Claims:

1. A traction machine comprising,
a sheave including a driving shaft,
a bearing stand for supporting the driving shaft as well as the sheave in a rotatable manner,

a motor arranged on an axial end of the driving shaft to drive rotationally the sheave through the driving shaft,

a flange section arranged an end of the sheave axially opposite to the motor,
a brake disk contacting a surface of the flange section opposite to the motor and

fixed with respect to the sheave through a fixing mechanism to rotate with the sheave, and
a brake for clamping the brake disk to brake a rotation of the brake disk,

wherein the fixing mechanism has a fitting section formed on the surface and a through-hole formed on the brake disk to be fitted onto the fitting section, and the brake disk and the sheave are fixed with respect to each other with a tight fit, the brake disk has a thickened part, the length in the radial direction of the thickened part is equal to or larger than 1/5 of the length in the axis direction of the thickened part.

2. The traction machine according to claim 1, wherein the fixing mechanism has a dent formed on the sheave, a groove formed on the brake disk to face to the dent, and a fixing member fitting into each of the dent and the groove.

3. The traction machine according to claim 1, wherein the fixing mechanism has a protrusion formed on the sheave, and a groove formed on the brake disk to engage with the protrusion.

4. The traction machine according to claim 1, wherein the fixing mechanism has a bolt fixing the flange section and the brake disk to each other.

5. An elevator comprising,
a cage movable upward and downward in a hoistway,

a balancing weight connected to the cage through a rope, and
a traction machine on which the rope is wound to move the cage upward and downward,

wherein the traction machine has,
a sheave including a driving shaft,
a bearing stand for supporting the driving shaft as well as the sheave in a rotatable manner,

a motor arranged on an axial end of the driving shaft to drive rotationally the sheave through the driving shaft,

a flange section arranged an end of the sheave axially opposite to the motor,
a brake disk contacting a surface of the flange section opposite to the motor and

fixed with respect to the sheave through a fixing mechanism to rotate with the sheave, and
a brake for clamping the brake disk to brake a rotation of the brake disk,

wherein the fixing mechanism has a fitting section formed on the surface and a through-hole formed on the brake disk to be fitted onto the fitting section, and the brake disk and the sheave are fixed with respect to each other with a tight fit, the brake disk has a thickened part, the length in the radial direction of the thickened part is equal to or larger than 1/5 of the length in the axis direction of the thickened part.

Claims:

1. A traction machine comprising:

a sheave including a driving shaft;

a bearing stand for supporting the driving shaft as well as the sheave in a rotatable manner;

a motor arranged on an axial end of the driving shaft to drive rotationally the sheave through the driving shaft;

a flange section arranged an end of the sheave axially opposite to the motor;

a brake disk contacting a surface of the flange section opposite to the motor and fixed with respect to the sheave through a fixing mechanism to rotate with the sheave, and a brake for clamping the brake disk to brake a rotation of the brake disk;

wherein the fixing mechanism has a fitting section formed on the surface and a through-hole formed on the brake disk to be fitted onto the fitting section, and the brake disk and the sheave are fixed with respect to each other with a tight fit, the brake disk has a thickened part, the length in the radial direction of the thickened part is equal to or larger than 1/5 of the length in the axis direction of the thickened part.

2. The traction machine according to claim 1, wherein the fixing mechanism has a dent formed on the sheave, a groove formed on the brake disk to face to the dent, and a fixing member fitting into each of the dent and the groove.

3. The traction machine according to claim 1, wherein the fixing mechanism has a protrusion formed on the sheave, and a groove formed on the brake disk to engage with the protrusion.

4. The traction machine according to claim 1, wherein the fixing mechanism has a bolt fixing the flange section and the brake disk to each other.

5. An elevator comprising:

a cage movable upward and downward in a hoistway;

a balancing weight connected to the cage through a rope; and

a traction machine on which the rope is wound to move the cage upward and downward~~,~~;

wherein the traction machine has:

a sheave including a driving shaft;

a bearing stand for supporting the driving shaft as well as the sheave in a rotatable manner;

a motor arranged on an axial end of the driving shaft to drive rotationally the sheave through the driving shaft;

a flange section arranged an end of the sheave axially opposite to the motor;

a brake disk contacting a surface of the flange section opposite to the motor and fixed with respect to the sheave through a fixing mechanism to rotate with the sheave; and

a brake for clamping the brake disk to brake a rotation of the brake disk;

wherein the fixing mechanism has a fitting section formed on the surface and a through-hole formed on the brake disk to be fitted onto the fitting section, and the brake disk and the sheave are fixed with respect to each other with a tight fit, the brake disk has a thickened part, the length in the radial direction of the thickened part is equal to or larger than 1/5 of the length in the axis direction of the thickened part.