MAGNETIC RECEPTACLE FOR KEYS AND THE LIKE

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ABSTRACT

A receptacle for holding keys and the like includes a section of magnetically susceptible material formed in the walls of the receptacle. Keys are mounted to holding devices connected to magnets which move along predetermined paths associated with the magnetically susceptible material. Positioning means on the external surface of the receptacle connect to the magnets so that the keys can be raised or lowered from the receptacle without having to open the receptacle, by adjusting the positioning means on the outside of the case.

10 Claims, 7 Drawing Figures
MAGNETIC RECEPTACLE FOR KEYS AND THE LIKE

BACKGROUND OF THE INVENTION

1. Field of the Invention
This invention relates to receptacles for keys and the like and, more particularly, to key cases in which access to a desired key can be obtained without opening the case.

2. Description of the Prior Art
Many key cases have been produced which provide access to a desired key without requiring that the key case be opened. However, the mechanism for holding the keys within these cases when access is not desired and extracting the returning individual keys from the closed case is often fairly complex and delicate.

For example, many of the prior art devices have springs or spring-type mechanisms, which are subject to failure and must be treated with an amount of care not often possible in their practical use. Additionally, these mechanisms, because of their complexity, are relatively expensive. Further, the complexities of the prior art devices often result in malfunctioning the devices so that the keys cannot be extracted or are jammed in the down position, rendering the case inoperative, or at least inconvenient to carry.

SUMMARY OF THE INVENTION

To overcome the problems set forth in the prior art, the present invention provides a receptacle for keys and the like having a body of magnetically susceptible material in the case, with guide paths through the walls of the case adjacent the magnetically susceptible material. Keys are connected to magnetic means held in place by their attraction of the magnetically susceptible material. Positioning means are connected to each magnetic means and extend through each of the guide paths to connect with protrusions on the exterior surface of the key receptacle, so that a key can be extracted from or withdrawn into the receptacle by adjusting the positioning means on the outside of the receptacle.

Accordingly, it is an object of the present invention to provide a simplified apparatus for positioning an individual item from a receptacle without opening the receptacle.

Another object of the present invention is to provide a case for keys and the like which affords access to a single item within the case without opening the case, and which is reliable in operation.

It is a further object of the present invention to provide a case for keys and the like which allows access to a single item within the case without opening the case, and which is inexpensive to fabricate.

Yet another object of the present invention is to provide a case for keys and the like which allows access to a single item within the case without opening the case, in which the mechanism for positioning the item adds strength to the structure of the case.

It is still another object of the present invention to provide a case for keys and the like which allows access to a single item within the case without opening the case, and which does not have any delicate moving parts.

A further object of the present invention is to provide a case for keys and the like which allows access to a single item within the case without opening the case, and which operates by the laws of magnetism.

Yet another object of the present invention is to provide a case for keys and the like which allows access to a single item within the case without opening the case, and which can be easily operated with one hand.

Still a further object of the present invention is to provide a case for keys and the like which allows access to a single item within the case without opening the case, and which is resistant to jamming.

Another object of the present invention is to provide a case for keys and the like which allows access to a single item within the case without opening the case, and which is relatively small in size.

Other objects and advantages will be apparent from the following description of an embodiment of the invention and the novel features will be particularly pointed out hereinafter in connection with the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a front elevation of a key case built in accordance with the teachings of the present invention.

FIG. 2 is a side elevation of FIG. 1.

FIG. 3 is a top elevation of FIG. 1.

FIG. 4 is a partial view, taken along lines 4—4 of FIG. 3.

FIG. 5 is a rear view of the key case shown in FIG. 1, with the case in the open position.

FIG. 6 is a perspective view from the front of the key case shown in FIG. 1.

FIG. 7 is a view taken along lines 7—7 of FIG. 6.

DESCRIPTION OF THE PREFERRED EMBODIMENT

FIGS. 1 through 7 show a key case, generally indicated at 10 having a front panel 12, and overlapping side panels 14 and 16, adapted to form a closed container with snap fastening means 18 and 20.

As shown in FIG. 3, inner flat 16 has a separating section 22 adapted to coact with the front panel section 12 when the case is closed, to divide the case into separate compartments 24 and 26. The front panel of the case includes a section of magnetically susceptible material 28 (in other words, material which is capable of being attracted by a magnet), which is fixed to the remaining portion of the front panel by any convenient method, such as gluing, stapling, stitching, etc. The magnetically susceptible material can be any material capable of being attracted by a magnet as, for example, a sheet of iron or any of the magnetically attractive plastics.

Two guide channels or slits 30 and 32 are formed in the panel of magnetically susceptible material and communicate the exterior of the case with the interior of the case. Pins 34 and 36 extend through slits 30 and 32 respectively to connect with magnets 38 and 40 respectively forming protrusions on the outside of the case, and with mounting means 42 and 44 on the inside of the case. Keys 50 and 52 are attached to key rings 46 and 48 which are connected to mounting means 42 and 44, connected, in turn, to magnets 38 and 40.

The magnets, in the shape of buttons, are held in position on the panel of magnetically susceptible material by the attraction of the two materials. When it...
is desired to extract a key, as, for example, key 50 shown in FIGS. 1 and 3, the magnetic button 38 is simply pushed along slit 30 in the panel of magnetically susceptible material it until it reaches the bottom of the slit, in which position the key is fully exposed and accessible. To return the key to the inside of the case after it has been used, the magnet is merely pushed to the upper end of the slit, as, for example, magnet 40 shown in the raised position in FIGS. 1 and 6.

Since most house keys are of brass or aluminum, they will not be affected by the presence of the magnets.

It should be pointed out that although the embodiment described in the present application sets forth a construction in which the magnets ride directly on the magnetically susceptible material, this need not be the case. For example, a layer of magnetically transparent material can be interposed between the magnets and the magnetically susceptible material without substantially affecting the performance of the device. The attraction between the magnet and the magnetically susceptible material would still be present and the magnet would just be drawn against the magnetically transparent material instead of directly against the magnetically susceptible material.

It should also be pointed out that the magnets need not be placed on the outside of the key case. Instead, the magnets could be located within the case and protrusions could be fastened to the pins extending through the slits to position the magnets from the outside of the case through the slits in the case.

It should also be noted that the magnetically susceptible material need not extend the entire length of the key case, nor be one continuous piece, for all applications of the device. For example, if it is only desired to have keys held in the case held in the uppermost position with no intermediate positions, then the magnetically susceptible material need only be placed near the upper portion of the case, so as to hold the mounting means in the upper position. Further, several individual strips of magnetically susceptible material could be positioned to form the slits.

Additionally, keys can be positioned in the case so that they can be extracted by moving the positioning means to opposite ends of a single slit. For example, if the keys were placed in proper position with relation to each other, moving the positioning means to one end of the slit would project one key from the case while moving the positioning means to the opposite end of the slit would project a different key from the case. In such a construction, positioning of the positioning means in the middle position would fix both keys within the case.

It should be pointed out that the simplicity of construction and operation of the device insures trouble-free performance, and allows the device to be operated with one hand.

It will be understood that various changes in the details, materials and arrangements of parts which have been herein described and illustrated in order to explain the nature of the invention may be made by those skilled in the art within the principle and scope of the invention as expressed in the appended claims.

What is claimed is:

1. A receptacle for keys and the like comprising:
   a body of magnetically susceptible material;
   at least one magnetic member adapted to coact with at least one surface of the magnetically susceptible material;
   positioning means connected to each magnetic member to position it with relation to the surface of the magnetically susceptible material;
   mounting means connected to each magnetic member adapted to support objects held in the receptacle; and
   closure means connected to the magnetically susceptible material to enclose the mounting member.

2. The receptacle for keys and the like according to claim 1, wherein the positioning means includes guide means associated with the body of magnetically susceptible material to guide the movement of each magnetic member with relation to the surface of the magnetically susceptible material.

3. The receptacle for keys and the like according to claim 2 wherein the guide means include:
   at least one passage extending through the closure means; and
   pin means connected to each magnetic means and extending through the passage in the closure means.

4. The receptacle for keys and the like according to claim 3 wherein:
   the passage extending through the closure means is at least partially defined by the body of magnetically susceptible material; and
   each pin means extending through the passage means is connected to a protrusion on the external side of the closure means.

5. The receptacle for keys and the like according to claim 4 wherein the body of magnetically susceptible material includes at least one flat, plate-like member.

6. The receptacle for keys and the like according to claim 5 wherein the body of magnetically susceptible material includes a flat plate having at least one passage formed therein.

7. The receptacle for keys and the like according to claim 6 wherein the magnetic member and the protrusion are on the external surface of the closure means.

8. The receptacle for keys and the like according to claim 7 wherein the closure means includes:
   a front panel connected to the plate of magnetically susceptible material; and
   two side panels adapted to overlap to close the receptacle.

9. The receptacle for keys and the like according to claim 8 wherein:
   the closure means includes fastening means on the side panels adapted to fasten the side panels together; and
   separating means connected to at least one of the side panels to separate the receptacle into compartments when the receptacle is closed.

10. The receptacle for keys and the like according to claim 9 further comprising:
   an array of magnetic members
   pin means extending from each magnetic member through a corresponding groove in the body of magnetically susceptible material;
   mounting means connected to each pin means and a key holding member connected to each mounting means.