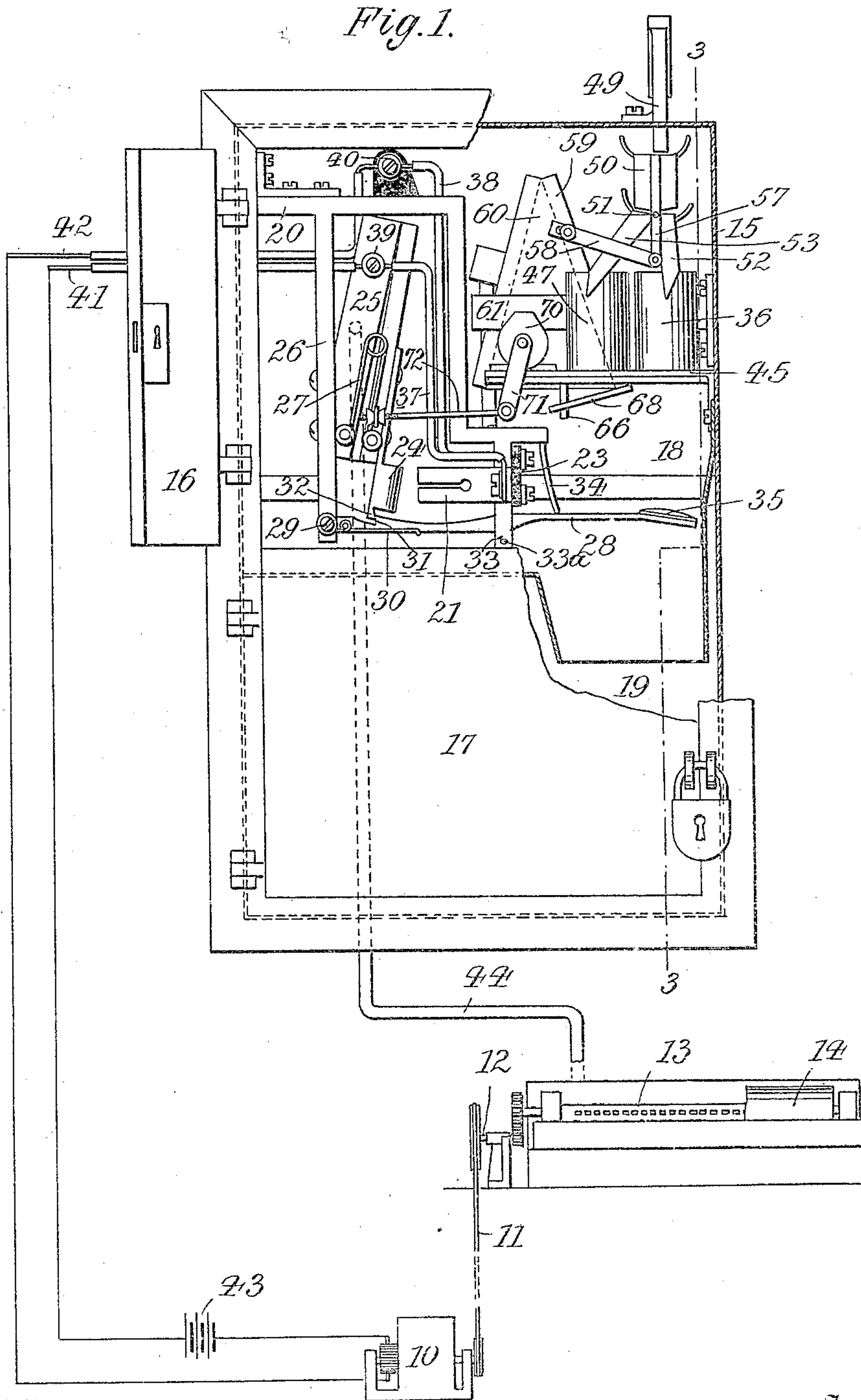


A. J. HOBART.
 COIN CONTROLLED ACTUATING MECHANISM FOR AUTOPNEUMATIC PIANOS.
 APPLICATION FILED MAR. 29, 1909.

958,125.

Patented May 17, 1910.

2 SHEETS—SHEET 1.



Witnesses:
 W. R. Schulz
 Edward Schorr.

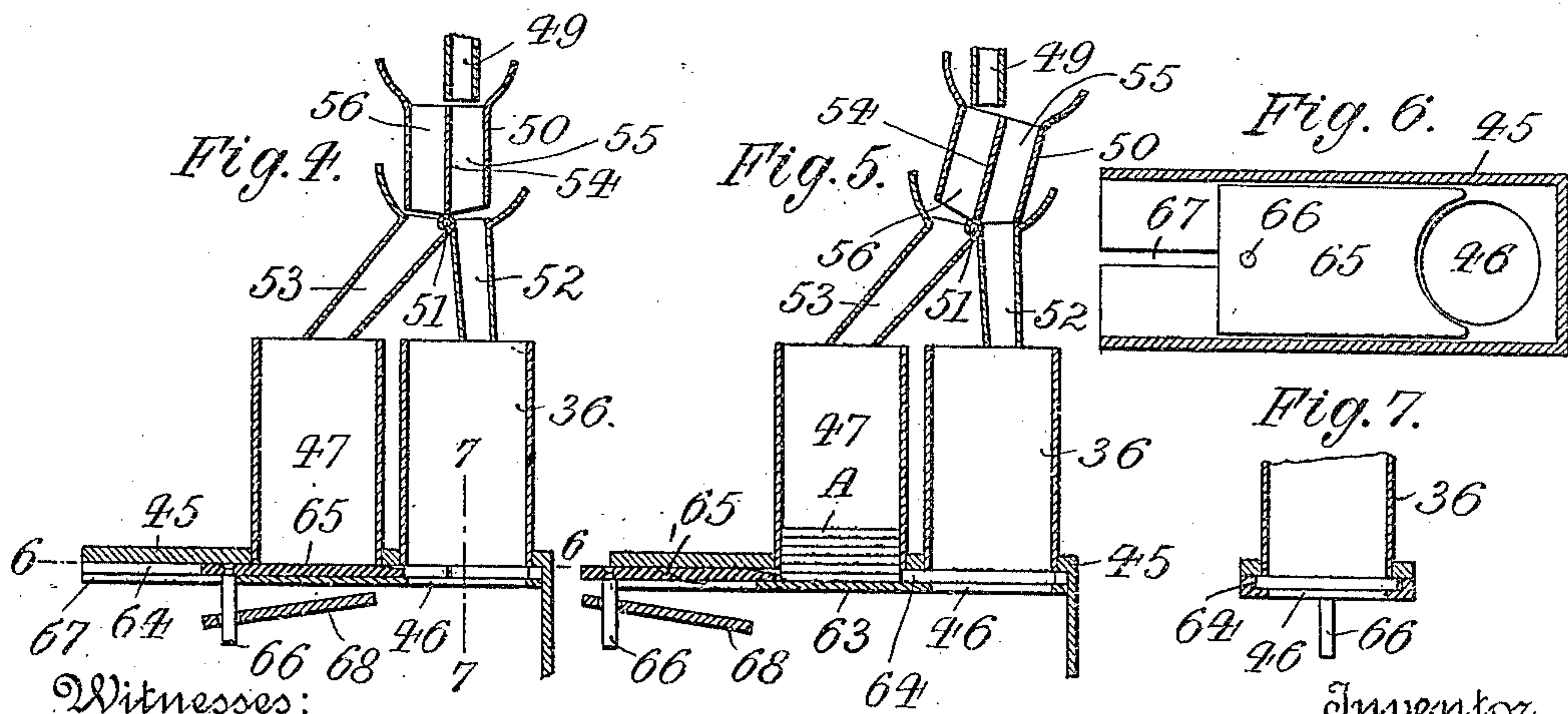
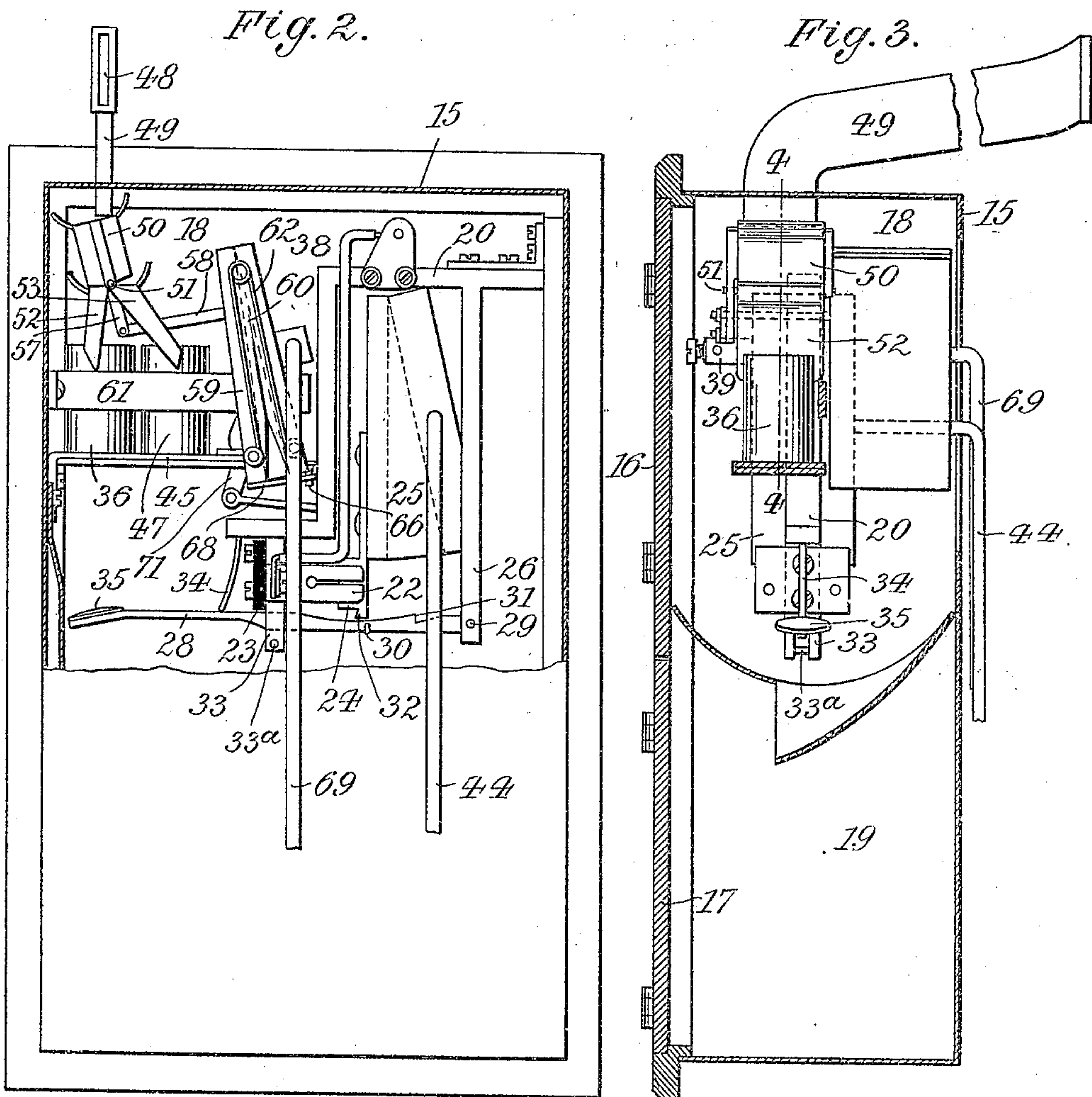
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 Adam J. Hobart
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 Frank H. Bensen

UNITED STATES PATENT OFFICE.

ADAM J. HOBART, OF ST. JOHNSVILLE, NEW YORK, ASSIGNOR TO F. ENGELHARDT & SONS, OF ST. JOHNSVILLE, NEW YORK, A FIRM.

COIN-CONTROLLED ACTUATING MECHANISM FOR AUTOPNEUMATIC PIANOS.

958,125.

Specification of Letters Patent.

Patented May 17, 1910.

Application filed March 29, 1909. Serial No. 486,479.

To all whom it may concern:

Be it known that I, ADAM J. HOBART, a citizen of the United States, residing at St. Johnsville, Montgomery county, State of New York, have invented new and useful Improvements in Coin-Controlled Actuating Mechanism for Autopneumatic Pianos, of which the following is a specification.

This invention relates to a coin controlled actuating mechanism for autopneumatic pianos and similar instruments, which is so constructed that a number of coins may be introduced into the coin slot in rapid succession, the first of said coins starting the instrument, while the following coins will be stored in a magazine. From this magazine the coins are successively discharged, in an automatic manner, to restart the piano after the music piece actuated by the descent of the previous coin has been completely rendered. Thus, if a person inserts ten coins into the coin slot, ten pieces of music will be successively played, one piece starting immediately after the previous piece has been finished, so that the instrument may render, continuously, several pieces of music without requiring repeated attention.

In the accompanying drawings: Figure 1 is a front view, partly broken away, of my improved coin-controlled actuating mechanism, showing diagrammatically its connection with the driving motor and tracker bar; Fig. 2 a rear view, partly in section, of the actuating mechanism, showing the parts in a different position; Fig. 3 a vertical cross section on line 3—3, Fig. 1; Fig. 4 an enlarged section through the coin receptacles and adjoining parts, taken on line 4—4, Fig. 3; Fig. 5 a similar section showing the parts in a different position; Fig. 6 a horizontal section on line 6—6, Fig. 4, and Fig. 7 a vertical section, partly broken away, on line 7—7, Fig. 4.

The numeral 10 indicates an electromotor which, by rope 11, or otherwise, drives the power shaft 12 of an autopneumatic piano or similar instrument.

13 is the tracker bar and 14 the feed roller for the perforated music sheet, all as usual.

In order to start the electromotor by the insertion of a coin and to arrest the motor after the piece of music has been played, the following construction has been devised: To the frame of an autopneumatic piano is

secured a box or casing 15 provided with an upper door 16 and a lower door 17. Door 16 gives access to an upper chamber 18 containing the operative mechanism of the apparatus, while door 17 gives access to a lower chamber or coin box 19, in which the coins are collected. Within chamber 18 is mounted a frame 20 provided with a pair of contacts 21, 22, insulated from the frame, as at 23. Contacts 21, 22 are adapted to be engaged by a switch-knife 24 carried by the movable board of a pneumatic or bellows 25, the fixed board of which is secured to a depending arm 26 of frame 20. A spring 27, interposed between the fixed and movable boards of bellows 25, tends to expand the latter, whereby knife 24 is thrown between contacts 21, 22, (Fig. 2). When bellows 25 is exhausted, the switch-knife is withdrawn from the contacts, as shown in Fig. 1. Bellows 25 may be temporarily maintained in its collapsed state by a releasing lever 28 pivoted at 29 to arm 26 and engaged by a spring 30 that tends to raise said lever. The latter is provided with a detent 31 adapted to engage a corresponding nose 32 formed at the lower end of knife 24. Lever 28 is guided by a forked arm 33 forming part of frame 20. A pin 33^a, traversing fork 33 below lever 28, limits the downward stroke of the latter, while a finger 34, carried by frame 20, serves as an upper abutment for the lever. At its free end lever 28 is provided with an inclined disk 35 arranged vertically below a coin tube 36. When a coin is discharged from said tube it will strike disk 35 to lower lever 28, whereupon it will slide off said disk and drop into box 19. By the descent of lever 28, detent 31 will be withdrawn from nose 32, thus permitting spring 27 to expand bellows 25 and to interpose switch-knife 24 between contacts 21, 22. These contacts are, by wires 37, 38, connected to insulated binding posts 39, 40, which are, in turn, by wires 41, 42, connected to electromotor 10, a suitable source of electricity being interpolated in wire 41. It will thus be seen that upon the engagement of lever 28 by a coin, a circuit will be closed which starts the electromotor 10, to play the piece desired.

In order to subsequently arrest motor 10, after the music piece has been played, means controlled by the perforated music sheet are

provided which automatically collapse bellows 25 to withdraw switch-knife 24 from contacts 21, 22. Such means are, for instance, comprised in Patent No. 870,744, granted to B. C. Peck, November 12, 1907. The device described in this patent provides two adjoining perforations in the music sheet which operate a combination of valves that are adapted to connect the switch bellows with the main vacuum chest of the instrument. These valves and chest have not been shown in the drawings of this case, a tube 44 being however illustrated that serves to connect bellows 25 with the valves described in the above cited patent. It will be seen that after the music piece has been played, the air is withdrawn from bellows 25 to collapse the same and open switch 21, 22, the bellows being maintained in their collapsed state owing to the engagement of nose 32 with detent 31. In this position, the parts will remain until the next coin strikes disk 35. Coin tube 36, which is open at its top and bottom, is mounted upon a support 45 secured to box 10 and provided with a perforation 46 alined with said tube. In proximity to tube 36 there is mounted upon support 45 a second coin tube 47 that constitutes a coin storing magazine.

Means are provided for conveying the coins inserted into the slot 48 of coin chute 49, either to tube 36 or magazine 47. The construction is such, that when a single coin is introduced while the instrument is at rest, this coin will pass unobstructed through tube 36 to strike disk 35 and start the instrument. If, however, immediately upon the insertion of this first coin, one or more additional coins are inserted into slot 48, this surplusage of coins will be automatically directed to magazine 47, to remain stored therein while the instrument is playing. After the first music piece has been rendered, the bottom coin contained in magazine 47 is automatically fed toward tube 36, to be discharged through opening 46 of support 45. This coin will drop upon disk 35 to re-start the instrument, which operation will be repeated until the supply of coins stored in magazine 47 has been exhausted. The construction for obtaining this result is as follows: The lower end of coin chute 49 is arranged slightly above a coin switch 50 pivoted at 51 intermediate a pair of diverging coin ducts 52, 53. The latter are preferably rectangular in cross section and open into tubes 36, 47, respectively. Coin switch 50 is made in the form of an open rectangular box and is provided with a central partition 64 that divides the box into a pair of coin passages 55, 56 which are arranged vertically above ducts 52, 53, respectively. From switch 50 extends downwardly an arm 57 which is, by link 58, connected to the movable board 59

of bellows 60 secured to box 15 by a suitable bracket 61, the bellows being normally expanded by a spring 62. The relative arrangement of the parts is such that when bellows 60 are expanded, switch 50 assumes such a position that coin passage 55 is vertically alined with the discharge end of chute 49, (Fig. 4). In this way a coin leaving chute 49 will descend, unobstructed, through passage 55, duct 52, tube 36 and opening 46, to strike disk 35 and start the instrument in the manner described. When, however, bellows 60 are collapsed, switch 50 will be tilted into the position shown in Fig. 5. In this position, passage 56 has been swung beneath the discharge end of chute 49, so that a coin A leaving said chute, will descend through passage 56 and duct 53 into magazine 47, where it will fall flat upon an imperforate bottom section 63 of support 45. Above said section there is formed within support 45, a longitudinal recess 64 in which is reciprocally mounted a coin slide or ejector 65. The latter is provided with a depending pin 66 accommodated within a corresponding slot 67 of support 45. Pin 66 is engaged by the apertured end of an arm 68 secured to the movable board 59 of bellows 60. The latter are, by a tube 69, permanently connected to the main vacuum chest of the instrument, (not shown).

The operation is as follows: When the instrument is at rest the parts are in the position shown in Figs. 1 and 4. A coin A, passed into slot 49 will descend through chute 48, passage 55, duct 52, tube 36 and opening 46, to strike disk 35. Lever 28 will thus be depressed, whereby detent 31 is withdrawn from nose 32, to permit spring 27 to expand bellows 25 and insert switch-knife 24 between contacts 21, 22. In this way a circuit will be closed to start electromotor 10 and create a vacuum in the main vacuum chest, as will be readily understood. Owing to the vacuum thus established, bellows 60 will collapse to tilt coin switch 50 from the position shown in Figs. 1 and 4, to that shown in Figs. 2 and 5, while at the same time, coin ejector 65 will be retracted. If one or more coins are now introduced into chute 49, they will be conveyed through passage 56 and duct 53, to magazine 47. After the first music piece has been played, the air will be withdrawn from tube 44, in the manner described, to collapse bellows 25 and thereby withdraw switch-knife 24 from contacts 21, 22. The electric circuit being thus interrupted, electromotor 10 will come to rest and the vacuum previously maintained in the main vacuum chest will cease, permitting spring 62 to expand bellows 60. Coin ejector 65 will thus be advanced, thereby taking along the bottom coin of the stack contained in magazine 47. This coin will fall through opening 46 upon

disk 35 and thereby start a second piece of music, immediately upon the ending of the first piece. This operation will be repeated for each of the coins stored in magazine 47.

5 If desired, a suitable registering or counting device 70 may be added, a downwardly projecting arm 71 of which is, by rod 72, connected to the movable board of bellows 25. As the latter collapses once for every
10 piece of music played, the amount of money accumulated within box 19 may be controlled.

It will be seen that by the construction described, any desired number of coins may
15 be inserted into the coin slot in rapid succession, to consecutively play a corresponding number of music pieces.

The invention is particularly applicable to instruments used in dance halls, parks
20 and similar places of amusement, in which the pleasure seekers desire to have a number of music pieces played in succession. In this case it is no longer necessary for the operator to step up to the instrument after
25 each piece of music has been finished, but the coins may be introduced *en masse*, thus simplifying the operation, and avoiding

undesirable breaks between the rendering of successive airs.

I claim:

1. A device of the character described, comprising a coin chute, a coin tube, a coin magazine, a pair of diverging coin ducts communicating with the tube and magazine, respectively, and a coin switch for connecting the chute with either one of said ducts. 30 35

2. A device of the character described, comprising a coin chute, a coin tube, a coin magazine, a pair of diverging coin ducts communicating with the tube and magazine, respectively, a coin switch adapted to connect the chute with either one of said ducts, a coin ejector at the bottom of the magazine, and spring-influenced bellows operatively connected to the switch and ejector. 40 45

Signed by me at St. Johnsville, N. Y., this 24th day of March, 1909.

ADAM J. HOBART.

Witnesses:

W. L. ENGELHARDT,
JOHN D. CAIRNS.