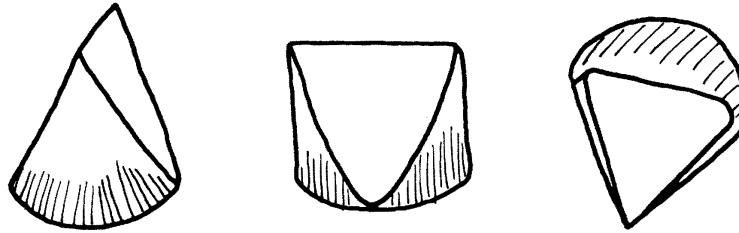
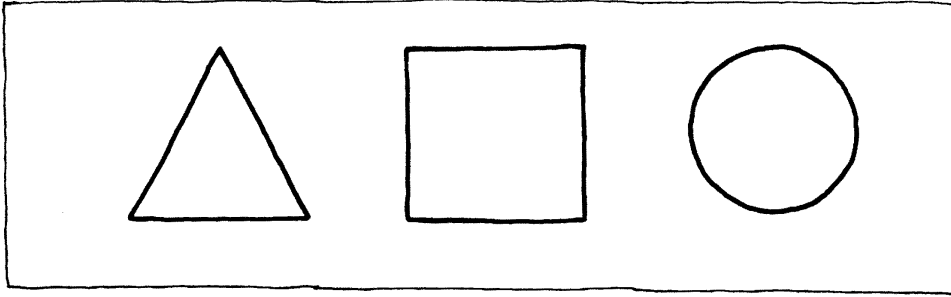


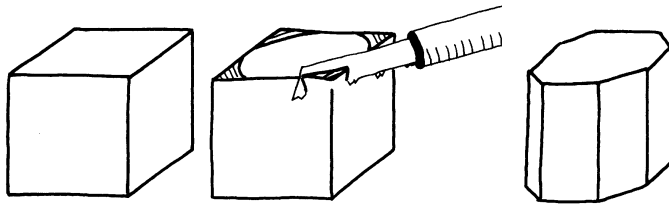
## THERMOCOLE TEASER

This is an old puzzle but the materials used to make it is new and easy to work.



1. This is a very old puzzle. I first saw in the book Fun with Physics by Yakob Perelman around 40 years back. Cut a Triangle, Square and Circle on a thick cardsheet. Think of a single inset / block which can go through all the three shapes - triangle, square and circle.

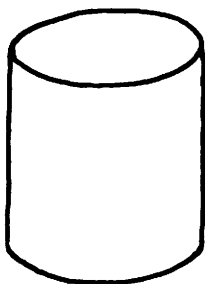
The 3-D inset is not very difficult to imagine. When viewed from the front it should look triangular, turn it at ninety degrees and it looks like a square and its top view looks circular.



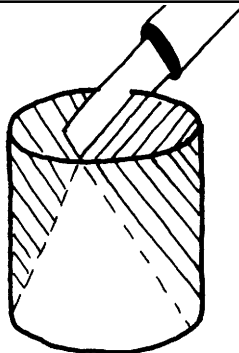
2. Such a shape is difficult to carve out of wood or metal. But it is easy to carve it from thermocole - a throwaway packaging material. First cut a rough cube. Then draw a circle on one facet and slice vertically to make an octagonal shape.



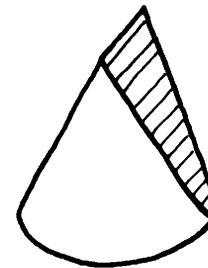
3. Gently sandpaper the edges of the octagon to make it cylindrical.



4. Mark out the cone on the cylinder.



5. Remove the shaded portion with a sharp knife.



6. To make the Magical Block which will pass through a triangular, square and a circular door.