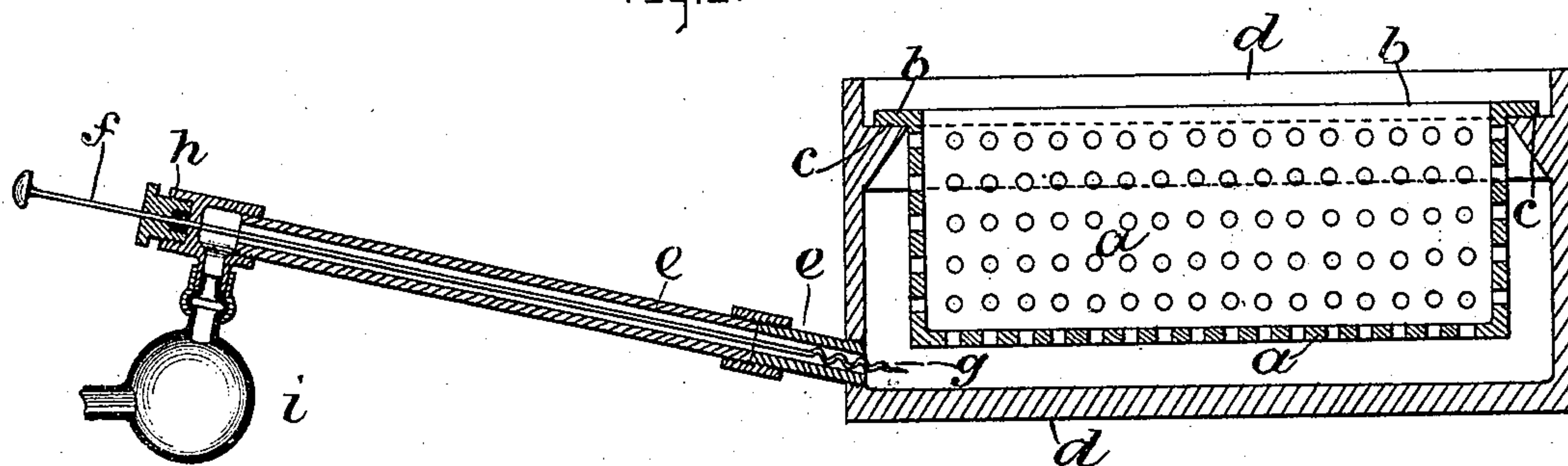


Fig. 2.

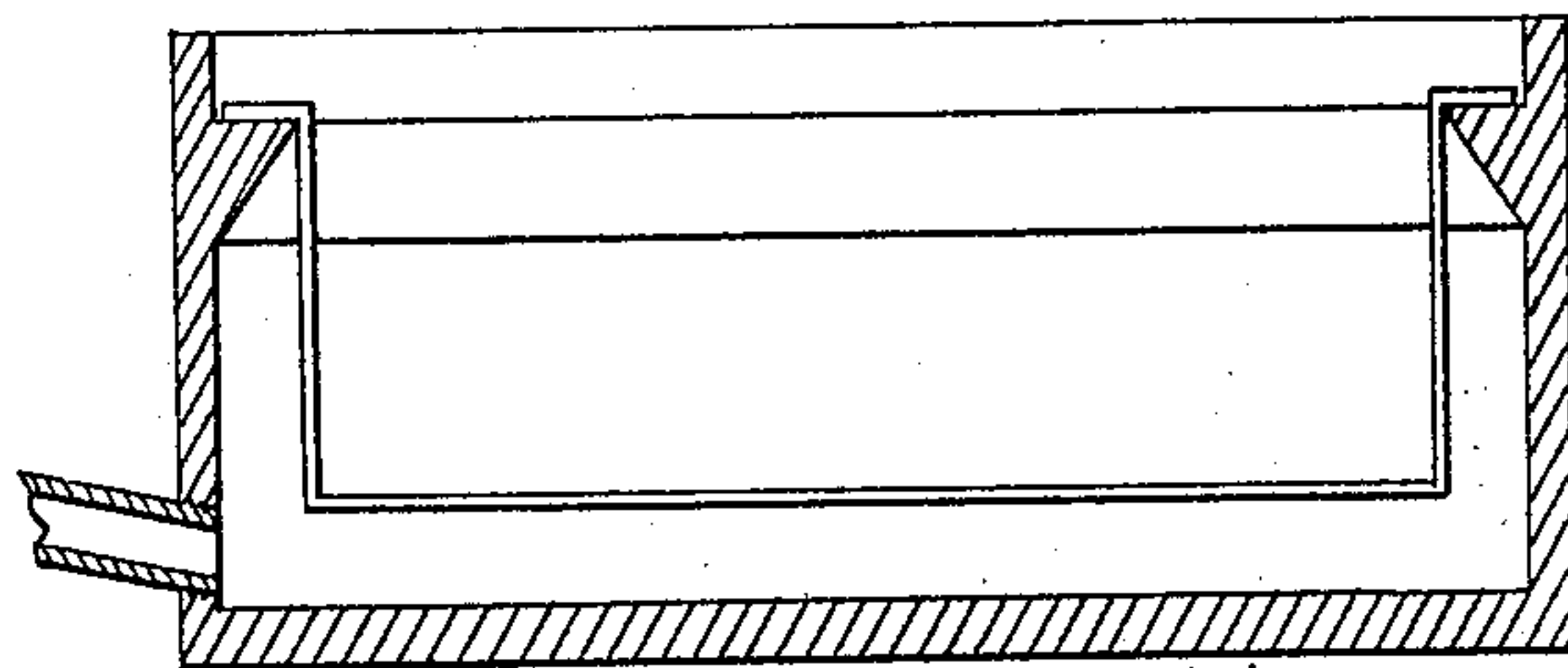


Fig. 3.

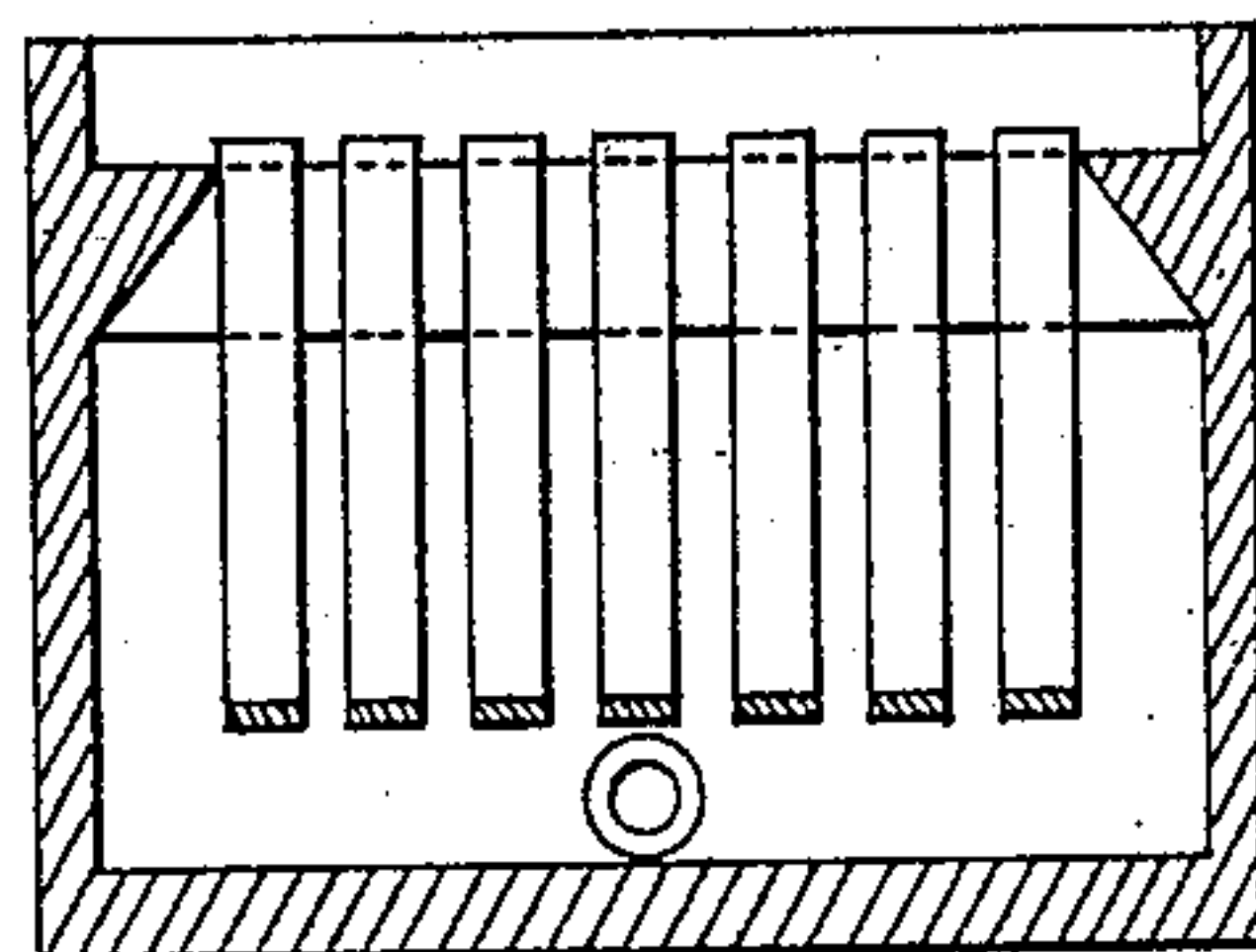
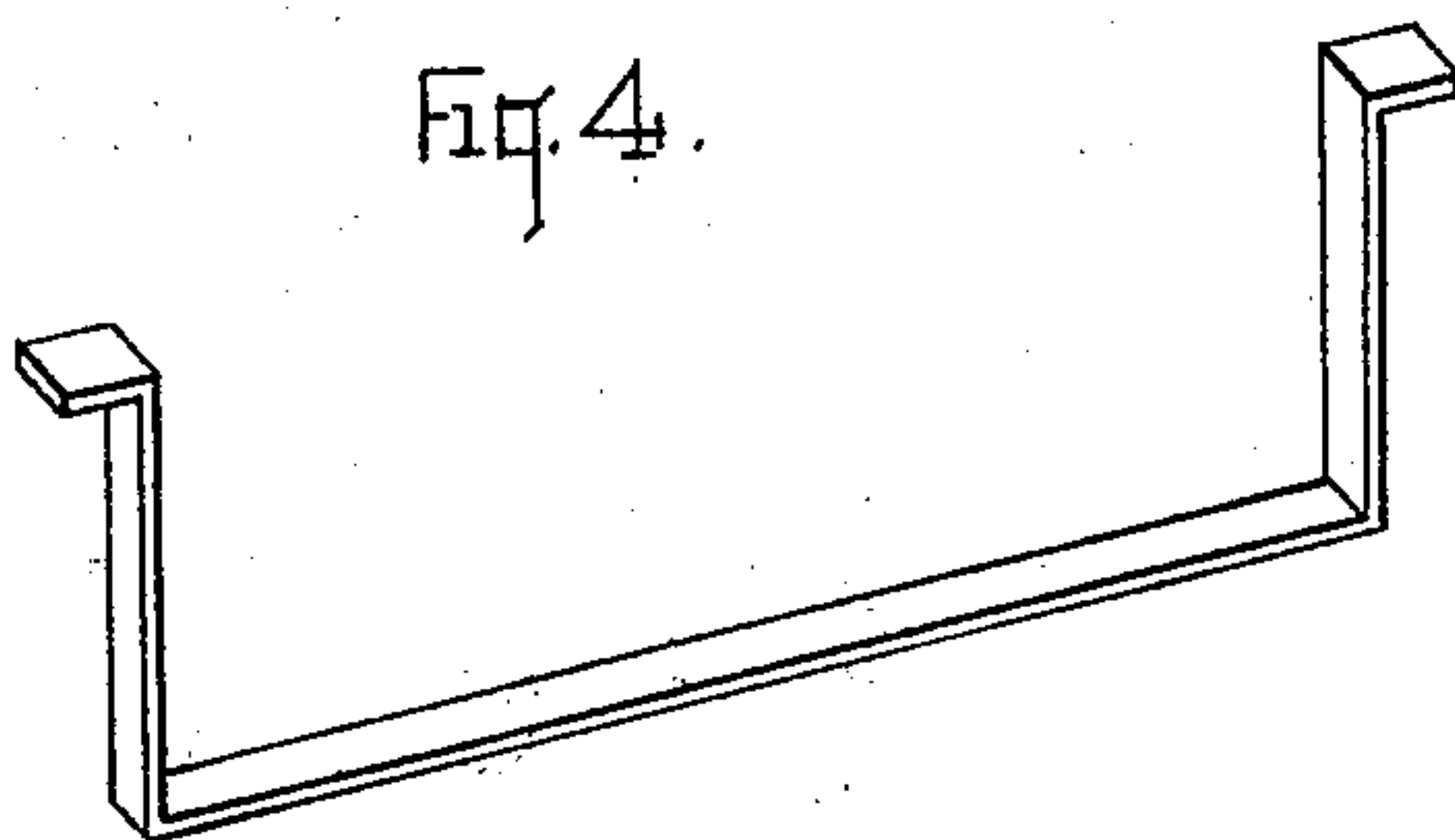


Fig. 4.



ATTEST:

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*att'y.*

# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR CARBONIZING INCANDESCENTS.

SPECIFICATION forming part of Letters Patent No. 287,315, dated October 23, 1883.

Application filed August 6, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES G. PERKINS, a citizen of the United States, and a resident of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in a Carbonizing Apparatus, of which the following is a specification.

My invention relates to a device for carbonizing filaments of paper or other material used for electric incandescent lamps, of which a full description will be given hereinafter.

My invention consists of a tube entering the carbonizing-box near its base. Said tube is provided with a rod having a spiral formation on the end thereof, or with other suitable means, whereby the clogging up of the pipe may be prevented when the rod is properly operated.

My invention consists, also, of a glass bulb connected with the aforesaid tube near the outer end thereof, said bulb having its neck on the outer portion thereof connected with a suitable device for generating hydrocarbon vapor.

In the drawings, Figure 1 represents a longitudinal section of the device. Figs. 2, 3, and 4 represent modifications of the same.

Similar letters refer to similar parts throughout the drawings, in which—

*a* represents the perforated box, provided with a continuous projecting rim, *b*, resting upon the rabbet *c* of the carbonizing-box *d*, by which the perforated box is suspended.

*e* is the metallic tube entering the carbonizing-box *c*. Said tube is provided with a rod, *f*, having a spiral formation, *g*, near its end.

*h* is the stuffing-box.

*i* represents the glass bulb connected with the tube *e*. Said bulb is connected with an ordinary apparatus for generating hydrocarbon vapor.

Mode of operation: The paper filaments to be carbonized are arranged in the usual way between perforated carbonized disks, after which they are placed in the perforated box, the whole arranged within the carbonizing-box and properly covered, and then placed in the furnace. The tube *e* is then connected with the chamber, after which the fire is started. When the carbonizing shall have become sufficient, or when carbonization takes place, the

hydrocarbon vapor is allowed to enter the carbonizing-box. In doing so the vapor enters the box *a* through its perforations, thus causing a deposit of hydrocarbon product on the surfaces of the filaments, which have been by this time reduced to carbon. During this process the inlet for the hydrocarbon vapor becomes clogged, and is cleared by means of the rod *f*, having the spiral formation on its end, and which is moved to and fro, thus clearing the inlet, the result of which produces a free and unobstructed passage for the vapor. When this is accomplished, the rod is pulled out toward the outer end, thus preventing the intense heat from destroying it.

I do not wish to confine myself to the devices herein shown, as I may use wire within the carbonizing-box, instead of the perforated box or strip, without departing from the spirit of my invention.

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

1. In combination with carbonizing-box, a tube made of any suitable material, provided with means for clearing its inlet to the carbonizing-box.

2. In combination with a carbonizing-box, the combination, substantially as shown and described, the tube *e*, rod *f*, with spiral formation *g* on the end thereof, and the stuffing-box on the outer end of said tube.

3. In combination with a carbonizing-box and feeding-tube, a glass globe provided with two projections, one of which is connected with the aforesaid feeding-tube, the other connected with a tube leading to an ordinary device for generating hydrocarbon vapor.

4. In a carbonizing device, the combination, substantially as shown and described, the perforated box *a*, projections *b*, carbonizing-box *d*, rabbet *c*, tube *e*, rod *f*, spiral formation *g*, stuffing-box *h*, glass bulb *i*, and gas generator or vaporizer, the whole forming a complete device.

Signed at New York, in the county of New York and State of New York, this 4th day of August, A. D. 1883.

CHARLES G. PERKINS.

Witnesses:

J. A. HURDLE,  
E. WM. EDWARDS.