

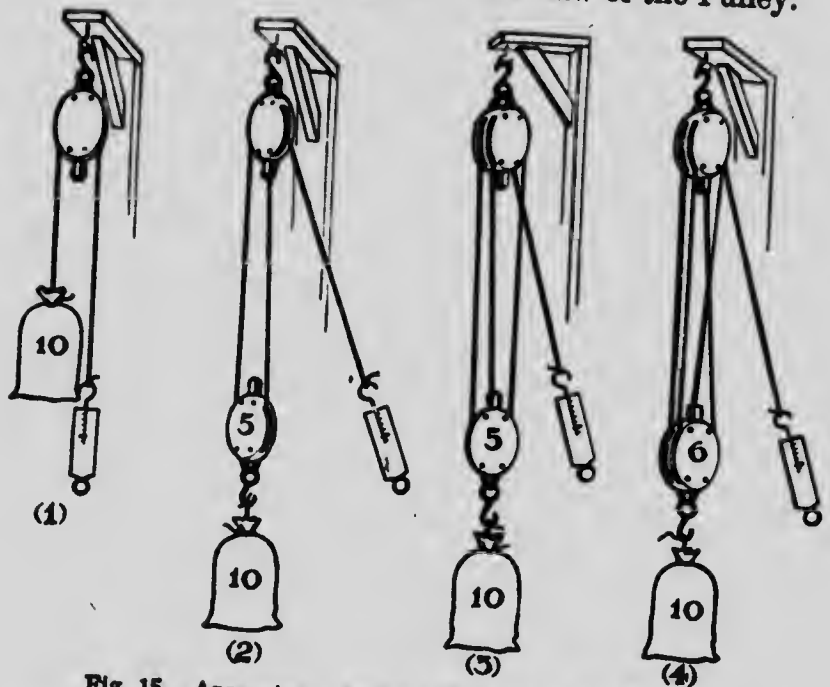
*Experiment XIII.—PART I.—The Law of the Pulley.*

Fig. 15. Apparatus: Pulleys, Weights, Cord, Support.

To test the Law of the Pulley:

In order to decrease the friction it is well to oil the pulley axles and use a stout cord in place of the usual heavy rope.

1. Find the force in (1), Fig 15. We cannot neglect the friction, but we can find the force that would just support the weight if there were no friction, as we did in the last experiment. That is: (a) pull on the spring balance so that the weight is slowly raised. Record the reading on the balance. (b) Decrease the pull so that the weight is slowly lowered, and record the reading on the balance. Then we have:

Reading I = force + friction.

Reading II = force - friction.