# I. Carter,

# Sawing Stone.

No. 15,328. Patented July 15, 1856.

Fig. 1

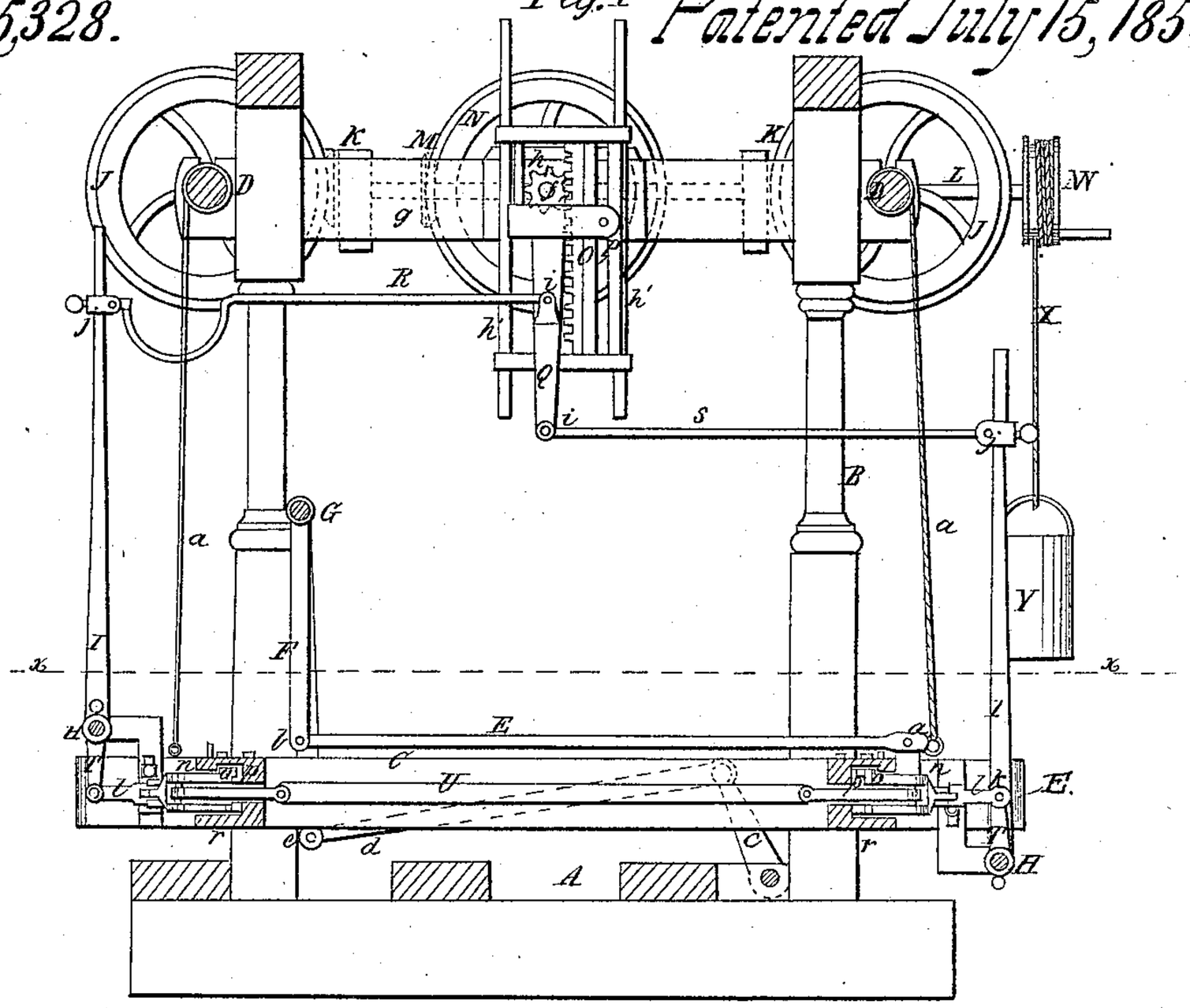
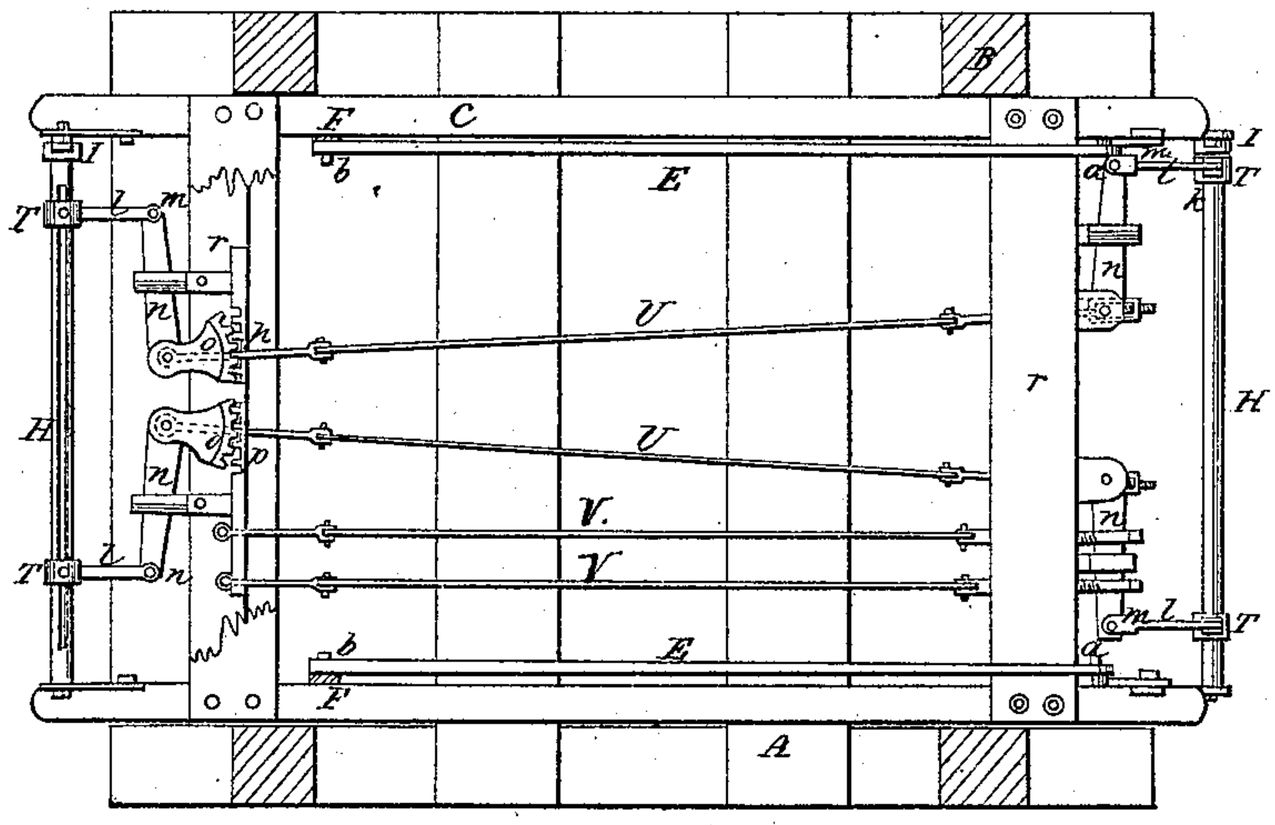



Fig. 2



# UNITED STATES PATENT OFFICE.

IRA CARTER, OF MALONE, NEW YORK.

## MARBLE-SAWING MACHINE.

Specification of Letters Patent No. 15,328, dated July 15, 1856.

*To all whom it may concern:*

Be it known that I, IRA CARTER, of Malone, in the county of Franklin and State of New York, have invented a new and Improved Machine for Sawing Marble Blocks in Polygonal Taper Form; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is a longitudinal vertical section of my improvement, the plane of section passing through the center. Fig. 2, is a horizontal section of ditto, (*x*), (*x*), Fig. 1, showing the plane of section.

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

To enable those skilled in the art to fully understand and construct my invention I will proceed to describe it.

A, represents a bed piece or flooring on which a rectangular frame B, is secured and C, is a horizontal saw frame or gate which is suspended within the frame B, by chains (*a*), which pass around shafts D, D, placed on the upper part of the frame B, as shown in Fig. 1.

To one end of the saw frame or gate C, there are attached by pivots (*a*), connecting rods E, E, one at each side of saw frame or gate. These connecting rods extend as far as the opposite end of the frame or gate, and are attached by pivots (*b*), to the lower ends of arms F, F, which arms are attached to a transverse shaft G, on the frame B. This shaft G, has a vibrating or rocking motion given it by means of a crank (*c*), pitman (*d*), and arm (*e*), as shown in Fig. 1. At each end of the saw frame or gate C, a shaft H, is placed, said shafts being fitted in suitable bearings attached to the frame or gate, and to one end of each shaft H, a permanent arm I, is secured.

To one end of each of the shafts D, on the upper part of the frame B, there is attached a bevel wheel J. These wheels gear into bevel pinions K, K, on a shaft L, at one side of the upper part of the frame. Another pinion M, on the shaft L, gears into a wheel N, the axis (*f*), of which passes through one of the side pieces (*g*), of the frame B, and has a pinion (*h*), upon it, which pinion gears into a vertical rack O, secured to a sliding frame P, which works on guide rods (*h'*), (*h'*), attached to the side piece (*g*), see Fig. 1.

To the sliding frame P, there is attached an arm Q, to which the inner ends of two rods R, S, are attached by pivots (*i*). The outer ends of the rods R, S, are attached to the arms I, I, the rods having each a socket (*j*), at their ends attached by pivots said sockets fitting on the arms I, and secured at any desired points by set screws.

The shafts H, H, have arms T, placed upon them, two on each shaft. The arms are secured upon the shafts by set screws so that they may be adjusted upon the shafts at varying points. The upper ends of the arms T, are attached by pivots (*k*), to horizontal levers (*l*), and the inner ends of the levers (*l*), are connected by pivots (*m*), to bent or right angled levers (*n*), the inner ends of which have segment racks (*o*), upon them which racks gear into racks (*p*), secured within the end pieces (*r*), of the saw frame or gate C, see Fig. 2. The racks (*p*), may be shifted or adjusted at different points within the end pieces. To the inner ends of the bent or right angled levers (*n*), there are attached saws V, and saws V, are attached to the end pieces (*r*), of the saw frame or gate. To one end of the shaft L, a pulley W, is attached and a chain X, passes around it, said chain having a weight or counterpoise Y, at its lower end.

Operation: The marble block to be sawed is placed upon the bed piece or flooring A. The saw frame or gate C, being raised, and the saws V, V, are set angularly with each other, to correspond with the taper intended to be given the sides of the block, by adjusting the levers (*l*), (*n*), racks (*p*), and arms T. Motion is then given the crank (*c*), in any proper manner and a reciprocating motion is given the saw frame or gate C, and a lateral vibrating movement is given the saws V, V, by means of the arms I, T, levers (*l*), (*n*), and racks (*p*), and the saws V, will consequently cut angularly with the sides of the saw frame or gate and the saws V, V, will cut parallel with the sides of the frame or gate.

The saws are fed to their work by the weight of the frame or gate, and the rods R, S, are allowed to descend, their inner ends, with the saws by means of the rack O, in the sliding frame P, which is operated by the wheel N, and pinions M, (*k*).

By the above invention it will be seen that two sides of a marble block will be sawed at the same time and in taper form, and the

saws V, will also cut at the same time slats or blocks with parallel sides.

Having thus described my invention I would state that I do not claim the mode of operating the saws as described and claimed in the patent of Cyrus Avery, dated June 17th 1856; but

What I claim as new and desire to secure by Letters Patent is,

Giving the saws V, V, a lateral vibrating motion while the saw frame or gate C, is being operated by means of the rods R, S, attached to sliding frame P, in combination with arms I, T, levers (*l*), (*n*), and racks (*o*), (*p*), when constructed arranged and operated substantially as shown and described.

IRA CARTER.

Witnesses:
M. D. MERKER,
HENRY HUTCHINS.