Claims

1. An automatic detachable combined toy gyro, wherein the combined toy gyro comprises at least vertically joined upper and lower gyros each having an elastic tip, wherein the upper and lower toy gyros each comprise an axis body and a gyro ring sleeved on the axis body, each elastic tip including a tip body connected to a lower end of its associated axis body and including a spring in an inner cavity of each tip body, wherein the spring in the elastic tip of the upper gyro is in a compressed state when the tip body of the upper gyro is inserted into the axis body of the lower gyro to implement jointing of the upper and lower gyros, whereby the upper gyro in the combined gyros automatically releases its connection with the lower gyro in the combined gyros when it is impacted or rotation thereof is blocked during rotation, wherein the upper gyro is ejected from the lower gyro under an action of the spring of the elastic tip in the upper gyro to separately form a rotating upper gyro together with a rotating lower gyro.

2. The automatic detachable combined toy gyro according to claim 1, wherein the gyros have the same structure.

3. The automatic detachable combined toy gyro according to claim 1, wherein, the tip body of the upper and lower gyros includes a spring seat in the inner cavity, and the spring is disposed on the spring seat, wherein an upper end of the spring is pressed against the axis body, and wherein when the upper gyro is connected to the lower gyro, the spring of the elastic tip is compressed and retracted into the axis body together with the tip body of the upper gyro.

4. The automatic detachable combined toy gyro according to claim 3, wherein when the upper gyro and the lower gyro are connected into one piece, the upper and lower gyros are connected to each other by either rotational clamping structures disposed on two gyro rings or are connected to each other by a rotational clamping of two axis bodies.

5. The automatic detachable combined toy gyro according to claim 3, wherein, an upper end of the axis body of each gyro includes a detachable cover, each cover including a connection structure fitting an ejector, and each gyro is adapted to be ejected by the ejector by cooperation of the connection structure on the cover and the ejector; the lower gyro is connected to the upper gyro after the cover is removed, wherein the axis body of the lower gyro is provided with a recessed cavity to receive the tip of the upper gyro.

6. The automatic detachable combined toy gyro according to claim 4, wherein, the gyro ring includes a locking structure disposed fitting an outer wall of the axis body.

7. The automatic detachable combined toy gyro according to claim 6, wherein, the locking structure includes a protrusion provided on an inner wall of the gyro ring, the axis body including an axis sleeve and a clamp ring rotatably disposed on the axis sleeve, the clamp ring including a pin extending out of the axis sleeve, an outer wall of the axis sleeve correspondingly including a guide slot configured to be penetrated by the pin for horizontal rotation, and a block structure for the protrusion of the gyro ring to slide in and to connect the gyro ring and the axis sleeve upon pressing of the pin, the elastic tip connected to a lower portion of the axis sleeve in a vertically movable manner, when the protrusion on the gyro ring slides into the block structure, the clamp ring may be rotated so that the pin is rotated to be above or below the protrusion, whereby the protrusion is locked between the pin and an end edge of the block structure, thereby connecting of the gyro ring and the axis body.

8. The automatic detachable combined toy gyro according to claim 7, wherein, the axis sleeve comprises an upper and a lower axis sleeve fitting each other, wherein an upper portion of the lower axis sleeve is sleeved in the upper axis sleeve, the clamp ring is disposed between the upper and lower axis sleeves, the upper portion of the lower axis sleeve is configured to be fitted with a cover disposed at an upper end thereof or a bottom of an elastic tip of another gyro, and a cover lower edge of the cover or both sides of the elastic tip are disposed above the lower axis sleeve.

9. The automatic detachable combined toy gyro according to claim 8, wherein, upper and lower limit ledges are disposed on an inner wall of the lower axis sleeve, and the tip body is configured to be connected to the lower axis sleeve in a vertically movable manner by means of hooking of a hook disposed thereon and the lower limit ledge of the lower axis sleeve, and an upper end of the spring disposed in the tip body is disposed on the upper limit ledge, wherein when the two gyros are jointed vertically, the bottom of the elastic tip of the upper gyro is sleeved into the upper portion of the lower axis sleeve of the lower gyro , and a force applied at the top of the lower axis sleeve compresses the upper elastic tip.

10. The automatic detachable combined toy gyro according to claim 9, wherein, an upper cavity wall of the lower axis sleeve includes a rotation clamp structure fitting with a protrusion disposed on a lower side wall of the cover, and the rotation clamp structure is formed by a flange disposed on the upper cavity wall of the lower axis sleeve.

11. The automatic detachable combined toy gyro according to claim 7, wherein, the gyro ring comprises a circular attack ring having a through hole in the middle, and a screw ring and a clamping ring disposed to fit the attack ring, the locking structure disposed on the screw ring, the rotational clamp structures comprise upper and lower edges respectively disposed on surfaces, facing each other, of the clamping rings of the upper and lower gyros; whereby overlapping the upper clamping ring on the lower clamping ring, and rotating the upper edge towards a lower portion of the lower edge so that the lower edge is engaged with the upper edge implements integral connection of the upper gyro and the lower gyro in a rotatably detachable manner.

12. The automatic detachable combined toy gyro according to claim 11, wherein, the screw ring comprises an upper cover ring and a lower cover ring disposed to fit the through hole of the attack ring, the protrusion in the locking structure formed by overlapping upper and lower flanges correspondingly disposed on the inner walls of the upper and lower cover rings; wherein when the axis body of the gyro is sleeved in ring holes of the upper and lower cover rings, upper and lower flanges of the upper and lower cover rings are fit with upper and lower ends of the block structure on the axis body of the gyro, thereby implementing connection to the axis body of the gyro.

13. The automatic detachable combined toy gyro according to claim 12, wherein, an edge is integrally disposed on an inner wall of the through hole of the attack ring, a notch is correspondingly disposed on the upper and lower cover rings at positions corresponding to the edge, and the upper and lower cover rings are positioned on the attack ring by fitting of the notches and the edge.

14. The automatic detachable combined toy gyro according to claim 1, wherein the direction in which the gyro ring is mounted on the axis body may be turned over vertically.

15. The automatic detachable combined toy gyro according to claim 11, wherein the direction in which the gyro ring is mounted on the axis body may be turned over vertically.

16. The automatic detachable combined toy gyro according to claim 12, wherein the direction in which the gyro ring is mounted on the axis body may be turned over vertically.

17. The automatic detachable combined toy gyro according to claim 13, wherein the direction in which the gyro ring is mounted on the axis body may be turned over vertically.

18. An automatic detachable combined toy gyro, wherein the combined toy gyro comprises at least vertically joined upper and lower gyros each having an elastic tip, wherein the upper and lower toy gyros each comprise an axis body and a gyro ring sleeved on the axis body, each elastic tip including a tip body connected to a lower end of its associated axis body and including a spring in an inner cavity of each tip body, wherein the spring in the elastic tip of the upper gyro is in a compressed state when the tip body of the upper gyro is inserted into the axis body of the lower gyro to implement jointing of the upper and lower gyros, whereby the upper gyro in the combined gyros automatically releases its connection with the lower gyro in the combined gyros when it is impacted or rotation thereof is blocked during rotation,

wherein the upper gyro is ejected from the lower gyro under an action of the spring of the elastic tip in the upper gyro to separately form a rotating upper gyro together with a rotating lower gyro; and wherein, an upper end of the axis body of each gyro includes a detachable cover, each cover including a connection structure fitting an ejector, and each gyro is adapted to be ejected by the ejector by cooperation of the connection structure on the cover and the ejector; the lower gyro is connected to the upper gyro after the cover is removed, wherein the axis body of the lower gyro is provided with a recessed cavity to receive the tip of the upper gyro.

19. An automatic detachable combined toy gyro, wherein the combined toy gyro comprises at least vertically joined upper and lower gyros each having an elastic tip, wherein the upper and lower toy gyros each comprise an axis body and a gyro ring sleeved on the axis body, each elastic tip including a tip body connected to a lower end of its associated axis body and including a spring in an inner cavity of each tip body, wherein the spring in the elastic tip of the upper gyro is in a compressed state when the tip body of the upper gyro is inserted into the axis body of the lower gyro to implement jointing of the upper and lower gyros, whereby the upper gyro in the combined gyros automatically releases its connection with the lower gyro in the combined gyros when it is impacted or rotation thereof is blocked during rotation, wherein the upper gyro is ejected from the lower gyro under an action of the spring of the elastic tip in the upper gyro to separately form a rotating upper gyro together with a rotating lower gyro; and

wherein when the upper gyro and the lower gyro are connected into one piece, the upper and lower gyros are connected to each other by either rotational clamping structures disposed on two gyro rings or are connected to each other by a rotational clamping of two axis bodies; wherein, the gyro ring includes a locking structure disposed fitting an outer wall of the axis body; and wherein, the locking structure includes a protrusion provided on an inner wall of the gyro ring, the axis body including an axis sleeve and a clamp ring rotatably disposed on the axis sleeve, the clamp ring including a pin extending out of the axis sleeve, an outer wall of the axis sleeve correspondingly including a guide slot configured to be penetrated by the pin for horizontal rotation, and a block structure for the protrusion of the gyro ring to slide in and to connect the gyro ring and the axis sleeve upon pressing of the pin, the elastic

tip connected to a lower portion of the axis sleeve in a vertically movable manner, when the protrusion on the gyro ring slides into the block structure, the clamp ring may be rotated so that the pin is rotated to be above or below the protrusion, whereby the protrusion is locked between the pin and an end edge of the block structure, thereby connecting of the gyro ring and the axis body.