SELECTIVE COIN SLIDE

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The present invention relates to a selective coin slide, that is, a coin slide which may be actuated only upon the inserting of a proper coin, or a token specifically designed to meet certain predetermined characteristics of the coin slide. Otherwise stated, the coin slide design is keyed to the token design, so that tokens not specifically designed to operate a particular coin slide will be rejected thereby, making it impossible to obtain free play with the use of tokens other than those specifically keyed to operate the correspondingly keyed coin slide.

An object of the invention is to provide means whereby tokens originating with one source, are unacceptable to coin slides from a different source, so that, for example, a particular coin controlled machine dispensing goods or services cannot be operated by tokens intended for use in another coin controlled machine, the machines or their contents being possibly under different ownerships. In any case, however, the coin slides may be actuated upon the insertion of a proper coin of the realm.

To cite and example of a problem to be met, let it be assumed that rivals in business operate machines in self-service laundries, wherein patrons obtain the services of washing machines, dryers, and the like, by inserting coins in the coin-controlled machines. In order to stimulate his business, one of the rival owners or operators of such machines may distribute to prospective patrons, a limited number of advertising tokens which may be used to obtain free or cut-rate services in connection with the advertiser's machines.

Such advertising plan may have considerable merit if properly and honestly executed, but difficulties arise when the patrons or representatives of the advertiser indiscriminately use the advertiser's free tokens in the machines of rival laundries, the owners or operators of which are thereby burdened with the expense of providing free laundry service in return for the tokens distributed by the rival advertiser. Such practice, if indulged in on a massive scale, could soon become a tool for destroying a competitive business, at the nominal cost of a flood of inexpensive free tokens distributed by one business operator for use in the machines of a rival business operator.

Under presently existing laws, the use of tokens as above set forth is permissive, until such time as the injured party enters injunctive proceedings against the infringers of the token distribution. However, relief is not complete due to the probable existence of many tokens unused and in the hands of the public at the time of the injunctive relief, and further, tokens from other sources may exist as slugs capable of being used in complainant's machines to his damage and maybe annul the injunction.

To overcome the inequities of systems such as that above cited, the present invention proposes to make it impossible, or at least fraudulent, for one businessman to issue tokens that may operate another businessman's machines. This is accomplished by so designing the coin slides of the machines of the potential victim, that his coin slides will accept only a certain authorized form of token, or a legitimate coin.

The invention proposes also, means whereby an infinite number of token designs may be produced, each keyed to a specific coin slide or group of coin slides, so that the owners or operators of all forms of coin-operated machines may be individually protected against the fraudulent or improper usage of slugs or tokens originating from sources other than the legitimate owner or operator of the machines. While machines equipped with

the protective means of the invention will reject all unauthorized tokens or slugs, they will nevertheless accept proper coins of the realm. The foregoing is one of the primary objectives of the invention.

Another object of the invention is the accomplishment of the advantages stated, with the use of simple and inexpensive means. The foregoing and other objects are attained by the means described herein and illustrated upon the accompanying drawings, in which:

FIG. 1 is a plan view of a coin slide embodying one form of selective means designed according to the present invention.
FIG. 2 is a plan view of the form of token which is keyed for operating the coin slide of FIG. 1.
FIG. 3 is an enlarged fragmental plan view of the FIG. 1 coin slide, showing a portion thereof in detail, and with a proper coin inserted.
FIG. 4 is a view similar to FIG. 3, showing the token of FIG. 2 inserted in the coin slide.
FIG. 5 is a plan view of a second form of token.
FIG. 6 is a side elevation view of the token of FIG. 5.
FIG. 7 is a cross-sectional view taken on line 7—7 of FIG. 6.
FIG. 8 is a fragmental plan view of a coin slide designed for and accepting the token of FIG. 5.
FIG. 9 is an enlarged cross-sectional view taken on line 9—9 of FIG. 8, the token being omitted.
FIG. 10 is a view similar to FIG. 9, showing the token of FIG. 5 inserted in the coin slide.
FIG. 11 is a plan view of a third form of token.
FIG. 12 is a plan view of a fourth form of token.
FIG. 13 is a side elevation view of the token illustrated by FIG. 11.
FIG. 14 is a cross-sectional view taken on line 13—13 of FIG. 13.
FIG. 15 is a fragmentary plan view of a coin slide designed for and accepting the token of FIG. 11.
FIG. 16 is an enlarged fragmentary cross-sectional view taken on line 16—16 of FIG. 15, the token being omitted.
FIG. 17 is a view similar to FIG. 16, showing the token of FIG. 11 inserted in the coin slide.
Referring to FIG. 1, of the drawings, 20 indicates a reciprocable slide plate movable in opposed guides 22 (FIG. 9), usually by means of a handle 24, the purpose of the slide plate being to carry a coin or token through various testing devices prior to acceptance thereof, and dispensation of a service or commodity. As will be understood, the butt end 26 of the slide plate is adapted to trip a release mechanism for dispensing goods or services whenever the coin slide accepts proper coin or token, permitting a full advancement of the slide plate to actuate the release mechanism.

The coin slide may include a transverse mounting plate 28 adapted to cover an opening 30 of a cabinet or casing 32 to which the mounting plate is secured. The handle end of slide plate 20 is accessible exteriorly of the cabinet, while the body 34 of the coin slide is concealed and inaccessible. The body 34 from which the guides 22 extend, carries various coin or token testing devices which may be considered common and usual in association with coin slides, such testing devices being of no moment or concern with respect to the present invention.

Slide plate 20 is provided with a coin-receipient opening or well 36, which in the fully retracted position of the slide plate, is exposed forwardly of mounting plate 28 for receiving a coin or token deposited by a patron. With a proper coin or token deposited in the well, the slide plate may be advanced by means of handle 24, the well carrying the coin or token into the body portion 34 of the coin slide for test and acceptance. Pushers 38
and 40 attached to the slide plate, serve to advance or retract coins or tokens along a stationary support 42 underlying the slide plate at opposite sides of the mounting plate 28. The support may be provided with a constricted opening 44 as usual, through which a finger may be inserted from below in order to dislodge a coin or token from the well in the retracted position of the slide plate. Openings such as 44 are generally provided to enable a patron to retrieve a coin or token inadvertently deposited, or refused by the coin sliding testing devices.

As indicated upon FIGS. 1 to 4, the coin-receptive opening or well 36 is basically circular in form, so as to nicely receive a legitimate coin of a given denomination. Such a coin is indicated at 46 in FIG. 5. The opening well 36 may have a perimeter provided with outwardly directed keyways or notches 48, in such numbers and spacings from one another as to receive a complementarily keyed token, exemplified by FIG. 2. The token 50 of FIG. 2, it will be noted, is a generally flat disc which will fit nicely into the well or opening 36 of the slide plate, provided that the keys or projections 52 thereon match or register with the keyways or notches 48 of the well or opening 36 of the slide plate. The keys or projections of the token just described are extended beyond the perimeter of the circular body thereof, and may be formed by merely swaging the piece to display portions of the perimeter in exact correspondence with the locations of the keyways formed in the well or coin-receptive opening 36 (FIG. 4).

By reason of the well and token treatment above described, the slide plate is keyed to receive a particular form of token, such as may be authorized by the owner or operator of a dispensing machine with which the machine is equipped. Accordingly, unauthorized tokens or tokens which are not keyed in exact correspondence with the coin slide opening or well, are destined for refusal unless the tokens are circular and meet all the tests which will pass a legitimate coin. Such coin-like tokens, as was previously explained, would not be issued by a competitor in business, without exposing himself to legal consequences.

As will readily be apparent, tokens of the general character illustrated by FIG. 2 are subject to many variations which will key them to individual coin slides variously modified. For example, such tokens may have their keys 52 spaced relatively in an infinite number of ways. Also, the number of keys provided is subject to change or selection, thereby further individualizing the token and corresponding to peripherally spaced slide well. In every instance, and regardless of the key structure employed, all such keyed coin slides will accept proper coins of a denomination for which they are originally designed.

From the foregoing, it will be understood that a great number of proprietors of coin-controlled machines may be accommodated, each having his individual keyed arrangement, so that the tokens issued by one cannot be used for operating the machines of another proprietor. Still, the machines of all proprietors will be operative with the use of proper coins of the realm. In this connection, it may be noted that the coin slides readily may be adapted for use in foreign countries wherein coins generally are square or of other shapes, by initially designating the slide plates to receive the foreign coins and then proceeding to apply the teaching of the present invention.

An alternative form of the invention is illustrated by FIGS. 5 to 10, wherein the coin-receptive opening or well 60, without notches or keyways, is made to nicely receive a legitimate coin of the realm, and means other than the slide plate serve to key the coin slide to a token of particular design.

Referring to FIGS. 5, 6 and 7, it is noted that the token 62 is a circular disc of the same diameter as a legitimate coin, but differs therefrom in that the token carries upon its opposite face the diametral extending ribs or keys 64 and 66, which may be integral with the body of the disc. The ribs or keys may be caused to distinguish or individualize different tokens, by imparting to the ribs or keys various differences in height and/or width dimensions.

To key any particular ribbed token to a selected coin slide, it is necessary only to cut away portions of the mounting plate 28 above and beneath the slide plate 20, to provide the notches or keyways 68 and 70 which will accommodate the keys of the tokens as the tokens are advanced to the testing devices by inward movement of the slide plate. Unless the keyways 68 and 70 match the token keys 64 and 66, the token may not be advanced past the mounting plate 28. It is therefore evident that with this key arrangement, a number of proprietors of coin-controlled machines may be accommodated, each having his individual keyed arrangement, so that tokens issued by one cannot be used unfairly for operating the machines of another proprietor.

In the modification illustrated by FIGS. 11 to 17, token 72 is of legitimate coin diameter to nicely fit the well or coin-receptive opening 60, and instead of having upper and lower keys or ribs such as FIG. 7 shows, it has a single key or rib 74 diametrically disposed. The key or rib on differently constituted tokens of the FIG. 14 variety may be provided with ribs or keys of any other desired shape. The height thereof also may be varied for individualizing the tokens. In order to correspondingly individualize the coin slide, its mounting plate or some other portion of the coin slide body may be cut away and shaped to pass the token, as indicated at 76, so that advancement of slide plate 20 may cause the token past the mounting plate and into the usual testing devices.

As in the previously described forms of the invention, the mounting plate 28 may be notched or cut away as at 78, to permit passage of the pushers 38 and 40 as the slide plate is reciprocated by means of handle 24. The operation of using tokens of the FIG. 14 variety is substantially the same as that described in connection with FIG. 7, and the purposes and advantages are the same. As in all other forms of the invention, the apparatus will accept in addition to the specially keyed tokens, proper coins of the realm.

FIG. 12 indicates as a modification, a polygonal token 80 which is characterized by many edge facets 82. In designing a slide plate to accommodate such a token, the slide plate will be drilled to accommodate a legitimate coin whose radius is substantially equal to the shortest distance between a face 82 and the center point of the token. Then the drilled hole or well of the slide plate will be altered by cutting away the metal surrounding the hole, to render the hole receptive of the several spires or corners 84 of the token which define the edge facets 82. Thus, the slide plate opening or well is adapted to receive either a proper coin, or a token of polygonal shape designed to fit the well.

It will readily be evident from the foregoing explanation, that a slide plate well 60 shaped to accept a twelve-sided token, for example, will not accept one having a different number of sides or facets. Accordingly, the polygonal type tokens may be keyed for acceptance by individually designed coin slide plates, so that the token of one proprietor will not be usable unfairly to operate the coin-controlled machines of another proprietor identified by a token and slide plate of differing polygonal shape. By altering the number of facets 82, and the shape thereof, an infinite number of keyed arrangements may be produced identifying various machine proprietors and ensuring protection against unauthorized use of tokens in the machines of all proprietors.

It is to be understood that various modifications and changes in the structural details of the apparatus may be resorted to, within the scope of the appended claims, without departing from the spirit of the invention.
What is claimed is:

1. The combination of a coin slide and keyed token for authorized use therewith, of a mounting plate, a body portion integral with one side thereof and including coin testing means, said mounting plate having an elongate horizontal slot therethrough, the slot having upper and lower edges, an elongate slide plate in and movable rectilinearly through said slot, said slide plate having a circular well to receive coins and tokens for advancement thereby through said slot to said testing means, said well depth and coin thickness being substantially equal, a guide and support means for said slide plate, a circular token of a diameter to fit in and conform to the diameter of said well, said token having a key rib diametrically of one face thereof, and means for rendering the slide plate operative with a keyed token in the wall thereof, consisting of a recess formed in and across one of said edges of said slot and dimensioned to permit said key rib to move therein and beyond said mounting plate.

2. The invention according to claim 1, wherein said slot further has a recess formed in the other one of said edges and said token has a key rib on and diametrically of the other face thereof parallel with the first rib.

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