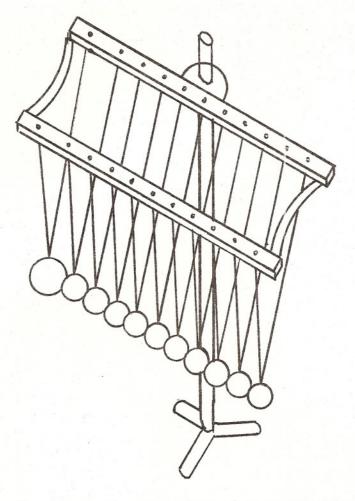
Colliding Balls

M-4 S-1



The apparatus has 10 small balls 1" in diameter, and one larger ball which has approximately four times the mass of a small ball. There are recessed places on top of the frame where balls not in use can be stored temporarily.

Although the lecturer may perfer a different attack, the following sequence makes an instructive demonstration.

- 1. With only two small balls hanging, drop one against the other.
- 2. With three small balls hanging, drop one against the other two.
- With four small balls hanging, drop first one and then two against the others.
- 4. With all ten small balls hanging, drop first one, then two, and then three against the others.
- 5. With one small ball and the large ball hanging, drop the large ball against the small ball.
- 6. With one small ball and the large ball hanging, drop the small ball against the large ball. Observe the motion carefully, particularly that of the large ball; it is interesting and instructive.

Notes: (1) With all balls hanging, dropping the large ball against the rest should drive four small balls off the other end, but it never seems to work well. (2) When dropping two or three balls simultaneously, it is advisable to hold the two forefingers parallel with the several balls between them. In this way the balls being dropped can be kept in line.