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(54) **ROTARY READING STAND**

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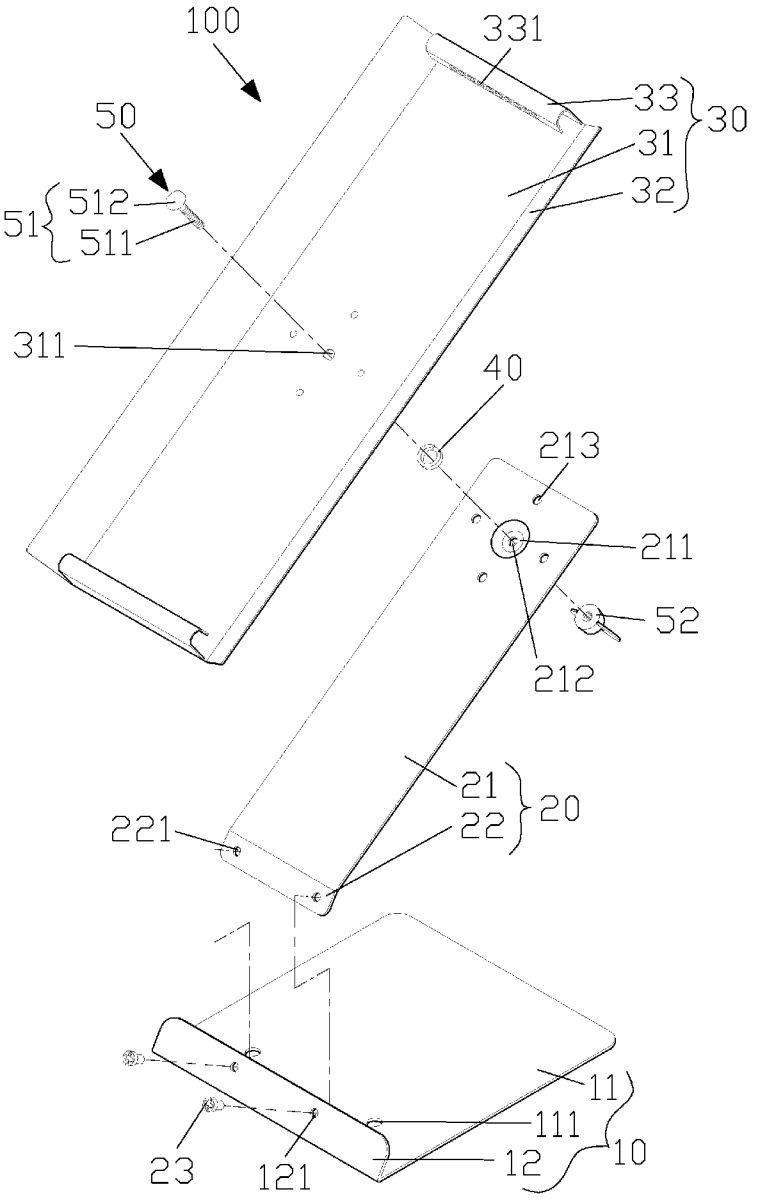
(57) **ABSTRACT**

A rotary reading stand contains a fixed plate; a bottom panel fixed on the fixed plate at a predetermined angle and including a recessed area and a plurality, of positioning members arranged around the recessed area, and the recessed area including a first orifice formed at a central position thereof; a top panel including a second orifice and a number of fixing projections formed around the second orifice; a resilient member fixed between the recessed area of the bottom panel and the top panel; a locking unit inserting through the first and second orifices and being pushed to be in an engaging or disengaging state.



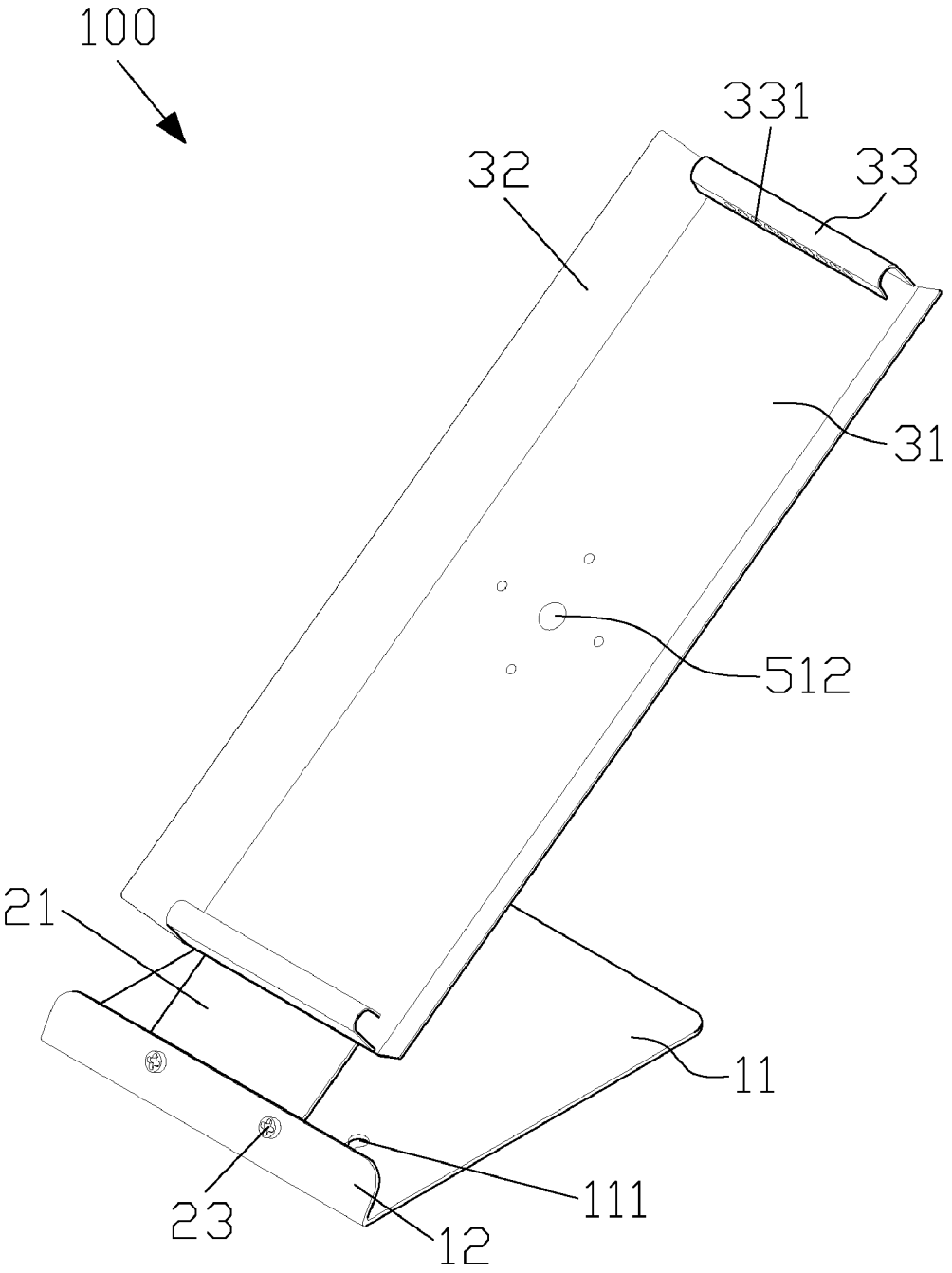


FIG. 1

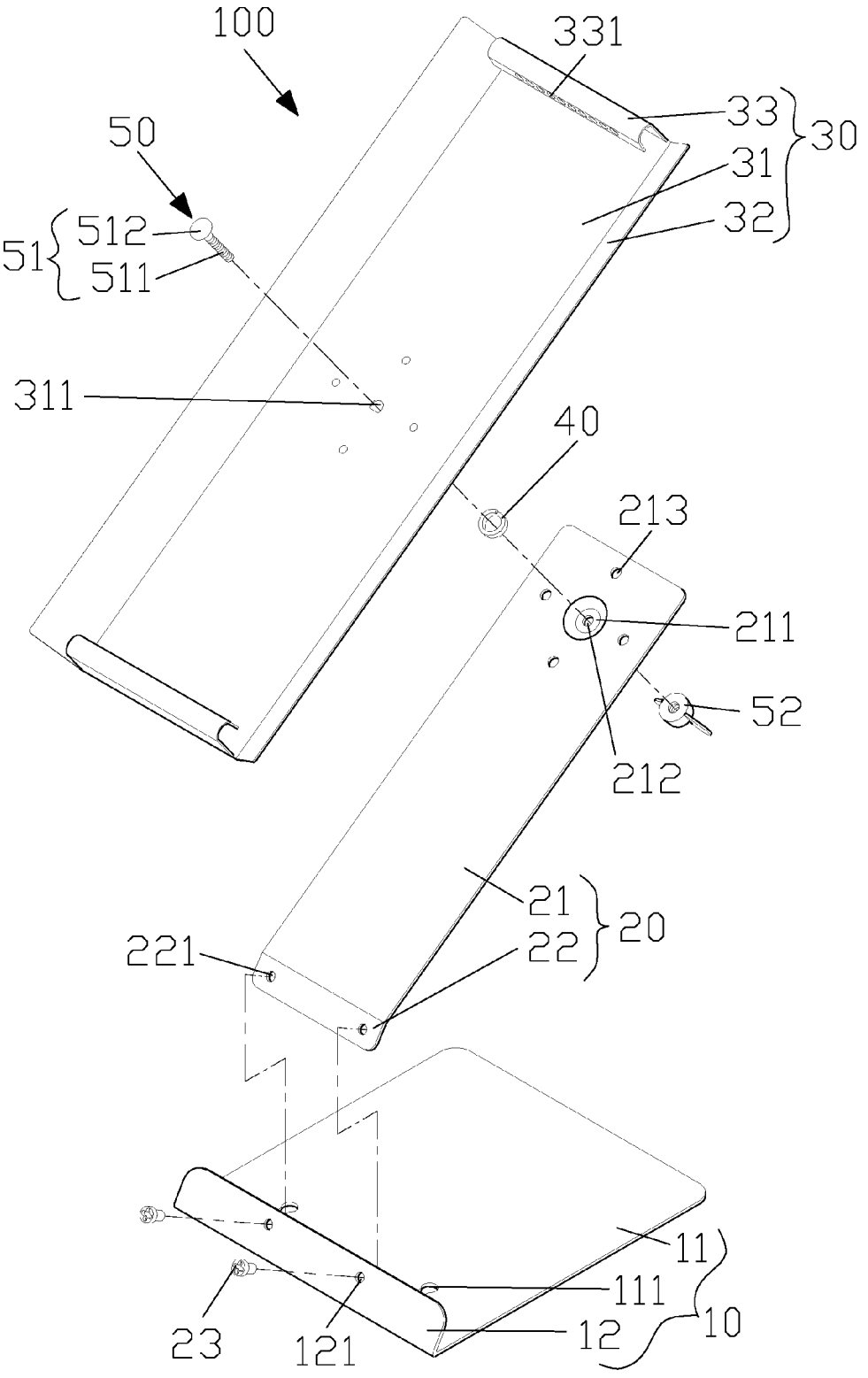

100
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FIG. 2

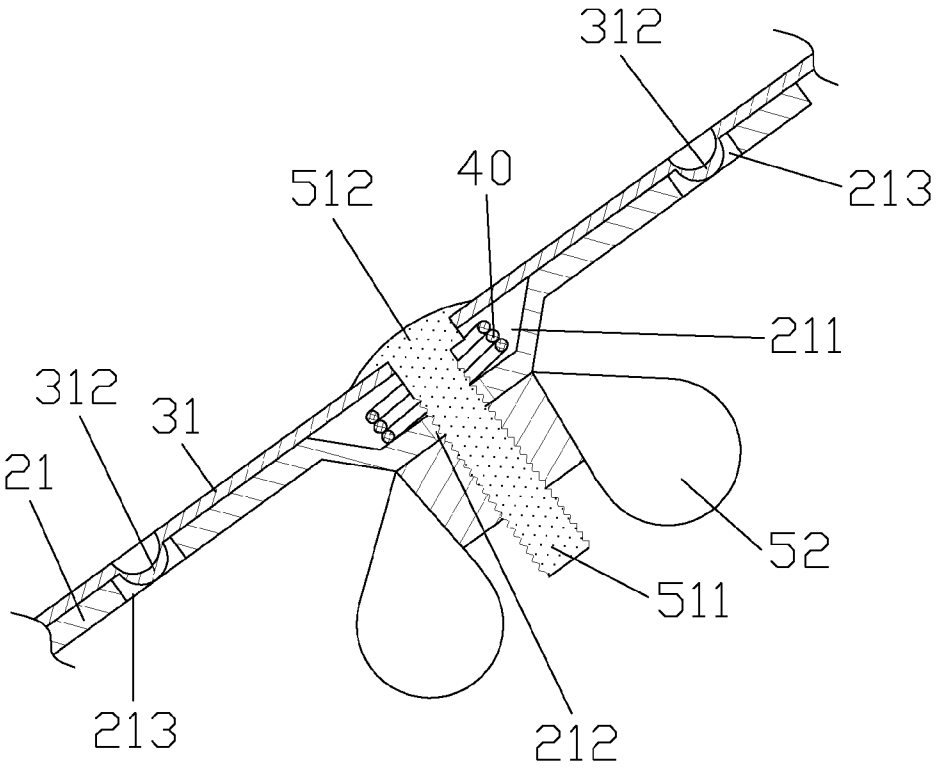

FIG. 3

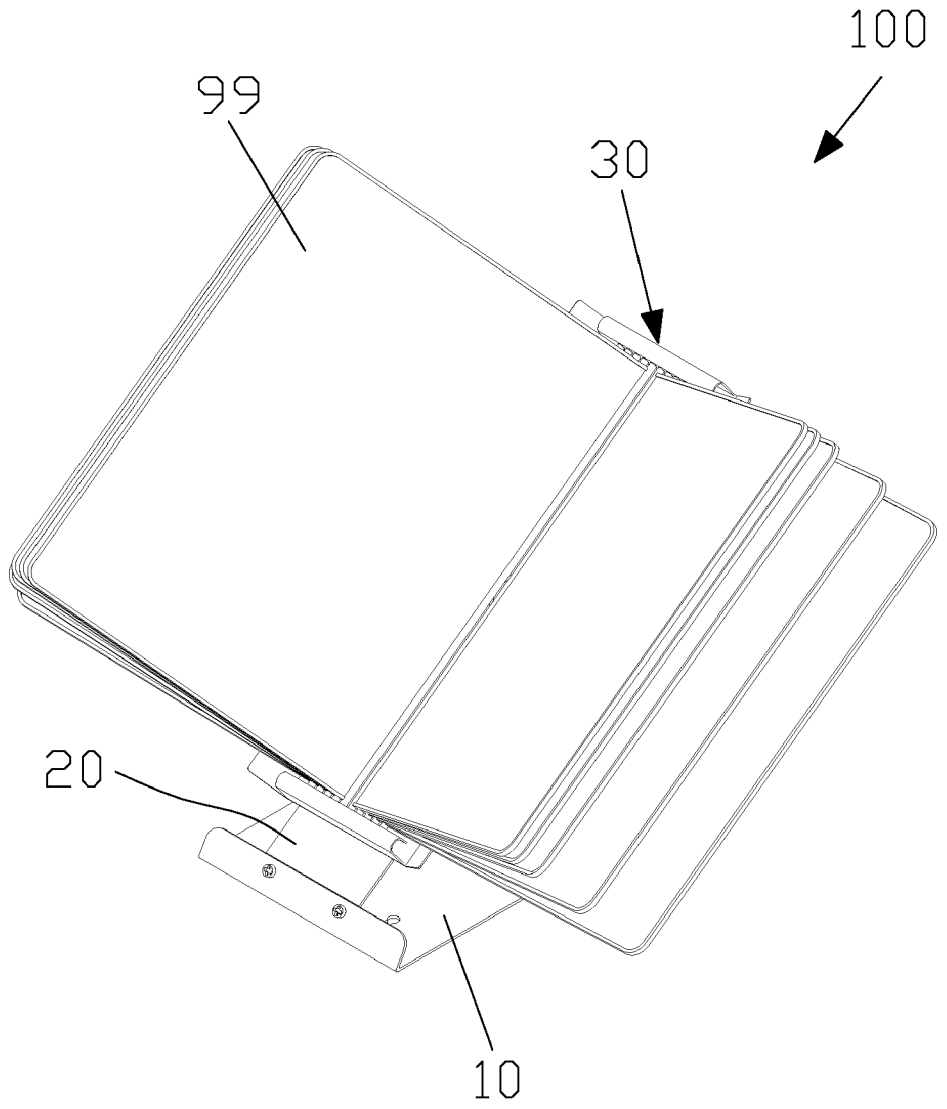

FIG. 4

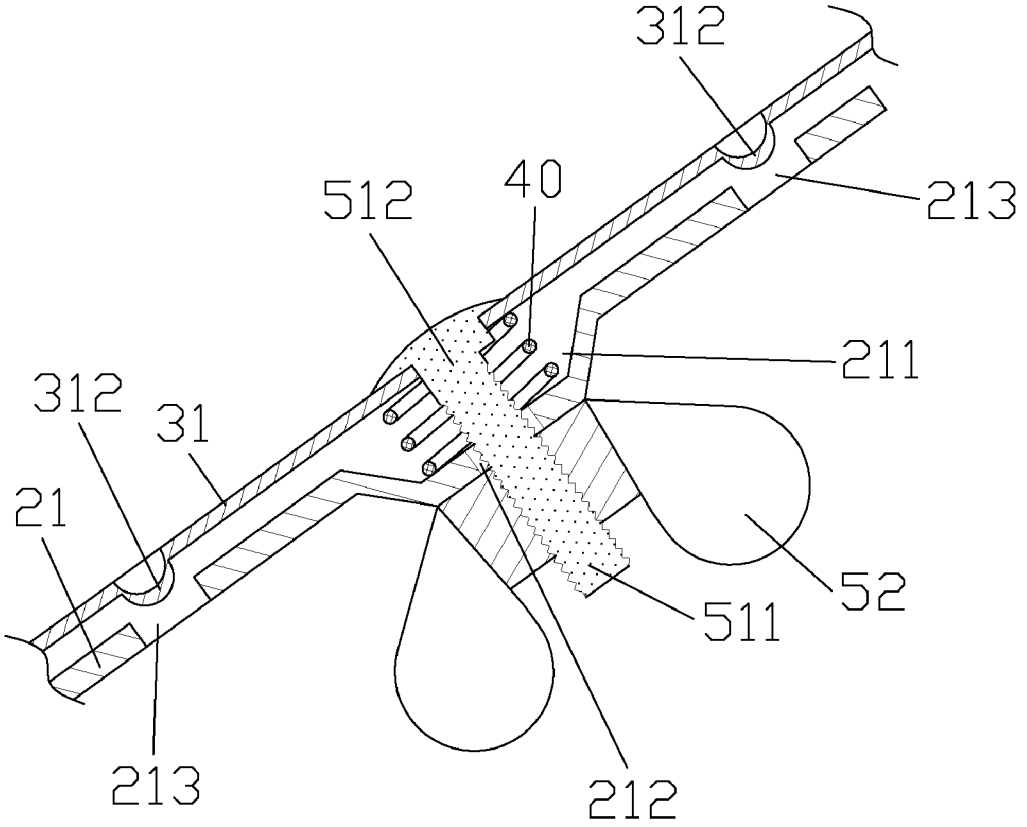

FIG. 5

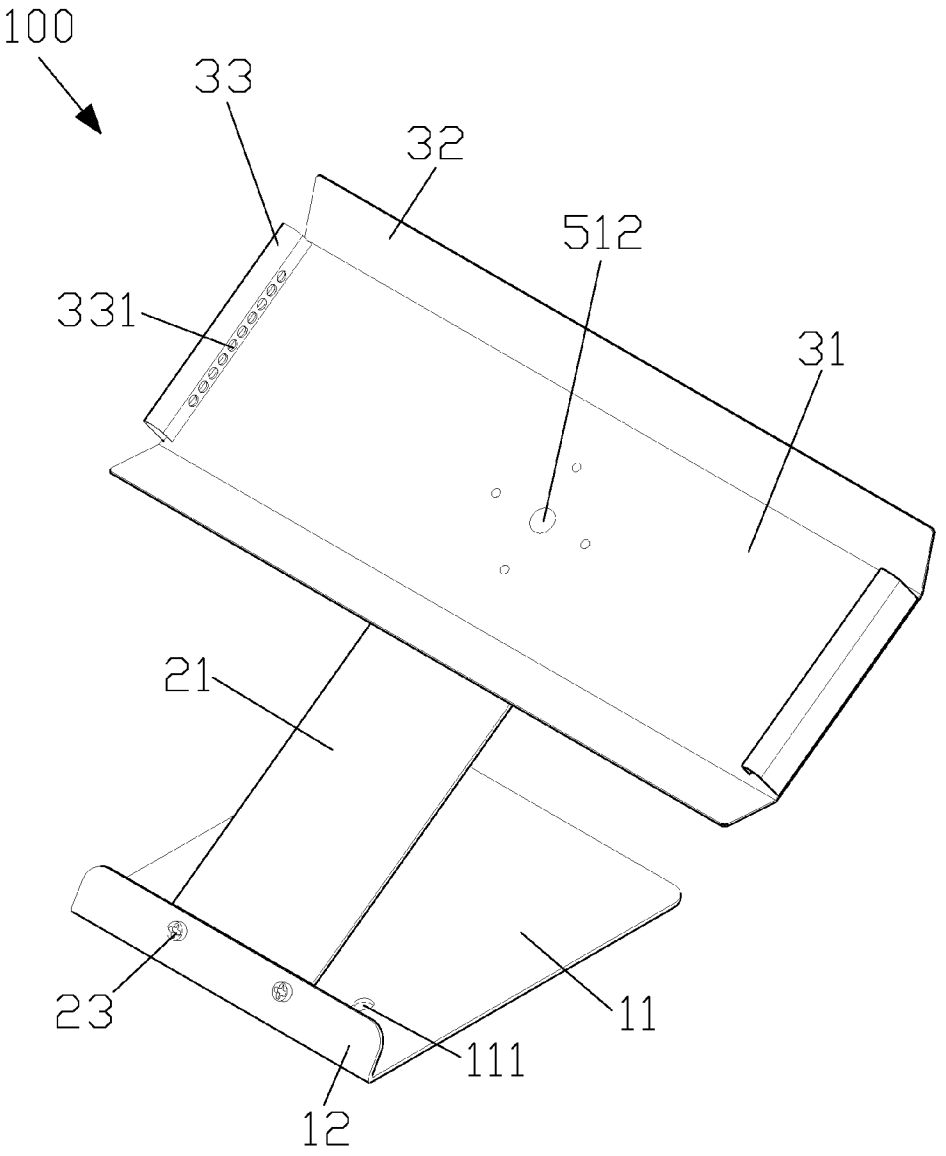

FIG. 6

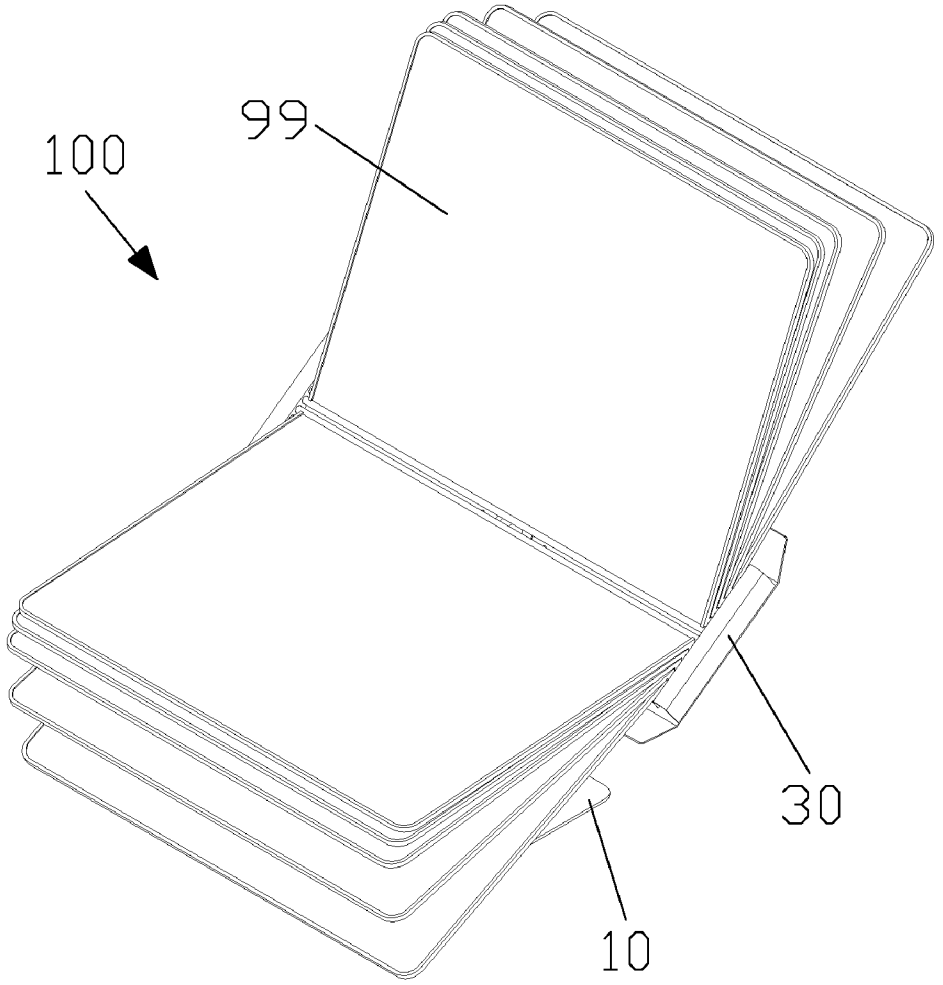

FIG. 7

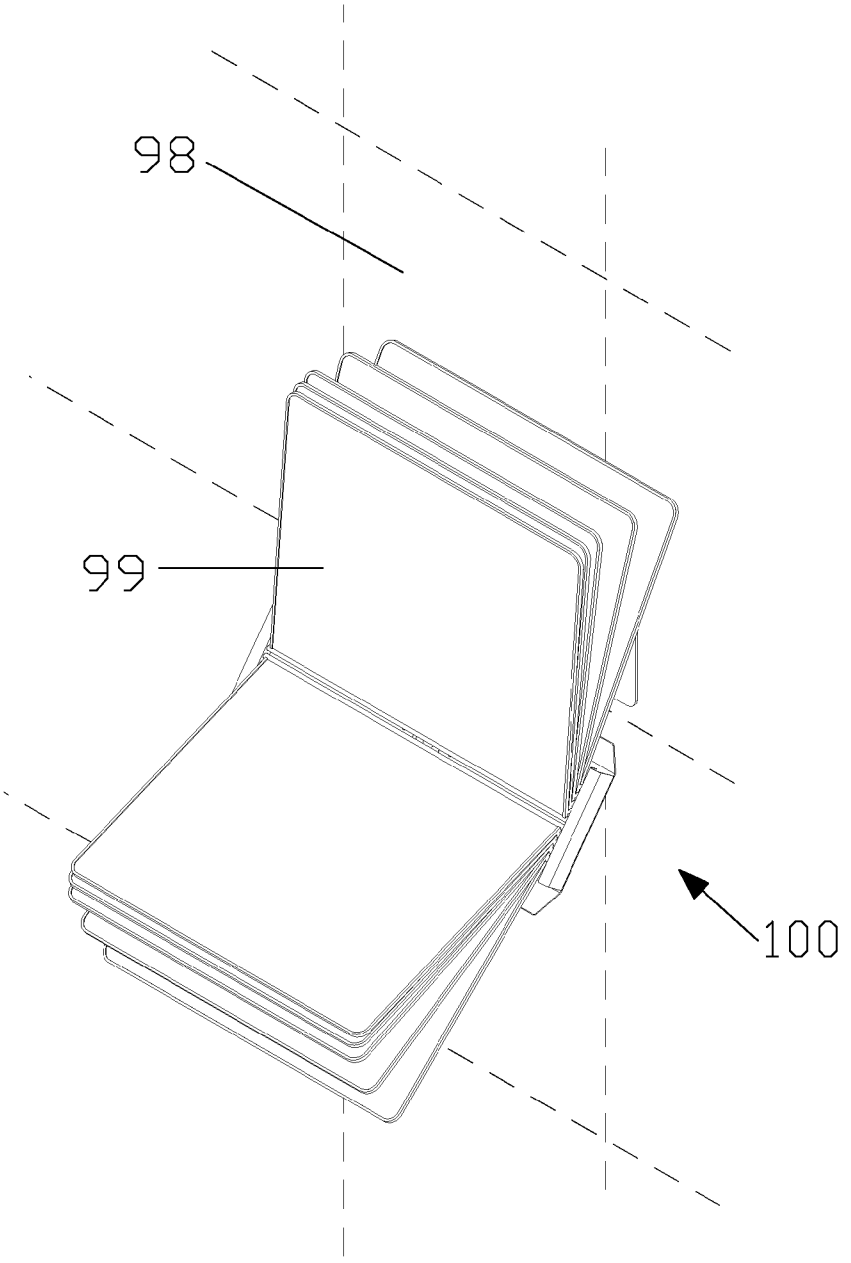

FIG. 8

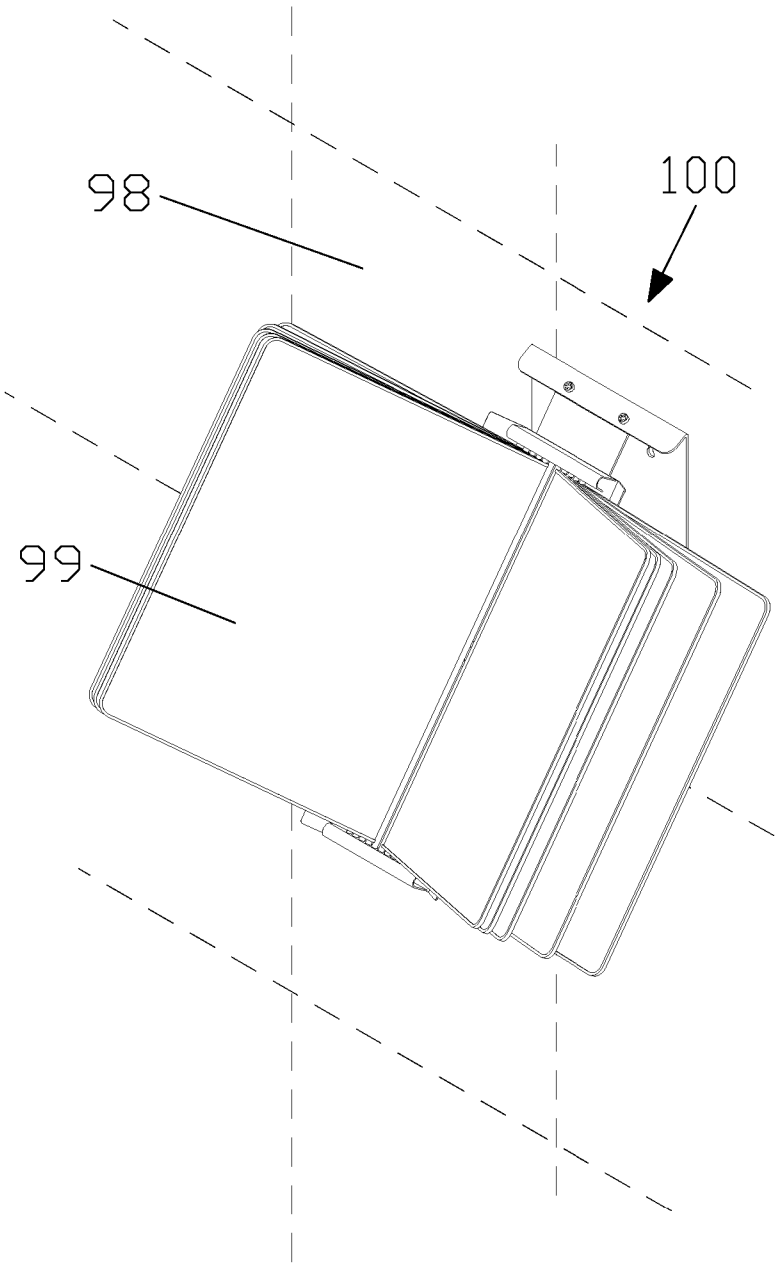

FIG. 9

ROTARY READING STAND

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] The present invention relates to a rotary reading stand that is adjustably rotated to position the sheets horizontally and vertically so that the sheets are turned horizontally and vertically based on actual requirement, made at a lower cost, and positioned precisely

[0003] 2. Description of the Prior Art

[0004] A conventional reading stand is fixed without being adjusted, therefore a plurality of sheets fixed on the reading stand are turned in a single direction without being positioned horizontally and vertically to match with actual requirement.

[0005] To overcome above-mentioned shortcoming, an improved rotary reading stand is developed, but it has complicated structure that is made at a high cost.

[0006] The present invention has arisen to mitigate and/or obviate the afore-described disadvantages.

SUMMARY OF THE INVENTION

[0007] The primary object of the present invention is to provide a rotary reading stand that is adjustably rotated to position the sheets horizontally and vertically so that the sheets are turned horizontally and vertically based on actual requirement, made at a lower cost, and positioned precisely.

[0008] To obtain the above objective, a rotary reading stand provided by the present invention contains:

[0009] a fixed plate;

[0010] a bottom panel fixed on the fixed plate at a predetermined angle and including a recessed area and a plurality of positioning members arranged around the recessed area, and the recessed area including a first orifice formed at a central position thereof;

[0011] a top panel including a second orifice and a number of fixing projections formed around the second orifice;

[0012] a resilient member fixed between the recessed area of the bottom panel and the top panel;

[0013] a locking unit inserting through the first and second orifices and being pushed to be in an engaging or disengaging state, wherein when the locking unit is in the engaging state, the top panel presses the resilient member so that the fixing projections retain with the positioning members, and the top panel is fixed on the bottom panel; when the locking unit is in the disengaging state, the top panel is pushed by the resilient member so that the fixing projections disengage from the positioning members to rotate the top panel relative to the bottom panel.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] FIG. **1** is a perspective view of the assembly of a rotary reading stand according to a preferred embodiment of the present invention;

[0015] FIG. **2** is a perspective view of the exploded components of the rotary reading stand according to the preferred embodiment of the present invention;

[0016] FIG. **3** is a cross sectional view of a part of the assembly of the rotary reading stand according to the preferred embodiment of the present invention;

[0017] FIG. **4** is a perspective view of the operation of the rotary reading stand according to the preferred embodiment of the present invention;

[0018] FIG. **5** is another cross sectional view of a part of the assembly of the rotary reading stand according to the preferred embodiment of the present invention;

[0019] FIG. **6** is also another perspective view of the operation of the rotary reading stand according to the preferred embodiment of the present invention;

[0020] FIG. **7** is another perspective view of the operation of the rotary reading stand according to the preferred embodiment of the present invention;

[0021] FIG. **8** is also another perspective view of the operation of the rotary reading stand according to the preferred embodiment of the present invention;

[0022] FIG. **9** is another perspective view of the operation of the rotary reading stand according to the preferred embodiment of the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0023] The present invention will be clearer from the following description when viewed together with the accompanying drawings, which show, for purpose of illustrations only, the preferred embodiment in accordance with the present invention.

[0024] Referring to FIGS. **1-3**, a rotary reading stand **100** in accordance with a preferred embodiment of the present invention comprises a fixed plate **10**, a bottom panel **20**, a top panel **30**, a resilient member **40**, a locking unit **50**, wherein

[0025] the fixed plate **10** includes a flat base **11** and an upward extension **12** extending upward from the base **11**, the base **11** includes two holes **111** disposed thereon, and the upward extension **12** includes two bores **121** mounted thereon.

[0026] The bottom panel **20** includes a flat abutting portion **21** and a lock portion **22** extending downward from the abutting portion **21**, the abutting portion **21** includes a recessed area **211** fixed on a top surface thereof, a first orifice **212** formed at a central position of the recessed area **211** and passing through the top and a bottom surfaces of the abutting portion **21**, and four positioning members **213** arranged around the recessed area **211**. In this embodiment, the positioning member **213** is a through aperture, and the lock portion **22** includes two openings **221**, such that two fixing elements **23** are inserted through the openings **221** of the bottom panel **20** and the bores **121** of fixed plate **10** to connect the bottom panel **20** with the fixed plate **10** at a predetermined angle.

[0027] The top panel **30** includes a support portion **31**, a limiting segment **32** extending toward two sides of the support portion **31**, two shaft segments **33** attached on a top and a bottom ends of the support portion **31** respectively, and each shaft segment **33** includes a notch **331** disposed on an inner side thereof; the support portion **31** includes a second orifice **311** passing through a top and a bottom surfaces of the support portion **31**, and the second orifice **311** is noncircular, the support portion **31** includes four fixing projections **312** formed around the second orifice **311**.

[0028] The resilient member **40** is a spring and fixed between the recessed area **211** of the bottom panel **20** and the top panel **30**.

[0029] The locking unit **50** includes an inserting element **51** and an adjusting element **52**, the inserting element **51** is a screw bolt with a shank **511** and a disk **512**, and the shank **511** includes outer threads, the adjusting element **52** is a nut with inner threads; the shank **511** of the inserting element **51**

inserts through the second orifice **311**, the resilient member **40**, and the first orifice **212** from a top surface of the top panel **30**, and the adjusting element **52** and the shank **511** are screwed together, the disk **512** of the inserting element **51** contacts with the top surface of the top panel **30** so that the top panel **30** is connected with the bottom plane **20**, and the resilient member **40** is further compressed so that the fixing projections **312** of the top panel **30** engage with the positioning members **213** of the bottom panel **20**.

[0030] As shown in FIG. **4**, when a number of sheets **99** are fixed to the reading stand **100** horizontally, the sheets **99** are inserted to the notch **331** of the shaft segments **33** of the top panel **30**, and the limiting segment **32** is used to limit a turning space of the sheets **99** so that the sheets **99** are turned horizontally.

[0031] When desiring to turn the sheets **99** vertically, the adjusting element **52** of the locking unit **50** is rotated releasably so that the locking unit **50** is released as illustrated in FIG. **5**, and the top panel **30** is not compressed by the locking unit **50**, hence the resilient member **40** pushes the top panel **30** to leave a predetermined distance away from the bottom panel **20** so that the fixing projections **312** of the top panel **30** disengage from the positioning members **213** of the bottom panel **20**. Thereafter, the top panel **30** is rotated toward a preset angle so that the fixing projections **312** align with the positioning members **213**, the adjusting element **52** is rotated tightly so that the locking unit **50** is in a tightly engaging state, and the fixing projections **312** are retained with the positioning members **213**, the top panel **30** is compressed by the resilient member **40** to rotate an angle and to connect with the bottom panel **20**, so that the top panel **30** is fixed horizontally as shown in FIG. **6**, and the sheets **99** are turned vertically as illustrated in FIG. **7**.

[0032] Besides, the fixed plate **10** is fixed on a wall **98** by ways of the holes **111** and coupling elements as shown in FIGS. **8** and **9**.

[0033] Also, the positioning member **213** is capable of being formed in a recess shape.

[0034] Thereby, the reading stand is adjustably rotated to position the sheets horizontally and vertically so that the sheets are turned horizontally and vertically based on actual requirement, made at a lower cost, and positioned precisely

[0035] While we have shown and described various embodiments in accordance with the present invention, it is clear to those skilled in the art that further embodiments may be made without departing from the scope of the present invention.

What is claimed is:

1. A rotary reading stand comprising:

a fixed plate;

a bottom panel fixed on the fixed plate at a predetermined angle and including a recessed area and a plurality of positioning members arranged around the recessed area, and the recessed area including a first orifice formed at a central position thereof;

a top panel including a second orifice and a number of fixing projections formed around the second orifice;

a resilient member fixed between the recessed area of the bottom panel and the top panel;

a locking unit inserting through the first and second orifices and being pushed to be in an engaging or disengaging state, wherein when the locking unit is in the engaging state, the top panel presses the resilient member so that the fixing projections retain with the positioning members, and the top panel is fixed on the bottom panel; when the locking unit is in the disengaging state, the top panel is pushed by the resilient member so that the fixing projections disengage from the positioning members to rotate the top panel relative to the bottom panel.

2. The rotary reading stand as claimed in claim **1**, wherein the fixed plate includes a flat base, and the base includes al least one hole disposed thereon to inert a fixing element.

3. The rotary reading stand as claimed in claim **1**, wherein the fixed plate includes an upward extension extending upward from the base; the bottom panel includes a flat abutting portion and a lock portion extending downward from the abutting portion, the lock portion connect with the upward extension so that the bottom panel is connected with the fixed plate at a predetermined angle.

4. The rotary reading stand as claimed in claim **3**, wherein the upward extension includes al least one bore mounted thereon, and the lock portion includes al least one opening, such that the fixing elements is inserted through the opening and the bore to connect the upward extension with the lock portion.

5. The rotary reading stand as claimed in claim **1**, wherein the positioning member is a through aperture.

6. The rotary reading stand as claimed in claim **1**, wherein the positioning member is a recess.

7. The rotary reading stand as claimed in claim **1**, wherein the top panel includes a support portion, a limiting segment extending toward two sides of the support portion, two shaft segments attached on a top and a bottom ends of the support portion respectively, and each shaft segment includes a notch disposed on an inner side thereof.

8. The rotary reading stand as claimed in claim **1**, wherein the resilient member is a spring

9. The rotary reading stand as claimed in claim **1**, wherein the locking unit includes a screw bolt and a nut; screw bolt inserts through the first and the second orifices to screw with the nut.

10. The rotary reading stand as claimed in claim **1**, wherein the locking unit includes an inserting element and an adjusting element, the inserting element includes a shank and a disk, and the shank of the inserting element inserts through the second orifice, the resilient member, and the first orifice from a top surface of the top panel, and the adjusting element and the shank are screwed together, the disk of the inserting element contacts with the top surface of the top panel so that the adjusting element is rotated tightly to engage with the inserting element and is rotated releasably to disengage from the inserting element.

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