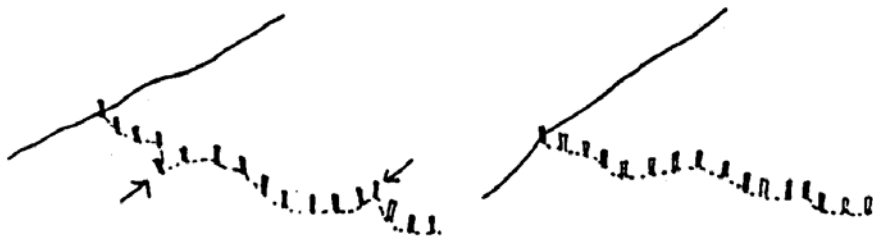


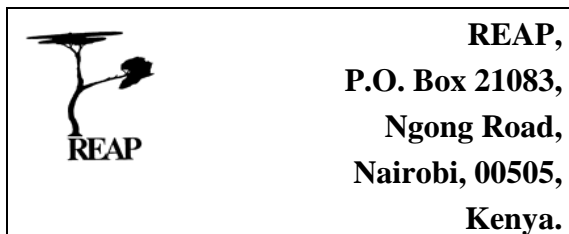
4. Push a stick into the soil below this leg of the 'A' Frame.
5. Move the 'A' Frame along so that the first leg of the 'A' Frame touches the second stick you have just pushed into the soil.
6. Move the other leg again until the string touches the level mark. Push in a third stick below where this leg is. Continue across the field like this, leaving a line of sticks to mark the contour line. If one leg of the 'A' Frame enters a small hole it will not measure well, so fill in the hole with a little soil and measure as before.

When you have finished marking across the field, you may see sharp bends in the contour line. It is difficult to dig ditches or make barriers with sharp bends in them. So before starting to dig the ditches or make the barriers, a few stakes can be moved to make the line more even. Only move a few sticks though, or you will lose the contour.



Move the stakes marked with arrows

After moving those stakes the contour line has no sharp bends



USING AN 'A' FRAME TO MARK CONTOUR LINES.

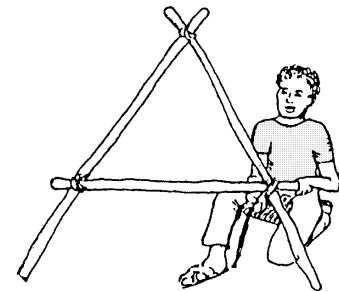
An 'A' Frame is used to find places of the same level on a hillside so that barriers can be made to stop the water and soil washing down the slope. This means more water can enter the soil, stopping it from drying up so quickly.

An 'A' Frame is easy to make from materials available anywhere, and does not normally need anything to be bought. All that is needed to make an 'A' Frame is:

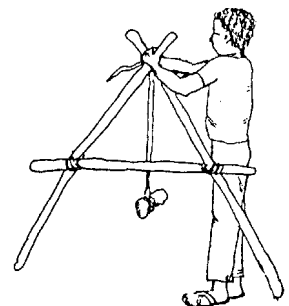
- 2 straight poles about 2 metres long;
- 1 shorter pole about 1 metre long;
- a small rock, or a bottle;
- a pen or pencil;
- some string.

STEP 1. Tying the Poles in the shape of a capital 'A'.

Make sure the two longer poles are cut to the same length, about 2 metres long. Tie them together tightly at the top. Now make the shape of a capital 'A' by tying the shorter pole to the two longer poles about half way down. Make all the ties very tight so they cannot move, and you will have a rigid 'A'-shaped frame. The frame can be made stronger by using nails.



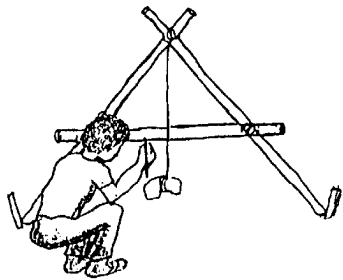
STEP 2. Hanging the rock or bottle.



Take a small rock or a bottle and tie some string tightly round it. Tie the other end of the string to the top of the 'A' Frame, so that the weight swings freely with the rock or bottle below the crosspiece.

STEP 3. Finding the Level.

Stand the 'A' Frame upright on a piece of land that seems level. Push two small sticks into the ground to mark exactly where the legs of the 'A' frame touch the ground.



Hold the 'A' Frame still. When the rock or bottle stops swinging, mark the place where the string touches the cross bar.

Turn the 'A' Frame round so that the legs again touch the two small sticks but with the left leg now touching the stick where the right leg was before. When the rock stops swinging, again mark the place where the string touches the cross bar.

Most times the marks will be in different places.

It is very important to remember to turn the "A" Frame round like this when finding the level, otherwise it will not show the level.



STEP 4. Making the Level Mark.

The two marks on the bar are probably not in the same place, so make another large mark with a pencil or pen **exactly** half way between them. This is the **LEVEL MARK**. If the two marks originally made on the cross bar happen to be in the same place this is already the Level Mark, which can be made darker.

The level Mark is then the place where the string touches the cross bar when the 'A' Frame is on level ground.

USING AN 'A' FRAME TO FIND CONTOUR LINES.

The 'A' Frame is used to find points across a slope that are at exactly the same level. These points are on what is called a **contour line**, or a line that is the same level right the way across the slope. It is important to find the contour lines for water and soil conservation measures such as lines of rubbish, stone lines, grass strips, trenches and terraces. If these barriers are exactly along the contour they will stop the flow of water most efficiently.

The 'A' frame helps to find the contour line, by finding points along the contour that are at the same level. The individual points can then be joined up to make a contour line. The 'A' Frame should be used when the land has been hoed but the soil is not too soft and loose.

1. Collect a lot of small sticks about 30 cm long to act as markers.
2. Push one stick into the soil at the edge of the field at the level where you want to mark the contour line.
3. Place one leg of the 'A' Frame so that it is touching the first stick, on the uphill side of the stick. Now move the other leg, rotating the frame, until the string touches the level mark on the cross bar.

