(No Model.)

F. MANNING.

STONE DRESSING MACHINE.

No. 354,200. Patented Dec. 14, 1886.

Fig. 1.

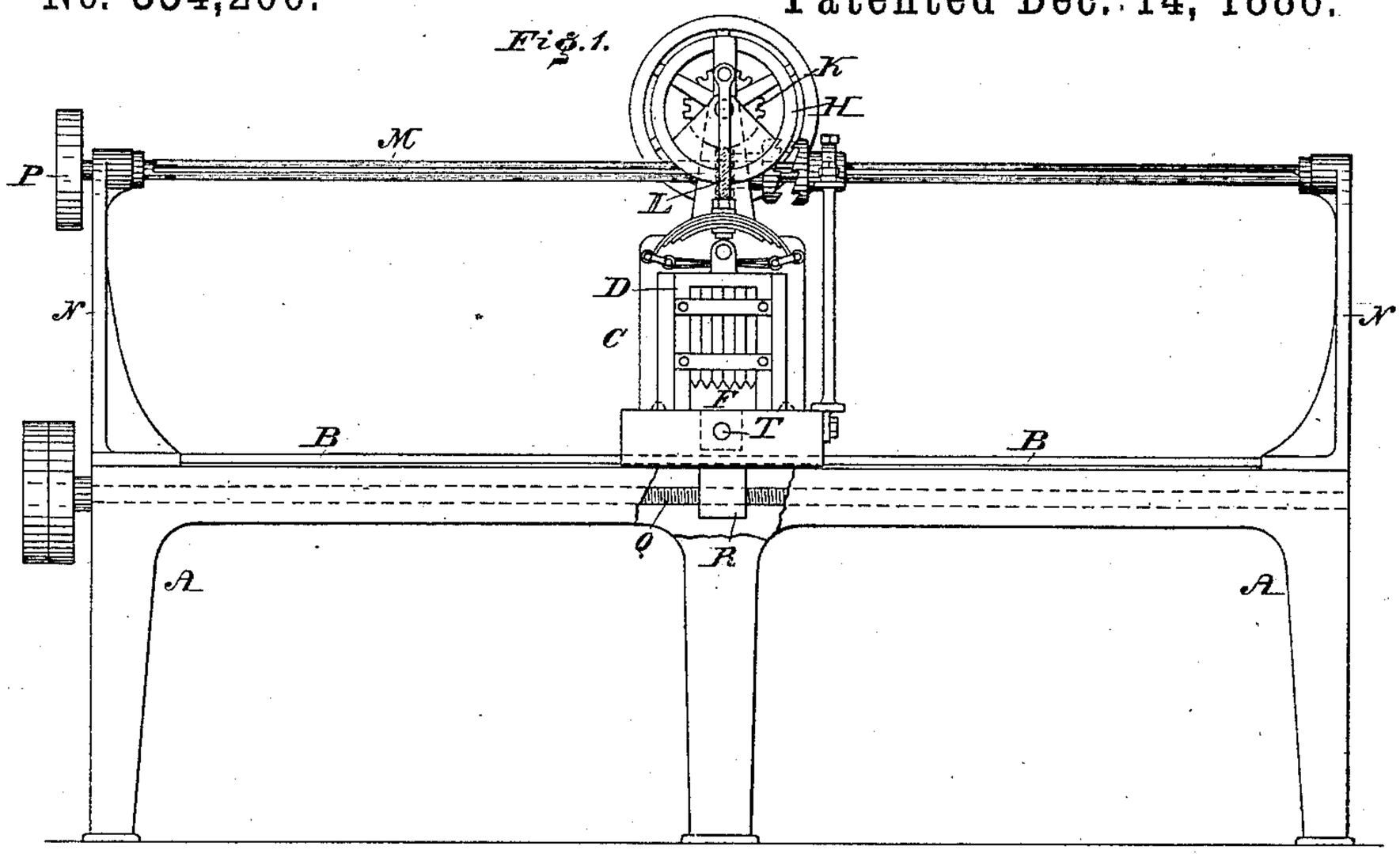


Fig. 2.

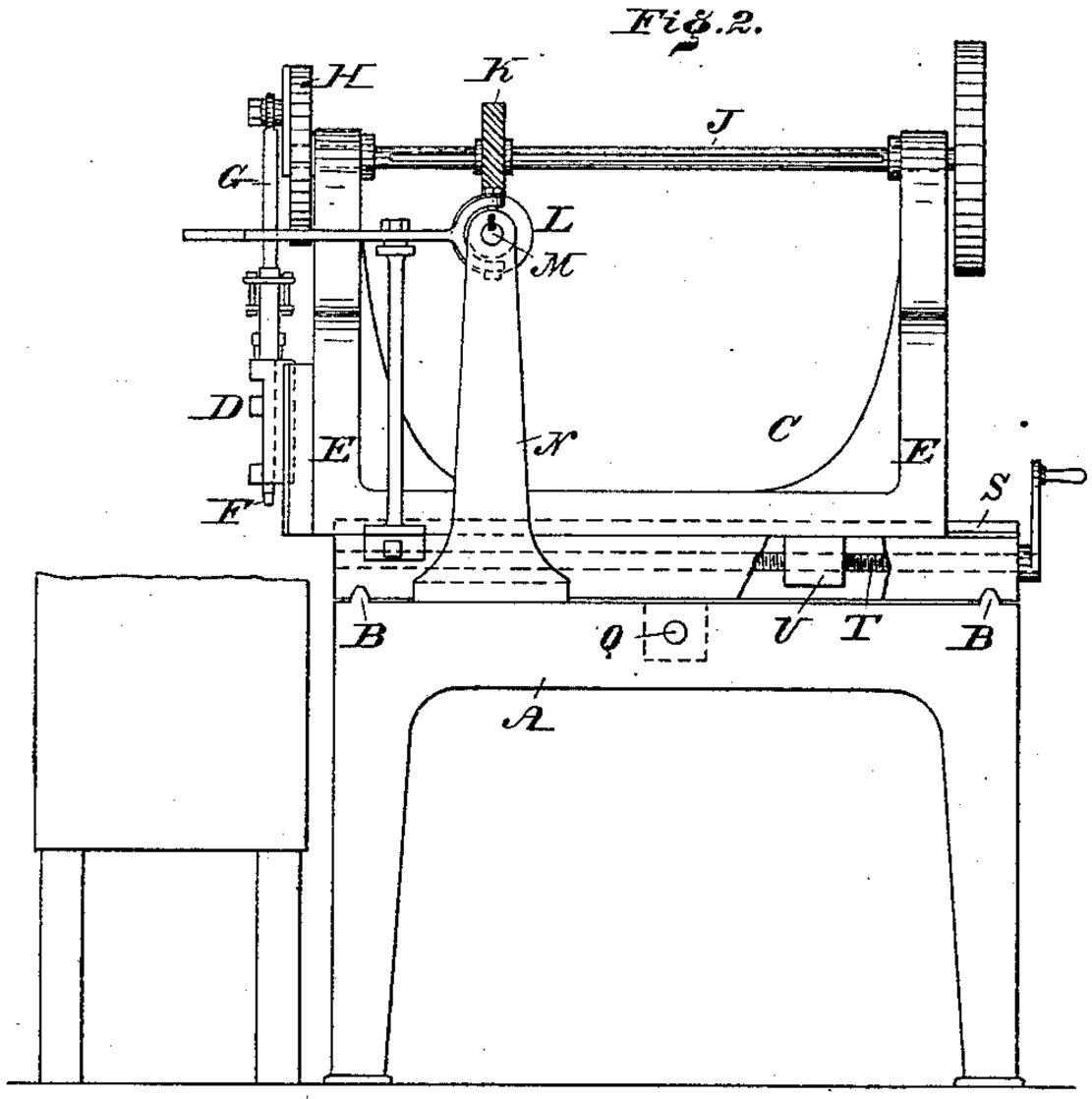
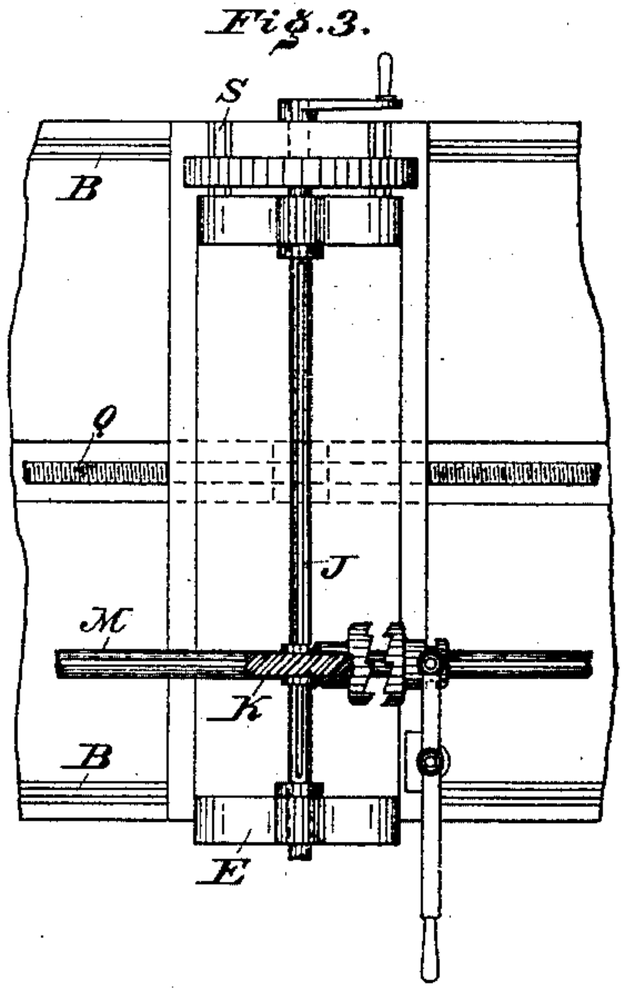


Fig. 3.



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FRANK MANNING, OF ARDMORE, PENNSYLVANIA.

STONE-DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 354,200, dated December 14, 1886.

Application filed May 1, 1886. Serial No. 200,795. (No model.)

To all whom it may concern:

Be it known that I, FRANK MANNING, a citizen of the United States, residing at Ardmore, in the county of Montgomery, State of Pennsylvania, have invented a new and useful Improvement in Machines for Cutting or Dressing Stone, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a side elevation of a machine for dressing or cutting stone embodying my invention. Fig. 2 represents an end view thereof. Fig. 3 represents a top or plan view of a portion thereof.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a machine for dressing or cutting stone, having a carriage on which the dressing or cutting tool is mounted, and means for operating said tool during the movement of said carriage, and at different positions of the same.

Referring to the drawings, A represents the main frame of the machine, the same having tracks B, on which is placed a carriage or truck, C.

D represents a sliding head, which is fitted to one of the uprights E of the carriage C, and supporting the cutting-tools F. To said head is attached a rod, G, the upper end whereof is connected with the wrist-pin of a crank-wheel, H, whose shaft J is mounted on the uprights E of the carriage, it being evident that by the rotation of said shaft, and consequently of the crank-wheel, the head D is raised and lowered and the tools or cutters F are caused to dress or cut the stone. The shaft J carries a worm or spiral wheel, K, which meshes with a worm or spiral wheel, L, the latter being connected with a shaft, M, which is mounted on uprights N, rising from the ends of the frame A, and provided with a pulley, P, whereby power may be communicated to said shaft M, and consequently to the worm-wheels L K, the shaft J, crank-wheel H, and tool or cutter carrying head D, it being noticed that the shafts M J extend at a right angle to each other, and the worm-wheel L is connected with the shaft M by a feather, so that it may both rotate with the shaft M and slide or move thereon.

The carriage may be moved in longitudinal directions, or to either end of the frame A, by means of a screw, Q, which is swiveled on the frame A, and engages with a threaded lug, R, on the carriage, or by other means, the object whereof is to move the cutters to the right or left over the stone to be dressed or cut, this feature, broadly considered, not being new.

It will be seen that when motion is imparted to the carriage and power communicated to the shaft M the wheel L rotates with said shaft and slides thereon, owing to the feather-connection of said wheel and shaft, and said wheel L follows the motion of the worm-wheel K, moving with the carriage, and continues in gear therewith, whereby the cutters are positively operated during the motions of the carriage.

The carriage is formed of sections, the upper section whereof is mounted on tracks S on the lower section, so as to be moved in transverse directions, and thus adjust the position of the cutters in said direction.

The lower section of the carriage has a swiveled screw, T, which engages with a threaded nut, U, on the upper section, whereby the latter may receive its motion. As the shaft M has its bearings N fixed to the frame A, the worm K is connected with the shaft J by a feather, so as to remain in gear with the wheel L as said shaft J moves in or out with the upper section of the carriage, thus keeping the wheels K L properly engaged.

In lieu of the worm-wheels K L, I may use bevel-wheels, which are connected with their respective shafts J M, and operate similar to said worm-wheels.

The shaft M is provided with a clutch, whereby the wheel L may be thrown into or out of operation for starting or stopping the motions of the head D, to which the cutters F are attached.

I am aware that it is not new to construct a stone-dressing machine having upper and lower parts so arranged that while the lower may have motion in one direction, both backward and forward, the upper part may either be carried with the lower in its motion or be moved transversely thereon, and such I do not claim.

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

1. A stone-dressing machine having a frame with tracks thereon, a carriage composed of an upper and a lower section adapted to slide on said track, means, substantially as described, for imparting reciprocal sliding motion to the said carriage, and separate means, substantially as described, for imparting transverse sliding motion to said upper part, uprights secured to said carriage, a shaft suitably journaled in said uprights, carrying a crank-wheel, a rod secured to said wheel and to a slide-head fitted on one of the uprights and provided with cutting-tools, a wheel mounted on the said shaft meshing with a wheel mounted on a counter-shaft, and means, substantially as described, for engaging and disengaging said wheels, all substantially as and for the purpose set forth.

2. A stone-dressing machine composed of the frame A, with tracks B, the carriage C, composed of an upper and a lower part, the lower part being adapted to slide on said track B, means for imparting reciprocating motion to said carriage, separate means, substantially as described, for imparting transverse motion to the upper part of said carriage, the uprights E, the shafts J, having bearings in uprights E, crank-wheel H, mounted on said shaft, the rod G, connected to the wheel H and to sliding head D, the latter being fitted to one of the uprights E, and carrying cutting-tools F, the uprights N, counter-shaft M, having bearings in the uprights N, meshing wheels K and L on said shafts J and M, and means, substantially as described, for engaging and disengaging said wheels, all combined substantially as and for the purpose set forth.

FRANK MANNING.

Witnesses:
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