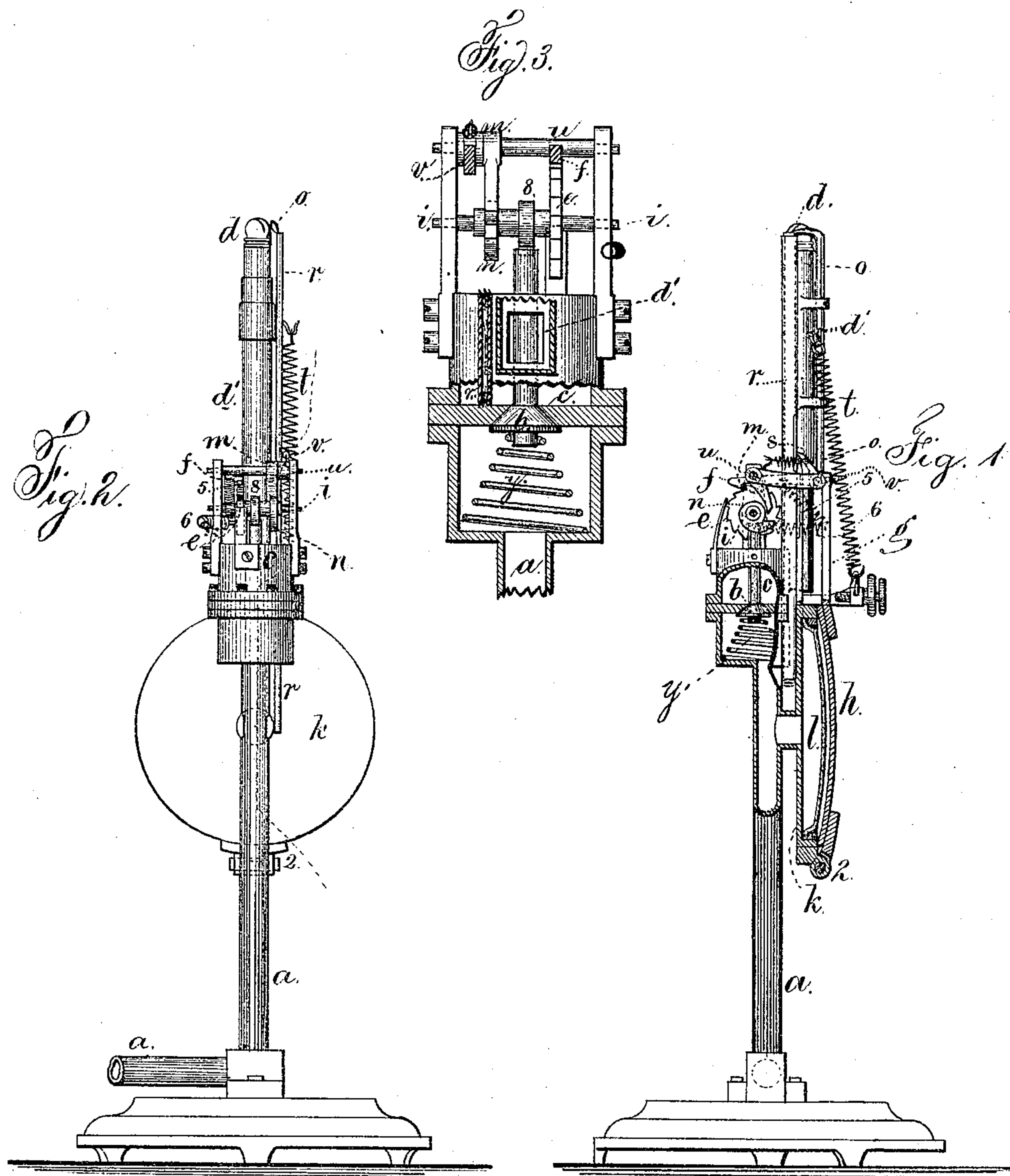


C. D. HASKINS.
Gas-Lighting Apparatus.

No. 151,588.

Patented June 2, 1874.



Witnesses

Chas. H. Smith
Geo. T. Pinckney

Inventor

Charles D. Haskins.
per Lemuel W. Perrell
att'y

UNITED STATES PATENT OFFICE.

CHARLES D. HASKINS, OF NEW YORK, N. Y.

IMPROVEMENT IN GAS-LIGHTING APPARATUS.

Specification forming part of Letters Patent No. **151,588**, dated June 2, 1874; application filed February 3, 1874.

To all whom it may concern:

Be it known that I, CHARLES D. HASKINS, of the city and State of New York, have invented an Improvement in Gas-Lighting Apparatus, of which the following is a specification:

This invention is for the purpose of moving a frictional lighting-strip out of a case contiguous to the burner end; also, moving a scratcher or frictional igniter, that is liberated and scratches the frictional lighting-strip, and sets the same on fire. The gas-supply is opened before the igniter is fired, and the motive power for giving these movements is derived from a diaphragm and its cover, that are moved by increasing and lessening the pressure of the gas itself.

In the drawing, Figure 1 is a vertical section of the apparatus. Fig. 2 is an elevation of the same. Fig. 3 is an elevation and partial section of the operative parts in larger size.

The gas is supplied by the pipe *a*, and *b* is a valve in the chamber *c*, that admits the gas to the burner *d*, or shuts the same off, according to the position of said valve *b*, the tube *d'* to the burner *d* opening at its lower end into the chamber *c*. Above the chamber *c* is a small shaft, *i*, with a ratchet-wheel, *e*, that is moved around step by step by the pawl *f*, lever-arm *g* from the diaphragm-cover *h*, that is hinged at 2 to the case *k*, and in this case *k* is the elastic diaphragm *l*; and by increasing and lessening the pressure of the illuminating-gas itself, the diaphragm and its cover will be moved and the shaft *i* turned around progressively by the ratchet and pawl. The springs 5 to the pawl *f* and the spring 6 to the arm *g* draw the pawl, to which they are connected, back to a normal position. The cam 8 on the shaft *i* operates upon the stem

of the valve to open the same, and also allows the valve to be closed by a spring, *y*, when the shaft *i* is turned for cutting off the supply to the burner. A scroll-cam, *n*, upon the shaft *i* acts upon the arm *m*, to move that progressively, and the shaft *u*, with which it turns, and in so doing the arm *v* is moved, and also the scratcher-rod *o*, that is above the end of the arm *v*. The rod *o* slides in guide-loops contiguous to a small case, *v*, containing a tape or strip of frictional igniting material. This tape is carried up at the same time by the pawl *s* upon the arm *v*, that catches into the side thereof. When the cam *n* turns past the end of the lever-arm *m*, the spring *t* draws the scratcher *o* down suddenly against the surface of the phosphorus or other frictional igniting material, and sets the same on fire, and this communicates with the gas-jet. The tape will not be consumed below the upper end of the case; hence, when again elevated, the material can be ignited as before.

When the gas is to be extinguished it is done by turning the shaft *i* by one or two pulsations of pressure upon the diaphragm, so as to relieve the valve *b* from the pressure of its cam 8, and allow the spring to close the valve.

I claim as my invention—

The diaphragm *l*, cover *h*, and lever *g*, in combination with the shaft *i*, cam 8, for opening the valve, and the cam *n*, for moving the frictional igniting-tape and scratcher or igniter contiguous to the gas-burner, substantially as set forth.

Signed by me this 27th day of January, A. D. 1874.

CHAS. D. HASKINS.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.