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(54) ADHESIVE-TAPE HOLDER WITH AN OPENABLE SIDE COVER

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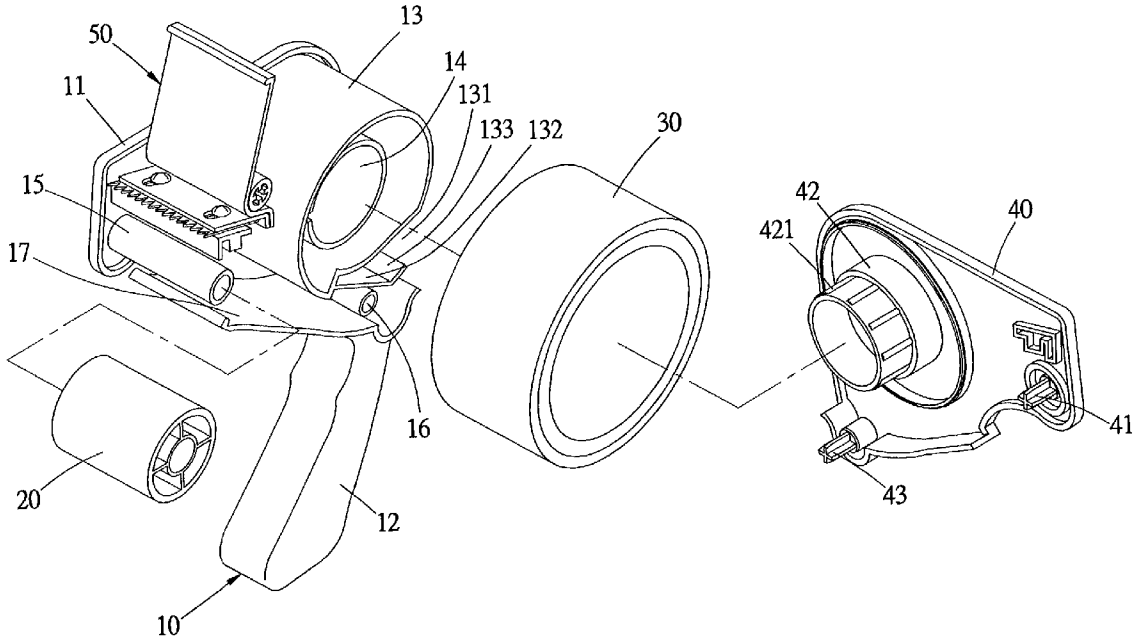
(57) **ABSTRACT**

An adhesive-tape holder with an openable side cover has an openable side cover positioned symmetrically opposite to a stationary side plate. The side cover has the combining tubular rod and a first and a second fitting rods respectively received in the combining tube and the roller support tube and the connecting tube of the side plate to make up three combining positions, capable to stabilize the adhesive-tape roller and prevent it from dropping out of an adhesive-tape roller base.



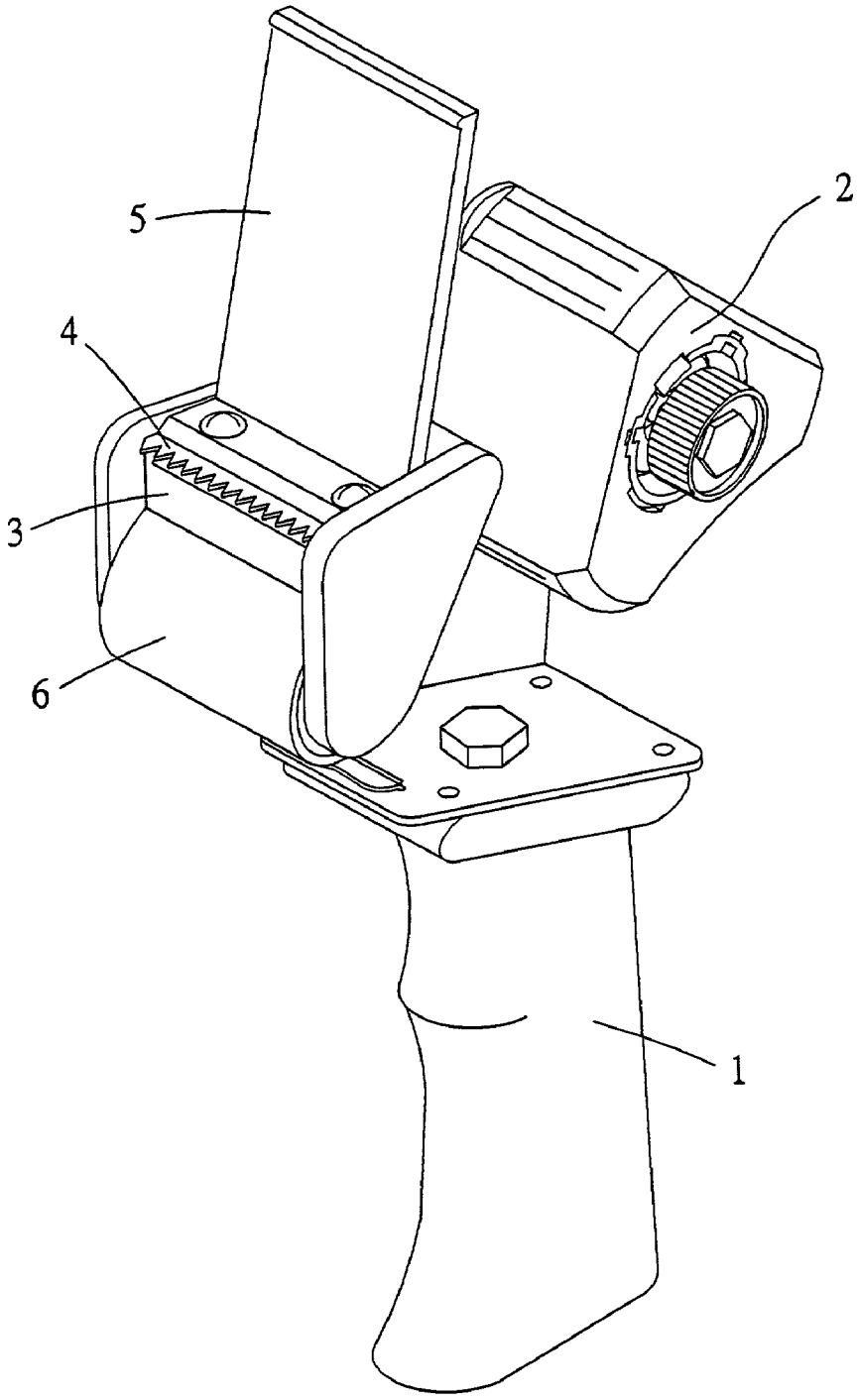


FIG. 1
PRIOR ART

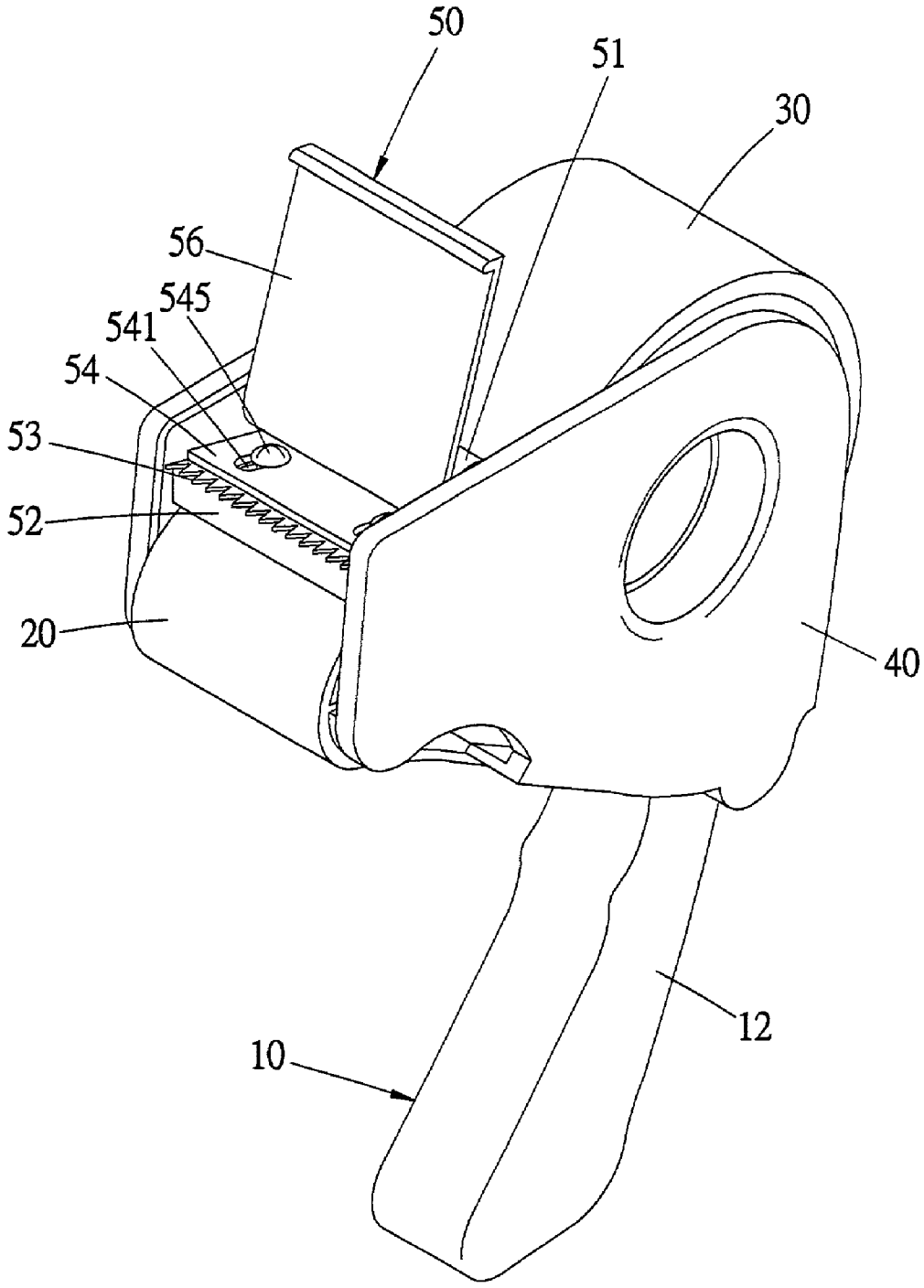


FIG. 2

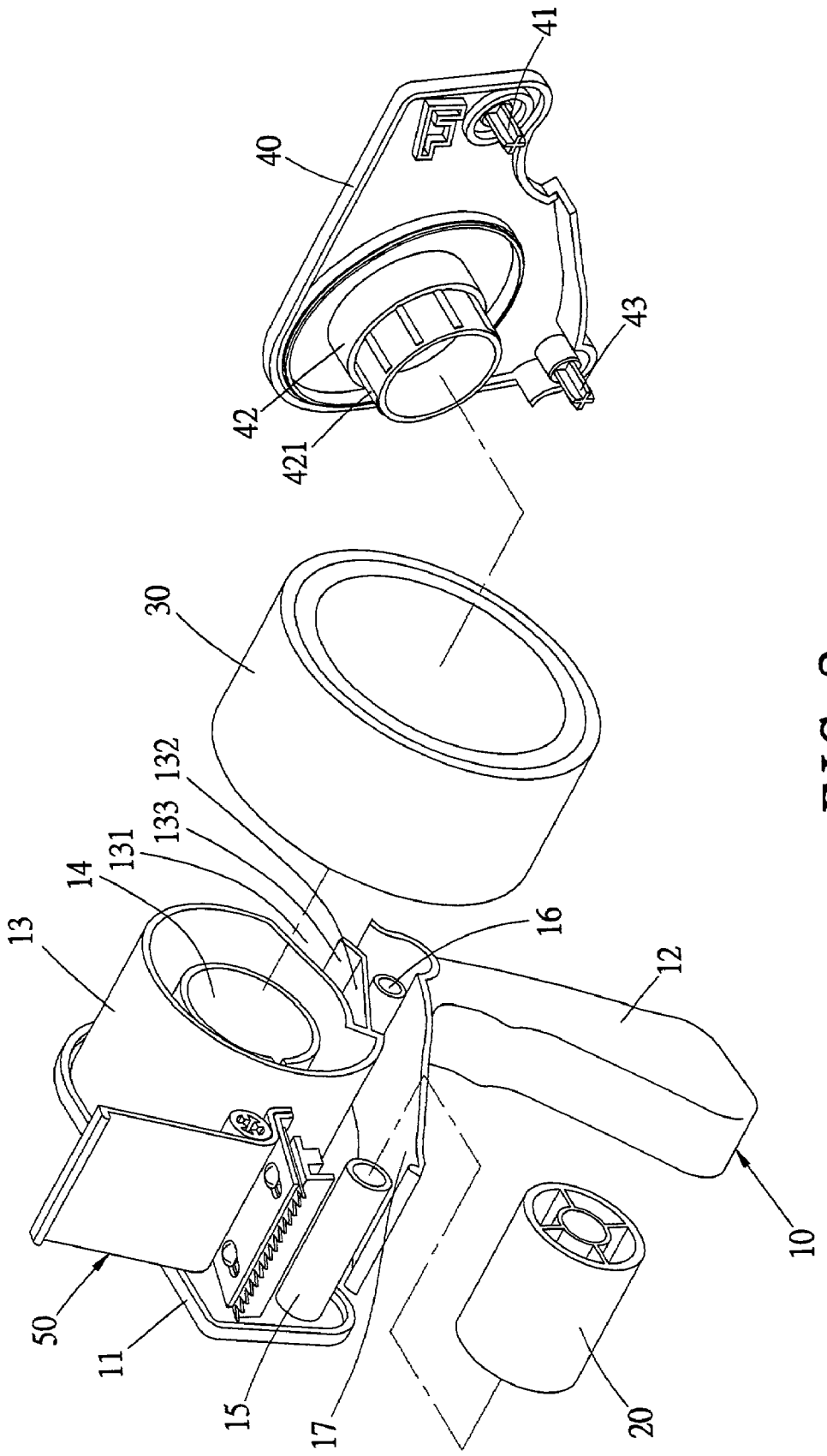


FIG. 3

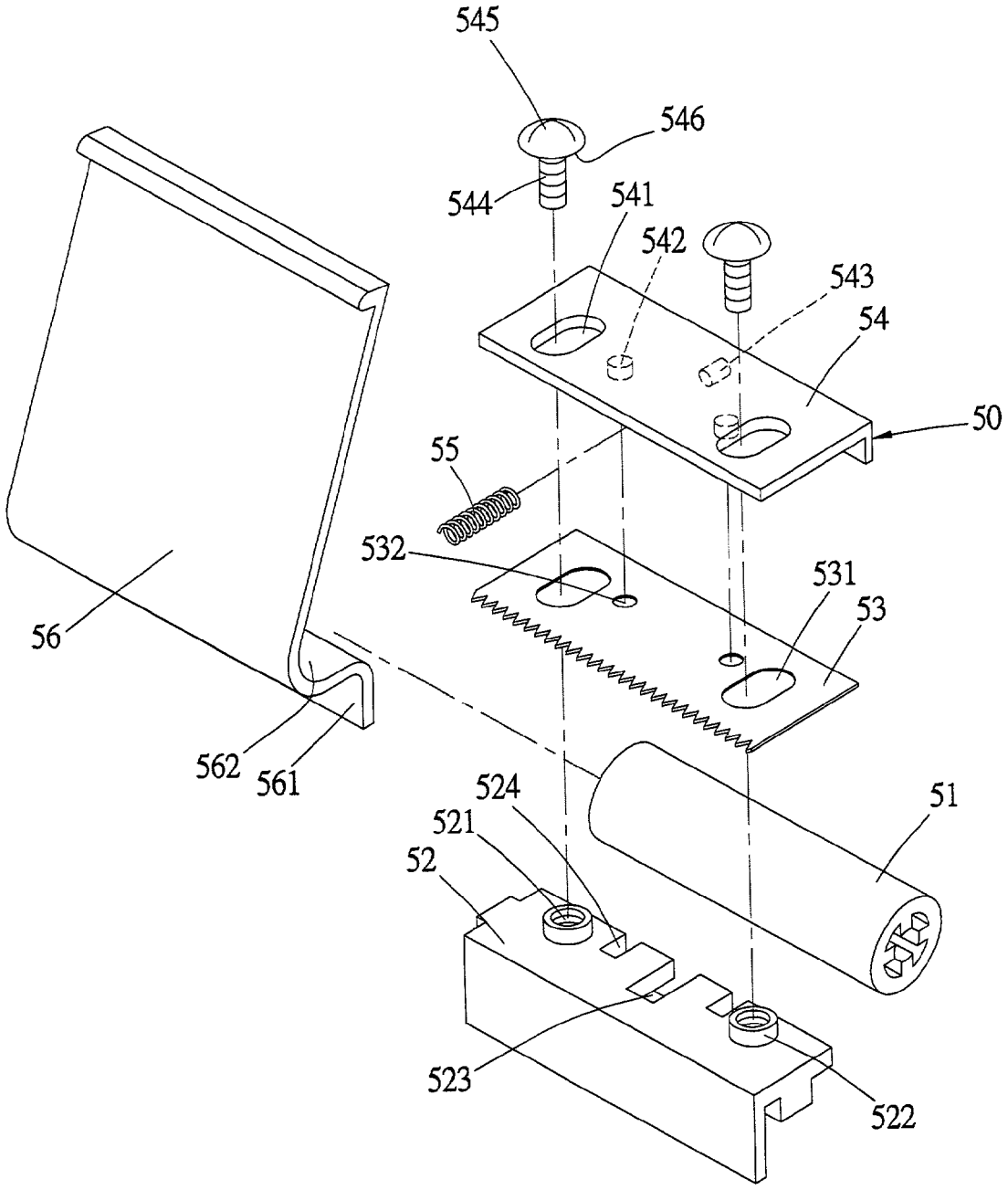

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FIG. 4

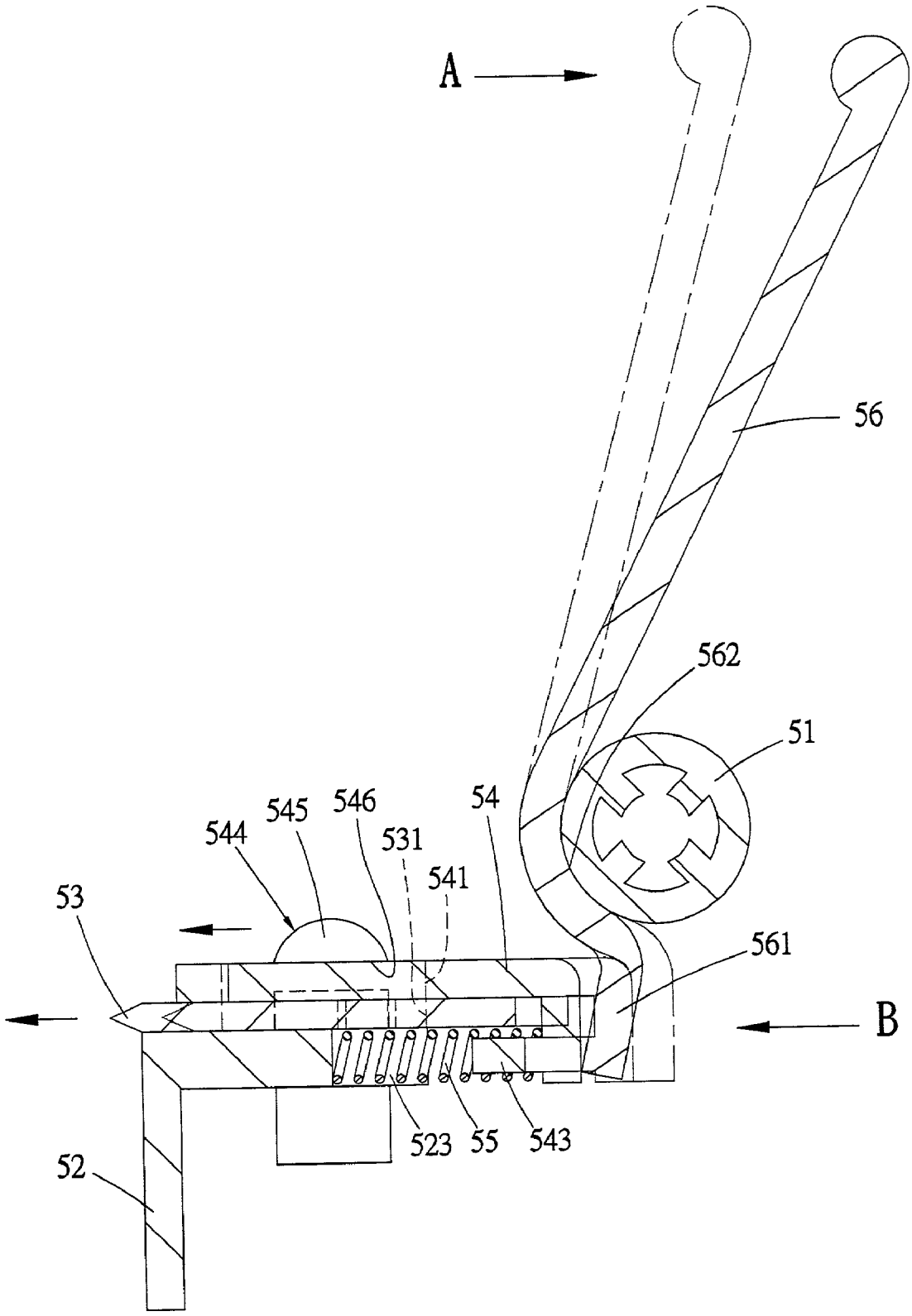

FIG. 5

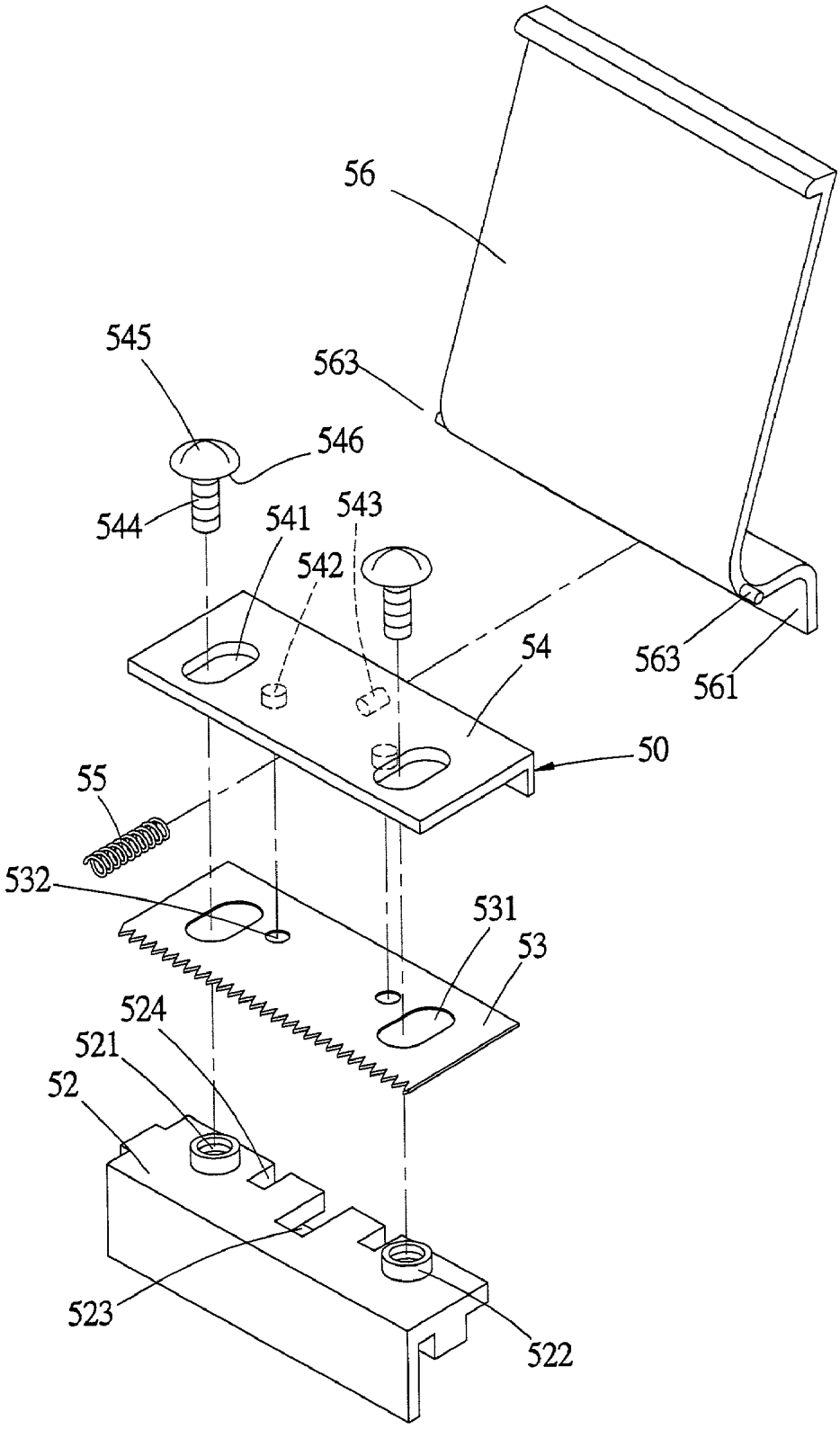
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FIG. 6

ADHESIVE-TAPE HOLDER WITH AN OPENABLE SIDE COVER

BACKGROUND OF THE INVENTION

[0001] This invention relates to an adhesive-tape holder with an openable side cover, particularly to one having a openable side cover provided on one side and combined with a combining tube, a roller support tube and a fitting tube at three locations, cap able to stabilize an adhesive-tape roller and protect an adhesive-tape roller from dropping out of an adhesive-tape roller base.

[0002] A conventional adhesive-tape holder, as shown in **FIG. 1**, includes a handle **1** provided with an adhesive-tape roller base **2** on top for receiving an adhesive-tape roller, a blade base **3**, a blade **4** and a press plate **5** combined together. In using the adhesive-tape holder, the adhesive tape on the adhesive-tape roller base **2** is first pulled out to pass through a roller **6** and then onto the press plate **5**. Then, the tape adhered on an article is pressed flat by the press plate **5** and then cut off by the blade **4** on the blade base **3**.

[0003] However, the adhesive-tape roller base **2** of the conventional adhesive-tape holder is of an open style so it is liable to drop out in case of carelessness in using. Besides, the blade **4** is fixedly mounted on the blade base **3**, therefore when cutting an adhesive tape, which has flexibility, the blade **4** may pull and drag the adhesive tape and fail to cut it off precisely and linearly.

SUMMARY OF THE INVENTION

[0004] A main objective of this invention is to offer an adhesive-tape holder with an openable side cover, having a side cover symmetrically combined with the adhesive-tape holder body by engagement at three locations, capable to protect an adhesive-tape roller from dropping out of an adhesive-tape roller base.

[0005] Another objective of this invention is to offer an adhesive-tape holder with an openable side cover, having a blade sandwiched by a blade slide base and a blade holder and restrictedly guided therebetween, so that it is able to cut off an adhesive tape with precision.

BRIEF DESCRIPTION OF DRAWINGS

[0006] This invention will be better understood by referring to the accompanying drawings, wherein:

[0007] **FIG. 1** is a perspective view of a conventional adhesive-tape holder:

[0008] **FIG. 2** is a perspective view of a first embodiment of an adhesive-tape holder with an openable side cover in the present invention:

[0009] **FIG. 3** is an exploded perspective view of the first embodiment of the adhesive-tape holder with an openable cover in the present invention:

[0010] **FIG. 4** is an exploded perspective view of the first embodiment of an automatic cutting device of the adhesive-tape holder in the present invention:

[0011] **FIG. 5** is a side cross-sectional view of the first embodiment of the automatic cutting device assembled and operated in the present invention:

[0012] **FIG. 6** is an exploded perspective view of a second embodiment of an automatic cutting device in the present invention.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

[0013] A first preferred embodiment of an adhesive-tape holder **10** with an openable side cover in the present invention, as shown in **FIGS. 2 and 3**, includes a stationary side plate **11**, a handle **12**, an adhesive-tape roller base **13**, a roller **20**, an adhesive-tape roller **30**, an openable side cover **40** and a cutting device **50** as main components combined together.

[0014] The handle **12** is located under one side of the side plate **11**, and the adhesive-tape roller base **13** is fixed laterally with one end of the side plate, formed with an inner recess **131** on its circumferential surface. The inner recess **131** has a stop plate **132** extending out of its edge and formed integral with the adhesive-tape roller base **13**, with an open end **133** of the stop plate **132** blocking the adhesive-tape roller **30** from rotating in a reverse direction.

[0015] In addition, the adhesive-tape roller base **13** is centrally formed with a combining tube **14** and extending out of the side plate **11**. Then, the side plate **11** is provided at the front end with a roller support tube **15** extending laterally from the side plate **11**, and a fitting tube **16** also extending laterally from the side plate above the handle **12**. Thus, the combining tube **14**, the roller support tube **15** and the fitting tube **16** together make up three combining locations.

[0016] Further, a stop late **17** is fixed on the upper side of the handle **12**, extending forward and having its side edge disconnected with a gap from the side plate **11**, and a cutting device **50** is disposed above the roller support tube **15** for cutting off an adhesive tape.

[0017] The roller **20** is fitted around the roller support tube **15**, having its circumferential surface stopped by the stop plate **17**.

[0018] The adhesive-tape roller **30** is fitted around the adhesive-tape roller base **13**, with an adhesive tape placed around the adhesive-tape roller **30** possible to be pulled out to pass through between the roller **20** and the stop plate **17** and then onto the cutting device **50**.

[0019] The opeanble side cover **40** is positioned above one side of the handle **12**, symmetrically located opposite to the side plate **11**. The side cover **40** is provided with a first fitting rod **41** of a cross shape to be inserted in the roller support tube **15**, and a step-shaped combining tubular rod **42** stably inserted in the combining tube **14** of the adhesive-tape roller base **1** and having a plurality of ridges **421** formed spaced apart around its circumferential surface, and further a cross-shaped second fitting rod **43** inserted in the fitting tube **16** on the side plate **11**.

[0020] The cutting device **50**, as shown in **FIG. 4**, includes a support rod **51**, a blade holder **52**, a blade **53**, a slide base **54**, a spring **55** and a press plate **56** combined together.

[0021] The support rod **51** is set on a support member **562** of the press plate **56** positioned between the adhesive-tape roller base **13** and the roller support tube **15**.

[0022] The blade holder **52** is disposed on the inner side wall of the side plate **11** under the support rod **51**, having two

fixing studs **522** provided spaced apart on top and respecpectively having a threaded hole **521**, a spring receiving groove **523** formed in the center and two slide grooves **524** respectively bored at the left and the right side of the spring receiving groove **523**.

[**0023**] The blade **53** is mounted on the blade holder **52**, having two slide holes **531** corresponding to the threaded holes **521** of the blade holder **52** and fitted around the fixing studs **522** of the blade holder **52**, and then two position holes **532** provided to conform to the slide grooves **524** of the blade holder **52**.

[**0024**] The slide base **54** is mounted on the blade **53** and activates it to shift. The slide base **54** is provided with two oval slide holes **541** matching with the slide holes **531** of the blade **53** and two position studs **542** protruding downward to pass through the position holes **532** of the blade **53** and then get in the slide groove **524** of the blade holder **52**. The slide base **54** further has a lateral projecting stud **543** on its vertical short wall.

[**0025**] The spring **55** has one end fitted around the projecting stud **543** and the other end inserted in the spring receiving groove **523** of the blade holder **52**.

[**0026**] The press plate **56** is formed with a lower vertical push member **561** at the lower end to push the slide base **54**, and has a curved support member **562** formed between an upper vertical press member and the lower push member **561** to rest against the support rod **51**.

[**0027**] In assembling, the adhesive-tape roller **30** is first fitted around the adhesive-tape roller base **13**, with the stop plate **17** stopping the inner side of the adhesive-tape roll **30** to prevent it from rotating in a reverse direction. Next, an adhesive tape is placed around the adhesive-tape roller **30** and pulled out to pass through the roller **20** and get onto the cutting device **50**, and then the side cover **40** is covered on one side of the handle **12** and the adhesive-tape roller **30** with the combining tubular rod **42**, the first and second fitting rods **41** and **43** respectively received in the combining tube **14** and the roller support tube **15** and the fitting tube **16** of the side plate **11**. Thus, the adhesive-tape roller **30** has its left and right sides respectively restricted and supported by the stationary side plate **11** and the openable side cover **40** to be protected therebetween from dropping out of the adhesive-tape roller base **13**.

[**0028**] Subsequently, as shown in **FIGS. 4 and 5**, the blade **53** and the slide base **54** are orderly mounted on the blade holder **52**, with the slide holes **531** and **541** of the blade **53** and the slide base **54** together fitted around the fixing studs **522** of the blade holder **52** and fixed therein by means of bolts **544**. The bolt **544** is only used to keep the blade **53** and the slide base **54** in place, but the bottom side **546** of its bolt head **545** doesn't closely contact with the top side of the slide base **54**, so that the slide holes **531** and **541** are capable to slide along the fixing studs **522**, and the slide base **54** and the blade **53** are restricted to shift back and forth only.

[**0029**] At the same time, the position studs **542** of the slide base **54** are inserted through the position holes **532** of the blade **53** and then get in the slide grooves **524** of the blade holder **52** to let the slide base **54** move the blade **53**. Then, the spring **55** has both ends respectively push against the projecting stud **543** of the slide base **54** and the spring receiving groove **523** of the blade holder **52** so as to enable the slide base **54** recover its position quickly by the resilience of the spring **55**.

[**0030**] Lastly, the press plate **56** has its curved support member **562** inserted sideward between the slide base **54** and the support rod **51**, letting the curved support member **562** push against the support rod **51** and the push plate **561** push against the rear side of the slide base **54**.

[**0031**] In using, as shown in **FIG. 5**, firstly, the tape on the adhesive-tape roller **30** is pulled out to pass around the roller **20** and get onto the press plate **56**. Next, the adhesive tape is glued on an article to be adhered and then pulled out smoothly by rotating the roller **20** and flattened synchronously by the end edge of the press plate **56**.

[**0032**] When the tape is needed to be cut off, just forcefully press the handle **12** down on the adhered article to let the top end of the press plate **56** produce an action (A) and the push plate **561** give rise to a reaction (B) at the same time to push the slide base **54**, with the support rod **51** supporting the support member **562** of the press plate **56** and serving as a fulcrum. Under this condition, the pushing force of the reaction (B) is larger than the resilience of the spring **55** so the push plate **561** can push the slide base **54** together with the blade **53** to move forward and cut off the adhesive tape.

[**0033**] On the contrary, in case the pressing force of the handle **12** is released from the article being adhered, the slide base **54** will quickly recover its position by the resilience of the spring **55**, and at the same time the position studs **542** of the slide base **54** will fit in the position holes **532** of the blade **53**, so that the blade **53** can be moved back to its original position, ensuring safety in using.

[**0034**] Another preferred embodiment of an adhesive-tape holder with an openable side cover in the present invention, as shown in **FIG. 6** is to have both sides of the press plate **56** of the cutting device **50** respectively provided with a pivotal stud **563** to be pivotally connected with the side wall of the side plate **11** and the side cover **40**, needless to be supported with a support rod **51** but equally enabling the lower push member **561** of the press plate **56** push forward the slide base **54** together with the blade **53** to carry on cutting of the adhesive tape.

[**0035**] While the preferred embodiments of the invention have been described above, it will be recognized and understood that various modifications may be made therein and the appended claims are intended to cover all such modifications that may fall within the spirit and scope of the invention.

I claim:

1. An adhesive-tape holder with an openable side cover comprising:

A stationary side plate:

A handle provided under one side of said stationary side plate:

An adhesive-tape roller base fixed on one end of said side plate for fitting an adhesive-tape roller:

A roller provided at a front end of said side plate:

Characterized by:

Said adhesive-tape roller base provided centrally with a combining tube horizontally extending laterally from said side plate, a roller support tube extending laterally from said side plate for receiving said roller, and a fitting tube positioned above said handle:

An openable side cover positioned on one side of the top of said handle, symmetrically located opposite to said side plate, said side cover provided with a first fitting rod to be inserted in said roller support tube of said side plate, said side cover having a combining tubular rod to be correspondingly received in said combining tube of said adhesive-tape roller base, said side cover further provided with a second fitting rod inserted in said fitting tube of said side plate.

2. The adhesive-tape holder with an openable side cover as claimed in claim 1, wherein a stop plate is formed extending forward from the upper surface of said handle to push against the circumferential surface of said roller, with a gap formed between the side edge of said resisting plate and said frame plate.

3. The adhesive-tape holder with an openable side cover as claimed in claim 1, wherein an inner recess is formed on the circumferential surface of said adhesive-tape roller base, having a stop plate extending from an end and formed integral with said adhesive-tape roller base, and said stop plate has an open side blocking said adhesive-tape roller to prevent said roller from rotating in a reverse direction.

4. The adhesive-tape holder with an openable side cover as claimed in claim 1, wherein said combining tubular rod of said side cover is step-shaped, having a plurality of ridges formed spaced apart around the circumferential surface to be stably inserted in said combining tube of said adhesive-tape roll base.

5. The adhesive-tape holder with an openable side cover as claimed in claim 1, wherein said adhesive-tape holder further includes a cutting device, said cutting device comprising:

A support rod disposed at a proper position of said side plate:

A blade holder fixed on an inner side wall of said side plate and provided on top with two fixing studs respectively having a threaded hole, said blade holder further having a spring receiving groove formed in the center:

A blade positioned on said blade holder and having two slide holes fitted around said fixing studs of said blade holder, said blade further bored with two position holes for receiving two position studs of said slide base:

A slide base mounted on said blade to activate said blade to shift and having two slide holes formed on top side to correspond to said slide holes of said blade and a projecting stud located on its vertical short wall, and a spring having one end fitted around said projecting stud and the other end inserted in said spring receiving groove of said blade holder, said slide base further having two position studs extending downward to be inserted through said position holes of said blade: and,

A press plate formed with a vertical push member at a bottom end to push said slide base, with a curved support member formed between an upper vertical press member of said press plate and said lower push member to rest against said support rod.

6. The adhesive-tape holder with an openable side cover as claimed in claim 1, wherein said adhesive-tape holder further includes a cutting device, said cutting device comprising

A blade holder fixed on an inner side wall of said side plate and provided on top with two fixing studs respectively having a threaded hole, said blade holder further provided with a spring receiving groove in the center:

A blade movably positioned on said blade holder and having two slide holes to be fitted around said fixing studs of said blade holder and two position holes for receiving two said position studs of said slide base:

A slide base mounted on said blade and activating it to shift, said slide base bored with two slide holes on a top side, said two slide holes conforming to said slide holes of said blade, said slide base provided with a projecting stud on its vertical short wall, and a spring having one end fitted around said projecting stud and the other end inserted in said spring receiving groove of said blade holder, said slide base further having two position studs protruding downward to be inserted through said position holes of said blade: and,

A press plate having two pivotal studs respectively provided at opposite side edges to be pivotally connected with said side plate and said side cover, said press plate formed with a vertical push plate for pushing forward said slide base.

7. The adhesive-tape holder with an openable cover as claimed in claim 5 or **6**, wherein a slide groove is provided respectively at the left and the right side of said spring receiving groove of said blade holder, two position holes corresponding to said slide grooves are bored on said blade, and two position studs are fixed under said slide base, protruding downward to be inserted through said position holes and then get in said spring receiving groove.

* * * * *