member **162** also rotates in relation to the first hinge member **161**, and the peak part of the first hinge member **161** escapes from the valley part of the second hinge member **162**. At this time, the biasing force of the spring member **163** is converted into the driving force for rotating the second hinge member **162** with respect to the first hinge member. That is, the second hinge member **162** is rotated in the direction for causing the peak and valley parts of the first and second hinge members **161** and **162** to be engaged with each other. Consequently, the driving force produced by the spring member **163** and the hinge members **161** and **162** acts as the driving force for rotating the second hinge member **102**.

[**0036**] If the second hinge member **162** is additionally rotated, and thus the peak part thereof passes the top of the peak part of the first hinge member **161**, the biasing force of the spring member **163** is converted into driving force acting in the direction of rotating the second hinge member **162** and the second hinge base **102**.

[**0037**] These actions between the spring member and the hinge members can be more easily understood from U.S. Pat. No. 6,292,980, which was filed in the name of the present applicant filed and issued on Sep. 25, 2001.

[**0038**] Referring to FIG. **3**, the first connection shaft **103** comprises a support part **131** for rotatably supporting the second hinge base **102**, a cylindrical part **133** extended from the support **131** in the direction of the first hinge axis A**1** through the second hinge base **102**, and a fastening part formed at the end of the cylindrical part **133** and fixed to the first hinge base **101**. The second hinge base **102** is formed with a support hole **121** for rotatably receiving the support part **131**. The support part **131** has a diameter larger than the cylindrical part **133**, and a support ridge (not shown) for supporting a stepped part between the support part **131** and the cylindrical part **133** is formed in the support hole **121**.

[**0039**] The fastening part **135** passes through the support **111** and projects outward from the end of the first hinge base **101**, and a fastening pin **129** as shown in FIG. **1** is fitted into the projecting part of the fastening part **135**, whereby the connection shaft **103** is fixed to the first hinge base **101**. The first connection shaft **103** is fixed so that it cannot rotate in relation to the first hinge base **101**, and the second hinge base **102** is rotated about the first hinge axis A**1** while being supported by the first connection shaft **103**.

[**0040**] The support part **131** of the first connection shaft **103** is formed with a first escaping groove **137** and a guide groove **139** as shown in FIG. **3**. The first escaping groove **137** and the guide groove **139**on the first connection shaft **103** are provided so as to configure a cooperative arrangement between the first connection shaft **103** and the second connection shaft **104** shown in FIGS. **1** and **5**. The cooperative arrangement between the first and second connection shafts **103** and **104** will be described below in detail with reference to FIGS. **5** to **7**.

[**0041**] The first escaping groove **137** is formed as a curved shape or recess by cutting a part of the support part **131** of the first connection shaft **103**. When the first connection shaft **103** and the second connection shaft **104** are joined with the second hinge base **102**, the first escaping groove **137** wraps the peripheral surface of the second connection shaft **104**. The second connection shaft **104** can be rotated about the second hinge axis A**2** only when its peripheral surface is partially wrapped by the first escaping groove **137**.

[**0042**] The guide groove **139** is formed on the curved surface of the first escaping groove **137** and extends in the circumferential direction of the first escaping groove **137**. The second connection shaft **104** is formed with a projection **149** (see FIG. **4**), which is selectively engaged with the guide groove **139** when the second connection shaft **104** rotates about the second hinge shaft A**2**.

[**0043**] Referring to FIG. **4** again, the second connection shaft **104** comprises a rotating part **141** rotatably received within the second hinge base **102** as shown in FIG. **1**, a shaft part **143** extending in the second hinge axis A**2** from the rotating part **141**, and a fastening part **145** provided at the end of the shaft part **143**. The second hinge base **102** is formed with a connection hole **123**, which extends in the second hinge axis A**2** to receive the rotating part **141**.

[**0044**] The peripheral surface of the rotating part **141** is formed with a second escaping groove **147**, which is formed by cutting a part of the peripheral surface in a curved shape, and a guide projection **149**, projects outward from the peripheral surface of the rotating part **141**adjacent to the second escaping groove **147**. If the second connection shaft **104** is assembled to the second hinge base **102**, the second escaping groove **147** wraps a part of the peripheral surface of the support part **131** of the shaft **103**. In addition, when the second connection shaft **104** is rotated, the guide projection **149** slides in the guide groove **139**.

[**0045**] Meanwhile, the peripheral surface of the rotating part of the second connection shaft **104** is formed with a stop groove **142**, and the second hinge base **102** is formed with a stop ball **151**, which is engaged with the stop groove **142**. When the second connection shaft **104** is rotated by a predetermined angle about the second hinge axis A**2**, the stop groove **142** and the stop ball **151** are engaged with each other, thereby temporarily stopping the rotation and keeping the second connection shaft **104** in the stopped state.

[**0046**] The second hinge base **102** is provided with a coil spring **153** for spring biasing the stop ball **151**, and a support plate **155** for supporting the coil spring **153** is fixed to the second hinge base **102** by screws **157**. Upon being spring biased by the coil spring **153**, the stop ball **151** compresses the peripheral surface of the rotating part **141**. Therefore, if the stop ball **151** is positioned opposite to the stop groove **142**, the stop ball **151** engages the stop groove **142**.

[**0047**] Two or more stop grooves **142** may be formed, which are spaced from each other in the circumferential direction of the peripheral surface of the rotating part **141**, and the rotation of the second connection shaft **104** is temporarily stopped at the position where the stop ball **151** is engaged with any of the stop grooves **142**.

[**0048**] The fastening part **145** is provided to mount a second housing **202** of the terminal **200** shown in FIG. **8**. In order to secure structural stability when mounting the second housing **202**, a fastening piece **105** is provided on the fastening part **145** by a screw **150**. As the second housing **202** is mounted on the second connection shaft **104** through the fastening piece **105**, the second housing **202** is rotatable about the second hinge axis A**2**. In addition, as the second hinge base **102** rotates about the first hinge axis A**1**, the second housing **202** is rotatable about the first hinge axis A**1**.

[**0049**] The cooperative arrangement between the first connection shaft **103** and the second connection shaft **104** is