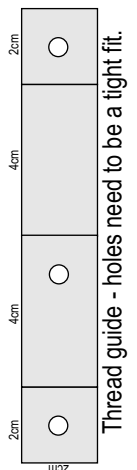


- (a)** (2) card disc 51mm dia.
- (b)** (4) dowel 7½cm
- (c)** (2) card disc 25mm dia.
- (d)** (4) stiff card 8 x 5cm
- (e)** (1) straw 8cm
- (f)** (1) dowel 15cm
- (g)** (1) stiff card 2 x 10cm
- (h)** (1) large paper clip
- (i)** (2) card washers
- (j)** (1) thread - at least 1m.

- Before beginning you will need to enlarge the holes in the discs **(a)(c)**. They come with 5mm diameter holes but we need to fit them on a length of 'jumbo' straw. The simplest way to do this is to use a 6mm hole punch.
- Glue the 4 dowels **(b)** to form a cross on one of the discs **(a)**. Do not let any of them cover the hole. Glue the second disc **(a)** to sandwich the dowels. It is a good idea to push a length of plastic straw through the holes to keep them in line.
- **FITTING THE SAILS** - Make a mark on each dowel about 1 to 2cm from the disc. Place the assembly on a flat surface and run a bead of glue along the top of each dowel from the mark to the end of each dowel. Place each card sail onto the glue then tilt it over until one edge rests on the surface. The sails must all tilt the same way. *Imagine some little mannikin is running round the structure. He runs up each 'ramp' and jumps off the other side. He should never need to change direction or 'climb' up onto the ramp. If you find you have a sail sloping the wrong way, then change the tilt while the glue is still wet. You will realise that our little 'man' can run round clockwise or anti-clockwise - it doesn't matter which, but if he runs clockwise so will the finished windmill.*
- Glue the assembly on to the length of straw **(e)** with the discs **(c)** near the other end of the straw.
- Fit the dowel **(f)** through the straw and put stoppers on each end (Don't push the stoppers on too tight).
- Punch and fold the card **(g)** to make a thread guide and fit in place on the end of dowel **(f)**.
- Fasten thread firmly to STRAW between the small discs and attach paperclip hook.



Hold the hoist facing the wind, (or walk forward briskly), and the revolving straw will wind up the thread. Place a load on the hook and the wind will lift the load. If it doesn't rise, then either the load is too great or the wind is too light.

The little man runs around, running up each ramp and then jumping down →

