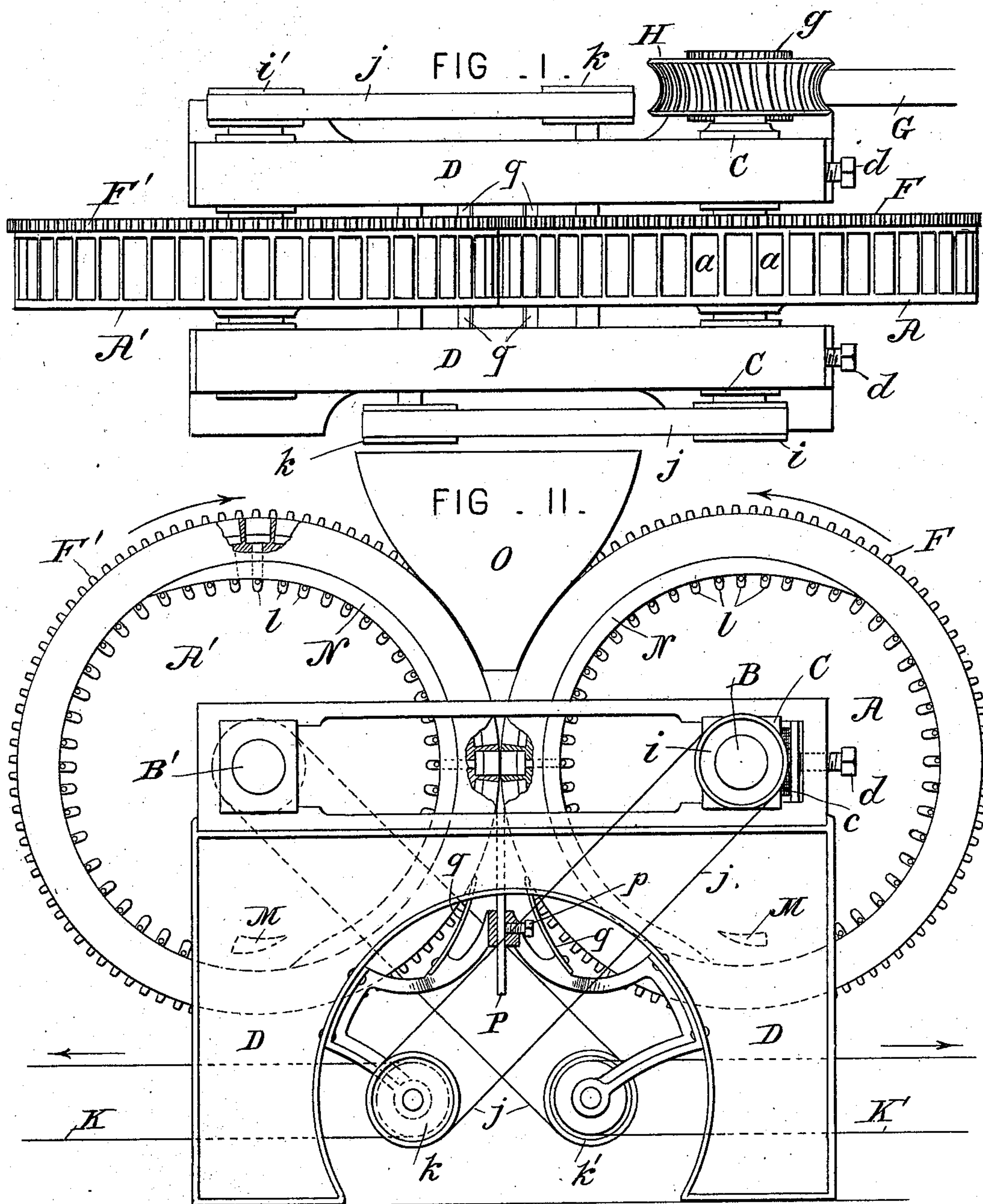


(No Model.)

S. E. HASKIN.
BRICK MACHINE.

No. 503,958.

Patented Aug. 29, 1893.



Attest:
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Inventor:
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UNITED STATES PATENT OFFICE.

SAMUEL E. HASKIN, OF AVOCA, NEW YORK.

BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 503,958, dated August 29, 1893.

Application filed April 13, 1892. Serial No. 429,025. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL E. HASKIN, of Avoca, in the county of Steuben and State of New York, have invented a new and useful
5 Improvement in Brick-Machines, which improvement is fully set forth in the following specification.

This invention has reference to the construction of brick-machines, and more particularly to machines of the rotary type, such
10 as described in Letters-Patent No. 75,542, dated March 17, 1868, and No. 171,118, dated December 14, 1875, both granted to W. A. Graham.

15 In machines of this character the molds are arranged around the entire periphery of a wheel, and are filled from a hopper as the wheel rotates. A pressure wheel is arranged to bear against the mold-wheel, and to rotate
20 in the opposite direction, thereby compressing the clay into the molds. Each of the molds is provided with a reciprocating plunger, which, by the action of a cam discharges the brick from the mold, when the latter arrives
25 at the bottom of the wheel. Thus all the molds are filled and emptied once at each revolution of the mold-wheel.

In the use of these machines it has been found that at the point where the surfaces of
30 the two wheels are in contact, there is formed from time to time a small roll or cylinder of clay, which increases in size until, when about the thickness of the thumb, it is gripped between the two wheels and embedded in the
35 clay of the mold which happens at the moment to be against the pressure wheel. As soon as one roll or pencil of clay is disposed of in this manner, another begins to form. This roll or pencil is extremely hard and com-
40 pact, and its presence (though it may not be seen) makes a defective brick, as it does not unite perfectly with the surrounding clay. Attempts have been made to overcome this difficulty, but, so far as I am aware, such at-
45 tempts have not been successful. The formation of these rolls or cylinders of clay is due to the action of the hard and smooth pressing surface of the compression wheel upon the yielding mass of clay; and the object of the
50 present invention is to obviate this action by removing its cause. To that end I convert the compression wheel into another mold-

wheel, and so rotate the two wheels that, at the point of contact of the wheels, two bricks are formed simultaneously. At this point of
55 contact, therefore, there is a pressure of clay against clay, and there is no rigid surface upon which a roll or cylinder can form. The invention has another advantage, in that it doubles the product of the machine without
60 using any additional power, further than the small amount required to operate another traveling band to carry off the product of the second mold-wheel.

I am aware that, prior to my invention, it
65 has been proposed to use two mold-wheels in contact; but these have been constructed with a rigid compression surface between each two adjacent molds, this surface being of greater
70 width than the face of the mold; and the wheels have been so geared together that each mold registered with a rigid compression surface on the opposite wheel. Thus the action is practically the same as if all the molds were
75 on one wheel, since but one brick is formed at a time, first in one wheel, then in the other. Moreover, there is little gain in output by this arrangement, since the molds must be set so far apart that they might as well be all in one
80 wheel, and the other be a plain compression wheel, much easier and less costly to construct.

In the accompanying drawings, Figure I, is a top view, and Fig. II, a side elevation of a machine constructed in accordance with my
85 invention.

The machine shown is, in its general organization and in many details of construction, similar to the Graham machine heretofore referred to; but it is to be understood that I
90 have selected this form of machine simply as an illustration of one manner of applying the principle of my invention, which is not limited to any special type of machine.

In the drawings A A' represent the two
95 mold-wheels each provided with a series of molds *a*, arranged as close together as possible. The shafts B B' of the wheels are journaled in bearings in a suitable frame D, the journal box C of the wheel A being adapted
100 to slide in its housing, so that it can be adjusted toward and away from wheel A', and the pressure regulated to the desired point. For the purpose of this adjustment a set screw

d is provided, between the point of which and the journal box C is a block c of elastic packing, such as heretofore used and for the same purpose; namely, to cause the two wheels to
5 bear at their point of contact with yielding pressure.

In the drawings, I have shown the two wheels each as provided with a large toothed gear F F', whose teeth are in mesh; but it is
10 not necessary that both wheels should be driven positively. Motion is communicated to the shaft B of wheel F from a worm-shaft G provided with a worm wheel g which drives a worm-gear H on shaft B. Shaft B has on
15 one end a small pulley i , which drives, through belt j and pulley k , a traveling band K beneath wheel A'. A similar pulley i' on shaft B' drives belt j' , pulley k' and band K' beneath wheel A. These endless bands or car-
20 riers move in opposite directions.

The plungers l for discharging molds a , the cams M by which the plungers are moved successively outward, and the cams N by which they are retracted, are substantially the same
25 in construction and function as the corresponding elements of the Graham machine. A hopper O is arranged to supply the clay, which is drawn down partly by the action of the wheels, and partly by gravity.

30 In Fig. II, the operation of forming two bricks simultaneously is illustrated, and by examination thereof it will be seen that as one pair of molds comes into position after another, there is no opportunity for detached
35 films of clay sheared off by the edges of the molds to roll themselves up into a pencil or cylinder. Immediately beneath the line of impact of the two cylinders is an upright knife P, whose function is to separate the two bricks
40 which have been compressed with their faces in contact. Inasmuch as the edge of this knife is subject to considerable wear, it is held detachably in place by a set-screw p and can be readily removed.

The scrapers q are used to clean the edges 45 of the wheels as heretofore.

From what has been stated above, it will be obvious that details of construction and arrangements of the various parts of the machine may be modified without departing 50 from the spirit of the invention.

I claim as my invention—

1. In a brick-machine the combination of two mold wheels, each provided with a series of complete molds the size and shape of the 55 brick to be formed and having their peripheries in contact, means for rotating the wheels in opposite directions, whereby two bricks are simultaneously formed at the point of contact, and means for separating the two bricks, and 60 delivering them separately, substantially as described.

2. In a brick-machine, the combination of two mold-wheels, each provided with a series of complete molds, the size and shape of a 65 brick, discharging devices for the several molds, means for rotating the wheels in opposite directions with their peripheries in contact, whereby two bricks are simultaneously formed at the point of contact, and means for 70 separating the two bricks, substantially as described.

3. The combination, of two wheels rotating in opposite directions, with their rims in contact, and provided each with molds in such 75 relation that the faces of the molds come together at the point of contact thereby forming two bricks simultaneously, and a separating knife or blade having its edge just beneath the line of contact, substantially as de- 80 scribed.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

SAMUEL E. HASKIN.

Witnesses:

PHILIP MAURO,
REEVE LEWIS.