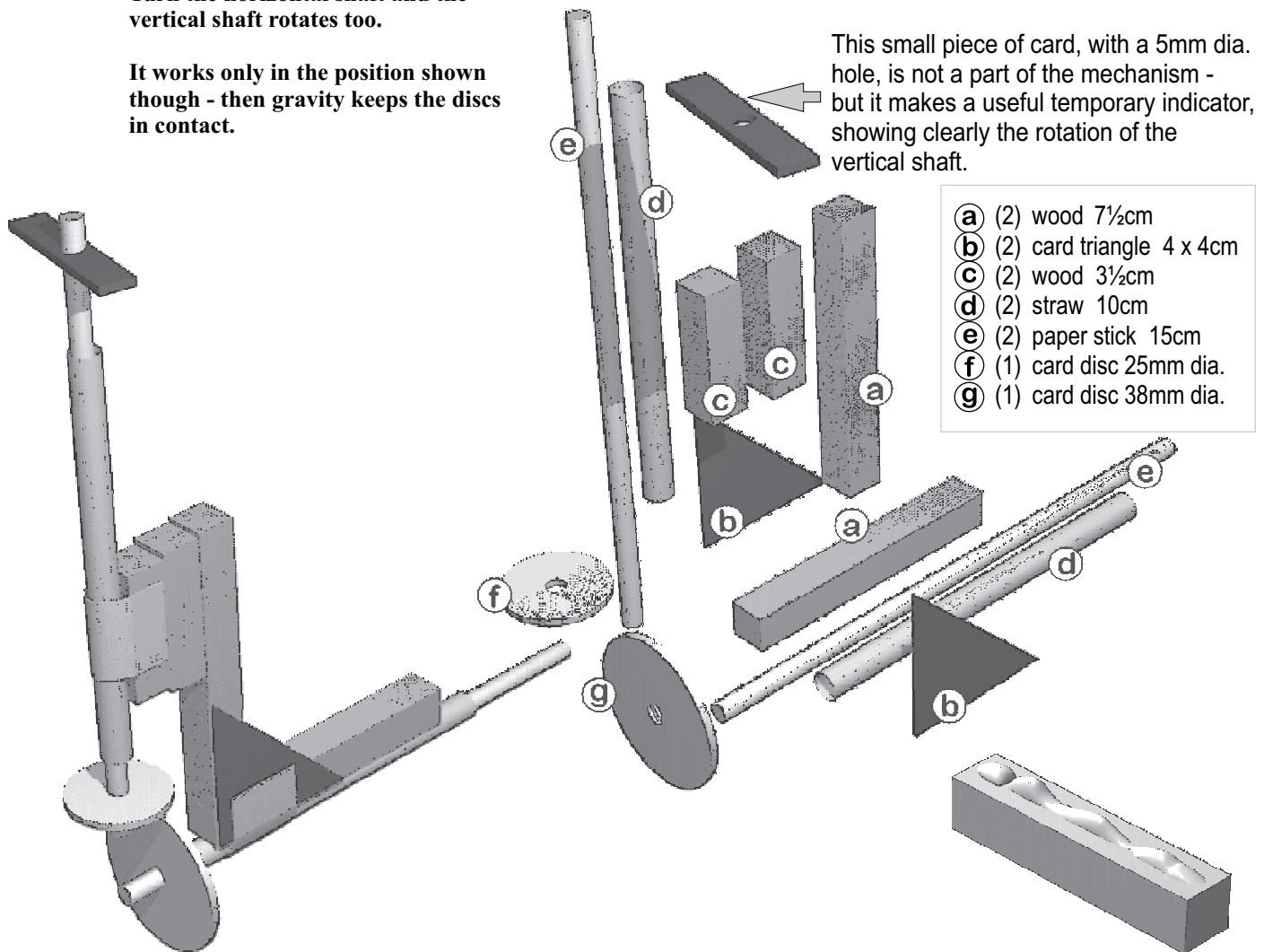


Turn the horizontal shaft and the vertical shaft rotates too.

It works only in the position shown though - then gravity keeps the discs in contact.



- Begin by building the L frame. The wood for the one shown here can be cut as follows: start with a half length of 10mm square wood, (which should be about 29½cm). Cut this into two equal parts, then cut each of these in half to give 4 pieces. Discard one and cut another in half so you have 2 long and 2 short pieces.
- Glue the 2 longer pieces of wood to form a right angle using the card triangles as guides for accurate positioning. The upright should stand on the horizontal piece.
- Glue the 2 small pieces of wood together then glue to the top half of the upright.
- Glue the pieces of straw to the frame. They should protrude about 1cm at the end where the wheels will go. There is very little area of contact when you glue a cylinder (the straw) to a flat surface, so run a raised bead of PVA along the frame where the straws will fit (see drawing). Sit the straw into this glue and hold in place with a short length of tape.
- Fit the smaller disc to a paper stick and attempt to fit the unit upwards into the vertical straw. If there is too much straw protruding, then trim so that the disc just squeezes past.
- Fit the horizontal straw and disc in place. The small disc should rest on the large disc. When the horizontal shaft is turned the vertical shaft should rotate as well. This can be difficult to see unless you add a small 'flag' or indicator to the top of the shaft.

