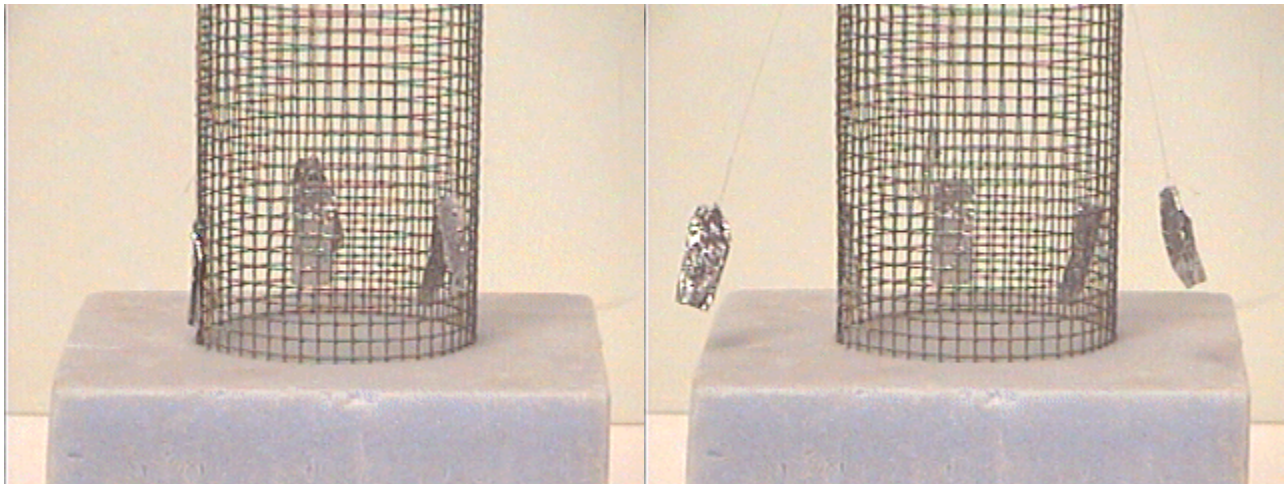
Answer #186

The answer is (b): only the outer foils will move away from the cylinder, as can be seen in the p;hotograph at the right and in an mpeg video by clicking your mouse on the photograph at the right.



In a device like this, according to Gauss' law the electric charge moves to the outside of the cage, leaving no net charge on the inside. Therefore no effect is felt by the foils on the inside of the cage.

This works the same way as a solid metallic cylinder would work, except that using a screen allows us to see inside and observe the effect of charging the cylinder on foils both outside and inside the cage.

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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.