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A project of Volunteers in Asia

Clod Crushers. Two Designs

ITDG Agricultural Equipment and Tools No. 10

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AGRICULTURAL EQUIPMENT
AND TOOLS FOR FARMERS
DESIGNED FOR LOCAL CONSTRUCTION

CLOD CRUSHERS (TWO DESIGNS)

DEVELOPED BY: R.B. BROCKBANK, Bunda College of Agriculture, Malawi.

DESCRIPTION: These two simple and cheaply-constructed implements are used for reducing the size of clods in cultivated land prior to ridging up the soil. They are made principally of 'gum' (Eucalyptus species) poles.

Type 1

The roller gangs are built up from short pieces of pole, each drilled and grooved so that when fitted onto the steel bar axle they rest at an angle of approximately 60° to each other. The poles are mounted on their axles with sufficient play to provide a self-cleaning effect. This implement is provided with additional weight by either ballasting the frame or fitting a seat on the frame for the operator.

Type 2

This model consists of short pole pegs attached in a staggered formation around the circumference of a single heavy log roller. The pegs need to be drilled before nailing to avoid splitting. Steel bolts, sharpened at the ends, of $\frac{1}{2}$ " (12.5) to $\frac{3}{4}$ " (19) diameter are driven into the centre of each end of the roller, to which the draught chains are attached. A swingle tree is fitted to the roller draught chains.

Note: Figures in brackets are in millimetres.

KEY: TYPE 1.

<u>ITEM</u>	<u>NAME</u>	<u>QUANTITY</u>	<u>ITEM DESCRIPTION</u>
A	FRAME SIDE MEMBER	2	Wooden plank 4" x 1" (102 x 25), 40" (1016) long.
B	FRAME END MEMBER	2	Wooden plank 4" x 1" (102 x 25), 30" (762) long.
C	DRAUGHT CHAIN	1	Mild steel link chain of convenient length.
D	REAR ROLLER PEGS	As required	Eucalyptus poles each 9" (229) long.
E	ROLLER AXLE	2	$\frac{3}{4}$ " (19) diameter mild steel bar.
F	FRONT ROLLER PEGS	As required	Eucalyptus poles each 12" (305) long.
G	-----		Diagram showing roller pegs mounted at 60° to each other.
G	-----		View showing a roller peg. Each peg has grooves cut at 60° on both sides.

KEY: TYPE 2.

<u>ITEM</u>	<u>NAME</u>	<u>QUANTITY</u>	<u>ITEM DESCRIPTION</u>
J	ROLLER	1	Eucalyptus log, 15" - 18" (381 to 457) in diameter, 36" - 48" (914 to 1219) long.
K	ROLLER PEGS	As required	Eucalyptus pegs, 2" - 3" (51 to 76) in diameter, 3" (76) long.
L	DRAUGHT CHAIN	1	Mild steel link chain of required length.

