

W. Emmett.

Polishing Marble.

Patented Mar. 20, 1860.

N^o 27,538.

Fig. 2.

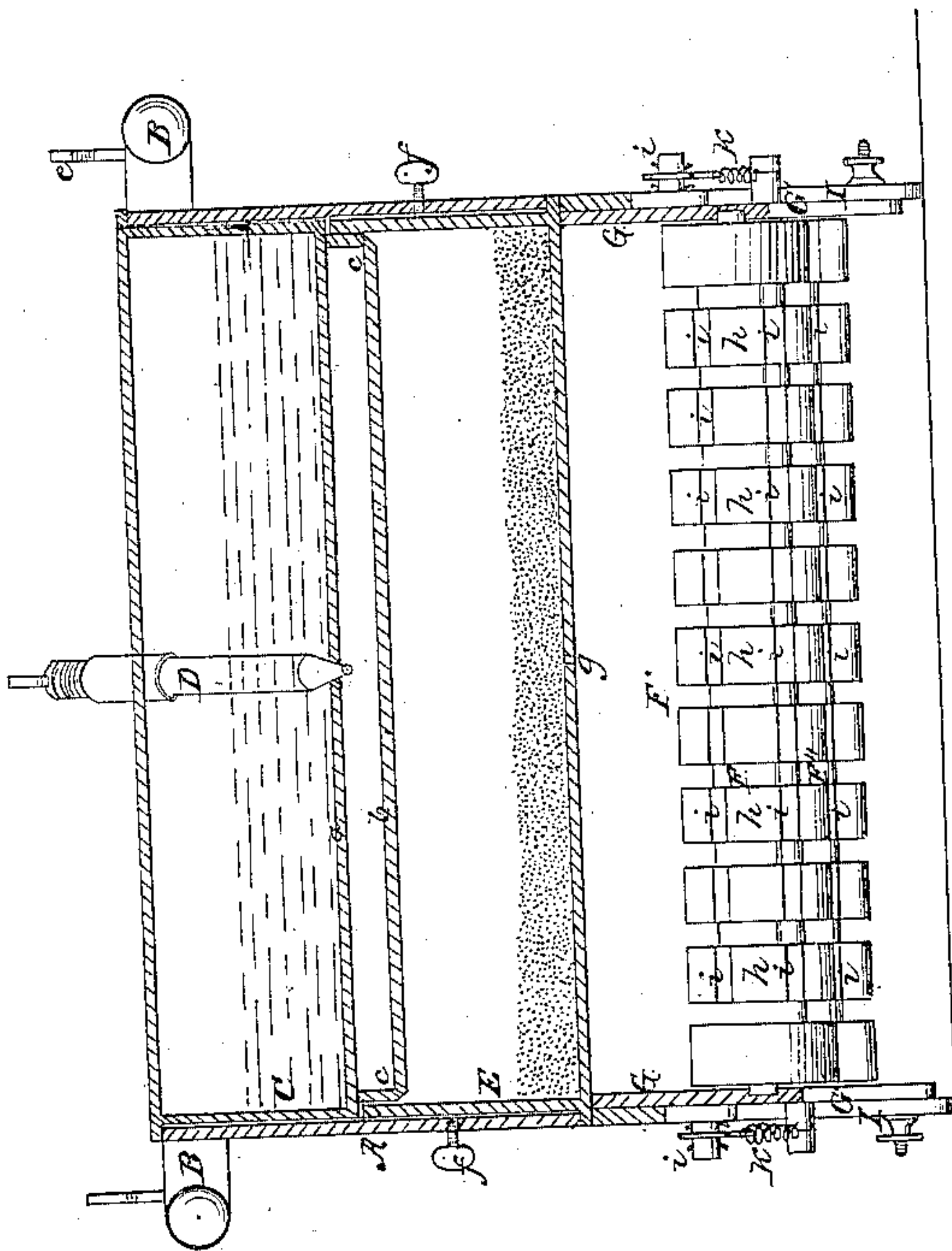


Fig. 1.

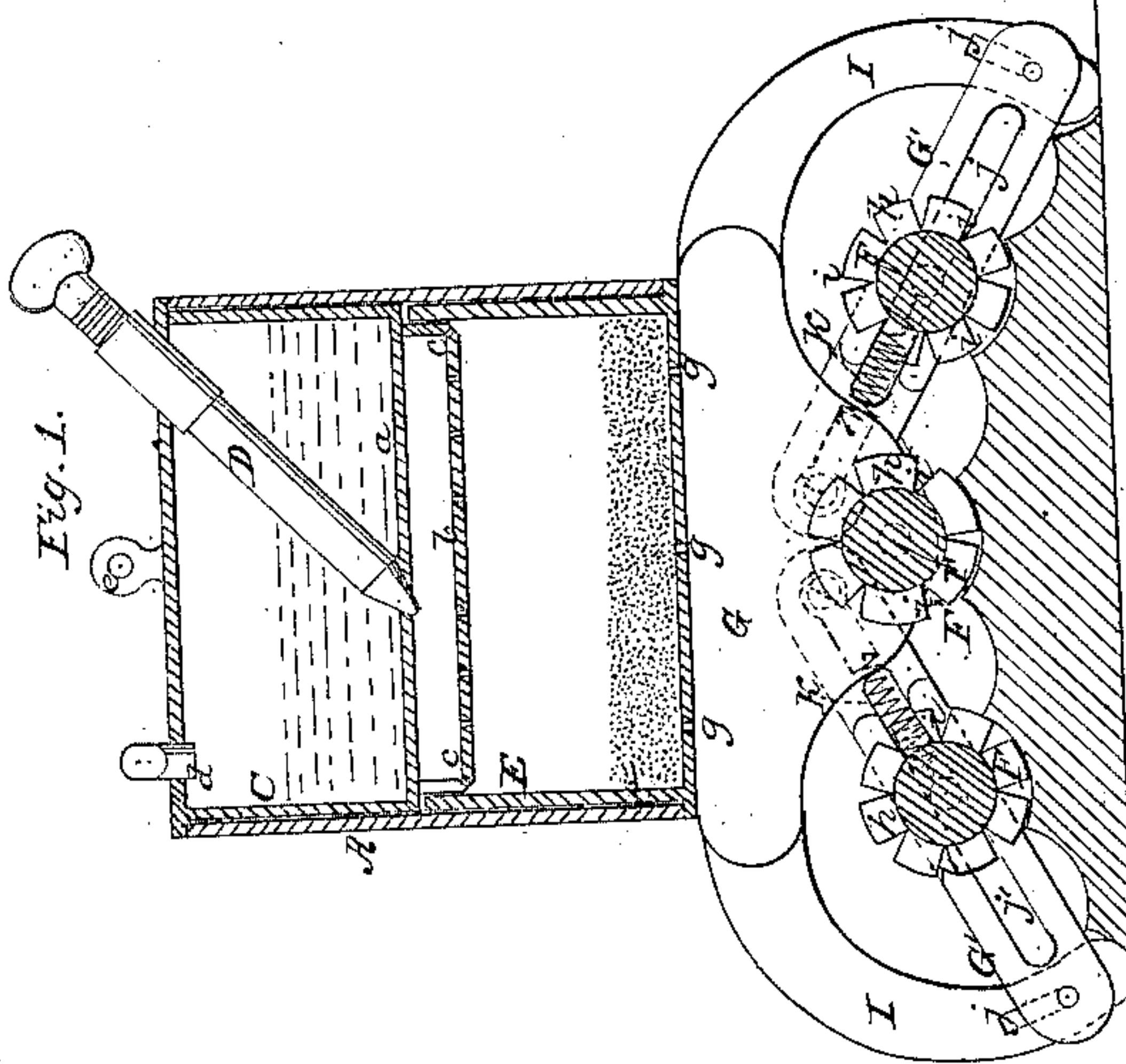


Fig. 5.

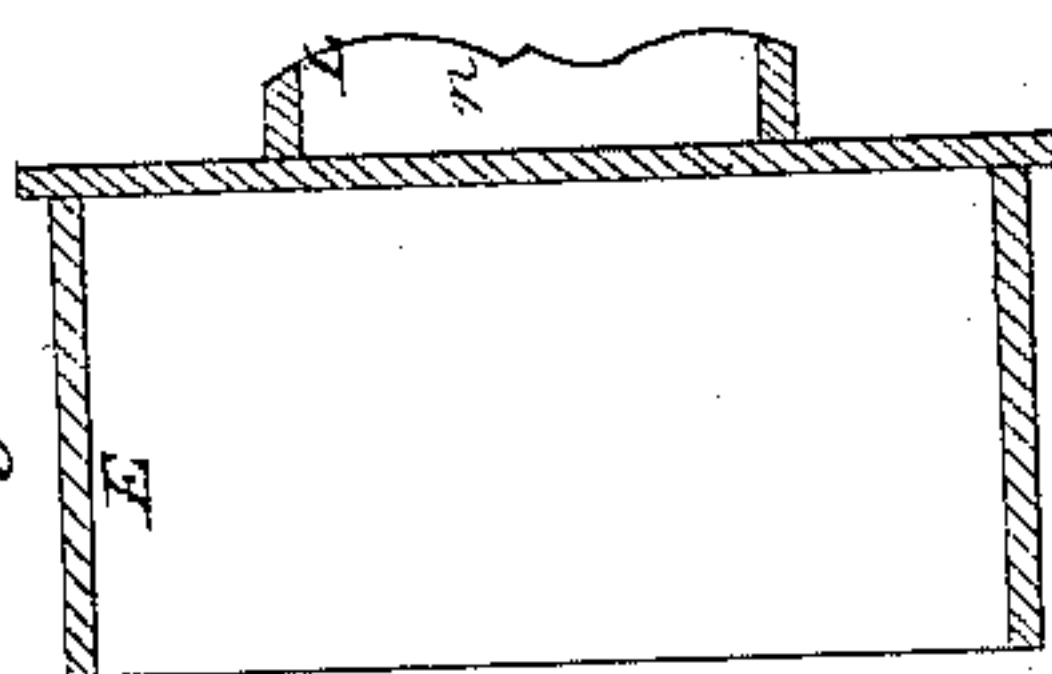


Fig. 4.

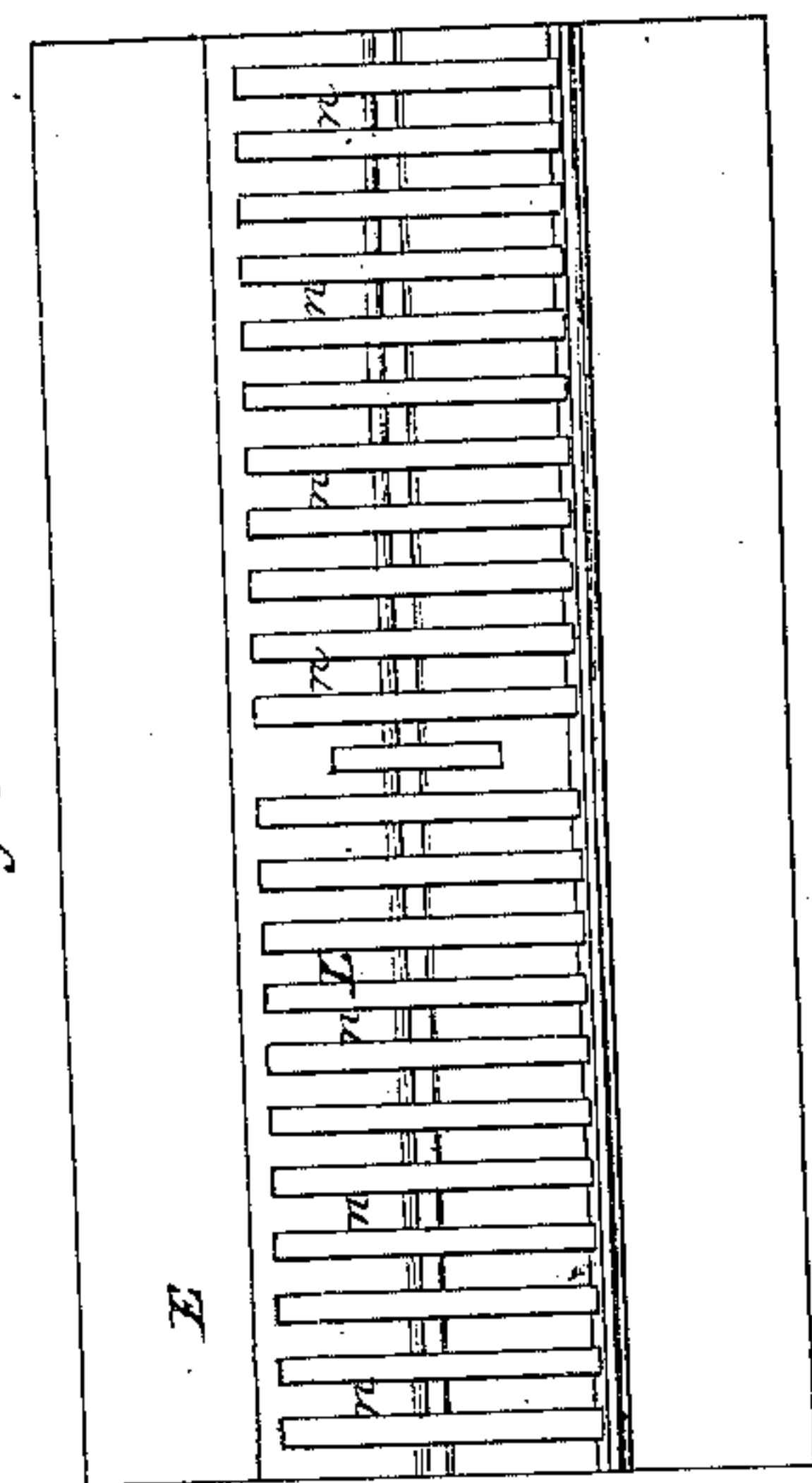
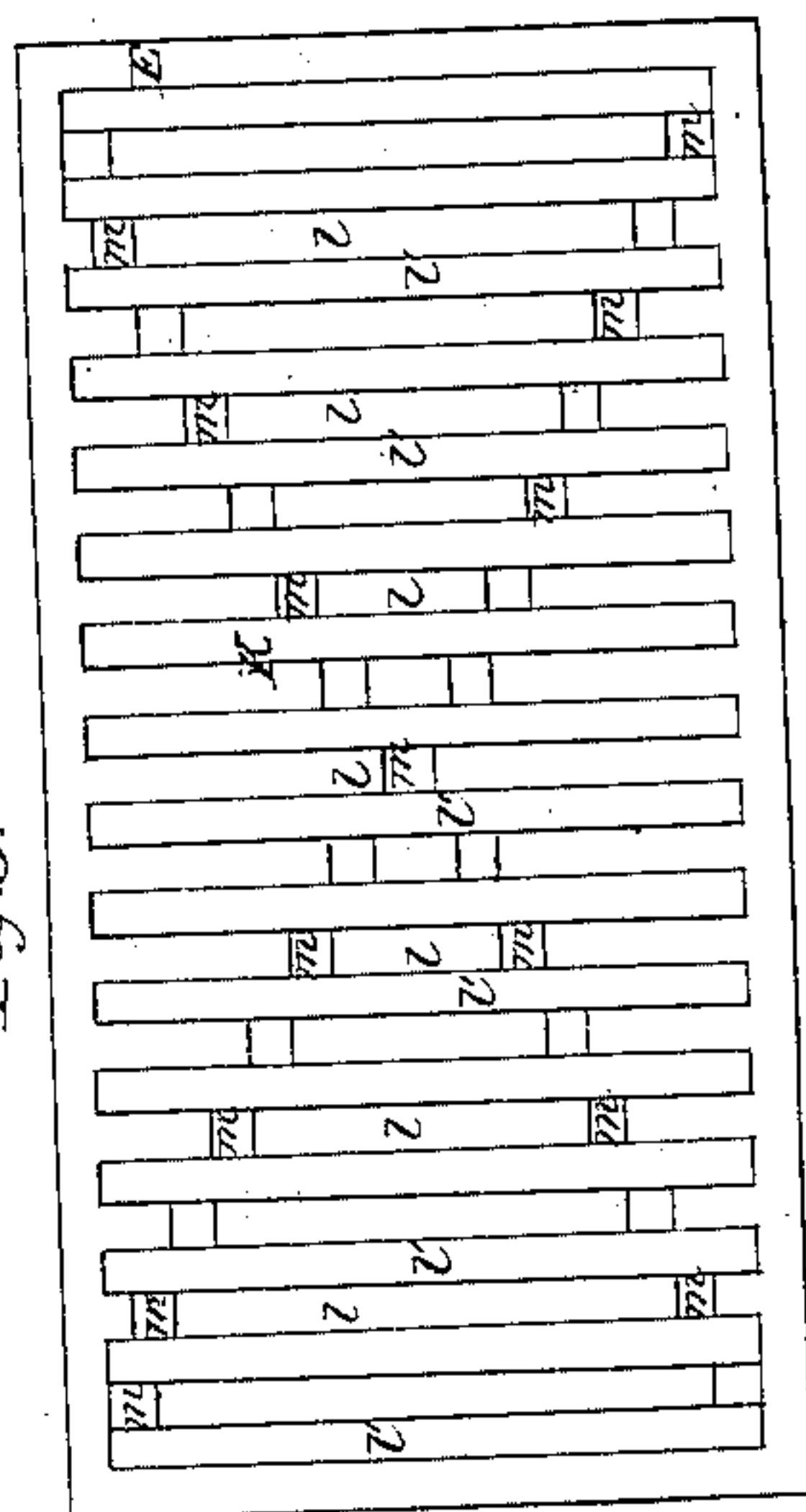


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM EMMETT, OF GALVESTON, TEXAS.

IMPROVEMENT IN MACHINES FOR POLISHING MARBLE, &c.

Specification forming part of Letters Patent No. 27,538, dated March 20, 1860.

To all whom it may concern:

Be it known that I, WILLIAM EMMETT, of Galveston, in the county of Galveston and State of Texas, have invented a new and Improved Machine for Rubbing and Polishing Marble, &c.; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a transverse vertical section of my invention arranged for rubbing and polishing a fluted column. Fig. 2 is a longitudinal vertical section of the same. Fig. 3 is an inverted plan of the rubbing-surface for flat surfaces. Fig. 4 is an inverted plan of the rubbing-surface for moldings. Fig. 5 is a transverse vertical section of the same.

Similar letters in all the figures refer to corresponding parts.

By the present method of rubbing and polishing the surfaces of articles made of marble or other similar substance a great deal of labor and time is spent, it being necessary in the first place to smooth the surface with the proper tools very carefully, and after this a long and tiresome rubbing is required. To save much of this labor and to facilitate the operation of smoothing, rubbing, and polishing the surface of articles of stone, marble, &c., is the object of my invention, which consists in combining with a shifting-box a reservoir to contain the water with a double bottom and regulating-tap, and a sand-box the bottom of which forms or has attached to it a rubbing-surface to correspond to the surface to be polished, so that the same shifting-box and reservoir can be used for rubbing and polishing different surfaces—such as fluted columns, moldings, or flat plates, or blocks; and it also consists in a particular combination of rollers for the purpose of rubbing fluted columns.

To enable those skilled in the art to make and use my invention, I will proceed to describe it.

A represents the shifting box, which is provided with handles B, that serve to push or draw the box along on the surface of the stone or other article to be rubbed. Fitted nicely into this box is the water-box C, which is furnished with a double bottom *a b*, and a stop-cock D, that fits into an opening in the

inner bottom *a*. The lower bottom *b* is perforated with a number of holes *c*, so that the water which is admitted from the box through the opening in the inner bottom is distributed over the entire surface of the lower bottom. The stop-cock D serves also to regulate the flow of the water. Water is introduced into the box C through an aperture *d*, that is closed by a stopper, and the box is kept in its place by passing a rod through two lugs *e*, which are rigidly attached to the shifting box A.

E is the sand-box, which fits nicely into the lower part of the shifting box A, being retained in the same by two set-screws *f*, and secured to the under side of the bottom of said sand-box is the rubbing-surface. The sand contained in the box E is washed down gradually through small holes *g*, and the number and size of these holes may be varied according to the work to be executed.

The rubbing-surface F* for fluted columns consists of a series of rollers F F', that rotate freely in the arched pendants G G' under the bottom of the said box. Each of the rollers is formed of a number of rubbing-disks *h*, which are furnished with incisions *i* to increase their efficacy. The middle roller F turns in suitable recesses in the inner sides of the pendants G, and it is arranged in such a manner that it can easily be taken out and replaced by one of larger or smaller diameter. The outer rollers F' work in slotted pendants G', which are secured to the outside of the pendants G by means of pivots *i'*, and which are adjustable in slots *j* in the arms I. The axles of the rollers F' are connected with the pivots *i'* by thin springs *k*, so that the several rollers may be brought closer together or farther apart, according to the diameter and to the size and depth of the flutes to be rubbed. The outer rollers are also so arranged that they can be taken off and replaced by others of larger or smaller diameter, so that the whole rubbing-surface can be made to adapt itself to flutes of different size and depth.

The rubbing-surface K for flat plates or blocks is represented in Fig. 3. It consists of a series of parallel slats *l*, with intermediate spaces *l'*, and each of the slats is furnished with one or more notches *m*, whereby its effect is materially increased.

The rubbing-surface L is represented in Figs. 4 and 5. It is formed of a series of slats *n*, the edges of which are cut out, so as to correspond to the molding to be polished, and the surface L, as well as the surface K, is attached directly to the bottom of the sand-box.

The operation will be easily understood. Sand is introduced into the sand-box E, and the shifting box is placed on it and secured to the same by the set-screws *f*. The water-box C, filled with water, is now placed into the top of the shifting box, and the whole is carried backward and forward on the surface of the stone or marble to be rubbed, and at the same time the water from the water-box C is allowed to drip down into the sand-box, whereby some of the sand is constantly carried down onto the surface of the article to be rubbed and between said surface and the rubbing-surface of the machine.

The effect of my machine is such that it

can be applied immediately after the tooth-chisel, no further tool being needed, so that it requires considerably less time and labor to turn out perfectly smooth and polished work than it does with the present method of smoothing and rubbing.

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

1. The arrangement of the rubbing-surface F, K, or L, in combination with the sand-box E, water-box C, and shifting box A, or their equivalents, substantially as and for the purpose described.

2. The employment of the rollers F F' or their equivalents, arranged for operation substantially as described, for the purpose of rubbing fluted columns.

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Witnesses:

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