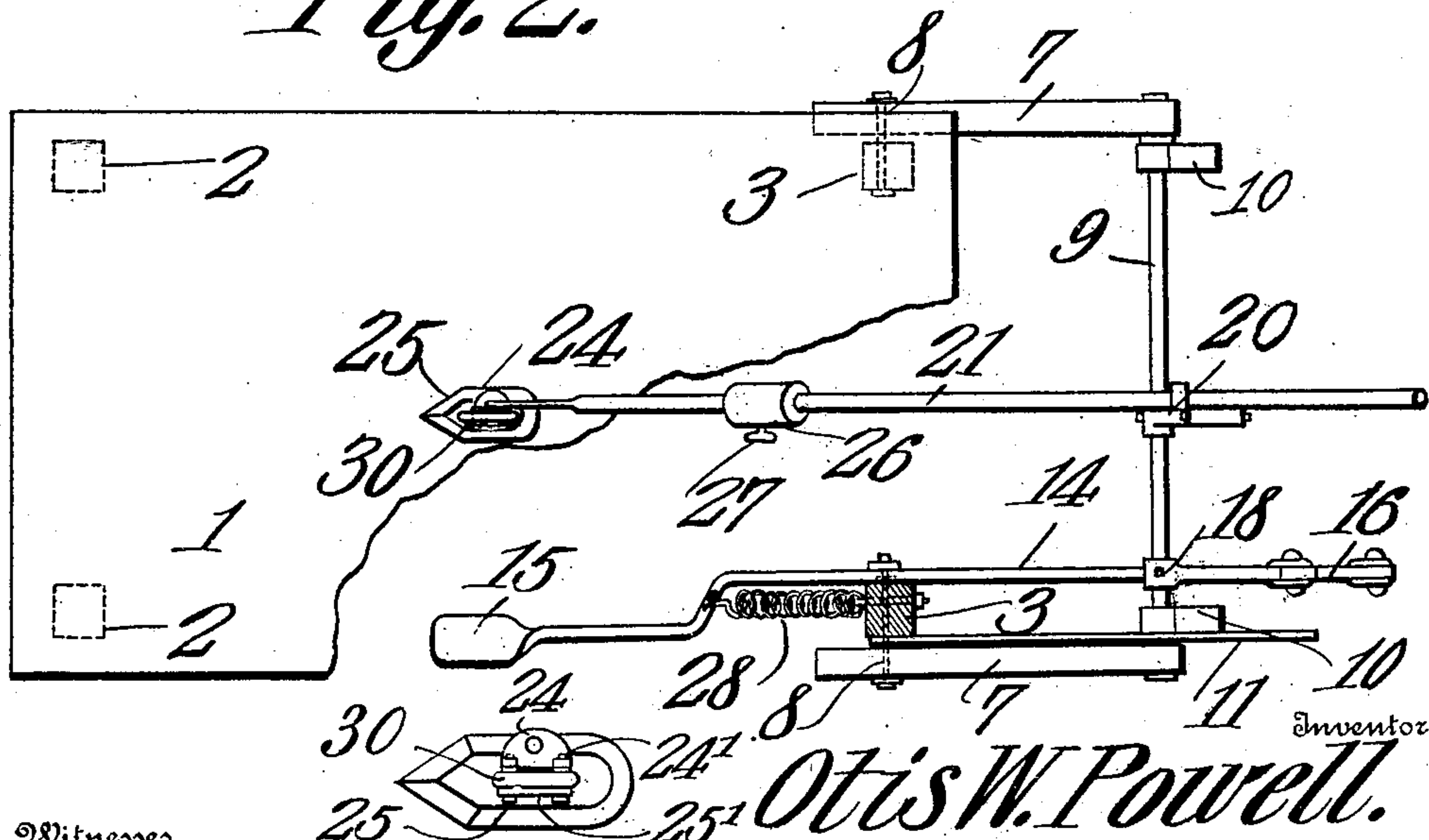


APPLICATION FILED MAR. 31, 1908.

Patented Feb. 9, 1909.

2 SHEETS—SHEET 1.



Witnesses

F. G. Chapman.

Fig. 6.

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*It is W. Powell.*

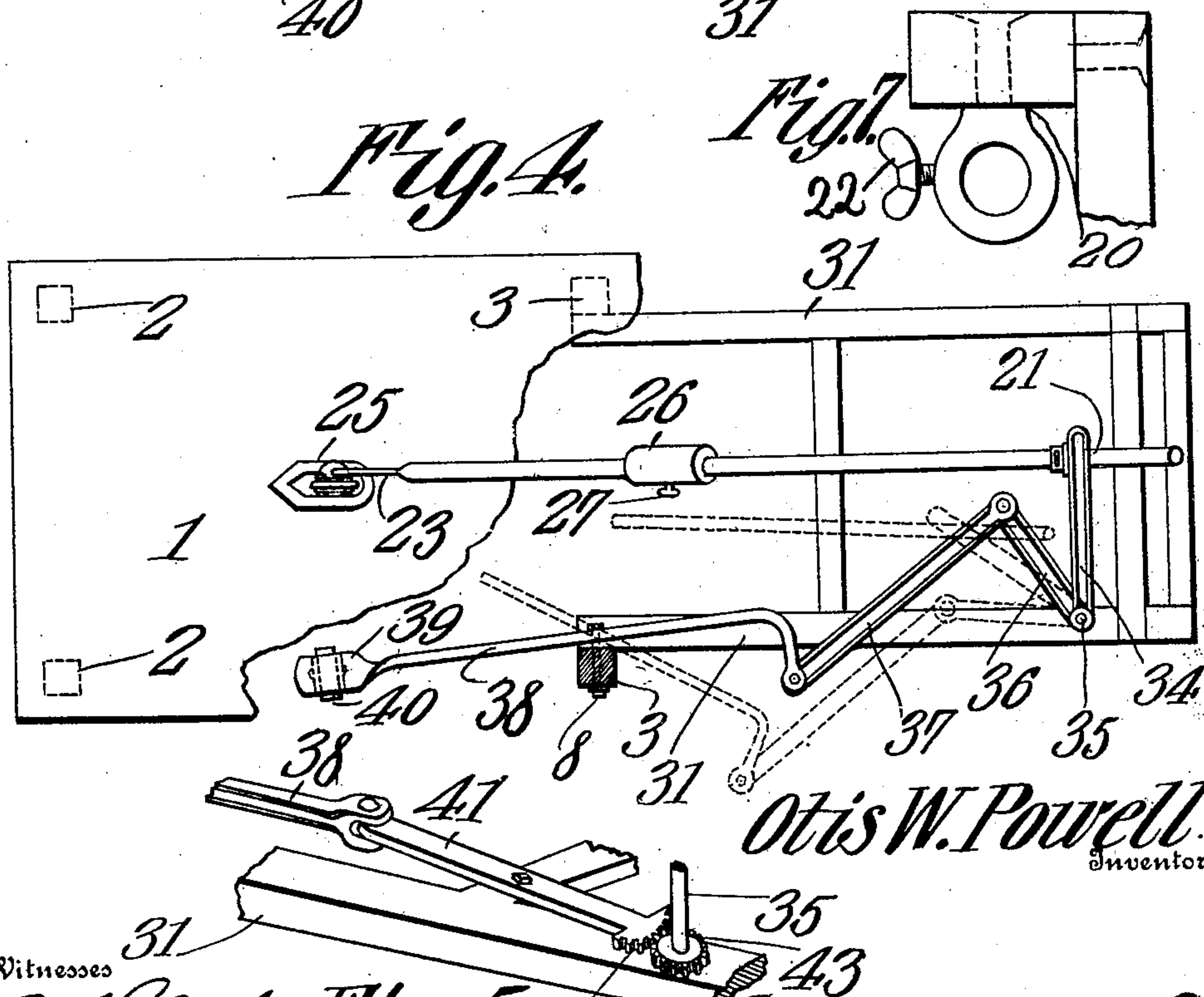
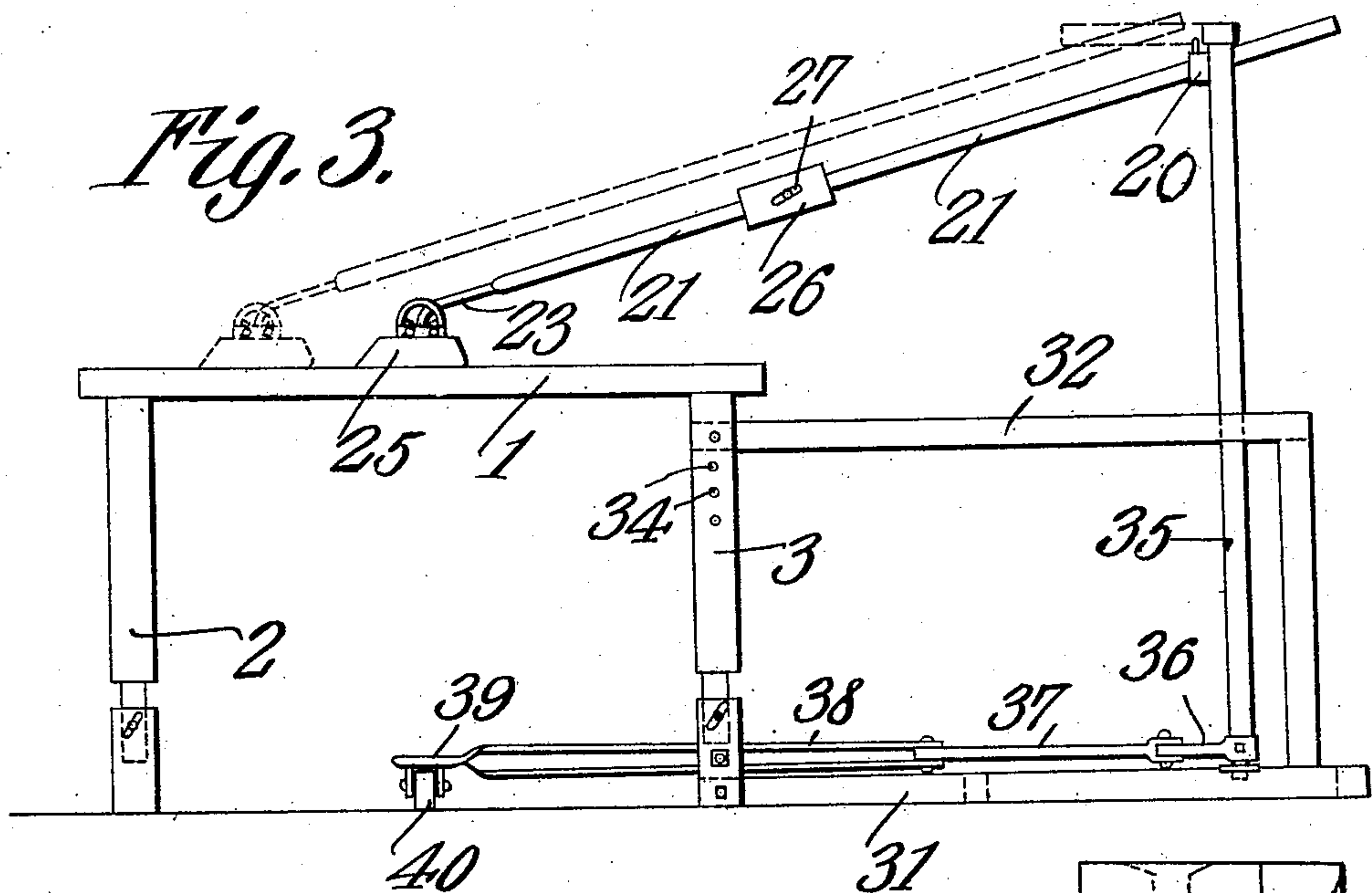
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O. W. POWELL.  
IRONING MACHINE.  
APPLICATION FILED MAR. 31, 1908.

Patented Feb. 9, 1909.  
2 SHEETS—SHEET 2.

912,271.



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# UNITED STATES PATENT OFFICE.

OTIS W. POWELL, OF HOOPESTON, ILLINOIS.

## IRONING-MACHINE.

No. 912,271.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed March 31, 1908. Serial No. 424,379.

*To all whom it may concern:*

Be it known that I, OTIS W. POWELL, a citizen of the United States, residing at Hoopeston, in the county of Vermilion and State of Illinois, have invented a new and useful Ironing-Machine, of which the following is a specification.

This invention has reference to improvements in ironing machines, and is designed to provide a mechanism whereby an operator is saved the fatigue attending the ordinary operation of hand ironing.

The invention comprises a table adjustable vertically to suit the height of the user. Attached to the table is a treadle in position to be operated by the foot of the user, and this treadle may either be operated in one direction by the pressure of the foot and in the other direction by a spring, or the foot of the user may move the treadle in either direction. The treadle is connected to a rock-arm which in turn is connected by adjustable means to an iron movable upon the surface of the table, and in connection with the iron there is provided an adjustable weight by means of which the pressure of the iron upon the goods being treated may be made heavy or light, as desired.

The operation of hand ironing as usually performed is very fatiguing, the labor being largely borne by the muscles of the arms and shoulders. The present invention avoids this condition by providing means whereby the foot of the user may be utilized on a treadle so that the user's weight is employed to cause the movements of the iron over the goods, it being unnecessary that the fatiguing pressure upon the arms and shoulders be used at all.

The invention will be best understood by a consideration of the following detail description taken in connection with the accompanying drawings forming a part of this specification, and in which drawings—

Figure 1 is a side elevation of a structure embodying the invention. Fig. 2 is a plan view, partly broken away and partly in section, of the structure of Fig. 1. Fig. 3 is a side elevation of a structure differing in some particulars from that of Fig. 1. Fig. 4 is a plan view, partly in section and partly broken away, of the structure shown in Fig. 3. Fig. 5 is a detail view of a modified form of a portion of the structure of Fig. 4. Fig. 6 is a plan view of the iron on a larger scale than shown in the other views. Fig. 7

is a detail view showing a universal joint connection.

Referring to the drawings there is shown a table 1 provided with legs 2 and 3. The legs 2 terminate at the lower end in a pin 4 entering a socketed section 5 forming a continuation of the leg 2 and held in any position of longitudinal adjustment with relation to the leg 2 by a thumb screw 6. The legs 3 in the structure shown in Fig. 1 are each mounted at the lower end upon a lever 7 by means of a pivot bolt 8. The lower and shorter end of the lever 7 is designed to rest upon the floor, while the lever itself extends at an angle upward and away from the leg 2. The upper ends of the two levers 7 are joined by a rock-shaft 9, and adjacent to these upper ends are supports 10 reaching to the floor. The relation of each lever 7 to the respective leg 3 is determined by a notched adjusting bar 11, the notches 12 of which are arranged to engage a pin 13 on the respective support 10. By this means the height of the table at the end supported by the legs 3 may be adjusted. In the structure shown in Figs. 1 and 2, one of the bolts 8 constitutes the pivot support for a foot or treadle lever 14 extending under the table to a convenient point and there formed with a treadle 15 in position to receive the foot of the user. This lever has the end remote from the treadle 15 extending away from the table and there connected by a link 16 to a rock-arm 17 fast on the shaft 9 by means of a set screw 18 or otherwise. Also fast on the shaft 9 there is another rock-arm 19 extending upward therefrom and its free end is connected by a universal joint 20 to a rod 21 which may be adjusted longitudinally in the joint and secured thereto by a thumb screw 22. This rod projects over the table 1 and is there formed with a reduced end or finger 23 adapted to engage in an eye in a plate 24 clamped to the handle 30 of an iron 25 of any suitable pattern. The plate 24 is held to the handle of the iron by bolt or thumb screws 24' extending through ears formed on the plate 24 and on a bar 25', which latter together with the plate 24, form an adjustable removable clamp for the iron. The rod 21 carries a weight 26 longitudinally adjustable thereon and held by a thumb screw 27.

The lever 14 has its treadle end sustained by a spring 28 connected at one end to the lever and at the other end to one of the legs 3.



The legs 2 may be suitably braced by means of rods 29 which may be hinged to the legs and arranged to engage any suitable notches on the underside of the table, the  
5 said legs 2 being also hinged to the table so that the structure may be folded up.

The table 1 may be adjusted to suit the height of the user.

Assuming that the iron is heated and  
10 placed upon the goods to be ironed, then on the pressing of the treadle 15 the iron will be caused to move toward the left, as viewed in Fig. 1, while the spring 28 will return the lever 14 to its normal position and cause the  
15 retrograde movement of the iron 25. The user by depressing and releasing the treadle 15 is enabled to cause the iron to move back and forth over the table. The iron is guided over the goods by the hand of the user grasp-  
20 ing the handle 30, and because of the universal joint 20 and finger 23 and plate 24, the iron may be made to reach any part of the table within the limits of the motion of the treadle and connecting parts. By this  
25 means the weight of the user is utilized by the treadle to propel the iron from point to point and the arms and shoulders of the user are entirely relieved from all work except the slight force necessary to guide the iron.  
30 By this means the fatiguing work of ironing is practically overcome. Should it be desirable to vary the pressure of the iron upon the goods this may be done by adjusting the weight 26 toward the iron to increase the  
35 pressure and away from the iron to decrease the pressure.

Referring now to Figs. 3 and 4, it will be seen that the legs 3 are similar in structure to the legs 2 and similarly adjustable in a ver-  
40 tical direction. Fast to the bottom of the legs 3 is a frame 31 suitably braced and connected with a similar frame 32 above the frame 31 and adjustably connected to the legs 3 by means of pins fitted to any one of  
45 a series of perforations 34 in the legs 3 so that the table may be adjusted for height without disturbing the frames 31 and 32. Mounted in the frames 31 and 32 is an upright shaft 35 having a step bearing in the  
50 frame 31 and extending through a suitable bearing in the frame 32. The upper end of the rock-shaft 35 has fast thereon a rock-arm 34 connected through a universal joint 20 to the rod 21 similar to the structure of  
55 Fig. 1. The lower end of the rock-shaft 35 has fast thereon a rock-arm 36 connected by a link 37 to one end of a foot lever 38 pivoted to the lower end of one of the legs 3 for movement in a horizontal plane. The  
60 treadle 39 of the lever 38 has fast on it a roller 40, in position to move over the floor in contact therewith. Suppose, now, that the user places the foot upon the treadle 39, then the lever 38 may be moved to and fro  
65 across the floor, and this motion is imparted

through the link 37 to the rock-arm 36, causing a rotative movement of the shaft 35 upon its longitudinal axis, but a connection of this shaft to the rod 21 is such that the iron 25 has imparted to it a reciprocatory  
70 movement over the table, and this movement may be translated into a movement in any direction over the table by the hand of the operator. Instead of utilizing a link 37 and rock-arm 36 the corresponding end of  
75 the lever 38 may be connected to another lever 41 mounted on a vertical axis on the frame 31. The end of the lever 41 remote from the lever 38 is formed into a segmental gear 42 meshing with a gear wheel 43 on the  
80 lower end of the shaft 35. By this means rotative movement is imparted to the shaft as in the structures shown in Figs. 3 and 4. In the structures of Figs. 3 and 4 no springs  
85 are used, and the movements of the iron in all directions are positive and are entirely under the control of the foot of the user. The reciprocatory movement in connection with the lever 38 is even easier than the up  
90 and down movement of the structures of Figs. 1 and 2, and the user does not have to exert as much force in one direction as in the case of the first described structure, since in such structure the downward move-  
95 ment of the foot must not only propel the iron but must at the same time expand the spring, which latter on its contraction must return the iron to its initial position. This means that the muscular force exerted on  
100 the down stroke is at least double that required on either stroke of the structures of Figs. 3 and 4.

What is claimed is:—

1. An ironing machine comprising a suitable table, a foot lever pivotally connected  
105 therewith, a rock shaft, a rock arm on said shaft, a link connection between the foot lever and the rock arm on the rock shaft, another rock arm on the rock shaft, a rod connected to the free end of the last named  
110 rock arm, said rod having the end remote from its connection to the respective rock arm reduced to form a finger, and an iron having thereon a plate provided with an eye adapted to be entered by the finger on  
115 the end of the rod.

2. An ironing machine comprising a suitable table adjustable as to height, an iron actuating bar or rod having at one end a finger, an iron having thereon a plate pro-  
120 vided with an eye adapted to be entered by the finger on the end of the rod, an upright rock shaft, connections between the upper end of the rock shaft and the iron actuating bar, a rock arm near the lower end of the  
125 rock shaft, a foot lever movable in a plane parallel to the top of the table, a link connecting the foot lever to the rock arm at the lower end of the shaft, and a roller support for the treadle end of the foot lever.



3. An ironing machine comprising a suitable table having supports adjustable as to height, a foot lever pivotally connected with one of the table legs, a rock shaft, a rock arm on said shaft, connections between the foot lever and the rock arm on the rock shaft, another rock arm on the rock shaft, a rod or bar connected to the free end of the last named rock arm, said rod having the end remote from its connection to the respective rock arm reduced to form a finger, an adjustable weight on said rod or bar, and an iron having thereon a plate provided with an eye adapted to be entered by the finger on the end of the rod.

4. An ironing machine comprising a suit-

able table, an iron actuating bar, an upright rock shaft, connections between the upper end of the rock shaft and the iron actuating bar, a rock arm near the lower end of the rock shaft, a foot lever movable in a plane parallel to the top of the table, a link connecting the foot lever to the rock arm at the lower end of the shaft, and a roller support for the treadle end of the foot lever.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

OTIS W. POWELL.

Witnesses:

C. A. FUNK,  
E. E. YATES.