What is claimed is:

1. A gate valve with secure sealing mechanism, comprising:

a main body, provided with a first end and a second end, with the second end having a valve opening;

a driver, disposed on the main body;

a sliding seat, slidingly disposed in the main body and transversely provided with a driving groove, while the driving groove defines a non-linear driving track;

a swing arm, with one end thereof connected to the driver and the other end thereof disposed in the driving groove, such that the driver drives the swing arm to circularly move along the driving track between a first position and a second position, so as to triggers the sliding seat to slide between the first end and the second end, wherein when the swing arm is at the first position and the second position, the swing arm is biased against a route direction of the sliding seat; and

a valve member, disposed on the sliding seat for moving in parallel or vertical to the valve opening,

such that the sliding seat is at the first end when the swing

arm is at the first position, and the sliding seat is at the second end when the swing arm is at the second position, whereby the valve member stably seals the valve opening.

2. The gate valve of claim 1, wherein the driver is rotatable disposed on the main body and operated manually.

3. The gate valve of claim 1, wherein the driver comprises a fixing portion externally fixed on the main body; an acting portion rotatable disposed on the fixing portion; a rotary shaft longitudinally disposed between the acting portion and the fixing portion, with one end of the rotary shaft connected to the swing arm; an operation rod passing through the acting portion and the rotary shaft for driving the rotary shaft to rotate.

4. The gate valve of claim 3, wherein one end of the swing arm is provided with an engaging hole, while one end of the rotary shaft is provided with a block for being engaged with the engaging hole.

5. The gate valve of claim 4, further comprising a fastening member transversely fastened to the engaging hole and the block.

6. The gate valve of claim 1, wherein one end of the swing

arm is provided with a rolling member which is placed in the driving groove.

7. The gate valve of claim 6, wherein the driving groove comprises a first driving section, a second driving section, and a third driving section, while the second driving section inclinedly connected between the first driving section and the third driving section, such that when the rolling member moves from the first driving section to the second driving section, the valve member vertically moves toward the valve opening for sealing the valve opening.

8. The gate valve of claim 7, wherein when the swing arm is at the first position and the second position, the rolling member is positioned at an end part of the third driving section.

9. The gate valve of claim 1, wherein the sliding seat is fixedly provided with two parallel first guiding portions, and the valve member is provided with two second guiding portions coupled with the first guiding portions, such that the valve member is allowed to move in vertical to the valve opening for sealing the valve opening.

10. The gate valve of claim 9, wherein two sides of the

inner edge of the main body are provided with a guiding plank, respectively, and two sides of the valve member are correspondingly provided with a guiding roller, respectively, for rollingly contacting the corresponding guiding plank.

11. The gate valve of claim 10, wherein a positioning groove is disposed on each of the guiding planks adjacent to the valve opening, respectively, and the positioning groove is provided with a curved portion and a distal portion, such that when the guiding wheel moves from the curved portion to the distal portion, the valve member seals the valve opening.

12. The gate valve of claim 9, wherein the first guiding portion is provided with two symmetric connecting grooves, and the second guiding portion is provided with two symmetric matching grooves reversely disposed in relation to the connecting grooves, with at least one circular rod passing through each of the connecting grooves and the matching grooves, respectively, such that each of the connecting grooves overlaps and cooperates with each of the matching grooves, respectively.

13. The gate valve of claim 12, wherein the shape of the

connecting groove is substantially identical with the shape of the matching groove.

14. The gate valve of claim 13, wherein the connecting groove and the matching groove are provided with a first end and a second end, respectively, with a bias section disposed between the first end and the second end.

15. The gate valve of claim 12, wherein the first guiding portion is formed of two parallel first planks with a certain spacing therebetween, and the second guiding portion is formed of two parallel second planks with a certain spacing therebetween, while the two second planks are sandwiched by the two first planks, with a linkage plank disposed between the two second planks, such that movement of each of the circular rods are synchronized.

16. The gate valve of claim 10, wherein four corners of the sliding seat is provided with a first roller, respectively, for rollingly contacting the inner lateral sides of the two guiding plank.

17. The gate valve of claim 1, wherein the sliding seat is provided with plural second rollers for rollingly contacting

the inner face of the main body on one side in opposite to the valve opening.

18. The gate valve of claim 1, wherein one end of the sliding seat adjacent to the driving groove is provided with a guiding wheel for contacting the inner face of the main body on one side provided with the valve opening.

What is claimed is:

1. A gate valve with secure sealing mechanism, comprising:

a main body, provided with a first end and a second end, with the second end having a valve opening;

a driver, disposed on the main body;

a sliding seat, slidingly disposed in the main body and transversely provided with a driving groove, while the driving groove defines a non-linear driving track, the sliding seat further provided with two first guiding portions symmetrically fixed thereon;

a swing arm, with one end thereof connected to the driver and the other end thereof disposed in the driving groove, such that the driver drives the swing arm to circularly move along the driving track between a first position and a second position, so as to triggers the sliding seat to slide between the first end and the second end, wherein when the swing arm is at the first position and the second position, the swing arm is biased against a route direction of the sliding seat; and

a valve member, disposed on the sliding seat and provided

with two second guiding portions connected with the two first guiding portions for moving in parallel or vertical to the valve opening,

such that when the swing arm is at the first position, the sliding seat is at the first end; when the swing arm is at the second position, the sliding seat is at the second end and the valve member stably seals the valve opening.

2. The gate valve of claim 1, wherein the driver is rotatable disposed on the main body and operated manually.

3. The gate valve of claim 1, wherein the driver comprises a fixing portion externally fixed on the main body, an acting portion rotatable disposed on the fixing portion, a rotary shaft longitudinally disposed between the acting portion and the fixing portion with one end of the rotary shaft connected to the swing arm, an operation rod passing through the acting portion and the rotary shaft for driving the rotary shaft to rotate.

4. The gate valve of claim 3, wherein one end of the swing arm is provided with an engaging hole, while one end of the rotary shaft is provided with a block for being engaged with the engaging hole; also, the engaging hole and the block are

transversely fastened through a fastening member.

5. The gate valve of claim 1, wherein one end of the swing arm is provided with a rolling member which is placed in the driving groove; the driving groove comprises a first driving section, a second driving section, and a third driving section, while the second driving section is inclinedly connected between the first driving section and the third driving section, such that when the rolling member moves from the first driving section to the second driving section, the valve member vertically moves toward the valve opening for sealing the valve opening; when the swing arm is at the first position and the second position, the rolling member is positioned at an end part of the third driving section.

6. The gate valve of claim 1, wherein two sides of the inner edge of the main body are provided with a guiding plank, respectively, and two sides of the valve member are correspondingly provided with a guiding roller, respectively, for rollingly contacting the corresponding guiding plank; four corners of the sliding seat is provided with a first roller, respectively, for rollingly contacting the inner lateral sides of

the two guiding plank; a positioning groove is disposed on each of the guiding planks adjacent to the valve opening, respectively, and the positioning groove is provided with a curved portion and a distal portion, such that when the guiding roller moves from the curved portion to the distal portion, the valve member seals the valve opening.

7. The gate valve of claim 1, wherein the first guiding portions are provided with two symmetric connecting grooves, respectively, and the second guiding portions are provided with two symmetric matching grooves reversely disposed in relation to the connecting grooves, respectively, with at least one circular rod passing through each of the connecting grooves and the matching grooves, respectively, such that each of the connecting grooves overlaps and cooperates with each of the corresponding matching grooves, respectively.

8. The gate valve of claim 7, wherein the shape of the connecting groove is substantially identical with the shape of the matching groove; each of the connecting grooves and each of the matching grooves is provided with a first end and a second end, respectively, with a bias section disposed between

the first end and the second end.

9. The gate valve of claim 7, wherein each of the first guiding portions is formed of two parallel first planks with a certain spacing therebetween, and each of the second guiding portions is formed of two parallel second planks with a certain spacing therebetween, while the two second planks are sandwiched by the two first planks, with a linkage plank disposed between the two second planks, such that movement of each of the circular rods are synchronized.

10. The gate valve of claim 1, wherein the sliding seat is provided with plural second rollers for rollingly contacting the inner face of the main body on one side in opposite to the valve opening.

11. The gate valve of claim 1, wherein one end of the sliding seat adjacent to the driving groove is provided with a guiding wheel for contacting the inner face of the main body on one side provided with the valve opening.

12. A gate valve with secure sealing mechanism, comprising:

a main body, provided with a first end and a second end,

with the second end having a valve opening;

a driver, disposed on the main body;

a sliding seat, slidingly disposed in the main body, the sliding seat provided with two first guiding portions symmetrically fixed thereon, the two first guiding portions provided with two symmetric connecting grooves, respectively, the driver driving the sliding seat to slide between the first end and the second end;

a valve member, disposed on the sliding seat and provided with two second guiding portions connected with the two first guiding portions for moving in parallel or vertical to the valve opening, the second guiding portions provided with two symmetric matching grooves reversely disposed in relation to the connecting grooves, respectively; and

at least one circular rod passing through each of the connecting grooves and the matching grooves, respectively, such that each of the connecting grooves overlaps and cooperates with each of the corresponding matching grooves, respectively; when the sliding seat is at the second end, the valve member stably seals the valve opening.

13. The gate valve of claim 12, wherein the shape of the connecting groove is substantially identical with the shape of the matching groove.

14. The gate valve of claim 13, wherein each of the connecting grooves and each of the matching grooves is provided with a first end and a second end, respectively, with a bias section disposed between the first end and the second end.

15. The gate valve of claim 12, wherein each of the first guiding portions is formed of two parallel first planks with a certain spacing therebetween, and each of the second guiding portions is formed of two parallel second planks with a certain spacing therebetween, while the two second planks are sandwiched by the two first planks, with a linkage plank disposed between the two second planks, such that movement of each of the circular rods are synchronized.