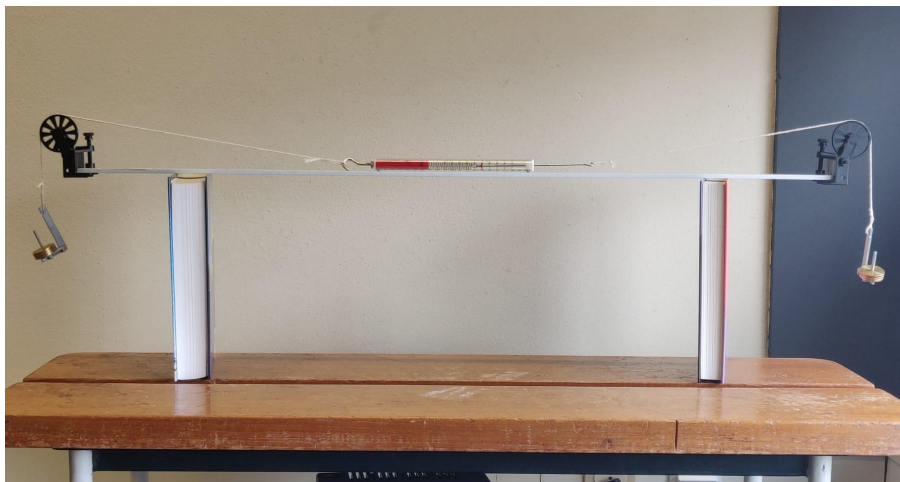


Tension in a string

Key words: Force, masses, balance, pulley



Equipment List:

1. Newton meter
2. Two mass hangers and masses
3. Two pulleys with clamps
4. String

How to assemble and operate:

- Clamp the pulleys at either end of a table/bench such that they overhang the edge
- Tie strings to each end of the Newton meter and cut the strings so that when the Newton meter is at the midpoint of the pulleys, that some string is left over to hang from each pulley
- Pull the strings over the pulleys and tie the mass hangers to the ends of the strings
- Load the mass hangers with equal masses, observe the Newton meter as mass increases

Description/Theory:

This demonstration shows how the forces are balanced, as the Newton meter should stay stationary as the masses are increased, and should show the sum of the forces created by the masses, demonstrating the tension in the string.

Comments/Notes:

Check beforehand that a suitable table or bench is available. The Newton meter can be moved when the masses are balanced to show equilibrium.