M. H. BARNES.

COAL-OIL STOVE.

No. 191,558. Patented June 5, 1877.

Fig.1.

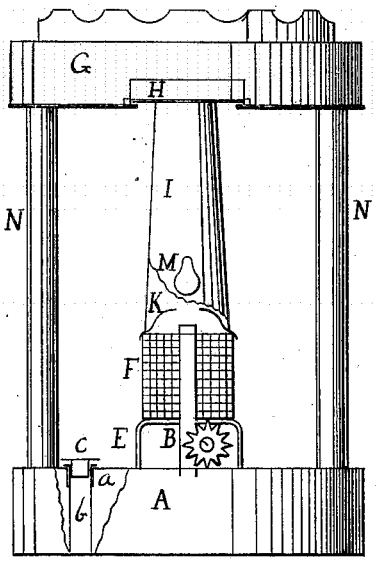
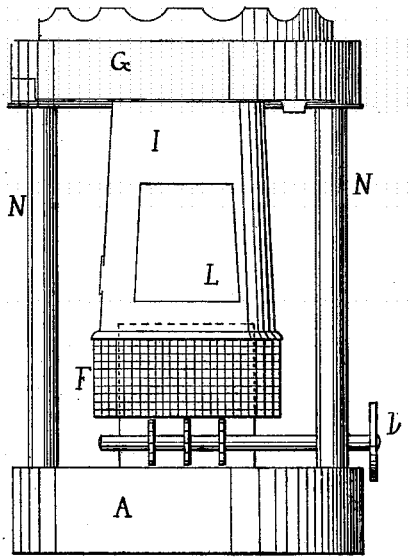


Fig.2.



WITNESSES

Geo. A. Sawyer.

H. B. Brown

INVENTOR

M. H. Barnes

ATTORNEY

N. PETERS. PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MATTHIAS H. BARNES, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN COAL-OIL STOVES.

Specification forming part of Letters Patent No. **191,558**, dated June 5, 1877; application filed April 3, 1877.

To all whom it may concern:

Be it known that I, MATTHIAS H. BARNES, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Coal-Oil Stoves; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

In the drawing, Figure 1 shows a side elevation, and Fig. 2 a front elevation, portions being cut away to show sections where necessary.

The object of my invention is to construct a lamp-stove by the use of which there may be a general economy of heat, and in which the oil or burning fluid used may not become overheated and dangerous, and to make it convenient and easy to handle, as will hereinafter be more fully described.

A represents a circular metallic oil chamber or receptacle, which is supplied with fuel through the opening *a*. *b* is a tube fitting the opening closely, and covered by the removable cap *c*. The tube *b* extends to the bottom of the oil-chamber, the object being to prevent the flame under any circumstances from communicating with the bulk of the gas in the oil-chamber.

The wick-tube is shown at B, the wick being raised by the toothed wheels, in the usual manner.

Over the top of the toothed wheels extends the stand of frame E, Fig. 1.

F is a sleeve or jacket, made of wire gauze or perforated metal, encircling the wick-tube, and resting on the frame E. This sleeve is constructed with top and bottom plate of the same perforated metal, with slots cut through the center to fit close to the wick-tube, the diameter of the sleeve being large enough to admit sufficient air to supply the flame; the purpose of the top plate being to break the current of air, as, in passing through the sides, it has to turn a direct angle to pass through the top plate to the flame.

G is a hollow top, supported by columns N N fastened to the top of the oil-chamber and bottom of the hollow top, making the whole permanent. An opening is cut through the side and bottom of the hollow top of sufficient width to admit the plate and slide H, the slide having a place through the center for the chimney to pass. The chimney is secured to this plate by means of rivets or bolts, the object or purpose being that by raising the end of the plate the slide and chimney can be drawn out altogether without disturbing anything which may be heating on the top.

All metallic chimneys are liable to become excessively heated, so that when the light is burning they can be handled only with difficulty. The outer end of this slide is so far from the flame that it keeps cool enough to allow it and the chimney attached to be readily withdrawn whenever it may be necessary to reach the wick.

I is the chimney, in the bottom of which is fastened the cone or deflector K, by rivets or bolts, so that in removing the plate or slide the whole moves together. On one side of the chimney is an opening, L, covered with mica, so that a person can see when the flame is at a proper height, and on one side or end is an opening with a slide, M, attached, so that a match can be inserted to light the lamp without removing the whole chimney.

The cone K rests on the top of the perforated sleeve, and has a flange which projects downward and fits over the outside of the sleeve, so that no air reaches the flame except after passing through the perforated sleeve.

N N are the columns supporting the hollow top, and of sufficient height to allow a chimney over the burner, and for the purpose of leaving the top of the oil-chamber free for the air to pass over it and carry off the heat radiating from the chimney.

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

1. In an oil-stove, the chimney I, having in its base the cone or deflector K, and its top

fastened to the slide H, by which it is supported in the top G, and by which it is drawn out for cleaning or lighting the wick.

2. A coal-oil stove having the oil-receptacle A, with the top G for the cooking utensils, the two parts connected by the metal strips N N, the top G having a transverse opening, in combination with the slide H and chimney I, substantially as described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

M. H. BARNES.

Witnesses:
GEO. F. GRAHAM,
GEO. A. SAWYER.