

(No Model.)

2 Sheets—Sheet 1.

O. BAIRD & J. CORNELL.  
MACHINE FOR RE-PRESSING BRICK.

No. 412,230.

Patented Oct. 8, 1889.

Fig. 5.

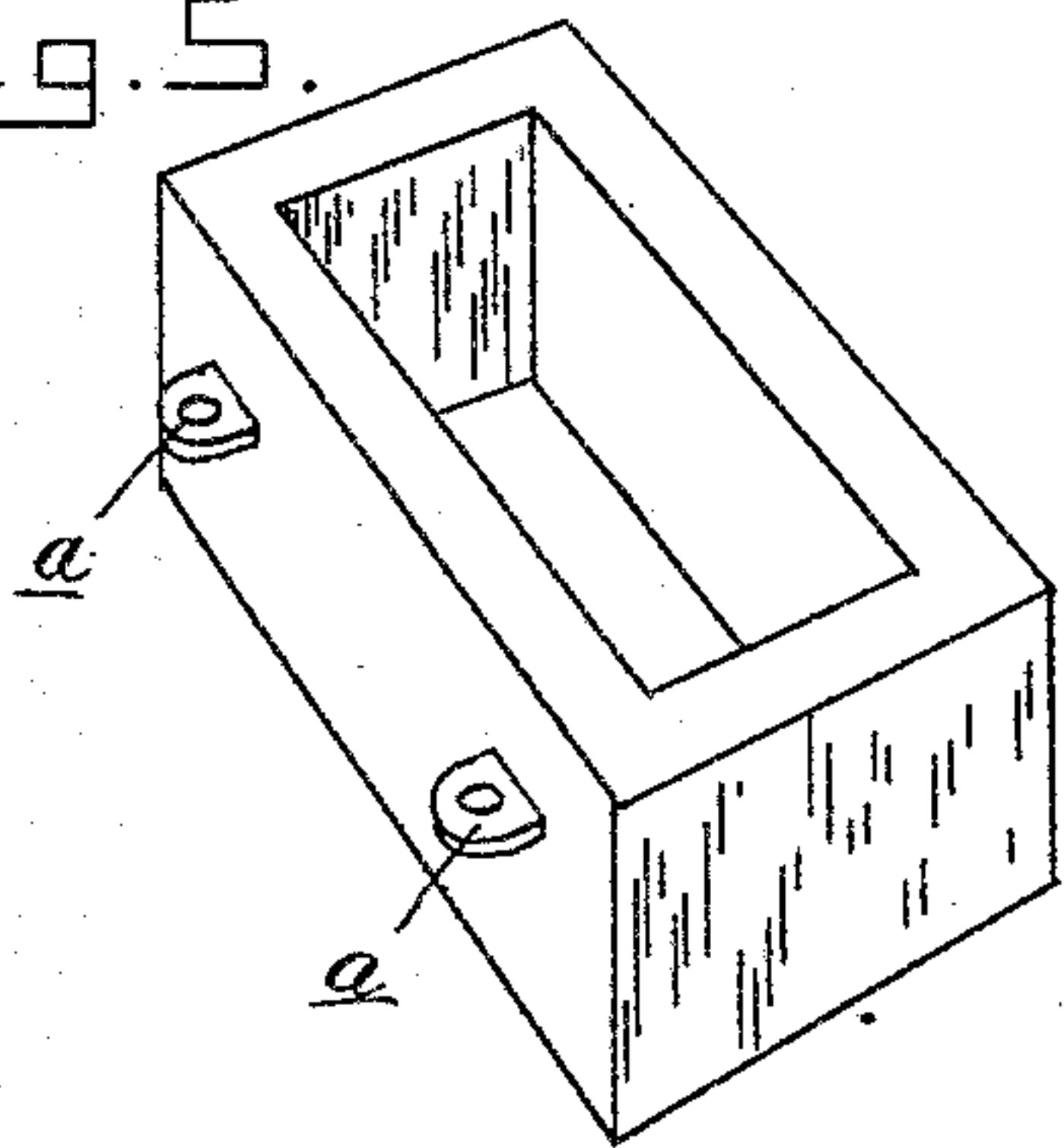
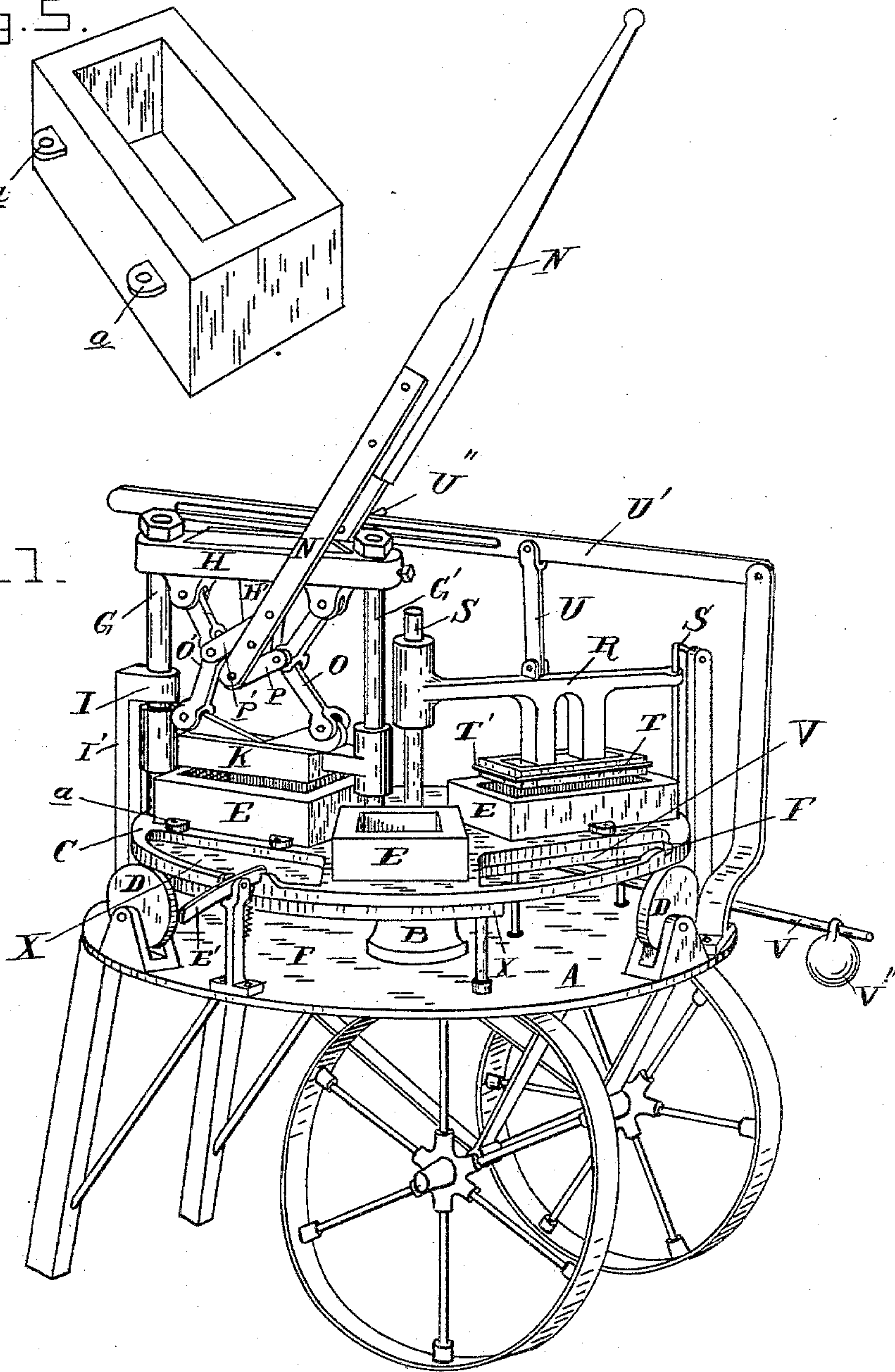


Fig. 1.



Witnesses:

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Jonas Cornell

By *Thos. S. Sprague Son*  
Att'y.

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Fig. 2.

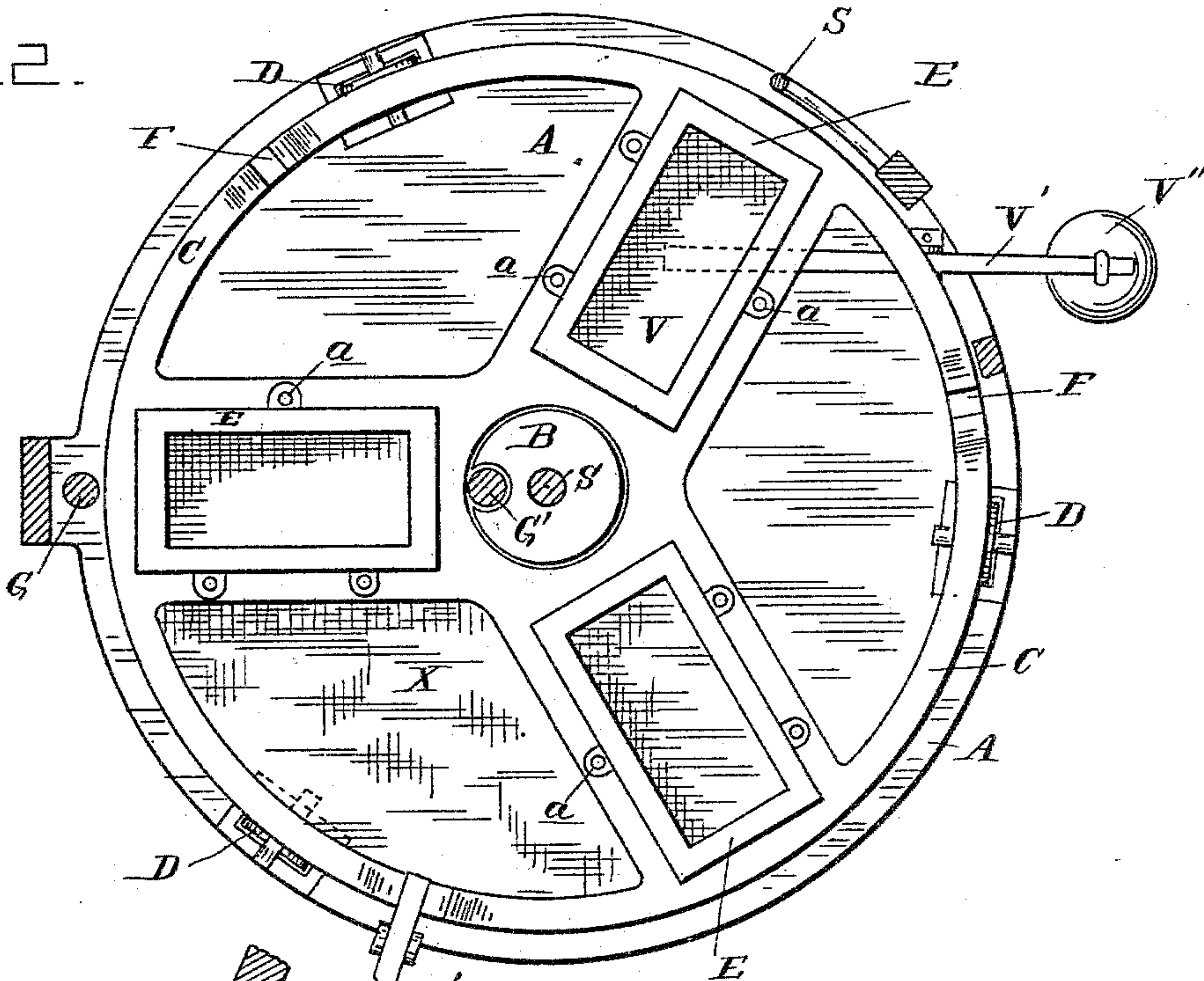


Fig. 3.

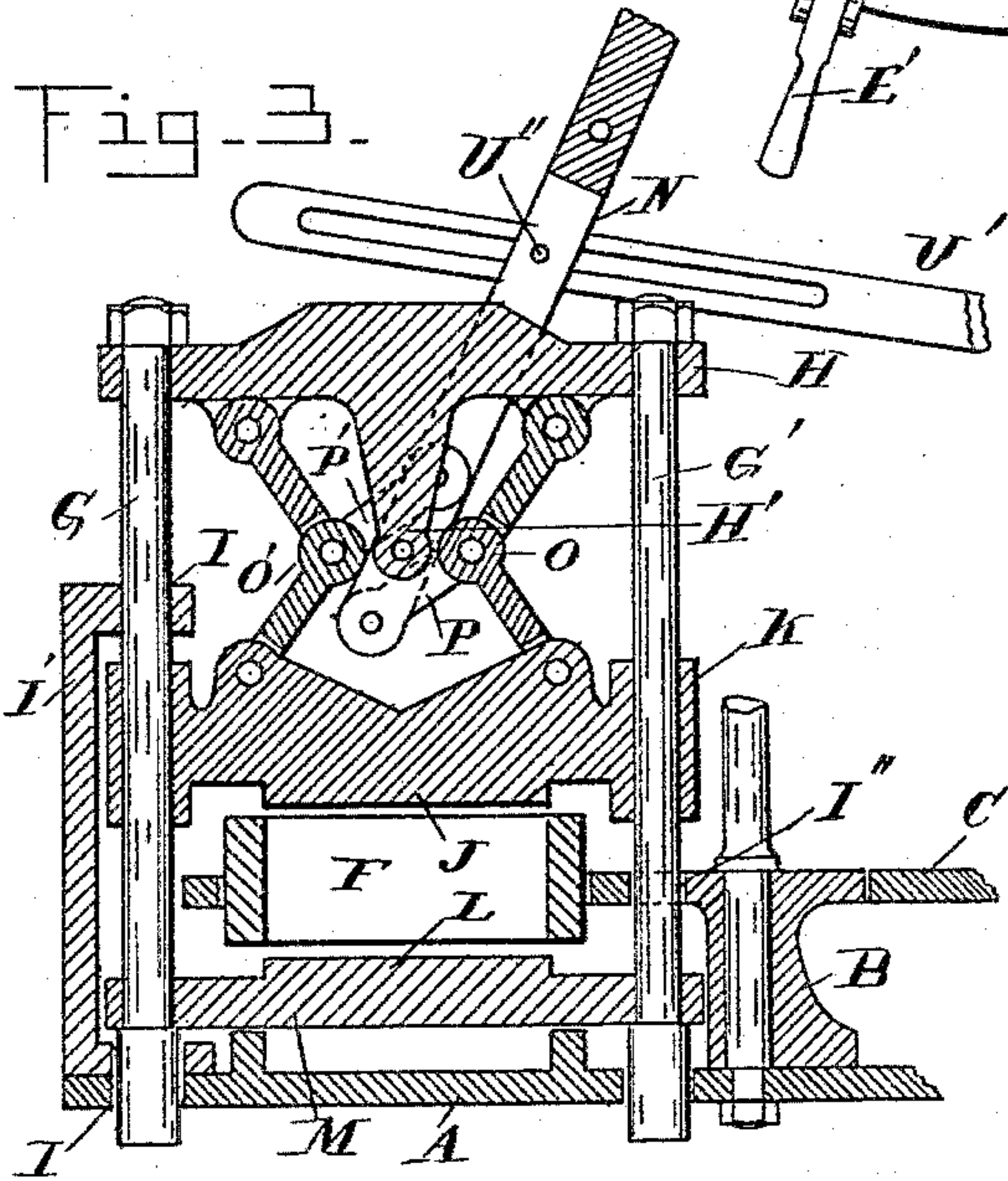
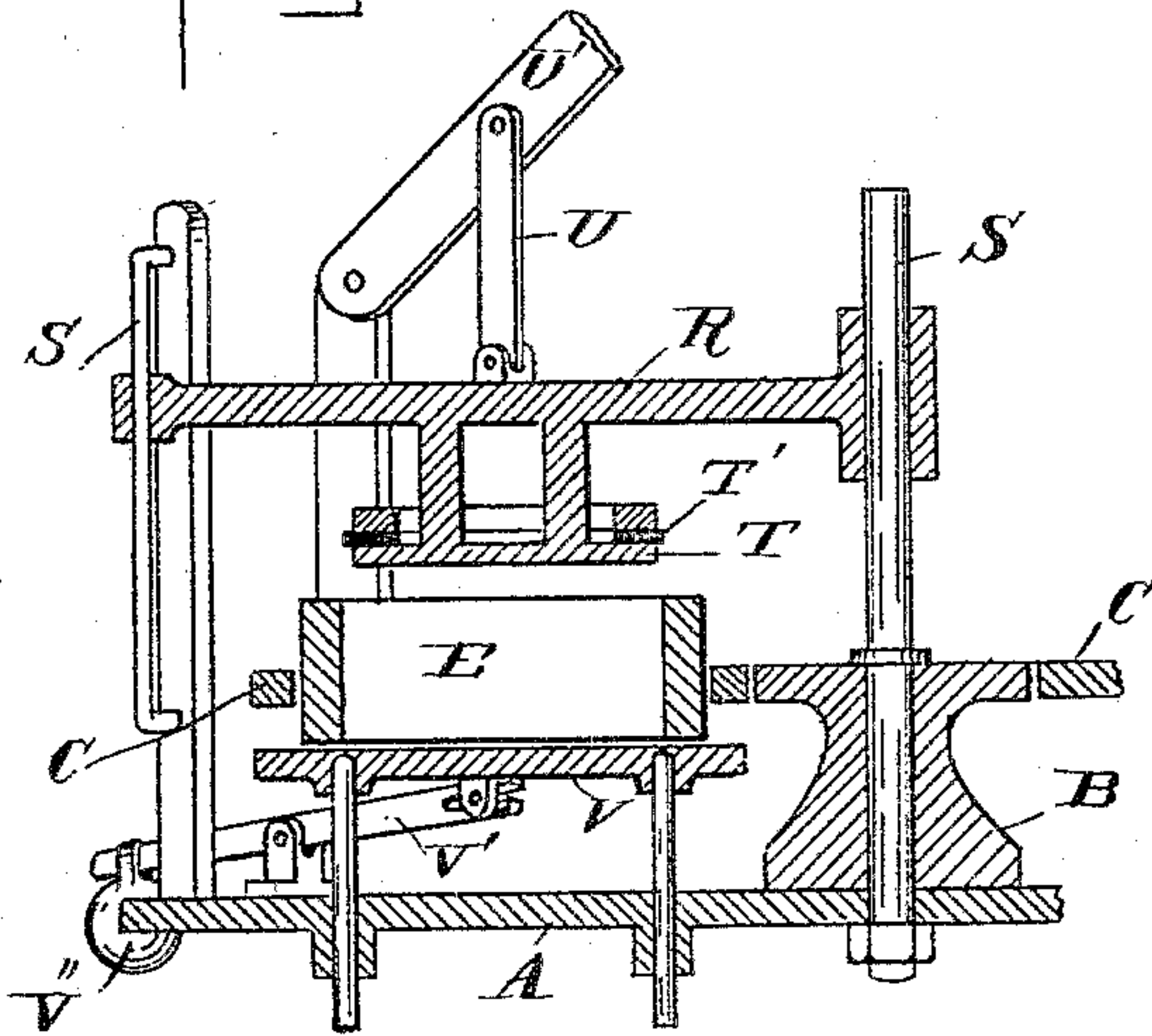


Fig. 4.



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# UNITED STATES PATENT OFFICE.

OLIVER BAIRD, OF PARKHILL, AND JONAS CORNELL, OF THETFORD,  
ONTARIO, CANADA.

## MACHINE FOR RE-PRESSING BRICKS.

SPECIFICATION forming part of Letters Patent No. 412,230, dated October 8, 1889.

Application filed May 10, 1889. Serial No. 310,305. (No model.)

*To all whom it may concern:*

Be it known that we, OLIVER BAIRD, of Parkhill, in the county of Middlesex and Province of Ontario, Canada, and JONAS CORNELL, of Thetford, in the county of Lambton, and Province of Ontario, Canada, both citizens of the Dominion of Canada, have invented certain new and useful Improvements in Machines for Re-Pressing Bricks, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in machines for re-pressing brick, for the purpose of converting brick manufactured in the ordinary way into a better article, or what is called "re-pressed brick."

Our invention consists in the peculiar construction and arrangement of a turn-table or carrier provided with open-ended forms at equal distances apart and adapted to receive and carry the brick, of a device for re-pressing the brick while contained in the form, of a device for discharging the pressed brick from its form, and of a device for oiling the forms, all as more fully hereinafter described, and shown in the accompanying drawings, in which—

Figure 1 is a perspective view of our machine. Fig. 2 is a plan of the turn-table and forms carried thereon. Fig. 3 is a vertical central section through the press. Fig. 4 is a vertical central section through the device for discharging the brick, and Fig. 5 is a detached perspective view of one of the forms.

A is a bed-plate, preferably permanently mounted upon a suitable truck for the convenient transportation of the machine to any place where it may be desired to set it up for operation.

B is a central post, upon which as a pivot is mounted the horizontal turn-table C, which is preferably also supported by anti-friction rollers D on its edge.

E are forms similar to brick-molds, and preferably set into corresponding recesses in the turn-table and detachably secured therein in any suitable manner, preferably by providing the form with laterally-projecting lugs

a, which may be secured to the turn-table in any suitable manner. These forms are preferably secured radially to the turn-table and are open-ended on top and bottom. The turn-table is free to be rotated with the forms, and is locked in position automatically by the spring-dog E', adapted to engage with suitable notches F on the turn-table, of which there are three, so that when the dog is disengaged from one notch, a one-third turn being given to the turn-table, the dog automatically engages it again with the next notch and locks the table in position.

Coinciding with one of the forms in the locked position of the turn-table there is a press for compressing the brick in the form. To this end two vertical rods or guide-bars G G', which are rigidly connected on top by the cross-head H, slidingly engage in suitable vertical guide-bearings, the guide-bar G engaging into the guide-bearings I, formed on the standard I', and the guide-bar G' engaging in a guide-bearing I'', formed on the central post.

An upper die J is secured to or formed upon the cross-head K, which slidingly engages upon the guide-rods G and G', and the lower die L is secured to or formed upon the cross-head M, which is fast upon the rods G and G'.

The cross-head H, which unites the upper ends of the guide-rods G and G', has a downwardly-projecting hanger H', to which is fulcrumed the power-lever M. This is preferably bifurcated to embrace the cross-head H.

O and O' are two toggle-levers, respectively secured at one end to the cross-head H and at the other end to the cross-head K and two links P and P' pivotally connect the knuckles of the toggles with the power-lever N on opposite sides of the fulcrum of said lever, all so arranged that by the actuation of the lever N the toggles are straightened or folded, whereby the cross-heads of both dies are moved apart or drawn together with great power.

It will be observed that from the arrangement of the parts, as described and shown the dies are completely withdrawn from the



form when the toggles are folded, and the turn-table is thereby rendered free to be turned, and when the lever is actuated to straighten the toggles one die enters the form from above and the other die enters the form from below, both acting with equal power against each other, and thereby, without bearing against the turn-table, compressing the brick which may be contained in the mold on both sides and imparting to it any impress which it may be desired to place on the dies. At the next succeeding locked position of the turn-table a device is arranged for expelling the brick from the form. To this end a cross-head R is slidingly mounted upon two fixed guide-bars S. This cross-head supports on its under side a follower-plate T, which is adapted to enter the form. To this end the cross-head is suspended by a link U from the lever U', which is slotted at its free end and engages upon a wrist U'' on the power-lever N, all so arranged that simultaneously with the pressing of the brick the actuation of the power-lever also depresses the cross-head R and its follower sufficiently to expel the brick from the form. To receive the brick when expelled a pallet-board V is loosely supported against the under side of the form by the lever V', which at one arm carries the pallet-board and at the other arm carries a weight V'', sufficiently heavy to counterbalance it when empty. The weight of the brick when received upon the pallet-board overbalances the weight and depresses the lever, whereby the brick may be easily removed from it. Combined with this follower-plate T is a device for oiling the form, and to this end a receptacle for the oil is formed on top of the follower-plate T, the outer walls of which are formed wholly or partly of porous or fibrous material T', through which the oil may leak and in the actuation of this follower lubricate the inner walls of the form, keeping them thereby sufficiently lubricated to prevent adhesion of clay in the further use of the form.

In practice, the parts being arranged and constructed as shown and described, it will be seen that, there being three forms, the brick to be pressed is placed into the first form and carried from there to the press by the operator giving the table one-third of a revolution. As the form is open at the bottom, the brick is retained therein while carried to the press by a stationary board or table X, mounted underneath in proximity to the under side of the form. After pressing the brick in the manner described another one-third of a revolution is given to the table, which carries the compressed brick to the place where it is expelled, and from there the next partial rotation of the turn-table carries it back to its starting place to receive a new brick. It will be seen by this construction that the device operates in a continuous manner, as all of the different steps of the operation take place at

the same time. We preferably place in the stationary table which carries the form while carrying the brick to the press an oil-well, into which dips a roller projecting with its upper face slightly above the table. This, in passing the brick over it, will distribute some oil on its under side, and thereby lubricate it sufficiently to prevent adhesion of clay to the table.

What we claim as our invention is—

1. In a brick-machine, the combination of the platform carrying detents, the turn-table carrying forms and having notches to receive the detents, the guide-bars having the cross-heads, the dies, the toggle-levers, the power-lever having links connected to said toggle-levers, the lever connected and operated by the power-lever, the follower connected to said lever for expelling the bricks from the forms, and the pallet-board arranged to receive the bricks, substantially as described.

2. In a brick-machine, the combination of the platform carrying detents and anti-friction rollers, the turn-table carrying forms riding on the anti-friction rollers and adapted to be engaged by said detents, the guide-bars on the turn-table, having the cross-heads, the dies, the power-lever connected to and operating the dies, the lever connected to the power-lever, the follower having the lubricator and connected to said lever, the guide-bars for said follower, and the pallet-board for receiving the bricks, substantially as described.

3. In a brick-pressing machine, the combination of the turn-table carrying the forms, the guide-bars having the cross-heads, the dies, the toggle-levers, the power-lever having links connected to said toggle-levers, the lever connected to and operated by the power-lever, the follower connected to said lever, and the guide-bars for said follower, substantially as described.

4. In a machine for the purpose described, the combination, with the turn-table carrying forms, of the follower adapted to coincide with one of the forms and adapted to expel the brick therefrom and of the pallet swung on the lever mounted below said form, substantially as described.

5. In a machine for the purpose described, the combination, with the turn-table carrying the forms, of the press consisting of the vertical guide-bars slidingly secured in vertical bearings, the cross-head uniting the same at the upper end, the upper die carried by the sliding cross-head, the lower die secured to the cross-head, fastened upon the guide-bars, toggle-levers connecting the cross-head of the upper die with the cross-head uniting the guide-bars, and an actuating-lever, substantially as described.

6. In a machine for the purpose described, the combination, with the turn-table carrying the forms, of the press provided with



the actuating-lever N, the follower adapted  
to coincide with one of the forms and car-  
ried by the cross-head R, the lever U', the  
link U, suspending the follower from the  
5 lever U', and the wrist U'', engaging in the  
slot on the lever U', all arranged to operate  
substantially as described.

In testimony whereof we affix our signatures,

in presence of two witnesses, this 6th day of  
April, 1889.

OLIVER BAIRD.  
JONAS CORNELL.

Witnesses:

JOHN DARRACH,  
E. F. MANES.