

Morton C. Bond
Temple University

Wired for a walk to aid science.

ORTHOPEDICS

Gait Study Measures Problems of Balance

Why elderly women fall and break their hips more often than men do is the subject of a gait study in Philadelphia's Moss Rehabilitation Center where 30 women from 65 to 86 have been wired for scientific measurements.

One unproved conclusion is that as women get older their centers of balance move upward so that they may get topheavy, but Dr. R. Ray Finley, who is on the staff of Temple University and associate director of Bio-Medical Engineering, Philco Corp., says he and his co-workers are just now breaking down data.

Volunteers for the study said they felt like astronauts as they strode around with six electrodes attached to their legs. The devices—two on the thigh, one at the base of the spine, two on the front of the leg below the knee and one on the calf—were plugged into specially designed apparatus.

If any of the electrical patterns associated with muscle motion or the relationships of joint motion would deviate in any way, it might be important in determining the reason for falling.

The volunteers were asked to recline on a special table that works like a seesaw with one end resting on a scale. Researchers found that for most women the center of gravity is slightly above the middle point of their height.

Some of the women had suffered strokes or had had amputations or arthritis, but at least two of them could keep up with a girl in her 20's.

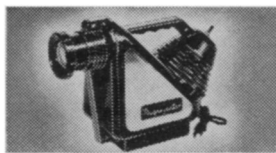
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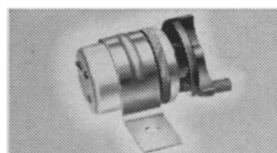
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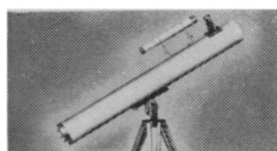
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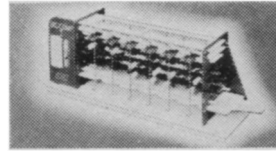


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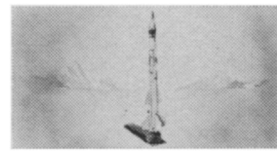
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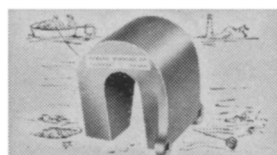
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