

M. Gregg,
Brick Machine.

No. 8,158.

Patented June 17, 1851.

Fig: 1.

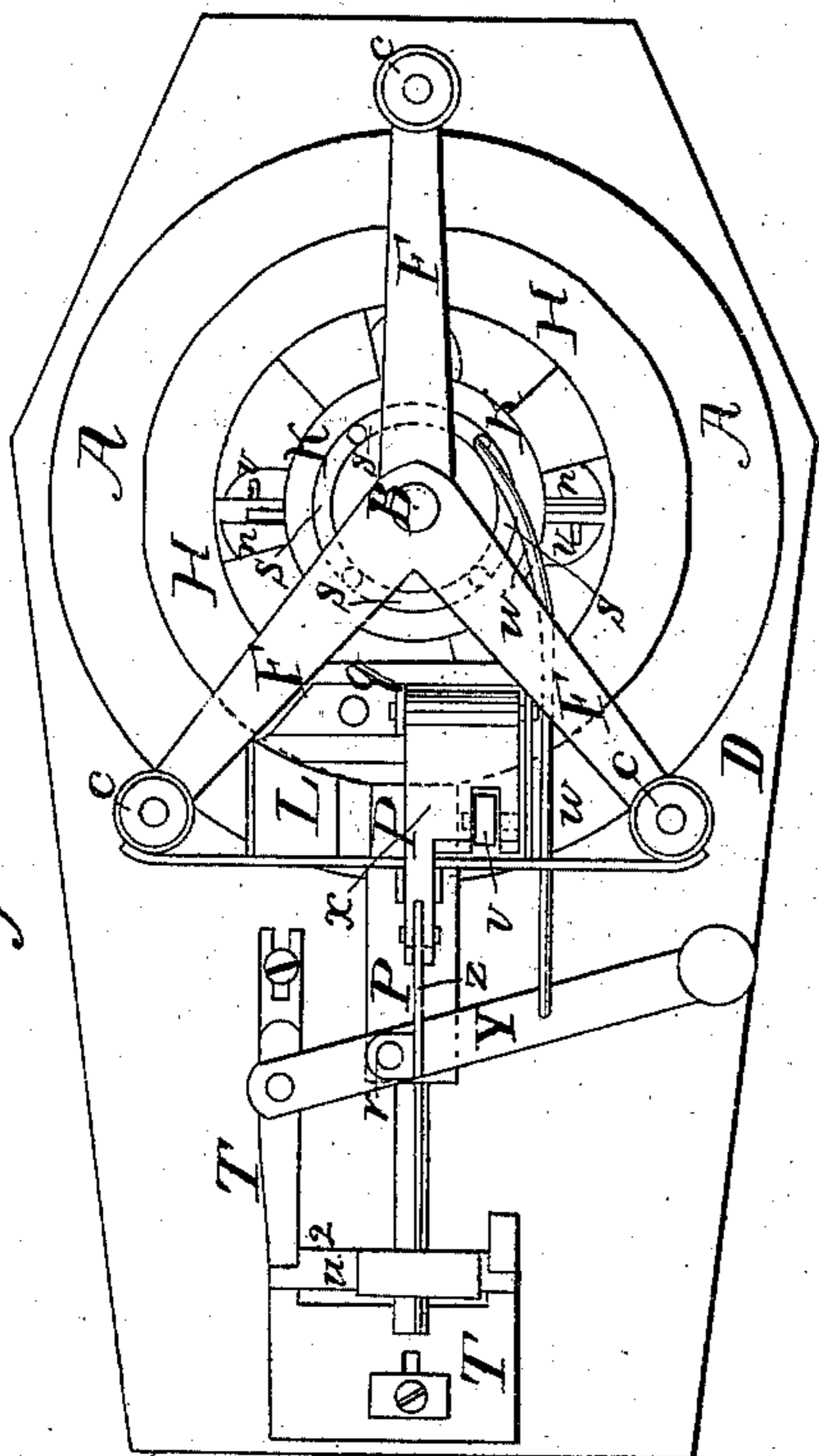


Fig: 3.

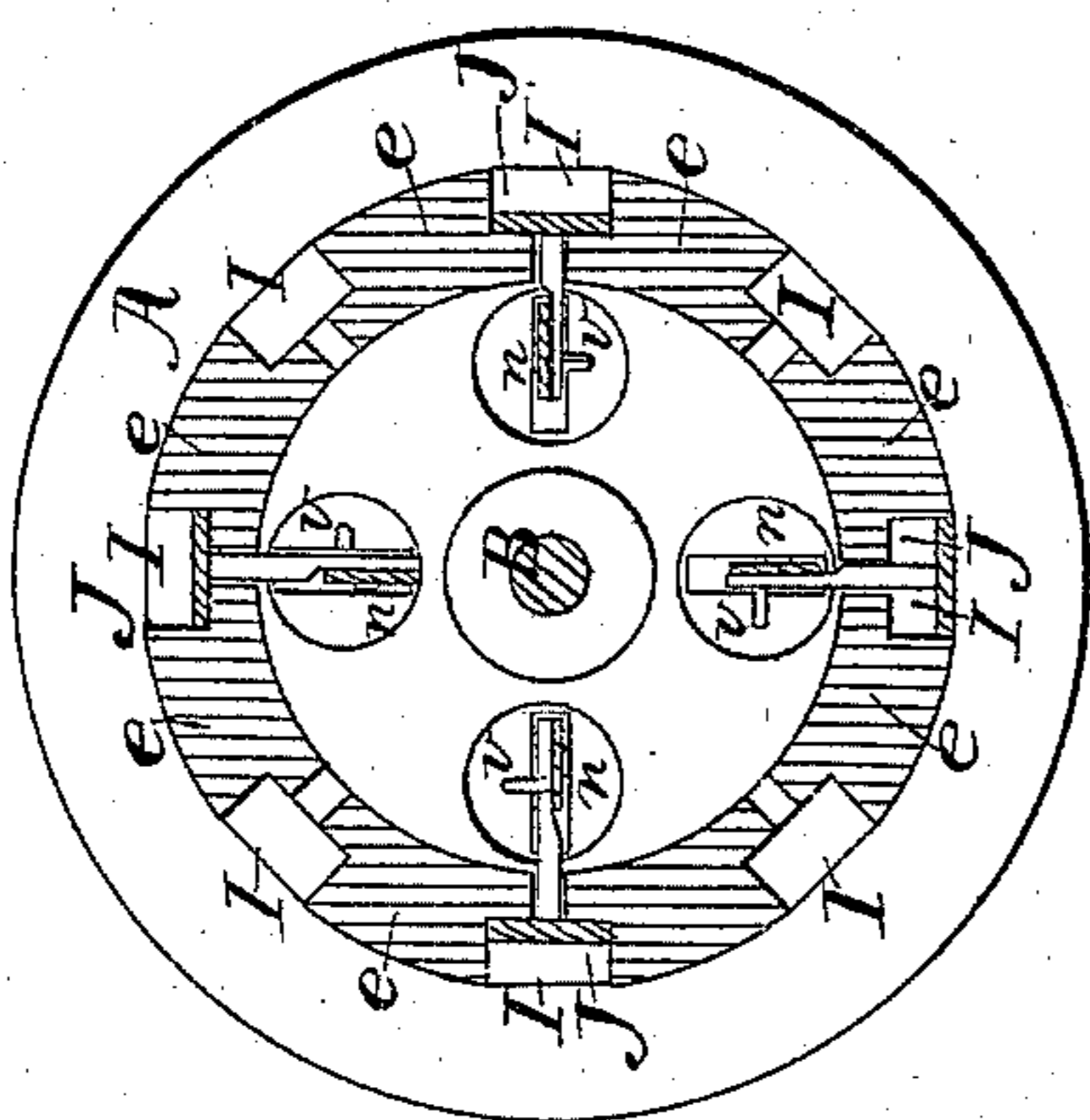


Fig: 4.

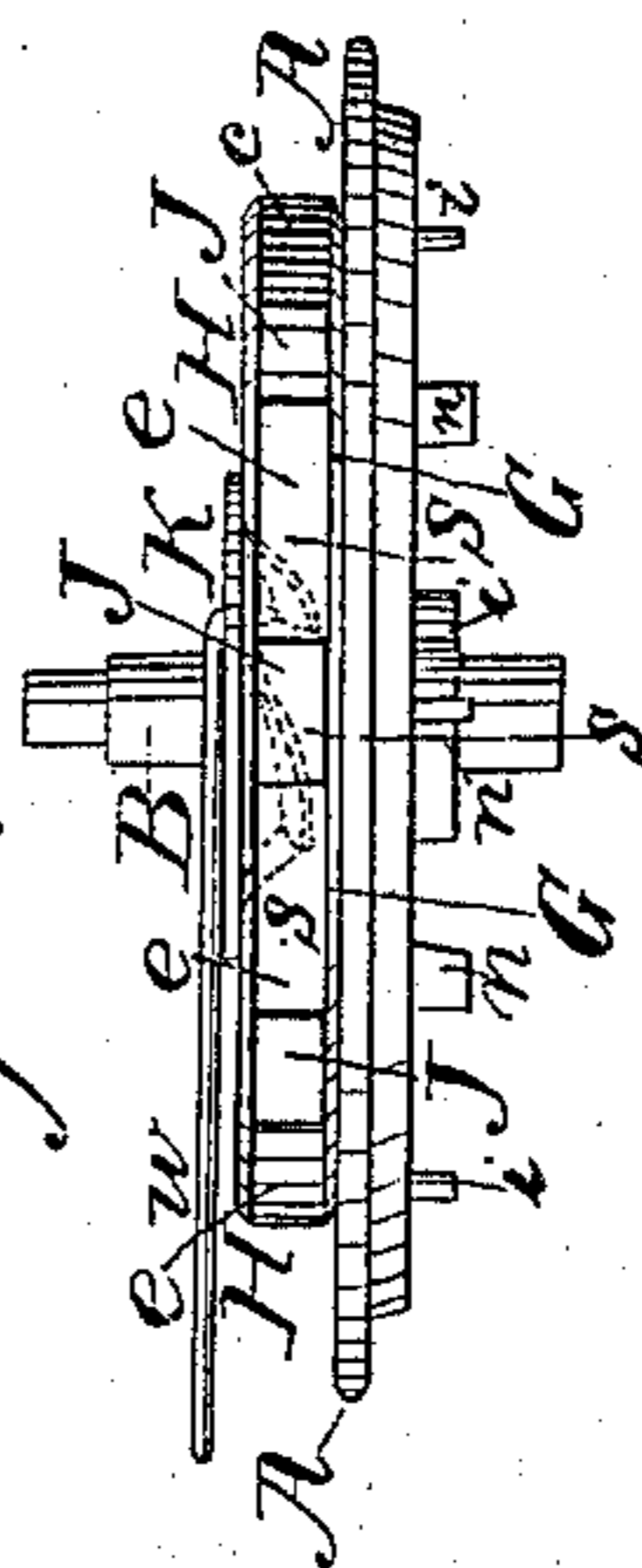
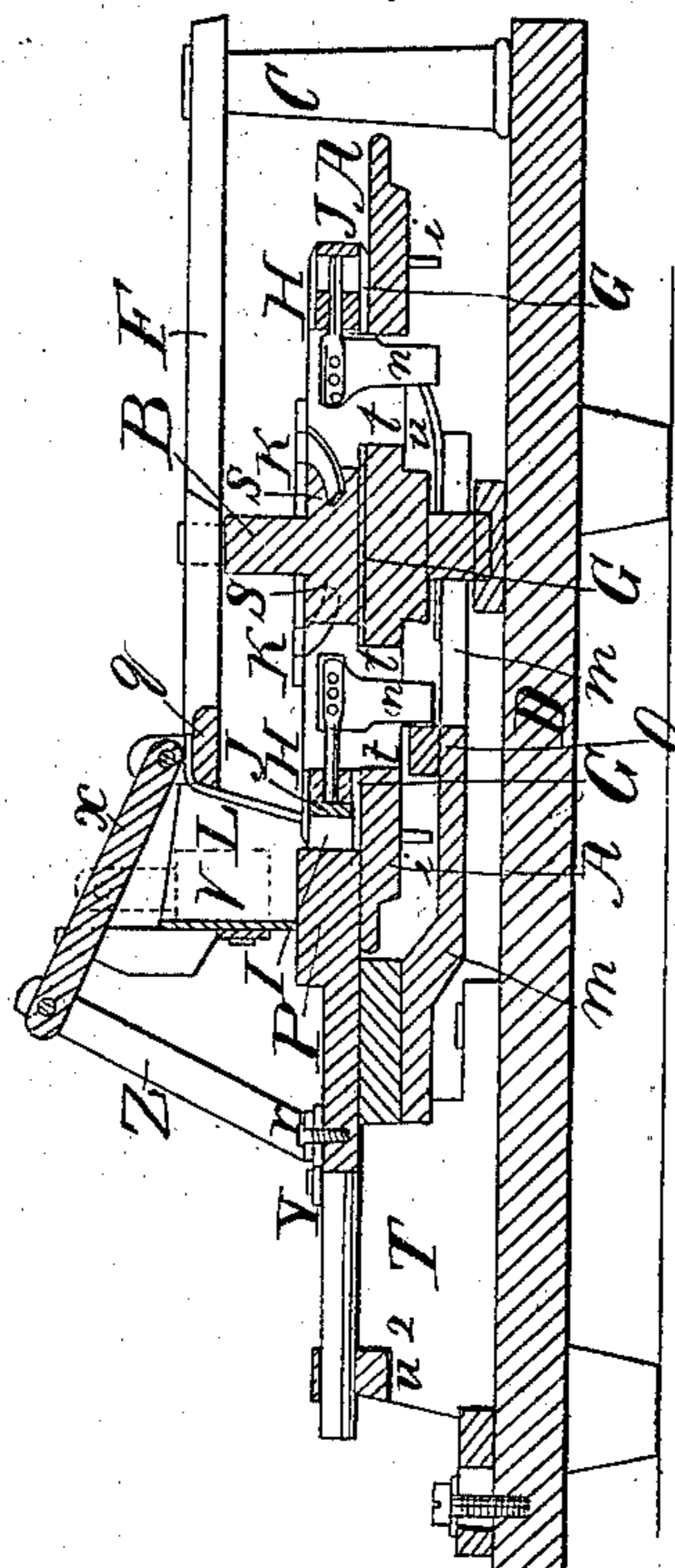


Fig: 2.



UNITED STATES PATENT OFFICE.

MAHLON GREGG, OF PHILADELPHIA, PENNSYLVANIA.

BRICK-MACHINE.

Specification of Letters Patent No. 8,158, dated June 17, 1851.

To all whom it may concern:

Be it known that I, MAHLON GREGG, of the city and county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Brick-Making Machines; and I do hereby declare the following to be a full and clear description of the construction and operation thereof, reference being had to the annexed drawings, making part of this specification.

Figure 1 is a top view of the machine. Fig. 2 is a longitudinal vertical section,—the presser having been advanced and a brick molded, and simultaneously therewith a brick discharged from the mold diametrically opposite. Fig. 3 is a horizontal section of the mold wheel. Fig. 4 is a side view of ditto.

Where the same letters of reference occur on the above figures they indicate the same parts.

Description.—A horizontal wheel A, six feet in diameter is mounted on a vertical shaft B, the bottom bearing of which rests upon a horizontal platform D, while the upper bearing thereof is supported by a trifurcated beam F, which is supported by three posts (*c c c*). Upon this wheel is placed a circular plate G—four feet in diameter, upon which are arranged a series of blocks (*e e*) four inches thick. Over these blocks (*e e*) is secured another circular plate H, equal in diameter to the bottom plate G—and at the joints of the blocks are formed spaces which constitute the molds I, in which the bricks are formed. The surfaces of these molds are made smooth, and each mold is furnished with a piston J, which is accurately fitted thereto,—and to the shank of which is attached a small vertical plate (*n*) which extends downward (through an aperture *t* made for the purpose) an inch or more below the bottom of the wheel. Upon the plate H, is adjusted a circular ratchet plate K, two feet in diameter, in the upper surface and near the periphery of which is a circular groove the bottom of which consists of a series of inclined planes (*s s*) which constitute the teeth of a circular ratchet;—the number of teeth corresponding with the number of molds in the wheel. Over the projecting disk or plane A of the wheel on the left of the mold-circle, is adjusted a hopper L, supported by two posts (*c c*) and by a cross-bar (*q*).—This hopper is so adjusted as to be nearly in

contact with the plane of the wheel, and with the periphery of the circular plates and blocks;—and through the left side of the hopper and at the bottom thereof, is an aperture through which works a horizontal presser P, the left end of which (being round) is made to slide through an aperture in a transverse bar (*u*²) of an adjustable frame T, which is connected to the platform D. A horizontal transverse lever Y, is connected by a fulcrum pivot to the side of the adjustable frame, and connected also to the presser at (*r*) and extending to the front of the machine is connected to the crank of a steam engine or other machinery whereby a horizontal oscillatory motion is produced.

To the underside of the presser is attached a horizontal bar (*m*) to the top of which is attached a block (*o*) and to its right end is attached a plate (*u*) which is bent upward. The object of the block (*o*) and bent plate (*u*) is to move the vertical plates (*n*) of the pistons J, simultaneously on the advance of the presser P—the piston in the hopper being moved centerward the wheel—and the piston diametrically opposite being moved from the center of the wheel—and thus mold and discharge a brick from the mold wheel at the same time. On one side of the presser, a hook-rod (*w*) is connected to the lever Y and extends rightward terminating in a hook which enters the ratchet groove (*s s*) and occasionally takes to the teeth thereof. Within the hopper and on the front side of the horizontal presser, is a vertical presser V, the top of which is connected to an inclined lever (*x*) the right end of which is connected by a hinge joint to the side of the hopper, and the left end is connected to the right end of an inclined connecting bar (*z*), the left and lower end of which is connected with the lever Y; so that when the horizontal presser is moved to the left, the vertical presser V is depressed, which has the effect of filling the space vacated by the receding movement of the horizontal presser; and when the presser P is made to advance the vertical presser V is elevated and so on in alternate order.

The hopper being filled with tempered clay, and the wheel being so adjusted that the position of one of the molds shall be directly opposite the end of the presser P, a movement of the lever Y, and the presser P to the right, fills the mold with the clay;

and by the same movement, the block (*o*) and plate (*u*) Fig. 2 of the horizontal bar (*m*) each impinges upon one of the vertical plates (*n*) and the two pistons J, J, to which they are attached, are thereby moved to the right, whereby the mold on the left is opened to receive the clay in the form of a new brick, and the formed brick in the mold on the right is discharged therefrom. At the same time the hook (*w*) is moved to the right far enough to take to another tooth of the ratchet; and by a reverse movement of the hook rod (*w*) the position of the wheel is thereby changed, and another mold is brought to the hopper—the horizontal presser P is withdrawn, and the vertical presser V is depressed by its connection with the horizontal presser P, thereby depressing the clay and filling the space vacated by the receding movement of the horizontal presser. When the pistons recede centerward the wheel, they come in contact with the back of the molds J, whereby they are prevented from receding too far; whilst their outward movement is governed by the plates (*n*) striking against the shoulders of the apertures (*t*) in which they move. Each movement of the mold wheel is limited by means of pins (*i*) which project from the bottom of the wheel, and are so arranged that when the wheel arrives at its proper position, one of the pins (*i*) will strike the block (*o*), which is made to move rightward on the advance of the presser P, and allow the wheel to turn when the brick shall have been molded. Such portions of the edges of the circular plates G and H, as constitute the edges of the molds above and below, are made sharp and straight that the bricks may be molded smoothly and of proper form. It should have been stated

that the shanks of the pistons J, are supported by means of pins (*v*) projecting from the wheel, over which they slide.

As a variation in the construction of this machine, a mold may be formed in the end of the horizontal presser and the same may be furnished with a piston to discharge the molded bricks therefrom leaving the bricks upon the annular plane of the wheel.

Having described my improvements in the machine for making bricks, what I claim therein as new and desire to secure by Letters Patent, is—

1. The rotating mold wheel A, G, H, I, C, constructed as herein described, with a series of molds in its periphery and an annular plane A, outside of the molds, and furnished with pistons J, arranged as herein described, for the purpose of discharging the bricks from the molds as set forth.

2. I also claim the mode herein described, of changing the positions of the pistons J, by means of the bar (*m*) (attached to the horizontal presser) with its block (*o*) and plate (*u*) which are made to impinge upon the vertical plates (*n*) which are attached to the pistons for that purpose.

3. I also claim the combination of the hopper L, horizontal presser P, vertical presser V, and a hook rod (*w*) with the transverse horizontal lever Y, and with the mold wheel—the whole being constructed and arranged in the manner and for the purposes herein described.

In testimony whereof I have hereunto signed my name before two subscribing witnesses.

MAHLON GREGG.

Witnesses:

C. BRAZER,
WILLIAM GREGG.