What is claimed is:

1. A gate valve (100) with secure sealing mechanism, comprising:

a main body (10), provided with a first end (11) and a second end, with the second end (12) having a valve opening (13);

a driver (20), disposed on the main body;

a sliding seat (30), slidingly disposed in the main body (10) and transversely provided with a driving groove (31), the driving groove (31) defining a non-linear driving track (32), the sliding seat (30) provided with two parallel first guiding portions (35);

a swing arm (40), with one end thereof connected to the driver (20) and the other end thereof disposed in the driving groove (31), such that the driver (20) drives the swing arm (40) to circularly move along the driving track (32) between a first position and a second position, so as to trigger the sliding seat (30) to slide between the first end (11) and the second end (12), wherein when the swing arm (40) is at the first position and the second position, the swing arm (40) is biased against a route direction of the sliding seat (30); and

a valve member (50), disposed on the sliding seat (30) for moving in parallel or vertical to the valve opening (13) and provided with two second guiding portions (51), the valve member (50) thus allowed to move in vertical to the valve opening (13) for sealing the valve opening (13);

wherein the sliding seat (30) is at the first end (11) when the swing arm (40) is at the first position, and the sliding seat (30) is at the second end (12) when the swing arm (40) is at the second position, whereby the valve member (50) stably seals the valve opening (13),

characterized in that

each first guiding portion (35) is provided with two symmetric connecting grooves (37), and each second guiding portion (51) is provided with two symmetric matching grooves (53) reversely disposed in relation to the connecting grooves (37) for being coupled

with the connecting grooves (37) of the corresponding first guiding portion (35), with at least one circular rod (60) passing through each of the connecting grooves (37) and the matching grooves (53), respectively, such that each of the connecting grooves (37) overlaps and cooperates with each of the matching grooves (53), respectively.

2. The gate valve (100) of claim 1, wherein the driver (20) is rotatable disposed on the main body (10) and operated manually.

3. The gate valve (100) of claim 1, wherein the driver (20) comprises a fixing portion (21) externally fixed on the main body (10); an acting portion (22) rotatable disposed on the fixing portion (21); a rotary shaft (23) longitudinally disposed between the acting portion (22) and the fixing portion (21), with one end of the rotary shaft (23) connected to the swing arm (40); an operation rod (24) passing through the acting portion (22) and the rotary shaft (23) for driving the rotary shaft (23) to rotate.

4. The gate valve (100) of claim 3, wherein one end of the swing arm (40) is provided with an engaging hole (41), while one end of the rotary shaft (23) is provided with a block (231) for being engaged with the engaging hole (41).

5. The gate valve (100) of claim 4, further comprising a fastening member (43) transversely fastened to the engaging hole (41) and the block (231).

6. The gate valve (100) of claim 1, wherein one end of the swing arm (40) is provided with a rolling member (42) which is placed in the driving groove (31).

7. The gate valve (100) of claim 6, wherein the driving groove (31) comprises a first driving section (321), a second driving section (322), and a third driving section (323), while the second driving section (322) inclinedly connected between the first driving section (321) and the third driving section (323), such that when the rolling member (42) moves from the first driving section (321) to the second driving section (322), the valve member (50) vertically moves toward the valve opening (13) for sealing the valve opening (13).

8. The gate valve (100) of claim 7, wherein when the swing arm (40) is at the first position and the second position, the rolling member (42) is positioned at an end part of the third driving section (323).

9. The gate valve (100) of claim 1, wherein two sides of the inner edge of the main body (10) are provided with a guiding plank (14), respectively, and two sides of the valve member (50) are correspondingly provided with a guiding roller (54), respectively, for rollingly contacting the corresponding guiding plank (14).

10. The gate valve (100) of claim 9, wherein a positioning groove (15) is disposed on each of the guiding planks (14) adjacent to the valve opening (13), respectively, and the positioning groove (15) is provided with a curved portion (151) and a distal portion (152), such that when the guiding wheel (54) moves from the curved portion (151) to the distal portion (152), the valve member (50) seals the valve opening (13).

11. The gate valve (100) of claim 1, wherein the shape of the connecting groove (37) is substantially identical with the shape of the matching groove (53).

12. The gate valve (100) of claim 11, wherein the connecting groove (37) and the matching groove (53) are provided with a first end (531) and a second end (532), respectively, with a bias section (533) disposed between the first end (531) and the second end (532).

13. The gate valve (100) of claim 1, wherein the first guiding portion (35) is formed of two parallel first planks (36) with a certain spacing therebetween, and the second guiding portion (51) is formed of two parallel second planks (52) with a certain spacing therebetween, while the two second planks (52) are sandwiched by the two first planks (36), with a linkage plank (70) disposed between the two second planks (52), such that movement of each of the circular rods (60) are synchronized.

14. The gate valve (100) of claim 9, wherein four corners of the sliding seat (30) is provided with a first roller (53), respectively, for rollingly contacting the inner lateral sides of the two guiding planks (14).

15. The gate valve (100) of claim 1, wherein the sliding seat (30) is provided with plural second rollers (38) for rollingly contacting the inner face of the main body (10) on one side in opposite to the valve opening (13).

16. The gate valve (100) of claim 1, wherein one end of the sliding seat (30) adjacent to the driving groove (31) is provided with a guiding wheel (54) for contacting the inner face of the main body (10) on one side provided with the valve opening (13).