

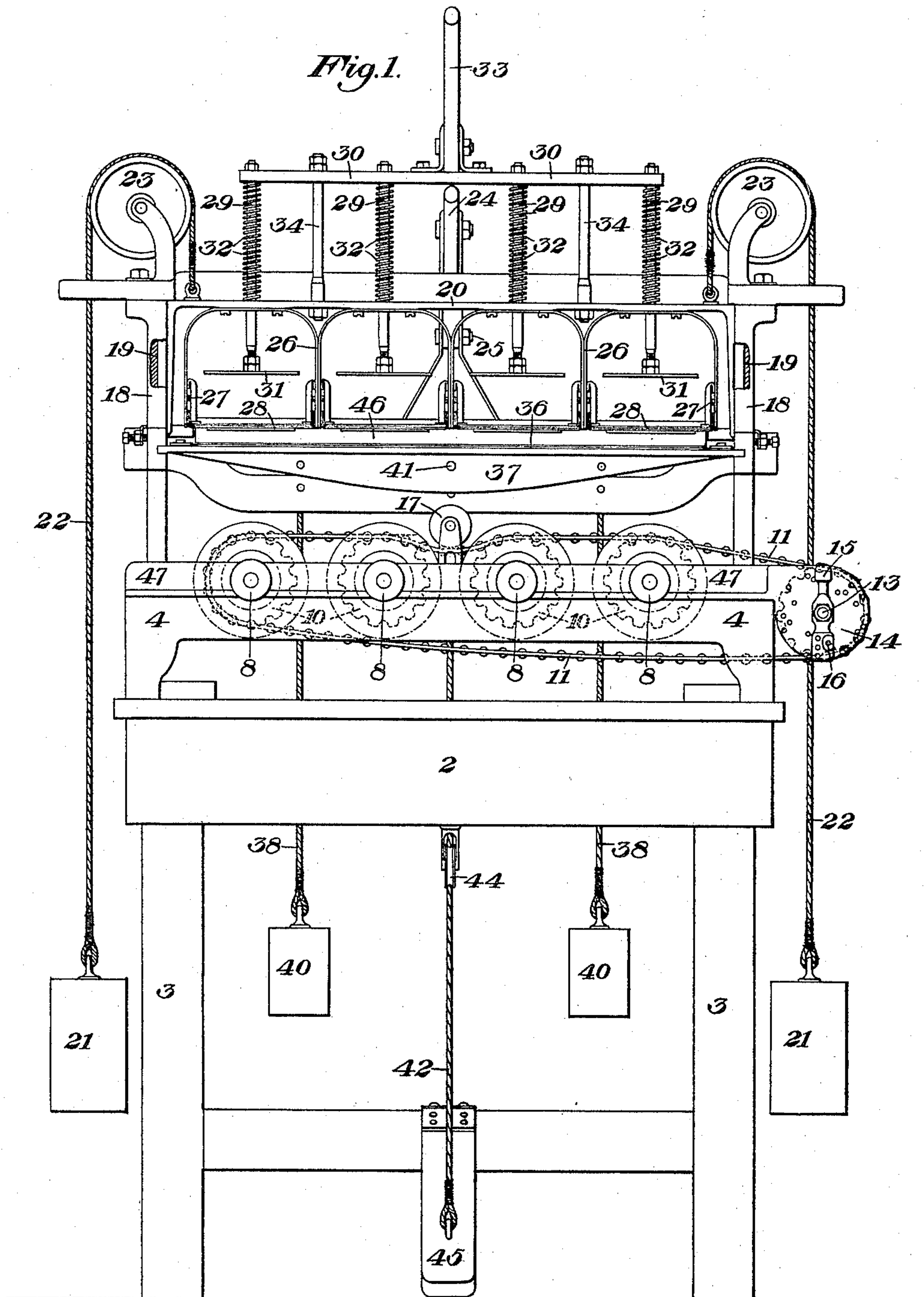
(No Model.)

4 Sheets—Sheet 1.

W. BUTTLER.  
DECORATING MACHINE.

No. 584,669.

Patented June 15, 1897.



WITNESSES

Warren W. Swartz  
G. D. Boldship

INVENTOR

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his attys.

(No Model.)

4 Sheets—Sheet 2.

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Fig. 2.

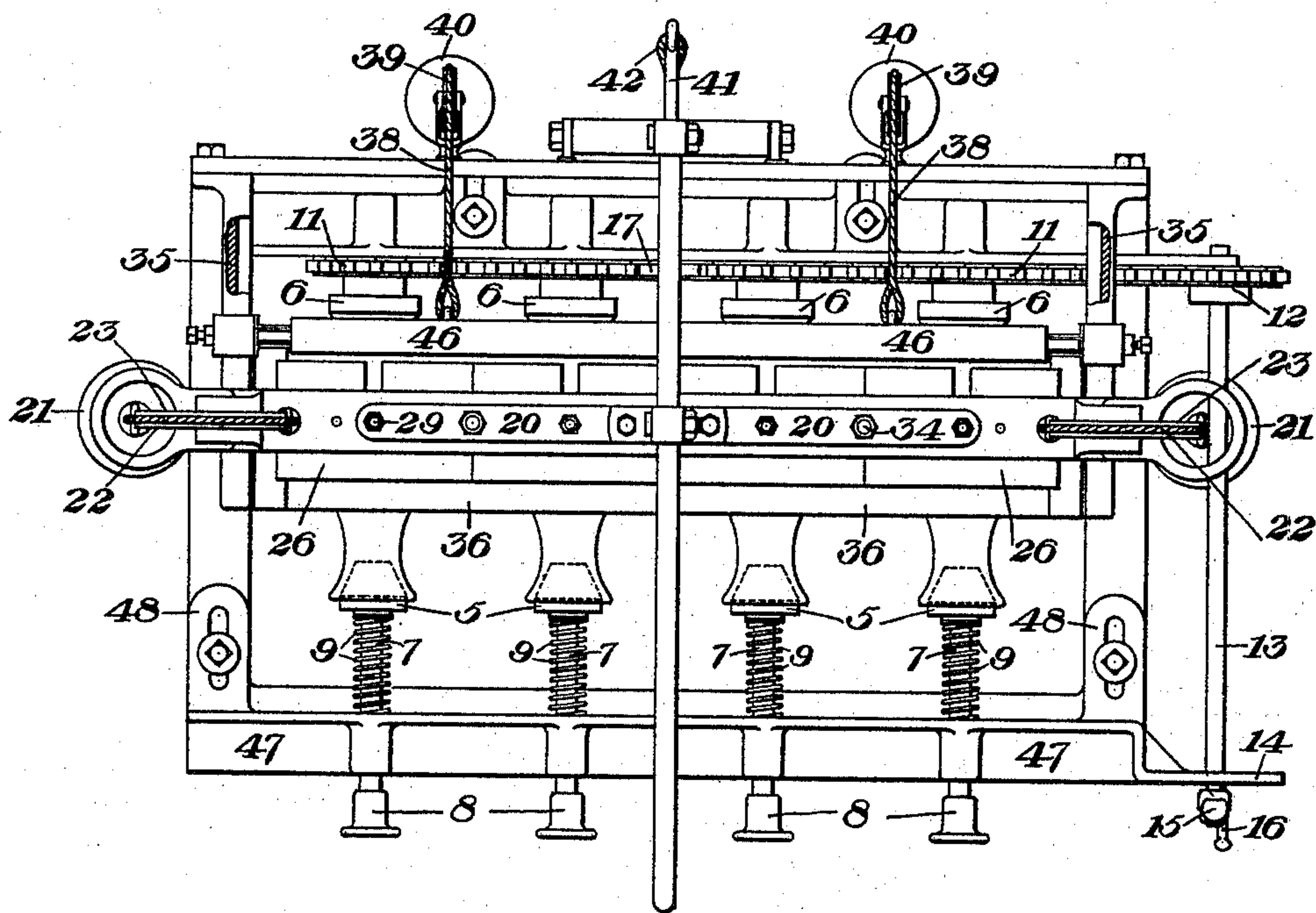
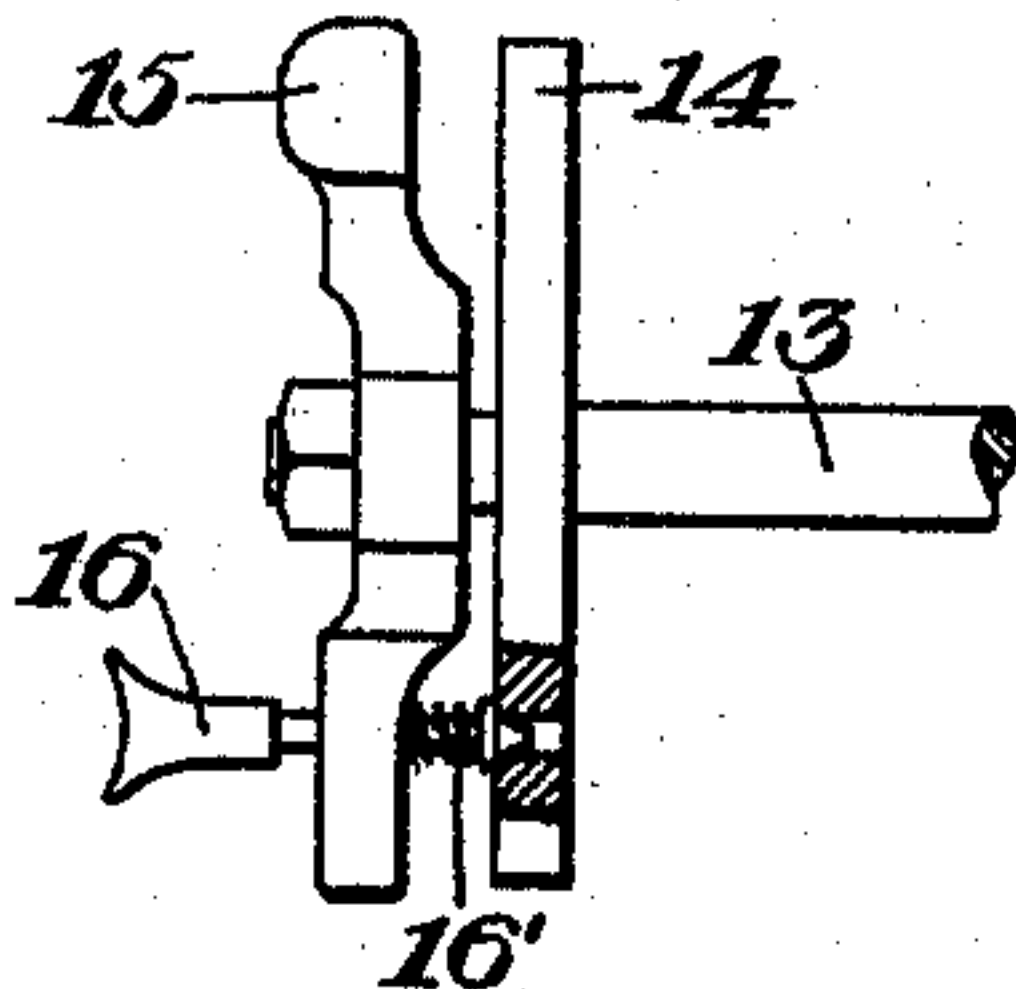


Fig. 5.



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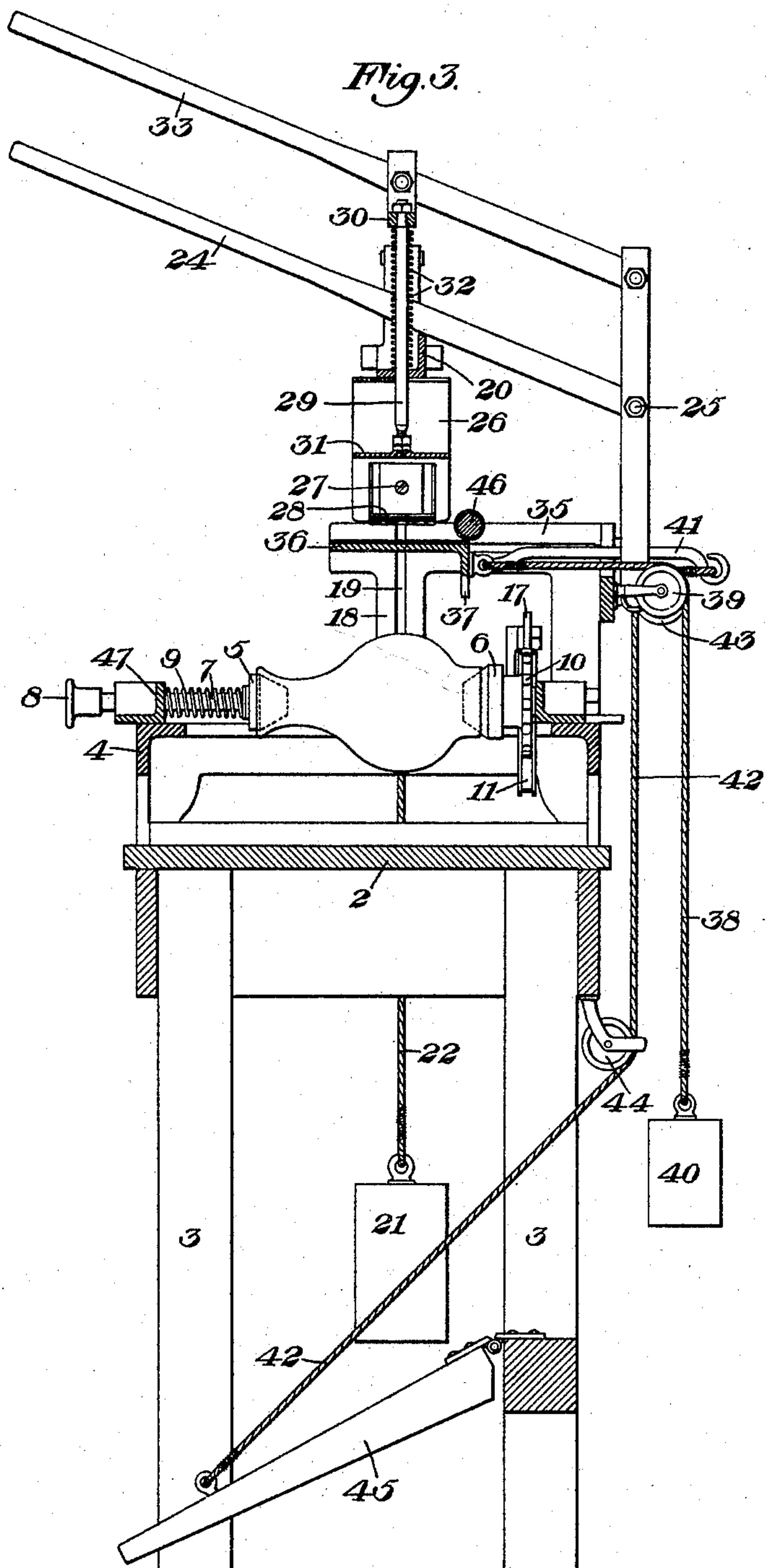
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WITNESSES

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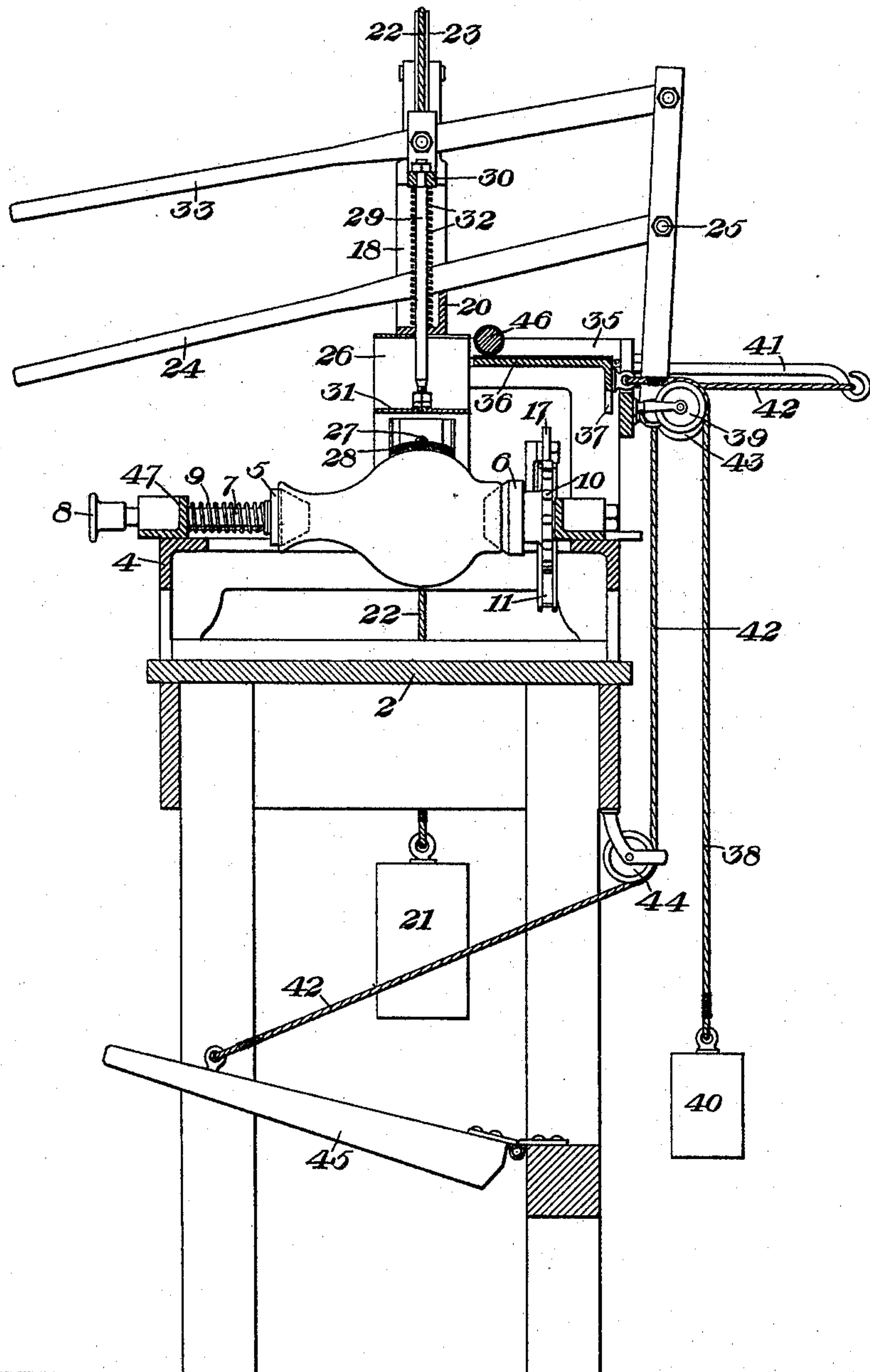
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Fig. 4



WITNESSES

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# UNITED STATES PATENT OFFICE.

WILLIAM BUTTLER, OF REDKEY, INDIANA.

## DECORATING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 584,669, dated June 15, 1897.

Application filed April 24, 1896. Serial No. 588,865. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM BUTTLER, of Redkey, in the county of Jay and State of Indiana, have invented a new and useful Improvement in Decorating-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of my improved decorating-machine. Fig. 2 is a top plan view of the same. Figs. 3 and 4 are cross-sections of the machine, showing the parts in different positions; and Fig. 5 is a detail view herein-  
after referred to.

My invention relates to the decorating of articles by means of patterns applied to their outer surfaces, and is more especially applicable to the decorating of chimneys and similar glass articles, though it may be applied to many other purposes; and it is designed to provide a machine which will apply any desired pattern to the surface of an article with great rapidity and accuracy, thus materially reducing the cost of their production.

In the drawings, 2 represents a suitable table or base supported upon legs 3, this table carrying the operating parts of my machine. Upon the table is carried a hollow rectangular frame 4, having in its top a series of slots arranged to receive the lower portions of the articles which are to be decorated, these articles in the present case being shown as glass chimneys. Each article, of which there may be any desired number, is carried by rotatable heads 5 and 6, which project into its ends, the head 5 rotating loosely about the end of a rod 7, having a projecting handle 8, and surrounded by a spiral spring 9, which tends to project the head and force it into contact with the chimney. Each of the heads 6 is secured to a sprocket-wheel 10, which is pivoted in the frame 4, these sprocket-wheels being engaged by a sprocket-chain 11, which passes over a sprocket-wheel 12, supported in suitable bearings at the end of the table and having an extended shaft 13, which passes through a dial-plate 14 and is provided with a handle 15, having a series of holes there-  
through which are at different distances from the center of the shaft and through which may be pushed a plug 16, having a spring-pressed

tip 16', arranged to engage registering holes in the dial-plate, as shown in Fig. 5. To maintain the chain 11 in contact with the sprocket-wheels, I employ a small idler-pulley 17, which is mounted in adjustable bearings and bears upon the chain.

Supported upon the plate 4 are vertical guides 18, in the vertical grooves 19 of which slide suitable projections upon a horizontal cross-head 20. This cross-head is normally held in its uppermost position by means of counterweights 21, having supporting-ropes 22, passing over pulleys 23 and secured to the same, and the head is forced down against the action of these weights by a central hand-lever 24, fulcrumed at 25 in the rear of the head and contacting therewith. Secured to the head 20 are a series of depending plates 26, between the lower ends of which are fastened by inner screw-clamps 27 the elastic webs 28, carrying rubber pads provided with the particular pattern desired.

Passing through the head 20 are a series of vertical rods 29, secured at their upper ends to a cross-bar 30 and provided at their lower ends with adjustable presser-plates 31. Springs 32 surround these rods above the cross-head 20 and hold them normally in elevated position, while a lever 33, pivotally connected with the cross-bar 30, acts to force down the rods and their pressure-plates, they being guided by the vertical rods 34, secured to the cross-head 20 and passing through holes in the cross-bar 30, these rods having nuts at their upper ends to limit the upward movement of the bar. The vertical guides 18 are provided with rearwardly-extending horizontal guide-plates 35, within inner grooves in which moves a horizontally-reciprocating inking-pad 36, this inking-pad having a depending rear flange, to which are secured ropes 38, passing over pulleys 39 and having counterweights 40, which normally hold the pad in its rear position. The flange 37 is also provided with a horizontal rod 41, to which is secured a rope 42, passing over pulleys 43 and 44 and extending to a pivoted foot-lever 45, by means of which the inking-pad may be forced forward, this pad in its movements contacting with the inking-roller 46, which is preferably covered with felt or similar substance. The inking-table 36 is provided with inking surfaces or pads, pref-



erably of rubber, these being located beneath the pads 28, carrying the pattern, so that when the pads 28 are depressed by action of the lever 33 the patterns carried thereby will  
 5 be inked by the pads upon the table 36, which at this time are held in forward position by depressing the foot-lever 45.

The spindles 7, carrying the heads 5, pass through a flanged plate 47, which is provided  
 10 with horizontal end plates 48, which are slotted so that the plate may be adjusted back and forth to suit different sizes of chimneys.

The action of my machine is apparent. The operator, having inserted the articles in  
 15 the machine by pulling back the spindles 7 and allowing the heads 5 and 6 to enter the ends of the chimneys, depresses the foot-lever 45 and thus throws the inking-table forward, the pads thereon being inked in  
 20 their forward motion by the roller 46. He then depresses the hand-lever 33, thus forcing the presser-plates 31 against the pads 28 and depressing these pads, causing the patterns thereon to contact with the inking-  
 25 pads. He then releases the lever 33, when the springs raise the pattern-bearing pads upwardly, and releasing the foot-lever 45 the inking-table is drawn rearwardly by the counterweights, whereupon seizing the handle  
 30 24 the operator depresses the cross-head 20 until the pattern-bearing pads are pressed against the surfaces of the chimneys, as shown in Fig. 4, these stretched pads adapt-  
 35 ing themselves to any curvature or other shape of the article, as only their intermediate flexible portions contact therewith. The handle 24 then being released the cross-head and pattern-pads are drawn upwardly and  
 40 the operative withdrawing the plug 16, so as to disengage it from the dial-plate, turns the handle until the spring-pressed end of the plug enters the next hole in the dial-plate, thus rotating the chimneys a certain portion  
 45 of their circumference, when the operations above stated are repeated. The holes in the dial-plate are so arranged at different distances from the center that by inserting the  
 50 plug 16 in the different holes of the handle the amount of the revolution may be gaged as desired, according as three, four, or more  
 55 sets of patterns are to be applied, the spring-dog 16' entering the next hole in the dial-plate as the handle revolves and stopping the chimneys at the proper point to again receive the pattern.

In the use of this machine I have employed it for etching patterns upon chimneys by means of hydrofluoric acid, the felt roller being saturated with this acid, which is then  
 60 transferred to the rubber inking-pads, from which the pattern-pads receive it. It is apparent, however, that any substance, whether ink, enamel, or similar composition, may be thus applied in any suitable pattern or design  
 65 to the surface of an article, whether it is composed of glass or other substance.

The advantages of my invention will be ob-

vious to those skilled in the art, since a species of decorating which has heretofore been done by hand can be carried out on an auto-  
 70 matic machine, thus enormously increasing the output and decreasing the cost of the article.

The machine demands no skilled labor and is simple and not liable to get out of order. 75

Modifications in the form, arrangement, and construction of the parts of my machine may be made by the skilled mechanic without departure from my invention, since

What I claim is— 80

1. An ornamenting-machine for curved surfaces, comprising a rotatable support for the article, hand-controlled mechanism for giving the same a partial revolution, a stop arranged to hold the article in its adjusted position, a plate carrying a yielding pattern-  
 85 carrying pad, and means for forcing the pad against the surface of the article while held at rest by the stop; substantially as described.

2. An ornamenting-machine for curved surfaces, comprising a rotatable support for the article, hand-controlled mechanism for giving the same a partial revolution, a stop arranged to hold the article in its adjusted position, a reciprocating yielding pattern-  
 90 carrying pad, means for inking said pad, and means for pressing the pad upon the article while it is held at rest by the stop; substantially as described. 95

3. An ornamenting-machine comprising a wheel carrying a head arranged to enter one end of an article, an oppositely-located rod carrying a head arranged to enter the other end of the article, hand-controlled mechanism for giving the article a partial revolution, a stop arranged to hold the article in its adjusted position, a movable inking-table, a yielding pattern-carrying pad, means for pressing the pad upon the inking-table, and means for pressing the inked pad upon the  
 100 article while it is held at rest by the stop; substantially as described. 105

4. An ornamenting-machine comprising a rotatory article-holder, a yielding pattern-carrying pad, means for pressing the same  
 110 against the article, an inking-table movable into the space between the article and the pattern-carrying pad, means for pressing the pattern-pad upon the inking-table and a roller arranged to apply ink to said table; substantially as described. 120

5. An ornamenting-machine comprising a table, having a rotatory holder for an article thereon, a vertically-movable cross-head carrying a yielding pattern-pad, a horizontally-  
 125 movable inking-table arranged to be moved into the space between the pattern-pad and the article, means for applying the pattern-pad to the inking-table when in such position, means for retracting the inking-table, and  
 130 a lever arranged to force the pattern-pad against the article, substantially as described.

6. An ornamenting-machine comprising wheels having heads arranged to enter the



ends of a series of articles, means for simultaneously giving said wheels a partial rotation, a reciprocating bar carrying a series of yielding pattern-pads arranged to contact with the article, and a movable inking-table by which ink is applied to the pad, substantially as described.

7. An ornamenting-machine containing a series of wheels each carrying a head arranged to rotate the article, a chain or belt arranged to rotate said wheels, and passing over a hand-wheel, and pattern-carrying pads arranged to press a pattern upon the articles, substantially as described.

8. An ornamenting-machine containing a series of wheels each having a head arranged to rotate an article, a belt or chain arranged to rotate said wheels, a hand-wheel over which the said chain or belt passes, a dial-plate through which the shaft of said wheel passes, and a handle having a stop arranged to coact with the dial-plate so as to give the wheels a rotation through a determined arc, substantially as described.

9. An ornamenting-machine containing a series of rotatory holders for the article, a vertically-movable cross-head carrying a series of yielding pattern-pads, a movable inking-table arranged to be brought into position beneath the pads, and movable presser-plates upon the cross-head arranged to force the pads into contact with the inking-table; substantially as described.

10. An ornamenting-machine comprising a table carrying a rotatory holder for the article, a vertically-movable cross-head carrying a yielding pattern-pad, a horizontal inking-table arranged to be moved beneath the pad, a presser-plate upon the cross-head arranged to force the pad into contact with the inking-table, a roller arranged to ink the table in its movements, and means for forcing the pad into contact with the article; substantially as described.

11. An ornamenting-machine containing a rotatory holder for the article, hand-controlled mechanism for giving the same a partial revolution, a reciprocating head having projecting strips between which is stretched a yielding pattern-carrying pad arranged to be pressed upon and conform to the shape of the article, a stop arranged to hold the article in the po-

sition to which it is rotated, and means for pressing the pad upon the article while so held; substantially as described.

12. An ornamenting-machine containing a rotatory holder for the article, hand-controlled mechanism for giving the same a partial revolution, a stop arranged to hold the article in the position to which it is adjusted, a counterweighted cross-head carrying a yielding pattern-carrying pad, and a lever arranged to force the pad against the article while it is held at rest by the stop; substantially as described.

13. An ornamenting-machine containing a rotatory holder for the article, hand-controlled mechanism for giving the same a partial revolution, a stop arranged to hold the article in its adjusted position, a reciprocating counterweighted head carrying a yielding pattern-carrying pad, a counterweighted horizontally-moving inking-table with which the pattern-pad is arranged to contact, and means for pressing the pattern-carrying pad upon the article while held at rest by the stop; substantially as described.

14. An ornamenting-machine containing a series of rotatory holders for the article, a counterweighted cross-head carrying a series of yielding pattern-pads, rods movable within said cross-head and carrying a series of pressure-plates, a horizontally-movable inking-table, and levers arranged to force the pressure-plates downwardly so as to press the pads against the inking-table, and to force the cross-head downwardly to press the pattern-pads upon the article, substantially as described.

15. An ornamenting-machine containing a series of rotatory holders for the articles, means for simultaneously giving said holders a partial rotation, a counterweighted vertically-movable cross-head carrying a series of pattern-pads arranged to contact with the articles, and means for inking said pattern-pad, substantially as described.

In testimony whereof I have hereunto set my hand.

WILLIAM BUTTLER.

Witnesses:

G. I. HOLDSHIP,  
H. M. CORWIN.