

No. 654,846.

Patented July 31, 1900.

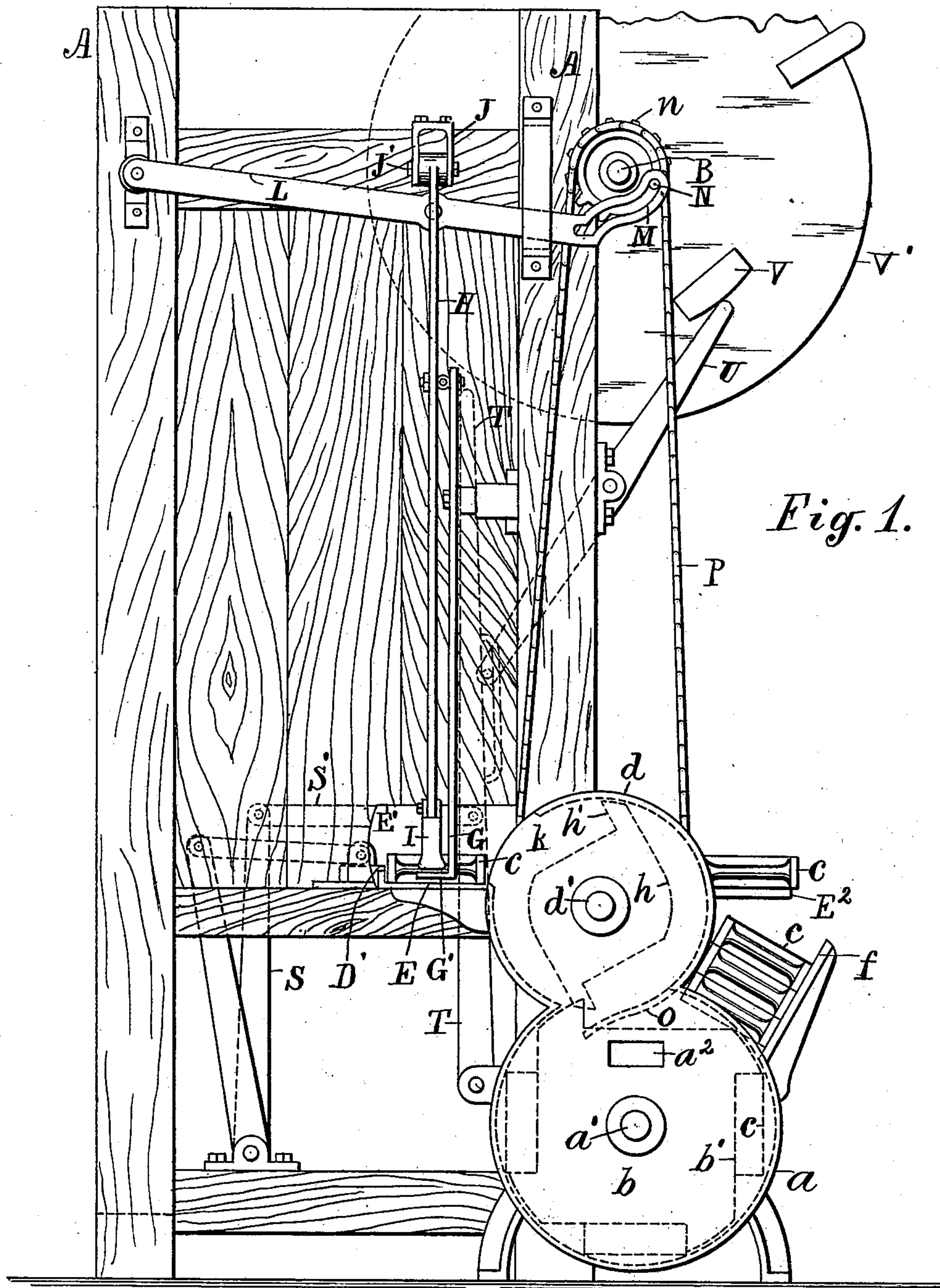
H. SCHOONMAKER.

BRICK MACHINE WITH SANDER ATTACHMENT.

(Application filed Apr. 21, 1900.)

(No Model.)

3 Sheets—Sheet 1.



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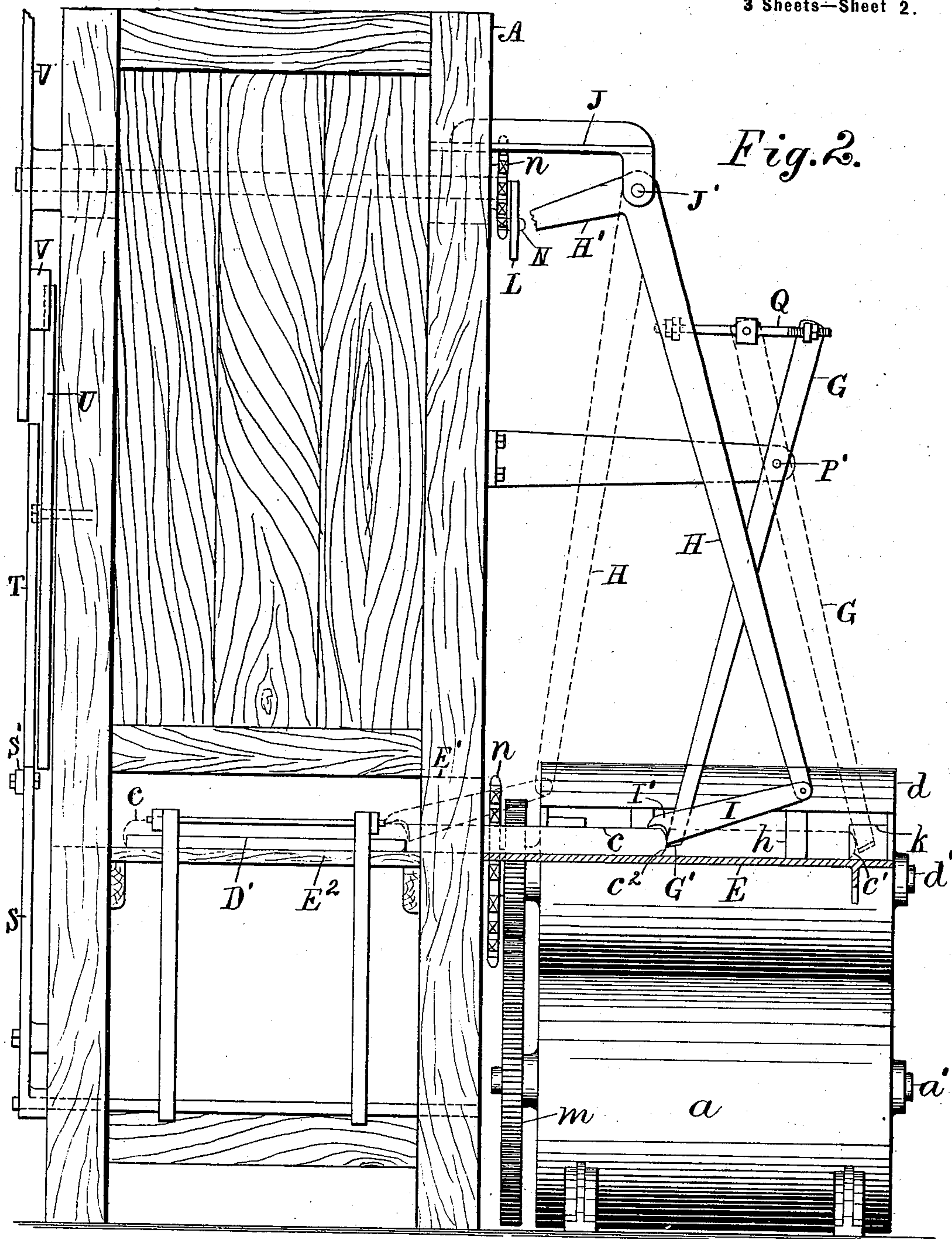
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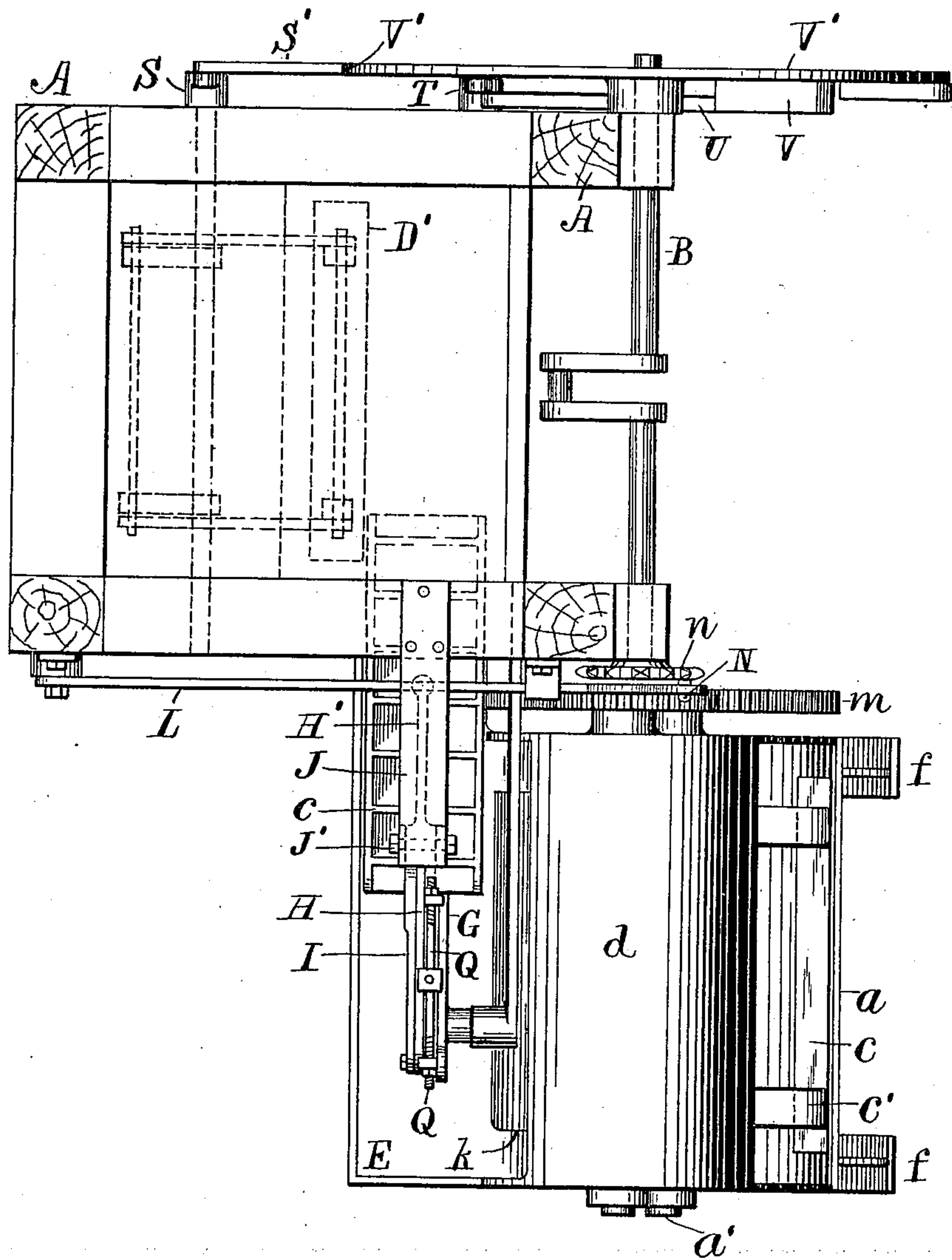
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Fig. 3.



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# UNITED STATES PATENT OFFICE.

HERBERT SCHOONMAKER, OF ROSETON, NEW YORK.

## BRICK-MACHINE WITH SANDER ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 654,846, dated July 31, 1900.

Application filed April 21, 1900. Serial No. 13,715. (No model.)

*To all whom it may concern:*

Be it known that I, HERBERT SCHOONMAKER, a citizen of the United States, whose residence and post-office address is Roseton, county of Orange, State of New York, have invented certain new and useful Improvements in Brick-Machines with Sander Attachments, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

The object of the present invention is to combine a brick-machine with a brick-mold sander arranged and operated to sand the molds, to jar the surplus sand from the same in an inverted position, and to deliver the sanded molds at suitable intervals in an upright position upon the table of the machine.

The brick-mold sander shown herein is specifically claimed by me in a separate application; but it is immaterial to the present invention what construction of apparatus is used to sand the molds, provided it is combined with the brick-machine so as to deliver the sanded molds at suitable intervals in an upright position upon the brick-machine table. In the present invention I extend a platform from the table of the brick-machine, upon which table the molds are filled with clay, and arrange the sanding-machine to deliver the molds upon such platform, and I provide means for sliding the sanded molds at regular intervals from the platform to the table of the brick-machine. To slide the sanded molds at proper intervals to the brick-machine to cooperate with the press for the brick-mold, I connect the shifting devices with the crank-shaft of the brick-machine, and I also connect the brick-mold sander with the same crank-shaft, so that the molds may be sanded and delivered to the platform at the same rate at which they are filled and pressed in the machine.

The invention will be understood by reference to the annexed drawings, in which—

Figure 1 is an end view of the sanding-machine with the brick-machine at the farther end of the same, only those parts of the brick-machine being shown which are necessary to connect with the sanding-machine. Fig. 2 is a side view of the sanding-machine, showing the platform in section and the devices for sliding the molds from the same to the table

of the brick-machine; and Fig. 3 is a plan of the same parts.

A designates the posts of the brick-machine, carrying upon the front side the crank-shaft B to operate the press.

C is the table or space in the machine to receive the molds, and D' the usual pusher worked by connections from the crank-shaft B, which transfers the molds to the press.

E is a platform extended from the level of the table sufficiently to receive the upright molds from the sanding-machine, which is shown constructed with a sanding-cylinder *a*, having a shaft *a'*, geared to the crank-shaft B. The shaft *a'* carries heads *b*, having seats *b'* and lugs *c'* to receive and propel the molds within the sanding-cylinder. The sanding-cylinder has an opening near the top to receive the molds and a guide *f* to hold the molds in contact with the heads which carry them successively into the cylinder by their rotation. Each of the seats is in practice provided with a blade which lifts the sand from the bottom of the cylinder and spills it into the mold, as is common in such machines. A reversing-cylinder *d* is fixed over an opening on the top of the sanding-cylinder, and the molds are transferred into the bottom of such cylinder from the heads *b* by ways *o*. The cylinder *d* is provided with shaft *d'*, having disks *h* with lugs *h'* to grasp the molds and deliver them to the platform E. The molds are inverted in their passage through the reversing-cylinder, so as to stand in an erect position when discharged upon the platform, and are removed from the disks by strippers *k*, which incline downward to the table, so that the molds slide outside of the reversing-cylinder when discharged. The shafts of the sanding-cylinder and reversing-cylinder are connected by gears or cog-wheels *m*, and one of such gears is driven from the crank-shaft B by sprocket-wheels *n* and sprocket-chain P. The disks *h* deliver two molds to the platform E at each rotation and are turned by the gearing one revolution when the crank-shaft B is rotated twice, and one mold is thus delivered to the platform for each rotation of the crank-shaft.

The devices shown for transferring the molds successively from the platform to the brick-machine table consist of two levers G



and H, pivoted and connected to the crank-shaft B in such manner as to vibrate in opposite directions and each operating upon the same mold successively to move it by two  
 5 impulses into the proper position upon the table. The lever H is pivoted upon a bracket J, near the top of the brick-machine, and is provided with a bell-crank arm H', projecting toward the machine. A lever L is piv-  
 10 oted upon the side of the brick-machine and extended past the arm H' to the end of the crank-shaft, where it is provided with a slot M to engage the pin of a crank N, secured upon such shaft. The arm H' is fitted to a  
 15 socket in the lever L, and the lever H is thus vibrated upon its fulcrum J' by the rotation of such crank-pin. The lever G is pivoted intermediate to its ends upon a pin P' upon a bracket below the bracket J, and its upper  
 20 end is connected with the lever H below its fulcrum J' by adjustable link Q. The levers G and H are thus moved simultaneously in reverse directions. The lever G is provided, near its lower end, with a laterally-projecting  
 25 shoe G', and the lever H vibrates at one side of the lever G and carries a pawl I central over the shoe, so that both shoe and pawl are enabled to press upon the center portion of the mold and push it squarely forward to the  
 30 table. The pawl is provided with a lug or toe I' at its forward upper corner to rest upon the mold and prevent the pawl from slipping off of the same in its backward movement. The operating ends of the levers being at dif-  
 35 ferent distances from their fulcrums, the lever H is traversed through a greater space than the lever G; but the parts are so proportioned that the lever G shifts the mold from its first position *c'* upon the platform to the position  
 40 *c''*, in which the pawl may readily engage its rear end.

The slot M is curved at its outer end concentrically with the movement of the crank-pin, so as to hold the lever H stationary for  
 45 a suitable period when the pawl I is in its outer position, as shown in Fig. 2, thus giving the pawl time to drop positively upon the rear side of the mold. The slot is thereafter curved in the opposite direction, which pro-  
 50 duces a quick return motion of the lever H. The pawl is made of sufficient length to force the mold into the aperture E', which is formed in the side of the brick-machine above the table E<sup>2</sup>, and is thus enabled to place the mold  
 55 centrally upon the table, where the pusher D' may shift it to the press.

The ordinary mechanism for operating the pusher is shown in Figs. 1 and 2, consisting of levers S and T, connected by link S' and  
 60 lever U, operated by dog V upon the wheel V'. This wheel is attached to the crank-shaft, and thus actuates the pusher once at each movement of the brick-press to place a mold beneath the same.

65 The table of the brick-machine is shown in Fig. 1 extended from the front of the machine to support the molds as they are dis-

charged successively from the press, one of the molds *c* being shown upon such table.

From the above description it will be seen 70 that the sanded molds are delivered upon a table of the brick-machine in a suitable position to be filled and pressed in the usual manner, by which the labor of one operator is en-  
 75 tirely dispensed with, as it is necessary even if a brick-mold sander be used in the ordinary manner for an operator to take the molds from such sander, dislodge the surplus sand, and place the molds in a suitable position  
 80 upon the brick-machine table.

The apparatus is simple and cheaply constructed, and the adjustable connection be-  
 85 tween the levers G and H permits them to be set in an operative relation to one another when the machine is constructed. The molds must unavoidably be moved a considerable  
 90 distance to transfer them from the sanding-machine to the brick-machine, and if a single lever were used for such purpose it would move through so large an arc as to rise incon-  
 95 veniently above the platform at the ends of its stroke. By using the two levers G and H the arc through which each vibrates is materially reduced and the mold is shifted with less strain upon the parts.

Having thus set forth the nature of the invention, what is claimed herein is—

1. The combination, with a brick-machine having a table to receive the molds and sustain the same during the filling operation and  
 100 having a crank-shaft to operate its press, of a platform extended from such table, a sanding-machine with devices for delivering the sanded molds upon such platform, and means for sliding the sanded molds from such plat-  
 105 form to the table of the brick-machine, substantially as herein set forth.

2. The combination, with a brick-machine having a table to receive the molds and sustain the same during the filling operation and  
 110 having a crank-shaft to operate its press, of a platform extended from such table, a sanding-machine with devices for delivering the sanded molds upon such platform, a lever for shifting the molds from the platform to the  
 115 table, and means upon the crank-shaft for vibrating such lever, substantially as herein set forth.

3. The combination, with a brick-machine having a table to receive the molds and sustain the same during the filling operation and  
 120 having a crank-shaft to operate its press, of a platform extended from such table, a sanding-machine with devices for delivering the sanded molds upon such platform, the lever  
 125 G adapted to slide the mold partially along the said platform, the lever H with hinged pawl to grasp and slide the mold from the platform to the table, the connection Q between the two levers to move them in reverse  
 130 directions, and means upon the crank-shaft for vibrating one of the levers, substantially as herein set forth.

4. The combination, with a brick-machine



having a table to receive the molds and sustain the same during the filling operation and having a crank-shaft to operate its press, of a platform extended from such table, a sand-  
 5 ing-machine with devices for delivering the sanded molds upon such platform, the lever G adapted to slide the mold partially along the said platform, the lever H movable at the side of the lever G and provided with pawl I  
 10 to pass over the mold and engage its rear end, the adjustable connection Q between the two levers to move them in reverse directions, and means upon the crank-shaft for vibrating one of the levers and thus operating them  
 15 alternately upon the mold, substantially as herein set forth.

5. The combination, with a brick-machine having a table to receive the molds and sustain the same during the filling operation and  
 20 having a crank-shaft to operate its press, of a platform extended from such table, a sand-ing-machine with devices for delivering the sanded molds upon such platform, the lever G adapted to slide the mold partially along  
 25 the said platform, the lever H movable at the side of the lever G and provided with pawl I to pass over the mold and engage its rear end, the adjustable connection Q between the two levers to move them in reverse directions, an  
 30 arm pivoted at one end and movable transversely across the end of the lever H and slotted at its outer end, and a crank upon the end of the crank-shaft movable in such slot, thus vibrating the levers and operating them  
 35 alternately upon the ends of the mold, substantially as herein set forth.

6. The combination, with a brick-machine having a table to receive the molds and having a crank-shaft to operate its press, of a  
 40 platform extended from such table, a sand-ing-machine with devices for delivering the molds upon such platform, and a lever vibrated by connection to the crank-shaft, and provided with a pawl to engage the rear end

of the mold and of suitable length to push the 45 mold within the opening E' upon the side of the brick-machine above the table.

7. The combination, with a brick-machine having a table to receive the molds and having a crank-shaft to operate its press, of a 50 platform extended from such table, a sand-ing-machine with devices for delivering the molds upon such platform, and a lever vibrated by connection to the crank-shaft and provided with the pawl I having the toe I' 55 upon its forward end and adapted to drag over the mold in the outward movement of the lever, and to engage, and rest upon, the rear end of the mold to push the same forward into the opening E' above the table E. 60

8. The combination, with a brick-machine having a table to receive the molds and sustain the same during the filling operation and having a crank-shaft to operate its press, of a platform extended from such table, a sand- 65 ing-machine with devices for delivering the sanded molds upon such platform, the lever G adapted to slide the mold partially along the said platform, the lever H movable at the side of the lever G and provided with pawl 70 to pass over the mold and engage its rear end, the adjustable connection Q between the two levers to move them in reverse directions, the crank-pin N upon the end of the crank-shaft, the arm L pivoted at one end and movable 75 transversely across the end of the lever H and provided with slot M formed concentric in its outer end with the crank-pin N whereby the pawl I is held stationary when dropping behind the rear end of the mold, substantially 80 as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

HERBERT SCHOONMAKER.

Witnesses:

THOMAS S. CRANE,  
 W. H. VAN STERNBERGH.