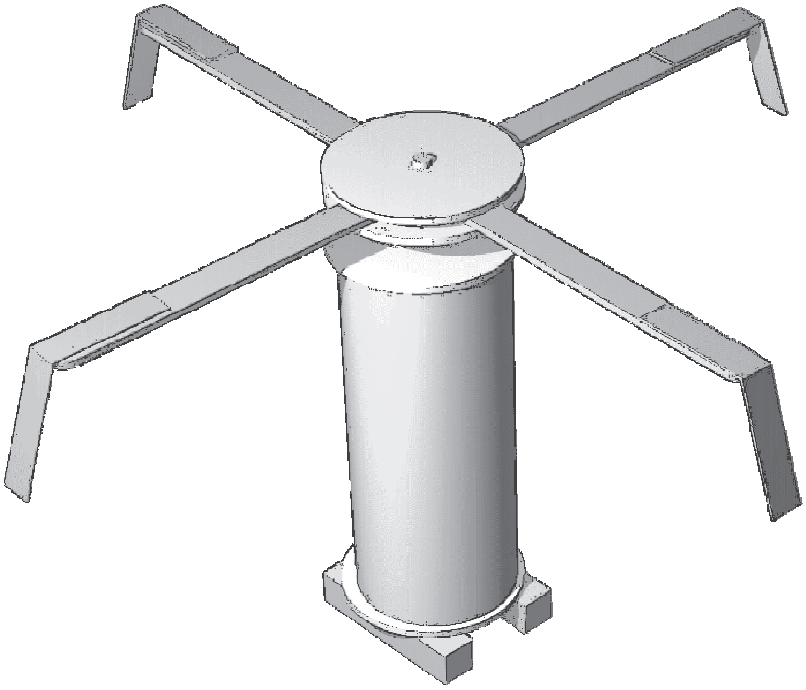
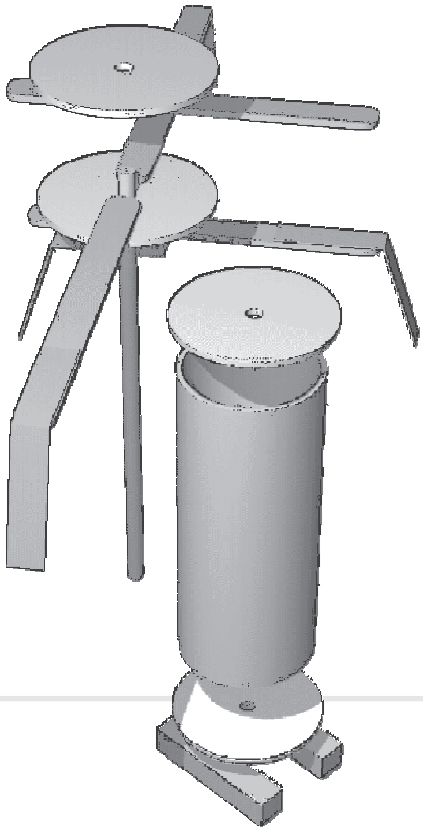


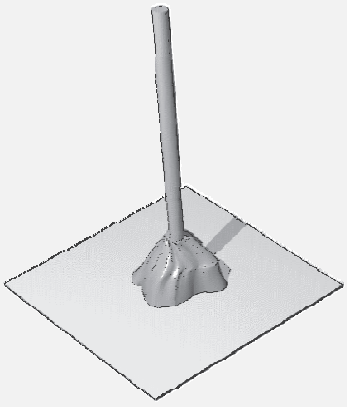


This is not intended as a project in itself.
Though it is set up here as if it is going to be a fairground ride, with 'seats' fastened to each arm, it is really a useful unit to be incorporated into other models.

When we need a model, or some part of a model, to revolve, we need some way of fastening the parts so they are both 'fixed' yet allowed to move. We need a fixed part and a moving part. One will have an axle, shaft or spindle, and the other a bearing for that axle, shaft or spindle. This is very likely to be a hole. It may be a hole drilled through wood, a hole punched through card, or it may be the long hole through the middle of a tube (eg. a plastic straw).

When the moving part is a wheel (with a bearing) and the fixed part is a chassis (with an axle), fastening doesn't usually present a great problem. *(See wheels and axles section).* The problem usually arises when the moving part revolves about a vertical axis like our carousel - or a roundabout - or a lighthouse - or a post mill. Then you often feel that you have to fasten an upright shaft to a card base.
Sadly, many people resort to a stick poked into a blob of modelling clay. I say 'sadly' because this rarely works for very long. The 'stick' wobbles, the hole gets bigger, the stick falls out!

Our little model uses a toilet roll middle and two 51mm diameter card discs. Of course, it doesn't have to be cylindrical, so a square tube with punched square ends would work as well. The shaft will revolve in these holes. *(See Box Clever pages.)*



Trying to hold up a dowel shaft by pushing it into a lump of modelling clay is not a good idea. Neither is a blob of screwed up sticky tape!

This unit is <u>not</u> glued directly to a card base. If it were, the shaft would not stay in the bottom hole, so the whole lot is raised on two pieces of wood. Now the shaft can protrude 1cm through the bottom disc. *The card base is not shown in the drawings - because it may well not be a flat card base but another section of a model, - a truck for example.*

In the example shown above the rotating part is fixed to the shaft. It consists of two more card discs with four lolly sticks sandwiched between them. BUT. . . . . the 'discs' could be square *(squisks?),* and there could be more, or less, than four lolly sticks. In fact, it could be an entirely different model.

The fact that 1cm of shaft sticks out at the bottom of the tube could be useful. **<u>IF</u>** the two pieces of wood became four, then there would be 2cm of shaft sticking out at the bottom. **<u>IF</u>** the bottom disc were larger that 51cm there would be more space underneath. Enough space, in fact, to fit a pulley. Then your carousel - roundabout - lighthouse, or whatever, could be powered.
You could connect an electric motor or fit a simple crank winder, or a wind turbine or . . . . . .?