INSTRUCTION MANUAL

Fordson

PLOUGH

"ELITE"

3-2 FURROW

By Appointment – Motor Vehicle Manufacturers

FORD MOTOR COMPANY LTD. DAGENHAM.

Price 9° Post Free

FOREWORD

The Fordson plough has been designed as a general-purpose three-furrow plough, easily convertible for use as a two-furrow plough. Semi-Digger bottoms are also available.

Service and adjustment can easily be carried out, and all controls are within easy reach of the operator. One of the main features is the rigidly-built frame, giving a 24-in. under-beam clearance.

Provision is made for adjusting the furrow width from 10 in. to 12 in., while a screw adjustment for depth, and a ratchet lever for levelling has been incorporated in the design.

The 16-in. steel disc coulters are fitted with adjustable skimmers.

The rear furrow wheel has an adjustment for loading and side thrust and is automatically raised into the transport position when the box lift is operated.

A ground clearance of 5 in. is obtained beneath the shares when the plough is raised into the transport position.

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OF THE

FORDSON PLOUGH

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SPECIFICATION

Frame Beams	Size 3 ins. by 1 in. Manufactured of heat-treated rolled steel
Plough Legs	Heat-treated cast steel.
Shares	Chilled cast iron.
Mouldboards	Three-ply laminated steel. Types available :—Semi-digger or General Purpose.
Furrow width	Adjustable, 10 ins. or 12 ins.
Furrow depth	Adjustable by means of a hand screw. Maximum depth, 11 ins.
Levelling	Controlled by ratchet lever which adjusts front furrow wheel position.
Screw Hitch	Screw type, adjustable, giving 15 ins. side movement.
Box Lift	Incorporated in land wheel and operated by trip rope.
Disc Coulters	16 ins. diameter. Adjustable from the vertical to give 15° undercut. Adjustable coulter cut.
Coulter Assemblies ...	3-in. adjustment to front and rear from central position. 9-in. vertical adjustment.
Shock Shoe	Mounted under rear plough body.
Automatic Safety Release coupling	Spring-loaded safety release coupling obtainable from Dealer at extra cost.

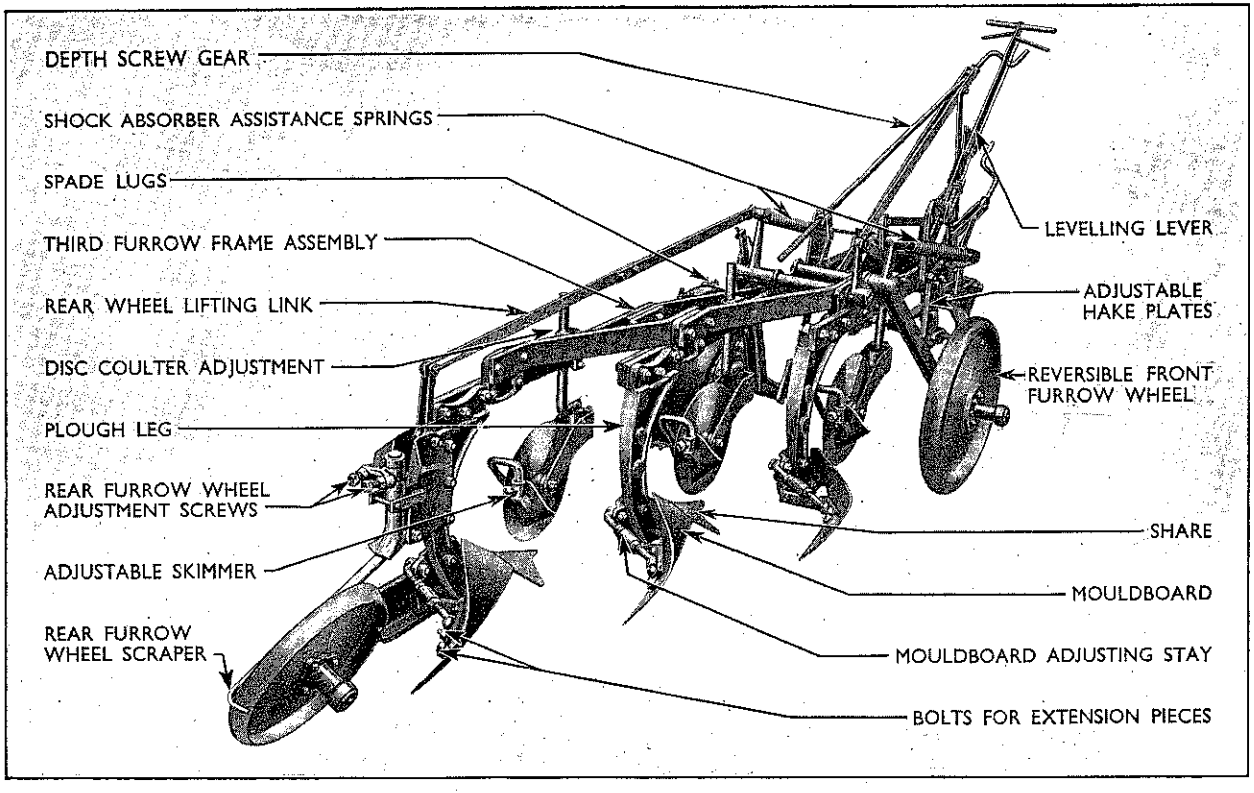

Fig. 3.
Components on Three-Furrow Plough

PREPARATION OF NEW PLOUGH

On receiving a new plough, remove the locking wire from the various parts that have been secured for transportation.

All points shown on the lubrication chart (see Fig. 8) should be greased. These are as follows :—

Box lift assembly	2 points
Land wheel hub	1 point
Front furrow wheel hub	1 point
Rear furrow wheel hub	1 point
Rear furrow wheel stem	1 point
Disc coulter hubs	3 points (1 each)
Depth screw gear	2 points
Hitch control screw	2 points

A buffer is fitted to the hake plates, to prevent damage to the controls during transportation. This should be removed during the preparation.

Fit the twelve spade lugs supplied, to the land wheel and assemble the drawbar with the two pins provided in the toolbox. (See Fig. 10.)

The shares can next be fitted and secured with the wooden pegs provided.

GENERAL

During service all points on the plough should be greased daily, except the disc coulters, which should be lubricated twice daily.

Note: *Wipe the grease nipples with a clean piece of rag before greasing.*

After the plough has been in use for a short period, check all nuts and bolts for tightness.

A periodical inspection and tightening of bolts will materially assist in maintaining the plough in good condition.

It is essential that the disc coulters and mouldboards be brushed over with oil at the end of the day's work to prevent corrosion. A liberal coat should be applied. Used engine oil is suitable for this purpose.

Note: *When transporting, do not tow the plough at speeds exceeding 3 miles per hour.*

DESCRIPTION OF PARTS AND THEIR ADJUSTMENT

THE GENERAL PURPOSE BOTTOM

This body (see Fig. 4) is generally used with a furrow width of 10 in. at depths up to 7 in.

Adjustment is provided for setting the mouldboards in or out as required. The setting at the time of manufacture is suitable for most general work.

To adjust, loosen the locknut on the mouldboard stay (see Fig. 3) and screw the adjuster so that the mouldboard is set in or out as required.

Note : *Do not adjust the mouldboards outwards if the furrows are standing on edge or rolling back, as this is generally caused by the width of the furrow being too narrow in relation to the depth.*

Four types of 10-in. and one 12-in. furrow General Purpose shares, as described overleaf, are available :—

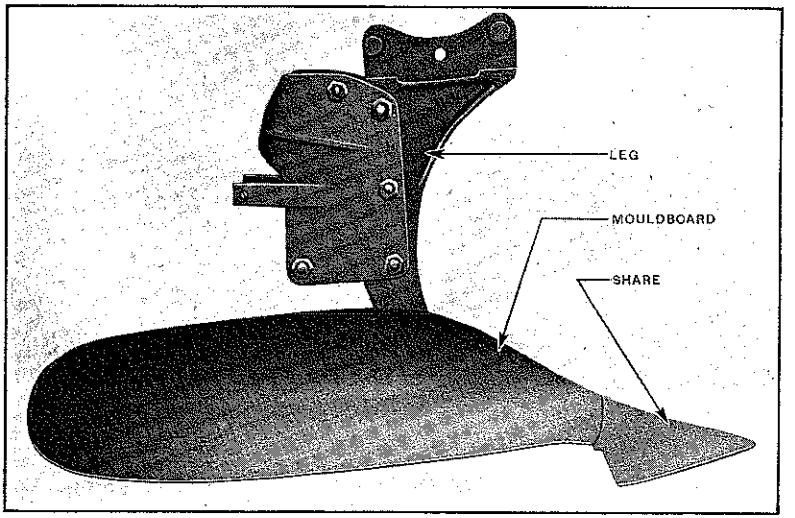

Fig. 4.
General Purpose Bottom

Chisel Point General Purpose Share. (*Part No. PT2A-725A.*)

This share has a small amount of upturn on the wing and is used as the General Purpose type in wet areas. Width, 7½ in., 10-in. furrow.

Hard Land Share. (*Part No. PT2A-725B.*)

This share is used when the ground is very hard and penetration with other shares is difficult. Width, 7½ in., with flat-wing and long-nose point, 10-in. furrow.

General Purpose Share. (*Part No. PT2A-725C.*)

This General Purpose share is used extensively in dry areas and has a width of 8 in., flat-wing and sharp-point, 10-in. furrow.

General Purpose Share. (*Part No. PT2A-725D.*)

This share is very similar to General Purposes share PT2A-725C, except that it is somewhat lighter, 8 in. wide, 10-in. furrow.

General Purpose Share. (*Part No. PT2B-725.*) (*12-in. furrow.*)

This share is also very similar to share PT2A-725C, except that it is 10 in. wide and used when ploughing 12-in. furrows.

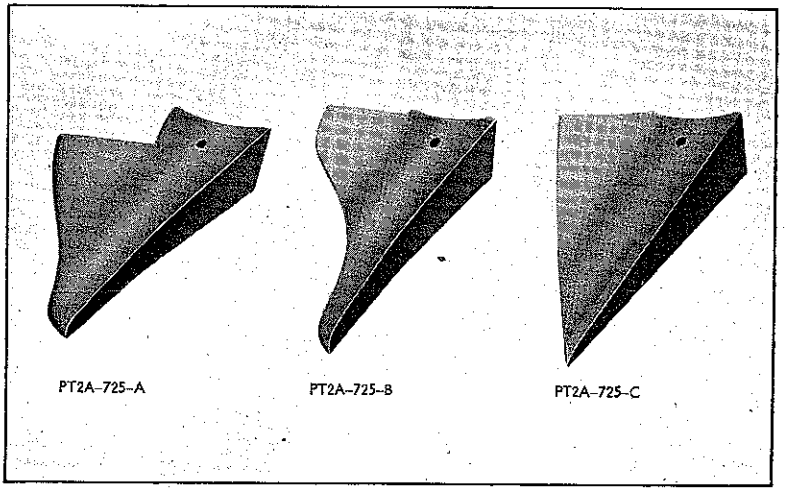

Fig. 5.
General Purpose Shares

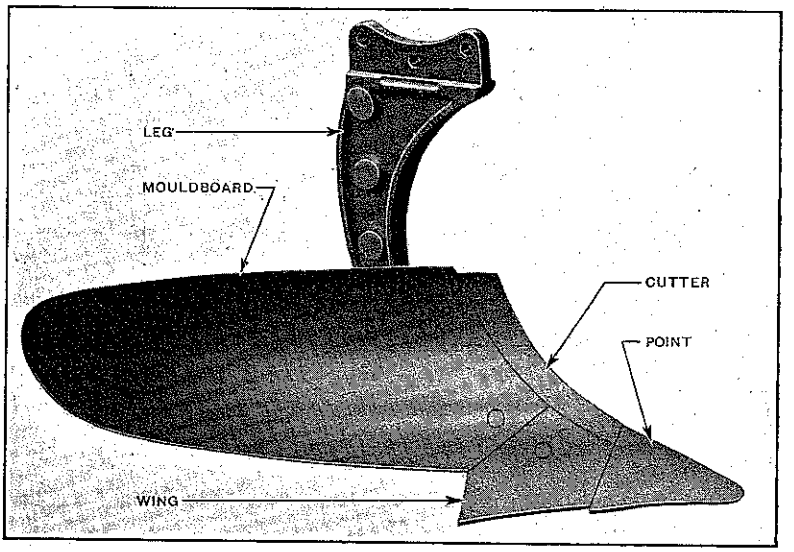

Fig. 6.
Semi-Digger Bottom

THE SEMI-DIGGER BOTTOM

This bottom is used for width of 10 in. and 12 in. at depths up to 11 in. (See Fig. 6.)

9-in., 10-in. and 12-in. wide wings are available. Mouldboard extensions are also available and can be attached with two bolts to the rear end of the mouldboard. (See Fig. 3.)

PLOUGH SETTING

The depth screw gear on the left of the plough (see Fig. 3) controls both the land and furrow wheels and determines the depth of ploughing.

The levelling lever (see Fig. 3) operates on the furrow wheel only, and is used to adjust the level of the plough so that the depth of cut is the same on all bottoms.

The box lift, operating on the land wheel, is of the conventional type, brought into action by means of a trip rope.

THE REAR WHEEL

When the plough is in operation the rear furrow wheel takes some of the side thrust that is applied against the rear landside. Adjustment is provided to increase or decrease this thrust by means of set screws on the rear furrow wheel bracket. (See Fig. 7.)

These set screws also adjust the weight carried by the rear wheel. This adjustment should be such that by grasping the rim of the wheel with the hand it can be stopped while the plough is at work.

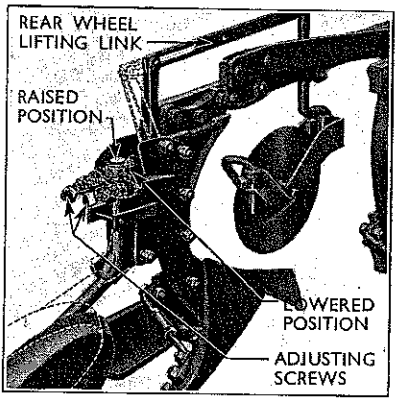

Fig. 7.
Rear Wheel Adjustment

During ploughing, the rear wheel stem is locked in line of travel, but is allowed to " castor " when the plough is raised in the transport position.

THE DISC COULTERS

The disc coulters are adjustable in four directions, *i.e.*, to front and rear along the beams, up and down in the coulter mounting bracket, width of the cut, and undercutting position of the coulter disc.

Adjustment for any of the above-mentioned positions (except " undercutting " see page 14) is effected by loosening the two clamp eye bolts securing the stem (see Fig. 9) and moving the disc coulter in the desired position.

The normal position is with the coulter hub central over the share point. When ploughing hard land they should be moved back towards the plough body to assist penetration.

To adjust for depth, the coulter stem can be moved up or down in the clamp bracket. This provides a total under-beam travel of 18 in. to 27 in., to the lower edge of the coulter disc. The stem is marked in 1-in. divisions to assist in obtaining the correct setting.

The width of the coulter cut is adjusted by turning the cranked stem with the tommy bar provided. The coulters should be adjusted so that the disc is $\frac{3}{8}$ in. to $\frac{1}{2}$ in. out from the landside.

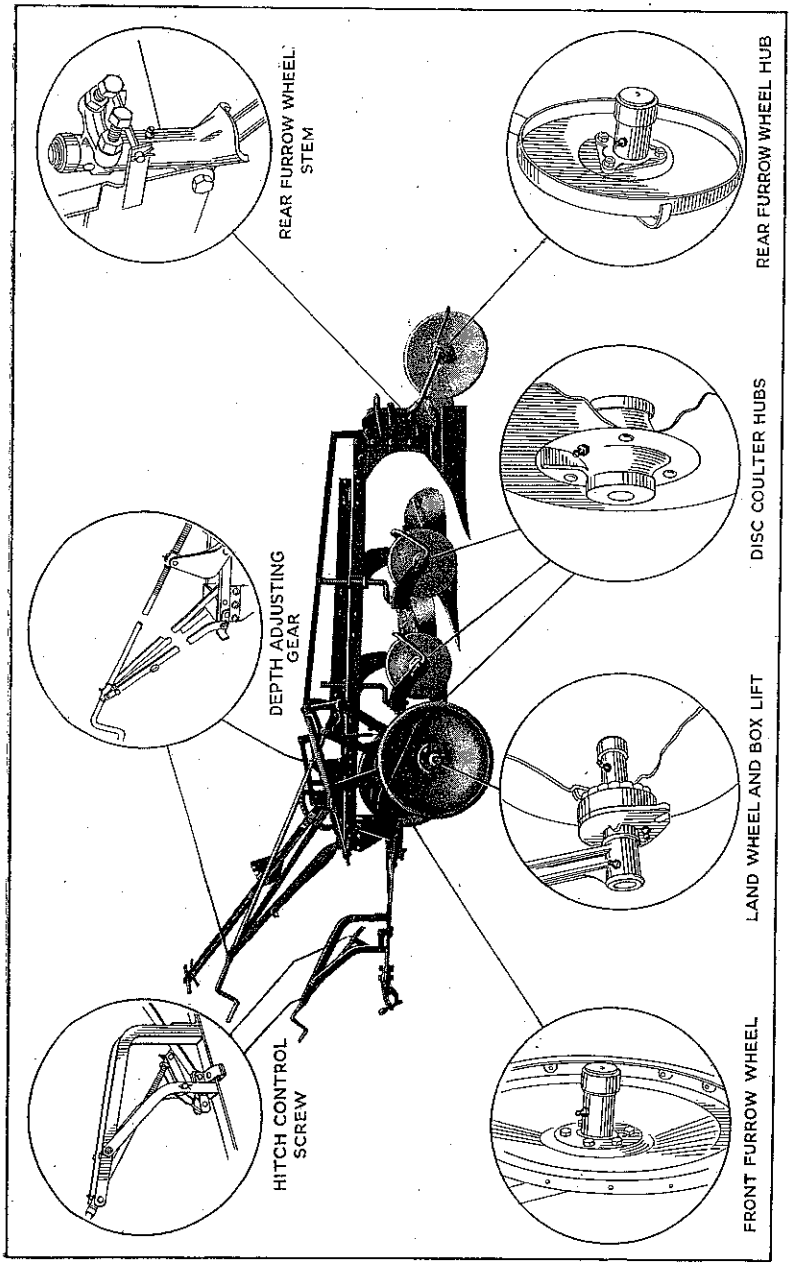

Fig. 8.
Lubrication Chart

If set too narrow, the furrow wall will be "broken" and excessive wear caused to the plough; if set too wide, the plough will "crab" out of line.

The disc fork mountings have a castor action on their stems, and the limit of movement to either side is governed by disc stops. Tighten the castor lock bolt so that the coulters have an equal amount of movement either side of the working position.

Note: *Check that the stop adjustment on the front coulter is such that the disc cannot foul the front furrow wheel when the plough is tilted.*

Adjustment for undercutting is made by screwing the vertical locating set-screw back (see Fig. 9) and loosening the large disc adjusting nut. Next tilt the top of the disc over towards the R.H. side of the plough and swing the locking latch in position between the fork and coulter stem bracket. Tighten the disc adjusting nut and the locknut on the locating set screw. This position provides a 15° undercut.

Note: *Do not use a tilted disc on hard ground.*

THE SKIMMERS

The skimmers are adjustable and should be set so that they just cut off the top edge of the furrow $1\frac{1}{2}$ in. deep.

This adjustment is made by sliding the palm or skimmer blade mounting up or down on the skimmer arm. (See Fig. 3.)

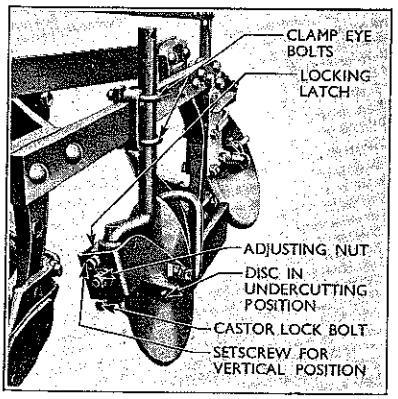

Fig. 9.
Disc Coulter

The lower bolt hole in the palm is elongated for angle adjustment of the blade. The point of the skimmer blade should be set just clear of the coulter disc.

Under certain conditions when a skimmer will not operate correctly, the burying of all trash, straw, etc., can be effected by tilting the disc coulter to undercut the furrow wall. For adjustment, see page 14 under "The Disc Coulter."

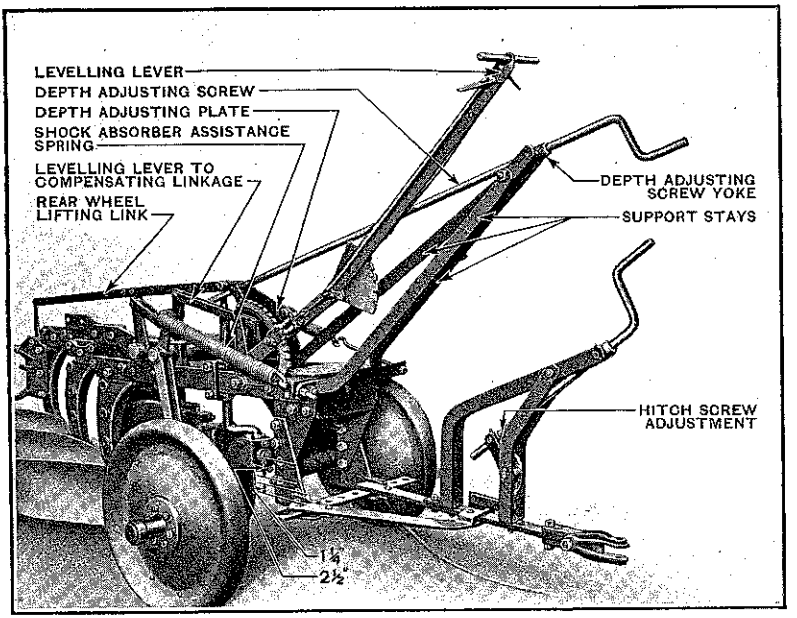

Fig. 10.
Long Controls and Hake Bar adjustment

CONTROLS

Long controls are supplied with the Three-Furrow plough and are suitable for use with the Fordson Major Tractor. These controls should be specified if required for the Two-Furrow plough.

The levelling lever, in the case of the long controls, has been made adjustable in a quadrant, to bring the lever within easy reach of the operator and so will meet individual requirements.

THE HITCH

The plough should be drawn into work, hitched to the centre hole of the tractor drawbar. By means of the hitch screw adjustment, the front furrow should be set at the same width as the remaining furrows. Next, examine the drawbar to see if it is parallel to the furrow wall. (See Fig. 11). If this is not the case, move the hake bar to the left or right as required. This is effected by uncoupling the two hinge pins on the hake bar and selecting the correct position. (See Fig. 10.)

While making this adjustment, set the hitch screw adjustment in the centre position of its travel.

It is essential that the plough should run straight and not "crab" out of line. Should the plough "crab" towards the land, then hitch the drawbar nearer to the ploughing side of the tractor, next re-align the drawbar as before. (See Fig. 11.)

Provision is made for adjusting the height of the hake bar, so as to obtain the correct line of draught on the plough.

When adjusted correctly, it should be possible to draw a straight line from the draw bar pin on the tractor, through the hake bar and the centre of draught on the second body. (See Fig. 12.) The hake plates can be raised or lowered to obtain this condition.

The hake plates are movable in 2½-in. steps (see Fig. 10), but this adjustment can be halved by fitting the hake bar hinge clips in their alternative position.

Note : *Do not fit a bolt of any type in place of the wood shear peg (see Fig. 10), as this will prevent the release of the drawbar shackle when ploughing in land where obstructions are likely to be encountered, possibly causing injury to the operator or at least damage to the plough.*

Do not attach the trip rope direct to the tractor, but couple with a thin cord to prevent damage to the box lift lever should the plough become detached.

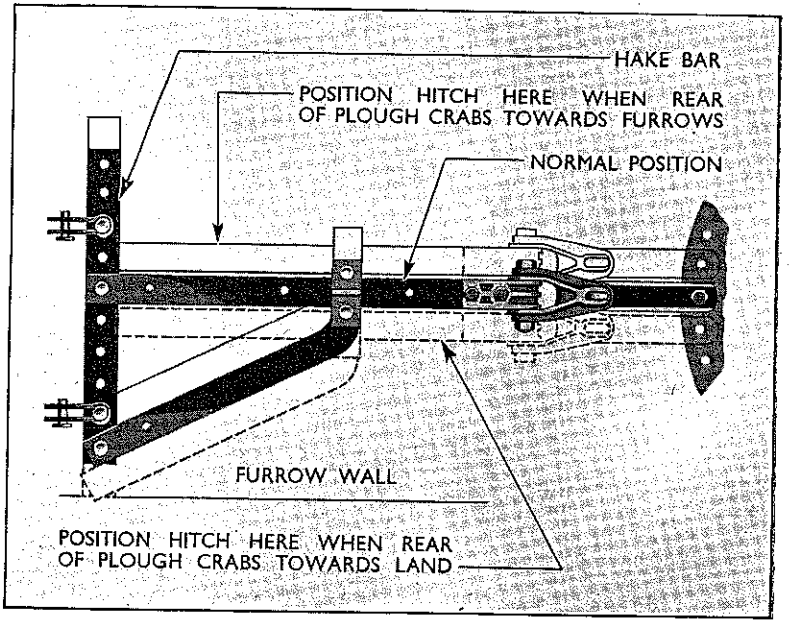

Fig. 11.
Hake Bar Adjustment

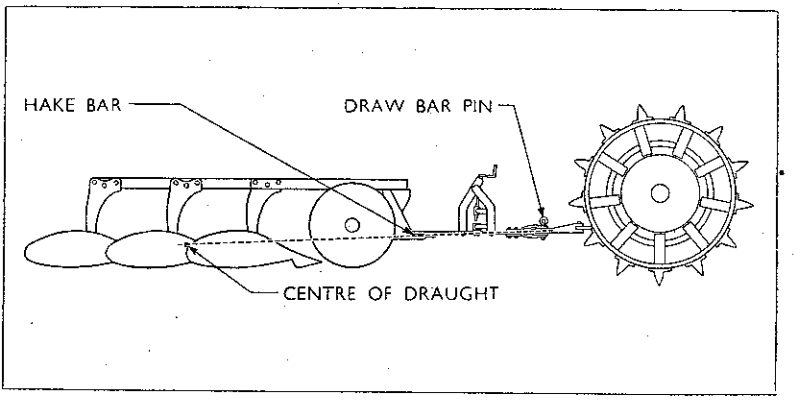

Fig. 12.
Line of Draught

ADJUSTING FURROW WIDTH

The furrow width is set to 10 ins. at the time of manufacture. To alter to a 12-in. furrow, proceed as follows :—

Set the plough in the transport position, that is, raised as high as possible on the depth screw gear and levelling lever. Place a block under the centre plough body, and wind the depth screw in so that no weight is carried by the rear furrow wheel.

Disconnect the rear furrow wheel lifting link.

Remove the three rear leg bolts and transfer the leg to the outside of the beam. Refit the bolts and tighten securely. (See Fig. 13.)

Transfer the front leg in a similar manner to the opposite side of the beam. Do not alter the position of the second leg.

On a two-furrow plough the front leg only is transferred.

REVERSING FRONT FURROW WHEEL

After the legs have been transferred, remove the block from under the second body and place it under the front body. By means of the levelling lever, raise the front furrow wheel off the ground and remove the six bolts attaching the wheel to the hub.

Earlier types may be fitted with three bolts.

Reverse the wheel on the hub so that the dish faces outwards this will have the effect of moving the rim 4 in. outwards.

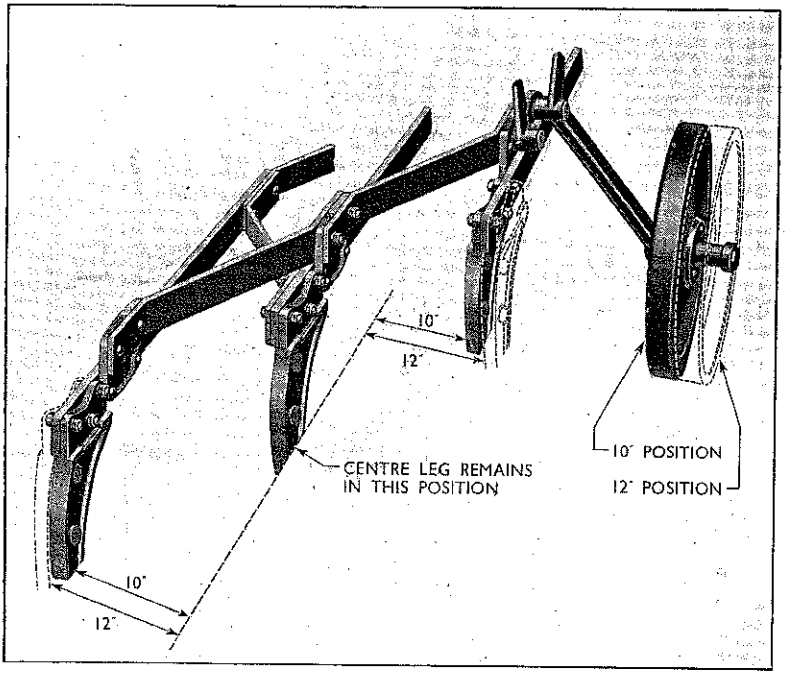

Fig. 13.
Adjustment of Furrow Width

TRANSPORT CHECK CHAIN *(where fitted)*

This check chain is provided to limit the movement of the furrow and land wheel axles when the plough is being transported over rough, hard ground. To hook up the chain, wind the depth screw well down (anti-clockwise), insert the hook through the first link, then wind the plough into a transport position.

Warning: *Always ensure that the chain is unhooked before starting to plough.*

TO SERVICE THE BOX LIFT

Set the plough in its transport position and place suitable blocks under the second beam. Next wind the depth screw (anti-clockwise) until the land wheel is clear of the ground. Remove the hub cap, after which the axle set screw can be removed. ***Note:*** *This screw has a left-hand thread.*

When the set screw is removed, the wheel and box lift hub can easily be slipped off. The lift requires little attention, except cleaning and periodically coating the internal portion of the hub and cam roller with grease.

WHEEL SCRAPERS

Set the wheel scrapers so that they are just clear of the wheel. Do not allow the scrapers to foul.

CONVERSION

(From Three-Furrow to Two-Furrow Plough)

First, raise the plough into the transport position. Place a suitable block of wood or a jack under No. 2 Beam at A. (See Fig. 14.) Then, by means of the depth screw, lower the beam on to the block so that the weight of the plough is carried by the block and the front wheels.

Next, remove No. 2 leg and body assembly, then remove the pin B from the rear wheel lifting arm and link.

Take out the three bolts at the rear leg marked C, and remove the leg, body and rear wheel assembly.

Release the four bolts marked D when the rear furrow beam assembly, together with the rear furrow disc coulter, can be removed.

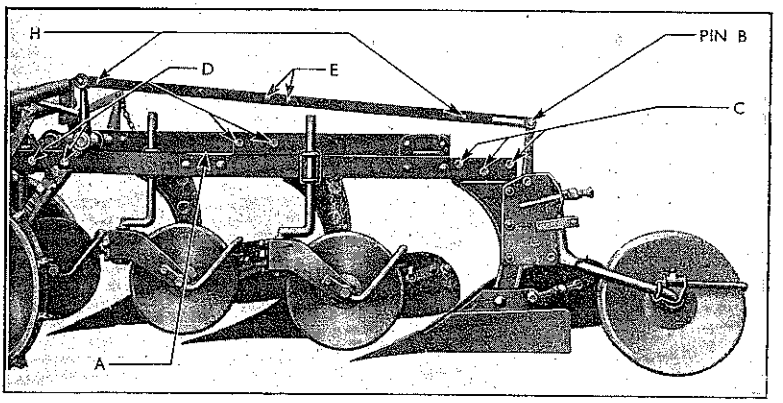

Fig. 14.
Converting from Three-Furrow to Two-Furrow Plough

Reassemble No. 3 leg and rear wheel assembly to the position from which No. 2 leg was removed and shorten the rear wheel lifting link by using bolts E in the holes marked H.

The rear furrow beam assembly can be left on the plough if desired. Then the conversion is merely a case of fitting the rear leg with body and wheel assembly into the position of No. 2 leg. The rear wheel lifting link has to be shortened, as previously explained, and the rear furrow disc coulter assembly removed.

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