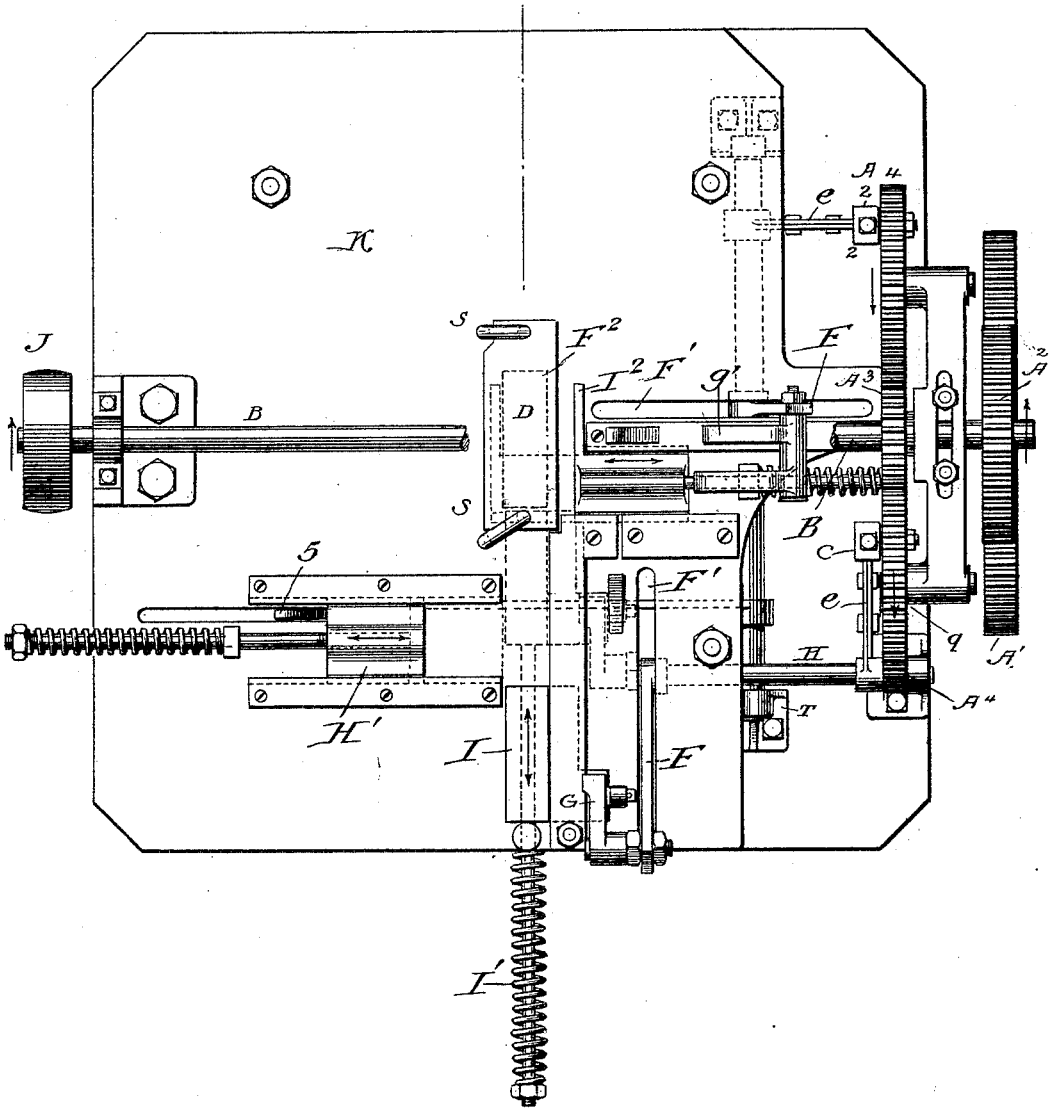
(No Model.) 3 Sheets—Sheet 1.

T. B. LEWIS.

AUTOMATIC BRICK PRESS.

No. 491,712 Patented Feb. 14, 1893.

Fig. 1.



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(No Model.) 3 Sheets—Sheet 2.

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Fig. 2.

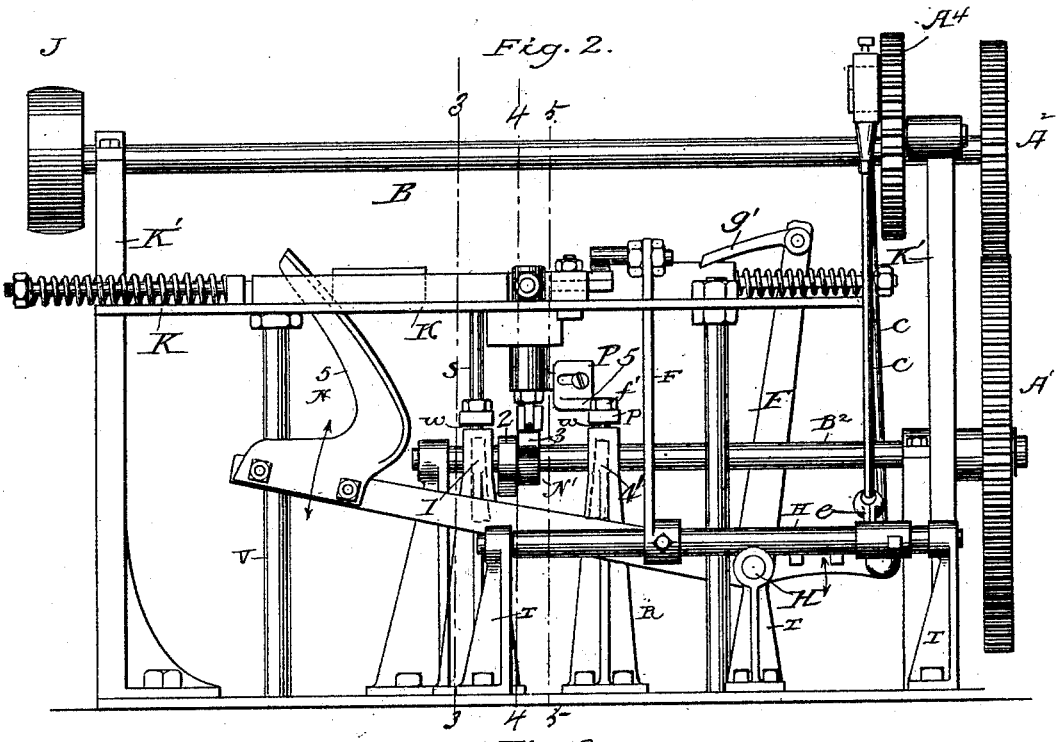
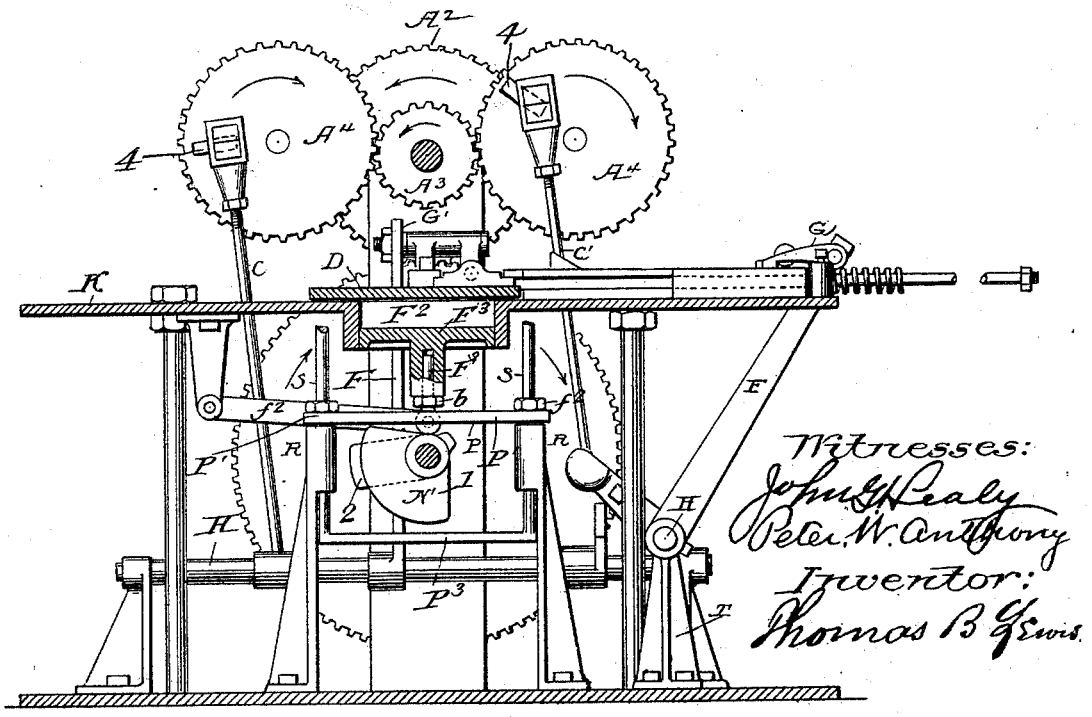


Fig. 3.



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(No Model.) 3 Sheets—Sheet 3.

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Fig. 4.

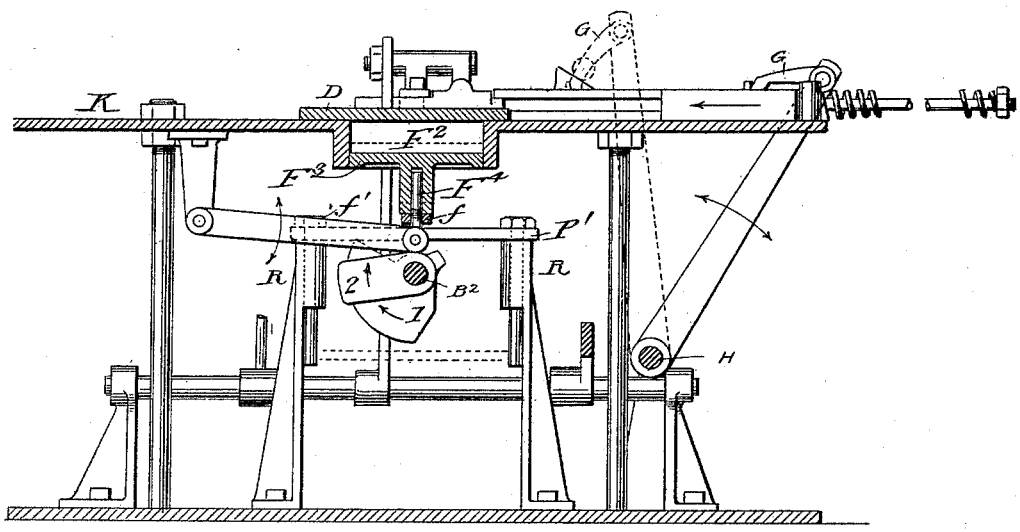
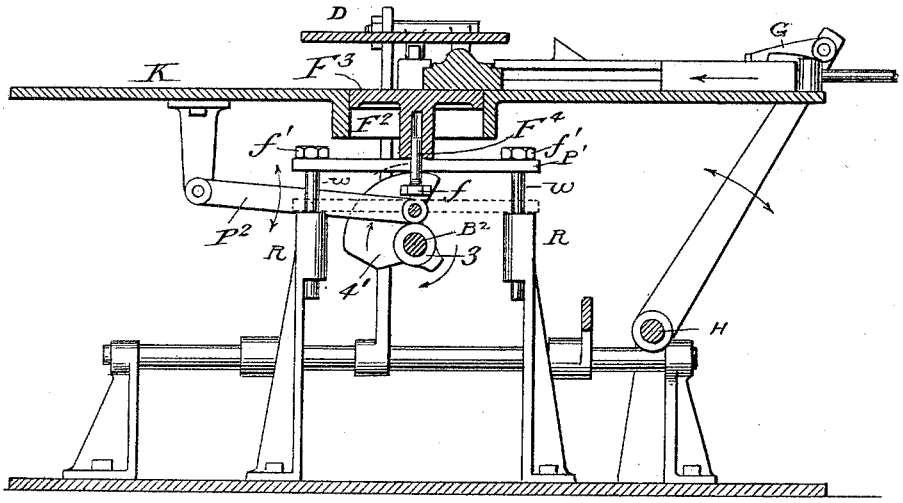


Fig. 5.



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UNITED STATES PATENT OFFICE.

THOMAS B. LEWIS, OF RENOVO, PENNSYLVANIA.

AUTOMATIC BRICK-PRESS.

SPECIFICATION forming part of Letters Patent No. 491,712, dated February 14, 1893.

Application filed December 18, 1891. Serial No. 415,541. (No model.)

To all whom it may concern:

Be it known that I, THOMAS B. LEWIS, a citizen of the United States, residing in Renovo, county of Clinton, and State of Pennsylvania, have invented a new and useful Automatic Brick-Press, of which the following is a specification.

My invention is an automatic brick press and consists in the novel construction and arrangement of its parts hereinafter set out in this specification.

In the accompanying drawings: Figure 1, is a top view of my invention. Fig. 2, is a side view of the same. Fig. 3, is a cross sectional view of Fig. 2 cut on the line 3—3, looking from the left hand end of the machine. Fig. 4, is a cross sectional view of Fig. 2, cut on the line 4—4, looking from the right hand end of the machine. Fig. 5, is a cross sectional view of Fig. 3, cut on the line 5—5.

My machine is provided with suitable platforms and upright posts. The two extreme end posts, K′, have journaled in their upper ends a shaft B, having on one end a balance wheel, J, and on the other end and outside of the post, K′, a cog-wheel A^2, and inside of the post a cog-wheel, A^3. On each side of and meshing with said cog-wheel, A^2, are cog-wheels, A^4, provided with slots 4. Pivoted to said slots are two pitman rods, C, extending to arms, *e*, to which they are pivoted by ball joints. These arms, *e*, operate rocker shafts, H, and work the levers, F.

The machine has a suitable table, K, on which the work is done and in it are slots, F′, to accommodate the workings of the said levers, F, which extend up through them. Said table, K, has a mortise, F^2, of any desirable shape, and a die, F^3, which fits in and works up and down in said mortise and is adjusted as hereinafter described to determine the thickness of the brick. When said die is raised on a plane with the table the automatic feeding works are ready for action. For this purpose the table is provided with three slides or pushers; the first, H′, is operated by cam 5, and is on the side of the table opposite the other two, and by the action of said cam, 5, it forces the brick laid on the table into the carrier or pusher, I, by means of a dog, G, operated by the lever, F, and when the brick is pushed into the carrier, I, it, said carrier, drives it forward on to the top of the die, F^3, which is held in position by the piston or plunger, F^4, and cam 4′, on a level with the top of the table, at which time the said dog, G, is released from its hole on said carrier, I, and said carrier is taken back to its normal position by weight or spring, I′. After the pressure works, hereinafter described, have performed their office and the brick is again on a plane with the top of the table, then carrier or pusher, I^2, comes in play, and by means of lever, F, and dog, *g*′, the brick is shoved off of the die and to one side of the table in a pressed and finished condition, when it may be removed by the hand easily and as rapidly as human dexterity will admit.

As to the pressing works there is beneath the table a shaft, B^2, with a large cog-wheel, A′, on its outer end which meshes with cog-wheel, A^2, on shaft B. Said shaft, B^2, is provided with four cams 1, 2, 3, and 4 reading from its left hand end. Cam 1, by striking the cross bar, P′, (see Fig. 3) raises the plunger, D, and at the same time cam 4, (see Fig. 5) pushes up the die, F^3, until it is flush with the top of the table. When the pressure is removed, the die descends into the mold as deep as desired, and cam 2, descending presses on the lower cross bar, P^3, and brings the plunger, D, down until it rests on the top of the table. Said plunger, D, cross bars, P and P^3, are connected to the upright rods, S, and thus it will be seen how cams 1 and 2 operate said plunger. The distance of the upper stroke is regulated by the nuts, f^2. Cam 3, by striking cross bar, P^2, raises plunger, F^4, and the die, F^3, and presses the brick in the mold, F^2, up against plunger or pressing block, D. The thickness of the brick is regulated by the set nut, *f*, on the piston rod, F^4. Cam 1, having about one-fourth of its arc on a perfect circumference from the center of shaft, B^2, turns up the face of said arc and strikes against the lower face of cross bar, P^4, which has attached to it a connection, P^5, which is attached to the die, F^3, and holds it up level with the upper face of the table while the brick is being removed therefrom.

Having described my invention what I claim as new and desire to secure by Letters Patent, is:—

1. The combination of the shaft B, provided with cog-wheels A^2, A^3; cog-wheels A^4, provided with slots 4; pitman rods C, pivoted to said wheels A^4, and having ball joints fitting into rocker shafts *e;* rocker shafts *e*, secured on shafts H; levers F, secured on said shafts; dogs G, G′, secured on said shafts F; cam 5; feeding slides H′, I, and push slides I^2, substantially as shown and described and for the purposes set forth.

2. The combination of the shaft B, provided with cog-wheels A^2, A^3; cog-wheels A^4, provided with slots 4; pitman rods C, pivoted to said wheels A^4, and connected to rocker shafts *e*, by ball joints; rocker shafts *e*, secured on shafts H; levers F, secured on said rocker shafts; dogs G and G′; carrier I^2, for the purpose of removing the brick from the press when finished; cam 5; feeding slides H′ and I; shaft B^2, bearing on its outer end cog-wheel A, meshing with cog-wheel A^2; cams 1 and 2, on said shaft operating the plunger D; cam 3, operating piston F^4, and die F^3; cam 4, through its connection P^5, holding said die up level with the floor while the pressed brick is being removed, substantially as shown and described and for the purposes set forth.

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Witnesses:
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