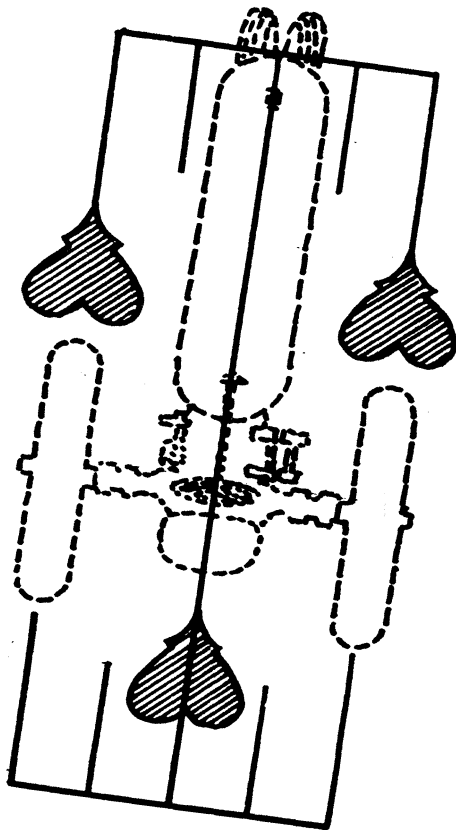


LINE-DIAGRAM METHOD of SETTING IMPLEMENTS

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Circular 501

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SETTING TRACTOR IMPLEMENTS with the line diagram method, as described in this leaflet, makes it possible to obtain accurate settings which are essential to successful and uniform operation of tractor equipment.

SETTING AND ADJUSTING of practically all row-crop implements, such as middle breakers, planters, and cultivators, can be done by using this method. The line diagram consists of a center line on the floor for aligning the tractor and shorter lines which represent the rows and the middles.

LOCATION AND KIND OF FLOOR: The Line Diagram should be in the shop or close to the supply of tools, bolts, and repair parts. A smooth concrete floor or slab is the best location for the diagram.

MATERIALS REQUIRED: (1) Roll of stovepipe wire; (2) Steel tape; (3) One long straight board (1" x 4") for straight edge; (4) Carpenter's square; (5) One pint of good paint or enamel; (6) One small paint brush, $\frac{1}{4}$ " to $\frac{3}{8}$ " wide; and (7) chalk.

LAYING OUT DIAGRAM: (See Figure 1)

1. Have the floor thoroughly clean.
2. At one end draw line AB (length, two-row width long for two-row diagram and four-row width long for four-row diagram.)
3. Locate C at center of line AB.

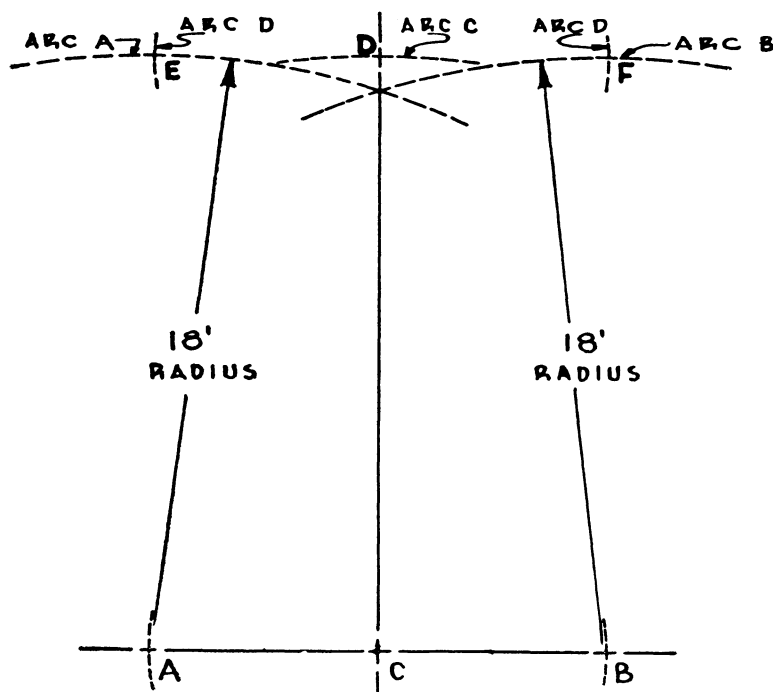


Figure 1. Method used in laying out line diagram.

4. Take a piece of wire 18 feet long and form small loops in each end for holding pivot nail and chalk. Make the following arcs:
 - a. With point A as pivot, draw arc A.
 - b. With point B as pivot, draw arc B.
 - c. With point C as pivot, draw arc C.
5. From point C draw a line through the intersection of arcs A and B and extend a few inches past arc C. Where this line crosses arc C, locate point D. Line CD will be the center line.
6. With a piece of wire the length of AC and with point D as the pivot, draw arcs D, cutting arc A at point E and arc B at point F.
7. Draw line EDF (Figure 2). This completes center line and two perpendicular end lines.

LAYING OFF ROW LINES: (See Figure 2)

Note: The line diagram, Figure 2, is for two-row implements. If four-row implements are used, lines AB and EF must each be four row widths long, as explained under point (2) on preceding page.

1. The distance X is always one half the row width. (If row width is 40 inches, then X will be 20 inches.)
2. Using the carpenter's square, lay off the row lines 36 inches long and the middle lines 48 inches long at right angles to end lines ACB and EDF, X distance apart.
3. Now, with diagram completed and drawn with chalk, check all measurements and make sure lines are at right angles.
4. Paint in diagram making all lines about $\frac{1}{2}$ inch wide. (Masking tape will be helpful in painting the lines.)

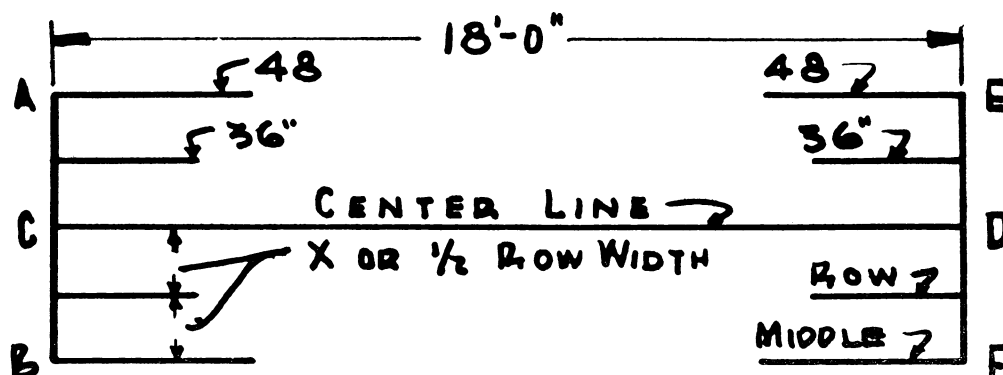


Figure 2. Line diagram for two-row implements.

PLACING TRACTOR ON DIAGRAM:

1. Drive tractor onto diagram from either end, having tractor approximately aligned before starting.
2. As tractor is driven down center line keep front wheels equally distant from this line.
3. Stop the tractor with the front wheels at the cross line.

SETTING IMPLEMENTS:

1. Align the tractor on diagram as described above.
2. Lower the implements to the floor. (Middle breakers, planter openers, or cultivator sweeps)
3. Planter openers and middle breakers are set directly over the row or middle lines, as the case may be.
4. Set inside cultivating sweeps the desired distances from row lines using a yard stick or ruler.
5. Rear cultivating sweeps are set directly over the middle lines.
6. Additional sweeps for cultivation are set to divide the distance between the front and rear sweeps.

USE INSTRUCTION MANUALS:

In setting and adjusting implements, be sure to use instruction manuals that are furnished by manufacturers. These manuals contain specific instructions that must be followed to obtain best results.

ACKNOWLEDGMENT

The information contained in this circular is adapted from material contained in Mississippi Experiment Station Circular No. 138, "Line Diagram Method for the Setting of Farm Implements." This method of setting implements has been used by Agricultural Engineers of the Oklahoma A. and M. College Experiment Station and found to be very satisfactory.