2 Sheets--Sheet 1.

J. H. BOTTENBERG.

Apparatus for the Manufacture of Lamp-Black.

No. 153,234. Patented July 21, 1874.

Fig. 1.

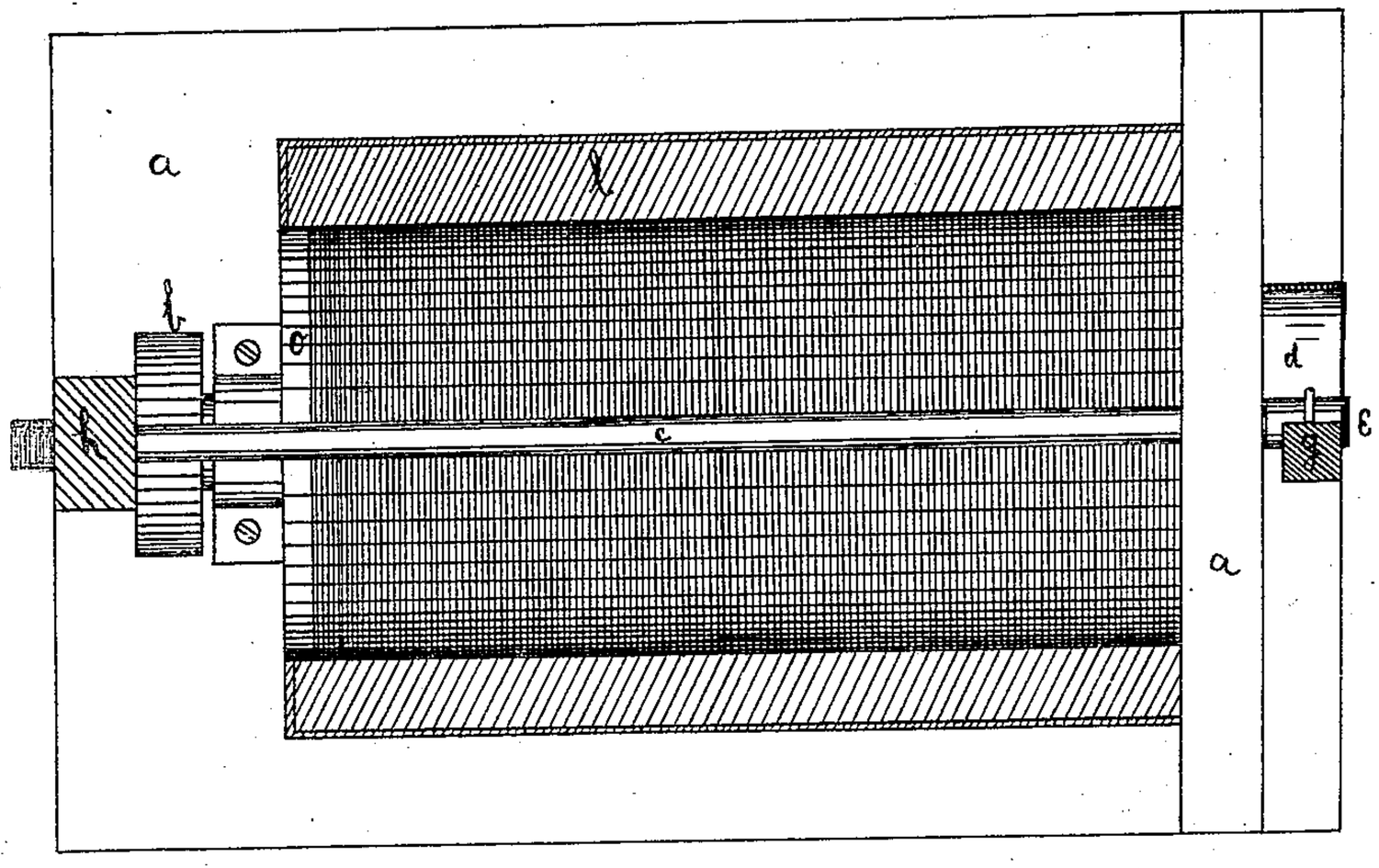
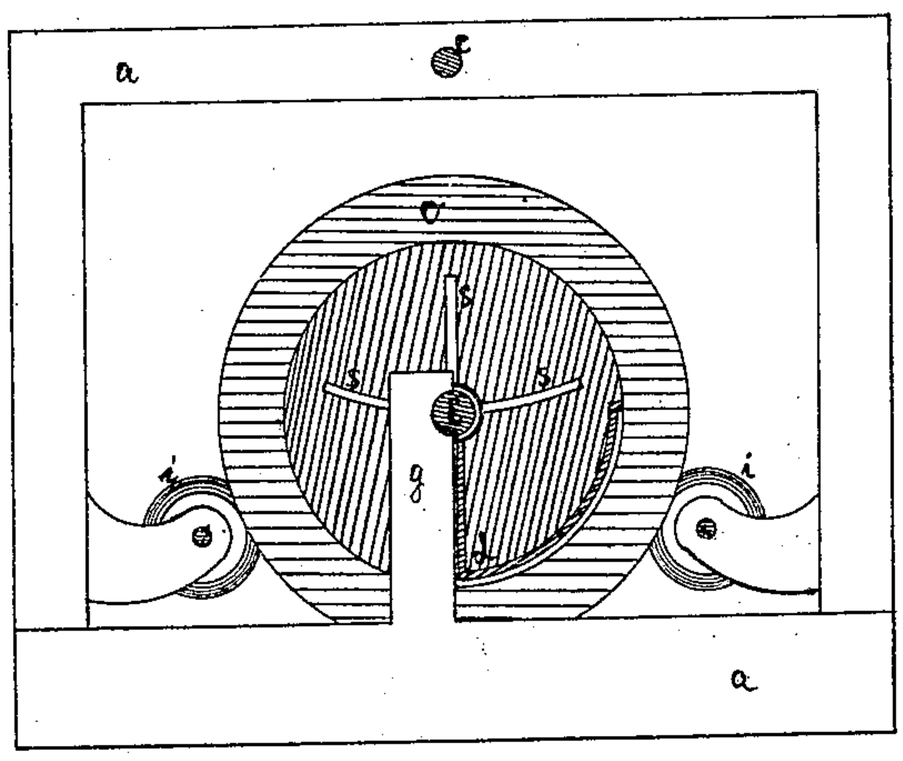


Fig. 2.



Witnesses
George F. Dawson
A. B. Griffin

Inventor.
Jacob H. Bottenberg.
by Bradford Howland
his Attorney.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

2 Sheets--Sheet 2.

J. H. BOTTENBERG.

Apparatus for the Manufacture of Lamp-Black.

No. 153,234. Patented July 21, 1874.

Fig. 3.

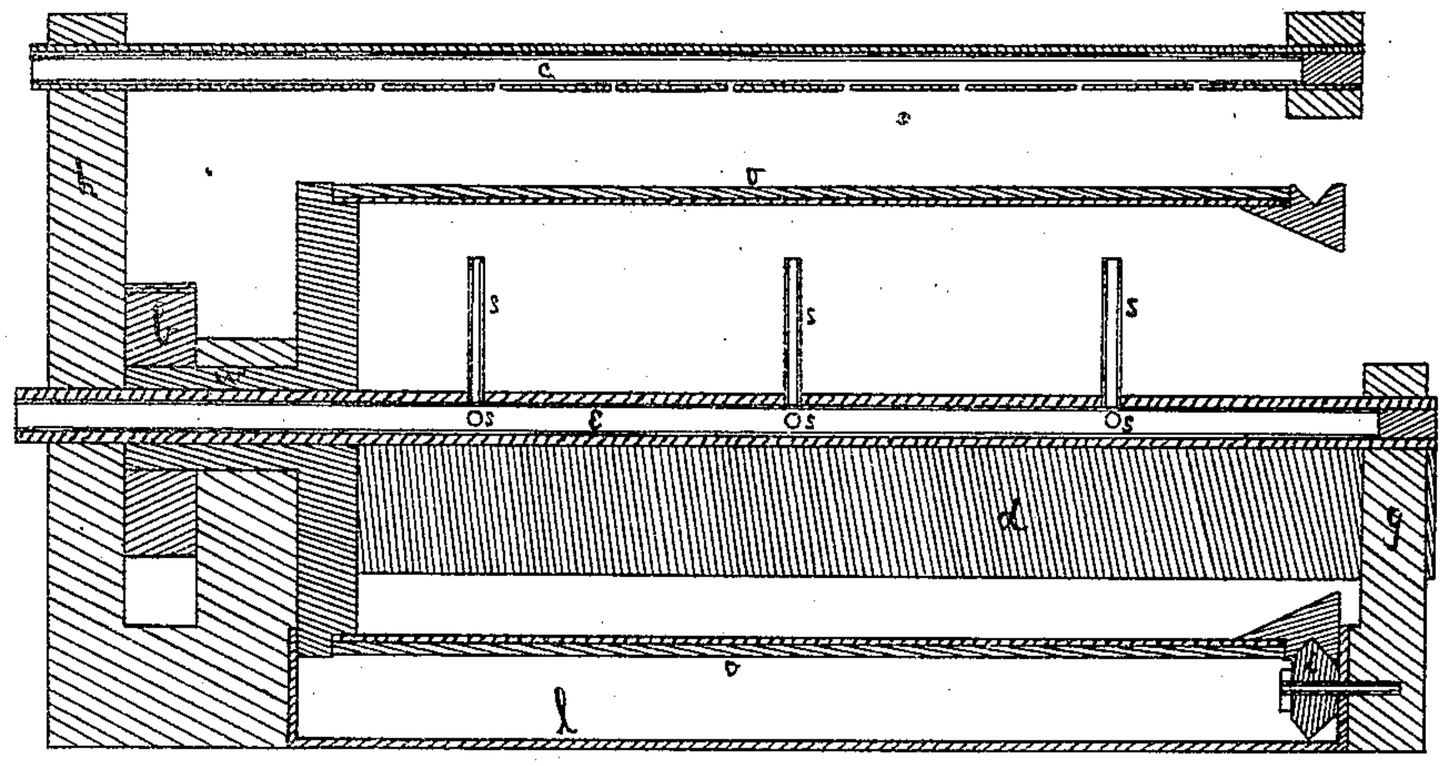
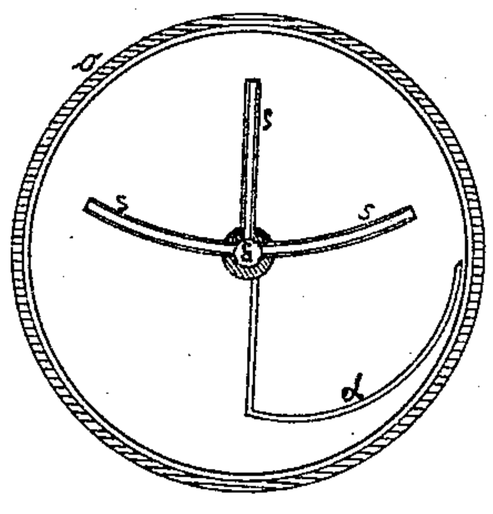


Fig. 4.



Witnesses.
George F. Lowry
A. B. Griffin

Inventor.
Jacob H. Bottenberg
by Bradford Howland
his Attorney.

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

JACOB H. BOTTENBERG, OF RAVENNA, OHIO, ASSIGNOR OF ONE-HALF HIS RIGHT TO ISAIAH LINTON, OF SAME PLACE.

IMPROVEMENT IN APPARATUS FOR THE MANUFACTURE OF LAMP-BLACK.

Specification forming part of Letters Patent No. **153,234**, dated July 21, 1874; application filed May 29, 1874.

To all whom it may concern:

Be it known that I, JACOB H. BOTTENBERG, of Ravenna, Portage county, Ohio, have invented certain Improvements in Machines for Manufacturing Carbon-Black, of which the following is a specification:

The nature and object of this invention is the manufacture and collection of carbon-black by burning gas in a revolving cylinder, from which the carbon-black is automatically scraped off or gathered at each revolution of the cylinder.

The accompanying two sheets of drawings form part of this specification.

Figure 1 is a top view of the machine. Fig. 2 is an end view of the machine. Fig. 3 is a longitudinal section of the machine. Fig. 4 is a cross-section of the cylinder *o*.

A is the frame of the machine. *g* and *h* are parts of the frame, in which the tube *e* rests. The cylinder *o* is made of metal, and it may be of any other non-combustible material, and it is covered with cloth. It may be covered with any material which will easily absorb water. One end, *w*, of the cylinder is sustained by and, turns on, the tube *e*, and the other end is supported by, and turns on, the small wheels *i i i*. One end of tube *e* is closed, and the other end open. In this tube, which passes lengthwise through the center of the cylinder, the gas-burners *s s s* are inserted. At the bottom of tube *e* is attached the scraper *d*, which scrapes off and holds the carbon-black deposited by the burners *s s s* on the inside of cylinder *o*. The bottom of the water-pipe *c* is perforated with holes, through which water falls on the revolving cylinder *o*, to keep it cool. The vessel *l* at the bottom of the cylinder, and through which the cylinder turns, also contains water to aid in keeping the cylinder from overheating. The driving-pulley *b* is attached to the small end *w* of the cylinder.

The machine is operated as follows: The gas is permitted to enter the tube *e*, from which it passes into the burners *s s s*, which are lighted. The cylinder *o* is slowly turned, and the carbon-black deposited on the surface of the inside of the cylinder is scraped off as the cylinder revolves by the stationary scraper *d*, in which it is allowed to accumulate, and at proper intervals is scraped or drawn out. Water is allowed to enter the water-pipe *c*, from which it passes through small holes in the pipe onto the cloth covering of the cylinder *o*, to keep the cylinder from heating so as to injure the carbon-black deposited on it. The vessel *l* contains water for the same purpose.

Any convenient number of burners may be used, depending on the size of cylinder *o*. As the cylinder revolves with a uniform motion, no part of its surface is subjected to the heat of the burners except while passing the burners, and as the carbon-black is scraped off by the scraper *d* at each revolution, it is not exposed to heat from the burners a second time; therefore the carbon-black is of a uniform quality, and uninjured by overheating after being deposited.

When scraped off it accumulates in the bottom of the scraper *d*, which being below the burners the carbon-black is not then exposed to heat.

I claim as my invention—

1. The combination of the burners *s s s* and scraper *d* with the interior surface of the revolving cylinder *o*, substantially as and for the purpose herein set forth.

2. The combination of the perforated water-pipe *c* with the revolving cylinder *o*, substantially as and for the purpose herein set forth.

JACOB H. BOTTENBERG.

Witnesses:

GEORGE F. ROBINSON,

BRADFORD HOWLAND.