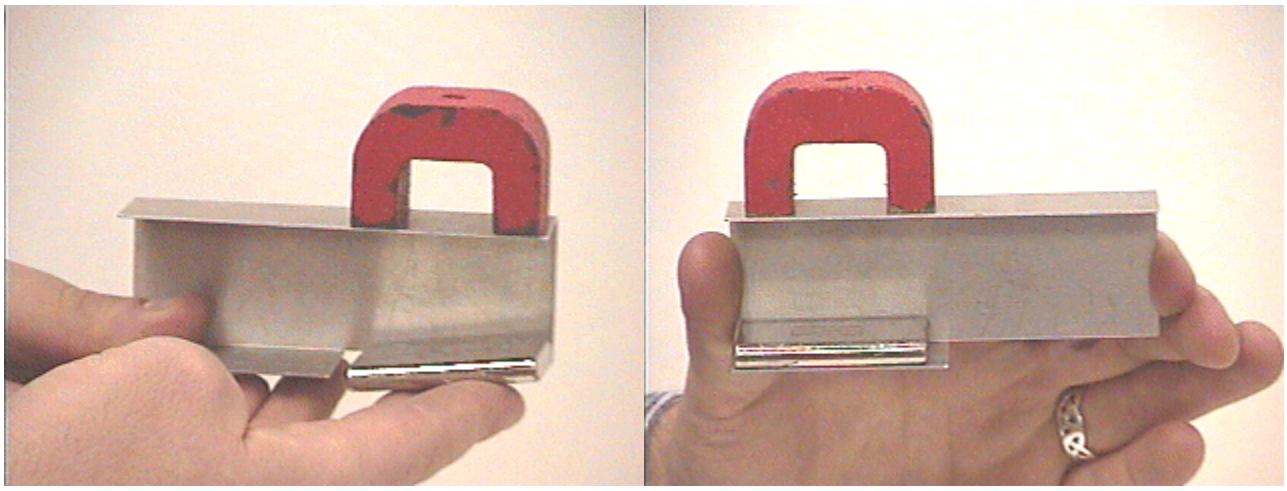
Question #107

A magnet and keeper (made from ferromagnetic material) are held in the position shown in the photograph at the left, and the keeper is released. What will happen? The keeper falls, as seen in an mpeg video by clicking your mouse on the photograph.



A slow-motion video is also available. Now the keeper is placed on the shelf below the magnet, as seen in the photograph at the right. The shelf will now be pulled back very quickly, allowing both the magnet and the keeper to accelerate from rest simultaneously. The question this week is what will happen when they fall. The keeper might fall faster than the magnet, and their separation increase. They might fall at the same rate, keeping their spacing as they fall. The magnet might fall more quickly, catch up with the keeper and stick together. Or perhaps something else will happen.

When the magnet and keeper are dropped simultaneously from their positions as shown in the photograph at the right,

- (a) the keeper will fall faster, so their separation will increase.
- (b) they will accelerate at the same rate, and fall with the same spacing.
- (c) the magnet will accelerate faster, so they will come together.
- (d) other.

Click here for Answer #107 after March 11, 2002.

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.