CLAIMS

1. A solid immersion lens holder holding a solid immersion lens at a front side of an objective lens, the solid immersion lens including a spherical face portion disposed to face the objective lens and a contact portion having a contact face configured to contact an observation object, and the solid immersion lens holder comprising:

a first member having a first opening disposing the spherical face portion therein so that a part of the spherical face portion protrudes toward an objective lens side, and three plate portions disposed on the objective lens side with respect to the first opening, each of the three plate portions being provided with a protrusion portion capable of contacting the spherical face portion; and

a second member having a second opening disposing the contact portion therein so that the contact face protrudes toward a side opposite to the objective lens side

wherein the solid immersion lens swings while sliding on the three protrusion portions, when the solid immersion lens comes into contact with the observation object.

2. The solid immersion lens holder according to claim 1,

wherein the three protrusion portions are provided at an interval of 120 degrees in a circumferential direction of the first opening.

3. The solid immersion lens holder according to claim 1,

wherein a line passing through a contact position between each of the three protrusion portions and the spherical face portion and a curvature center of the spherical face portion intersects an optical axis of the objective lens in the range of 15 to 65 degrees.

4. The solid immersion lens holder according to claim 1,

wherein the three protrusion portions are configured to come into line-contact with the spherical face portion.

5. The solid immersion lens holder according to claim 4,

wherein a contact position between each of the three protrusion portions and the spherical face portion is located on a circumference having a center of the first opening as a center.

6. The solid immersion lens holder according to claim 1,

wherein the three plate portions are disposed along an optical axis of the objective lens.

7. The solid immersion lens holder according to claim 1,

wherein the three plate portions are formed along a radial direction of a circle about a center of the first opening.

8. An image acquisition device comprising:

a stage holding an observation object;

an objective lens disposed to face the observation object on the stage;

the solid immersion lens holder according to claim 1 holding the solid immersion lens at the front side of the objective lens;

an optical detector configured to detect light from the observation object through the solid immersion lens and the objective lens and to output image data; and

an image generating device configured to generate an image of the observation object based on the image data.