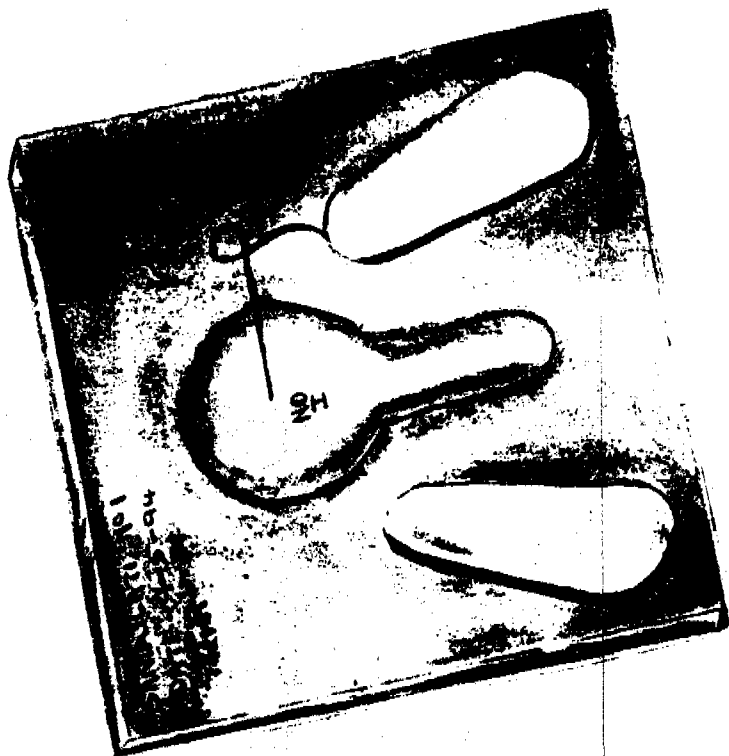


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COMMUNITY WATER SUPPLY AND
ATION (IRC)

SANPLAT CASTING

MANUAL FOR CASTERS

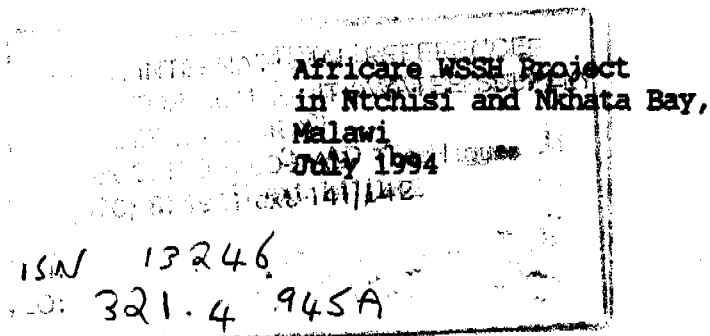


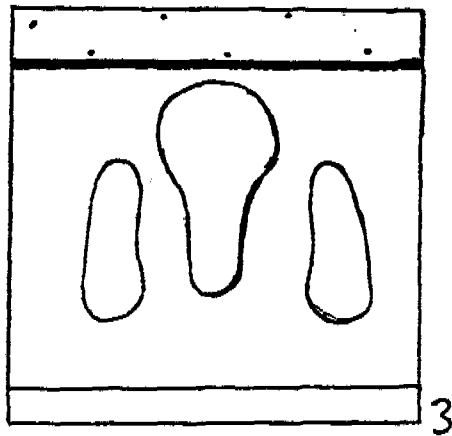
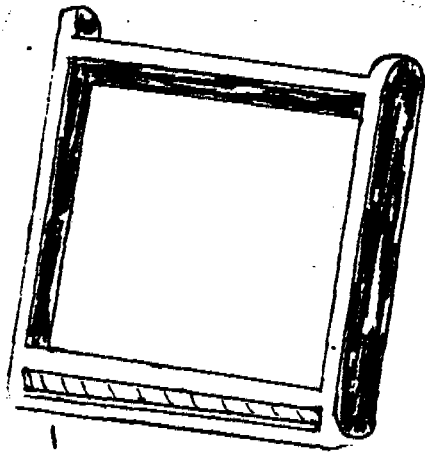
Africare WSSH Project
in Ntchisi and Nkhata Bay,
Malawi
July 1994

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SANPLAT CASTING

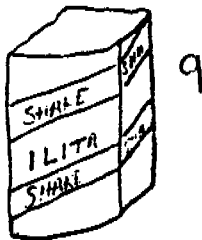
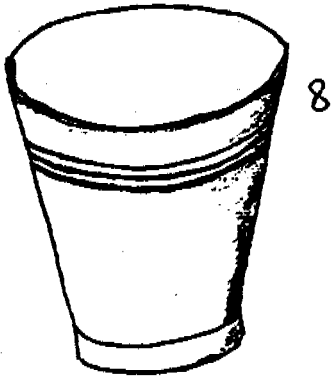
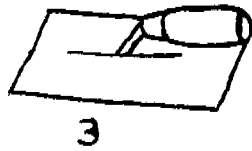
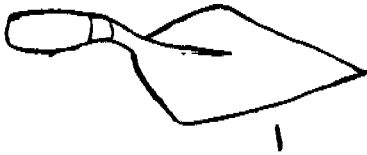
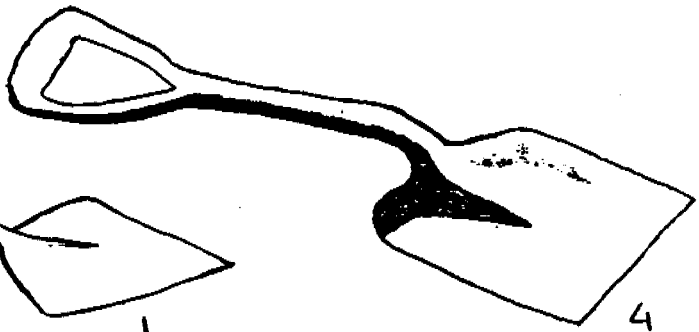
MANUAL FOR CASTERS





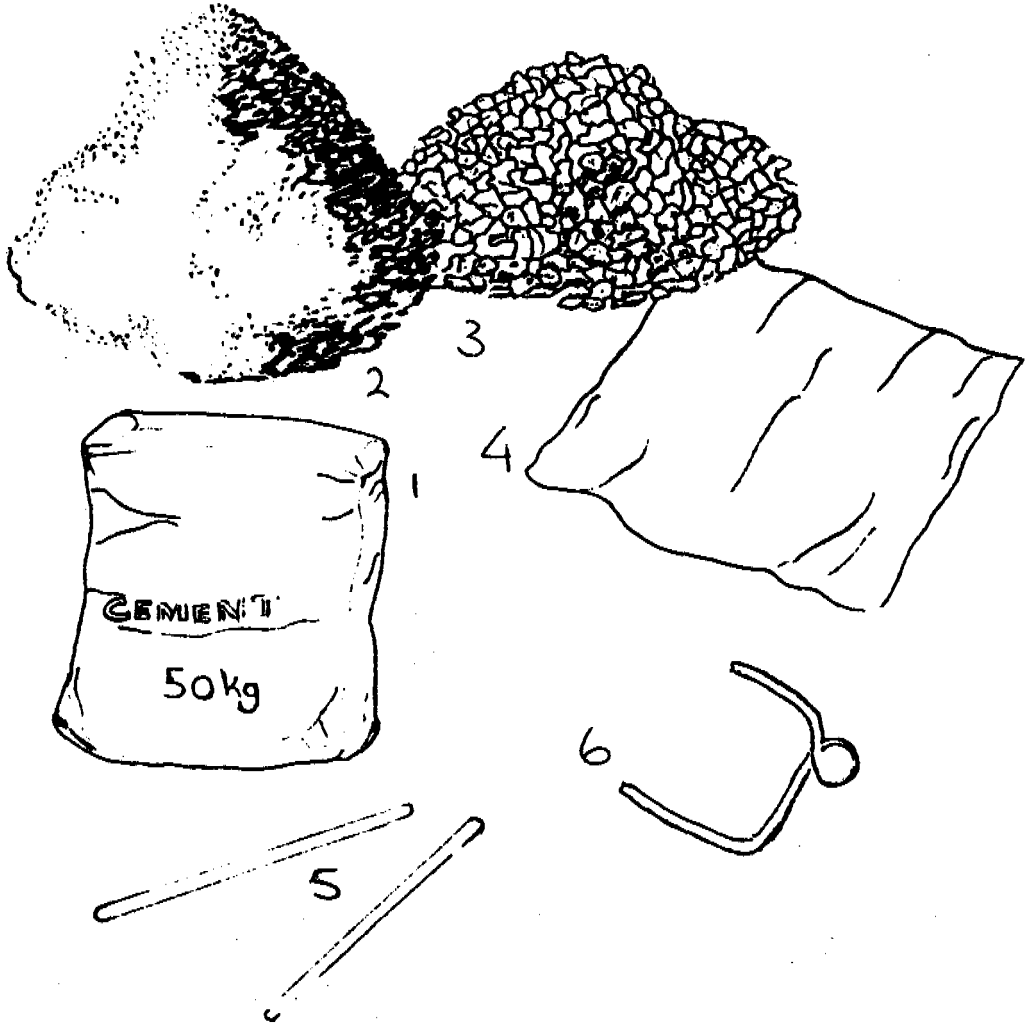
Moulds

1. sanplat frame
2. drop hole mould
3. foot rest mould



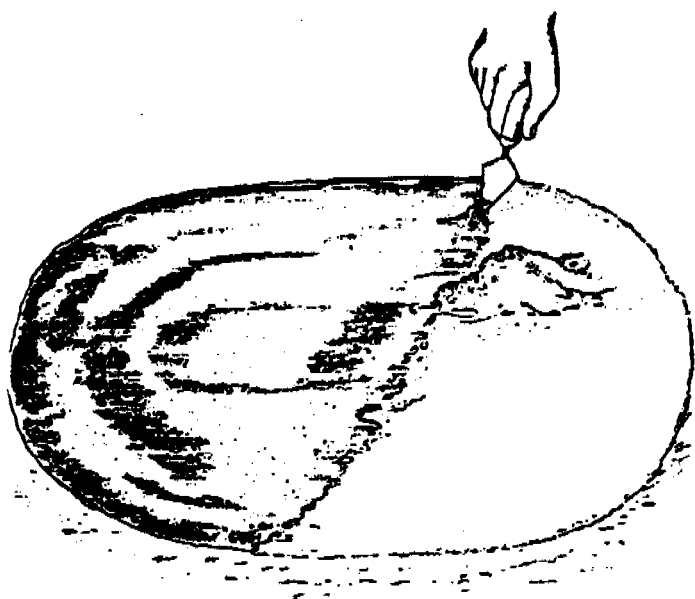
Tools

1. big trowel
2. pointing trowel
3. polishing trowel
4. shovel
5. string
6. 30cm straight edge
7. 80cm straight edge
8. pail
9. 1 liter container
- * set of sanplat moulds



Materials

1. cement
2. riversand
3. quarry stones
4. piece of paper
5. two 30 cm iron bars
6. one 70 cm iron bar



Making a mixing bay

- level the ground
- diameter should be
2 metres
- mortar should be:
 - * 1 pail of cement
 - * 2½ pails of
river sand
 - * 4 pails of
quarry stone



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$$\begin{array}{ccc} \text{[Block]} & + & \text{[Block]} & + & \text{[Block]} \\ \text{[Block]} & + & \text{[Block]} & + & \text{[Block]} & = & 6 & \text{litres} \end{array}$$

For 1 sanplat you need:

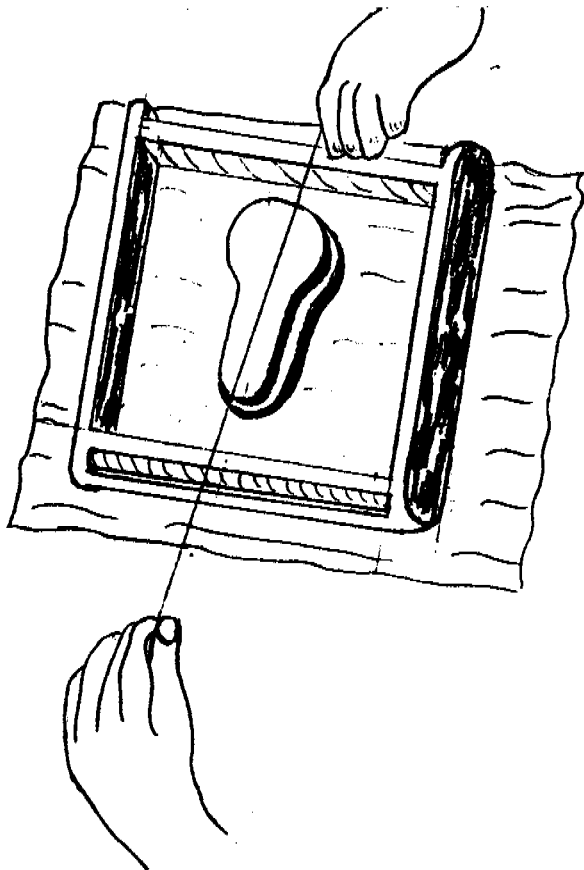
- * 6 litres of cement**
- * 10 litres of sand**
- * 10 litres of
quarry stones**

**For 5 sanplats you will
need 1 bag of cement**



Using the mixing bay

mix well



Making the platform

- mortar for each platform should be:
 - * 5 litres of cement
 - * 8 litres of sand
 - * 8 litres of quarry stone

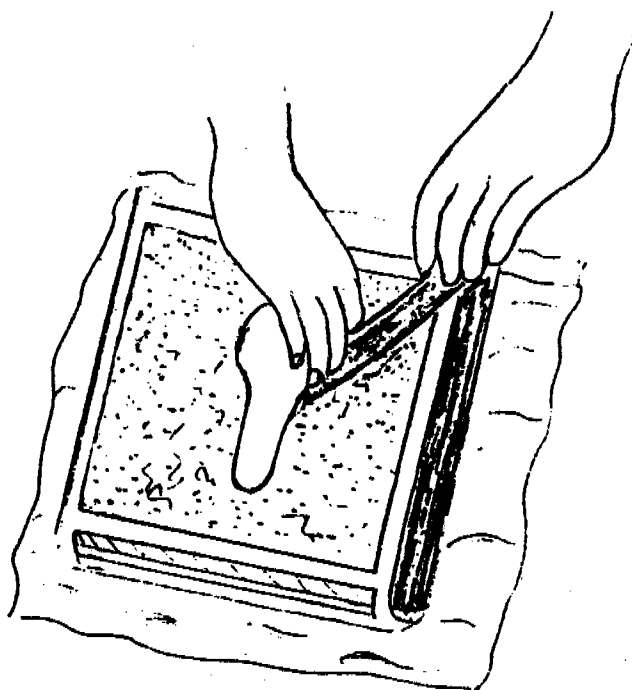
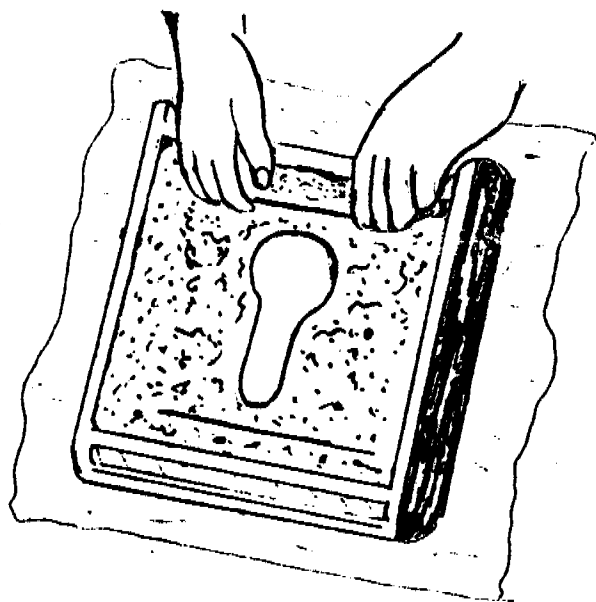
- level the ground with the longer piece of wood

- cover the ground with paper

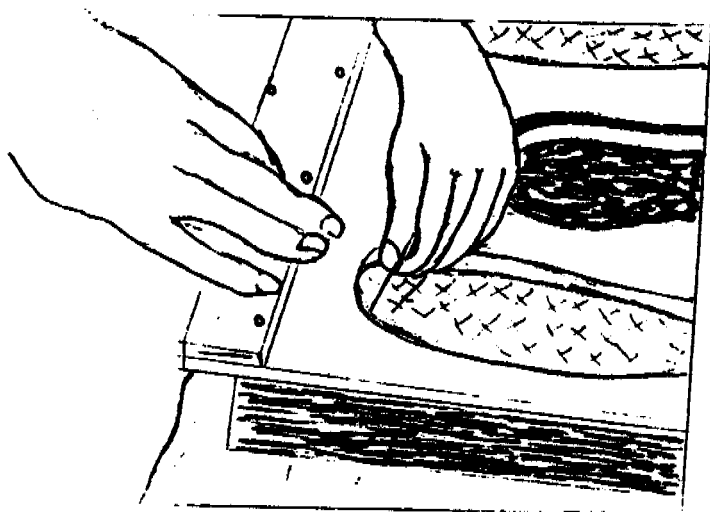
- put the frame on the paper

- put the drop hole mould exactly in the middle, using a string

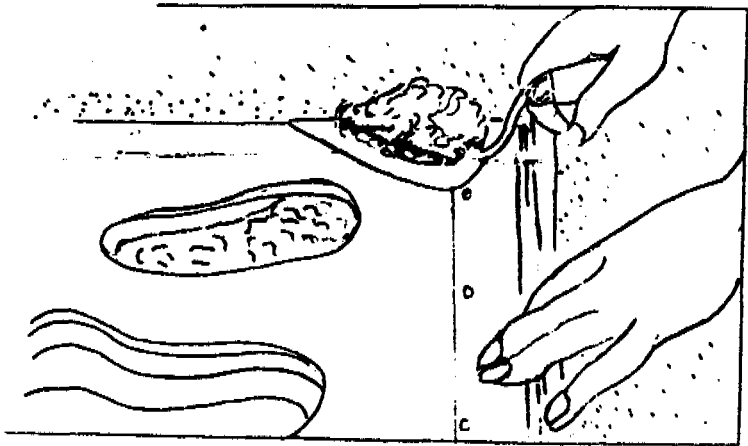
- fill the frame with concrete and compact well



- compact very well around the drop hole mould
- cut a groove in front and behind the drop hole mould, exactly in the middle of the concrete
- put the two 30 cm bars in the grooves, cover the bars and compact well
- compact the concrete with the 30cm wood, for smooth inclination
- polish the surface with a polishing trowel or a big trowel



- center the foot rest mould around the drop hole
- scratch the area of the foot rests, using the foot rest mould
 - * scratches must be deep enough, for good fixation of foot rests to the platform
- inscribe the sanplat



Making the foot rests

- mortar for each sanplat should be:
 - * $\frac{1}{2}$ litre of cement
 - * 1 litre of sand
 - * 1 litre of quarry stone

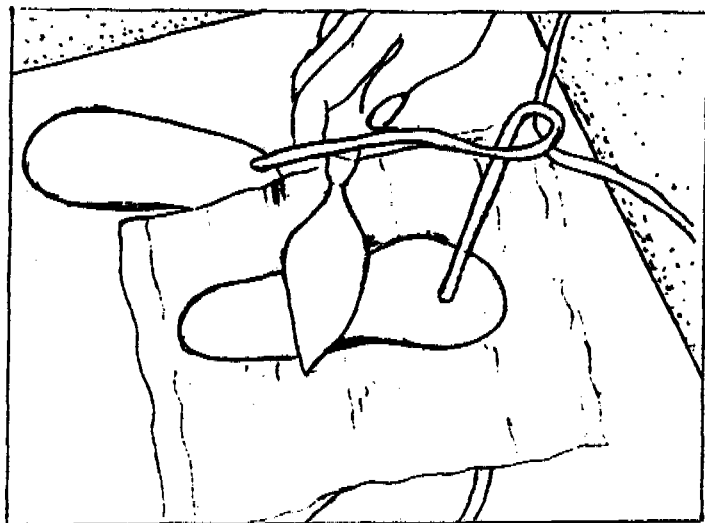
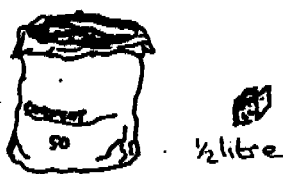
- soak the platform with water

- smear the scratched area with water and cement

- center the foot rest mould around the drop hole

- fill the holes for the foot rests with stiff mortar

- cut and finish the edges and polish the footrests



Making the lid

- mortar for each sanplat should be:
 - * $\frac{1}{2}$ litre of cement
 - * 1 litre of sand
 - * 1 litre of quarry stone

- bend the 75 cm bar to make the handle

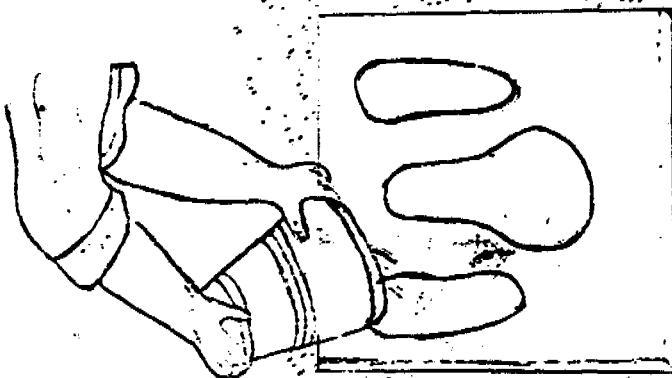
- put a piece of wet paper in the drop hole, fill the drop hole with mortar and shape the surface

- cut a groove in the middle of the lid, place the handle and compact well before finishing the surface

- inscribe the lid

Curing

- remove the lid on the 3rd day after it was casted and keep the drop hole full of water
- for full strength of the cement, the sanplat must be kept damp for at least one week



Common mistakes

- quarry stones too big
- no smooth surface of drop hole sides, due to:
 - * bad compactation
 - * big quarry stones
- no smooth corners of platform:
 - * compact well in corners
 - * remove mould carefully
- crack in the lid:
 - * remove lid on 3rd day
 - * centre handle in the middle of the lid
 - * compact well
- foot rests and lid too thick:
 - * polishing not well done

This SANPLAT booklet is produced
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in Ntchisi and Mkhata Bay districts
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Africare