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(54) CONTAINER FOR BLANK OPTICAL DISKS

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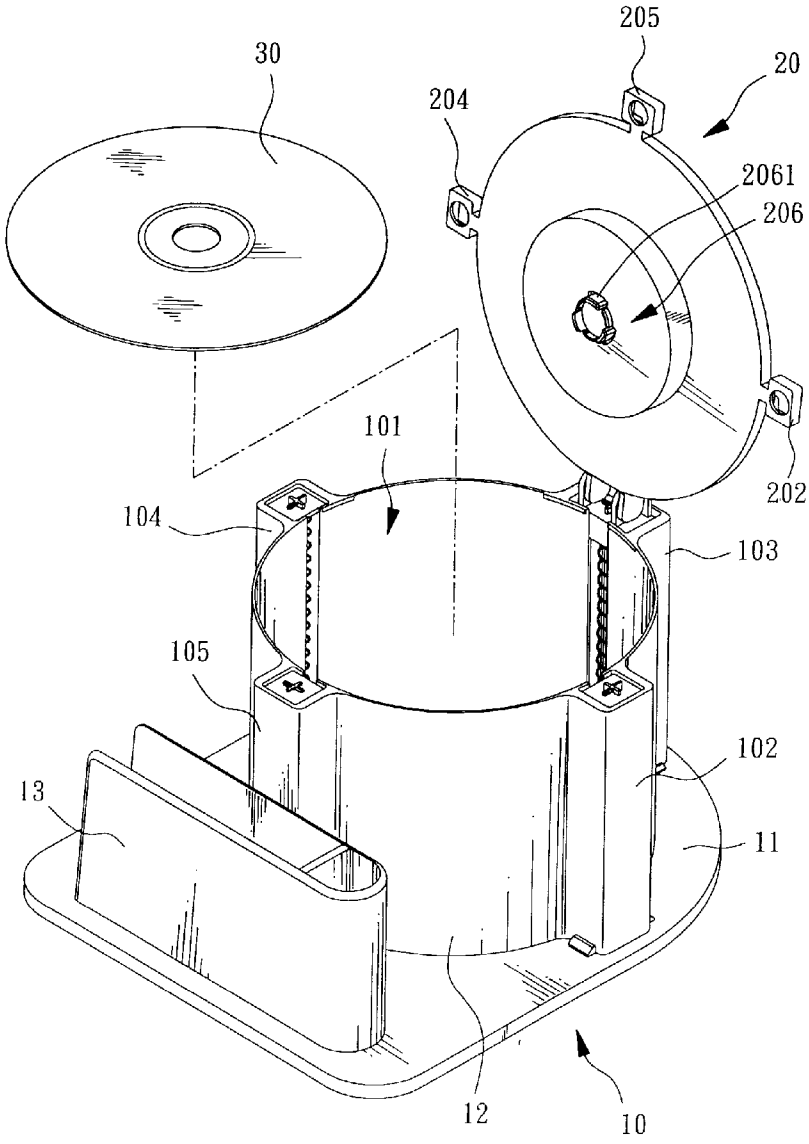
(57) **ABSTRACT**

A blank optical disk container for holding a plurality of blank optical disks allows the blank optical disks be retrieved individually and easily from the container. The container has a case lid movably mounted upon it. The case lid has claws located on the bottom side thereof to clip and grip the center opening of a blank optical disk. The case lid may be closed and depressed downwards to grip one blank optical disk with its claws, then the case lid may be opened to allow the blank optical disk to be removed from the case lid.



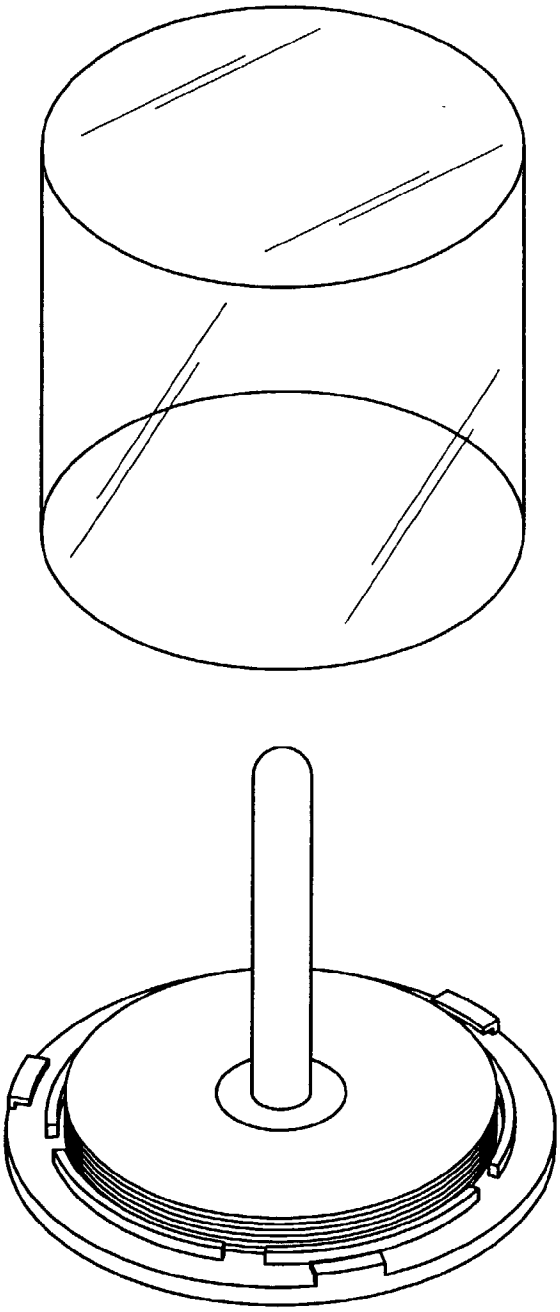


FIG. 1
(PRIOR ART)

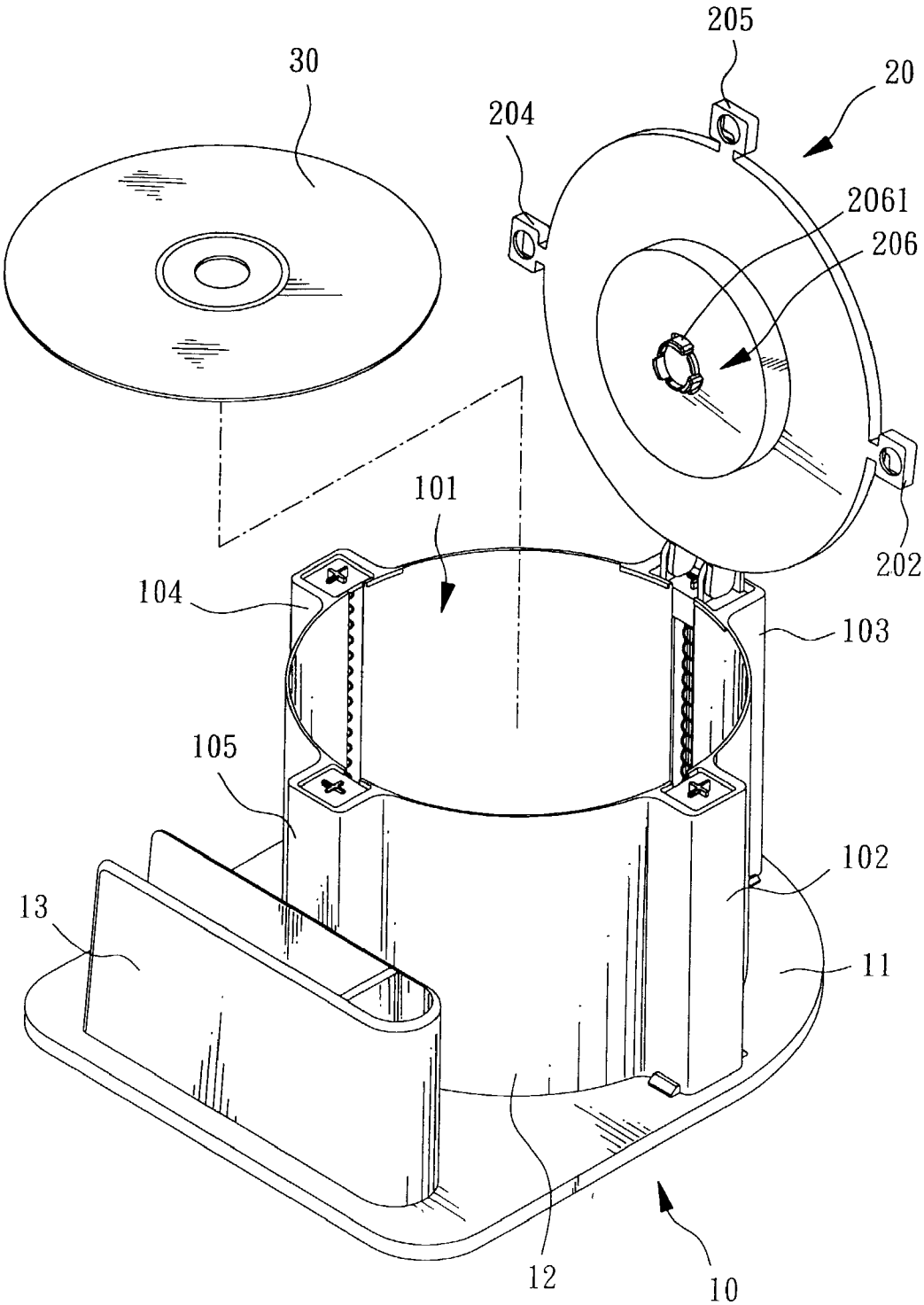
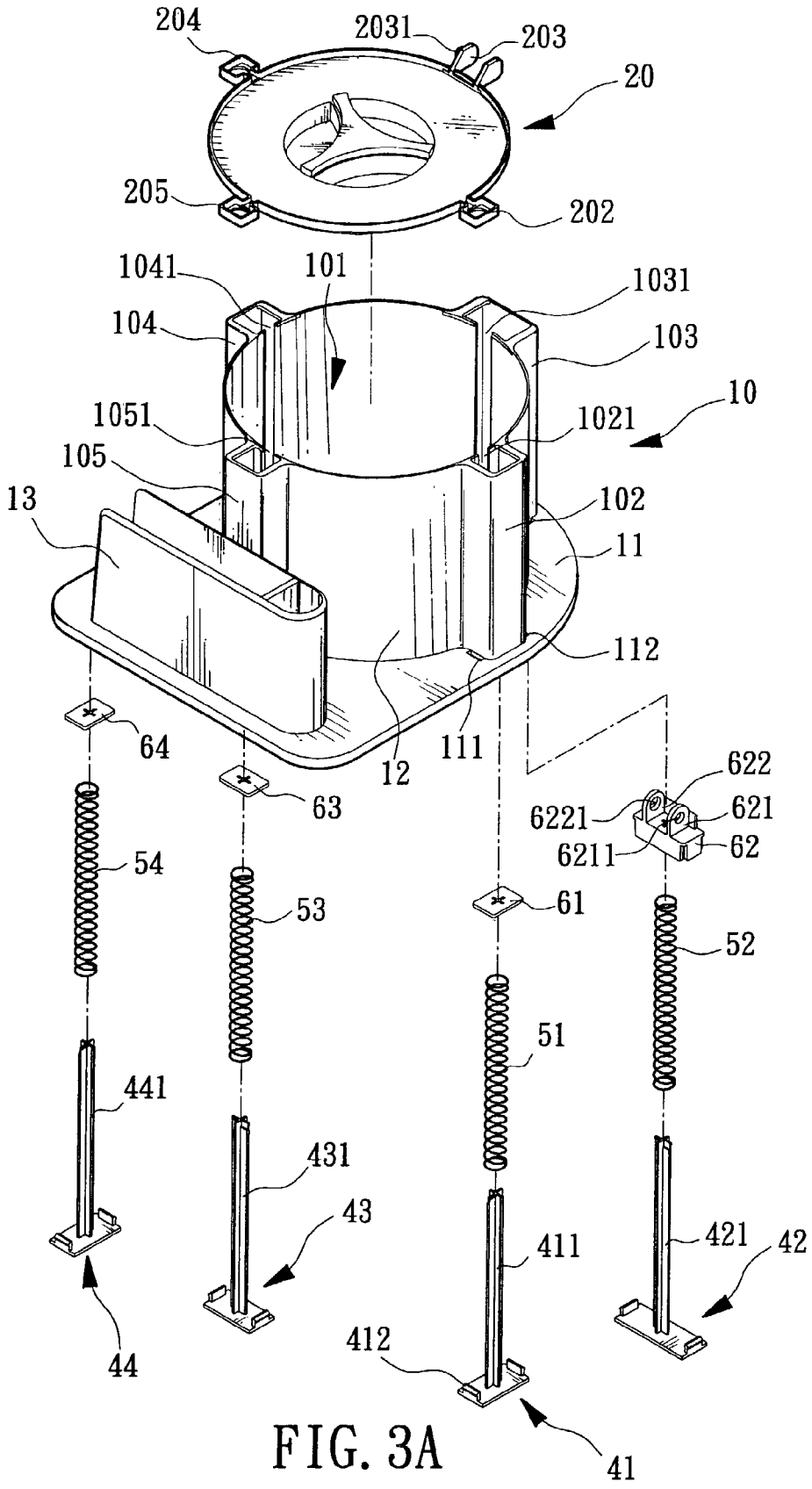


FIG. 2


204
2031
203
20
205
202
1041
101
1031
104
103
10
1051
1021
105
13
102
11
112
64
12
111
63
622
6221
621
6211
62
54
53
61
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51
441
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411
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412
41

FIG. 3A

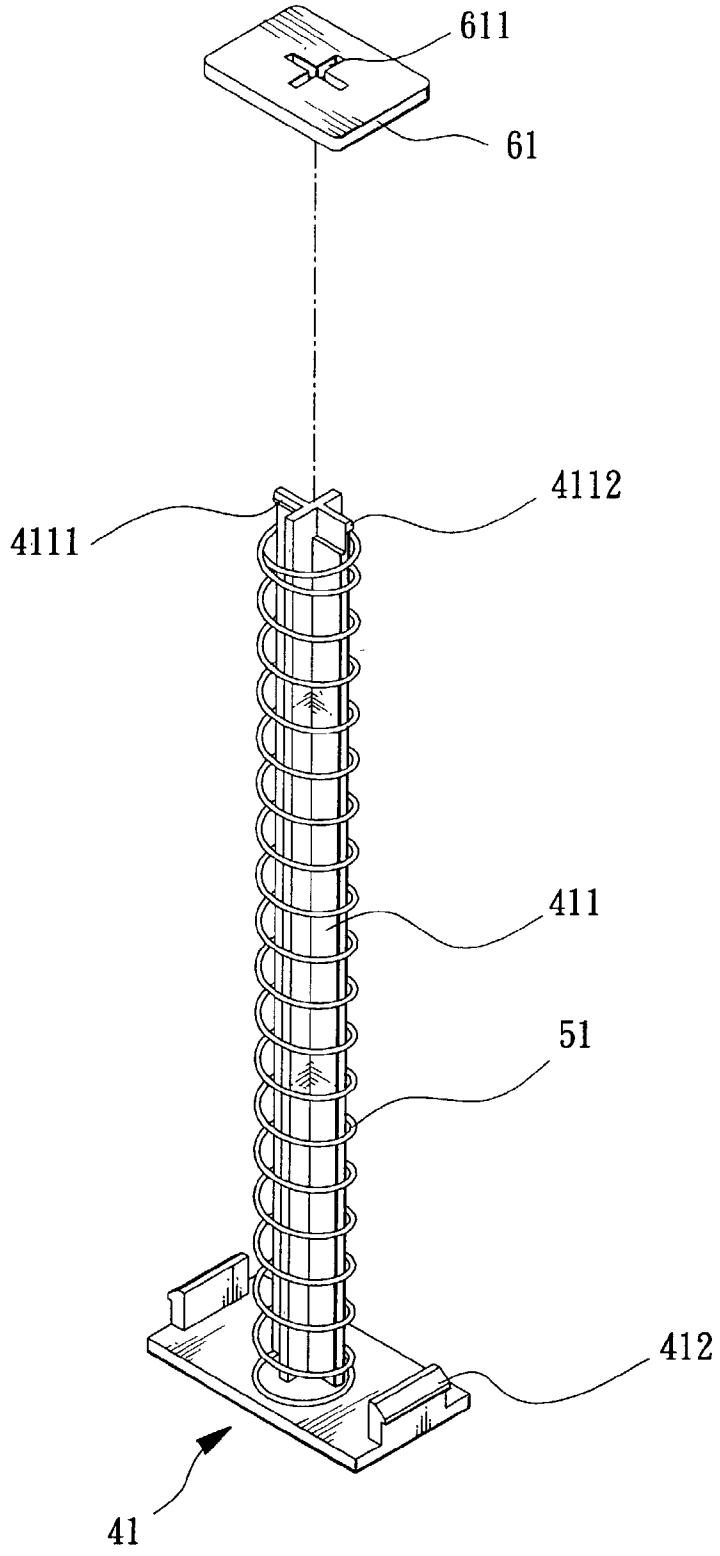

FIG. 3B

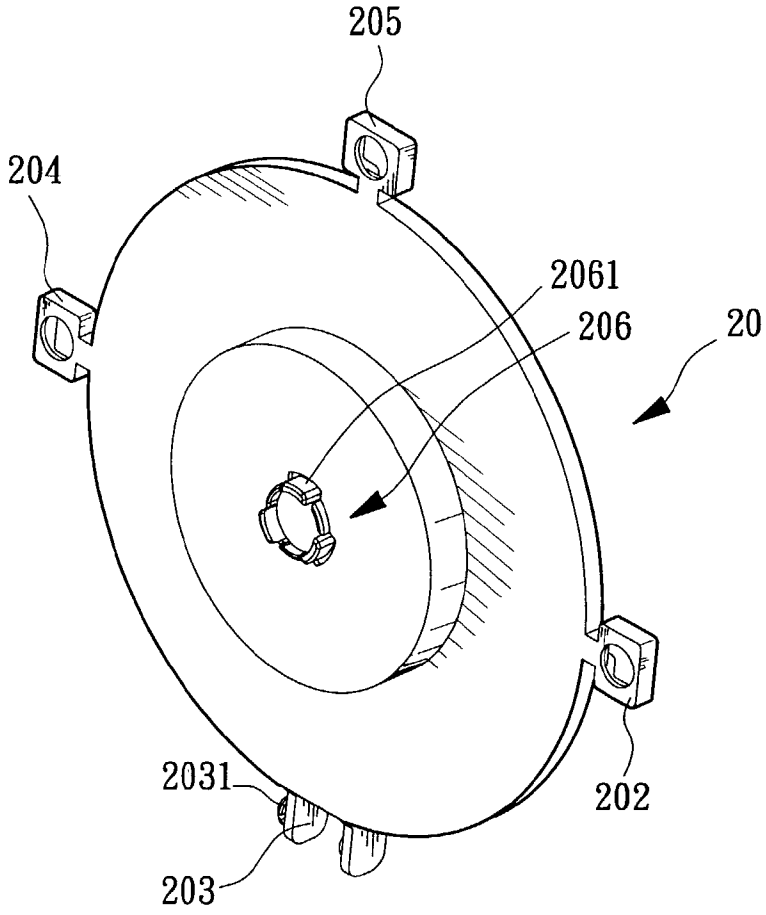

FIG. 4A

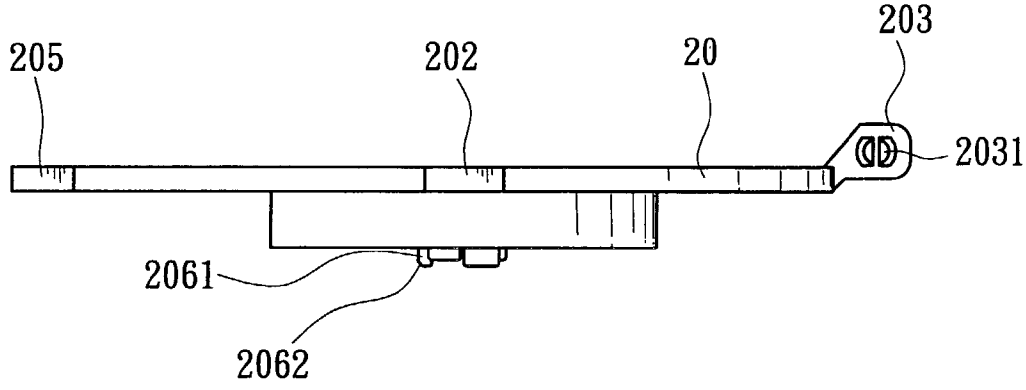

FIG. 4B

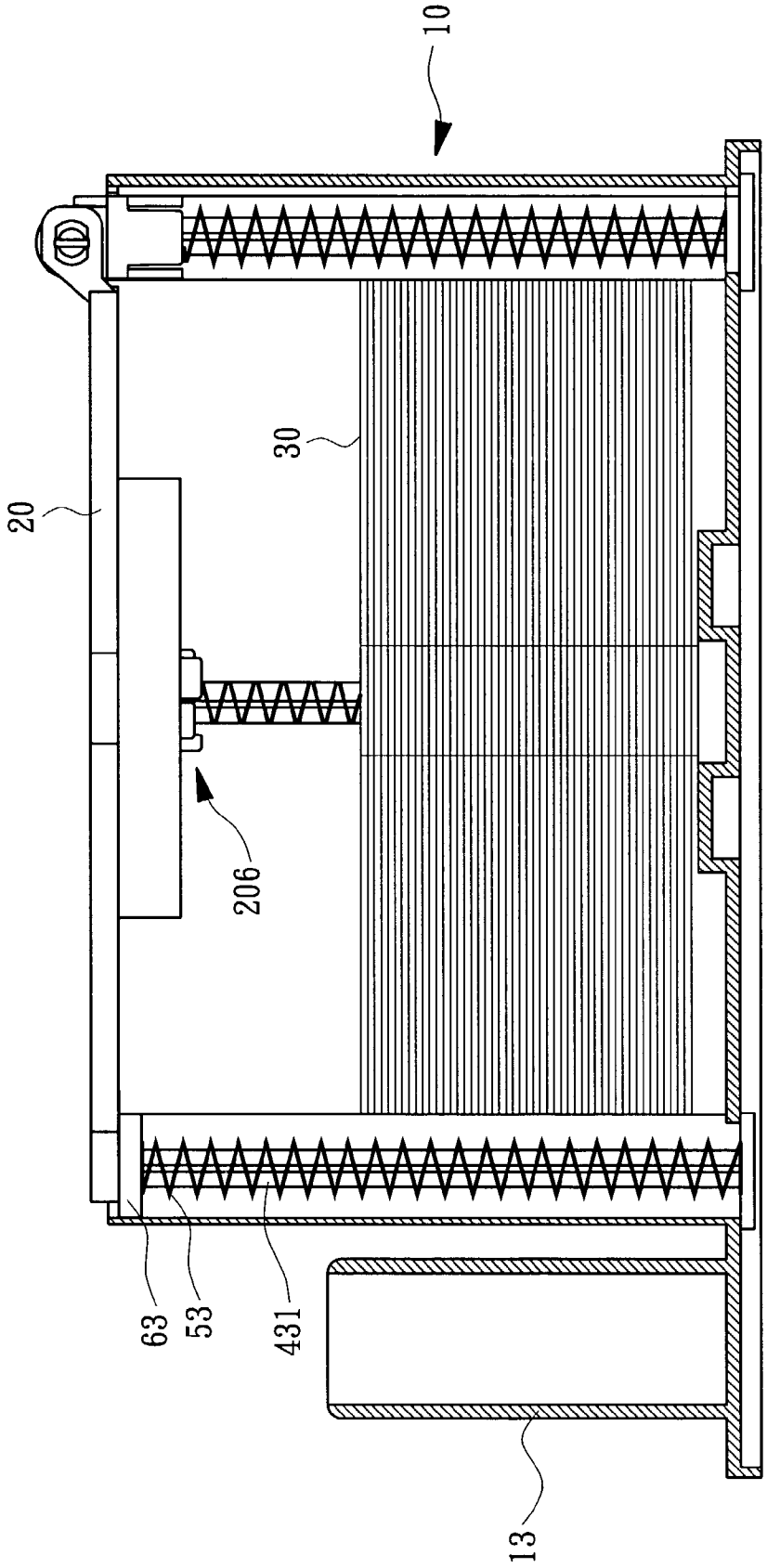

FIG. 5A

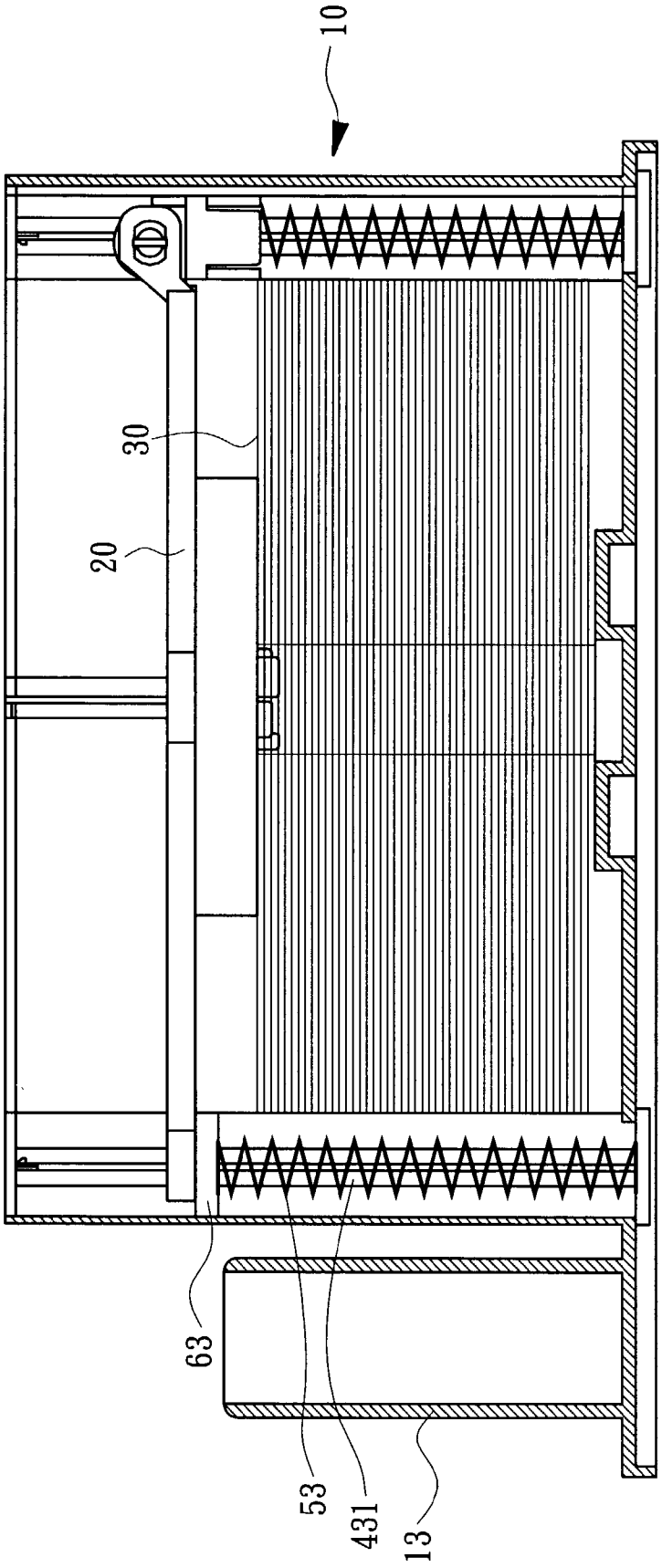

FIG. 5B

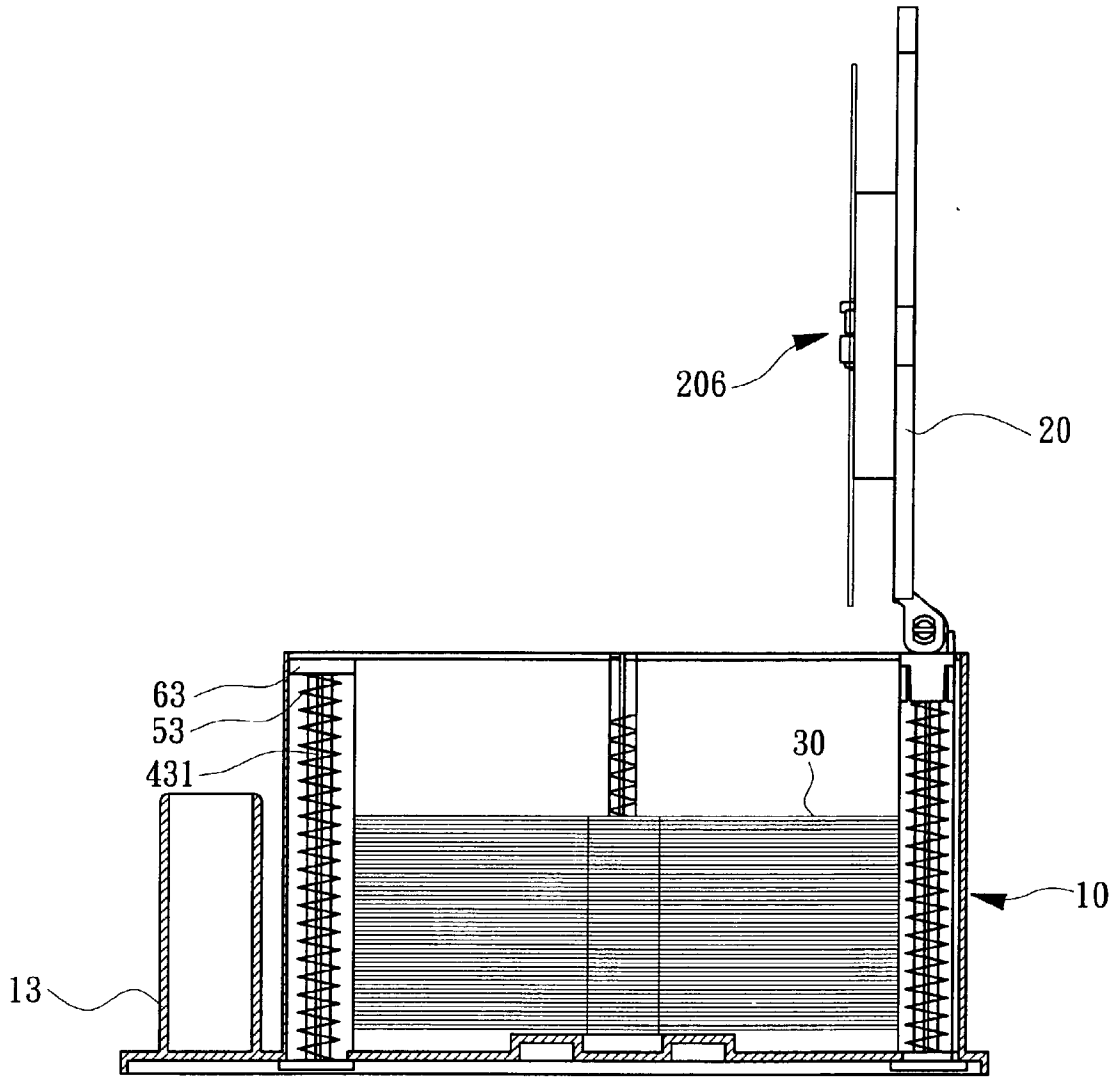

FIG. 5C

CONTAINER FOR BLANK OPTICAL DISKS

FIELD OF THE INVENTION

[0001] The invention relates to a container for blank optical disks, and particularly to a container that can hold a plurality of optical disks and has a case lid for retrieving individual blank optical disks.

BACKGROUND OF THE INVENTION

[0002] Optical disks are commonly used data recording media for storing relative large amounts of data. For instances, music, movies, and application programs are generally stored on optical disks. Optical disks that have no data recorded thereon are generally called blank optical disks. **FIG. 1** shows a conventional container for holding blank optical disks. It mainly consists of a base seat and a case. The base seat is a circular disk with a round post mounted in the center. Blank optical disks are individually coupled on the round post through an opening formed in their centers. The case is substantially a hollow cylindrical barrel, which may encase the base seat.

[0003] When users want to retrieve the blank optical disks for loading data, they have to remove the case, then take the required blank optical disks. However when multiple blank optical disks are stacked one upon another around the round post, it is difficult to remove one blank optical disk. Moreover, the round post has a certain length. When only a few blank optical disks are stacked around the round post, users have to remove the blank optical disks from the bottom section of the round post. This movement is not easy. Hence the design of conventional containers for holding blank optical disks generally is not user-friendly.

SUMMARY OF THE INVENTION

[0004] The primary object of the invention is to provide a container for holding blank optical disks that enables users to easily retrieve individual blank optical disks.

[0005] The container for holding blank optical disks disclosed in the invention consists of a case and a case lid. The case has an opening directing upwards and a housing space for holding blank optical disks. The case lid is movably located on the case and has claws located on its bottom side to clip and grip the center aperture of the blank optical disk. The case lid may be depressed downwards to connect with the blank optical disk, and claws on the bottom side of the case lid grip one blank optical disk. Then the case lid may be opened to allow users to remove the blank optical disk from the case lid.

[0006] The foregoing, as well as additional objects, features and advantages of the invention will be more readily apparent from the following detailed description, which proceeds with reference to the accompanying drawings. The drawings are only to serve for reference and illustrative purposes, and are not intended to limit the scope of the invention.

BRIEF DESCRIPTION OF THE DRAWINGS

[0007] **FIG. 1** is a schematic view of a conventional container for holding blank optical disks.

[0008] **FIG. 2** is a schematic view of the invention showing the assembled structure.

[0009] **FIG. 3A** is an exploded view of the invention.

[0010] **FIG. 3B** is a fragmentary perspective view of an enlarged structure of the invention.

[0011] **FIG. 4A** is a schematic view of the case lid of the invention.

[0012] **FIG. 4B** is a schematic sectional view of the case lid of the invention.

[0013] **FIG. 5A** is a schematic view of the invention, showing a moving condition.

[0014] **FIG. 5B** is a schematic view of the invention, showing another moving condition.

[0015] **FIG. 5C** is a schematic view of the invention, showing yet another moving condition.

DESCRIPTION OF THE PREFERRED EMBODIMENT

[0016] Referring to **FIGS. 2, 3A** and **3B**, the container for holding blank optical disks according to the invention consists of a case **10** and a case lid **20**. The case **10** is substantially a hollow cylindrical barrel, which has an opening directing upwards. The case **10** has a bottom surface **11** and a wall **12** slightly larger than the outside diameter of a blank optical disk **30**. The bottom surface **30** has a pen holder and a name clip **13** located thereon. The wall **12** forms a housing space **101** in the interior for holding blank optical disks **30**. On the perimeter of the wall **12** there are a plurality of equally spaced troughs **102, 103, 104**, and **105** extended in the axial direction. The contact surfaces between the troughs **102, 103, 104** and **105** and the wall **12** have respectively a slot **1021, 2031, 1041** and **1051**. The bottom surface **11** has a pair of latch slots **111** and **112** corresponding to each trough **102** (also applicable to troughs **103, 104** and **105**).

[0017] Inside the troughs **102, 103, 104** and **105**, there are respectively and sequentially disposed base seats **41, 42, 43** and **44**, elastic elements **51, 52, 53** and **54**, and retainers **61, 62, 63** and **64**. The base seats **41, 42, 43** and **44** have respectively extended posts **411, 421, 431** and **441** mounting thereon in the center, and a pair of first coupling hooks **412** (same for the base seats **42** and **43**) for engaging with the latch slots **111** and **112**. The elastic elements **51, 52, 53** and **54** are coupled respectively on the posts **411, 421, 431** and **441**. The posts **411, 421** and **431** are formed as a cross type. The posts **411, 421, 431** and **441** each have a top end forming a pair of second coupling hooks **4111** and **4112** (same for the posts **421, 431** and **441**). The retainers **61, 62, 63** and **64** each have a cross-shaped slot **611** (same for the retainers **62, 63** and **64**). The retainers **61, 62, 63** and **64** are respectively coupled with the posts **411, 421, 431** and **441** and are movable up or down on the posts **411, 421, 431** and **441**. The second coupling hooks **4111** and **4112** on the posts **411, 421, 431** and **441** can prevent the retainers **61, 62, 63** and **64** from separating from the posts **411, 421, 431** and **441**. In normal conditions, the retainers **61, 62, 63** and **64** are pushed by the elastic elements **51, 52, 53** and **54** to the top end of the posts **411, 421, 431** and **441**.

[0018] The retainer **62** has two pivotal lugs **621** and **622**, which each have a pivotal aperture **6211** and **6221** formed thereon.

[0019] The case lid **20** is a circular disk matching the shape of the case **10** but is slightly smaller than the housing space **101** of the case **10** and is movable in the housing space **101**. The case lid **20** has compression rings **202**, **204** and **205** formed on the perimeter thereof corresponding to the locations of the troughs **102**, **104** and **105**, and a pair of pivotal flanges **203** corresponding to the trough **103**. The pivotal flanges **203** have pivotal stub shafts **2031** located thereon to pivotally couple with the pivotal apertures **6211** and **6221** of the retainer **62**. Thus the case lid **20** can be turned about the stub shafts **2031** so that the case lid **20** may be lifted upwards or folded down to close the housing space **101** of the case **10**. In addition, the compression rings **202**, **204** and **205** have an inside diameter greater than the posts **411**, **421**, **431** and **441** so that the compression rings **202**, **204** and **205** can compress the retainers **61**, **62**, **63** and **64** and the elastic elements **51**, **52**, **53** and **54** downwards.

[0020] Moreover, the case lid **20** has a bottom surface with a multi-claw chuck **206** located in the center thereof (as shown in **FIGS. 4A and 4B**). The multi-claw chuck **206** has a plurality of spaced claws **2061** that can extend to engage with the center opening **301** of the blank optical disk **30**. The claws **2061** may be slightly compressed and retracted, or released and return to their normal condition. Each claw **2061** has a height slightly greater than the thickness of a blank optical disk **30**, and a slant surface on its front end such that the multi-claw chuck **206** can, through the claws **2061**, clip and grip one blank optical disk **30** at a time.

[0021] Refer to **FIGS. 5A, 5B** and 5C, a plurality of blank optical disks **30** are housed in the housing space **101** of the case **10**. The case lid **20** is in its normal condition located above the case **10** by means of the compression rings **201**, **202** and **203** and pivotal stub shafts **204** which are straddled on the retainers **61**, **62**, **63** and **64**. It closes the opening of the housing space **101** of the case **20**. When retrieving a blank optical disk **30**, the case lid **20** is depressed downwards. The compression rings **201**, **202** and **203** are moved downwards to compress the retainers **61**, **62**, **63** and **64** and the elastic elements **51**, **52**, **53** and **64** downwards until the multi-claw chuck **206** under the case lid **20** extends into the center opening **301** of the blank optical disk **30** and grips the blank optical disk **30**. When the pressure on the case lid **20** is released, the case lid **20** is pushed upwards to return to its original position through the restoring force of the elastic elements **51**, **52**, **53** and **54**. Then a user may open the case lid **20** to remove the blank optical disk **30** from the case lid **20**. Even when the case **10** contains only a few blank optical disks **30**, a user can still depress the case lid **20** all the way down into the case **10** to grip and retrieve the blank optical disks **30** without difficulty.

[0022] While the preferred embodiment of the invention has been set forth for the purpose of disclosure, modifications of the disclosed embodiment of the invention as well as other embodiments thereof may occur to those skilled in the art. Accordingly, the appended claims are intended to cover all embodiments which do not depart from the spirit and scope of the invention.

What is claimed is:

1. A blank optical disk container for holding blank optical disks, comprising:

a case having a housing space with an opening directing upwards for holding the blank optical disks and a plurality of troughs located on the perimeter thereof in an axial direction, the troughs having respectively a retainer supporting by an elastic element and locating at the top end of the trough in normal conditions; and

a case lid movably located in the case and being moved and supported by the retainers in the normal conditions to close the opening of the housing space, the case lid being moved into the housing space by pushing the elastic elements when subject to a force, and having a multi-claw chuck located on a bottom surface thereof for gripping a center opening of the black optical disk.

2. The blank optical disk container of claim 1 further having through slots formed between the troughs and the housing space of the case.

3. The blank optical disk container of claim 1, wherein each trough has a base seat which has a post extending therefrom for coupling with the elastic element.

4. The blank optical disk container of claim 1, wherein the base seat has a pair of first coupling hooks for engaging with the case.

5. The blank optical disk container of claim 1, wherein one of the retainers has a pair of pivotal lugs which have respectively a pivotal aperture formed thereon.

6. The blank optical disk container of claim 1, wherein the case lid has compression rings corresponding to the troughs.

7. The blank optical disk container of claim 1, wherein the case lid further has a pivotal stub shaft for pivotally engaging with the pivotal lugs.

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