

Description

BACKGROUND OF THE INVENTION

Field of the Invention

[0001] The present invention relates to a roll paper holder for holding roll paper, and more particularly to a roll paper holder in which a leading end of roll paper is in a state of extending outwardly from the roll paper holder by a certain length after cutting of the roll paper, thereby being capable of allowing the user to easily grasp the leading end of the roll paper.

Description of the Related Art

[0002] In a conventional roll paper holder, roll paper is cut by a cutter formed at an end of the holder. In such a roll paper holder, however, there is a problem in that since a leading end of the roll paper formed upon cutting the roll paper is disposed beneath the cutter, the user may cut his finger on the cutter when pulling the leading end of the roll paper to use the roll paper. For this reason, it has been required to maintain the leading end of the roll paper in a state of extending outwardly from the roll paper holder by a certain length, namely, in a state of being spaced apart from the cutter by a certain length, in order to prevent the user from cutting his finger on the cutter.

[0003] Conventional proposals to meet the above-mentioned requirement are disclosed in Japanese Unexamined Patent Publication No. 2002-85288, Japanese Unexamined Patent Publication No. 2003-153821, Japanese Unexamined Patent Publication No. 2003-135306, Japanese Unexamined Utility Model Publication No. H5-28292, Japanese Unexamined Patent Publication No. H10-43087, and Japanese Unexamined Patent Publication No. H10-000171.

[0004] However, in Japanese Unexamined Patent Publication Nos. 2002-85288 and 2003-153821, there is a problem in that cutting operation may be unstable because there is a space between a cutter and an end of a cover to allow roll paper to extend outwardly from a roll paper holder by a certain length. In the case of Japanese Unexamined Patent Publication No. 2003-135306, cutting operation may be unstable because roll paper cutting by a cutter is achieved only using frictional force generated at one side of a holder. Furthermore, a portion of the cutter is forwardly protruded, so that the user may cut his finger on the protruded cutter portion. In the case of Japanese Unexamined Utility Model Publication No. H5-28292, stable cutting operation may be achieved. In this case, however, the leading end of roll paper formed after cutting is still positioned at a cutting position without extending downwardly from the cutting position. For this reason, there is difficulty for the user to grasp the leading end of the roll paper. In the case of Japanese Unexamined Patent Publication No. H10-43087, cutting operation carried out by a cutter is unstable. In the case of Japanese

Unexamined Patent Publication No. H10-000171, roll paper is stably supported. In this case, however, there is a problem in that the leading end of roll paper does not extend smoothly downward.

SUMMARY OF THE INVENTION

[0005] According to one aspect, the present invention provides a roll paper holder, in which a leading end of roll paper is in a state of extending outwardly from the roll paper holder by a certain length after cutting of the roll paper, thereby being capable of allowing the user to grasp the leading end of the roll paper and then to pull the roll paper from the roll paper holder by a desired length in order to use the roll paper.

[0006] Another aspect of the present invention is to provide a roll paper holder configured to prevent teeth of a cutter to cut roll paper from being exposed, thereby being capable of preventing the user from injury by the teeth of the cutter upon cutting the roll paper.

[0007] Another aspect of the present invention is to provide a roll paper holder usable in a state of being laid on a horizontal table.

[0008] In accordance with an aspect of the present invention, a roll paper holder is provided including a pair of side members, a support shaft for supporting roll paper between the side members, a backing member mounted to front sides of the side members, and a cover member rotatably mounted to the side members while facing the backing member, further including a concave portion formed at the backing member, a convex portion formed at the cover member to correspond to the concave portion, a cutter formed at a lower end of the cover member, and an elastic member mounted to the backing member, to be arranged over the concave portion.

[0009] The cover member may include a pair of legs formed at one side of the cover member, second fixed pins respectively protruded from outer ends of the legs, and grooves respectively formed at inner ends of the legs. Each of the side members may include guide holes to receive the second fixed pins, respectively, fulcrum pins respectively fitted in the grooves, and first fixed pins. A coil spring may be mounted between each of the second fixed pins and a corresponding one of the first fixed pins.

[0010] The cutter may include a saw-shaped tooth portion formed at a lower end of the cover member, a spring member formed between the tooth portion and the convex portion of the cover member, and a spring plate formed at an end of the spring member.

[0011] The spring member may include a pair of coil springs, and three coil springs arranged between the pair of coil springs while having a shorter length than the pair of coil springs.

[0012] The cutter may include a horizontally-elongated tooth portion formed at a lower end of the cover member, spring members respectively formed at upper and lower sides of the tooth portion, and spring plates each formed at an end of a corresponding one of the spring members.

The tooth portion may be inserted into a concave portion formed on the backing member at a position corresponding to the tooth portion

[0013] The cutter may include a horizontally-elongated tooth portion formed at a lower end of a connector to connect the pair of legs, sponges respectively formed at upper and lower sides of the tooth portion, and spring plates each formed at an end of a corresponding one of the sponges. The backing member may be formed with a concave portion at a position corresponding to the tooth portion. Sponges may be mounted to the backing member at upper and lower sides of the concave portion. Spring plates may be attached to free ends of the sponges mounted to the backing member, respectively.

[0014] The cutter may include a 90°-rotated U-shaped recess formed at the backing member, two parallel spring members mounted at an upper portion of the recess, to extend toward the cover member, respectively attached with spring plates, a plate-shaped tooth portion disposed at a lower portion of the recess and supported by two spring members, the plate-shaped tooth portion having an inclined surface, a spring plate support portion formed at a lower end portion of the cover member, and a tooth portion formed at the cover member beneath the spring plate support portion, to be integral with the spring plate support portion. Accordingly, when the cover member is pressed, the tooth portion of the cover member may be moved along the inclined surface of the plate-shaped tooth portion, and may then cut an end of the roll paper while coming into contact with the plate-shaped tooth portion, in a manner similar to scissors.

[0015] In accordance with another aspect of the present invention, there is provided a roll paper holder including a pair of side members, a base plate mounted between the side members, to support roll paper laid on the base plate, a backing member mounted to the side members beneath the base plate, and a cover member mounted to the side members to be horizontally movable with respect to the backing member, further including a plurality of concave portions formed at the backing member, a plurality of convex portions formed at the cover member, to correspond to the concave portions of the backing member, a roll paper cutter formed at the cover member beneath the convex portions, a guide receiving member mounted to the backing member between the concave portions, a guide formed at the cover member between the convex portions, to be inserted into the guide receiving member, and a spring member mounted to an end of the guide inserted into the guide receiving member.

[0016] The cutter may include a guide plate and a stopper, which are formed at a lower end of the cover member while being vertically spaced apart from each other, a tooth portion formed between the guide plate and the stopper, spring members arranged at upper and lower sides of the tooth portion, and bases formed at the backing member, to correspond to the spring members, respectively. Accordingly, when the cover member is

pressed, the spring members may be pressed against the bases while coming into contact with the bases, and the tooth portion may be inserted into a groove defined between the bases.

[0017] The cutter may include a slider vertically slidably mounted to a lower end of the cover member, and formed with a horizontal groove, a tooth portion formed at the cover member beneath the slider, a spring member mounted to the cover member beneath the slider, a spring plate mounted to a free end of the spring member, a pair of bases formed on the backing member at a position corresponding to the spring plate, and a control rod formed on the backing member at a position corresponding to the slider. Accordingly, when the cover member is pressed, the control rod may be inserted into the slider, the spring plate may be pressed against the bases, and the tooth portion may be inserted into a space defined between the bases.

[0018] The tooth portion may include teeth having mountains and valleys, which are alternately arranged.

BRIEF DESCRIPTION OF THE DRAWINGS

[0019] The above and other objects, features and other advantages of the present invention will be more clearly understood from the following detailed description taken in conjunction with the accompanying drawings, in which:

FIG. 1a, 1b illustrates each configurations of a roll paper holder according to an exemplary embodiment of the present invention through a side view while illustrating a cover member through a plan view;

FIG. 2 is a perspective view of the roll paper holder; FIG. 3 is a side view illustrating a cover member according to another embodiment of the present invention;

FIG. 4 is a side view illustrating a roll paper holder according to another embodiment of the present invention;

FIG. 5 is a plan view illustrating arrangement of springs on a cover member in the roll paper holder of FIG. 4;

FIG. 6a, 6b, 6c are side views illustrating each procedures of cutting roll paper by the cutter;

FIG. 7a, 7b, 7c are side views illustrating each procedures of cutting roll paper using a cutter according to another embodiment of the present invention;

FIG. 8a, 8b are side views illustrating each procedures of cutting roll paper using a cutter according to another embodiment of the present invention;

FIG. 9a, 9b are plan views illustrating the shape of a tooth portion each;

FIG. 10a, 10b, 10c illustrates a cutter according to another embodiment of the present invention through a side view and a plan view;

FIG. 11 is a side view illustrating a cutter according to another embodiment of the present invention;

FIG. 12 is a side view illustrating an embodiment modified from the embodiment of FIG. 11;
 FIG. 13a, 13b, 13c are side views illustrating a roll paper holder according to another embodiment of the present invention;
 FIG. 14 is a schematic view illustrating structures of concave and convex portions according to an exemplary embodiment of the present invention.
 FIG. 15a, 15b are views illustrating a roll paper holder according to another embodiment of the present invention;
 FIG. 16a to 16h are perspective views illustrating a cutter according to another embodiment of the present invention;
 FIG. 17a, 17b, 17c illustrates a tooth portion each according to another embodiment of the present invention through a side view and plan views;
 FIG. 18 is a perspective view illustrating a roll paper holder, to which a cover member is attached, in accordance with another embodiment of the present invention;
 FIG. 19a, 19b, 19c illustrates constituent elements of the roll paper holder shown in FIG. 18 through a front view and perspective views;
 FIG. 20a, 20b illustrates detailed structures of the constituent elements of the roll paper holder shown in FIG. 18 through front views;
 FIG. 21 is a perspective view illustrating a desktop roll paper holder according to an exemplary embodiment of the present invention;
 FIG. 22 is a perspective view illustrating an inner structure of the desktop roll paper holder in an opened state of a cover member;
 FIG. 23 is a perspective view illustrating the desktop roll paper holder in a state in which roll paper is mounted;
 FIG. 24 is a perspective view illustrating a usable state of the desktop roll paper holder;
 FIG. 25a, 25b illustrates a kitchen paper holder according to an exemplary embodiment of the present invention through a front view and a perspective view;
 FIG. 26 is a view illustrating detailed structures of the constituent elements of the kitchen paper holder;
 FIG. 27 is a perspective view illustrating a use state of the kitchen paper holder;
 FIG. 28 is a perspective view illustrating a desktop kitchen paper holder according to an exemplary embodiment of the present invention;
 FIG. 29 is a perspective view illustrating a state in which kitchen paper is laid on the desktop kitchen paper holder;
 FIG. 30 is a perspective view illustrating the desktop kitchen paper holder in a state in which a kitchen paper pressing member is set; and
 FIG. 31 is a perspective view illustrating a use state of the desktop kitchen paper holder.

DETAILED DESCRIPTION OF THE INVENTION

[0020] Reference will now be made in detail to the preferred embodiments of the present invention associated with roll paper holders, examples of which are illustrated in the accompanying drawings.

[0021] In accordance with an exemplary embodiment of the present invention, a roll paper holder includes a pair of side members, a backing member mounted between the side members, and formed with a concave portion, a cover member rotatably mounted to the side members and formed with a convex portion corresponding to the concave portion, and a cutter formed at a lower end of the cover member. Support shafts are formed at the side members, respectively, to support roll paper. An end of the roll paper supported by the support shafts passes through a space defined between the backing member and the cover member. When the user pushes or presses the cover member, the cutter formed at the lower end of the cover member cuts the roll paper. The roll paper, which has been pressed between the concave and convex portions in accordance with the pressing of the cover member, is then unrolled in the direction of gravity after cutting, so that a leading end of the roll paper extends outwardly from the cutter by a length allowing the user to grasp the leading end of the roll paper.

[0022] FIGS. 1a and 1b are a side view and a plan view, which illustrate a configuration of a roll paper holder, respectively. FIG. 2 is a perspective view of the roll paper holder. FIG. 3 is a side view illustrating a cover member according to another embodiment of the present invention. FIG. 4 is a side view illustrating a roll paper holder according to another embodiment of the present invention. FIG. 5 is a plan view illustrating arrangement of springs on a cover member in the roll paper holder of FIG. 4. FIG. 6a, 6b, 6c are side views illustrating each procedures of cutting roll paper by the cutter. FIG. 7a, 7b, 7c are side views illustrating each procedures of cutting roll paper using a cutter according to another embodiment of the present invention. FIG. 8a, 8b are side views illustrating procedures of cutting roll paper using a cutter according to another embodiment of the present invention. FIG. 9a, 9b are each plan views illustrating the shape of a tooth portion. FIG. 10a, 10b, 10c illustrates a cutter according to another embodiment of the present invention through a side view and a plan view.

[0023] Referring to FIGS. 1a and 1b, roll paper 3 is mounted on a support shaft 2 fixed between a pair of side members 1. When the roll paper 3 is unrolled, the unrolled roll paper passes over a roll paper support rod 5 and then passes along concave portions 6a of a backing member 6.

[0024] As shown in FIG. 2, elastic members 6A are mounted to the backing member 6, to be arranged over the concave portions 6a. For each elastic member 6A, a Z-shaped plate spring, a coil spring, or a cushion member may be used.

[0025] A cover member 8 is rotatably mounted to the

side members 1 such that the cover member 8 faces the backing member 6. The cover member 8 includes convex portions 8d engagable with the concave portions 6a under the condition that the unrolled roll paper is interposed between the concave portions 6a and the convex portions 8d. The cover member 8 also includes a pair of legs 8b. A sliding pin 12 is protruded from an outer surface of each leg 8b at an end of the leg 8b. The sliding pins 12 of the legs 8b are inserted into guide holes 15 formed through the side members 1, respectively. The legs 8b are connected by a connector 8c disposed between the legs 8b. Grooves 8a are formed at opposite sides of the cover member 8 between the legs 8b and an end of the convex portion 8d disposed adjacent to the legs 8b, respectively. The grooves 8a are fitted around fulcrum pins 9 protruded from inner surfaces of the side members 1, respectively.

[0026] The cover member 8 further includes a cutter formed at a lower end of the connector 8c. The cutter includes a saw-shaped tooth portion 10, spring members 4a, 4b, and 4c disposed between the tooth portion 10 and an end of the convex portion 8d disposed adjacent to the tooth portion 10, and a spring plate 11 mounted to free ends of the spring members 4a, 4b, and 4c.

[0027] FIG. 2 is a perspective view illustrating a roll paper holder according to an exemplary embodiment of the present invention. Each guide hole 15 formed at a corresponding one of the slide members 1 has a shape corresponding to a movement trace of the corresponding sliding pin 12 established when the cover member 8 rotates about the fulcrum pins 9 as the cover member 8 is pushed or pressed toward the backing member 6. Meanwhile, fixed pins 13 are mounted to the side members 1, respectively. A coil spring 14 is mounted between each sliding pin 12 and a corresponding one of the fixed pins 13, to return the cover member 8 to an original position thereof.

[0028] When the user presses a lower end of the cover member 8 after grasping an end 3b of the unrolled roll paper and pulling the roll paper by a desired length, the cover member 8 is rotated about the fulcrum pins 9. At this time, the sliding pins 12 slide along the guide holes 15. When the pressing force is released, the cover member 8 is returned to an original position thereof by the coil springs 14.

[0029] When the cover member 8 is pressed, the convex portions 8d are inserted into the concave portions 6a while pressing the roll paper and elastic members 6A interposed between the concave portions 6a and the convex portions 8d. At this time, the roll paper is unrolled, and the elastic members 6A are tensioned. When the cover member 8 is further pressed, the spring plate 11 mounted to the free ends of the spring members 4a, 4b, and 4c is pressed against a base 7 provided at a lower portion of the backing member 6. At this time, the roll paper is pressed by the tooth portion 10 beneath the base 7, so that it is cut by the tooth portion 10.

[0030] When the user releases the pressing force ap-

plied to the cover member 8 after the cutting, the cover member 8 is returned to an original position thereof by resilience of the coil springs 14. At this time, the roll paper interposed between the concave portions 6a and the convex portions 8d is pushed away from the concave portions 6a by the elastic members 6A. As a result, the roll paper extends in the direction of gravity through a gap defined between the concave portions 6a and the convex portions 8d. Thus, the roll paper extends outwardly from the roll paper holder by a certain length.

[0031] When the spring plate 11 or base 7 is subjected to surface machining to increase frictional force or is provided with a member to increase frictional force, it may be possible to obtain slippage preventing effects.

[0032] FIG. 6a, 6b, 6c are side views illustrating a procedure of cutting roll paper by the cutter. FIG. 6a, 6b, 6c illustrates each operations of the tooth portion 10 and spring plate 11. FIG. 6c illustrates a state in which a leading end of the roll paper formed after a cutting operation and in contact with the tooth portion 10 is separated from the tooth portion 10 by the spring plate 11. That is, the plate spring 11 is disposed between the tooth portion 10 and the end of the convex portion 8d disposed adjacent to the tooth portion 10 in order to prevent the leading end of the roll paper from being kept in a state of being attached to the tooth portion 10 after cutting of the roll paper. That is, even when the leading end of the roll paper is in a state of being attached to the tooth portion 10 after cutting of the roll paper, the spring plate 11 continuously presses the leading end of the roll paper until the tooth portion 10 returns to an original position thereof, thereby causing the leading end of the roll paper attached to the tooth portion 10 from being separated from the tooth portion 10. Thereafter, the spring plate 11 is returned to an original position thereof.

[0033] Meanwhile, the roll paper positioned between the backing member 6 and the cover member 8 extends in the direction of gravity by the resilience of the elastic members 6A while being moved away from the concave portions 6a when the cover member 8 returns to an original position thereof. At the same time, the roll paper leading end 3b extends downwardly from the tooth portion 10 while being separated from the base 7 and the tooth portion 10. Thus, the roll paper leading end 3b is positioned to be easily grasped by the user.

[0034] It is apparent that the downward extension length of the roll paper from the tooth portion 10 depends on the length of the curved surfaces of the concave portions 6a, namely, the depths and number of the concave portions 6a. Preferably, the downward extension length of the roll paper is 20mm or more, in order to enable the user to easily grasp the leading end of the roll paper.

[0035] FIG. 3 illustrates a cover member according to another embodiment of the present invention. In accordance with this embodiment, a cover member 17 is rotatably mounted to the side members 1 by support pins 18, to be rotatable about support pins 18. A spring 14 is coupled between fixed members 19 and 20. When the cover

member 17 is pressed, the spring 14 is tensioned. When the pressing force applied to the cover member 17 is released, the cover member 17 is returned to an original position thereof by resilience of the spring 14.

[0036] FIG. 4 illustrates a roll paper holder according to another embodiment of the present invention. FIG. 5 is a plan view illustrating arrangement of springs on a cover member in the roll paper holder of FIG. 4. In accordance with this embodiment, a cover member 17A is mounted to a pair of side members, to be roatable about support pins 18 formed at upper portions of the side members. A cutter is formed at a lower end of the cover member 17A. The cutter includes a tooth portion 10B, a pair of coil springs 4A and 4B disposed between the tooth portion 10B and an end of a convex portion provided at the cover member 17A adjacent to the tooth portion 10, and three coil springs 4a, 4b, and 4c disposed between the coil springs 4A and 4B while having a shorter length than the coil springs 4A and 4B. The cover member 17A is kept spaced apart from a backing member 66 by the coil springs 4A and 4B and a base 7A.

[0037] Roll paper extends between the two coil springs 4A and 4B. The three coil springs 4a, 4b, and 4c operate in the same manner as the coil springs 4a, 4b, and 4c shown in FIG. 1a, 1b. Spring plates are attached to ends of the two coil springs 4A and 4B and three coil springs 4a, 4b, and 4c, respectively.

[0038] In an initial state, the roll paper is positioned in a space defined by the backing member 66, which is provided with elastic members 6B, and the cover member 17A, which is provided with elastic members 8B. When the user presses a lower portion of the cover member 17A, convex portions of the cover member 17A come into contact with concave portions of the backing member 66. At this time, the elastic members 6B and 8B are tensioned, and the two coil springs 4A and 4B are compressed.

[0039] Also, the three coil springs 4a, 4b, and 4c retain the roll paper between the base 7A and the coil springs 4a, 4b, and 4c. The roll paper is pressed against the base 7A by the tooth portion 10B. As a result, the roll paper is cut. When the user releases the pressing force applied to the cover member 17A after cutting, the cover member 17A is returned to an original position thereof by resilience of the coil springs 4A and 4B. At this time, the roll paper interposed between the concave portions and the convex portions, which has a certain length, is pushed away from the concave portions by the elastic members 6B and 8B. As a result, the roll paper extends in the direction of gravity. Thus, the roll paper extends downwardly from the tooth portion 10B by a certain length.

[0040] FIG. 7a, 7b, 7c illustrates a cutter according to another embodiment of the present invention. In FIG. 7a to 7c, operations of constituent elements of the cutter, namely, a tooth portion 25 and spring plates 28a and 28b, are shown. Referring to FIG. 7a, a backing member 23, which has a horizontally-elongated concave portion 23a, is shown. The tooth portion 25 is formed at a cover

member 24 to extend horizontally. The tooth portion 25 is insertable into the concave portion 23a. Springs 27a and 27b are mounted to the cover member 24 while being vertically arranged such that the tooth portion 25 is disposed between the springs 27a and 27b. Spring plates 28a and 28b are mounted to free ends of the springs 27a and 27b, respectively. A stopper 26 is formed at the cover member 24 beneath a lower one of the springs 27a and 27b, namely, the spring 27b. Referring to FIG. 7a, a leading end 3a of the roll paper passes through a gap between the backing member 23 and the cover member 24.

[0041] FIG. 7b illustrates a state in which the cover member 24 is pressed toward the backing member 23. In this state, the tooth portion 25 is inserted into the concave portion 23a. When the stopper 26 comes into contact with the backing member 23, the insertion of the tooth portion 25 into the concave portion 23a is stopped. At this time, the roll paper is cut by the tooth portion 25 inserted into the concave portion 23a. At this time, stable cutting is achieved because the two spring plates 28a and 28b respectively arranged at upper and lower sides of the tooth portion 25 press the roll paper leading end 3a during cutting, thereby firmly fixing the roll paper leading end 3a.

[0042] FIG. 7c illustrates a state just before the cover member 24 returns to an original position thereof at which the cover member 24 is spaced apart from the backing member 23. FIG. 7c shows a state in which a leading end of roll paper formed after a cutting operation and in contact with the tooth portion 25 is separated from the tooth portion 25 by the spring plates 28a and 28b. That is, even when the leading end of roll paper 3a is in a state of being attached to the tooth portion 25 after cutting of the roll paper, the spring plates 28a and 28b continuously press the leading end of the roll paper 3a until the tooth portion 25 returns to an original position thereof, thereby preventing the leading end of the roll paper attached to the tooth portion 25 from being separated from the tooth portion 25. Thereafter, the spring plates 28a and 28b are moved away from the leading end of the roll paper 3a. The spring plates 28a and 28b, to which the springs 27a and 27b are attached, and the tooth portion 25 may be provided at the backing member 23, and the concave portion 23a may be provided at the cover member 24.

[0043] FIG. 8a, 8b illustrates a cutter according to another embodiment of the present invention. Referring to FIG. 8a, a backing member 23 and a cover member 24 are illustrated. Spring plates 30a and 30b are mounted to the backing member 23 via sponges 29a and 29b attached to the backing member 23. Also, spring plates 28a and 28b are mounted to the cover member 24 via sponges 38a and 38b attached to the cover member 24 such that the spring plates 28a and 28b face the spring plates 30a and 30b, respectively. A tooth portion 25 is formed at the cover member 24, and a concave portion 23a is formed at the backing member 23 such that the tooth portion 25 is insertable into the concave portion 23a. FIG. 8b illustrates a configuration reverse to that of

FIG. 8a. That is, in the case of FIG. 8b, the spring plates 30a and 30b are mounted to the cover member 24 via the sponges 29a and 29b attached to the cover member 24, and the spring plates 28a and 28b are mounted to the backing member 23 via the sponges 38a and 38b attached to the backing member 23 such that the spring plates 28a and 28b face the spring plates 30a and 30b, respectively. In this case, a tooth portion 25 is formed at the backing member 23, and a concave portion 23a is formed at the cover member 24 such that the tooth portion 25 is insertable into the concave portion 23a.

[0044] FIG. 9a, 9b are plan views illustrating horizontal shapes of the tooth portions 25 respectively shown in FIGS. 7 and 8. In the case of a tooth portion 25B shown in FIG. 9b, teeth having different heights are alternately formed to reduce the pressure initially applied to roll paper upon cutting the roll paper. In this case, it may be possible to increase the number of teeth having different heights, and thus to vary the shapes and arrangement of teeth.

[0045] FIG. 10a, 10b, 10c illustrates a cutter according to another embodiment of the present invention. Referring to FIG. 10a, a backing member 33 is shown. A 90°-rotated U-shaped recess 33A is formed at the backing member 33. Two parallel spring members 37a and 37b are mounted at the recess 33A, to extend toward an opening of the recess 33A, namely, toward a cover member 31 facing the backing member 33. Spring plates 36a and 36b are attached to respective free ends of the spring members 37a and 37b. Meanwhile, two spring members 35a and 35b are mounted to the inner bottom surfaces of the recess 33A, and a plate-shaped lower tooth portion 34 is supported by the spring members 35a and 35b. As shown in a plan view of FIG. 10c, the plate-shaped lower tooth portion 34 has an inward cut-out section 34b, and inclined sections 34a respectively formed at opposite sides of the cut-out section 34b.

[0046] Meanwhile, the cover member 31 is provided, at a lower end thereof, with a spring plate support portion 31b and a tooth portion 32. The spring plate support portion 31b comes into contact with the spring plates 36a and 36b when the cover member 31 moves toward the backing member 33. When the cover member 31 is pressed toward the backing member 33, the tooth portion 32 of the cover member 31 comes into contact with roll paper 3a, and then presses the roll paper 3a against the inclined sections 34a of the plate-shaped lower tooth portion 34. At this time, the spring plate support portion 31b presses the roll paper 3a against the spring plates 36a and 36b. In this state, the tooth portion 32 subsequently moves along the inclined sections 34a while downwardly pressing the plate-shaped tooth portion 34. At this time, the roll paper is inserted into the recess 33A by a certain length while being interposed between the spring plate support portion 31b and the spring plates 36a and 36b. As the tooth portion 32 comes into contact with an edge of the cut-out section 34b in a sequential manner during movement thereof, it cuts the roll paper 3a in a manner

similar to scissors. When the cover member 31 is moved away from the backing member 33 after cutting of the roll paper, a leading end 3b of the roll paper formed after cutting is moved away from the recess 33A by the spring plates 36a and 36b. Thus, the leading end 3b extends downwardly by a certain length.

[0047] FIG. 11 illustrates a cutter according to another embodiment of the present invention. A cover member 40 rotates about fulcrum pins (not shown) to come into contact with a backing member 42, as indicated by reference numeral "40A". A tooth portion 46 and spring plates 44 mounted to spring members 45, which are provided at the cover member 40, are moved along arc-shaped tracks 47. The spring plates 44 come into contact with bases 43 mounted to the backing member 42. In detail, the tooth portion 46 and spring members 45 slide along arc-shaped guide members 48 or grooves.

[0048] FIG. 12 illustrates an embodiment modified from the embodiment of FIG. 11. In this embodiment, no arc-shaped guide member is provided. Cushion members 49 having a certain thickness are interposed between the backing member 42 and each base 48, in order to absorb slight vertical shaking.

[0049] FIG. 13a, 13b, 13c illustrates a roll paper holder according to another embodiment of the present invention. In this case, roll paper 100 is laid on a base plate 112. When the user downwardly pulls the roll paper, the roll paper passes over a roll paper support rod 5 while being unrolled. The base plate 112 is downwardly inclined as it extends in a direction opposite to a front portion of the roll paper holder, at which a cover member 101 is disposed. As the roll paper 100 is always inclined in a direction opposite to the front portion of the roll paper holder, it may be possible to prevent the roll paper 100 from being shaken when the roll paper is pulled by the user. The roll paper is guided between the cover member 101 and a backing member 102 facing the cover member 101. A guide 104 is horizontally mounted to the cover member 101. The guide 104 is horizontally slidable along a guide receiving member 106 mounted to the backing member 106. A spring member 105 is coupled between a free end of the guide 104 and an inner end of the guide receiving member 106. When the cover member 101 is horizontally pressed until a stopper 108 formed at the cover member 101 comes into contact with the backing member 102, the roll paper 100 is unrolled by convex portions 103 of the cover member 101 and concave portions of the backing member 102 while being pressed between each of spring plates 110 and a corresponding one of bases 111. That is, a loosened portion of the roll paper to be subsequently downwardly moved is formed. At the same time, the roll paper is cut by a tooth portion 109.

[0050] When the user releases the pressing force applied to the cover member 101, the cover member 101 is returned to an original position thereof. Thus, a leading end of the roll paper is downwardly moved. The cover member 101 includes a guide plate 107, in addition to

the stopper 108. The cover member 101 also includes a paper guide including guide portions 107a formed at opposite sides of the guide plate 107, and guide portions 108a formed at opposite sides of the stopper 108. Accordingly, the cut paper is downwardly guided by the paper guide without being laterally inclined toward one side, as shown in FIG. 13c.

[0051] FIG. 14 illustrates structures of concave and convex portions according to an exemplary embodiment of the present invention. Inclinations of the concave portions and convex portions and slippage of paper will be reviewed hereinafter. In the case of roll paper, the inclination angle required to allow the paper to slip down on a flat plate under the condition that there is no static electricity is 30 to 40°. That is, an inclination of 30° or more is required.

[0052] When the length of paper on a final inclination region is defined between points 135a and 135b, and the length from an end of the inclination region to a cutting position is defined between points 135b and 135c, in the case of FIG. 14, roll paper slips down if there is even a slight inclination under the condition that the above-described lengths are equal.

[0053] When the length between the points 135a and 135b is less than the length between the points 135b and 135c, the roll paper slips down even if the inclination region is substantially horizontal under the condition that the end of the inclination region is smooth. The inclinations of the concave portions and convex portions may satisfy the condition of " $\theta_4 < \theta_2 < \theta_3 < \theta_1$ ". Also, the inclination angle θ_3 or θ_1 may be close to zero (0) when the order of paper distribution is taken into consideration.

[0054] FIG. 15a, 15b illustrates a roll paper holder according to another embodiment of the present invention. Referring to FIG. 15a, a cover member 141 is illustrated. The cover member 141 includes a pair of arms, namely, left and right arms 141A. The cover member 141 is supported by rotating pins 144, to rotate about the rotating pins 144. A paper lifting member 142 is arranged between the left and right arms 141A, to rotate about the rotating pins 143. As shown in FIG. 15b, the cover member 141 includes a tooth portion 141a. The cover member 141 supports the roll paper 149 unrolled to pass over two roll paper support rods 147A and 147B while covering the roll paper 149. The paper lifting member 142, which is arranged between the left and right arms 141A, is in contact with a pair of stoppers 146 at an upper portion of the paper lifting member 142 by pulling forces of a pair of coil springs, namely, left and right coil springs 145. When the cover member 141 is pressed until the tooth portion 141a comes into contact with a base 148, the paper lifting member 142 is rotated about the rotating pins 143 while pressing the stoppers 146. As a result, the roll paper 149 is lifted by a lower end 142a of the paper lifting member 142, so that a loosened paper portion 149b is formed. In this state, paper cutting is carried out. When the cover member 141 is returned to an original state thereof after cutting, the paper lifting member 142 is also returned to

an original position thereof. At this time, the loosened paper portion 149b is downwardly moved, thereby allowing a leading end 149a of the roll paper 149 to extend outwardly from the roll paper holder.

[0055] FIG. 16a to 16h illustrates a cutter according to another embodiment of the present invention. Referring to FIG. 16a, a cover member 151 and a backing member 156 face each other while defining a certain space therebetween under the condition that roll paper (not shown) is interposed therebetween. A cutter is formed at a lower end of the cover member 151. The cutter includes a stopper 151a, a tooth portion 152, spring members 153, and a spring plate 154 mounted to ends of the spring members 153. The cover member 151 includes a slider 155, a spring member 157 to return the slider 155 to an original position thereof, and a spring fixing member 158 to fix one end of the spring member 157 to the cover member 151. The slider 155 is vertically slidable. Meanwhile, the backing member 156 includes bases 156a, and a control rod 156b disposed above the bases 156a.

[0056] Referring to FIG. 16g, the slider 155 is illustrated. The slider 155 has a 90°-rotated U-shaped structure. The slider 155 has an opening 159a formed at a central portion of the slider 155. The control rod 156b extends into the slider 155 through the opening 159a, thereby moving the slider 155. FIG. 16h illustrates another example of the slider. In this case, an opening 159b to receive the control rod 156b is formed at a portion of a rectangular box structure.

[0057] When the cover member 151 is pressed to a position near the backing member 156 from the state of a 16A, the control rod 156b comes into contact with an inclined surface 155a of the slider 155 installed to be slidable in the cover member 151. When the cover member 151 is further pressed, the slider 155 slides upwardly while pressing the spring member 157. When the cover member 151 is pressed until the spacing between the cover member 151 and the backing member 156 reaches a predetermined distance, a spring plate receiving portion 155b formed at the slider 155 is separated from the spring plate 154, as shown in FIG. 16c. In this state, the spring plate 154 and the bases 156a are positioned near a position where they come into contact with each other. When the cover member 151 is further pressed, the stopper 151a comes into contact with the backing member 156, thereby stopping the movement of the cover member 151, as shown in FIG. 16d. At this time, the control rod 156b, which slides along the inclined surface 155a of the slider 155, is stopped after being inserted into a rod receiving portion 155c of the slider 155. The spring plate 154 tends to move toward the backing member 156 by resilience of the spring members 153, thereby causing the roll paper to be interposed between the spring plate 154 and the bases 156a. In this state, the tooth portion 152 cuts the roll paper. After the cutting, the cover member 151 is returned to an original position thereof.

[0058] FIG. 16e illustrates a structure of the spring plate 154. FIG. 16f illustrates the spring members 153.

A gap 154A is formed through the spring plate 154, to allow the tooth portion 152 to pass through the spring plate 154. The spring members 153 are fixed to the spring plate 154 at opposite ends of the spring plate 154, respectively.

[0059] FIG. 17a illustrates a state in which paper 162 is cut by a tooth portion 161 of the cutter. However, the paper 162 is not completely cut along a cutting line, but incompletely cut such that portions of the paper 162 are still connected along the cutting line. This is achieved by a specific shape of the tooth portion 161.

[0060] Referring to FIG. 17b, an example of the tooth portion 161 is illustrated. The tooth portion 161 includes teeth constituted by mountains 161A and valleys, which are alternately arranged. A slit 161B extends inwardly from each valley arranged between adjacent ones of mountain pairs including two adjacent mountains 161A. The roll paper is not completely cut by the slit 161B. The width of the slit 161B, namely, a width 161c, is so narrow as to prevent the paper from being completely cut. The width 161c may be 0.5mm or less.

[0061] FIG. 17c illustrates a modified example of the tooth portion 161. In this case, slits 161D are formed at valleys arranged at opposite sides of the tooth portion 161, respectively. In this structure, it may be possible to easily cut roll paper by pulling the roll paper even when the width of the slits 161D is so wide as to be about 1.5mm.

[0062] FIG. 18 illustrates a roll paper holder, to which the above-described cover member is attached. The roll paper holder includes a backing member 201, and a cover member 221 rotatably mounted to the backing member 201, to rotate with respect to the backing member 201 between an opened position and a closed position. The cover member 221 includes a pair of arms 222 mounted to arm rotating pins 214, to be rotatable about the arm rotating pins 214, respectively. The arms 222 are disposed to define a space at an upper portion of the cover member 221. Roll paper receiving members 209 are disposed at an upper portion of the backing member 201. A top cover 213 is rotatably mounted to an upper portion of the backing member 201.

[0063] The above-described configuration will be shown in more detail. FIG. 19a is a front view of the roll paper holder in a separated state of the top cover 213. FIG. 19b is a view illustrating the top cover 213 and pins 212 for rotatably mounting the top cover 213. FIG. 19c illustrates a configuration in which the pins 212, which are mounted to a top cover support 211 disposed at the upper portion of the backing member 201, are fitted into pin holes provided at the top cover 13, respectively.

[0064] The roll paper receiving members 209 are rotatably mounted to rotating pins 210 fixedly mounted to a front upper portion of the backing member 201 at opposite sides of the backing member 201, respectively.

[0065] FIG. 20a, 20b are views illustrating detailed structures of the constituent elements of the roll paper holder. Installed in the backing member 201 are a base

202, a convex portion 203, a concave portion 204, and a plate spring 205. A roll paper cutter 226 is installed in the cover member 221. When the cover member 221 rotates in accordance with rotation of the arms 222 about the arm rotating pins 214, the convex portion 203 of the backing member 201 pushes a plate spring 224 of the cover member 221. Also, the plate spring 205 of the backing member 201 is pressed by a convex portion 223 of the cover member 221. At this time, the convex portion 204 of the backing member 201 pushes roll paper while sliding on the convex portion 223 of the cover member 221 (in a direction opposite to the plate spring 224 of the cover member 221).

[0066] FIG. 21 is a perspective view illustrating a state in which a desktop roll paper holder is laid on a table. This roll paper holder includes a backing member 251 and a cover member 261. The cover member 261 includes a pair of arms 26 mounted to arm rotating pins 263 to be rotatable about the arm rotating pins 263, respectively. Accordingly, the cover member 261 is freely rotatable with respect to the backing member 251 between an opened position and a closed position. In use, the cover member 261 is retained as the arms 262 are supported by cover lifting springs 256. Roll paper receiving members 257 are provided at the backing member 251, to support roll paper.

[0067] FIG. 22 is a perspective view illustrating an inner structure of the roll paper holder in an opened state of the cover member 261. The backing member 251 includes a base 252, a convex portion 253, a pair of unlocking pins 255, a plate spring 254, and a pair of cover lifting springs 256, which are mounted on a lower plate 258 of the backing member 251. The spacing between adjacent ones of the base 252, plate spring 254, and convex portion 253 is set to 2mm or less, in order to prevent roll paper from being jammed between the adjacent constituent elements during operation. The lower plate 258 is inclined from a horizontal plane to cause the base 252 to be positioned at a lower side. The convex portion 253, plate spring 254 and base 252 of the backing member 251 are disposed at positions gradually lowered in this order, respectively. The base 252 is spaced apart from the surface of the table by a height of 10mm or more, in order to allow the user to easily grasp the leading end of the roll paper even in a state in which the leading end of the roll paper is not near the table surface. Meanwhile, a convex portion 264, a paper cutter 265, and a locking mechanism 266 are installed at the cover member 261.

[0068] FIG. 23 is a perspective view illustrating a state in which roll paper 271 is mounted. The roll paper 271 is laid on the roll paper receiving members 257 in a state of being pulled to be unrolled. As shown in FIG. 21, the roll paper receiving members 257 comprise two rails, respectively. Each rail is inclined such that the convex portion 253 of the backing member 251 is disposed at a lower position than the rail. Accordingly, the roll of the roll paper 271 laid on the roll paper receiving members 257 is kept in a state of contacting stoppers (not shown)

provided at respective lower ends of the two rails. In accordance with this structure, it may be possible to avoid backrush of the roll paper during pulling paper.

[0069] FIG. 24 is a perspective view illustrating a usable state of the roll paper holder achieved by returning the cover 261 to an original position thereof after setting the roll paper 271. The cover member 261 is supported by the pair of cover lifting springs 256 mounted to the backing member 251 such that a certain gap is formed between the cover member 216 and the backing member 251. When the user forwardly pulls the leading end of the roll paper in a horizontal direction, to outwardly extract the roll paper from the cover 261 by a desired length, and then downwardly presses the cover member 261, the cover member 261 is rotated about the arm rotating pins 214, thereby causing the convex portion 264 of the cover member 261 to press the plate spring 254 of the backing member 251. As a result, a loosening paper portion is formed by a step defined between the convex portion 264 and the convex portion 253. At the same time, the paper is cut by operations of the paper cutter 265 and base 252. When the user then releases the pressing force applied to the cover 261, the cover 261 is lifted to an original position thereof by the cover lifting springs 256, and a new leading end of the roll paper is pushed out of the roll paper holder. That is, a paper portion to be subsequently grasped by the user falls from the base 252.

[0070] In the above-described desktop roll paper holder, an anti-slippage rubber may be attached to a lower portion of the backing member, in order to achieve stable operation, and thus to prevent unintentional movement. A rotatable stand may also be attached to a bottom of the backing member 251. In this case, it may be possible to freely change the use direction of the roll paper holder.

[0071] FIG. 25a, 25b illustrates a roll paper holder for kitchen paper, namely, a kitchen paper holder. FIG. 25a is a front view, and FIG. 25b is a side view. The kitchen paper holder includes a backing member 301, and a front cover member 321 rotatably mounted to the backing member 301, to rotate with respect to the backing member 301 between an opened position and a closed position. The cover member 321 includes a pair of arms 326 mounted to arm rotating pins 311, to be rotatable about the arm rotating pins 311, respectively. The arms 222 are disposed to define a space at an upper portion of the cover member 321. Roll paper receiving members 309 are disposed at an upper portion of the backing member 301. A pair of stoppers, namely, left and right stoppers 310, is attached to respective roll paper receiving members 309. This will be described in more detail. The kitchen paper is set such that the roll paper receiving members 309 extend through an axial hole of the kitchen paper. Lateral movement of the set kitchen paper is limited by the paper stoppers 310. Accordingly, it is possible to prevent the kitchen paper from being deviated to one side, and thus to prevent the kitchen paper from being separated from the paper receiving members 309, and then falling downward.

[0072] FIG. 26 is a view illustrating detailed structures of the constituent elements of the kitchen paper holder. FIG. 26 shows a lifted state of the front cover member 321. In the backing member 301, a base 302, a plate spring 304, and a convex portion 305 are installed in this order. A roll paper cutter 322, which corresponds to the tooth portion 152 or lifting plate 154 of FIG. 16a to 16h, and a convex portion 323 are installed in the front cover member 321. When the front cover member 321 rotates in accordance with rotation of the arms 326 about the arm rotating pins 311, the convex portion 323 of the front cover member 321 pushes a plate spring 304 of the backing member 301, and, at the same time, pushes kitchen paper to a region defined beneath the convex portion 305 of the backing member 301. The kitchen paper holder also includes a locking mechanism 324 and an unlocking pin 306, which are identical to those of FIG. 16a to 16h.

[0073] Referring to FIG. 27, the paper receiving members 309 are mounted to the backing member via support members 308, respectively, in order to prevent the outer portion of the kitchen paper from being outwardly protruded from a back side of the backing member in a state in which new kitchen paper is set by the paper receiving members 309.

[0074] When the front cover member 321 is pushed toward the backing member 301, the convex portion 305 of the backing member is disposed in an upper region without being interfered with the front cover member 321. In accordance with this structure, it may be possible to increase the amount of kitchen paper by increasing the height of the convex portion 305 of the backing member, and thus to increase the amount of kitchen paper extending downwardly after the cutting operation.

[0075] Inclination maintaining members 307 are provided at an upper portion of the front cover member 321, in order to allow the backing member 301 and front cover member 321 to be always spaced apart from each other by an appropriate distance, and to allow the kitchen paper to easily fall downward while sliding. Of course, the same effect as described above may be achieved by increasing the inclination of an upper portion of the convex portion 323 in the front cover member, in place of the above-described structure.

[0076] Referring to FIG. 25a, a character mark 331 is formed at a front surface of the front cover member 321. The character mark 331 may include an engraved pattern or photograph. In place of the character mark 331, an electronic display may be mounted. When the electronic display is mounted, a switch is interposed between the front cover member 321 and the backing member 301. In this case, the switch may sense a contact signal generated when the front cover member 321 is pushed. In response to the contact signal, the image displayed on the electronic display may be changed by a controller.

[0077] FIG. 28 is a perspective view illustrating a desktop kitchen paper holder according to an exemplary embodiment of the present invention. FIG. 28 shows a state in which the desktop kitchen paper holder is placed on a

table, and a cover member 371 is opened. The desktop kitchen paper holder mainly includes a backing member 351 and the cover member 371. The cover member 371 is rotatably mounted to the backing member 351, to rotate with respect to the backing member 351 between an opened position and a closed position. The cover member 371 includes a pair of arms 375 mounted to arm rotating pins 373, to rotate about the arm rotating pins 373, respectively. The arms 375 are supported by cover lifting springs 356, respectively. The backing member 351 includes a kitchen paper receiving member 357, on which kitchen paper to be used is laid, and kitchen paper guides 358 for preventing the kitchen paper from being deviated to one side. A support 352 is provided at a lower end of the backing member 351. The support 352 is upwardly spaced apart from the surface of the table by a height of 10mm or more, in order to allow the user to easily grasp a leading end of the kitchen paper. The backing member 351 is formed with a convex portion 353. A plate spring 354 is also mounted to the backing member 351.

[0078] A pair of kitchen paper pressing arms 359 is rotatably mounted to side surfaces of the kitchen paper guides 358, respectively. A kitchen paper pressing member 360, which has a shape corresponding to the convex portion 353 of the backing member 351, is fixed to ends of the kitchen paper pressing arms 359. When the roll paper pressing arms 359 are rotated, the kitchen paper pressing member 360 is overlapped with the convex portion 353 of the backing member 351. The cover member 371 is provided with a convex portion 372, a paper cutter 376, and a locking mechanism 374.

[0079] FIG. 29 is a perspective view illustrating a state in which kitchen paper is laid on the kitchen paper holder. Referring to FIG. 29, new kitchen paper is laid on the kitchen paper receiving member 357 in a state in which a leading end of the kitchen paper is pulled to be downwardly extracted. The kitchen paper receiving member 357 is inclined such that the convex portion 353 of the backing member 351 is disposed at a lower position than the kitchen paper receiving member 357. The roll of the kitchen paper 381 laid on the kitchen paper receiving member 357 is kept in a state of contacting stoppers 362. Accordingly, although the kitchen paper is pulled to be unrolled, the position of the kitchen paper on the kitchen paper receiving member 357 is constant. It may also be possible to prevent the leading end of the kitchen paper from being moved due to irregular rotation of the kitchen paper. The structure for preventing irregular rotation of the kitchen paper is not limited to the above-described structure. Inclination and arrangement reverse to the above-described inclination and arrangement may be implemented. Alternatively, the kitchen paper receiving member may be formed in the form of a V or U-shaped recess. In addition, a method of increasing the weight of the paper roll may be implemented.

[0080] FIG. 30 illustrates a state in which the kitchen paper pressing arms 359 supporting the kitchen paper pressing member 360 are rotated to interpose unrolled

kitchen paper between the kitchen paper pressing member 360 and the convex portion 353 of the backing member 351. A paper guide is formed at one or each of the inner surfaces of the backing member 351 and cover member 371, in order to smoothly guide paper from a portion of the kitchen paper holder from which the paper is extracted. Alternatively, a member, which has a sliding surface and connects the stoppers 362 and the convex portion 353 of the backing member 351, may be provided.

[0081] FIG. 31 is a view illustrating a state in which the cover member 371 is returned to an original position thereof after setting of the kitchen paper 381 and setting of the kitchen paper pressing member 360, in order to allow the kitchen paper holder to be usable. The cover member 371 is retained by a pair of cover plate lifting springs 356 mounted to the backing member 351 such that a certain space is maintained between the cover member 371 and the backing member 351.

[0082] When the user forwardly pulls the kitchen paper in a horizontal direction by a certain length while grasping the leading end of the kitchen paper, and then downwardly pushes the cover member 371, the cover member 371 is rotated about the arm rotating pins 373. As a result, the convex portion 372 of the cover member 371 presses the plate spring 354 of the backing member 351, so that the kitchen paper is inserted into a step defined between the convex portion 372 of the cover member 371 and the convex portion 353 of the backing member 351. Thus, a loosened paper portion is formed. At the same time, the kitchen paper is cut in accordance with operations of the paper cutter and support 352. When the user releases the pressing force applied to the cover member 371, the cover member 371 is lifted by the cover lifting springs 356. At the same time, a new leading end of the kitchen paper is pushed out of the kitchen paper holder. That is, the loosened paper portion falls from the support 352.

[0083] The kitchen paper pressing member 360 is not limited to a configuration in which the kitchen paper pressing member 360 overlaps with the convex portion 353 of the backing member 351 without a spacing defined therebetween. For example, the kitchen paper pressing member 360 may be spaced apart from the convex portion 353 to provide a space having a width of 15mm to allow kitchen paper to pass therethrough. Although the kitchen paper pressing member 360 has been described as being rotatable, it may also have a fixed structure. In the case of the desktop kitchen paper holder, an anti-slippage rubber member may be mounted to a lower portion of the backing member.

[0084] Although the kitchen paper pressing member 360 has been described as being applied to a desktop structure, it may also be applied to a wall-mounted structure.

[0085] Although detailed structures of the roll paper holder and kitchen paper holder have been described, it may be appreciated that the constituent elements and structures of the paper holders may be interchanged.

[0086] In accordance with the present invention, it may

be possible to stably cutting roll paper after pulling a leading end of the roll paper from a roll paper holder, and to keep a new leading end of the roll paper formed after the cutting in a state of extending outwardly from the roll paper holder by a length required to enable the user to grasp the roll paper leading end. Thus, there is an effect of allowing the user to easily successively pull the roll paper.

[0087] Also, there is an effect capable of preventing the cutter to cut roll paper from being exposed, and thus achieving safe handling.

[0088] In addition, the roll paper holder may be installed on a vertical wall or on a table. In both cases, the same effects are obtained.

[0089] Although the preferred embodiments of the present invention have been disclosed for illustrative purposes, those skilled in the art will appreciate that various modifications, additions and substitutions are possible, without departing from the scope and spirit of the invention as disclosed in the accompanying claims.

Claims

1. A roll paper holder comprising a pair of side members, a support shaft for supporting roll paper between the side members, a backing member mounted to front sides of the side members, and a cover member rotatably mounted to the side members while facing the backing member, further comprising:

a concave portion formed at the backing member;
a convex portion formed at the cover member to correspond to the concave portion;
a cutter formed at a lower end of the cover member; and
an elastic member mounted to the backing member, to be arranged over the concave portion.

2. The roll paper holder according to claim 1, wherein the cover member comprises a pair of legs formed at one side of the cover member, second fixed pins respectively protruded from outer ends of the legs, and grooves respectively formed at inner ends of the legs, wherein each of the side members comprises guide holes to receive the second fixed pins, respectively, fulcrum pins respectively fitted in the grooves, and first fixed pins, wherein a coil spring is mounted between each of the second fixed pins and a corresponding one of the first fixed pins.

3. The roll paper holder according to claim 1, wherein the cutter comprises:

a saw-shaped tooth portion formed at a lower end of the cover member;
a spring member formed between the tooth portion and the convex portion of the cover member; and
a spring plate formed at an end of the spring member.

4. The roll paper holder according to claim 3, wherein the spring member comprises:

a pair of coil springs; and
three coil springs arranged between the pair of coil springs while having a shorter length than the pair of coil springs.

5. The roll paper holder according to claim 1, wherein the cutter comprises:

a horizontally-elongated tooth portion formed at a lower end of the cover member;
spring members respectively formed at upper and lower sides of the tooth portion; and
spring plates each formed at an end of a corresponding one of the spring members, wherein the tooth portion is inserted into a concave portion formed on the backing member at a position corresponding to the tooth portion

6. The roll paper holder according to claim 1, wherein the cutter comprises:

a horizontally-elongated tooth portion formed at a lower end of a connector to connect the pair of legs;
sponges respectively formed at upper and lower sides of the tooth portion; and
spring plates each formed at an end of a corresponding one of the sponges, wherein the backing member is formed with a concave portion at a position corresponding to the tooth portion, wherein sponges are mounted to the backing member at upper and lower sides of the concave portion, and spring plates are attached to free ends of the sponges mounted to the backing member, respectively.

7. The roll paper holder according to claim 1, wherein the cutter comprises:

a 90°-rotated U-shaped recess formed at the backing member;
two parallel spring members mounted at an upper portion of the recess, to extend toward the cover member, respectively attached with spring plates,
a plate-shaped tooth portion disposed at a lower

- portion of the recess and supported by two spring members, the plate-shaped tooth portion having an inclined surface;
 a spring plate support portion formed at a lower end portion of the cover member; and
 a tooth portion formed at the cover member beneath the spring plate support portion, to be integral with the spring plate support portion, whereby, when the cover member is pressed, the tooth portion of the cover member is moved along the inclined surface of the plate-shaped tooth portion, and then cuts an end of the roll paper while coming into contact with the plate-shaped tooth portion, in a manner similar to scissors.
8. A roll paper holder comprising a pair of side members, a base plate mounted between the side members, to support roll paper laid on the base plate, a backing member mounted to the side members beneath the base plate, and a cover member mounted to the side members to be horizontally movable with respect to the backing member, further comprising:
- a plurality of concave portions formed at the backing member;
 - a plurality of convex portions formed at the cover member, to correspond to the concave portions of the backing member;
 - a roll paper cutter formed at the cover member beneath the convex portions;
 - a guide receiving member mounted to the backing member between the concave portions;
 - a guide formed at the cover member between the convex portions, to be inserted into the guide receiving member; and
 - a spring member mounted to an end of the guide inserted into the guide receiving member.
9. The roll paper holder according to claim 8, wherein the cutter comprises:
- a guide plate and a stopper, which are formed at a lower end of the cover member while being vertically spaced apart from each other;
 - a tooth portion formed between the guide plate and the stopper;
 - spring members arranged at upper and lower sides of the tooth portion; and
 - bases formed at the backing member, to correspond to the spring members, respectively, whereby, when the cover member is pressed, the spring members are pressed against the bases while coming into contact with the bases, and the tooth portion is inserted into a groove defined between the bases.

the cutter comprises:

- a slider vertically slidably mounted to a lower end of the cover member, and formed with a horizontal groove;
 - a tooth portion formed at the cover member beneath the slider;
 - a spring member mounted to the cover member beneath the slider;
 - a spring plate mounted to a free end of the spring member;
 - a pair of bases formed on the backing member at a position corresponding to the spring plate; and
 - a control rod formed on the backing member at a position corresponding to the slider, whereby, when the cover member is pressed, the control rod is inserted into the slider, the spring plate is pressed against the bases, and the tooth portion is inserted into a space defined between the bases.
11. The roll paper holder according to claim 8, wherein the tooth portion comprises teeth having mountains and valleys, which are alternately arranged.

10. The roll paper holder according to claim 8, wherein

FIG.2

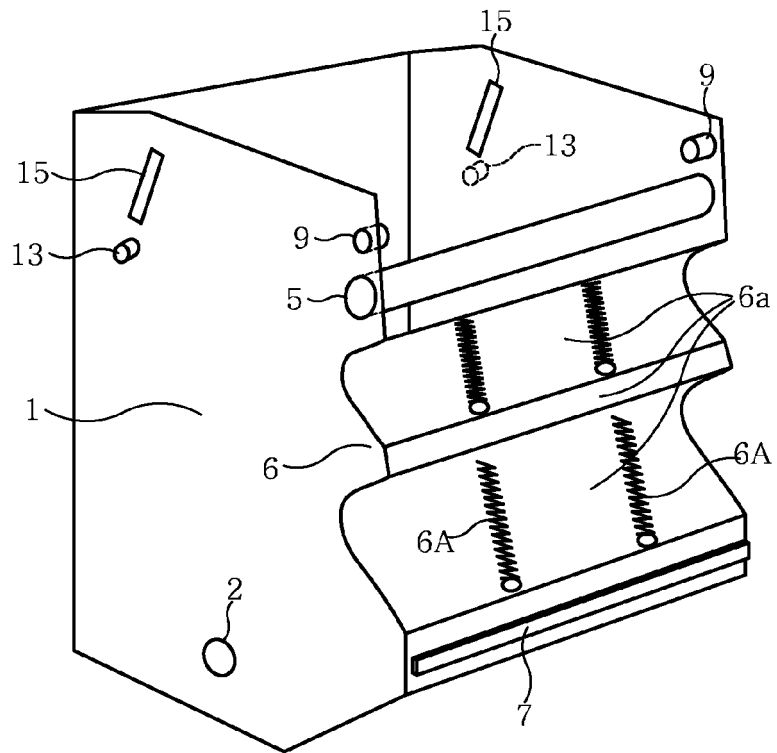


FIG.3

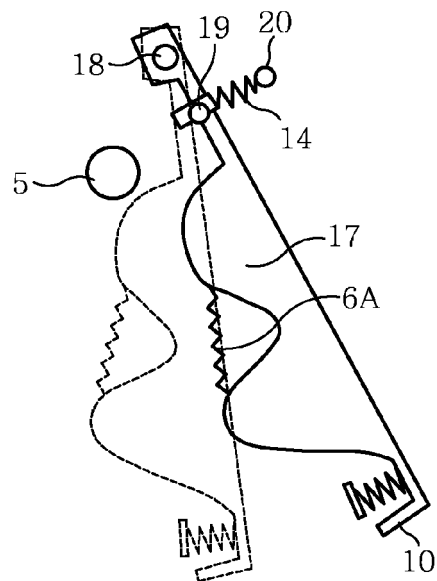


FIG.4

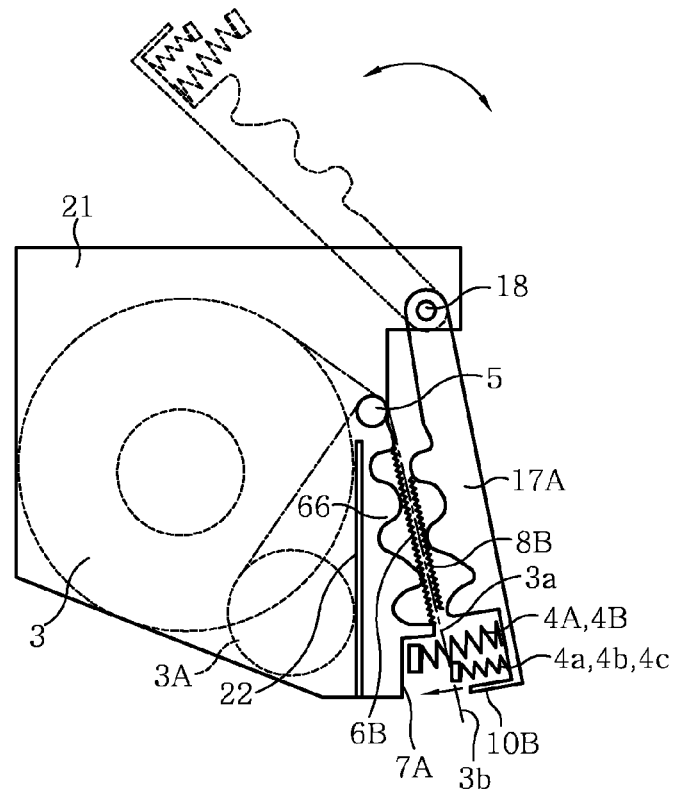


FIG.5

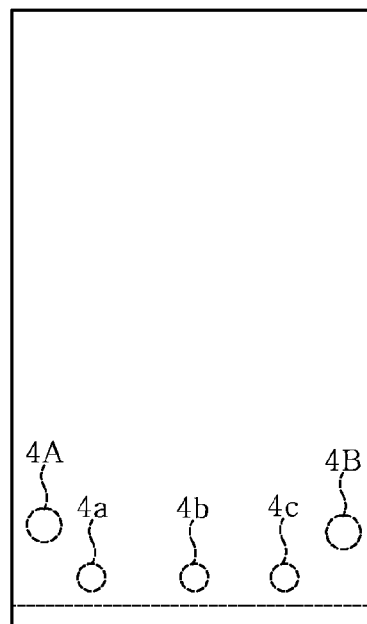


FIG.6a

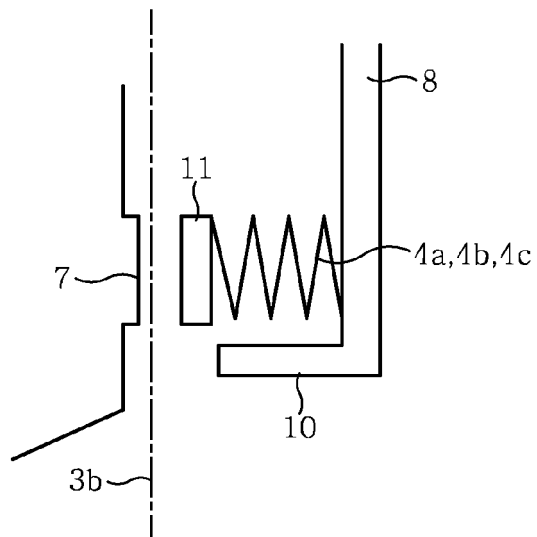


FIG.6b

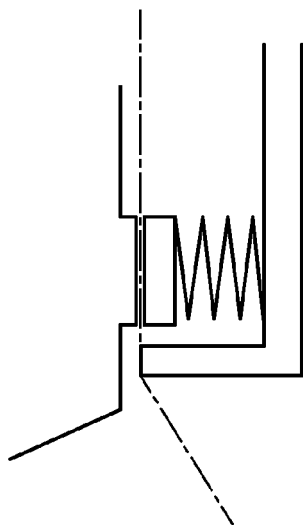


FIG.6c

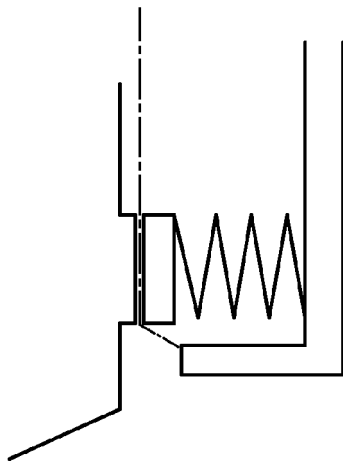


FIG.7a

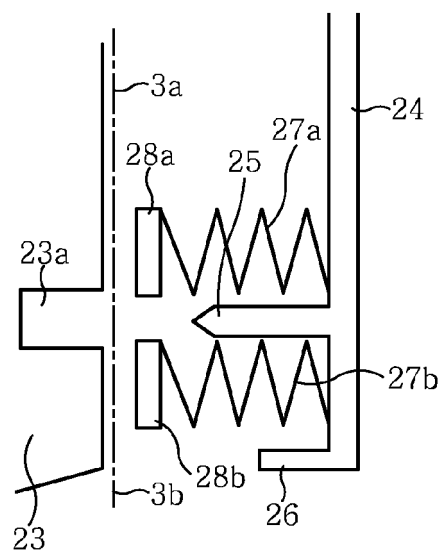


FIG.7b

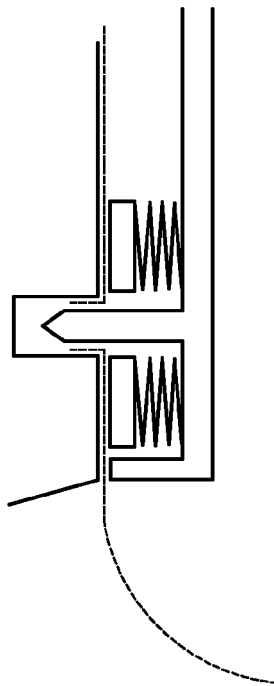


FIG.7c

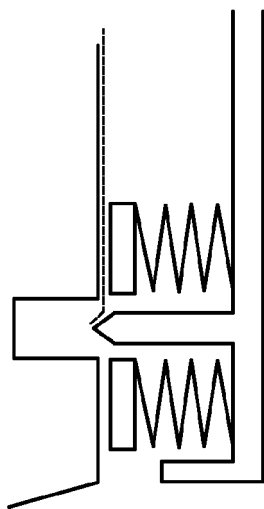


FIG.8a

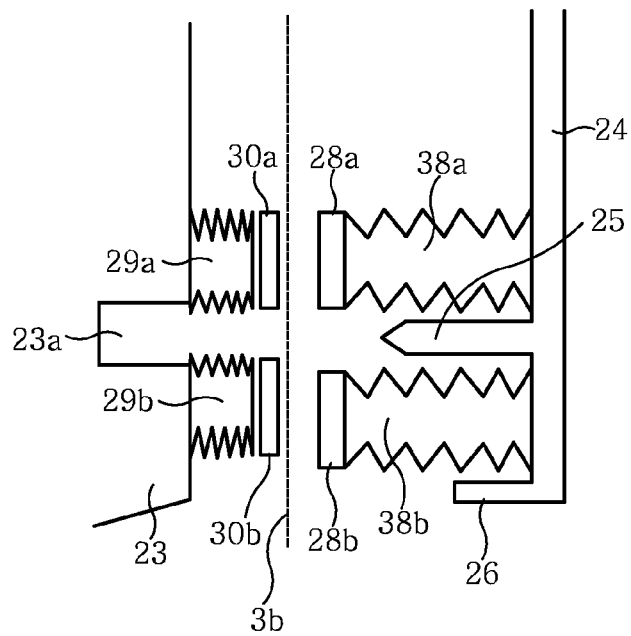


FIG.8b

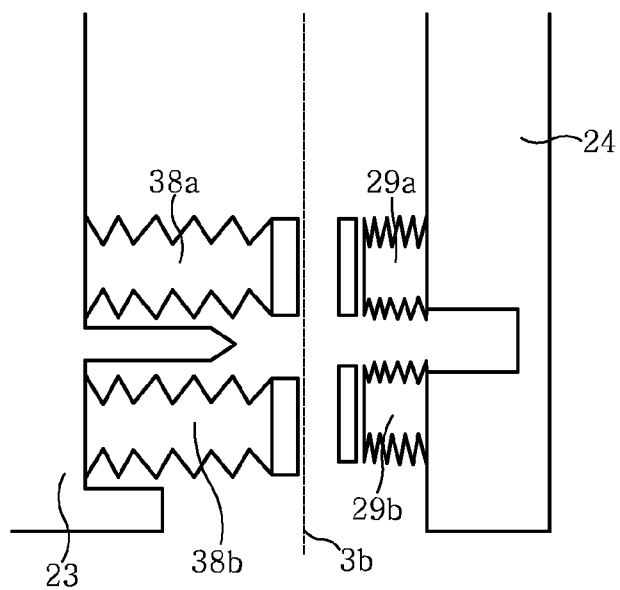


FIG.9a

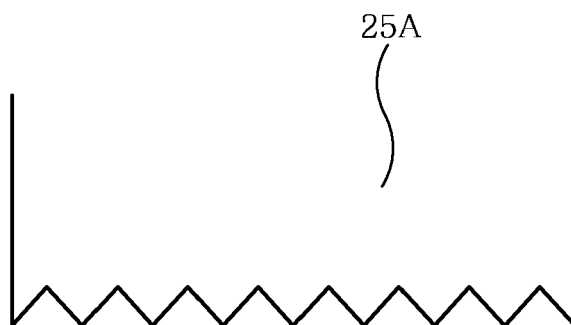


FIG.9b

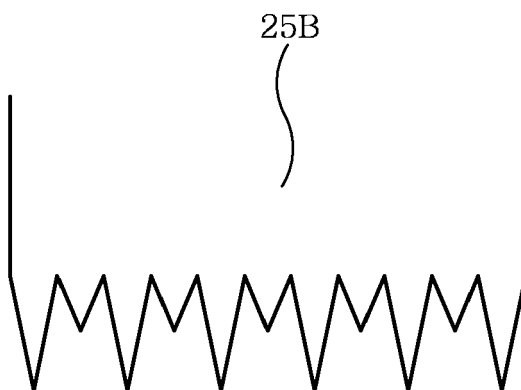


FIG.10a

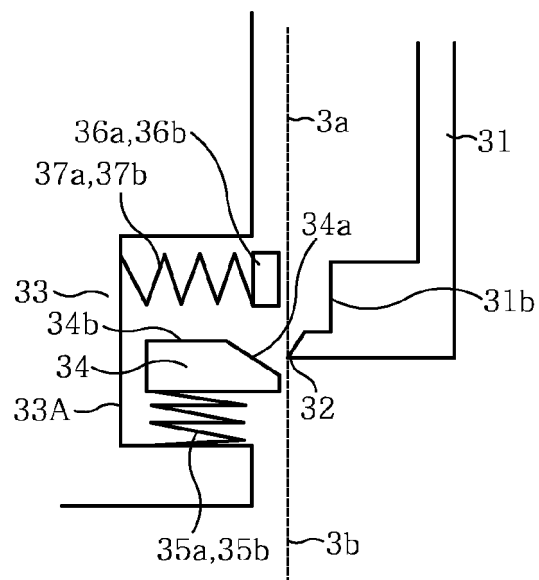


FIG.10b

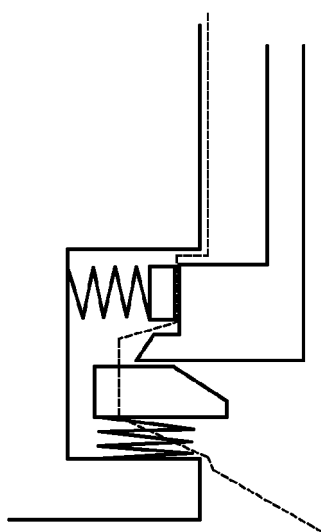


FIG.10c

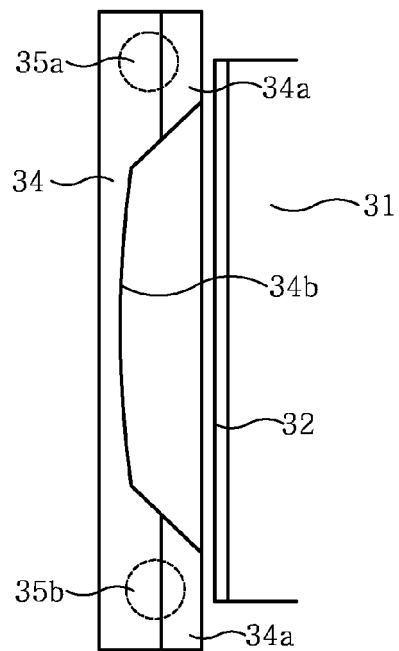


FIG.11

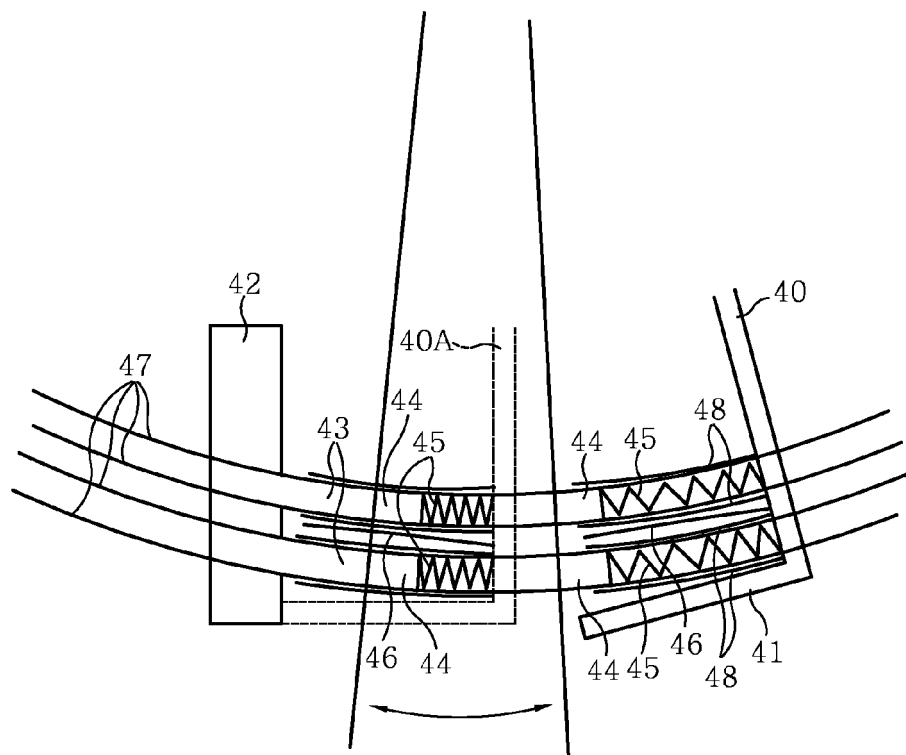


FIG.12

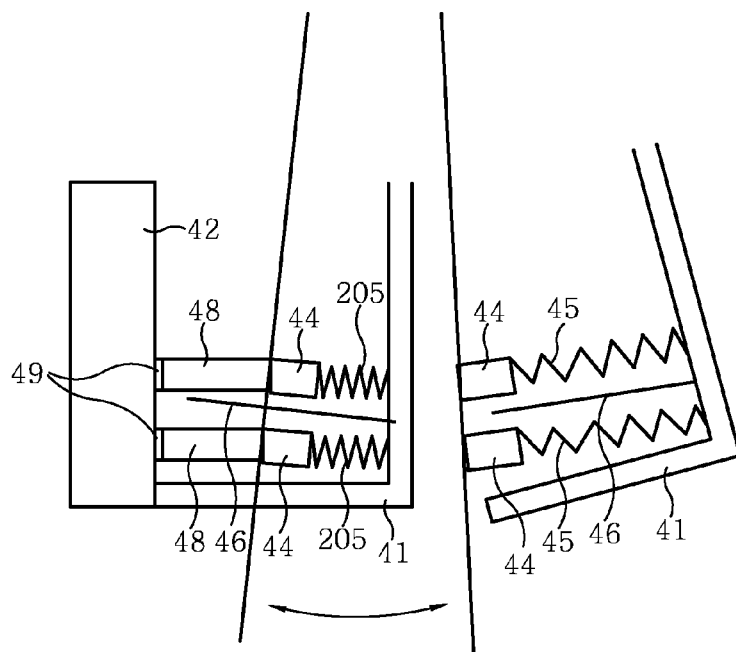


FIG.13a

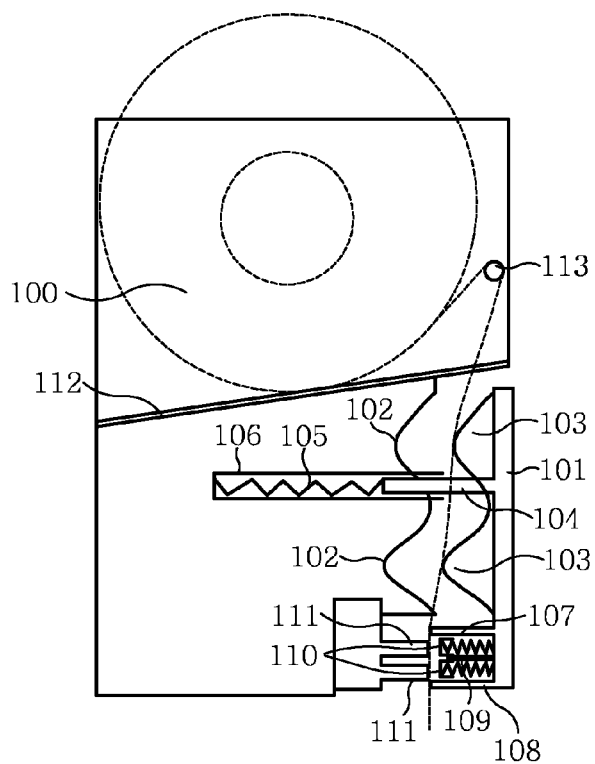


FIG.13b

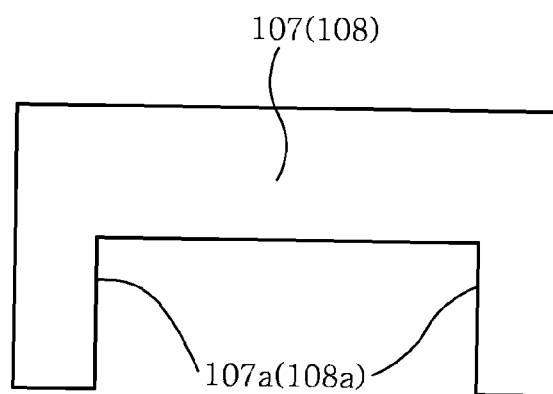


FIG.13c

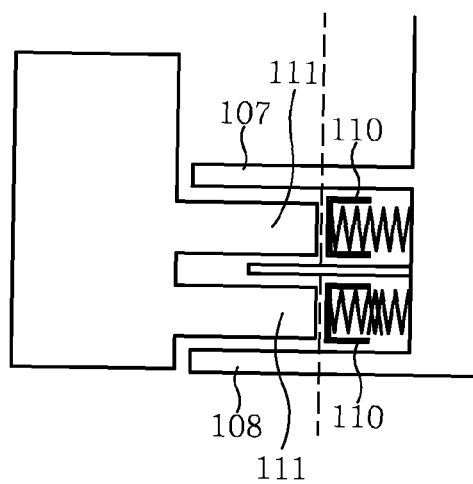


FIG.14

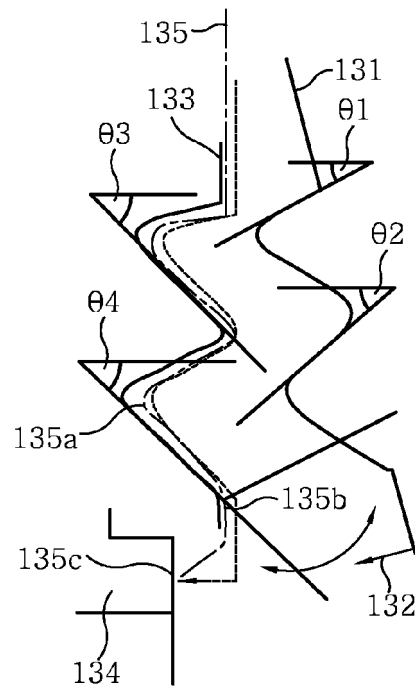


FIG.15a

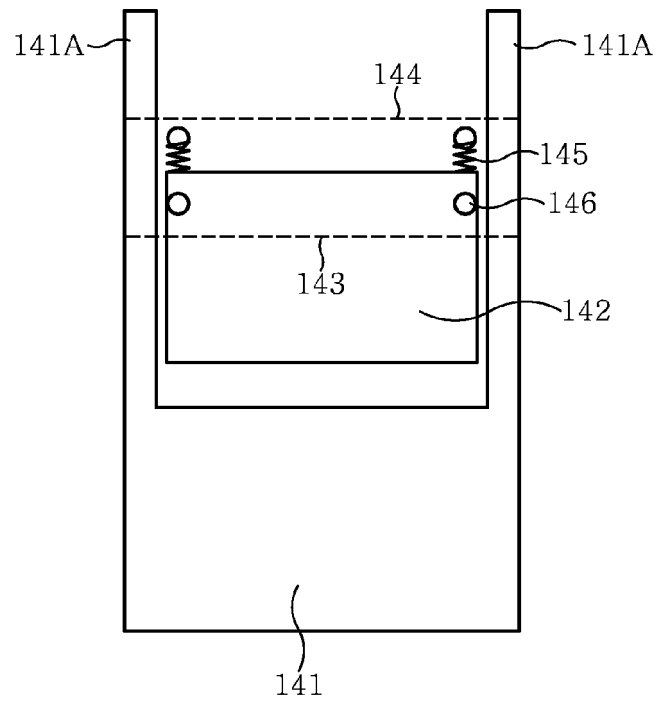


FIG.15b

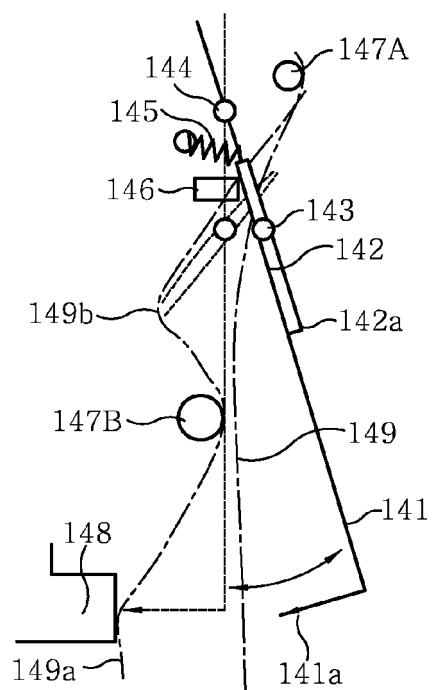


FIG.16a

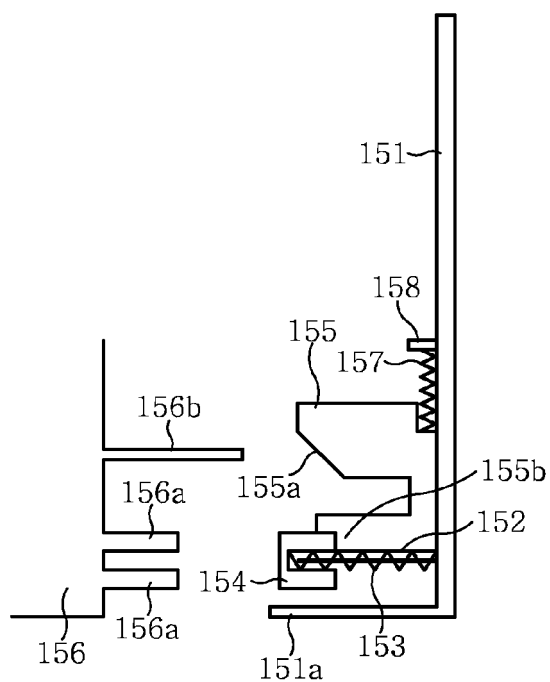


FIG.16b

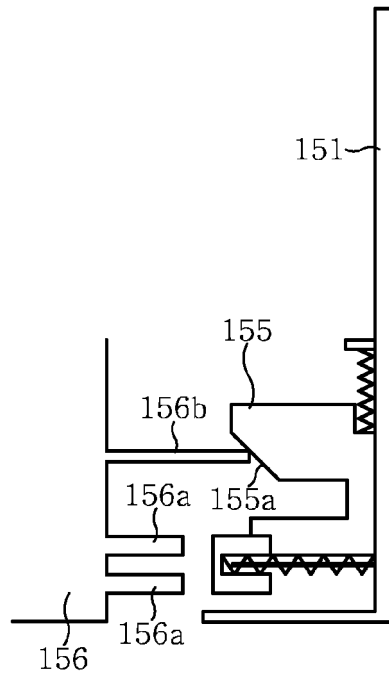


FIG.16c

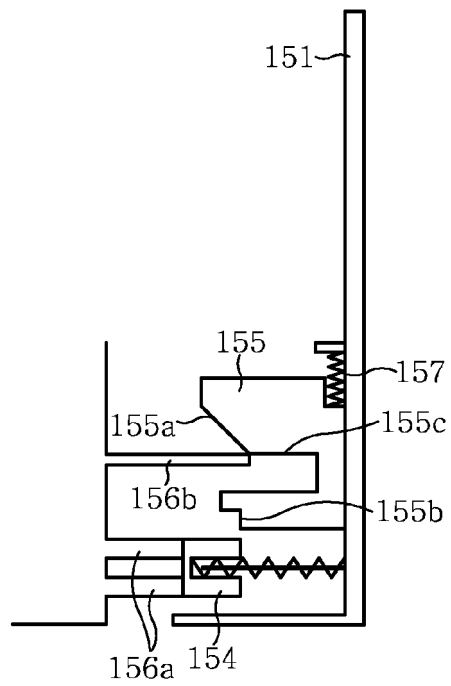


FIG.16d

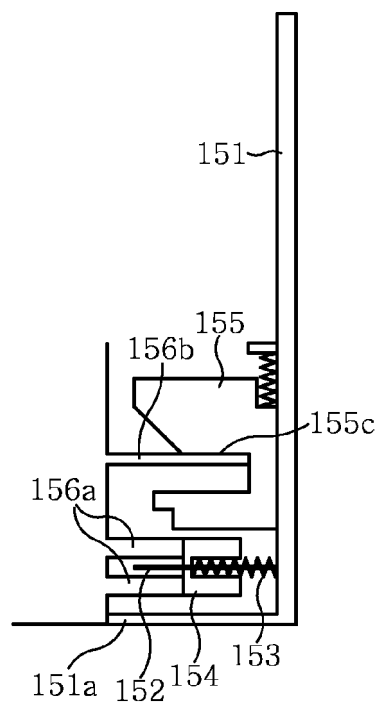


FIG.16e

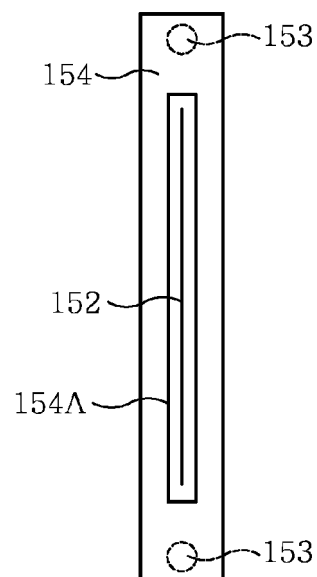


FIG.16f

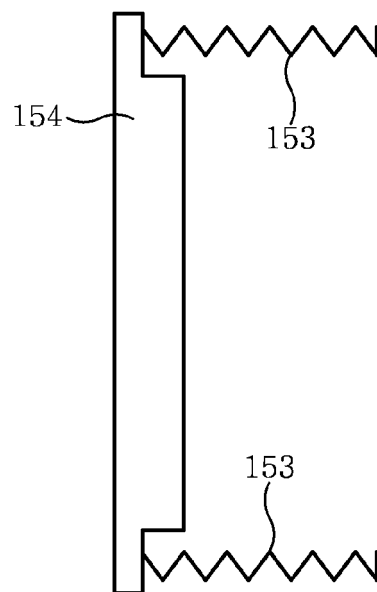


FIG.16g

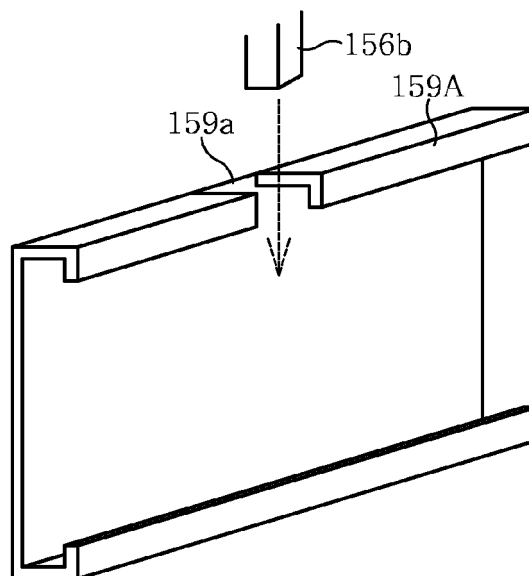


FIG.16h

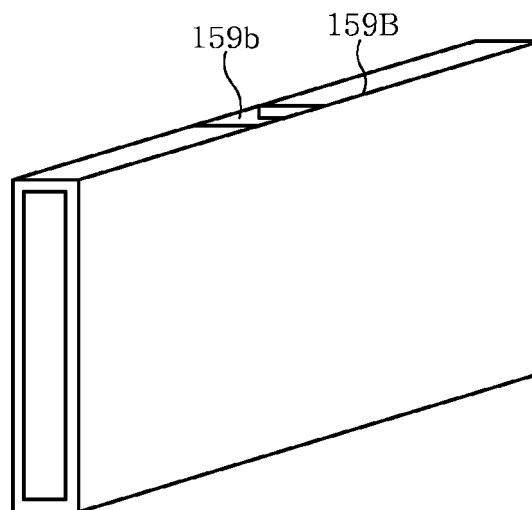


FIG.17a

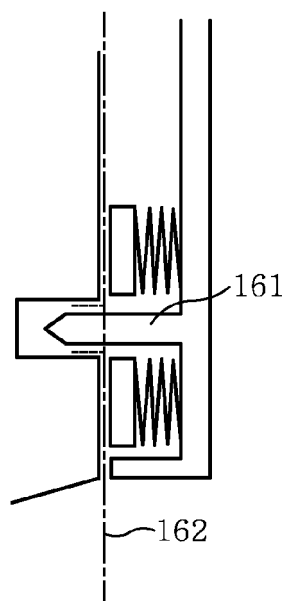


FIG.17b

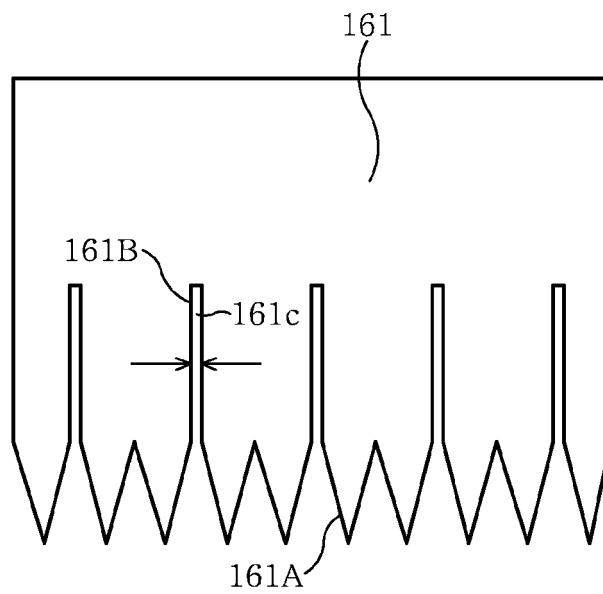


FIG.17c

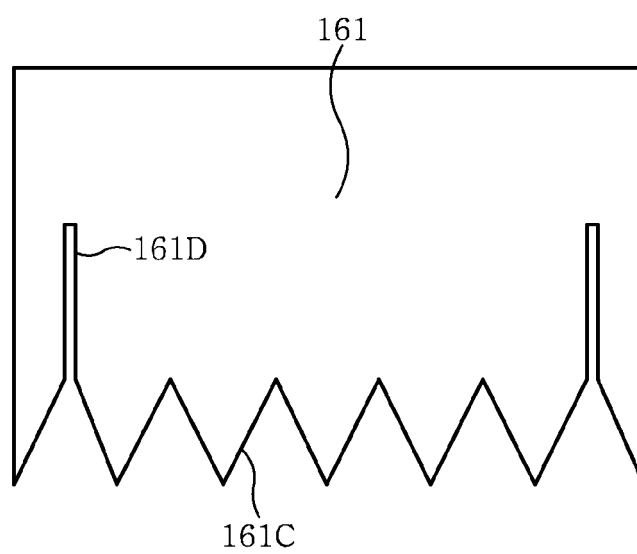


FIG.18

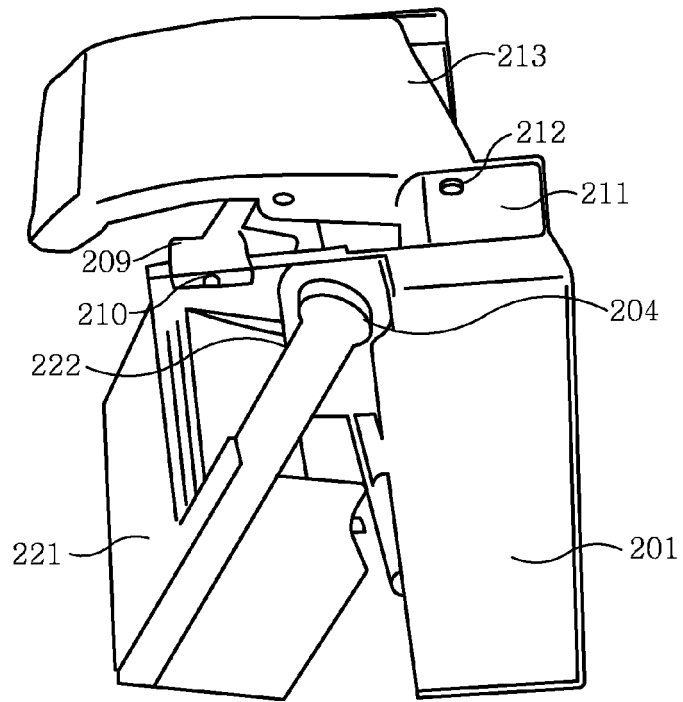


FIG.19a

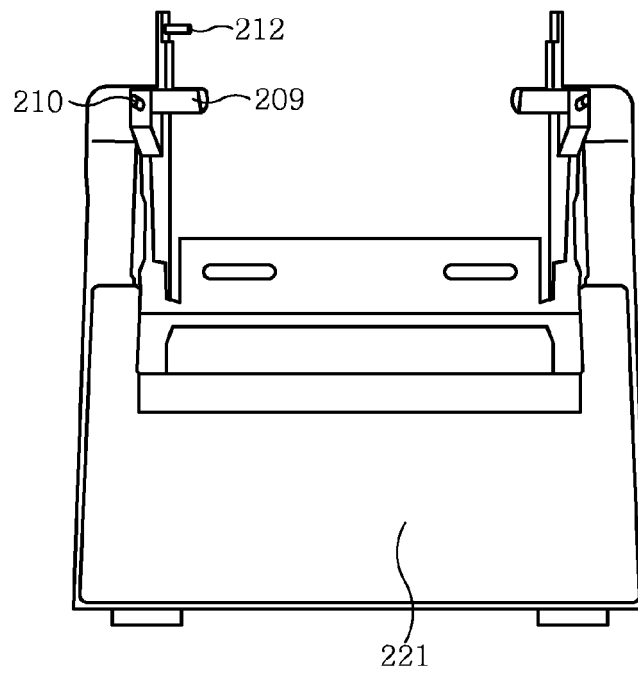


FIG.19b

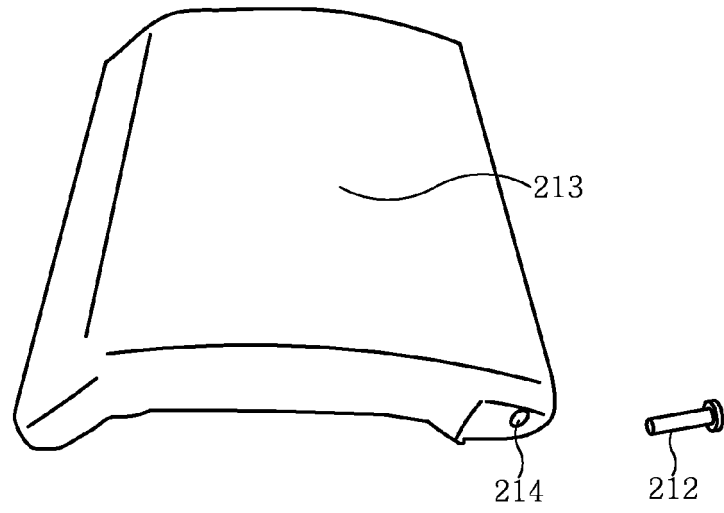


FIG.19c

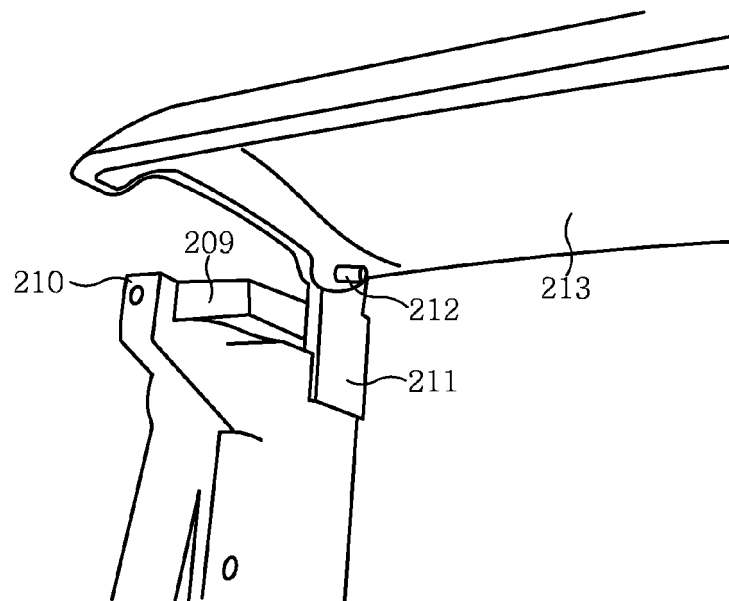


FIG.20a

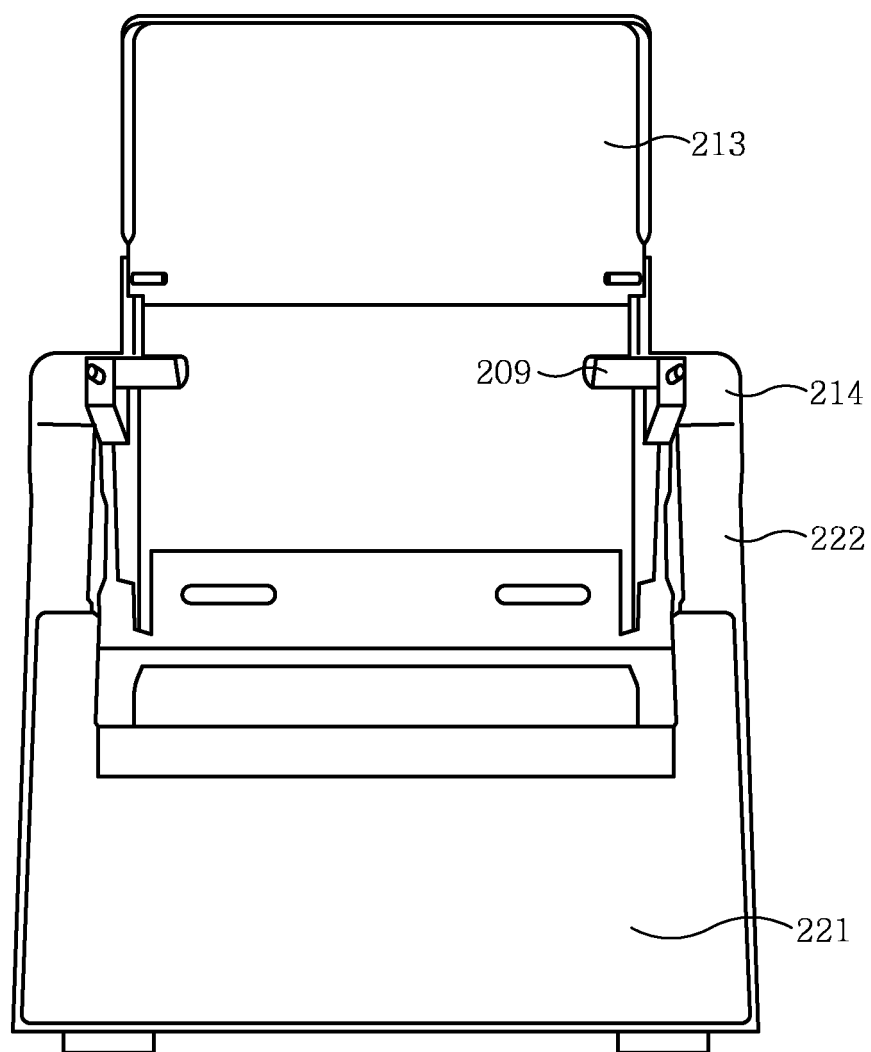


FIG.20b

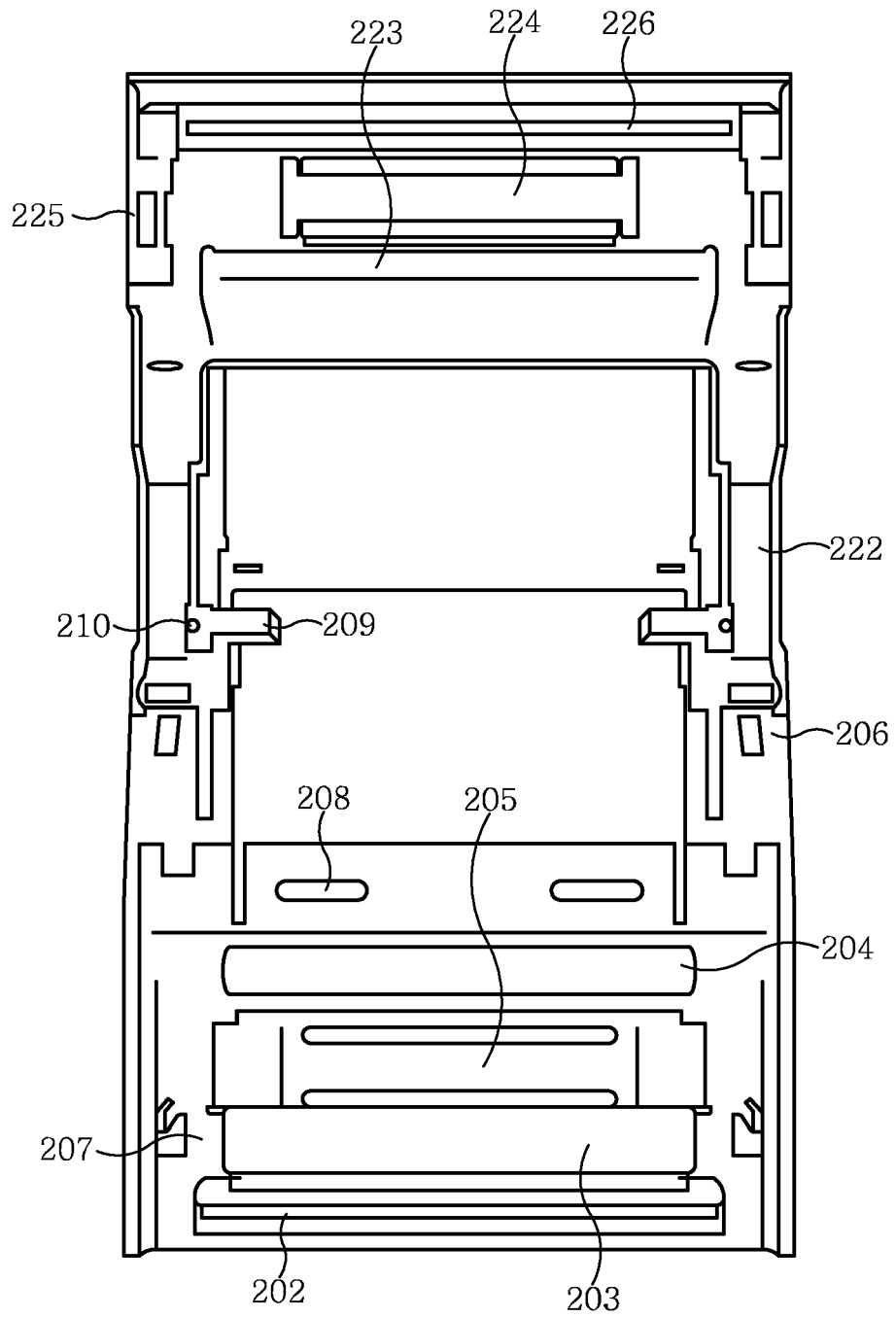


FIG.21

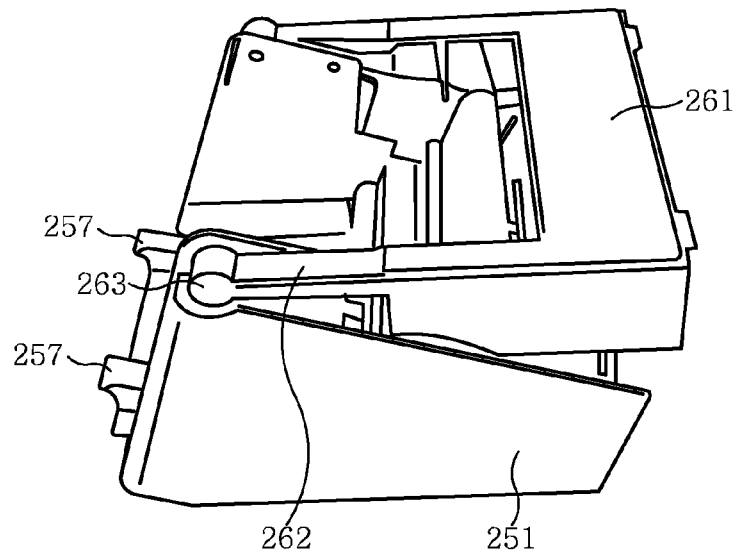


FIG.22

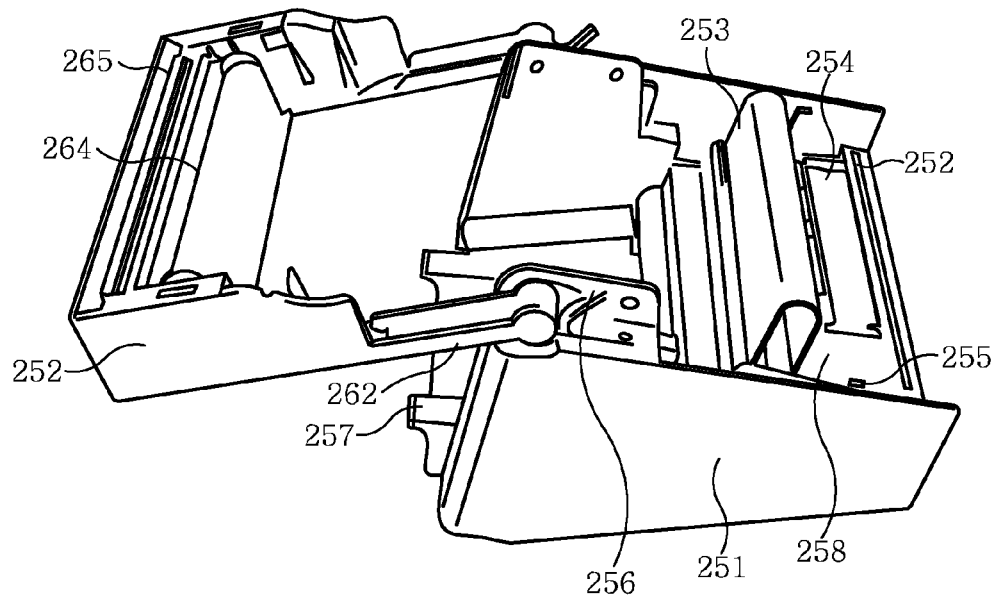


FIG.23

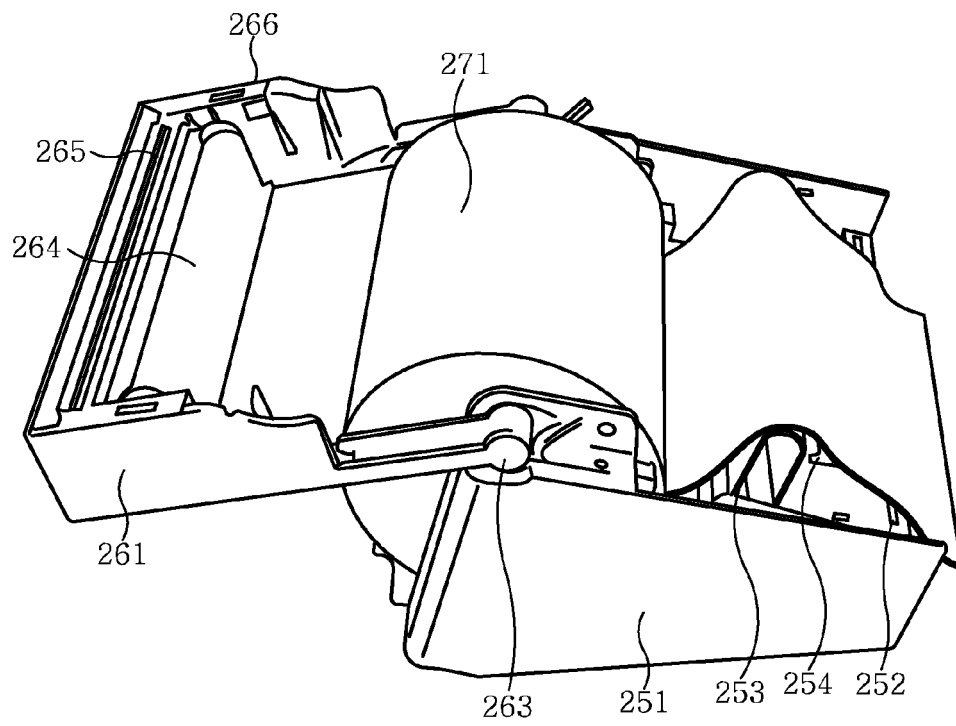


FIG.24

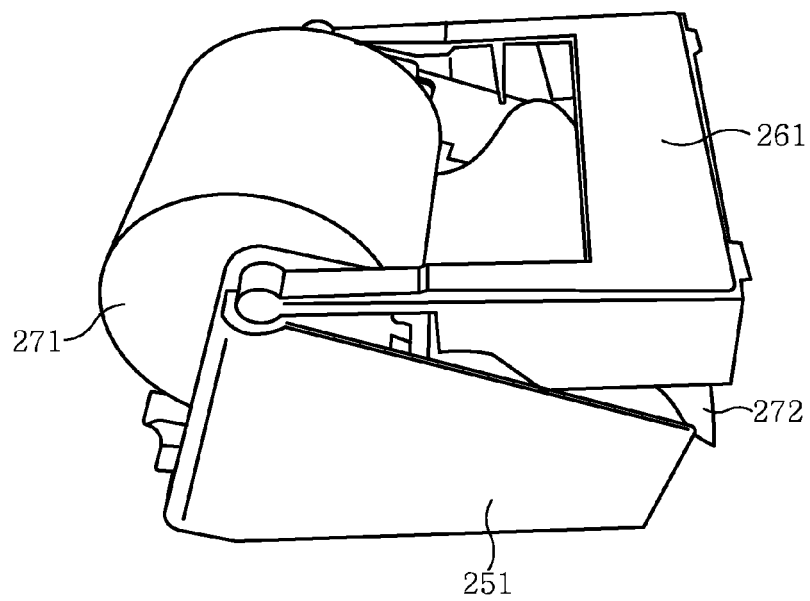


FIG.25a

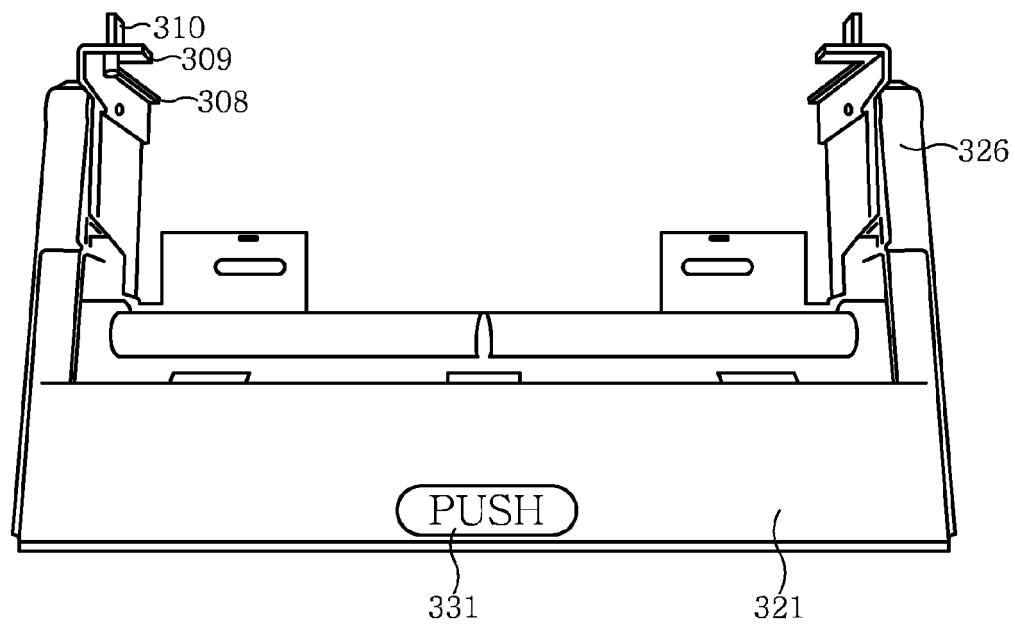


FIG.25b

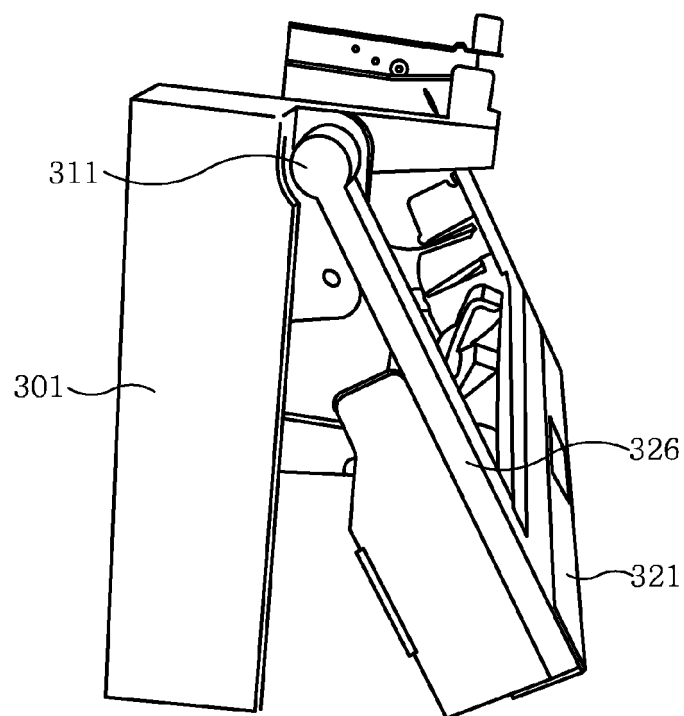


FIG.26

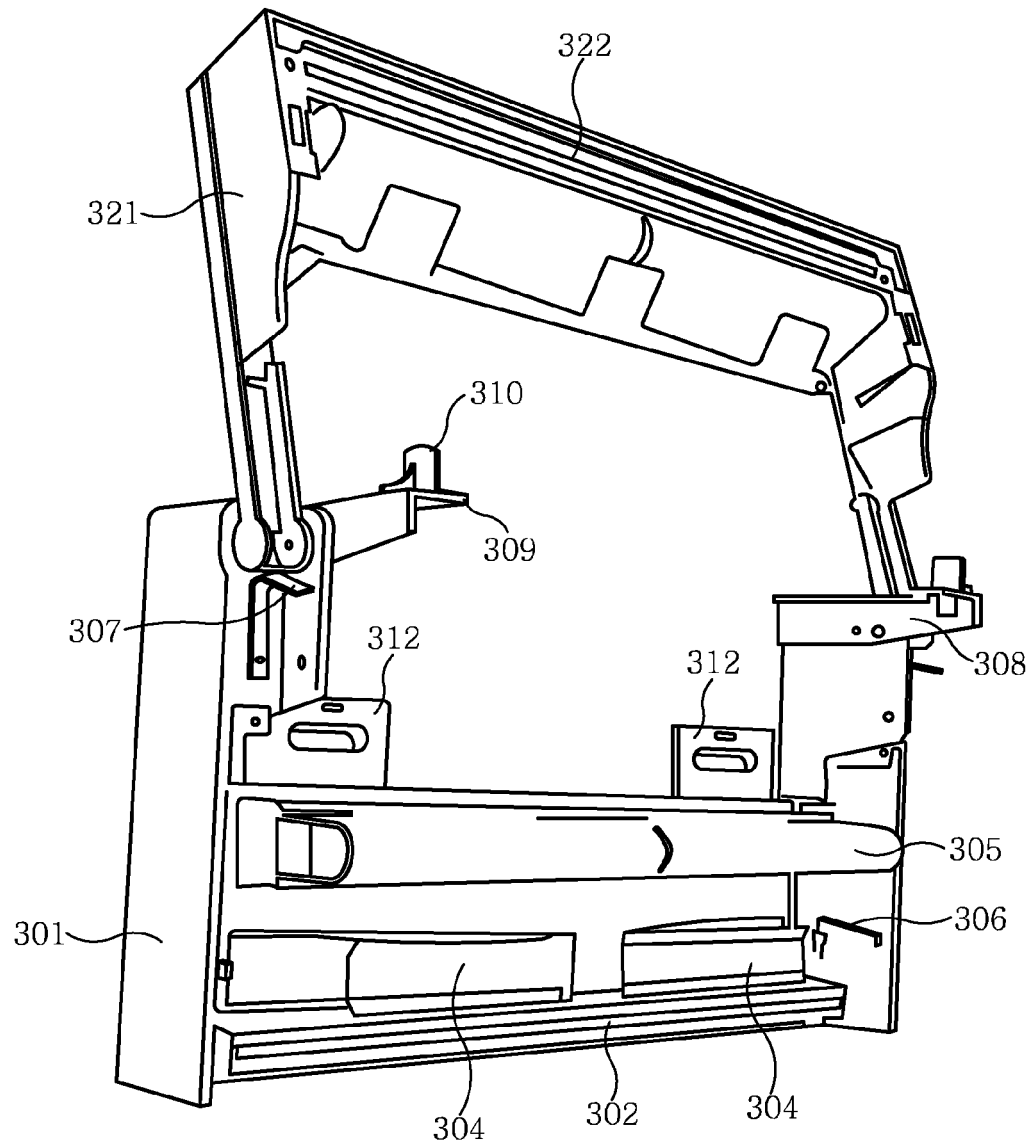


FIG.27

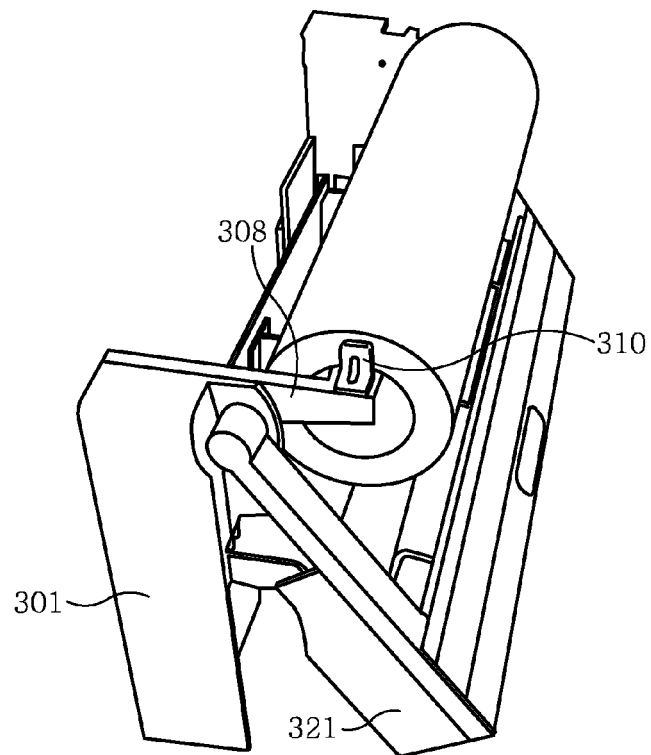


FIG.28

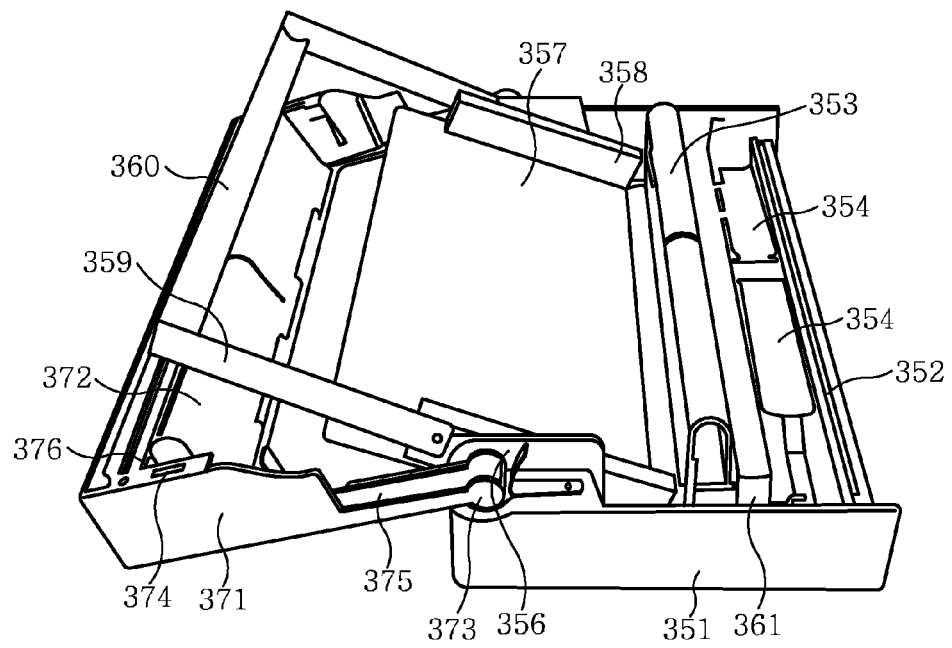


FIG.29

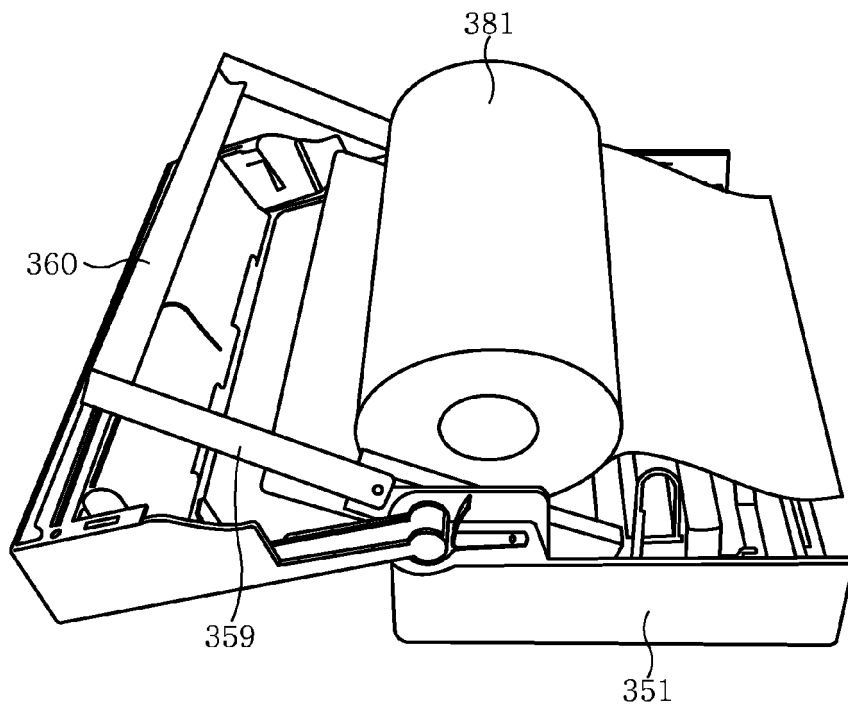


FIG.30

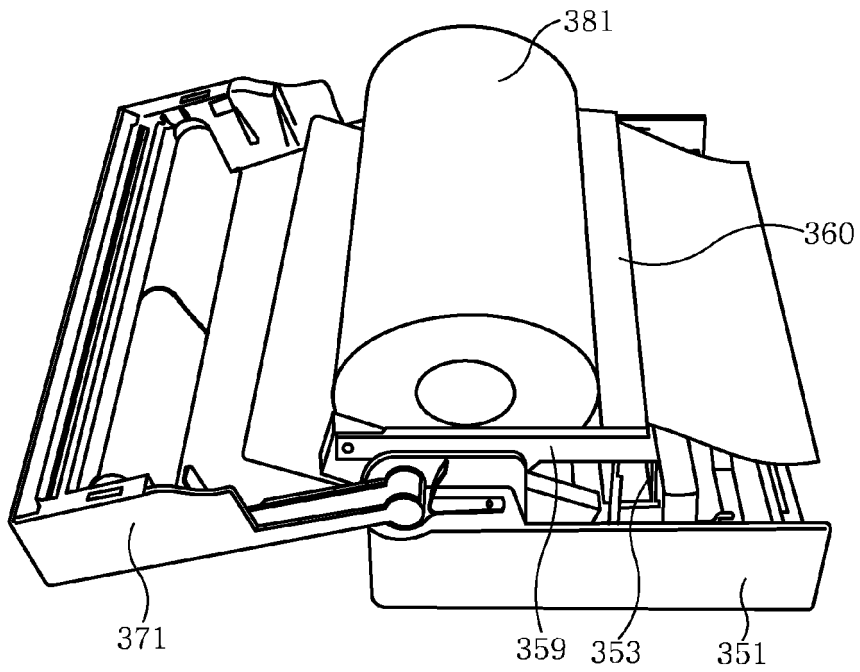
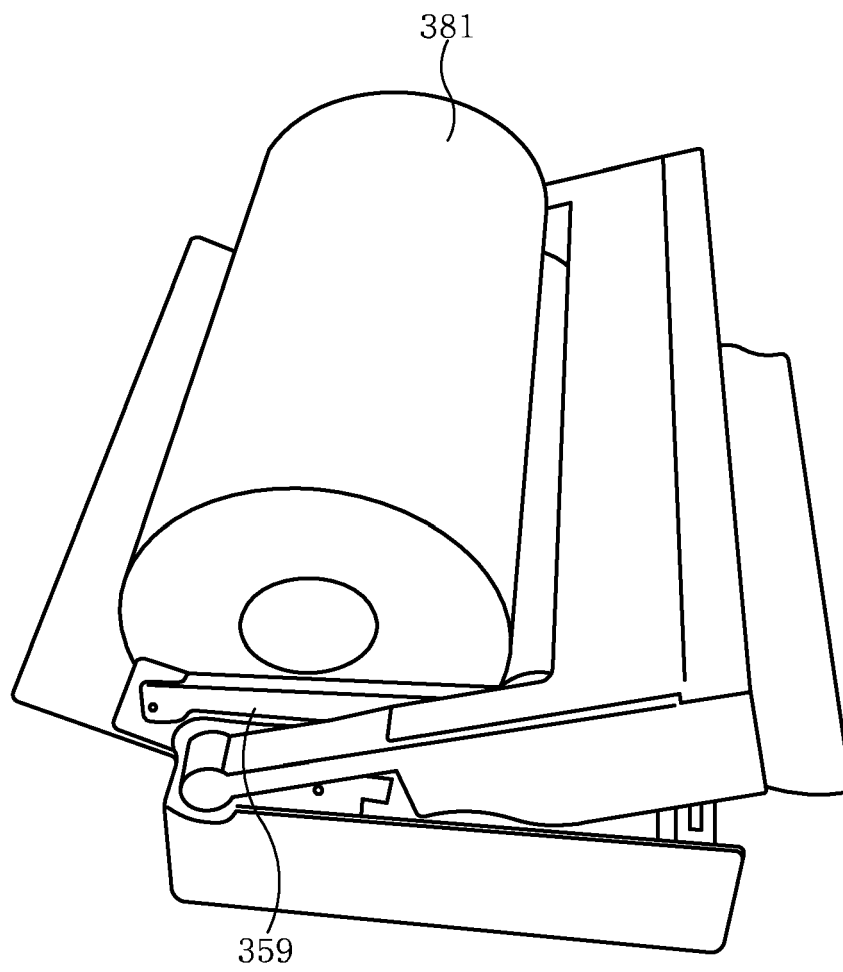


FIG.31



REFERENCES CITED IN THE DESCRIPTION

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