

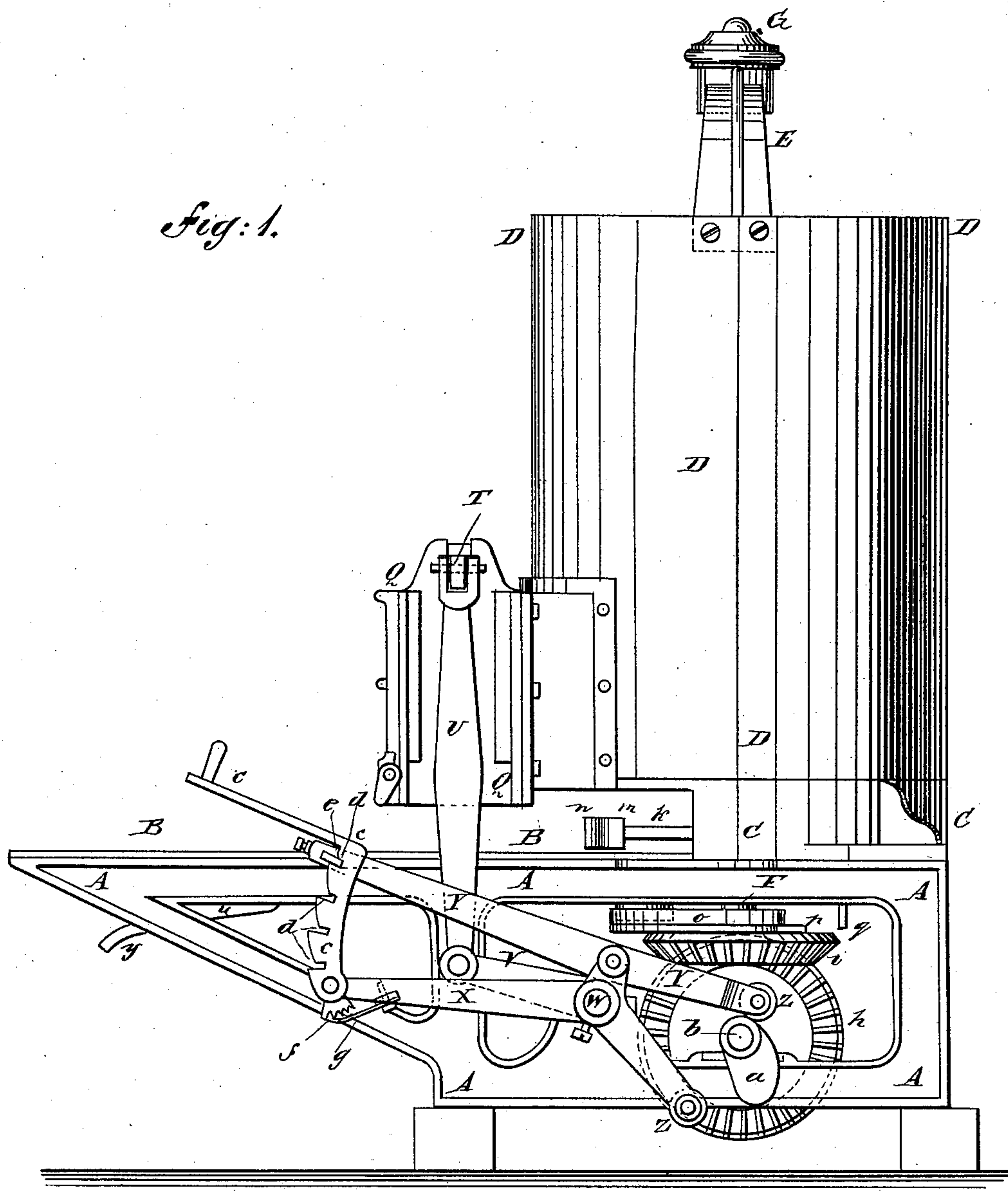
(No Model.)

3 Sheets—Sheet 1.

W. E. TALLCOT.  
BRICK MACHINE.

No. 347,136.

Patented Aug. 10, 1886.



WITNESSES:

*Chas. Nida*  
*& Sedgwick*

INVENTOR:

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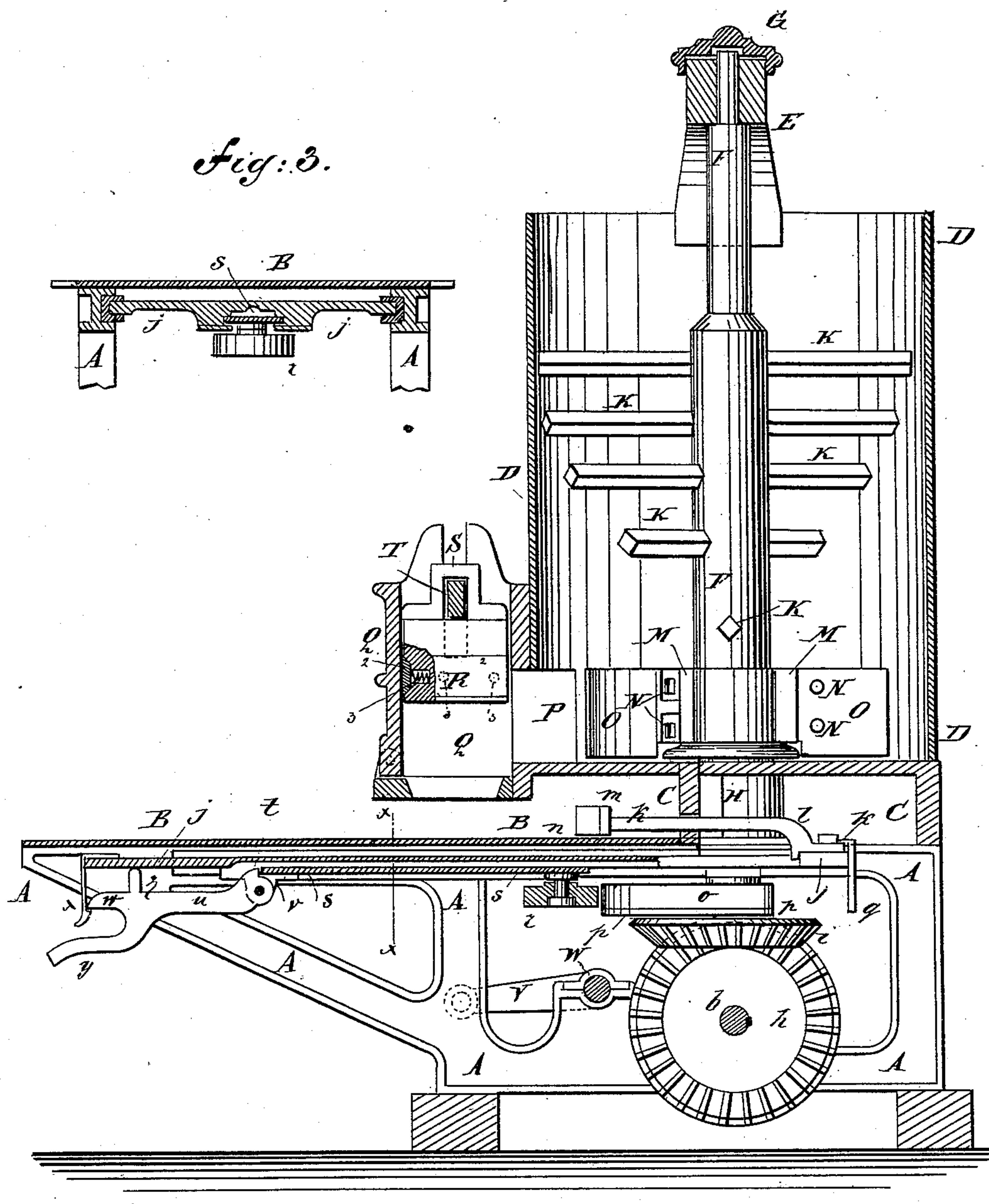
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*Fig: 2.*



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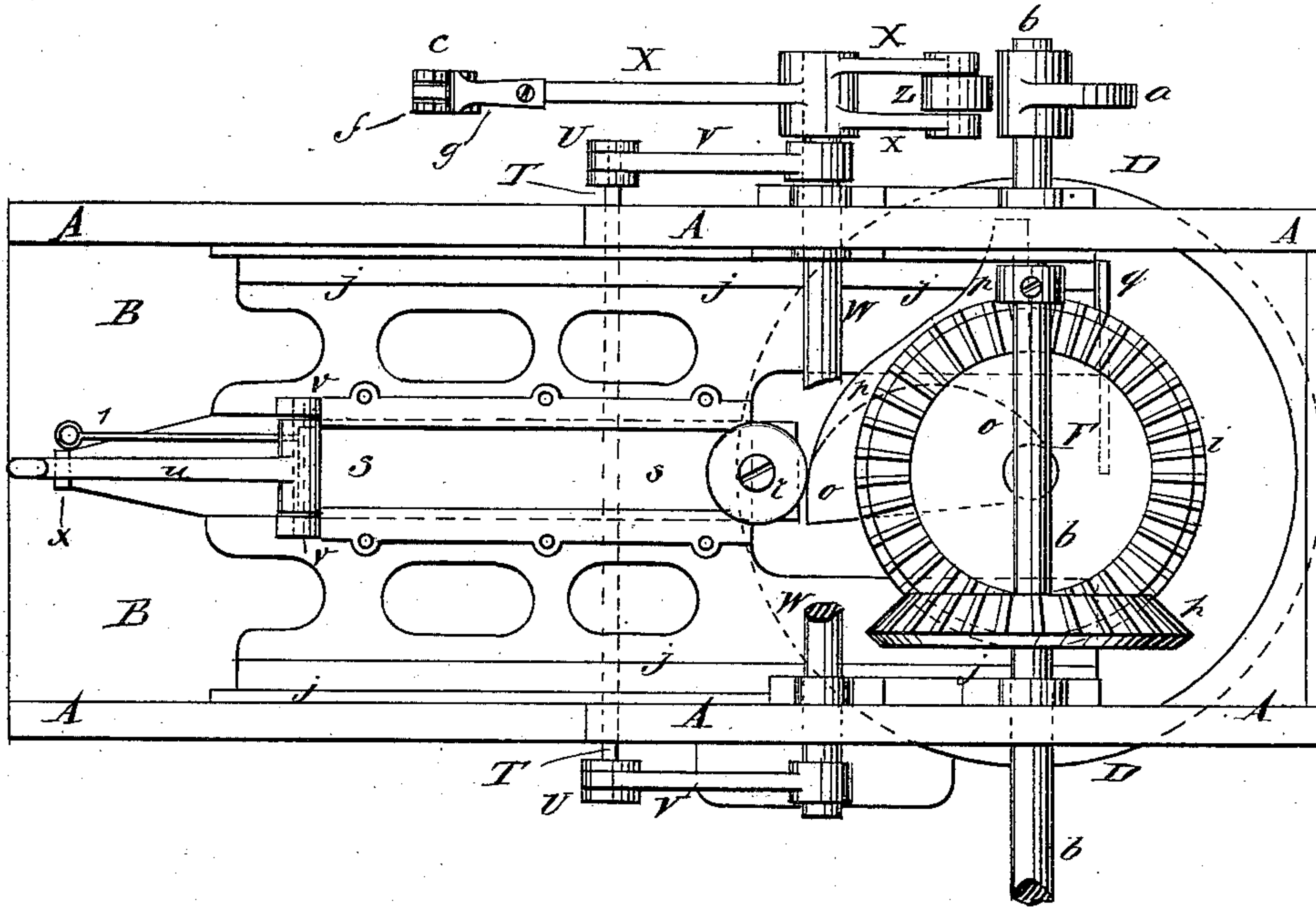
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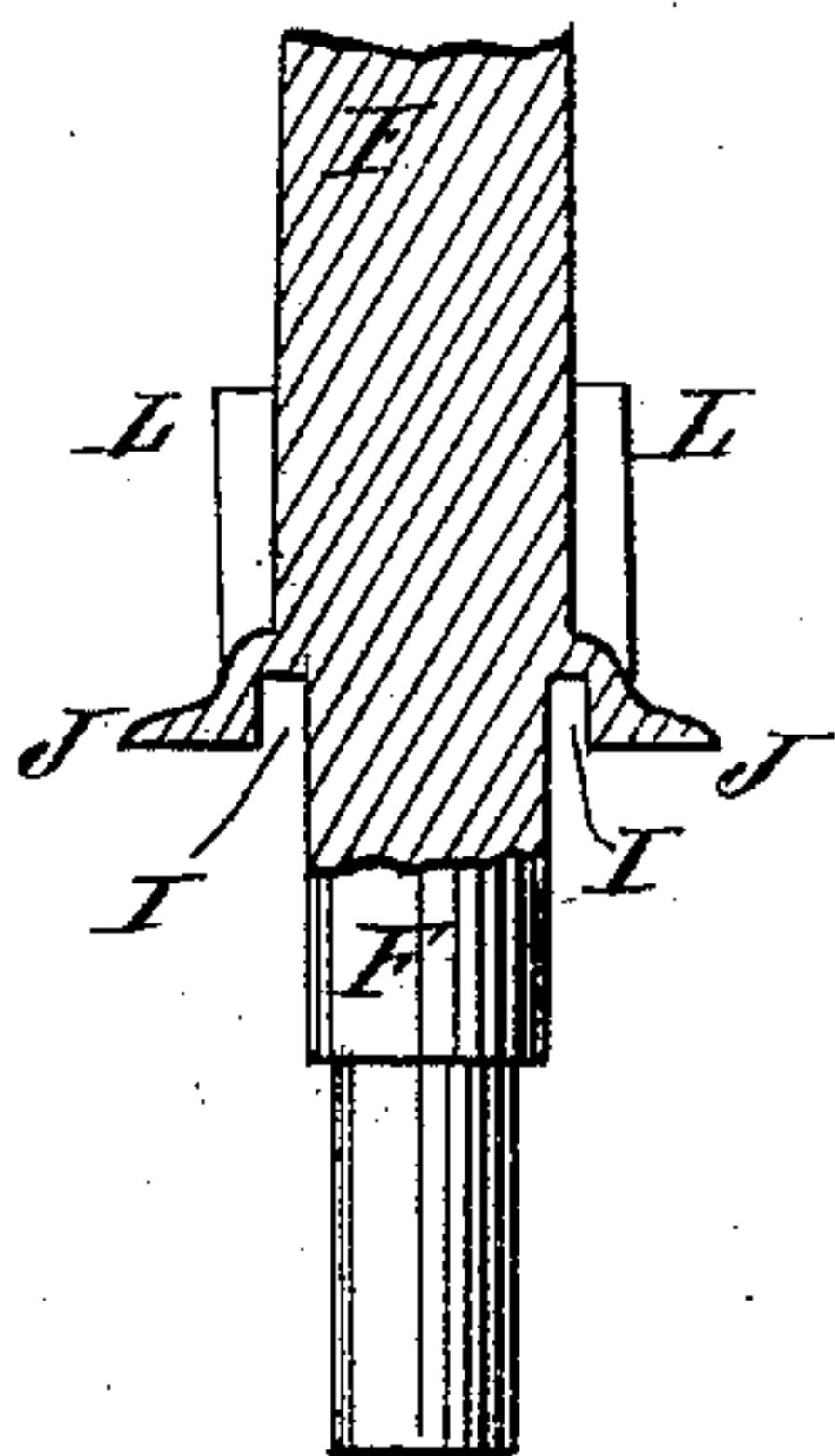
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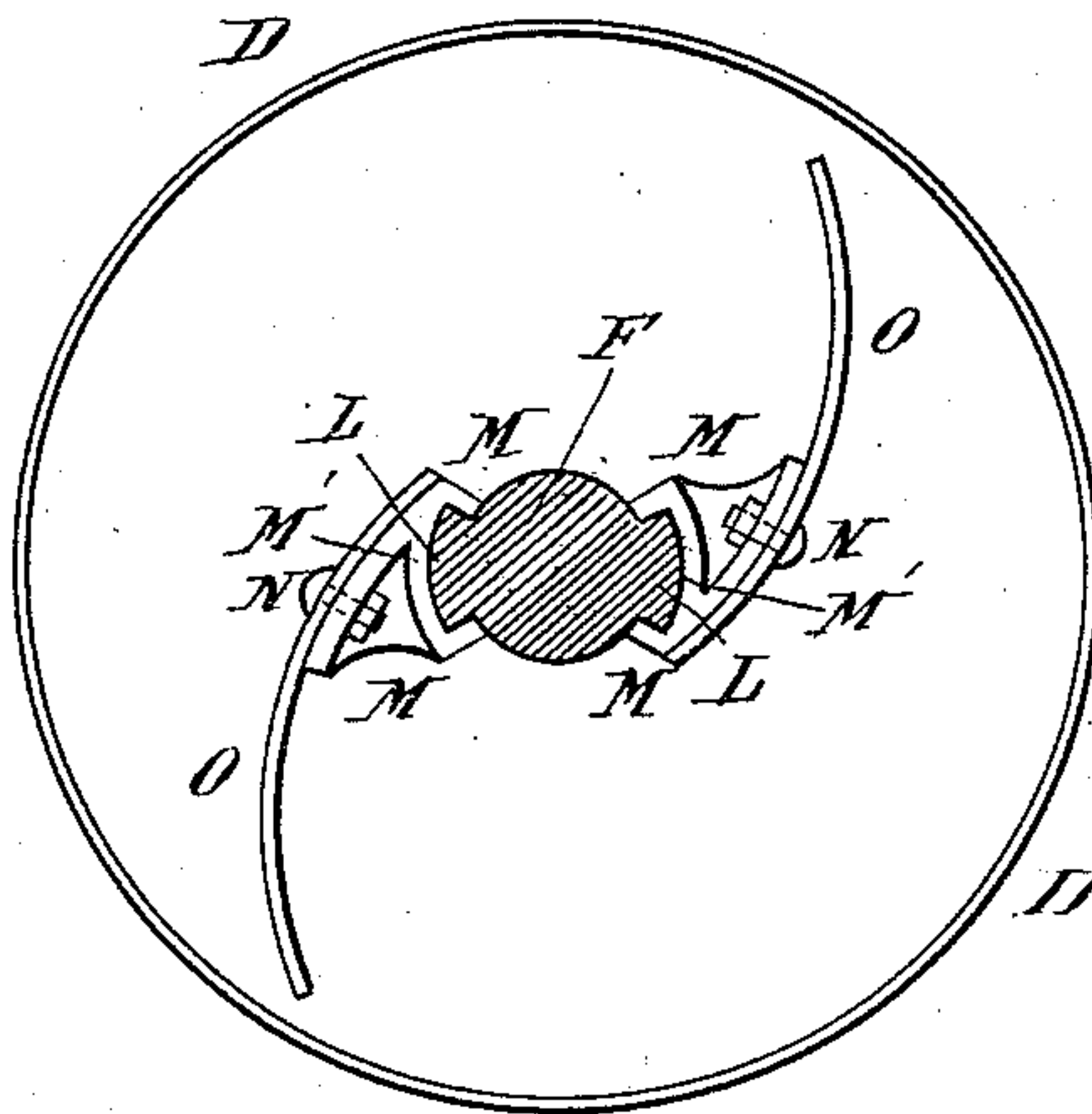
*Fig. 4.*



*Fig. 6.*



*Fig. 5.*



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# UNITED STATES PATENT OFFICE.

WILLIAM E. TALLCOT, OF CROTON LANDING, NEW YORK.

## BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 347,136, dated August 10, 1886.

Application filed February 24, 1886. Serial No. 193,021. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM E. TALLCOT, of Croton Landing, in the county of Westchester and State of New York, have invented a new and useful Improvement in Brick-Machines, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of my improved brick-machine. Fig. 2 is a sectional side elevation of the same. Fig. 3 is a sectional front elevation of the mold-table and the mold-driving frame, taken through the line *x x*, Fig. 2. Fig. 4 is a bottom view of the same, parts being broken away. Fig. 5 is a plan view of the mud-cylinder and the wipers, the vertical shaft being shown in section. Fig. 6 is a side elevation, partly in section, of a part of the vertical shaft, and showing the guard-collar in section.

The object of this invention is to improve the construction of the brick-machines for which Letters Patent No. 237,636 were issued February 8, 1881, William E. Tallcot, inventor, in such a manner as to make them more convenient in use and more reliable in operation.

The invention consists in the construction and combination of various parts of the machine, as will be hereinafter fully described.

A represents the base-frame of the machine, the upper forward part of which projects and has a platform, B, attached to its top, to form a table to receive the molds and support them while being filled.

To the top of the rear part of the frame A is attached the semi-cylindrical base C, to which is attached the lower end of the mud-cylinder D. To the opposite sides of the upper end of the mud-cylinder D are attached the ends of an arched cross-bar, E, in the center of which is formed a bearing to receive the upper end of the vertical shaft F, or a journal formed upon the said upper end. The upper end of the journal of the shaft F is covered with a cap, G, to prevent mud from getting into the bearing and wearing the said bearing and the shaft-journal.

The lower part of the shaft F revolves in a bearing, H, secured to the base C, and which

projects through the bottom of the cylinder D. The upper end of the bearing H enters an annular groove, I, in the lower side of the collar J, formed upon or attached to the shaft F, to prevent the mud in the said cylinder D from working in between the bearing H and the journal of the shaft F and wearing the said bearing and journal.

To the middle part of the shaft F are attached radial arms K, to keep the mud in the cylinder D stirred up, and cause it to pass freely into the lower part of the said cylinder.

To the shaft F just above the collar J are attached or upon it are journaled dovetailed ribs L, which fit into dovetailed grooves M' in the shoes M, so as to connect the said shoes securely to the said shaft. The outer surfaces of the shoes M are curved, and to them are secured by bolts N the curved wings or wiper plates O by which the mud is pushed through an opening, P, in the lower part of the forward side of the cylinder D into the press-box Q secured to the forward side of the said cylinder. By this construction the wipers will be independent of each other and can be readily detached from the shaft, and the wiper-plates can be readily detached from their shoes and replaced with new plates. If desired, the wiper-plates and their shoes can be made in one piece; but I prefer the construction first described, as it allows the wiper-plates to be made of steel and their shoes of cast-iron or steel. In the bottom of the press-box Q is formed an opening, through which the mud is forced down into the molds by the plunger R. The plunger R, upon its ends and forward side, is provided with a packing, 2, the upper and lower edges of which are beveled, and which is held out against the inner surface of the press-box Q by spiral springs 3, placed in recesses in the said plunger, and which is designed to prevent the mud from working up between the said plunger and the ends and side of the said press-box. Upon the upper side of the end parts of the plunger R are formed keepers S, through which is passed a bar, T. The bar T passes through vertical slots in the upper parts of the ends of the press-box Q, and to the ends of the said bar T are pivoted, by pins or other suitable means, the forked upper ends of the connecting-bars U. The lower ends of the con-



neeting-bars U are pivoted to the forward ends of the arms V, the rear ends of which are secured to a shaft, W. The shaft W rocks in bearings in the base-frame A, and to one of its ends is secured at its angle the three-armed lever X. The upper arm of the three-armed lever X is made short, is slotted, and to it is pivoted the lever Y. To the rear ends of the levers X Y are pivoted rollers Z, which are struck successively by the cam *a*, secured to the drive-shaft *b*. The drive-shaft *b* revolves in bearings in the base-frame A, and power can be applied to it by a pulley and belt, or other suitable means. With this construction, as the cam *a* strikes the roller Z of the lever Y, the levers X Y and the arms V will be vibrated to draw the plunger R downward and force the mud out of the press-box Q and into the molds. As the cam *a* strikes the roller Z of the lever X, the levers Y X and the arms V will be vibrated to force the plunger R upward, to allow more mud to enter the press-box Q.

To the forward end of the lever X is pivoted the lower end of the bar *c*, in the forward edge of which are formed recesses *d*, to receive the lug *e*, formed upon or attached to the side of the forward end of the lever Y, so that by adjusting the catch-bar *c*, to change the lug *e* from one to another of the recesses *d*, the rear ends of the levers X Y will be adjusted at a greater or less distance apart, to give a less or greater vibration to the levers X Y and the arms V, and a less or greater movement to the plunger R, as may be required.

The upper end of the catch-bar *c* is extended forward, as shown in Fig. 1, so that it can be conveniently reached and operated by the attendant standing in front of the machine. The lower end of the catch-bar *c* is extended a little below its pivot, and has teeth *f* formed upon it, with which engages a spring-pawl, *g*, secured to the lever X, to hold the catch-bar *c* in gear with the lever Y when the machine is at work.

To the drive-shaft *b* is attached a large beveled gear-wheel, *h*, the teeth of which mesh into the teeth of the large beveled gear-wheel *i*, attached to the lower end of the vertical shaft F, so that the said vertical shaft will be revolved from the said drive-shaft.

*j* is a frame, which is placed just below the platform *b*, and the side edges of which slide in grooves in the inner sides of the side top bars of the frame A. To the upper side of the rear end of the sliding frame *j* are attached the rear ends of two bars, *k*, which are made with an upward curve or offset, *l*, at or near their rear ends, to raise the said bars above the level of the platform B. The bars *k* pass through holes in the front wall of the semi-cylindrical base C, and to their forward ends is attached a cross-bar, *m*, so that the mold will be pushed squarely beneath the press-box by the forward movement of the said bars *k*. Upon the forward side of the cross-bar *m*, near one end, is formed, or to it is attached, a lug,

*n*, to serve as a stop to the mold when being pushed into place before the said cross-bar. With this construction the part of the front wall of the base C below the push-bars *k* will prevent the sand falling upon the platform or table B from falling from the rear end of the said platform, and coming in contact with and wearing the bearings of the sliding frame.

The sliding frame *j* is pushed forward and back by the cams *o p*, attached to the vertical shaft F just above the gear-wheel *i*. The cam *p* operates against the downwardly-projecting flange *q*, attached to the rear end of the frame *j*, to force the said frame back.

To force the sliding frame *j* forward, the cam *o* operates against the roller *r*, pivoted to the rear end of the bar or interior frame, *s*, which slides in a way in the forward middle part of the said frame *j*. The forward end of the bar *s*, when the said bar is in position for the roller *r* to be operated upon by the cam *o*, rests against a shoulder, *t*, formed upon the rear end of the lever *u*, the said rear end of which is pivoted to supports *v*, attached to the sliding frame *j*. The forward end of the lever *u* is provided with a catch, *w*, to engage with a spring-latch, *x*, attached to the forward part of the frame *j*, and which is made of sufficient strength to hold the said lever *u* against the forward push of the sliding bar *s* under ordinary circumstances; but should the mold in its forward movement encounter a stone or other obstruction the spring-latch *x* will yield and allow the catch-lever *u* to drop and withdraw the shoulder *t* from the end of the sliding bar *s*, so that the said sliding bar *s* moves forward, carrying the roller *r* out of reach of the cam *o*, and therefore the sliding frame *j* and the push-bars *k* will not be operated by the revolution of the shaft F and its cams *o p*. The catch-lever *u* is also provided with a handle, *y*, for convenience in raising it into engagement with the spring-latch *x*, and with a stop, *z*, to strike against the frame *j*, and limit the upward movement of the said catch-lever.

When the obstruction has been removed the sliding bar *s* is pushed back into such a position that the catch-lever *u* can be raised into engagement with the spring-latch *x* by means of a rod, *l*, attached to the forward end of the sliding bar *s*, and projecting into such a position that it can be readily reached and operated by an attendant standing in front of the machine.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. In a brick-machine, the combination, with the drive-shaft *b*, the rock-shaft W, the plunger R, and the bars U and arms V, connecting the said rock-shaft and plunger, of the cam *a*, attached to the drive-shaft, and the levers X Y, provided with rollers Z at their rear ends, and connected with each other and the rock-shaft, substantially as herein shown and described.

2. In a brick-machine, the combination, with



the drive-shaft *b*, the rock-shaft *W*, the plunger *R*, the bars *U*, and arms *V*, connecting the rock-shaft and plunger, the cam *a*, attached to the drive-shaft, and the levers *X Y*, connected  
 5 with the rock-shaft, of the pivoted bar *c*, provided with recesses *d*, and a holding mechanism and the lug *e*, engaged by the said bar, substantially as herein shown and described, whereby the said levers can be readily ad-  
 10 justed to regulate the throw of the plunger, as set forth.

3. In a brick-machine, the combination, with the frame *A* and the vertical shaft *F* and its driving mechanism, of the cams *o p*, attached  
 15 to the said shaft, the sliding frame *j*, having roller *r*, and flange *q*, the push-bars *k*, attached to the sliding frame, and the cross-bar *m*, attached to the said push-bars, substantially as herein shown and described, whereby the  
 20 molds will be pushed forward beneath the press-box by the movement of the said sliding frame, as set forth.

4. In a brick-machine, the combination, with the sliding frame *j*, the roller *r*, and the cam  
 25 *o*, attached to the vertical shaft, of the sliding bar *s*, the catch-lever *u*, having shoulder *t* and catch *w*, and the spring-latch *x*, substantially as herein shown and described, whereby the said roller will be held against the cam-press-

ure under ordinary circumstances, but will 30 yield and be thrown out of gear should an obstruction occur, as set forth.

5. In a brick-machine, the method of protecting the sliding frame *j* from sand, which consists in making the push-bars *k* with an  
 35 upward offset, and passing them through holes in the wall at the rear end of the mold-table, whereby the sand will be prevented from falling off the rear end of the said mold-table, as set forth. 40

6. In a brick-machine, the combination, with the mud-cylinder *D* and the vertical shaft *F*, having dovetailed ribs *L*, of the wipers *M O*, having dovetailed grooves *M'*, substantially  
 45 as herein shown and described, whereby the wipers will be secured to the said shaft detachably, as set forth.

7. In a brick-machine, the combination, with the shaft *F*, having dovetailed ribs *L*, and the wiper-plates *O*, of the separate shoes *M*, sub-  
 50 stantially as shown and described, whereby the said wiper-plates can be readily replaced when worn, as set forth.

WILLIAM E. TALLCOT.

Witnesses:

JAMES T. GRAHAM,  
 EDGAR TATE.