

A. V. Hough,
Brick Machine.

N^o 13,129.

Patented June 26, 1855.

Fig. 1.

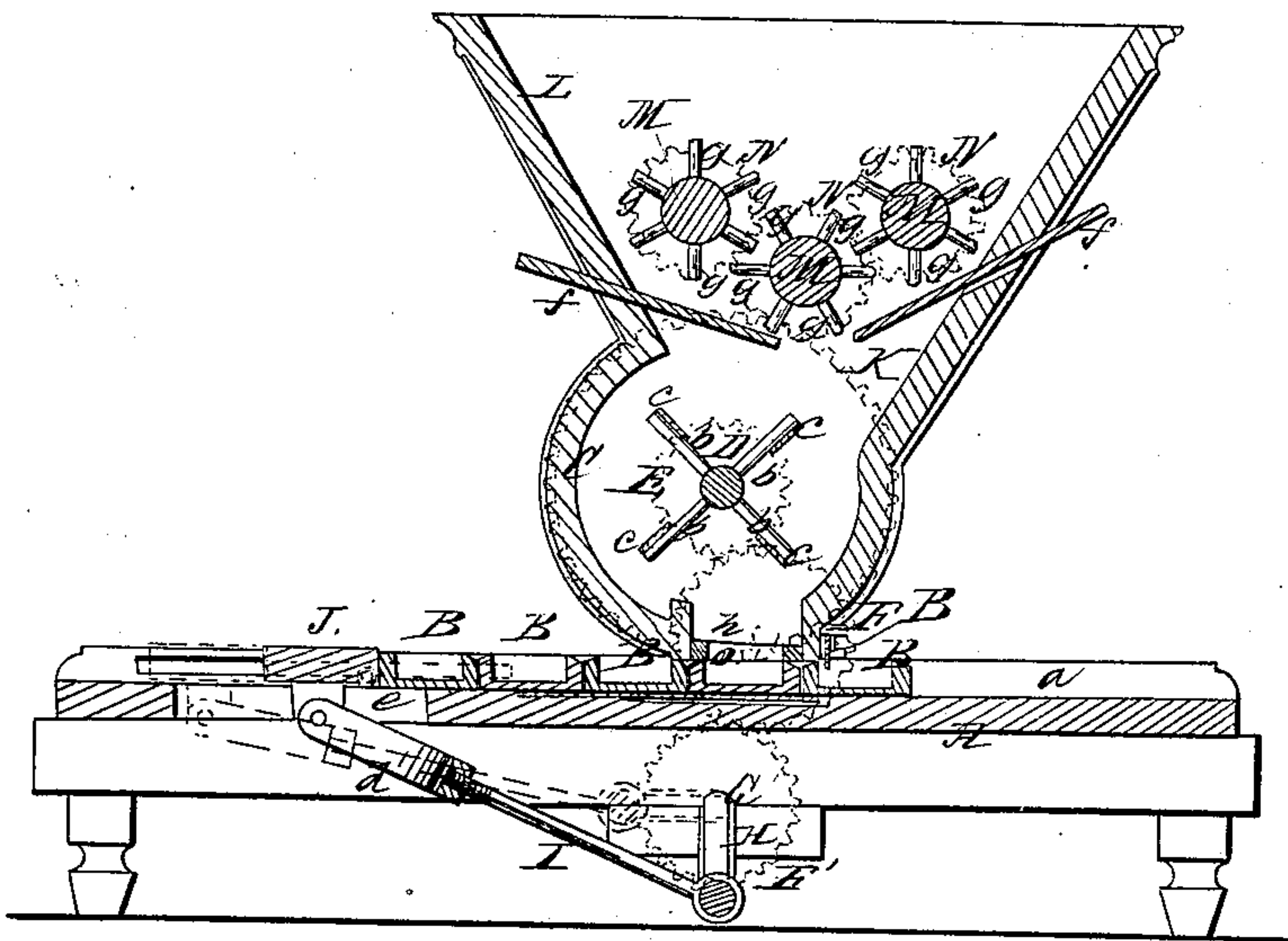
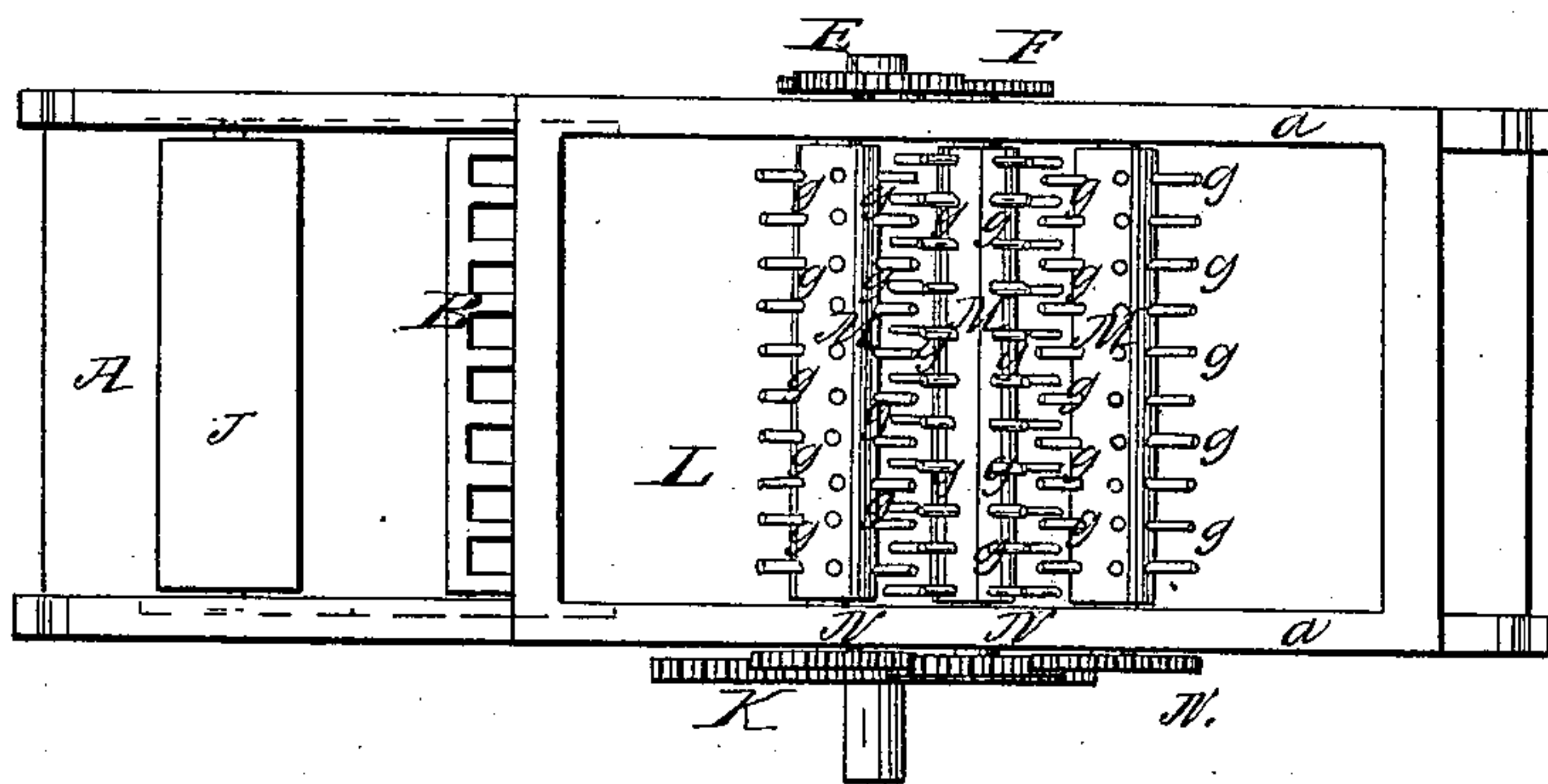


Fig. 2.



UNITED STATES PATENT OFFICE.

A. V. HOUGH, OF GREENCASTLE, INDIANA.

BRICK-MACHINE.

Specification of Letters Patent No. 13,129, dated June 26, 1855.

To all whom it may concern:

Be it known that I, A. V. HOUGH, of Greencastle, in the county of Putnam and State of Indiana, have invented a new and
5 Improved Brick-Machine; 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—

10 Figure 1, is a longitudinal vertical section of my improvement. Fig. 2, is a plan or top view of ditto.

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

15 The nature of my invention consists in placing regulating slides (*f*) (*f*) at the bottom of the pug mill as will be presently shown and described. And also placing a shaft provided with suitable blades horizon-
20 tally within a cylindrical case, whereby the machine is rendered extremely simple, and other advantages derived therefrom as will be hereafter shown.

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

A, represents a horizontal bed having cleats or ledges *a, a*, one at each side, between which the brick molds B, fit or work,
30 the molds resting upon the bed.

C, represents a cylindrical case which is secured horizontally over the bed A. The ends of this cylindrical case rest upon the cleats or ledges, *a, a*, so as to leave a space
35 between the lower side of the case C, and the surface of the bed A, to allow the molds to pass underneath the case, see Fig. 1. Within the case C, there is placed a longitudinal shaft D, which has radial arms, *b*,
40 attached to it. To the ends of these arms horizontal blades, *c*, are attached, similar to a fan wheel, the edges of the blades, *c*, do not extend as far as the inner side of the case C, a space being allowed between the
45 blades and case. To one end of the shaft D, there is attached a pinion E, which gears into a pinion F, and the pinion F, gears into a pinion F', at one end of a horizontal shaft G, underneath the bed A. This shaft G, is
50 provided with a crank H, to which one end of a rod or pitman I, is attached, the opposite end of the rod or pitman being attached by a bow, *d*, to a bar J, which works on the bed A, slots, *e*, being made through the bed
55 to allow projections on the under side of the bar to pass through, the ends of the bow

being attached to these projections, see Fig. 1.

To the end of the shaft D, opposite to the end where the pinion F, is attached, there
60 is secured a toothed wheel K, see Fig. 2.

To the upper part of the cylindrical case C, there is secured a box L, the front and back ends of which are inclined. The lower
65 end of this box is provided with two slides, *f, f*, one passing through the front, and the other through the back end piece of the box. The slides, *f*, are somewhat inclined, their inner edges being lower than the outer
70 edges, see Fig. 1.

Within the box L, there are placed three
cylinders, M, M, M, these cylinders are parallel with the shafts D, G, and have radial
75 arms or beaters, *g*, attached to them, the arms or beaters of one cylinder passing between or overlapping those of the adjoining one. The shafts or journals of the cylinders M, at one end have pinions N, attached to them, one to each, these pinions gear into
80 each other, and one of the pinions gears into the toothed wheel K, at the end of the shaft D.

The lower end of the cylindrical case A, has a longitudinal opening, *h*, made in it,
85 in which a grate O, is fitted, the spaces between the bars of the grate being somewhat smaller than the molds.

At one side of the lower part of the case C, there is attached a plate or scraper P,
90 see Fig. 1.

Operation: The clay is placed in the box L, and supplied with a requisite quantity of water. Motion is given the shaft D, in any proper manner, and the clay is ground and tempered by the arms or beaters, *g*.
95 The slides, *f*, are adjusted so as to allow the requisite quantity of ground clay to pass into the case C, and the blades, *c*, as they rotate force the clay through the grate O, into the molds B, which are fed under-
100 neath the cylindrical case C, by the bar J, said bar being operated by the rod or pitman I, and crank H. The filled molds are forced one at a time out at the front side of the case C, at every stroke or vibration of
105 the bar J, and the empty molds are placed directly in front of the bar J, back of the case, previous to the forward movement of said bar. The plate or scraper P, clears the
110 superfluous clay off from the upper surfaces of the molds, as they are forced out from underneath the case C.

The above machine is extremely simple, economical to manufacture, and is not liable to get out of repair. By having the shaft D, placed in a horizontal position and provided with radial arms with blades (c) and by having the horizontal cylinders M, with the beaters (g) attached as shown, the machine is rendered extremely simple, for motion is communicated direct from the shaft D, to the cylinder M, whereas in other machines a complicated arrangement of levers is required and in many cases the pug mill is operated by a separate application of power. The blades (c) will force the clay into the molds equally as well as a reciprocating plunger or follower which is mostly used.

I am aware that vertical shafts with radial arms attached have been used for forcing the clay into a press box, in which a plunger works. In my improvement I dispense with a plunger, and the whole work, viz, tempering and grinding the clay

and forcing the same into the molds is done by the simple rotation of the shaft D, and cylinders M, arranged in the most simple manner as shown.

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

1. I claim the slides *f, f*, placed at the bottom of pug mill L, for the purpose of enabling the operator to regulate the rapidity of the egress of the clay, according as it requires to be subjected to the operation of the cylinder for a longer or shorter time.

2. I claim placing the shaft D, with its blades (c) in a horizontal position within the cylindrical case C, as herein shown, whereby the machine is rendered extremely simple, the journals kept free from clay, and all the parts of the machine operated by the rotation of a single shaft.

A. V. HOUGH.

Witnesses:

JOS. GEO. MASON,
WM. TUSCH.