

(No Model.)

A. D. MOORE.
STONE POLISHING MACHINE.

No. 541,978.

Patented July 2, 1895.

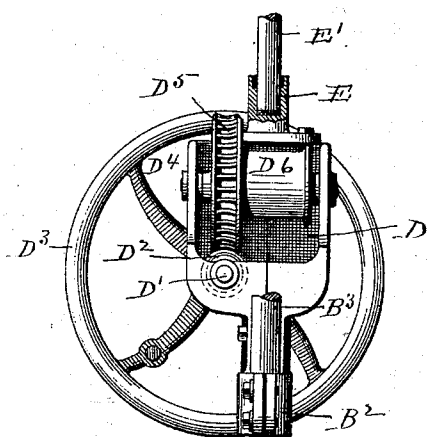
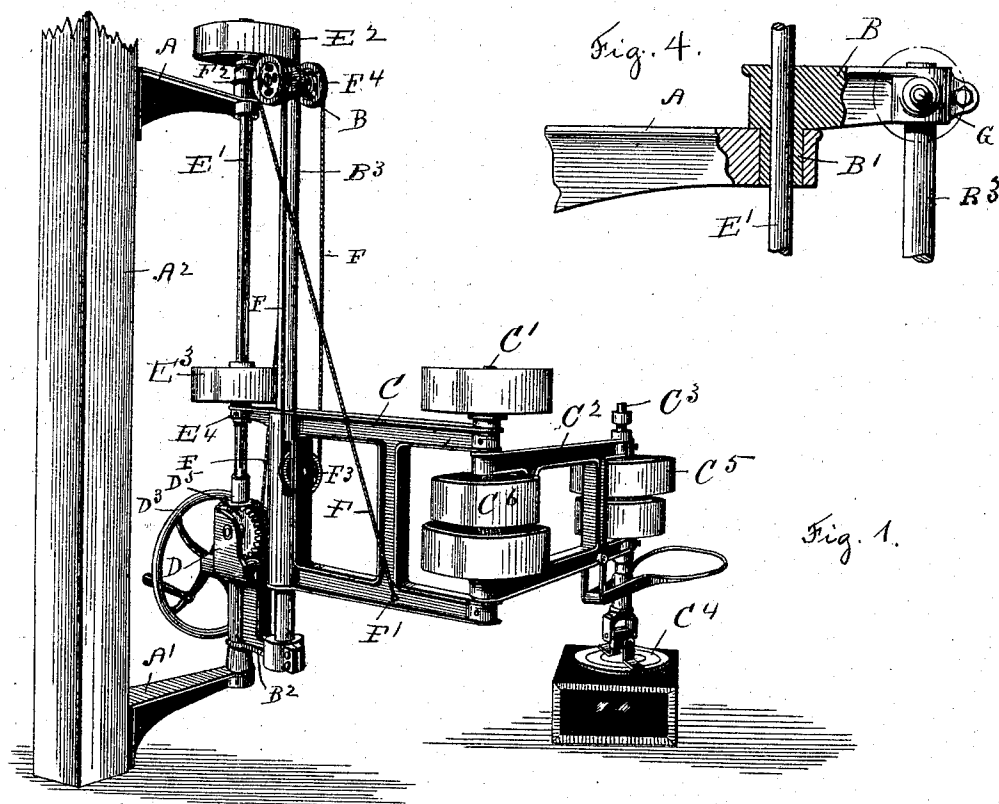


Fig. 2.

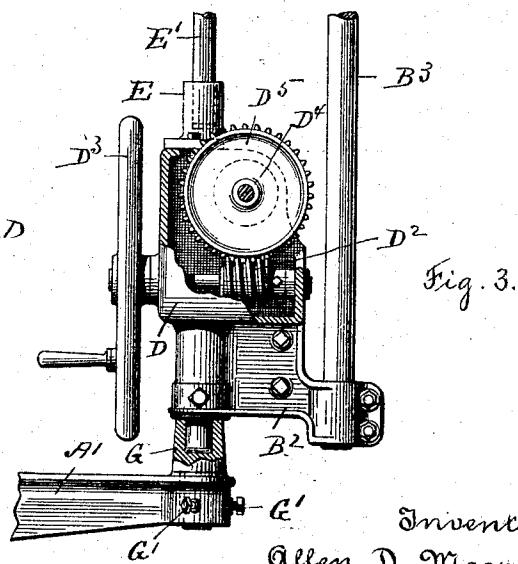


Fig. 3.

Witnesses

Chas. F. Schmeitz

Emma Kester

Inventor.

Allen D. Moore,

By his Attorney

Refused to answer,

UNITED STATES PATENT OFFICE.

ALLEN D. MOORE, OF MONTPELIER, ASSIGNOR TO JAMES A. SMITH, WILLIAM E. WHITCOMB, AND BENJAMIN B. COOK, OF BARRE, VERMONT.

STONE-POLISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 541,978, dated July 2, 1895.

Application filed October 25, 1892. Serial No. 449,971. (No model.)

To all whom it may concern:

Be it known that I, ALLEN D. MOORE, a citizen of the United States, residing at Montpelier, in the county of Washington and State of Vermont, have invented a new and useful Improvement in Stone-Polishing Machines, of which the following is a specification, reference being had to the accompanying drawings, forming a part of the same and representing a stone-polishing machine embodying my invention, and in which—

Figure 1 represents a perspective view of the machine. Fig. 2 is a detached view of that portion of the framework which supports the worm-gear and winding-drum. Fig. 3 is a side view of the framework supporting the worm-gear and winding-drum, a portion having been broken away to disclose the actuating-worm, and also showing the lower or step bearing, partly in sectional view; and Fig. 4 is a central view of the upper bearing, forming a hinged joint between the swinging frame and the upper fixed supporting-bracket.

Similar letters refer to similar parts in the different figures.

My invention relates to certain improvements in stone-polishing machines, and particularly to the mechanism by which the swinging frame is raised and lowered, as hereinafter described and set forth in the annexed claims.

Referring to the drawings, A and A' denote, respectively, the upper and lower fixed supporting-brackets, projecting from the post A², or from the side of the building.

B denotes a swinging arm supported upon the upper surface of the fixed arm A and having a hub B', entering a hole in the fixed arm, by which the swinging arm is hinged to the arm A, and B² denotes the lower swinging arm, hinged in a similar manner to the lower fixed bracket A'.

The ends of the swinging arms B B² are rigidly attached to and connected by the bar B³, the arms B B² and bar B³ forming a single framework supported by and hinged to the ends of the fixed brackets A A'.

Held upon the bar B³ and capable of sliding thereon is a frame C, carrying at its outer end the revolving shaft C³, provided with the

stone-polishing disk C⁴ and the pulley C⁵, having a belt connection with the pulley C⁶ on the shaft C'.

Supported upon the arm B², and preferably cast integrally therewith, is a shell D, which forms the supporting-framework for a shaft D', carrying a worm D² and a crank-wheel D³, and also for the shaft D⁴, to which is attached a worm-gear D⁵, engaging the worm D², and a winding-drum D⁶. The sides of the shell D inclose the drum D⁶ and worm D⁵ and form a housing for the winding mechanism.

Attached to the shell D is a step-bearing E for a shaft E', which extends upward through the swinging arm B, concentrically with its hinged joint, and carrying at its upper end a belt-pulley E², by which power is imparted to the machine.

E³ denotes a belt-pulley having a spline connection with a shaft E' and with its hub engaged by the arm E⁴, extending from the frame C, so the pulley E³ will be moved up and down the shaft E' as the frame C is moved up and down the bar B³, so that by suitable belt connections the rotary motion imparted to the shaft E' will be communicated from the pulley E³ to the shafts C' and C³.

At the central portion and the lower edge of the frame C, I attach a chain or wire cable F to the stud F². The wire cable is carried over a scored guide-pulley F², around the scored pulley F³, turning upon a stud held in the framework C in a vertical plane immediately in front of the bar B³ and between the center of the frame C and its upper edge. From the pulley F³ the cable is carried around a guide-pulley F⁴ and attached to the winding-drum D⁶.

The pulleys F² and F⁴ turn upon studs or bosses projecting from the sides of the swinging arm B, one of which is shown at G, Fig. 4, and the cable F is so connected with the frame C that the frame is suspended upon the cable by the stud F' and the guide-wheel F³, so the frame will be drawn upward in a direct line and be prevented from binding upon the bar B³. The frame C is raised and lowered by the rotation of the hand-wheel D³ through the worm D², worm-gear D⁵, and

winding-drum D^6 , the worm D^2 serving to lock the winding-drum and hold it from being rotated by the weight of the frame C.

I am aware that it is not new to raise the frame of a polishing-machine by means of a cable or chain and a winding-drum, and I therefore do not claim such broadly.

The lower arm B^2 is journaled in a step-bearing G, which is adjustable in the bracket A' and is held by the set-screws G' , with its axis in alignment with the axis of the hub B' . By supporting the winding mechanism in a shell D, supported upon the lower arm B^2 , I bring the hand-wheel D^3 near the axis of rotation of the swinging frame and distribute the strain incident to raising the swinging frame C.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a stone polishing machine, the combination of the fixed brackets A and A' , arms B and B^2 hinged upon said brackets, a shell D formed integrally with said arm B^2 and forming a housing for a winding mechanism, a winding mechanism held in said shell, a step bearing mounted upon the lower of said arms, a shaft E' supported by said step bearing and journaled in the arm B, a swinging arm carrying a polisher and a flexible connection between said swinging arm and said winding mechanism, substantially as described.

2. In a stone polishing machine, the combination of the fixed bracket A, arm B hinged to said bracket A, fixed bracket A' , arm B^2

hinged to said bracket A' , step E supported by the arm B^2 , shaft E' resting in said step and journaled concentrically to the hinged joint between the arm B and the bracket A, bar B^3 uniting the arms B and B^2 , frame C sliding on said bar B^3 , a winding mechanism supported on said arm B^2 and a flexible connection between said winding mechanism and said sliding frame C, substantially as described.

3. In a stone polishing machine, the combination of the fixed brackets A and A' , arms B and B^2 hinged upon said brackets, bar B^3 , sliding frame C on said bar, step bearing mounted upon the lower of said arms, a shaft E' supported by said step bearing and journaled in the upper of said arms and concentrically with its hinged joint, substantially as described.

4. In a stone polishing machine, the combination of bracket A, arm B hinged upon said bracket, bracket A' , adjustable step bearing held in said bracket, arm B^2 hinged in said step bearing, bar B^3 uniting said arms, step bearing E mounted upon said arm B^2 , shaft E' journaled in said step bearing E and said arm B and concentrically with the axis of said arms, swinging arms C and C^2 , said arm C^2 carrying a polisher, substantially as described.

Dated this 20th day of October, 1892.

ALLEN D. MOORE.

Witnesses:

W. A. WHITCOMB,

DANIEL R. BISBEE.