

PUZZLER

The *Spirit of Akron* is an airship that is more than 60 m long. When it is parked at an airport, one person can easily support it overhead using a single hand. Nonetheless, it is impossible for even a very strong adult to move the ship abruptly. What property of this huge airship makes it very difficult to cause any sudden changes in its motion? (Courtesy of Edward E. Ogden)

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For more information about the airship, visit <http://www.goodyear.com/us/blimp/index.html>



chapter

5

The Laws of Motion

Chapter Outline

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| 5.1 The Concept of Force | 5.5 The Force of Gravity and Weight |
| 5.2 Newton's First Law and Inertial Frames | 5.6 Newton's Third Law |
| 5.3 Mass | 5.7 Some Applications of Newton's Laws |
| 5.4 Newton's Second Law | 5.8 Forces of Friction |