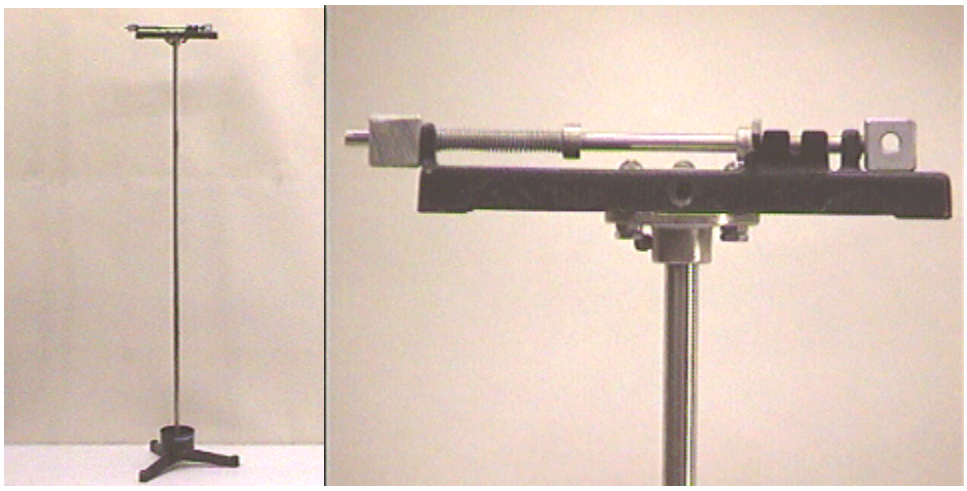
Question #47

Two square balls are mounted as shown on the apparatus pictured below. When the system is tripped the ball at the left is released from rest and falls downward; ball at the right is projected horizontally and falls to the floor in a parabolic arc.



The question for this week involves how fast the two balls will fall to the floor. In particular, after one is released and the other projected horizontally, which ball will win the race to the floor: the falling ball, the projected ball, or will the race end in a tie. The falling ball might get to the floor first because it will travel a shorter distance. On the other hand, the projected ball might get to the floor first because it starts with more kinetic energy, and it will therefore go faster.

When the apparatus is tripped, sending the balls on their respective paths to the floor:

- (a) the ball released from rest will arrive at the floor first.
- (b) the ball projected horizontally will get to the floor first.
- (c) the two balls will get to the floor simultaneously.

Click here for Answer #47 after January 15, 2001.

Question of the Week

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For questions and comments regarding the *Question of the Week* contact Dr. Richard E. Berg by e-mail or using phone number or regular mail address given on the Lecture-Demonstration Home Page.