CLAIMS

What is claimed is:

1. A ball screw, comprising:

a screw including at least two track grooves;

a nut slidingly disposed on the screw and including:

a nut body having two assembly openings, wherein the inside of the nut body includes at least two inner ball grooves corresponding to the track grooves, respectively, the inner ball grooves and the track grooves constitute two inner ball channels, the nut body includes two reflowing channels corresponding to the inner ball channels, and the reflowing channels and the inner ball channels constitute a part of two ball circulation channels of the ball screw; and

at least one end assembly, including:

an end circulation member disposed to the nut body and including at least two circulation portions which are disposed in the assembly openings, respectively;

a dust-proof member disposed on the side of the end circulation member away from the nut body; and

a fastening member disposed on the side of the dust-proof member away from the end circulation member, wherein one side of the fastening member includes a plurality of projections and the other side of the fastening member includes a plurality of indentations corresponding to the projections; and

a plurality of balls disposed within the ball circulation channels.

2. The ball screw as recited in claim 1, wherein the projections and the indentations are projected and concaved along the lengthwise direction of the nut body, respectively.

3. The ball screw as recited in claim 1, wherein the fastening member is compressible or deformable along the lengthwise direction of the nut body.

4. The ball screw as recited in claim 1, wherein one end of the nut body includes a first annular containing recess and a second annular containing recess, the end circulation member is disposed in the first annular containing recess, and the dust-proof member and the fastening member are disposed in the second annular containing recess.

5. The ball screw as recited in claim 4, wherein the axial thicknesses of the dust-proof member and the fastening member are greater than the axial thickness of the second annular containing recess.

6. The ball screw as recited in claim 4, wherein the inner diameter of the second annular containing recess is greater than that of the first annular containing recess.

7. The ball screw as recited in claim 1, wherein the material of the dust-proof member is a flexible material, and the material of the fastening member is a rigid material.

8. The ball screw as recited in claim 1, wherein the projections are connected continuously.

9. The ball screw as recited in claim 1, wherein a plurality of the intervals exist among the projections, and the projections are not continuous.

10. The ball screw as recited in claim 8, wherein the projections are arched, convex or taper.

11. The ball screw as recited in claim 9, wherein the projections are arched, convex or taper.

12. The ball screw as recited in claim 1, wherein the dust-proof member is composed of a plurality of dust-proof units.

13. The ball screw as recited in claim 1, wherein a strengthening member is disposed in each of the circulation portion.

CLAIMS

1. A ball screw, comprising:

a screw including at least two track grooves;

a nut slidingly disposed on the screw and including:

a nut body having two assembly openings, in which

the inside of the nut body includes at least two inner ball grooves corresponding to the track grooves, respectively, the inner ball grooves and the track grooves constituting two inner ball channels, the nut body including two reflowing channels corresponding to the inner ball channels, and the reflowing channels and the inner ball channels constituting a part of two ball circulation channels of the ball screw;

in which one end of the nut body includes a first annular containing recess and a second annular containing recess, the inner diameter of the second annular containing recess being greater than that of the first annular containing recess; and

at least one end assembly, including:

an end circulation member disposed in the first annular containing recess of the nut body and including at least two circulation portions which are disposed in the assembly openings, respectively;

a dust-proof member made of a flexible material and disposed on the side of the end circulation member away from the nut body and contained by the second annular containing recess; and

a fastening member made of a rigid material and disposed on the side of the dust-proof member away from the end circulation member and contained by the second annular containing recess, in which one side of the fastening member includes a plurality of projections and the other side of the fastening member includes a plurality of indentations corresponding to the projections,

the projections and the indentations being projected and concaved along the lengthwise direction of the nut body, respectively;

in which the axial thicknesses of the dust-proof member and the fastening member are greater than the axial thickness of the second annular containing recess; and

a plurality of balls disposed within the ball circulation channels.

2. A ball screw according to Claim 1, in which the projections and the indentations are projected and concaved along the lengthwise direction of the nut body, respectively.

3. A ball screw according to Claim 1, in which the fastening member is compressible or deformable along the lengthwise direction of the nut body.

4. A ball screw according to Claim 1, in which the projections are connected continuously.

5. A ball screw according to Claim 1, in which a plurality of the intervals exist among the projections, and the projections are not continuous.

6. A ball screw according to Claim 4, in which the projections are arched, convex or taper.

7. A ball screw according to Claim 5, in which the projections are arched, convex or taper.

8. A ball screw according to Claim 1, in which the dust-proof member is composed of a plurality of dust-proof units.

9. A ball screw according to Claim 1, in which a strengthening member is disposed in each of the circulation portion.