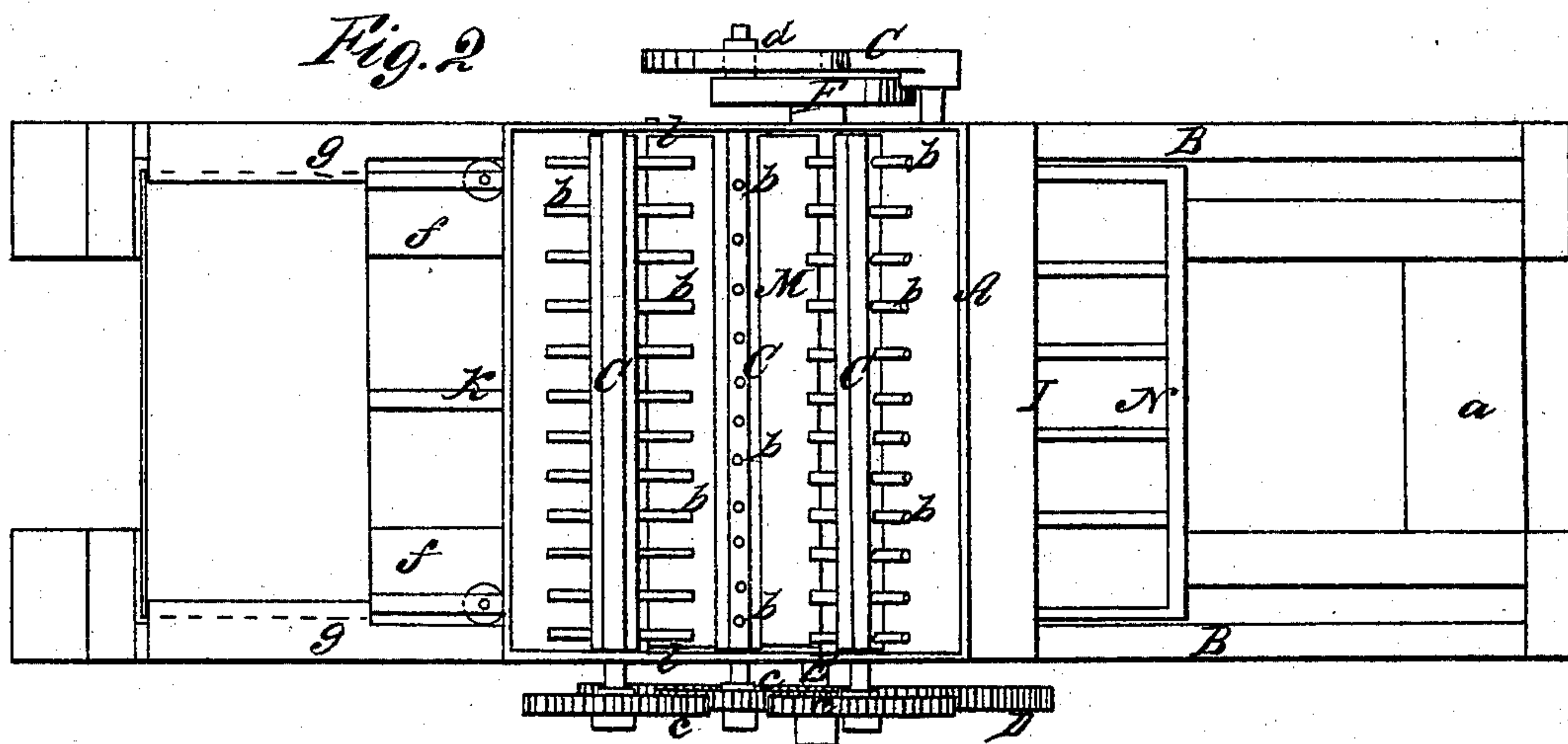
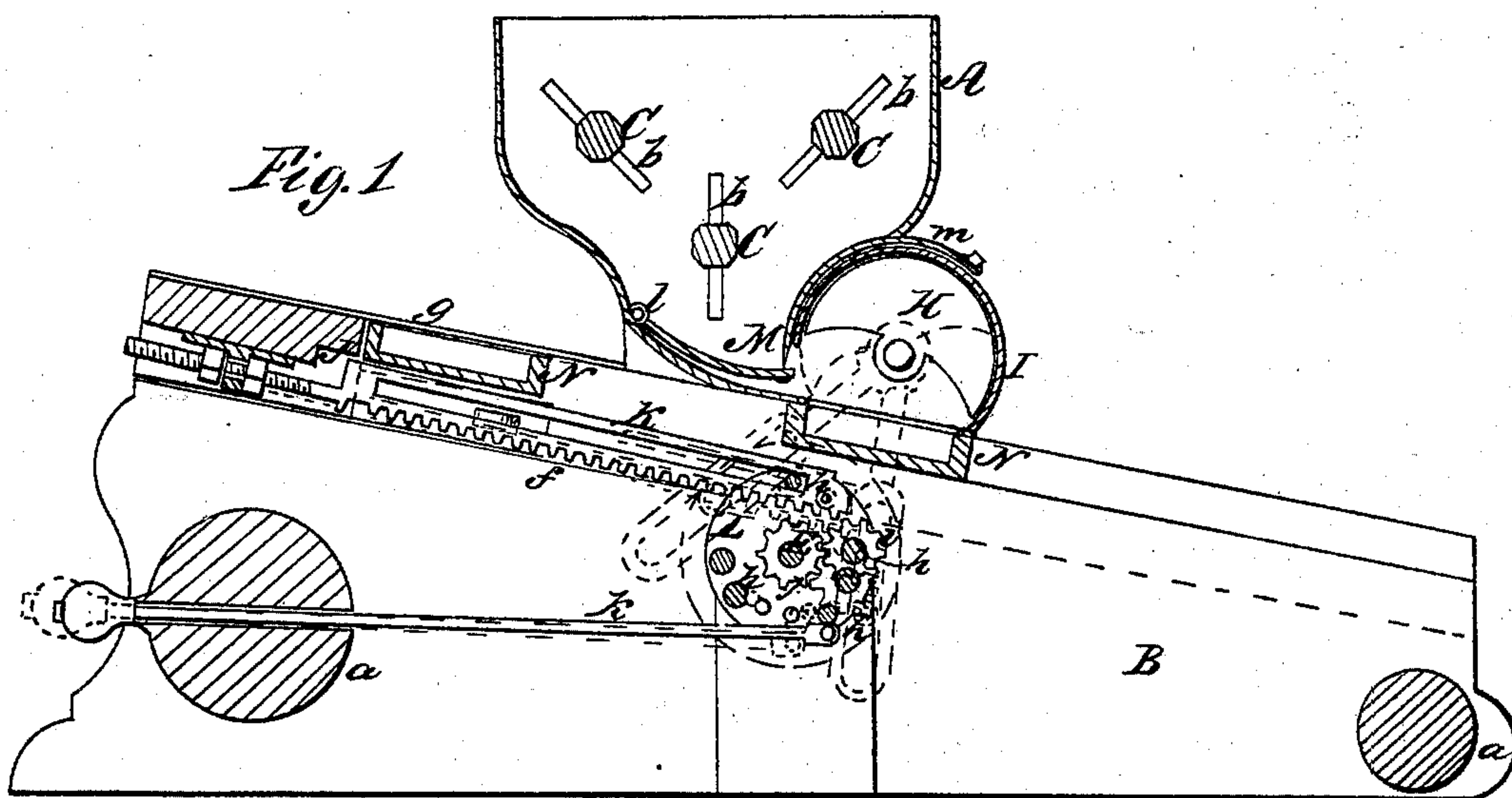


*J.A.Hill,*  
*Brick Machine,*  
*No 15,808,      Patented Sep. 30, 1856.*





# UNITED STATES PATENT OFFICE.

JOS. A. HILL, OF GREENCASTLE, INDIANA.

## BRICK-MACHINE.

Specification of Letters Patent No. 15,808, dated September 30, 1856.

*To all whom it may concern:*

Be it known that I, JOSEPH A. HILL, of Greencastle, in the county of Putnam and State of Indiana, have invented a new and Improved Machine for Molding and Pressing Brick; 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. Fig. 2 is a plan or top view of ditto.

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

My invention consists in the peculiar means employed for operating the carriage J, for feeding the molds underneath the pug mill and discharging them therefrom.

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

A, is the pug wheel which is placed upon the framing of the machine, said framing being formed of two side pieces or boards B, B, connected by cross ties (a), (a).

C, C, C, are three shafts which are fitted in the pug mill, each shaft being provided with arms or beaters (b). These shafts at one end have toothed wheels (c), on them, the wheels of the two uppermost shafts gearing into the wheel of the lower shaft and the lower wheel gearing into a toothed wheel D, on the driving shaft E.

On the end of the driving shaft E, opposite to the end on which the wheel D, is placed there is a crank pulley F, the pin (d), of which is fitted and works in a slotted arm G, which is attached to one end of the axis of a semi or part cylinder H, which is fitted and works in a case I, adjoining the pug mill A. The under surface of the semi-cylinder is of concave form as clearly shown in Fig. 1.

From the above description of parts it will be seen that by rotating the driving shaft E, the pug mill shafts C, will be rotated by the gearing (c), (c), (c), D, and the semi-cylinder H, will have a reciprocating rotating motion given it by the crank pulley F and slotted arm G.

On each of the side pieces or boards B, B which form the framing of the machine there is a way or guide (f), on which a carriage J, works, and (g), (g), are metallic plates secured to the top surface of the side

pieces to hold the carriage in proper position, said plates projecting over the inner surfaces of the side pieces. To the inner end of the carriage J, there is attached a rack bar K, which is slotted longitudinally. The ways (f), (f), are somewhat inclined, as clearly shown in Fig. 1.

L, represents a drum through the center of which the driving shaft E, passes, the drum being detached from the shaft and having bearings of its own. This drum is formed of two circular plates connected by rods (h), one of which passes through the slotted rack bar K. One of the other rods (h), has a pinion (i) upon it, and a pinion (j), is placed upon the driving shaft E, within the drum L. To the lower part of the drum L, a rod (k), is attached and by moving this rod either of the pinions (i), (j), may be thrown in gear with the rack bar K, and a reciprocating motion given the carriage J.

Within the pug mill A, a board or plate M, is placed, said board or plate being hinged at one edge, as shown at (b), and serving as a door or flap to cover the opening leading into the case I, that incloses the semi-cylinder H. A string or cord (m), is attached to this board or plate by which it may be raised and lowered as desired.

The operation is as follows: The clay is placed within the pug mill A, properly moistened, and motion being given the shaft E, in any proper manner the shafts C, are rotated and the clay is properly ground and tempered, the door or flap M, being closed or raised so as to shut off communication with the case I. When the clay is properly ground, the door or flap M, is allowed to open or descend and the clay passes into the case I, underneath the same cylinder H, and as the semi-cylinder oscillates the clay is forced into the molds N, which are carried underneath the case I, by the carriage J, which is moved forward underneath the case when the rod (k), is moved by the hand of the attendant, so that the pinion (j), will be thrown in gear with the rack bar K, said pinion being out of gear with the rack bar when the mold reaches the proper point or position. The return motion is given the carriage by throwing the pinion (i), in gear with the rack bar. The filled molds are pressed forward or thrown out from underneath the case I, by the succeeding molds.

The above machine is exceedingly simple,

is not liable to get out of repair, and works with but little friction.

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

The drum L, provided with the pinion (i), when constructed and arranged to operate relatively with the rack bar K, and

pinion (j), as described, for the purpose of reciprocating the carriage J, in the manner 10 and for the purpose set forth.

JOSEPH A. HILL.

Witnesses:

JAMES TAYLOR,  
JEROME ALLEN.