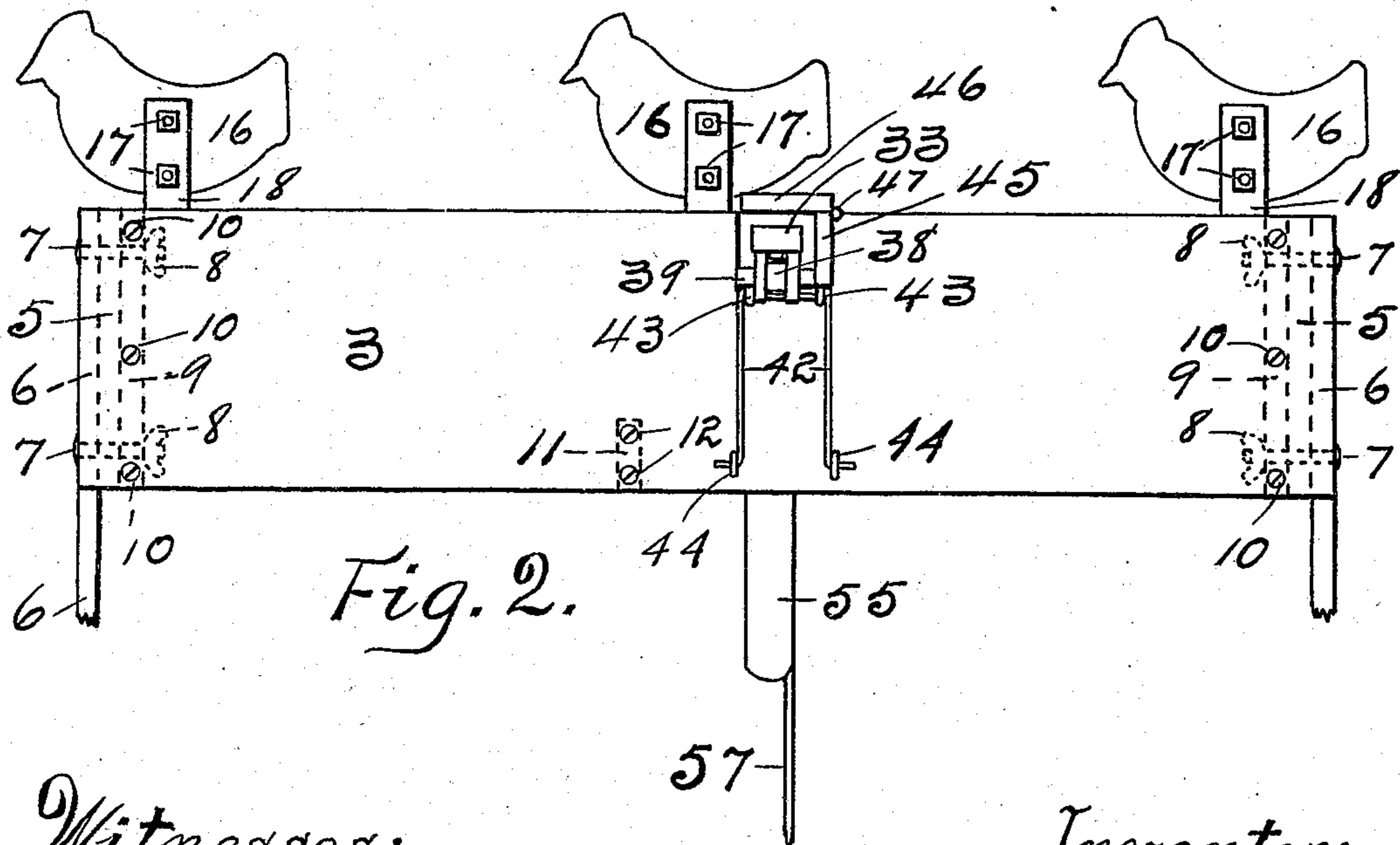
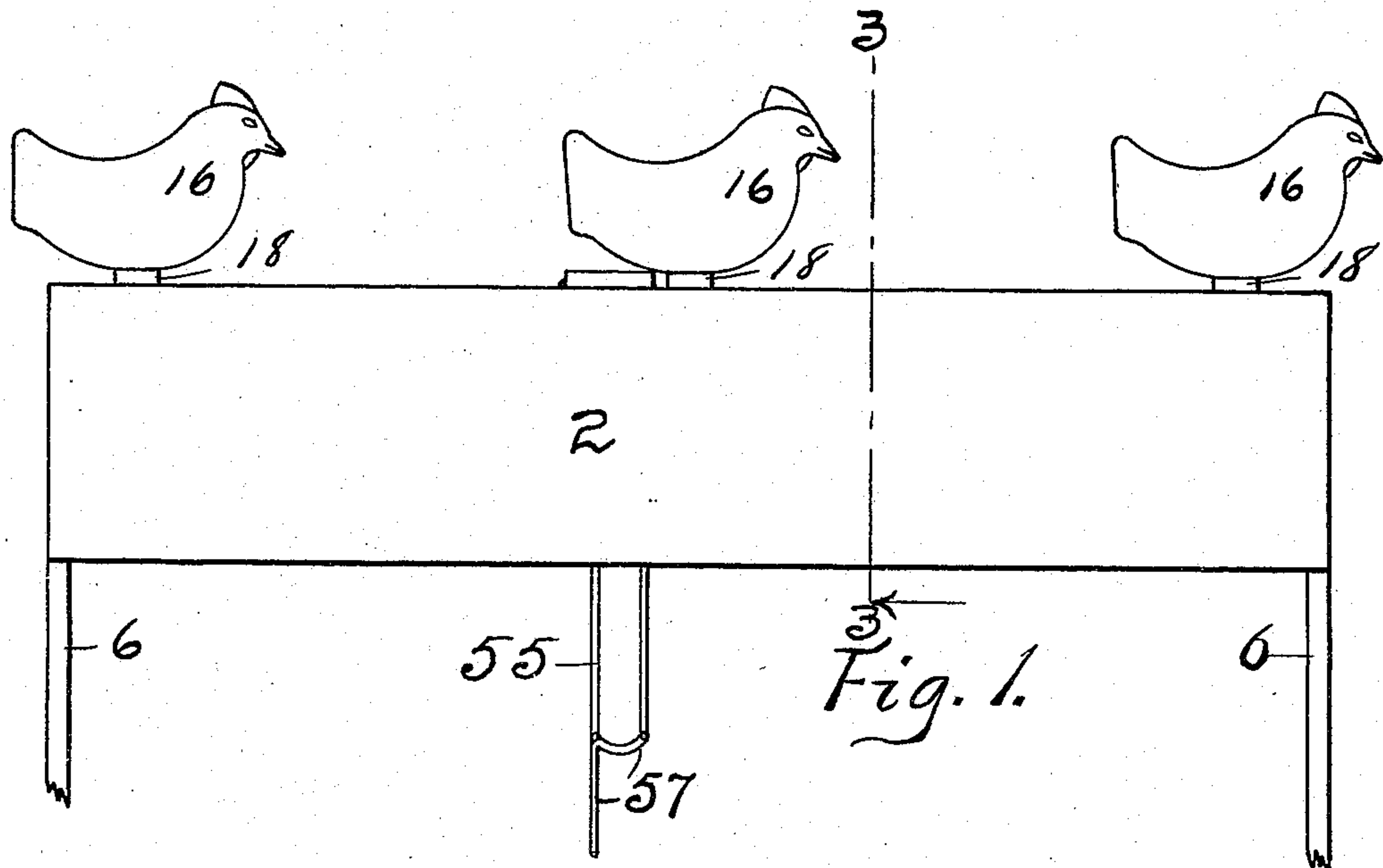


M. H. JOHNSTON.
VENDING MACHINE.
APPLICATION FILED SEPT. 18, 1908.

936,726.

Patented Oct. 12, 1909.
2 SHEETS—SHEET 1.



Witnesses:
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Thos. Brainerd.

Inventor:
M. H. Johnston,
By A. M. Richards,
his atty.

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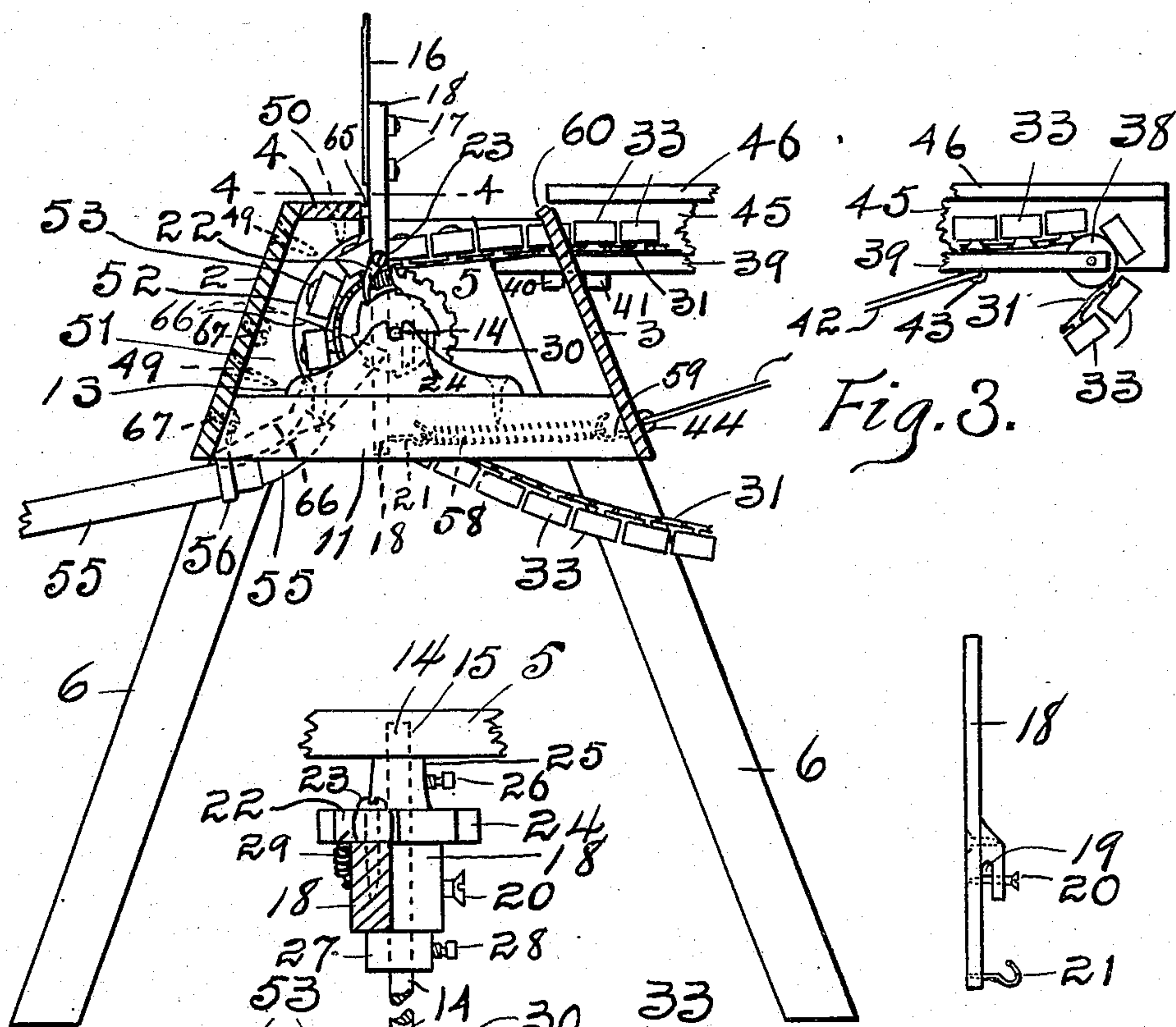


Fig. 3.

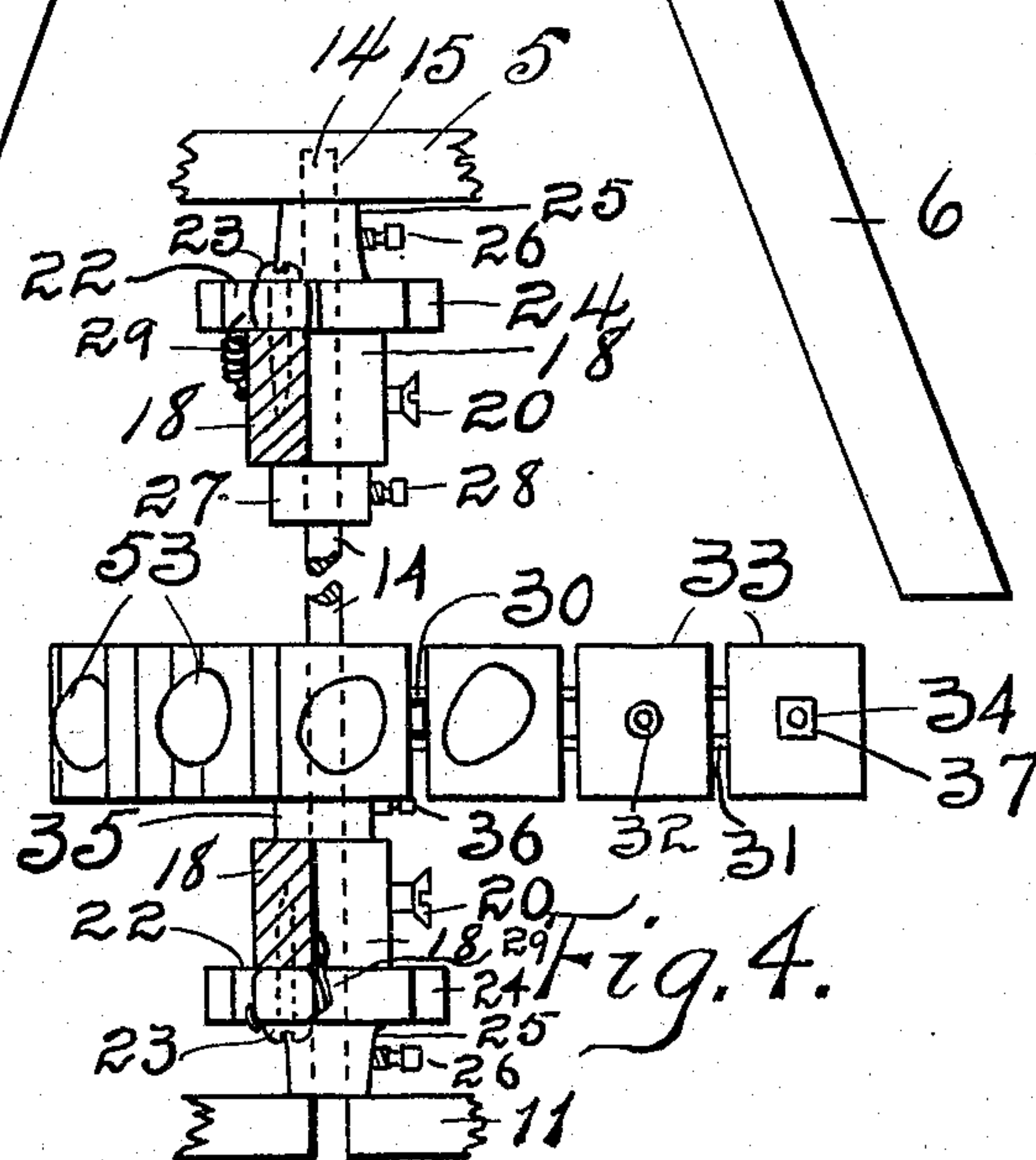
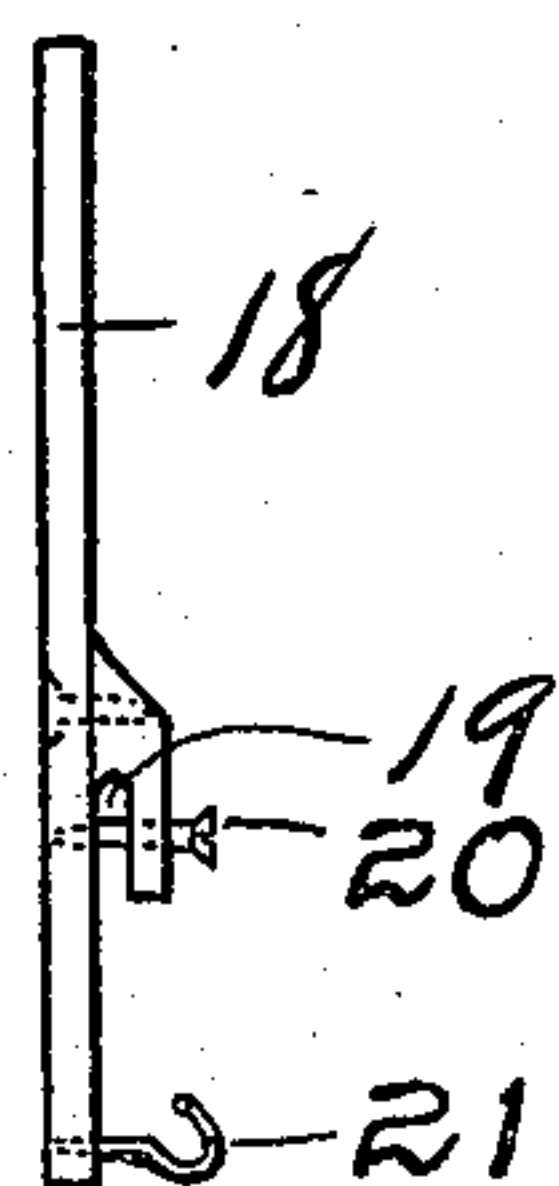


Fig. 4.



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UNITED STATES PATENT OFFICE.

MICHAEL HAYES JOHNSTON, OF GALESBURG, ILLINOIS.

VENDING-MACHINE.

936,726.

Specification of Letters Patent.

Patented Oct. 12, 1909.

Application filed September 18, 1908. Serial No. 453,664.

To all whom it may concern:

Be it known that I, MICHAEL HAYES JOHNSTON, a citizen of the United States, residing at Galesburg, in the county of Knox and State of Illinois, have invented a new and useful Vending-Machine, of which the following is a specification.

My invention has but little relation to vending machines in the ordinary acceptation of the term, but to devices generally used at fairs, carnivals, parks, summer-gardens and other places where large crowds congregate for amusement and entertainment, and at which device a player throws a ball with greater or less degrees of skill and accuracy, the device being equipped with an imitative figure or figures. So far as my knowledge extends, the reward for skilful playing has been manually given by the attendant.

The primary object of my invention is to provide a device of the character described which will automatically deliver the reward to a successful player.

A further object is to provide means whereby the thrown balls will be returned to the player without the attendant delivering them by hand. By providing this last named means the attendant not only may be near the device more of the time, but a great amount of walking is saved him.

This sort of device is frequently shipped from place to place; it therefore becomes essential that it be taken apart and packed in a relatively small box. To this end a further object lies in providing a suitable frame or support for the operating mechanism, and in providing a separable delivery spout.

To the end of carrying out these main as well as subsidiary objects, the invention consists in constructions, modifications of constructions, and in combinations hereinafter described and claimed.

Mechanism showing the preferred structural features, the arrangement, connection and mutual relationship of the parts of my improvements, is shown in the accompanying drawings, in which:

Figure 1 is a front elevation; Fig. 2, a rear elevation; Fig. 3, a vertical section, partly broken away, taken in the line 3—3 in Fig. 1; Fig. 4, an enlarged top plan, partly in section in the line 4—4 in Fig. 3; and Fig. 5, a detail of one of the levers.

In the drawings I have not chosen to

illustrate modifications. It will be apparent that a great many of these which include only constructive changes and which do not materially depart from the spirit of the invention would be evident to a skilled mechanic.

Referring to said drawings by numerals, the same one indicating the same part in all the figures, 2 represents the front; 3, the rear; 4, the top; and 5, the end boards of the box or frame on and within which the operating parts of my improvements are mounted. The supporting legs 6 preferably converge at their upper ends and are removably secured to the ends 5 by bolts 7 and wing-nuts 8, see Fig. 2. Cleats 9 are fixed by screws 10 within the end boards 5 to further strengthen the construction. A cross-piece 11 is secured at its ends by screws 12 to the front and rear boards 2 and 3, and to it is fixed (see Fig. 3,) a central bearing-block 13 for the actuating shaft 14, the other ends of which rest in socket-bearings 15 in the ends 5. A series of imitative figures or representations 16 are suitably secured at 17 to the free ends of a series of levers 18 fulcrumed at 19 on the shaft 14, a screw 20 retaining them securely but separably in engagement. The lower and rear portion of each lever is provided with a hook or eye 21 for a purpose presently described. A pawl 22 is pivoted to each lever at 23, its free end being adapted to engage and actuate the teeth of a ratchet-wheel 24 fixed on the shaft 14 by means of an integral hub 25 which is apertured for the reception of a set-screw 26 adapted to take against said shaft. Collars 27 fixed to the shaft by means of set-screws 28 prevent inward movement of the outer wheels 24. A spring 29, one end of which is secured to the pawl 22 and its other end to the lever, holds each of said pawls in frictional contact with the ratchet teeth.

A sprocket-wheel 30 is fixed by an integral hub 35 and a set-screw 36 to the shaft 14. It is embraced by an endless chain 31, to a portion of the links of which are fixed by rivets 32 a series of object-carrying cups 33. In order that the chain may be separable, I removably secure at least one of said cups to a link by a stove-bolt 34 and nut 37, the removal of said cup permitting such angularity of certain of the links of the chain as to allow uncoupling. The rear flight of the chain embraces an idler 38

mounted in bearings in the rear end of the bottom board 39 of a chainway, the front portion of which rests in the cutaway portion of the frame-board 3, its front end being held from forward or rear movement by cleats 40, 41, and its rear end supported by a U-shaped spring 42, the cross-bar of which rests in staples 43 in said board and the outwardly bent ends of which engage eyes 44 in the frame board 3. When the chain is disengaged and the spring-ends removed from the eyes 44 said chain and the way which it traverses may be removed and packed in the box. A single side board 45 is tacked to the edge of the board 39 and to it is hinged at 47 a cover or lid 46 which not only prevents breaking of the objects when it is in closed position, but permits replenishing said cups when their contents have become exhausted.

Fixed by screws 49 and 50 to the frame boards 2 and 4 respectively, is an object-retaining and releasing block 51, the front or face of which is semi-circularly cut away at 52 to practically conform in contour to the curve described by the cups 33 as they pass in front of the wheel 30. In other words, it is concentric with the rim of the sprocket wheel. As the objects 53 pass along said face they will be retained within the cups by the curved face of said block, but upon reaching its lower edge they will fall from the cups into the mouth of a chute or trough 55, the receiving end of which is suitably secured to the frame by a bracket 56. The trough 55 is preferably built in sections, and in use the abutting ends of the sections are supported by a wire standard 57, the upper portion of which is reflexed and bent into U-shape, or substantially the shape of the cross section of the trough, the lower end of the standard being stuck into the ground.

One of the essential features in a device of this character is that it be a departure from what is old, not only mechanically, but in some characteristic way. To this end (it being noted that the representation 16 is that of a hen,) I provide hard boiled eggs 53 as the reward. These are placed in each of the cups, and a player standing some little distance from the machine, say 20 feet, throws a ball at said representations. Should he strike either of them the upper end of the lever 18 will be cast rearwardly and will carry with it the pawl 22. A rubber buffer 60 (Fig. 3) fixed on the upper edge of the frame board 3 takes up the shock of the contact, and the lever is returned to its normal position by a retractile spring 58 secured at one end to the hook 21 and at its other end to a hook 59 in the frame board 3. As the lever is returned as last described, the pawl will be drawn by the spring 29 into contact with a ratchet tooth 65 on the wheel 24 to revolve it a sufficient dis-

tance to impart a part-revolution to the sprocket wheel 30 through the medium of the shaft 14 to which both are fixed, and said sprocket wheel will transmit motion to the cups 33 by means of the chain 31 traversing said sprocket. When a cup has passed beneath the object retaining and releasing block 51 the egg will fall into the open mouth of the inclined delivery chute and roll down it to the player. (But one section of the chute is shown in the drawings.) In order that the shock of the lever in its forward movement may be absorbed, I provide a buffer 65 fixed on the upper edge of the board 2. The thrown balls may be tossed by the attendant into the open mouth of a chute or hopper 66 secured in place by screws 67 threaded into the board 2, the delivery end of this chute communicating with the receiving end of the chute 55, whereby the balls will roll down the latter to the player.

In taking the device apart, the legs, chain and chainway are removed, the chute sections 55 are disengaged, and all of said parts are placed within the casing formed of the front, rear, top and end boards, and the whole is then placed in a packing box.

Having thus set forth the construction and operation, the purposes and advantages of my invention, I claim as new and desire to secure by Letters Patent the following, namely:—

1. In a device of the nature described, a frame, a shaft rotatably mounted therein, a series of cups adapted to receive motion therefrom, means on which they travel, an object retaining and releasing block within the frame, and a lever actuated by a thrown ball, adapted to actuate said shaft, said lever provided with an enlarged head having thereon a pictorial representation.

2. In a device of the nature described, a frame, a shaft rotatably mounted therein, a sprocket-wheel fixed on said shaft, a sprocket chain actuated thereby, a chainway and an idler traversed by said chain, object-containing cups on said chain, an object-retaining and releasing block fixed within the frame, its face conforming in contour to that of the periphery of said sprocket wheel and thereby that portion of the chain which embraces it, a chute communicating with said cups, a ratchet-wheel on said shaft, a lever fulcrumed on said shaft and actuated by a thrown ball, a pawl carried by said lever and adapted to actuate said ratchet-wheel, and means for returning the lever to its normal position after being struck as indicated.

3. In a device of the nature described, a frame, a shaft rotatably mounted therein, a sprocket-wheel fixed on said shaft, a sprocket-chain actuated by said wheel, a chainway and an idler traversible by said chain, object containing cups on said chain, an object retaining and releasing block fixed

within the frame, its face conforming in contour to that of the periphery of the sprocket wheel and thereby that portion of the chain which embraces it, a chute communicating with said cups, a ball-receiving chute communicating with the above recited chute, a ratchet-wheel on said shaft, a lever also on said shaft, it being actuated by a thrown ball, a pawl carried by said lever and adapted to impart intermittent movements to said ratchet-wheel, and means for returning the lever to its normal position after being struck as indicated.

4. A vending machine comprising a frame, a shaft rotatably mounted therein, a sprocket-wheel thereon, a chainway extending rearwardly from said frame, an idler wheel at the rear portion thereof, a sprocket chain embracing said wheels and actuated by the former, object-containing cups actuated by said chain, a lever actuated by a thrown ball, whereby said shaft may be ac-

tuated, and an object-retaining and releasing block fixed within the frame, its face semi-circularly cut away to approximately conform in contour to the periphery of said sprocket wheel and thereby that portion of the chain which embraces it.

5. In a device of the nature described, a frame, a shaft rotatably mounted therein, a series of cups adapted to receive motion therefrom, means on which they travel, an object-retaining and releasing block within the frame, a lever actuated by a thrown ball, adapted to actuate said shaft, and a delivery chute in communication with said block.

In testimony whereof I have hereunto signed my name, in presence of two witnesses, at Galesburg, Knox county, Illinois, this 15 day of September, 1908.

MICHAEL HAYES JOHNSTON.

Witnesses:

CLARK E. CARR,

WEBB A. HERLOCKER.