No. 749,240. PATENTED JAN. 12, 1904.

W. B. STOUGHTON.

STONE DRESSING MACHINE.

APPLICATION FILED MAY 14, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

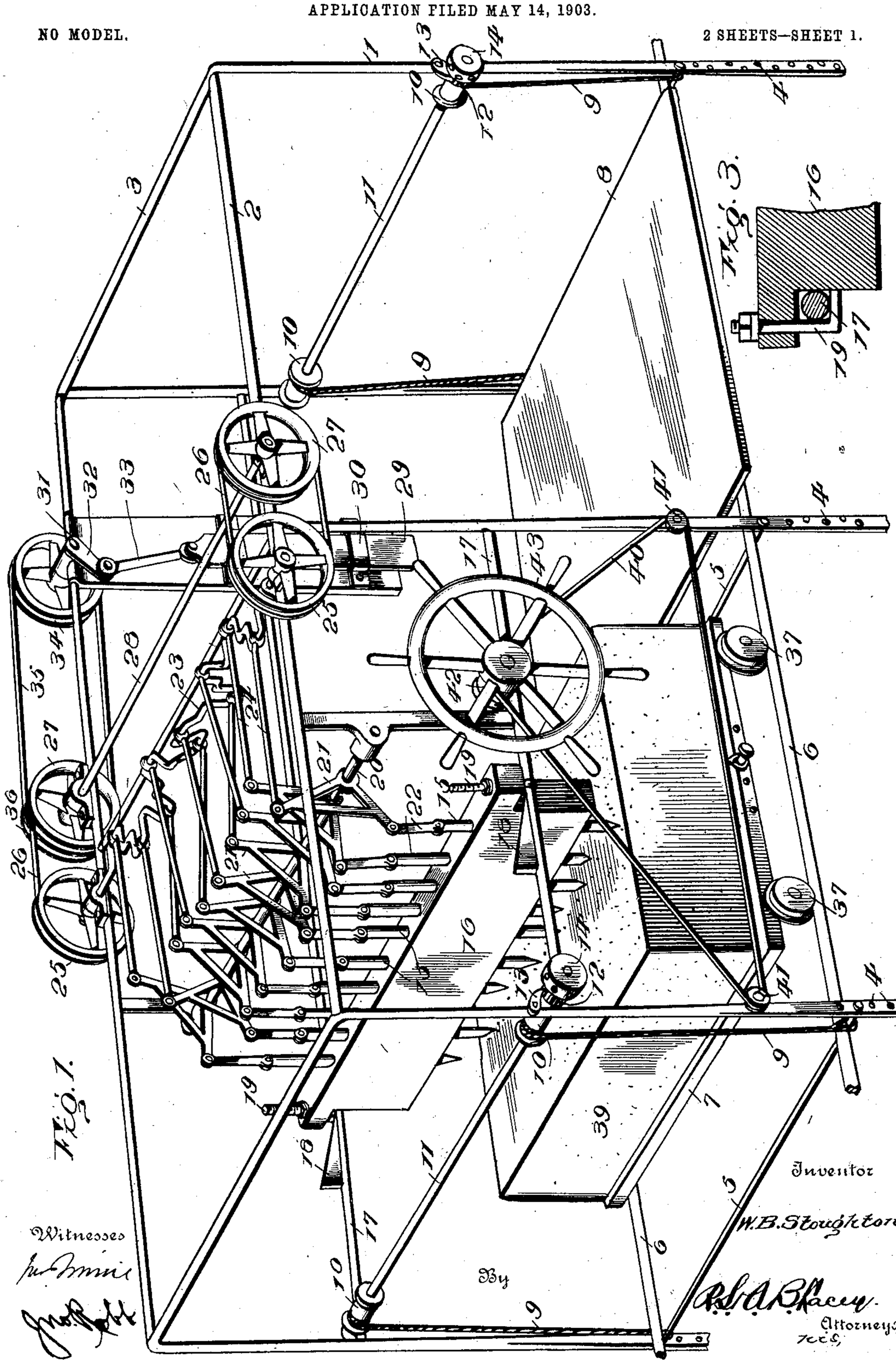

Fig. 1.

Fig. 3.

Witnesses

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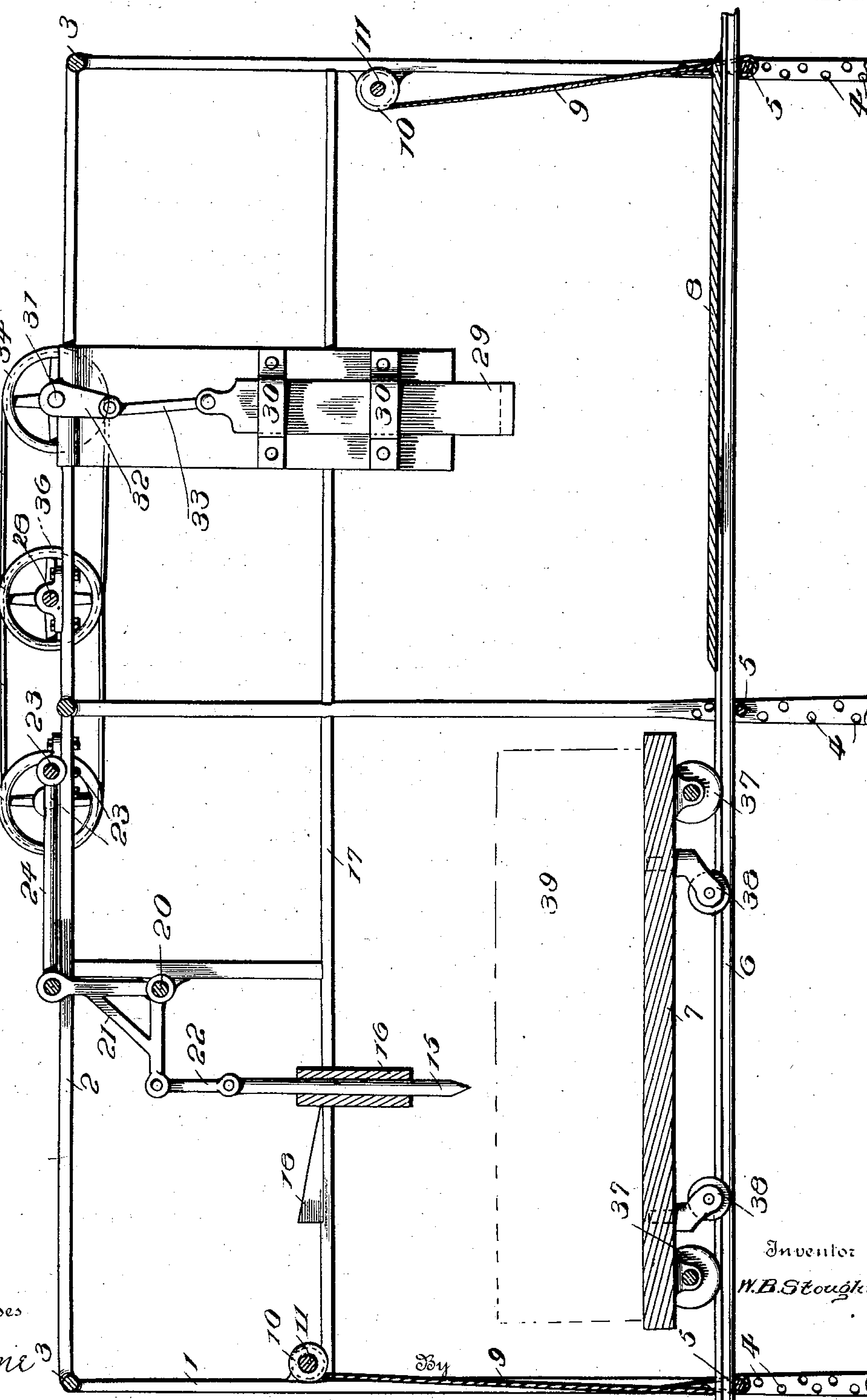
NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.



Witnesses

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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 749,240. Patented January 12, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM B. STOUGHTON, OF ROCKTON, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO C. M. KRESGE, OF DUBOIS, PENNSYLVANIA.

STONE-DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 749,240, dated January 12, 1904.

Application filed May 14, 1903. Serial No. 157,169. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM B. STOUGHTON, a citizen of the United States, residing at Rockton, in the county of Clearfield and State of Pennsylvania, have invented certain new and useful Improvements in Stone-Dressing Machines, of which the following is a specification.

This invention provides a machine of novel formation for conveniently handling blocks of stone during the operation of dressing and finishing same.

The machine comprises a series of bits, a guide for the bits mounted for angular adjustment to change the pitch of the bits, as may be required, actuating means for imparting a reciprocating movement to the bits in alternation, a track, means for vertically adjusting the track, a car mounted to travel upon said track and provided with caster-wheels in addition to the ordinary car-wheels, means for moving the car to advance the work to the bits, and a platform for supporting the car when clear of the tracks and free to move in all directions by reason of its being supported upon the platform by means of the said caster-wheels.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of a stone-dressing machine embodying the invention. Fig. 2 is a vertical longitudinal section thereof. Fig. 3 is a detail view showing the means for securing the guide for the bits in an adjusted position.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The framework of the machine may be of any substantial construction and comprises posts 1, longitudinal bars 2, and transverse bars 3. The posts 1 are provided near their lower ends with a series of openings 4 to receive rods or bars 5, forming a support for tracks 6, upon which car 7 and platform 8 are mounted, the latter being stationary and the former adapted for reciprocating movement. Ropes or cables 9 are connected at their lower ends to the outermost rods or bars 5 and are adapted to wind at their upper ends upon spools 10, secured to the ends of shafts 11, mounted in bearings applied to the corner-posts 1. Upon disconnecting rods or bars 5 from posts 1 and turning shafts 11 the track may be raised or lowered, according as ropes or cables 9 are shortened or lengthened by being either wound upon or unwound from spools 10. When the tracks have been elevated to the required position, the rods or bars 5 are engaged with posts 1 by entering the nearest openings 4 thereof. The intermediate bar or bars 5 is correspondingly adjusted to support the track between the corner-posts 1. The shafts 11 are held in the adjusted position by any suitable means, such as ratchet-wheels 12 and pawls 13. Wheels 14 are secured to an extension of shafts 11 and are provided in their periphery with a series of openings for reception of a rod or bar to be used as a lever when turning the shafts to effect vertical adjustment of the track and the parts supported thereby.

A plurality of bits or cutters 15 are provided and mounted for reciprocal movement in guide 16, adapted for angular adjustment to change the pitch or slant of the bits according to the nature of the work. The guide 16 is supported at its ends upon longitudinal bars 17, and in order to effect angular adjustment of said guide wedges 18 are applied to or formed with bars 17, and the ends of guide 16 are adapted to rest upon the inclined edges of said wedges. The guide is adapted to be secured in an adjusted position by any fastening means, such as angle-bolts 19, passed through openings in the end portions of guide 16 and having their lower bent ends adapted to underlap bars 17, as shown most clearly in Fig. 3. By loosening the clamp-nuts mounted upon the threaded ends of angle-bolts 19 guide

16 is loosened and may be shifted to any position upon bars 17 or wedges 18 to attain the desired adjustment, and by retightening said clamp-nuts the guide is secured in the located adjusted position. Rod 20 is located in a higher plane than guide 16 and supports a series of bell-crank levers 21, one for each bit and connected thereto by link 22. A compound crank-shaft 23 is journaled parallel with rod 20, and its crank portions are connected by pitmen or rods 24 with the vertical arms or members of the bell-crank levers 21 so as to impart an oscillatory movement thereto in the operation of the machine. The crank portions of the crank-shaft are so arranged as to impart a reciprocating movement to the bits 15 in alternation, thereby enabling a minimum amount of power being used in the operation of the machine. Pulleys 25 are provided at the ends of the crank-shaft 23 and are connected by drive-belts 26 with corresponding pulleys 27 at the ends of drive-shaft 28, the latter being connected with a suitable source of power in any well-known manner. For dressing the corners of a block of stone a bit 29 is provided and located at one side of the machine above platform 8 about midway between its front and rear ends. Bit 29 is mounted in keepers or guides 30, so as to move rectilinearly when reciprocating movement is imparted thereto. Shaft 31, located above bit 29, is provided with crank 32, connected by pitman 33 with bit 29. Pulley 34 is secured to the outer end of shaft 31 and connected by drive-belt 35 to pulley 36, keyed to shaft 28. When the machine is in operation, the bits 13 and 29 have a reciprocating movement imparted thereto and are adapted to operate upon the stone passed below same and within reach to be operated on thereby.

The car 7 is provided with car-wheels 37 of ordinary construction for supporting same upon the rails of track 6 and also with caster-wheels 38, which project a short distance below car-wheels 37, so as to support the car when run upon platform 8 from track 6, thereby admitting of the car being moved in all directions for any required purpose. When the car is run upon platform 8, it may be moved to present any corner of the stone to bit 29 for dressing the said corner. The car carrying stone 39 to be dressed is adapted to be reciprocated upon the track by any well-known feed mechanism. As shown, a rope or cable 40 is adapted to be connected by car 7 and is passed around direction-pulleys 41, thence around drum 42, provided with hand-wheel 43. The rope or cable 40 is passed once or a greater number of times around drum 42 in order to insure movement of said rope when the drum turns to advance or move the car rearward, as may be required. The stone may be secured to car 7 or may be simply placed thereon and held in place by its weight, the latter being sufficient for all ordinary purposes.

Having thus described the invention, what is claimed as new is—

1. In a stone-dressing machine, a plurality of bits, actuating means therefor, a guide supporting and directing said bits in their reciprocating movements, wedges forming an adjustable support for said guide, and means for securing the guide in an adjusted position, substantially as set forth.

2. In a stone-dressing machine, a plurality of bits, a compound crank-shaft, a series of bell-crank levers mounted in axial alinement, links connecting one arm of the bell-crank levers with the bits, a pitman connecting the other arm of said bell-crank levers with the crank portions of said crank-shaft, substantially as set forth.

3. In a stone-dressing machine, the combination of two sets of cutting mechanism, a track extending beneath the cutting mechanisms, a platform arranged below one of the sets of cutting mechanisms, and a car provided with a set of wheels to run upon said track and with a set of caster-wheels extended below the car-wheels to run upon the platform and enable the work to be variously presented to the cutting mechanism above said platform, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM B. STOUGHTON. [L. S.]

Witnesses:

H. A. MOORE,

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