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Abstract
Eye and eyelid mechanisms are regulator that adjust suitable angle of reflector and set on a toy. Toy would show delight, anger, sorrow, and happiness by expression.
After analyze existing eye and eyelid mechanism, we can find that the main research of eye and eyelid mechaism is almost about the wooden or basal face by expression. According to the patent analysis result, we could design a development mechanism. First step is the design of eye and eyelid mechanism that is follow the comparisons and viewpoints of anatomy then we aimed at the eye and the eyelid spot and accomplish the design of topological structure to judge the feasibility. Second step is motion design that is to find out input angles then we obtain output positions. Third step is detailed-design that is focus on tolerance between various demand components.
The main subject of thesis is design an eye and eyelid mechanism. We find out 22 Republic of China patents and 7 U.S. patents by TIPO and USPTO then to define the subject of eye and eyelid mechanism from the result of patent analysis. According to conceptual design, we make a model by CAD software and accomplish a model of eye and eyelid mechanism. Finally, we accomplish an archetype of toy and record the test result. The information could be a reference for the designer who is design toy in the future.
Advisory Committee Chu, Chia-Chun - advisor

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