



**LIFT
TYPE**

DEARBORN
**SPRING SHANK
CULTIVATOR**

MODEL 13-2, 13-2A



ASSEMBLY and OPERATING
Instructions

DEARBORN MOTORS CORPORATION — DETROIT 3, MICHIGAN

DESCRIPTION

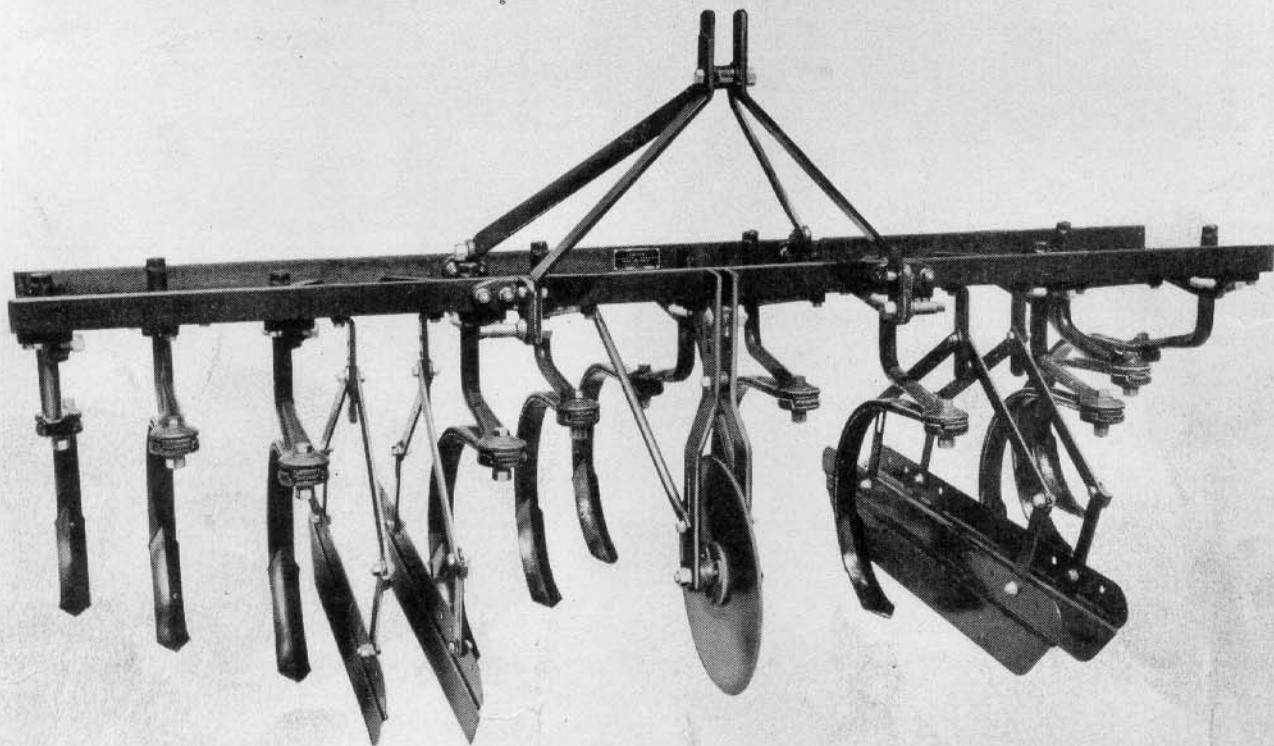


Figure 1

The Dearborn Spring Shank Cultivator (Lift Type)

The Dearborn Spring Shank Cultivator pictured above is a lift type implement and, like all Dearborn equipment, is built to high quality standards and specifications. This cultivator is easy to attach and operate. The cultivating depth is controlled from the tractor seat of the Ford Tractor by means of the Ford Hydraulic Touch Control lever.

The main frame of this cultivator is made of heat treated steel. The rigidly braced frame has holes at one inch intervals to provide a

wide range of lateral adjustments of the stem seats to accommodate most row widths.

The strong spring shanks consist of two sheaves of heat treated spring steel to assure longer life and better action. The rolling fin aids in keeping the cultivator in line and helps prevent damage to the crop.

This cultivator is available in two models 13-2 and 13-2A. Both models are identical with the exception that Model 13-2 has shovels and 13-2A is equipped with sweeps.

ASSEMBLY

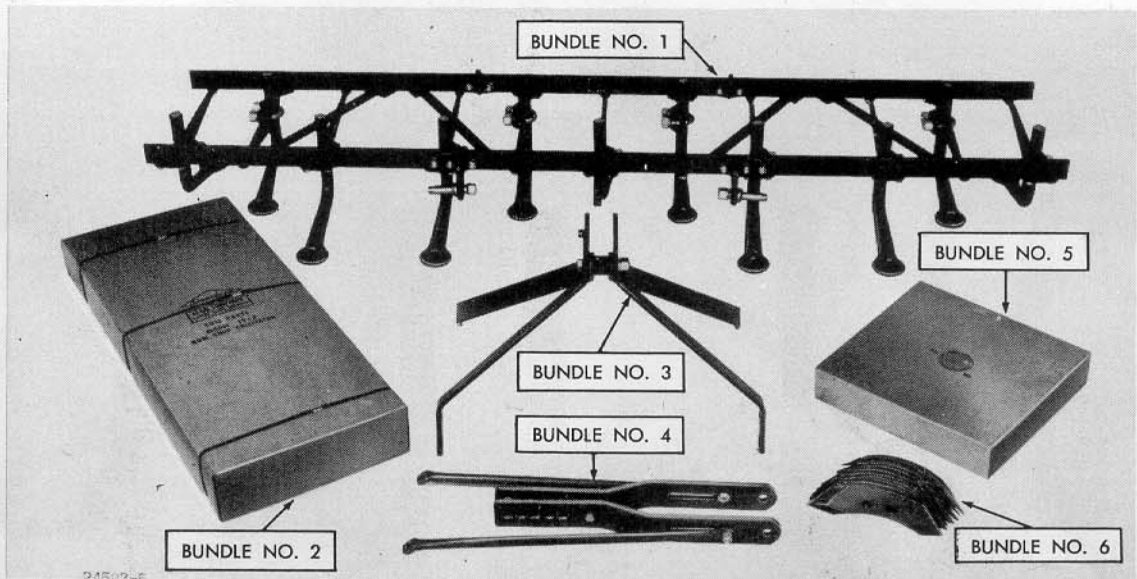


Figure 2

Implement Bundled for Shipment

NOTE: The assembly of the Dearborn Spring Shank Cultivator is the responsibility of the Dearborn Farm Equipment dealer. The implement should be delivered completely assembled. The following instructions are provided in case of need.

BUNDLE INFORMATION

Make certain that the shipment is complete; check each bundle with the list below and Figure 2. Eleven Spring Shanks are furnished as standard equipment.

Bundle No. 1

Main Frame

Bundle No. 2

Box containing:

- 4 Shield Toggles
- 1 Steering Pointer
- 1 Soil Bag (Small parts)
- 4 Shields
- 22 Springs

- 11 Spring Shank Clamps
- 1 Manual Tube

Bundle No. 3

Top Link Assembly

Bundle No. 4

Rolling Fin Support

Bundle No. 5

Box containing:

- Rolling Fin
- Bag of small parts for fin

Bundle No. 6

11 Shovels

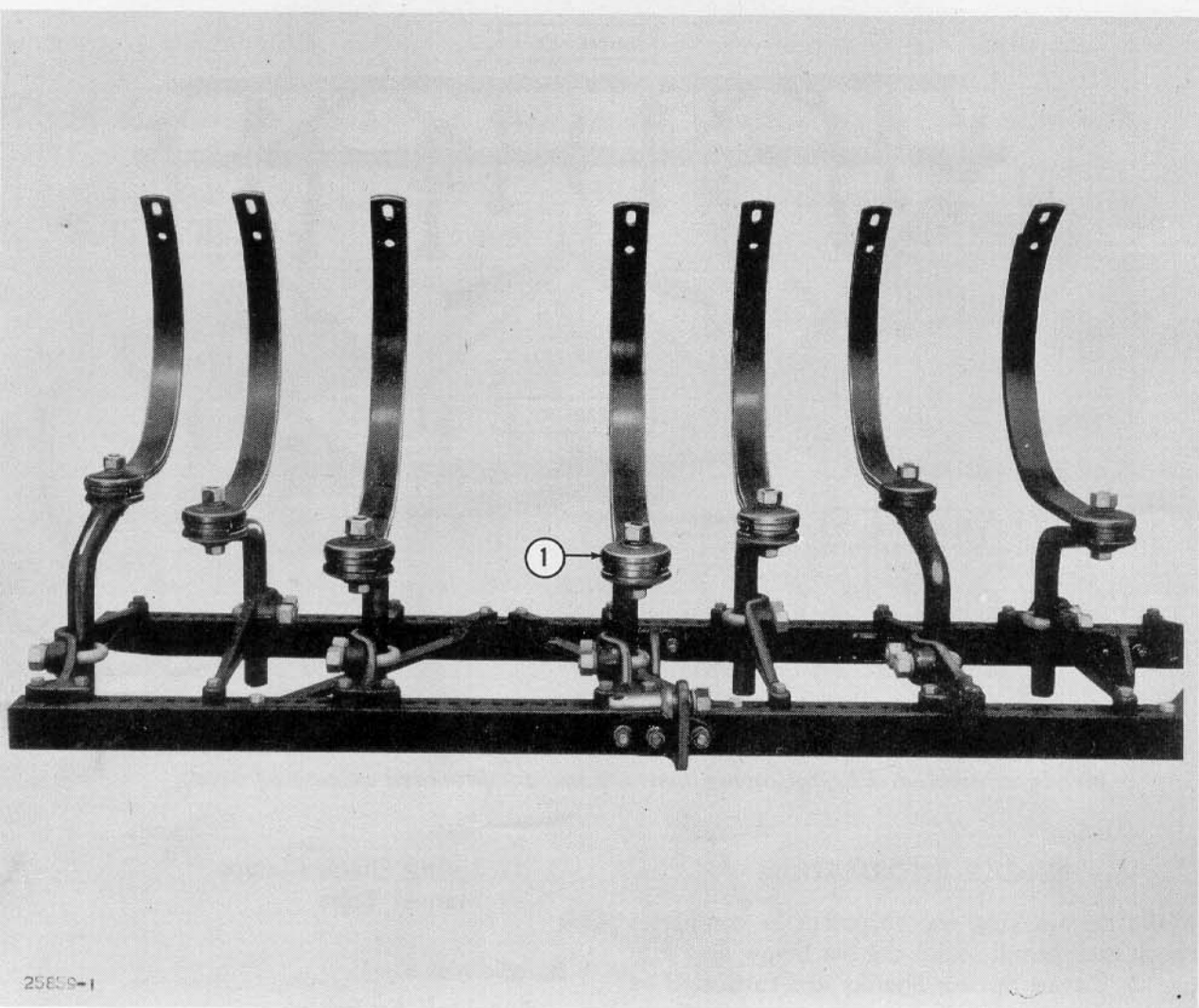


Figure 3

Spring Shanks Attached

ASSEMBLY PROCEDURE

1. Cut and remove the wires from all bundles. Remove the contents of the two cartons.
2. Turn the main frame over so that the stems are up and attach the spring shanks to the stems, as shown in Figure 3. The short helper (outer) springs are mounted behind the inner springs with the clamps (1) and bolt provided. See Figure 3.
3. Attach the shovel (1), Figure 4, to the front spring (2) with the short bolt. Do not tighten nut. Insert the long bolt through the top hole of the shovel and both springs. Place the spacer (3) on the bolt and insert it in the slot of the helper

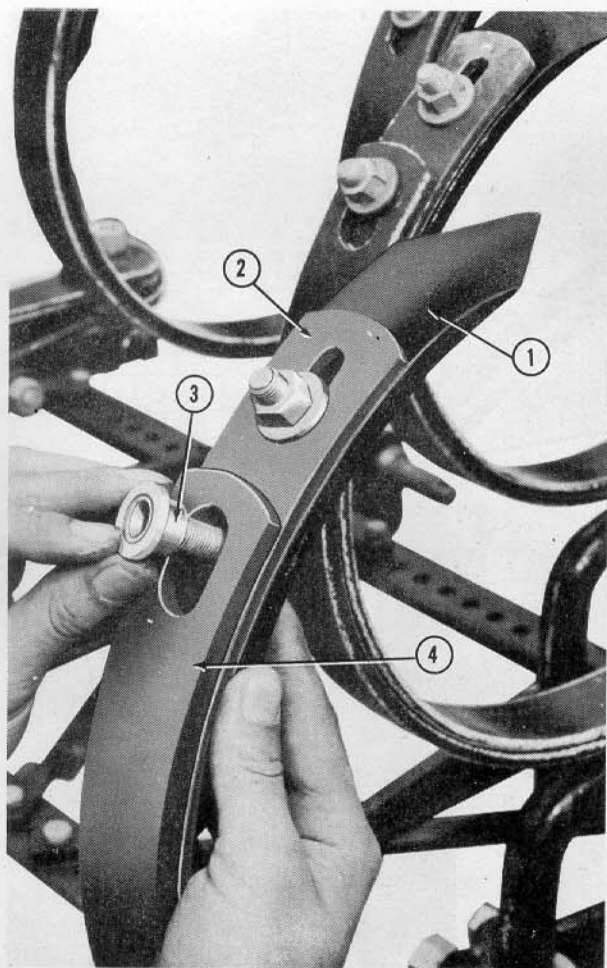


Figure 4

Attaching Shovels to Spring Shanks

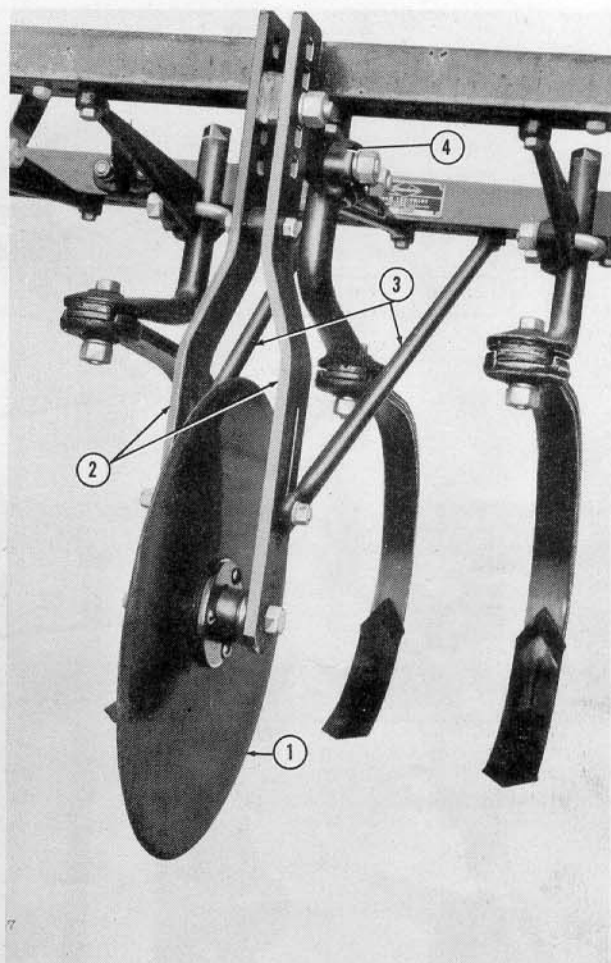


Figure 5

Rolling Fin Assembly Attached

spring (4), as shown in Figure 4. Then tighten all nuts securely. The spacer permits flexibility in the spring shank assembly.

4. Turn the main frame over so that it is above the shovels.
5. Assemble the rolling fin (1) and the fin supports (2) as shown in Figure 5.
6. Attach the rolling fin assembly to the center stem seat (4) with the stay braces (3)

to the rear as shown in Figure 5. For the normal setting, bolt the supports (2) through the center hole. In this position the fin will ride about three inches lower than the shovel points. Attach the stay braces (3) to holes in the main frame so that the rolling fin assembly will line up squarely with the main frame. Adjust the braces to the rolling fin supports as shown in Figure 5, and securely tighten all nuts.

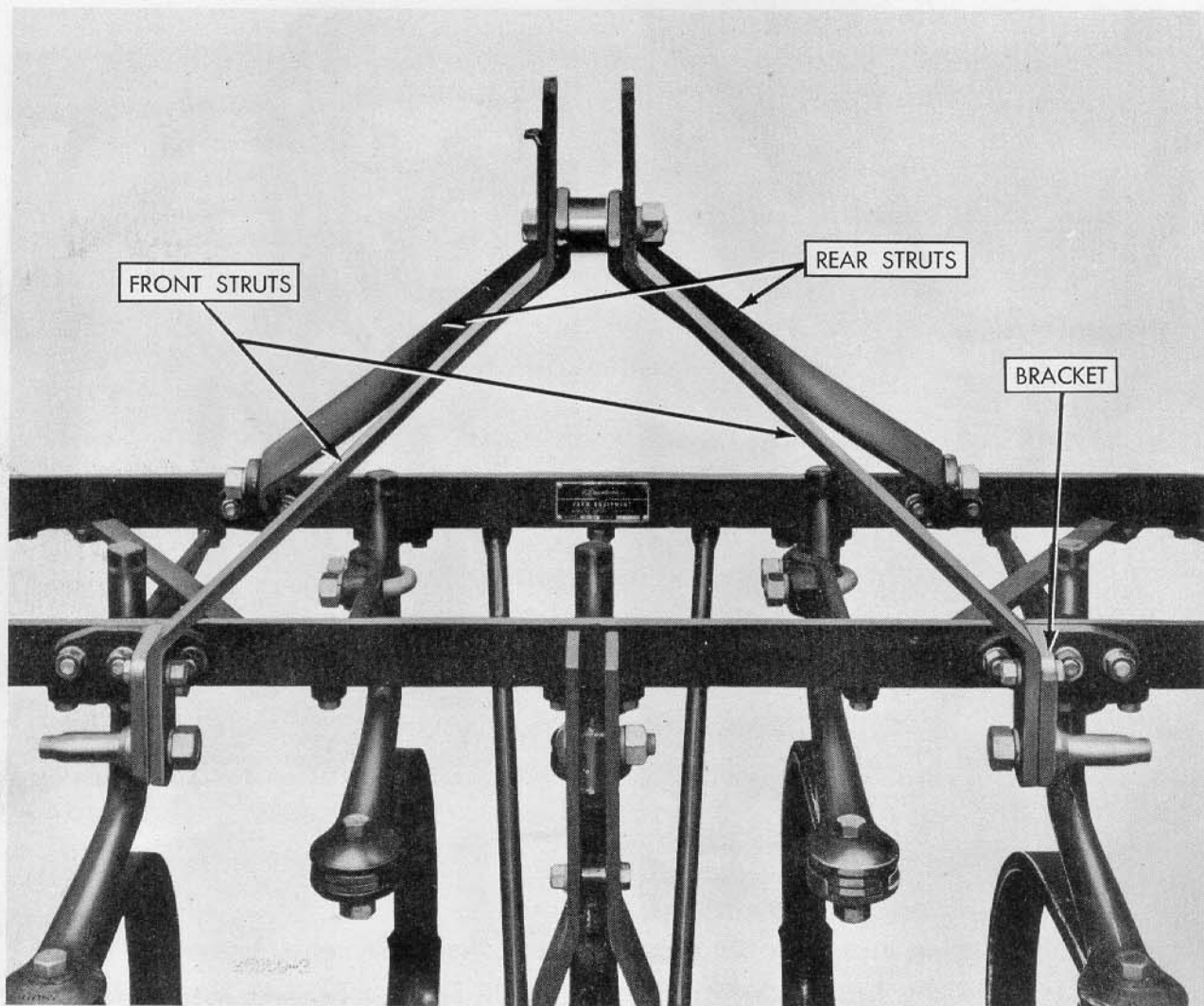


Figure 6

Top Link Bracket Attached

7. Attach the top link assembly as shown in Figure 6 using the bolts provided. Bolt the front struts to the brackets on the front tool bar. Insert the link pins through the bottom holes of the front struts and secure with nuts. Bolt the rear struts to the brackets attached to the rear tool bar. Securely tighten all nuts.
8. Attach the shield support arms (1), Figure 7, to the main frame. Attach the fenders and the shield support arms as shown in Figure 7.
9. Before going into the field, space the front and rear wheels to accommodate the row widths, as explained in Adjustments, Page 9.

ASSEMBLY

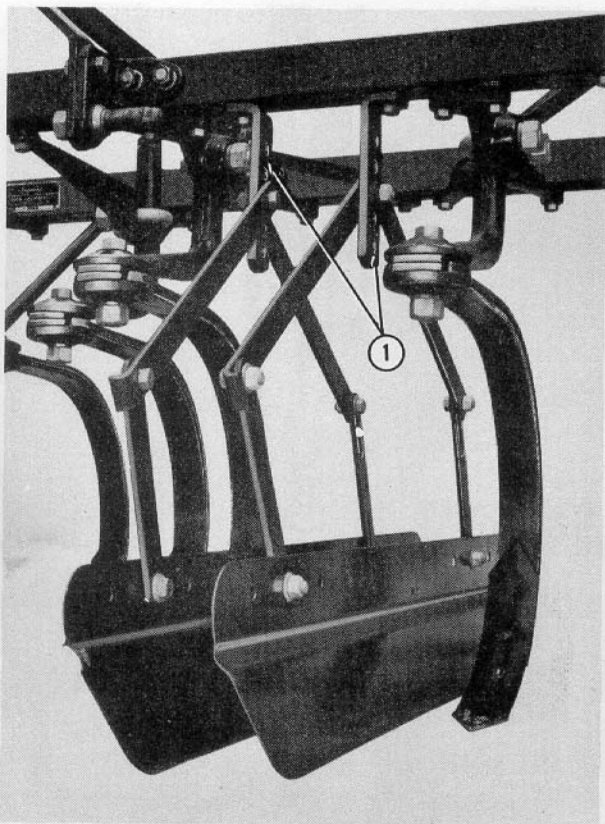


Figure 7
Shields Attached

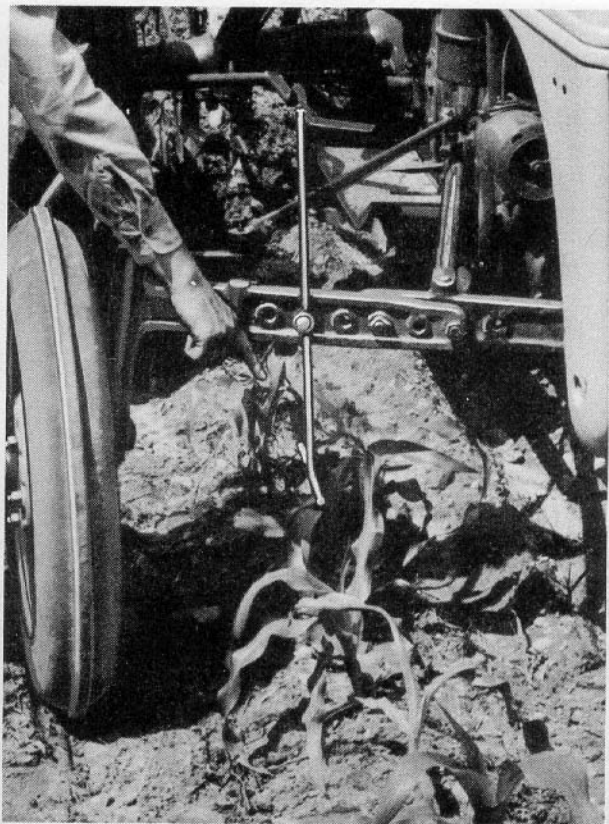


Figure 8
Steering Pointer Attached

10. Attach the steering pointer to the right front axle as shown in Figure 8. Position it in the hole of the right front axle that will put the pointer over the row to be cultivated. See Figure 8.

NOTE: Before taking implement into the field, carefully read the section on Adjustments and Lubrication, Pages 9-10, and make all necessary adjustments on the implement.

ATTACHING AND DETACHING

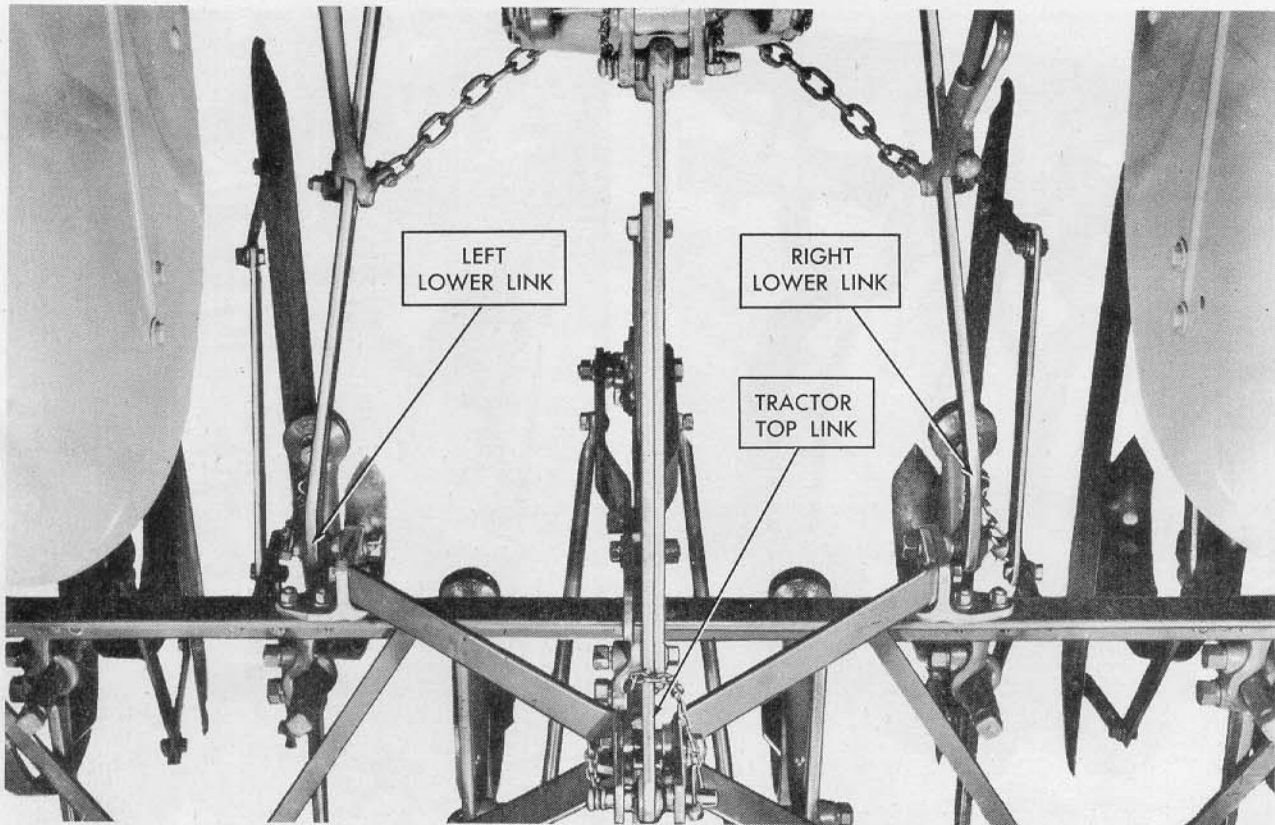


Figure 9

Cultivator Attached to Ford Tractor

ATTACHING TO FORD TRACTOR

1. Back tractor into position so that the lower links align with the link pins on the cultivator.
2. Attach the lower left tractor link to link pin on cultivator. Secure with linch pin.
3. Attach the lower right tractor link to link pin on cultivator. Secure with linch pin.
4. Attach tractor top link to top link bracket of implement and to tractor control spring yoke. Secure with linch pins.

DETACHING

1. Detach top link from control spring yoke on tractor.
2. Detach lower right link from cultivator. Secure linch pin in bracket provided on link arm.
3. Detach lower left link from cultivator. Secure linch pin in bracket provided on link arm.

CAUTION: Be sure cultivator is completely disconnected before attempting to move the tractor.



Figure 10

Spring Shank Cultivator at Work

The Dearborn Spring Shank Cultivator does a fine job on stony and trashy soils. The spring shanks enable the shovels to operate in stony and root filled ground and do a good job of cultivating. These shanks permit the shovels to pass over or around rocks and roots without lifting the cultivator out of the ground.

The Dearborn Spring Shank Cultivator is an easily operated implement. This implement when attached to the Ford Tractor can be lifted or lowered by Ford Hydraulic Touch Control making it easy to turn at the end of rows, back

into corners, and to raise implement when crossing grassed waterways.

The reversible shovels assure extra long service under all types of cultivating conditions. The crank type stems and spring shanks are designed so that they may be rotated to obtain a variety of adjustments to suit various row crops.

The long crop shields make it possible to cultivate even the smallest crops without the danger of covering them. The adjustable rolling fin minimizes side sway and helps the cultivator to accurately follow the tractor.

LUBRICATION

There is only one grease fitting on the Dearborn Spring Shank Cultivator. It is located on the rolling fin hub and should be lubricated three times daily with a good grade of gun grease. The spring shank cultivator requires no other lubrication.

ADJUSTMENTS

Tractor Wheel Spacing: The front and rear wheels should be adjusted as near as possible to *twice the row width* of the crop being cultivated. See instructions for adjusting the wheel spacing in the Ford Tractor Operator's Manual.

Stem Seat Spacing: The stem seats should be adjusted to conform to row widths to be cultivated. To do this remove the bolts securing the stem seats and shift them to the desired position and secure with bolts. They may be adjusted for two rows spaced from 36" to 42"; four rows spaced 12" to 20"; or two rows and three middles spaced from 24" to 30". The adjustments are made in steps of one inch.

The stem seats may be easily reversed on the main frame as shown in Figure 11. Remove seat attaching bolts, reverse the seats and reattach with the removed bolts. The stem must then be adjusted as explained in the following section.

Stem and Spring Shank Settings: The crank type stems may be rotated through a complete circle and locked in any position to enable the operator to adjust the cultivator to fit his needs. This is accomplished by loosening the nuts on the U-bolt holding the stem, see Figure 11, and turning the stem to the desired position with a wrench. Lock the stem in position by

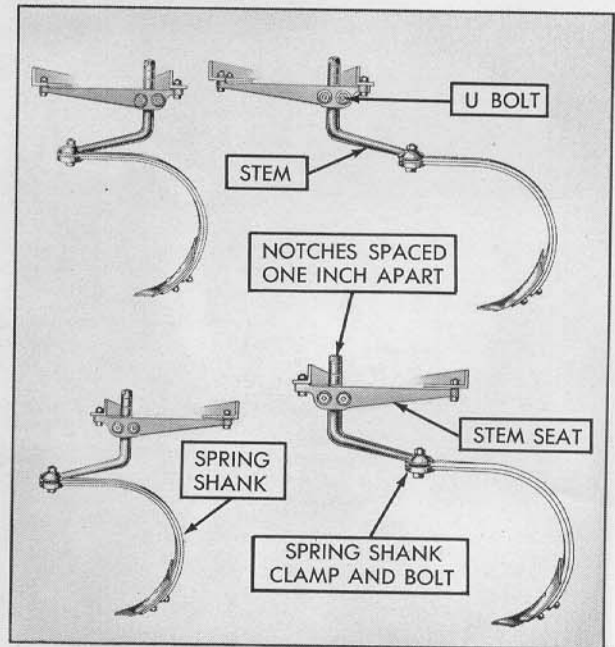


Figure 11
Stem Crank Adjustments

securely tightening the nuts on the U-bolt. The spring shanks may be adjusted by loosening the bolt that clamps them to the stem and rotating them to the desired position. Lock in position by tightening the clamp bolt.

Shovel Depth: Shovels should be set individually to operate at a depth necessary to obtain maximum weed destruction. This depth will vary with the crop being cultivated.

Corresponding shovels must be set at the same depth or side draft will result. Four notches one inch apart are provided on the stems to aid in obtaining a uniform setting of all shovels.

To raise or lower individual shanks, loosen the U-bolts shown in Figure 11 and reposition them as desired. Tighten nuts on U-bolts securely.

OPERATION

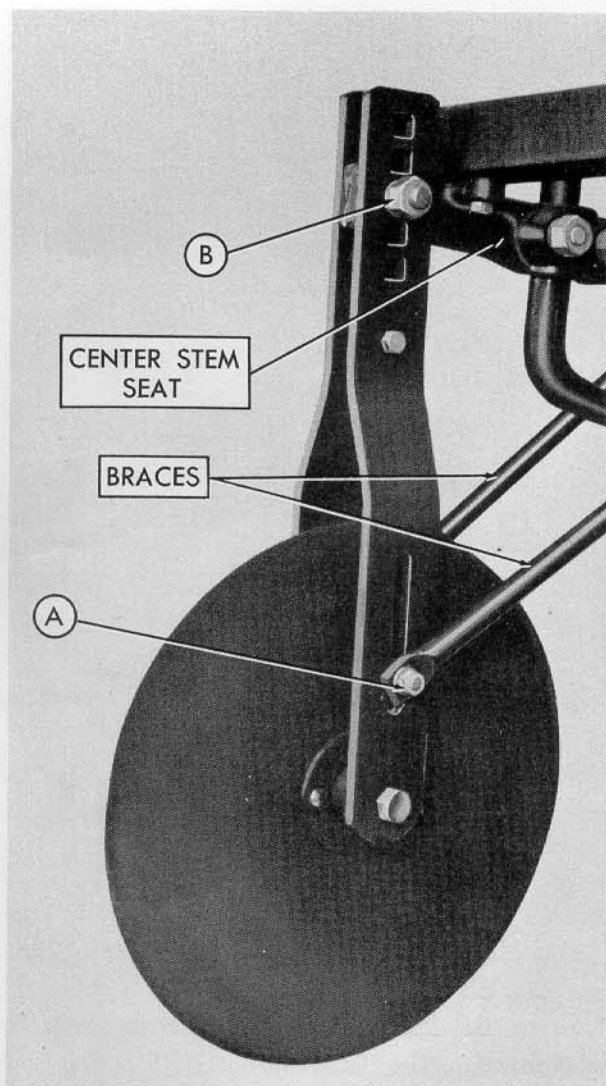


Figure 12

Rolling Fin Adjustments

Fenders: The cultivator fenders should be adjusted so that the young plants will not be covered with soil by the shovels, however, some soil should be allowed to hill the plants.

To adjust fenders remove the bolt holding the arms to the shield support and reposition it in the hole that will give the desired fender height.

Rolling Fin: The rolling fin helps to keep the cultivator in line, and to prevent damage to the crop. Be sure to set the fin properly.

Normally, the rolling fin should be set to penetrate three inches deeper than the shovel points. However, in sandy or loose soils, or on hill-sides, a setting of one or two inches deeper, may give better results. Rolling fin depth adjustments may be made in steps of one inch.

To adjust the depth of the fin, loosen the bolts (A), Figure 12, which attach the braces to the rolling fin supports. Remove the bolt (B) which attaches the fin supports to the main frame. Move fin supports up or down and replace bolt in the hole which will give the desired setting. Securely tighten all nuts.

CAUTION: The rolling fin must line up squarely with the main frame.

Tractor Control Spring: Normally the tractor main control spring is set for heavy draft. It should be re-set when using light-draft implements such as the Spring Shank Cultivator. Adjust the spring by first removing the pin which holds the main control spring yoke in the rocker. Push the rocker rearward to free the yoke. Turn the yoke out one half to one full turn. This will usually be sufficient to reduce the compression on the spring and still hold the spring so that there is no end play.

OPERATION



Figure 13

Cultivator in Transport Position

TRANSPORT

The Dearborn Spring Shank Cultivator, when attached to the Ford Tractor, is easily raised to the transport position with the Ford Hydraulic Touch Control lever for turning at the ends of rows and for transporting to and from the field.

MAINTENANCE

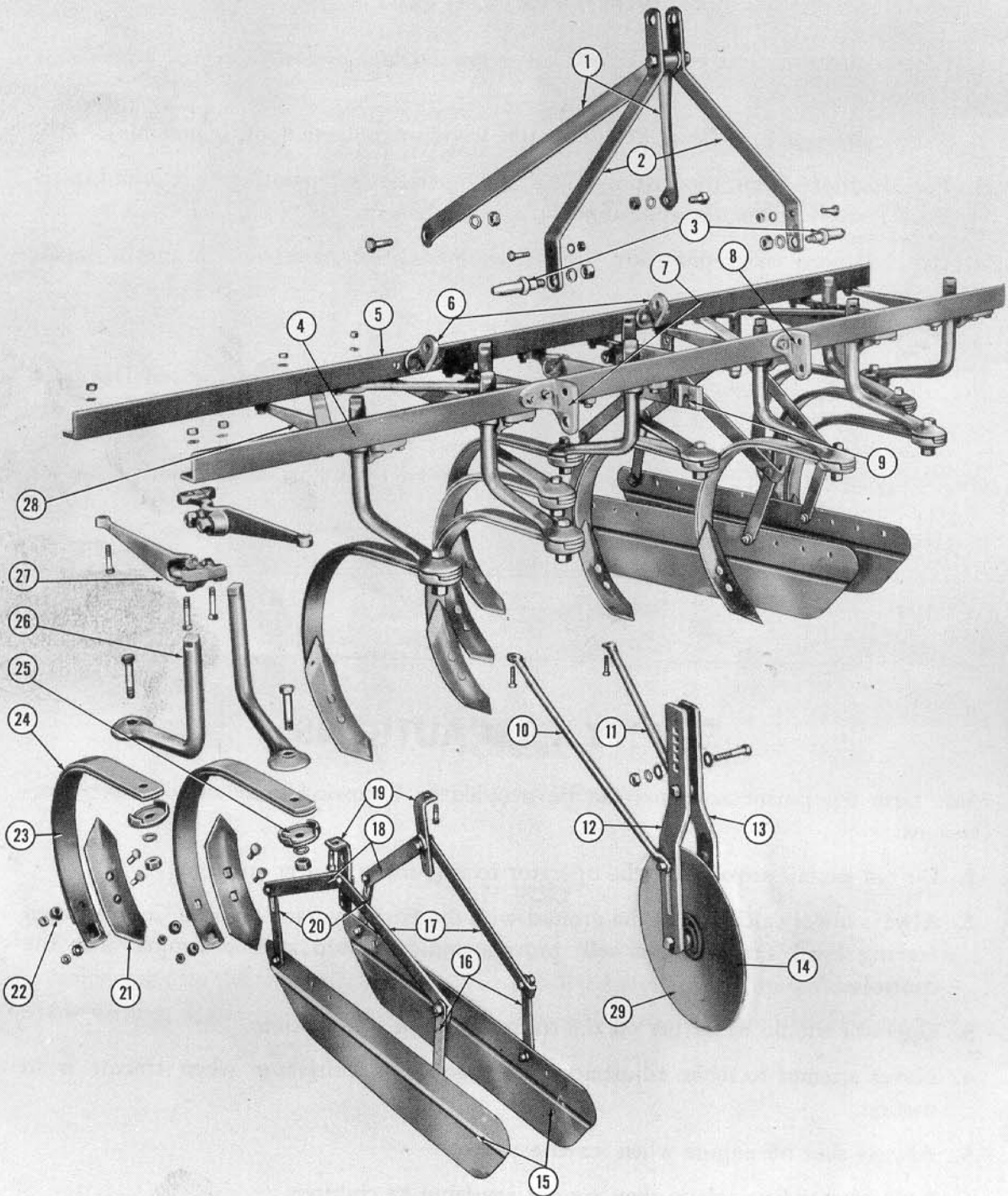
1. Clean cultivator after each use and cover ground engaging surfaces with a good rust preventive.
2. Store cultivator in a clean, dry place (on wood or concrete floor, if possible).
3. Use Dearborn Vermillion Paint M2822 for touch-up or repainting as required to reduce rust and maintain appearance of the implement.
4. Replace worn parts promptly, using genuine Dearborn Farm Equipment repair parts.
5. Keep all nuts tight.
6. The Dearborn Farm Equipment dealer carries genuine Ford Tractor and Dearborn Farm Equipment repair parts. These parts are manufactured and inspected, to assure high quality and accurate fit. Insist on Genuine Ford Tractor and Dearborn Farm Equipment Replacement Parts. (See page 13 and 14 for list of Dearborn Parts for the Spring Shank Cultivator.)

SAFETY PRECAUTIONS

Most farm equipment accidents can be avoided by following these simple safety precautions:

1. Do not permit anyone but the operator to ride the tractor at any time.
2. Always lower cultivator to the ground with the Ford Hydraulic Touch Control when leaving Ford Tractor. This will prevent injury should anyone tamper with the controls.
3. Operator should never get off the tractor while it is in motion.
4. Never attempt to make adjustments on tractor or cultivator when tractor is in motion.
5. Always shut off engine when leaving tractor.
6. Keep tractor keys where they are not available to children.

SERVICE PARTS



SERVICE PARTS LIST

NOTE: THIS IS NOT INTENDED TO BE A COMPLETE PARTS LIST

KEY NO.	D. M. C. PART NO.	DESCRIPTION	NO. REQ'D
1	131007	Strut—right and left rear.....	2
2	131005	Strut—right and left front.....	2
3	131010	Pin—link	2
4	131000	Bar—tool, front.....	1
5	131208	Bar—tool, rear.....	1
6	131003	Bracket	2
7	131001	Bracket—right front.....	1
8	131002	Bracket—left front.....	1
9	131050	Seat—center stem.....	1
10	131091	Stay Brace—right	1
11	131092	Stay Brace—left.....	1
12	131027	Arm—right support	1
13	131028	Arm—left support	1
14	103048	Disc & Hub Assembly—riveted.....	1
15	131011	Shield—38" long.....	4
16	131015	Link—front toggle	4
17	131013	Arm—front shield.....	4
18	131014	Arm—rear shield.....	4
19	131012	Support—shield arm.....	4
20	131016	Link—rear toggle	4
21	131018	Shovel—2½ reversible.....	11
22	131056	Spacer—shovel	11
23	131055	Spring Shank—inner.....	11
24	131054	Spring Shank—outer	11
25	131053	Clamp—spring shank.....	11
26	131052	Stem	11
27	131049	Seat—stem	10
28	131004	Brace—Front to rear tool bar.....	4
29	131095	Rolling Fin Ass'y Complete.....	1