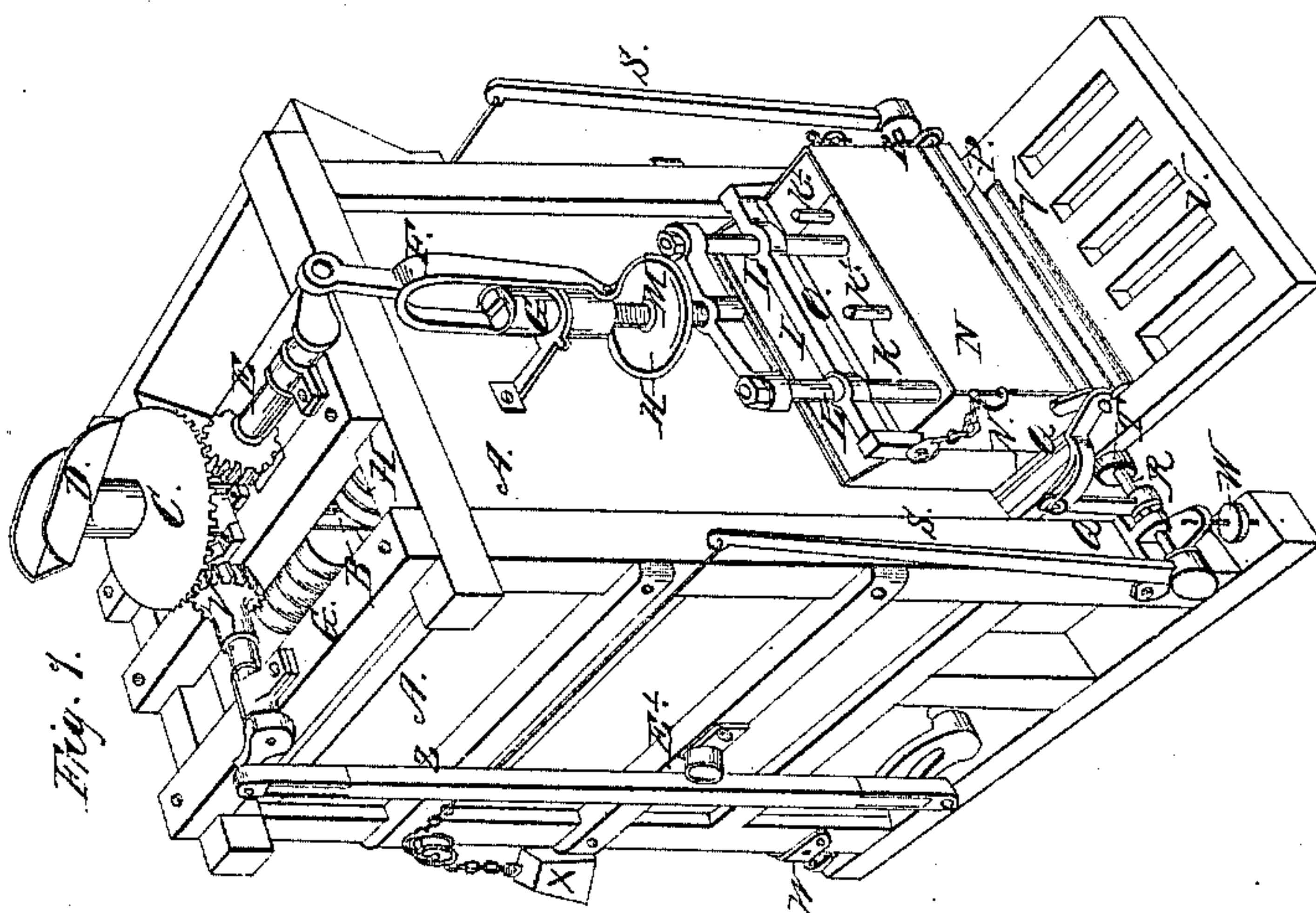
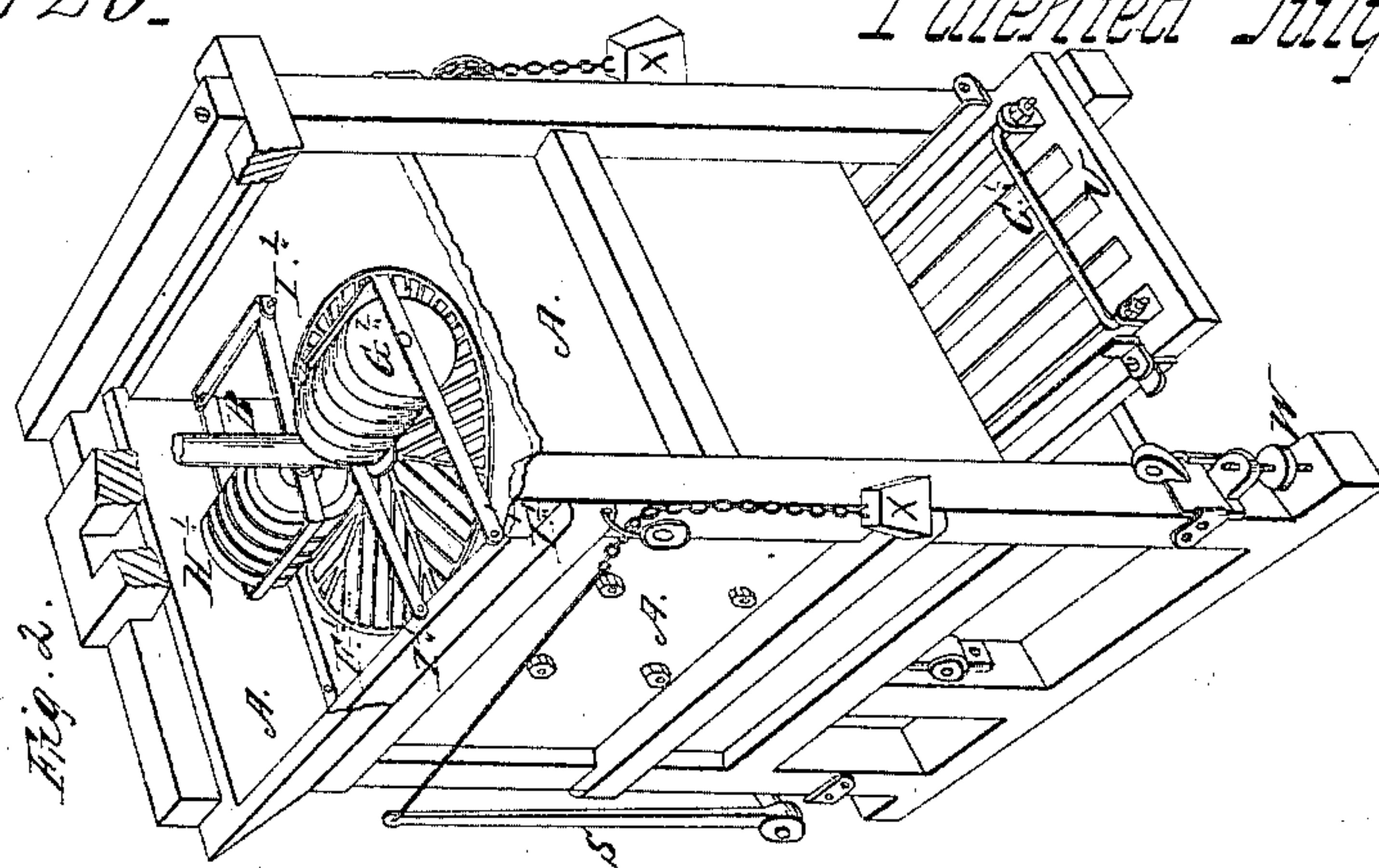


*G. Martin,*  
*Brick Machine,*  
*N<sup>o</sup> 66723.* *Patented July 16, 1867.*

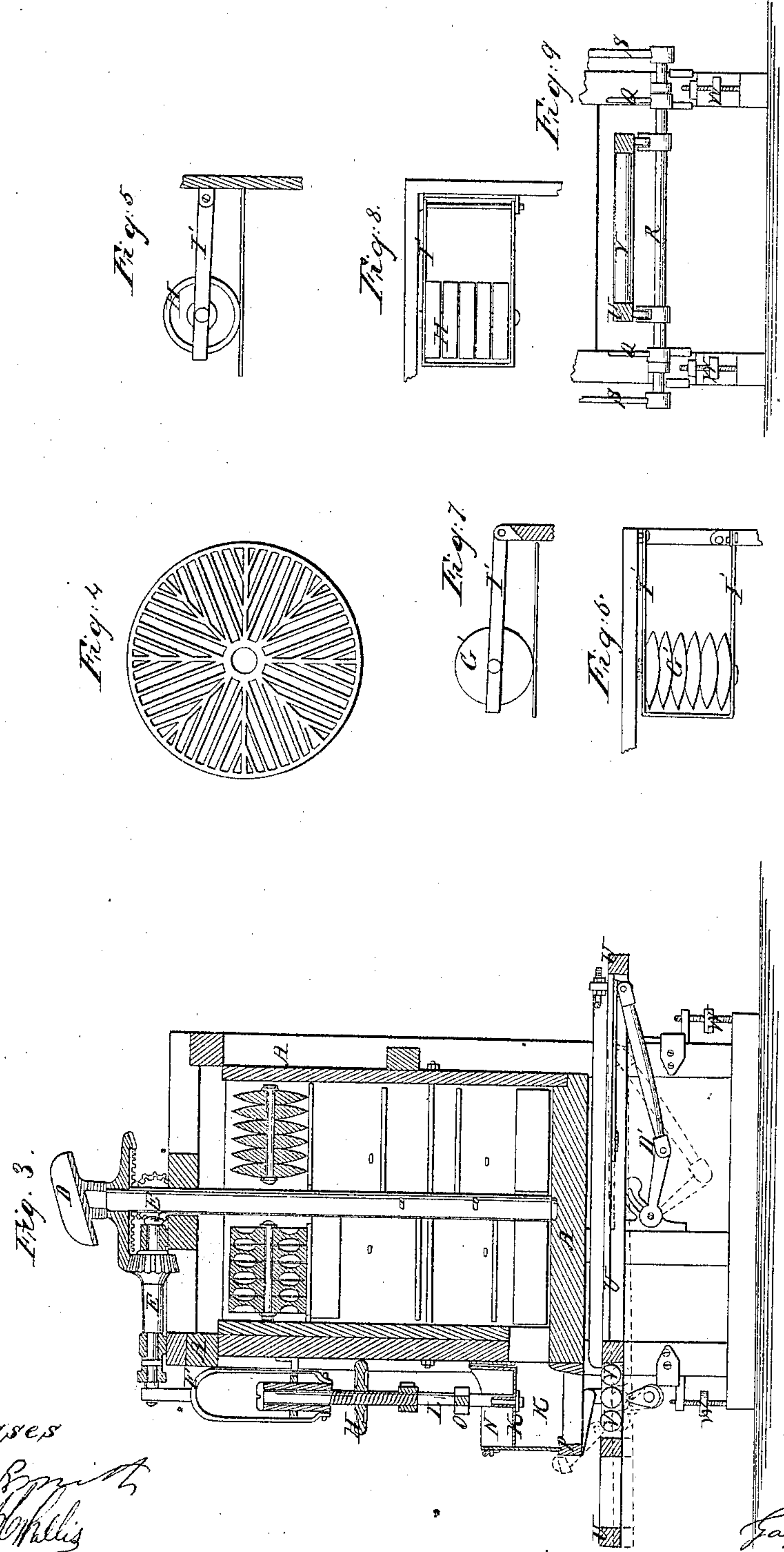


Witnesses

*J. B. Smith*  
*W. H. Smith*

*Inventor*  
*Gaylord Martin*

*G. Martin,*  
*Brick Machine,*  
*N<sup>o</sup> 66,723.*  
*Patented July 16, 1867.*



Witnesses  
*J. B. Ruppert*  
*W. H. Ellis*

Inventor  
*Gayland Martin*



# United States Patent Office

GAYLORD MARTIN, OF MILWAUKEE, WISCONSIN, ASSIGNOR TO HIMSELF  
AND GEORGE BURNHAM, OF THE SAME PLACE.

*Letters Patent No. 66,723, dated July 16, 1867.*

## IMPROVED BRICK MACHINE.

*The Schedule referred to in these Letters Patent and making part of the same.*

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, GAYLORD MARTIN, of the city and county of Milwaukee, and State of Wisconsin, have invented a new and useful improvement in Brick Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a perspective view.

Figure 2, a perspective view of the other side of the machine, with the driving-gear removed.

Figure 3, sectional view.

Figure 4, revolving grate.

Figure 5, end view of clay-crushing rollers.

Figure 6, top view of revolving clay-cutters.

Figure 7, end view of revolving clay-cutters.

Figure 8, top view of clay-crushing rollers.

Figure 9, section of platform raising and lowering apparatus.

Similar letters of reference in each of the figures indicate corresponding parts.

A, frame and pug-mill; B, centre-shaft, with pulverizing-knives; C, bevel-wheel on centre-shaft; D, operating lever-holder; E, shaft, with pinion on one end and crank on the other; F, pitman; G, hollow slide, working in a keeper fastened to the pug-mill; H, adjusting nut; I, yoke; K, follower, with which to press clay into the moulds; L, round slides, connecting follower K to yoke I; M, screw, with its lower end attached to yoke I, and passing up through slide G, with a head on its top larger than the hollow in slide G; N, press-box; O, guide-bar on the top of press-box N; P, stone-door; Q, jointed levers, attached to stone-door; R, shaft; T, cams; U, platform; V, rollers in platform; W, adjusting-screws; X, weights, attached by chains and rods to levers S; Y, shaft, with pinion on one end and crank on the other; Z, pitman; A', slotted lever; B', lever rocking-shaft; C', slide to shove the moulds under the press-box N; D', jointed lever, one end connected to shaft B' and the other end to slide C'; E', roller, attached to frame A; F', circular grate, attached to shaft B, and revolving with it; G', revolving clay-cutters, hung on a yielding frame; H', revolving clay-crushers, hung on a yielding frame also; I', the yielding frames, hung at one end only; K', air pipes in follower K.

Operation: Clay is thrown on circular grate F'. Shaft B is revolved by horse or other power, revolving grate F' with it. This brings the clay under cutters G' and crushing-rollers H', which cut and pulverize it, and, when fine enough, it falls through the openings in the grate into the pug-mill. If stones get in with the clay, the cutters G' and rollers H' pass over them; the frames to which the cutters and rollers are hung being fastened at one end only, yield so as to let them pass over the stones or other hard substance, and they can be taken out when necessary. The clay, when ground to the proper consistency in the pug-mill, passes through an opening into the press-box N. Shaft E is revolved by its pinion meshing into wheel C, which gives a reciprocating motion to follower K by its connections F, G, M, and L. The operator puts his mould on the back end of platform U, shaft Y being revolved by its pinion meshing into wheel C, gives a reciprocating motion to pitman Z, which, being attached to slotted lever A', gives a rocking motion to shaft B', which operates slide C' by lever D'. This takes the mould under press-box N. The follower K when coming down presses the clay into the mould, when it is taken away by the striker. Pitman Z, operating rock-shaft B' by means of a roller revolving on a pin in its end, and entering the slot in lever A', gives a quick motion back to the slide, and a slow motion forward. The slot in the lever allows the slide to make a short stop at the terminus of the outer stroke to give the operator time to properly place his mould on the platform. This slow motion is produced by the pitman Z, working in the outer end of the slot in lever A' on the inward stroke, and in the inner end of the slot on the outward stroke, roller E' forming a fulcrum to make the change. The striker regulates the pressure of the follower K by means of the circular nut H, running it up or down on screw M. When heavy pressure is desired the nut is run up. That makes slide G strike it sooner, which carries follower K lower. For less pressure, the nut is run down, and that makes the slide G strike it later, and consequently the pressure

is less. As the follower K is pressed down on the clay the air under it escapes through pipes K'. These pipes also let air in as the follower is raised. As these air pipes project above follower K, they do not become clogged with clay, as is the case with ordinary holes. Should stones or other hard substances get into the press N, large enough to stick in the clod-cutters or moulds, the pressure on stone-door P will be sufficient to press it open, and as it opens jointed lever Q turns rock-shaft R, which brings cams T into indentations in the bottom of the platform, which permits the platform to lower, and thus let the hard substance pass out and relieve the mould. This opening of the stone-door and lowering of the platform is done at one operation. Levers S being moved by the rock-shaft, weights X are raised, and, as soon as the press is relieved, the weights, acting on levers S, shut the stone-door and raise the platform again.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. Revolving grate F', cutters G', and rollers H', in combination, substantially as and for the purpose described.
2. Adjusting nut H, screw M, slides G, pitman F, yoke I, slide L, and follower K, in combination, substantially as described.
3. Follower K, when made with pipes K', substantially as described.
4. Jointed lever Q, shaft R' levers S, cams T, and weights X, in combination, for the purpose of holding the stone-door shut against any ordinary pressure, and, when the stone-door is opened by extraordinary pressure, to lower the platform at the same time, and to shut the door and raise the platform simultaneously when the extraordinary pressure is relieved.
5. Lowering platform U simultaneously with opening stone-door P, and closing said door, and raising the platform automatically, substantially as described.
6. Slide C', jointed lever D', rocker-shaft B', slotted lever A', pitman Z, and roller E', in combination with crank and crank-shaft Y, substantially as and for the purpose described.

GAYLORD MARTIN.

Witnesses:

J. B. SMITH,  
W. H. WALLIS.