



Centurion
UNIVERSITY

Shaping Lives...
Empowering...

MOULD BOARD PLOUGH



Centurion
UNIVERSITY

Shaping Lives...
Empowering Communities...

Parts of MB plough

Mould Board Plough Bottom Share

- a. Point of share
- b. Cutting edge of share
- c. Wing of share
- d. Gunnel of share

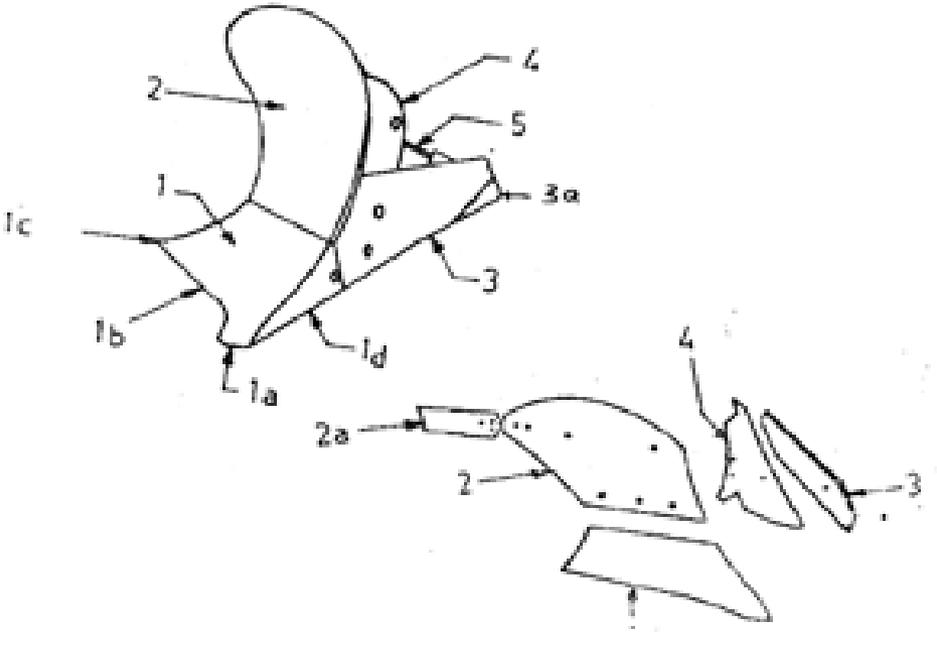
2. Mould board

Mould board extension

2b

Shin of mould board

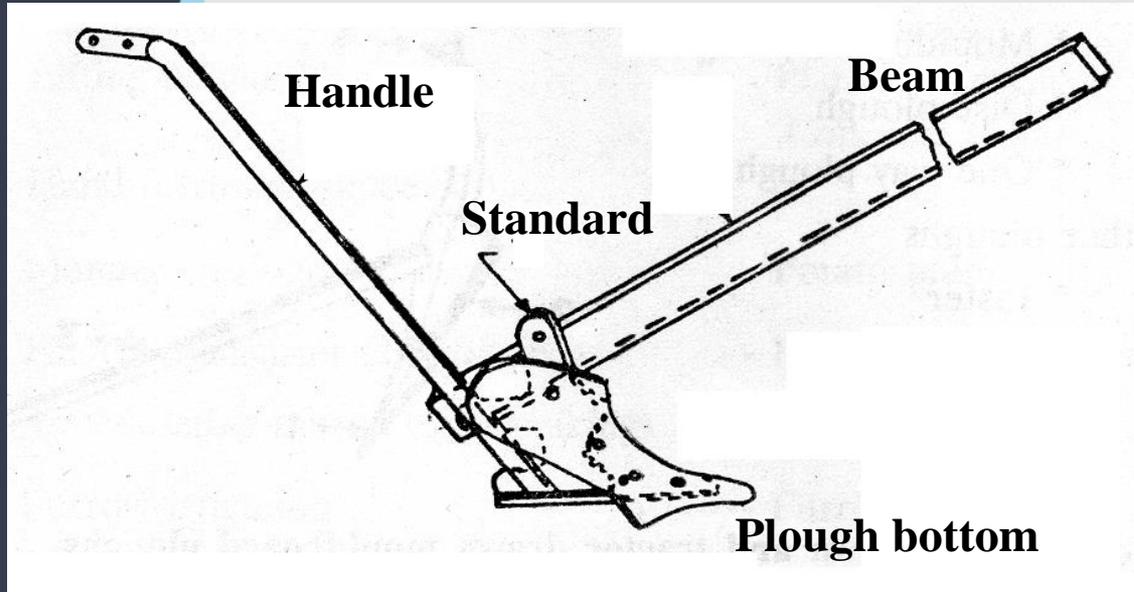
3. Landside
 - a) Heel of landside
4. Frog
5. Brace





Centurion
UNIVERSITY
*Shaping Lives...
Empowering Communities...*

Animal drawn MB plough

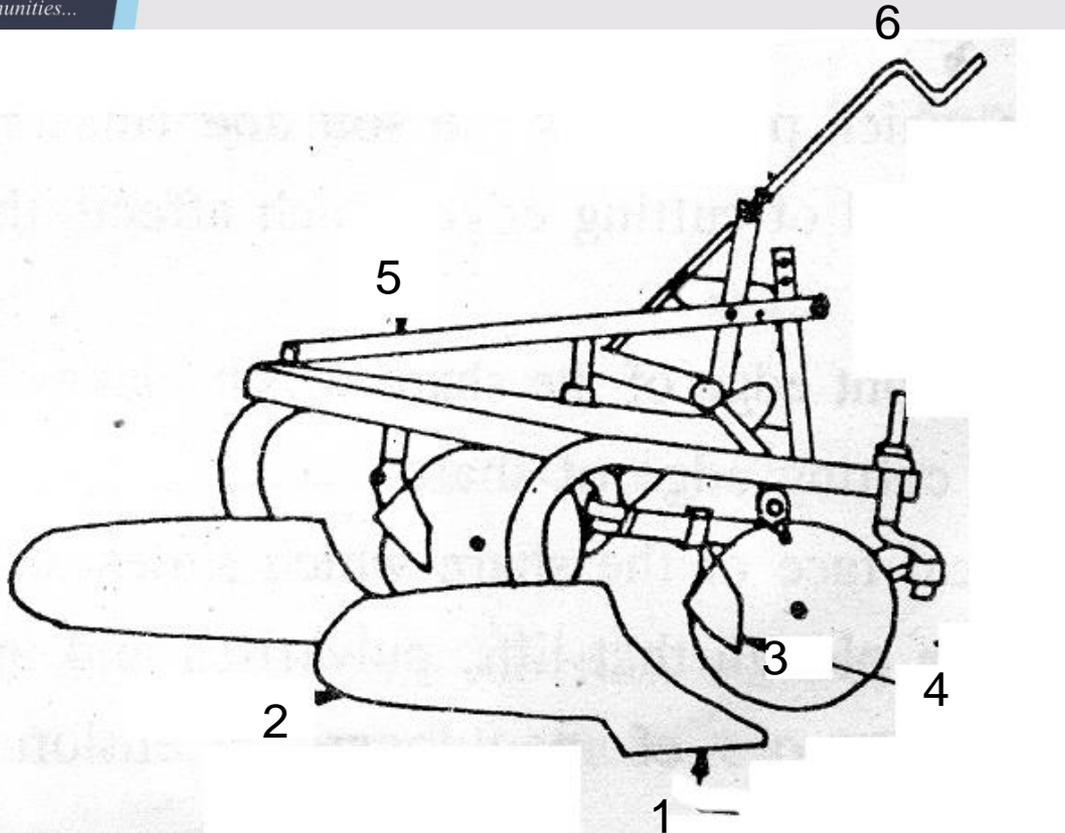




Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

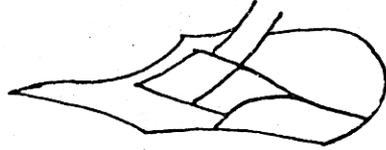
Tractor drawn MB plough



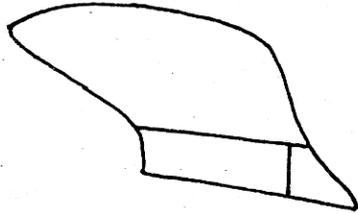
- 1 Share
- 2 Mould board
- 3 Jointer
- 4 Coulter
- 5 Frame
- 6 Depth of control screw



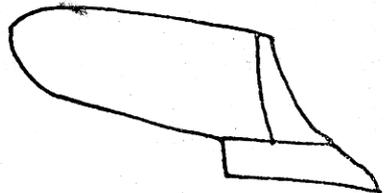
Types of share



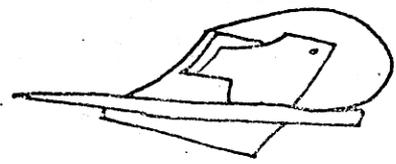
Slip share



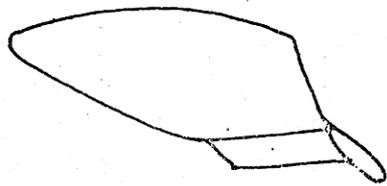
Slip nose share



Shin share



Bar share

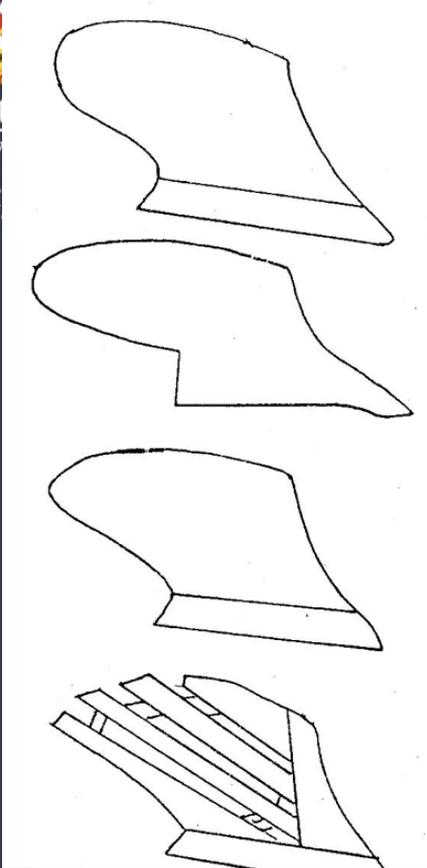


Bar point share



Central
UNIVERSITY
Shaping Lives
Empowering
Communities

Types of mould board



Stubble bottom

General purpose

High speed bottom

Slut type bottom



Sod breaker bottom

Land side



Centurion
UNIVERSITY

*Shaping Lives...
Empowering Communities...*

The landside acts as one of the wedge, which is formed with the share.

It is a long flat metal piece bolted to the side of the frog.

It absorbs the side thrust that is caused when the furrow slice is turned and provides lateral stability to the plough.

Length of landside depends on type of plough & soil.

Height of landside is 5-10 cm.

Length

Normal plough: 30 cm

40 cm with heel when used in abrasives soil

50 cm when no rear furrow wheel



Mould board accessories

Depth control wheel

to maintain uniform depth and is a must in extremely variable ploughing conditions.

Coulter

used to help loosening the furrow slice from the wall. It also cuts through the trash so that the plough can cover it better. Coulters also reduces the draft of the plough.

Jointer

Jointer is alike a miniature plough bottom and hangs over the plough bottom. It cuts off a narrow ribbon of the furrow slice just above the soil and a little ahead of the plough.

Rear furrow wheel

Carry the side thrust of the plough against the furrow wall. On larger mounted type ploughs, the rear furrow wheel supports the rear end of the ploughs also. It takes $1/3^{\text{rd}}$ weight of the plough. Keeps the plough running straight. It also controls the depth of the rear bottom of the plough.

Coulter

Function:

Cuts into $\frac{1}{2}$ to $\frac{2}{3}$ rd of furrow slice

Cuts the furrow slice edge and leaves the furrow wall clean

Cuts the trash over the surface of the field for better coverage by the furrow slice.

Reduces the plough draft

In hard soil, the centre of the coulter should be slightly behind the share point.

For normal and hard soil it should be above the share point.

For soddy land, above the share but 12 mm above

Transversely, it is 12 -20 mm towards the landside.

Types of coulter

Plain coulters: It is used when trash is not heavy.

Notched coulters: It is used in hard ground and heavy trash conditions

Fluted or ripple edge coulter: This type of coulter is used in very heavy trash conditions.

Jointer

Centurion
UNIVERSITY

Cuts into 50 -75 mm furrow slice from the top

The trash at the top of the furrow slice is moved towards the ploughed land so that it can be buried deeper.

A little soil is thrown on the top of the trash to reduce its tendency to pitch.

It reduces air space.

Transversely it is 12 -16 mm away from landside

Rear furrow wheel

It is mostly used in tractor drawn ploughs.

The function of the rear furrow wheel is to carry the side thrust of the plough against the furrow wall.

On larger mounted type ploughs, the rear furrow wheel supports the rear end of the ploughs also.

It carries $1/3^{\text{rd}}$ weight of the plough.

It helps to control the depth of rear bottom of the plough.

It reduces the landside pressure.

It should have a clearance of 12 – 20 mm from the furrow wall.