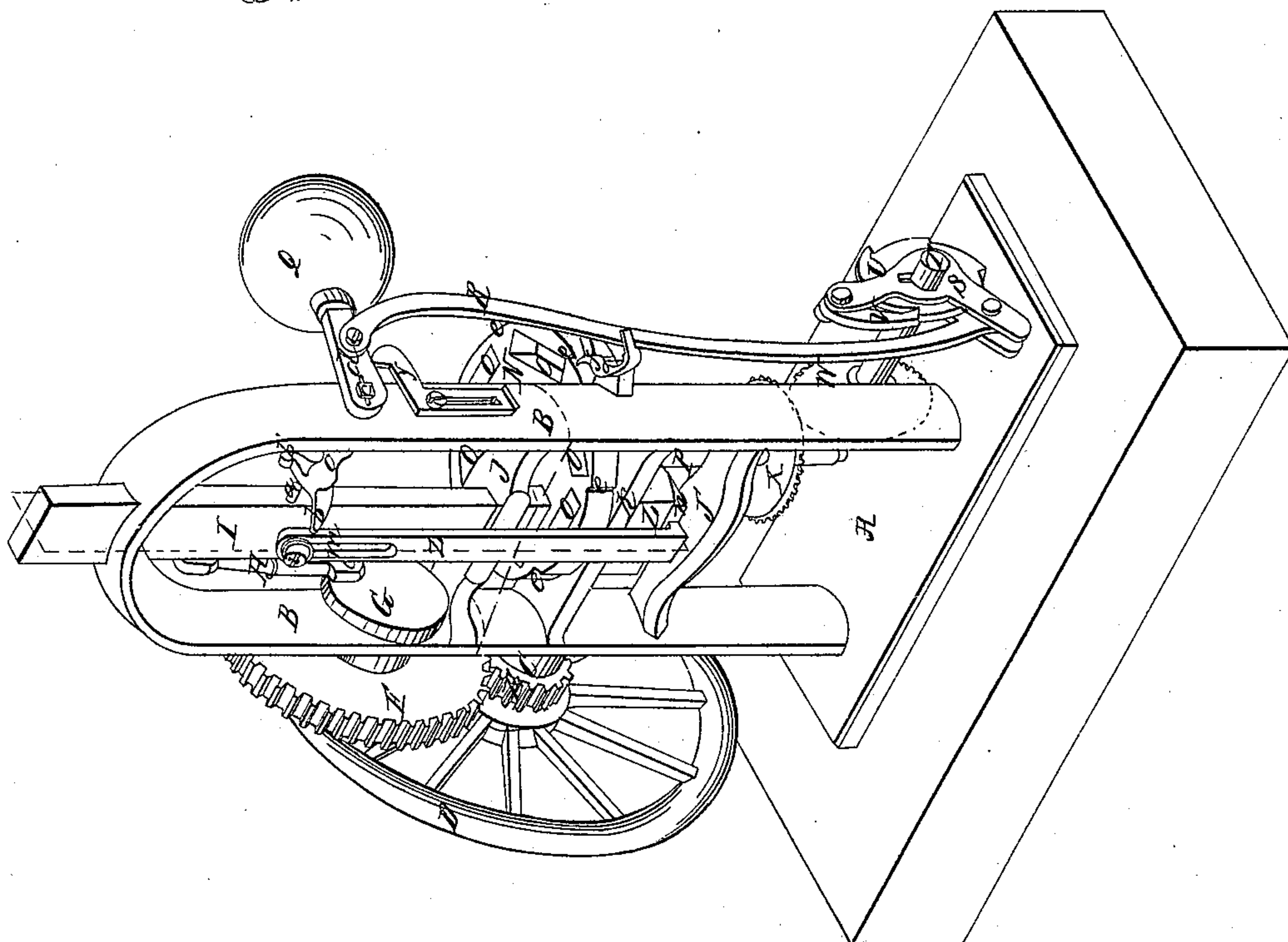
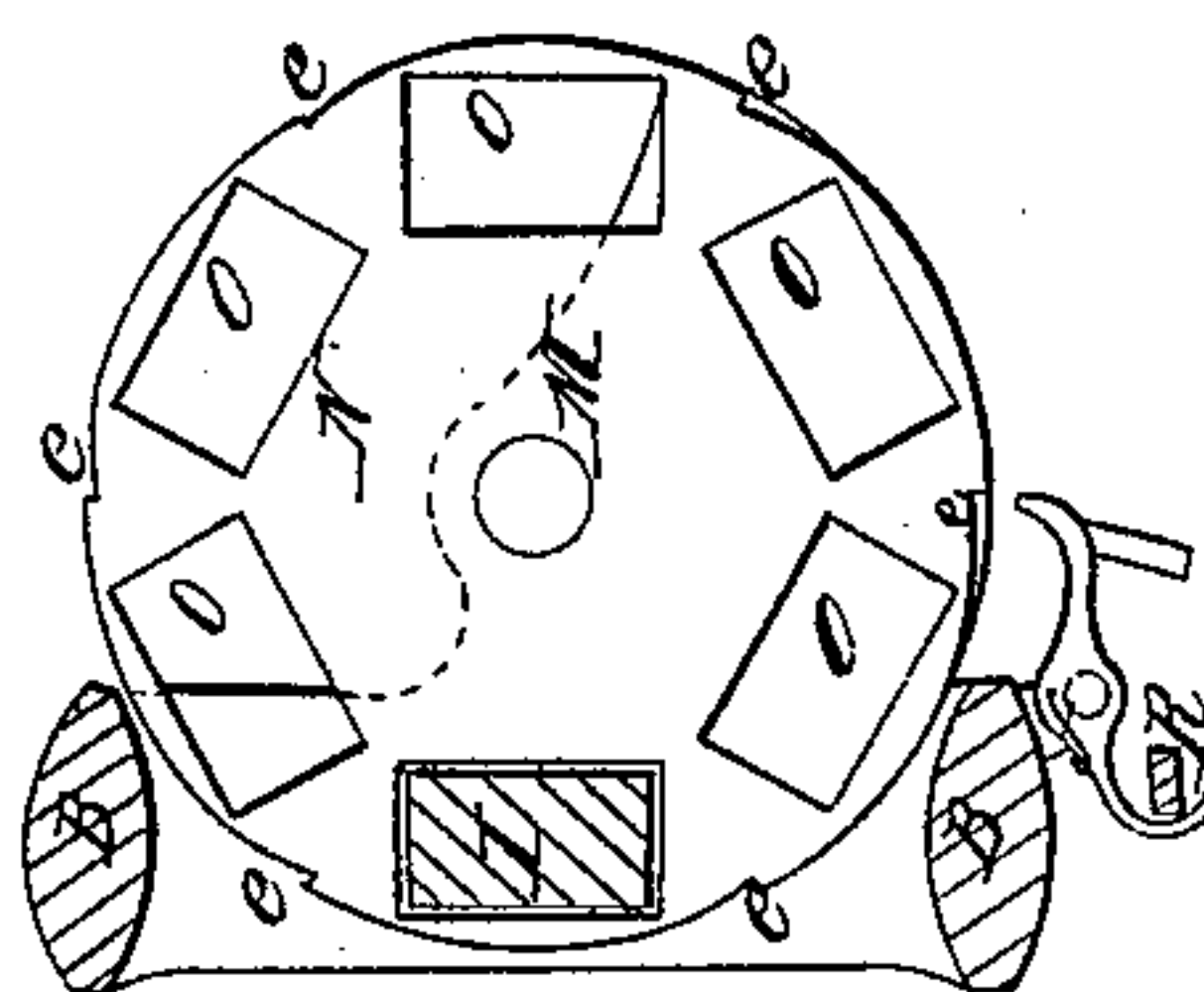
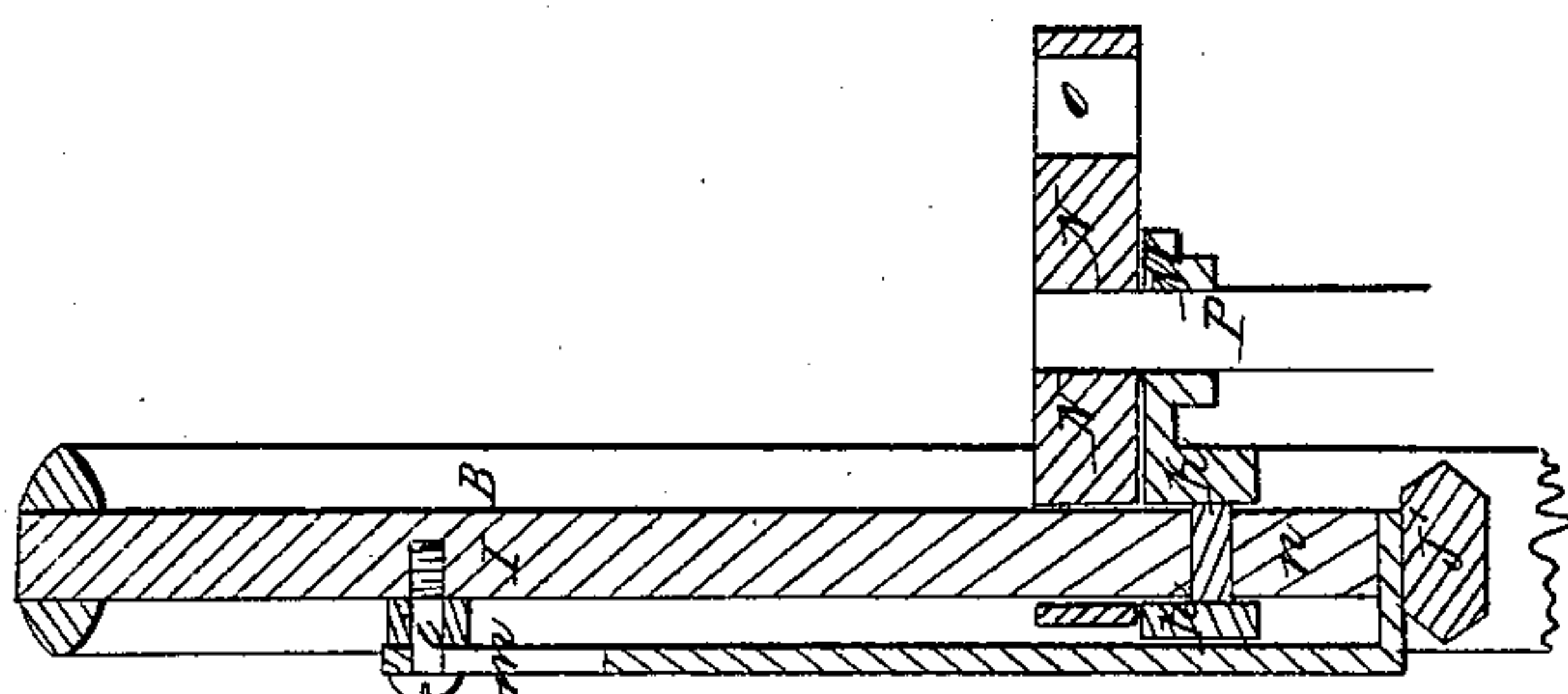
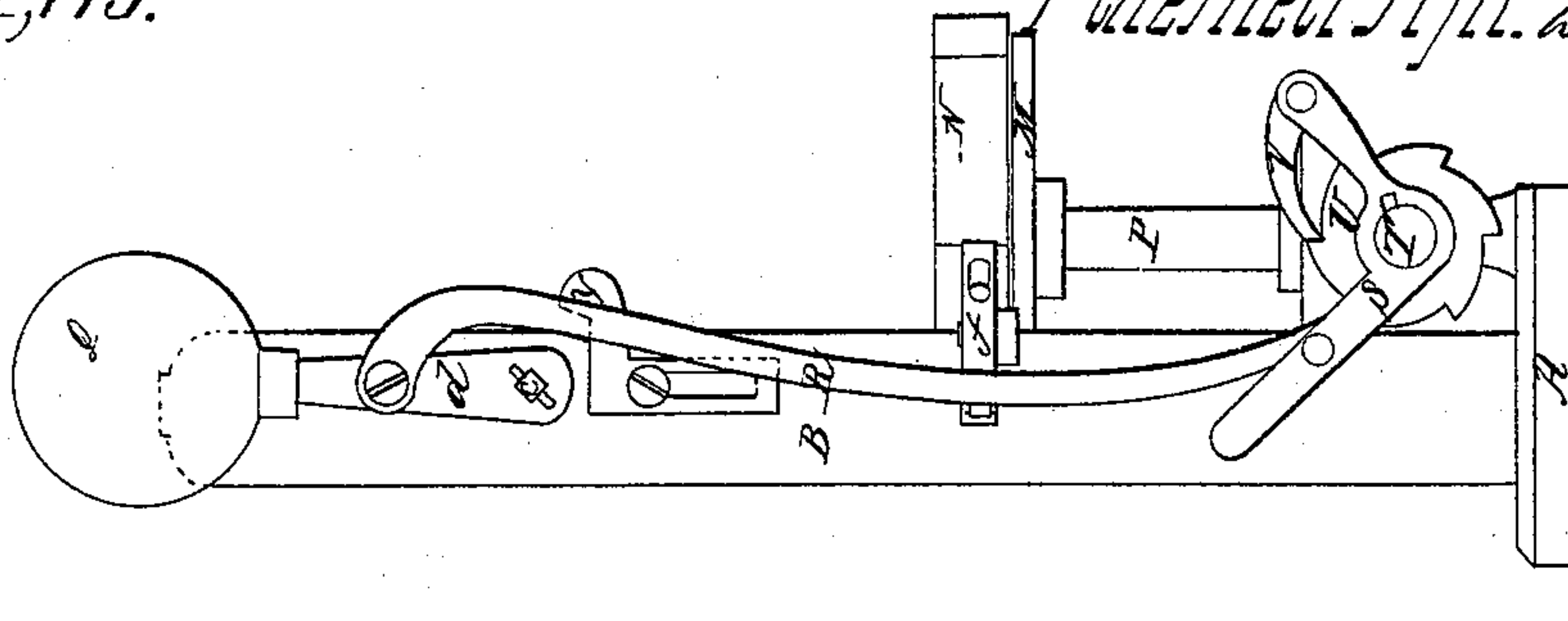


Brick Machine

Patented Apr. 22, 1856.



UNITED STATES PATENT OFFICE.

P. S. DEVLAN, OF READING, PENNSYLVANIA.

BRICK-MACHINE.

Specification of Letters Patent No. 14,713, dated April 22, 1856.

To all whom it may concern:

Be it known that I, PATRICK S. DEVLAN, of Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Brick-Machines; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part thereof, in which—

Figure 1 represents a perspective view of the machine. Fig. 2 represents a vertical and a horizontal section taken through the red lines in Fig. 1 and Fig. 3 represents an elevation from one of the sides.

Similar letters in the several figures denote like parts.

The nature of my invention relates to the combination of an intermittently acting conveying and delivery apparatus, with a reciprocating plunger, and stationary mold, so that the plunger shall pass through the clay conveying, and brick delivering apparatus into the mold below it to form the brick, and the arrangement of devices, for operating the several parts of the machine so as to work in unison with each other, and which simplify and cheapen the cost of the machine, as will be described.

A, represents the base of the press, from which rises an inverted U shaped frame B, which together with the base or bed plate A, supports the entire machine.

In a hub C, on one side of the vertical frame, is secured a short shaft, upon which a fly or band wheel D is placed through which motion is communicated to the machine from any first mover. Connected with the wheel D, so as to turn with it is a spur wheel E, which takes into and operates a gear wheel F, also supported on the frame, by a shaft passing through the frame, said shaft having on its inner end a wheel G, to which is connected by a wrist pin, one end of a connecting rod H, the other end of which connecting rod is similarly attached by a wrist pin to the top of the plunger I.

The plunger I, is supported in the top or bow of the frame, and in a cross piece J, below it, and has a vertically reciprocating movement through its bearings, by the means just above described. A second cross piece K, below that J, has in it the mold L, in which the brick (as shown by red sectional lines in Fig. 2) is formed. On this

cross piece K, is also formed a kind of table M (Fig. 2) over which the intermittently rotating, clay carrying, and brick delivering apparatus N, which is of a circular form, (though it may be of different form and accomplish the same thing) works. This wheel N, is furnished with any suitable number of clay depositories O, into which the clay is thrown, the table M, underneath it, forming bottoms as it were to said depositories, and it is rotated intermittently, through a shaft P, on the upper end of which it is placed, as will be described.

On one side of the plunger I, is a stud or pin *a*, which strikes alternately on the arms *b*, *b'*, attached to a shaft *c*, by which means said shaft receives a rocking motion. The shaft *c*, passes through the frame B, and has upon its outer end, an arm *d*, provided with a weight Q, for causing said arm *d* to fall with sufficient force to operate the pawls connected to, or operated by it, as follows: R, is a connecting bar, one end of which is attached to the arm *d*, and the other end to a bell crank lever S, which works loosely on the shaft T. On the said shaft T, is permanently fixed a ratchet wheel U, into which a dog or pawl V, pivoted to one of the arms of the bell crank S, takes, so that as the arm *d*, rises by the rocking of the shaft *c*, said pawl V, will slip over the ratch U, and when it falls, will by means of said ratch and pawl, give a partial rotation to the shaft T. The shaft T, has upon it a bevel gear wheel W, which meshes with a similar bevel wheel X on the shaft P, and thus imparts to said shaft P, and the wheel N upon it, a similar partial rotation, bringing one of its clay receptacles *o*, immediately underneath the plunger I, and over the mold L. The plunger I, in its descent, passes through the clay depositories *o*, carrying the clay before it into the stationary mold L, below, and there forms the brick. The perimeter of the wheel N, is provided with ratchet teeth *e*, into which a ratchet *f*, operated by the arm R, takes so as to release said wheel N, and then catch and hold it in proper position for the plunger. Y is an adjustable support for catching the arm *d*, to prevent its falling too far.

On the rear of the plunger I, is a stud or pin *i*, and to this stud or pin, is connected by a slot *m*, a bar Z, which carries on its lower end a follower *n*, for raising up out of the mold into one of the receptacles *o*, the brick

after it is pressed, and thus the same receptacle which brings up the clay to the mold, becomes the depository for the pressed brick, and carries it around or forward far enough
5 to drop it onto an endless belt, or other conveyer, for carrying it away. When the plunger descends the pin *i*, passes through the slot *m*, until near the end thereof without moving the bar *Z*, or the follower *n* on
10 it, but when the pin arrives at the bottom of the slot, it carries down the bar *Z*, and the follower *n*, until said follower rests upon the cross piece *J'*, of the frame, which takes the pressure off the follower. The brick being
15 formed, the plunger rises, and when the pin reaches the top of the slot, the follower rises up also, carrying the pressed brick up into the receptacle *o*, immediately above it; at this point of the operation the wheel *N*, is
20 again brought around a portion of a revolu-

tion, and the operation of pressing and delivering is again repeated.

Having thus fully described the nature of my invention what I claim therein as new and desire to secure by Letters Patent is— 25

In combination with a stationary mold, and a reciprocating piston or plunger, an intermittently rotative feeding and conveying apparatus through which the plunger passes, to compress the clay, and form the
30 brick and which remains to receive the brick as it is ejected from the mold, and carries it forward out of the way of the succeeding clay box, the whole being operated by an arrangement of devices substantially as de- 35 scribed.

PATRICK S. DEVLAN.

Witnesses:

M. RUPPEL,
A. B. STOUGHTON.