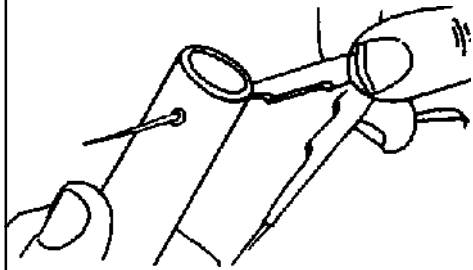
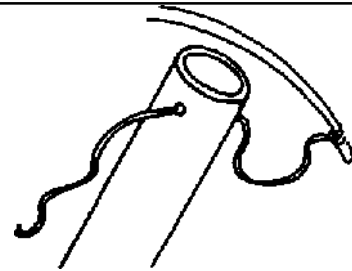


BIRD IN A CAGE

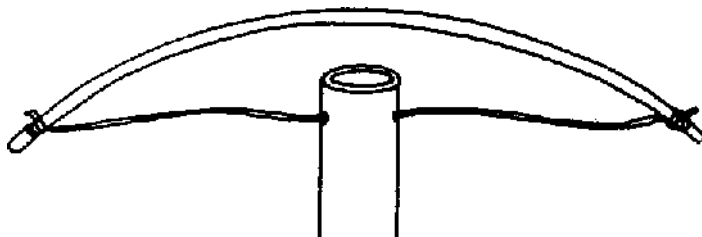
We see things with our eyes. But we continue to see a thing for a little while longer even after it has been removed from sight. This is called persistence of vision. The principle of the bow-drill, still in use by carpenters can be incorporated into an ingenious folk toy to demonstrate the persistence of vision.



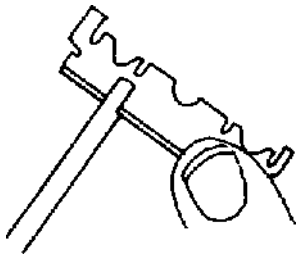
1. Take an empty cotton thread reel. Make a hole through the reel at one end using a divider point.



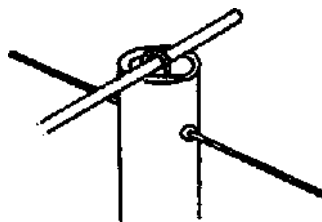
2. Weave a thread through this hole.



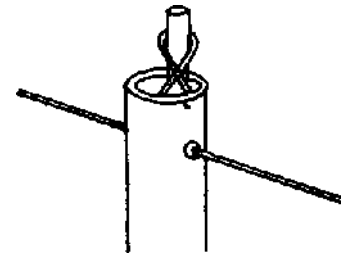
3. Tie the two ends of the thread to the two ends of a strong coconut broomstick bent into an arc. The bowstring should be slightly loose.



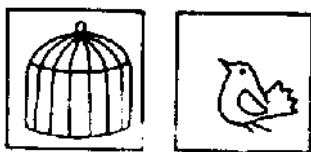
4. Take a 10-cm. long reed from a *phooljhadu* (broom) and split it at one end for about 1 cm in length.



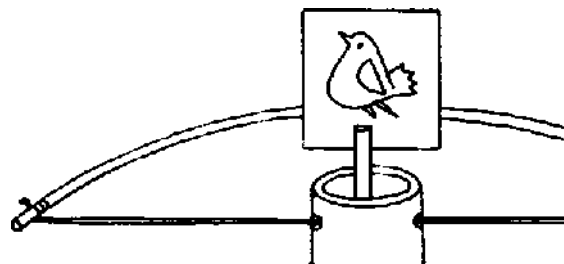
5. Insert the other end of the reed inside the reel and remove out the thread.



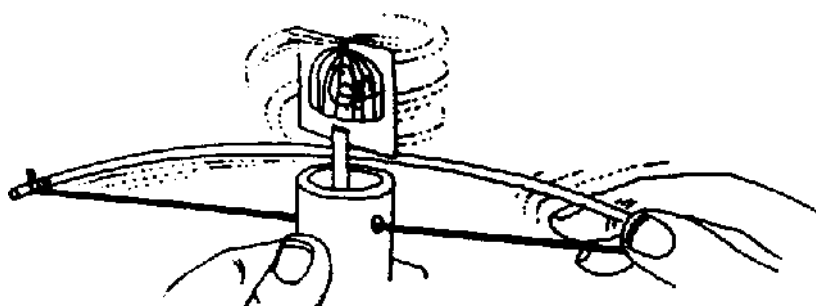
6. Rotate the reed by 180 degrees and insert it inside the reel so that the thread loops once around the reed.



7. Make a bird and a cage on either side of a 3 -cm. square card sheet.



8. Wedge the card in the slit on top of the reed and apply some glue to stick it.



9. Hold the thread reel with the left hand and move the bow to and fro with the right hand. The reed will turn round and round and the bird will appear to be encaged. The bow drill is a beautiful mechanism. It converts the straight-line motion of the bow, into the rotary motion of the reed.