J. C. CLIME.

Machine for Making Plumbago-Crucibles.

No. 197,335. Patented Nov. 20, 1877.

FIG. 2

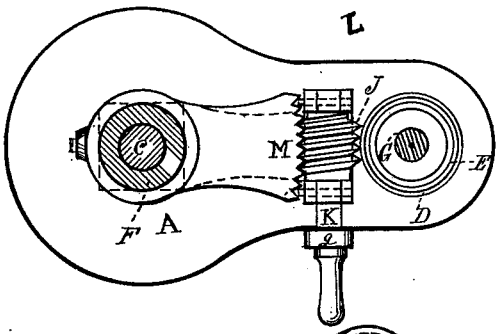
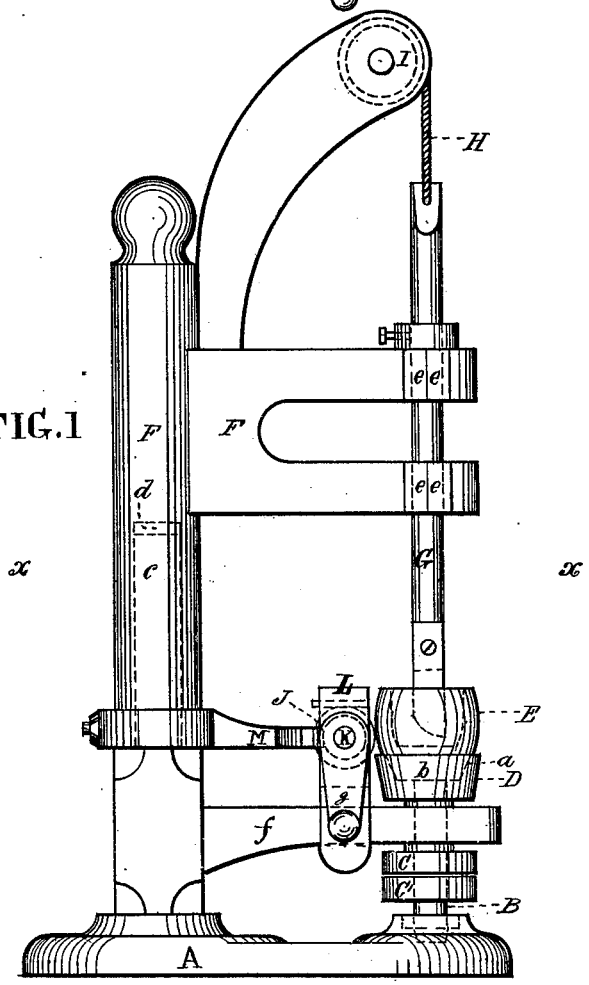


FIG. 1



Witnesses

Thomas J. Bewley.

S. A. Millett

Inventor

John C. Clime

per Stephen Ustick, attorney

UNITED STATES PATENT OFFICE.

JOHN C. CLIME, OF PHILADELPHIA, ASSIGNOR OF TWO-THIRDS HIS RIGHT TO HENRY WILE, OF SAME PLACE, AND REUBEN B. SEIDEL, OF ROBESON TOWNSHIP, PENNSYLVANIA.

IMPROVEMENT IN MACHINES FOR MAKING PLUMBAGO CRUCIBLES.

Specification forming part of Letters Patent No. **197,335**, dated November 20, 1877; application filed August 24, 1877.

To all whom it may concern:

Be it known that I, JOHN C. CLIME, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain new and useful Improvements in Machines for Making Plumbago Crucibles and other pottery-ware, which improvements are fully set forth in the following specification, and the accompanying drawings, in which—

Figure 1 is a side elevation of my improved machine. Fig. 2 is a horizontal section, taken at the line *x x* of Fig. 1.

Like letters of reference in both figures indicate the same parts.

My invention consists in the combination of a toothed sector and worm-wheel with the base of the machine which contains the mold for forming the outside of crucibles, and with a partially revolving or swinging frame which holds the former for shaping the inside of the same, in such a manner as to provide for carrying the former outward from the center of the mold for the formation of a crucible by turning the sector in one direction, and by turning it in the opposite direction to return the former toward the center of the mold for its withdrawal from the crucible just formed, as hereinafter fully described.

Referring to the drawing, A is the base of the machine, having a vertical revolving shaft, B, provided with a tight and loose pulley, C and C′, in the usual manner. D is a wheel on the upper end of the shaft, having a recess, *a*, for the reception of the mold E, which is of suitable size and form to make the outside of the crucible.

Molds of various sizes are connected with the wheel D by having the projection *b* on their under side to fit the recess *a* of the mold.

F is a swinging vertical frame, which is connected with the base A by means of the upwardly-projecting shaft or spindle *c* of the base and a corresponding opening, *d*, of the frame, whereby the frame is adapted to rotate or swing around in either direction any desired distance. This frame is provided with a former, G, for making the inside of the crucibles, as the mold E is revolved by means of a belt which connects the tight pulley C with the motive power.

The former has a vertical movement in the bearings *e e*, being held up and varied in its height by the cord H which passes over the pulley I, and is provided with a weight in the usual manner.

J is a worm-wheel on the horizontal shaft K, which has bearings in the pedestal L, secured by means of bolts or screws to the arm *f* of the base A, and M is a toothed sector which gears into the worm-wheel, the sector being projected from the lower end of the rotating frame F. The shaft K is provided with a crank, *g*.

By turning the crank *g* the action of the worm-wheel upon the sector M rotates the frame F, so as to swing the latter any desired distance.

The height of the crank may be varied to suit persons of different height by the adjustment of the pedestal L, in which case the sector has to be adjusted on the frame F.

The operation is as follows: After a lump of material for forming a crucible has been placed in the mold, the former G, which has been previously raised out of the way, is lowered upon the lump, and the mold being revolved, by the means heretofore described, the former is gradually swung around the requisite distance from the center of the mold to form the inside of the crucible by the revolutions of the worm-wheel J acting upon the toothed sector M, and rotating the frame F, with which the sector is connected, as above described.

The outside of the crucible is formed by the action of the former pressing the material gradually against its inner surface. When the crucible is fully formed, by a reverse movement of the sector the frame F is turned in the opposite direction far enough toward the center of the mold to admit of the withdrawal of the former G out of the crucible into its elevated position, where it remains until the crucible is removed from the mold and a lump of material for the formation of another crucible is laid in the mold.

By giving the teeth of the worm-wheel the

requisite pitch, any desired amount of power may be given to the former to give solidity to the crucible.

I claim as my invention—

The combination of the sector M and worm-wheel J with the frame F and base A for swinging the frame in opposite directions to give reciprocating lateral movements to the former C, to press it outward from the center of the mold in the formation of the crucible, and return it to the center for its removal from the crucible, substantially as set forth.

JOHN C. CLIME.

Witnesses:

STEPHEN USTICK,

THOMAS J. BEWLEY.