

(No Model.)

D. S. PLUMMER.
BRICK MACHINE.

No. 452,648.

Patented May 19, 1891.

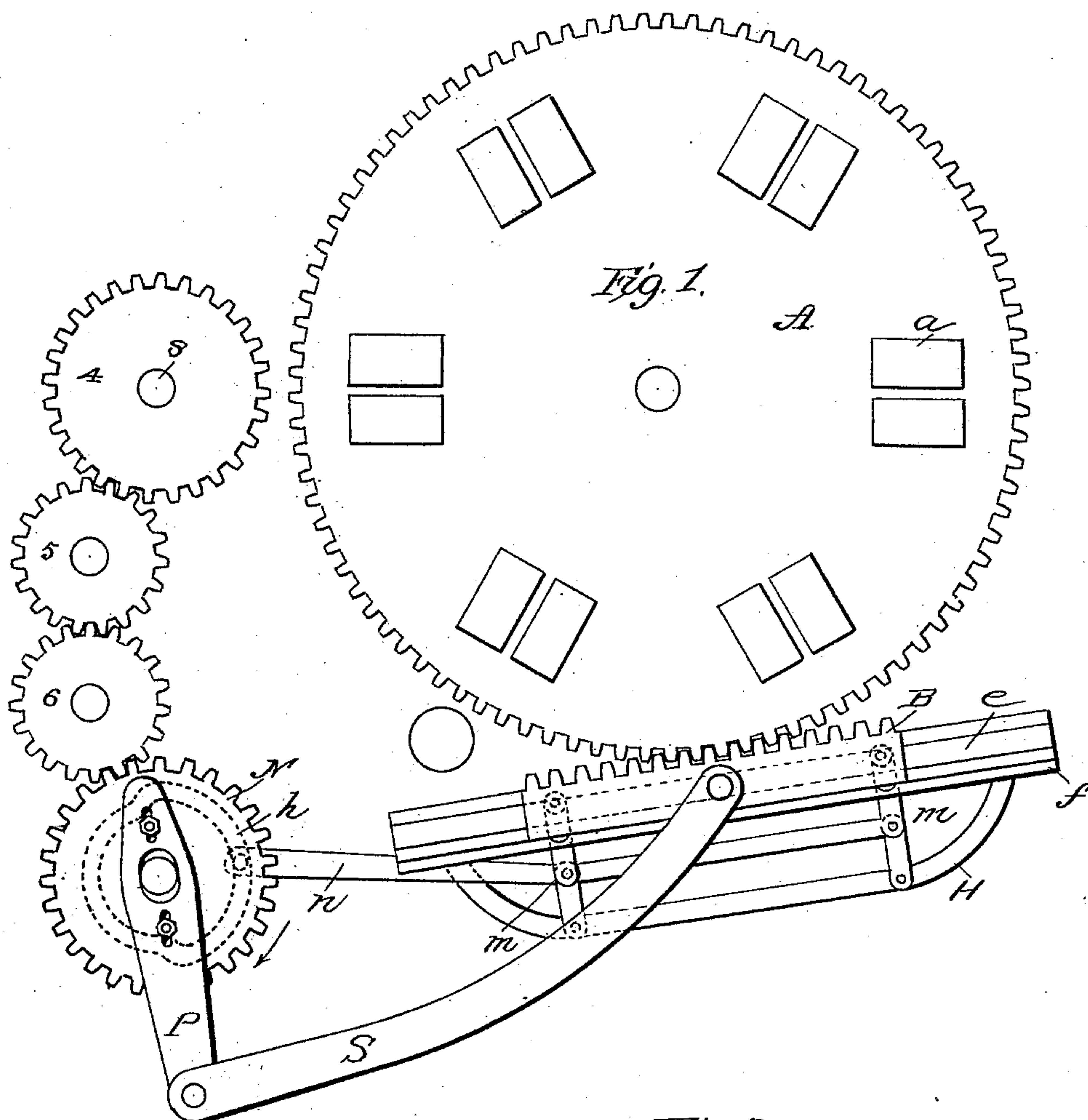
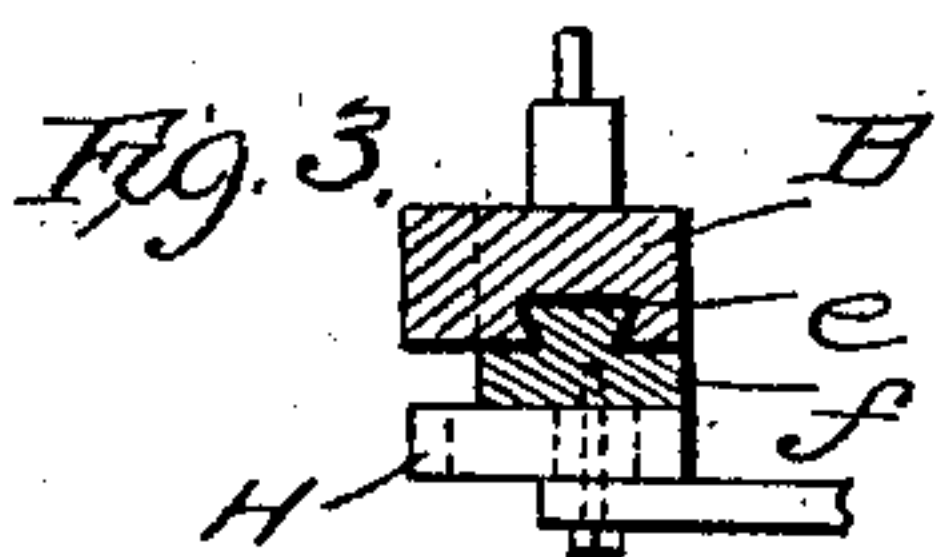
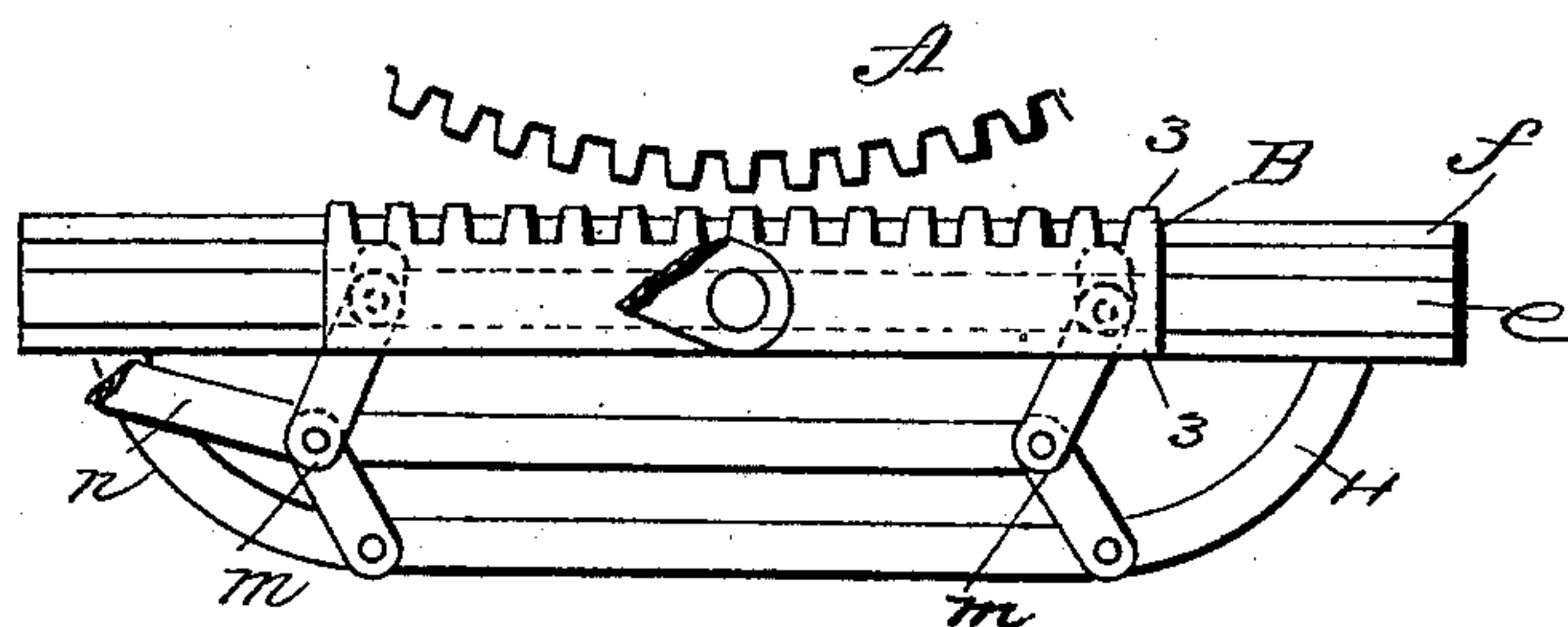


Fig. 2.



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UNITED STATES PATENT OFFICE.

DAVID S. PLUMMER, OF BOSTON, MASSACHUSETTS.

BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 452,648, dated May 19, 1891.

Application filed April 24, 1890. Renewed April 18, 1891. Serial No. 389,452. (No model.)

To all whom it may concern:

Be it known that I, DAVID S. PLUMMER, of Boston, in the county of Suffolk and Commonwealth of Massachusetts, have invented certain Improvements in Brick-Making Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to machines employed for making bricks, and to that class of such machines wherein a revoluble mold-table is used in combination with compressing-plungers, and more specifically this invention appertains to the mechanism for revolving the mold-table intermittently.

The nature of the invention is fully described, and then specifically claimed hereinafter.

This my invention as shown in the present instance is combined with the revolving mold-table usually employed in what is known in the trade as the "Gregg brick-machine," and so much only of the machine is represented as to illustrate my invention and its use combined with such a machine.

In the drawings, Figure 1 is a plan view representing the mold-table and my improved mechanism for rotating the same. Fig. 2 is a sectional plan representing the mechanism disengaged from the mold-table. Fig. 3 is a cross-section on line 3 3 of Fig. 2.

The mold-table A is provided with mold-chambers *a* for receiving the brick-clay and holding it while compressed by plungers, (not shown,) which plungers to that end enter the mold-chambers *a* from opposite sides, or instead one plunger may be used for compressing the clay against the fixed stop-plate.

The construction and arrangement of the mold-table, the said plungers, and other co-operating mechanisms are not specifically described herein; but for a knowledge thereof reference is had to Letters Patent of the United States No. 354,129, and other Letters Patent of the United States issued to William L. Gregg for improvements in brick-machines.

Heretofore a segment-gear has been used for rotating intermittently the mold-table A. To that end the said gear has been arranged to mesh with gear-teeth arranged on the periphery of the mold-table A and revolved

continuously, so as to engage and disengage the mold-table at intervals.

In operation the clay is received in the mold-chamber at one point while the mold-table is resting. The next movement of the mold-table brings the filled chambers to a point directly in line with the plungers, at which place the table rests, while the plungers enter said chambers to compress the clay. The next movement of the table A brings the said chambers to a point where the bricks are ejected. It will be understood that the compressing-plungers necessarily fit quite closely the mold-chambers, and it becomes necessary for the mold-table to move and stop with precision and uniformly in registration with the compressing-plungers.

In practice I have found great difficulty arising when a segment-gear is used for rotating the mold-table. The gear does not leave the mold-table uniformly in position with the mold-chambers in registration with the compressing-plungers—that is to say, the movements imparted to the mold-table by a segment-gear are not uniformly equal—and to provide a mechanism for rotating the mold-table with uniform regularity of movements, and thus to insure uniform alignment between the mold-chambers and plungers constitutes the object of my present invention. To that end I engage the mold-table intermittently by a rack B. Said rack is provided with teeth to engage the teeth of the mold-table for moving the table, as in Fig. 1. The rack is chambered to receive a suitable tongue *e*, Fig. 3, on which the rack is permitted a longitudinal sliding movement. The tongue is formed integral with the block *f*, and this block is movably supported on the frame-work H, so that it, together with the rack, may be moved to and from the mold-table to make the said rack engage and disengage the teeth of the mold-table, as shown respectively in Figs. 1 and 2. This movement of block *f* toward and from the mold-table is imparted from the revolving gear-wheel N, through the lever *n* and toggles *m*, to which end the toggles are engaged, one end with frame H and one end with block *f*, to permit which latter connection the toggles are provided with anti-friction wheels that set into

oblong chambers in the block, as shown. The lever *n* has in its rear end a pin that engages in a cam-groove *h*, formed in gear-wheel N. Said wheel carries a crank-arm P, that en-
 5 gages, as shown, the pitman S.

In operation the wheel N is revolved as indicated by arrow. Obviously each complete revolution of said wheel N reciprocates the rack B forward and backward one movement
 10 in each direction. The motion is imparted through the arm P and pitman S. As the rack reaches its extreme limit of movement in one direction it is disengaged from the mold-table by bending of the toggle-arms *m*, which
 15 movement is effected through the pitman *n* by the cam *h*. Said toggles are held by the cam in such manner as to continue the disengagement of the rack and mold-table during the entire longitudinal movement of said rack
 20 in one direction. Said cam then operates through the lever *n* to straighten the toggles *m*, and thereby to set the rack into engagement with the mold-table, where it is retained by the action of said cam during the entire
 25 obverse longitudinal movement of the rack. It is during this movement that the partial rotation of the mold-table is effected. This device insures a positively uniform movement of the mold-table.

30 In the drawings I have represented gears 4 5 6 combined with gear-wheel N. This system of gears is introduced, as it affords a convenient way of connecting my mechanism with the shaft 8, which is the driving-gear of
 35 a Gregg machine, and it allows my mechanism to be set away from other interfering parts of the machine. I would not, however, be understood as stating this system of gears to be an essential part of my invention.

40 I have described my invention as applica-

ble to the so-called "Gregg machine;" but mechanics of ordinary skill would have no difficulty in applying it to other brick-machines wherein a revoluble mold-table is employed.

I have represented the mold-table as pro- 45 vided on its periphery with gear-teeth to engage teeth on the rack B; but instead of such teeth pins or other obvious engaging devices might be used without departing from the spirit of my invention. The arm P is set upon 50 the wheel N adjustably by means of pins and clamp-nuts, as shown, to permit adjustment of the arm for varying the length of movement longitudinally imparted to rack B.

What I claim is—

1. In combination, a revoluble mold-table 55 having mold-chambers *a* and tooth projections, a rack to engage said teeth, said rack being supported to have reciprocating movement and movement to and from the mold- 60 table, means for reciprocating the rack, and means for moving it to and from the table, substantially as described.

2. In a brick-machine, the mold-table A, having tooth projections, and a tooth-rack B, 65 supported movably on block *f*, the toggles *m*, wheel N, and intermediate pitman *n*, substantially as described.

3. In a brick-machine, in combination with a mold-table having tooth projections, a tooth- 70 rack and operating mechanisms consisting of toggles *m*, cam-wheel N, intermediate pitman *n*, and levers P S, all arranged substantially as set forth.

Signed at Boston, Massachusetts, this 16th 75 day of April, A. D. 1890.

DAVID S. PLUMMER.

Witnesses.

C. B. TUTTLE,
 E. E. HAMILL.