

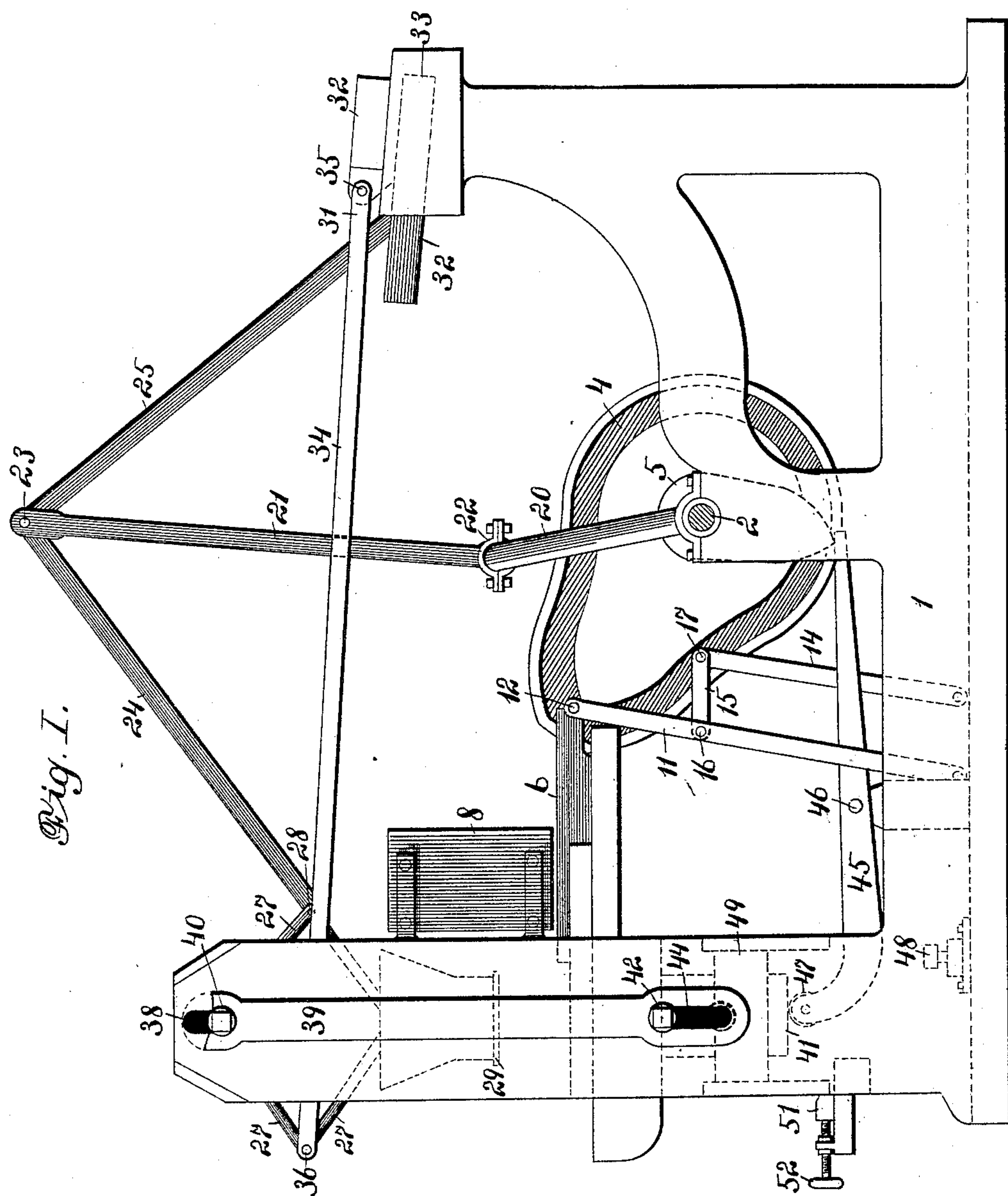
(No Model.)

4 Sheets—Sheet 1.

J. Q. ADAMS.  
BRICK MACHINE.

No. 462,610.

Patented Nov. 3, 1891.



Witnesses:  
J. G. Fischer  
Geo. E. Carr.

Inventor  
J. Q. Adams  
By *Knicker Bros.* Attys.

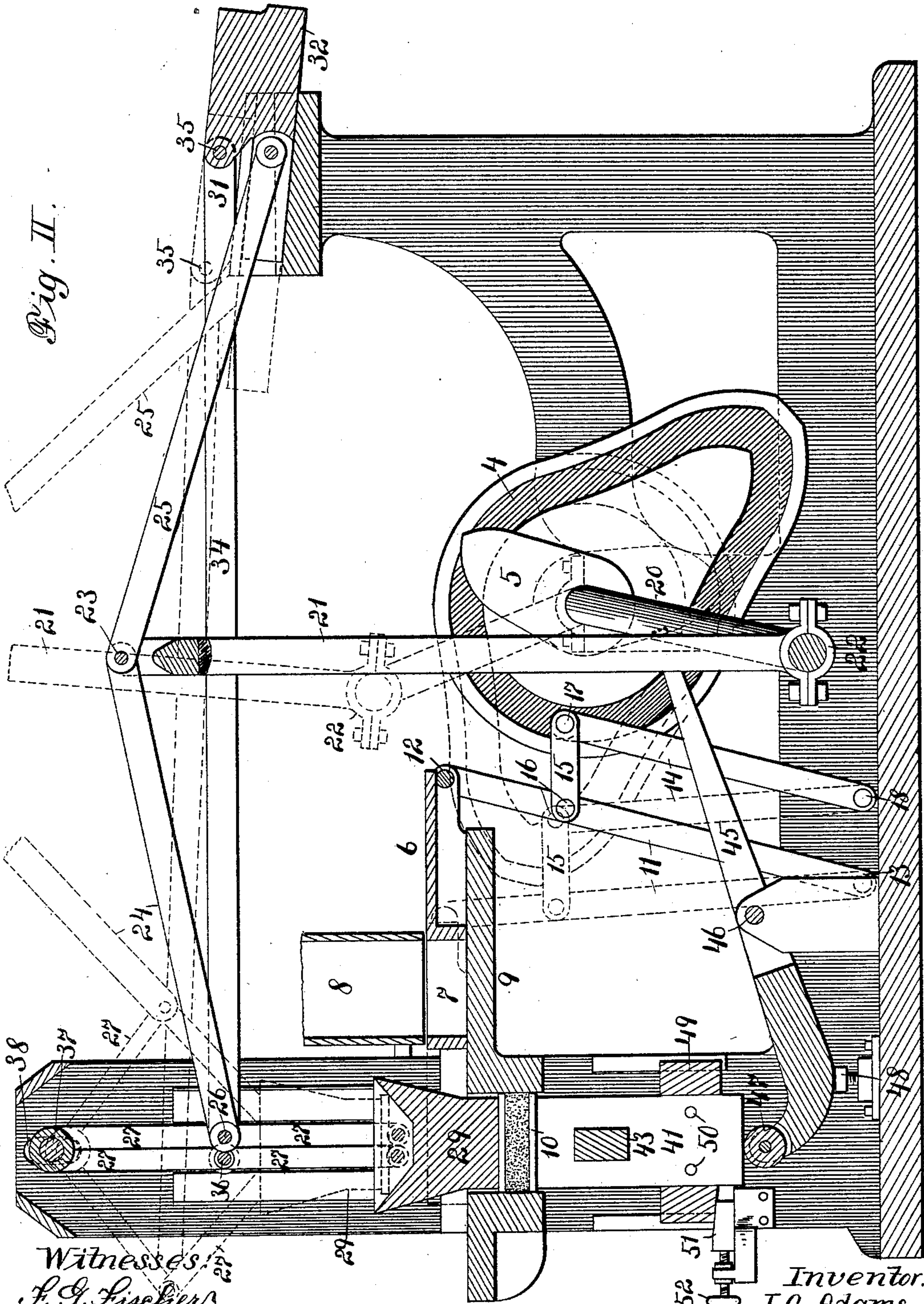
(No Model.)

4 Sheets—Sheet 2.

J. Q. ADAMS.  
BRICK MACHINE.

No. 462,610.

Patented Nov. 3, 1891.



Witnesses:  
J. G. Fischer  
Geo. E. Cruise.

Inventor:  
J. Q. Adams.  
By *Wm. R. Adams* Attys.



(No Model.)

4 Sheets—Sheet 3.

J. Q. ADAMS.  
BRICK MACHINE.

No. 462,610.

Patented Nov. 3, 1891.

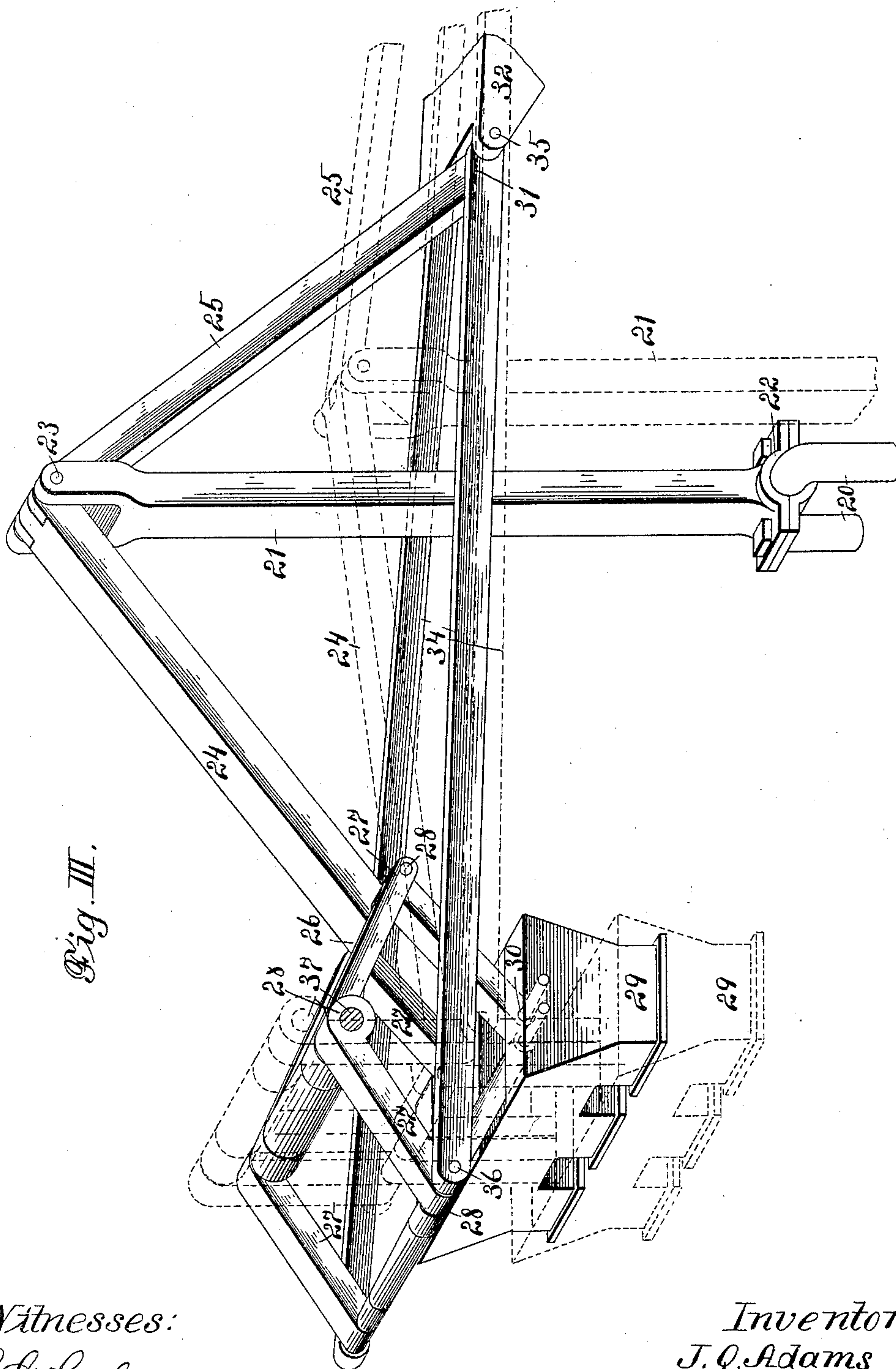


Fig. III.

Witnesses:  
J. G. Fischer  
W. E. Cunn

Inventor:  
J. Q. Adams  
By *Amiel R. Davis*  
Atty's.

(No Model.)

4 Sheets—Sheet 4.

J. Q. ADAMS.  
BRICK MACHINE.

No. 462,610.

Patented Nov. 3, 1891.

Fig. VI.

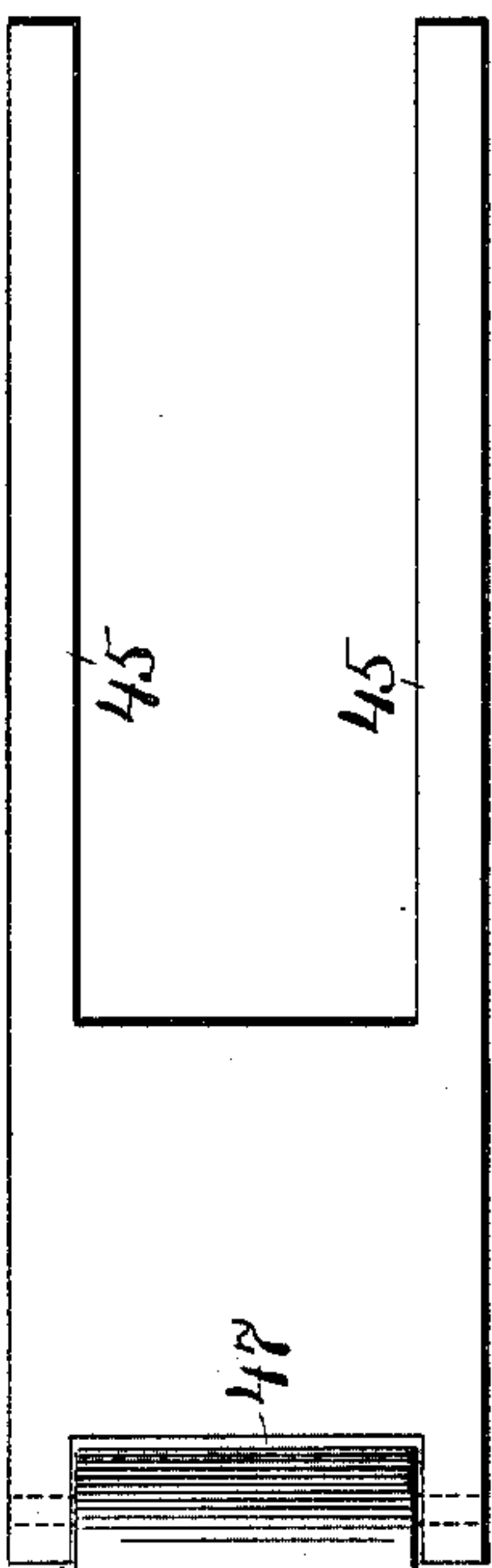
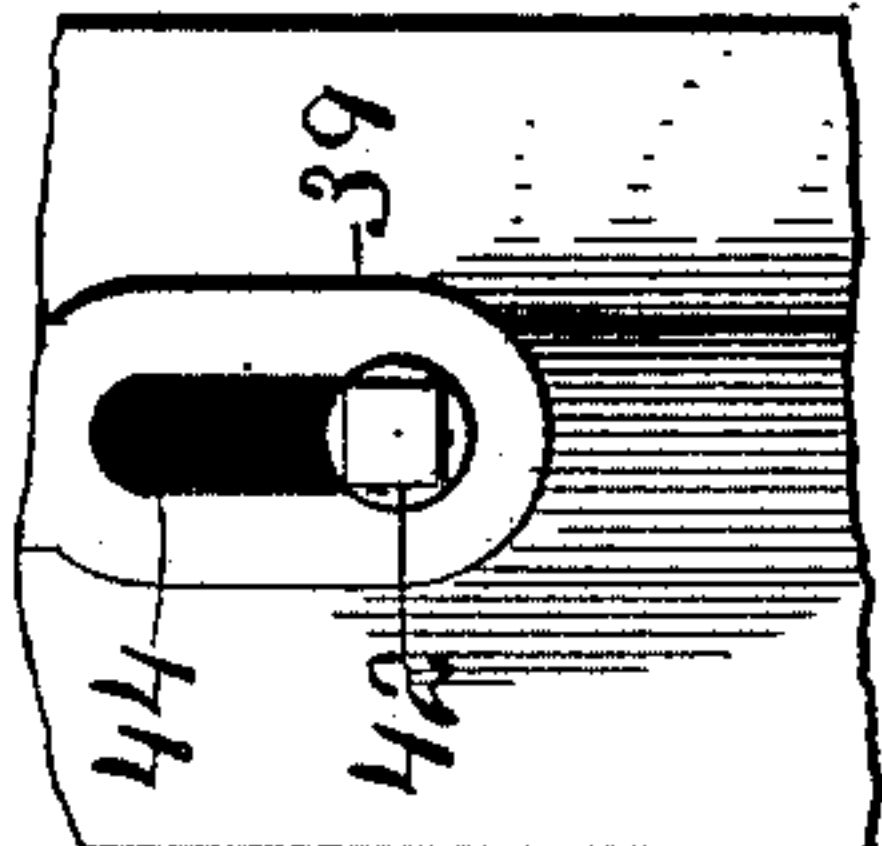


Fig. V.

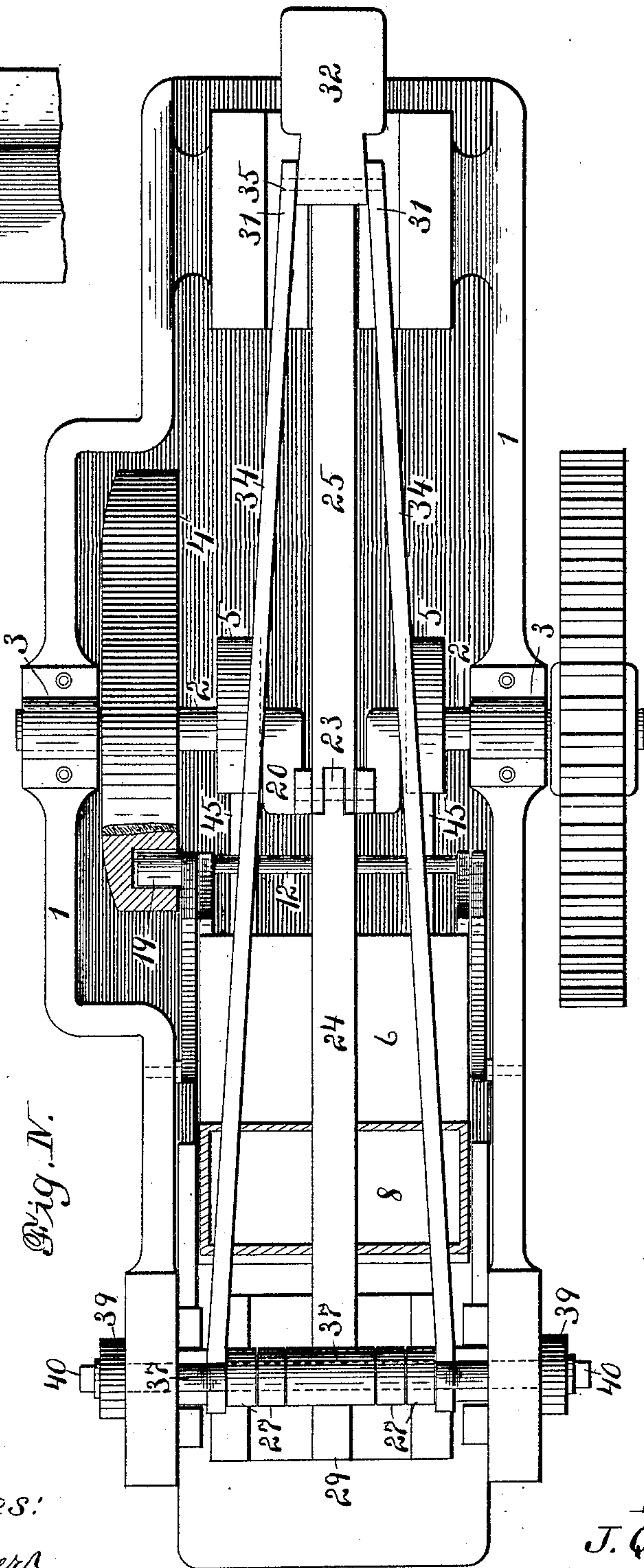


Fig. IV.

Witnesses:  
J. G. Fischer  
Geo. E. Curre.

Inventor:  
J. Q. Adams

By *Amiel B. Adams*  
Attys.



# UNITED STATES PATENT OFFICE.

JOHN Q. ADAMS, OF BIRMINGHAM, MISSOURI.

## BRICK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 462,610, dated November 3, 1891.

Application filed June 6, 1891. Serial No. 395,291. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN Q. ADAMS, of Birmingham, in the county of Clay and State of Missouri, have invented certain new and useful Improvements in Brick-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to a new and useful power for the operation of brick-machines; and my invention consists in features of novelty hereinafter described, and pointed out in the claims.

Figure I represents a side elevation of my improved device with the upper dies in their raised position. Fig. II is a vertical section of the same. Fig. III is an enlarged detailed perspective of my improved toggle-levers. Fig. IV is a plan view. Fig. V is an enlarged detail plan view of the lever for casting the bricks out of the molds. Fig. VI is an enlarged detail side elevation of one of the bars for raising the lower dies.

Referring to the drawings, 1 represents the frame of the machine, to which the various parts are attached and by which they are supported.

2 represents a crank-shaft journaled to the frame 1 at 3, said crank-shaft having a cam 4 secured thereto for operating the feeding device, and cams 5 for operating the lever which raises the lower dies and casts the bricks from the mold. The feeding device consists of a sliding feeder 6, having an opening 7 therein for receiving a charge of clay from a chute 8, which leads from the supply, said feeder 6 reciprocating on a table 9, the reciprocating motion of the same causing it to discharge a quantity of clay sufficient to form a number of bricks in the molds 10 preparatory to their being pressed into shape.

11 represents a lever pivoted, as shown at 12, to one end of the feeder 6, said lever having its opposite end pivoted to the frame 1, as shown at 13. The lever 11 is connected with an auxiliary lever 14 by a link 15, pivoted to said lever, as shown at 16 17, and the lower end of the lever 14 is pivoted to the frame 1, as shown at 18. I provide two sets of these compound levers, one being secured

to either side of the feeder 6 and to the frame 1. (See Fig. IV.)

On one side of my machine I secure a roller 19 to the upper end of the lever 14, said roller operating on the cam 4 on the shaft 2. Therefore as said shaft is rotated the cam will reciprocate the compound-levers, and in so doing reciprocate the feeders 6, thus discharging a fresh supply of clay into the molds at each revolution of the shaft 2. The shaft 2 is provided with a crank 20, to which is journaled the lower end of a rod 21, as shown at 22, the upper end of said rod being pivoted, as shown at 23, to toggle-levers 24 25. The opposite end of the lever 24 is pivoted, as shown at 26, to one side of a compound toggle 27, said toggles being pivoted to each other, as shown at 28, and to the upper dies 29, as shown at 30. The opposite end of the lever 25 is pivoted, as shown at 31, to a sliding block 32, operating in the frame 1, as shown at 33.

34 represents parallel bars pivoted at one of their ends, as shown at 35, to the sliding block 32, said bars having their opposite ends pivoted to the outer portion of the compound toggle 27, as shown at 36. As the shaft 2 is rotated from the position shown in Fig. I and in full lines, Fig. III, to the position shown in full lines, Fig. II, and dotted lines, Fig. III, the rod 21, pulling down on the levers 24 25, will force the inner portion of the compound toggle 27 toward the outer portion of said toggle. During the said operation the lever 25 will press outward on the sliding block 32, and as said block slides outward it will draw the parallel bars 34 from the position shown in full lines, Fig. III, to the position shown in the dotted lines in the same figure, thus forcing the compound toggle 27 together or into the position shown in Fig. II, forcing the dies 29 downward, thus pressing the upper side of the brick. As the upper dies 29 are being forced downward by the toggles 27 the shaft 37, by which the upper portions of said toggles are connected, is forced upward, the frame 1 being slotted, as shown at 38, for this purpose. As said shaft works upward it draws with it bars 39, secured to the upper ends of said shaft, as shown at 40. As said bars 39 are forced upward they force the lower dies 41 upward, thereby pressing on the



under side of the brick at the same time that the upper dies are pressing on the upper side. Said lower dies 41 are connected with the bars 39, as shown at 42, by a cross-piece 43, extending through said dies, the lower end of the bars 39 being provided with slots 44 to admit of the vertical movement of the cross-piece 43 in said bars. After the bricks have been pressed and the dies returned to their normal position the cams 5, in their revolution with the shaft 2, come in contact with one end of a bifurcated lever 45, (see Fig. I,) said lever being pivoted to the frame, as shown at 46, having its opposite end curved and provided with a roller, as shown at 47. As the cams 5 move from the position shown in full lines, Fig. III, to the position shown in Fig. I and come in contact with the said bifurcated lever 45, depressing the outer end of the same, at which time the roller 47 comes in contact with the under side of the dies 41, pressing the same upward, as shown in Fig. I, forcing the bricks out of the mold. After said cams release said lever it is allowed to drop into the position shown in full lines, Fig. II, where it rests on a set-screw 48, which may be adjusted to limit its downward movement.

49 represents a sliding frame connected with the dies 41, as shown at 50, said frame in its descent coming in contact with a wedge-shaped block 51, which limits the backward movement of the lower dies. 52 represents a set-screw connected with said wedge-shaped block, whereby the same may be adjusted at will.

By the use of my device I can gain sufficient power to press brick by hand, the same being desirable at times in small plants.

I claim as my invention—

1. In a brick-machine, the combination of the upper and lower dies, compound double toggles for operating the dies, bars 34 for operating one side of said toggle, and levers 24

25 for operating the opposite side of said toggles, substantially as described, and for the purpose set forth.

2. In a brick-machine, the combination of an upper and lower die, double toggles 27, bars 34, pivoted to said toggles, levers 24 25, one of said levers pivoted to said toggles, and means for connecting said levers with a power mechanism, substantially as and for the purpose set forth.

3. In a brick-machine, the combination of upper and lower dies, double toggles 27, bars 34, having one of their ends pivoted to a portion of said toggles and their opposite ends pivoted to a sliding support, a lever 24, having one of its ends pivoted to said toggles and its opposite end pivoted to an operating device, lever 25, having one of its ends pivoted to said operating device and its opposite end pivoted to the sliding support to which the bars 34 are pivoted, substantially as described, and for the purpose set forth.

4. In a brick-machine, the combination of an upper and lower die, double toggles 27, bars 34, and levers 24 25, connecting said toggles with a sliding support, a sliding support, rod 21, pivoted to the levers 24 25 at one of its ends, and a crank-shaft to which the opposite end of said rod is journaled, substantially as set forth.

5. In a brick-machine, the combination of upper and lower dies, toggles 27, bars 34, and levers 24 25 for operating said toggles, a shaft 37 at the upper end of said toggles working in a slot 28 in the frame, cross-piece 43 for supporting said lower dies, said cross-piece engaging in a lower slotted end of the bars 39, substantially as and for the purpose set forth.

JOHN Q. ADAMS.

Witnesses:

JAS. E. KNIGHT,  
F. E. MULLETT.