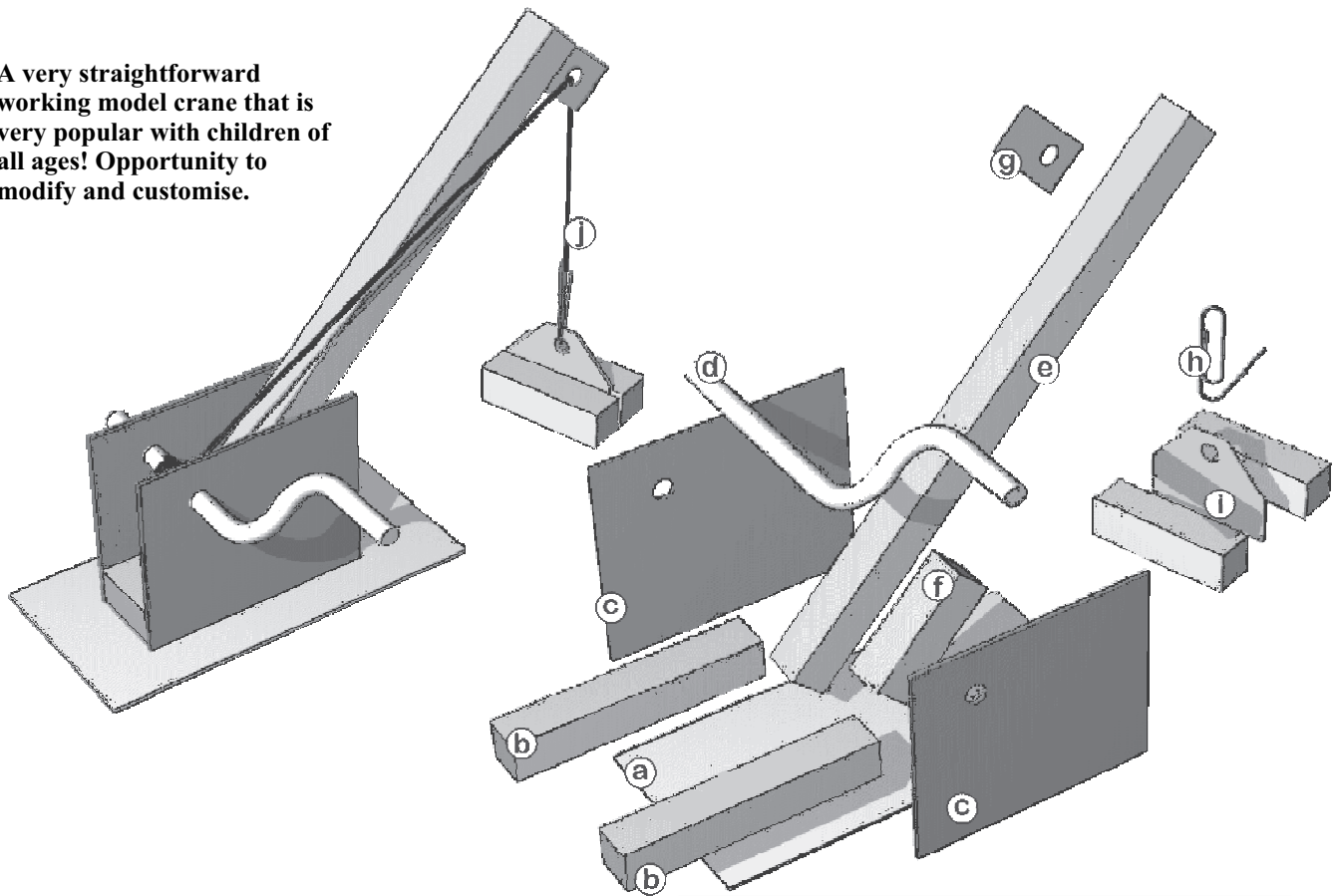


A very straightforward working model crane that is very popular with children of all ages! Opportunity to modify and customise.



- |                              |                             |
|------------------------------|-----------------------------|
| (a) (1) base - card 10 x 5cm | (f) (1) spacer - 3cm        |
| (b) (2) base - wood 5cm      | (g) (1) card 2 x 1cm        |
| (c) (2) stiff card 6 x 5cm   | (h) (1) large paper clip    |
| (d) (1) paper stick 7½cm     | (i) scrap for 'load' thread |
| (e) (1) jib - wood 14cm      | (j)                         |

- Cut the 2 pieces of wood (b) and glue them together and onto the card base.
- Punch the card sides (5mm) near, but not too near, a corner as shown. Punch them together so that the holes are in the same position on both cards.
- Glue the sides to the base assembly. Put something through the holes to keep them in line.
- Build the jib - it should look a little like a wooden toothbrush, and glue between sides at about 45°. (*opposite end to holes*).
- Bend crank and fit in holes and make top 'pulley' from punched card. Fit under top of jib. (It should be the same side of the 'toothbrush' as the 'bristles').
- Tie (or tape) thread to crank between sides, thread through top pulley, and tie a paperclip hook to the end.
- The hook will wind up easily, but friction will prevent it winding down again unless it is weighted. Either make a little load (as shown) to fit on the hook, or weight the thread just above the hook. You could use a small ball of modelling clay or, better still, a wooden bead threaded above the hook.

This crane is so basic that it is very easy to find ways of 'improving' the design. A better system for the top pulley would help by reducing the effects of friction on the cable. A way of increasing the crane's stability would also be an improvement..

The model shown here is taken from another crane project outlined later in the manual. It is virtually the same crane, but it has some of these extra problems solved.

