(No Model.)

W. A. WRIGHT.

STONE CUTTING MACHINE.

No. 333,436. Patented Dec. 29, 1885.

Fig. 1.

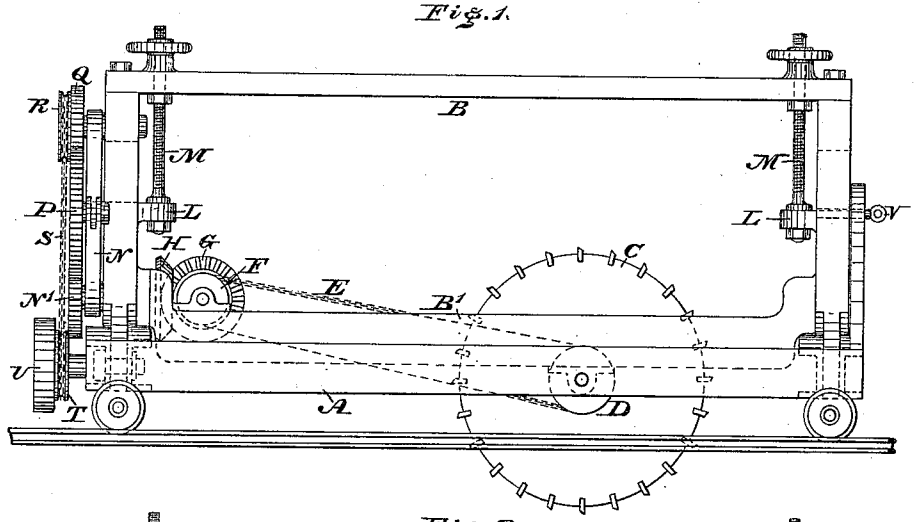


Fig. 2.

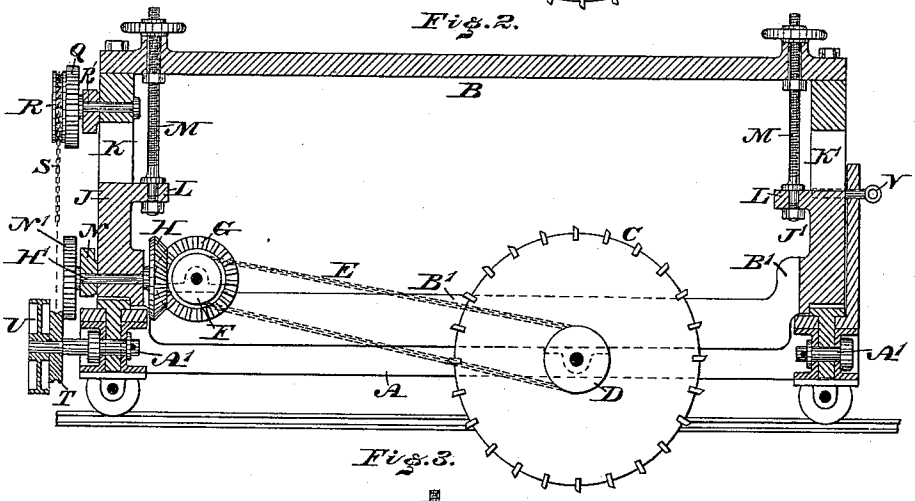
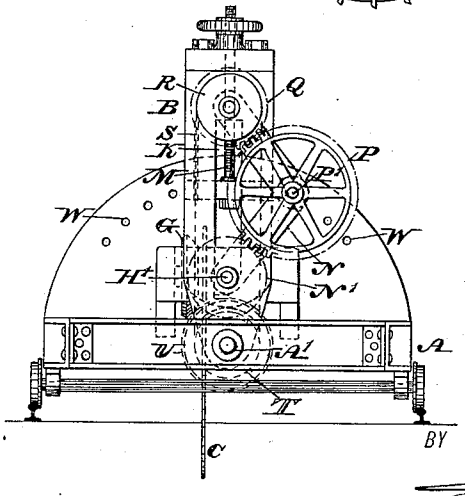


Fig. 3.



WITNESSES:

Th. Rolle.

W. F. Kircher

INVENTOR

Wm. A. Wright

BY John A. Wiedersheim

ATTORNEY

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM A. WRIGHT, OF CENTRETON, NEW JERSEY.

STONE-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 333,436, dated December 29, 1885.

Application filed July 23, 1885. Serial No. 172,369. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. WRIGHT, a citizen of the United States, residing at Centreton, in the county of Burlington and State of New Jersey, have invented a new and useful Improvement in Stone Cutting or Quarrying Machines, which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a side elevation of a stone-cutting machine embodying my invention. Fig. 2 represents a vertical section thereof. Fig. 3 represents an end view thereof.

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

My invention consists of a stone-cutting machine having means for adjusting the depth of penetration of the cutter.

It also consists of means for setting the cutter at an angle.

It also consists of means for preserving the engagement of the gearing of the machine during the rising and falling of the frame which carries the cutter.

Referring to the drawings, A represents a truck or base, which is properly mounted on wheels, and has connected with it, by means of pivots A′, an upright frame, B, which is capable of lateral motions, owing to said pivots or axis, said frame B carrying a vertically-adjustable frame, B′, on which is mounted the cutter-wheel C, the shaft whereof has secured to it a pulley, D, which, by means of a chain or band, E, receives power from a pulley or band-wheel, F, the shaft of the latter being mounted on the frame B′ and carrying a bevel-wheel, G.

On the end of the frame B is mounted a bevel-wheel, H, the shaft H′ whereof is supported on said frame, and likewise on a box, J, which is fitted in a vertical slot, K, in the adjacent upright of the frame B, the opposite end of the frame B′ also carrying a box, J′, which is fitted in a vertical slot, K′, of the other upright of the frame, each box having a lug or eye, L, to which is connected a screw, M, the screws being fitted to the top cross-beam of the frame B, whereby, by the rotation of the screws, the frame B′ may be raised and lowered, and the cutter C thereby adjusted relatively to the required depth of penetration or cut in the stone. The shaft H′, which rises and falls with its box J in the slot K of the frame B, due to the vertical motions of the frame B′, is also mounted on the lower end of an elbow-lever, N, and carries a pinion, N′, which meshes with a pinion, P, whose axis P′ is at the joint of the elbow-lever, said pinion P meshing with a pinion, Q, mounted on the upper end of the frame B. The upper end of the elbow-lever is mounted on the shaft of the pinion Q.

Power is communicated to the pinion Q by means of a pulley, R, on the shaft R′ of said pinion, a belt, S, and a pulley, T, on the driving-wheel U, the latter being mounted on the truck, said belt passing around the pulleys T R, whereby power is communicated to the gearing Q P N′, shaft H′, gearing H G, pulley F, belt E, and pulley D, and consequently to the cutter or cutter-wheel D. As the frame B′ rises and falls, the elbow-lever N opens and closes after the manner of a toggle, thus keeping the pinion P engaged with the pinions N′ Q, whether running or at rest.

Owing to the pivots A′, the frame B may be turned to the right or left thereon, and the cutter-wheel accordingly set for operation at an inclination without changing the centers of the various parts of the machine.

When the angular adjustment of the cutter-wheel is accomplished, the parts are retained in position by means of a pin, V, which is passed through one of the openings W in the end of the truck into an opening in the frame B.

It is evident that the truck may be readily moved over the stone, and when power is communicated to the driving-shaft the wheel C is operated, and cuts into the stone, quarrying or channeling the same, as is evident.

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

1. A stone-cutting machine having a vertically-adjustable frame, with a rotary cutter mounted thereon, two gear-wheels, one of which is journaled in a block movable with said frame, an elbow-lever connected to the shafts of the said gear-wheels and carrying a pinion meshing at the same time with said gear-wheels, and means, substantially as described, for rotating said gear-wheels and cut-

ter, substantially as and for the purpose set forth.

2. The frame B′, vertically adjustable and having the cutter C and gear-wheel G, mounted on shafts provided with fixed bearings on said frame, in combination with means, substantially as described, for communicating motion from said gear-wheel to said cutter, the shaft H′, having gear-wheel H and mounted on the box J, the shaft R′, mounted on the frame B, the elbow-lever N, connected with said shafts H′ and R′ and carrying pinion P, meshing with pinions N′ and Q, and means, substantially as described, for rotating said pinion Q, substantially as and for the purpose set forth.

3. The truck A, in combination with vertically-adjustable frame B′, carrying a shaft having a cutter, C, and pulley D, mounted thereon, band or chain E, pulley F, and gear-wheel G, mounted on the shaft R′, the shaft H′, with bearings on the box J, carrying the gear-wheel H and gear-wheel N′, the elbow-lever N, with axis P′ and pinion P, the shaft B′, with the upper end of the elbow-lever N mounted thereon, and carrying the pinion Q and pulley R, the said pinion P meshing with both pinions N′ and Q, and means, substantially as described, for imparting rotary motion to said pulley R, substantially as and for the purpose set forth.

WM. A. WRIGHT.

Witnesses:
JOHN A. WIEDERSHEIM,
A. P. GRANT.