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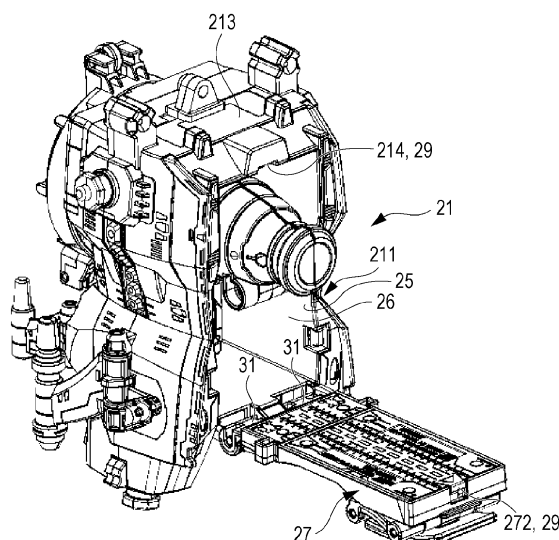
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(54) **Toy**

(57) A toy main section (20) includes an operation unit (50). When a first operation is performed with the operation unit (50), releasing means (52) executes release of first holding means (29) and release of second holding means (29) at different timings. Also, when a second operation is performed with the operation unit (50),

the release of the first holding means (29) and the release of the second holding means (29) are substantially simultaneously performed. Accordingly, since a form is changed in different ways in accordance with the operation with the operation unit (50), a toy (10) with an unexpected change in form can be provided.

FIG. 5



Description

BACKGROUND OF THE INVENTION

1. Field of the Invention

[0001] The present invention relates to a toy, part of which is developed.

2. Description of the Related Art

[0002] A conventional toy, part of which is developed and can house a content therein, has been known.

[0003] For example, a doll described in Japanese Unexamined Patent Application Publication No. 10-118340 has an opening in part of a hollow body, and a housing box is provided inside the opening. The housing box is stored and locked by lock means. The housing box is unlocked when a movable portion such as an arm of the doll is moved, and the housing box protrudes to outside of the body by urging means.

[0004] Accordingly, a person can play with the doll by taking out, for example, a hair brush or a comb housed in the housing box and brushing the hair of the doll or putting a hair accessory on the hair of the doll.

[0005] With the above-described conventional toy, the housing box protrudes from the body. It is convenient for housing a small tool required when the person plays with the doll. However, the protrusion of the housing box only allows the housed small tool to be taken out. The toy is still desired to be improved as a toy that has an unexpected change in form.

SUMMARY OF THE INVENTION

[0006] The present invention is made in light of the situation, and an object of the present invention is to provide a toy that has an unexpected change in form.

[0007] According to an aspect of the present invention, a toy includes a toy main section having first and second openings provided at the toy main section, and a housing space that communicates with outside of the toy main section through the first and second openings; a first closing member that is provided at the first opening and can be in a closed state in which the first closing member closes the first opening and an open state in which the first closing member opens the first opening; a second closing member that is provided at the second opening and can be in a closed state in which the second closing member closes the second opening and an open state in which the second closing member opens the second opening; first urging means that is provided at the first opening and urges the first closing member to become the open state; second urging means that is provided at the second opening and urges the second closing member to become the open state; first holding means that is provided at the first opening and holds the first closing member in the closed state against the urging by the first

urging means; second holding means that is provided at the second opening and holds the second closing member in the closed state against the urging by the second urging means; an operation unit; and releasing means that releases the holding by the first holding means and the holding by the second holding means in accordance with an operation with the operation unit. The releasing means releases the holding by the first holding means and the holding by the second holding means at different timings when a first operation is performed with the operation unit. The releasing means substantially simultaneously releases the holding by the first holding means and the holding by the second holding means when a second operation is performed with the operation unit.

[0008] The first and second openings may be physically separated individual openings. Alternatively, the first and second openings may be at least partly connected to each other and may form a single opening. In this case, a portion of the single opening that can be brought into the closed state and the open state by the first closing member corresponds to the first opening, and a portion of the single opening that can be brought into the closed state and the open state by the second closing member corresponds to the second opening.

[0009] In the toy according to the aspect of the present invention, the first closing member may include a first engaged portion, and the first holding means may include a first engagement portion. The first holding means may hold the first closing member in the closed state when the first engagement portion is engaged with the first engaged portion of the first closing member. The second closing member may include a second engaged portion, and the second holding means may include a second engagement portion. The second holding means may hold the second closing member in the closed state when the second engagement portion is engaged with the second engaged portion of the second closing member.

[0010] The toy according to the aspect of the present invention may further include a first operating member that moves the first engagement portion of the first holding means in a direction in which the engagement between the first closing member and the first engaged portion is released; and a second operating member that moves the second engagement portion of the second holding means in a direction in which the engagement between the second closing member and the second engaged portion is released. The first engagement portion may move when the first operating member moves from an initial position to an operation position with respect to the toy main section by an operation with the operation unit. The second engagement portion may move when the second operating member moves from an initial position to an operation position with respect to the toy main section by an operation with the operation unit.

[0011] In the toy according to the aspect of the present invention, the first operation may be an operation that rotates the operation unit in a first direction, and the second operation may be an operation that rotates the op-

eration unit in a second direction opposite to the first direction.

[0012] In the toy according to the aspect of the present invention, the releasing means may include cam members that rotate by the rotation of the operation unit, and the cam members may contact the first operating member and the second operating member. The cam members may include a first cam portion that moves the first operating member from the initial position to the operation position, and a second cam portion that moves the second operating member from the initial position to the operation position. A distance on the cam members from the first cam portion to the second cam portion may differ from a distance on the cam members from a first contact position at which the first operating member contacts the corresponding cam member to a second contact position at which the second operating member contacts the corresponding cam member.

[0013] In the toy according to the aspect of the present invention, the cam members may include a third cam portion that moves the first operating member from the initial position to the operation position, and a fourth cam portion that moves the second operating member from the initial position to the operation position. A distance on the cam members from the third cam portion to the fourth cam portion may be equivalent to the distance on the cam members from the first contact position at which the first operating member contacts the corresponding cam member to the second contact position at which the second operating member contacts the corresponding cam member.

[0014] In the toy according to the aspect of the present invention, when the operation unit is rotated in the first direction from a state in which both the first operating member and the second operating member are at the initial positions, the first cam portion may move the first operating member before the third cam portion moves the first operating member, and the second cam portion may move the second operating member before the fourth cam portion moves the second operating member.

[0015] In the toy according to the aspect of the present invention, when the operation unit is rotated in the second direction from the state in which both the first operating member and the second operating member are at the initial positions, the third cam portion may move the first operating member before the first cam portion moves the first operating member, the fourth cam portion may move the second operating member before the second cam portion moves the second operating member, and the third cam portion and the fourth cam portion may substantially simultaneously move the first operating member and the second operating member.

[0016] In the toy according to the aspect of the present invention, the first operation may be an operation that moves the operation unit in a first direction, and the second operation may be an operation that moves the operation unit in a direction opposite to the first direction.

[0017] In the toy according to the aspect of the present

invention, the first operation may be an operation that rotates the operation unit in a first direction, and the second operation may be an operation that rotates the operation unit in a direction opposite to the first direction.

[0018] The toy according to the aspect of the present invention may further include a content member that can be housed in the housing space.

[0019] In the toy according to the aspect of the present invention, the content member may include rendering means that executes rendering when the first closing member or the second closing member becomes the open state.

[0020] In the toy according to the aspect of the present invention, the rendering means may include a moveable member that is movable between a position near a surface of the content member and a position far from the surface, and an elastic member that urges the movable member in a direction away from the surface of the content member. When the first closing member and/or the second closing member is in the closed state, the movable member may contact the first closing member and/or the second closing member and hence the movable member may move in a direction toward the surface of the content member against the elastic member. When the first closing member and/or the second closing member becomes the open state, the movable member may move in the direction away from the surface of the content member by elasticity of the elastic member.

[0021] In the toy according to the aspect of the present invention, the rendering means may include a light-emitting portion and a push switch. The push switch may be changed between an ON state in which the push switch protrudes from the surface of the content member and an OFF state in which the push switch is depressed with respect to the surface. When the first closing member and/or the second closing member is in the closed state, the push switch may contact the first closing member and/or the second closing member, may be depressed with respect to the surface of the content member, and hence may become the OFF state. When the first closing member and/or the second closing member becomes the open state, the push switch may protrude from the surface of the content member, and hence may become the ON state. The light-emitting portion may become a light-emission standby state when the push switch is in the OFF state, and the light-emitting portion may become a light-emission state when the push switch becomes the ON state from the OFF state.

[0022] In the toy according to the aspect of the present invention, the content member may include a first content member and a second content member.

[0023] In the toy according to the aspect of the present invention, the housing space may include a first housing space that communicates with the outside of the toy main section through the first opening and a second housing space that communicates with the outside of the toy main section through the second opening. The first content member may be housed in the first housing space, and

the second content member may be housed in the second housing space.

[0024] In the toy according to the aspect of the present invention, the first content member and the second content member may form at least part of a figure that imitates a doll, an animal, or a vehicle by connecting the first content member and the second content member together.

[0025] In the toy according to the aspect of the present invention, the toy main section may include a center member having the operation unit and a peripheral member that can be connected to the center member. At least the first opening may be provided at the peripheral member.

[0026] In the toy according to the aspect of the present invention, the first operating member may include a center portion located at the center member and a peripheral portion located at the peripheral member. The center portion and the peripheral portion may be interlocked with each other when the center member and the peripheral member are connected together.

[0027] In the toy according to the aspect of the present invention, the center portion may be interlocked with the peripheral portion when the center member and the peripheral member are connected together and the center portion contacts the peripheral portion.

[0028] In the toy according to the aspect of the present invention, the toy main section may have a form that imitates a doll or an animal having a body and a limb. The center member may form the body. The peripheral member may form the limb.

[0029] With the toy according to the aspect of the present invention, since the toy can be changed in various forms in accordance with an operation with the operation unit, the toy with the unexpected change in form can be provided.

BRIEF DESCRIPTION OF THE DRAWINGS

[0030]

Fig. 1 is a front view of a toy in a closed state according to an embodiment of the present invention; Fig. 2 is a rear view of the toy in the closed state according to the embodiment of the present invention;

Fig. 3 is a perspective view showing an example of the toy in a developed state according to the embodiment of the present invention;

Fig. 4 is a perspective view of a body;

Fig. 5 is a perspective view showing the body in an open state;

Fig. 6A is a perspective view showing the body in the open state, and Fig. 6B is an enlarged view showing a configuration of a hinge;

Fig. 7 is a perspective view showing a right arm in an open state;

Fig. 8 is a perspective view showing a left arm in an open state;

Fig. 9A is a perspective view showing the right arm in the open state, and Fig. 9B is an enlarged view showing a configuration of a hinge;

Fig. 10 is a perspective view showing a right leg in an open state;

Fig. 11 is a perspective view showing a left leg in an open state;

Fig. 12A is a perspective view showing the right leg in the open state, and Fig. 12B is an enlarged view showing a configuration of a hinge;

Fig. 13 is a configuration diagram of releasing means;

Fig. 14 is an illustration explaining an operation of a left-arm operating member and a body operating member;

Fig. 15 is an illustration explaining an operation of a leg operating member;

Fig. 16 is an explanatory view showing a relationship between a left-leg operating member and a cam plate;

Fig. 17 is an explanatory view showing a relationship between the left-arm operating member and a cam plate;

Fig. 18 is an explanatory view showing a relationship between the body operating member and a cam plate;

Fig. 19 is an explanatory view showing a relationship between a right-arm operating member and a cam plate;

Fig. 20 is an explanatory view showing a relationship between a right-leg operating member and a cam plate;

Fig. 21 is a perspective view in a state in which an example of a content member is housed;

Fig. 22 is a perspective view in a case in which the example of the content member is housed and panels are in open states;

Fig. 23 is a perspective view of a configuration in which examples of content members are connected together;

Fig. 24 is a perspective view in a case in which another example of a content member is housed and panels are in an open state;

Fig. 25 is a perspective view in a state in which another example of a content member is housed; and

Fig. 26 is a perspective view of a configuration in which examples of content members are connected together.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0031] A preferable embodiment of the present invention will be described below with reference to the drawings.

[0032] As shown in Figs. 1 and 2, a toy 10 according to an embodiment of the present invention includes a toy main section 20 having a body 21 that serves as a center member, a pair of left and right arms 22 (22L, 22R) and

a pair of left and right legs 23 (23L, 23R) as limbs that serve as peripheral members movably attached to the body 21, and a head 24 attached to an upper portion of the body 21.

[0033] The left and right arms 22L and 22R, and the left and right legs 23L and 23R are removably and rotatably held by holders 30 provided at left and right side surfaces and a bottom surface of the body 21 (see Fig. 4).

[0034] A rotating knob 51 that forms an operation unit 50 is rotatably attached at a rear surface of the body 21. The rotating knob 51 is connected with releasing means 52 that releases the holding by holding means 29 (described later).

[0035] As shown in Fig. 3, each of the arms 22, the legs 23, and the body 21 has an opening 25, a housing space 26 that communicates with outside of the toy main section 20 through the opening 25, and a panel 27 provided at the opening 25 and serving as a closing member that can become a closed state in which the panel 27 closes the opening 25 and an open state in which the panel 27 opens the opening 25.

[0036] Fig. 5 is a perspective view of the body 21 in an open state. Fig. 6A is a perspective view showing the body in the open state. Fig. 6B is an enlarged view showing a configuration of a hinge.

[0037] As shown in Figs. 5 and 6, bearings 212 are provided at two positions of a lower portion of a front surface of a body main section 211. The bearings 212 protrude forward of the toy main section 20. Bearings 271 are provided to protrude from a lower end portion of the panel 27. The bearings 271 correspond to the bearings 212 of the body main section 211. The bearings 212 and 271 pinch each other. Rotating shafts 31 are attached to penetrate through the bearings 212 and 271. Also, springs 28 as urging means are attached to the rotating shafts 31. The springs 28 constantly urge the panel 27 in a direction in which the panel 27 is open (open state).

[0038] Hence, the panel 27 is constantly urged in a direction in which the panel 27 protrudes forward of the toy main section 20 (in a direction in which the panel 27 moves to become the open state).

[0039] An engagement claw 214 serving as an engagement portion forming holding means 29 that holds the panel 27 in the closed state against an urging force of the springs 28 is provided at a front surface of an upper wall 213 of the body main section 211. The engagement claw 214 is constantly urged in an engagement direction (A direction in the drawing) by urging means (not shown) such as a spring. When the panel 27 is moved in a close direction (direction in which the panel 27 becomes the closed state) and contacts an engaged portion 272 forming holding means 29 at an upper end surface of the panel 27, the engagement claw 214 can move in a release direction (B direction in the drawing) against the urging by the urging means. Also, when the engaged portion 272 moves across the engagement claw 214, the engagement claw 214 moves again in the engagement

direction by the urging means, and is engaged with the engaged portion 272. Hence, when the panel 27 is closed (becomes the closed state), the engagement claw 214 and the engaged portion 272 are automatically engaged, and the panel 27 is held in the closed state.

[0040] Although the detail will be described later, the engagement claw 214 can be moved in the release direction by a body operating member 553.

[0041] As described above, the engaged portion 272 forming the holding means 29 is provided at the upper end surface of the panel 27. The engaged portion 272 holds the panel 27 in the closed state when the engaged portion 272 is engaged with the engagement claw 214 of the body main section 211 and becomes the engaged state.

[0042] In the closed state in which the engaged portion 272 is engaged with the engagement claw 214, when the body operating member 553 moves the engagement claw 214 in the B direction (release direction) in the drawing, the engaged portion 272 is disengaged from the engagement claw 214. That is, since the holding of the panel 27 by the engagement claw 214 and the engaged portion 272 (i.e., holding means 29) is released, the panel 27 is opened forward by the urging force of the springs 28, and becomes the open state.

[0043] Fig. 7 shows a configuration diagram of the right arm 22R. Fig. 8 shows a configuration diagram of the left arm 22L. Figs. 9A and 9B schematically show configuration diagrams of the right arm 22R. The left and right arms 22 have a common configuration. Hence, only the right arm 22R will be described.

[0044] As shown in Figs. 7, and 9A and 9B, bearings 222 are provided to protrude outward of the toy main section 20 at two positions of upper and lower portions of a front surface of an arm main section 221. Bearings 271 are provided to protrude from upper and lower portions of the panel 27. The bearings 271 correspond to the bearings 222 of the arm main section 221. The bearings 222 and 271 pinch each other. Rotating shafts 31 are attached to penetrate through the bearings 222 and 271.

[0045] Also, springs 28 as urging means are attached to the rotating shafts 31. The springs 28 constantly urge the panel 27 in a direction in which the panel 27 is open (open state).

[0046] Hence, the panel 27 is constantly urged in a direction in which the panel 27 protrudes outward of the toy main section 20 (in a direction in which the panel 27 moves to become the open state).

[0047] An engagement claw 224 serving as an engagement portion forming holding means 29 that holds the panel 27 in the closed state against an urging force of the springs 28 is provided at a front surface of a side wall 223 of the arm main section 221. The engagement claw 224 is constantly urged in an engagement direction (A direction in the drawing) by urging means (not shown) such as a spring. When the panel 27 is moved in a close direction (direction in which the panel 27 becomes the

closed state) and contacts an engaged portion 272 forming holding means 29 at an end surface of the panel 27, the engagement claw 224 can move in a release direction (B direction in the drawing) against the urging by the urging means. Also, when the engaged portion 272 moves across the engagement claw 224, the engagement claw 224 moves again in the engagement direction by the urging means, and is engaged with the engaged portion 272. Hence, when the panel 27 is closed (becomes the closed state), the engagement claw 224 and the engaged portion 272 are automatically engaged, and the panel 27 is held in the closed state.

[0048] Although the detail will be described later, the engagement claw 224 can be moved in the release direction by an arm operating member 552 or 554.

[0049] As described above, the engaged portion 272 forming the holding means 29 is provided at the end surface of the panel 27. The engaged portion 272 holds the panel 27 in the closed state when the engaged portion 272 is engaged with the engagement claw 224 of the arm main section 221 and becomes the engaged state.

[0050] In the closed state in which the engaged portion 272 is engaged with the engagement claw 224, when a center transmission member 552B or 554B of the arm operating member 552 or 554 moves the engagement claw 224 in the B direction (release direction) in the drawing, the engaged portion 272 is disengaged from the engagement claw 224. That is, since the holding of the panel 27 by the engagement claw 224 and the engaged portion 272 (i.e., holding means 29) is released, the panel 27 is opened outward by the urging force of the springs 28, and becomes the open state.

[0051] Fig. 10 is a perspective view of the right leg 23R in an open state. Fig. 11 is a perspective view of the left leg 23L in an open state. Fig. 12A is a perspective view of the right leg 23R. Fig. 12B is an enlarged view of a hinge.

[0052] The left and right legs 23L and 23R have a common configuration. Hence, only the right leg 23R will be described.

[0053] As shown in Figs. 10, and 12A and 12B, bearings 232 are provided to protrude outward of the toy main section 20 at two positions of upper and lower portions of a front surface of a leg main section 231. Bearings 271 are provided to protrude from upper and lower portions of the panel 27. The bearings 271 correspond to the bearings 232 of the leg main section 231. The bearings 232 and 271 pinch each other. Rotating shafts 31 are attached to penetrate through the bearings 232 and 271.

[0054] Also, springs 28 as urging means are attached to the rotating shafts 31. The springs 28 constantly urge the panel 27 in a direction in which the panel 27 is open (open state).

[0055] Hence, the panel 27 is constantly urged in a direction in which the panel 27 protrudes outward of the toy main section 20 (in a direction in which the panel 27 moves to become the open state).

[0056] An engagement claw 234 serving as an en-

gagement portion forming holding means 29 that holds the panel 27 in the closed state against an urging force of the springs 28 is provided at a front surface of an upper wall 233 of the leg main section 231. The engagement claw 234 is constantly urged in an engagement direction (A direction in the drawing) by urging means (not shown) such as a spring. When the panel 27 is moved in a close direction (direction in which the panel 27 becomes the closed state) and contacts an engaged portion 272 forming holding means 29 at an upper end surface of the panel 27, the engagement claw 234 can move in a release direction (B direction in the drawing) against the urging by the urging means. Also, when the engaged portion 272 moves across the engagement claw 234, the engagement claw 234 moves again in the engagement direction by the urging means, and is engaged with the engaged portion 272. Hence, when the panel 27 is closed (becomes the closed state), the engagement claw 234 and the engaged portion 272 are automatically engaged, and the panel 27 is held in the closed state.

[0057] Although the detail will be described later, the engagement claw 234 can be moved in the release direction by a leg operating member 551 or 555.

[0058] As described above, the engaged portion 272 forming the holding means 29 is provided at the upper end surface of the panel 27. The engaged portion 272 holds the panel 27 in the closed state when the engaged portion 272 is engaged with the engagement claw 234 of the leg main section 231 and becomes the engaged state.

[0059] In the closed state in which the engaged portion 272 is engaged with the engagement claw 234, when a center transmission portion 551B or 555B of the leg operating member 551 or 555 moves the engagement claw 234 in the B direction (release direction) in the drawing, the engaged portion 272 is disengaged from the engagement claw 234. That is, since the holding of the panel 27 by the engagement claw 234 and the engaged portion 272 (i.e., holding means 29) is released, the panel 27 is opened outward by the urging force of the springs 28, and becomes the open state.

[0060] Next, releasing means 52 for releasing the holding of the panel 27 by the holding means 29 will be described in detail.

[0061] As shown in Figs. 13 and 16, a rotating shaft 53 is rotatably provided inside the body 21. A rear end of the rotating shaft 53 protrudes rearward from the body 21, and the rotating knob 51 is attached to the rotating shaft 53. When the rotating knob 51 is rotated, the rotating shaft 53 is rotated. The rotating shaft 53 is rotatable in a clockwise direction (CW1) and a counterclockwise direction (CW2) when viewed from the rear side of the toy 10.

[0062] Also, a plurality of cam members 54 are stacked and integrally attached to the rotating shaft 53 through a spacer 531. The plurality of cam members 54 are rotatable by the rotation of the rotating shaft 53. The plurality of cam members 54 respectively correspond to a plurality of operating members 55 that form the releasing means

52.

[0063] The operating members 55 include the body operating member 553, the left-arm operating member 552, the right-arm operating member 554, the left-leg operating member 551, and the right-leg operating member 555. The body operating member 553 includes an operating bar 553A and a peripheral transmission member 553E that is in contact with the operating bar 553A. The body operating member 553 moves the engagement claw 214 of the body 21 in the release direction, releases the engaged portion 272 from the engaged state, and releases the holding of the panel 27 in the closed state by the holding means 29 (by the engagement claw 214 and the engaged portion 272).

[0064] The left-arm operating member 552, the right-arm operating member 554, the left-leg operating member 551, and the right-leg operating member 555 respectively include operating bars 552A, 554A, 551A, and 555A and center transmission members 552B, 554B, 551B, and 555B that are included in the body 21 serving as a center member; and peripheral transmission members 552E, 554E, 551E (not shown), and 555E that are included in the arms 22 or legs 23 serving as peripheral members. The left-arm operating member 552, the right-arm operating member 554, the left-leg operating member 551, and the right-leg operating member 555 respectively move the engagement claw 224 of the left arm 22L, the engagement claw 224 of the right arm 22R, the engagement claw 234 of the left leg 23L, and the engagement claw 234 of the right leg 23R in the release directions, release the engaged portions 272 from the engaged states, and release the holding of the panels 27 in the closed states by the holding means 29.

[0065] The operating bars 551A, 552A, 554A, and 555A and the center transmission members 551B, 552B, 554B, and 555B are provided at the body 21 serving as the center member, and the peripheral transmission members 551E, 552E, 554E, and 555E are provided at the arms 22 or the legs 23 serving as the peripheral members. Hence, if the arms 22 and the legs 23 can be separated from the body 21, the operating bars 551A, 552A, 554A, and 555A and the center transmission members 551B, 552B, 554B, and 555B can be separated from the peripheral transmission members 551E, 552E, 554E, and 555E. When the arms 22 and the legs 23 are attached (connected) to the body 21, the center transmission members 551B, 552B, 554B, and 555B contact the peripheral transmission members 551E, 552E, 554E, and 555E (state shown in Figs. 13, 14, and 15), and the center transmission members 551B, 552B, 554B, and 555B are interlocked with the peripheral transmission members 551E, 552E, 554E, and 555E.

[0066] Fig. 14 is an illustration explaining an operation of the left-arm operating member 552 and the body operating member 553. The operation of the right-arm operating member 554 is similar to that of the left-arm operating member 552, and hence the description will be omitted.

[0067] Describing the operation of the left-arm operating member 552, the cam member 54 corresponding to the left-arm operating member 552 first contacts the operating bar 552A that forms the left-arm operating member 552, and moves the operating bar 552A outward of the body 21 (i.e., from an initial position to an operation position). Then, a driven member 552C that contacts the operating bar 552A rotates around a shaft 552D. Hence, the center transmission member 552B moves outward (i.e., from an initial position to an operation position), and the peripheral transmission member 552E that contacts the center transmission member 552B rotates around a shaft 552F (i.e., from an initial position to an operation position). Accordingly, the engagement claw 224 moves in the release direction. In particular, since the operating bar 552A, the center transmission member 552B, and the peripheral transmission member 552E that form the right-arm operating member 552 move from the initial positions to the operation positions, the engagement claw 224 moves in the release direction. The engaged state of the engagement claw 224 with respect to the engaged portion 272 is released, and the holding of the panel 27 in the closed state is released.

[0068] Describing next the operation of the body operating member 553, the cam member 54 corresponding to the body operating member 553 contacts the operating bar 553A that forms the body operating member 553, and moves the operating bar 553A outward of the body 21 (i.e., from an initial position to an operation position). Then, the peripheral transmission member 553E that contacts the operating bar 553A rotates around a shaft 553F (i.e., from an initial position to an operation position). Accordingly, the engagement claw 214 moves in the release direction. In particular, since the operating bar 553A and the peripheral transmission member 553E that form the body operating member 553 move from the initial positions to the operation positions, the engagement claw 214 moves in the release direction. The engaged state of the engagement claw 214 with respect to the engaged portion 272 is released, and the holding of the panel 27 in the closed state is released.

[0069] Fig. 15 is an illustration explaining an operation of the right-leg operating member 555. The operation of the left-leg operating member 551 is similar to that of the right-leg operating member 555, and hence the description will be omitted.

[0070] Describing the operation of the right-leg operating member 555, the cam member 54 corresponding to the right-leg operating member 555 contacts the operating bar 555A that forms the right-leg operating member 555, and moves the operating bar 555A outward of the body 21 (i.e., from an initial position to an operation position). Then, a driven member 555C that contacts the operating bar 555A rotates around a shaft 555D. Hence, the center transmission member 555B moves outward of the body 21 (i.e., from an initial position to an operation position) and the peripheral transmission member 555E that contacts the center transmission member 555B ro-

tates around a shaft 555F. Accordingly, the engagement claw 234 moves in the release direction. In particular, since the operating bar 555A, the center transmission member 555B, and the peripheral transmission member 555E that form the right-leg operating member 555 move from the initial positions to the operation positions, the engagement claw 234 moves in the release direction. The engaged state of the engagement claw 234 with respect to the engaged portion 272 is released, and the holding of the panel 27 in the closed state is released.

[0071] As shown in Figs. 13 and 16, the operating bars 551A, 552A, 553A, 554A, and 555A of the operating members 55 respectively contact the corresponding cam members 54. As described above, the operating bars 551A, 552A, 553A, 554A, and 555A move from the initial positions to the operation positions at which the engaged states of the engaged portions with respect to the engagement claws are released and as the result the holding of the panels 27 in the closed states is released.

[0072] Each of the operating bars 551A, 552A, 553A, 554A, and 555A is constantly urged toward the initial position by a spring (not shown) serving as urging means, and is restored to the initial position when being located in an off region 54C (low region, see Fig. 16) of the corresponding cam member 54.

[0073] As shown in Fig. 16, a cam plate 541 that moves the left-leg operating member 551 for releasing the holding of the panel 27 of the left leg has a cam portion 541A and a cam portion 541B. The cam portion 541A operates (moves) the left-leg operating member 551 (from the initial position to the operation position) when the cam plate 541 is rotated in the clockwise direction CW1 by an angle θ_1 with respect to an illustrated reference position (position of the left-leg operating member 551). The cam portion 541B operates (moves) the left-leg operating member 551 (from the initial position to the operation position) when the cam plate 541 is rotated in the counterclockwise direction CW2 by an angle ϕ_1 with respect to the reference position.

[0074] In this embodiment, for example, θ_1 and ϕ_1 may be determined such that $\theta_1 = 45^\circ$ and $\phi_1 = 175^\circ$.

[0075] As shown in Fig. 17, a cam plate 542 that moves the left-arm operating member 552 for releasing the holding of the panel 27 of the left arm has a cam portion 542A and a cam portion 542B. The cam portion 542A operates (moves) the left-arm operating member 552 (from the initial position to the operation position) when the cam plate 542 is rotated in the clockwise direction CW1 by an angle θ_2 with respect to an illustrated reference position (position of the left-arm operating member 552). The cam portion 542B operates (moves) the left-arm operating member 552 (from the initial position to the operation position) when the cam plate 542 is rotated in the counterclockwise direction CW2 by an angle ϕ_2 with respect to the reference position.

[0076] In this embodiment, for example, θ_2 and ϕ_2 may be determined such that $\theta_2 = 45^\circ$ and $\phi_2 = 45^\circ$.

[0077] As shown in Fig. 18, a cam plate 543 that moves

the body operating member 553 for releasing the holding of the panel 27 of the body 21 has a cam portion 543A and a cam portion 543B. The cam portion 543A operates (moves) the body operating member 553 (outward of the body 21, i.e., from the initial position to the operation position) when the cam plate 543 is rotated in the clockwise direction CW1 by an angle θ_3 with respect to an illustrated reference position (position of the body operating member 553). The cam portion 543B operates (moves) the body operating member 553 (outward of the body 21, i.e., from the initial position to the operation position) when the cam plate 543 is rotated in the counterclockwise direction CW2 by an angle ϕ_3 with respect to the reference position.

[0078] In this embodiment, for example, θ_3 and ϕ_3 may be determined such that $\theta_3 = 45^\circ$ and $\phi_3 = 285^\circ$.

[0079] As shown in Fig. 19, a cam plate 544 that moves the right-arm operating member 554 for releasing the holding of the panel 27 of the right arm has a cam portion 544A and a cam portion 544B. The cam portion 544A operates (moves) the right-arm operating member 554 (from the initial position to the operation position) when the cam plate 544 is rotated in the clockwise direction CW1 by an angle θ_4 with respect to an illustrated reference position (position of the right-arm operating member 554). The cam portion 544B operates (moves) the right-arm operating member 554 (from the initial position to the operation position) when the cam plate 544 is rotated in the counterclockwise direction CW2 by an angle ϕ_4 with respect to the reference position.

[0080] In this embodiment, for example, θ_4 and ϕ_4 may be determined such that $\theta_4 = 45^\circ$ and $\phi_4 = 105^\circ$.

[0081] As shown in Fig. 20, a cam plate 545 that moves the right-leg operating member 555 for releasing the holding of the panel 27 of the right leg has a cam portion 545A and a cam portion 545B. The cam portion 545A operates (moves) the right-leg operating member 555 (from the initial position to the operation position) when the cam plate 545 is rotated in the clockwise direction CW1 by an angle θ_5 with respect to an illustrated reference position (position of the right-leg operating member 555). The cam portion 545B operates (moves) the right-leg operating member 555 (from the initial position to the operation position) when the cam plate 545 is rotated in the counterclockwise direction CW2 by an angle ϕ_5 with respect to the reference position.

[0082] In this embodiment, for example, θ_5 and ϕ_5 may be determined such that $\theta_5 = 45^\circ$ and $\phi_5 = 225^\circ$.

[0083] For example, an operation when the right-arm operating member 554 serves as a first operating member according to the present invention and the right-leg operating member 555 serves as a second operating member according to the present invention as shown in Fig. 20 will be described below. Configurations of the other operating members 55 may be considered in a manner similar to the right-arm operating member 554 and the right-leg operating member 555.

[0084] The cam plate 544 that moves the right-arm op-

erating member 554 serving as the first operating member from the initial position to the operation position has the cam portion 544B that serves as a first cam portion and operates the right-arm operating member 554 when the cam plate 544 is rotated in the clockwise direction CW1, and the cam portion 544A that serves as a third cam portion 544A and operates the right-arm operating member 554 when the cam plate 544 is rotated in the counterclockwise direction CW2.

[0085] The cam plate 545 that moves the right-leg operating member 555 serving as the second operating member from the initial position to the operation position has the cam portion 545B that serves as a second cam portion and operates the right-leg operating member 555 when the cam plate 545 is rotated in the clockwise direction CW1, and the cam portion 545A that serves as a fourth cam portion 545A and operates the right-leg operating member 555 when the cam plate 545 is rotated in the counterclockwise direction CW2.

[0086] Described here is a case in which a first operation is performed with the operation unit 50, or in particular, the rotating knob 51 is rotated in the clockwise direction CW1 serving as a first direction.

[0087] This embodiment is configured such that a distance L1 on the cam members from the cam portion 544B serving as the first cam portion to the cam portion 545B serving as the second cam portion when the cam members 54 are rotated in the clockwise direction CW1 differs from a distance L2 on the cam members from a first contact position P1 at which the right-arm operating member 554 serving as the first operating member contacts the cam plate 544 to a second contact position P2 at which the right-leg operating member 555 serving as the second operating member contacts the cam plate 545. That is, $L1 \neq L2$.

[0088] Hence, if the cam members 54 are rotated in the clockwise direction CW1 (i.e., if the first operation is performed with the rotating knob 51 serving as the operation unit 50 (if the rotating knob 51 is rotated in the first direction)), a timing at which the right-arm operating member 554 is operated is shifted (differs) from a timing at which the right-leg operating member 555 is operated.

[0089] Described next is a case in which a second operation is performed with the operation unit 50, or in particular, the rotating knob 51 is rotated in the counterclockwise direction CW2 serving as a second direction.

[0090] This embodiment is configured such that a distance L3 on the cam members from the cam portion 544A serving as the third cam portion to the cam portion 545A serving as the fourth cam portion if the cam members 54 are rotated in the counterclockwise direction CW2 is equivalent to the distance L2 on the cam members from the first contact position P1 to the second contact position P2. That is, $L3 = L2$.

[0091] Hence, if the cam member 54 is rotated in the counterclockwise direction CW2 (i.e., if the second operation is performed with the rotating knob 51 serving as the operation unit 50 (if the rotating knob 51 is rotated in

the second direction)), a timing at which the right-arm operating member 554 is operated is the same as a timing at which the right-leg operating member 555 is operated.

[0092] When the rotating knob 51 is rotated in the clockwise direction CW1 serving as the first direction from a state in which the right-arm operating member 554 serving as the first operating member and the right-leg operating member 555 serving as the second operating member are in the initial positions, the cam portion 544B serving as the first cam portion moves the right-arm operating member 554 before the cam portion 544A serving as the third cam portion moves the right-arm operating member 554, and the cam portion 545B serving as the second cam portion moves the right-leg operating member 555 before the cam portion 545A serving as the fourth cam portion moves the right-leg operating member 555. This is because this embodiment is configured to satisfy that $(360^\circ - \theta_4) > \phi_4$ and $(360^\circ - \theta_5) > \phi_5$.

[0093] When the rotating knob 51 is rotated in the counterclockwise direction CW2 serving as the second direction from the state in which the right-arm operating member 554 serving as the first operating member and the right-leg operating member 555 serving as the second operating member are in the initial positions, the cam portion 544A serving as the third cam portion moves the right-arm operating member 554 before the cam portion 544B serving as the first cam portion moves the right-arm operating member 554, and the cam portion 545A serving as the fourth cam portion moves the right-leg operating member 555 before the cam portion 545B serving as the second cam portion moves the right-leg operating member 555. This is because this embodiment is configured to satisfy that $(360^\circ - \phi_4) > \theta_4$ and $(360^\circ - \phi_5) > \theta_5$.

[0094] Also, as described above, the cam portion 544A serving as the third cam portion and the cam portion 545A serving as the fourth cam portion substantially simultaneously move the right-arm operating member 554 and the right-leg operating member 555.

[0095] In the above description, an operation is described if the right-arm operating member 554 serves as the first operating member according to the present invention and the right-leg operating member 555 serves as the second operating member according to the present invention. However, in this embodiment, any of the left-leg operating member 551, the left-arm operating member 552, the body operating member 553, the right-arm operating member 554, and the right-leg operating member 555 may serve as the first operating member or the second operating member according to the present invention. Even in this case, it can be easily understood that the first operating member and the second operating member are operated similarly as long as proper cam portions are applied to the first cam portion, the second cam portion, the third cam portion, and the fourth cam portion.

[0096] On the basis of the configuration described above, an operation of the toy 10 when the rotating knob

51 serving as the operation unit 50 is rotated will be described.

[0097] When the rotating knob 51 is rotated in the counterclockwise direction CW2 by 45° (when the second operation is performed, i.e., when the rotating knob 51 is rotated in the second direction), since the $\theta_i = 45^\circ$ ($i = 1$ to 5), all the operating members 55 substantially simultaneously move from the initial positions to the operation positions by the cam members 54. Accordingly, in all the body 21, the arms 22, and the legs 23, the body operating member 553, the left-arm operating member 552, the right-arm operating member 554, the left-leg operating member 551, and the right-leg operating member 555 respectively move the engagement claws 214, 224, 224, 234, and 234 in the release direction. Hence, the holding of the panels 27 of the body 21, the arms 22, and the legs 23 in the closed states is substantially simultaneously released. Accordingly, all the panels 27 are substantially simultaneously developed (become the open states).

[0098] In contrast, when the rotating knob 51 is rotated in the clockwise direction CW1 by 45° (when the first operation is performed, i.e., when the rotating knob 51 is rotated in the first direction), since $\phi_2 = 45^\circ$ and $\phi_2 < \phi_4 < \phi_1 < \phi_5 < \phi_3$, the left-arm operating member 552 moves to the operation position by the cam portion 542B of the cam plate 542 before the other operating members. Hence, the panel 27 of the left arm 22L is developed (becomes the open state).

[0099] When the rotating knob 51 is further rotated in the clockwise direction CW1 by 60° , since $\phi_4 = 105^\circ$ and $\phi_4 < \phi_1 < \phi_5 < \phi_3$, the right-arm operating member 554 moves to the operation position by the cam portion 544B of the cam plate 544 before the left-leg operating member 551, the right-leg operating member 555, and the body operating member 553. Hence, the panel 27 of the right arm 22R is developed (becomes the open state).

[0100] When the rotating knob 51 is further rotated in the clockwise direction CW1 by 70° , since $\phi_1 = 175^\circ$ and $\phi_1 < \phi_5 < \phi_3$, the left-leg operating member 551 moves to the operation position by the cam portion 541B of the cam plate 541 before the right-leg operating member 555 and the body operating member 553. Hence, the panel 27 of the left leg 23L is developed (becomes the open state).

[0101] When the rotating knob 51 is further rotated in the clockwise direction CW1 by 50° , since $\phi_5 = 225^\circ$ and $\phi_5 < \phi_3$, the right-leg operating member 555 moves to the operation position by the cam portion 545B of the cam plate 545 before the body operating member 553. Hence, the panel 27 of the right leg 23R is developed (becomes the open state).

[0102] When the rotating knob 51 is further rotated in the clockwise direction CW1 by 60° , the body operating member 553 moves to the operation position by the cam portion 543B of the cam plate 543. Hence, the panel 27 of the body 21 is developed (becomes open state).

[0103] In other words, when the rotating knob 51 is

rotated in the clockwise direction CW1 (when the first operation is performed, i.e., when the rotating knob 51 is rotated in the first direction), the panels 27 of the left arm, right arm, left leg, right leg, and body are successively developed (become the open states) at different timings.

[0104] The housing spaces 26 of the body 21, arms 22, and legs 23 can house various content members 40.

[0105] As shown in Fig. 21, for example, a body of a patrol car 41 can be housed in the housing space 26 of the body 21, and wheel portions having wheels 42 (with machine guns) of the patrol car 41 can be housed in the housing spaces 26 of the arms 22 and legs 23. It is to be noted that the panels 27 are not illustrated in Fig. 21.

[0106] When the body and the wheel portions are housed in the housing spaces 26, the panels 27 are brought into the closed states, and then the rotating knob 51 is rotated as described above, the panels 27 become the open states and the body and the wheels 42 with the machine guns of the patrol car 41 housed in the housing spaces 26 are exposed from a surface of the toy 10 (see Fig. 22). The form of the toy can be changed into a form that is hardly expected when the panels 27 are in the closed states.

[0107] Also, a light-emitting portion (patrol-car lamp 411) and a sound-generating device as rendering means may be provided at the body of the patrol car 41, and rendering may be performed such that the patrol-car lamp 411 blinks while a siren sounds when the panels 27 become the open states.

[0108] In this case, a push switch 412 serving as an execution switch for the rendering is provided at the body of the patrol car 41. The push switch 412 can be changed between an ON state in which the push switch 412 protrudes from a surface of the body of the patrol car 41 and an OFF state in which the push switch 412 is depressed with respect to the surface. When the panel 27 of the body 21 moves to be closed, the panel 27 contacts the protruding push switch 412 in the ON state, and depresses the push switch 412 with respect to the body surface. When the panel 27 becomes the closed state, the push switch 412 can be held in the OFF state.

[0109] When the panel 27 is in the closed state, the push switch 412 is depressed because the push switch 412 contacts the panel 27, and the push switch 412 becomes the OFF state. When the panel 27 becomes the open state, the push switch 412 protrudes from the surface of the patrol car 41 and becomes the ON state. Accordingly, the rendering is executed such that the patrol-car lamp 411 blinks and the sound-generating device sounds a siren.

[0110] Also, the body and the wheel portions of the patrol car 41 housed in the housing spaces 26 can be connected to each other and form the patrol car 41 as shown in Fig. 23.

[0111] Each of the wheel portions may have a light-emitting portion, a sound-generating device, and a push switch similar to those of the body. The rendering may

be performed such that each machine gun generates discharge sound while the machine gun blinks when the panel 27 becomes the open state.

[0112] For another example of a content member, a movable member that is movable between a position near a surface of the content member and a position far from the surface may be provided as the rendering means. For example, the movable member may be a wing 43, and the content member may be a wing portion with the wing 43. Also, the wing portion may include a left wing portion with a left wing 43L and a right wing portion with a right wing 43R. The left and right wing portions can be housed in the housing spaces 26 of the left and right arms of the toy 10 (see Fig. 24). The wings 43L and 43R can move between positions near surfaces of the left and right wing portions and positions far from the surfaces. The wings 43L and 43R are urged by elastic members in directions away from the surfaces of the left and right wing portions. In particular, when an external force does not act, the wings 43L and 43R are separated from the surfaces of the left and right wing portions and hence are developed in wing forms (see Fig. 24). To house the wings 43L and 43R in the housing spaces 26, the wings 43L and 43R contact the panels 27 that move to be closed, and hence the wings 43L and 43R move toward the positions near the surfaces of the left and right wing portions while the wings 43L and 43R are folded against the elasticity of the elastic members. When the panels 27 are in the closed states, the wings 43L and 43R contact the panels 27, and hence the wings 43L and 43R are held at the positions near the surfaces of the left and right wing portions while the wings are folded (see Fig. 25, in which the panels 27 are not illustrated).

[0113] When the rotating knob 51 is operated and the panels 27 become the open states from this state, rendering is executed such that the wings 43L and 43R move in the directions away from the surfaces of the left and right wing portions by the elasticity of the elastic members and the wings 43L and 43R are developed in wing forms. The development of the wings 43L and 43R from the housing spaces 26 of the left and right arms is hardly expected from the form of the toy 10 when the panels 27 are closed. Accordingly, an unexpected change in form can be provided.

[0114] Alternatively, the left and right wing portions may be connected together and may form a portion of, for example, a back portion of a dragon 44 as shown in Fig. 26. In this case, portions other than the back portion (portion formed of the left and right wing portions) of the dragon 44 may be properly divided and may be housed in the housing spaces 26 of the body 21 and the legs 23 (see Figs. 24 and 25). As described above, by connecting together the content members housed in the housing spaces 26 of the respective portions, a part or the entire shape of a figure (for example, the patrol car 41 or the dragon 44) that imitates a doll, an animal, or a vehicle. With this configuration, not only by using the content members for the change in form of the toy 10, but also

by connecting the content members together, a user may play with the content members as a toy independent from the toy 10, such as the patrol car 41 or the dragon 44.

[0115] With the toy 10 according to the above-described embodiment of the present invention, the housing spaces 26 are formed inside the toy main section 20, and the housing spaces 26 communicate with the outside of the toy through the openings 25. The openings 25 are provided with the panels 27 that are constantly urged to be open by the springs 28. The panels 27 become the closed states when the panels 27 are closed against the springs 28 and held by the holding means 29.

[0116] The toy main section 20 includes the operation unit 50. When the first operation is performed with the operation unit 50, the releasing means 52 executes the release of the first holding means 29 and the release of the other holding means 29 at different timings. Also, when the second operation is performed with the operation unit 50, the release of the first holding means 29 and the release of the other holding means 29 are substantially simultaneously performed.

[0117] Accordingly, since the form is changed in different ways in accordance with the operation with the operation unit 50, the toy 10 with an unexpected change in form can be provided.

[0118] The preferable embodiment of the present invention has been described above. However, the toy of the present invention is not limited to the above-described embodiment, and modification and variation can be made in various ways within the scope of the present invention described in the claims.

Claims

1. A toy (10) comprising:

a toy main section (20) having first and second openings (25) provided at the toy main section, and a housing space (26) that communicates with outside of the toy main section through the first and second openings;

a first closing member (27) that is provided at the first opening and can be in a closed state in which the first closing member closes the first opening and an open state in which the first closing member opens the first opening;

a second closing member (27) that is provided at the second opening and can be in a closed state in which the second closing member closes the second opening and an open state in which the second closing member opens the second opening;

first urging means (28) that is provided at the first opening and urges the first closing member to become the open state;

second urging means (28) that is provided at the second opening and urges the second closing

member to become the open state;
 first holding means (29) that is provided at the
 first opening and holds the first closing member
 in the closed state against the urging by the first
 urging means;
 second holding means (29) that is provided at
 the second opening and holds the second closing
 member in the closed state against the urging
 by the second urging means;
 an operation unit (50); and
 releasing means (52) that releases the holding
 by the first holding means and the holding by
 the second holding means in accordance with
 an operation with the operation unit,
 wherein the releasing means releases the hold-
 ing by the first holding means and the holding
 by the second holding means at different timings
 when a first operation is performed with the op-
 eration unit, and
 wherein the releasing means substantially si-
 multaneously releases the holding by the first
 holding means and the holding by the second
 holding means when a second operation is per-
 formed with the operation unit.

2. The toy according to claim 1,

wherein the first closing member includes a first
 engaged portion (272), and the first holding
 means includes a first engagement portion (214,
 224, 234),
 wherein the first holding means can hold the first
 closing member in the closed state when the
 first engagement portion is engaged with the first
 engaged portion of the first closing member,
 wherein the second closing member includes a
 second engaged portion (272), and the second
 holding means includes a second engagement
 portion (214, 224, 234), and
 wherein the second holding means can hold the
 second closing member in the closed state when
 the second engagement portion is engaged with
 the second engaged portion of the second clos-
 ing member.

3. The toy according to claim 2, further comprising:

a first operating member (55) that moves the
 first engagement portion of the first holding
 means in a direction in which the engagement
 between the first closing member and the first
 engaged portion is released; and
 a second operating member (55) that moves the
 second engagement portion of the second hold-
 ing means in a direction in which the engage-
 ment between the second closing member and
 the second engaged portion is released,
 wherein the first engagement portion moves

when the first operating member moves from an
 initial position to an operation position with re-
 spect to the toy main section by an operation
 with the operation unit, and
 wherein the second engagement portion moves
 when the second operating member moves from
 an initial position to an operation position with
 respect to the toy main section by an operation
 with the operation unit.

4. The toy according to claim 3, wherein the first op-
 eration is an operation that rotates the operation unit
 in a first direction, and the second operation is an
 operation that rotates the operation unit in a second
 direction opposite to the first direction.

5. The toy according to claim 4,

wherein the releasing means includes cam
 members (54) that rotate by the rotation of the
 operation unit, and the cam members contact
 the first operating member and the second op-
 erating member,
 wherein the cam members include a first cam
 portion (54A) that moves the first operating
 member from the initial position to the operation
 position, and a second cam portion (54B) that
 moves the second operating member from the
 initial position to the operation position, and
 wherein a distance on the cam members from
 the first cam portion to the second cam portion
 differs from a distance on the cam members
 from a first contact position at which the first op-
 erating member contacts the corresponding
 cam member to a second contact position at
 which the second operating member contacts
 the corresponding cam member.

6. The toy according to claim 5,

wherein the cam members include a third cam
 portion (54A) that moves the first operating
 member from the initial position to the operation
 position, and a fourth cam portion (54B) that
 moves the second operating member from the
 initial position to the operation position, and
 wherein a distance on the cam members from
 the third cam portion to the fourth cam portion
 is equivalent to the distance on the cam mem-
 bers from the first contact position at which the
 first operating member contacts the correspond-
 ing cam member to the second contact position
 at which the second operating member contacts
 the corresponding cam member.

7. The toy according to claim 6, wherein, when the op-
 eration unit is rotated in the first direction from a state
 in which both the first operating member and the sec-

ond operating member are at the initial positions, the first cam portion moves the first operating member before the third cam portion moves the first operating member, and the second cam portion moves the second operating member before the fourth cam portion moves the second operating member; and optionally, when the operation unit is rotated in the second direction from the state in which both the first operating member and the second operating member are at the initial positions, the third cam portion moves the first operating member before the first cam portion moves the first operating member, the fourth cam portion moves the second operating member before the second cam portion moves the second operating member, and the third cam portion and the fourth cam portion substantially simultaneously move the first operating member and the second operating member.

8. The toy according to any of claims 1 to 3, wherein the first operation is an operation that moves the operation unit in a first direction, and the second operation is an operation that moves the operation unit in a direction opposite to the first direction.

9. The toy according to claim 1 or 2, wherein the first operation is an operation that rotates the operation unit in a first direction, and the second operation is an operation that rotates the operation unit in a direction opposite to the first direction.

10. The toy according to any of claims 1 to 9, further comprising a content member (40) that can be housed in the housing space.

11. The toy according to claim 10, wherein the content member includes rendering means that executes rendering when the first closing member or the second closing member becomes the open state.

12. The toy according to claim 11,

wherein the rendering means includes a moveable member (43L, 43R) that is movable between a position near a surface of the content member and a position far from the surface, and an elastic member that urges the movable member in a direction away from the surface of the content member, and

wherein, when the first closing member and/or the second closing member is in the closed state, the movable member contacts the first closing member and/or the second closing member and hence the movable member moves in a direction toward the surface of the content member against the elastic member, and when the first closing member and/or the second closing member becomes the open

state, the movable member moves in the direction away from the surface of the content member by elasticity of the elastic member.

13. The toy according to claim 11,

wherein the rendering means includes a light-emitting portion (411) and a push switch (412), wherein the push switch can be changed between an ON state in which the push switch protrudes from the surface of the content member and an OFF state in which the push switch is depressed with respect to the surface, when the first closing member and/or the second closing member is in the closed state, the push switch contacts the first closing member and/or the second closing member, is depressed with respect to the surface of the content member, and hence becomes the OFF state, and when the first closing member and/or the second closing member becomes the open state, the push switch protrudes from the surface of the content member, and hence becomes the ON state, and wherein the light-emitting portion becomes a light-emission standby state when the push switch is in the OFF state, and the light-emitting portion becomes a light-emission state when the push switch becomes the ON state from the OFF state.

14. The toy according to any of claims 10 to 13, wherein the content member includes a first content member and a second content member;

optionally, the housing space includes a first housing space that communicates with the outside of the toy main section through the first opening and a second housing space that communicates with the outside of the toy main section through the second opening, the first content member can be housed in the first housing space, and the second content member can be housed in the second housing space; and optionally, the first content member and the second content member form at least part of a figure that imitates a doll, an animal, or a vehicle by connecting the first content member and the second content member together.

15. The toy according to claim 3, wherein the toy main section includes a center member having the operation unit and a peripheral member that can be connected to the center member, and at least the first opening is provided at the peripheral member;

wherein, optionally, the first operating member includes a center portion located at the center member and a peripheral portion located at the

peripheral member, and the center portion and the peripheral portion are interlocked with each other when the center member and the peripheral member are connected together; optionally, the center portion can be interlocked with the peripheral portion when the center member and the peripheral member are connected together and the center portion contacts the peripheral portion; and optionally, the toy main section has a form that imitates a doll or an animal having a body and a limb, the center member forms the body, and the peripheral member forms the limb.

15

20

25

30

35

40

45

50

55

FIG. 1

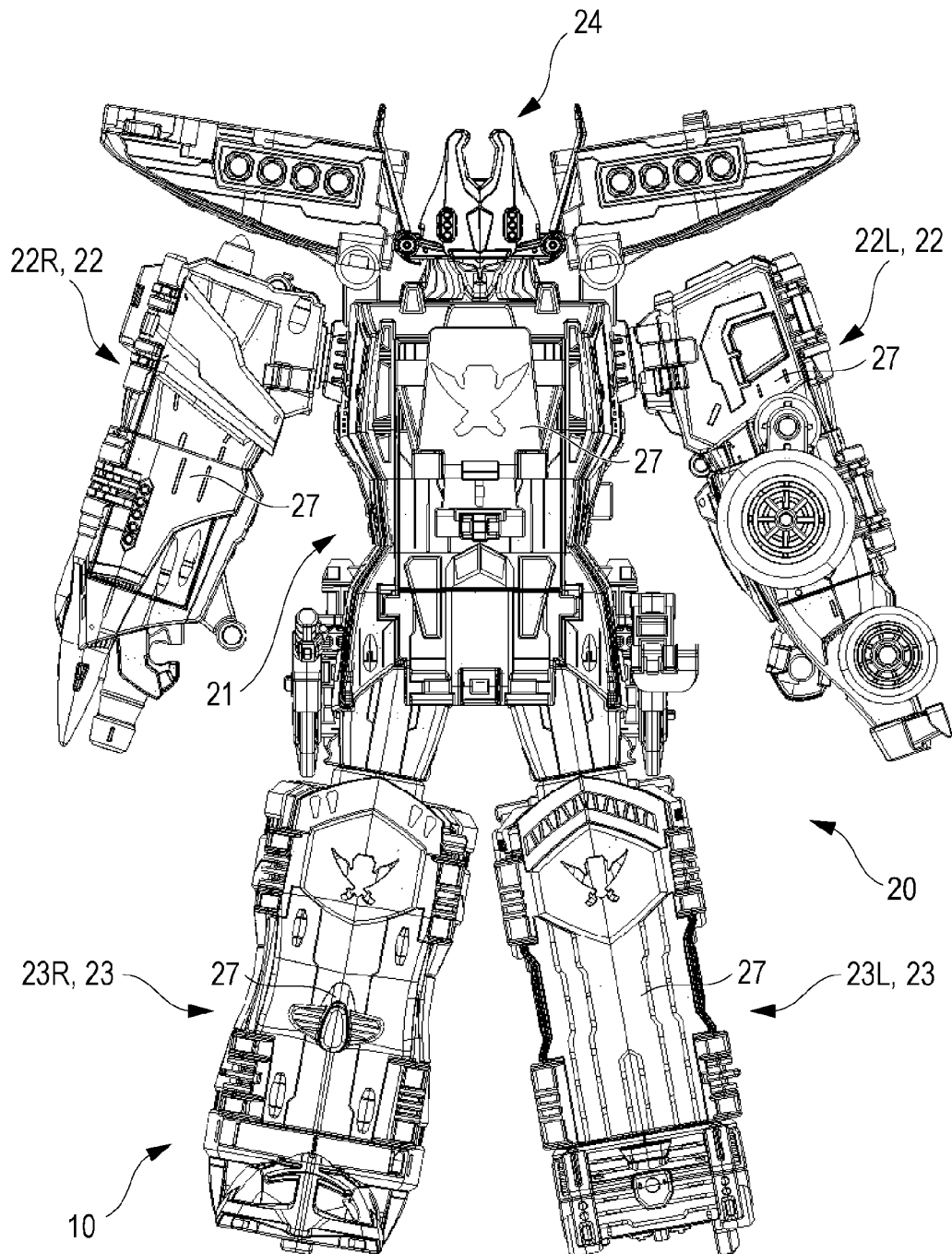


FIG. 2

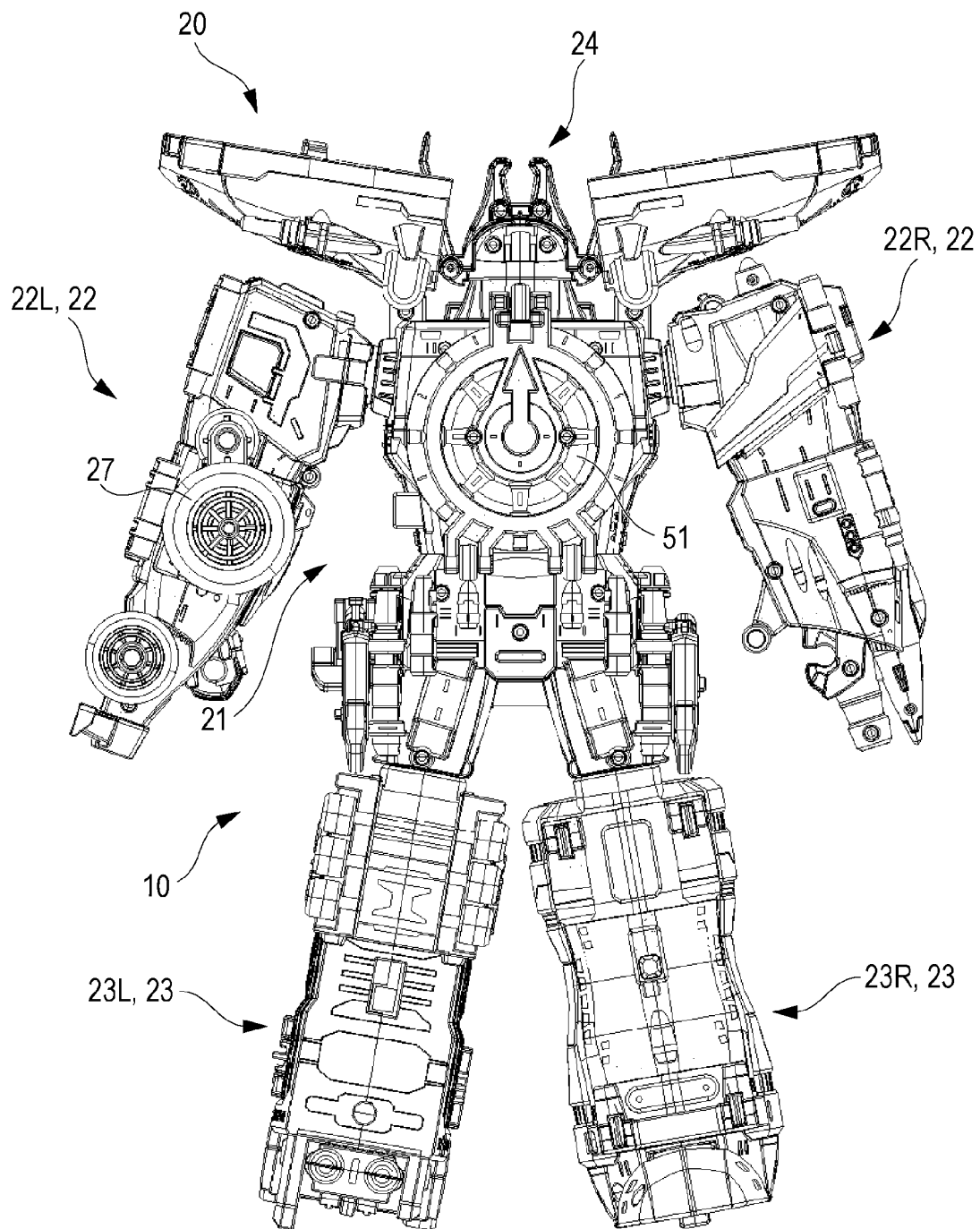


FIG. 3

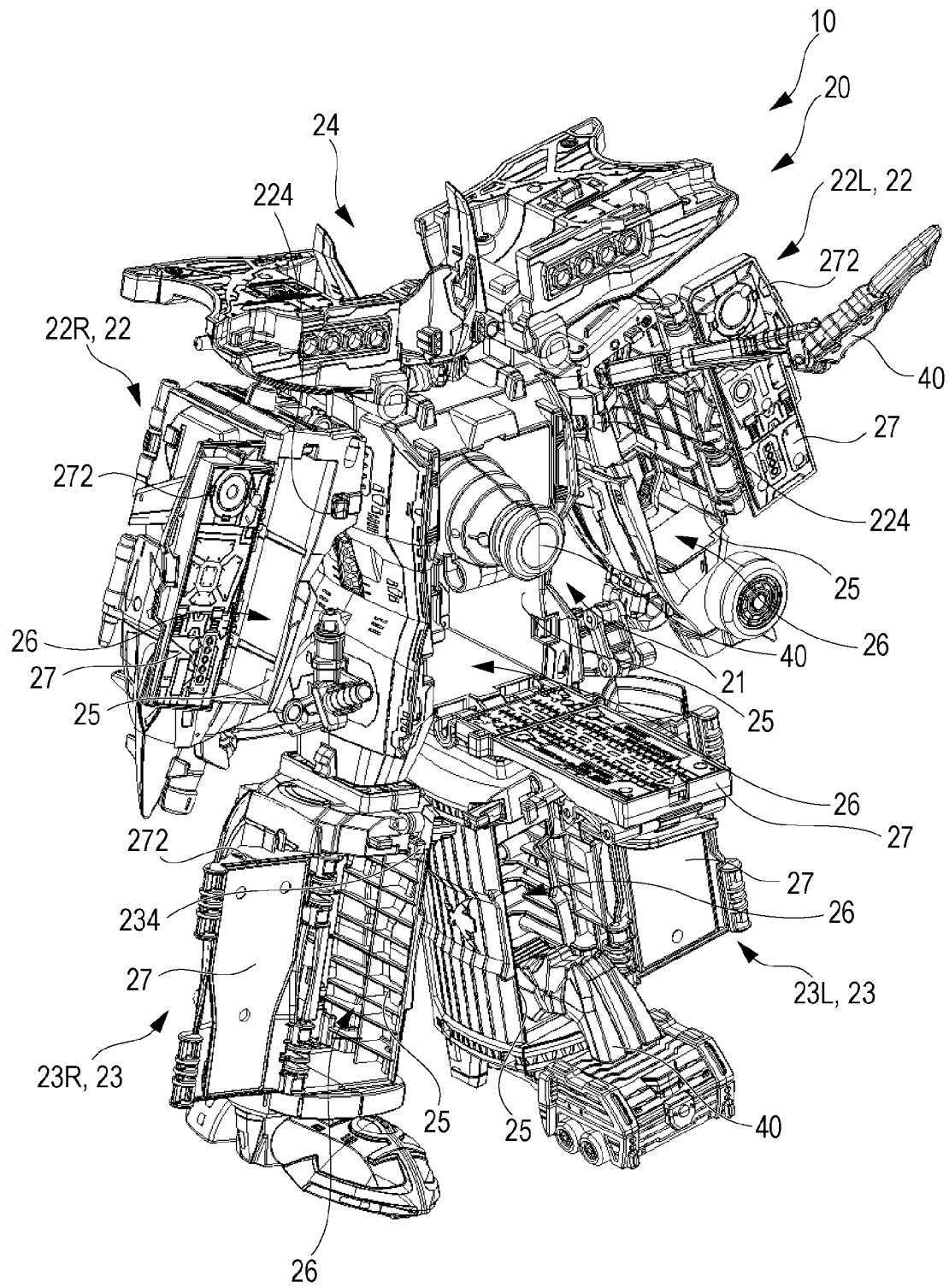


FIG. 4

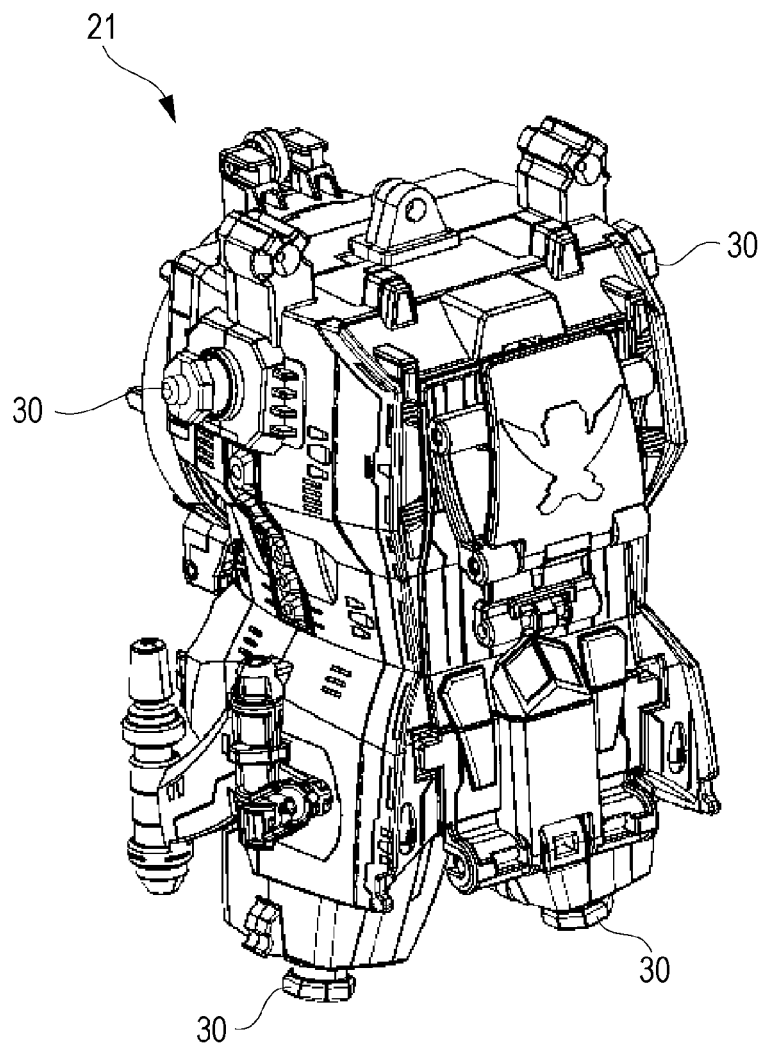


FIG. 5

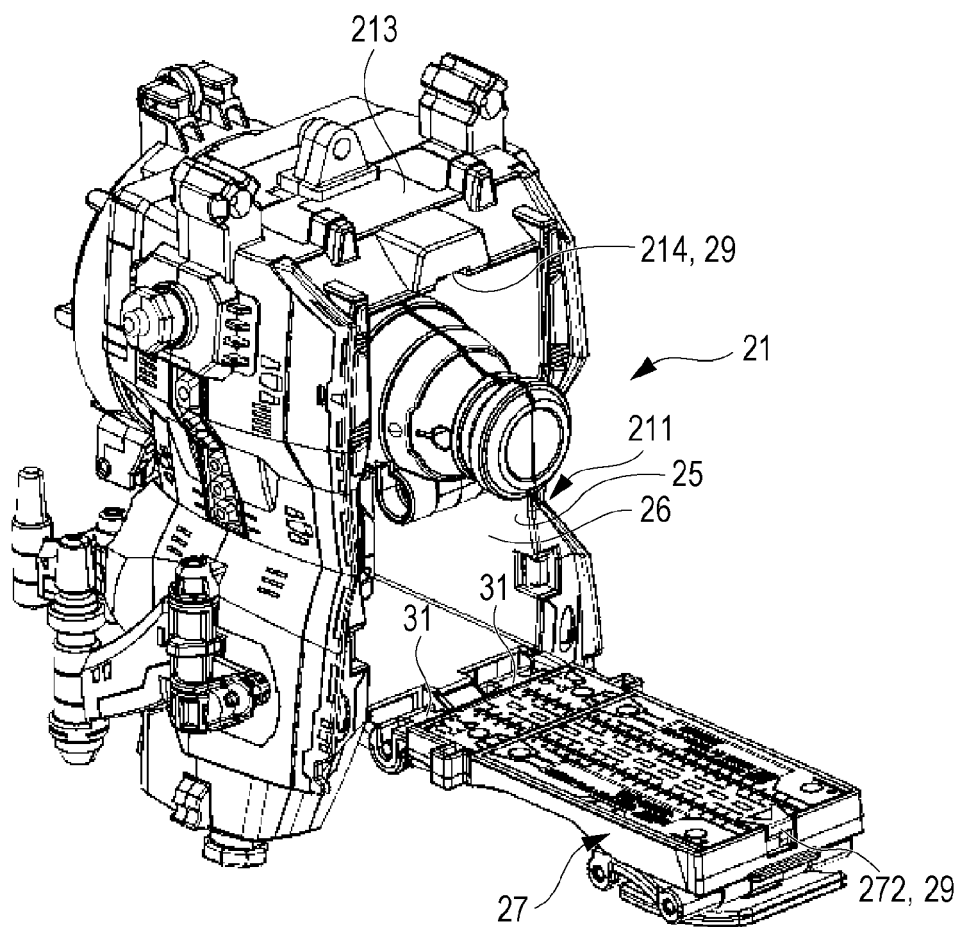


FIG. 6A

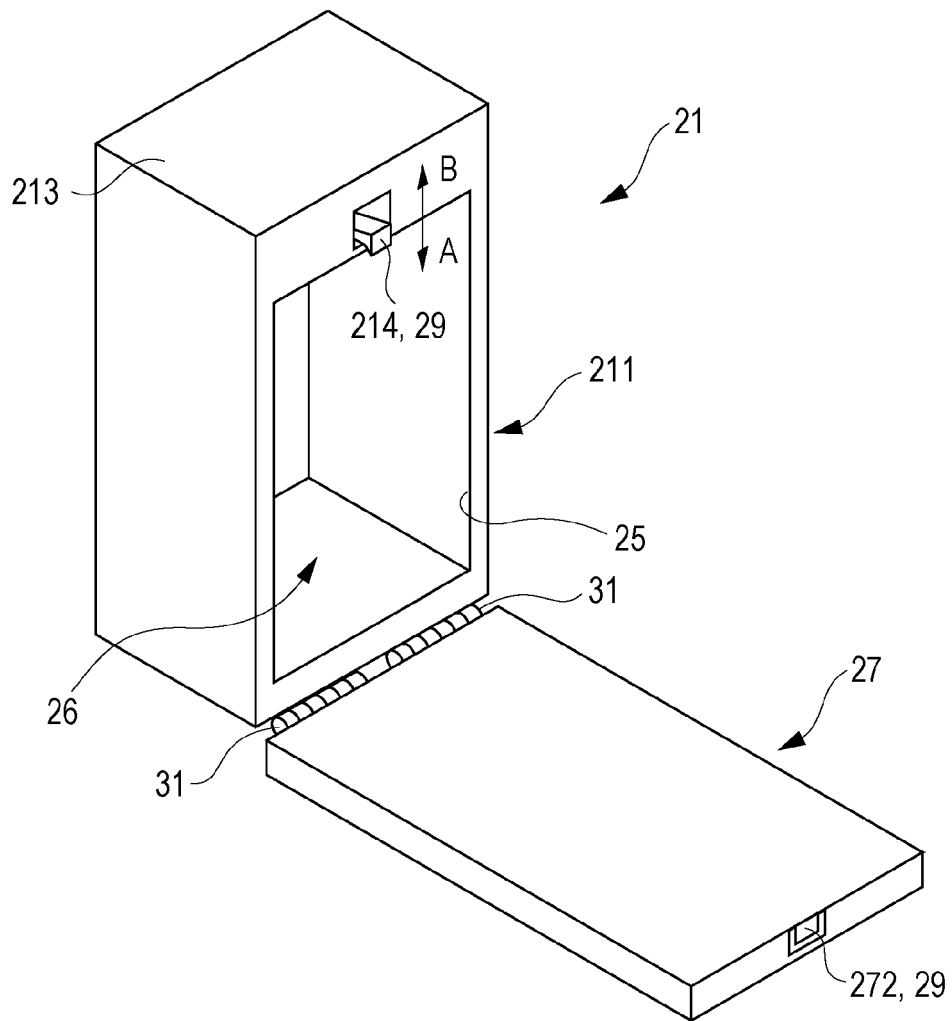


FIG. 6B

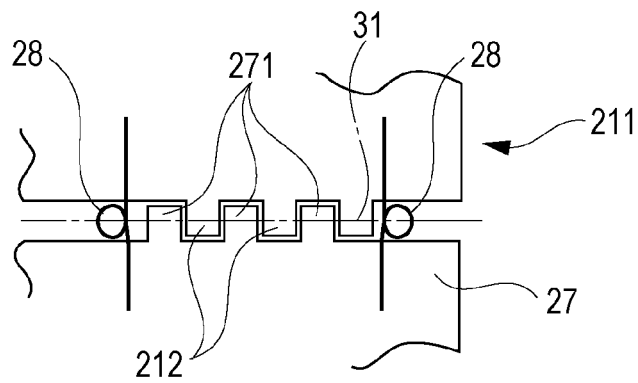


FIG. 7

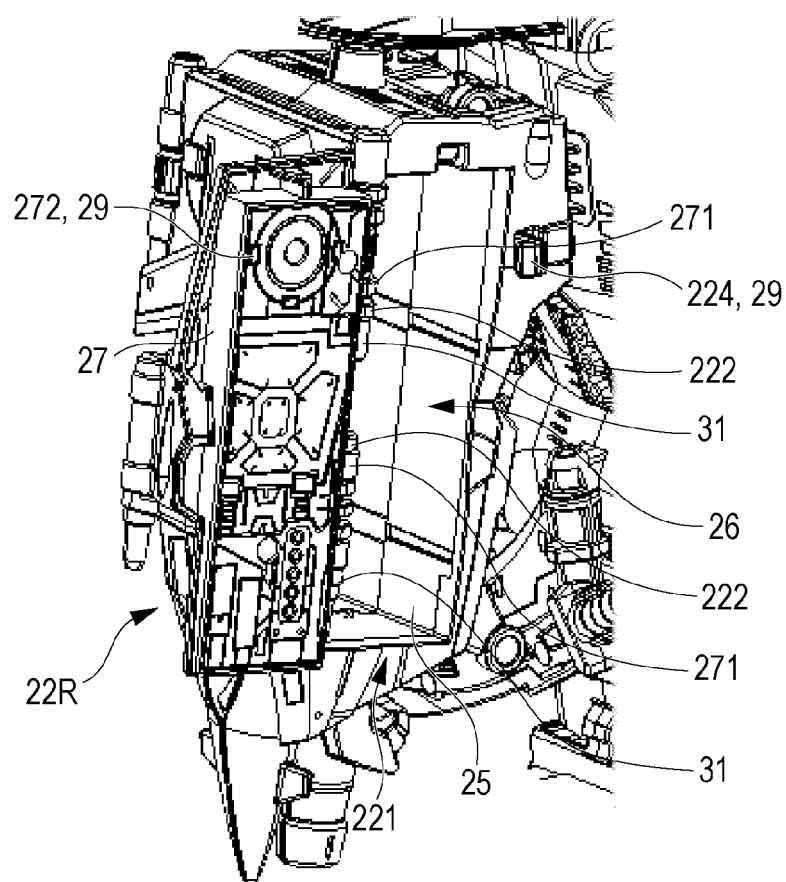


FIG. 8

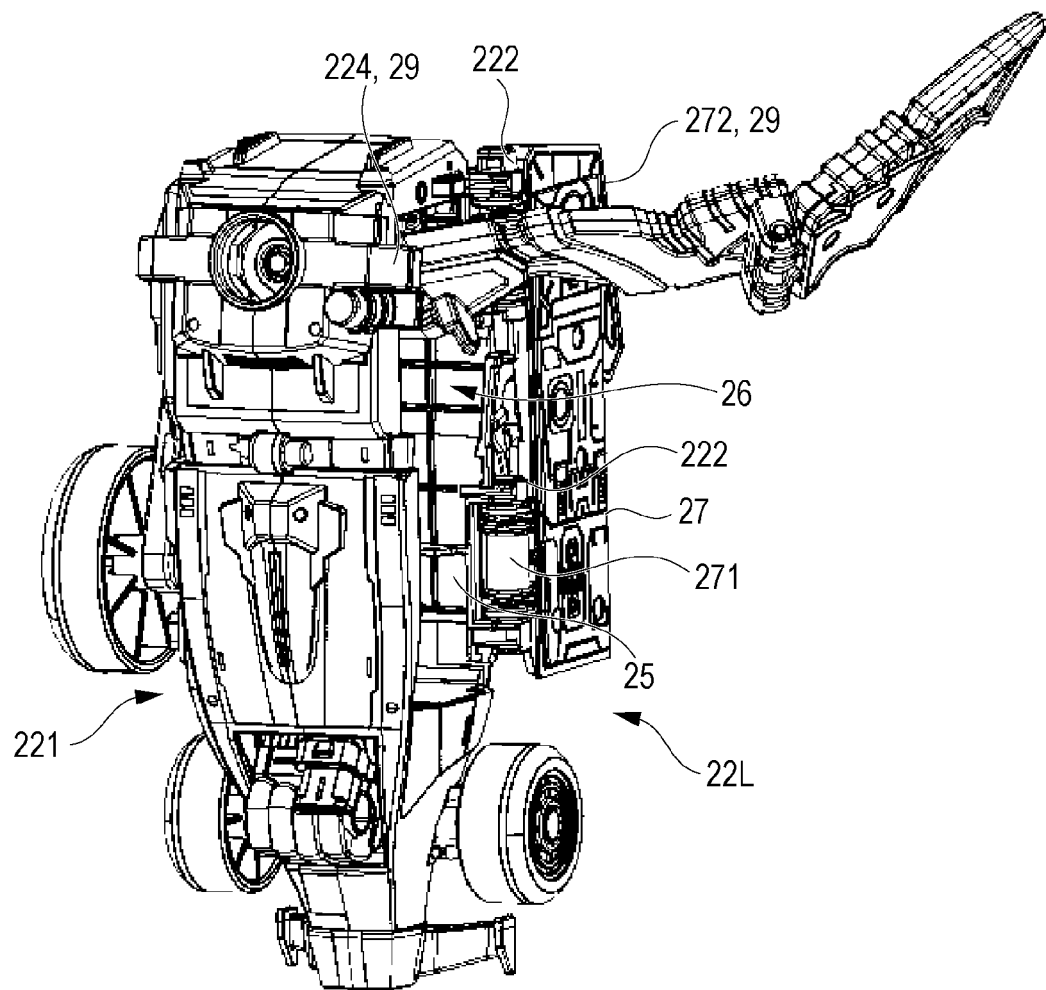


FIG. 9A

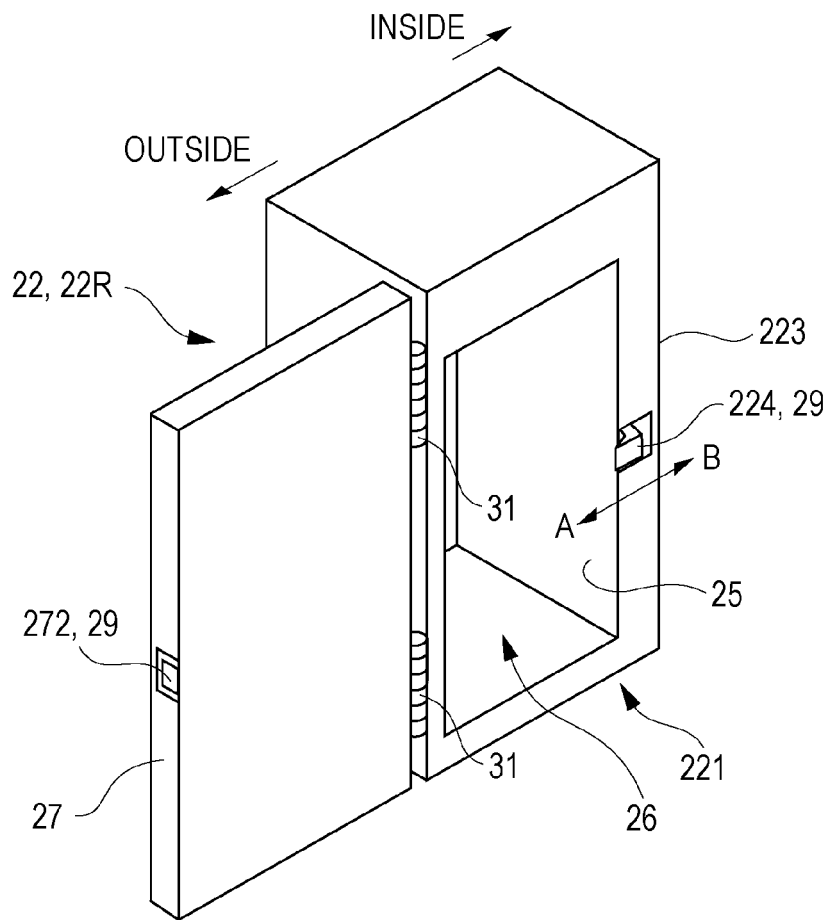


FIG. 9B

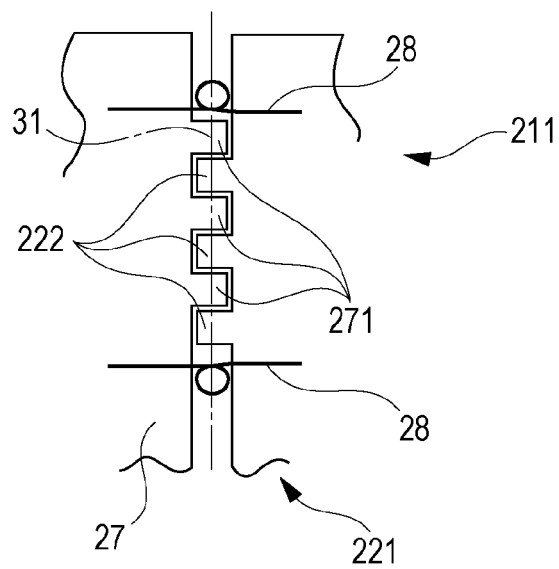


FIG. 10

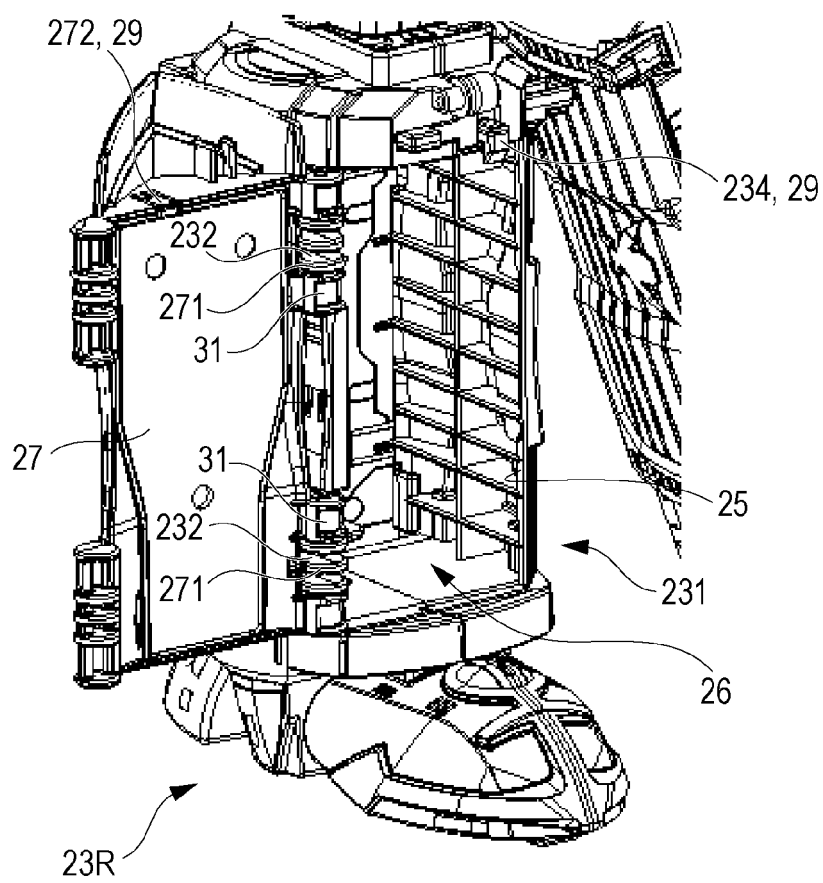


FIG. 11

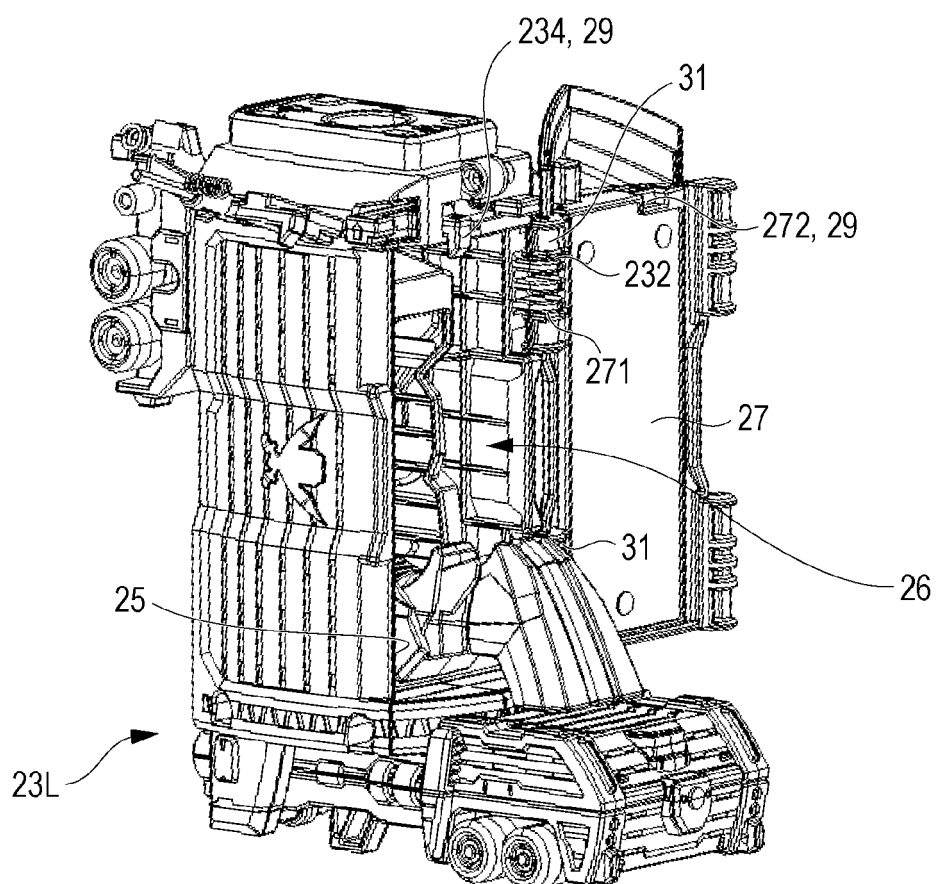


FIG. 12A

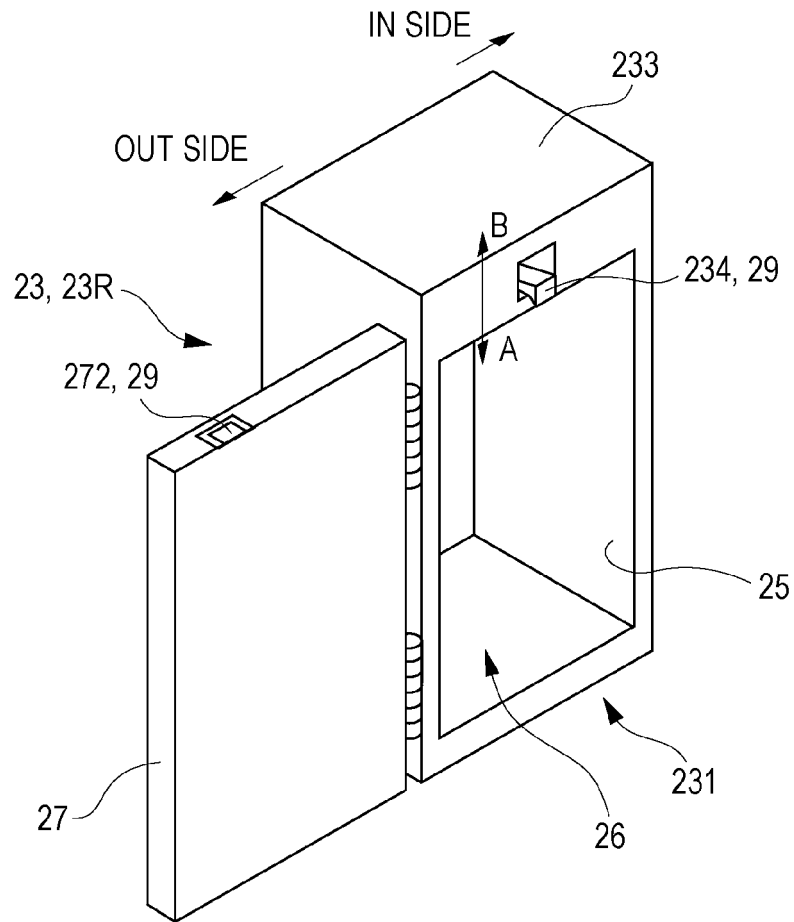


FIG. 12B

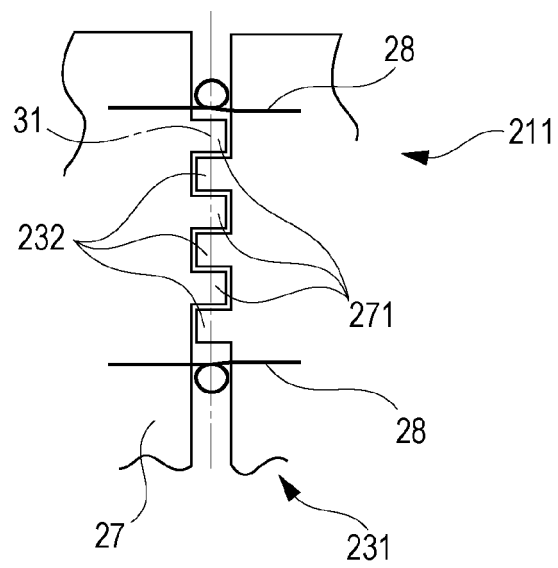


FIG. 13

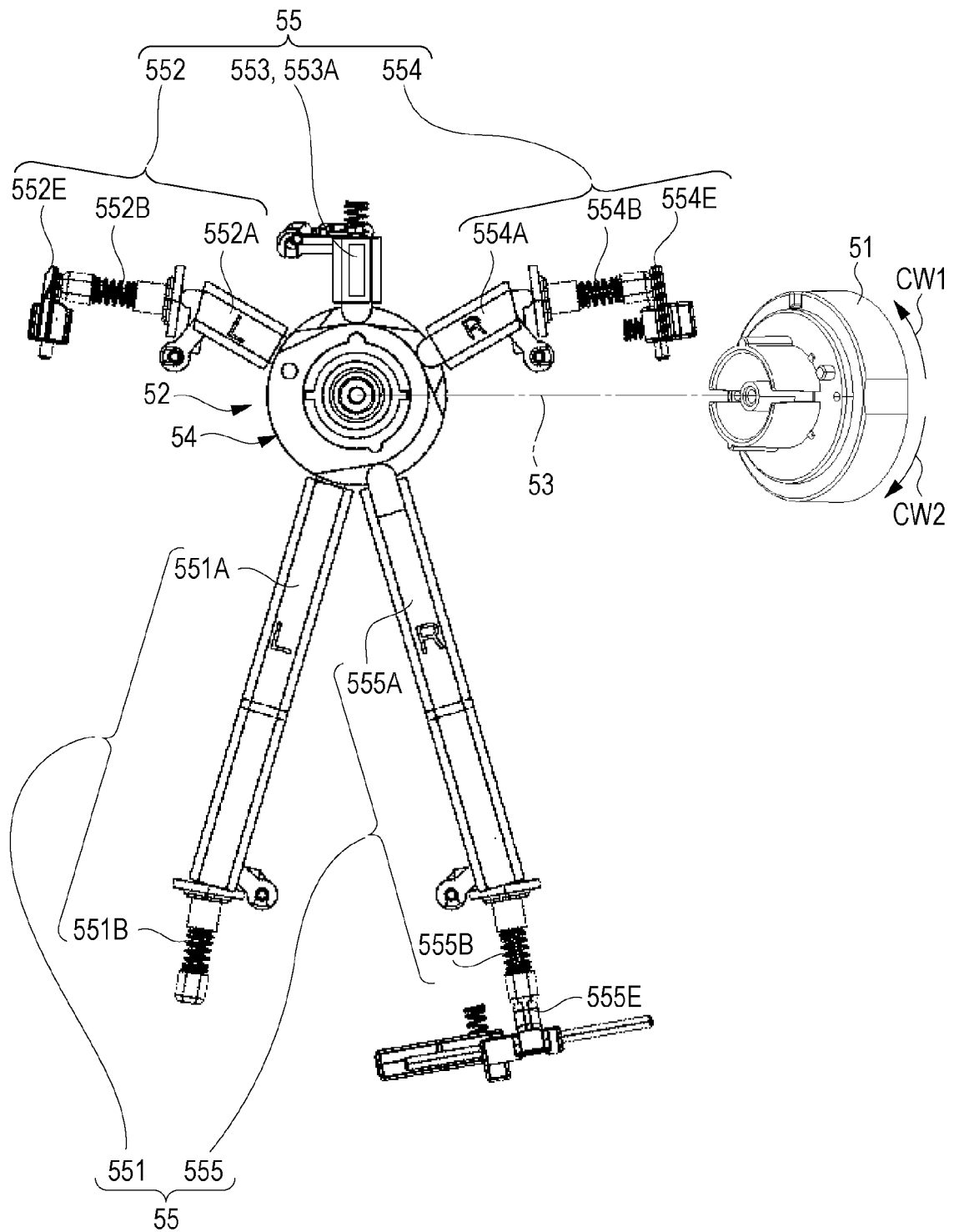


FIG. 14

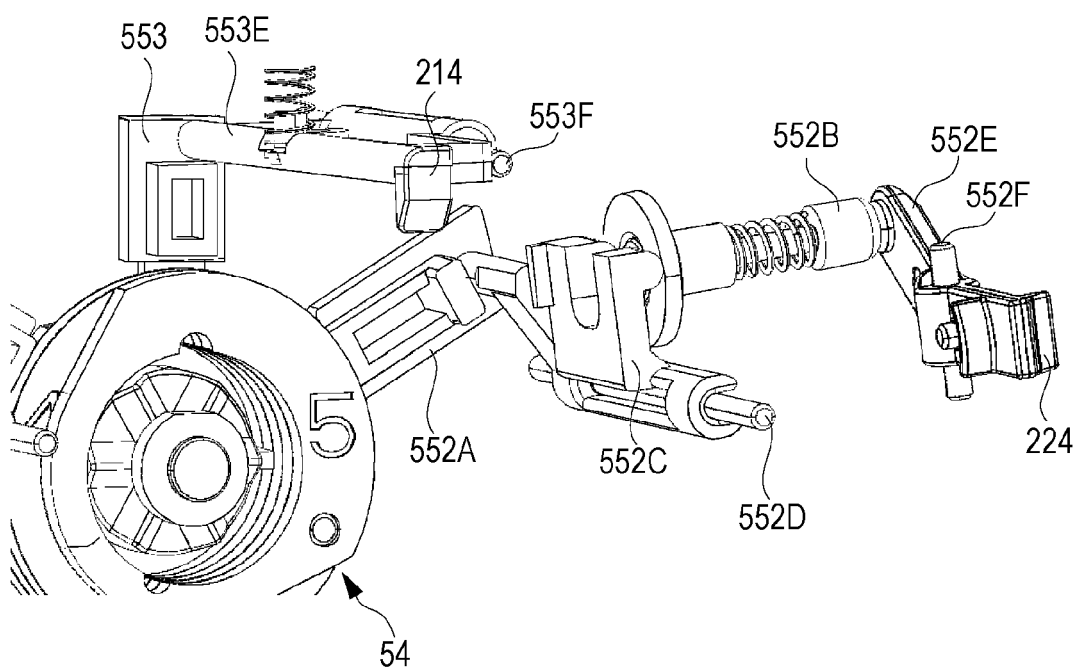


FIG. 15

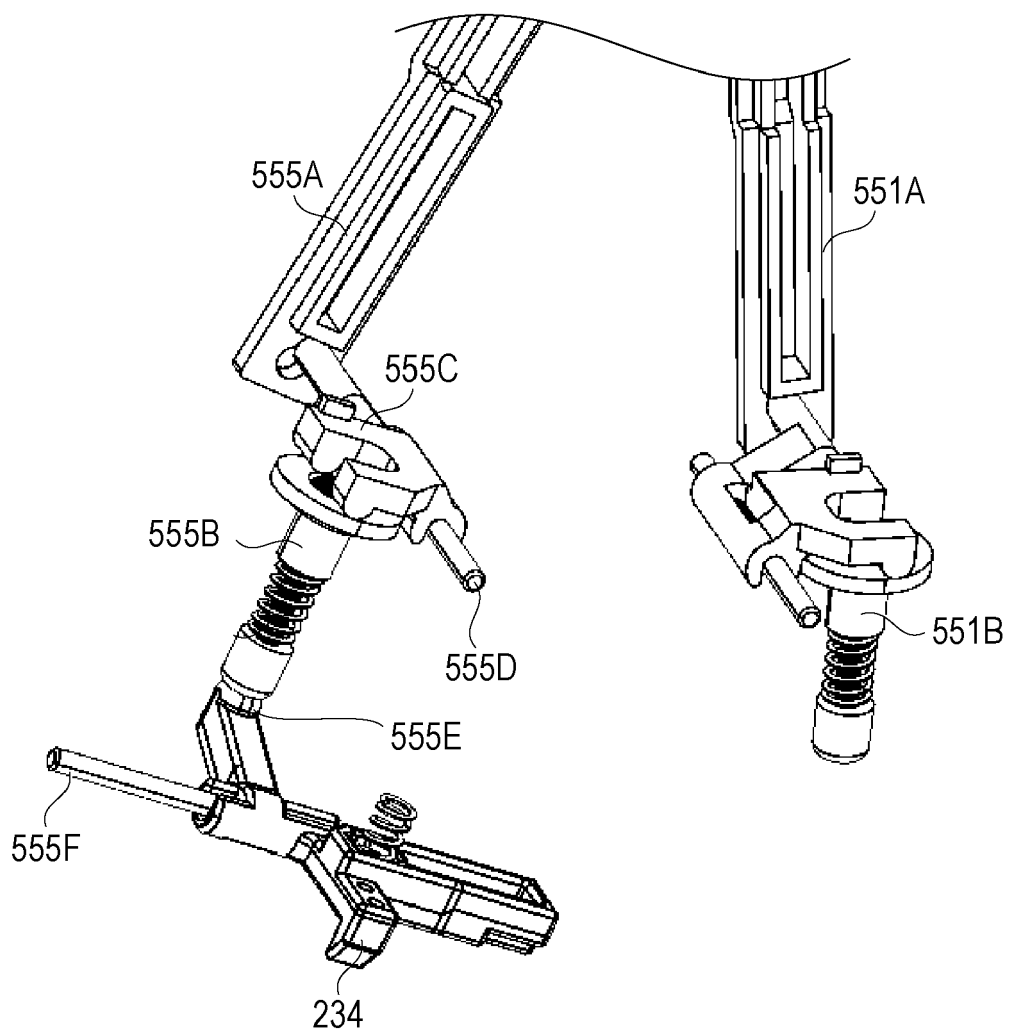


FIG. 16

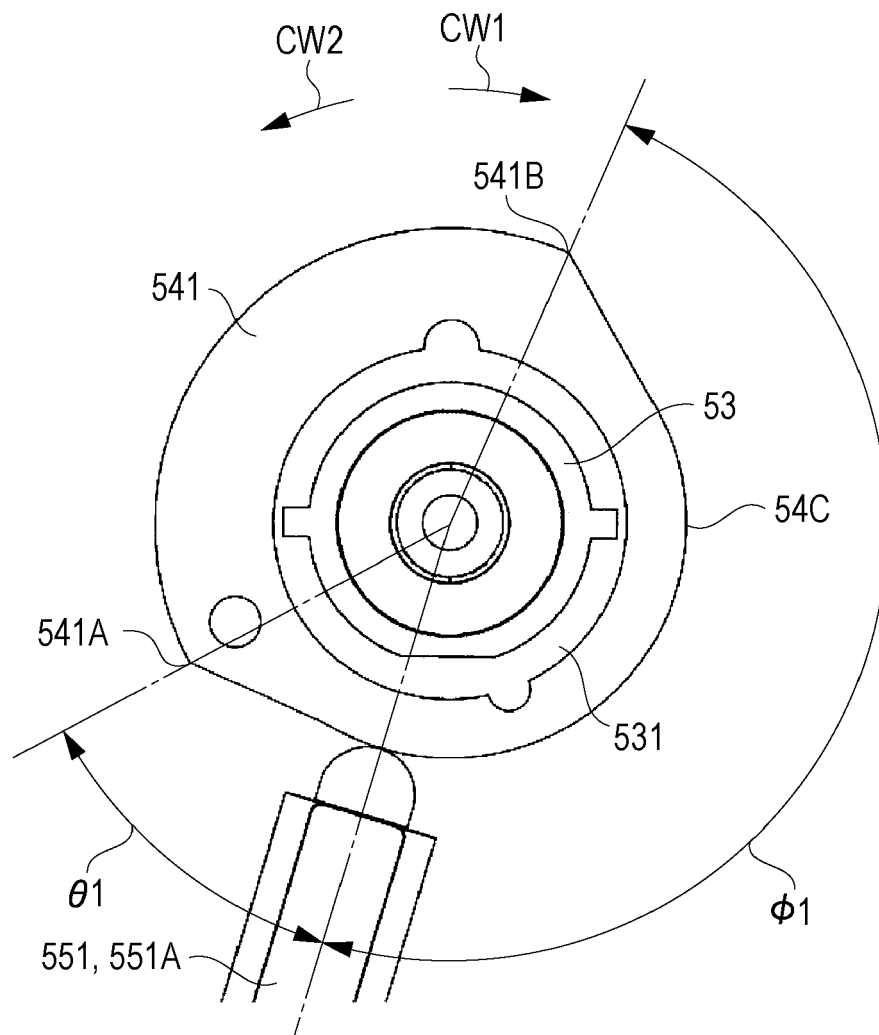


FIG. 17

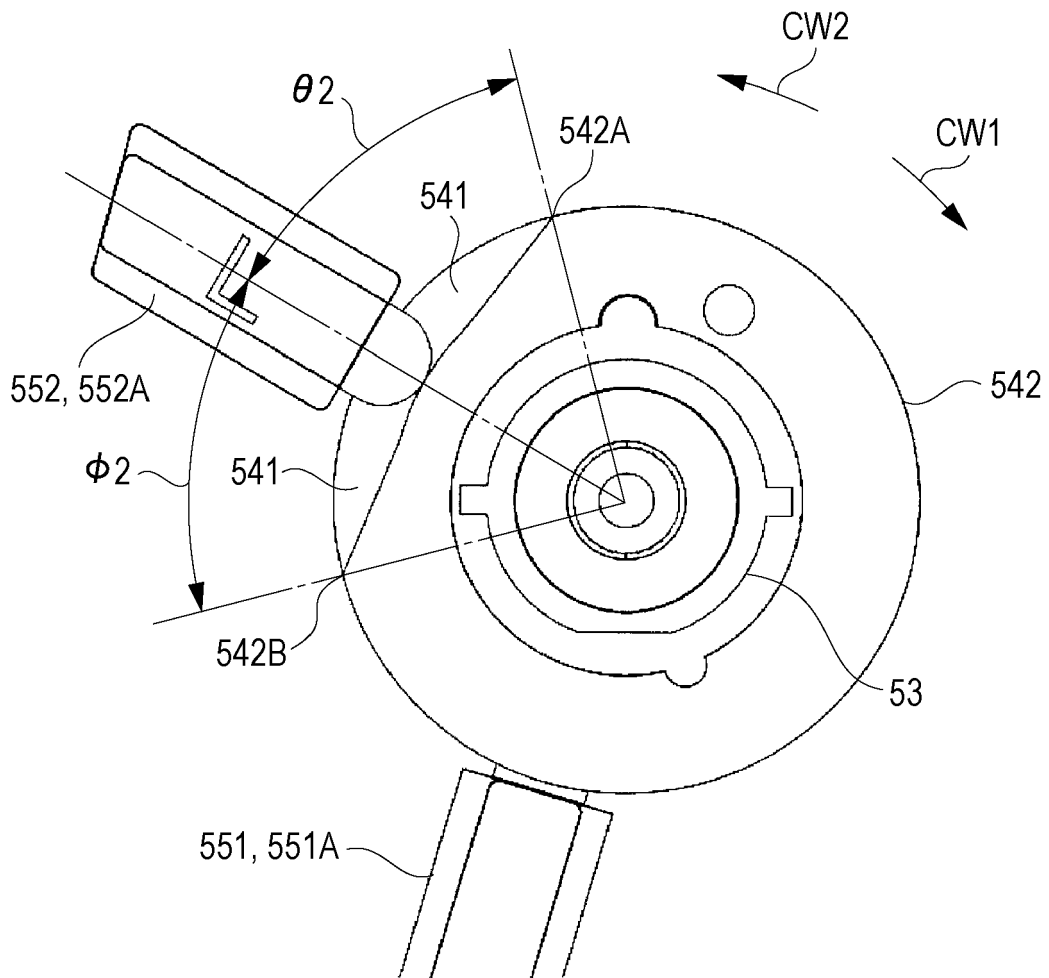


FIG. 18

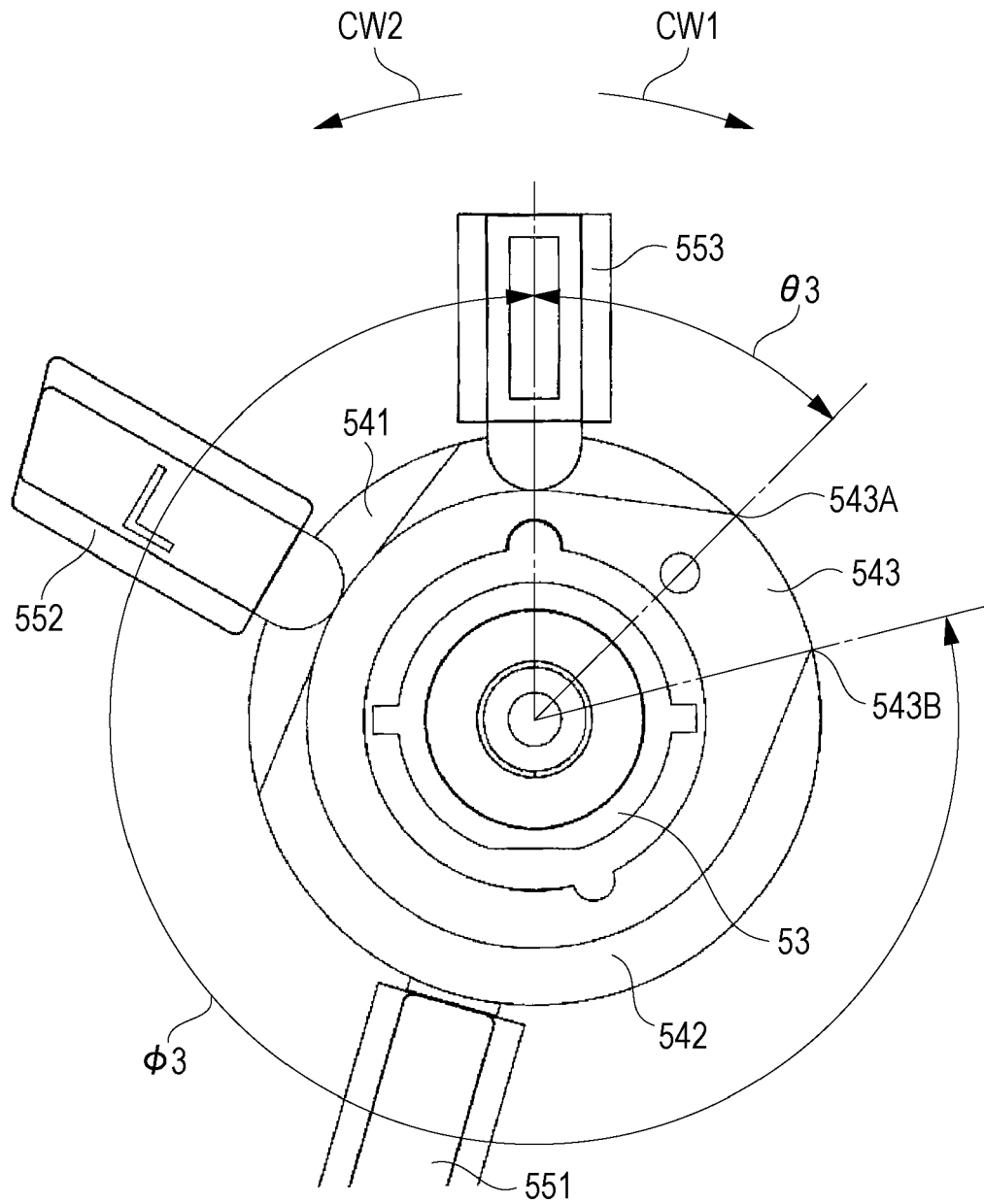


FIG. 19

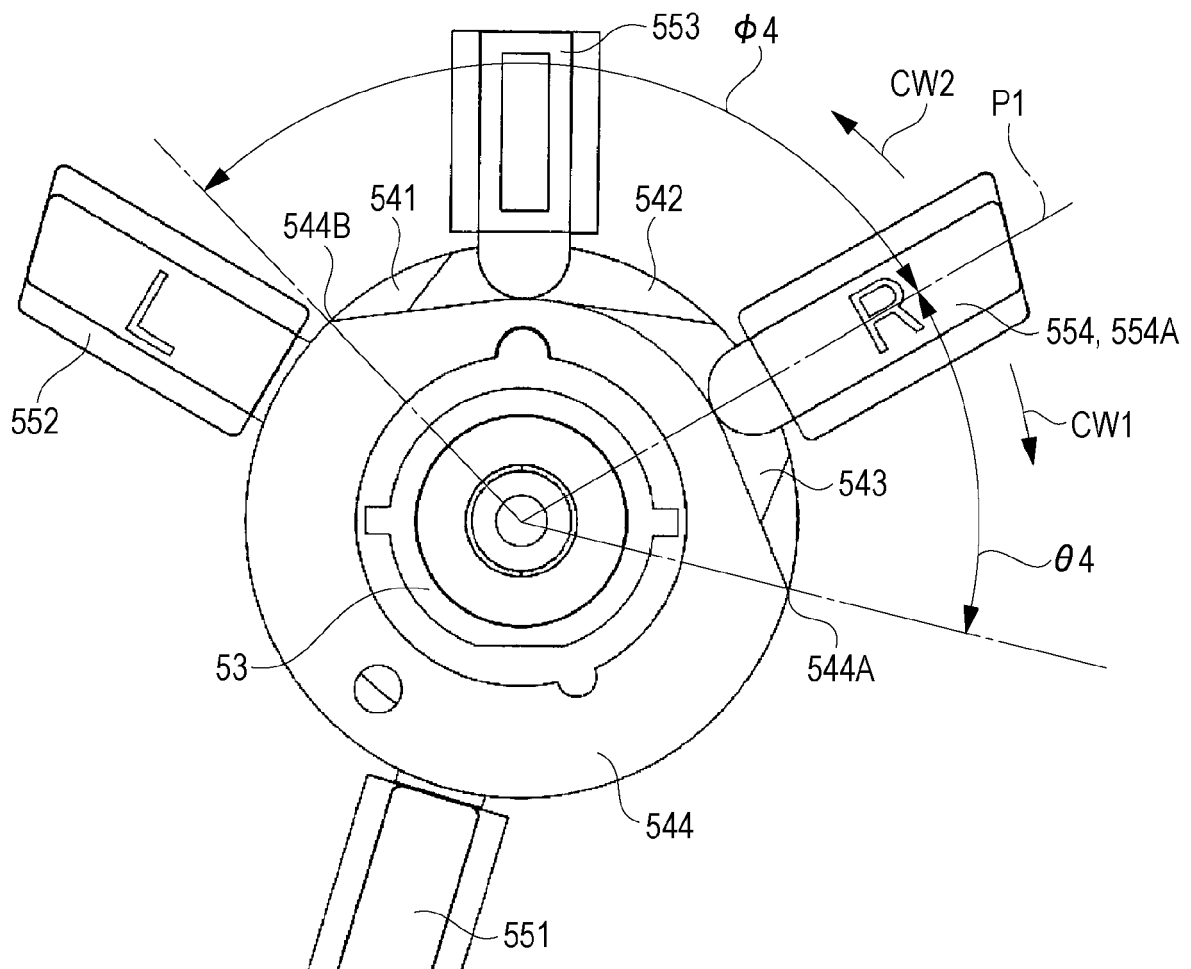


FIG. 20

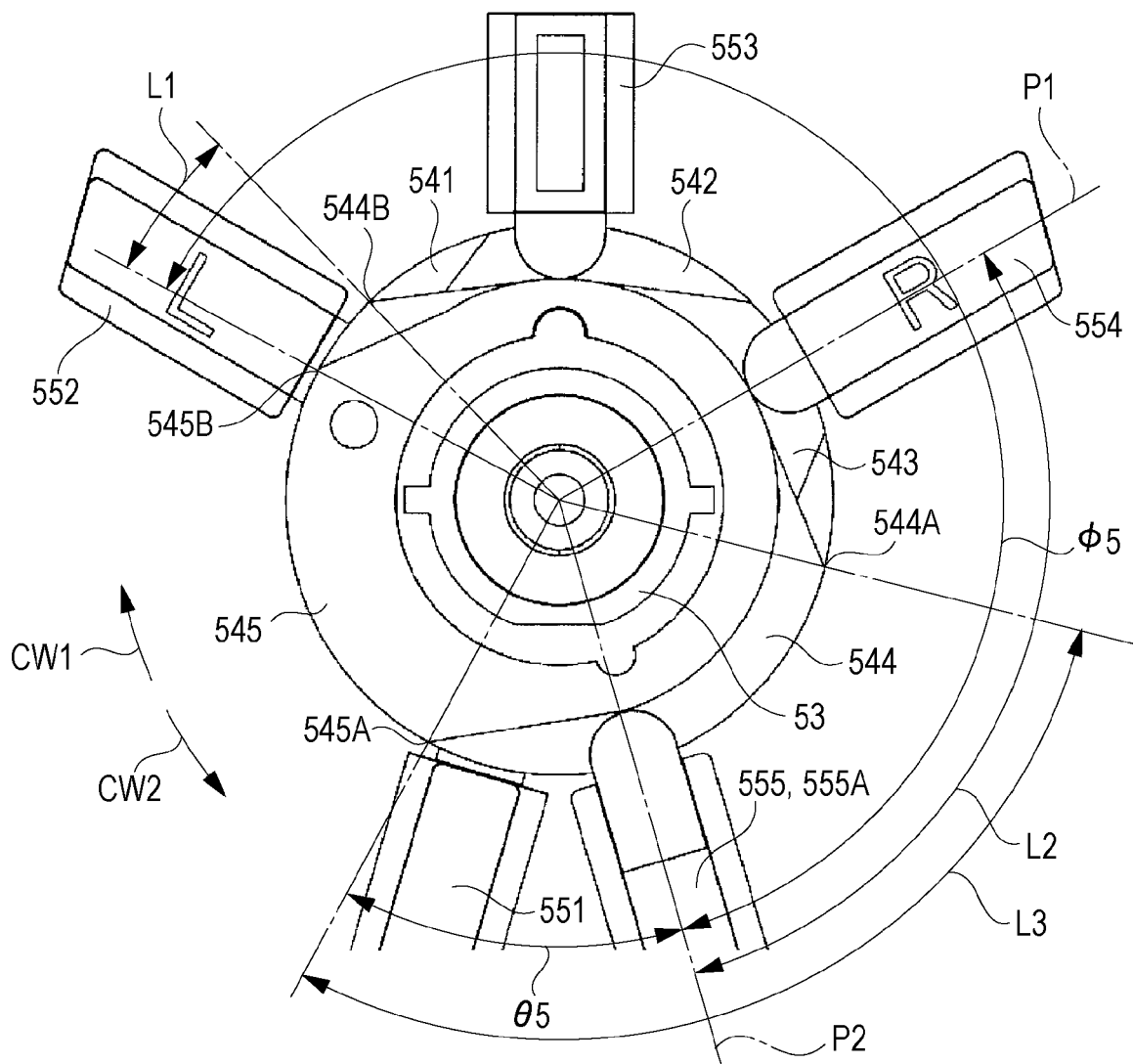


FIG. 21

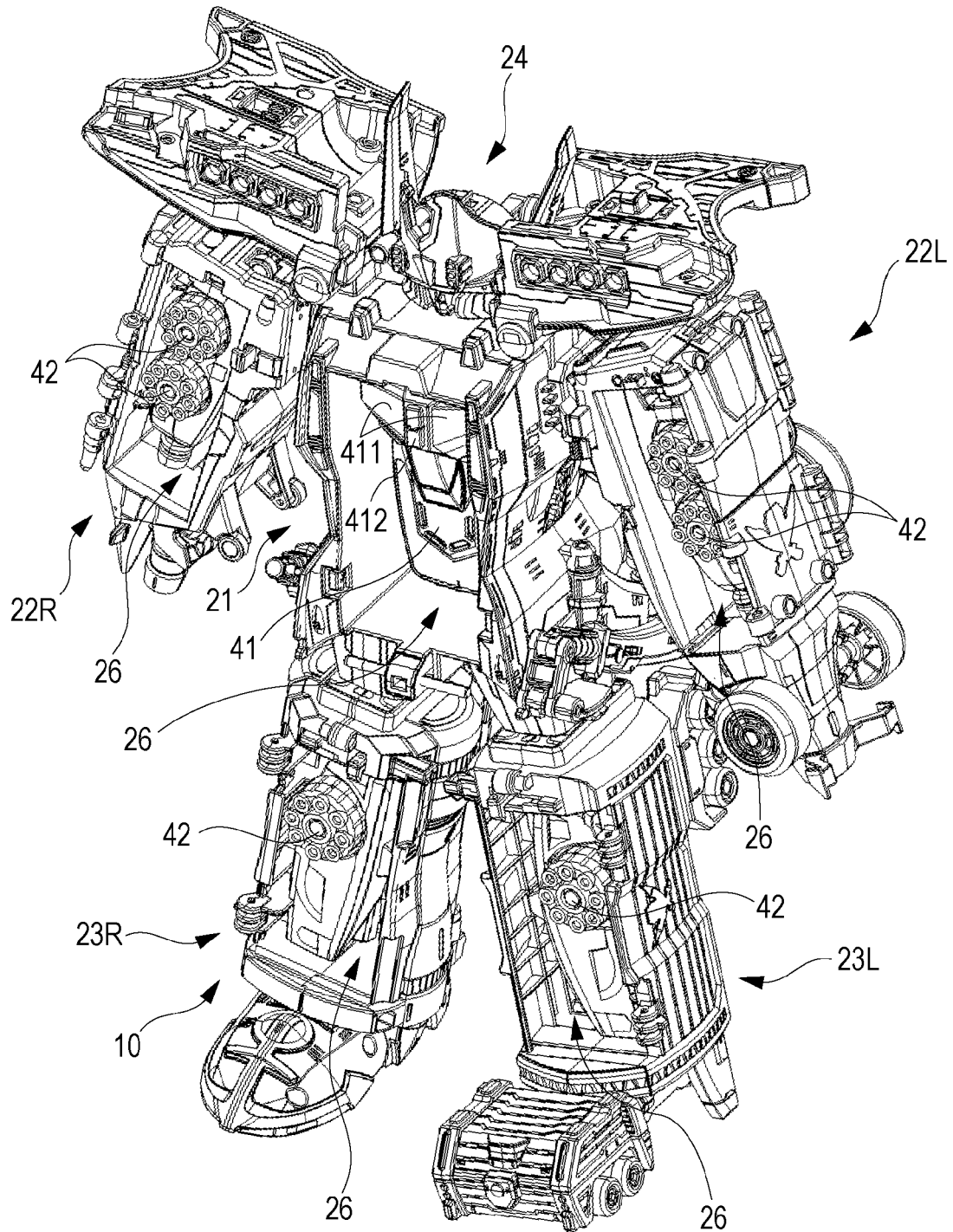


FIG. 22

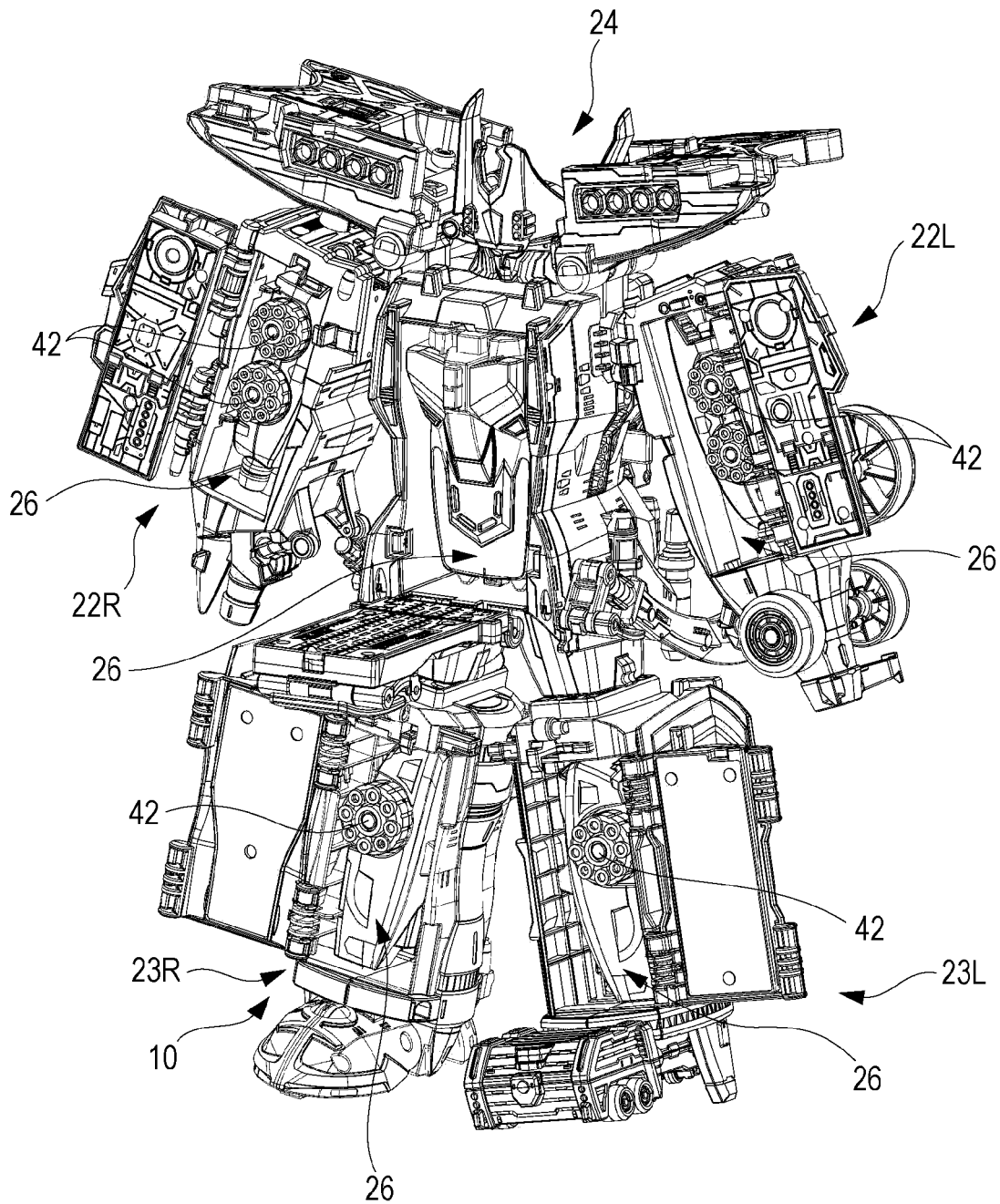


FIG. 23

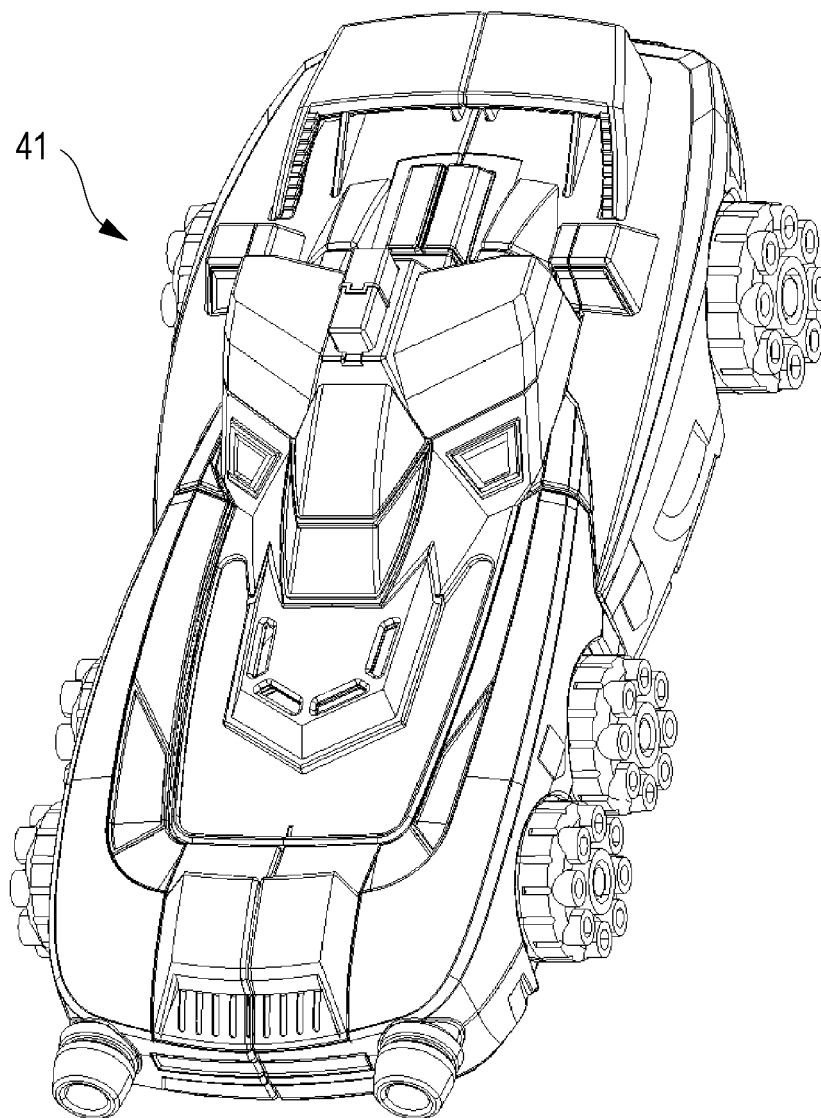


FIG. 24

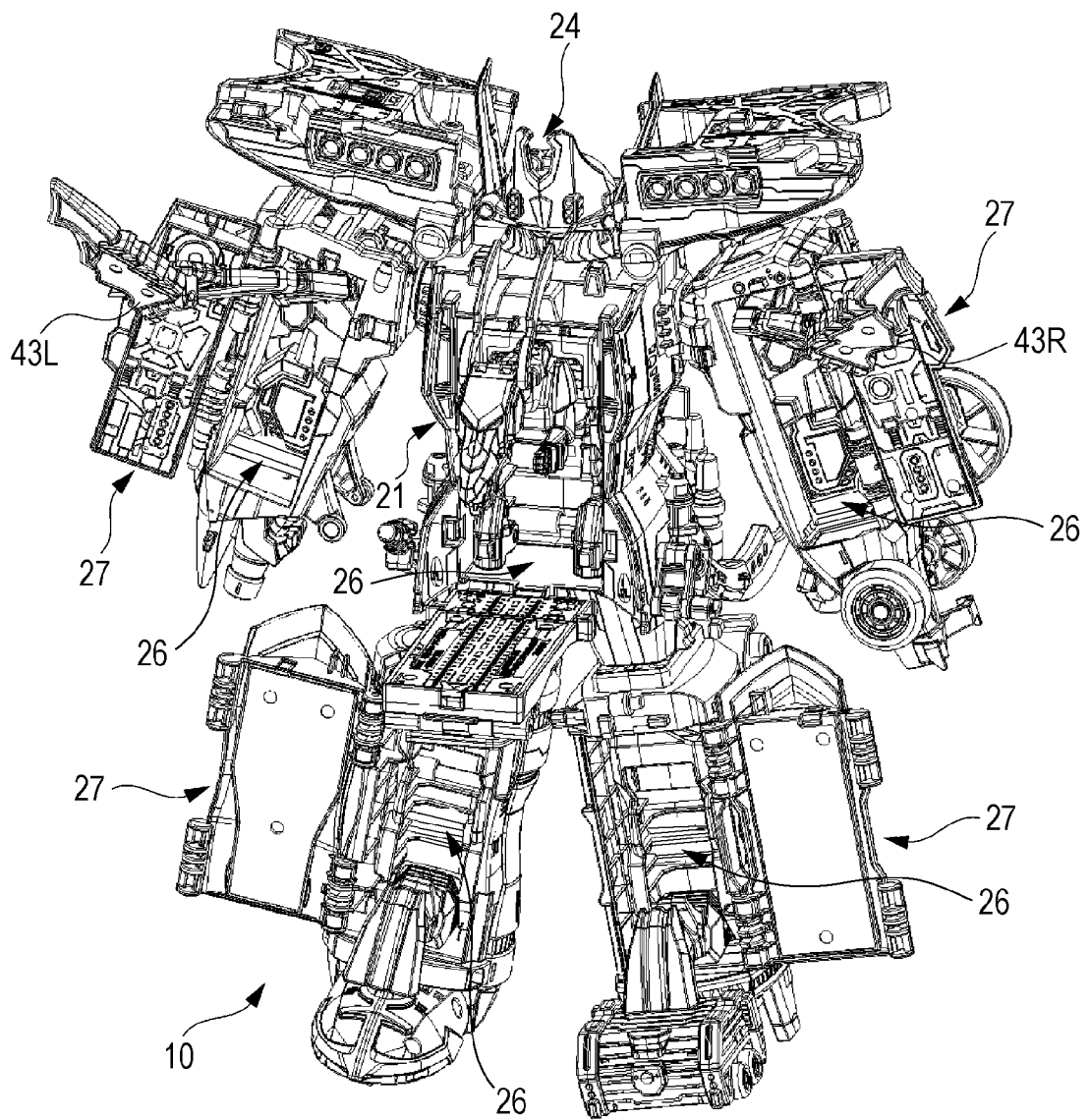


FIG. 25

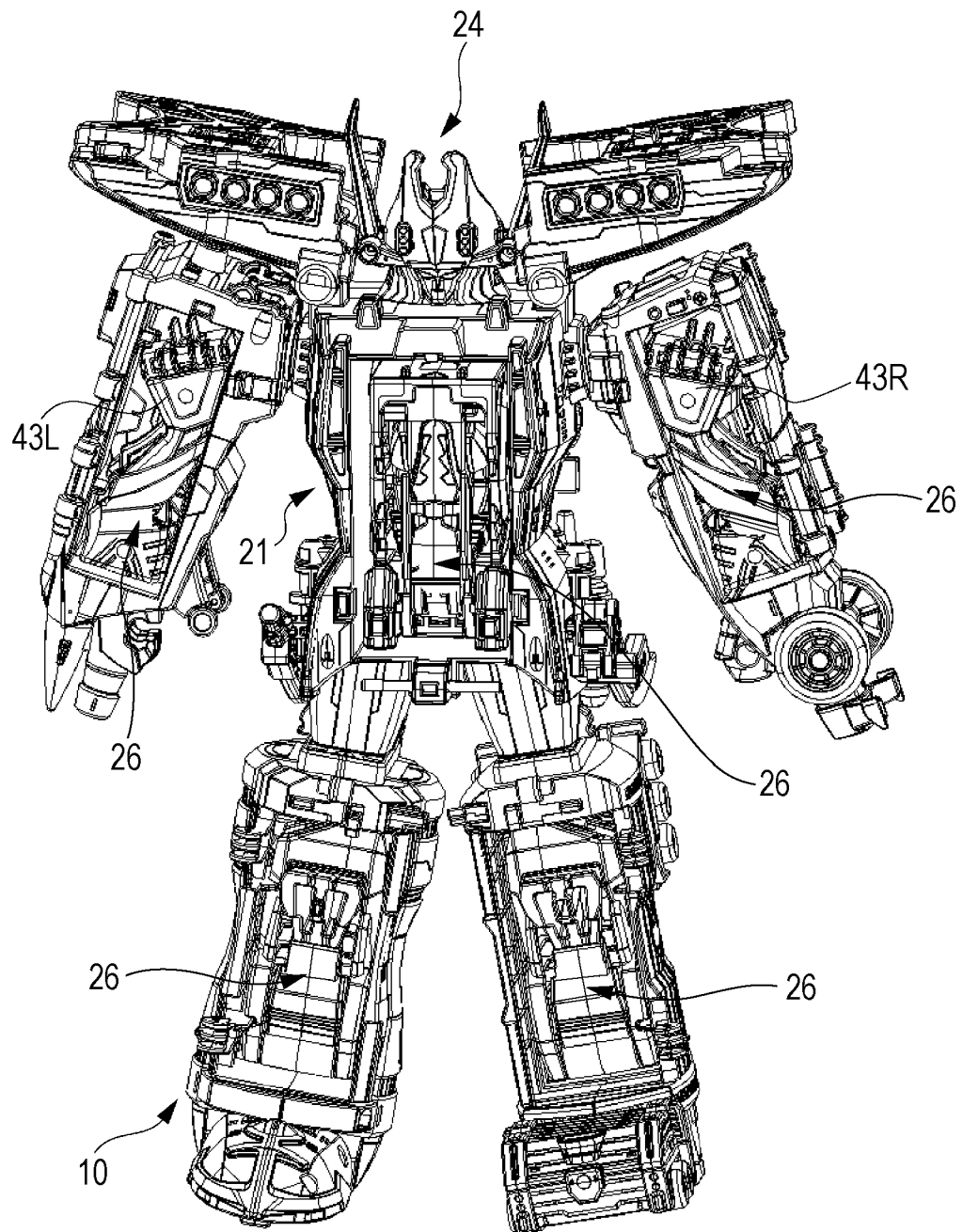
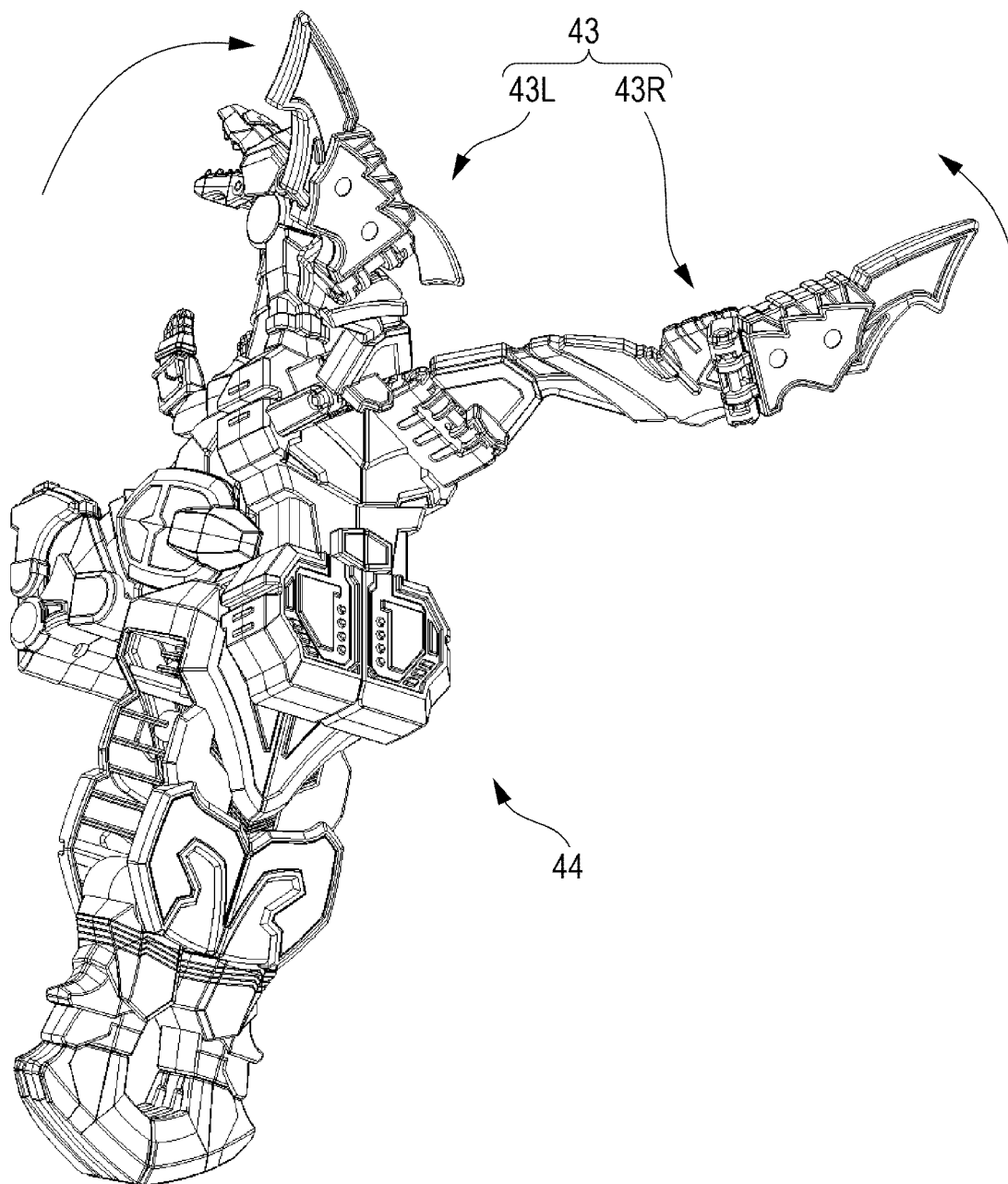


FIG. 26





EUROPEAN SEARCH REPORT

Application Number
EP 11 18 9202

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	US 6 540 580 B1 (WOLFRAM DAVID G [US]) 1 April 2003 (2003-04-01) * column 3, line 30 - column 4, line 45; figures *	1-15	INV. A63H33/00
A	US 2005/245168 A1 (KAY ROBERT [GB] ET AL) 3 November 2005 (2005-11-03) * paragraph [0019] - paragraph [0026]; figures *	1-15	
A	US 4 946 413 A (LEHMANN ROGER W [US] ET AL) 7 August 1990 (1990-08-07) * column 3, line 21 - line 62; figures *	1-15	
A	GB 2 122 908 A (BANDAI CO) 25 January 1984 (1984-01-25) * claim 1; figures *	1-15	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (IPC)
			A63H
Place of search		Date of completion of the search	Examiner
Munich		22 February 2012	Lucas, Peter
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EP 11 18 9202

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22-02-2012

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