(No Model.) 2 Sheets—Sheet 1.

J. E. JAMES.

LAMPBLACK OR CARBON BLACK MACHINE.

No. 521,797. Patented June 26, 1894.

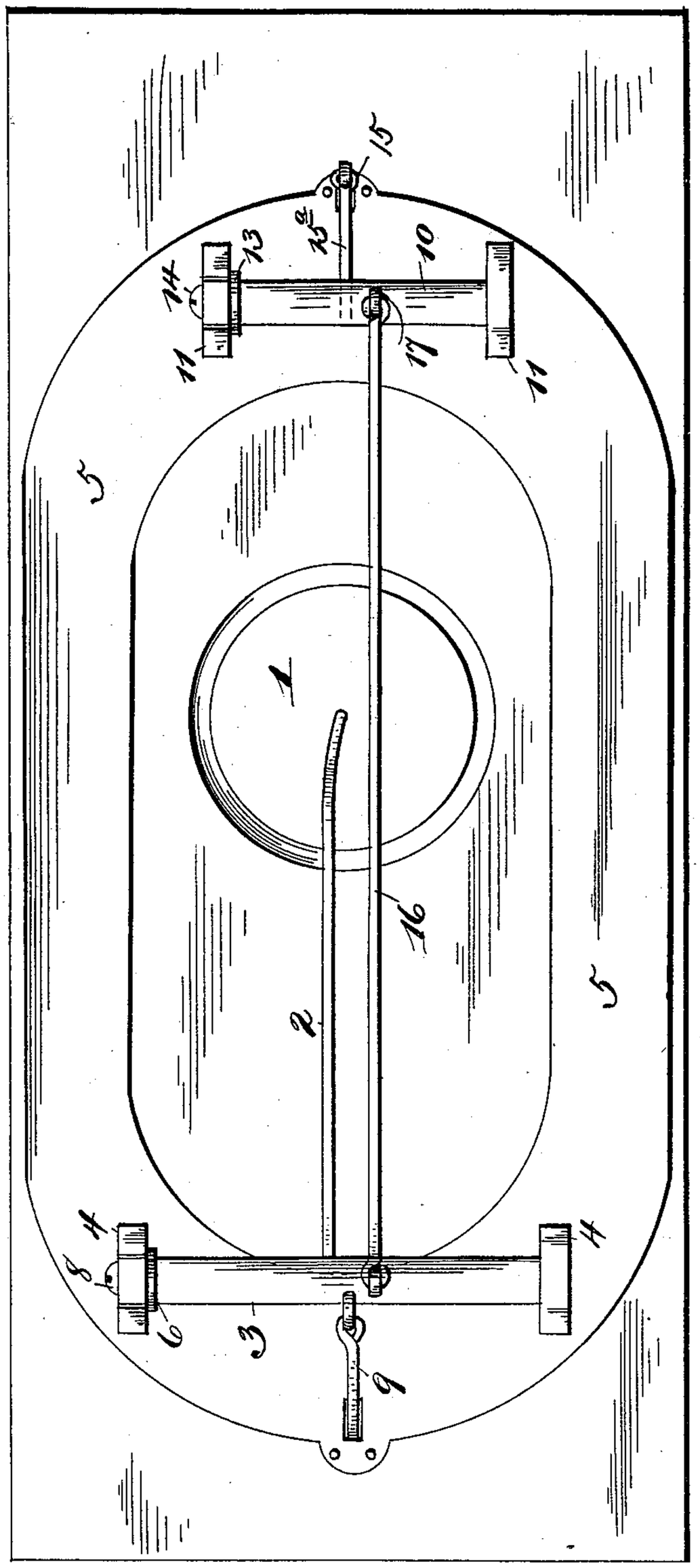

Fig. 1.

Witnesses:-
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J. H. Wilson.

Inventor:-
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By H. G. Wilson
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THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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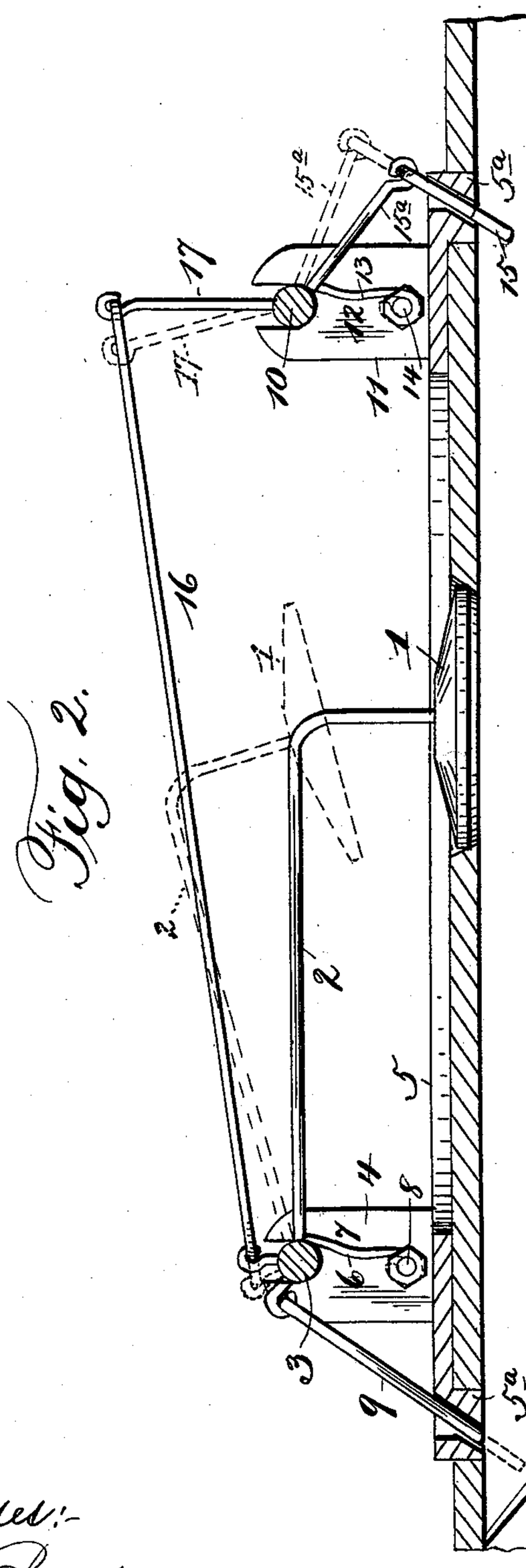

Fig. 2.

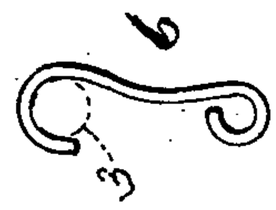

Fig. 3.

Witnesses:-
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Inventor:
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THE NATIONAL LITHOGRAPHING COMPANY,
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UNITED STATES PATENT OFFICE.

JOHN E. JAMES, OF WORTHINGTON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO JOHN M. WILLIAMS, OF SAME PLACE.

LAMPBLACK OR CARBON-BLACK MACHINE.

SPECIFICATION forming part of Letters Patent No. 521,797, dated June 26, 1894.

Application filed March 23, 1894. Serial No. 504,771. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. JAMES, a citizen of the United States, residing at Worthington, in the county of Armstrong and State of Pennsylvania, have invented certain new and useful Improvements in Carbon-Black or Lampblack Machines; and I do 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.

My invention relates to improvements in carbon-black or lamp-black machines, and it has for its object to prevent the loss or escape of the lamp-black or carbon-black *via* the hot air vent-opening or openings, as also to prevent the liability of the clogging or closing of the hot air vent-opening or openings, and to these ends the invention consists primarily of a damper or valve adapted to close the hot air vent-opening just previous to the scraper, brush, or other device, used to remove the lamp or carbon black, passing said opening, and to open said damper or valve just after passing said opening; and of actuating said valve or damper by means of said scraper, brush or other device, and certain other details as relates to the construction and arrangement of the parts, substantially as hereinafter more fully disclosed and pointed out in the claims. In this class of machines, as the hot air vent-openings, as heretofore constructed, had no provision to stop off the draft relative to the movement of the brush, scraper or other device for removing the carbon black or lamp-black, the latter would naturally more or less escape through said openings as it was removed, upon the brush or scraper passing said openings, and, furthermore, the hot air vent-openings were, as heretofore constructed, of such a character that they were liable to become clogged or closed by the lamp-black or carbon-black and thus interfere with the correct and thorough working of the machine. By means of my invention these drawbacks are all overcome.

Figure 1 is a plan view showing my invention as applied for use. Fig. 2 is a longitudinal section thereof with the ordinary lamp-black or carbon-black scraper in position. Fig. 3 is an enlarged detail view showing friction or tension device.

In carrying out my invention, I provide the hot air vent-openings of the lamp-black or carbon black machine, each, with a valve or damper, 1, having its stem or rod, 2, in the present instance, after extending upward vertically a short distance, extended the greater portion of its length horizontally and keyed into or otherwise secured in a rock-shaft, 3, suitably trunnioned or journaled in bearings, 4, preferably cast with a frame or base plate, 5, preferably secured to the plate of the lamp-black or carbon-black machine, by pendent studs, 5^a, thereon, keyed into corresponding openings in said plate. The rock-shaft, 3, has hooked over one of its journals the hooked end of the hook or latch, 6, of a retaining or friction device, 7, pivoted at its opposite end upon a screw-bolt, 8, passing through the respective bearing and having one end headed and a nut upon its other end, to put said rock-shaft under sufficient friction or tension to effect the automatic holding of the damper or valve raised when elevated for the escape of the hot air. The rock-shaft, 3, has loosely connected or jointed thereto an arm, 9, extending downward and outward therefrom through the base plate, 5, and the plate of the machine, with its lower end arranged or depending in the path of the brush or scraper 5^a used for removing the carbon-black or lamp-black as well understood. Upon the opposite end of the base-plate, 5, is arranged a second rock-shaft, 10, similarly supported or journaled in bearings, 11, preferably cast with said base-plate said rock-shaft also having applied thereto a like retaining or friction device, 12, comprising a hook or latch, 13, engaging one of its journals and pivoted upon a screw-bolt, 14, in all other details being the same as that before described. Similarly connected to an arm 15^a extending downward and outward from the rock-shaft, 10, is an arm 15 extending through the base-plate, 5, and the plate of the machine, and also standing in the path of the scraper or brush aforesaid. To provide for the actuation of the aforesaid rock-shaft, 3, and the valve or damper, 1, through the engagement of the scraper or

brush with the arm, 15, connection is made between the two rock-shafts by means of a connecting rod or pitman, 16, having one end connected or jointed to a short radial arm, 17, fixed to the rock-shaft, 10, and its other end jointed to the rock-shaft, 3. It will be seen that (the valve or damper being in a raised position as seen in dotted lines Fig. 2 to permit the escape of the hot air through the vent-opening) the scraper or brush just previous to passing said vent-opening will engage the nearer arm, 9, and accordingly close the valve or damper, and that, as the scraper, after passing said vent opening, engages the other arm, 15, the valve or damper will be opened and thus keep the valve normally open and permit the escape of the collected air and close the valve against the escape or forcing out thereat of a great amount of lamp-black or carbon-black that would otherwise take place. It is also obvious that the closing of the valve or damper at every revolution of the lights or plate will prevent the clogging and eventual closing of the vent opening as experienced in the old method of providing for the escape of the hot or collected air.

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

1. In a lamp-black or carbon-black machine, the combination of the collecting plate, having an air-vent opening, a valve or damper for governing said opening and means controlled by the scraper or brush for automatically raising said valve or damper, substantially as described.

2. In a lamp-black or carbon-black machine, the combination of the collecting plate having an air-vent opening, a valve or damper for governing said opening, and means controlled by the scraper for automatically raising said valve and means also controlled by said scraper or brush for automatically lowering said valve or damper, substantially as set forth.

3. The combination of the collecting plate a valve or damper for the vent opening therein, a rock-shaft connected to said damper or valve, and an arm connected to said rock-shaft and depending through the plate of a lamp-black or carbon-black machine, and means for actuating said arm, substantially as set forth.

4. The combination of the collecting plate a valve or damper for the vent opening therein, rock-shafts connected together and one carrying said valve or damper, and arms, one connected to each rock-shaft and depending in the path of the scraper, brush or other device for removing the lamp-black or carbon-black deposits, substantially as set forth.

5. In a valve or damper actuating device, the combination, with the collecting plate and rock-shaft carrying the valve or damper for the vent opening in said plate, of the friction retaining device, having a pivoted hook or latch hooked over the journal of the said shaft and means for operating the damper, substantially as set forth.

6. In a valve or damper actuating device, the combination, with the collecting plate hava vent-opening, of the base having the studs, 5^a, entering openings in the said plate, and the arms, 9 and 15, of said damper actuating mechanism, passing through said studs, and means for operating the damper, substantially as set forth.

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

JOHN E. JAMES.

Witnesses:

CHAS. MORRISON,

BEN CROFT.