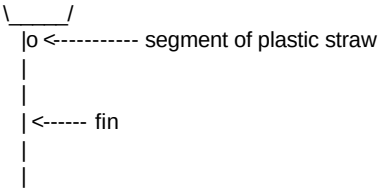
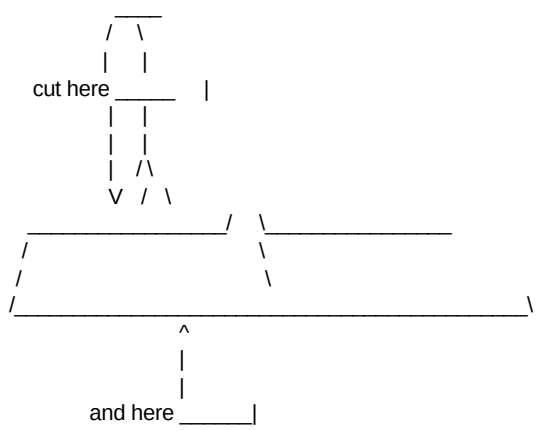
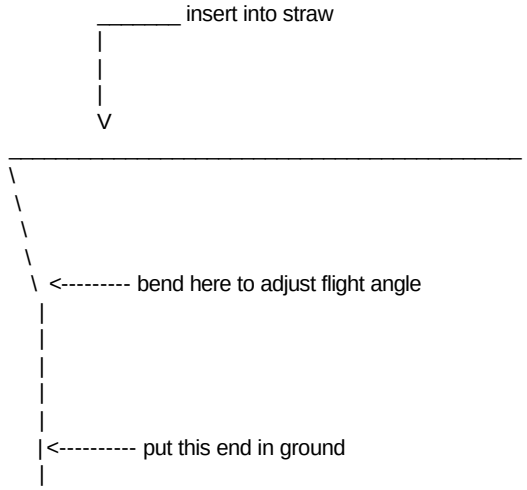


By cutting a coat hanger at the indicated arrows, and bending it, a launch rod can be made. After a fuse is inserted in the engine, the rocket is simply slid down the launch rod, which is put through the segment of plastic straw. The rocket should slide easily along a coathanger, such as the one illustrated on the following page:



Bend wire to this shape:



LONG RANGE ROCKET BOMB

Long range rockets can be made by using multi-stage rockets. Model rocket engines with an "0" for a time delay are designed for use in multi-stage rockets. An engine such as the D12-0 is an excellent example of such an engine. Immediately after the thrust period is over, the ejection charge explodes. If another engine is placed directly against the back of an "0" engine, the explosion of the ejection charge will send hot gasses and burning particles into the nozzle of the engine above it, and ignite the thrust section. This will push the used "0" engine off of the rocket, causing an overall loss of weight.

The main advantage of a multi-stage rocket is that it loses weight as travels, and it gains velocity. Multi-stage rockets must be designed somewhat differently than a single stage rocket, since, in order for a rockets to fly straight, their center of gravity must be ahead of their center of drag. This is accomplished by adding weight to the front of the rocket, or by moving the center of drag back by putting fins on the rocket that are well behind the rocket. A diagram of a multi-stage rocket appears on the following page: