H. Q. MAURINO.

STONE SAWING MACHINE.

APPLICATION FILED MAY 4, 1910.

995,269. Patented June 13, 1911.

2 SHEETS—SHEET 1.

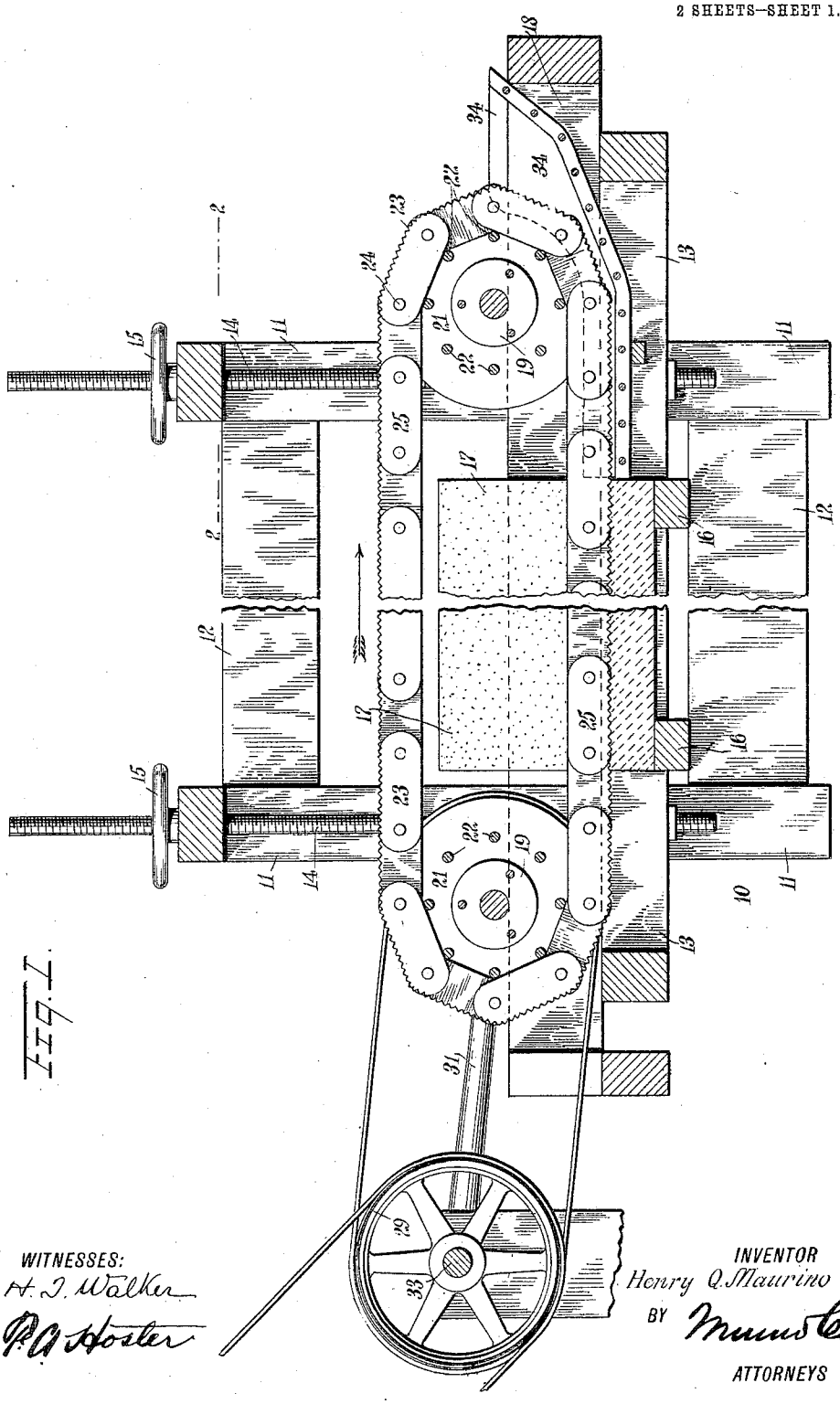

Fig. 1.

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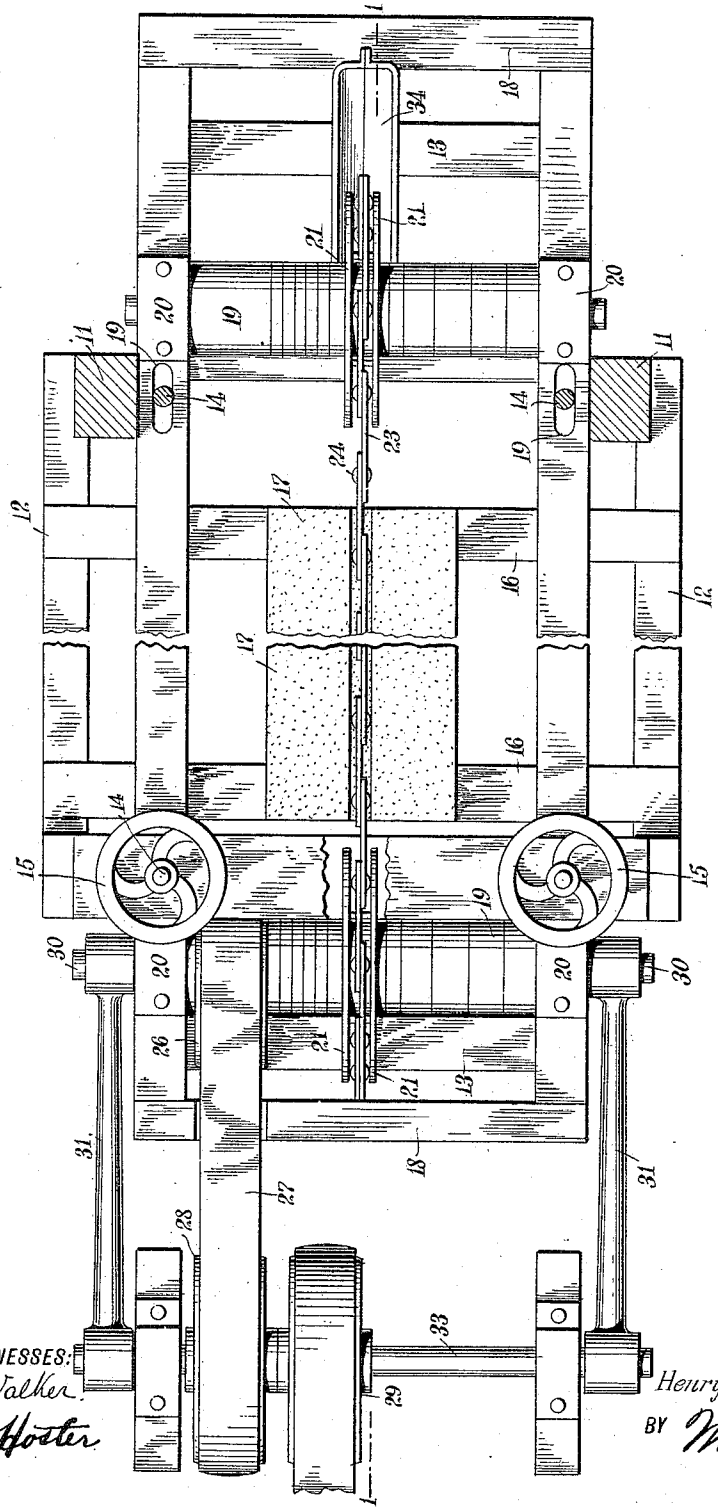
2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

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STONE-SAWING MACHINE.

995,269. Specification of Letters Patent. **Patented June 13, 1911.**

Application filed May 4, 1910. Serial No. 559,264.

To all whom it may concern:

Be it known that I, HENRY QUIRICO MAURINO, a citizen of the United States, and a resident of Albuquerque, in the county of Bernalillo and Territory of New Mexico, have invented a new and Improved Stone-Sawing Machine, of which the following is a full, clear, and exact description.

The invention relates to sawing stone, and has for an object to provide a machine for sawing stone, such as marble and the like. For the purpose mentioned, use is made of a main frame, an auxiliary frame adapted to move vertically and mounted on the main frame, an auxiliary frame adapted to move horizontally and mounted on the first auxiliary frame, means for moving the vertical frame, means for moving the horizontal frame, rollers on the horizontal frame, and a chain of saws mounted to turn on the rollers and adapted to saw stone.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views, and in which—

Figure 1 is a sectional side view of my device and taken on the line 1—1 of Fig. 2; and Fig. 2 is a plan view of my stone sawing machine, with a part in section on the line 2—2 of Fig. 1.

Referring more particularly to the views, I provide a main frame 10, having standards 11 and cross braces 12. An auxiliary frame 13 is mounted on the main frame 10 and is engaged by screw rods 14 mounted on the main frame 10 and provided with hand wheels 15 to raise or lower the frame 13 when the wheels 15 are turned. A bed consisting of bars 16 is disposed on the main frame 10 and adapted to constitute a seat for a stone 17. An auxiliary frame 18 is mounted over the frame 13. The frame 18 is adapted to slide horizontally on the auxiliary frame 13, and is provided with slots 19, through which are extended the screw rods 14, so that the said rods will not interfere or impede the horizontal movement of the frame 18. On the frame 18 at both ends, are rollers 19 mounted to turn on the frame and disposed in suitable bearings 20. Centrally secured on the rollers are spaced circular plates 21 having a series of pins 22 extended therefrom, and a chain of saws 23, pivotally connected by pins 24, is mounted on the rollers 19, intermediate the plates 21, so that as the individual saws 25 will engage the pins 22 when the said saws pass on the rollers 19, as may be conveniently seen by referring to Fig. 1. As shown in Fig. 2, one of the rollers 19 constitutes a driving roller and is provided with a pulley 26 and a belt 27, in engagement with a pulley 28 connected with driving means 29, adapted to engage the pulley 26 to drive the rollers 19 and the chain of saws 23. The ends 30 of the driving roller 19 project beyond the bearings 20, and rods 31 are adapted to loosely engage the ends 30, as shown in Fig. 2, the other ends of the rods 31 being loosely connected with a shaft 33 of the driving means 29.

A trough or chute 34 is disposed on the frame 18 and acts as a means for feeding sand and water or lubricants onto the cutting saw-chain 23.

In the operation of my device, the stone 17 is disposed on the base members 16 of the main frame 10 and the vertical frame is moved upwardly so that the stone 17 is engaged by the saw chain 23. The driving means 29 are now operated and the saw chain fed by its own weight cuts into the stone 17, while a grit such as sand, water, and the like, is fed onto the stone at the cutting point, by means of the trough 34. As the saw cuts into the stone 17, the frame 18 moves radially downward, owing to the connections 31, and thus the frame 18 slides on the frame 13. The device described can be made in any convenient size, the slots 19 being in length proportionate to the radial movement of the frame 18 so that there will be no binding whatever between the frame 13 and the frame 18.

It will be seen that with this device a perfect cutting control is maintained at all times; and it will be understood that although for the purpose of conveniently describing my invention, I have shown a particular construction, the scope of my invention is defined in the appended claims.

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

1. A stone sawing machine comprising a main frame, an auxiliary frame mounted on the main frame and vertically movable thereon, a second auxiliary frame mounted on the first auxiliary frame and movable

horizontally thereon, a chain of saws mounted on the second auxiliary frame and adapted to engage a block of stone seated on the said main frame, and means whereby the said saws may be driven, means whereby the second auxiliary frame is maintained at a constant distance from the driving means, the first mentioned auxiliary frame being removed as the saws progress, while the second auxiliary frame moves relatively to the first mentioned auxiliary frame as the saw progresses.

2. A stone sawing machine comprising a main frame, an auxiliary frame mounted on the main frame and vertically movable thereon, a second auxiliary frame mounted on the first auxiliary frame and movable horizontally thereon, means whereby the first auxiliary frame may be moved vertically, a chain of saws mounted on the second auxiliary frame and adapted to cut material, means whereby the said saws may be driven to cut the material, means whereby the distance between the driving means and the second auxiliary frame is maintained constant, and means permitting the second auxiliary frame to move on the first auxiliary frame as the saws cut into the material, the said first auxiliary frame being moved relatively to the second auxiliary frame as the saws cut into the material.

3. A stone sawing machine comprising a main frame, a seat on the main frame for holding material to be cut, an auxiliary frame mounted on the main frame, screw rods on the main frame for moving the auxiliary frame vertically, a second auxiliary frame mounted on the first auxiliary frame and movable horizontally thereon, a chain of saws mounted on the second auxiliary frame, driving means for operating the saws to cut the material and bars hingedly engaging the second auxiliary frame to move the same horizontally on the first auxiliary frame when the saw is fed gravitationally to saw the material, thereby keeping the distance between the said driving means and the said second auxiliary frame constant as the saw cuts into the material.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY QUIRICO MAURINO.

Witnesses:

FRANCIS E. HOOD,

H. M. BASINGER.