



**LIFT
TYPE**

TOWNER

OFFSET DISC HARROW

MODELS 11-19, 21, 22, 23, & 24



ASSEMBLY and OPERATING

Instructions

DEARBORN MOTORS CORPORATION — DETROIT 3, MICHIGAN

DESCRIPTION

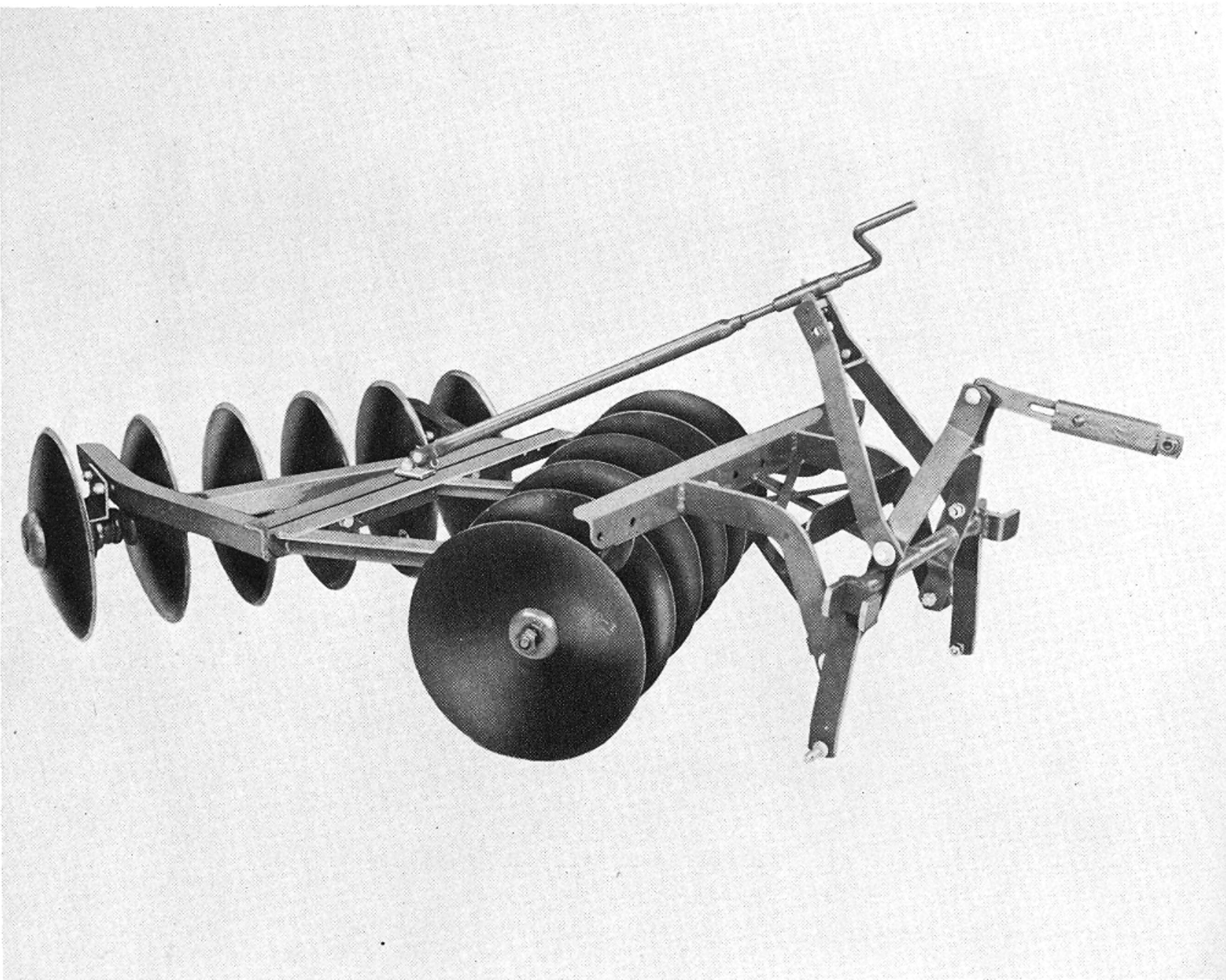


Figure 1

Towner Offset Disc Harrow (Model 11-22)

The Towner Offset Disc Harrow pictured above is an easily operated, all purpose harrow that embodies the high quality manufacturing standards required of all implements in the Dearborn Farm Equipment line.

This harrow is very adaptable for a wide range of uses: it will perform effectively in the open field; it can be offset to the right or left for all types of orchard work; it can be set to throw to or away from planted rows for vineyard and similar operations.

The heavy all-steel construction assures long life and dependable operation. The side draft elimi-

nating screw feature of this harrow enables the operator to effectively and easily control side draft by raising or lowering the rear gang in relation to the front gang.

The heavy duty discs are made of heat treated high carbon steel to give maximum wear and shock resisting properties.

This harrow is manufactured with two types of bearings. Models 11-19, 11-21, 11-22 and 11-23 are equipped with plain metal bearings. Model 11-24 is equipped with oil bath bearings. The above picture shows the plain bearing type harrow, Model 11-22.

ASSEMBLY

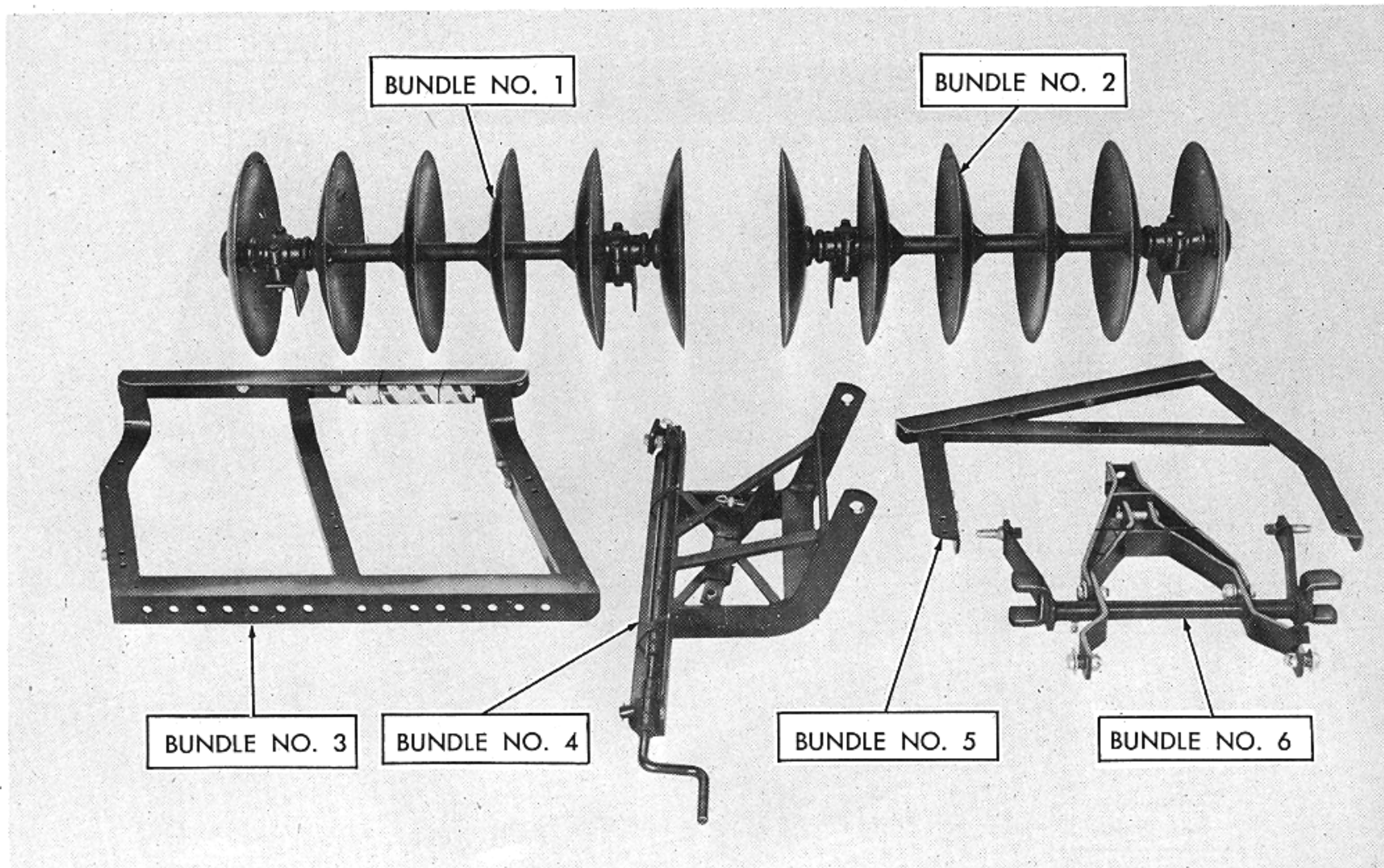


Figure 2

Disc Harrow Bundled for Shipment

NOTE: Assembly of Towner Offset Disc Harrow is the responsibility of the Dearborn Farm Equipment dealer. The implement should be delivered completely assembled. The following instructions are for guidance in case of need.

BUNDLE INFORMATION

All lift type Towner Offset Disc Harrows are shipped in six bundles as shown in Figure 2. Check the shipment against the figure and the following list to be sure all parts are received.

Bundle No. 1

Front disc gang assembly

Bundle No. 2

Rear disc gang assembly

Bundle No. 3

Front frame with instruction manual tube wired to it

Bundle No. 4

Wired bundle containing hitch assembly, side draft eliminating screw, seat plate, and a top link

Bundle No. 5

Rear frame

Bundle No. 6

"A" frame assembly

ASSEMBLY

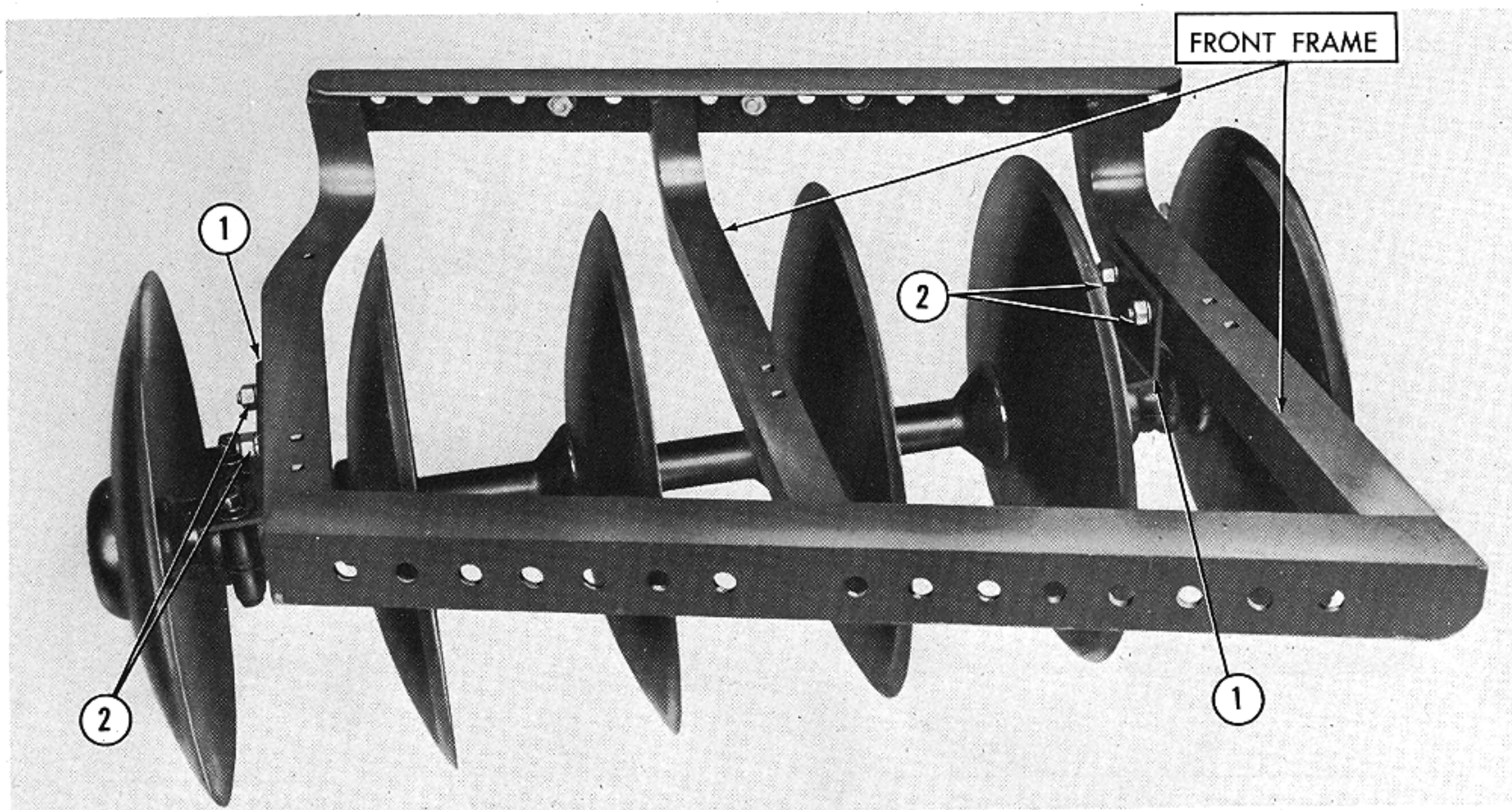


Figure 3

Front Frame Mounted on Disc Gang

ASSEMBLY PROCEDURE

NOTE: This harrow is manufactured with two types of bearings. Models 11-19, 11-21, 11-22 and 11-23 are equipped with plain metal bearings. Model 11-24 is equipped with oil bath bearings. All models are assembled in the same manner except that there is a slight difference in the way that the frame sections are mounted on the disc gangs with oil bearings, as compared to that of the gangs with plain metal bearings. This difference is explained in the assembly procedure

1. Attach the front frame to the disc gang. See Figure 3.

Plain Bearing Models

- a. Position the front frame to fit on the disc gang risers (1) as shown in Figure 3. Be sure that the discs are dished to the right (when viewed from the rear), and that the raised part of the frame is to the front. The disc gangs are interchangeable.

- b. Bolt the risers to the frame with the four bolts (2) provided in the frame.

Oil Bearing Model

(See Figure 6)

- a. Position the front frame to fit on the risers (1) of the front disc gang (disc gangs are not interchangeable), as shown in Figure 6. Notice that the frame attaches to the risers (1) located outside of the discs at both ends of the disc gang. Be sure that the lubrication fitting guard (2) is in front of the lubrication fitting (3) and that the discs are dished to the right as shown in Figure 6 when viewed from the rear.
- b. Bolt the risers to the frame with the four bolts provided in the frame. The straight riser is attached to the left side of the frame; the offset riser is mounted to the right hand side of the frame.

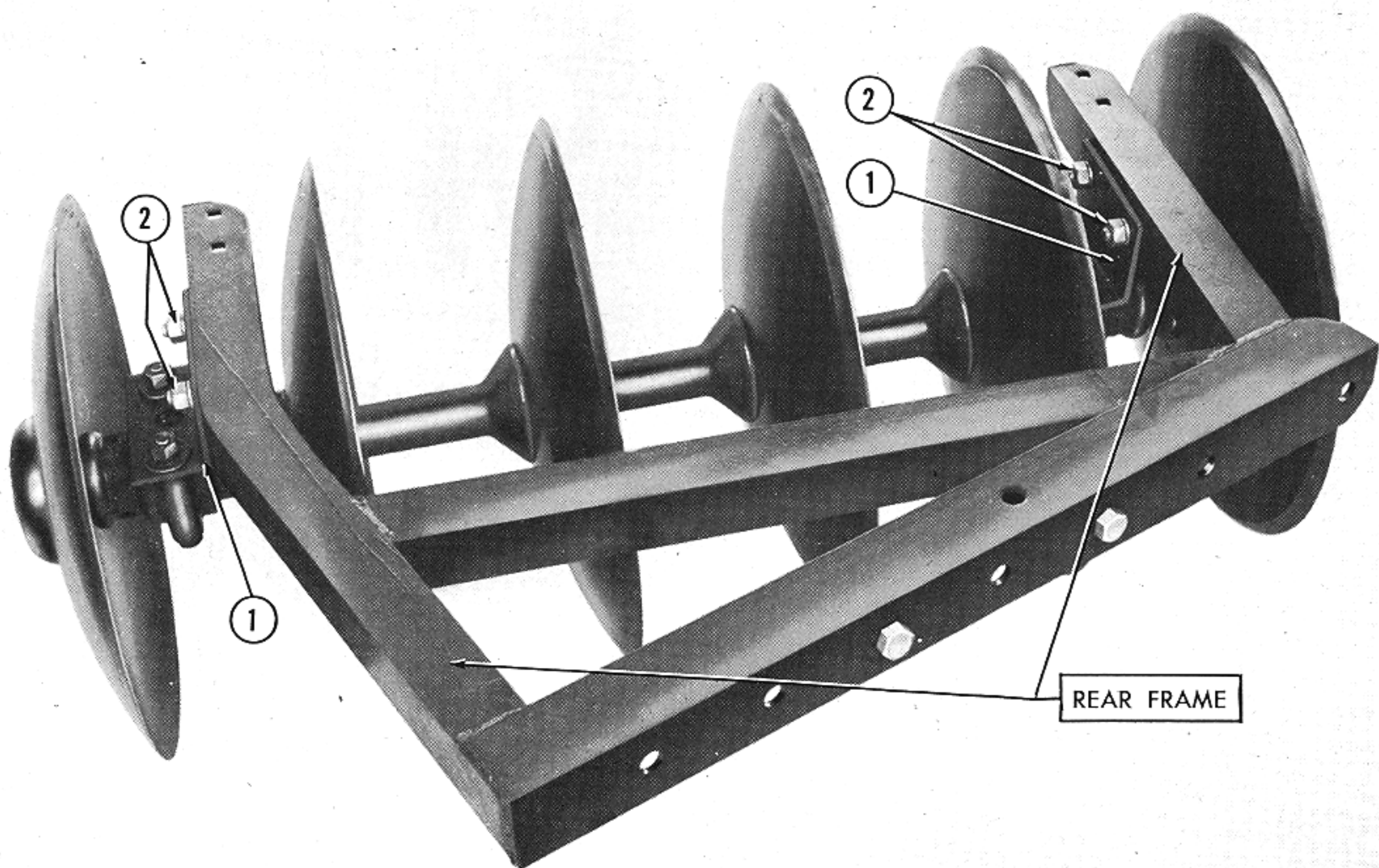


Figure 4

Rear Frame Mounted on Disc Gang

2. Attach rear frame to the disc gang. See Figure 4.

Plain Bearing Models

- a. Position the rear frame to fit on the disc gang risers (1) as shown in Figure 4. Be sure that the discs are dished to the left (when viewed from the rear). The open part of the frame is to the rear.
- b. Bolt the risers to the frame with the four bolts (2) provided in the frame.

Oil Bearing Model

(See Figure 6)

- a. Position the rear frame to fit on the risers (4) of the rear disc gang as shown in Figure 6. Be sure that the lubrication fitting guard is in front of the lubrication fitting (these parts are not visible in Figure 6) and that the discs are dished to the left when viewed from the rear.
- b. Bolt the risers to the frame with the four bolts provided in the frame. The straight riser is attached to the *right* side of the frame; the offset riser is mounted on the left hand side of the frame. See Figure 6.

ASSEMBLY

3. Place the assembled front and rear gang sections into the position shown in Figure 5. Note that the front and rear frames form a continuous line at point "A". This setting is for normal operating conditions with no "offset" in the gangs.
4. Bolt the two frame sections together in this position with the two bolts provided in the rear frame. Space these bolts as wide apart as possible to give the assembly added strength and rigidity.

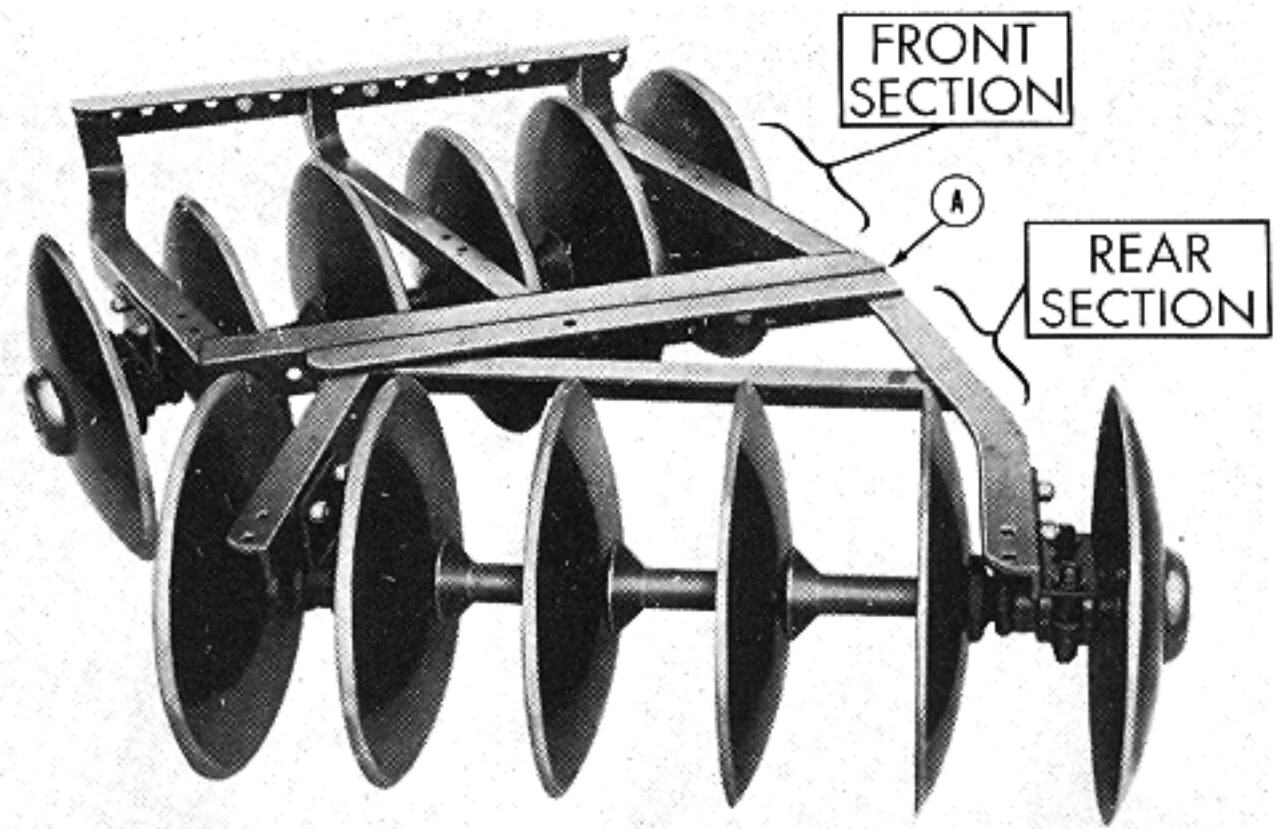


Figure 5

Front and Rear Sections Bolted Together

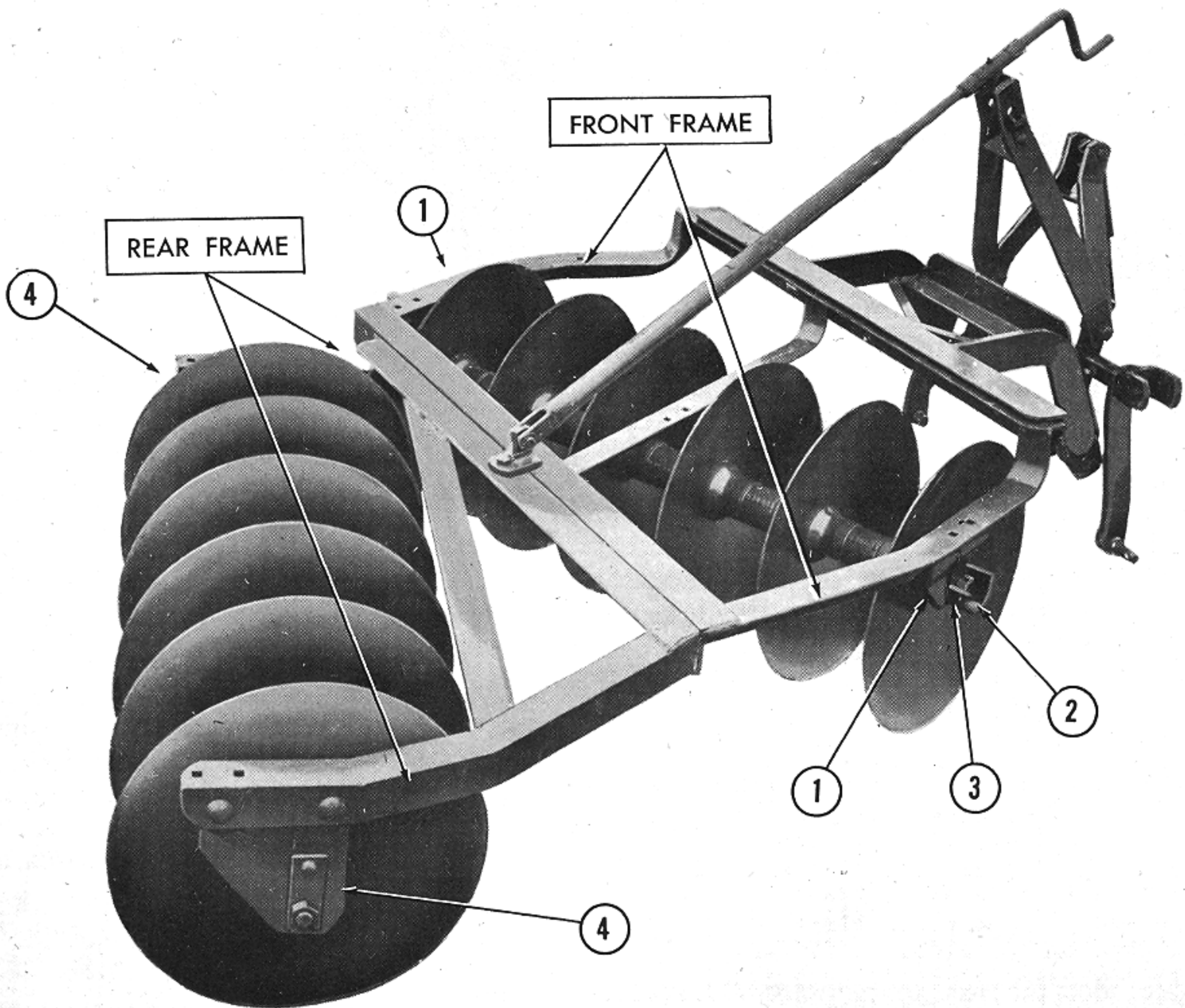


Figure 6

ASSEMBLY

- Center the hitch-weight box assembly on the front frame and bolt it to frame with the two bolts (1) (provided in front frame) as shown in Figure 7.
- Attach the "A" frame assembly to the hitch frame at points "B" with bolts, bushings, and large washers provided as shown in Figure 8. Secure the castellated nuts with cotter pins. Be sure that stop bracket (1) is hooked behind the hitch bar as shown in Figure 8.

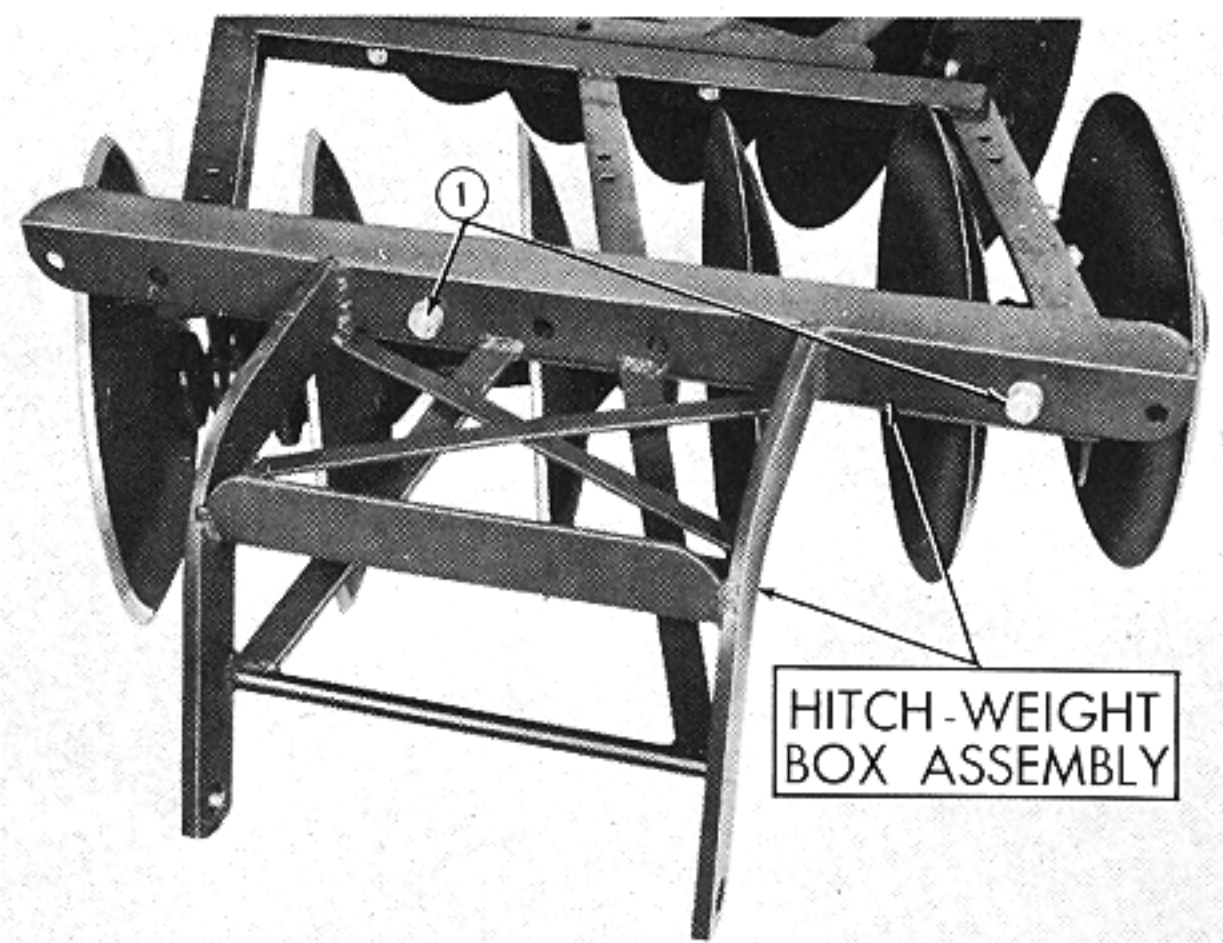


Figure 7

Hitch-Weight Box Assembly Attached to Front Frame

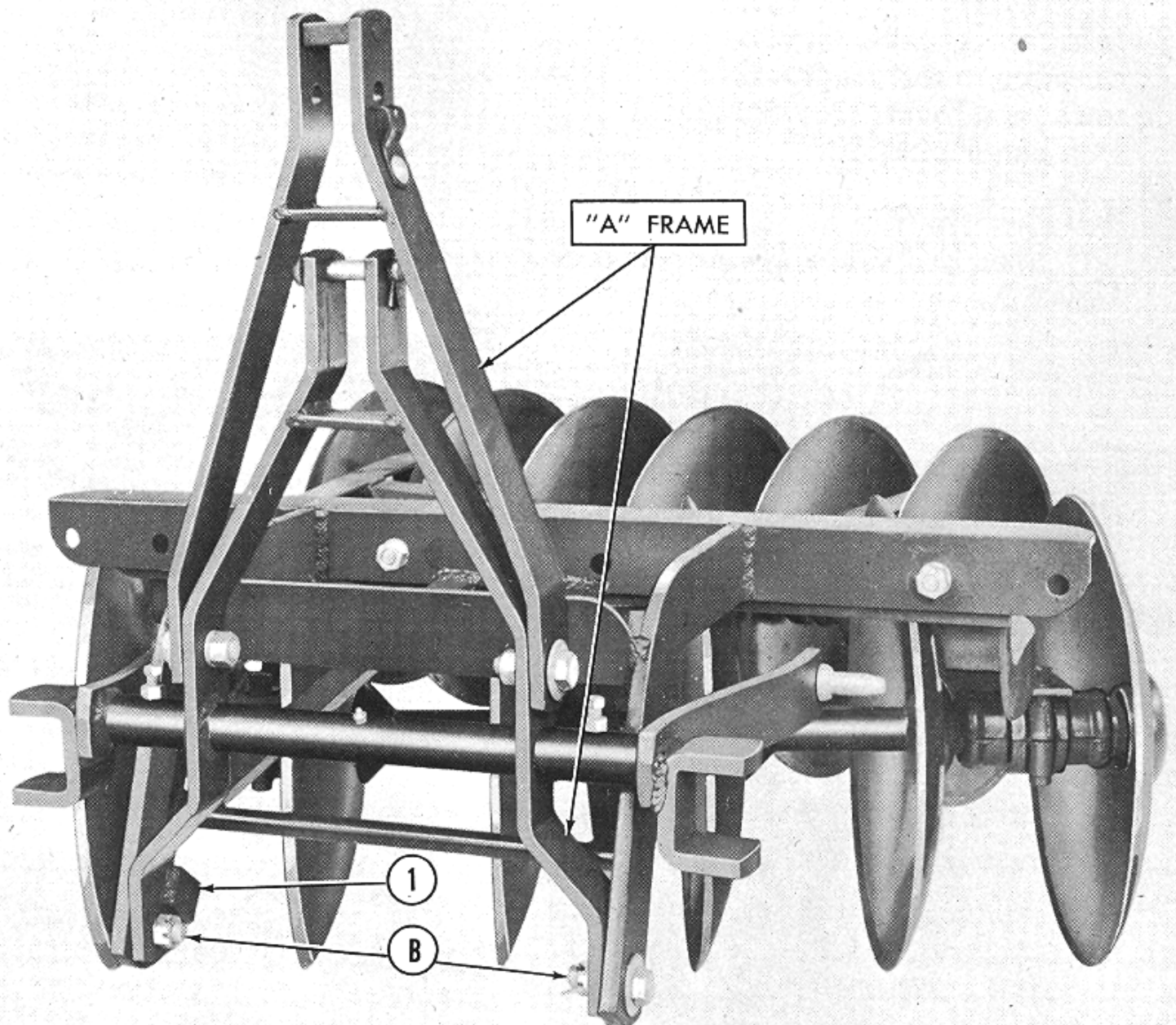


Figure 8

"A" Frame Attached to Hitch

ASSEMBLY

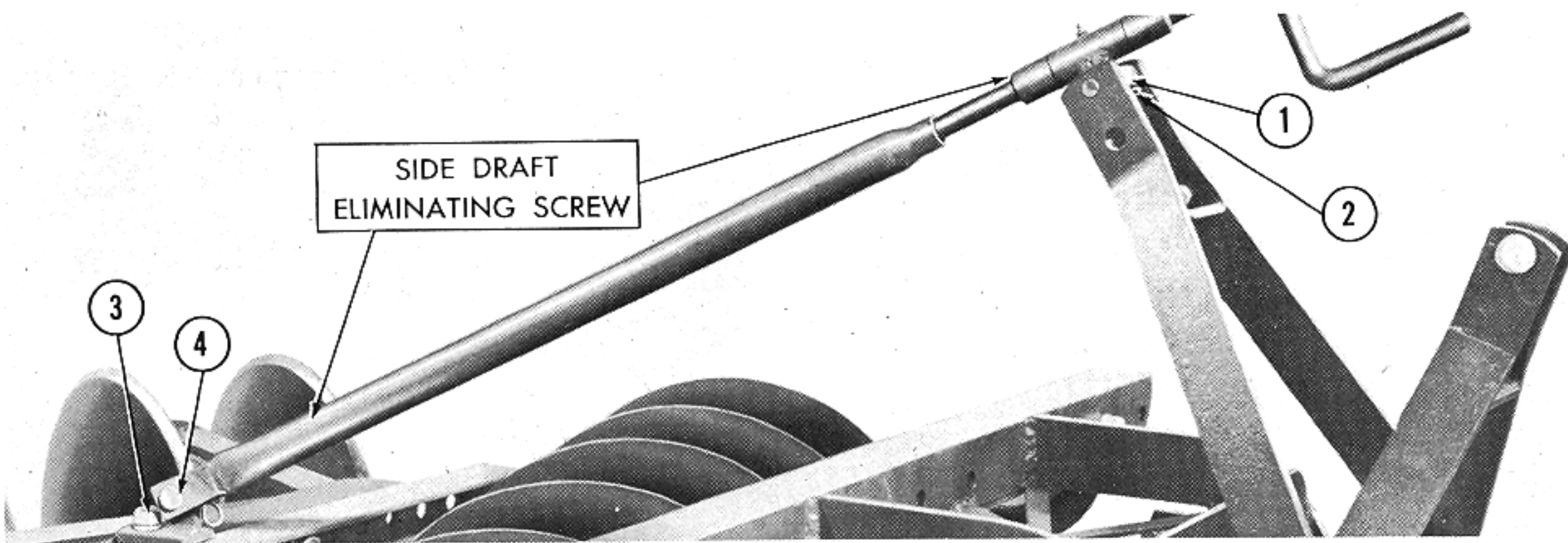


Figure 9

Side Draft Eliminating Screw Attached

7. Attach side draft eliminating screw assembly. See Figure 9.
 - a. Insert the spindle pin of the draft screw assembly in the spindle block (1) at the top of the outer "A" frame and secure with cotter pin (2).
 - b. Bolt the rear end to the center of the rear frame with bolt (3) provided. See Figure 9.
8. Attach the telescoping top link to the top of the inner "A" frame with pin and cotter pin as shown in Figure 10.
9. Attach the seat bracket to the tractor seat spring studs as shown in Figure 11. To permit full use of the stud threads, do not use washers or lockwashers.
10. Check the entire implement to see that all nuts are drawn up tight and that all the cotter pins are securely fastened.

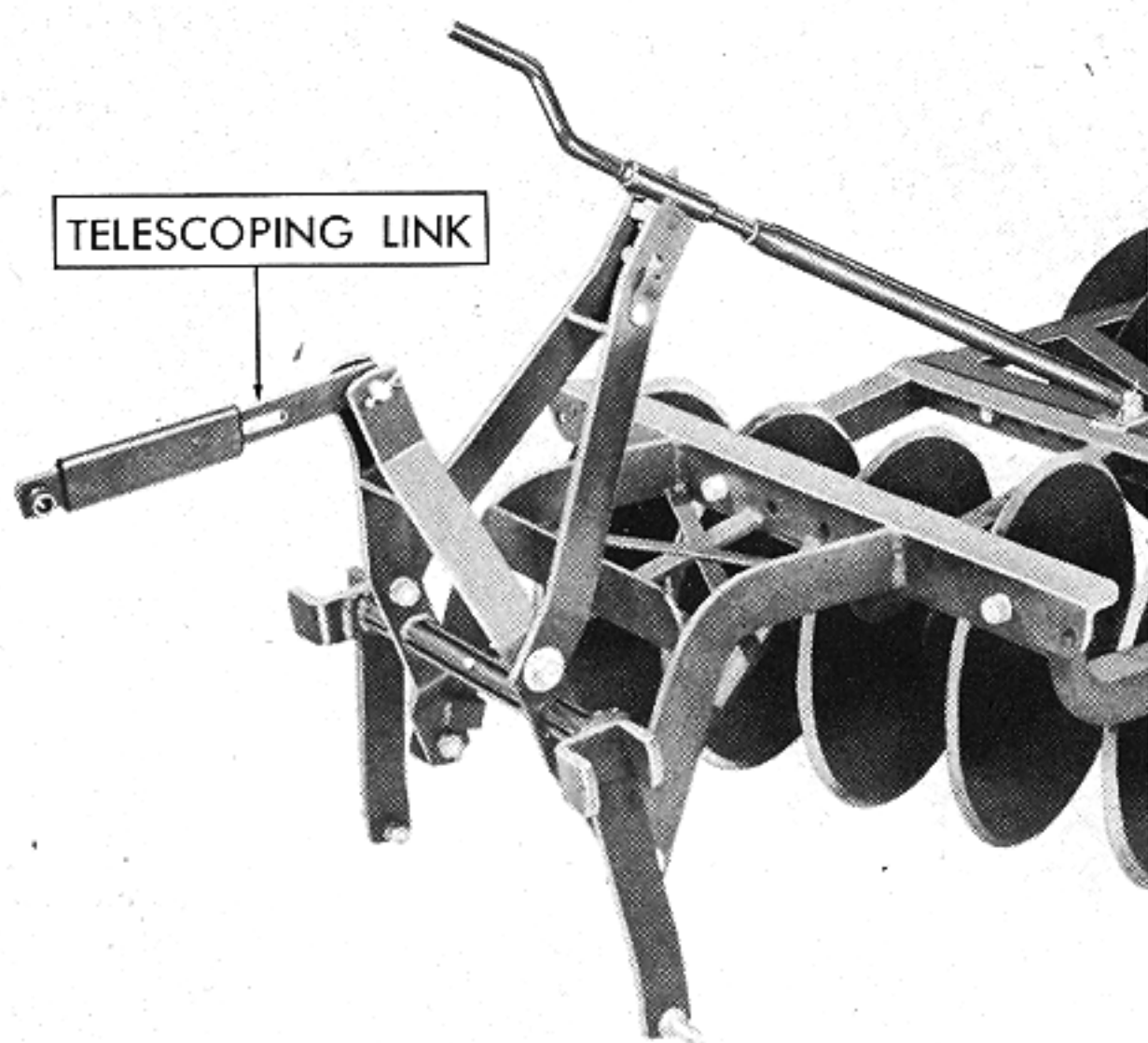


Figure 10

Telescoping Link Attached to Inner "A" Frame

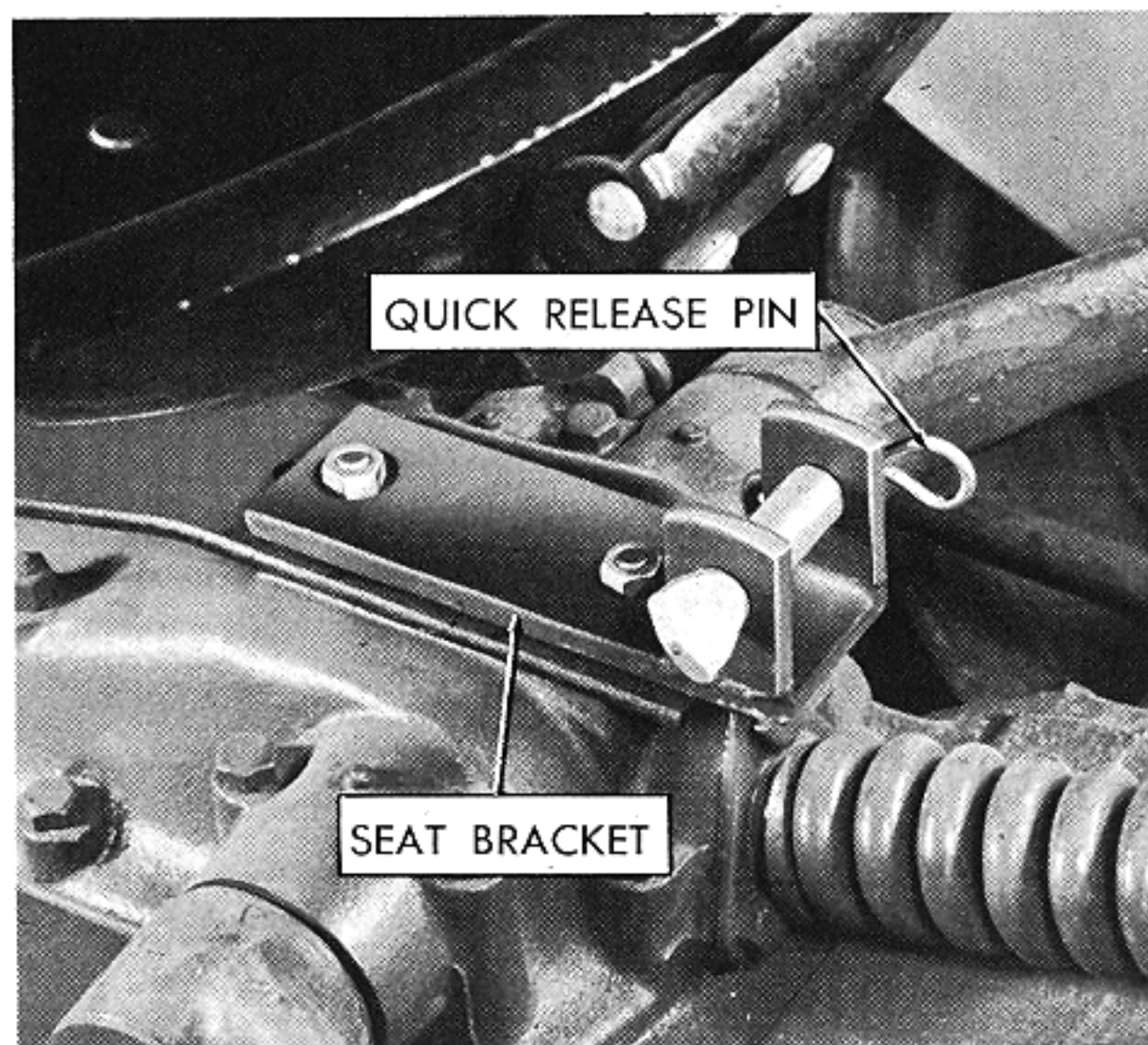


Figure 11

Seat Bracket Attached

ATTACHING AND DETACHING

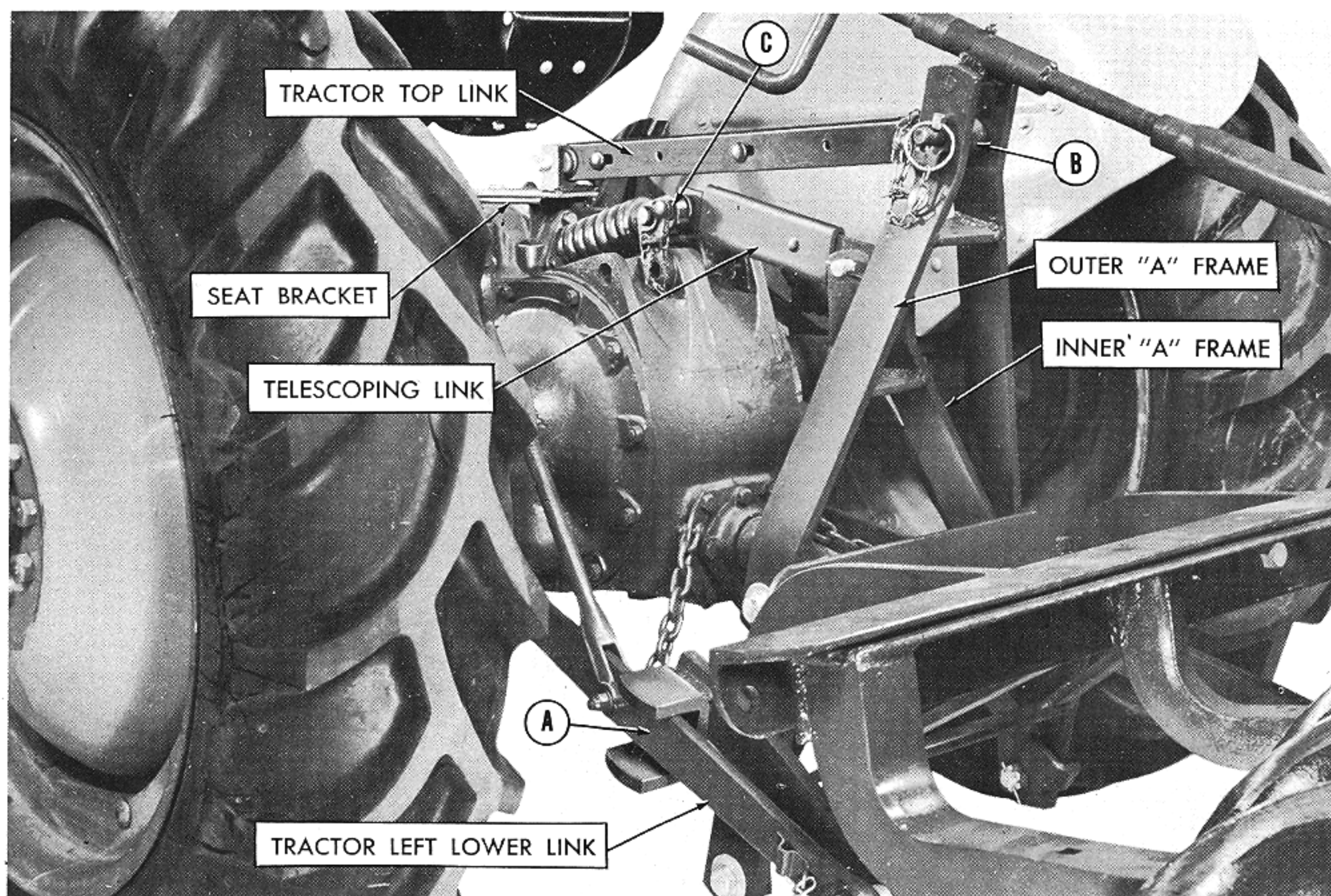


Figure 12

Harrow Attached to Ford Tractor

ATTACHING PROCEDURE

1. Back the tractor into position.
2. Attach the left lower link to the link pin and secure with linch pin as shown in Figure 12. Note that the link fits between the ends of the link retaining bracket at point "A". See Figure 12.
3. Attach the right lower link in the same manner and secure with linch pin.
4. Release the tractor end of the tractor top link from the tractor control spring yoke and attach it to the seat bracket with pin and quick release pin. See Figure 12.

5. Attach other end of the tractor top link to the outer "A" frame at "B" and secure with linch pin as shown in Figure 12.
6. Attach the telescoping link to the tractor control spring yoke and secure pin.

DETACHING PROCEDURE

1. Detach the telescoping link from the tractor spring yoke. Replace and secure pin.
2. Detach the tractor top link from the outer "A" frame.
3. Detach the tractor lower links and secure the linch pins in the lower link linch pin brackets.

OPERATION



Figure 13

Harrow at Work

The Towner Offset Disc Harrow can be used for wide variety of discing jobs because of the ease of operation and the wide range of adjustment possibilities. It can be offset to the right or to the left; it can be set to in-bar (throw to) or off-bar (throw away) from planted rows in the offset positions. These features make it possible for the operator to adjust the implement to do the best possible job for the operation intended.

The side draft eliminating screw enables the operator to control the side draft in any setting by merely turning a screw crank that is easily accessible from the tractor seat. The depth of soil penetration is controlled by means of the *Ford Hydraulic Touch Control*. The lift feature of this harrow makes it possible for the operator to back the tractor and work corners and other areas inaccessible to the pull type harrows.

OPERATION

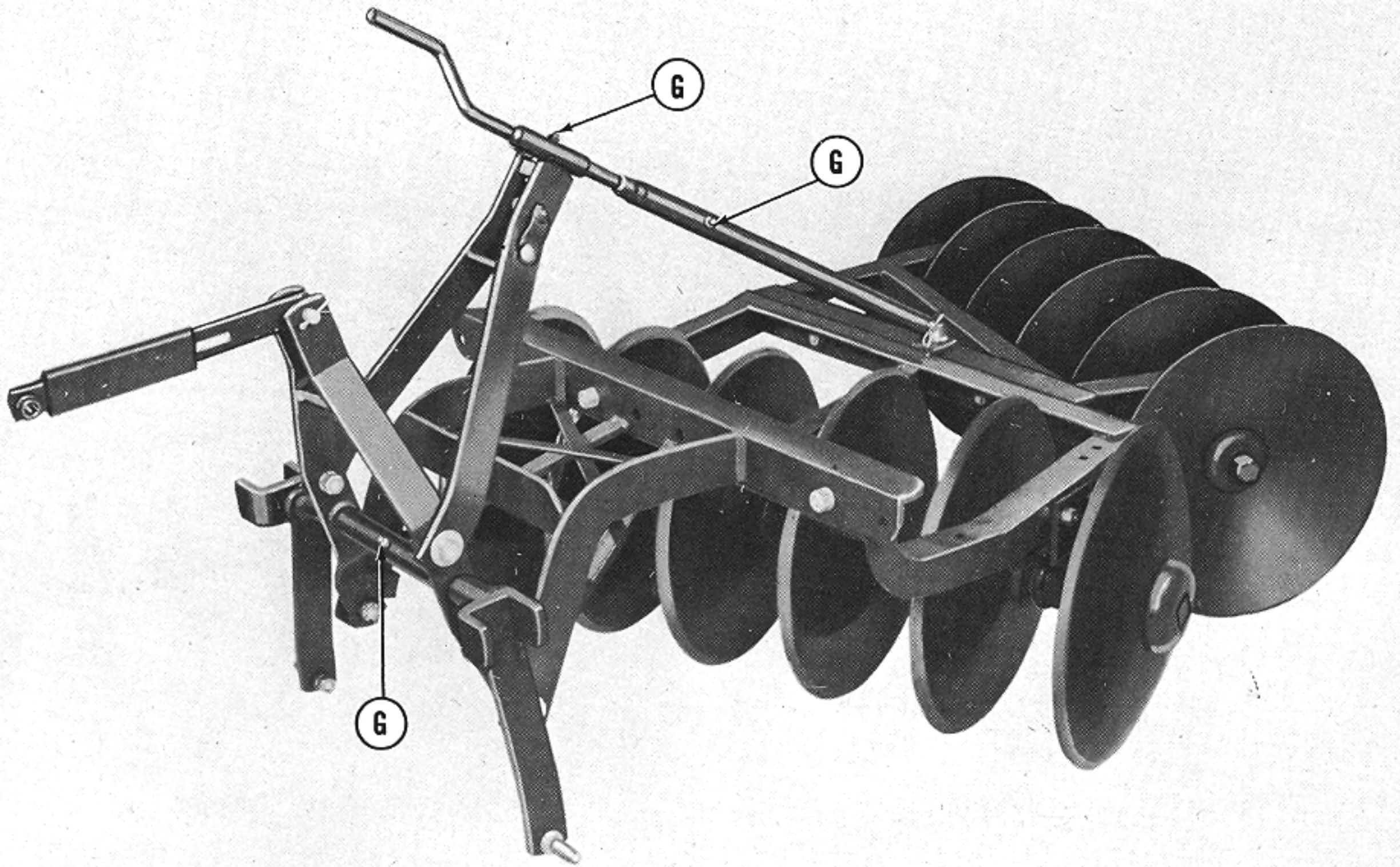


Figure 14
Lubrication Points

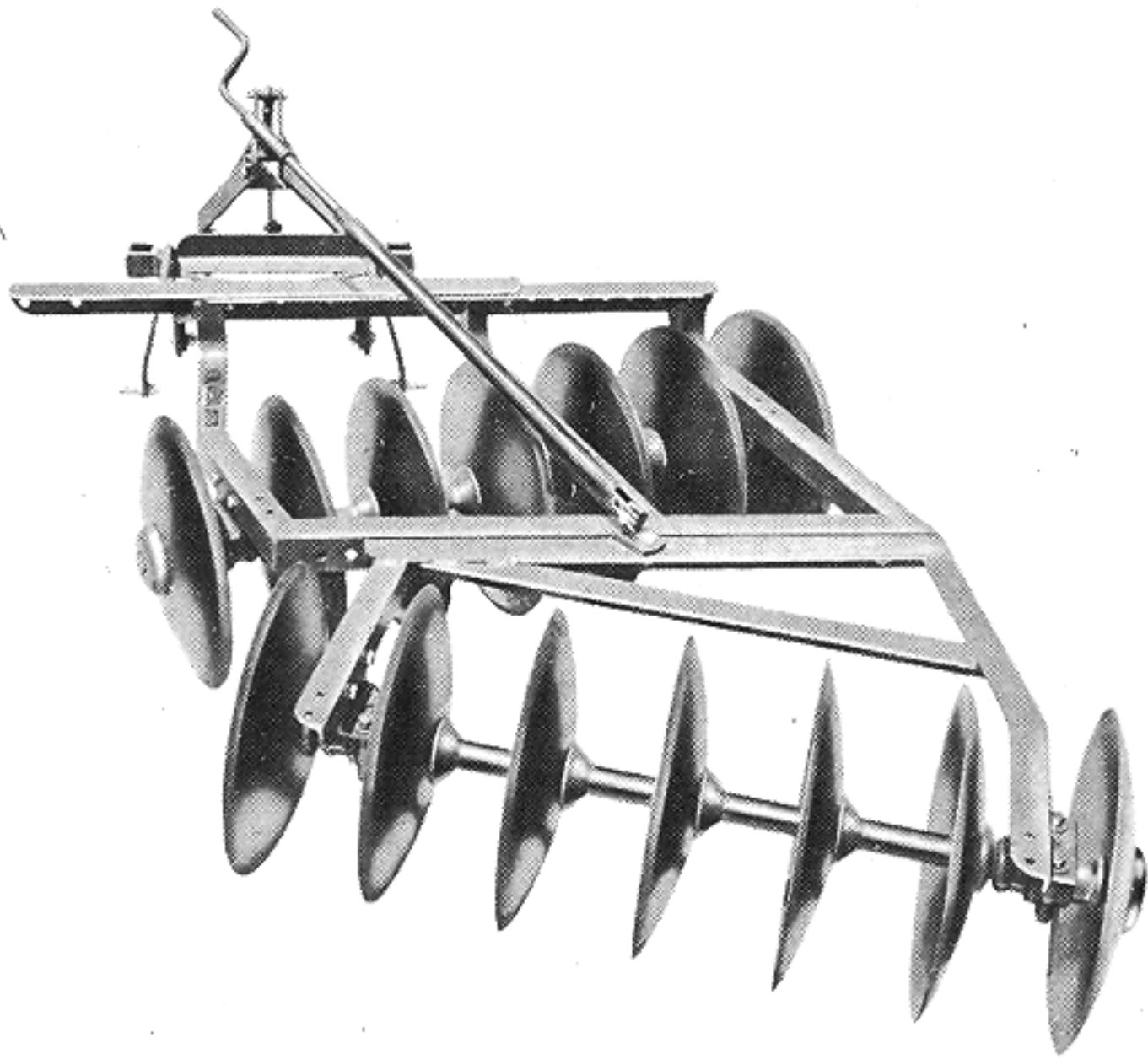
LUBRICATION

NOTE: *All Towner Disc Harrows are shipped with dry bearings. Be sure to lubricate your harrow according to the following instructions before putting it into field operation.*

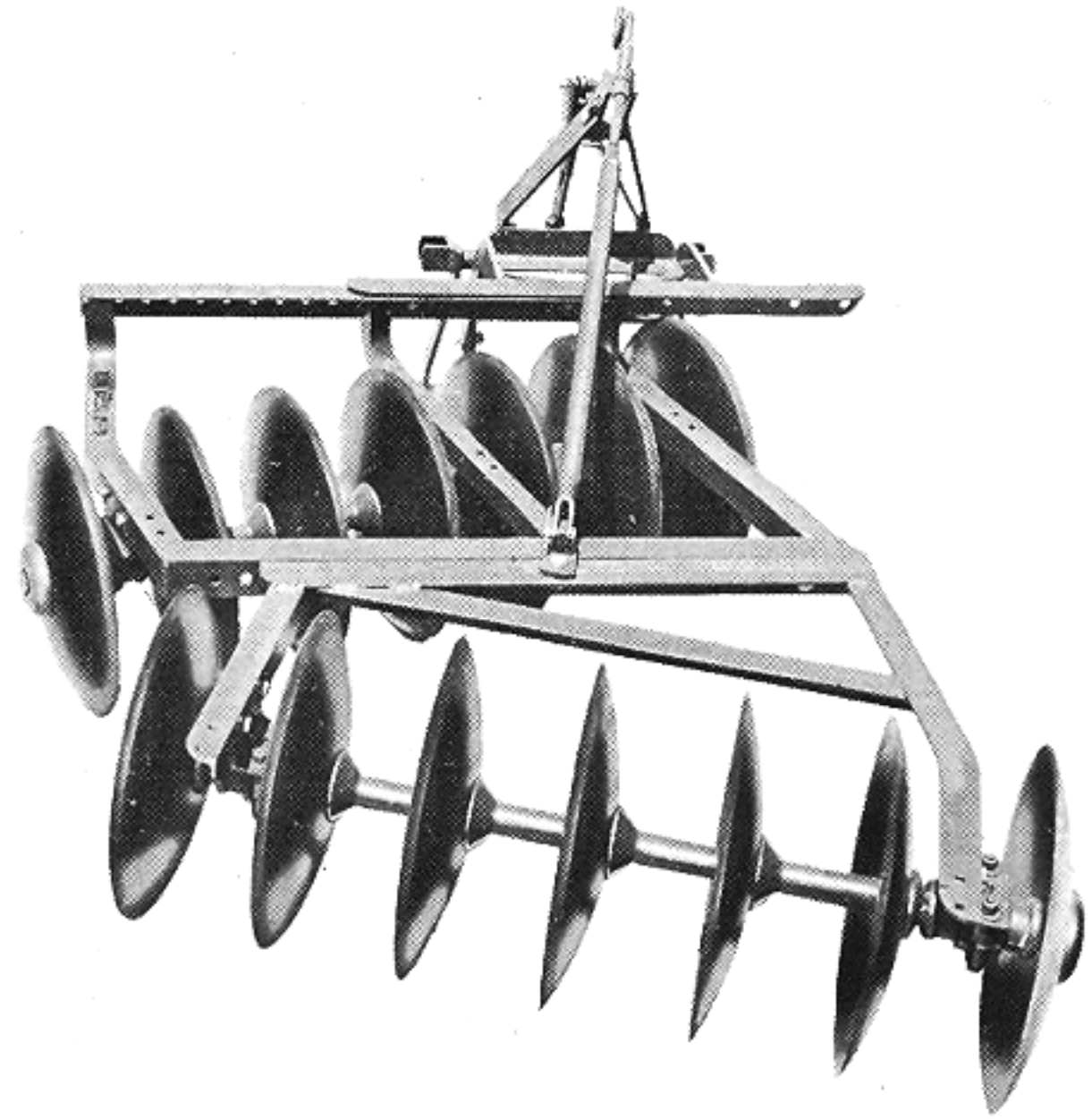
1. *Plain metal bearings.* There are seven lubrication fittings on the plain bearing model disc harrows. Four of these fittings (one on each disc gang bearing box) should be greased once a day with a good grade of gun grease when the implement is in use. The other three fittings (marked "G" in Figure 14) should be lubricated occasionally to keep the parts operating satisfactorily. Wipe the fittings clean before lubricating to give a good pressure gun fit and to prevent outside dirt from being forced into the bearings. Force enough grease into the bearings
2. *Oil bearing model.* This model has only two fittings for lubricating the disc gang bearings. One is located at the center of the right hand disc in the front gang (see (3), Figure 6); the other is in the center of the left hand disc in the rear gang. Both of these fittings should be lubricated twice a week with a 140 or 160 gear oil. A large capacity pressure gun is recommended for this because the axles hold from 2½ to 3½ quarts of oil. The oil need never be changed but the reserves should be kept full and oil should be forced past the seals for flushing purposes, when lubricating the bearings.

The three fittings marked "G" in Figure 14 should be lubricated occasionally to keep the parts operating satisfactorily.

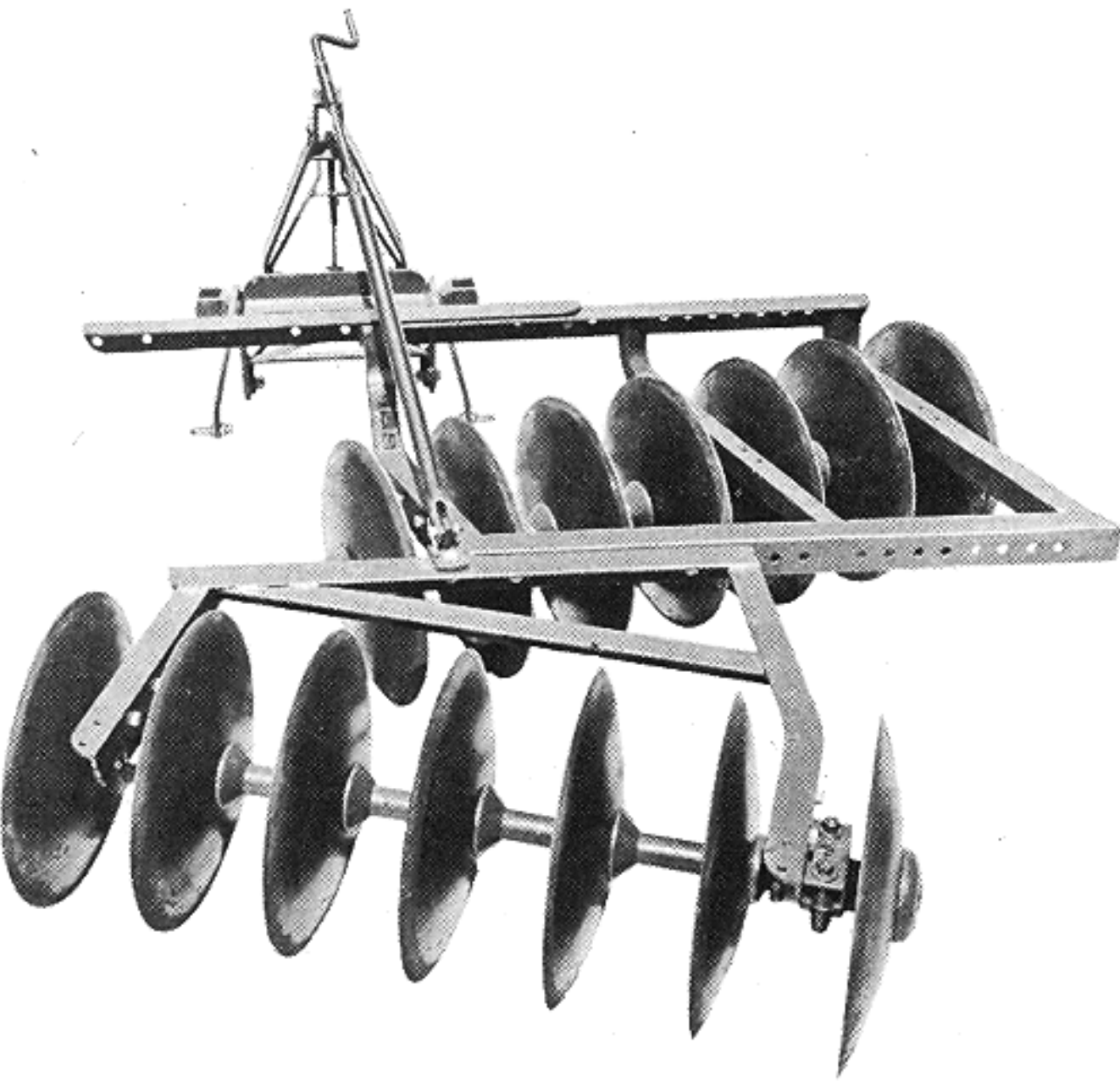
OPERATION



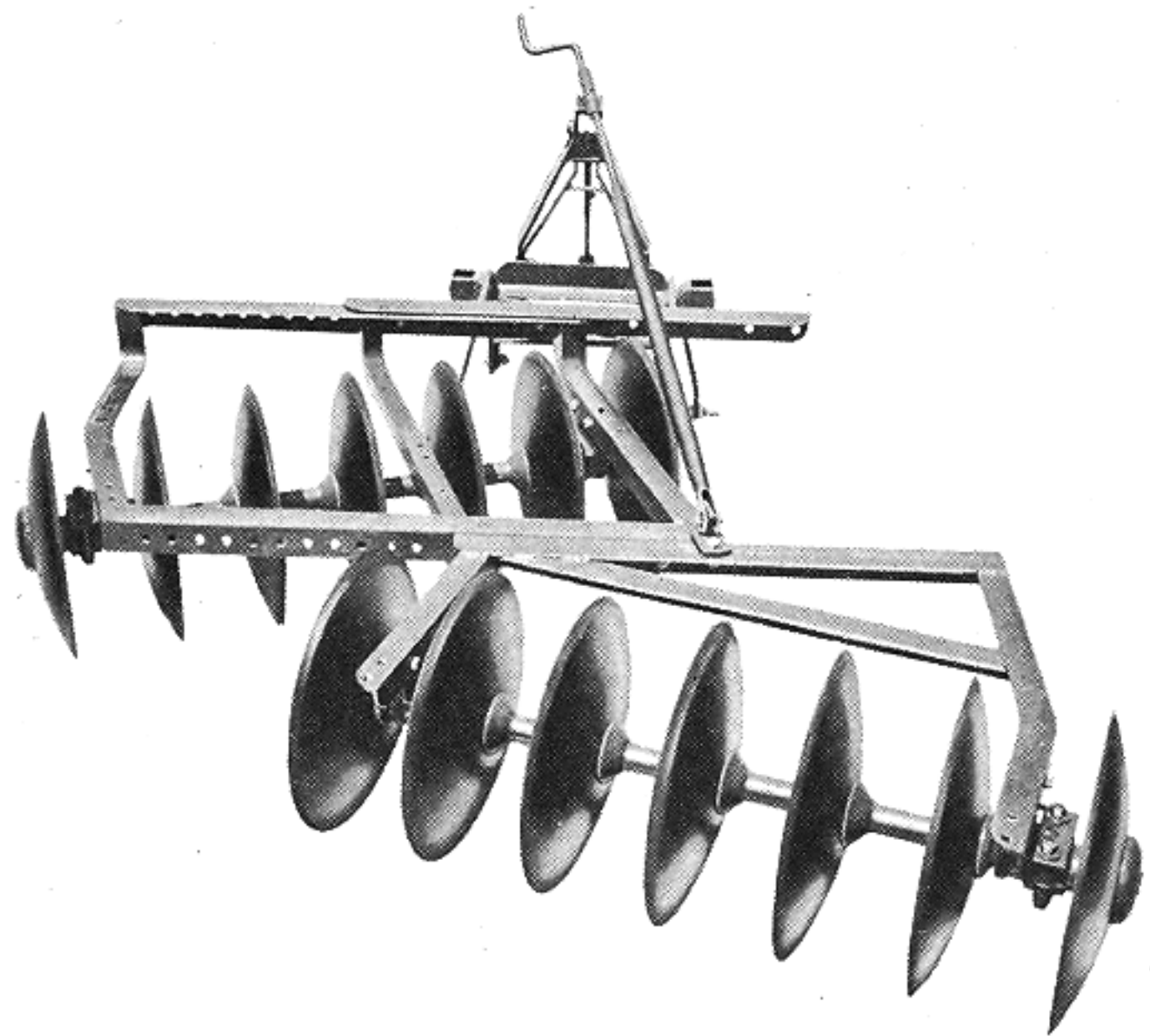
RIGHT HAND OFFSET



LEFT HAND OFFSET



RIGHT HAND OFFSET
IN-BAR SETTING



LEFT HAND OFFSET
OFF-BAR SETTING

Figure 15
Offset Positions

OPERATION



Figure 16

Harrow in Transport Position

ADJUSTMENTS

1. *Right or left hand offset.* (See Figure 15.)

- When the harrow is mounted to the tractor, remove the two bolts (1), Figure 7, that hold the hitch weight box assembly to the front frame.
- Detach the side draft eliminating screw at the frame end by removing pin (4), Figure 9.
- Hold the crank handle of the eliminating screw and maneuver the tractor to obtain desired offset.
- Reattach the hitch to the frame, spacing the bolts as wide apart as the hole locations will permit.
- Reattach the side draft eliminating screw and secure pin with the quick release pin.

2. *In-bar adjustment.* (See Figure 15.)

NOTE: The in-bar adjustment is normally made when the implement is in right hand offset; the off-bar setting is made when the implement is in the left-hand offset.

- Remove the pin that holds the side draft eliminating screw to the bracket at the frame end.
- Remove the two bolts that hold the front and rear frame sections together.
- Move the rear section to the left for desired offset.
- Reattach the side draft eliminating screw and bolt the frames together. Space the bolts as wide apart as hole locations will permit.

3. *Off-bar adjustment.* (See Figure 15.)

This adjustment is made exactly the same way as the in-bar adjustment except that the rear frame section is moved to the right.

MAINTENANCE

1. Keep bearings well lubricated.
2. Use touch-up paint where necessary on painted surfaces to prevent rust and maintain appearance of the implement.
3. Store the harrow in a dry place between operating seasons and coat non-painted surfaces with a good grade of rust preventative.
4. Replace worn and damaged parts promptly with genuine parts from your Dearborn Farm Equipment dealer.

SAFETY

Most farm implement accidents can be prevented by following these simple precautions.

1. Do not permit anyone but the operator to ride tractor at any time.
2. Do not permit anyone to ride on implement.
3. Do not leave tractor while it is in motion.
4. Do not make tractor or implement adjustments when tractor is in motion.
5. Shut off engine before leaving tractor.
6. Lower the harrow to the ground when not in use.
7. Keep tractor keys where they are not available to children when tractor is in the farmyard.