(No Model.) 3 Sheets—Sheet 1.

A. HARRIS.

COIN FREED OR ACTUATED MACHINE.

No. 434,109. Patented Aug. 12, 1890.

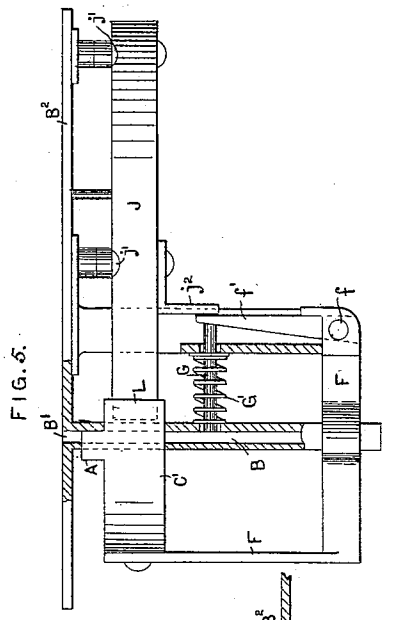

FIG. 5.

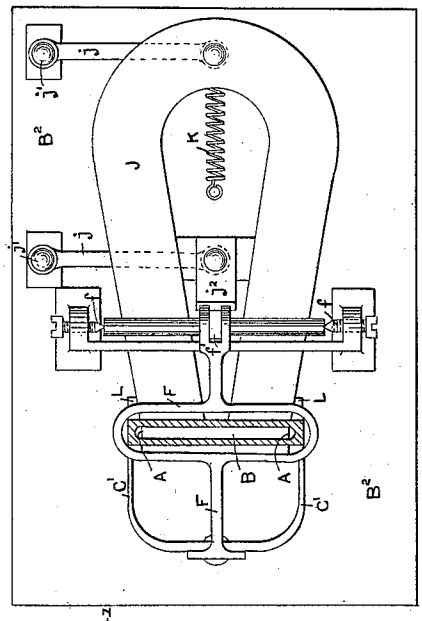

FIG. 6.

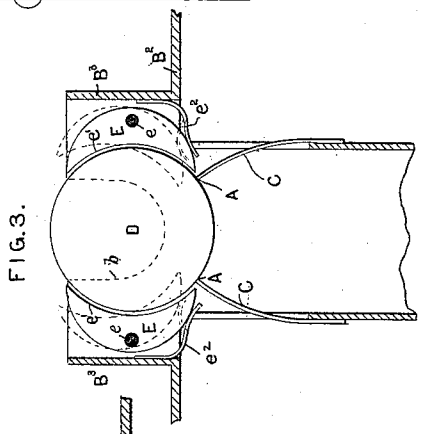

FIG. 3.

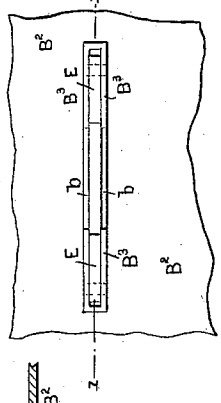

FIG. 4.

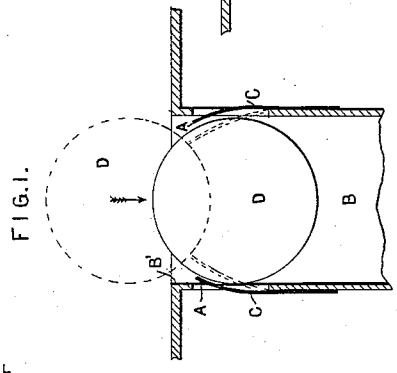

FIG. 1.

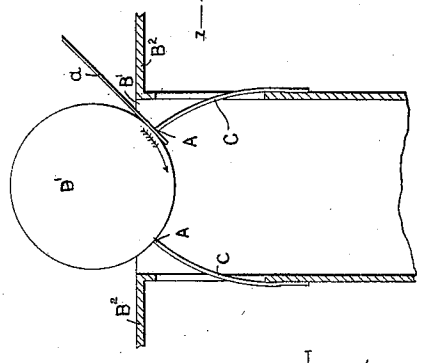

FIG. 2.

Witnesses
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A. HARRIS.

COIN FREED OR ACTUATED MACHINE.

No. 434,109. Patented Aug. 12, 1890.

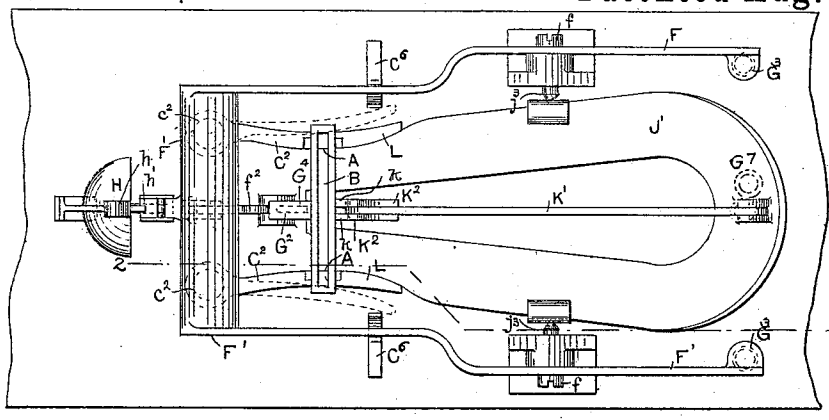

FIG. 7.

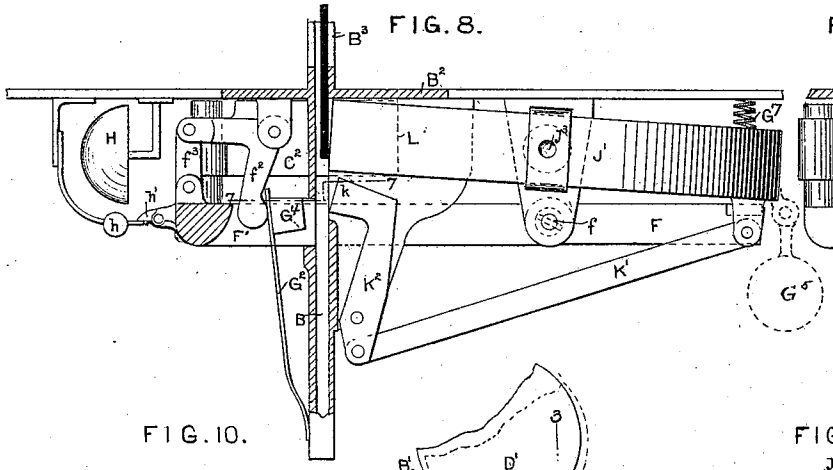

FIG. 8.

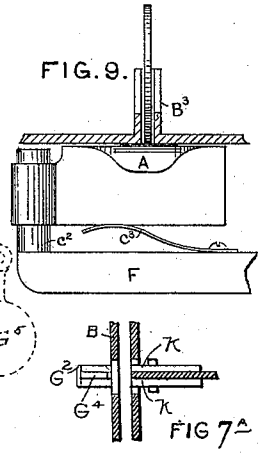

FIG. 9.

FIG 7A

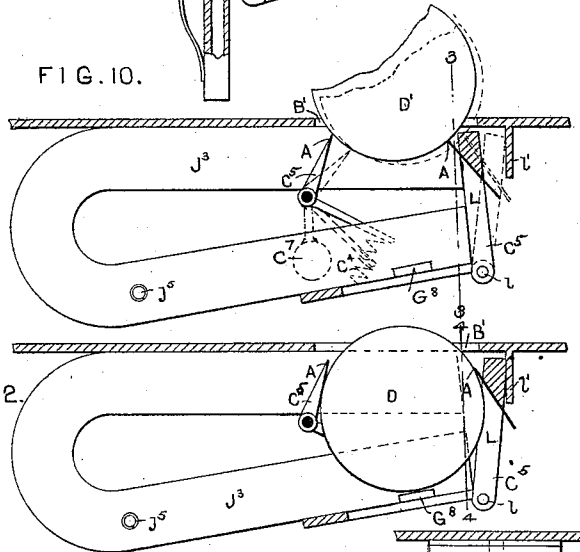

FIG. 10.

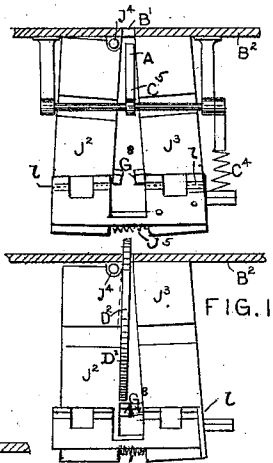

FIG. 11.

FIG. 12.

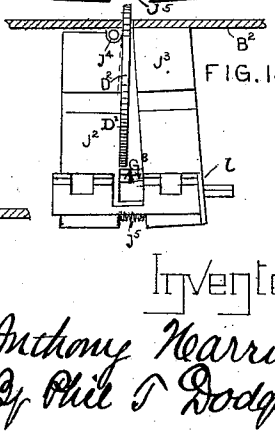

FIG. 13.

FIG. 14.

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A. HARRIS.

COIN FREED OR ACTUATED MACHINE.

No. 434,109. Patented Aug. 12, 1890.

FIG. 15.

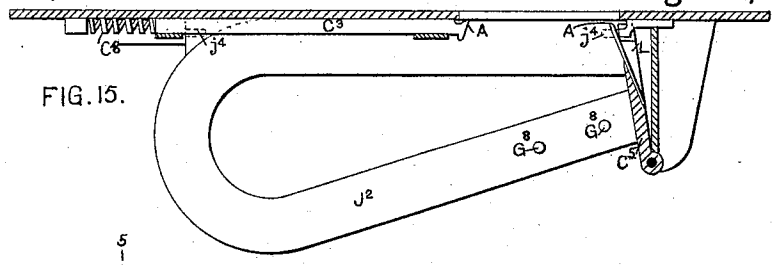


FIG. 16.

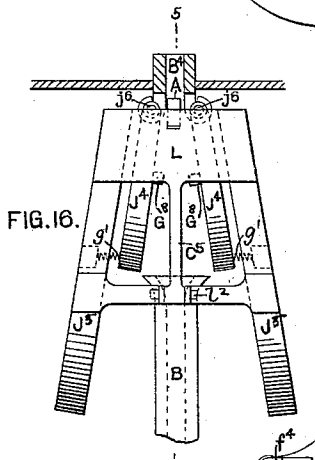


FIG. 17.

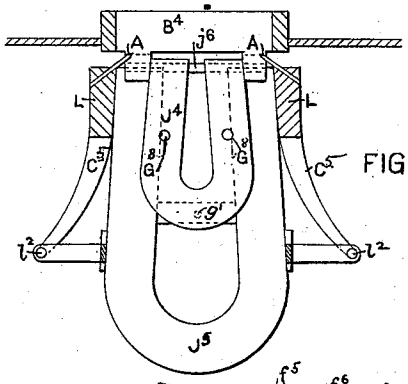


FIG. 18.

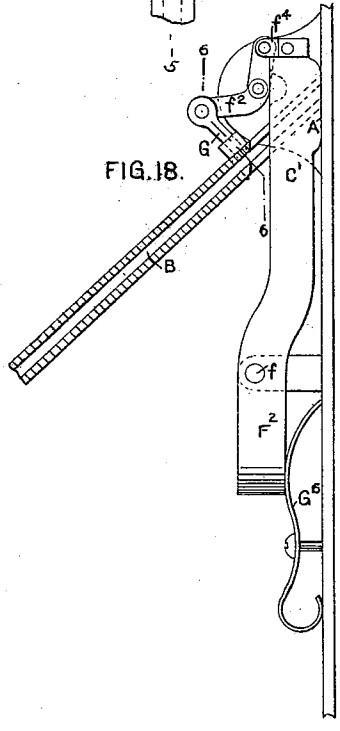
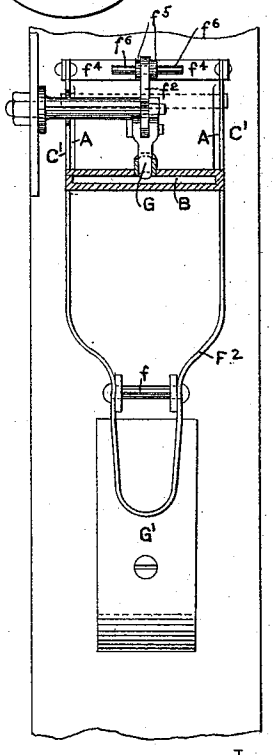


FIG. 19.



Witnesses
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H. R. Kennedy.

Inventor
Anthony Harris
By Phil T. Dodge
Atty.

UNITED STATES PATENT OFFICE.

ANTHONY HARRIS, OF MIDDLESBOROUGH, COUNTY OF YORK, ENGLAND.

COIN FREED OR ACTUATED MACHINE.

SPECIFICATION forming part of Letters Patent No. 434,109, dated August 12, 1890.

Application filed March 11, 1889. Serial No. 302,762. (No model.) Patented in England June 4, 1888, No. 8,098.

To all whom it may concern:

Be it known that I, ANTHONY HARRIS, a subject of the Queen of Great Britain, residing at Middlesborough, in the county of York, in the Kingdom of England, have invented certain new and useful Improvements in Coin Freed or Actuated Machines, (for which provisional protection has been obtained in Great Britain, No. 8,098, dated June 4, 1888,) of which the following is a specification.

This invention relates, broadly, to that class of machines or appliances in which the whole or a portion of the mechanism is freed or actuated by the insertion of a coin into an opening provided therefor.

More particularly the invention relates to the construction and arrangement of certain mechanisms in connection with the coin orifice or chute, with the object of preventing the insertion into the machine of, first, disks, coins, rings, or other similar articles of lead, card-board, or other soft material, hereinafter called "leaden disks," and, second, disks, rings, &c., of iron, steel, or other magnetic material, hereinafter styled "iron disks."

The invention may be understood by reference to the accompanying drawings, in which—

Figure 1 is a section through the coin orifice and chute, showing an arrangement for preventing the insertion of leaden disks. Fig. 2 is a similar view illustrating a way in which the arrangement shown in Fig. 1 may be fraudulently circumvented. Fig. 3 is a sectional elevation on line 1 1, Fig. 4, of a coin orifice and chute provided with an arrangement by which the above defect may be overcome. Fig. 4 is a plan of the device shown in Fig. 3. Fig. 5 is an elevation of a combined arrangement for preventing the insertion into the machine of both leaden disks and iron disks, parts of the coin-chute and framing being in section. Fig. 6 is a plan of the under side of the mechanism shown in Fig. 5, the coin-chute being in section. Fig. 7 is a plan view of the under side of the mechanism shown in Fig. 8, parts being removed and a portion of the framing broken away, and showing a modification of the above arrangement. Fig. 7^a is a sectional plan of the stop device shown on Fig. 8, the section being taken on line 7 7 on said figure. Fig. 8 is a sectional elevation on the line 2 2 of Fig. 7. Fig. 9 is a detail view of a portion of the mechanism shown in Figs. 7 and 8. Figs. 10 to 13 show another modification of the above combined arrangements, Figs. 10 and 12 being longitudinal vertical sections through the coin-orifice B′, Figs. 11 and 13, respectively, and Figs. 11 and 13 being transverse sections through the coin-orifice on the lines 3 3, Fig. 10, and 4 4, Fig. 12, respectively. Fig. 14 is an end view, partly in section, of another modified combined arrangement. Fig. 15 is a longitudinal vertical section taken through the coin-orifice of another form of the above combined arrangement. Fig. 16 is an end elevation of a further modification of the above, the mouth of the coin-chute being in section. Fig. 17 is a section on line 5 5, Fig. 16. Fig. 18 is an elevation of a modified form of apparatus for preventing the insertion of leaden disks into the machine, the coin-chute being shown in section. Fig. 19 is a sectional plan on the line 6 6, Fig. 18, of the under side of the mechanism shown in said figure.

B′ is the coin-orifice of a machine such as described.

Leaden disks are prevented from being introduced into the machine by the following device: A pair of movable blades, strips, or arms (hereinafter called "gripping-arms") are mounted within the inclosing-cabinet of the machine in proximity to the coin-orifice B′, and are each provided at or near one end with a knife-edge or a series of points, such edges or points being hereinafter called "gripping-edges." The said arms are mounted with their gripping-edges opposite each other, one on each side of the path of the coin, in such a manner that a hard coin or disk inserted at the coin-orifice B′ will bear with its periphery against the gripping-edges and will under slight pressure thrust apart the gripping-arms, so that the said coin or disk may pass farther through the coin-orifice, whereas a leaden disk, when inserted into the orifice and pressed against the gripping-edges, will have its periphery indented by the latter, so that the arms will not move apart and the further progress of the said disk will be prevented. In combination with the gripping-arms I also employ a suitable stop device,

which is so arranged that should the resistance of the gripping-arms be insufficient to prevent the entry of a leaden disk thrust forcibly into the coin-orifice the increased pressure required to overcome such resistance shall be the means of so changing the position of said stop device relative to the path pursued by the disk that the forward edge of the disk shall come in contact with the said stop device, which effectually prevents the disk from being thrust farther through the coin-orifice. To prevent iron disks from being introduced into the machine, I employ the same or a similar stop device. In this case, however, an abnormal pressure on the gripping-edges being an unavailable source of power, on account of the hardness of the iron disk, I employ one or more permanent or electro magnets, which are so located and arranged in proximity to the coin-orifice that the mutual attraction between them and an iron disk inserted into the orifice becomes the means of changing the position of the stop device relative to the path pursued by the disk, and thus, as before, preventing the farther progress of the disk through the orifice.

The gripping-arms may be formed of flexible strips C, Figs. 1, 2, and 3, which are attached to opposite sides of the coin-chute B or other convenient part, and are provided upon their converging extremities with gripping-edges A, located as above described; or the gripping-arms may be mounted in a flexible manner one on each side of the coin-chute, as at C′, Figs. 5, 6, 18, and 19, their gripping-edges A being located upon the edges of the arms at or near their outer ends, as shown; or they may take the form of pivoted arms C^2 with gripping-edges A upon their edges at or near their ends, as in Figs. 7, 8, and 9, or of pivoted arms C^5 with their gripping-edges A at their extreme ends, as in Figs. 10, 11, 12, 14, 15, 16, and 17, or of sliding arms C^3, as in Fig. 15, having their gripping-edges located upon their extreme ends. In cases where the arms are not in themselves flexible, I provide them with returning-springs or their equivalent, as hereinafter set forth, whereby they are returned to their normal positions after having been thrust apart by the passage of a coin. In each case, however, the gripping-edges are located, as above described, with respect to the coin-orifice and coin-path so that a coin can readily thrust the gripping-arms apart and pass into the coin-chute, whereas a leaden disk is arrested by them at the entrance to the chute and prevented from passing therein.

Fig. 1 illustrates the manner in which the flexible gripping-arms C are thrust aside by a coin D or iron disk when pressed into the coin-orifice B′.

In Fig. 2 D′ is a leaden disk. If a flat piece of wire or wood *a* be laid on the outer end of one of the flexible gripping-arms C and the disk turned as shown by the arrow, being at the same time pressed inward, it will be found that the gripping-arms C are thrust apart, and in this way a leaden disk may be inserted into the machine in spite of the gripping-edges A. The above class of fraud may be prevented by the arrangement shown in Figs. 3 and 4. The coin-orifice is provided, preferably, beyond the outer wall B^2 of the machine, with a mouth-piece B^3, which is cut away at the sides, as at *b*, to enable the fingers of the operator to push the coin to a sufficient distance into the coin-chute B. The mouth-piece is provided with two tumblers E, pivoted at or about their centers, as at *e*. The opposing edges *e′* of the tumblers are curved, as shown, the curve being an arc of a circle having a radius equal to or slightly larger than that of the predetermined coin by which the machine is to be operated. The upper ends of the tumblers may, if desired, be held normally apart, as shown in dotted lines in Fig. 3, by springs e^2, so that a coin can always be inserted between them. These springs may, however, in some instances be dispensed with, the tumblers being simply held normally in their parallel position, as in Fig. 3. In this case when the edge of a coin D or iron disk is inserted into the mouth-piece it forces the upper ends of the tumblers apart, passes down between them, and thrusts apart their lower ends, being afterward pressed between the flexible gripping-arms C, as in Fig. 1. A leaden disk might possibly be got in between the tumblers; but it could not be forced past their lower ends and into the coin-chute B by reason of the arms C. If a wire or similar article were fraudulently inserted into the coin-orifice, as described with reference to Fig. 2, it would be impossible to get a leaden disk of the proper size past the tumblers, as the space between the latter is only just large enough to admit the said disk.

When the gripping-arms are employed in combination with a stop device, as hereinafter set forth, such stop device is located in proximity to the coin-path behind the coin-orifice and preferably at such a distance from said orifice that it is impossible to force more than about a half or three-quarters of the leaden disk into the coin-chute.

The above combined stop and gripping device may be arranged in a variety of ways, of which the following will serve as examples.

In the arrangement shown in Figs. 5 and 6 the flexible gripping-arms C′ are carried by a frame F, which is pivoted at *f*, and is provided with an arm *f′* adapted to engage a sliding spring-stop G G′. When a leaden disk is inserted at B′ and pressed against the gripping-edges A, the latter grip the edge of the disk and the arms will not open. If sufficient pressure be applied, the frame F is turned upon its pivots so that the spring-stop G G′ is engaged by the arm *f′* and is thrust forward across the money-chute B. On withdrawing the disk the frame and stop are returned to

their normal position by the spring G′. This spring and the equivalent springs described hereinafter in reference to modified forms of the mechanism are of sufficient strength to prevent the frame from moving under the slight pressure due to the insertion of a coin or iron disk into the coin-orifice.

In Figs. 7, 7ª, 8, and 9 the gripping-arms C^2 are mounted upon pivots c^2, which are carried by a rocking frame F′, pivoted at f and provided with coiled returning-springs G^3, each located between the free ends of the arms constituting a portion of the rocking frame F′ and the under side of the casing of the machine. The springs are compressed when the frame F′ is rocked on the pivots f to project the stop G^4, and react and restore the frame to its normal position. The stop G^4 is mounted upon a flexible or counterbalanced arm G^2, and is adapted to be engaged by one arm of an angle-lever f^2, the other arm of which is connected by a link f^3 to one end of the frame F′. When a leaden disk is inserted into the mouth-piece B^3 and pressed against the gripping-edges A, the arms C^2 will not open, but are pushed against the frame F′. The latter turns upon its pivots f and carries with it the link f^3, thus causing the lever f^2 to be moved so as to insert the stop G^4 into the money-chute B. On withdrawing the disk the frame is returned to its original position by its springs G^3 or by a balance-weight G^5, attached to the magnet J, and the stop is withdrawn from the chute. A warning-bell H may also be provided. The hammer h of the bell is mounted upon a flexible arm, or in other suitable manner, in proximity to the bell. A tappet h' on the rocking frame F is arranged to press the said arm outward, and to suddenly release it each time the frame is depressed. The tappet is preferably spring-jointed, as shown, so that it may return to its normal position on the return of the frame. Instead of the above arrangement of bell, the tappet h' may be the means of causing an electric or other bell to sound either within the machine or otherwise.

In the arrangement shown in Figs. 18 and 19 the flexible arms C′, bearing the gripping-edges A, form part of the sides of a rocking frame F^2, which is pivoted at f, and is provided at one end with a returning-spring G^6 or its equivalent. The other end of the frame is connected by a cross-piece f^4 and angle-lever f^2 with a sliding stop G, which is adapted to be inserted into the coin-chute B. The connection between the cross-piece f^4 and the angle-lever f^2 is of such a nature that the arms C′ can move freely apart, as above described, when a coin or iron disk is inserted at the orifice B′ and pressed against the gripping-edges A. To this end the cross-piece f^4 may be made in two lengths, the outer ends of which are attached to the arms C′, while their inner or adjacent ends are provided with lugs f^5, through which a pin f^6, fixed on the angle-lever f^2, passes loosely. The action of this mechanism is precisely the same as that of the mechanism described in reference to Figs. 7 to 9.

When a magnet or magnets is or are employed in combination with a stop device, as hereinbefore set forth, for the purpose of preventing the introduction of iron disks into the machine, the said magnet or magnets is or are arranged with its or their poles behind the coin-orifice in proximity to the coin-path and so connected with or arranged with respect to said stop device that the mutual attraction between the poles and an iron disk inserted into the orifice becomes the means of changing the position of the stop device relative to the path pursued by such disk in such a manner that the forward edge of the latter comes in contact with the stop device and its further progress through the coin-orifice is prevented. The magnet or magnets may be either fixed or movable, and when more than one is employed a part of them may be fixed and the remainder movable. When a movable magnet is employed, it may be hinged, pivoted, or otherwise mounted in such a manner that it will be easily moved either by its attraction for an iron disk fraudulently introduced into the coin-orifice, or by the inward movement of such disk after it has been attracted to the magnet. The stop device may be either fixed or movable. When a movable stop is provided, it may be moved either directly by the magnet or through the intervention of mechanism connected therewith.

A magnet and stop arrangement such as above described is preferably combined with an arrangement such as hereinbefore set forth for preventing the introduction of leaden disks into the machine, although either arrangement might be used separately. When the two arrangements are used conjointly, either one or both of the movable gripping-arms may serve as an armature or armatures for one or more of the magnets, the contact of the said armature or armatures with the poles of the magnet being thus broken each time an iron disk or a coin is inserted into the coin-orifice. It will be obvious that the said magnets and stops and their connections can be arranged in a variety of ways. The following examples will, however, suffice to explain the scope of the invention.

In Figs. 5 and 6 the magnet J, which may, if desirable, be composed of two or more magnets laid side by side, is pivotally mounted upon two parallel swiveling links j, which are pivoted to the wall B^2 of the machine, as at j'. The poles of the magnet are preferably arranged opposite an opening in the side of the coin-chute B. An iron disk inserted into the coin-orifice B′ will cause the magnet to move bodily forward in a direction at right angles to the chute until its ends enter the chute. The opening in the side of the coin-chute is, however, not absolutely necessary. The weight of the magnet may be counterbalanced

and its forward movement assisted by a spring K. The armatures L of the magnet are formed upon or attached to the ends of the gripping-arms C′ in such a manner that they are removed from the magnet each time the said arms are thrust apart by a coin or iron disk inserted into the coin-orifice. A projection j^2, carried or actuated by the magnet, is arranged to engage the arm f' of the gripping-arm frame F each time the magnet moves toward the coin-chute.

The mode of action of the above mechanism is as follows: When a coin or an iron disk is inserted into the coin-orifice B′, it forces the gripping-arms C′ apart and removes the armatures L from the magnet without operating the frame F by reason of the resistance of the spring G′, as before set forth. A coin is then free to fall down the coin-chute B′ without operating the magnet. An iron disk, however, will, as soon as the armatures are removed from the magnet, be attracted to the side of the coin-chute nearest the magnet, and the latter will move forward bodily toward the said disk, carrying with it or actuating the projection j^2. The latter engages the frame-arm f' and causes the stop G to be thrust across the coin-chute, so as to prevent the further passage of the disk. As soon as the coin has passed down the chute or the iron disk is withdrawn therefrom the armatures are again attracted to the magnet, and the spring G′ returns the frame F and the magnet to their normal positions. If a leaden disk be inserted at B′ and pressed against edges A, it will not move the magnet, but will operate the stop G, as before described in reference to the figures under consideration.

In the arrangement shown in Figs. 7, 7ª, 8, and 9 the magnet J′ is mounted upon trunnions j^3, so that its poles are capable of moving in a line approximately parallel to the coin-chute B, which is preferably open just opposite the said poles. The rear end of the magnet is connected by a link K′ with a double rocking arm K^2 in such a manner that each oscillation of the magnet causes a double stop k, carried by the said arm, to be inserted into or withdrawn from the coin-chute. When the magnet is at rest, its poles are held in an elevated position, as shown, and the stop k is withdrawn from the chute by the spring G^7 aforesaid or its equivalent, such as the weight G^5, attached to the magnet. The armatures L are, as in Figs. 5 and 6, carried by the extremities of the gripping-arms C^2. Springs or stops C^6 prevent the armatures being forced apart beyond the magnetic influence. The action of a coin in this apparatus is identical with that described with reference to Figs. 5 and 6. An iron disk, however, instead of drawing forward the magnet bodily when the armatures are thrust apart, is attracted toward and adheres to the poles of the magnet. Any further inward pressure upon the iron disk causes the magnet to turn upon its trunnions j^3, and (through the medium of the link K′ and arm K^2) to thrust the double stop k in front of the disk, thus effectually barring its further progress. The various parts are returned to their normal positions on the withdrawal of the disk by the spring G^7 and the attraction of the magnet. The action of a leaden disk on the apparatus has already been set forth. It will be seen, however, from Fig. 9 that the gripping-arms C^2 are held normally at a short distance from the frame F by a light spring c^3. When, therefore, a leaden disk is pressed against the gripping-edges A, the arms C^2 will slide on their pivots for some distance before depressing the frame F′. During this first movement of the arms the magnet J′ is also depressed by reason of its contact with the armatures L, carried by the said arms, and it moves the double stop k across the coin-chute. On the depression of the frame F′ the stop G^4 is inserted between the double stop k, and the leaden disk has thus three stops opposed to it.

In Figs. 10 to 13 an arrangement is shown in which two magnets J^2 J^3 are employed, one on each side of the coin-orifice. The magnets are preferably so placed that their edges adjacent to the coin-orifice are nearer together than their edges remote from the said orifice. One magnet J^2 is hinged, as at j^4, by its upper edge to the wall B^2 of the machine, and the other J^3 is located in a similar position, but is a fixture. The magnets are held normally apart by a light spring j^5 or its equivalent, or they may be so mounted as to fall apart by their own weight. The armature L for both magnets is identical with one of the pivoted gripping-arms C^5, hereinbefore mentioned, and is hinged to the magnets at 1, its gripping-edge A being located behind one end of the coin-orifice, as before described. The other pivoted gripping-arm C^5 has its gripping-edge A located behind the opposite end of the coin-orifice, as shown, and the arm is held in its normal position by a spring C^4, or by a weight C^7; or the latter arm may be a flexible one, as in Fig. 1. One or more stops G^8 G^8 are provided on each magnet. The mode of action is as follows: When a coin D is inserted into the coin-orifice B′ between the magnets and pressed against the gripping-edges A, it thrusts aside the pivoted gripping-arm C^5 and the armature-arm C^5 L into the position shown in Fig. 12, the outward movement of the armature being controlled by a stop l'. The coin then drops freely down into the machine between the stops G^8 G^8, as may be understood by reference to Figs. 11 and 12, in the former of which the armature-arm is not shown. If an iron disk D^2 be inserted into the coin-orifice and pressed against the gripping-edges, the arm C^5 and armature-arm C^5 L will be thrust apart, as in Fig. 12; but the disk will be attracted to one or other of the magnets, as shown in Fig. 13, so that when pushed farther in it will catch upon one of the stops G^8. If the disk is adhering to the hinged magnet J^2 and an at-

tempt be made to shake it over toward the fixed magnet J^3, the magnet J^2 will be drawn over in spite of the spring j^5, and the stops G^8 will be brought together, the magnets being retained in this position by their mutual attraction for the iron disk. This may be understood from Fig. 13, in which the armature-arm is not shown. When the magnets are in the position shown, the iron disk D^2 cannot be forced past the stops G^8. As soon as the disk is withdrawn the magnet J^2 is moved backward by the spring j^5, the armature-arm C^5 L falls against the poles, and the gripping-arm C^5 is returned to its normal position by the spring C^4. Should an attempt be made to insert a leaden disk D', Fig. 10, into the machine, the edges A will grip the disk, as before. By dint of great pressure the armature-arm C^5 L might be forced off the magnets, as seen in dotted lines; but the opposite gripping-arm C^5 would take up another position within the coin-path, also shown in dotted lines, and would effectually debar any further progress of the disk.

In Fig. 14 two fixed magnets J^3 J^3 are shown, each provided with a stop G^8 on each side of a groove g, down which the good coins are able to pass. The power of the magnets is, however, too great to permit of an iron disk being passed centrally down the groove between the stops, and the disk is consequently attracted to one or other of the magnets, so that it comes in contact with one of the stops G^8 and is prevented from being inserted farther into the machine.

The mechanism shown in Fig. 15 is arranged in a similar manner to that described in reference to Figs. 10 to 13. One of the gripping-arms is, however, in the form of a sliding arm C^3, provided with a returning-spring C^8, the other gripping-arm being a pivoted armature-arm C^5 L, similar to that shown in Fig. 10. The magnet J^2 is hinged at j^4 in such a manner as to fall away from the fixed magnet by its own weight, and it is provided with two stops G^8, which interlock with a stop or stops on the fixed magnet. The mode of action is the same as described with reference to Figs. 10 to 13.

In Figs. 16 and 17 two small magnets J^4 are shown hung by their polar ends upon the pivots j^6 at each side of the coin-orifice. The lower ends of the magnets are held normally apart by two light springs g', or their equivalent. The stops G^8, which preferably interlock, are carried by the small magnets J^4. B^4 is the coin-chute. The coin is guided centrally, so as to fall clear of the stops G^8, by a mouth-piece B. An iron disk inserted into the mouth-piece causes the magnets J^4 to be attracted to it, so that they approach each other and place the stops G^8 across the path of the disk. The small magnets may be accelerated in their closing movements, and may be held more firmly closed by the aid of two larger fixed magnets J^5, which are placed outside the smaller magnets and in a similar position thereto, and have their poles so arranged with respect to the poles of the smaller magnets that as soon as the armature-arm C^5 L is removed a repelling action takes place between the smaller and larger magnets, whereby the former are quickly brought together and held in their closed position. The power of the larger magnets is not, however, sufficient to repel the smaller ones unless the movement of the latter is also assisted by their attraction for an iron disk inserted between them. The armature-arms C^5 L are thrust apart, as before, by the pressure of a coin or iron disk upon the gripping-edges A. The armatures are pivoted a considerable distance outside their centers of gravity, as at l^2, so that their weight assists the pull of the magnets; or the large magnets J^5 may be placed horizontally, as in Figs. 10 to 13. In this case only one gripping armature-arm C^5 L is employed, the other gripping-arm being simply a flexible sliding or pivoted arm, as before described; or the larger magnets may be dispensed with and the gripping amature-arms arranged to act in conjunction with the magnets J^4.

Instead of permanent magnets, such as shown in the drawings, I may employ an electro-magnet, (or magnets,) which I may so arrange that an iron disk, on being inserted into the coin-orifice, will remove an armature from the ends of the already polarized core, or will complete the circuit round the core, either directly through itself or indirectly by actuating a suitable contact or contacts connected with the circuit-wire.

I claim as my invention—

1. In a coin-freed or coin-actuated machine, the combination of a movable stop device located adjacent to the coin-passage, a laterally-yielding plate extending normally into the coin-path, the said plate sustained to move also longitudinally of the coin-path, and suitable connections between the stop device and the plate constructed and arranged to cause the stop to be projected when the plate is moved longitudinally of the coin-path, whereby the plate will yield laterally on the insertion of a coin of hard metal and permit its passage, but will, on the insertion of a coin of soft metal, enter the same and be moved thereby longitudinally of the coin-path and project the stop.

2. In a coin-freed or coin-actuated machine, a fraud-preventing device consisting of the combination of a stop device located at a suitable distance behind the coin-orifice of the machine in proximity to the coin-path, a pair of movable gripping-arms located one at each end of the coin-orifice immmediately behind the same and having their gripping-edges projecting into opposite sides of the coin-path, as described, mechanism connecting said gripping-arms and stop device, and adapted, each time a leaden disk is inserted into the coin-orifice and pressed against said edges, to change, as described, the position of said stop

device relative to the path pursued by such disk, one or more magnets also connected with said stop device and located behind the coin-orifice with the poles in proximity to the coin-path, and means whereby the magnetic attraction of said magnet or magnets for an iron disk inserted into the coin-orifice changes, as described, the position of the said stop device relative to the path pursued by the iron disk, and prevents the further progress of said disk through the coin-orifice, substantially as described.

3. In a coin-freed or coin-actuated machine, a fraud-preventing device consisting of the combination of a movable stop located at a suitable distance behind the coin-orifice of the machine in proximity to the coin-path, a pair of movable gripping-arms located one at each end of the coin-orifice immediately behind the same and having their gripping-edges projecting into opposite sides of the coin-path, as described, a pivoted frame carrying said gripping-arms and adapted to be turned about its pivot-axis each time a leaden disk is inserted into the coin-orifice and pressed against said gripping-edges, a device connecting said frame and movable stop and adapted at each such turning movement to place said stop across the coin-path in front of said disk, a movable magnet mounted behind the coin-orifice with its poles in proximity to the coin-path, and adapted on the insertion of an iron disk into the coin-orifice to be moved by its attraction for the same, means whereby such movement is conveyed to the aforesaid movable stop and the latter placed across the coin-path in front of the iron disk, and a device for returning the several parts to their normal positions after each operation, substantially as described.

4. In a coin-freed or coin-actuated machine, a fraud-preventing device consisting of the combination of a sliding stop G, located, as described, behind the coin-orifice of the machine, a pair of opposing movable gripping-arms C′, arranged, as described, with respect to said stop and orifice, a pivoted frame F, carrying the arms C′, and adapted to be moved inward by any abnormal inward pressure on the same, an arm f', movable with said frame and adapted to engage the outer end of said stop and thrust it across the coin-chute, as described, a balanced magnet J, mounted with its poles behind the coin-orifice in proximity to the coin-chute and adapted to move bodily toward said chute by its attaction for an iron disk inserted into the orifice, a projecting piece f^2 on the magnet, also adapted to engage and thrust forward the stop G, and a spring G′ for returning the several parts to their normal positions, substantially as described.

5. In a coin-freed or coin-actuated machine, a fraud-preventing device consisting of the combination of the sliding stop G, the pair of flexible gripping-arms C′, having their opposing gripping-edges A located, as described, with respect to the coin-orifice, coin-chute and stop G, the pivoted gripping-arm-supporting frame F, the stop-operating arm f' thereon, the magnet J, located with its poles in proximity to the coin-chute and orifice, as described, the stop-operating piece f^2 on said magnet, the parallel swivel links $j\,j$, supporting and guiding the magnet, the returning-spring G′, the magnet-counterbalancing spring K, and the gripping-arm extensions K L L, serving as armatures for the magnet, substantially as described.

6. In a coin-freed or coin-actuated machine, the combination, with a stop device located at a suitable distance behind the coin-orifice of the machine in proximity to the coin-path, of a pair of movable gripping-arms located one at each end of the coin-orifice and having their gripping-edges projecting, as described, into opposite sides of the coin-path immediately behind the coin-orifice, and a device connecting said gripping-arms and stop device, and adapted each time any abnormal pressure is brought to bear upon the said gripping-edges by a spurious article introduced into the coin-orifice to change, as described, the position of said stop device relative to the path pursued by such article and obstruct the further progress of said article into the coin-orifice, substantially as described.

7. In a coin-freed or coin-actuated machine, the combination, with a movable stop located at a suitable distance behind the coin-orifice of the machine and in proximity to the coin-path, of a pair of movable gripping-arms located one at each end of the coin-orifice and having their opposing gripping-edges projecting, as described, into the coin-path, a pivoted frame supporting said gripping-arms and adapted to be turned about its pivot-axis by any abnormal pressure on the said gripping-edges, a device connecting said frame and movable stop and adapted at each such turning movement to place said stop across the coin-path at a short distance behind the gripping-edges, and means for returning the several parts to their normal positions after each operation, substantially as described.

8. In a coin-freed or coin-actuated machine, the combination, with a movable stop located, as described, behind the coin-orifice of the machine in proximity to the coin-path, of a pair of movable gripping-arms having their gripping-edges located, as described, with respect to the coin-orifice and coin-path, a pivoted frame supporting said arms and adapted to to be moved inward about its pivot-axis by any abnormal pressure on the said gripping-edges, an angle-lever connected at one end to said frame and at the opposite end to said movable stop, and adapted to thrust the latter across the coin-path at each inward movement of the frame, and means for returning the several parts to their normal positions after each operation, substantially as described.

9. In a coin-freed or coin-actuated machine, the combination, with the spring-stop G^2 G^4, located, as described, with respect to the coin-orifice and coin-path of the machine, of the pair of pivoted gripping-arms C^2, mounted one behind each end of the coin-orifice and having their gripping-edges A A projecting, as described, into the coin-path, means for retaining said arms at the proper distance apart, a device for returning the same to their normal positions after having been thrust, as described, the pivoted frame F′, carrying said arms and adapted to be moved inward, as described, the link f^3 and the angle-lever f^2, connecting said frame and spring-stop, and the frame-returning springs G^3 G^3, substantially as described.

10. In a coin-freed or coin-actuated machine, a movable stop located at a suitable distance behind the coin-orifice in proximity to the coin-path, a pair of gripping-arms having their gripping-edges arranged, as described, behind said orifice, and a frame carrying said arms and adapted to move inward and place said stop across the coin-path each time any abnormal pressure is put upon the gripping-arms by a spurious article inserted into the coin-orifice, in combination with an alarm device, as H h, and a hinged tappet h' on said frame adapted to actuate said alarm device at each inward movement of the frame, substantially as and for the purpose described.

11. In a coin-freed or coin-actuated machine, the combination, with a stop device located at a suitable distance behind the coin-orifice of the machine in proximity to the coin-path, of one or more magnets also located behind the coin-orifice and having the poles arranged in proximity to the coin-path and adapted, by their attraction for an iron disk inserted into the coin-orifice, to change, as described, the position of said stop device relative to the path pursued by the said disk, whereby the forward edge of the latter comes in contact with the stop device and its further progress through the coin-orifice is thereby prevented, substantially as described.

12. In a coin-freed or coin-actuated machine, the combination, with a stop or stops located at a suitable distance behind the coin-orifice of the machine in proximity to the coin-path, of a magnet mounted with its poles behind the coin-orifice in proximity to the coin-path and adapted to attract an iron disk inserted into the coin-orifice into the line of said stop or stops, whereby the forward edge of the disk comes in contact with the stop or stops and its further progress through the coin-orifice is prevented, substantially as described.

13. In a coin-freed or coin-actuated machine, the combination, with a pair of opposing stops located one at each side of the coin-path at a suitable distance behind the coin-orifice and at a distance apart sufficient to permit the passage of the coin between them, of a pair of magnets also located one on each side of the coin-path, with their poles immediately behind the coin-orifice and in proximity to said path, but at a distance apart in the neighborhood of the stops greater than the distance between such stops, substantially as described.

14. In a coin-freed or coin-actuated machine, the combination, with a pair of opposing stops located one at each side of the coin-path at a suitable distance behind the coin-orifice and at a distance apart not less than the thickness of the coin, of a fixed magnet located with its poles immediately behind the coin-orifice in proximity to one side of the coin-path and having one of said stops projecting from its face toward said path, a movable magnet similarly located on the opposite side of the coin-path and carrying the other of said stops on its corresponding face, and means for retaining said stops and magnets normally in their open position, whereby an iron disk inserted at the orifice is attracted by one or other of the magnets into the line of its corresponding stop and an attempt to shake the said disk into the space between the stops is frustrated by the closing of the same, substantially as described.

15. In a coin-freed or coin-actuated machine, the combination, with the stops G^8 G^8, both located, as described, with reference to each other and to the coin-orifice and coin-path, of the fixed magnet J^3, carrying one of said stops G^8 on its face nearest the coin-path and having its poles located as described, the similarly-arranged movable magnet J^2, hinged at its outer edge, as at j^4, on the opposite side of the coin-path and carrying the other of said stops G^8 on its corresponding face, and a spring j^5, adapted to hold said movable magnet normally in its position farthest from the magnet J^3, substantially as described.

16. In a coin-freed or coin-actuated machine, a stop device located at a suitable distance behind the coin-orifice in proximity to the coin-path, and a magnet device also located behind the coin-orifice, as described, and adapted by its attraction for an iron disk inserted into the said orifice to change, as described, the position of said stop device relative to the path pursued by the said disk, in combination with a pair of movable gripping-arms located one behind each end of the coin-orifice, as described, one or both arms serving as armatures to said magnet device, whereby the latter only comes into action after the gripping-arms have been thrust apart by the insertion of said iron disk into the coin-orifice, substantially as described.

17. In a coin-freed or coin-actuated machine, a stop or stops located at a suitable distance behind the coin-orifice in proximity to the coin-path and a magnet mounted with its poles behind the coin-orifice in proximity to the coin-path and adapted to attract an iron disk inserted into said orifice into the line of said stop or stops, in combination with a pair of movable gripping-arms mounted, as

described, one behind each end of the coin-orifice and one or both serving as armatures to said magnet, substantially as described.

18. In a coin-freed or coin-actuated machine, a pair of opposing stops located one at each side of the coin-path at a suitable distance from the coin-orifice and at a distance apart not less than the thickness of the coin, and a pair of magnets also located, as described, one on each side of the coin-path, in combination with a movable gripping-arm mounted between said magnets and having its gripping-edge located, as described, within the coin-path at one end of the coin-orifice, a second movable gripping-arm serving as an armature for said magnets and having its gripping-edge projecting, as described, into the coin-path at the opposite end of the coin-orifice, and means for preventing such armature-arm from being thrust beyond the sphere of magnetic influence, substantially as described.

19. In a coin-freed or coin-actuated machine, the stops G^8 G^8, the fixed magnet J^3, carrying one of said stops, and the opposing hinged magnet J^2, carrying the other of said stops, in combination with a pivoted gripping-arm projecting at an angle into the coin-path behind one end of the coin-orifice and adapted to move farther into said path whenever undue pressure is brought to bear upon its gripping-edge, and a second movable gripping-arm serving as armature to said magnets and having its gripping-edge lying normally within the coin-path at the opposite end of the coin-orifice, substantially as described.

20. In a coin-freed or coin-actuated machine, the stops G^8 G^8, the fixed magnet J^3, the hinged magnet J^2, and the magnet-returning spring j^5, in combination with a pivoted gripping-arm C^5, projecting, as described, into one edge of the coin-path, an arm-returning spring C^4, a pivoted gripping-arm C^5 L, serving as armature to the said magnets and having its gripping-edge projecting, as described, into the opposite edge of the coin-path, and a stop l', adapted to prevent the armature-arm C^5 L from being thrust beyond the sphere of magnet influence, substantially as described.

21. In a coin-freed or coin-actuated machine, a stop or stops located at a suitable distance behind the coin-orifice in proximity to the coin-path, and a movable magnet also located behind the coin-orifice and having its poles arranged in proximity to the coin-path and adapted by their attraction for an iron disk inserted into the coin-orifice to place said stop device in front of the disk, as described, in combination with a fixed magnet located with its poles in proximity, respectively, to the like poles of the said movable magnet and adapted to re-enforce the same and accelerate its movement when attracted to an iron disk inserted at the orifice, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANTHONY HARRIS.

Witnesses:
FRED WATSON,
FRED BARRATT.