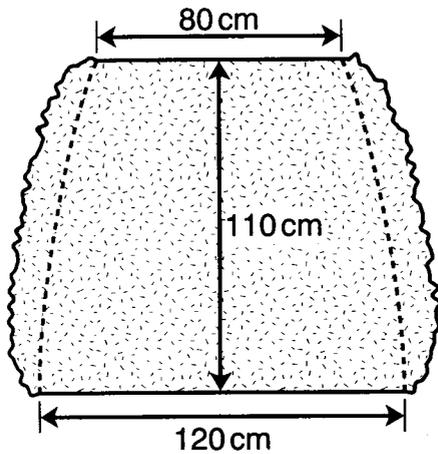
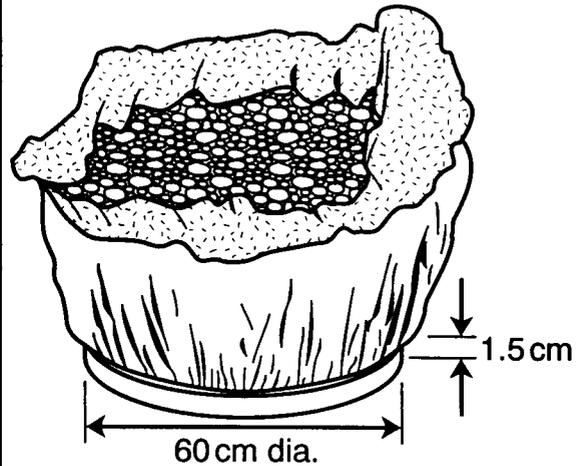


Stages in the making of a water jar in unreinforced mortar.



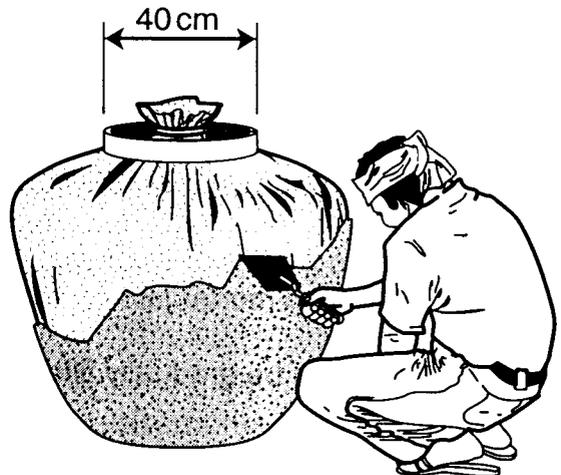
1. Cut two pieces of sacking, 125cm x 110cm, mark out as shown, place together and sew along the sides only. Turn inside out.



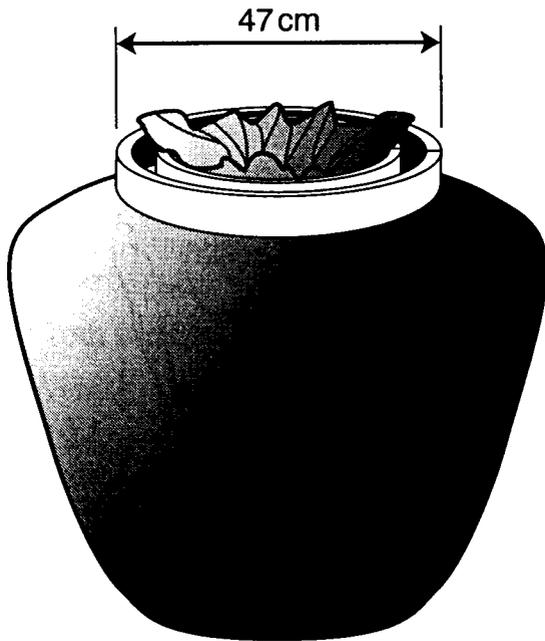
2. Place sack on a pre-cast mortar bottom plate, 60 cm dia. x 1.5 cm thick. Fill sack with sand. Ensure bottom plate sticks out from under the sacking.



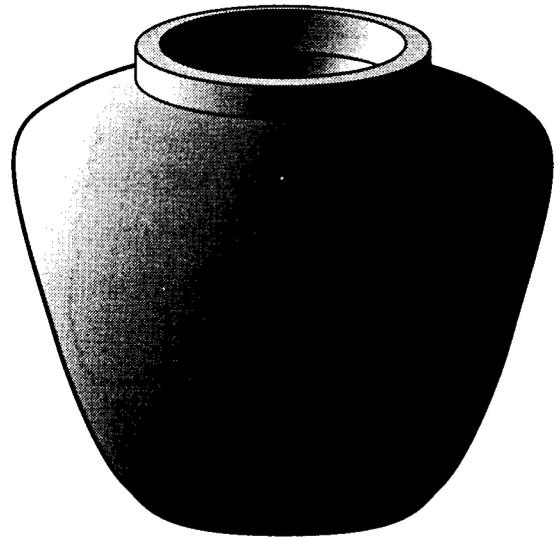
3. When full, tie the top sacking and form into a jar shape by tapping with a block of wood. Spray with water before plastering.



4. Place a metal ring on top of the jar as a mould for the opening. Place the first layer of mortar onto the sacking to a thickness of 0.5 cm.



5. Add a second layer of mortar to give a total thickness of 1cm. Check thickness of mortar by pushing in a nail. Form an opening at the top with a second metal ring.



6. Remove the sand, sacking and rings two days after plastering. Repair any defects with mortar. Paint the inside with cement slurry. Cure for two weeks.

The mortar is a 1:2 (cement:sand) dry mix, by volume.

A 250 litre jar requires 50kg of sand and 25kg cement.

Jars up to 1 m³ have been made this way.

Unreinforced mortar jars can be considerably cheaper than clay jars.

The jars can be gradually filled starting four days after curing:

1st day of use – not more than half full

2nd day of use – not more than three-quarters full

3rd day of use – the jar can be filled.

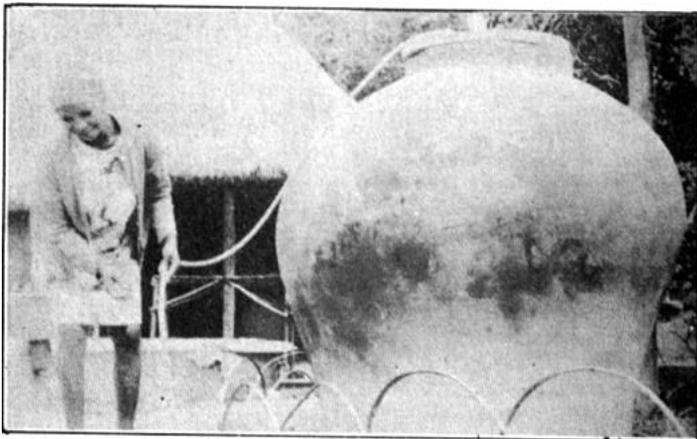
A cover should be fitted to the jar when in use.

Water Supply in Kenya

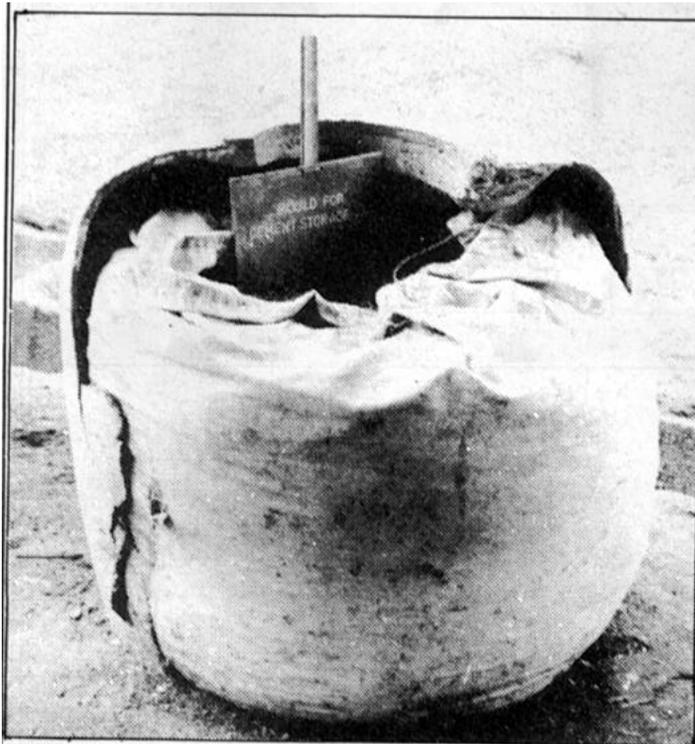
ample supply in the morning. It has been found that with a little assistance the womens' associations are motivated to improve basic problems in their daily living.

How to Make a Cement Storage Jar

This cement jar was developed by UNICEF in Kenya. Apart from collecting rainwater, it can also be used to store grain. The jar makes the water more accessible; it is cheap and simple to build, and by keeping it covered water can be kept pure.



UNICEF photo A cement jar in use



UNICEF photo A cement jar

Materials (for a 300-litre jar)

3 metres of coarse cloth, 1/3 bag cement, fine river sand, string, needle and thread, water. (Greater quantities of all materials are required for the 1,200-litre jar, including chicken mesh and wire. Also piping and a tap).

Construction

A large bag is made from coarse cloth or several sacks. This is packed with any convenient material, such as grass, leaves, chaff, sand or wood-shavings. A circular object is placed in the neck of the bag to make a large opening. The bag is moistened with water and a thin layer of cement (2.5 cm thick for a 1,200 litre jar) is plastered over the outside.

Chicken mesh and wire are wrapped around the bag on top of the cement; another thin layer of cement is then applied.

When the cement is dry, the bag and contents are carefully removed. The jar is then plastered inside with waterproof mortar and left to cure for 10 days. The jar can be made on the ground or placed on a raised platform so that a pipe and tap can be fitted to enable water to be easily removed.

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