2 Sheets--Sheet 1.

A. F. DAVIS.

Machines for Finishing Stone.

No. 134,197. Patented Dec. 24, 1872.

Fig. 1.

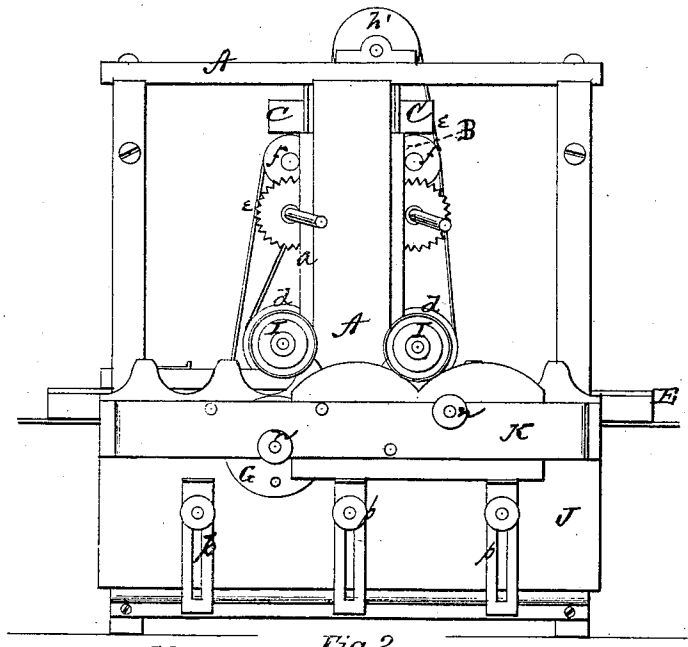
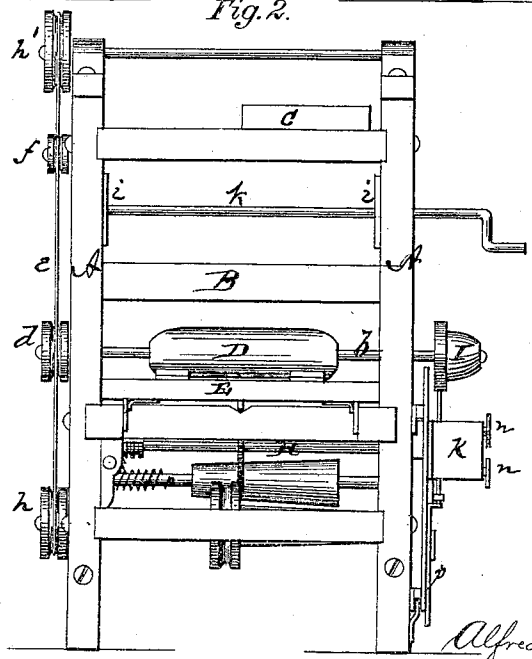


Fig. 2.



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2 Sheets--Sheet 2.

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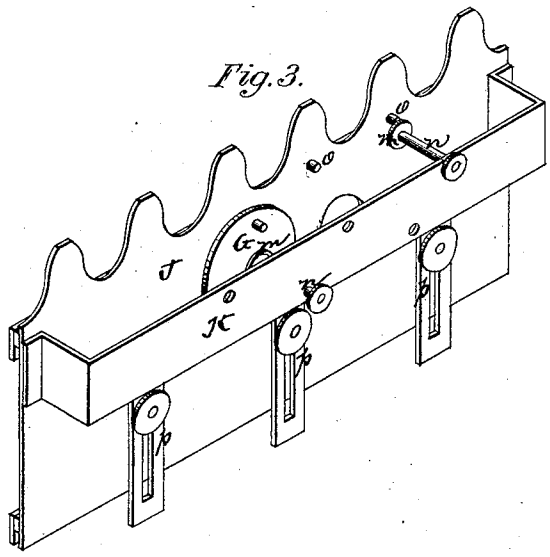
Fig. 3.



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UNITED STATES PATENT OFFICE.

ALBERT F. DAVIS, OF RUTLAND, VERMONT.

IMPROVEMENT IN MACHINES FOR FINISHING STONE.

Specification forming part of Letters Patent No. **134,197**, dated December 24, 1872.

To all whom it may concern:

Be it known that I, ALBERT F. DAVIS, of Rutland, in the county of Rutland and State of Vermont, have invented certain new and useful Improvements in Attachment to Stone-Finishing Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

My present invention consists in certain improvements upon the stone-finishing machine for which Letters Patent have recently been granted to me, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, in which—

Figure 1 is a front view, and Fig. 2 a side elevation, of my machine as improved; Fig. 3 is an enlarged perspective view of a part thereof.

A represents the frame-work of my machine, on each side of the center of which is a perpendicular frame, B, capable of sliding up and down on guides *a a*. At the lower end of each frame B is a shaft, *b*, running across the machine and carrying the cutters.

In my former patent, the stone was held up against the cutters, but in this case the cutters are held against the stone, following the desired pattern, by means of weights placed in a box, C, on top of each of the frames B.

Upon the end of each cutter-shaft *b* is a pulley, *d*, under which passes a belt or rope, *e*. From one side of each of the pulleys *d* the belt passes over a pulley *f*, located above the former, and on the frame B, and from thence it passes under the pulley *h* on the driving-shaft, while from the other side of each pulley *d* the belt passes over a pulley, *h'*, at the top of the main frame. By this arrangement the cutters on the two shafts *b b* will run in opposite directions so as to cut cross-grained stone smoothly; and it also allows of the cutter-frames being raised and lowered without change of belt. In each cutter-frame B is a crank-shaft, *k*, provided near each end with a ratchet-wheel, *i*, which gears in a rack-bar attached to the main frame A, whereby the cutters may be adjusted to follow a mark as well as a pattern. On each shaft *b* is a cutter-head, D, with cutters, to revolve in the same manner as a cylinder wood-planer for planing stone or cutting moldings or panel-work and finishing building-stone, by inserting such knives as are required for different forms of work, the stone being fastened on a movable bed, E, which is moved in either direction by means of gears and conical pulleys, substantially in the same manner as described in my former patent. In this case I use a straight shaft, H, to revolve the face-plate G, instead of a jointed shaft, as in the former case, the stone being clamped with screws on the face-plate, the same as described in my former case. I I represent the outside cutter-heads for the knives, said cutter heads being on the front ends of the shafts *b b*. On the front side of the main frame A, and moved by gearing, is a sliding rest, J, for cutting straight, irregular, or serpentine edges. This rest is provided with an arm, K, with clamps *m* and set-screws *n* for holding the stone and the pattern on the back of the stone, with dowel-pins *o o* running through to hold the stone firmly in place. *p p* are movable rests on the outside of the main rest J, for holding straight work. To the gears which operate this rest should be attached a clutch with shipping device, so that its movement may be reversed at any time. The patterns are to be put on with rubber cloth, the same as described in my former patent.

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

1. The sliding rest J provided with arm K, clamp set-screws *m n*, dowel-pins o, and movable guides *p*, all substantially as and for the purposes herein set forth.

2. The vertically-sliding cutter-frames B B, with weight-boxes C C, for holding the cutters to the work, substantially as herein set forth.

3. The arrangement of the cutter-shaft pul-

leys *d d*, belt *e*, and pulleys *f f*, *h*, and *h'*, substantially as shown and described, and for the purposes herein set forth.

4. The combination of the cutter-frames B, shafts *k*, with ratchet-wheels *i*, and the rack-bars on the main frame, for the purposes herein set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

ALBERT F. DAVIS.

Witnesses:

CHAS. E. HUTCHINSON,

B. W. MARSHALL.