PATENT SPECIFICATION

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PROVISIONAL SPECIFICATION

Improvements in Coin Operated Machines for Amusement

I, (Mr.) WILLIAM EDWARD BRYAN, of Bryan's Automatic Works, London Road, Kegworth, Derby, British Subject, do hereby declare the nature of this invention to be as follows:—

This invention relates to the kind of machine wherein a certain number of balls, after being released by the insertion of a coin or check to the player, are projected in an upward direction between a panel and a sheet of glass, the panel and glass being arranged in a vertical or nearly vertical position.

The present invention provides a means of driving the balls, one at a time, from the bottom of the panel in an upward direction by means of a spring plunger or by a pivoted lever, under the control of the player.

A curved rail or similar projection is arranged at the top of the panel to cause the path of the balls to take the form of an arc. The balls then fall by gravity down the centre of the panel.

In the path of the falling balls are arranged a row of cups—say three. A similar number of balls are provided for the game and the player endeavours to get one ball and one only, into each cup.

On succeeding in this, a prize is released to the player.

This release mechanism is arranged as follows:

In each cup is pivoted a gravity or spring controlled lever which is tilted as each ball falls into a cup and is held in this tilted position.

A lever bar, controlled by the player, has notches in its side engaging the above pivoted cup lever, locking same until all levers in all cups are moved from their resting position. The lever bar is then released and the prize is delivered to the player on his actuating same.

Actuating this lever can also be arranged to return the balls to the player for further play or alternatively the balls can be kept in the locked position at the will of the owner of the machine.

The prize giving mechanism is arranged to deliver either coins, checks or prizes in kind—say cigarettes—also at the will of the owner of the machine according to which hopper is brought into use.

Dated the 15th day of October, 1935.

W. E. BRYAN.

COMPLETE SPECIFICATION

Improvements in Coin Operated Machines for Amusement

I, WILLIAM EDWARD BRYAN, of Bryan's Automatic Works, London Road, Kegworth, Derby, a Subject of the King of Great Britain, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to coin or check operated amusement machines of the type comprising a coin or check freed mechanism and a pay-out mechanism.

In such machines, it has hitherto been necessary to make different machines according to whether they are to pay out in coins, or in checks or the like, or in prizes in kind such as cigarettes. This has many obvious disadvantages.

The primary object of the present invention is to overcome this disadvantage and to provide a single machine which can be readily adapted to pay out in coins, or in checks or the like, or in prizes in kind.

According to this invention, a coin or check operated amusement machine of the type specified above is provided in which the pay-out mechanism is associated with both a coin, check or the like hopper and a container for prizes in kind, so that said mechanism can act to deliver coins, checks or the like and prizes in kind, and means is provided to prevent at will delivery of either the coins, checks or the like, or the prizes in kind.

In a practical embodiment the machine comprises a coin, check or the like hopper a chute for containing articles as prizes in kind, a pay-out slide forming the base of said hopper and arranged at one side of

[Price 1/-]

the bottom of said chute, said slide having a hole to receive the predetermined number of coins, checks or the like to be paid out, which hole is normally closed by a support for the slide but is adapted to be brought into coincidence with a similar hole in said support when said slide is operated, to deliver the coins, checks or the like, and said slide being adapted when operated to pass through said chute and to deliver one of the articles contained in said chute and means for preventing either the coins, checks or the like or the articles from being delivered by said slide.

In such machines in which the pay-out mechanism is controlled by levers actuated by balls or other playing pieces so arranged that the levers normally prevent actuation of the pay-out mechanism but when the levers or a predetermined number of them are actuated by the balls or playing pieces they release said mechanism, the pay-out mechanism according to this invention acts normally to restrain actuation of the levers by the balls or playing pieces, and mechanism is provided operable by the player when using said machine for releasing the restraining action momentarily to allow said levers to be actuated.

Further, in a machine in which balls or other playing pieces are played up and/or down the face of a panel beneath a sheet of glass or other transparent material, the face of the panel is, according to a feature of this invention, also covered with glass or other transparent material, so that the ball or playing pieces move wholly or partly between the two glass or other sheets. The panels are usually provided with a distinctive design or display thereon and the provision of the covering prevents this from being worn by the balls or playing pieces.

A practical embodiment of this invention is illustrated in the accompanying drawings as applied to a machine wherein a number of balls, after being released by the insertion of a coin or check, are adapted to be projected upwardly between a panel and a sheet of glass, the panel and glass being arranged in a vertical or nearly vertical position. In the drawings:—

Fig. 1 is a front elevation of the machine, part of the front being broken away in order to show the playing lever.

Fig. 2 is a cross-section on the line 2—2 in Fig. 1.

Fig. 3 is an elevation of the rear of the panel with the outer casing removed showing the mechanism carried on the panel in its normal position, i.e., in the position which it occupies prior to the insertion of a coin or check.

Fig. 4 is a section on the line 4—4 in Fig. 2 showing the pay-out slide, the coin hopper and part of the vertical chute for the articles in kind; the chute being provided with means for preventing articles in kind from being supplied by the pay-out slide.

Fig. 5 is a similar view to Fig. 4 but illustrates the coin hopper provided with means to prevent coins being paid out by the pay-out slide.

Fig. 6 illustrates diagrammatically the pay-out mechanism showing in full lines the escapement slide bearing against the ball actuable levers and indicating in dotted lines how said levers are released on rotating the ball release handle.

As illustrated the machine comprises an outer casing a having a front portion partly covered by a glass panel c and having a rear portion b^1 on the upper part of which is painted a suitable design or display, said upper part being covered by an inner glass panel d. The glass panels c and d are spaced apart and the balls are adapted to be played in between these two panels.

On insertion of a coin or check in the coin slot b^2, the mechanism is so set that it will permit the three balls indicated in Fig. 1 and marked e to be released so that these balls can be supplied in sequence into a playing position at the end of the playing lever f by which they are projected upwardly until they fall under the action of gravity into one of the pockets g provided on the outer surface of the panel. Three pockets are provided in the example illustrated and three balls are arranged to be supplied in sequence on the insertion of each coin or check and the player endeavours by exercising his skill in operating the playing lever to get one ball and one only into each pocket where it is adapted in the manner to be hereinafter explained to actuate a ball operable lever g^1 in each pocket, which lever normally retains the ball in the pocket until released either by the insertion of a coin in the coin slot b^2 or by operation of the pay-out mechanism. If the player is successful in his endeavours, then mechanism is provided which is released by the ball operable levers to cause a prize to be ejected to the player, said prize being supplied to the opening a^1 in the lower part of the casing. A coin till a^2 is provided at the opposite side of the casing to receive coins inserted into the machine and arranged to be paid to the owner of the machine. In the machine illustrated, on winning a prize the three balls are also released for further play.

On insertion of a coin in the slot, the coin passes down the coin chute h until it comes into position between the free end of a pivoted arm h^1 and the crank pin h^2 formed on the pivot h^3 of a plate h^4. After insertion of a coin the ball release knob i is operated and the rotation of this knob through the crank i^1 and the link i^2 acts to depress the lever h^1 against the top of the coin and this depression acts to move the crank pin h^2 laterally out of the coin chute thereby rotating the pivot h^3 against the action of the spring h^5 and moving the plate h^4, which normally acts to limit the rocking movement of said levers, so as to release the ball operable levers g^1 and thereby permit any of these levers on which a ball or balls rest to be rocked by the balls and thus allow the balls to fall into the lower part of the pockets as shown in Fig. 1 from which they are fed in succession to the playing position by the ball receiving member i^3 which is also operated from the ball release knob i through the link i^4 and the crank arm i^5 mounted on the spindle i^6 carrying the ball holder. When this mechanism has been actuated as indicated, the coin or check passes freely down the coin chute k and is deposited on the upper end of the coin hopper j which, if full, is so arranged as to cause the penny to fall down the inclined top of the hopper and pass into the till a^2. The balls are now released and can be fed successively by rotating the knob i on to the free end of the playing lever by which they can be projected upwardly into the respective pockets.

The pay-out mechanism, controlled by the ball operated levers, consists of a pay-out lever bar k pivoted to the lever k^1 which is urged by the springs k^2 towards the left of the position shown in Fig. 3, said movement to the left being normally prevented by shoulders formed by notches k^3 and by the end of the bar coming against the inner ends of the ball operable levers g^1 and acting in the manner of an escapement mechanism to prevent movement of the lever bar until all three of the ball operable levers are moved out the path of the lever bar. It will be apparent that when three balls are played, one into each of the three pockets g, and the ball operable levers are rocked under the weight of the balls, then the lever bar k will be released so as to allow the lever k^1 to be rocked about its pivot to the left in Fig. 3. At its lower end the lever k^1 carries a pay-out slide k^4 arranged to project underneath the coin hopper j as shown clearly in Figs. 4 and 5 and to be located at one side of the vertical chute l which contains articles in kind indicated by l^1. The pay-out slide is provided with a hole k^5 adapted to coincide with the hopper j so as to allow a number of coins or checks or the like to be contained in the pay-out slide, said hole k^5 being normally closed by a support k^6 for the slide, but said hole is so arranged that on the slide being reciprocated to the left in Figs. 3, 4 or 5, the hole k^5 is brought above a hole k^7 in said support for the slide through which the coins, checks or the like are adapted to pass and from which they are adapted to fall into the opening a^1. In moving to the left, the pay-out slide will also traverse the underside of the vertical chute l and will, therefore, eject one of the articles contained in this chute out of the chute and this also will fall into the opening a^1. It will thus be apparent that the machine can be arranged to pay out both in coins or checks and in articles in kind. Means are, however, provided to prevent the paying out of two different kinds of prizes and to enable either one or the other of these kinds of prizes to be supplied. This means consists of a bar adapted to be inserted through openings j^2 in the coin hopper or the opening l^2 in the vertical chute. As shown in Fig. 4 the bar is applied to the vertical chute l to prevent the supply of prizes in kind, whereas in Fig. 5 the bar is shown applied to the coin hopper.

The lever bar k and the other parts of the pay-out mechanism are arranged, as shown clearly in Fig. 6, normally to restrain actuation of the ball operable levers. To this end, the mechanism is arranged so that the springs k^2 act to press the shoulders on the lever bar k against the ball operable levers and thus prevent the actuation of these levers by the ball, and means is provided to relieve said levers of this restraining pressure momentarily to allow the levers to move clear of the level bar. Said means consist of providing a bowl or roller i^7 on the crank portion i^1 connected to and operable by the ball release knob i so that after playing one ball into one of the pockets on operating the knob i to release the subsequent ball the lever bar k is momentarily released as indicated in dotted lines in Fig. 6 to allow the ball operable lever in the pocket into which the ball has been played to be operated by said ball and to be moved clear of the lever bar. The plate h^4, by limiting the rocking movement of the levers g^1, prevents these from being rocked sufficient to allow the balls to fall into the lower end of the pocket g until either a coin is inserted and the knob i operated as hereinbefore explained or, on the operation of the pay-out mechanism, the

lever k^1 operates a pivoted actuating device m which also acts to move the plate h^4 so as to release the levers g^1.

It will be understood that modifications may be made in the form of the mechanism illustrated, for instance, instead of a pivoted playing lever a spring plunger may be provided for driving the ball up the panel. A curved rail b^3 is provided at the upper part of the panel to guide the balls and cause them to take an arcuate path.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A coin or check operated amusement machine of the type specified in which the pay-out mechanism is associated with both a coin, check or the like hopper and a container for prizes in kind, so that said mechanism can act to deliver coins, checks or the like and prizes in kind, and means is provided to prevent at will delivery of either the coins, checks or the like, or the prizes in kind.

2. A coin or check operated amusement machine of the type specified comprising a coin, check or the like hopper, a chute for containing articles as prizes in kind, a pay-out slide forming the base of said hopper and arranged at one side of the bottom of said chute, said slide having a hole to receive the predetermined number of coins, checks, or the like to be paid out, which hole is normally closed by a support for the slide but is adapted to be brought into coincidence with a similar hole in said support when said slide is operated, to deliver the coins, checks or the like and said slide being adapted when operated to pass through said chute and to deliver one of the articles contained in said chute and means for preventing either the coins, checks or the like or the articles from being delivered by said slide.

3. A coin or check operated amusement machine as claimed in Claim 1 or 2, in which the pay-out mechanism is controlled by levers actuated by balls or other playing pieces so arranged that the levers normally prevent actuation of the pay-out mechanism but when the levers, or a predetermined number of them, are actuated by the balls or playing pieces they release said mechanism, characterised in that the pay-out mechanism acts normally to restrain actuation of the levers by the balls or playing pieces, and mechanism is provided operable by the player when using said machine for relieving the restraining action momentarily to allow said levers to be actuated.

4. A coin or check operated amusement machine as claimed in any of the preceding Claims, in which balls or other playing pieces are played up and/or down the face of a panel beneath a sheet of glass or other transparent material characterised in that the face of the panel itself is also covered with glass or other transparent material so that the ball or playing pieces move wholly or partly between the two glass or other sheets.

5. A coin or check operated amusement machine of the type specified substantially as herein described with reference to the accompanying drawings.

Dated this 7th day of July, 1936.

BREWER & SON,
33, Chancery Lane, London,
Patent Agents for the Applicant.

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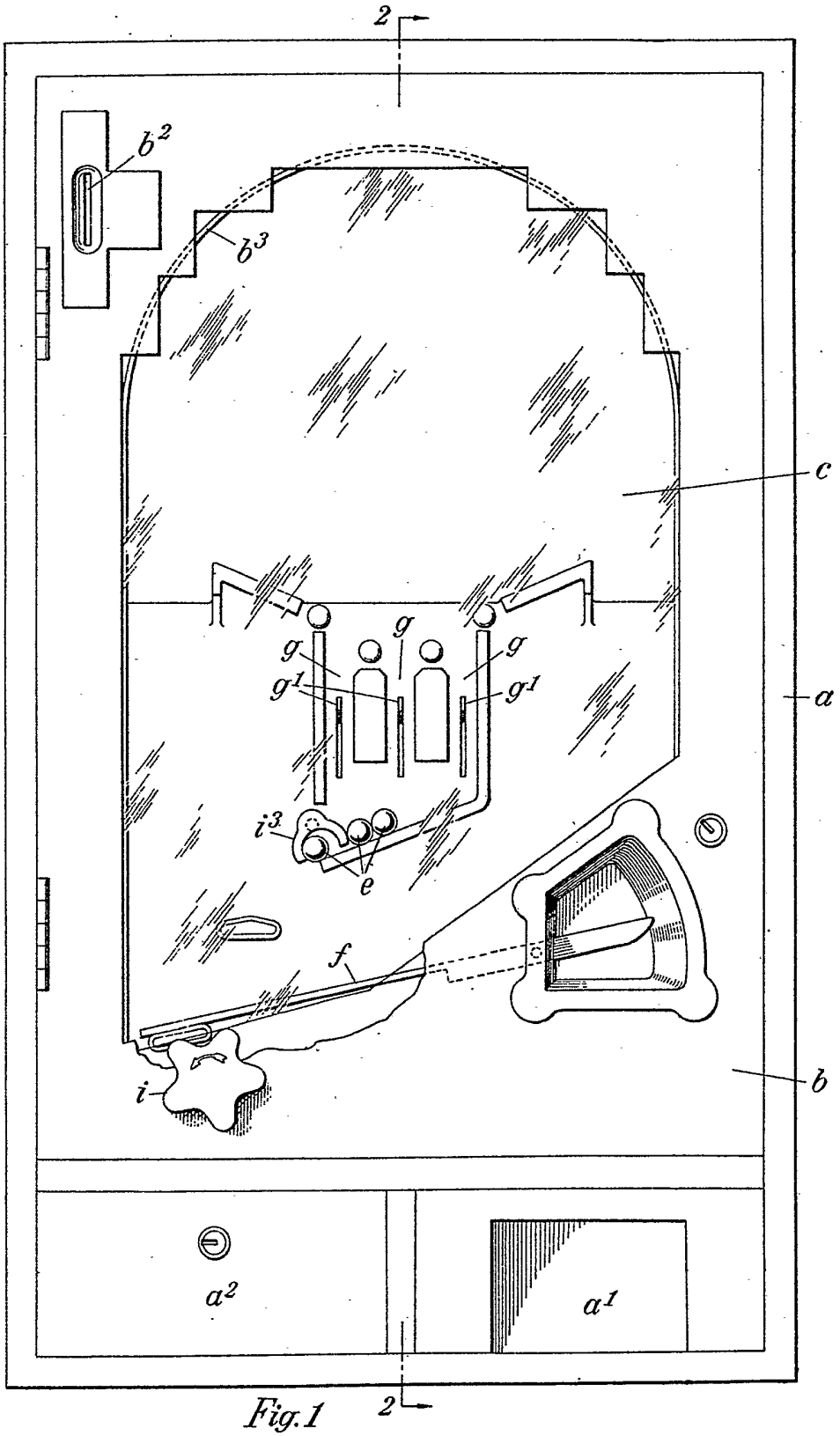
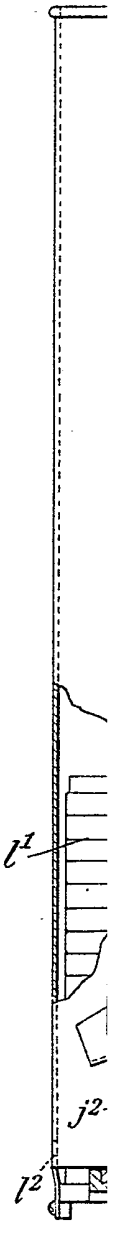


Fig. 1



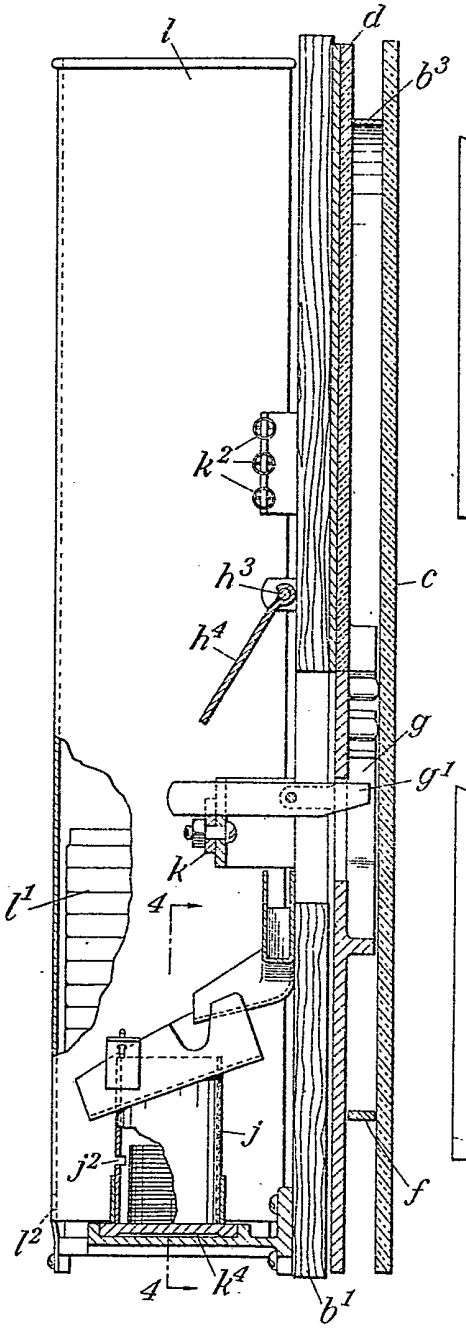


Fig.2

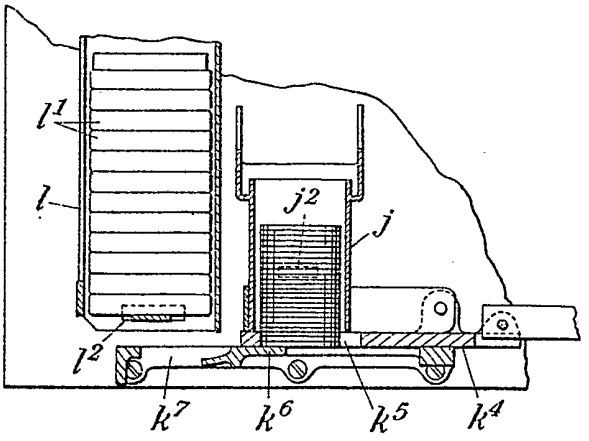


Fig.4

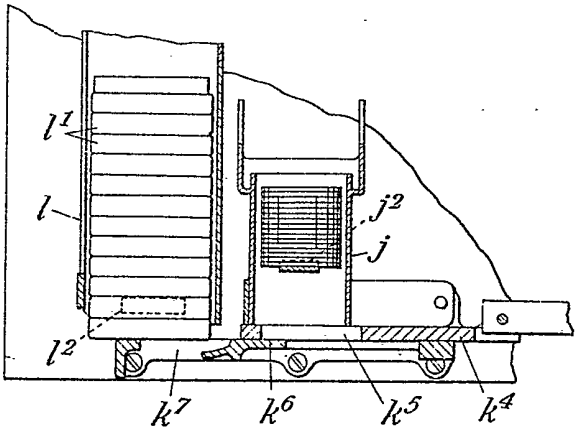


Fig.5

Malby & Sons, Photo-Lith.

456,785 COMPLETE SPECIFICATION

4 SHEETS
SHEET 2

SHEET 1

[This Drawing is a reproduction of the Original on a reduced scale.]

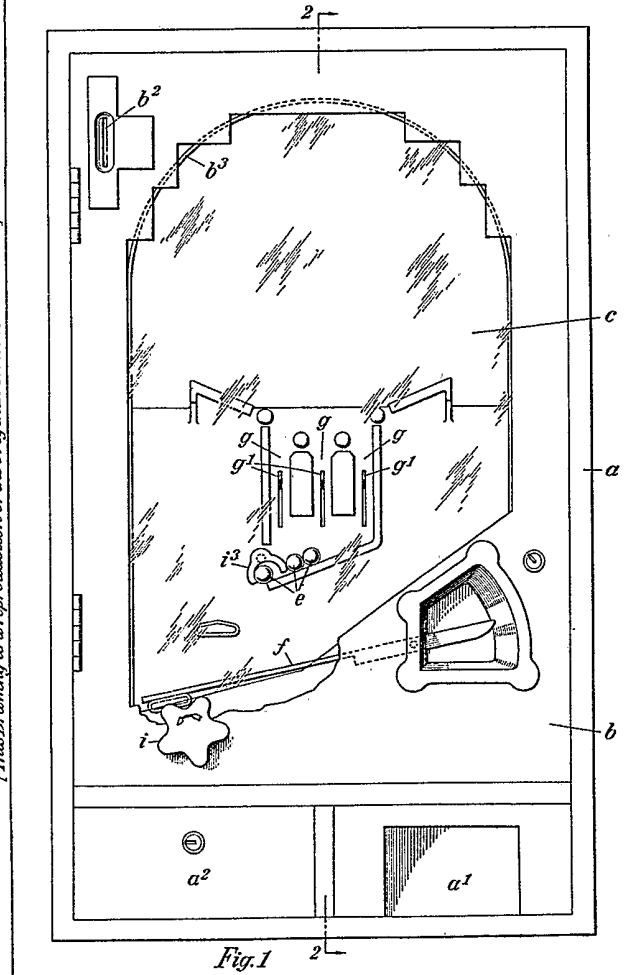


Fig.1

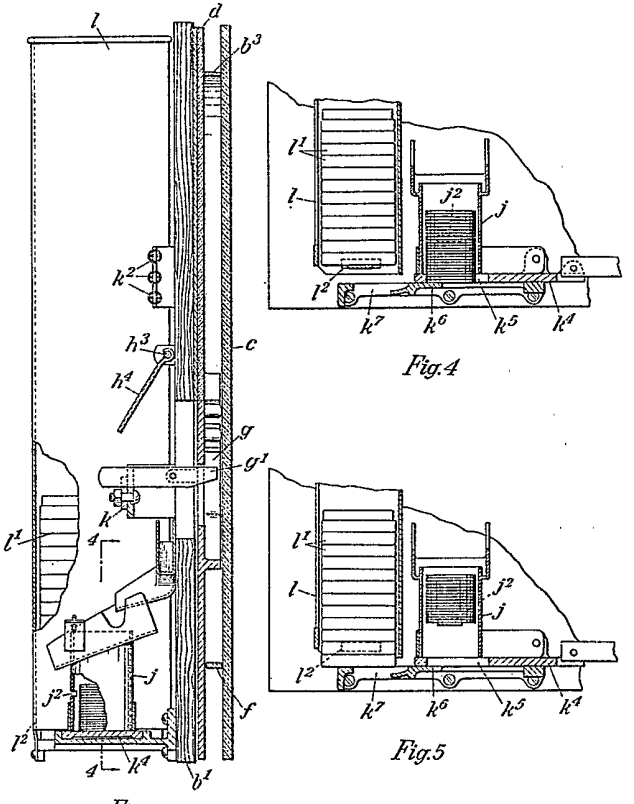


Fig.2

Fig.4

Fig.5

Malby & Sons, Photo-Lith

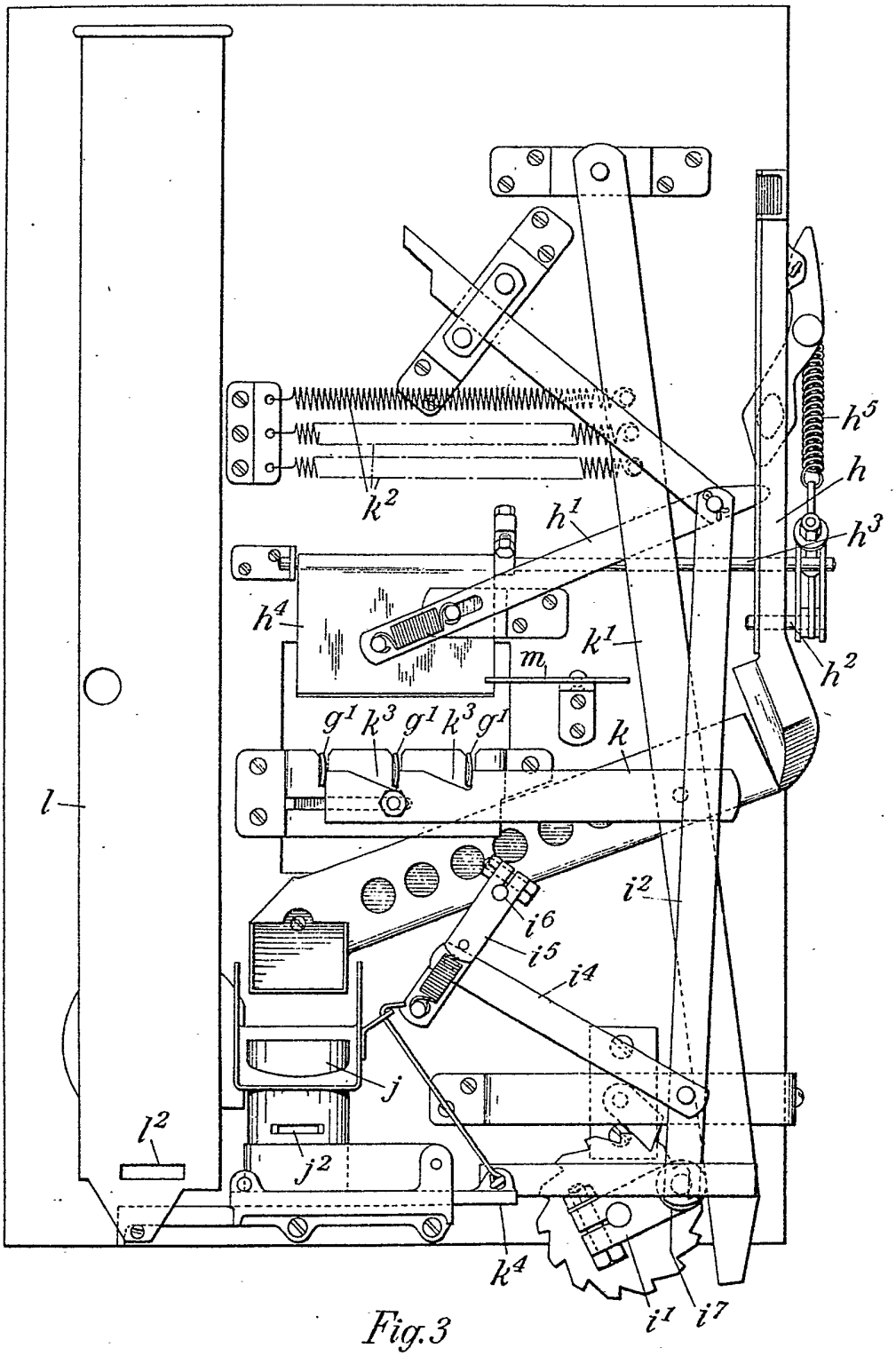
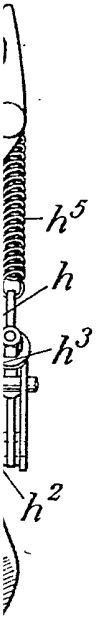


Fig. 3



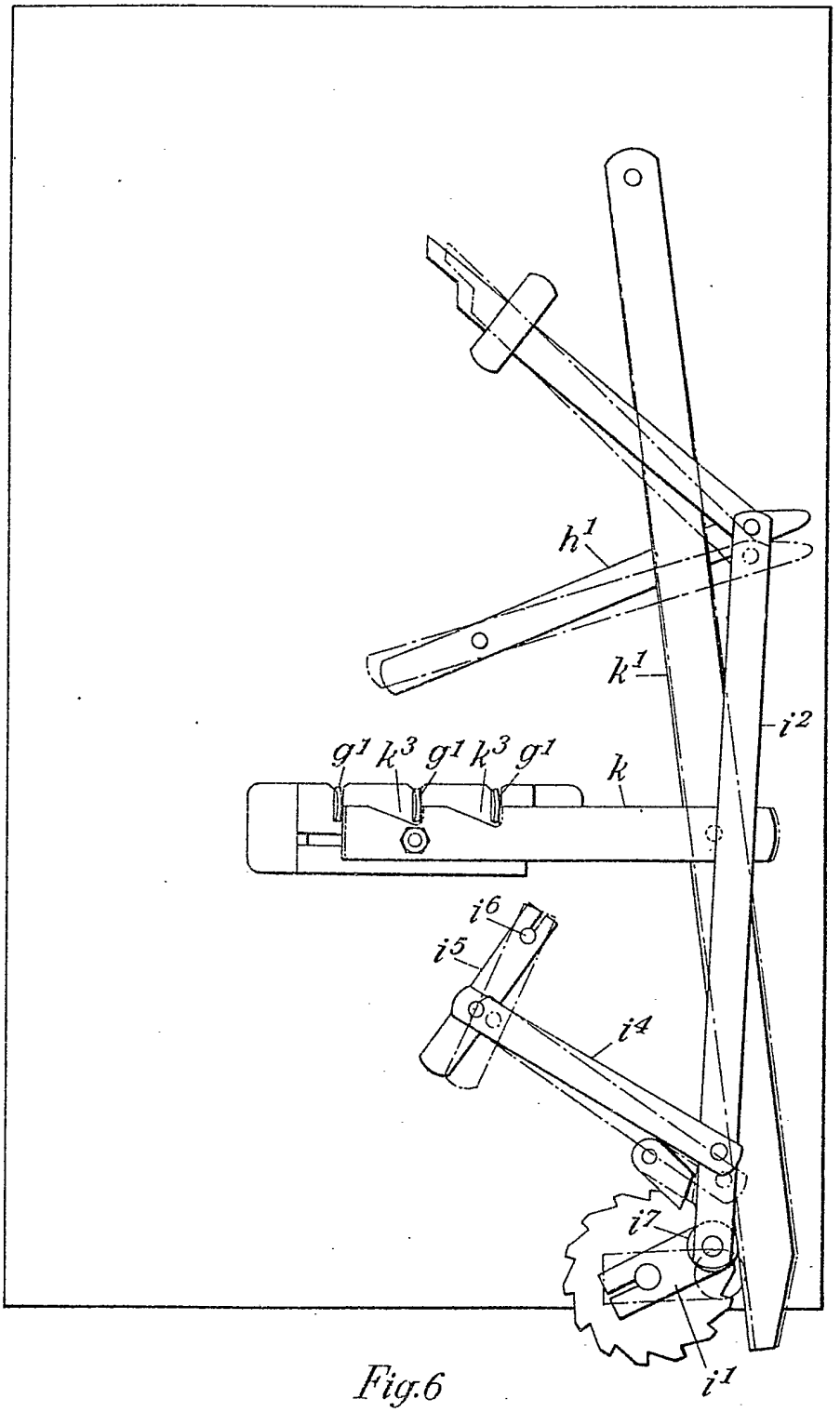


Fig.6

Malby & Sons, Photo-Lith.

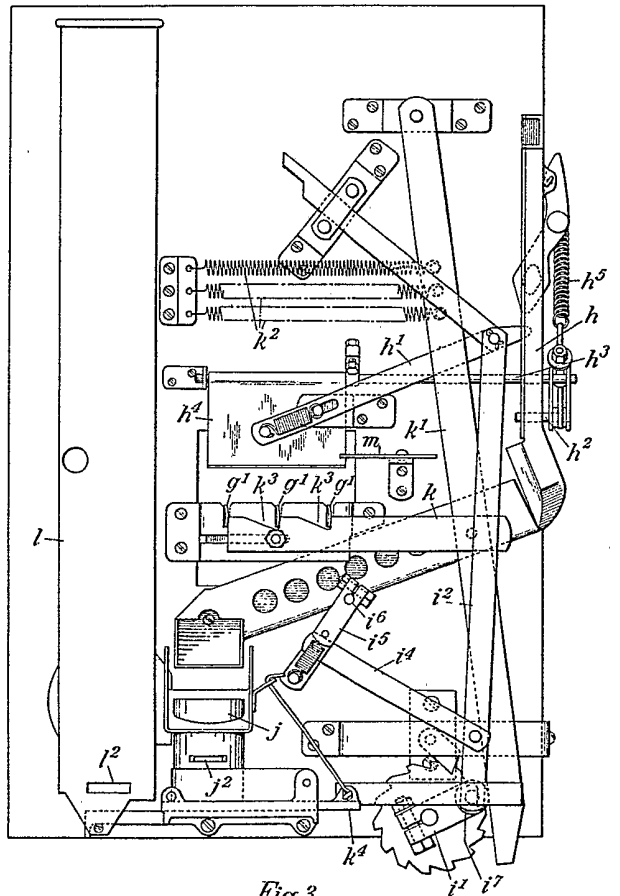


Fig.3

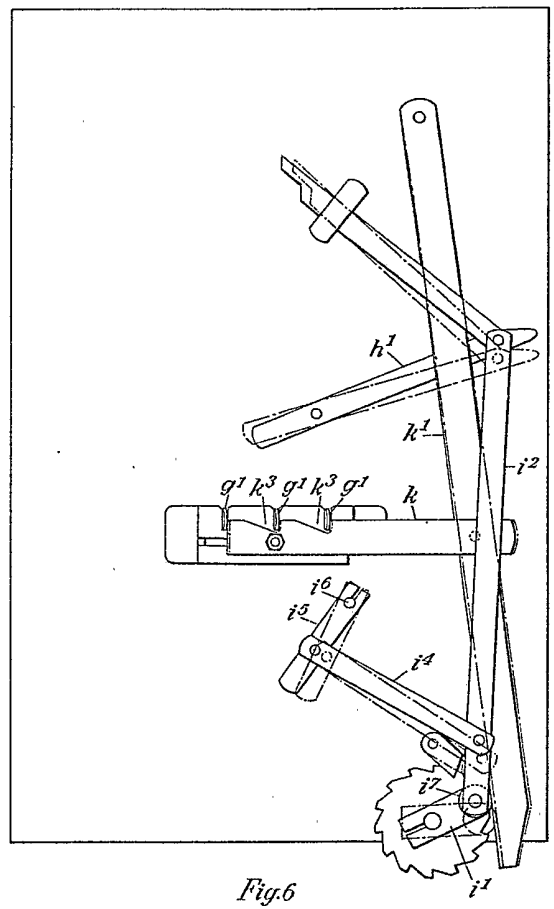


Fig.6

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