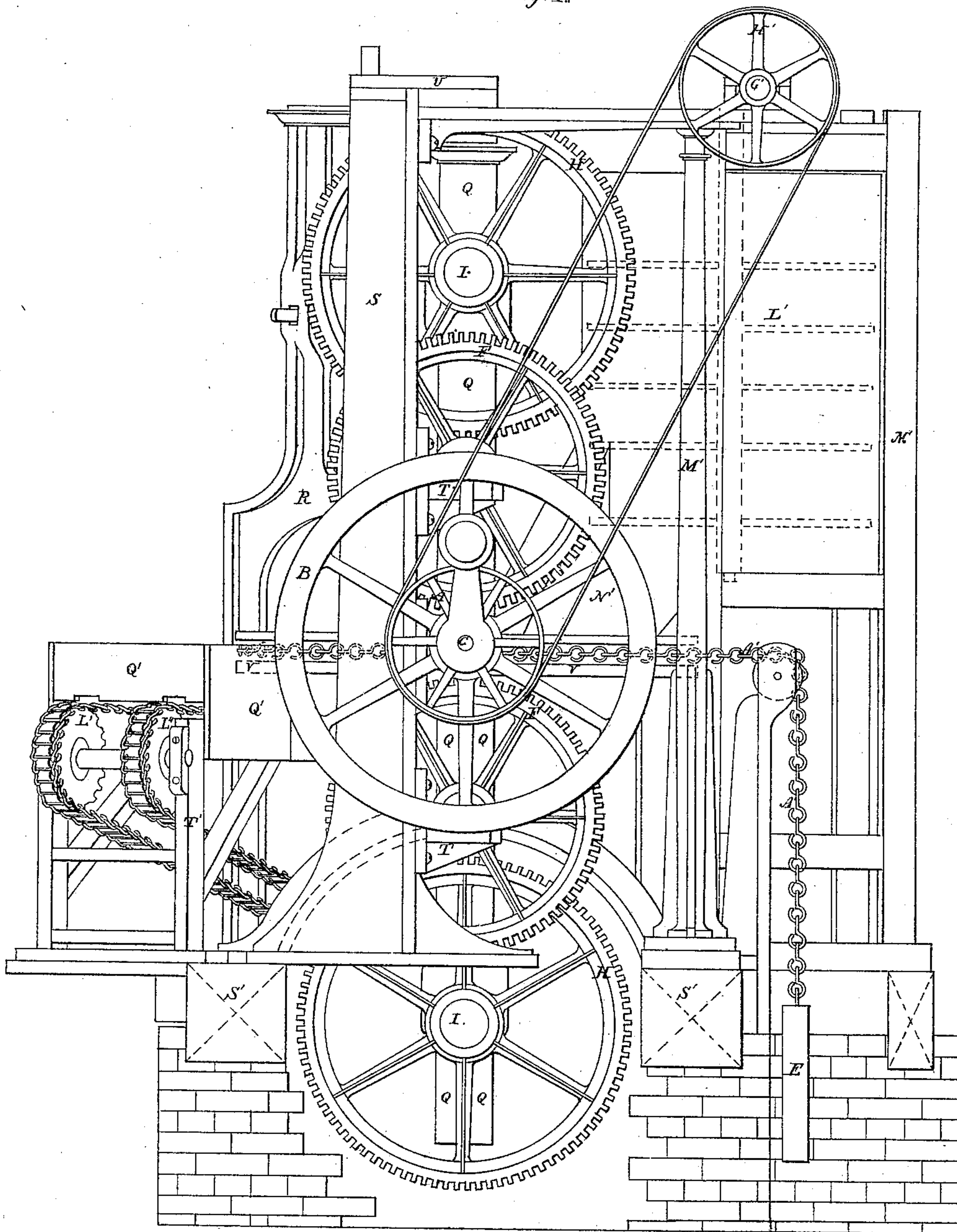


A. H. Sampson,
Brick Machine.

N^o 9,785.

Patented June 14, 1853.

Fig. 1.

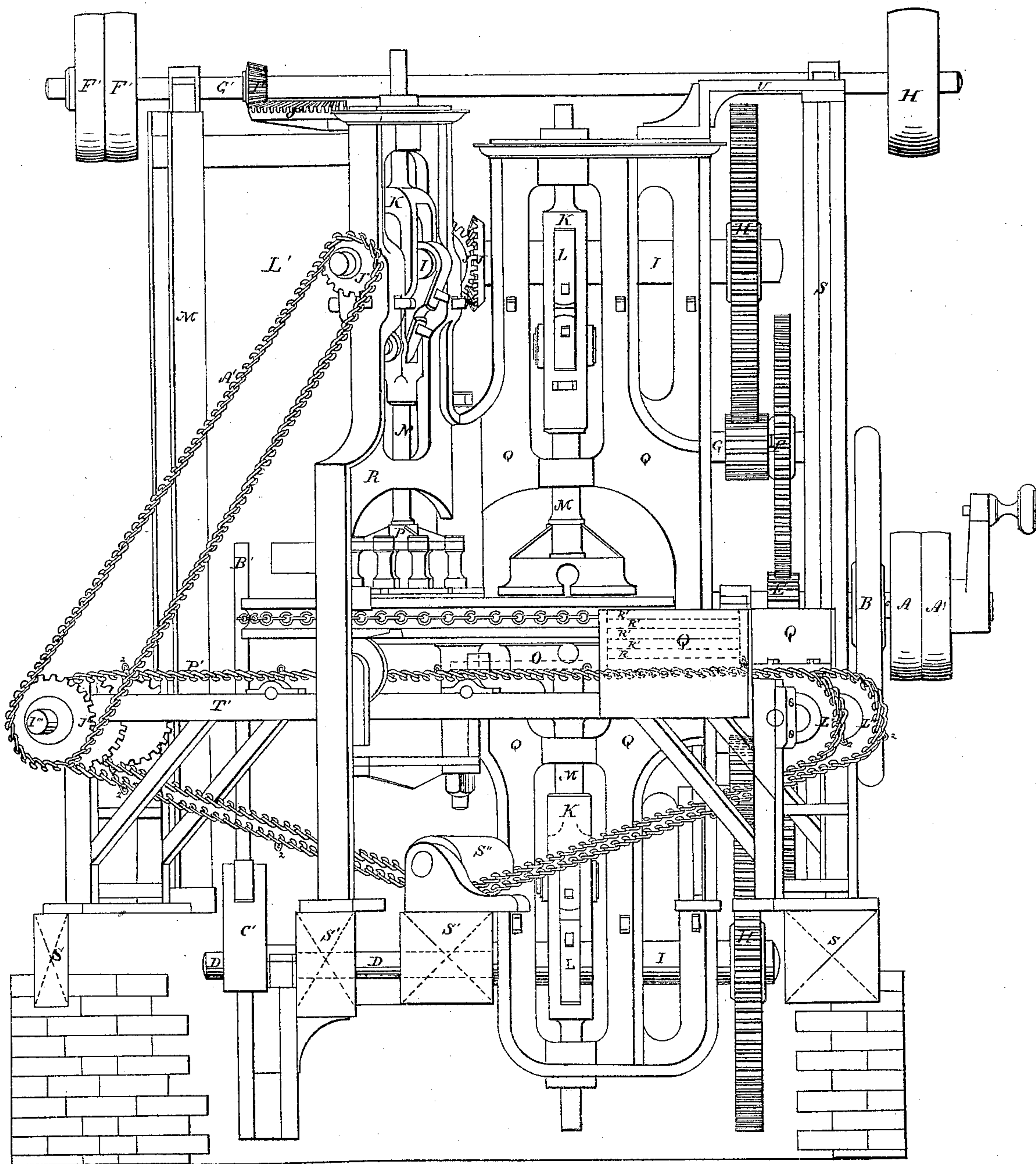


A. H. Sampson,
Brick Machine.

3 Sheets-Sheet 2.

N^o 9,785.

Fig. 2. Patented June 14, 1853.

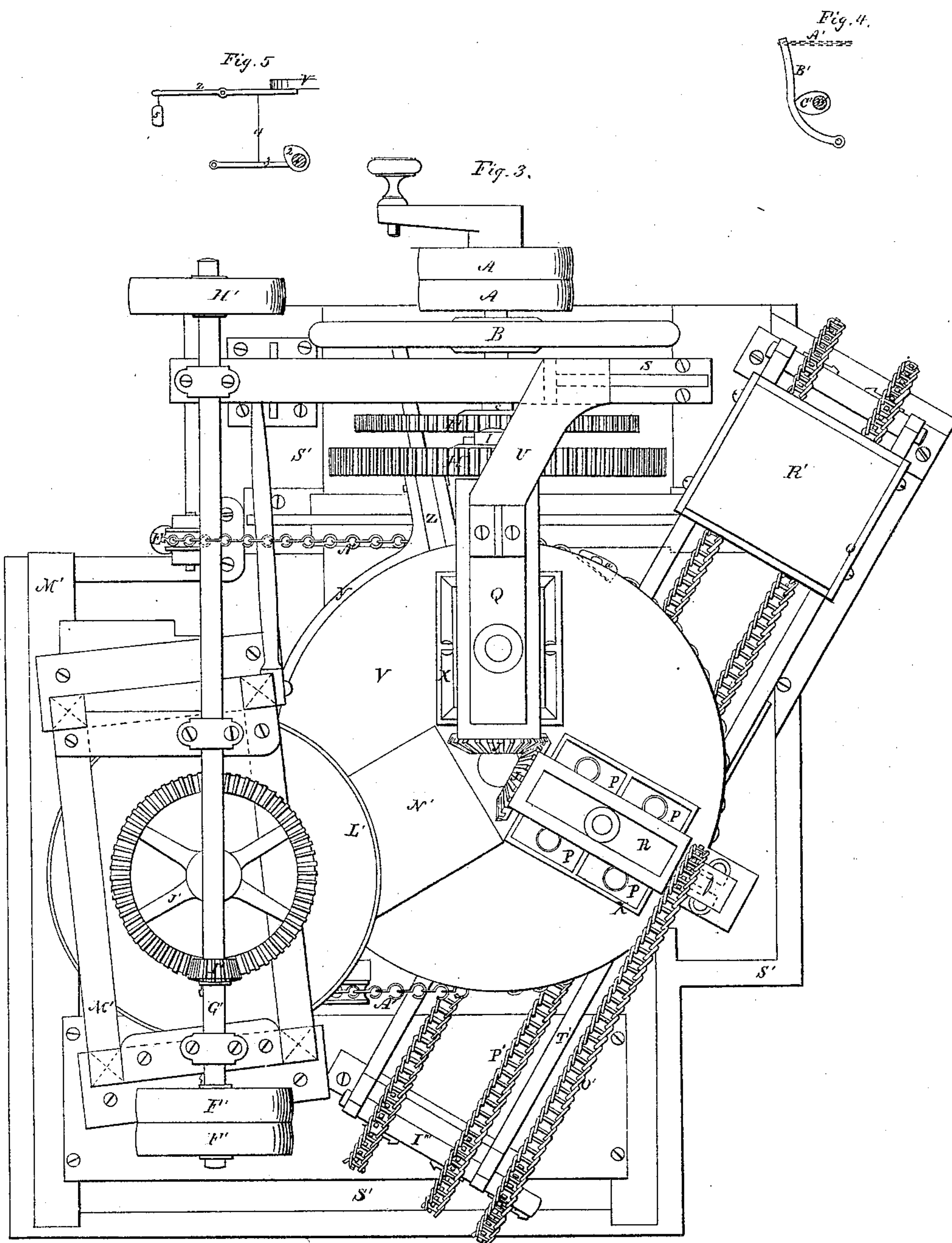


A. H. Sampson,
Brick Machine.

3 Sheets, Sheet 3.

N^o 9,785.

Patented June 14, 1853.



UNITED STATES PATENT OFFICE.

ALEXN. HIPPOLITE SAMPSON, OF NEW ORLEANS, LOUISIANA.

BRICK-MACHINE.

Specification of Letters Patent No. 9,785, dated June 14, 1853.

To all whom it may concern:

Be it known that I, ALEXANDER HIPPOLITE SAMPSON, of New Orleans, in the parish of Orleans and State of Louisiana, 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 of the same, in which—

Figure 1, represents an end elevation, looking toward the driving gear. Fig. 2, represents a side elevation, looking toward the pressing and delivery apparatus, &c., and Fig. 3, represents a top or "bird's-eye" view of the whole.

Similar letters in the several figures denote the same parts.

The nature of my invention consists in combining with the mold wheel, pressing and delivering apparatus, the carrying chains or their equivalents with suitable projections thereon which furnish from a reservoir or box and carry forward to the delivery followers, the boards or platforms, upon which the pressed brick are received and carried to any convenient point for arranging them in the drying house or kiln—some portions of the apparatus having a continuous, and others a reciprocating or intermittent motion, but the whole being so timed as to operate with perfect uniformity with each other.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

Motion is communicated to the machine through a band or endless belt passing around the pulley A, on the shaft *c*, and another pulley H', on the shaft G',—there being on the farther end of the shaft G', two pulleys F', F', (Figs. 2 and 3) one fast, and the other loose, for throwing the press into and out of operation, in a manner well known to mechanics, and to which said fast pulley F', the first moving power, whether steam or otherwise, may be applied. A loose pulley is also arranged alongside of the pulley A, on the shaft, for a purpose similar to that just described. On the shaft *c*, is also arranged the balance or fly wheel

B, and a spur gear wheel or pinion E, which meshes into and operates the large cog wheels F, F,—the one above, and the other immediately below it,—said cog wheels being of equal size. The shafts G, of the wheels F, F, each carry an intermediate spur gear of equal size, which operate the two wheels H, H, on the shafts I, I,—one of which shafts is placed near the top, and the other near the bottom of the press. These wheels and pinions should be of such size as to give a uniform and simultaneous movement to the shafts I, I, which operate the other portions of the machine, as will be described.

On the shafts I, I, are arranged cams or eccentrics, which operate the pitmen M, carrying the followers O, O, so that two followers shall approach each other from above and below, and meet in the mold on the clay, and thus give to the clay equal pressure from above and below at the same time—the space between the ends of the followers defining the size or thickness of the brick to be formed. The pitmen M, may be connected to and operated by the cams, through a strap, yoke, frame or guide so as to give a reciprocating motion to the followers, or a common toggle, or elbow joint may be used, and produce the same effect. On the end of the upper one of the shafts I, is a bevel gear wheel J, working into a similar wheel, also marked J, which latter is placed on the end of the shaft which carries the eccentric for giving the delivery follower P, motion in unison with the pressure followers (before described), for forcing the pressed bricks or clay out of the one set of molds, while the pressure followers are pressing another set, in the next succeeding series in the mold wheel. Each set of molds contain six cases, and consequently the followers should be made with six corresponding divisions—one for each case. In this machine I have represented six cases in each set of molds, but I do not confine or limit myself to this number, but intend to vary the construction in any manner I deem essential, so long as I retain the principle of the invention. I have also represented the cases or sets of molds as being rectangular in form. In this particular also I reserve the

right of substituting such molds, as the shape of the bricks to be made may require, whether plain or ornamental, hollow or solid.

5 The shaft G', carries a bevel pinion wheel I', which works into another larger bevel wheel J', on a shaft provided with arms (as seen in red dotted lines in Fig. 1,) in the clay hopper L', for working the clay into
10 proper consistency for molding, and forcing it down through the chute N', into the molds in the mold wheel, which has an intermittent rotary motion underneath said chute, stopping just long enough at each one third of
15 a revolution to charge the molds with clay.

Y, is a stationary table immediately under the mold wheel V—the mold wheel turning just far enough above it, to run easily, and prevent the unpressed clay in said molds
20 from falling out. After the clay is pressed in the mold, it will sustain itself therein (the table, Y, extending no farther than where the pressing followers catch and press the clay), thus giving free motion to the up-
25 per and under pressure followers into the molds. When the mold wheel V, comes around to the delivery followers, it stops momentarily until the three operations are performed, viz: filling one set of molds with
30 clay,—pressing the set of filled molds—and the delivery of the set just previously pressed, and these operations are continuous and uniform so long as the driving power is applied to the machine. On the extreme end of the
35 shaft which carries the delivery follower, is a chain spur wheel J'', around which, and around a similar wheel J''', passes a chain O', the links of said chain catching over the teeth in said wheels and communicating
40 motion the one to the other. The chain wheel J''', is arranged on a shaft I''', on which said shaft is also arranged two other similar spur wheels K'', K'', over and around which pass the carrying chains P'—
45 these chains also pass over another set of chain wheels L'', L'', on the opposite end of the machine, the links in said chains catching over the teeth in said chain wheels, and by which means they receive a continuous horizontal motion for carrying off
50 the pressed bricks.

S'', is a friction roller, under which the chains P', pass, so as to keep them up to such a degree of tension, as to catch and
55 carry out from the under side or bottom of the box Q', the boards or platforms R', (on which the pressed bricks are received and carried out of the machine) and convey them immediately under the delivery fol-
60 lower, at the proper time to receive the bricks when the follower comes down. The box Q', is made to contain any suitable number of platforms or boards on which the bricks are received and carried away. These

boards are laid into said box one on top of 65 the other, and as the carrying chains P', pass along close underneath said box, small projections (2) on said chains catch against the lowermost of the pile of platforms, moving it out from underneath the others, and 70 carries it immediately under the delivery follower, where it receives the pressed bricks, and passes them forward out of the machine. The boards or platforms when any number of them accumulates, are car- 75 ried back and again piled up in the box Q', so as to keep a full supply for the machine while operating.

I have stated that, the mold wheel has an intermittent rotary motion, this it re- 80 ceives as follows: A prolongation of the lower shaft I, (as seen at D', Fig. 2), carries a cam C, which operates a lever B'. To the top of this lever B', is fastened a chain A', which passes around in a groove in the 85 edge of the mold wheel, thence over a friction pulley, and terminates in a weight E a side view of which arrangement may be seen in Fig. 4. On this chain A', is a catch piece a, which drops into an inclined gain 90 in the groove or edge of the mold wheel as seen in dotted lines in Fig. 3, and by which the said mold wheel, is drawn around one third of a revolution, by each throw of the lever B', and when the lever comes back, by 95 the operation of the cam, the weight E', slips or draws back the chain (the catch piece slipping out of the inclined gain) without turning back the mold wheel, its motion being in one direction by intermit- 100 tent movements as heretofore described. A trigger Z, is so arranged and operated by a cam 2 on the lower shaft I, as to lock the mold wheel when it performs its one third of a revolution, a pin on said trigger drop- 105 ping into a catch in the underside of the mold wheel; and to unlock it when it is about to make the next portion of a revolution. This arrangement of cam and lever motion may be seen on a reduced scale in 110 Fig. 5, where 1 represents the shaft and 2, the cam on it, which forces down the lever 3, and by means of the rod 4, pulls down out of connection the trigger Z, from the mold wheel V. After the cam has passed 115 over the lever, the weight 5, on the end of the trigger throws the catch pin again into action to lock the mold wheel at the proper time, and by altering the throw of the cam or the length of the lever this may be done 120 with the greatest precision.

The frame of the machine may be constructed in any well known substantial manner, and as it may be varied to suit the peculiar circumstances of the case need not 125 be fully described, one method of constructing it being clearly shown in the drawings.

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

5 The box or reservoir of platforms with the carrying chains or their equivalents provided with suitable projections for catching, drawing forward, and carrying immediately underneath the delivery follower

the boards or platforms for receiving the pressed brick, and by which they are conveyed out of the machine, substantially as described. 10

A. H. SAMPSON.

Witnesses:

JAS. N. DE POUILLY,
P. LANE.