ABSTRACT OF THE DISCLOSURE

The specification discloses a combination of a vending machine having a lower coin-receiving and coin-storing means associated with a vending machine mechanism actuating and operating means and a separable upper mercandise receptacle including upstanding framework means slidably mounting a plurality of panel means defining the sides of the merchandise receptacle and with at least one of the panel means also defining and comprising an amusement device having an upper end adapted to receive a coin and having a lower end effectively coupled to and in communication with the above-mentioned coin-receiving and coin-storing means of the lower vending machine and the vending machine mechanism actuating and operating means associated therewith, whereby to receive a coin at the upper end of the amusement device and to cause same to pass downwardly under the action of gravity through a random-coin-positioning means and a result-indicating means thereof in a perceptible indicating manner in correspondence with the output position of the coin, which then passes into the coin-receiving portion of the vending machine actuating and operating means for allowing operation of the vending machine in a conventional manner after the coin has passed through the amusement device and has provided a perceptible result on the result-indicating means, which may correspond to the playing of a game and the achievement of a goal or score or to any other comparable type of result or answer to a selected question or the like. In a preferred form, the vending machine may be coupled to the merchandise receptacle by an adapter means provided with a through slot means to conduct the coin from the output of the amusement device into the coin-receiving and coin-storing vending machine actuating and operating means, and the lower vending machine may be provided with a controllably attachable auxiliary coin input-chute cover means positioned over and in exterior covering relationship with respect to the conventional coin input slot normally in communication with the coin-receiving and coin-storing vending machine mechanism actuating and operating means for preventing the direct exterior feeding of coins thereinto apart from those fed thereinto from the output end of the amusement device.

This application comprises a continuation-in-part of my co-pending patent application, Ser. No. 460,687, filed on June 2, 1965, now Pat. No. 3,341,267, and, therefore, generally speaking, can be said to relate to a side panel means which, in at least one form of the present invention, comprises an amusement device adapted to be movably mounted with respect to a portion of a coin-operated vending machine, usually in a slightly removable and operable manner with respect to a side of a merchandise receptacle or cabinet of a merchandise vending machine in a manner such that it effectively comprises one closing side wall of the merchandise receptacle or cabinet and can be easily removed when desired, to facilitate the loading of the merchandise receptacle with merchandise and/or premiums, or the like, and/or for the purpose of interchanging the amusement device when desired.

However, it should be understood that the invention is not specifically limited to an arrangement of the type referred to above wherein it comprises in effect a slightly removable side panel means of a merchandise receptacle or cabinet of a conventional vending machine. Actually, the amusement device of the present invention, taking the form of a panel means, may be mounted in a variety of different ways with respect to virtually any type of merchandise vending machine or other coin-operated device and may or may not comprise one or more side walls of a merchandise receptacle thereof.

In some forms of the invention, it may merely comprise one or more amusement devices of panel-like form carried by an appropriate mounting structure, usually in a readily removable and interchangeable manner and cooperating with a coin-receiving and coin-storing means at the output end of the amusement device. The coin-receiving and coin-storing means referred to may be the conventional coin-receiving and coin-storing mechanism and storage chamber of a conventional vending machine, or other coin-operated machine, which will have an operation thereof initiated by receipt of a coin passing therethrough into its coin-storing chamber after it has passed downwardly from the bottom end of the amusement device and, in this case, it may be said that the random-coin-positioning amusement device of the present invention is mounted in an input location with respect to the conventional coin-operated machine.

However, it should be noted that the present invention also broadly contemplates an arrangement wherein the random-coin-positioning amusement device of the present invention is effectively positioned in what might be termed an output location with respect to the conventional coin-receiving mechanism of a conventional coin-operated machine and, in this latter case, this may be achieved by positioning such a conventional coin-operated mechanism of a conventional vending machine, or the like, at the top or input end of the panel means comprising the random-coin-positioning amusement device of the present invention so that a coin received by the conventional vending machine, or the like, in the conventional manner will not be stored in its conventional storage chamber, but will be fed directly into the input or coin-receiving portion of the random-coin-positioning amusement device of the present invention which, in turn, will have at its bottom or output end another coin-receiving and coin-storing means.

Both types of arrangement referred to above—that is, an input-located arrangement or an output-located arrangement with respect to the conventional coin-receiving and coin-operated mechanism of a vending machine or other coin-operated machine are contemplated within the broad scope of the present invention in addition to the arrangements referred to heretofore wherein the amusement device of the present invention is self-sufficient and is not associated with a conventional vending machine.

It should be clearly noted that the exemplary type of merchandise vending machine set forth in the drawings accompanying this application and described as being in mounting association with the amusement device in this present application is one exemplary type of vending machine capable of cooperating with the present invention. However, it should be clearly understood that this is an exemplary arrangement only and is not to be construed as specifically limiting the present invention to mounting cooperation with respect to the specific type of vending machine illustrated in the drawings of the present application, and all general references to a vending ma-
3,375,912

The exemplary type of vending machine illustrated in the drawings of the present application is described hereinafter only in a very general way rather than in very specific, particular, and detailed form since it is exactly the same type of vending machine as is disclosed in much greater particularity and detail in the above-identified copending patent application, and reference is made thereto for any specific and particular detailed structural description not again and repetitively set forth in such great detail in the present application.

The novel amusement device of the present invention makes it possible for a person inserting a coin thereinto to play a game, or to bring about the operation of a problem and answer portion thereof, in an educational, entertaining, and/or amusing manner and to do this entirely as a result of the passage of the coin therethrough, and it will be understood that when the device of the present invention is in an input location with respect to a conventional coin-operated vending machine or other conventional coin-operated machine, the above-mentioned educational, amusement, and/or entertainment feature effectively comprises a bonus feature which one normally would not receive when directly inserting a coin into the conventional coin-operated machine and, thus, provides an additional incentive for inserting a coin into the composite unit comprising the input-located amusement device of the present invention and the conventional coin-operated machine connected to the output end of the amusement device of the present invention so as to receive the coin therefrom after it has already been used for operating the amusement device of the present invention.

Additionally, the novel amusement device of the present invention, when employed in the manner referred to in the preceding paragraph, makes it possible to visibly observe the coin which has been inserted thereinto for some period of time before it disappears from view into the coin-receiving and coin-operated mechanism of the conventional vending machine and, thus, minimizes the likelihood of a person inserting a spurious coin or "slug" (as it is conventionally known in the art) into the machine—something which frequently happens when a person can directly insert a slug directly into the coin-receiving chute of a conventional vending machine, or the like, because of the fact that this can be done without the knowledge of bystanders and onlookers seeing that the slug is adventitiously a slug and not an authentic coin. However, an inserted coin or slug, in the novel amusement device of the present invention, is visible for all bystanders and onlookers to see and, thus, because of this monitoring or observation effect produces a substantial reduction of the number of slugs inserted thereinto and subsequently into the conventional coin-operated vending machine.

Additionally, it should be noted that one form of the novel amusement device of the present invention may be provided with, and effectively incorporate therein, a slug-rejection means effectively operable to bypass slugs away from the conventional coin-receiving chute of the convenient coin-operated vending machine so that no operation thereof will occur when the amusement device of the present invention has a slug fed thereto and, in addition, in one preferred form, the amusement device may have the slug-rejection means so arranged that the amusement device itself is not effectively operated when a slug is fed thereto, thus eliminating all incentive for a person to insert a slug thereto after he has once become aware of this fact.

With the above points in mind, it is an object of the present invention to provide a novel device of the character referred to herein having any or all of the advantages referred to herein generically and/or specifically and individually or in combination and which is of extremely simple, inexpensive, readily removable and interchangeable construction adapted for ready mass manufacture at a very low cost and adapted to be removable and very easily interchangeably mounted in pre-existing conventional coin-operated vending machines, or the like, or to be independently mounted in an appropriate mounting structure whereby to provide an amusemnent device or plurality of amusement devices, per se—all being of a nature such as to be conducive to widespread use of the invention.

FIG. 1 is a reduced-size exterior, three-dimensional, pictorial view illustrating one typical and non-specifically-limiting exemplary form of the merchandise vending machine of the type more specifically described, illustrated, and claimed in my hereinabove-identified co-pending patent application having one exemplary form of the novel amusement device of the present invention, effectively comprising a panel means, substantially carried at the front one of the four sides of the merchandise receptacle or cabinet of the vending machine and in effective input relationship with respect to the conventional coin-receiving and coin-operated mechanism of the vending machine. In other words, the arrangement of FIG. 1 is such that an appropriate coin can be inserted into the amusement device of the present invention at the top thereof and, after passing through the amusement device in a manner effectively operating same for the amusement purposes thereof, the coin will then pass into the conventional coin-receiving chute feeding into the conventional coin-operated mechanism of the conventional vending machine for operating same in a vending or dispensing manner.

FIG. 2 is an enlarged fragmentary, partially broken away view taken substantially along the plane and in the direction indicated by the arrows 2—2 of FIG. 1 and shows the novel panel-form amusement device of the present invention fragmentarily in its mounted relationship with respect to the vending machine as shown in full in FIG. 1.

FIG. 3 is a greatly enlarged, fragmentary, partly broken away, sectional view taken substantially along the plane and in the direction indicated by the arrows 3—3 of FIG. 1 and clearly illustrates the detailed structure of the right-hand rear corner post member and the righthand front corner post member of the upstanding framework means of the exemplary merchandise receptacle and fragmentarily shows the slidable mounting edge of the rear transparent panel window member, the slidable mounting of both the front and rear edges of the right-hand panel window member, and the slidable mounting of the right edge of the panel-shaped novel amusement device of the present invention—all of said structures being drawn to a greatly enlarged scale as compared to the other views and being shown fragmentarily and partly broken away for drawing-space-saving reasons.

FIG. 4 is a greatly enlarged, fragmentary, partly broken away sectional view taken substantially along the plane and in the direction indicated by the arrows 4—4 of FIG. 1 and shows in cross-section substantially the same structures as shown in FIG. 3 although taken at a higher plane and in a direction looking upwardly rather than downwardly as in the case of FIG. 3.

FIG. 5 is a front elevational view of the panel-shaped exemplary amusement device of the present invention as shown in FIGS. 1—4, but in which it is shown individually and separately from the vending machine illustrated in mounting association therewith in FIGS. 1—4.

FIG. 6 is a side elevational view taken substantially in the direction indicated by the arrows 6—6 of FIG. 5.

FIG. 7 is a front elevational view similar to FIG. 5 but illustrates the amusement device after the interchangeable intelligence-carrying information display means or sheet carried by the front surface of the rear or inner panel back member has been effectively removed and interchanged by the replacement thereof with another intelligence-carrying information display means or sheet which effectively defines a different type of game or the
5 like so as to effectively convert the amusement device from one form to another form.

FIG. 8 is a view similar to FIGS. 5 and 7 but illustrates another modification of the amusement device wherein it includes one specific exemplary and non-specifically-limiting form of slug-rejection means.

FIG. 9 is a fragmented view similar to a portion of FIG. 8 but illustrates the apparatus provided with a non-specific and generic type of slug-rejection means differently positioned than in FIG. 8.

Generally speaking, the exemplary first form of the invention illustrated in FIGS. 1-6 inclusive may be said to comprise an amusement device or means, such as is generally designated by the reference numeral 20, which is of generally panel-like form and may be said to comprise a panel means which is of substantially rectangular shape as seen in front or rear elevation and which has a relatively thin depth dimension when viewed in top or bottom edge elevation or side elevation as shown in FIG. 6.

The amusement means or panel means 20 has vertically spaced, substantially parallel top and bottom edge portions, as generally designated at 22 and 24, and has horizontally spaced, substantially parallel side edge portions, as generally designated at 26 and 28 and, in one form thereof, is adapted to be effectively vertically elastically received within a corresponding facing pair of vertically directed receiving channel portions, such as the right hand one clearly shown at 30 in FIG. 3 and the left hand one shown fragmentarily at 32 in FIG. 1, of the corresponding laterally spacedly adjacent front pair of corner post members 34 and 36 of the upstanding framework means, generally designated by the reference numeral 38, of the merchandise receptacle or cabinet, generally designated by the reference numeral 40, of the complete vending machine, generally designated at 48, which fastens the cover means 44 to the upper end of a centrally positioned, vertical (or left-hand shown in broken lines at 50 in FIG. 1 and which is more particularly described, illustrated, and claimed in my hereinafter-identified co-pending patent application.

In other words, in one type of mounting of the amusement panel means 20 of the present invention, as illustrated fragmentarily in FIGS. 1-4, it is adapted to be vertically slidably moved downwardly into the fully assembled and mounted relationship best shown in FIG. 1 (of course, this can only be accomplished when the closure cap or cover generally designated by the reference numeral 44 is removed as will be described in greater detail hereinafter), and said amusement panel means 20 is adapted to be just as easily removed from its mounted relationship as shown in FIG. 1 whenever desired by merely inserting an appropriate key (not shown) into the key slot 46 of the fastening and locking means, generally designated at 48, which fastens the closure cover means 44 to the upper end of a centrally positioned, vertical (or right-hand shown in broken lines at 50 in FIG. 1 and which is more particularly described, illustrated, and claimed in my hereinafter-identified co-pending patent application.

Said vertical tie rod 50 is effectively connected at its bottom end to a lower wall portion (not shown) of the bottom corner member 52 of the vending machine so that the fastening means 48 effectively draws the closure cover means 44 downwardly toward the hood means 52 and locks the entire vending machine 42 together in the fully assembled relationship best shown in FIG. 1.

As previously mentioned, the unfastening of the fastening and locking means 48 by insertion of a key (not shown) in the key slot 46 and by turning same in an appropriate manner to disengage it from vertical tie rod 50, allows the closure cover means 44 to be removed from the closing relationship shown in FIGS. 1 and 2. Thereafter the amusement panel means 20 may be merely vertically slidably removed from its mounted position between the corner post members 34 and 36 and may be either replaced by a transparent window means such as the three such transparent window means 54 shown in the exemplary first form of the invention as closing the two sides and the rear of the merchandise receptacle 40. Or the amusement panel means 20 may even be replaced by another amusement panel means 20 displaying a different game or amusement device, or only the portion of the amusement panel means 20 positioned immediately in front of the back panel member thereof and visibly displaying the intelligence-carrying information display means defining any particular game, may be removed and interchanged with respect to the transparent front panel window member so that essentially the same device may be replaced with the display means defining the amusement information changed, so that a viewer looking through the transparent outer panel window member of the amusement panel means 20 will see what appears to be a different game or amusement device.

The arrangement described above makes it possible for a vending machine service man or operator to periodically call on each vending machine on his route and change the type of game or amusement device 20 displayed by the vending machine 42 so that customers will not become tired of playing or using the same amusement device.

In the exemplary arrangement illustrated, the amusement panel means 20 comprises the previously mentioned transparent front or outer panel window member which is designated by the reference numeral 56, the previously mentioned rear or inner and usually opaque panel back member which is designated by the reference numeral 58 and which is provided on its front or outer surface with the previously mentioned intelligence-carrying information display means, such as is designated by the reference numeral 60 and which includes both display information corresponding to and defining the problem nature of the amusement means and display information corresponding to and defining the result achieved by the positioning of a coin as it passes through the apparatus and reaches the result-indicating region generally designated by the reference numeral 62.

The amusement panel means 20 also includes spacer means for positioning said front panel window member 56 a predetermined distance frontwardly or outwardly from said rear or inner panel back member 58 whereby to define a narrow coin passage open region therebetween which is designated by the reference numeral 64 as best shown in FIG. 6. The spacer means referred to comprises a plurality of vertically and laterally separated and discrete coin-abutment members such as designated by the reference numeral 66 and which, in one preferred form of the invention, are integrally carried by the rear, inner surface of the front panel window member 56 and are normally adapted to extend rearwardly between said front panel window member 56 and said rear panel back member 58 (and the display surface means 60 at the front thereof) for closing the corresponding portion of said coin passage open region 64 whereby to, together, define and comprise what might be generally termed a random-coin-positioning means, such as is generally designated by the reference numeral 68.

It should be noted that there are additional spacer means at the top as indicated at 70 and at the bottom as indicated at 72 and 74, which function in substantially the same manner as the coin abutment members 66 comprising a part of said spacer means, and it should be noted that all of said elements 66, 70, 72, 74, and, indeed, the complete random-coin-positioning means 68 may all be said to be part of said spacer means.

Incidentally, it should be noted that the separate and discrete coin-abutment members 66 comprising, in combination, the random-coin-positioning means 68, are so positioned as to be in vertically alternately staggered and offset relationship so as to prevent the direct downward passage of a coin through said random-coin-positioning means 68. In other words, a coin passing therethrough must follow a progressively laterally offset and, in certain
cases, laterally positionally reversed path in travelling downwardly from a coin ingress aperture-defining means, such as is generally designated by the reference numeral 78 and which is positioned at the lower end of the amusement panel means 20.

Incidentally, it should be noted that the amusement panel means 20 has a result-indicating region or surface carrying result-indicating means as shown at 80 positioned adjacent to the lowermost portion of the random-coin-positioning amusement means 68 and a very short distance above the coin-egress means 78 so that the final position of a coin, such as is indicated at 82 in FIG. 5 for example, will indicate on the result-indicating means 80 that a hand-winning has been made. Alternatively, the coin 82 may pass through any of the other four openings between the five laterally adjacent coin-abutment means 66 at the bottom of the random-coin-positioning means 68, and will correspondingly indicate on the result-indicating means 80 either two bases, one base, a home run as previously indicated, or three bases, depending upon which if the four openings, reading from left to right in FIG. 5, the coin 82 passes through. Then the coin 82 will pass through the egress means 78 and will be fed into the coin-receiving apparatus and mechanism of the conventional vending machine at the location generally designated by the reference numeral 84, and will be in a position for operating the conventional vending and dispensing mechanism (not shown) of the conventional vending machine 42 in a conventional manner for dispensing a predetermined amount of merchandise (usually one merchandise item) from its previously stored position within the interior of the merchandise receptacle 40—the dispensed merchandise being fed downwardly through a dispensing chute into an outlet dispensing tray, indicated generally at 86, and normally closed by a controllably openable cover 88.

All of said apparatus of the vending machine 42 is referred to generally in this description since it is described, illustrated, and claimed with great particularity in my heretofore identified co-pending patent application, and since it does not touch upon the real inventive concept of the present invention, which relates substantially entirely to the novel amusement panel means 20.

Incidentally, it should be noted that the conventional coin-receiving means 84 of the vending machine 42 usually has a forwardly open coin-receiving chute, such as is generally designated by the reference numeral 90, as is best shown in FIG. 4. This is the case with pre-existing vending machines of the type illustrated at 42 in FIG. 1 and described, illustrated, and claimed with great particularity in my heretofore identified co-pending patent application. However, when the novel amusement panel means 20 of the present invention is mounted in the input-located relationship with respect to the vending machine's coin-receiving means 84, some modification of the pre-existing vending machine 42 is needed in order to provide a through-connection from the egress means 78 of the amusement panel means 20 into the usual or pre-existing coin-receiving chute 90 of the coin-receiving means 84 of the vending machine 42 and this is provided, as is best shown in FIGS. 1 and 4, by providing a through-slot 92 in the coupling adapter generally designated by the reference numeral 94 and, in certain cases, a coin-feeding, depending guide member 96 extending downwardly therefrom into the upper end of the conventional, pre-existing coin-receiving chute 90 at the location indicated at 98 in FIG. 4. This places the egress means 78 in direct downward communication with the pre-existing conventional coin-receiving chute 90 of the vending machine 42. In order to provide a closed connection at said location, a front cover means 100 may be provided and appropriately mounted in covering relationship over the otherwise normally frontwardly open coin-receiving chute 90 of the conventional coin-receiving mechanism 84 of the vending machine 42, and this may be mounted in a manner such that when the machine is vertically assem
parallel, spaced, corner post members, each having a top and bottom end and each similar to the two previously mentioned corner post members 34 and 36. Also, the upstanding framework means 38 includes a top fastening rim and ring, such as is generally designated by the reference numeral 104 of substantially the same shape, as seen in plan view, as that defined at a corresponding plurality of spaced locations by the top ends of the previously mentioned upstanding corner post members. Said top fastening rim and ring 104 pivotally mounts at the centers of opposite sides thereof (one of which is clearly shown in 34), a similarly shaped ball handle means 105 which normally lies in a folded-down, horizontal position underneath the closure cover or cap 44 when the vending machine is in fully assembled relationship as shown in FIGS. 1 and 2, but which can be pivoted into an upright position for carrying the complete merchandise receptacle or cabinet 40 when the closure cover or cap 44 is removed. This structure is movement peculiarly described, illustrated, and claimed in my hereinbefore identified pending patent application and is not described herein in detail since it does not touch upon the real inventive concept of the present invention. Said top fastening rim and ring 104 is provided with corresponding corner-positioned fastening projections, such as the exemplary ones of the four there-of shown at 106, which extend outwardly at each of the four corners thereof into positions directly overlying and fastened to the corresponding top ends of the previously mentioned four corner post members such as those designated at 34, 36, and the two rear corner post members spaced directly rearwardly therebehind. Each of the four corner post members is provided with two angularly related receiving channel portions, such as those designated by the reference numerals 30, 108, and 110 (comprising partial showings thereof only, as best shown in FIGS. 3 and 4), and opposite ends of which face each other and are adapted to receive the corresponding transparent panel window members 54 therebetween for vertical slidable engagement and disengagement or, in the case of the front channel portions 30 and 32 carried by the two front corner post members 34 and 36, being adapted to vertically slidably receive the amusement panel means 54 in the manner previously described for mounting and disembowling it, after the closure cover means 44 has been removed, of course.

The various panel members may be provided with compressible elastomeric gasket means, such as indicated at 112, which may effectively provide edge-sealing of the mounted panel members so as to isolate the interior of the merchandise receptacle 40 from the exterior thereof. As previously mentioned, a coupling adapter 94 is provided for effectively coupling the merchandise receptacle 40 with respect to the bottom hopper means 52 so that the upwardly facing trough portions 114 therein may engage bottom edges of the panel members, while the corresponding top edges of the panel members are abutted by the undersides of the top closure cap 44, whereby to provide a sealed closure when the top closure member 44 is in firmly fastened, fully assembled relationship, as is best shown in FIGS. 1 and 2. Each of said trough portions 114, in the example illustrated, includes an inner, upstanding lip member 116, a bottom-positions transverse portion 118, and an outer, upstanding lip member 120, terminating at a level below the termination level of the inner, upstanding lip member 116. This provides for outward drainage of any moisture (either condensed moisture or otherwise). A plurality of threaded fasteners 122 act to effectively vertically interconnect the corner post fastening projections 106 to the fastening rim and ring 104 to the corresponding top ends of the four corner post members of the upstanding framework means 38, and similar threaded fasteners 123 fasten the bottoms of said four corner post members, the coupling adapter 94, and the bottom hopper 52 together.

FIG. 8 illustrates a slight modification of the invention, and similar parts are designated by similar reference numerals, followed by the letter b, however. In this modification it will be noted that the intelligence-carrying information display means 60b corresponds to, and effectively defines, a different type of game, in this case defining the sport or game of bowling. Also, in this version, for purposes of variety, I have illustrated a novel type of slug-rejection means which is generally designated by the reference numeral 124 and which effectively comprises a pair of coin abutment members 66'b which are spaced apart laterally and in depth between the front and rear members so as to be just adapted to pass vertically there-through an authentic coin 82b of the proper denomination.

Also, it should be noted that the slug-rejection means 124 includes a bounce-back coin abutment member 126 so positioned that a coin must move off of the inclined coin abutment member 66b positioned to the left thereof, and move downwardly and toward the right under the action of gravity, until it strikes the bounce-back abutment member 126, after which it then is bounced in a positionally reversed direction from right to left and downwardly so as to exactly enter the open space, or effective entry gate 128, between the two previously mentioned coin abutment members 66'b. If the coin 82b is a spurious coin or slug having the wrong mass, its rate of bounce-back movement with respect to its rate of downward movement will be incorrect, and it will not enter the opening between the two coin abutment members 66'b. On the other hand, if the coin 82b is a spurious coin or is a slug, and does not have an excessive mass but has a deficient mass, it will also be found that its rate of bounce-back movement with respect to its rate of downward movement will be incorrect, and it will again fail to enter through the gate 128 defined between the two coin abutment members 66'b. The same type of reasoning applies with respect to the elasticity of the metal of such a spurious coin or slug, even if it has the correct mass. If it is too elastic, the bounce-back rate of movement will be too great, and if it is not elastic enough the rate of bounce-back movement will be too small and, thus, in either case, the spurious coin or slug will fail to pass through the entry gate 128 defined between the two coin abutment members 66'b.

In other words, in any of the circumstances outlined above, a false or spurious coin comprising what is known in the art as a slug will fail to enter the gate 128 defined between the coin abutment member 66'b and, instead, will roll downwardly along either of the two outwardly inclined guide rails 130 and bypass trough means 132, which may be said to effectively comprise bypass means, which act to bypass any such slug to a slug-receiving chamber 134 in either of the two lower corners of the amusement panel means 205, where such slugs will be visibly displayed to any interested onlooker or bystander, who will immediately be aware of the fact that the person who has just put a coin into the coin ingress opening has actually put in a spurious coin or slug. This factor will tend to minimize this type of fraudulent playing. Any authentic coin which passes through the entry gate 128 will, of course, pass through the remainder of the random-coin-positioning means 860 in the manner similar to that described hereinbefore in connection with the first form of the invention and, therefore, this feature of the invention will not again be described.

The slug-rejection means 124 illustrated in FIG. 8 is merely exemplary of one specific type of slug-rejection means and is not to be construed as specifically limiting the invention thereto or, indeed, to any particular type or specific type of slug-rejection means. Actually, virtually any type of slug-rejection means may be employed in lieu of that designated at 124 in FIG. 8 and may be based upon any of the physical properties of a coin or slug and a departure of a slug from a predetermined normal value thereof in excess of a predetermined permissible depa-
ure or deviation value, as measured or determined by the slug-rejection means. The physical characteristics may comprise size or dimensions, mass, resiliency, electrical conductivity (in this case, the size of the coin may be measured by whether or not it closes very precisely spaced electrical contacts in a manner well known in the art), or the magnetic characteristics of the metal of the coin or slug may be measured in a manner such as to operate the slug rejection means. For example, what is known as a Hughes induction balance or other variations thereof, or apparatus of the so-called neutron analysis type, or apparatus of the nuclear magnetic resonance type, or virtually any other type of analysis apparatus capable of distinguishing a true coin from a spurious coin, may be employed for activating or controlling the slug-rejection means, and such an arrangement is generically illustrated in FIG. 9, wherein said generic slug-rejection means is indicated in block diagrammatic form at 134c, and is somewhat differently positioned from the arrangement illustrated in FIG. 8 (although not specifically so limited), and wherein the rest of the apparatus is similar to that of FIG. 8 and is designated by similar reference numerals, followed by the letter c, however.

It should be noted that mounting apparatus embodying vertical post members having facing channel members and generally similar to the vertical post members 34 and 36 of the merchandize receptacle 40, may be employed independently of a merchandize vending machine, to comprise what might be termed edge mounting means for the amusement panel means 20 or for a plurality of such amusement panel means 20, perhaps four of them positioned at each of the four sides of a parallelepipedal-like mounting structure, and such an arrangement, whether of the single panel or multiple panel type, may be employed with a direct connection of the amusement machine 70 to a coin-receiving and coin-storing means without the interposition of a conventional vending machine or the cooperative association of such a conventional vending machine therewith. In other words, one or more of the amusement panel means 20 of the present invention may comprise merely an amusement device per se and need not, in all forms, be associated with a vending machine. Also, if desired, the mounting structure of such a modification may be swiveled or otherwise provided with means to allow any of a plurality of different amusement devices to be rotatively moved into a convenient playing position with respect to a particular person desiring to play the game, and such a multiple game device might be appropriately mounted on such a turret-like base positioned on a stand, a counter, a shelf, or any other convenient supporting structure and, if desired, may be appropriately locked into place so that it cannot be removed by unauthorized personnel.

It should be understood that the figures and the specific description thereof set forth in this application are for the purpose of illustrating the present invention and are not to be construed as limiting the present invention to the precise and detailed specific structures shown in the figures and specifically described hereinbefore. Rather, the real invention is intended to include virtually all substantially equivalent constructions and/or methods embodying the basic teachings and inventive concept of the present invention.

1 claim:

1. The combination of: a vending machine provided with an upstanding framework means including a plurality of pairs of upstanding, substantially parallel corner post members having facing receiving channel portions, at least certain of which are provided with and slidably receive and engage side edge portions of corresponding panel means defining and comprising a merchandize receptacle therewithin, one of said pairs of corner post members and the corresponding facing receiving channel portions being provided with and slidably receiving and engaging side edge portions of a panel means comprising an amusement device, said vending machine being provided with a coin-receiving and coin-storing vending machine mechanism actuating and operating means positioned below said merchandise receptacle and said one of said panel means comprising said amusement device and further being provided with coupling adapter means positioned above said coin-receiving and coin-storing vending machine mechanism actuating and operating means and below said upstanding framework means, said multiple panel means slidably carried thereby and said merchandise receptacle defined therewithin, and effectually vertically joining and coupling same together in a controllably disassemblable manner, said amusement device comprising amusement means having an upper end provided with coin ingress aperture-defining means, having a lower end provided with coin egress aperture-defining means, and having vertically positioned between said coin ingress means and said coin egress means random-coin-positioning means and result-indicating means operable in a perceptible indicating manner in correspondence with the output positioning of a coin passing from said coin ingress means to said coin egress means through said random-coin-positioning means therebetween and through said coin egress means and a through slot means provided in a corresponding edge portion of said coupling adapter means and into said coin-receiving and coin-storing vending machine mechanism actuating and operating means.

2. An amusement device as defined in claim 1, including an auxiliary coin input-chute cover means attached to said vending machine in exterior covering relationship with respect to said coin-receiving and coin-storing vending machine mechanism actuating and operating means for preventing the direct exterior feeding of coins thereto apart from those fed thereto from the coin egress means of said amusement means.

3. Apparatus as defined in claim 1, wherein said amusement means takes the form of panel means of substantially rectangular elevational configuration, with said result-indicating means being positioned adjacent to the bottom thereof and immediately above said coin-egress means.

4. Apparatus as defined in claim 3, wherein said amusement panel means comprises a transparent front panel window member, a rear panel back member provided on its front with removably interchangeable intelligence-carrying information display means visibly displaying through said front panel window member information corresponding to and defining the problem or game of the amusement means and information corresponding to and defining the result achieved by positioning of a coin with respect thereto in response to passage of the coin through the random-coin-positioning means.

5. Apparatus as defined in claim 4, wherein said random-coin-positioning means also includes slug-rejection means effectively operable in response to departure beyond a predetermined permissible deviation from a predetermined normal value of some measurable physical property of a coin or slug to by-pass all slugs which fall outside of permissible limits along slug-ejection by-pass means whereby to prevent such a slug from passing through said coin egress means and said coin-receiving and coin-storing vending machine mechanism actuating and operating means of said vending machine.

6. An amusement device as defined in claim 4, wherein said pair of facing receiving channel portions of said pair of corner post members slidably receiving said edge portions of said panel means comprising said amusement device of define and define mounting edge means for removably mounting said front panel window member, said rear panel back member, and said information display means of the complete amusement means for facilitating the easy mounting and dismounting thereof with respect to said vending machine and the easy removal.
and interchanging of the intelligence-carrying information display means so that the nature of the amusement means can be changed at will with respect to said vending machine.

7. An amusement device as defined in claim 6, including auxiliary coin input-chute cover means attached to said vending machine in exterior covering relationship with respect to said coin-receiving and coin-storing vending machine mechanism actuating and operating means for preventing the direct exterior feeding of coins thereinto apart from those fed theretofrom the coin egress means of said amusement means.

8. Apparatus as defined in claim 3, wherein said amusement panel means comprises a transparent front panel window member, a rear panel back member provided on its front with removable interchangeable intelligence-carrying information display means visibly observably displaying through said front panel window member information corresponding to and defining the problem or game of the amusement means and information corresponding to and defining the result achieved by the positioning of a coin with respect thereto in response to passage of the coin through the random-coin-positioning means and further including spacer means for positioning said front panel window member a predetermined distance frontwardly of said rear panel back member whereby to define a narrow coin-passage open region therebetween.

9. Apparatus as defined in claim 8, wherein said spacer means comprises a plurality of vertically and laterally separate and discrete coin-abutment members normally adapted to extend between said front panel window member and said rear panel back member for closing the corresponding portion of said coin-passage open region and effectively defining and comprising said random-coin-positioning means.

10. Apparatus as defined in claim 8, wherein said spacer means comprises a plurality of vertically and laterally separate and discrete coin-abutment members integrally carried by the rear surface of said front panel window member and normally adapted to extend between said front panel window member and said rear panel back member for closing the corresponding portion of said coin-passage open region and effectively defining and comprising said random-coin-positioning means and being positioned in vertically alternately staggered and offset relationship so as to prevent the direct downward passage of a coin through said random-coin-positioning means.

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WALTER SOBIN, Primary Examiner.