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FAN et al.

(54) **SLIDE ASSEMBLY**

(71) Applicant: **HON HAI PRECISION INDUSTRY CO., LTD.**, New Taipei (TW)

(72) Inventors: **CHEN-LU FAN**, New Taipei (TW); **LI-PING CHEN**, New Taipei (TW)

(73) Assignee: **HON HAI PRECISION INDUSTRY CO., LTD.**, New Taipei (TW)

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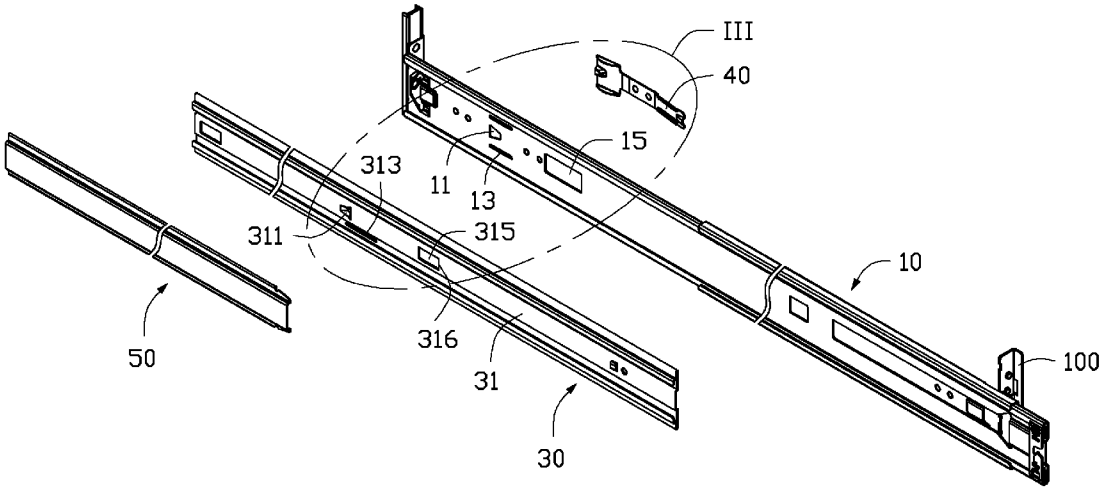
(57) **ABSTRACT**

A slide assembly includes a first slide, a locking member, a second slide, and a third slide. The first slide defines a first slot, a locking hole, and a first engaging hole. The locking member is attached to the first slide. The locking member includes a body, a first locking tab, a ridge, and an engaging tab. The body is located on an outer side of the first locking tab and includes two opposite resilient end portions. The engaging tab is received through the first engaging hole. The second slide is located on an inner side of the first slide. The second slide includes a second locking tab and defines a second slot and second engaging hole. The third slide is located on an inner side of the second slide away from the first slide.



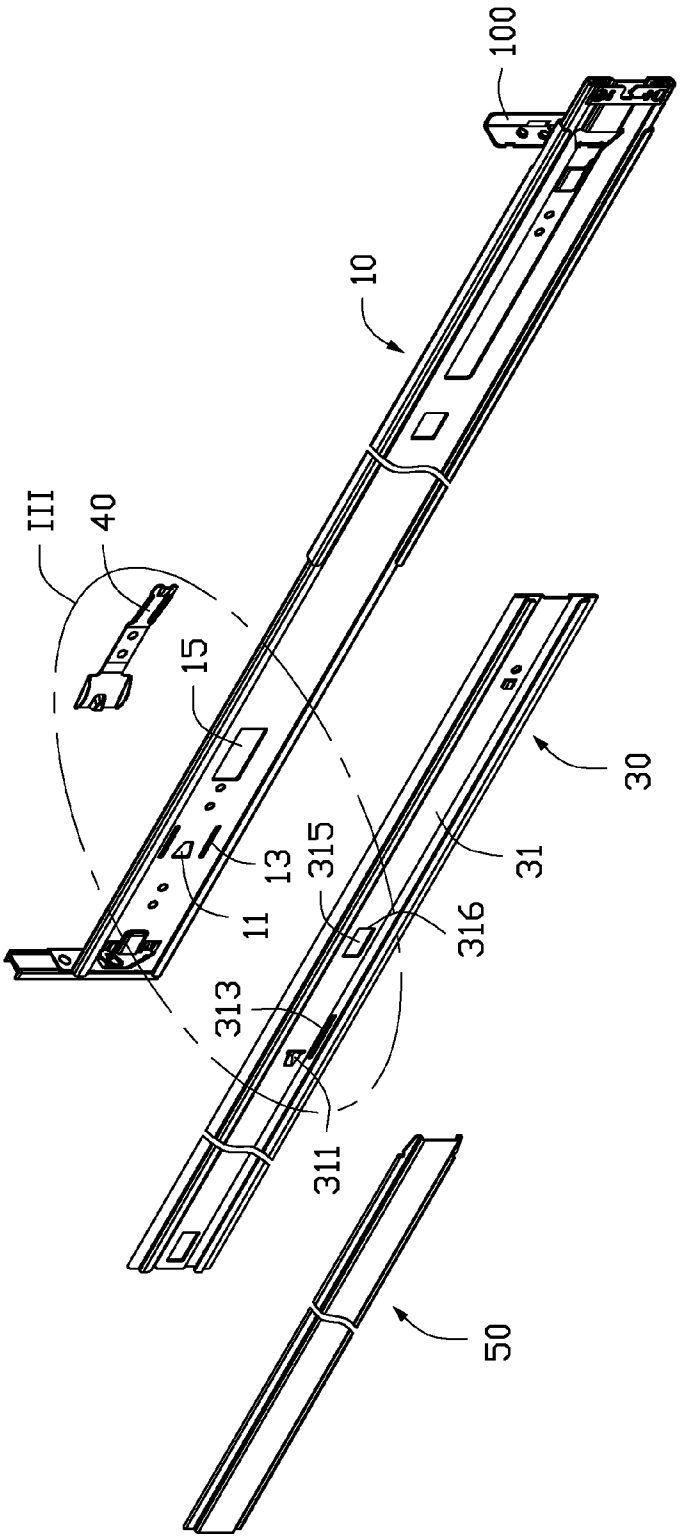


FIG. 1

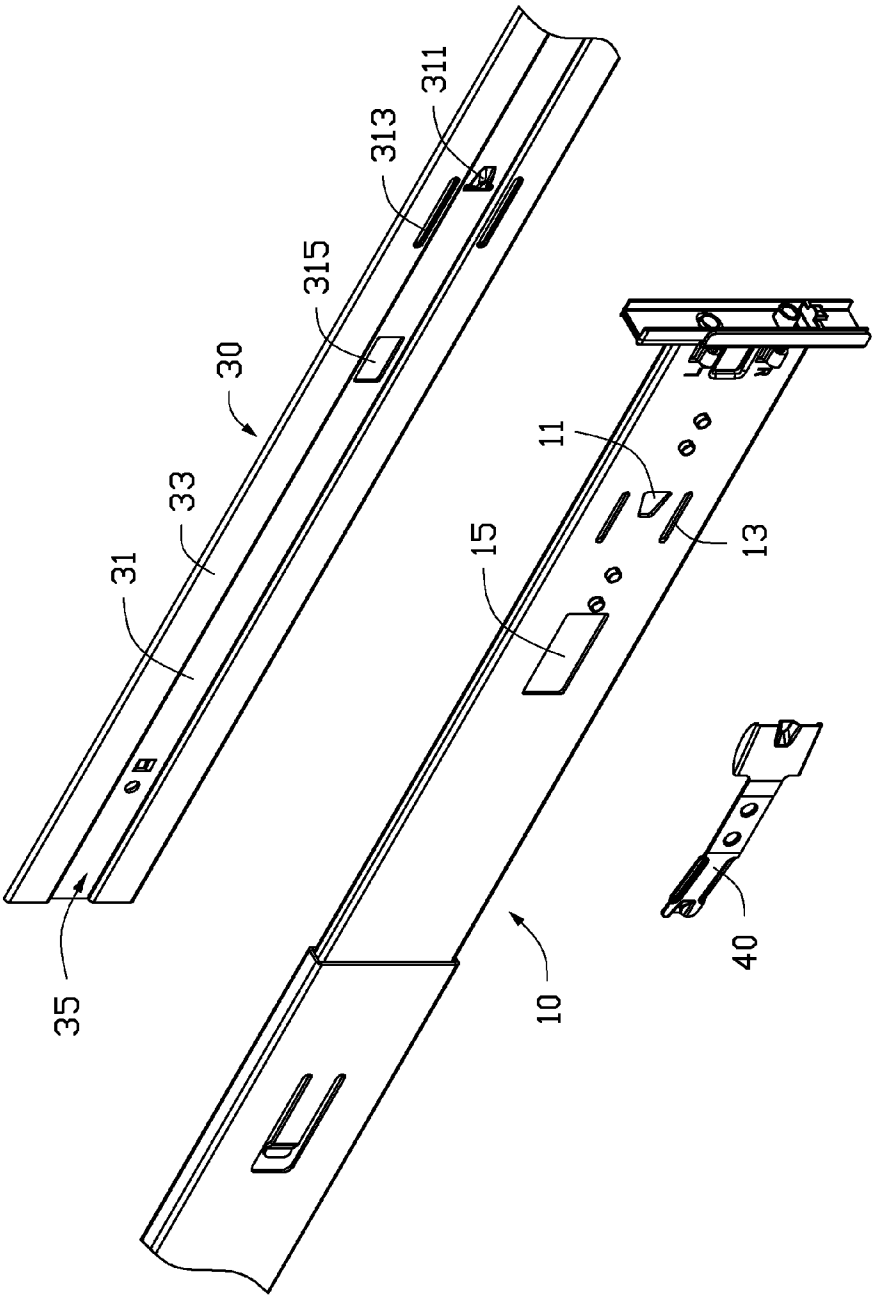


FIG. 2

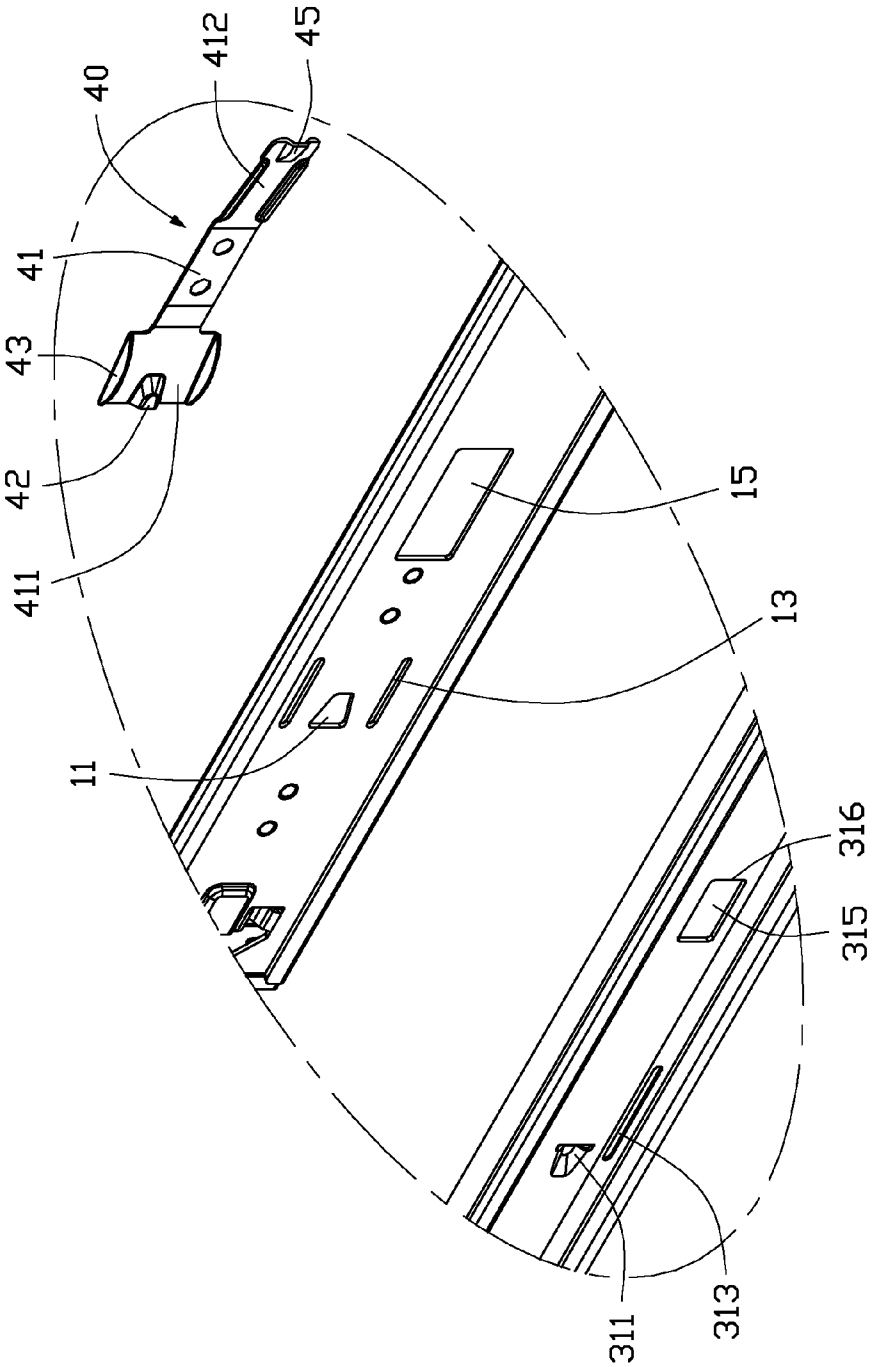


FIG. 3

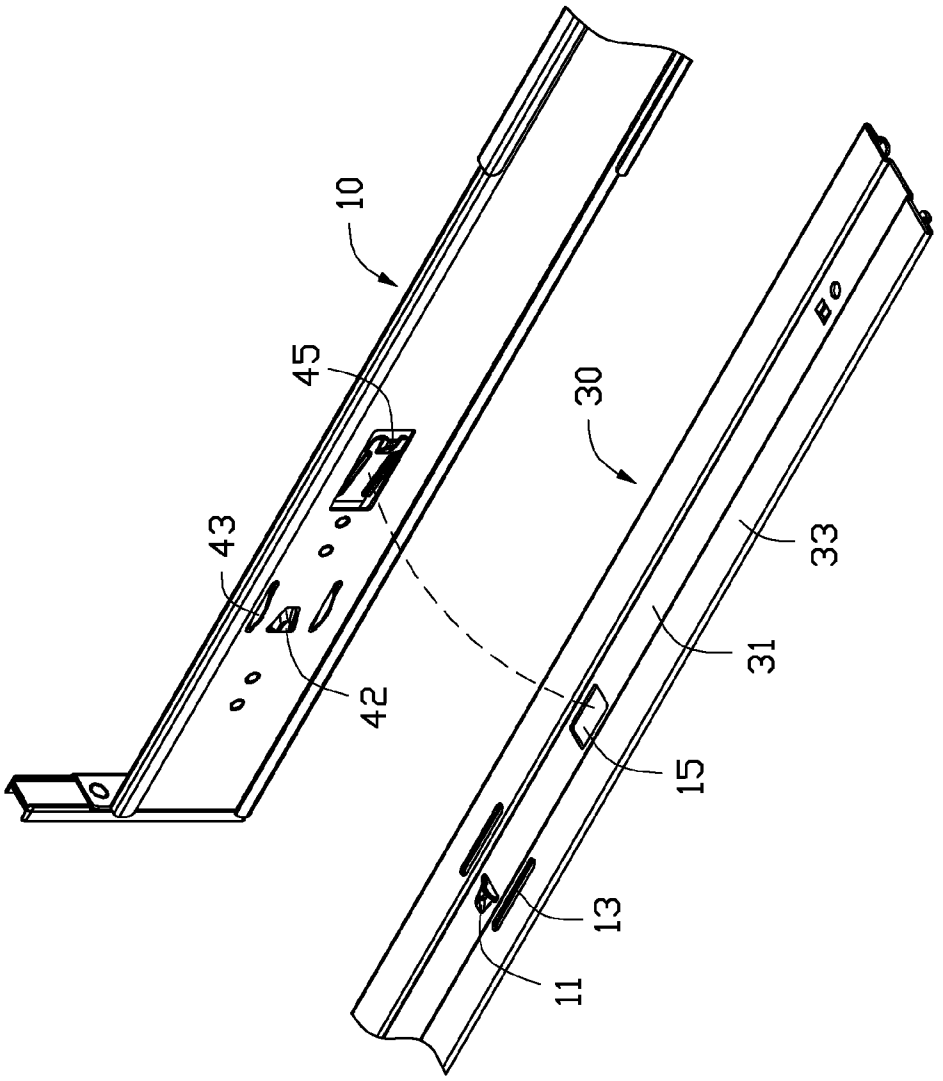


FIG. 4

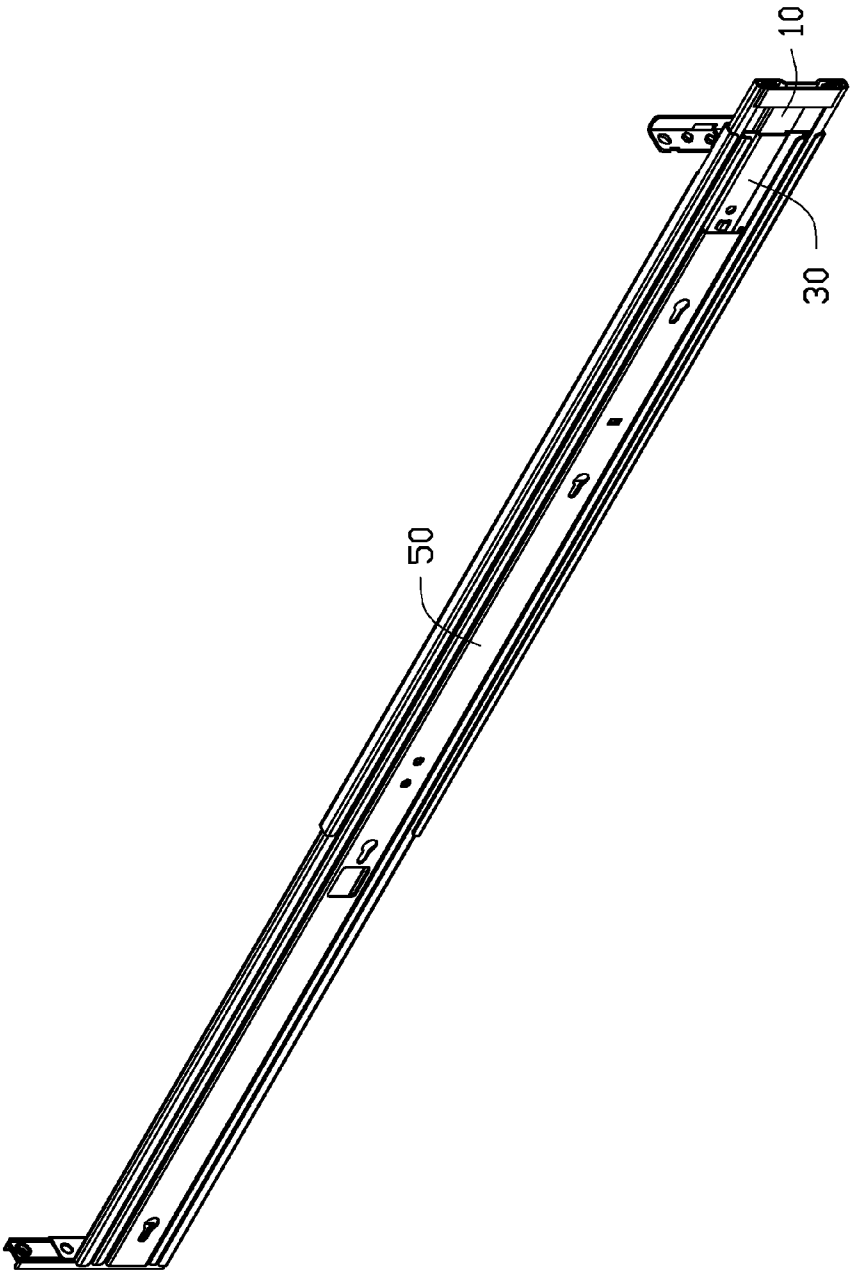


FIG. 5

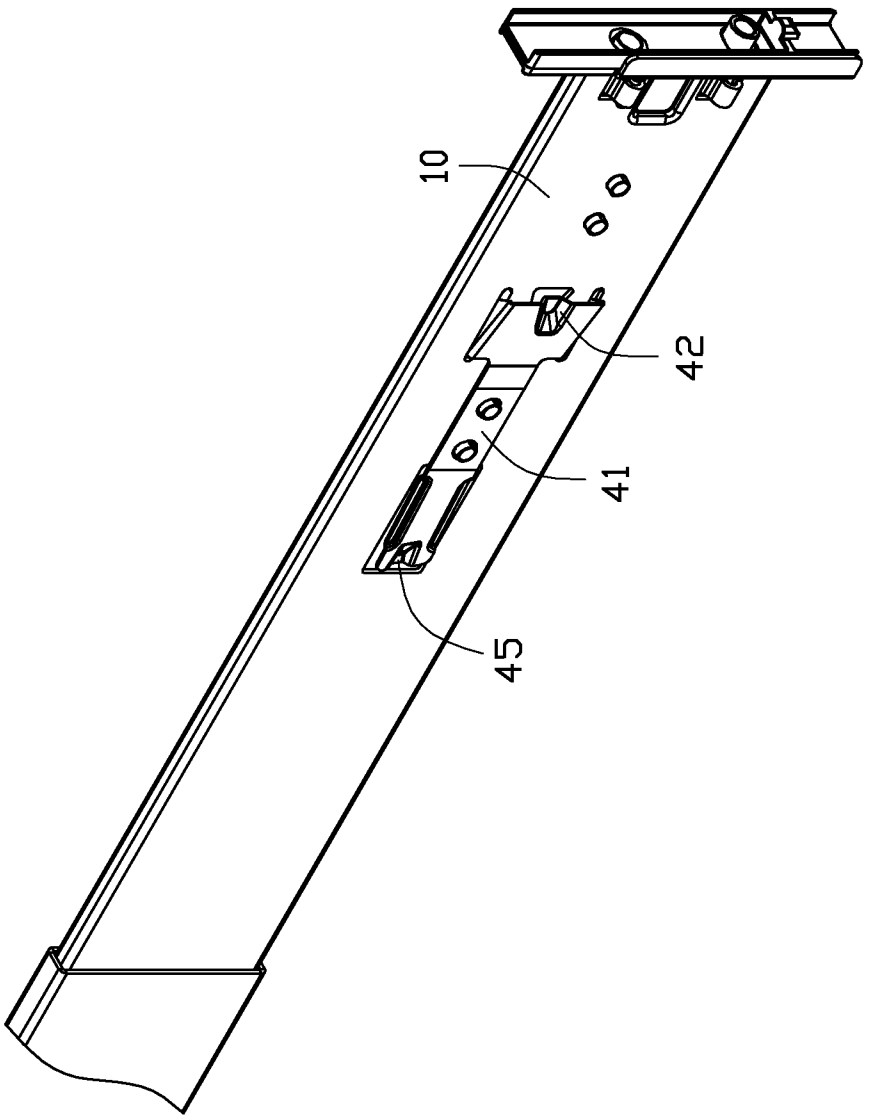


FIG. 6

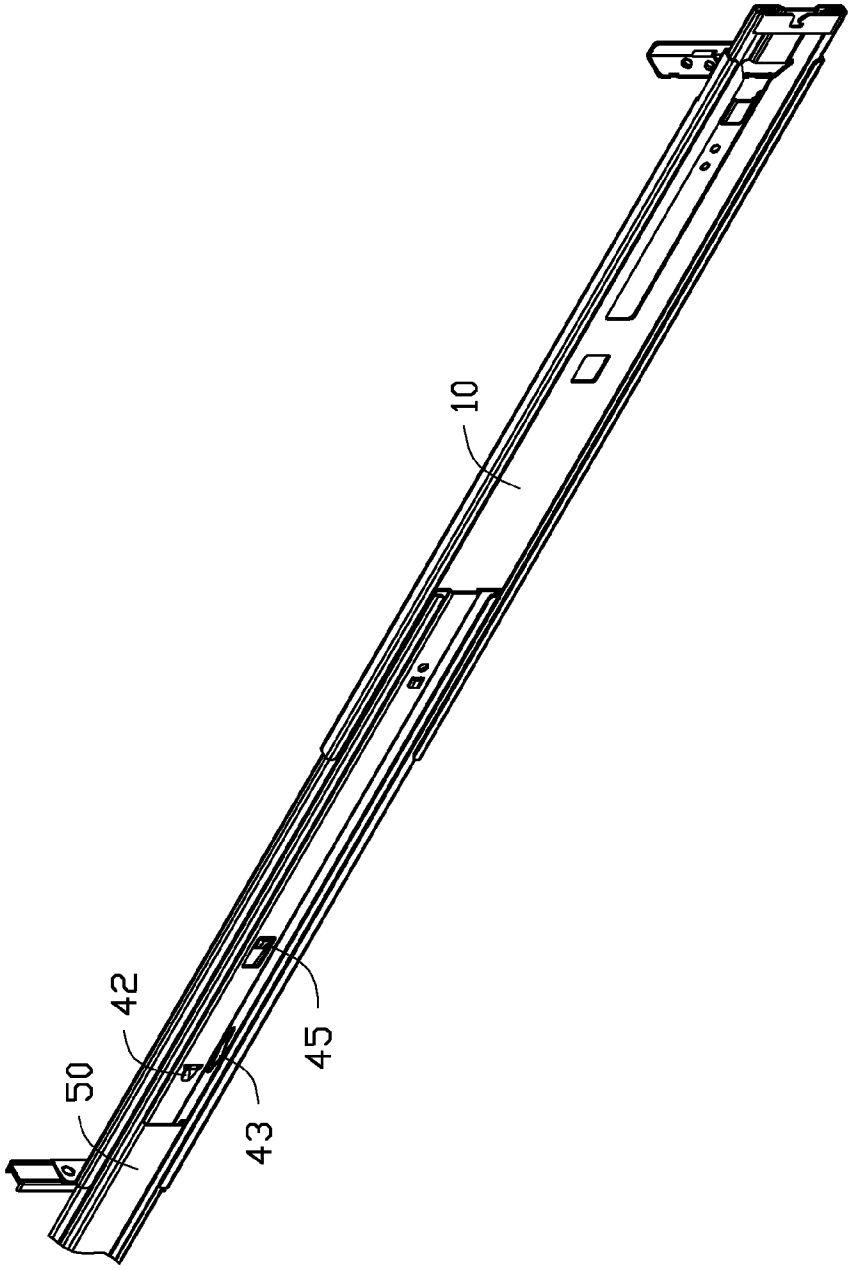


FIG. 7

SLIDE ASSEMBLY

BACKGROUND

[0001] 1. Technical Field

[0002] The present disclosure relates to a slide assembly for a server, a drawer, or the like.

[0003] 2. Description of Related Art

[0004] Computer network systems include many separate computer units or servers mounted in a rack. Slide assemblies allow the servers to be pulled out from the rack for maintenance. Current devices and techniques to secure the slide assembly to the rack are complicated and require mounting installation tools. Some techniques involve loose hardware, such as screws and bolts that can be lost and inconvenient to keep track of. Therefore, there is room for improvement within the art.

BRIEF DESCRIPTION OF THE DRAWINGS

[0005] Many aspects of the embodiments can be better understood with references to the following drawings. The components in the drawings are not necessarily drawn to scale, the emphasis instead being placed upon clearly illustrating the principles of the embodiments. Moreover, in the drawings, like reference numerals designate corresponding parts throughout the several views.

[0006] FIG. **1** is an exploded, isometric view of an embodiment of a slide assembly.

[0007] FIG. **2** is an exploded, isometric, cutaway view of a first slide, a second slide, and a locking member of the slide assembly of FIG. **1**, but shown from another aspect.

[0008] FIG. **3** is an enlarged view of a circled portion III of FIG. **1**.

[0009] FIG. **4** is a partial, assembled view of the first slide, the second slide, and the locking member of the slide assembly of FIG. **1**.

[0010] FIG. **5** is an assembled view of the slide assembly of FIG. **1**.

[0011] FIG. **6** is a partial view of the slide assembly of FIG. **5**, but shown from another aspect.

[0012] FIG. **7** is a partial view of the slide assembly of FIG. **5** except the second slide is retracting from an extending position to a retracted position.

DETAILED DESCRIPTION

[0013] The disclosure is illustrated by way of example and not by way of limitation in the figures of the accompanying drawings in which like references indicate similar elements. It should be noted that references to "an" or "one" embodiment in this disclosure are not necessarily to the same embodiment, and such references mean "at least one."

[0014] FIGS. **1** and **2** illustrate two exploded views of an embodiment of a slide assembly. The slide assembly includes a first slide **10**, a second slide **30**, a third slide **50**, and a locking member **40** attached to the first slide **10**.

[0015] The first slide **10** is mounted to a rack column **100** for receiving servers, drawers, or the like. The first slide **10** defines a locking hole **11**, two first slots **13**, and an engaging hole **15**. In the illustrated embodiment, the two first slots **13** are substantially parallel to each other and defined at opposite sides of the first locking hole **11**. The first locking hole **11** is substantially trapezoidal, and the first engaging hole **15** is rectangular.

[0016] Referring to FIG. **3**, the locking member **40** includes a body **41**. The body **41** includes a first end portion **411** and a second end portion **412**. In one embodiment, the first end portion **411** and the second end portion **412** are resilient and located at opposite ends of the body **41**. A first locking tab **42** and two ridges **43** protrude from the first end portion **411**, and an engaging tab **45** protrudes from the second end portion **412**. Each of the two ridges **43** is arcuate. In the illustrated embodiment, the two ridges **43** are substantially parallel to each other and located at opposite sides of the first locking tab **42**.

[0017] An outer side of the second slide **30** includes two fixing boards **33**, and a depressed recess **35** defined between the two fixing boards **33**. A web **31** is located on a bottom of the depressed recess **35**. The web **31** is rectangular and extends along a latitude direction. A second locking tab **311** protrudes from the second slide **30** toward the first slide **10**. A second engaging hole **315** is defined in the second slide **30**. In the illustrated embodiment, the second engaging hole **315** is rectangular. Two second slots **313** (as shown in FIG. **2**) are defined in the second slide **30** at opposite sides of the second locking tab **311**.

[0018] FIGS. **4-7** illustrate four assembled states of the slide assembly. In assembly, the body **41** of the locking member **40** may be mounted to an outer side of the first slide **10** through fasteners (not shown). The first locking tab **42** is received through the locking hole **11**, and each ridge **43** is received through a corresponding first slot **13**. The engaging tab **45** is received through the first engaging hole **15**. The second slide **30** is slidably mounted to a first groove defined in an inner side of the first slide **10**. The third slide **50** is slidably mounted to a second groove defined in an inner side of the second slide **30** away from the first slide **10**. The two ridges **43** are pressed out of the first slots **13** by the third slide **50**, such that the first end portion **411** is raised from the outer surface of the first slide **10**. The slide assembly is retracted in a retracted position, and the first slide **10**, the second slide **30**, and the third slide **30** are aligned side by side.

[0019] To extend the slide assembly, the second slide **30** and the third slide **50** are slid toward an extending direction. When the second locking tab **311** slides over the first locking tab **42**, the engaging tab **45** extends to the second engaging hole **315** and abuts against a flange **316** to prevent the second slide **30** from sliding further. The third slide **50** is then slid toward the extending direction. When a back end of the third slide **50** moves away from the first locking tab **42** and the ridges **43**, the ridges **43** are released and are received through the first slots **13** and the second slots **313**, and the first locking tab **42** is received through the locking hole **11**. The first locking tab **42** blocks the second locking tab **311** to prevent the second slide **30** from sliding toward a retracting direction, which is opposite to the extending direction. Thus, the second slide **30** and the third slide **50** are in an extended position and are fully extended relative to the first slide **10**.

[0020] To retract the slide assembly, the third slide **50** is slid along the retracting direction from the extended position, until the third slide **50** presses the two ridges **43** out of the first slots **13** and the second slots **313**. The first locking tab **42** is removed from the locking hole **11**, such that the first locking tab **42** does not block the second locking tab **311**. The second slide **30** is slid towards the retracted position. The second slide **30** presses and disengages the engaging tab **45** from the first engaging hole **15**. Thus, the second slide **30** and the third slide **50** are retracted.

[0021] It is also understood, that even though numerous characteristics and advantages have been set forth in the foregoing description, together with details of the structures and functions, the disclosure is illustrative only, and changes may be made in detail, especially in matters of shape, size, and arrangement of parts within the principles of the disclosure to the full extent indicated by the broad general meaning of the terms in which the appended claims are expressed.

What is claimed is:

1. A slide assembly comprising:

a first slide defining a first slot, a locking hole, and a first engaging hole;

a locking member attached to the first slide, the locking member comprising a body, a first locking tab, a ridge, and a engaging tab;

a second slide located on an inner side of the first slide, comprising a second locking tab, and defining a second slot and a second engaging hole; and

a third slide located on an inner side of the second slide away from the first slide;

wherein the body is located on an outer side of the first locking tab and comprises two opposite resilient end portions, the first locking tab and the engaging tab are located on the two opposite resilient end portions, the first locking tab extends through the locking hole, the ridge extends through the first slot, the engaging tab extends through the first engaging hole, the second slide is located in an extended position, where the third slide is extracted relative to the second slide, and the second slide is extracted relative to the first slide, the ridge protrudes from the first slot and the second slot, the engaging tab blocks the second slide in the second engaging hole to prevent the second slide from moving towards an extending direction; the first locking tab blocks the second locking tab to prevent the second slide from moving towards a retracting direction which is opposite to the extending direction, and the third slide is configured to press in the ridge to disengage the second locking tab from the first locking tab when the third slide moves along the retracting direction relative to the second slide.

2. The slide assembly of claim **1**, wherein the ridge is arcuate.

3. The slide assembly of claim **2**, wherein an extending direction of the ridge is substantially parallel to the extending direction.

4. The slide assembly of claim **1**, wherein the ridge is located on a lateral side of the first locking tab.

5. The slide assembly of claim **1**, wherein the engaging tab extends through the second engaging hole when the second slide is located in the extended position.

6. The slide assembly of claim **1**, wherein the body extends through a lineal direction.

7. The slide assembly of claim **1**, wherein a depressed recess is defined in the second slide, and the second locking tab is located in the depressed recess.

8. The slide assembly of claim **7**, wherein the second slot is located on a lateral side of the depressed recess.

9. A slide assembly comprising:

a first slide defining a first slot, and a locking hole;

a locking member attached to the first slide, comprising a body, a first locking tab, and a ridge;

a second slide located on an inner side of the first slide, comprising a second locking tab, and defining a second slot; and

a third slide located on an inner side of the second slide away from the first slide;

wherein the body is located on an outer side of the first locking tab, the first locking tab is located on the a resilient end portion of the body, the first locking tab extends through the locking hole, the ridge extends through the first slot, the second slide is located in a extended position, where the third slide is extracted relative to the second slide, and the second slide is extended relative to the first slide, the ridge extends through the first slot and the second slot, the second slide is limited from moving towards an extending direction, the first locking tab is blocked in the second engaging hole to prevent the second slide from moving towards a retracting direction which is opposite to the extending direction, and the third slide is configured to press in the ridge to disengage the second locking tab from the first locking tab when the third slide moves along the retracting direction relative to the second slide.

10. The slide assembly of claim **9**, wherein the first slide defines a first slot, a locking hole, and a first engaging hole, the locking member comprises an engaging tab, and the engaging tab protrudes from the first engaging hole and engages in the second engaging hole when the second slide is in the extended position.

11. The slide assembly of claim **10**, wherein the engaging tab extends through the second engaging hole when the second slide is located in the extended position.

12. The slide assembly of claim **9**, wherein the ridge is arcuate.

13. The slide assembly of claim **11**, wherein an extending direction of the ridge is substantially parallel to the extending direction.

14. The slide assembly of claim **9**, wherein the ridge is located on a lateral side of the first locking tab.

15. The slide assembly of claim **9**, wherein the body extends through a lineal direction.

16. The slide assembly of claim **9**, wherein a depressed recess is defined in the second slide, and the second locking tab is located in the depressed recess.

17. The slide assembly of claim **16**, wherein the second slot is located on a lateral side of the depressed recess.

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