

tion in two seconds, the bullet fired when its bore was at right angles to the plane of the stationary target would miss the target on the disc but would hit the stationary target. Thus while the bullet traveled from the muzzle of the gun to the rotating target, the latter moved to the left enough to cause the bullet to miss it and hit the stationary target. A coating of wax placed on the surfaces of the targets enables the observer to locate the position of the impact of the bullet. The accompanying diagram shows the arrangement of parts.

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THE FORMATION OF NODES AND LOOPS ON A WEIGHTED CORD BY MEANS OF A ROTATOR

The apparatus used in performing this simple experiment was as follows: A "chalk line" cord about two and one-half feet in length weighted at one end with an hundred gram mass-hanger had its other end clamped in the chuck of a rotator, the rotator shaft of which rotated about a vertical axis. By varying the speed of the rotator definite speeds were found at which the cord was made to break into one, two, three, etc., clearly defined loops having distinct nodes. The steadiness of these loops and nodes depended upon the steadiness and smoothness with which the rotator ran. Care was taken to keep the mass-hanger rotating about an axis along its stem rather than about some point in its stem as was its tendency to do. Perhaps less twisting of the cord would take place if a heavy braided cord like a heavy fish-line were used instead of a twisted cord. The accompanying diagram shows the arrangement of the apparatus.

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