CLAIMS

Claim 1. A drum unit for a cartridge that is detachably mountable to a main assembly of an electrophotographic image forming apparatus, said drum unit comprising:

a photosensitive drum; and

a coupling member provided adjacent to an end portion of the photosensitive drum and connected with the photosensitive drum so as to be capable of transmitting a driving force toward the photosensitive drum by rotating about a rotational axis of the coupling member,

wherein the coupling member is inclinable relative to a rotational axis of the photosensitive drum, and an inclination angle of the rotational axis of the coupling member relative to the rotational axis of the photosensitive drum is reduced with rotation of the coupling member relative to the photosensitive drum about the rotational axis of the coupling member.

Claim 2. A drum unit according to Claim 1, further comprising a flange member mounted to the end portion of the photosensitive drum, wherein the coupling member is inclinably supported by the flange member and connected with the photosensitive drum through the flange member.

Claim 3. A drum unit according to Claim 2, wherein one of the coupling member and the flange member includes a projection shape portion and the other of the coupling member and the flange member includes a recess shape portion, and

wherein when the coupling member is rotated relative to the flange member, the inclination angle of the rotational axis of the coupling member is reduced by engagement between the projection shape portion and the recess shape portion.

Claim 4. A drum unit according to Claim 3, wherein at least one of the projection shape portion and the recess shape portion is twisted.

Claim 5. A drum unit according to Claim 3 or 4, wherein the projection

shape portion has a substantially triangular cross-section taken along a plane perpendicular to the rotational axis of the coupling member.

Claim 6. A drum unit according to any one of Claims 3 - 5, wherein the coupling member includes a first coupling portion and a second coupling portion capable of transmitting the driving force from the first coupling portion toward the photosensitive drum, wherein the first coupling portion is rotatable in a predetermined angular range relative to the second coupling portion, and the second coupling portion includes one of the projection shape portion and the recess shape portion.

Claim 7. A drum unit according to Claim 2, wherein the coupling member includes a first coupling portion and a second coupling portion capable of transmitting the driving force from the first coupling portion toward the flange member,

wherein the flange member includes a first restricting portion and a second restricting portion, and the first coupling portion includes a first restricted portion, and the second coupling portion includes a second restricted portion, and

wherein when the first coupling portion rotates relative to the second coupling portion about the rotational axis of the coupling member, one of the first coupling portion and the second coupling portion moves relative to the other in an axial direction of the photosensitive drum, the first restricted portion contacts the first restricting portion, (c) the second restricted portion contacts the second restricting portion, and (d) the coupling member moves such that the inclination angle reduces.

Claim 8. A drum unit according to Claim 7, wherein one of the first restricting portion and the first restricted portion includes a projection having a spherical surface, and the other includes a recess having a conical surface or a spherical surface, and one of the second restricting portion and the second restricted portion includes a projection having a spherical surface, and the other includes a conical surface or a spherical surface.

Claim 9. A drum unit according to Claim 7 or 8, wherein by rotation of the first coupling portion relative to the second coupling portion, one of the first coupling portion and the second coupling portion moves relative to the other in the axial direction

of the photosensitive drum.

Claim 10. A drum unit according to any one of Claims 7 - 9, wherein at least one of the first coupling portion and the second coupling portion includes an inclined portion, and wherein by rotation of the first coupling portion relative to the second coupling portion, one of the first coupling portion and the second coupling portion moves relative to the other in a direction of the rotational axis of the photosensitive drum along the inclined portion.

Claim 11. A drum unit according to any one of Claims 6 - 10, further comprising an urging member for urging the first coupling portion to rotate the first coupling portion relative to the second coupling portion.

Claim 12. A drum unit according to any one of Claims 6 - 11, wherein the first coupling portion is rotatable relative to the second coupling portion by not less than an angle of 120°.

Claim 13. A drum unit according to any one of Claims 1 - 12, further comprising an urging member for urging the coupling member in a direction of the rotational axis of the photosensitive drum.

Claim 14. A cartridge comprising:

a drum unit according to any one of Claims 1 - 13; and

a frame for rotatably supporting said drum unit.

Claim 15. A cartridge according to Claim 14, further comprising an urging member for urging the coupling member so as to incline said coupling member relative to the rotational axis of the photosensitive drum.

Claim 16. A drive transmission unit detachably mountable to a main assembly of an electrophotographic image formation apparatus, the drive transmission unit comprising:

a support member, and

a coupling member supported by the support member so as to transmit a driving force toward the support member by rotating about a rotational axis of the coupling member,

wherein the coupling member is inclinable relative to a rotational axis of the support member, and an inclination angle of the rotational axis of the coupling member relative to the rotational axis of the support member reduces with rotational of the coupling member relative to the support member about the rotational axis of the coupling member.

Claim 17. A drive transmission unit according to Claim 16, wherein one of the coupling member and the support member includes a projection shape portion, and the other includes a recessed shape portion, and wherein when the coupling member rotates relative to the support member, the inclination angle of the rotational axis of the coupling member is reduced by engagement between the projection shape portion and the recess shape portion.

Claim 18. A drive transmission unit according to Claim 16, wherein at least one of the projection shape portion and the recess shape portion has a twisted shape.

Claim 19. A drive transmission unit according to Claim 17 or 18, wherein the projection shape portion has a substantially triangular cross-section taken along a plane perpendicular to the rotational axis of the coupling member.

Claim 20. A drive transmission unit according to any one of Claims 16 – 19, wherein the coupling member includes a first coupling portion and a second coupling portion capable of transmitting the driving force from the first coupling portion toward the support member, wherein the first coupling portion is rotatable in a predetermined angular range relative to the second coupling portion, and the second coupling portion includes one of the projection shape portion and the recess shape portion.

Claim 21. A drive transmission unit according to Claim 16, wherein the coupling member includes a first coupling portion and a second coupling portion

capable of transmitting the driving force from the first coupling portion toward the support member, wherein the support member includes a first restricting portion and a second restricting portion, and the first coupling portion includes a first restricted portion, and the second coupling portion includes a second restricted portion, and

wherein when the first coupling portion ~~carries out rotational driving~~ rotates relative to the second coupling portion, one of the first coupling portion and the second coupling portion moves relative to the other in an axial direction of the support member, the first restricted portion contacts the first restricting portion, (c) the second restricted portion contacts the second restricting portion, and (d) the coupling member moves such that the inclination angle reduces.

Claim 22. A drive transmission unit according to Claim 21, wherein one of the first restricting portion and the first restricted portion includes a projection having a spherical surface, and the other includes a recess having a conical surface or a spherical surface, and one of the second restricting portion and the second restricted portion includes a projection having a spherical surface, and the other includes a conical surface or a spherical surface.

Claim 23. A drive transmission unit according to Claim 21 or 22, wherein by rotation of the first coupling portion relative to the second coupling portion, one of the first coupling portion and the second coupling portion moves relative to the other in the axial direction of the support member.

Claim 24. A drive transmission unit according to Claim 23, wherein at least one of the first coupling portion and the second coupling portion includes an inclined portion, and wherein by rotation of the first coupling portion relative to the second coupling portion, one of the first coupling portion and the second coupling portion moves relative to the other in a direction of the rotational axis of the support member along the inclined portion.

Claim 25. A drive transmission unit according to any one of Claims 20 - 24, further comprising an urging member for urging the first coupling portion to rotate the first coupling portion relative to the second coupling portion.

Claim 26. A drive transmission unit according to any one of Claims 20 - 25, wherein the first coupling portion is rotatable relative to the second coupling portion by not less than an angle of 120°.

Claim 27. A drive transmission unit according to any one of Claims 16 - 26, further comprising an urging member for urging the coupling member so as to incline the coupling member relative to the rotational axis of the support member.

Claim 28. A drive transmission unit according to any one of Claims 16 - 27, further comprising an urging member for urging the coupling member in a direction of the rotational axis of the support member.

Claim 29. A cartridge comprising:

a drive transmission unit according to any one of Claims 16 - 28; and

a photosensitive drum capable of receiving a driving force from the drive transmission unit.

Claim 30. An electrophotographic image formation apparatus comprising a cartridge according to Claim 14, 15 or 29; and a main assembly to which the cartridge is detachably mountable and which includes an inclinable drive output member connectable with the coupling member of the cartridge.

Claim 31. An electrophotographic image formation apparatus comprising:

a drive transmission unit according to any one of Claims 16 - 28; and

a main assembly to which the drive transmission unit is detachably mountable and which includes an inclinable drive output member connectable with the coupling member of the drive transmission unit.