

Reverse Engineering Folding Rocking Chair - Ricardo Bowers

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Summary

A fold-able rocking chair uses 6 linkages to collapse the chair from almost flat, to the fully open position. The chair has a slider that follows a curved path that locks into place at the open position. There is only one locking pin that keeps the chair in the correct position. A position analysis is used to analyze the kinematic motion of the linkage throughout the chair's motion. The mechanical advantage from a force applied to the seat, to the bottom of the front leg, is calculated using MATLAB. This is so that the force applied to the locking pin can be found when the chair is open.