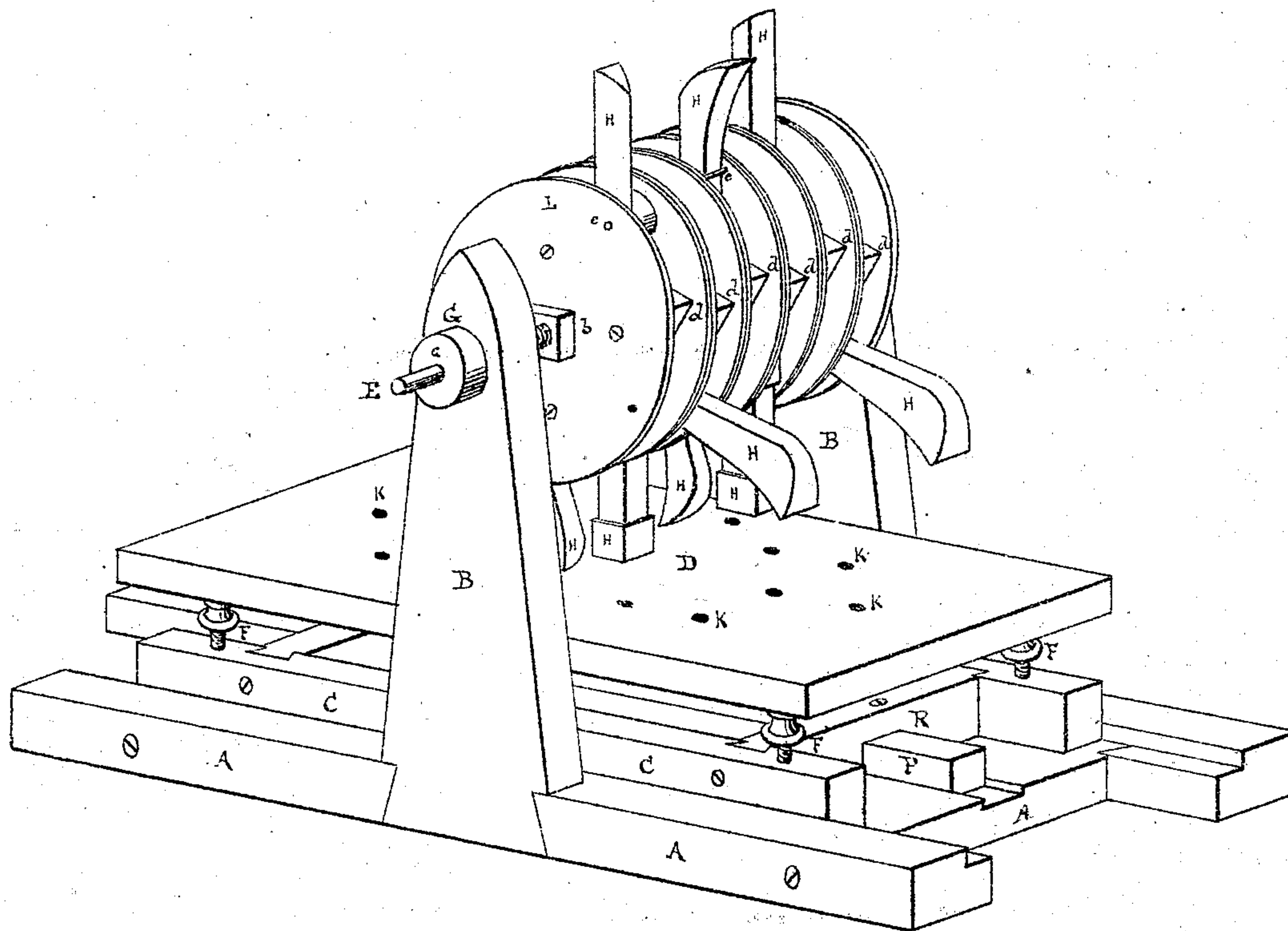


THOMAS WOODS.

Improvement in Machines for Dressing Stone.

No. 118,323.

Patented Aug. 22, 1871.



Witnesses.

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THOMAS WOODS, OF NICHOLASVILLE, KENTUCKY.

IMPROVEMENT IN MACHINES FOR DRESSING STONE.

Specification forming part of Letters Patent No. 118,323, dated August 22, 1871.

To all whom it may concern:

Be it known that I, THOMAS WOODS, of Nicholasville, in the county of Jessamine and State of Kentucky, have invented an Improved Stone-Dressing Machine, of which the following is a specification:

The first part of my invention relates to the construction of a cylinder composed of a series of pairs of metallic disks, each pair held a certain distance apart by blocks interposed between them and the disks, and blocks made fast upon a shaft so that they will not revolve except with the shaft, and confining the said parts together by screw-nuts on each end of the shaft, and, further, in placing and hinging a series of cutters of any desired form between each pair of disks, and having the cutters of such length that they will all, when extended radially from the shaft, reach the same distance therefrom, so that when the cylinder is revolved in one direction a stone passing under it and within reach of the cutters in an opposite direction will be cast and planed until its top surface is level and parallel to the axis of the said shaft. The second part of my invention relates to the construction of a carriage similar to a saw-mill carriage, by which the stone is to be borne back and forth under the cylinder upon a platform, which is sustained over the carriage by four or more screw-bolts in such a manner as to render the platform adjustable, so that the stone may be faced into any plane that may be desired.

The accompanying drawing represents a perspective view of the frame of the machine, the carriage and platform, and the shaft, cylinders, and cutters.

A A A indicate the base-frame; B B, the up-rights, in the tops of which the shaft E is journaled; c c P R, the carriage; D, the platform, perforated with as many holes, K, as may be necessary. The stone is to be prevented from slipping out of place by pins inserted in these holes on every side of it, their upper ends extending above the surface. The screw-shafts are indicated by F, and may be enlarged, as shown, into a flange or wheel between the carriage and platform so that they may be operated conveniently. G is a fast pulley upon the shaft E, by means of which the power to revolve the shaft is communicated, and b indicates the nuts on each end of the shaft that hold the parts of the cylinder together, and L indicates the disks, and H three different forms of cutters, and e e are stops to prevent the cutters from being thrown

forward out of their radial line to the main shaft, and d indicates the blocks interposed between each pair of the disks L.

Reciprocating motion may be given to the carriage in any suitable manner. The cutters may have any suitable form, and there may be several different forms of them upon the same cylinder, provided that these forms are such that they will act efficiently. They will all turn freely on their pivots through their inner ends and the disk between which they swing. When they become dull or are broken, then, by unscrewing the nuts b, the disks come asunder, and then the cutters can be easily taken out and ground and broken ones replaced by new ones.

The mode of operation of this machine is simply this: The shaft and cylinder are revolved rapidly in the direction designed, and each cutter is thrown in the line of a radius to the circle of the cylinder by centrifugal force, and in this manner approaches and strikes the stone and expends upon it either a part or the whole of its momentum, according to the amount of resistance in the way. If it expends the whole of its momentum upon the stone it is thrown back and then is dragged forward by its rivet until it is thrown again into its radial position by centrifugal force, ready for another blow during the next revolution; but if the projections or points upon the surface of the stone should yield and come off without exhausting the momentum of the cutter the latter will be more or less retarded in its course around its circuit. One result of this construction and operation is that the force of each blow by a cutter is regulated by its size, form, and weight in connection with the speed of revolution of the cylinder, and another is that if the cutters are equally distributed around the periphery of the cylinder the force required to turn the same will be nearly uniform, and as a consequence a uniform supply of force will secure a like speed of revolution.

I claim as my invention—

1. The cylinder, composed of the disks L, divided into pairs by the blocks d and held together by the nuts b upon the shaft E, substantially as and for the purpose described.

2. The cutters H, pivoted, constructed, and operated substantially in the manner and for the purpose described.

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Witnesses:

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