

Great Gears



Patented by K. Minami and T. Nishimiya 1984, made by Tomy.

(plastic with colored metal ball bearings, 4.3 inches square by 1/2 inch thick)

Turning a wheel on the side causes the center ring to turn one direction and all the other rings to turn in the opposite direction. When solved, the center ring and three of the outer rings have silver ball bearings, and the other three outer rings have bearings colored red, green, and blue, and the center ring is missing one ball bearing. The one missing bearing allows bearings to be moved around by turning the rings and transferring a bearing from one ring to an adjacent one that currently has the empty position. After mixing it up, it is difficult to get it back to the solved position because rings cannot be rotated individually.

Further reading:

Jaap's Page, from: <http://www.geocities.com/jaapsch/puzzles/gears.htm>

Minami and Nishimiya Patent (U.S. 4,468,033)