

(No Model.)

2 Sheets—Sheet 1.

E. R. BLOOD.
LAMPBLACK MACHINE.

No. 480,990.

Patented Aug. 16, 1892.

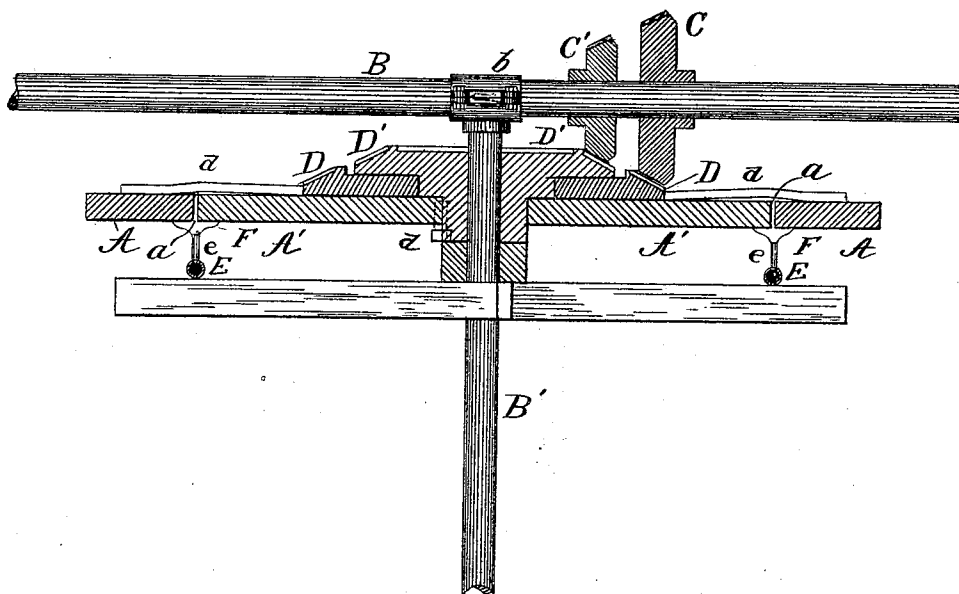


Fig. 1.

WITNESSES.

Franklin Moore
R. G. Amies.

E. R. Blood

INVENTOR.

J. Haller & Haller.
Attys.

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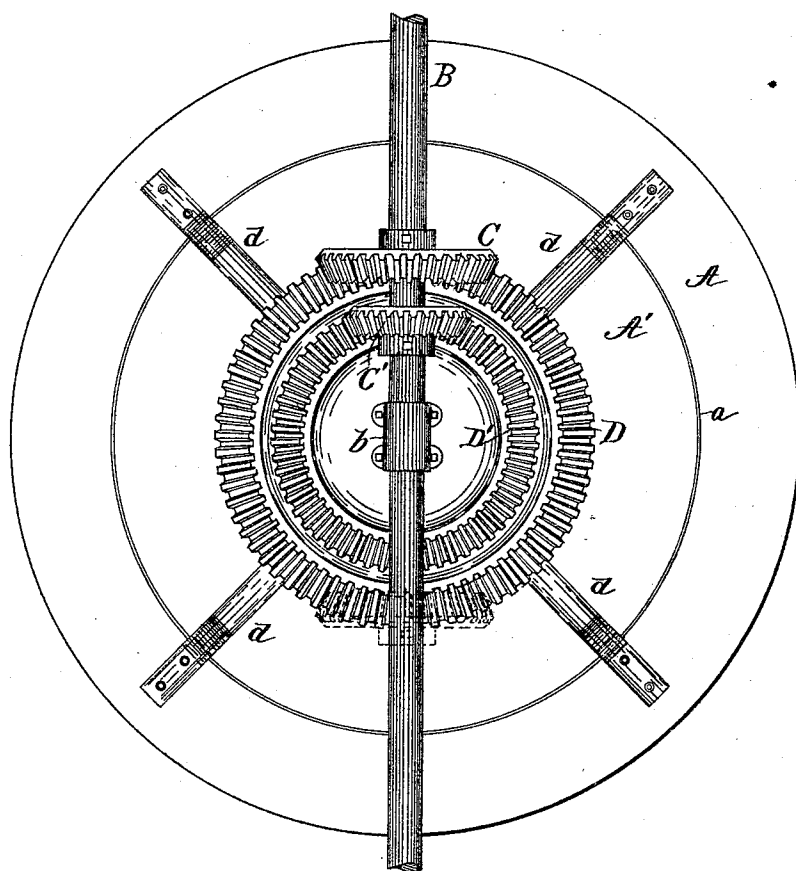


Fig. 2.

E. R. Blood.

INVENTOR.

WITNESSES.

Franklin Moore
R. L. Ames.

by Hallock & Hallack
Attys.

UNITED STATES PATENT OFFICE.

ERASTUS R. BLOOD, OF KANE, PENNSYLVANIA, ASSIGNOR TO MARTHA P. BLOOD, OF SAME PLACE.

LAMP-BLACK MACHINE.

SPECIFICATION forming part of Letters Patent No. 480,990, dated August 16, 1892.

Application filed October 28, 1891. Serial No. 410,116. (No model.)

To all whom it may concern:

Be it known that I, ERASTUS R. BLOOD, a citizen of the United States, residing at Kane, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Lamp-Black Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to machines for making lamp-black from a gas-flame; and it consists in certain improvements in the construction thereof, as will be hereinafter fully described, and pointed out in the claims.

My invention is illustrated in the accompanying drawings, as follows:

Figure 1 is a vertical sectional view taken in the plane of the shaft B. Fig. 2 is a top plan view.

The construction, as represented, is as follows:

A A' mark the depositing-plates, of which there are two, which are circular and concentrically mounted on a common central post B'. These plates lie in a common horizontal plane, as shown, and their contiguous edges do not meet, but are slightly separated, so as to form a narrow vent or opening *a* between them. The plate A is connected by arms *d* with a beveled gear D, and the plate A' is connected with a beveled gear D'. On the shaft B, which is journaled in the box *b* on the top of the post B', there are beveled pinions C and C', which respectively mesh with the gears D and D'. The arrangement of this gearing is such that the two plates will move at different speeds as the shaft B is revolved, and, if desired, by placing the pinion C as shown by dotted lines in Fig. 2 the plates may be moved in opposite directions. The essential thing in this respect is that the two plates shall have different movements either in direction or in speed, so if they move in different directions they may move at the same speed, if desired; but if they move in the same direction they should move at dif-

ferent speeds. The object of this will appear later on.

E are the gas-supply pipes, *e* the gas-burners, and F the gas-flames. It will be seen that the gas-flames impinge upon the plates at their point of meeting—that is, immediately below the opening *a*—so that part of the flame impinges on one plate and part on the other. The object of thus adjusting the flames directly below the vent or opening *a* is to allow the non-carbonaceous gas which forms the blue central core of a flame to escape through the vent *a* while the yellow outside part of the flame, which is carbonaceous, impinges upon the plates.

In the practice of this process it is necessary that the vent or opening *a* be kept open, and heretofore a cleaner has been moved through it at intervals.

I have found that the vent *a* can be kept open best by moving the two plates either in opposite directions or at different speeds, in which case no cleaning device is required, because the vent will not become clogged at all, as the differential movement of the plates, whether they be circular in form, as shown, or otherwise, will prevent lamp-black from accumulating in the vent-opening *a*.

The means for removing the lamp-black from the plates forms no part of this invention and is not illustrated.

What I claim as new is—

1. In a lamp-black machine, the combination, with the plates A and A', arranged substantially as shown, with an opening *a* between their contiguous edges, and a gas-burner arranged to impinge its flame upon said plates on opposite sides of said opening, of means, substantially as shown, for moving said plates in a common horizontal plane over said flame differentially, whereby the said opening will be kept clear of lamp-black, as set forth.

2. In a lamp-black machine, the combination, with the circular concentric plates A and A', arranged substantially as shown, with an opening *a* between their contiguous edges, and a gas-burner arranged to impinge its flame upon said plates on opposite sides of

said opening, of means, substantially as shown,
for moving said plates in a common horizontal
plane over said flame differentially, whereby
the said opening will be kept clear of lamp-
5 black, as set forth.

3. In a lamp-black machine, the combina-
tion of the burners e , the circular concentric
plates $A A'$, arranged in a common horizontal
plane and having an opening a between them
10 directly over said burners, and the gearing

$C D$ and $C' D'$ for moving said plates rota-
tively and differentially, substantially as set
forth.

In testimony whereof I affix my signature in
presence of two witnesses.

ERASTUS R. BLOOD.

Witnesses:

N. M. ORR,

FRANK D. EVANS.