

J. Hodge,
Brick Machine,
Nº 1,509, *Patented Mar. 6, 1840.*

Fig. 1.

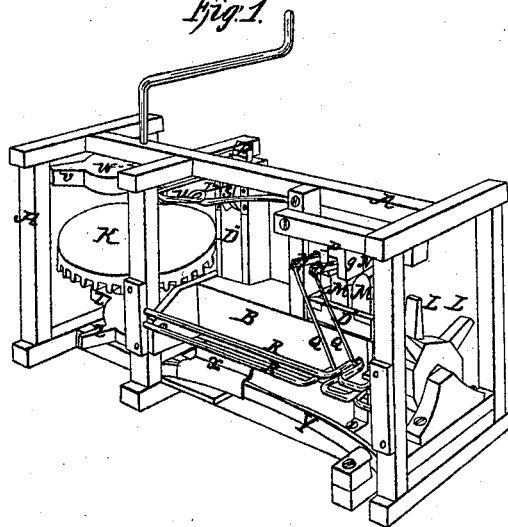
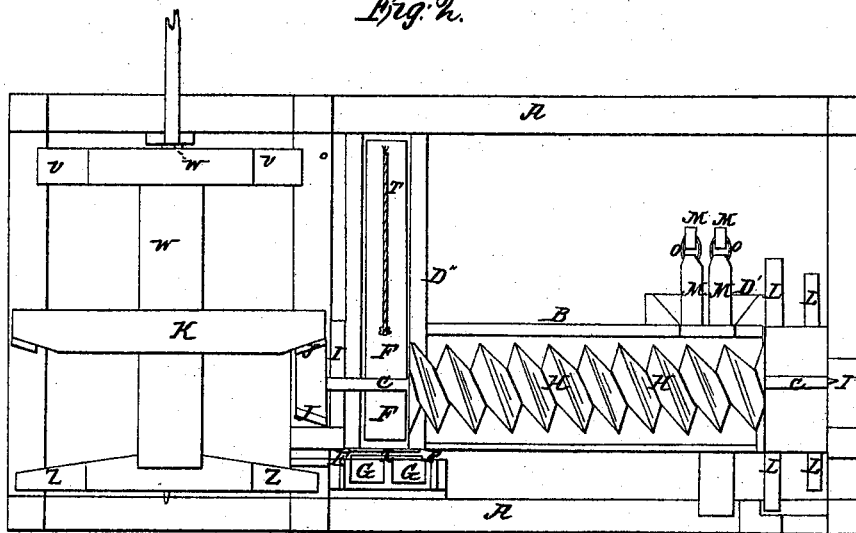


Fig. 2.



UNITED STATES PATENT OFFICE.

JAMES HODGE, OF FAIRPLAY, SOUTH CAROLINA.

BRICK-MACHINE.

Specification of Letters Patent No. 1,509, dated March 6, 1840.

To all whom it may concern:

Be it known that I, JAMES HODGE, of the town of Fairplay, Anderson district, State of South Carolina, have invented a new and useful Machine for Mixing Clay and Making Bricks, which is described as follows, reference being had to the annexed drawing of the same, making part of this specification.

Figure 1, perspective view of the machine; Fig. 2, section through the mixing trunk.

This machine consists of a frame A of proper size and strength to contain the parts hereafter described, composed of longitudinal and transverse sills, posts, caps, and ties, mortised and tenoned together. In this frame is placed in a horizontal position a hollow mixing and conveying trunk B made cylindrical, or square, of staves, or boards, held together by bands, or otherwise, with both ends closed except openings for the admission of the shaft C and having two openings in the top—one near each end—over which are raised vertical trunks D', D'', the one at the feeding end D' being the hopper and the other at the discharging end serving as a guide for the ram. In the lower side of the mixing trunk and immediately under the vertical trunk is a grate E through which the clay is forced by a ram F into the molds G placed below said grate. Within this horizontal mixing trunk turns a screw H for mixing and conveying the clay, the shaft C of which projects beyond the trunk at each end. Its gudgeons turn in boxes in cross bolsters I mortised and tenoned into the posts. The end of the shaft at the discharging end is surrounded by a row of cogs J, into the spaces between which the cogs of the driving wheel K work. Into the other end of the shaft at the feeding end are inserted arms or cams L for raising and letting fall pounders or weights M for pounding the clay from the hopper D' into the mixing trunk which pounders are attached to the longer ends of levers N by cords, chains, or rods O whose fulcrum is a rod passed horizontally through hanging posts P and the levers N, and to the shorter ends of these levers are affixed rods or chains Q leading down to treadles R attached thereto, which treadles are depressed in order to raise the weight by the cams L in the shaft of the screw wheel. The ram F for driving the clay into the molds is attached to a cord T which leads up over a pulley S at the top of the trunk then turns horizontally and is fastened to a spring U

fixed at one of its ends to the frame, its other end being loose and when the ram is to be raised is pushed from the trunk (which draws up the ram) by means of arms or cams V radiating from the shaft W of the driving wheel. Between the grate and the top of the mold is a striker X for striking the clay; attached by means of a horizontal rod to a spring Y fastened by one of its ends to the side of the frame, the other end being moved by cams Z or arms radiating from the propelling shaft W in the same manner as described from the other spring. A screen or punched sheet tin or iron is placed over the hopper for sprinkling the water over the clay in the hopper. A sweep is fastened to the upper end of the main or driving shaft to which a horse is attached for propelling the machine. The molds G are made in the usual manner and are placed under the grate in a space designed to admit them.

To make bricks with this machine the horse is driven around in a circle in the manner of a bark mill. This turns the vertical or driving shaft. The large horizontal cog-wheel fixed on said shaft turns the screw or mixer by meshing into the cogs on the end thereof. Dry clay is put into the hopper and water sprinkled over it. The cams in the end of the screw shaft give motion to the treadles and these to the levers which raise the weights or pounders and these in descending pound the clay from the hopper into the mixing trunk. The mixing screw mixes the clay and conveys it to the grate under the ram. The ram after being raised by cam, spring, cord, and pulley falls and drives the clay through the grate into molds placed below. A cam or arm projecting from the lower part of the driving shaft slipping over the end of the spring of the striker allows the spring to drive the striker horizontally through the clay between the molds and grate, which strikes the bricks. The filled molds are instantly removed by hand and empty ones put in their places and the operation repeated.

The invention claimed and desired to be secured by Letters Patent consists—

In the arrangement of the rams or beaters in combination with the revolving screw for mixing and conveying the clay as before described for making bricks.

JAMES HODGE.

Witnesses:

WM. P. ELLIOT,
N. BENEDICT.