

# Peter can hit the ivories again



Peter is a keen pianist and watercolour painter. However, he hasn't been able to do either because if he reached out the weight of his arm caused severe shoulder pain. The solution was to provide a means of balancing most of the weight of the arm so it wasn't carried by his shoulder.

A bracket was clamped to his piano stool which supported a hollow vertical post behind his shoulder. A freely rotating radial arm fitted on top of the column with two small pulley wheels. A cord attached to a sling round the forearm (just below the elbow) passes over the

outer pulley, along to the arm to the inner one above the post. It then goes down the hollow post and is attached to cylindrical weights on its other end. The weights in the post are adjusted to balance the arm weight.

All the parts are made of aluminium to minimise weight. The top fitting on the post incorporates two small ball bearing races so the radial arm swings freely when following Peter's arm. An adjuster is incorporated in the cord so the working height of the sling can be altered to suit. The weights are 150 mm and 75 mm long sections 35mm mild steel bar, tapped at the ends so they can be screwed together. O-rings at each end stop the weights rattling in the column.

