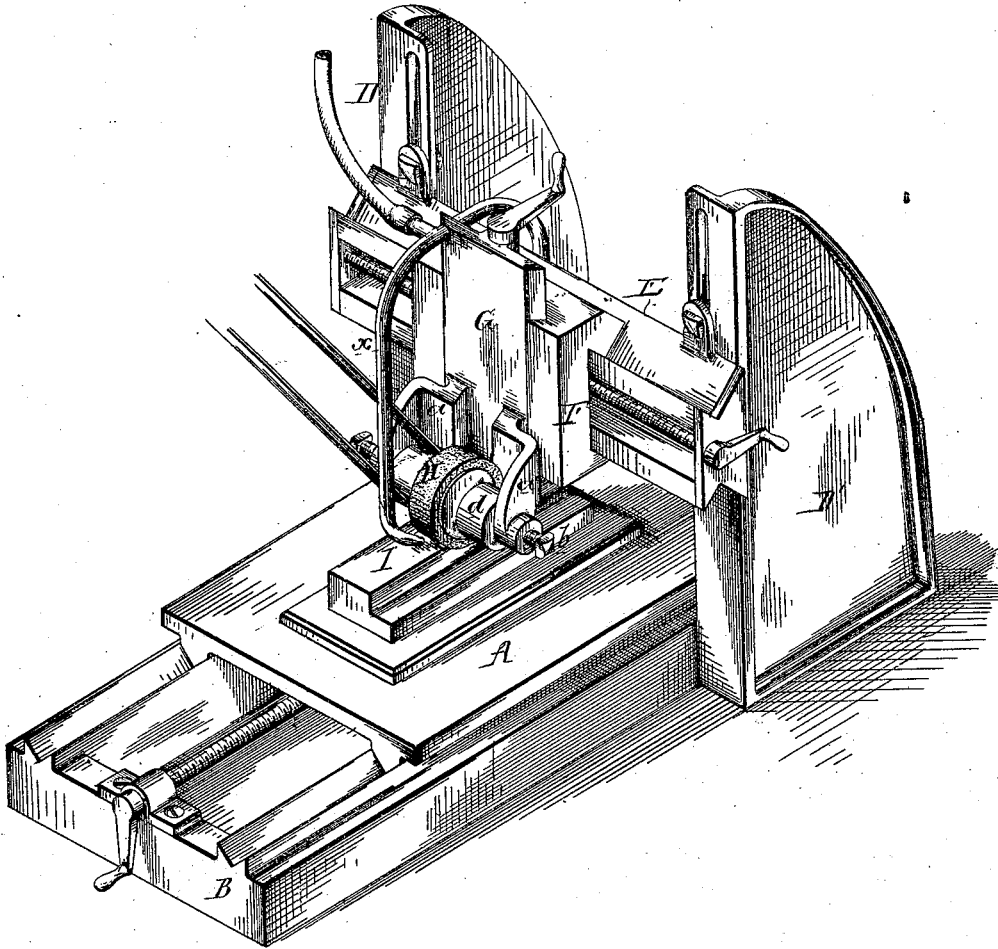


J. M. POOLE.
SURFACING STONE.

No. 194,879.

Patented Sept. 4, 1877.



Witnesses,
Harry Lawson Jr.
Harry Smith

Inventor.
J. Morton Poole
by his Attorneys
Howson and son

UNITED STATES PATENT OFFICE.

J. MORTON POOLE, OF WILMINGTON, DELAWARE.

IMPROVEMENT IN SURFACING STONE.

Specification forming part of Letters Patent No. 194,879, dated September 4, 1877; application filed February 25, 1876.

To all whom it may concern:

Be it known that I, J. MORTON POOLE, of Wilmington, Delaware, have invented a Machine for Surfacing Stone, of which the following is a specification:

The object of my invention is to construct a machine for surfacing marble and other stone by means of an emery or corundum wheel and a reciprocating bed, so that by the aid of a jet or jets of water, as described hereinafter, the surface of the marble will have acquired such a finish as to require but little subsequent polishing.

As illustrated in the accompanying drawing, the frame-work of the machine is constructed like an ordinary metal-planing machine, A being the reciprocating bed adapted to ways in the base B, D, and D', the opposite frames carrying the vertically-adjustable cross-head E, to which is adapted the horizontally-adjustable slide F, having the vertical slide G, on which are two projections, *a a'*, each of the latter having a set-screw, *b*.

The points of the two screws carry a spindle, *d*, to which is secured the cutting-wheel H, the latter being caused to revolve at a high velocity, in the present instance, by a belt passing round a pulley on the spindle.

A pipe, *x*, for supplying jets of water on each side of the cutting-wheel, projects down on each side of the cross-head E. One jet of water, however, will suffice in some instances.

For operating on comparatively soft stones, the cutting-wheel may consist of the composition known as "vulcanite emery," or granulated quartz may enter into the composition of the wheel; but for stones of harder kinds the wheel should be composed of granulated corundum, incorporated and intimately mixed with any solidifying substances of such character that the composition will constitute a cohesive mass, capable of resisting the action of water, and so retaining the particles of corundum that the latter are presented in the condition of a multitude of small cutters adhering to and partly projecting from the wheel.

The slab I, of marble or other stone, having been secured to the bed A, and the slide G

adjusted in accordance with the depth of the cut to be made, the cutting-wheel is caused to revolve at a high velocity, while the bed A moves slowly. After one cut has been made by the periphery of the wheel, the slide D is adjusted laterally, so as to bring the said wheel in a proper position for making a second cut, after which the bed is reversed, the wheel continuing to revolve in the same direction, and this reciprocation of the bed and lateral adjustment of the wheel are continued until the stone has been reduced to the desired surface.

It is essential that a plentiful supply of water should be directed, preferably at both the front and rear of the wheel, to that part of the periphery of the same which acts on the stone—hence the pipes *x*, which terminate in nozzles turned in the proper direction, and which are carried by the slide G, so that whatever may be the position of the wheel, as determined by the adjustment of the slides, the jets of water will always be directed to the proper points.

I do not desire to claim, broadly, the combination of a reciprocating bed with a rotating grinding-wheel admitting of both lateral and vertical adjustment; nor do I claim, broadly, the conveying of water to a grinding or polishing wheel; but

I claim as my invention—

A stone-facing machine in which are combined the following elements, namely, a reciprocating bed to which the stone is secured, a corundum or emery wheel, the slides F and G carrying the said wheel, and a pipe or pipes, *x*, carried by the said slide G, and terminating in a nozzle or nozzles directed to that portion of the periphery of the wheel which acts on the stone, all substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

J. MORTON POOLE.

Witnesses:

GEO. H. MURPHEY,
SAML. MURPHEY, Jr.