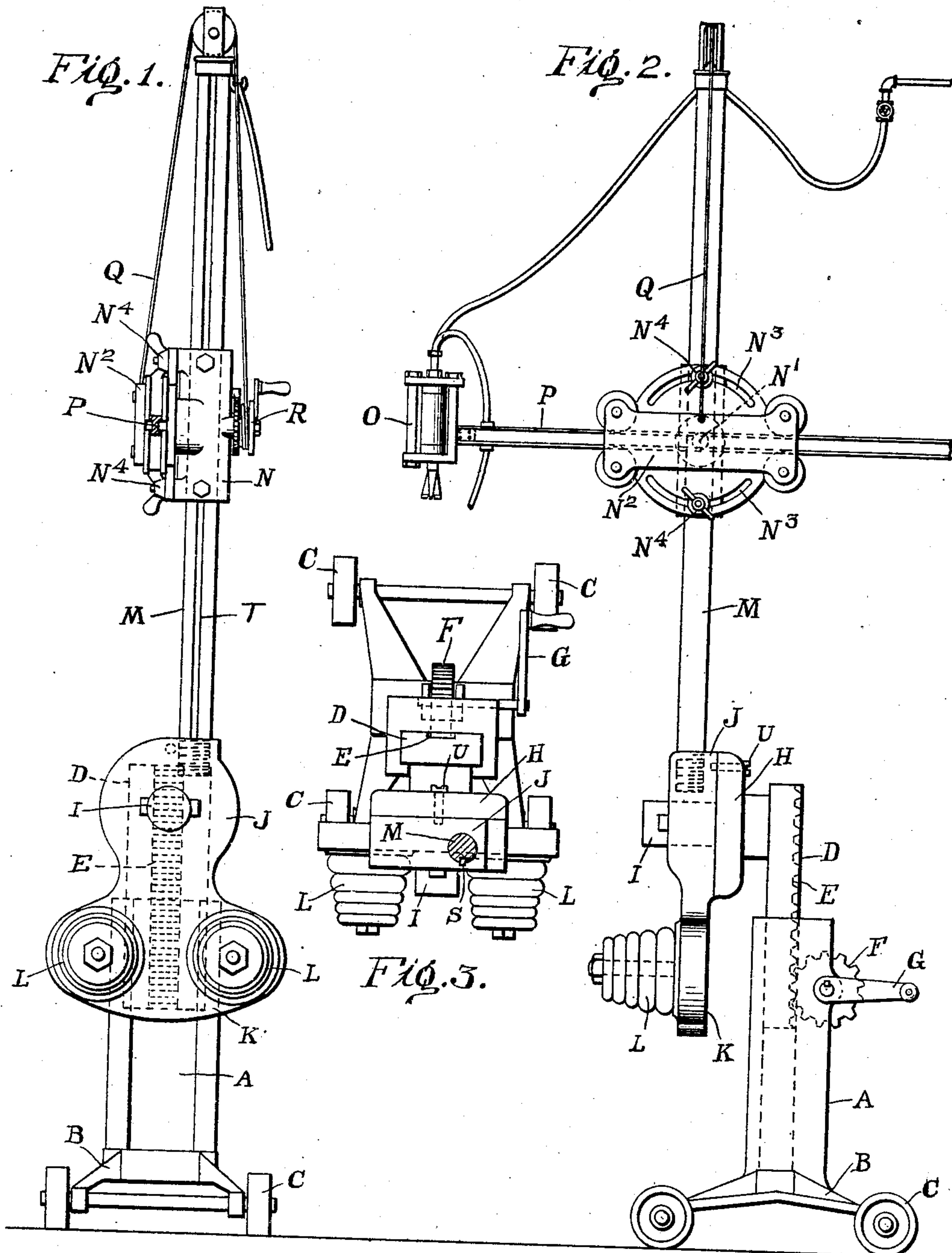


No. 827,960.

PATENTED AUG. 7, 1906.

F. CARMAN.
STONE DRESSING MACHINE.
APPLICATION FILED AUG. 17, 1905.



WITNESSES:

D. Webster, Jr.

J. Williamson

INVENTOR

Florence Carman

By *W. Truman Williamson*
Attorney

UNITED STATES PATENT OFFICE.

FLORENCE CARMAN, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR OF
ONE-HALF TO JACOB M. BYE, OF PHILADELPHIA, PENNSYLVANIA.

STONE-DRESSING MACHINE.

No. 827,960.

Specification of Letters Patent.

Patented Aug. 7, 1906.

Application filed August 17, 1905. Serial No. 274,567.

To all whom it may concern:

Be it known that I, FLORENCE CARMAN, a citizen of the United States, residing at Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented a certain new and useful Improvement in Stone-Dressing Machines, of which the following is a specification.

My invention relates to a new and useful improvement in stone-dressing machines, and has for its object to so construct such a machine as to adapt it not only for surfacing or scaling stone and other substances or matter, but also to adapt it for cutting columns or circular surfaces, either cylindrical or tapering.

With these ends in view my invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which my invention appertains may fully understand how to make and use the same, its construction and operation will now be described in detail, referring to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an elevation of a machine made in accordance with my improvement; Fig. 2, a similar view at right angle to Fig. 1; Fig. 3, a plan view, the mast being in section.

In carrying out my invention as here embodied A represents a housing which may be mounted on a suitable base B, provided with truck-wheels.

D is a standard adapted to slide vertically in the housing A, and this standard has a rack E formed thereon, with which meshes gear F, which gear may be revolved by the crank G for raising or lowering the standard, as will be readily understood. A head H is formed with or secured to the standard D, and from this head projects a stud I, upon which is pivoted a swinging block J. The lower end of this block is enlarged, as indicated at K, and provided with a series of weights L, for the purpose hereinafter set forth.

M is a mast extending upward from the block J, and on this mast is mounted a head N, so as to slide vertically thereon. Any suitable means, such as the key S, running in a groove T, formed in the mast, may be utilized for preventing the rotation of the head around the mast. From this projects a stud

N', upon which the cross-head N² is pivoted, the latter being provided with the segmental slots N³, through which the set-bolts N⁴ are passed, thus forming the adjustment of the cross-head around the stud N', for the purpose hereinafter set forth.

O is the tool, operating pneumatically or otherwise and carried upon the outer end of the rod P, which latter is adapted to slide to and fro through the cross-head N², which, in conjunction with the rotary movement of the head around the mast, gives to the tool a universal movement in any given plane. Suitable mechanism, such as the cable Q and windlass R, may be used for adjusting the head and cross-head to any desired height on the mast, whereby the tool is adjusted to operate in various planes.

When my improved apparatus is to be used for dressing the surface of stone in a plane, the head is adjusted so that the tool will be at the right height to properly operate upon the surface, the cross-head being adjusted to a horizontal position, and when said tool is in operation the cross-head is swung around the mast and the rod P is moved in and out of the cross-head, so as to bring the tool into contact with all parts of the surface being operated upon.

When the apparatus is to be used for dressing columns or circular work, the key S is inserted in the head so as to run in the groove T, formed in the mast, thus locking the head against rotary motion, but permitting it to be adjusted vertically on the mast. The column to be operated upon is placed in any convenient position and the standard D adjusted up or down by the proper operation of the crank G, so as to bring the center of the stud I in registry with the center of the column, after which the head N is adjusted so as to bring the tool into contact with the work, and when said tool is put into operation the swinging block J will carry the tool around the column in a circle corresponding to the radius of the column, and by the movement of the rod P through the cross-head said tool may be brought into contact with every portion of the surface of the column for properly dressing the same. After the column has been dressed to the extent that is practical to swing the mast the column may be turned so as to bring a new portion of this surface within the field of operation of

the tool, care being taken to see that the center of the stud I is maintained upon the center or axis of the column.

When tapering or conical work is to be operated upon, the cross-head N^2 is adjusted to the desired degree from the horizontal and securely locked in this position by means of the set-bolts N^4 , after which any inward or outward movement of the tool will cause it to travel on an incline, and the swinging of the mast to carry the tool around the work, as just described, will produce a tapering column or cone.

A lock-screw U is provided for locking the block J against any movement of the stud I when flat work is being operated upon and releasing the block in order that it may swing on the stud when circular work is being operated upon.

Any suitable means may be used for locking the gear F against rotary motion, so as to hold the standard D in any position in which it may have been adjusted, or means may be used for clamping the standard in any adjustment.

One of the important features of my improvement is that when working upon circular, column, or conical work the hammer always strikes a square blow—that is to say, the reciprocation of the hammer is always upon the line of the radius of the column or of the work where the hammer comes in contact therewith—which prevents fluting or scalloping the surface acted upon, thereby greatly facilitating the operation of the apparatus.

Having thus fully described my invention, what I claim as new and useful is—

1. In a stone-dressing machine, the combination of a suitable base and housing carried by said base, a standard adapted to be adjusted vertically within said housing, a head secured to or formed with the standard, a block mounted upon the head so as to be swung, means for holding said block against this swinging movement, a mast carried by the block and cross-head adapted to slide vertically upon said mast and be rotated around the same, means for holding said cross-head against the last-named swinging movement, a tool-rod supported by the cross-head, free to move to and fro and a tool carried by the rod, as and for the purpose set forth.

2. In combination with a pneumatic tool

and a mast supporting and permitting the free movements of said tool, a block to which said mast is attached, a head to which said block is pivoted whereby the tool may be swung in a circle for dressing surfaces, means for holding said block stationary to the head and means for adjusting the head so as to make the center of the swinging movement of the tool coincide with the center of the work to be performed as specified.

3. In a stone-dressing machine, the combination of a tool, means for adjusting the same vertically and permitting a universal movement thereof for access to all portions of a plane within certain limits, means for swinging the tool through an arc, and means for adjusting the center of the swinging point of the tool to correspond with the center of the work to be operated upon, as specified.

4. In a stone-dressing machine, a base and housing supported thereby, a standard adapted to slide vertically within said housing, a head carried by the standard, a block pivoted upon said head, a mast carried by the block, a cross-head carried by the mast, a rod carried by the cross-head, a tool carried by the rod and a weight carried by the block so as to counterbalance the mast and parts carried thereby as specified.

5. In combination with a mast adapted to be swung from a center, means for adjusting the height of said center and a head fitted to slide upon the mast and adapted to rotate thereon, means such as a key whereby the head may be locked against this rotary movement, a cross-head pivoted to said head, means for adjusting and holding said cross-head at various angles, a tool-rod adapted to slide to and fro through the cross-head and a tool carried by said rod for the purpose specified.

6. In a stone-finishing machine, the combination of a carriage for stone-cutting tools movable longitudinally with respect to its work, and means for supporting the carriage to swing in curves transversely with respect to its work.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses.

FLORENCE CARMAN.

Witnesses:

MARY E. HAMER,
R. SIEGFRIED.