

**OWNERS**  
**PRODUCT INFORMATION**  
**MANUAL**



**FORD TRACTOR with FERGUSON SYSTEM**

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**FERGUSON SYSTEM**

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**FERGUSON PLOW**

*Harry Ferguson, Inc.*

**D E A R B O R N , M I C H I G A N**

# T H I S   I S   Y O U R B O O K

As an owner of a Ford Tractor with Ferguson System and Ferguson Implements, you have in your possession the finest and most modern farm equipment. By knowing how to care for and operate it, you will increase still further the many savings it is bringing you.

That is why we have prepared this book for you—in brief question and answer form. We hope that you will keep it in a handy place where you can refer to it from time to time.

It is the first in a series of this type of material to be issued to owners. Other books in this series will be printed at later dates, and you will be advised concerning them.

In the meantime, if you wish more information or help on any of the points discussed here . . . or on any problems we have not covered . . . we know that you will feel free to call on your Ferguson Dealer. He is willing and anxious to serve you in any way that he can.

HARRY FERGUSON, INC.  
Dearborn, Michigan

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Our purpose in developing the revolutionary features of the Ford Tractor with Ferguson System and Ferguson Implements was to provide a means by which the basic principles of the Ferguson Plan can be accomplished.

The one basic cost of all costs is that of farm production. It is the prime item in the cost of living of all the people. In the final analysis, it determines the cost of all our commodities, services and comforts.

Only with improved machines and methods can farm production costs be driven down—down to a level that leaves the farmer a fair profit after he has met all soil maintenance charges and returned to the land as much fertility as he has taken out.

It is low production costs that make American Industry strong. And lower costs of raising food and clothes through modern farm mechanization will help to keep industry's costs low. They will provide the basis for a permanently sound agriculture—a strong foundation for a greater National Security.

*Harry Ferguson*

# THE FERGUSON SYSTEM

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### 1. What is the Ferguson System?

The Ferguson System is a combination of linkage and hydraulic mechanism for implement control. It is the name given to a new development by Mr. Harry Ferguson for controlling farm implements as units with the tractor. By simple linkage connections and hydraulic mechanism, this system makes it possible to do every kind of farm work with the tractor from seedbed preparation right through harvesting.

### 2. How is the hydraulic system controlled?

- (1) Manually by the finger-tip control lever.
- (2) Automatically through the contraction and expansion of the control spring.

### 3. Name 5 things the Ferguson System does.

- (1) *Provides Penetration Without Weight.*

The implement is attached to the tractor by two bottom links and one top link. When the Implement starts to enter the ground, the bottom links go into tension (start pulling) and the top link goes into compression (starts pushing). This keeps the implement on a level plane. Therefore, the forward motion of the tractor literally pulls the implement into the ground without the use of weight.

- (2) *Provides Automatic, Hydraulic Control.*

When the implement is in a transport position, the main cylinder is full of oil. When the finger-tip control lever is moved downward, oil is released from the cylinder, causing the implement to lower by its own weight. Just as soon as the implement reaches its desired depth, which is determined by the position of the control lever, the release of oil from the main cylinder is automatically stopped. This holds the implement at the desired depth. As long as the texture of the soil does not change, the implement will remain at the pre-determined depth. When working over uneven ground, the expansion and contraction of the control spring regulates the flow of oil into and out of the main cylinder. This provides flexibility between the implement and the tractor.

- (3) *Provides Traction Without Built-in Weight.*

When using a unit implement its weight is always carried on the tractor even though the ground-engaging parts are below the surface of the ground. Take, for example, a plow. Not only the weight of the plow itself is added to the tractor, but the weight of the soil on the moldboards, as well as the downward suction of the plow, is carried as extra weight on the tractor. All of this combined weight gives

added traction and lessens the need for built-in weight. When the texture of the soil changes, the weight of the soil and the downward suction of the plow changes. When plowing in waxy or gummy soils, the draft is usually high and calls for additional weight for traction. The very nature of the soil has a great influence on the weight of the tractor and automatically increases its traction efficiency. When working in loose, sandy soils, the draft is much lighter and the soil does not have such a weight influence on the tractor. That is why it is easy for the Ford tractor with the Ferguson System to work in loose, sandy soils without hazard of the tractor sinking. In other words, it is just like taking on or putting off ballast. The weight is automatically changed to suit the job.

(4) *Keeps the Front End Down.*

The bottom links which are in tension (pulling) are located below the tractor axle, which is the pivotal center, and the top link is located above the rear axle. Previously we explained that when the implement engages the ground, the top link goes into compression (pushes). This forward push on the top link has a tendency to keep the front end of the tractor on the ground.

(5) *Automatically Protects Tractor and Implement When Obstructions Are Hit.*

The instant a solid, hidden obstruction is hit, the oil is automatically released from the main cylinder. Thus the weight of the implement is lost to the tractor. At that moment, the linkage acts as a cantilever which transfers some of the weight from the rear end of the tractor to the front wheels. This action practically eliminates any pull on the implement and, at the same time, keeps the front end of the tractor firmly on the ground. This loss of traction at the time of impact protects both tractor and implement.

**4. What is the proper adjustment of the control spring, and explain the position of the control lever when making this adjustment?**

- The control spring is adjusted properly when it has no end play and can be turned easily with thumb and finger. This adjustment should be made with control lever in the raised position and final check made with an implement attached.

**5. How far down the quadrant must the control lever move to allow the implement to lower or drop?**

2½ inches—plus or minus ⅛ inch.

This means that the control lever is moved down the quadrant 2½ inches and, at this point, the implement should just start dropping. Best results are obtained only when this adjustment is correct.

**6. What adjustment is provided to hold the control lever at any position?**

A castellated nut is provided at the lower end of the control lever that can either be tightened or loosened. Adjust so that control lever can be easily moved with thumb and finger and remain wherever placed.

**7. Does the hydraulic mechanism have a safety valve? If so, explain the function.**

Yes.

This safety valve protects the complete mechanism by releasing the oil pressure if it becomes too high.

**8. Ordinarily does the safety valve operate when an obstruction is hit?**

No.

The outlet port in the control valve opens, letting the oil out of the ram cylinder and releasing the weight of the implement from the tractor.

**9. What will happen if the control valve sticks?**

The implement cannot be raised or lowered.

**10. What may cause the control valve to stick?**

A varnish type deposit, originating in improper oil, collecting on the valve. The oil should be changed in the rear end of the tractor for the first time at the end of 200 hours; thereafter, every 600 hours or once a year. If specified oil is used, and the oil changed at regular periods, there will be very little possibility of the control valve sticking.

**11. Why is it necessary that the ram cylinder bolts be kept tight?**

To avoid damage to the hydraulic system.

This is done at regular intervals by tightening the four hex nuts found directly under the seat spring.

**12. Because an implement gradually settles to the ground (when the motor is stopped) does this mean it will have any serious effect on efficient operation when in actual use?**

No.

The pump has ample capacity to take care of any small leakage.



**13. Why is it necessary for all linkage connections to be free?**

- (1) Free linkage permits easy and quick attachment of implements.
- (2) To insure smooth operation, and free movement throughout the hydraulic system.

When tractors are left uncovered all winter or during heavy rains, bushings in the cross shaft may become corroded. When the hydraulic mechanism is not used, this cross shaft might become tight in the bushings and not work freely. This may be responsible for an irregular movement in the linkage. For this reason we urge owners without storage facilities to cover their tractors properly when not in use.

**14. Explain why none of the ball sockets or pin connections should be lubricated.**

Lubricated ball sockets or pin connections will collect dust and grit, causing rapid wear.

We suggest, if the tractor is stored for the winter, that these connections be oiled to prevent rust. However, before the tractor is put into operation again, *these parts should be washed clean of all oil.*

**15. What are the purposes of the check chains?**

- (1) To hold the implement rigid in transport position.
- (2) To limit the amount of side movement in the bottom links.

**16. Should the long or short end of the check chain anchor be installed in an upward position?**

Short end up.

It is necessary to remove the check chain anchors when putting on the belt pulley. Be sure when replacing these anchors that they are not put on upsidedown, as this would shorten the chains and the lift arms could not reach the proper height.

# THE FORD TRACTOR

## with FERGUSON SYSTEM

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**1. When should the tractor be driven slowly?**

- (1) When starting in cold weather.
- (2) When working in rough ground or on steep grades.
- (3) When working in fields that are full of obstructions.
- (4) When breaking-in a new tractor.

**2. What is the best average height of the drawbar when pulling a drag type implement?**

18 inches.

The average height of the drawbar is 18 inches. However, it can be adjusted higher or lower to suit various pull-type implements.

**3. What danger is there in pulling from the top link connection?**

We do not believe there are any tractor owners who can not see what might result by pulling from the top link connection. However, keep this in mind as a precaution against damaging the hydraulic mechanism or losing control of the tractor.

**4. When should the hydraulic pump be disconnected?**

- (1) When pull-type implements are used.
- (2) When operator leaves the seat when using power-take-off equipment such as the corn picker, combine, mower, etc.

This question is very important. In view of the many accidents that happen through carelessness in handling power-take-off equipment, we caution all owners when making repairs or adjustments, to throw out the power-take-off, turn off the motor, and set the brakes when operating on grades.

**5. When plowing with 10" tires, what tread setting is recommended?**

52" on the rear wheels and 48" on the front. In the event the wheels were set on wider wheel treads, it is quite possible there would be undue side draft, wear on the tires, or unnecessary strains and stresses on various parts of the tractor.

**6. What is the minimum and maximum wheel spread?**

48 to 76 inches in 4 inch steps.

**7. Why should the tractor be used on the narrowest tread under all possible conditions?**

To reduce strain.

**8. Explain simple procedure for adjusting rear wheel brakes.**

Jack up rear wheel, turn cam screw until tight, then loosen until wheel turns freely.

**9. What is the recommended air pressure of the tires?**

12 pounds for the rear and 26 pounds for the front.

For simple, easy inflation of your tires, your dealer can supply you with a small tire pump that fits conveniently into the tractor engine by merely removing a spark plug.

Both *under-inflation* and *over-inflation* are harmful to tires. Under-inflation will result in repeated buckling of the side wall and this will soon break the cord fabric. Under-inflation may also allow the tire to slip on the rim. This, in turn, will tear off the valve stem of the tube. Over-inflation causes loss of traction, which results in excessive slip-page, causing the tires to wear more rapidly.

If additional traction is needed, a calcium chloride and water solution may be used in the tires. The following table is a guide to follow as a protection against freezing.

**10" TIRE**

**20° BELOW ZERO**

24 gallons water

44 pounds Calcium chloride

Total Weight 227 pounds per tire.

Consult your dealer for further details.

**10. Outline briefly the care of the storage battery.**

To fill the battery, stop the motor, remove all 3 caps from the top of the battery, fill it with clean distilled water, replace the caps and the job is completed. The battery should be kept clean at all times and the terminals greased occasionally. When the tractor is not in use for some time, the charge in the battery should be maintained by running the engine or removing the battery and taking it to a battery service station. Never store the battery on a concrete floor or in a damp place.

**11. How is the charge maintained in the storage battery?**

By adjusting the charging rate of the generator.

There is a screw on the rear of the generator that can be adjusted by inserting a coin into the slot. High and low positions are clearly indicated by arrows.

Set generator charging rate at lowest point that will keep battery fully charged. An excessive charging rate boils away the solution.

**12. What is the correct spark plug?**

14mm. H10 Champion.

**13. Does the ignition system have an automatic spark advance?**

Yes.

It is controlled by a small governor on the inside of the distributor base.

**14. Is there a manual adjustment to advance and retard the spark?**

Yes.

This adjustment is made by loosening the screw at the left hand side of the distributor base and moving this screw up to retard the spark and down to advance it.

**15. What is the proper procedure for cleaning carburetor?**

- (1) Remove carburetor from the manifold.
- (2) Remove the fuel needle valve. (The fuel needle valve is set at an angle and should be removed first to prevent damage.)
- (3) Disassemble carburetor bowl.
- (4) Remove the float, float valve, gasket, venturi tube, drain plug and elbow strainer.
- (5) After carburetor is disassembled use compressed air to blow out each individual part.

*CAUTION*—Never attempt to blow out a carburetor by connecting an air line to the fuel inlet.

**16. How many turns should the fuel needle be opened for average conditions?**

One full turn.

Heavy work such as grinding, threshing or other similar work usually requires an additional quarter turn.

**17. What will be the result of air leaks occurring between the air filter and carburetor?**

Dirt will be taken into the motor and rapid wear will result.

It is very important that a good hose connection be maintained between the pipe running from the air cleaner and the carburetor.

**18. What is the capacity of the fuel tank?**

10 gallons.

Fuel is supplied by gravity from the fuel tank to the carburetor. Only one tank is provided. By means of a two-way valve, fuel can be drawn from the tank at the bottom or from an opening in a short standpipe. Thus, a portion of the fuel (1 gallon) is held in reserve for emergencies. When the tank is full, by turning the fuel valve on reserve, whatever dirt or water may have gotten into the tank will settle down into the sediment bowl where it can easily be removed. The "Main" and "Reserve" supplies are indicated by the letters M and R on the sediment bulb assembly.

**19. What may cause the governor to surge?**

- (1) Improper carburetor adjustment.
- (2) Dirty air cleaner.
- (3) Sticky or gummy connections between the governor and the carburetor.
- (4) Accumulation of dirt between and around the governor arms.

**20. Through what speed range does the governor function?**

400 to 2,000 engine revolutions per minute.

The governor is calibrated at the factory to work at this speed and should not be changed.

**21. What is correct setting of the clutch pedal?**

It should have  $3/16$ " free pedal travel, then an additional  $1\ 9/16$ " travel before the clutch pedal contacts the brake shaft arm. The clutch adjustment is made by adjusting the clevis on end of clutch rod. Brake-engaging adjustment is made by changing the arm on the brake shaft.

**22. Explain how to clean the air cleaner. How often should this be done?**

The screen at the top of the air cleaner catches heavy foreign material such as weed seeds, beards from rye, etc. All the air that enters this cleaner must pass through the top screen. Therefore, it should be kept clean at all times. To clean, remove the screen, wash it thoroughly in gasoline and make sure it is dry before reassembling. Take off the bottom of the air cleaner containing the oil, empty the oil and wash out the bowl with gasoline or kerosene and refill it to the proper level. It is important that right oil be used:

S.A.E. 30 for summer  
S.A.E. 20 for winter down to 40°F  
S.A.E. 10 for 40°F to 10°F  
S.A.E. 10 plus kerosene from 10° to sub zero

It is recommended owners service this cleaner once a day in ordinary conditions and twice daily in very dusty conditions, or more often if necessary.

**23. How often should the engine oil be changed?**

When the tractor is shipped from the factory the oil in the engine is satisfactory for the first 30 hours of operation *only*.

After this period, the oil should be changed not less than every 200 hours of operation or when the oil shows dark on the dipstick, whichever comes first.

**24. How do you determine the proper time to replace the oil filter element?**

When the oil shows dark or discolored on the dipstick.

If the oil is dark on the dipstick, remove the oil filter element, replace the element and change the oil.

**25. What care should be given the oil filler cap?**

Check the oil filler cap daily. Wash in gasoline to insure proper breather action and to prevent accumulation of dirt.

**26. What would be the result if the oil filler cap became clogged?**

- (1) There would be no escape for the condensation of moisture accumulating in the crankcase, thus causing the formation of sludge in the oil.

It would also build up pressure in the crankcase, causing oil to be forced through the rear main bearing. *Replace with new cap when old one cannot be cleaned.*

**27. What is the capacity of the cooling system?**

14 quarts—in types without pressure radiator cap.

12 quarts—in types with pressure radiator cap.

**28. Why is it necessary to remove or loosen the radiator pressure cap when draining the cooling system?**

To make certain that all water will drain out.

**29. What is a simple method of calculating pulley sizes?**

Multiply tractor pulley speed by tractor pulley diameter and divide this sum by the desired RPM of the driven machine. For example, the tractor pulley speed, 1352, multiplied by the tractor pulley diameter, 9, equals 12,168. This sum of 12,168 divided by 2,000 (desired speed of driven machine) would require a 6" pulley.

**30. Why is it recommended that any tractor with rubber tires be grounded whenever it is used for belt work?**

To eliminate possibility of fire when refueling, caused by static electricity from the friction of the belt on the pulley.

**31. How is the tractor grounded?**

- (1) Suspend a chain somewhere on the tractor so that it touches the ground, or,
- (2) Put the drawbar in left lower link permitting one end of it to touch the ground.
- (3) Place a metal bar, such as a crowbar, so that one end of it touches the ground and the other end touches some metal portion of the tractor.

**32. What may cause difficult starting?**

- (1) Worn out spark plugs.
- (2) Worn out ignition points.
- (3) Heavy oil in air cleaner.
- (4) Water in fuel system.
- (5) Moisture in distributor.
- (6) Dirty air cleaner.

**33. When a tractor is to be out of use for any length of time, what are some of the things that should be done?**

- (1) Store tractor in shed or other place of shelter.
- (2) Drain entire fuel system (to carburetor and fuel tank).
- (3) Drain cooling system (at two points—radiator and motor).
- (4) Remove battery for proper storage.
- (5) Put tractor on blocks to relieve tires.
- (6) Clean the tractor of all dirt and grease.

It is surprising what a little time spent on an occasional painting of the tractor will do to improve its looks and durability.



**34. What would cause over-heating?**

- (1) Dirty air cleaner.
- (2) Clogged radiator core.
- (3) Heavy sediment settling in radiator core.
- (4) Lean carburetor setting.
- (5) Worn out or wrong type plugs.
- (6) Improper setting of spark advance.
- (7) Worn out ignition points.
- (8) Loose fan belt.
- (9) Insufficient water in radiator.

**35. What is responsible for excessive fuel consumption?**

- (1) Improper carburetor setting.
- (2) Dirty air cleaner.
- (3) Worn out spark plugs.
- (4) Worn out ignition points.
- (5) Leaky connections between fuel tank and carburetor.

**36. What will a good tractor operator do in order to avoid many unnecessary troubles?**

He will inspect his tractor making sure everything is in working order before starting the engine.

- (1) Remove dirt and grime from all electrical connections.
- (2) Clean air cleaner—top and bottom.
- (3) Check oil filler cap—wash in gasoline if necessary.
- (4) Clean dirt and trash from radiator fins. Fill radiator with clean, soft water.
- (5) Clean all grease fittings, then lubricate.
- (6) Check engine oil level with dipstick.
- (7) Check transmission oil level with dipstick.
- (8) Fill the gas tank with clean fuel of right grade.
- (9) Check tires for correct inflation and inspect for damage.
- (10) Check all bolts and nuts for tightness.

***CONSULT YOUR INSTRUCTION BOOK OFTEN!***

# THE FERGUSON PLOW

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1. **What is the purpose of cleaning off the paint and varnish from moldboard and other bright parts before using the plow?**

This is done so that the plow will scour.

2. **How far above the nearest point of the share should the coulter be set for average conditions?**

1¼ inches.

3. **When should the coulters be raised above a normal working position, and what would be the result if this were not done?**

(1) When plowing deep, raise the coulters above a normal setting; otherwise, the coulter hubs will drag on top of the ground, causing the tractor to lose traction and result in excessive wheel slippage.

(2) When working in hard ground, if the coulters are set too low, they will have a tendency to ride the plow out of the ground, thus losing penetration.

4. **Would the draft of the plow be increased if the coulters were not set in proper alignment to the landside?**

Yes.

5. **How should the coulters be set relative to the landside?**

Just out far enough to make a straight furrow wall.

The average adjustment of the coulter is ¾" out from the landside. However, in different soil conditions, this adjustment will vary.

6. **Explain the purpose of the coulter check chains.**

(1) To limit the amount of swing in the coulters;

(2) To prevent the coulters from swinging into the tires.

7. **How deep should the jointers cut into the furrow slice?**

Just deep enough to cover trash, usually about ¾". This depth will vary depending on soil conditions.

8. **What is the correct measurement from the shoulder of the left end of the cross shaft to the plow beam on the 14" plow, 12" plow, and the 16" plow?**

For the 14" plow it is 3½"; for the 12" plow it is 7½"; and for the 16" plow it is 8⅞".

9. **Should the plow frame be moved side ways on the cross shaft to make the plow cut the desired width?**

No.

If the plow was moved back and forth on the cross shaft, the side draft would be greatly increased, making the tractor hard to steer. At the same time, it would cause undue wear on the shares, landsides, and moldboards; resulting in poor work.

10. **What is the procedure for changing the width of cut of the FRONT plow base?**

Loosen the U-bolts and rotate the cross shaft backward or forward. By turning the cross shaft forward, it increases the width of cut. By turning it backward it is decreased.  $\frac{1}{8}$ " movement of cross shaft changes the width of cut 1". Assuming that you were using a 14" plow that was cutting 12" wide, the first step would be to make a mark on the beam of the plow and down onto the cross shaft. This would indicate how much the cross shaft was being turned. It would be necessary to turn the cross shaft  $\frac{2}{8}$  or  $\frac{1}{4}$  inch to get the 2 inches desired increase in width of cut. *Always make sure the front coulter is properly set before measuring width of cut of front plow base.*

11. **What is the purpose of the furrow wheel?**

The furrow wheel acts as a rolling landside to reduce friction.

12. **What care should be given to the furrow wheel?**

Keep it free to move up and down.

Keep it well lubricated.

It is very important to keep the furrow wheel bracket well greased so that it can move up and down freely. In order to insure this free movement, a needle bearing has been put in the bracket where it fastens onto the landside. Occasionally mud packs on the furrow wheel bracket, causing it to lose its flexibility; then when the plow is dropped, it will first hit the furrow wheel instead of the plow point, causing slow entry at the headland. Therefore, keep the furrow wheel bracket clean and free from trash, mud, and small stones.

13. **What usually causes the greatest amount of plow difficulties?**

- (1) Dull or worn out plowshares.
- (2) Plow out of adjustment.
- (3) Dull coulters when plowing in trashy conditions.

Dull or worn out plow shares are caused by the friction of the land on

the share, but keep in mind that this wear can be greatly reduced by keeping your plow in adjustment—that is, keep it cutting at the proper width. Dull coulters also cause a great amount of difficulty. However, coulters are very easy to sharpen by taking them off the plow at the eyebolt and holding the blade against an emery wheel. The coulters will revolve as the emery wheel turns, giving an even sharpening job that is done easily and quickly.

**14. What depth headland furrow should be used?**

Two to four inches deep.

The headland furrow is the single furrow plowed on each end of the field, making it possible to get even entries and finishes and also allowing the plow to penetrate quickly. In very hard ground, it may be necessary to make this headland furrow a little deeper in order to get quicker penetration.

**15. Which way should the headland furrows be turned?**

Toward the center of the field. This means that the headland furrows should be turned in to the land to be plowed.

**16. How are even entries and finishes made?**

By raising and lowering the plow just as the rear wheel of the tractor leaves the headland furrow.

**17. Why should the operator watch the headland furrow on his left when entering and leaving furrow?**

He can see the headland furrow more clearly to his left, as this has not been plowed under.

**18. How many grease fittings are there on the two-bottom plow?**

These fittings are located—one on each coulter hub, one on the furrow wheel hub, and one on the furrow wheel bracket.

**19. Why is it recommended that all bright surfaces of the plow be coated with a lubricant when not in use?**

To prevent rust.

It is commonly known that farmers suffer heavy loss on all farm equipment due to rust. In order to get longer service from equipment and cut down repairs, all owners should care for their machinery by keeping it properly lubricated and covered when not in use.

**20. Explain proper way to attach the plow.**

Back the tractor centered with the plow.

Lower control lever before leaving tractor seat.

Attach left bottom link.

Attach right bottom link. (Use leveling lever if necessary.)

Attach top link (from tractor seat).

**21. Explain proper way to detach the plow.**

Level the plow with leveling lever.

Lower the plow to the ground centered with tractor.

Detach top link (from the tractor seat).

Detach right bottom link.

Detach left bottom link.

Be sure to put lynch pins in their holders.

Remember to have the plow level when lowering it to the ground. It is important that the plow be set on as level a place as possible, so it can easily be attached.

**22. When a plow is to be out of use for any reasonable length of time, what are some of the things that should be done?**

(1) Store in proper shelter (storage shed, etc.).

(2) Clean, paint, and coat all polished parts with a heavy lubricant to prevent rust.

(3) Place on some type platform to keep the implement off of the ground.

**REFER TO YOUR INSTRUCTION BOOK—OFTEN!**

# CERTIFIED INSTALLATION

To get the most out of any piece of equipment, you must understand its operation and care.

That is why every Ferguson Dealer takes the extra time necessary to show a new operator how to get the most from his Ford Tractor with Ferguson System; why and how to make simple adjustments; where and when to grease it; what to do to prolong its life and assure top performance. And so that no important point will be overlooked, he uses the installation certificate shown below—a copy of which is filed at Dearborn.

This booklet will help those who received their Tractors before we introduced Certified Installation as they will be brought up to date on product information. It will assist those who have received their Tractor with Certified Installation to review the important facts and also to broaden their understanding of the Ferguson System.

<b>FORD-FERGUSON OWNERS INSTALLATION CERTIFICATE</b>							
Tractor No. _____	Model _____ Date Delivered _____						
Purchaser _____ <small>(NAME—PLEASE PRINT) (TOWN) (R.F.D.) (COUNTY) (STATE)</small>							
<input type="checkbox"/> Checked for shortage or damage. Remarks: _____ <input type="checkbox"/> Tools and Instruction Literature checked. <input type="checkbox"/> Serial number, Dealer's name, address and phone number have been placed on inside cover of Instruction Book. <input type="checkbox"/> Owner understands that when ordering parts he will give serial number, part number and name.							
<b>PROPER INSTRUCTIONS HAVE BEEN GIVEN OPERATOR ON:</b>							
<input type="checkbox"/> Care and adjustment of fan and fan belt. <input type="checkbox"/> Lubrication of entire tractor and selection of recommended lubricants. <input type="checkbox"/> Importance of proper oil pressure—The gauge reads (_____) lbs. at (_____) R.P.M.) <input type="checkbox"/> Care of: Air Cleaner, Oil Filter, Fuel Filters. <input type="checkbox"/> Carburetor Adjustments—idle and power. <input type="checkbox"/> Ignition System: Timing, breaker points, spark plugs, and wiring. <input type="checkbox"/> CARE OF BATTERY AND GENERATOR. Generator charging rate at 1400 R.P.M. is (_____) amperes.	<input type="checkbox"/> ADJUSTMENT AND CARE OF HYDRAULIC SYSTEM. <input type="checkbox"/> Purchaser actually has adjusted the lift quadrant and control lever. <input type="checkbox"/> Purchaser has adjusted master control spring. <input type="checkbox"/> Use and adjustment of brakes. <input type="checkbox"/> Adjustment of clutch pedal—Free pedal travel is (_____) inches. <input type="checkbox"/> Adjustment of front wheel alignment. <input type="checkbox"/> Correct tire pressure and maintenance. <input type="checkbox"/> Five causes of engine overheating and dangers <input type="checkbox"/> Keeping radiator core clean. <input type="checkbox"/> Soft water or rust inhibitor in cooling system.						
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding: 2px;">TYPE OF FARMING OR USE: _____; Size of farm _____; Acres harvested _____</td> </tr> <tr> <td style="padding: 2px;">No. of work animals on farm _____; Other tractors _____; What makes _____</td> </tr> <tr> <td style="padding: 2px;">Custom work: _____ hrs. per year. Belt work: Type _____; Hrs. per year _____</td> </tr> <tr> <td style="padding: 2px;">SOIL: <input type="checkbox"/> light <input type="checkbox"/> medium <input type="checkbox"/> heavy <input type="checkbox"/> sandy <input type="checkbox"/> abrasive <input type="checkbox"/> clay <input type="checkbox"/> black loam <input type="checkbox"/> muck <input type="checkbox"/> adobe <input type="checkbox"/> rocky</td> </tr> <tr> <td style="padding: 2px;">OPERATED BY: <input type="checkbox"/> owner <input type="checkbox"/> family <input type="checkbox"/> hired help LAND: <input type="checkbox"/> level <input type="checkbox"/> hilly</td> </tr> </table>		TYPE OF FARMING OR USE: _____; Size of farm _____; Acres harvested _____	No. of work animals on farm _____; Other tractors _____; What makes _____	Custom work: _____ hrs. per year. Belt work: Type _____; Hrs. per year _____	SOIL: <input type="checkbox"/> light <input type="checkbox"/> medium <input type="checkbox"/> heavy <input type="checkbox"/> sandy <input type="checkbox"/> abrasive <input type="checkbox"/> clay <input type="checkbox"/> black loam <input type="checkbox"/> muck <input type="checkbox"/> adobe <input type="checkbox"/> rocky	OPERATED BY: <input type="checkbox"/> owner <input type="checkbox"/> family <input type="checkbox"/> hired help LAND: <input type="checkbox"/> level <input type="checkbox"/> hilly	
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Dealer _____	(PURCHASER'S SIGNATURE) _____						
By _____ <small>(SERVICEMAN DELIVERING, SIGN HERE)</small>							
Mail YELLOW and PINK copies to your Distributor (Distributor will forward Yellow Copy to Harry Ferguson, Inc.). WHITE Copy for Dealer. BLUE copy for owner.							
<small>FORM No. 426</small>							

# M A I N T E N A N C E P A R T S A N D A C C E S S O R I E S

It's a well-known fact that the man who usually gets the biggest production at the least cost keeps his tractor and machinery in good working condition.

Certain parts on a tractor—or even a simple plow—wear out just as surely as gasoline is burned up. That is true of all machines—and to get the most out of them, the operator must plan to maintain them in good operating condition. Doing so is neither difficult nor expensive—and in the long run saves both time and money.

Many of the “maintenance parts” on the tractor, for example, are low in cost and easily installed by the owner. By investing a few extra dollars in his “power plant,” the tractor owner can set up his own stock of these maintenance parts the same as is done in industrial plants where lost time also means lost money.

Just to illustrate. An extra fan belt costs, let us say, \$1.25. But if it's purchased after the one on the tractor wears out, that same fan belt may cost the same \$1.25 *plus* the miles of travel to town and back *plus* several hours of time for the extra trip *plus* lost time of hired help and possibly *plus* the loss of part of a crop.

For the tractor owner who wants the insurance and convenience provided by a farm stock of these simple maintenance parts, here is a recommended list:

		Qty.
1. “Trac-Pak” containing 4 Oil and Motor Cleaner Elements	9N-18649	1
2. Fuel Filter Bowl	9N-9162	1
3. Fuel Strainer	9N-9553	1
4. Spark Plug	9N-12405	4
5. Fan Belt	9N-8620	1
6. Oil Filler Cap Assembly	9N-6766	1
7. Link Pin	9N-560	1
8. Lynch Pin Ring	2N-574	2
9. Lynch Pin	9N-575	2
10. Chain Assembly	9N-583-B	2

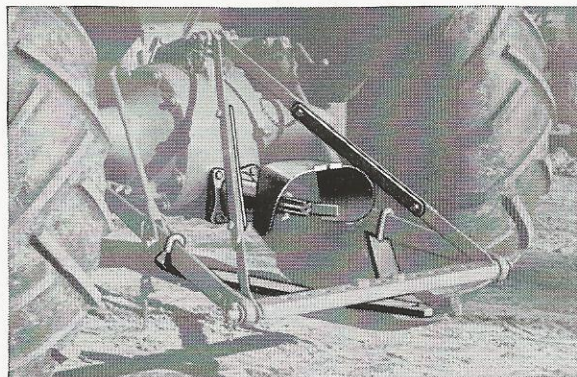
REGULAR SERVICE CHECKS: *Even though the Ford Tractor with Ferguson System has a reputation for low upkeep and repairs, regular service checks by your Ferguson Dealer will help to insure continuous reliable operation at greatest efficiency—by finding possible sources of trouble before they occur and by making necessary adjustments.*



# ACCESSORIES

## A.S.A.E STANDARD POWER TAKE-OFF ADAPTER AND EXTENDED DRAWBAR

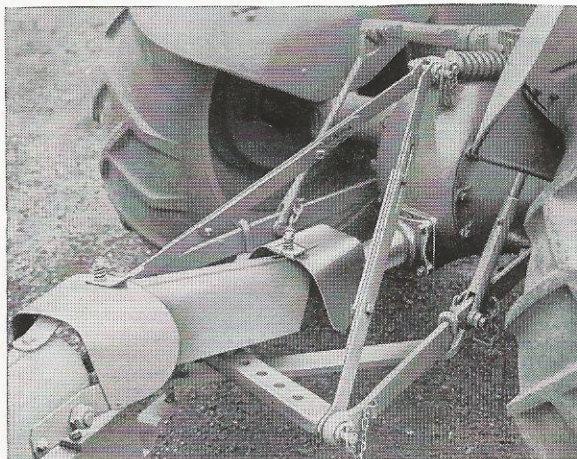
CLO 8920



• Your Ford Tractor with Ferguson System can be immediately fitted to any power take-off driven machine manufactured after January 1, 1944—and many manufactured before that date—if you have this Standard Power Take-Off Adapter and Extended Drawbar, designed according to the specifications of the American Society of Agricultural Engineers.

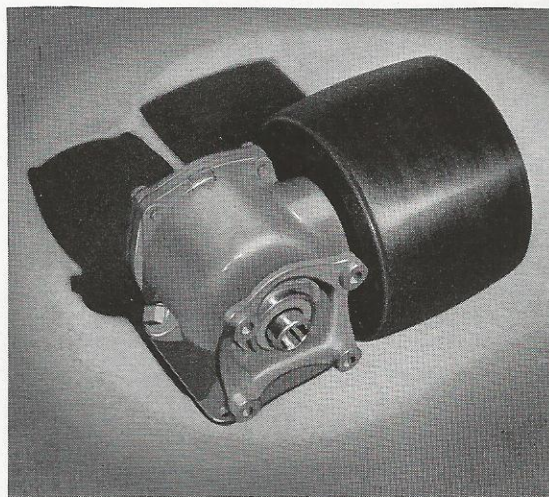
With this unit you will have greater safety as well as the convenience of one hitch. Extended drawbar permits a sharp 90 degree turn.

Furnished complete with power take-off shaft extension, extension housing, master shield, brace straps and extended drawbar with all necessary clamps and bolts.



As attached

## BELT PULLEY



With this belt pulley unit, the Ford Tractor with Ferguson System becomes a portable power plant providing a smooth constant source of belt power for hammermills, silo fillers, circular saws, irrigation pumps, separators, feed grinders and similar pieces of machinery. Increases the usefulness of the Ford Tractor during every season of the year.

The unit is easy to attach to the power shaft of the tractor. It may be mounted in any of the three positions shown below—vertical or right or left horizontal. Direction of the belt may be reversed by changing the mounting from one side position to the other. Rear mounting assures easy line-up and the rear-wheel brakes will hold the belt taut.

### SPECIFICATIONS — NO. 9N-760

**Drive Unit:** Pulley is carried by self-contained dust-proof, drive unit which attaches to power shaft at rear of tractor. Mounted by 4 cap screws.

**Gears:** Fully enclosed, spiral-beveled, alloy steel gears. Run in oil bath.

**Bearings:** Taper roller bearing.

**Pulley:** Diameter—9" (8" optional); width—6½".

**Pulley Clutch:** Supplied as standard equipment on the tractor.

**Pulley Speeds:** At 2,000 r.p.m. engine speed, pulley speed is 1,358 r.p.m., and belt travels 3,200 feet per minute.



## ACCESSORIES

### LIGHTING KIT

NO. 9N-18438-B



• When extra time in the field may mean the difference between a good crop or a poor one, your Ford Tractor with Ferguson System equipped with these sealed beam headlights can work around the clock.

Throughout the year, you will also find them convenient for those smaller jobs around the farm that weren't quite done by dark. On the highway, the headlights and red tail light provide safety at night.

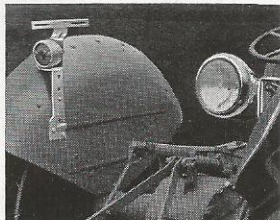
These headlights are equipped with sealed beam lamps, proved by truck and car use to have longer life. Prefocused at the factory, they do not get out of adjustment and always provide an even broad spread of light. They will not grow dim because the reflector is completely sealed against dust and impurities.

As shown, both bright lights may be mounted on the front of the tractor. Or, one may be mounted on the rear wheel fender to light up the implement.

A tail light and a license bracket also are included for use where road travel is necessary.

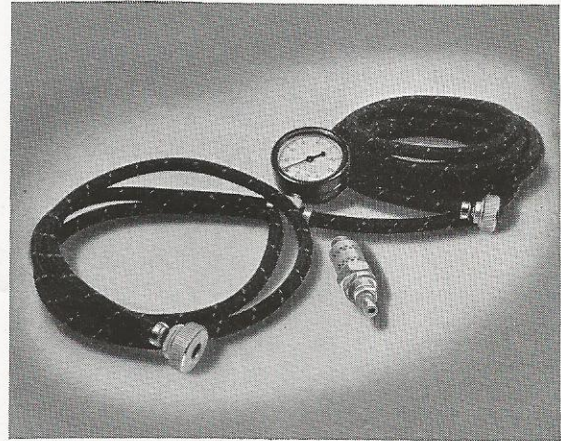
#### THIS KIT CONTAINS

- 2 Headlamp assemblies
  - 1 Rear lamp and bracket assembly
  - 1 Light switch and wiring assembly
  - 1 Wiring diagram
- All necessary parts for installation of above.



### TIRE PUMP, HOSE AND GAUGE

NO. 9N-17052



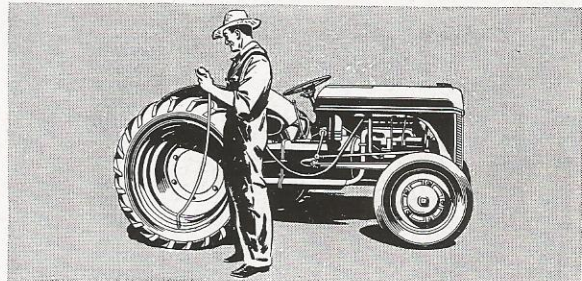
• Maintaining recommended air pressure in tractor tires is one of the best possible ways to lengthen their life of service. And, with a tire pump, hose and gauge set, it is a simple matter.

This handy accessory may be installed in about one minute. Simply remove a spark plug and put the pumping element in its place. Press the air chuck over the tire valve and the engine does the rest.

It pumps only cool, clean air—no exhaust or fumes—into the tire.

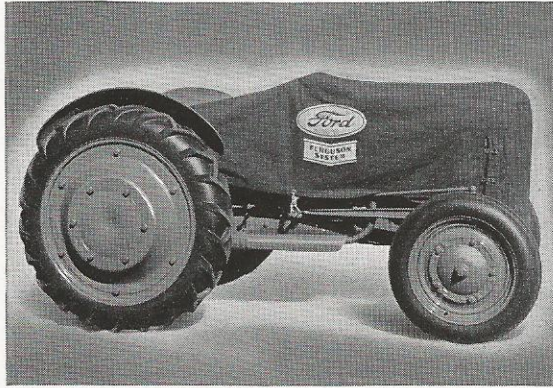
Included in this set is a dial-type gauge which registers up to 80 lbs. and shows recommended tire pressures on the back side. It shows the pressure in the tire while pumping.

The hose is 16½ feet long so that all tires can be reached easily.



## ACCESSORIES

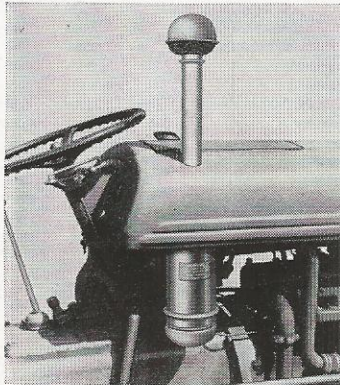
### STORM COVER NO. 9N-17049



- For the tractor owner who takes pride in the appearance of his tractor—and also wants to protect it against unnecessary depreciation—this heavy durable cover offers protection against damage by dust, dirt and water.

Specially designed to fit the Ford Tractor with Ferguson System, this tailor-made tarpaulin is put on or taken off easily and quickly.

### AIR CLEANER EXTENSION

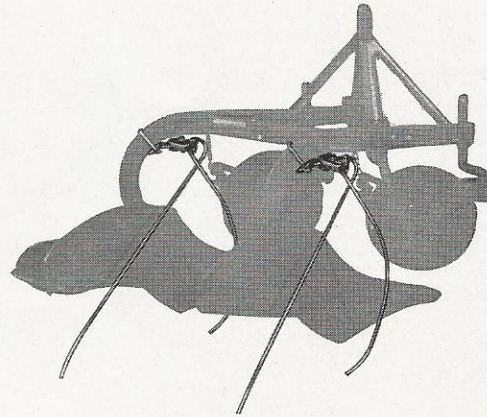


- Work in unusually heavy dust throws an extra load on your air cleaner—and makes more frequent cleaning of screen and oil bowl necessary.

By drawing the cleaner air from above the tractor hood, this air cleaner extension lightens the load on your cleaner and results in less clogging of screen and bowl. It also encourages better care by making the air screen easier to get at for cleaning.

For the tractor that must "take it" in heavy dust, this air cleaner extension will give added protection and help prolong motor life, reduce maintenance costs and conserve fuel.

### FOR MOLDBOARD PLOWS WEEDHOOKS



- Clean plowing in tall weeds or trash is assured by these Ferguson Weedhooks. Both ends ride down and place weeds in the bottom of the furrow. A swivel connection prevents damage when backing the tractor. Sold in pairs.

### MOLDBOARD EXTENSION



For plowing in old sod, the Moldboard Extension is particularly valuable. Extending beyond the moldboard, it controls the furrow slice after it passes the moldboard.

### EXTRA SHARES

With extra shares on the farm you can insure yourself against interrupted work and the possibility of delayed planting. You will also be able to have your worn shares sharpened at your convenience without extra trips to town.

For longest share life and most satisfactory performance with your precision-built Ferguson plow, insist upon genuine Ferguson shares. All Ferguson shares, as well as moldboards and other wearing plow parts bear the registered mark

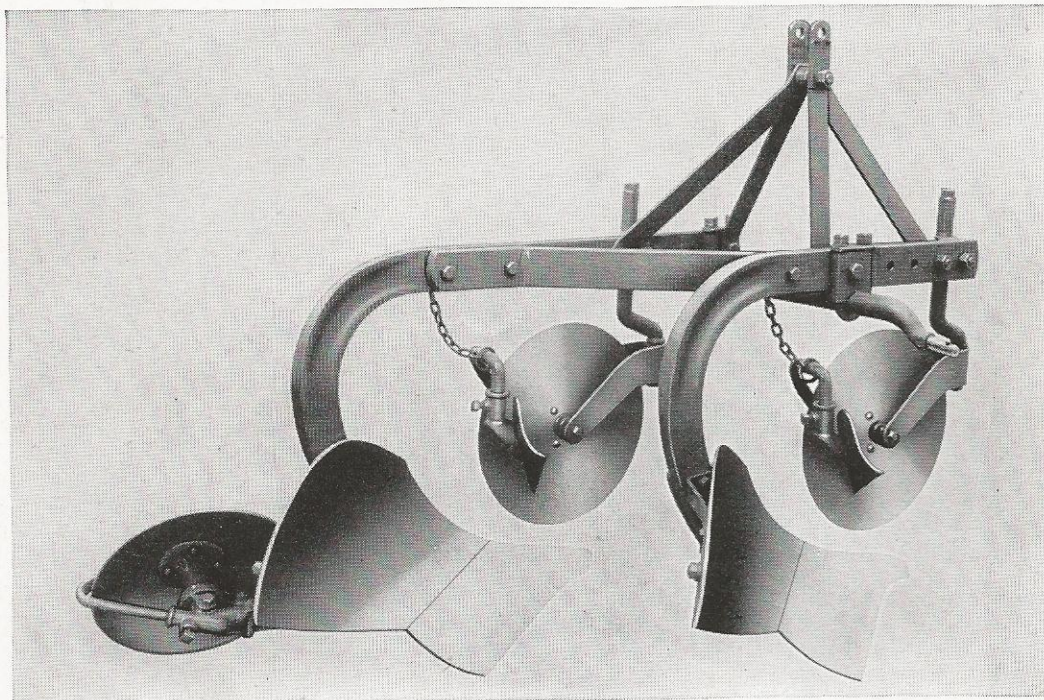


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# FERGUSON MOLDBOARD PLOWS

## 2-BOTTOM PLOW



• Mounted on the Ford Tractor with Ferguson System, this plow has revolutionized farm work.

Ferguson plows do not have to be built of heavy materials to stay in the soil. The Ferguson System of linkage keeps them there without the use of weight. Careful designing and special manufacturing processes have eliminated the fuel consuming "dead" weight built into ordinary plows. The result is a direct saving in costs of tractor operation.

With the three-point system of mounting Ferguson implements there is no tugging and lifting. Only one minute—and the plow is connected to the tractor.

When mounted, a finger-tip touch to the control of the hydraulic system raises or lowers the plow and sets it for depth. A few easy turns of the tilting control place the plow at the desired angle. In operation, the Ferguson hydraulic system takes over and automatically maintains the desired depth regardless of "ups and downs" in the field.

In this Ferguson plow, built to precision standards and with entirely new principles, you will find the greatest savings in operating costs—insurance against crop delays—and an ease of operation that will allow any member of your family to become an expert plowman.

## SPECIFICATIONS

**Mounting:** Directly connected to tractor by the three links of the hydraulic system. Can be mounted or detached in one minute or less.

**Beams:** Newly developed sections of high strength steel.

**Bases:** Available in various sizes and types for local requirements.

**Coulter and Jointer:** All Coulter Discs are heat treated high-carbon steel. Sturdy coulter bearing has large bearing surface. All Jointer Blades are heat treated alloy steel.

**Rolling Landslide:** 13" diameter pressed steel disc wheel mounted on rear landside. Sealed needle roller bearings insure free action for quick entry at headlands. Mud scraper furnished.

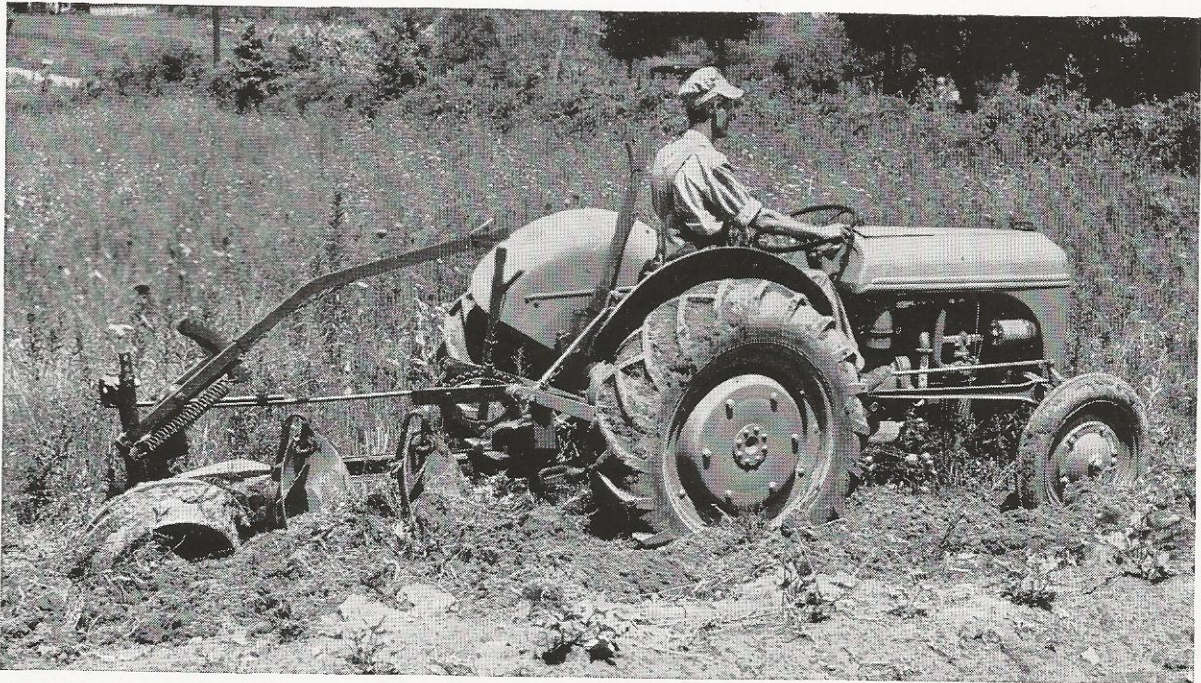
**Clearance:** Two base plow—21" from share points to beams. Single base plow—22½" from share point to beam.

**Lubrication:** Pressure grease gun fittings at coulter hubs, furrow wheel hub and furrow wheel bracket.

**Adjustments:** Plowing depth is controlled by hydraulic mechanism. Plow is leveled by crank on tractor lift arm. Width of cut of front plow base is changed by rotating cross shaft—an ⅛" turn forward increases width of cut about one inch. Coulters may be adjusted for both depth and lateral location by loosening nut on eye-bolt holding coulter stem. Factory coulter setting is 1¼" above share at nearest point and ⅞" to left of landside. All nuts and bolts fit standard open-end wrench furnished with tractor.



# DISC PLOWS



- For better work in wet, waxy, sticky soil where moldboard plows won't scour—for easier work in stony land or ground with many roots and stumps—for lower operating costs in abrasive soils that literally "eat up" plow points in a few hours—for quick, positive penetration in hard, dry ground—disc plows have proved their advantages.

In operation, the rotating discs slice through the ground with minimum wear, cutting small roots and riding over larger obstructions. The dirt is turned with a mixing action rather than completely over as with the moldboard plow.

These advantages of the disc plow are combined with the greatest ease of operation and control in this model for the Ford Tractor with Ferguson System.

Plow is quickly attached to lower links of tractor. Front end weight of plow is carried by tractor, increasing traction. Automatic steering on rear wheel makes plow respond quickly to all turns.

After leveling and depth levers have been set, a fingertip touch to the hydraulic control lever raises or lowers plow on turns or for transport.

With furrow wheel adjustment lever (slight extra cost)

operator controls furrow wheel from tractor seat when working on hillsides or uneven ground.

Available in one, two and three-disc models, AP-1D, AP-2D (illustrated), AP-3D.

## SPECIFICATIONS

**Frame:** High carbon steel, bolted.

**Discs:** 26" dia.; high carbon, heat-treated steel.

**Disc Scrapers:** Furnished—for sticky soils and to control furrow pitch in terracing.

**Bearings:** Two tapered roller bearings for each disc and for furrow wheel.

**Lubrication:** Standard pressure gun fittings.

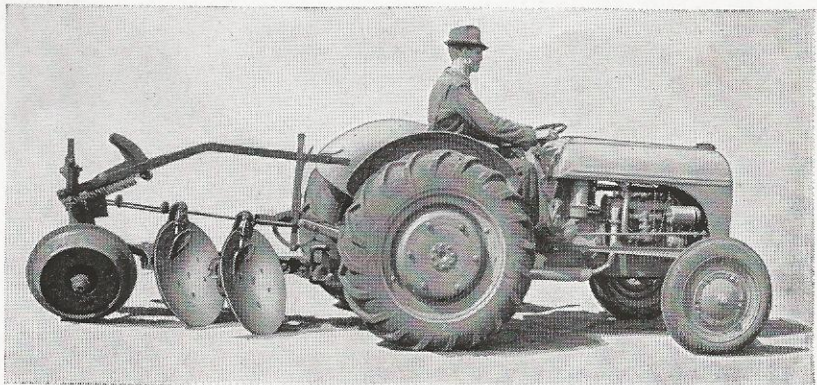
**Rear Wheel:** V-type, cast steel wheel especially adapted to sticky, gummy soil.

**Wheel Weight and Automatic Steering Rod:** Furnished.

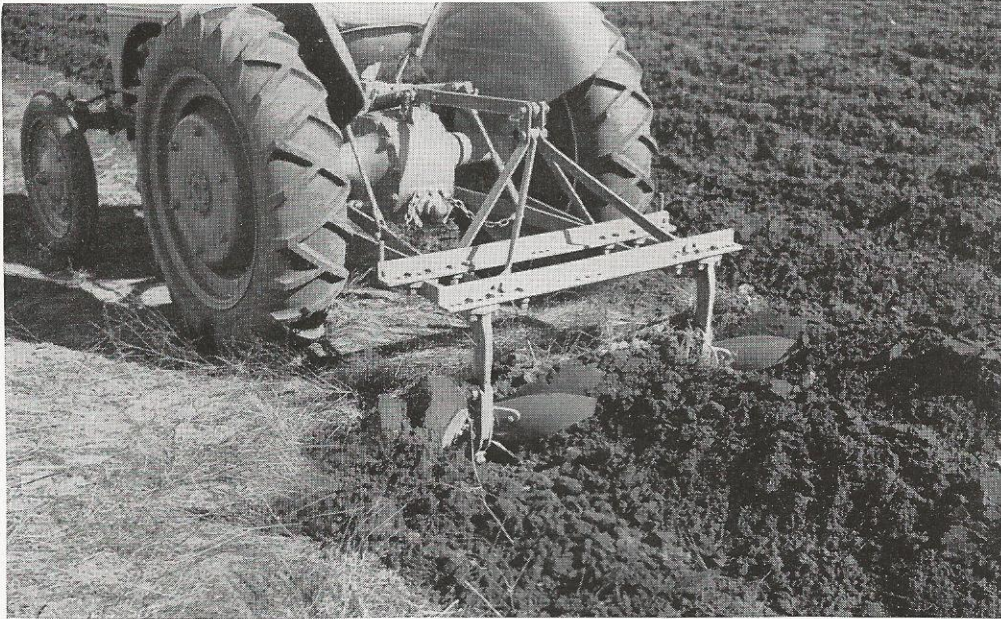
**Rubber Tire:** Available at slight extra cost.

**Max. Plowing Depth:** Approx. 12".

**Width of Cut (8" Deep):** 1-disc, 12"; 2-disc, 18"; 3-disc, 27".



# MIDDLEBUSTER



• Simplicity—of design, construction and use—is the outstanding characteristic of the Ferguson 2-row Middlebuster. Like other Ferguson Unit Implements for the Ford Tractor, it is raised, lowered and depth is adjusted by Finger Tip Control. When listing or rebedding, the Ford Tractor's 4-wheel design greatly reduces steering strain.

## RUGGED STRENGTH—LIGHT WEIGHT

Elimination of wheels, lifting devices and the framework required for wheeled, pulled imple-



ments effects a considerable saving in weight, and hence in cost of operation and upkeep. The Ferguson 2-Row Middlebuster weighs little more than 200 pounds. Draft and fuel consumption are thereby reduced. But due to the use of alloy steels new to the implement industry, it is practically indestructible. Positive penetration is assured by the action of the Ferguson Linkage.

## IDEAL FOR CONTOUR WORK

Closely linked to the Ford Tractor, the Ferguson Middlebuster follows the path of the tractor's front wheels when working on the contour. This is of particular advantage in throwing up uniform beds on sharp curves.

Turning, when listing or 'busting short point rows, is made easier by the short wheel base and short turning radius of the Ford Tractor, and by Finger Tip Control of the implement.

## ROW WIDTH ADJUSTABLE

Each base and standard may be adjusted on the frame in 2" steps, for rows from 36" to 42" apart.

Accurate corn or corn and cotton planting attachments are available for converting the Ferguson Middlebuster to a lister planter, easily and quickly.



# MIDDLEBUSTER

## SPECIFICATIONS

**Mounting**—Directly connected to the rear of tractor by means of the exclusive Ferguson Linkage. Can be attached or removed in one minute or less. Beam assemblies are bolted rigidly to parallel frame bars.

**Control**—Depth is set, and the Middlebuster raised and lowered, by Finger Tip hydraulic control. Desired depth is automatically maintained. Four-wheel design and easy maneuverability of Ford tractor gives positive directional control. Both front and rear wheels may be set out to follow old furrows and aid steering when busting ridges. Exact lateral control is provided by stabilizers attached to brackets under rear axle.

**Clearance**—19" from point of base to beam. When raised in transport position ground clearance under points of bases is 11".

**Adjustments**—Row widths may be varied from 36" to 42" in 2-inch steps by means of holes in frame.

**Frame**—High carbon alloy steel, heat treated.

**Beams**—Forged from high carbon alloy steel, heat treated for strength and toughness. Each beam securely bolted to frame with four  $\frac{5}{8}$ " bolts.

**Coulter**—(Supplied as accessory.) Hardened, high-carbon steel rolling disc coulter,  $15\frac{1}{2}$ " diameter. Fork is rigidly bolted to front end of beam. Depth adjustments provided by means of holes in fork.

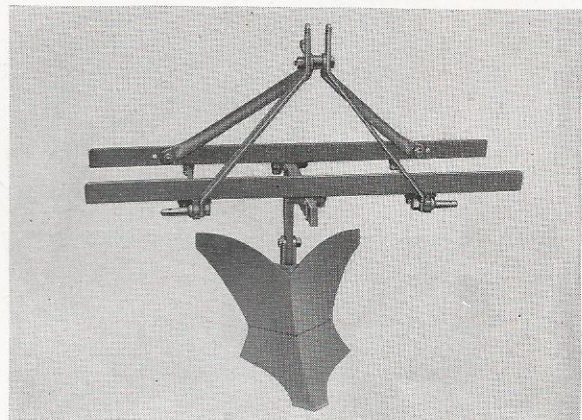
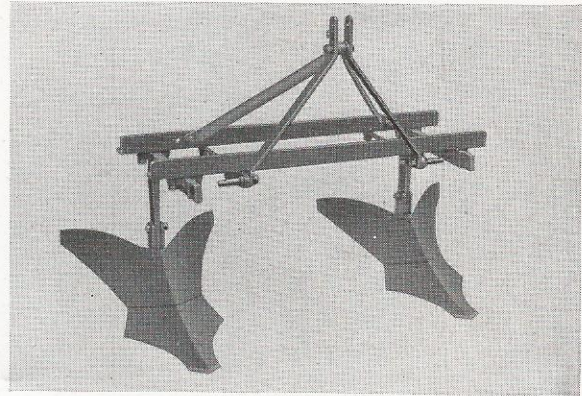
**NOTE: Planter attachment**—planting attachment sets are available for converting above middlebuster into lister planters.

### MIDDLEBUSTERS (Complete with Bases)

Type No.	Type	Approx. Shipping Wt.
14A-DO-21	General Purpose	160 lbs.

### BASES

Type No.	Size	Type	Approx. Shipping Wt.
14A-DO-108-B	14"	General Purpose	50 lb. (set)



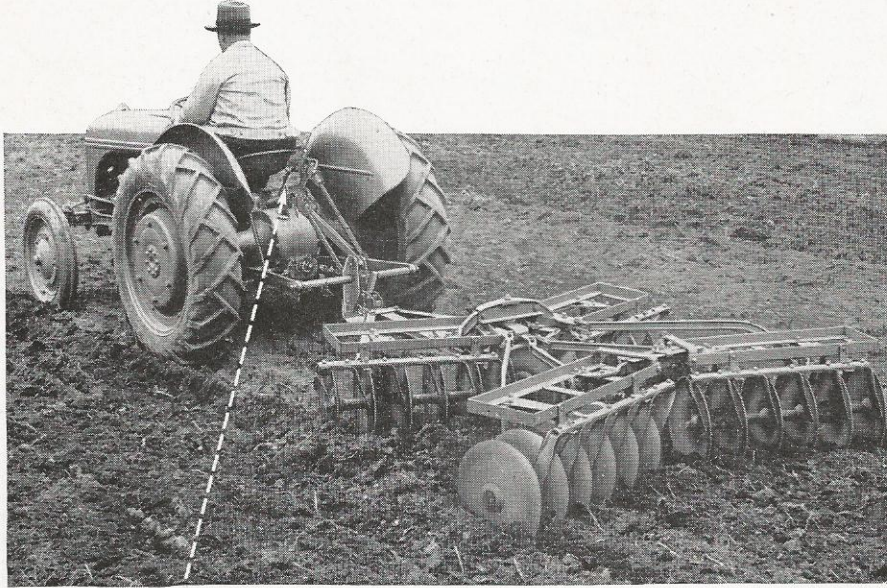
The 2-row Ferguson Middlebuster may be converted to 1-row use in heavy land conditions, and for drainage or irrigation work. No additional parts are required.



Suitable equipment is available for converting the Ferguson Middlebuster into a 2-row lister planter.



# DISC HARROWS



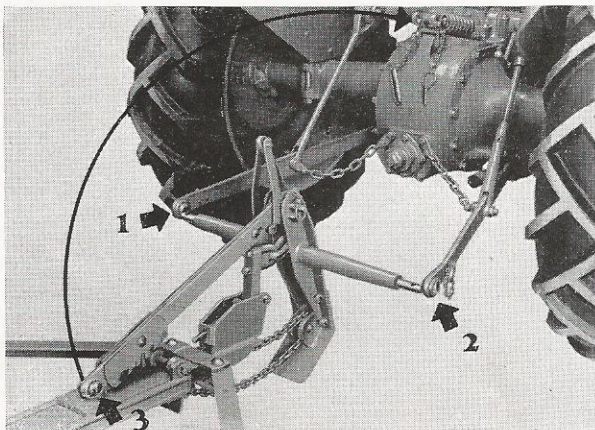
## FINGER TIP ANGLE CONTROL WITH FERGUSON TANDEM AND SINGLE DISC HARROWS

### ONLY THREE EASY STEPS TO OPERATING A FERGUSON DISC

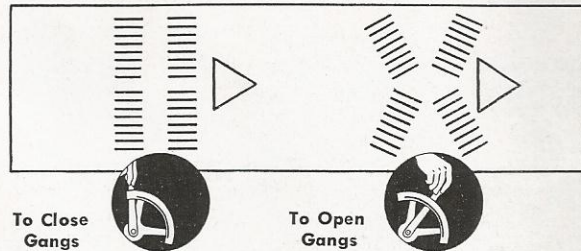
1. The farmer decides what "set" or angle the disc gangs should have, from the condition of the field about to be disced.
2. Now comes the easy part. He simply selects the position on the angle control rack which will give the desired set for the gangs. Strong arm tactics, backaches,

strained stomach muscles are no longer necessary preliminaries to the job of disc harrowing—with Ferguson System.

3. Then with his finger tips he moves the hydraulic control lever forward to open the gangs to the angle selected on the rack or flip the lever back to take the gangs out of angle! Simple—sure; actually no more work than stirring a cup of coffee.



THREE-POINT ONE-MINUTE ATTACHMENT

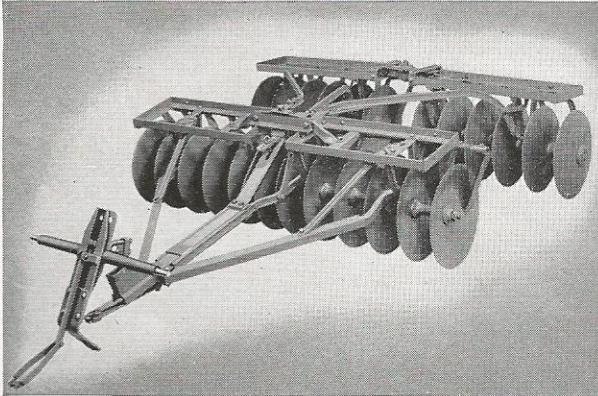


Every time he reaches the end of a field he should straighten the gangs—make the turn—open the gangs again. This practice relieves the continuous load on the tractor. Reduces severe wear on tires when turning. Eliminates mounding up dirt on headlands and forming low spots which become water holes after heavy rains.



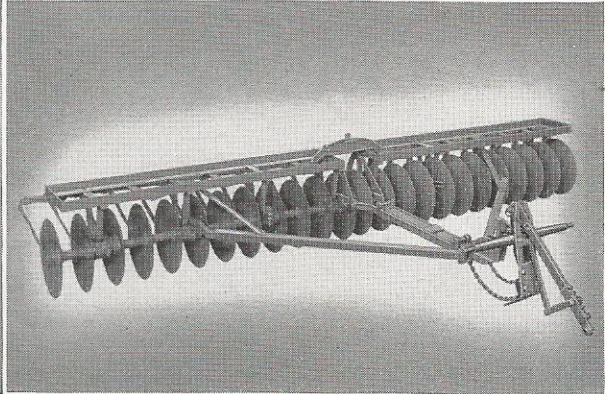
# DISC HARROWS

## FERGUSON TANDEM DISC HARROWS

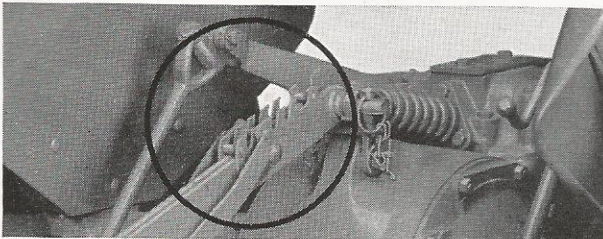


- 4A-B021 ..... Five Foot, 20-18" Discs
- 10A-B021 ..... Six Foot, 24-16" Discs
- 13A-B021 ..... Six Foot, 24-18" Discs
- 19A-B021 ..... Seven Foot, 28-16" Discs

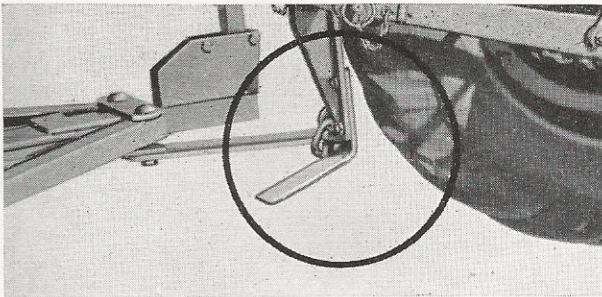
## FERGUSON SINGLE DISC HARROWS



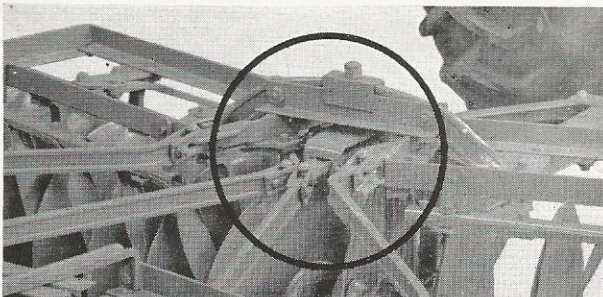
- 50A-B021 ..... Ten Foot, 20-16" Discs
- 56A-B021 ..... Twelve Foot, 24-16" Discs



SIX-POSITION ANGLE SELECTOR RACK



EMERGENCY RELEASE



ADJUSTABLE SNUBBER CONTROL

## SPECIFICATIONS

**CONTROL**—Angle of gangs may be set on the angle selector rack from tractor seat. Gangs also may be straightened and re-angled without stopping by use of the hydraulic fingertip control.

**FRAME**—Heavy steel angle bar construction.

**DISCS**—High carbon steel, heat treated to maintain sharp cutting edges.

**BEARINGS**—Hard maple wood bushings 5" long, boiled in oil, easily replaceable. Special thrust flange in center of bearing, plus regular thrust flange, doubles the thrust bearing area. Special shield keeps out dust and grit.

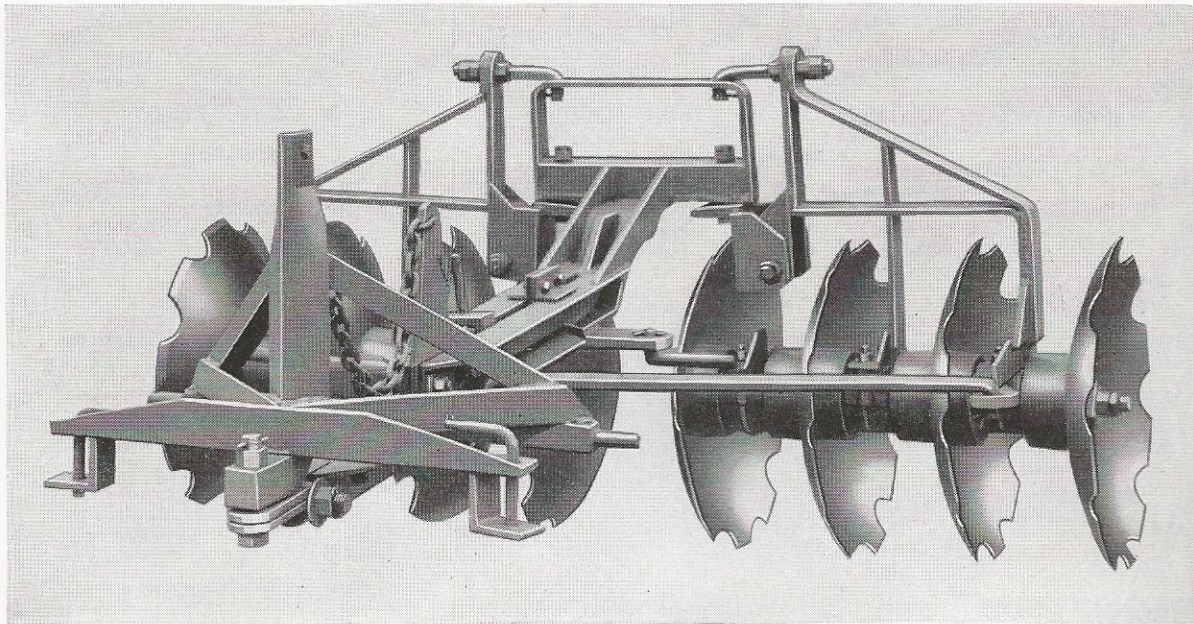
**LUBRICATION**—Two pressure grease fittings on each bearing, located on lower half where less pressure is required to force lubricant into bearing surfaces.

**ADJUSTMENTS**—Relative angle of front and rear gangs may be adjusted. Leveling adjustment is provided to keep gangs working level in field.

**SHIPPING WEIGHT**—Tandem disc weights vary from 650 to 850 pounds, depending on the model. Single discs weigh from 600 to 800 pounds.



# BUSH AND BOG HARROWS



Model 823—Pull Type

## BUSH AND BOG HARROW

- Originally designed for use in clearing unusually rough land and heavy brush, the Bush and Bog disc harrow has become increasingly popular for general tillage work. In addition, it is being adapted to a variety of farm maintenance work and construction jobs—cutting down ditch banks, maintaining terraces, grading lots, smoothing air fields, etc.

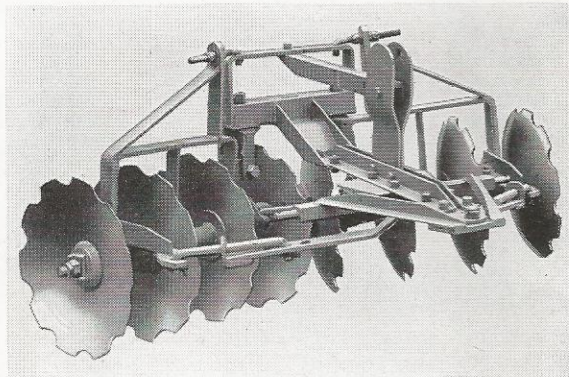
Because of the exceptional ability of its cut-away discs to cut and incorporate heavy vegetative cover into the top soil, the heavy duty disc is also popular for turning under cover crops. In some areas, it is also being used in place of the plow and conventional disc by farmers seeking a faster, cheaper way to prepare their seed-beds with relatively shallow tillage methods.

In the Model 820 Bush and Bog disc harrow, especially designed for the Ford Tractor with Ferguson System, the advantages of the heavy duty disc harrow are combined with the greatest ease of operation and control. This is a unit or lift-type harrow attached by the three-point mounting of the Ferguson System. A finger-tip touch on the hydraulic control raises or lowers the implement for turns or transport.

Because of this effortless control and mounting which make it possible to lift the disc, back

into tight corners and maneuver at will, this model is also very popular for work in orchards or small fields.

For the farmer who has larger, fairly level fields where the going is rough—where growth is heavy or the soil extremely hard—the larger, pull-type Model 823 has certain advantages. Much heavier, and using larger discs, this pull-type disc harrow will chop and mix very heavy brush and vegetative cover. This is the type originally developed for the reclamation of cut-over land and heavy brush or palmetto areas in the south. Angling the discs for cutting or straightening them for turns and travel on the discs is regulated by a finger-tip touch of the hydraulic control.



Model 820—Lift Type



# BUSH AND BOG HARROWS



## SPECIFICATIONS

### MODEL 820

**Type:** Unit or lift-type, heavy duty disc harrow.

**Mounting:** Attached to tractor by Ferguson three-point implement mounting.

**Control:** Raised or lowered by finger-tip control of hydraulic system.

Angle of discs controlled manually.

Leveling and tilting of each gang controlled by adjustments on center frame.

Complete disc also leveled or tilted by crank adjustment of tractor link.

**Frame:** High carbon steel angles, electrically welded

**Gang Carriers:** Bent plates of high carbon steel.

**Gang Bolts:** 1 1/8" square high carbon steel.

**Discs:** Eight 20 inch cutaway discs; heat treated 7 gauge crucible steel; 2" concavity; 9 1/2" apart.

**Scrapers:** For each disc with adjustments for wear.

**Bearings:** Spools and top boxings of special white hard iron; bottom boxings rounded to avoid being hung on obstacles in field.

**Lubrication:** 2 standard pressure grease fittings on rear of each bottom bearing. Grease discharges through groove in bearing boxings for even distribution of lubricant.

**Height:** 33 1/2" **Overall Width:** 69" **Weight:** 565 lbs.

**Length:** Implement alone, 50"; attached to tractor, 12' 4".

**Cutting Width:** At full angle, 62".

**Maximum Angle of Discs:** 20 degrees forward from straight.

**Working Depth:** Maximum, 7 1/2"; Average, 5".

**Ground Clearance in Transport Position:** 13".

### MODEL 823

**Type:** Pull-type, power-angled, heavy duty disc harrow.

**Mounting:** Connected with tractor by special drawbar attachment on lower links.

**Control:** Discs straightened or angled by finger-tip touch on hydraulic control; angle of discs may be set for 6 different positions.

Leveling or tilting of each gang controlled by adjustments on center frame.

**Frame:** High carbon steel angles, electrically welded.

**Gang Carriers:** Bent plates of high carbon steel.

**Gang Bolts:** 1 1/8" square high carbon steel.

**Discs:** Eight 23 inch cutaway discs; heat treated 7 gauge crucible steel; 3 1/2" concavity; 9 1/2" apart.

**Scrapers:** For each disc with adjustments for wear.

**Bearings:** Spools and top boxings of special white hard iron; bottom boxings rounded to avoid being hung on obstacles in field.

**Lubrication:** 2 standard pressure grease fittings on rear of each bottom bearing. Grease discharges through groove in bearing boxings for even distribution of lubricant.

**Height:** 37 1/2" **Overall Width:** 71" **Weight:** 975 lbs.

**Length:** Implement alone, 84"; attached to tractor, 15' 2".

**Cutting Width:** At full angle, 66".

**Maximum Angle of Discs:** 25 degrees forward from straight.

**Working Depth:** Maximum, 8 1/2"; Average, 6".

Model 820  
in transport  
position



# FERGUSON SPRING TOOTH HARROW



## TWO-SECTION SPRING TOOTH HARROW—KBO-20

One of the most effective tools in destroying weeds is the Ferguson Spring Tooth Harrow with patented Joseph J. Kovar Spring Teeth. It is the backbone of thousands of farmers' weed control programs.

The Ferguson Spring Tooth Harrow has 17 teeth. Its cut is six feet and in the toughest going the Ford Tractor with Ferguson System handles it easily.

In addition to its use for weed control, the spring tooth harrow is an excellent tillage machine. It is often used for seedbed preparation. Instead of merely breaking up the clods on top of the land, the harrow's spring teeth, operating below the surface, roll hidden clods to the top. At the same time, the finer soil works down to the bottom to fill air spaces and thereby retards the loss of subsoil moisture. Result: a finer, better yielding seedbed.

## SPECIFICATIONS

**FRAME:** High-strength steel frame, in two sections, is flexibly connected with three adjustments of angle of operation. Each section is free to move up or down independently of the other when working on uneven ground. Sections may be disconnected easily.

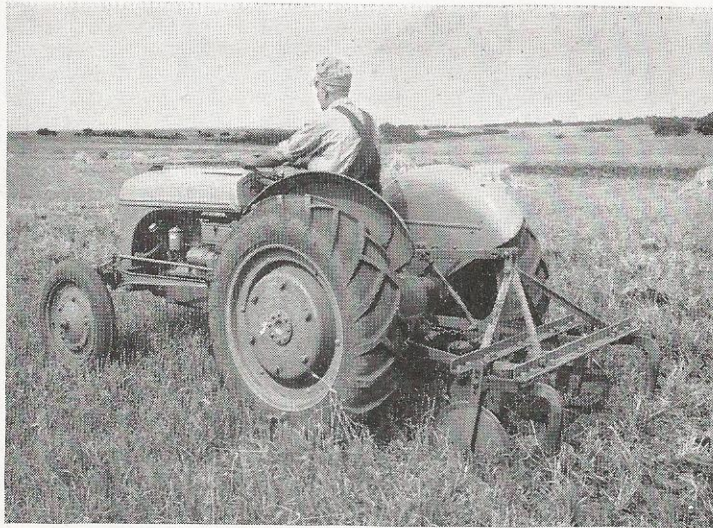
**CONTROLS:** Separate ratchet-type control lever for each section regulates working depth and angle of teeth. Also raises teeth to transport position.

**TEETH:** Has 17 patented Jos. J. Kovar Spring Teeth, attached so as to provide high arched effect for maximum resiliency and tension. Teeth are constructed of high-quality spring steel and are self-sharpening.

**DIMENSIONS:** Over-all width 73". Over-all height from bottom of runners to top of control levers 37½". Height from bottom of runner to top of segment bar 11". Width of cut approximately 6'.



# SUB-SURFACE TILLER



• Here is a dual purpose sub-surface tiller especially designed for the farmer who wants one implement that is practical for weed eradication and summer fallow work yet strong and rigid enough for working hard stubble ground and handling trash in stubble mulch farming.

To let the soil absorb and retain more water, reduce evaporation, prevent erosion and improve soil structure, large duckfoot shovels or sweeps are widely used for stubble mulching.

The Ferguson Sub-Surface Tillage attachment mounts three 24" sweeps on the Middlebuster frame. Special design provides enough wing suction to make sweeps penetrate properly at desired depth.

Shaker bars at the back of the sweeps agitate soil sufficiently to kill weeds yet leave residue on top. Three rolling coulters and a center beam of special design minimize clogging even when working in heavy weeds, stubble or corn stalks.

Raised or lowered by finger-tip control and automatically maintained at any depth by the Ferguson hydraulic system, this attachment permits accurate control over a wide range of penetration from shallow work to a depth of five or six inches.

Offering the greatest ease in hook-up, control and operation, this economical attachment has a use in almost every month of the growing season. In addition to doing work equal to or better than the majority of large, heavy sub-surface tillage machines, it is unexcelled for many other jobs such as shelter belt work, eradicating weeds in turn rows, fence corners, gardens, orchards, etc.

## SPECIFICATIONS—MODEL DO-93

**Frame:** Mounted on Middlebuster frame (not furnished)

**Mounting:** Directly connected to tractor by the three links of the Ferguson System.

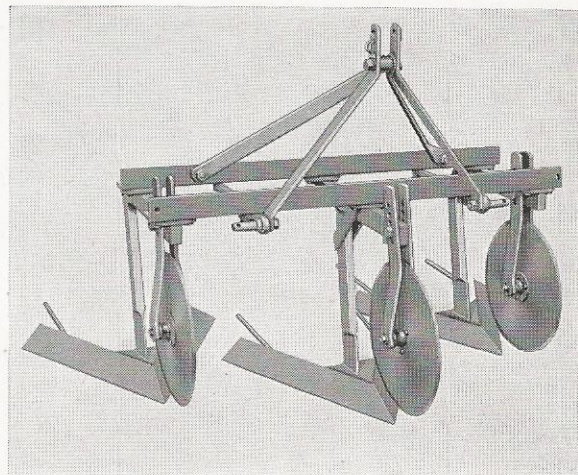
**Control:** Finger-tip and automatic control.

**Beams:** Welded to sweeps; bolted to frame. Welded and reinforced for extra strength.

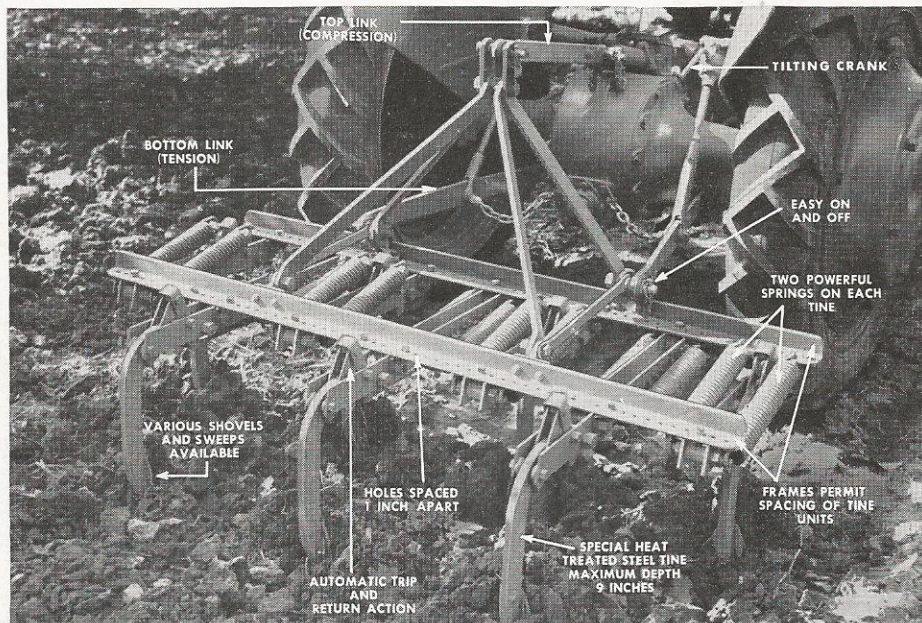
**Sweeps:** 3 high carbon steel sweeps; 4" wide;  $\frac{9}{32}$ " thick; 24" spread across back wings; beveled on underside of cutting edge; heavy shaker bars bolted to backs of sweeps.

**Rolling Coulters:** 3 high carbon discs; 16" dia.; mounting brackets fit Middlebuster.

**Width of Cut:** 5 feet 6 inches with lap of 6 inches.



# TILLERS



• The Ferguson Tiller is second only to the plow in its adaptability to all parts of the country and types of farming. And, under many recommended new soil management practices, the Tiller has many advantages over the plow. Wider use of the Tiller by every Ford Tractor owner awaits only a fuller knowledge of what can be accomplished with this versatile tool.

## A TOOL OF MANY USES

1. Prepares a deep seed bed quickly and economically.
2. Loosens and aerates the soil to any desired depth down to 9 inches. Reaches below plow pan.
3. Renovates alfalfa and similar crops.
4. Cultivates pasture land sod.
5. Aids conservation of moisture by roughing in stubble.
6. Prevents soil drift by ridging.
7. Controls all weed pests such as quack grass, Johnson grass, thistles, bindweed, Bermuda grass and ragweed.
8. Breaks hardpan beneath top soil (easily converted to subsoiler).
9. Ideal for summer or fall fallowing without disturbing straw or stubble needed to retain moisture.
10. Prepares wheat stubble for spring crops, by mulching and weed killing.

11. Cultivates orchard or nursery rows, works in small plots and narrow or sloping terraces.

12. Opens newly cleared land, rough marsh land and stony ground where plowing is difficult.

13. Works at maximum depth without regard for rocks, roots and other obstructions in the ground. Does not jump out of the ground. Tines reset automatically without stopping tractor—no time lost.

14. Destroys rank vegetation. Keeps irrigated land level.



The Ferguson Tiller is made in 5' size for deep subsurface tillage, or for use in heavy soils; and in 7' size for lighter soils and shallower work. Above, cultivating an orchard with 7' Tiller.



# TILLERS

## SPECIFICATIONS

**Mounting**—Directly connected to rear of tractor by the three links of the Ferguson hydraulic system. Can be mounted or removed in one minute or less.

**Control**—Raised, lowered and depth adjusted by a finger tip touch on the hydraulic control. Desired tillage depth maintained automatically. Levelled or tilted by easy-operating crank on tractor lift arm.

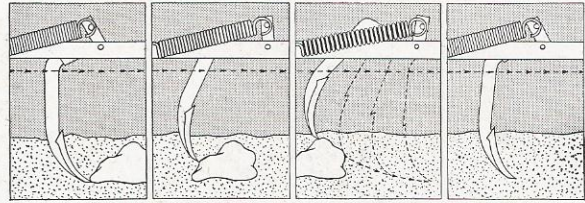
**Clearance**—Point of shovels to frame, 18". Tines are staggered to provide trash clearance. Ground clearance in transport position, 12½".

**Adjustments**—Tines adjustable laterally in 1" steps by means of holes in frame. Factory spacing of tines is 9" with alternate tines staggered in front and rear positions.

**Spring Tine Release**—Tines have individual spring releases to avoid breakage when an obstruction is encountered. Tines reset automatically after passing over the obstruction. Two coil springs, each 2" diameter, 10" long, per tine.

**Frame**—High carbon steel, heat treated.

**Tines**—Alloy steel, heat treated, designed for deep tillage.



**TINES AUTOMATICALLY RESET**—The action of the tines, striking and riding over an obstruction, is illustrated in the diagram above. The first picture at the left shows the shovel about to come in contact with a buried rock. In the picture at the right, the tine has automatically reset itself and continues work in a normal position.

Model No.	No. Tines	Width	App. Shipping Weight
BO-20	7	84"	285 lbs.
9BO-20	9	84"	360 lbs.

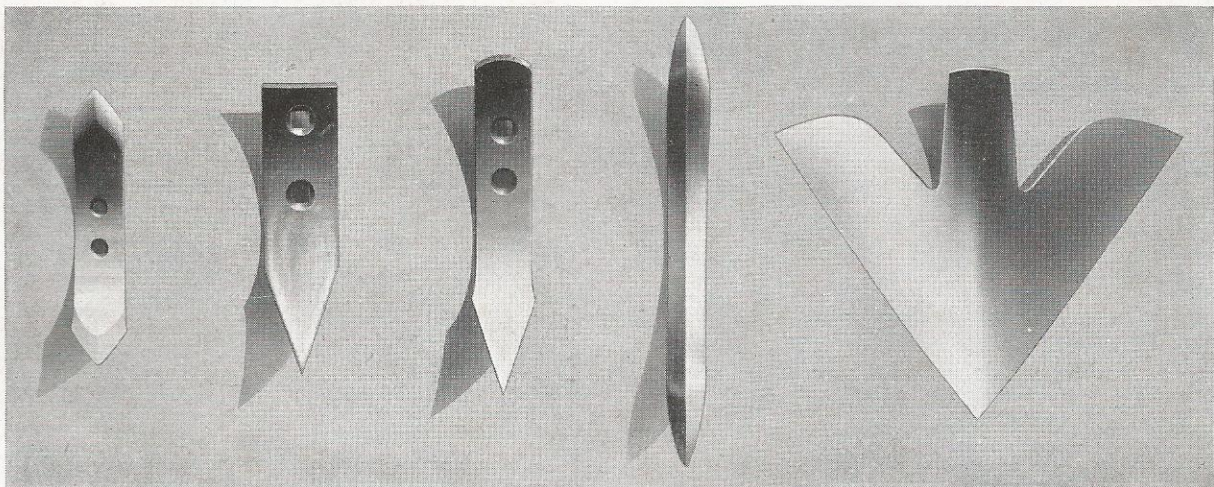
Equipped with 2" reversible teeth (2BO-150A).

## SHOVELS AND SWEEPS

Parts No.	Description
2BO-150A	2" Reversible Points
BO-150A	2½" Reversible Points
BO-150DD	S.C. Spear Points
BO-150DB	Crucible Spear Points
BO-150B	Duckfoot Points
BO-150D	Quack Grass Points
BO-150E	Chisel Points
BO-150C	Alfalfa Points

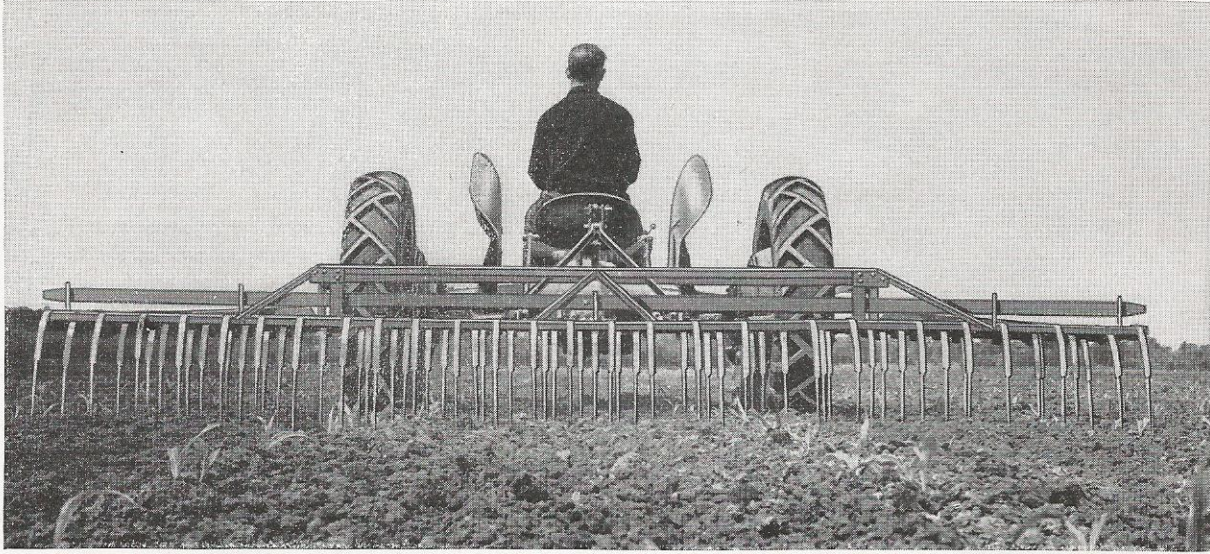
## SWEEPS AND SHOVELS FOR FERGUSON TILLERS

Reversible Points    Quack Grass Points    Chisel Points    Alfalfa Points    Duckfoot Points





# WEEDER



- The large acreage which can be covered in a day, the effectiveness with which weeds are killed before they get a good start, and the light draft of the implement all combine to make the weeder one of the lowest cost, most efficient tools for nearly every farm. The Ferguson Weeder, in addition, offers the advantages of Finger Tip Control, ease of getting into corners and small fields, and extremely accurate depth adjustment.

## LOWER WEED CONTROL COSTS

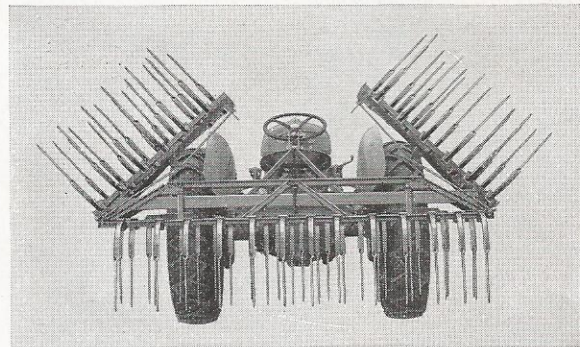
At normal field speed for this light-draft work, the new Ford Tractor with Ferguson Weeder will easily cultivate 50 acres or more per day with remarkably low fuel consumption. The springy, sharp teeth provide a zigzagging agitation that tears out small weeds, turning their roots up to the sun and wind. The Ferguson Weeder permits starting control measures while weeds are small. Thus they are prevented from robbing the soil of valuable moisture and nutrients. With proper use of the weeder, the number of cultivations required as the crop grows larger often can be reduced, making still further savings in time, labor and fuel.

For the most effective results, the Weeder should be used just as weeds are coming through the ground. Used early in the season the Weeder also hastens weed seed germination, and enables the weeds to be brought under control before crops are planted. The Weeder is not suitable for controlling deeply rooted weeds or vines.

From the time crops come through the ground, until six or eight inches high, the weeder may be used as often as necessary to prevent weed growth. It is particularly effective in keeping row crops weed-free, as the weeder teeth tear out small weeds in the rows, without injury to the deeper rooted crop plants.

## PROMOTES PLANT GROWTH

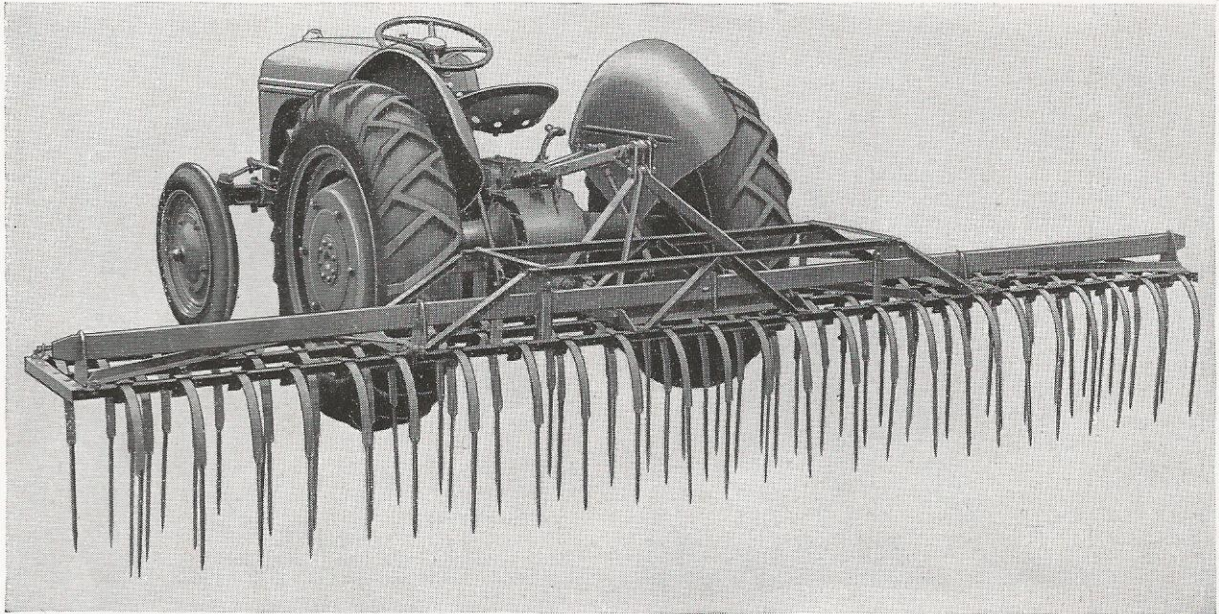
Soil crust that retards seed germination or stunts the growth of crops as they come through the ground is effectively broken up by the Weeder. Surface of the ground is left in a mulched condition ideal for aiding the development of vigorous crops.



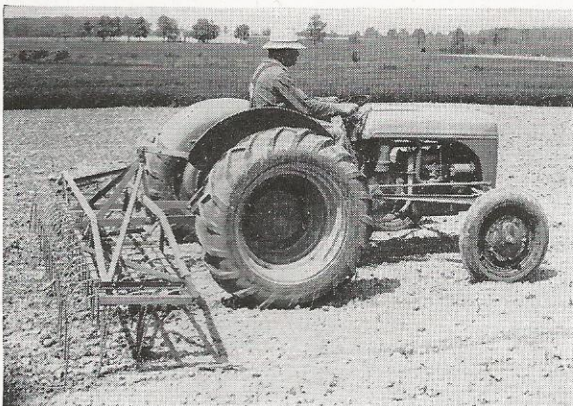
End sections of the Ferguson Weeder may be tipped up for driving through gates or narrow lanes.



# WEEDER



Weeder may be used until crops are several inches high.



The Weeder effectively breaks up soil crust, aiding plant growth and conserving soil moisture.

## SPECIFICATIONS

### M-KO-21 WEEDER

**Mounting**—Attached to the Ford Tractor in a minute or less by means of the Ferguson Linkage. No wrenches or other tools required.

**Control**—Raised and lowered, and depth set by hydraulic control, with finger tip ease.

**Width**—13<sup>1</sup>/<sub>4</sub>". Cultivates 4 rows of corn and similar crops, 6 to 8 rows of beans, beets and vegetable crops. *Transport width* with ends folded up is 10'.

**Adjustment**—Teeth may be moved laterally on the frame. Ends may be folded up by moving lock bar for transport. Depth is adjusted by finger-tip hydraulic control lever near the tractor seat.

**Clearance**—17<sup>3</sup>/<sub>8</sub>" under teeth with weeder raised to transport position.

**Teeth**—74 high carbon spring steel teeth, rounded and pointed for effective soil penetration and agitation.

**Frame**—Light-weight, high-strength steel angles.

**End Sections**—Strongly reinforced, held rigidly in place by lock bars. Hinged for tipping up for transport through narrow gates and lanes.

Type No.	Width	No. Teeth	Approximate Shipping Wt.
M-KO-21	13 <sup>1</sup> / <sub>4</sub> "	74	290 lbs.

# ROW CROP CULTIVATOR



Ample clearance is provided for laying by the corn crop.

- Simplicity of attachment, adjustment and use is the outstanding characteristic of the Ferguson Adjustable Row-crop Cultivator. It is light in weight, but rugged in design and construction. It may be attached to the new Ford Tractor, or taken off, in a minute or less, without the use of tools.

## WIDE RANGE OF ADJUSTMENTS

This implement meets the great majority of row-crop cultivation requirements in all sections of the country, due to its ease of adjustment for a wide range of crops, soil conditions, and row widths. It is equally suited for working crops on flat land, beds, or listed in furrows.



Cultivating small cotton.



Cross-Cultivating poorly checked corn.

## RUGGEDLY BUILT

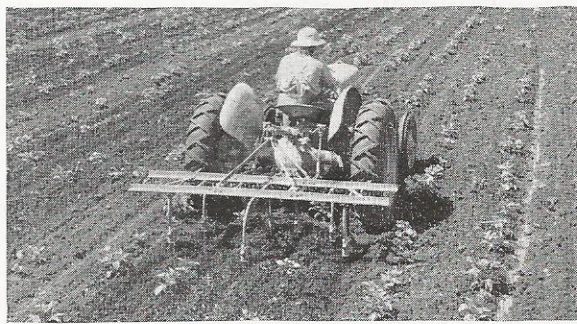
Tines of special cast alloy steel are rigidly bolted to a rugged frame of heat treated steel. As a result, this cultivator provides rugged strength with light weight.

## AMPLE CLEARANCE

Height from ground to under part of frame is ample for laying by tall crops. Arrangement of tines gives a high degree of trash clearance.

## FINGER-TIP CONTROL

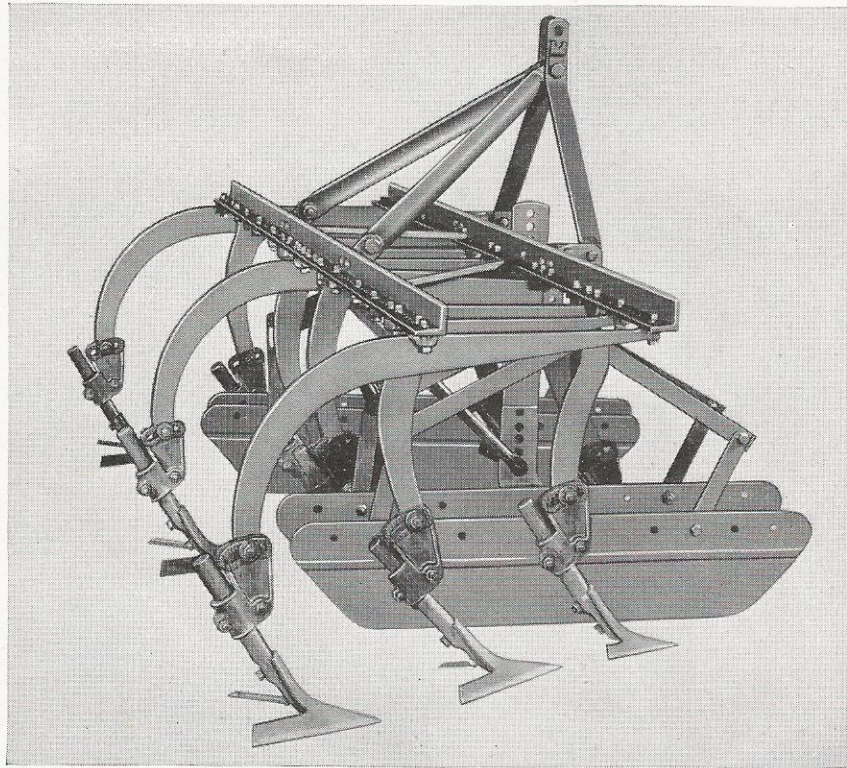
The Row-Crop Cultivator is designed to operate as a compact unit with the Ford Tractor. It brings all the advantages of the Ferguson System to row-crop cultivation—advantages that mean easier, cheaper and quicker cultivating for increased yields.



Showing tines adjusted for potato cultivation.



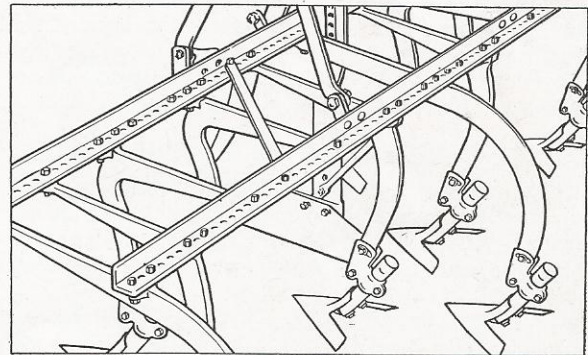
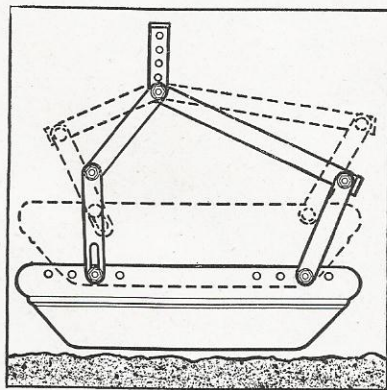
# ROW CROP CULTIVATOR



Tine arrangement gives a high degree of trash clearance, as shown by this view

## EASILY ADJUSTED FENDERS

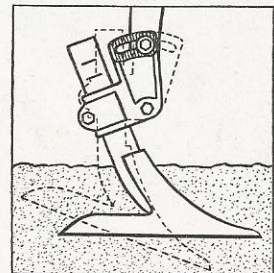
Dotted lines in the illustration below show the wide range of vertical adjustment. Unique hanger design permits adjustment of the fender parallel to the ground surface, or with either front or rear end higher. Height above the ground can be set without the use of a wrench. Lateral adjustment on the frame in 1" steps is quickly accomplished by means of a single bolt for each fender.



Holes bored at 1" intervals in the sturdy, heat treated frame provide accurate lateral adjustment of the tines, for working close to the rows, and for rows of different widths.

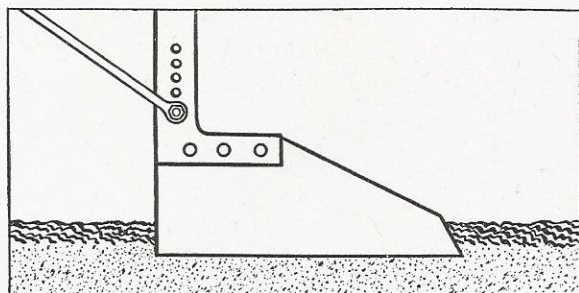
## 3-WAY SHOVEL ADJUSTMENT

Stem construction permits sweeps or shovels to be turned toward or away from the row, and to be raised or lowered within a 3" range. Angle of the tine foot may be changed to give the desired pitch. This 3-way adjustment fits the Row-crop Cultivator for working crops planted on flat land, on beds, or in furrows.



# ROW CROP CULTIVATOR

## CULTIVATOR FOLLOWS ACTION OF THE FRONT WHEELS



Precision cultivation, and many other operating advantages, result from the design of the Ferguson rear-mounted cultivator.

With this cultivator the tractor operator can do accurate, efficient work while driving with head up and eyes front. This is due to the design of the Ferguson Linkage, combined with the steering action of the cultivator fin. Tiresome and eyestraining watching of each hill or plant in the row no longer is necessary.

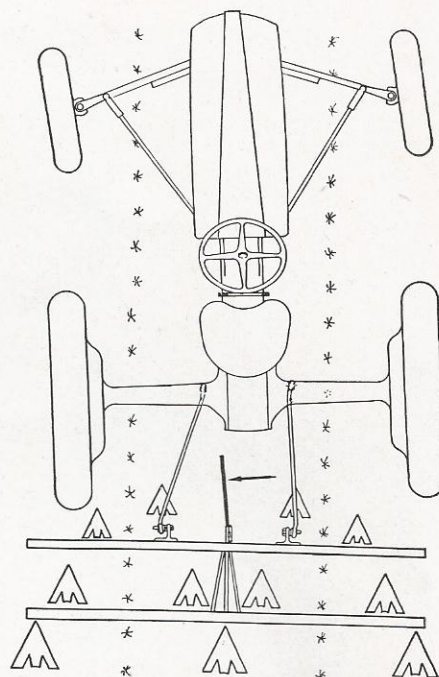
As shown by the illustration (right), if the operator allows the tractor to get too close to the crop, (see the left rear wheel), he steers the tractor central again as shown by the front wheels. The instant the front wheels are turned to steer the tractor back to the center of the row, a heavy soil pressure is imposed all along the side of the fin, as indicated by the arrow. This causes the fin to deflect and steer the implement to follow the front wheels.

## HOLDS CULTIVATOR ON HILLSIDES

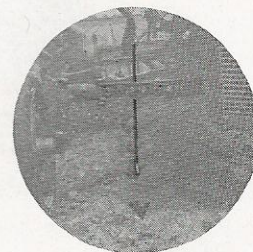
The four-wheel design of the Ford Tractor gives a high degree of stability for accurate steering on hillsides. At the same time, tendency of the implement to fall away puts a soil pressure



Cultivating corn planted on beds and on the contour with the new Ford Tractor and Ferguson Row-crop Cultivator.

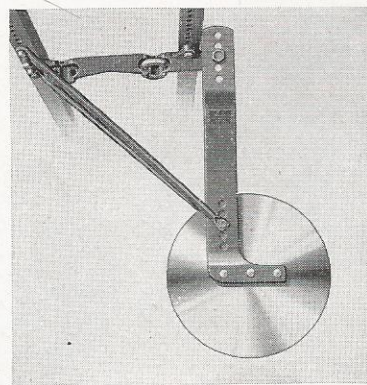


The drawing above clearly shows how the cultivator follows the action of the tractor's front wheels. A marker attached to the front axle (circle) shows the operator exactly where to steer.



along the side of the fin. This steers the cultivator up hill and keeps it in the correct position.

For these reasons, the Ford Tractor with Ferguson Row-crop Cultivator has won immediate approval among farmers who plant and cultivate on the contour, or who practice strip cropping.



For trashy land, or conditions where vines are encountered the rolling fin is available as accessory equipment.



# ROW CROP CULTIVATOR

## SPECIFICATIONS—N-KO-21

**Mounting**—Directly and quickly connected to the Ford Tractor by means of the Ferguson Linkage; may be attached or detached in a minute or less. Rear mounted.

**Control**—The Ferguson system protects cultivator when an obstruction is hit, lifts it for transport, lowers it to working position, sets and automatically maintains the working depth. Steering fin causes the cultivator to follow the action of the tractor front wheels and counteracts drifting on hillsides. Tines are lifted and lowered in parallel, allowing operator to use hydraulic control for various temporary depth adjustments without changing pitch of shovels. Cultivator is leveled by easy-operating crank on tractor lift arm.

**Width**—86" frame, 1" lateral adjustment of tines by means of holes in frame. Adapted to many crops, planted in wide range of row widths.

**Adjustment**—Individual shovel adjustment of 3" marked in 1" steps on the stem for operator's convenience. Tine foot adjustment gives a wide range of angles for many different shovels used. Combination of tine foot and stem angularity adjustments allows use of shovels on side of ridges or furrows.

The steering fin is adjustable in height for packed or loose ground.

**Clearance**—Cultivator has 21"—23" ground clearance. At 21" normal setting, clearance with cultivator in raised position is 6½" under the fin, and 10½" under the shovels.

**Stems**—Extra strong, heat treated, high alloy steel, 1¼" diameter. Fit many sizes and styles of shovels.

**Sweeps**—Standard equipment includes 6" sweeps on the four front tines; 8" sweeps on the four middle tines; and 10" sweeps on the three rear tines.

**Frame**—Heat treated, high alloy steel, very rugged in construction.

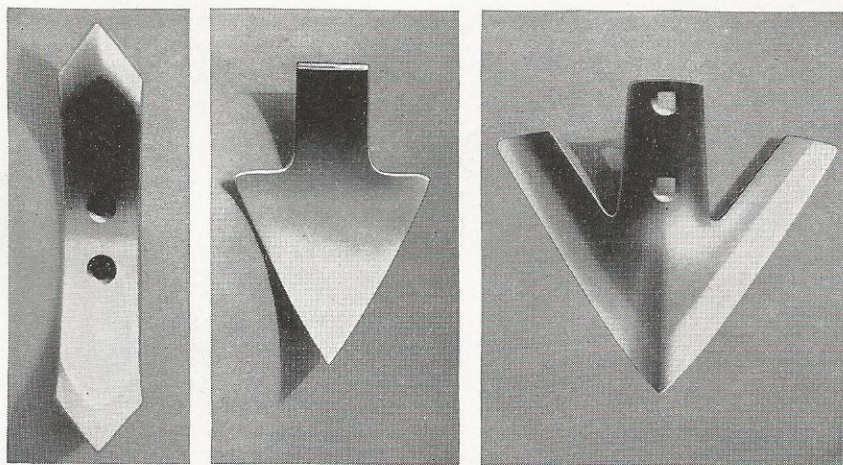
**Fin**—Blade is highly polished, high carbon steel with soft center. Flexibly designed so that weight of cultivator on side hills will cause fin to ride uphill.

**Tines**—High quality heat treated alloy steel. Tines, as furnished, allow for proper overlap of sweeps with good trash clearance.

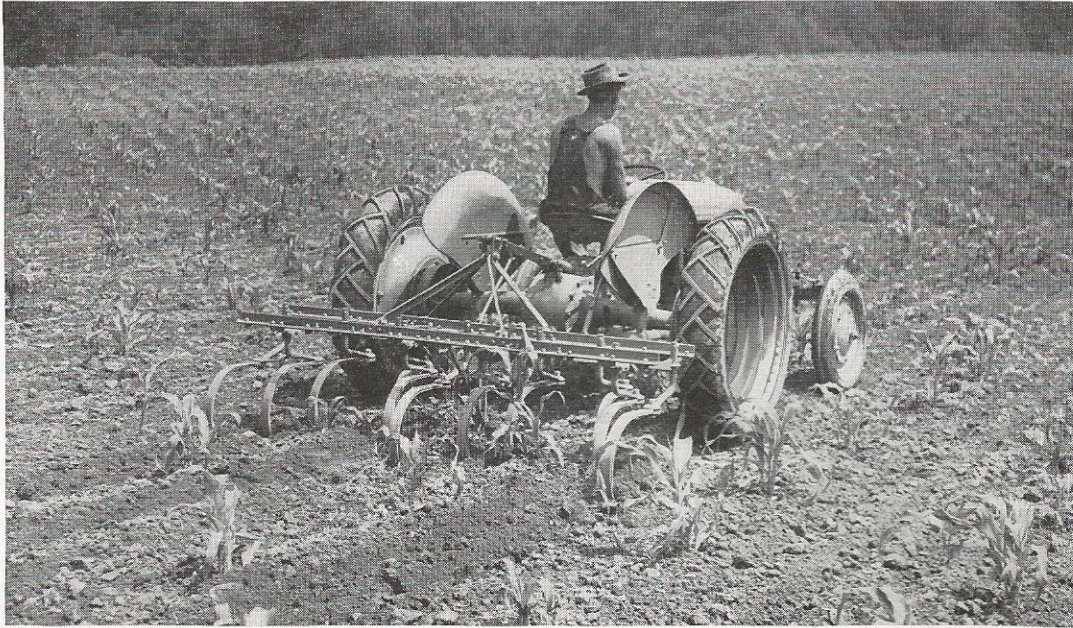
**Fenders**—Quickly attached to main frame by one bolt for each fender; adjustable laterally in 1" steps. Amount of swing and lift, as well as forward or rear location adjustable by holes in fender proper. Raised or lowered without need for wrench or other tools.

Type No.	No. Tines	Approx. Shipping Weight
N-KO-21	11	400 lbs.

## SWEEPS AND SHOVELS AVAILABLE FOR THE ROW-CROP CULTIVATOR



# SPRING TINE CULTIVATOR



• Spring tines enable this Ferguson Cultivator to be used in land containing stones, rocks, roots and other obstructions. It is possible to drive all day long at full operating speed in land containing such obstructions, without damage to any part and without stopping the tractor.

## A DOUBLE PURPOSE TOOL

The Ferguson Spring-tine Cultivator is equally suitable for row-crop cultivation, and for general field, orchard and vineyard cultivation in light soils. Tines are easily adjusted on the cultivator frame for either type of work. This cultivator, however, is not designed for deep sub-surface field tillage in medium or heavy soils. For such requirements, the Ferguson Tiller should be used.

## TINES EASILY ADJUSTED FOR ACCURATE WORK

Growing the best crops is impossible without perfect cultivation. Perfect cultivation is impossible without accurate setting of the shovels.

Such precise lateral and vertical adjustment is remarkably easy to attain with the Ferguson Spring-tine Cultivator which is manufactured to automobile standards of accuracy. The stem crank used to attach the tines to the frame may be adjusted to the smallest fraction of an inch.

## EASY ON—EASY OFF

The Ferguson Spring-tine Cultivator is easily attached to the new Ford Tractor, or taken off, in a minute or less, without the use of tools.

## CULTIVATES MANY ROW WIDTHS

Two, three or four rows over a wide range of widths can be cultivated with the Ferguson Spring-tine Cultivator. Change from one row width to another is accomplished by arrangement of the tines on the cultivator frame.



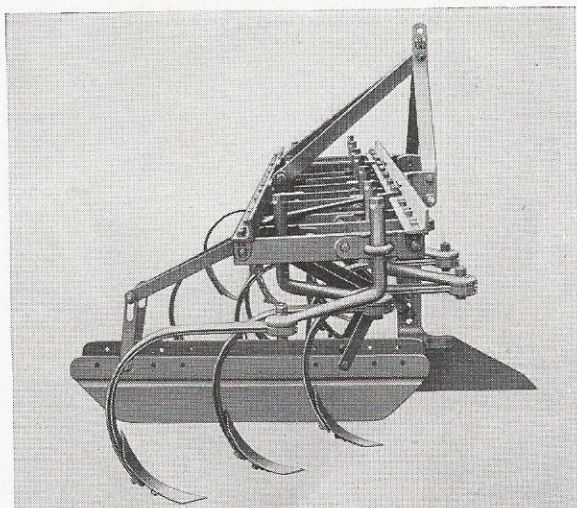
Tines may be changed from row-crop work to general field, orchard or vineyard cultivation, in a short time.



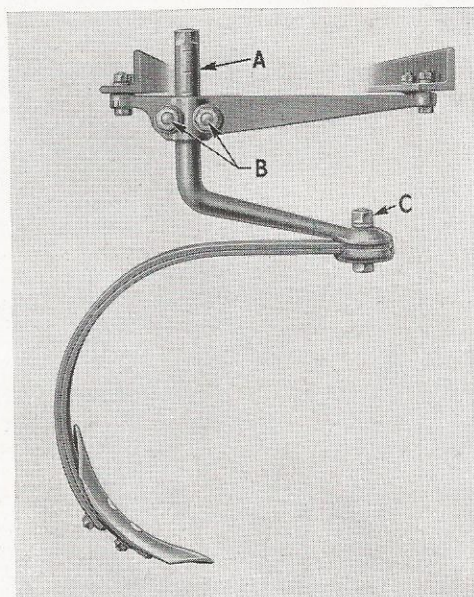
# SPRING TINE CULTIVATOR

## ROW-CROP CULTIVATION

Tines are adjusted laterally on the frame to meet the row width of the crop to be cultivated. Stem cranks may be turned forward so that front and rear shovels work closely together to thoroughly mix and stir the soil. Or, they may be turned to place the rear tines farther back, thus providing a high degree of clearance between the tines, for trashy conditions.

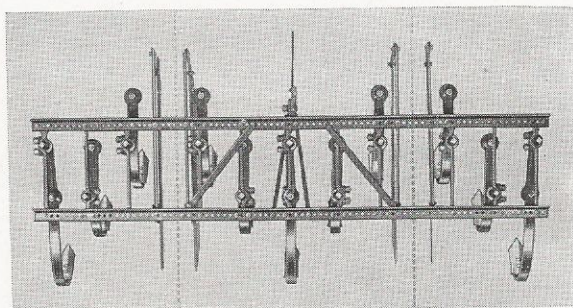


Side view of the Spring tine Cultivator, showing fender attachment.

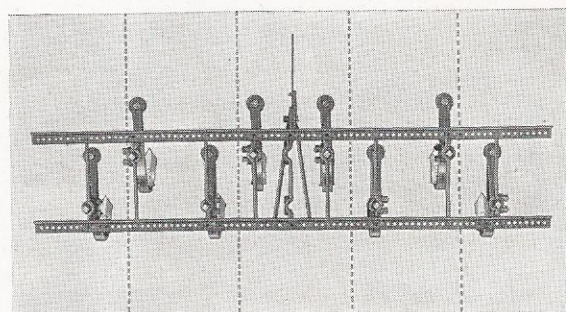


The above illustration shows how sweeps and shovels may be precisely adjusted for accurate cultivation. Markings provided on the upper end of the stem "A" aid in setting shovel depth accurately. Lateral adjustment for a very fine setting is accomplished by loosening nuts "B"—"C", and rotating the stem crank slightly.

## ADAPTABLE TO MANY ROW WIDTHS



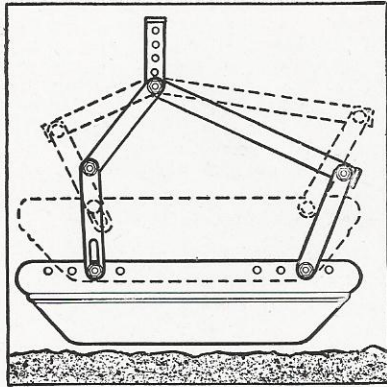
This view (with top structure removed) shows a typical tine arrangement for cultivating two rows. Tines are adjustable laterally on the frame in 1" steps. Tractor wheels and cultivator tines can be adjusted for two rows of any width from 30" to 42". The Cultivator is furnished with eleven tines, as shown.



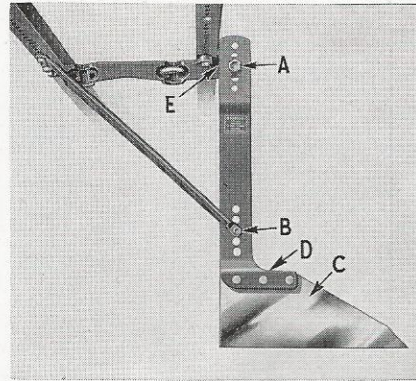
Tines in the illustration above are adjusted for cultivating four rows, planted 18" or 19" apart. Under certain conditions, four rows 16" to 20" apart also can be cultivated. Two extra tine assemblies may be purchased if it is desired to increase the number of tines between each row to three.



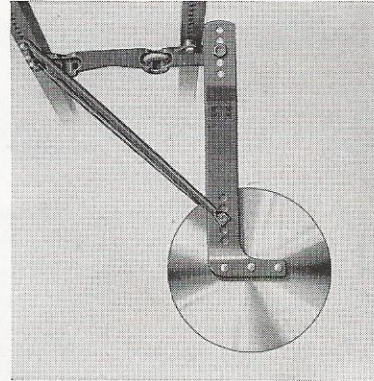
# SPRING TINE CULTIVATOR



Dotted lines show vertical range of fender adjustment. Lateral adjustment is provided at 1" intervals.

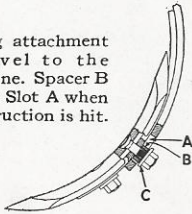


Blade fin, furnished as standard equipment, causes the rear-mounted cultivator to follow the action of the front wheels.

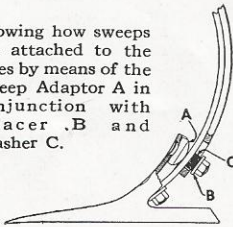


Rolling fin, available as accessory equipment, may be desirable in trashy conditions, or where vines are encountered.

Showing attachment of shovel to the spring tine. Spacer B slides in Slot A when an obstruction is hit.

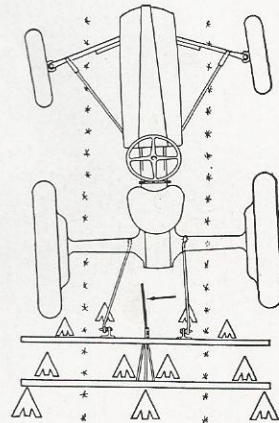


Showing how sweeps are attached to the tines by means of the Sweep Adaptor A in conjunction with Spacer B and Washer C.



## FOLLOWS ROW ACCURATELY

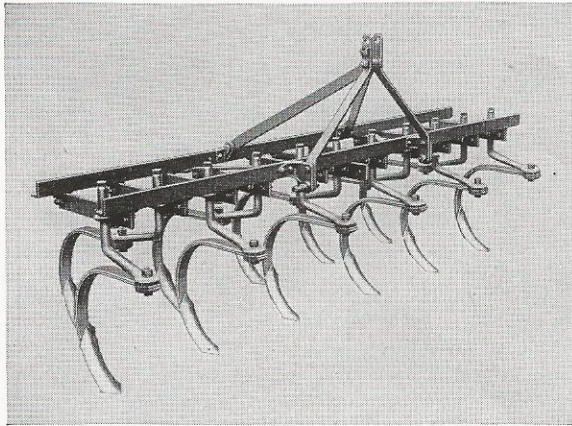
As shown by the illustration (right) if the operator allows the tractor to get too close to the crop, as indicated at the left rear wheel, he then steers the tractor central again as shown by the front wheels. The instant the front wheels are turned to steer the tractor back to the center of the row, a heavy soil pressure is imposed all along the side of the fin, as shown by the arrow. This causes the fin to deflect and steer the implement to follow the front wheels. Pressure of soil on fin also tends to keep the cultivator from drifting on hillsides.



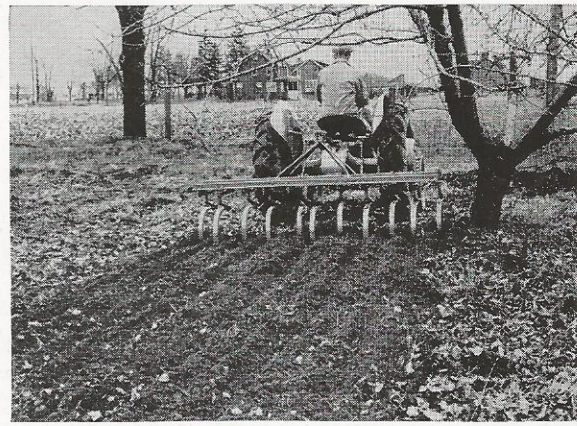
## FIELD, ORCHARD AND VINEYARD CULTIVATION

By suitably spacing the tines in the holes provided in the frame at 1" intervals, the Cultivator is easily adjusted to general cultivation in light

soils, and for shallow cultivation of medium soils. A variety of sweeps and shovels is available for different types of cultivation.



No extra parts are needed to convert the Spring-tine Cultivator from row-crop to general cultivation.



It is possible to operate close to trees, where the branches permit, without danger of damage to the roots.



# SPRING TINE CULTIVATOR

## SPECIFICATIONS

**MOUNTING**—Directly and quickly connected to the Ford Tractor by means of the Ferguson Linkage; may be attached or detached in a minute or less. Rear mounted.

**CONTROL**—The hydraulic system protects cultivator from breakage, lifts it for transport, lowers it to working position, sets and automatically maintains the working depth. Equipped with steering fin which causes the cultivator to follow the action of the tractor front wheels and counteracts drifting on hillsides. Tines are lifted and lowered in parallel, allowing operator to use hydraulic control for various temporary depth adjustments. Cultivator is leveled or tilted by easy-operating crank on tractor lift arm.

**WIDTH**—Frame is 86" wide. Tines may be arranged to cultivate two rows of 30" to 42" widths, three rows of 24" to 30" widths or four rows of 16" to 20" widths. Tines also may be equally spaced to make a 7' general field cultivator for light or medium work.

**ADJUSTMENTS**—Lateral adjustment of shovels is provided by holes in frame spaced 1" between centers. Finer lateral adjustments possible by rotating stem crank slightly. Vertical adjustment over 4" range may be made quickly by loosening "U" bolts holding stems and setting individual shovels to desired depth. Stems have marks 1" apart to adjust depth accurately. Fin depth may be adjusted by a series of holes in the fin stem. Normal fin setting is 3" below the shovel points. Somewhat deeper setting may be needed in light soils or for hillside cultivation. Fenders may be adjusted laterally by means of holes in frame and vertically by means of holes in support arms.

**CLEARANCE**—Ground clearance under frame is from 21" to 25" depending on shovel depth setting. Clearance with cultivator in transport position is 8½" under shovels and 6½" under fin at normal depth setting. Trash clearance between tines may be provided by reversing alternate stem holders, and/or stem cranks.

**STEMS**—Forged high carbon steel, 1¼" diameter, heat-treated for strength and toughness.

**FRAME**—Heat-treated, high alloy steel, very rugged in construction.

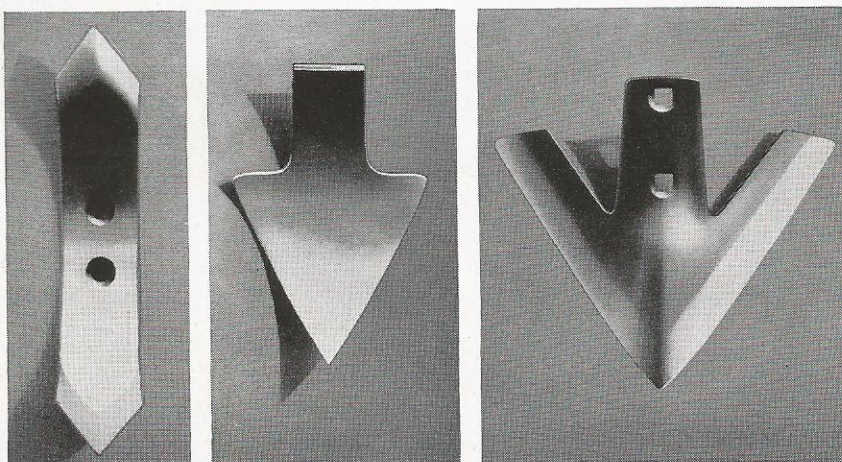
**FIN**—Blade is highly polished, high carbon steel with soft center. Flexibly designed so that weight of cultivator on side hills will cause fin to ride uphill and prevent drifting.

**FENDERS**—Quickly attached to main frame by one bolt for each fender; adjustable laterally in 1" steps. Amount of swing and lift, as well as forward or rear location adjustable by holes in fender proper. Raised or lowered without wrench or other tools.

**TINES**—Two flat nested concentric springs 1¾" wide made from alloy spring steel, heat-treated to give proper spring action and maximum strength.

Type No.	No. Tines	Soil Parts No.	Approx. Shipping Weight
S-KO-20	11	S-KO-62A Reversible Teeth (standard)	400 lbs.
S-KO-20	11	S-KO-60A Sweeps	400 lbs.

## SWEEPS AND SHOVELS FOR THE SPRING TINE CULTIVATOR



# AGRICULTURAL MOWER



• Designed to make use of the exclusive Ferguson System, this agricultural mower will cut a large acreage per day at surprising savings in fuel, time, and work.

## EASILY ATTACHED OR DETACHED

Simple connections to built-in bracket on tractor rear axle provide quick easy means for attaching or detaching mower.

## QUICK, EASY TURNS

Location of cutter bar just back of the rear wheels, plus the independent rear wheel brakes of the tractor, make it possible to mow a square

corner without stopping. Operator has excellent view of full width of cut.

## POSITIVE SAFETY RELEASE

When a hidden obstruction is hit, a safety release allows the cutter bar and driving mechanism to swing to the rear and the power to the sickle is cut off.

## FINGER TIP CONTROL

Cutter bar can be raised for turning, backing or clearing obstructions by the finger tip control located near the driver's seat. No heavy lifting or tugging. So easy a child can operate it. New easy-acting tilting lever eliminates plungers, rods, and grips to loosen and rattle.

## MOWING SPEEDS

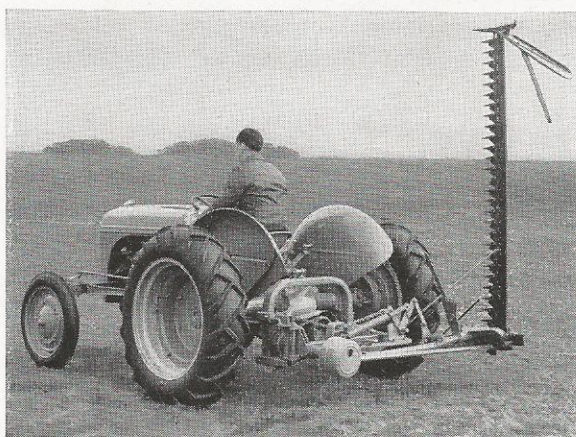
Pulley Diameter	TRACTOR SPEED			MOWING CONDITIONS	CAPACITY—ACRES PER 10-HR. DAY		
	Gear	RPM	MPH		5' Bar	6' Bar	7' Bar
5½"	2nd	1400	3.23	Average	16 to 23	19 to 27	22 to 32
		2000	4.62				
7⅛"	2nd	1400	3.23	Extra Heavy	16 to 19	19 to 23	22 to 27
		1700*	3.90				
10⅛"	3rd	500	3.50	Very Light	17 to 30	21 to 36	24 to 40
		1200*	6.75				

\*Top speed at which tractor may be operated without excess wear and strain.



# AGRICULTURAL MOWER

## SPECIFICATIONS



**Cutter Bar**—5', 6' or 7' length optional. Constructed of heat-treated steel. Sickle head, clips, wear plate, yoke and swathboard constructed of steel.

**Inner and Outer Shoes**—Malleable iron with hardened steel soles.

**Guards**—Regular, Rock or Twin Guards optional.

**Knife**—5', 6' or 7' length optional. Stroke 3".

**Knife Sections**—Hardened Tool Steel—3" wide, 45° angle. Plain cutting edge, or serrated edge optional.

**Pitman**—Wood pitman, 59 $\frac{3}{8}$ " long, provides small angle at cutter bar to reduce friction and wear. Pitman runs on anti-friction roller bearings.

**Lubrication**—9 Zerk fittings provide for lubrication of all important wearing parts, including knife guides and knife heads.

**Hydraulic Lift**—Connections to tractor lift arms provide finger tip control for raising cutter bar to turn, back or clear obstructions.

**Tilt Lever**—Direct-operating type. Eliminates plungers, rods and grips.

**Pulley Drive**—Triple V-belt drive runs from 7 $\frac{1}{8}$ " pulley on power take-off to triple V-pulley on flywheel shaft. Single adjustment for belt tension. Special 5 $\frac{1}{2}$ " pulley with 4 V-belts (shorter) can be supplied for high speed operation in second gear.

**Gauge Wheels**—None.

**Rotating Shafts**—Rotating shafts mounted on Timken roller bearings. One-piece steel tube.

**Flywheel**—Heavy construction. Scientifically balanced to reduce vibration. Fully guarded.

**Mounting**—Can be taken off or put on quickly and easily, by means of simple connections to built-in bracket on tractor rear axle.

**Yoke Bar**—Extra heavy solid steel with all brackets welded in place.

**Safety Release**—Allows cutter bar and driving mechanism to swing to rear when obstruction is hit. Drive belts are loosened and power to sickle is cut off.

**Dimensions**—Ground clearance when raised 11 $\frac{1}{4}$ ". Inside edge of swath is 45 $\frac{3}{4}$ " from center line of tractor.

**Weight**—Net weight 5' length, 468 lbs.; 6' length, 480 lbs.; 7' length, 493 lbs. Shipping weight 5' length, 482 lbs.; 6' length, 495 lbs.; 7' length, 509 lbs.

### TYPES AND CATALOG NUMBERS

Type No.	Width of Cut	Finger Guards	Knives
15A-E020	5 ft.	Regular	Regular
16A-E020	6 ft.	Regular	Regular
17A-E020	7 ft.	Regular	Regular
25A-E020	5 ft.	Rock Pattern	Regular
26A-E020	6 ft.	Rock Pattern	Regular
27A-E020	7 ft.	Rock Pattern	Regular
35A-E020	5 ft.	Regular	Serrated Edge
36A-E020	6 ft.	Regular	Serrated Edge
37A-E020	7 ft.	Regular	Serrated Edge
45A-E020	5 ft.	Rock Pattern	Serrated Edge
46A-E020	6 ft.	Rock Pattern	Serrated Edge
47A-E020	7 ft.	Rock Pattern	Serrated Edge

# HEAVY DUTY MOWER



Mowing sugar beet tops to be threshed for seed.



Cutter bar is raised by finger tip hydraulic control.

- For highway, industrial and heavy-duty farm mowing, the Ferguson Heavy-Duty Mower has won great favor. It is easy to operate—is flexible in handling—can be put on or taken off quickly—is smooth running—and gives long trouble-free service.

Complete and flexible control of the mower combined with the low center of gravity and quick, easy handling of the Ford Tractor, make it possible for this combination to get in places that only a scythe could reach, before.

## FINGER TIP CONTROL

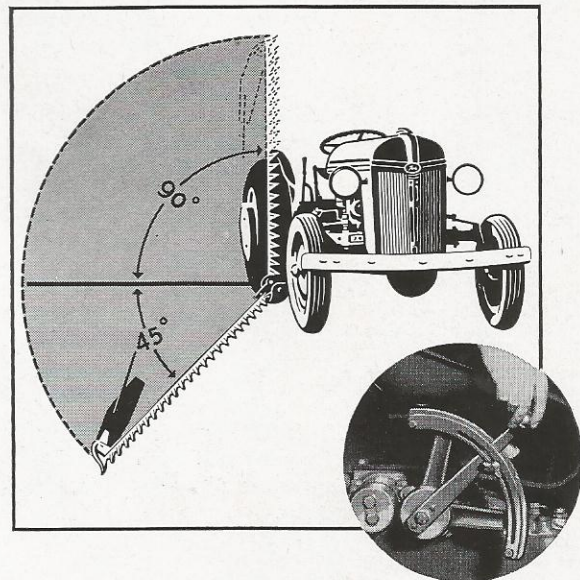
Cutter bar is raised and lowered by means of the Ferguson hydraulic system, built into the new Ford Tractor. Only a touch on the finger tip hydraulic control lever is required. Cutter bar may be raised with the tractor moving forward or standing still. Thus, obstructions may be cleared without stopping the tractor, saving considerable time on jobs such as highway mowing. Floating suspension allows the mower to follow the ground contour, independently of the tractor wheels.

## EASY ON—EASY OFF

After the mower sub-frame is attached to the tractor, it may be left on the tractor when the mower is not in use. The mower can be quickly and easily attached to, or removed from the sub-frame.

## QUIET RUNNING

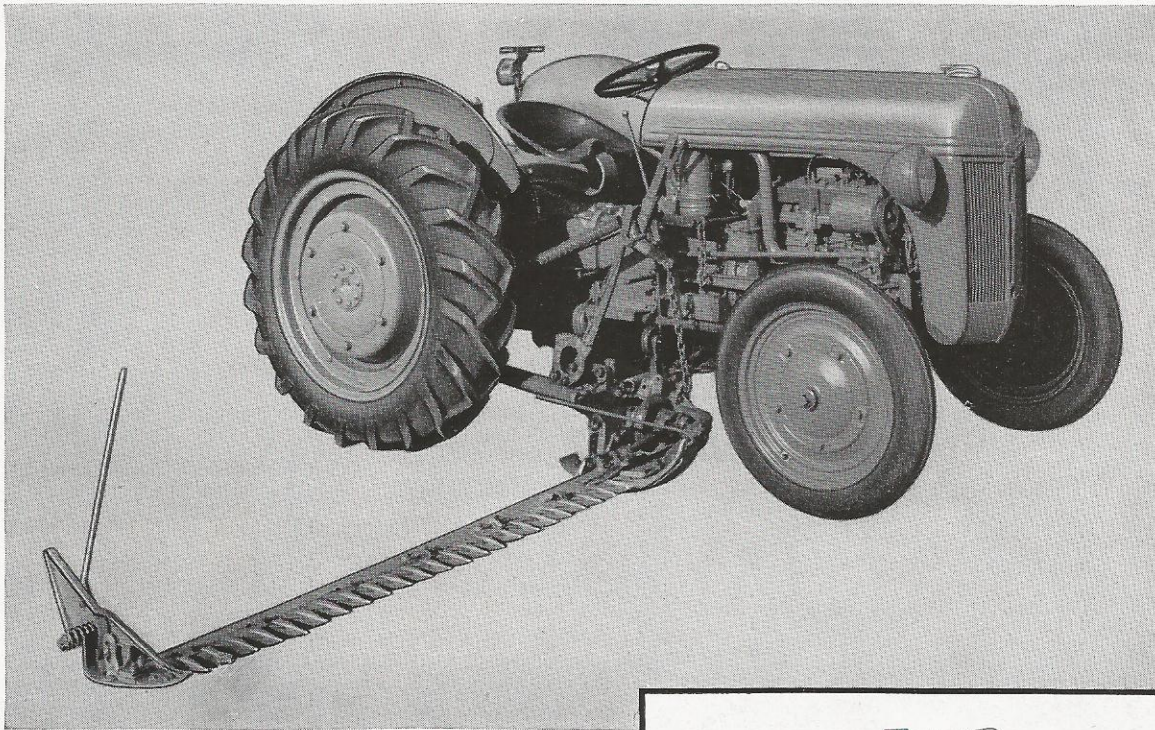
A simple, direct drive . . . liberal use of anti-friction bearings . . . rubber bushings that absorb vibrations . . . and precision manufacture to automotive standards . . . all contribute to the unusually quiet, smooth-running operation of this mower.



Cutter bar operates in any position between vertical and 45° below level. Inset, the finger tip control lever.



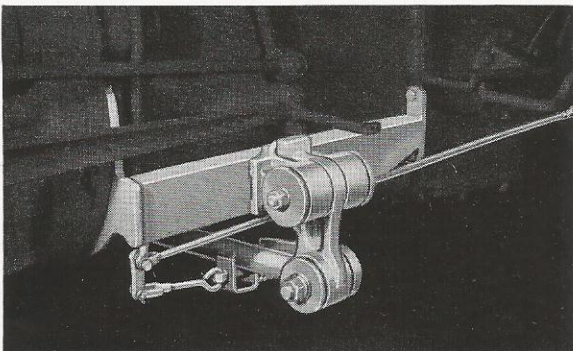
# HEAVY DUTY MOWER



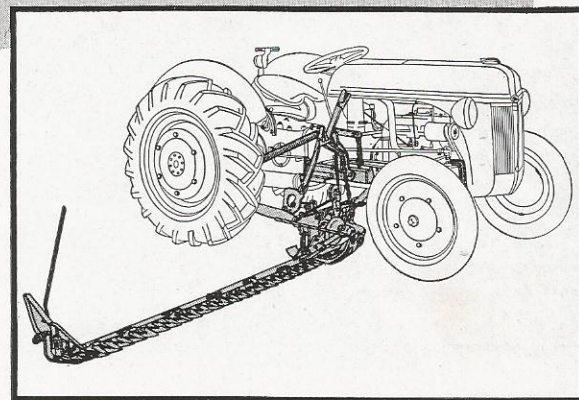
## EASILY ATTACHED

Simplified design enables the improved Ferguson Heavy Duty Mower to be attached to, or detached from the Ford Tractor in a short time. Neither the lifting of heavy parts nor use of a jack or special tools is necessary.

Removal of two pins, two U-Bolts and two springs detaches the mower from the sub-frame. This sub-frame may be left on the tractor, without interfering with other work. It is not necessary to remove the regular tractor drawbar links when using the mower.



Showing the single pin drag bar connection to the mower sub-frame, and "break back" rod connection which throws out the clutch and stops tractor automatically when an obstruction is hit.



Phantom view showing the simplicity of design and attachment to the tractor.

## SAFETY RELEASE

Injury to mower or tractor when an obstruction is struck by the cutter bar is prevented by the automatic safety device. Instantly, (1) the cutting motion of the sickle is stopped, (2) cutter bar is released and swings backward, and (3) tractor is stopped.

To resume mowing, the operator merely has to relieve the pressure on the obstacle by backing the tractor. Clutch is re-engaged for backing by raising the pedal.

# HEAVY DUTY MOWER

## CONVENIENT CONTROLS

In normal operation, the operator has only to lower the cutter bar to the ground by a touch on the hydraulic control. Floating suspension allows the mower to follow the ground contour.

Cutter bar is just as easily lifted to any position up to vertical by the same finger tip effort. Such easy, instant control is of special value when mowing roadside or irrigation ditch banks, or on other work where obstructions are frequently encountered.



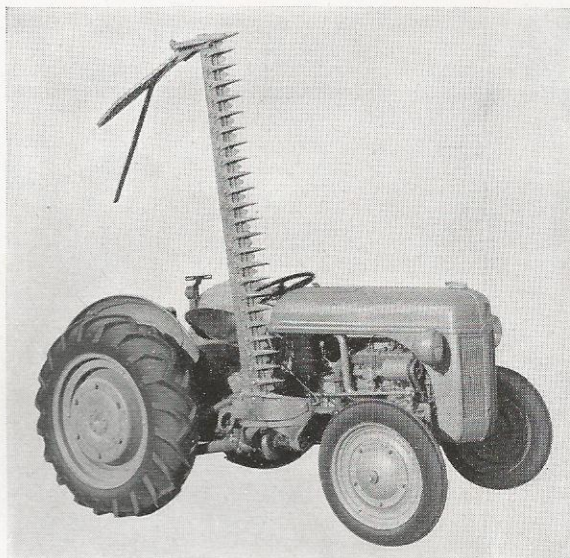
All controls are grouped within easy reach of the tractor operator.

## 12" CLEARANCE LIFT

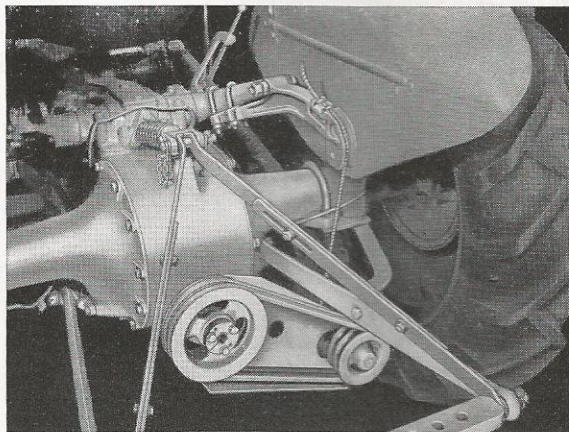
A hand lever is provided for lifting the inner shoe to any position from the ground level, up to 12" clearance. This permits mowing over curbs and pavement shoulders without excessive drag and wear on the inner shoe. It also permits leaving a high stubble when desired.

## TILTING LEVER

Tilt of the cutter bar may be easily adjusted within a 3" range by means of hand lever. This lever is conveniently located within easy reach of the tractor operator's right hand.



Inner shoe may be adjusted to any height up to 12" clearance.



Showing V-belt drive and cable attachment to the hydraulic lift arm.

## RUGGEDLY BUILT

Steel sub-frame members are securely bolted to the tractor transmission case in such a manner as to avoid excessive strain. All moving parts (except belt drive) are of forged carbon or alloy steel, heat treated and ground for accuracy. Pulley shaft and crankshaft run on heavy tapered roller bearings.

Needle bearings are used for the universal joints. Shaft connections are splined and pinned, eliminating keys and set screws. Knife head ball and sockets are deep hardened to reduce wear and frequency of adjustment. Knife plates and ledgers are of hardened tool steel.



# HEAVY DUTY MOWER

## SPECIFICATIONS

**LOCATION**—Right side of tractor midway between front and rear wheels, for easy handling and best visibility.

**MOUNTING**—On steel frame bolted to transmission flanges. Frame can remain on tractor when mower is removed. Belt drive housing clamped under rear axle housing by U-Clamps.

Four large rubber bushings used in drag bar mounting on frame, to insulate vibration of mower from tractor and protect drag bar pivot point from wear. Regular drawbar links need not be removed. Mower quickly removed by disconnecting drag bar from bracket, pulling pin which supports lift cable and hand lever, detaching pulley housing at rear axle and removing hydraulic lift arm and two springs.

**DESIGN**—All moving parts (except belt drive) are of forged steel, machined, heat treated, and ground for accuracy. Heavy duty taper roller bearings at pulley shaft and crankshaft. Needle bearing universal joints. Spring loaded leather oil seals used throughout. Zerk pressure lubrication of all moving parts. Flexible mounting on tractor allows mower to float and thus follow contour of ground. Fully enclosed drive to exclude dirt, and prevent winding hay. Cutter bar "break back" and clutch release works automatically when bar runs into obstacle and (1) instantly stops cutting motion of sickle, (2) allows cutter bar to swing backward, (3) stops tractor, and (4) re-engages and resumes cutting action as soon as operator relieves pressure on obstacle by backing tractor away from it. Clutch re-engaged for backing up by raising clutch pedal with foot.

**CUTTING ACTION**—Fast, at all angles of cutter bar. Correct register of knife sections with guards maintained through all angles, from 45° below level, to vertical. Extra large guide surfaces for knife. Height of cut from ground adjustable. Stroke of knife 3". Spacing of guards 3". Knife cuts 1600 strokes per minute (800 RPM at mower crank) at 1400 RPM of engine, with 8½" pulley—1800 strokes per minute with 9¾" pulley.

**CONTROL**—Floating suspension allows mower to follow contour of ground independently of wheels. Long balance springs adjust weight at both inner and outer shoes to the minimum required for action. Wear on shoe soles is reduced. Hydraulic lift lever is connected to mower by flexible steel cable. When lifting, cutter bar folds up and then entire mower raises.

**DRIVE**—Double V-Belt from power take-off to pulley housing on side of tractor; then by enclosed propeller shaft directly to mower crankshaft. V-belts cushion load, thus protecting sickle. Enclosed needle bearing universal joints. All shaft connections splined and pinned no keys or set screws. Direct drive to pitman eliminates extra parts.

**MATERIAL**—Heat treated forged carbon or alloy steel in all moving parts. Knife sections and ledger plates hardened tool steel. Brackets malleable iron. Shoes and hinge are malleable iron. V pulleys are cast iron for high friction qualities. Steel divider board. Cold rolled steel cutter bar, ribbed at back for stiffness.

**HEAT TREATMENT**—All wearing parts hardened. Knife head ball and sockets deep hardened to reduce wear and frequency of adjustment.

**ADJUSTMENT FOR CUTTING**—Convenient lever lifts inner shoe to any position, up to 12" clearance. Angle of bar when cutting up or down side of bank is controlled by hydraulic lift. Hand lever adjusts tilt. All controls easily reached from seat. "Break back" adjustable so as to release clutch at desired impact intensity. Balance springs adjustable to provide for heavy or light cutting. Knife quickly removed for sharpening.

**ADJUSTMENT FOR WEAR**—Pulley housing shaft and crankshaft taper roller bearings are adjusted by adding shims. Belts quickly adjusted by single screw. Pitman ball socket and knife head guides adjusted by adding shims.

**SAFETY**—Automatic "break back" stops tractor when hitting obstacle, V-belt, drive shaft and universal joints are fully enclosed. Bar held vertical when on highway by tie rod in addition to lifting cable.

## MOWING SPEEDS

Pulley Diameter	Tractor Speed—Engine			Mowing Conditions	Capacity—Acres per 10-hour Day	
	Gear	RPM	MPH		5' Bar	6' Bar
8½"	2nd	1400	3.23	Average	16 to 23	19 to 27
		2000	4.62			
9¾"	2nd	1400	3.23	Heavy	16 to 19	19 to 23
		1700*	3.90			
9¾"	3rd	1200*	6.41	Light	17 to 30	21 to 36

\*Top speed at which tractor may be operated without excess strain and wear on mower under these mowing conditions.

## MOWER TYPES

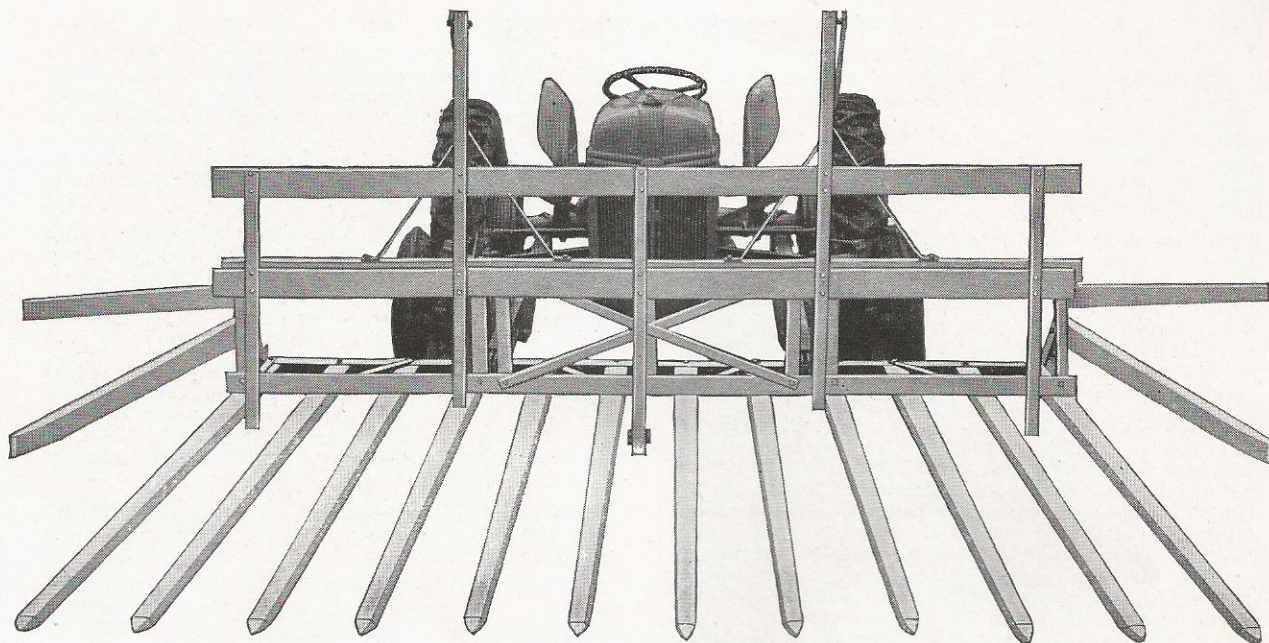
Type No.	Description	Approximate Shipping Wt.	Type No.	Description	Approximate Shipping Wt.
15 P-E0-21	5' cutter bar	530	26 P-E0-21	6' cutter bar with	550
25 P-E0-21	5' cutter bar with clearance lift	540	55 P-E0-21	5' cutter bar, regular guards, serrated knives	510
16 P-E0-21	6' cutter bar	540			

(Other Models available with Rock Knives)





# SWEEP RAKE

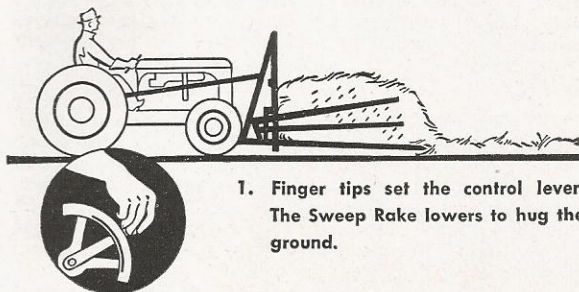


## A Finger Tip Touch Does ALL The Hard Work With This TRACTOR-MOUNTED SWEEP RAKE

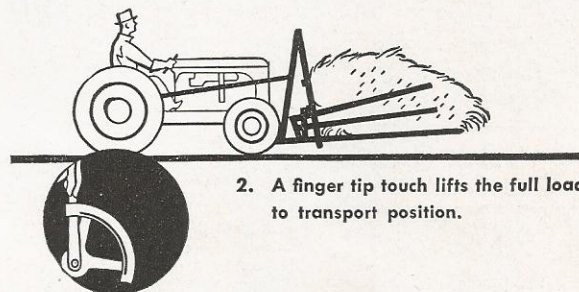
When the owner of a Ford Tractor with Ferguson System mounts this Sweep Rake on his tractor and goes to work he gets more done faster and easier.

The hard back and arm labor of tugging at an awkward, long lever is replaced by a finger tip touch on a lever only a few inches long. This little lever sets a mechanical brain and automatic muscles of steel to work, making light work of hard work.

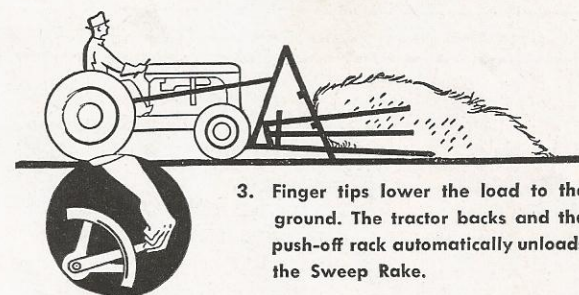
The Ford Tractor with Ferguson System and this Sweep Rake is an unbeatable combination for farmers using this method of making hay, or carrying shocked grain from the field to the separator.



1. Finger tips set the control lever. The Sweep Rake lowers to hug the ground.



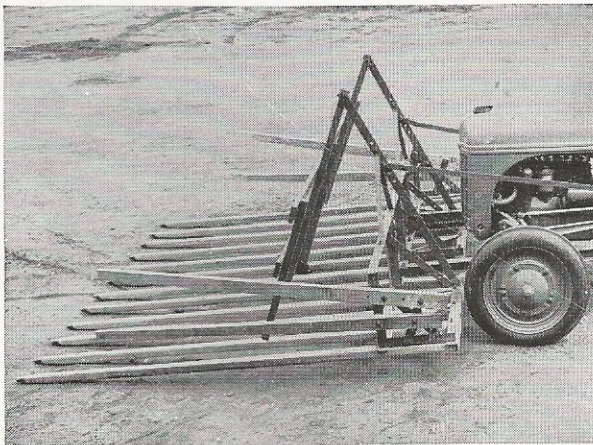
2. A finger tip touch lifts the full load to transport position.



3. Finger tips lower the load to the ground. The tractor backs and the push-off rack automatically unloads the Sweep Rake.



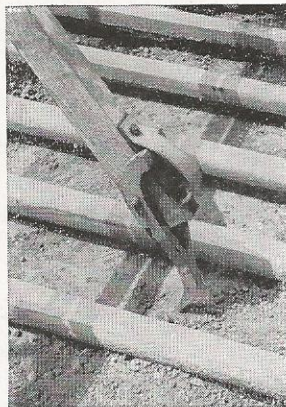
# SWEEP RAKE



Push-off rack at maximum extension



Stirrup bolted to axle  
Supports I-beam frame



Push-off point engages  
ground to extend rack

## SPECIFICATIONS WL-1-SR SWEEP RAKE

**CONSTRUCTION:** I-beam frame and steel trussed head give rigidity and strength to the unit. Push-off rack and teeth are constructed of wood. Gathering teeth are steel pointed.

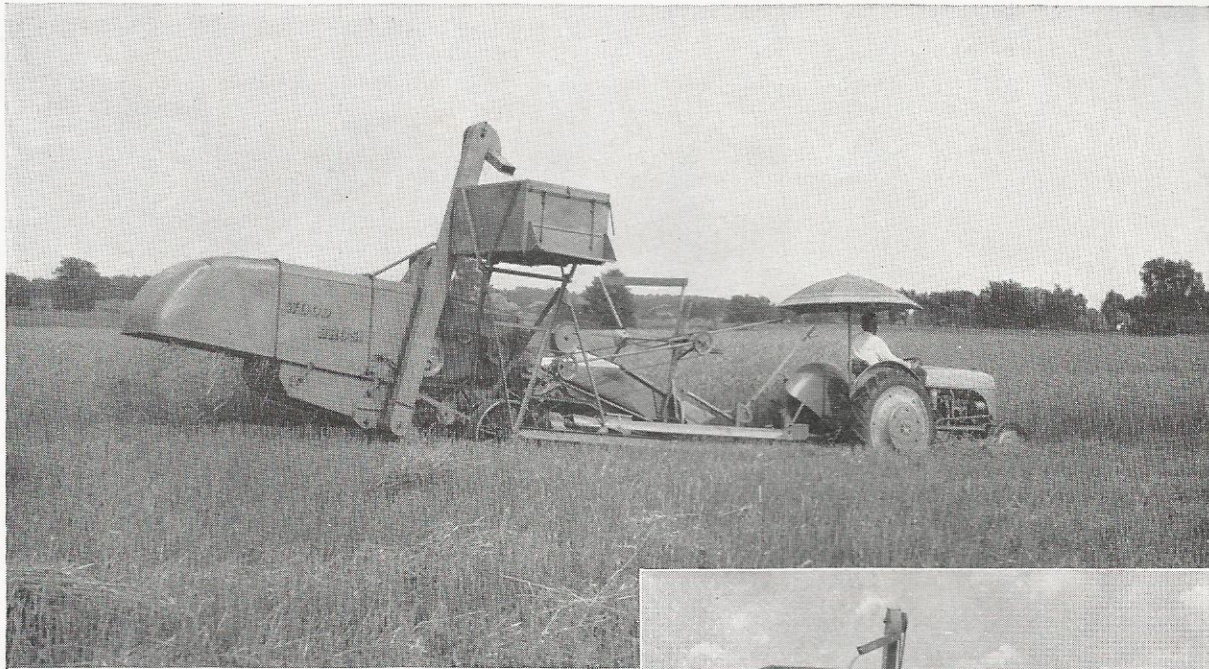
**MOUNTING:** The I-beam frame members are held by stirrups bolted to the front axle and by U-bolts passing over the rear axle of the tractor. The Sweep Rake's lifting arms are attached to the hydraulic lifting arms of the Ford Tractor with Ferguson System.

**CONTROL:** The floating head construction permits the teeth to follow or ride on the ground. The finger tip control raises and lowers head. Push-off rack works automatically when head is lowered and tractor backs.

**CAPACITY:** The load capacity is approximately 600 pounds which is all the Sweep Rake will gather if grain or hay is exceptionally heavy in relation to its bulk.

**SHIPPING WEIGHT:** The total shipping weight is 525 pounds. It is delivered to the dealer in eight packages, the heaviest weighing 137 pounds.

# WOOD BROS. COMBINE



Combining speeds up harvesting. It allows the farmer not only to cut his grain when it is right—but *gets it in the bin*. It prevents losses due to excessive handling and bad weather.

## A BIG-CAPACITY ONE-MAN COMBINE

WB-6-C

- The combine saves time, grain and money. One man with a tractor can combine as much grain in a day as the same man could cut with a binder—that means a saving of all the time otherwise spent for shocking, pitching, turning and threshing. The combined operation costs less than half that of the binder-thresher method.

The Wood Bros. WB-6-C Combine meets the requirements of both small and medium sized farms. Light in weight—yet sturdy. It operates successfully on any two-plow tractor.

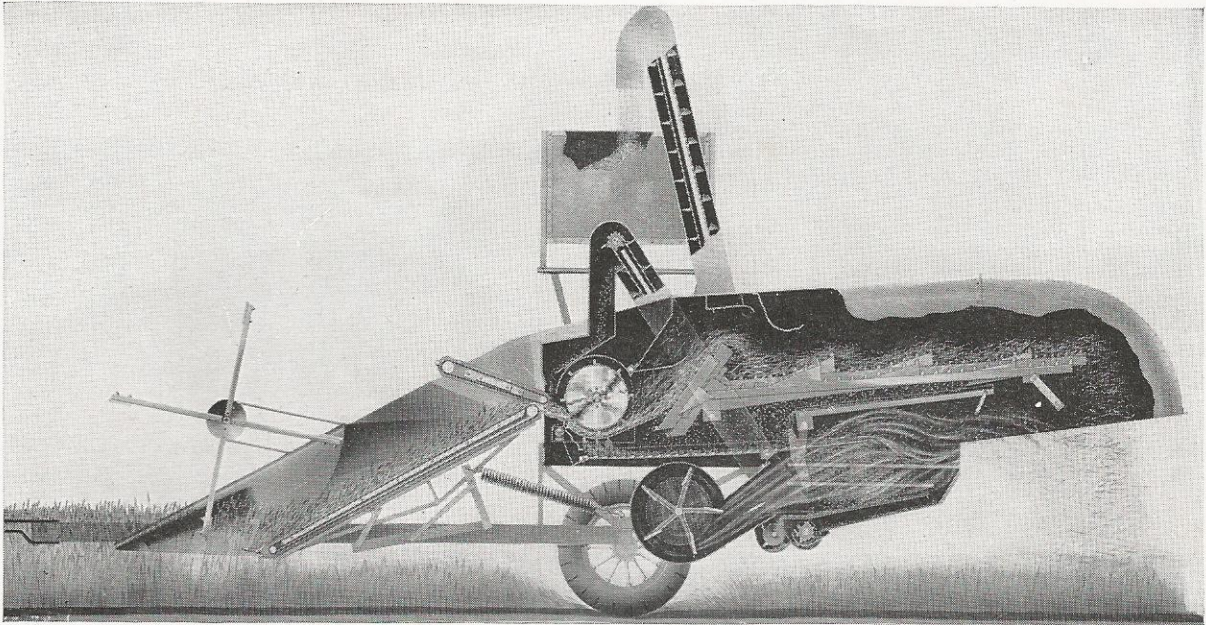


The extra large capacity of the Model WB-6-C, together with the efficient separating action of the long rotary straw-walkers, makes it ideal for either straight or windrow combining.

Combines, of necessity, require many moving parts. That's why the simplicity of design and the rugged construction of the Wood Bros. Combine is so important. It means better operation, less danger of breakdown—greater assurance that the combine will be ready to operate the day the farmer wants it.



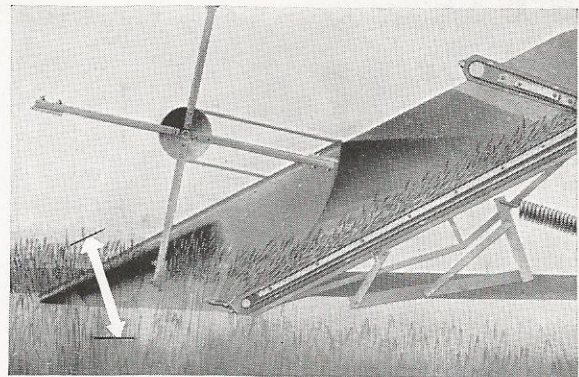
# WOOD BROS. COMBINE



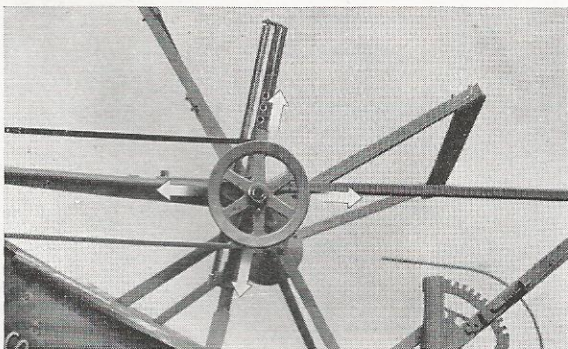
## THESE FEATURES EXPLAIN THE BETTER PERFORMANCE OF THE WOOD BROS. WB-6-C COMBINE

• Every feature of a combine is important. For inefficiency of any one step in the combining operation could mean a loss of grain or stoppage through choking up of straw—all that would prevent getting in the grain at the right time. The Wood Brothers Combine is designed for positive, constant action from the cutter bar to the grain bin.

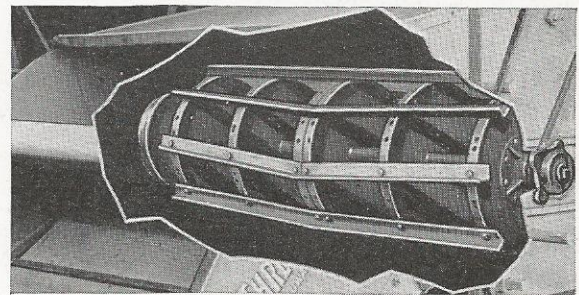
**4-Way Adjustable Reel . . .** Reel is ground-wheel driven to insure proper relation to cutting speeds. May be set forward or backward by simple adjustment. Height can be regulated from the tractor.



for grain of varying heights—or to pick up patches of down grain.

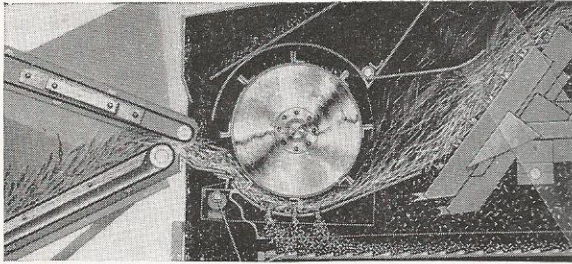


**Header Lift . . .** Header may be set at any height between 1½" and 29" from the ground. Can be changed instantly from the tractor seat

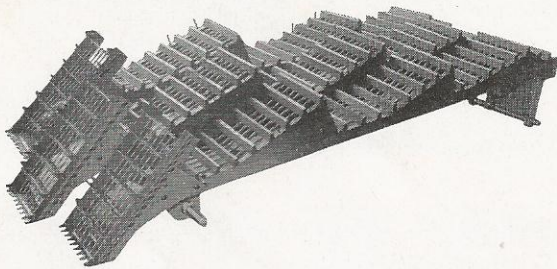


**Herringbone Cylinder . . .** Full width 47". Requires less power. Reduces vibrations and end-thrust on bearings. Hits grain heads with glancing blow that reduces cracking and provides better separation. Rubber-covered bars are easier on grain and don't chop up green weeds.

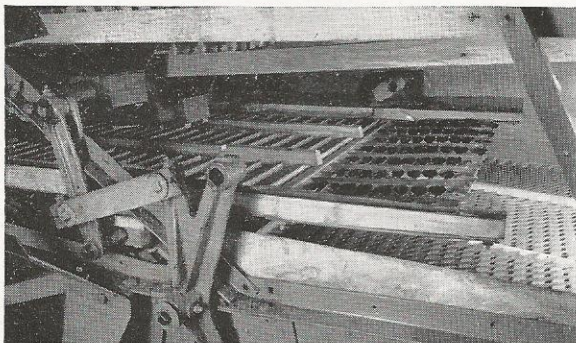
# WOOD BROS. COMBINE



**Quick, Simple Concave Adjustment . . .** Shelling plates and concave are quickly and easily adjusted to cylinder with simple cam-action control. No bolts—no shims. Assures accurate alignment.

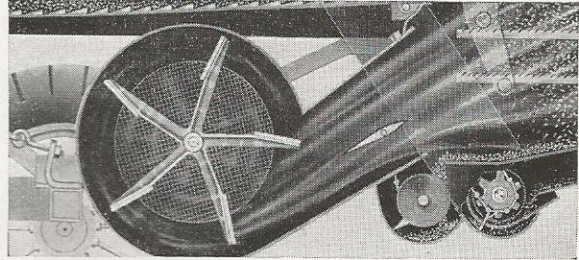


**Rotary Straw-Walkers . . .** Rotary grates retard straw as it leaves cylinder and deflect grain to the grain pan. Rotary action at front of rack clears straw from cylinder, and swinging action at rear slows it down for greater separation by sifting motion. Rotary straw-walkers toss straw up and down, from side to side, and forward and backward. Prevent bunching of straw—even on hillsides.

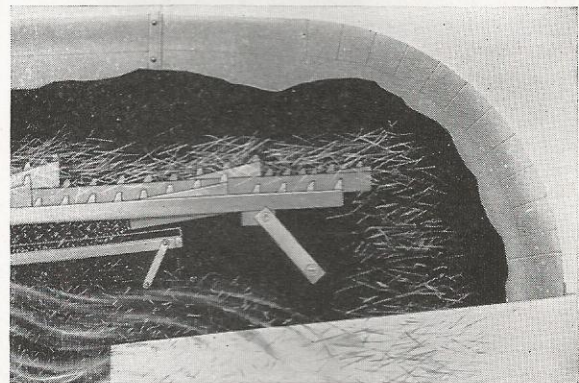


**“No-Choke” Chaffer . . . “No-Choke”** Chaffer on reciprocating grain pan prevents grain and chaff from bunching up on cleaning shoe. Provides even distribution on shoe. Results in better cleaning of grain or seed.

**Grain Pan.** “No-choke” extension feeds evenly to the chaffer and keeps the air pressure equalized. It prevents grain pile-up.



**Large Volume, Low Pressure Fan . . .** Variable speed, low velocity large volume fan maintains pressure which “floats” chaff out of machine, but allows cleaned grain to drop through shoe.



**Straw Discharge . . . 36”** opening holds straw together for full windrow. Easier to pick up. Straw spreader may be attached, which scatters straw evenly to provide better plowing under.



**Side-Tilting Grain Tank . . .** Gravity type. Grain tank is easy and quick to unload. No driven parts to wear out or to be replaced.



# WOOD BROS. COMBINE

## SPECIFICATIONS

Width of cut—72".  
Distance between divider points—72".  
Length of cutter bar—66".  
Range of cutting—from 1½" to 29" above the ground, adjustment made by setting of lever within easy reach of driver's seat.  
Reel—ground driven, adjustable from driver's seat. 4 or 6 bats.  
Sickle directly in front of cylinder.  
Conveyor—48" canvas.  
Cylinder—rubber bar-type herringbone.  
Diameter of cylinder—17".  
Width of cylinder—47".  
Speed range of cylinder—375 to 1450 R. P. M., controlled by variable-pitch V-belt sheaves.  
Length of separator surface—97".  
Separating action—with three rotary-type straw-walkers.  
Width of chaffer sieve—35".  
Length of chaffer sieve—39".  
Length of cleaning sieve same length as chaffer sieve.

Fan—19" Dia., low velocity.  
Power—either power take-off through steel cut and hardened bevel gears running in oil, or through auxiliary motor. Optional auxiliary motor—Wisconsin, 4-cylinder, 2000 R. P. M. Power transmission through 4 V-belts.  
Bearings—  
Cylinder—Ball  
Fan—Oilite  
Main Wheels—Bronze bearings.  
Lubrication—High-pressure fittings throughout the combine  
Wheels—2—rubber tired.  
Tire size, tank side—6.50 x 16—8 ply.  
Tire size, grain side—6.50 x 16—6 ply.  
Frame—heavy channel and tubular steel.  
Length with tractor hitch—20'8".  
Width—Cutting—9'8".  
Transport—8'0".  
Height over elevator—11'0".  
Shipping weight with PTO—2700 lbs.

*Specifications subject to change without notice*

## ADDITIONAL INFORMATION

**Header . . .** Light and sturdy with a fast cutting sickle and scoop type header gathers 6 ft. of grain. Canvases are used to carry the straw and grain and feed it evenly to the cylinder. Reel is ground driven to insure correct presentation of the grain to the sickle at all speeds.

**Cylinder . . .** Rubber bar-type herring bone cylinder. Light in power consumption because of its length. Threshes all types of grains and seeds. Particularly adapted to harvesting soy beans.

**Shelling Plate and Concaves . . .** Quickly adjustable to meet varying crops and field conditions. Less than a minute is required for adjustment. Made possible because the shelling plate and concaves are synchronized and actuated together by one adjusting bar employing two eccentrics.

**Separating Action . . .** Light running, long life, vibration free, rotary straw walkers are used because of their ability to separate more grain in less space. Straw and grain are deflected inwardly as they leave the cylinders and are presented to the rotary grates (a part of the rotary

straw walkers) where the major part of separating the grain from the straw begins. Plenty of deck room and length for efficient handling of heavy straw and wind rows.

**Grain Pan and Cleaning Shoe . . .** More than ample capacity to meet the most difficult separating conditions. One unit counterbalances the other to insure long life and vibration free operations. The grain pan is equipped with a no-choke chaffer which insures a maximum of efficiency for the cleaning shoe. Ample air is provided for all conditions by a large volume, low velocity fan.

**Safety . . .** Shields are provided in accordance with the National Safety Program.

**Other Important Features . . .** The Wood Bros. Combine is equipped with an over-ride clutch. This saves wear and tear on the tractor and combine when the tractor is stopped suddenly. All power in the Wood Bros. WB-6-C Combine is delivered by 6-V belts. Shields are provided for safety—in accordance with the National Safety Program.



## WOOD BROS. CORN PICKER



• A Wood Bros. Corn Picker does better work because it is designed, built and proved by corn belt people who know corn.

**Saves Time . . .** One man with a team can expect to handpick only about two acres a day. But with this picker he can pick and husk eight acres a day. One man, working alone, can pick 40 acres of corn in five days!

**Saves Labor . . .** Since one mechanical picker will do the work of 3 to 5 men, there's practically no labor problem. There's no scurrying around for help—no missing good days because men aren't available.

**Saves Money . . .** Labor savings amount to as much as \$1.40 an acre. And of course, corn saved by getting it in on time is money saved, too.

**Gets More Corn in the Crib . . .** Gets all the ears—even the nubbins that workers paid on a bushel basis like to pass up. There's less shelling. And the mechanical picker puts it all in the wagon—doesn't miss its aim.

**Picks at the Right Time . . .** When the corn is right—and the weather is right—you pick your corn. No days lost looking for help.

**Increases Income . . .** Modern equipment permits a farmer to plant more corn than he can usually handpick during the short corn harvesting period. When he has a mechanical picker he can plant more corn with assurance that he will be able to get it all in the crib.

**Does Away with Drudgery . . .** Any farmer will welcome *sitting and driving* instead of *picking and tossing* . . . and that's what a Wood Bros. Corn Picker will bring him.



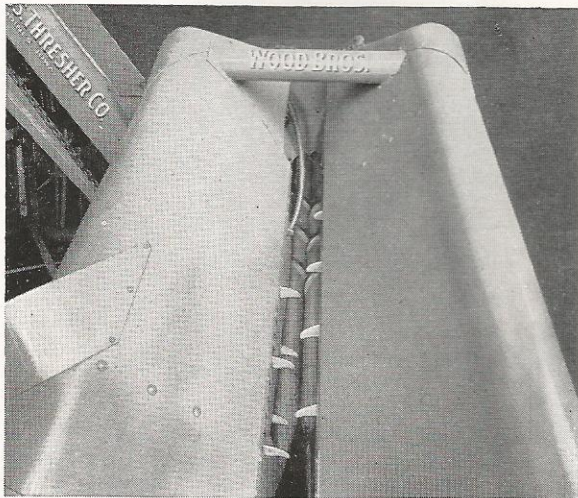
# WOOD BROS. CORN PICKER

## WHY THE WOOD BROS. CORN PICKER PUTS MORE CORN—CLEANER CORN—IN THE CRIB

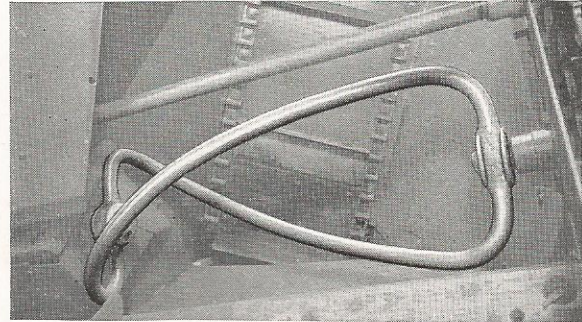
• A corn picker is bought as one unit—but the machine is really a combination of gathering, picking, elevating, husking and delivery operations. And it is important that *every one* of them be done correctly and efficiently. Look at these features and you'll see why this corn picker is a favorite with hybrid seed growers—men who insist on gentle handling of their valuable crop.



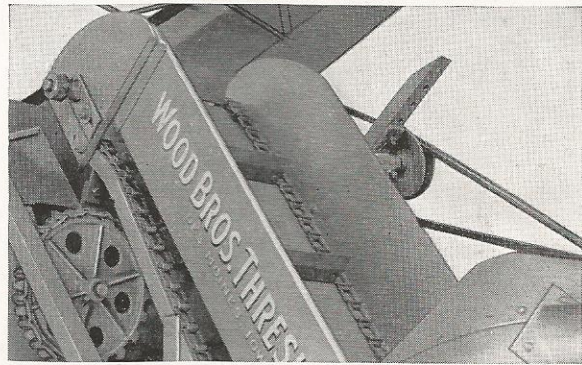
**Floating Gathering Points . . .** The wide-mouthed gathering points are floating type for picking up down stalks. Have simple height adjustment. Three gathering chains have adjustable speeds to suit field conditions. Position of chains gives better support to stalks.



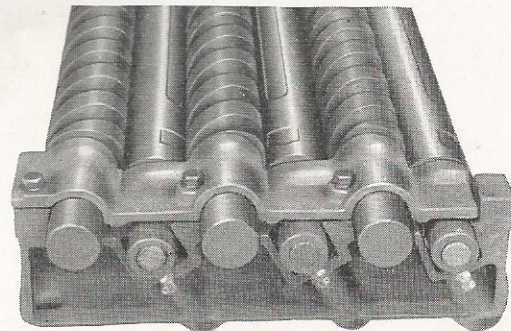
**Spiral Rolls . . .** Carry the corn up through the throat to the snapping bar. They are "gentle" with the corn—no bite—no grab—no tear. They are arranged to *direct* the ears to the rotary snapping bar and into the elevator hopper.



**Rotary Snapping Bar . . .** This exclusive Wood Bros. feature snaps corn from stock, with same motion as in hand picking. Misses no ears—even gets the nubbins. Cuts down butt shelling, and helps to clear away trash. Prevents clogging—reduces lost time.



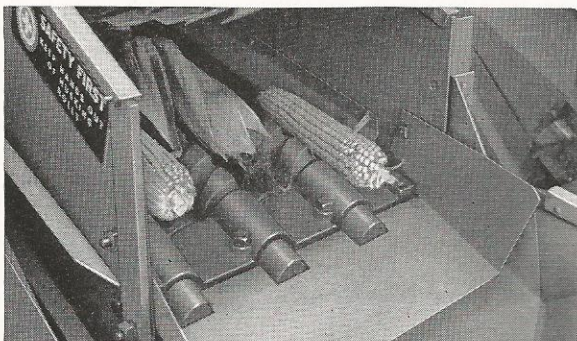
**Large Capacity Elevator . . .** Roomy—14" wide—to handle heavy yields and large hybrid ears, without clogging. Delivers corn in steady stream to husking bed.



**Rubber Husking Rolls . . .** Three long spiral rubber rolls, working against three slotted metal rolls, give cleaner husking than you get by hand, with little shelling—exclusive with Wood Bros.



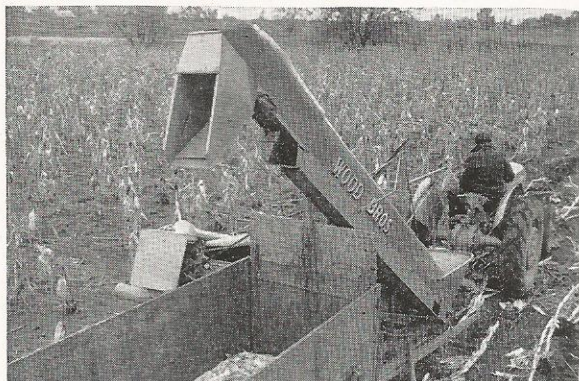
# WOOD BROS. CORN PICKER



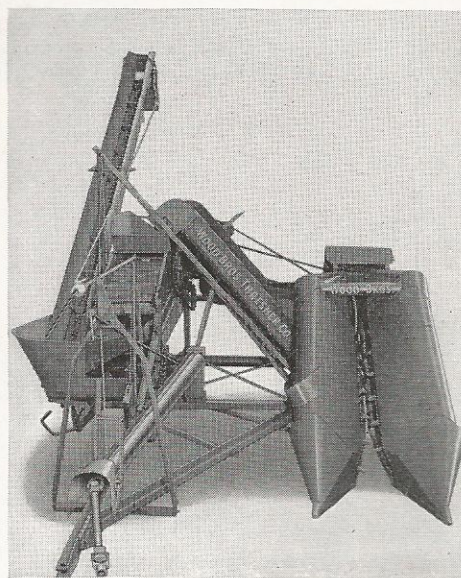
**Rubber Roll Husking Unit . . .** Large capacity—spiraled rubber rolls working against slotted metal rolls—adjustable feed apron moves ears over husking rolls—husks and silk are pulled off clean with positive but gentle husking action. No pegs to bite into and scar the corn. Rolls 40" long—on floating bearings—simple adjustment.



**Straight-Pull Wagon Hitch . . .** Wagon pulled directly behind the picker, with no side sway or side draft. Takes less power to operate. Saves up to an hour a day in hitching time, alone.



**Rear Delivery Elevator with Adjustable Hood . . .** This elevator keeps the corn moving in a straight line to the wagon. It permits picking closer to the fence and row ends. Ample capacity to handle heaviest crops. The adjustable hood can be controlled from the tractor seat, making it easy to distribute corn and balance the load. Reduces loss of ears from the wagon.



**Other Important Features . . .** All the advantages of the Wood Bros. Corn Picker cannot be shown here. Other features important to every farmer are: the "Corn Miser" that catches the small amount of shelled corn that may result from unusually dry corn; the safety clutches on snapping rolls, husking rolls and elevators; the simplicity of adjustment throughout the picker.



# WOOD BROS. CORN PICKER

## SPECIFICATIONS

Gathering points—hinged, below gathering chains.  
Gathering chains—3, of No. 62H steel.  
Clearance between gathering chains and ground— $2\frac{1}{2}$ ".  
Gathering chains—17" ahead of snap rolls.  
Length of snapping rolls—51".  
Snapping rolls adjustable laterally.  
Snapping unit height adjustable from the driver's seat.  
Width of snapped corn elevator— $14\frac{1}{2}$ ".  
Number of husking rolls—6.  
Diameter of husking rolls— $2\frac{7}{16}$ ".  
Length of husking rolls—40".  
Type of husking rolls—rubber and steel.

Equipped with shelled corn saver.  
Depth of ear corn elevator—7".  
Width of ear corn elevator—10".  
Offset of picker hitch point from inside row—60".  
Distance inside row to wagon center line—7'.  
Width overall—for transporting—8'2".  
Elevator removed for transporting.  
Wheels—rubber tired—R. H. 6.50 x 16—6 ply:  
L. H. 5.00 x 16—4 ply.  
Tread—center to center of wheels—63".  
Approximate shipping weight—2,000 lbs.  
Lubrication. All bearings pressure lubricated.

## ADDITIONAL INFORMATION

**Gathering** . . . Three gathering chains properly spaced to support the corn, are placed far enough ahead and close enough to the ground to pick up down corn and direct it to the snapping rolls.

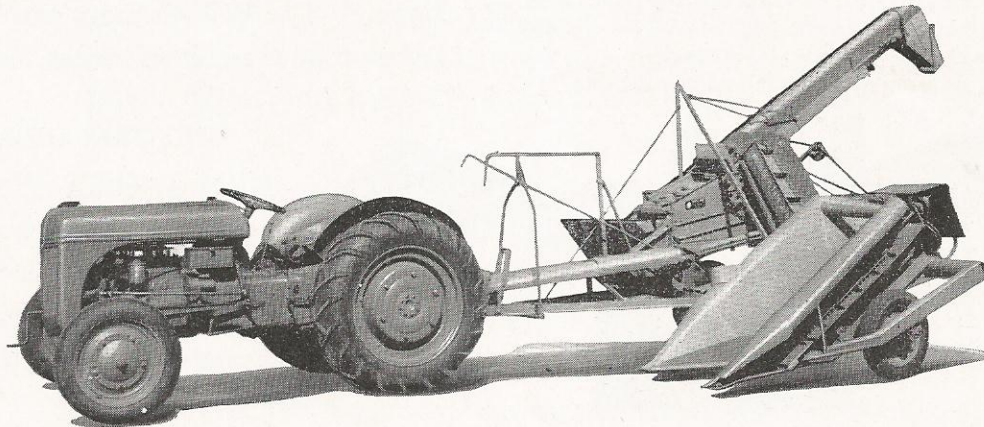
**Snapping** . . . Snapping rolls are designed to reduce shelling to a minimum and present the ears to the rotary snapping bar. The combined action of these two units, the rolls to draw the stalks down to the ears and hold the latter for the rotary bar to snap the ear from the stalk simulates the action of hand picking.

**Husking** . . . Embodies principals not to be found in any other corn picker. Spiral rubber rolls yield to the action of the grooved steel rolls. No pegs to bite into and scar the corn. Tension springs hold the steel rolls firmly against the rubber rolls. The pressure of the hold-down apron and the squeezing action created by the groove in the steel roll combine to result in a husking action that is equally effective in either green, normal, or dry crop conditions.

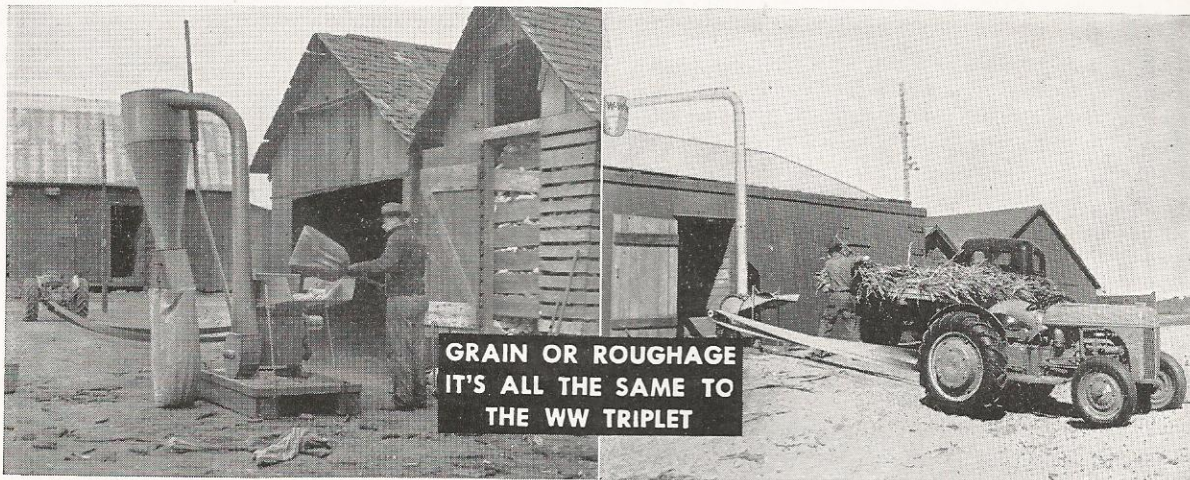
**Wagon Elevator** . . . Located to deliver the corn into the wagon, which trails by means of a special hitch, directly behind the center of the tractor. The draft of the wagon as hitched offsets the side draft of the corn picker. The elevator is equipped with a deflector which controls the flow of corn to the wagon, insuring a full, even load. A clutch easily accessible from the tractor seat is provided to disengage the power from the wagon elevator when turing corners.

**Construction** . . . All welded steel tubular construction is sturdy, durable, yet light. Mounted on two pneumatic tired wheels equipped with bronze bearings. The wheels are adjustable to the frame so that the height of the picker can be raised or lowered to meet the crop conditions.

**Safety** . . . Drive shaft and drives are properly shielded. V-Belt drive and slip clutches protect against breakage.



# FEED GRINDER



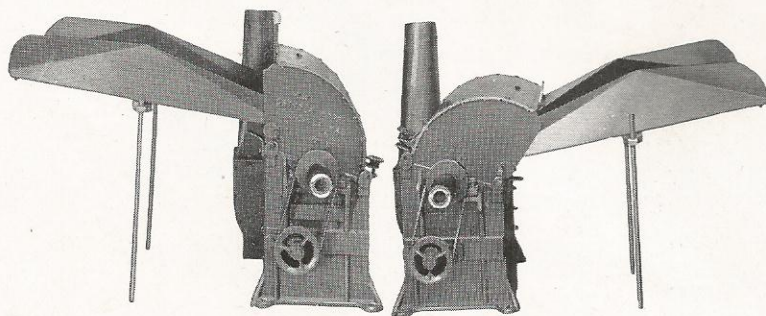
## THE WW TRIPLET GRINDER IS AN ALL PURPOSE GRINDER

### WW-2-G

The WW Triplet Grinder will grind and mix practically any feed ensilage, roughage, ear corn or grain.

This all-purpose feature is made possible by a design which permits the hood and feed table to be placed on either side of the cylinder. On the dry grinding side feed makes contact with the cylinder on its upward stroke. This shatters the grain, suspends it in the cylinder area to be hit again and again until fine enough to pass

To change from Grain to Ensilage grinding simply reverse hood and feed table.



through the screen. On the other hand, to chop ensilage or wet roughage the raw material is fed from the opposite side of the cylinder to make contact on its downward motion, thereby cutting the material.

### LOW POWER REQUIREMENTS

The hammers are staggered and cannot follow one another in the same path. This evens out the horsepower requirements and also prevents dragging and clogging. The WW Grinder can be operated on a power unit as low as  $7\frac{1}{2}$  HP.

### UNIFORM GRIND

High cylinder speed, the distance feed must travel and the wide feeding table together assure a uniform grind and thorough mixing with every WW Grinder run.



# FEED GRINDER

## CAPACITY

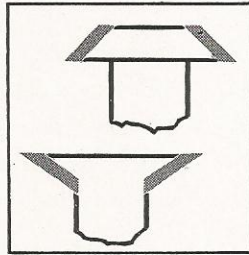
Material	Fineness of Grinding	Size of Screen	Capacity Bu. per Hour
Ear corn	Coarse	1"	84
Ear corn	Medium	7/16"	54
Shelled corn	Coarse	No	170
Shelled corn	Medium coarse	1"	115
Shelled corn	Medium	1/2"	119
Oats	Medium	3/16"	46
Oats	Medium fine	1/8"	37
Barley	Coarse	1/4"	72
Barley	Medium coarse	3/16"	37
Barley	Medium	1/8"	24
Wheat	Medium	3/16"	53
Wheat	Medium fine	1/8"	54

The capacities shown in the above chart are approximate only. They are conservative and may be exceeded under favorable conditions.

## SPECIFICATIONS

### Hammers

WW Grinder hammers have a Stellite face. This alloy makes the hammers self-sharpening. As the softer metal shown in grey in the diagram wears away it leaves a sharp edge of Stellite.

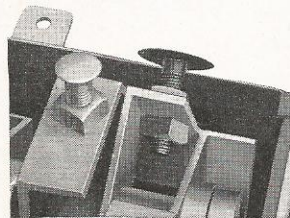


### Knives

Like the hammers the knives are Stellite surfaced. They can be turned for a new cutting edge.

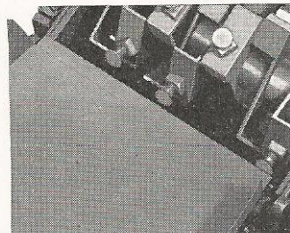
### Cutter Bar

This bar is the shearing plate when mill is operating in ensilage position. The bar is easily replaceable.



### Feed Table

The reversible feed table is large enough to permit mixing feeds while grinding. It is 41" long x 18" wide at the mill. At the outer lip it is 21" wide x 6" deep.



### Feed Opening

Feed opening is 9" high by 18" wide.

### Cylinder

Dynamically balanced, the cylinder rotates at 2400 to 3200 RPM with a minimum of vibration. It is as wide as the feed opening which is 18".

### Blower

Four-vane, propeller type, dynamically balanced—this 12" fan runs at 3000 to 3600 RPM.

### Screens

An exclusive feature of the WW Grinder is the removable screen rollers. One or all rollers can be removed to accommodate ear corn, green and semi-cured feeds. One perforated screen is furnished as standard equipment. Additional sizes may be selected from the following: 1/8", 5/32", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 3/4", 1", 1 1/4", 1 1/2", 2".

### Feed Collector and Pipe

A feed collector and 6' pipe are furnished as standard equipment for sacking and raising to wagon height.

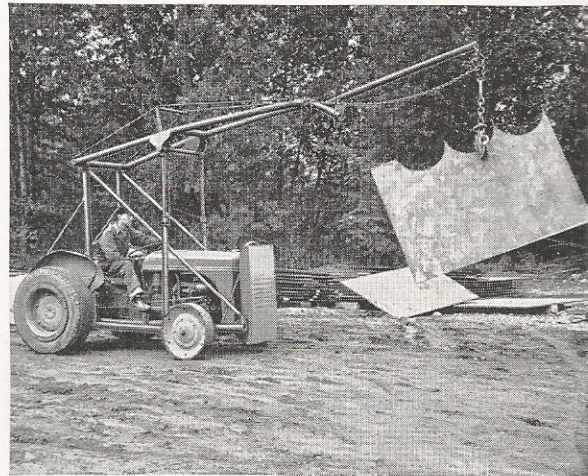
### Dimensions-Weight

Over-all height 40", width 40" and length with table 57". Shipping weight 571 pounds.

## LOADER AND CRANE



LOADER



CRANE

### With the **BALDWIN HYDRAULIC LOADER** and **CRANE** *One Man with FINGER TIP CONTROL Does the Work*

Wherever heavy materials are to be handled, the Baldwin Hydraulic Loader does the job with economy of mechanical power, and completely without manual effort.

The Loader is quickly and easily attached to the Ford Tractor with Ferguson System, without changing any part of the tractor itself.

It is operated by the tractor's hydraulic pump, under constant finger tip control, and requires no cables, sheaves, gears, clutches or brakes.

The Loader is ruggedly built with tubular members that withstand shock and twisting action. There is nothing to get out of order, or to require frequent adjustment.

On many jobs its capacity is two loads per minute, and the load is as portable and movable as the tractor itself.

The position of the bucket for loading and cutting, is controlled by the operator from the

tractor seat. The bucket loads or unloads at any level. The filled bucket can be transported by the tractor to any location the tractor can reach, and then dumped, by trip release from any position.

The vertical action is completely hydraulic. No manual or physical effort is required to handle the heaviest materials.

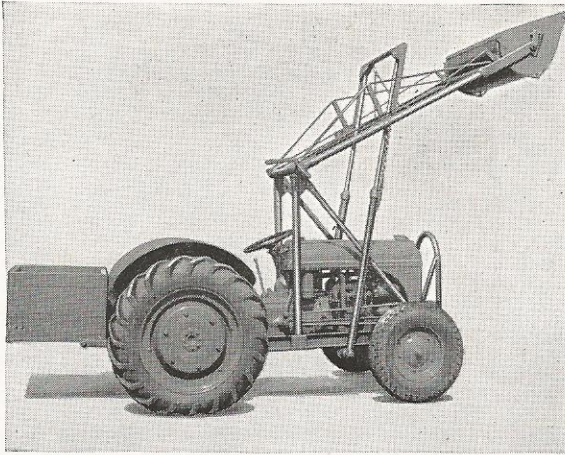
#### **A FEW OF THE MANY JOBS THE BALDWIN LOADER WILL DO**

**CRANE:** Will lift, carry, unload or stack large and heavy units such as metal assemblies, lumber, boxes, barrels.

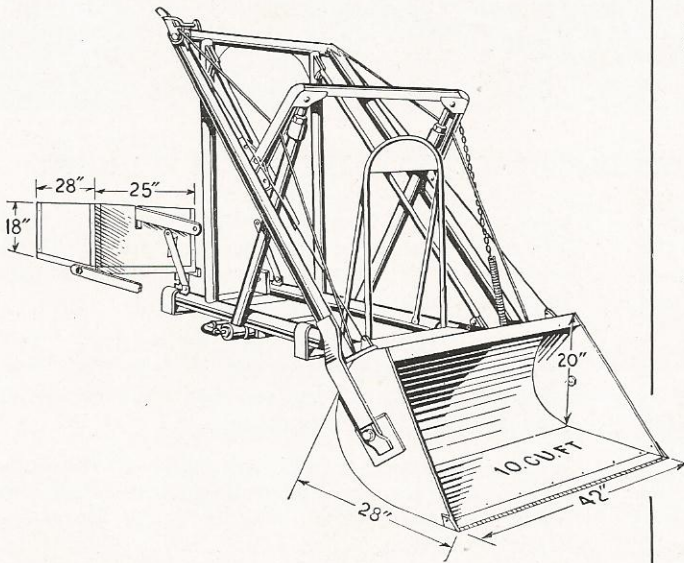
**LOADER:** Handle bulk materials of all kinds; coal, gravel, sand, and logs. It will shovel, transport, load or dump without manual effort.



# LOADER AND CRANE



Bucket shown in maximum elevation; height 8½ feet. For the Crane maximum height, 12 feet.



## SPECIFICATIONS

**CONSTRUCTION:** Sub-frame is of bolted channel construction and may be used with either Crane or Loader. The upper frames of the Crane and Loader are welded tubular construction. The weight box is wood, reinforced with strap iron.

**CAPACITY:** The ten cubic foot capacity bucket has a 42-inch blade, is 20 inches deep and measures 28 inches from back face to lip. Under average conditions it will load and dump two loads per minute. Maximum lifting height for the bucket is 8½ feet; for the Crane 12 feet. The Crane's rated capacity is 1500 pounds.

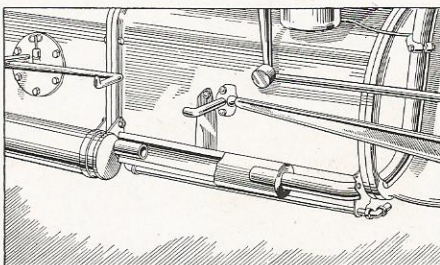
**CONTROL:** The hydraulic finger tip lever raises and lowers the load. The bucket is hand tripped and automatically resets itself.

**DIMENSIONS:** When the bucket is in a lowered position, the over-all length—from the bucket lip to the back of the weight box—is 13 feet; the highest point on the unit is 6 feet when bucket is in lowered position. When the Crane is in its lowest position the over-all length is 13½ feet and the height, 7½ feet.

**WEIGHT:** Shipping weight for Loader, approximately 970 pounds. Shipping weight for Crane, 770 pounds. Each of the units is shipped knocked down in three easy-to-handle bundles.

## CODE NUMBERS

Baldwin Loader . . . . .	BL-10
Baldwin Crane . . . . .	BC-10
Baldwin Crane Attachment for Loader . . . . .	BCA-5

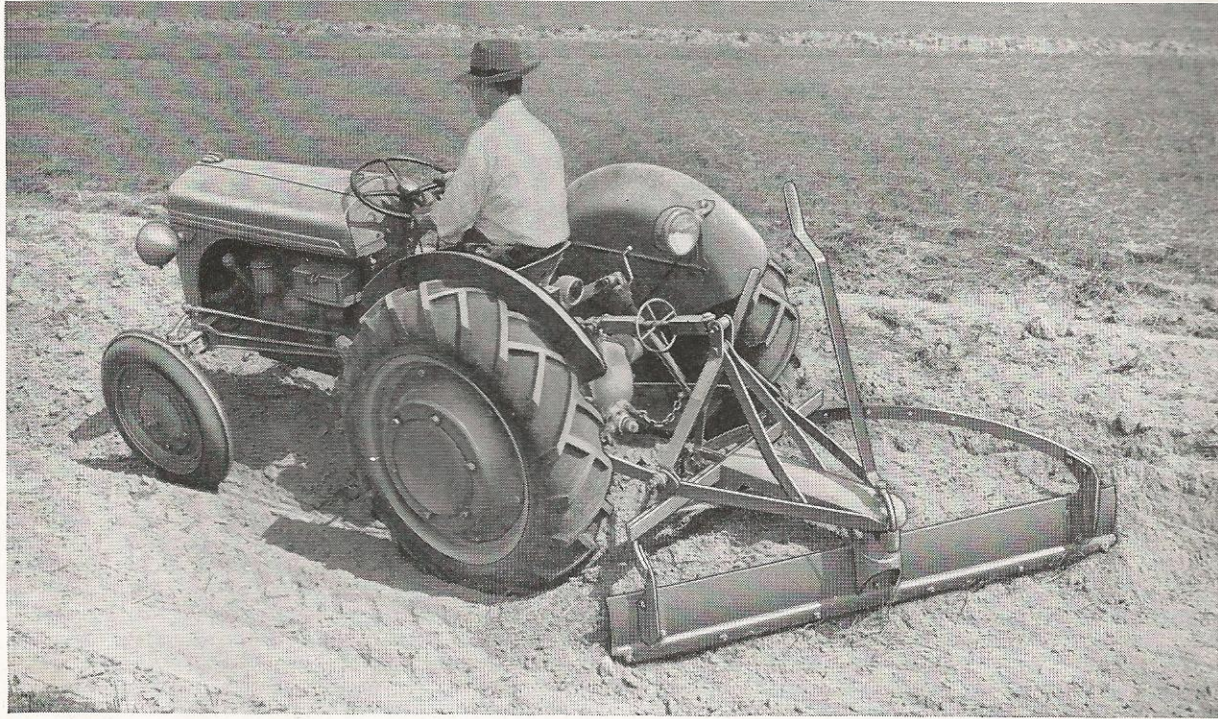


## OIL HEATER SPEEDS UP OPERATION IN COLD WEATHER

Each tractor on which a Baldwin Hydraulic Loader is mounted should be equipped with a Baldwin Oil Heater during the cold season. This rugged, efficient heater employs heat from the tractor exhaust pipe. It is easy to attach and speeds up the loading job by providing a freer flow of oil to the raising rams.



# FERGUSON BLADE TERRACER



## THIS ONE MAN TERRACER (REVERSIBLE BLADE) MOVES DIRT IN A HURRY

• Designed to give the farmer an efficient low-cost machine for building his own terraces, the Ferguson Blade Terracer has also proved itself as an all-round dirt mover on any farm where time counts.

Tractor power now becomes practical for those many dirt moving jobs ordinarily done by hand as well as for terracing to control soil erosion and water runoff.

Digging and cleaning ditches, maintaining driveways, roads or country lanes, clearing snow, cleaning dirt from fence rows, building firebreaks

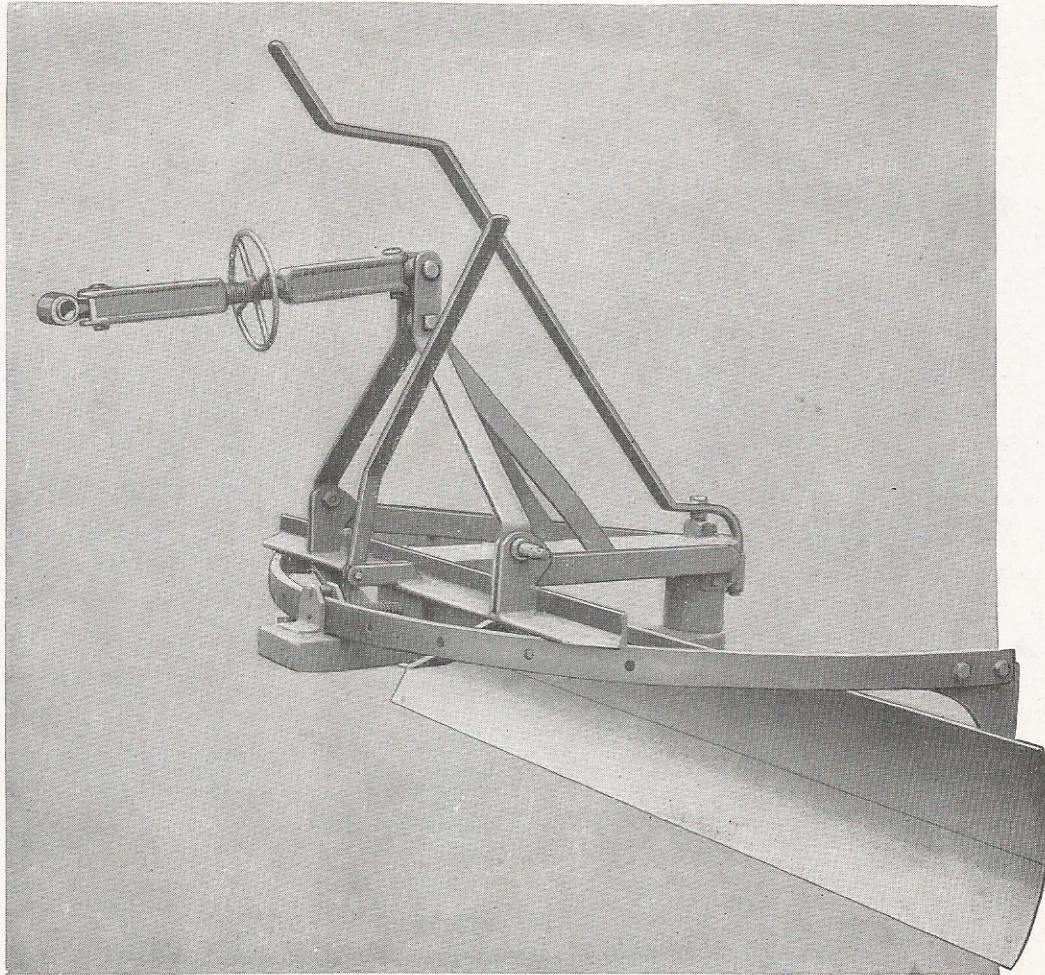
to control grass fires, removing debris from feed lots and cleaning or grading barn yards—these are some of the extra jobs easily done with this Blade Terracer.

And no time is lost “getting ready”. The terracer is quickly attached in less than five minutes with the Ferguson System’s exclusive 3-point implement mounting.

Once attached, a finger-tip touch to the control of the Ferguson hydraulic system raises the blade for transport or sets its depth for automatic operation.



# FERGUSON BLADE TERRACER



## SPECIFICATIONS

### MODEL B-FO-20

#### Construction:

Entire implement is made of steel. Frame members are bolted and welded together. The blade is made of long wearing alloy steel. Removing five bolts is all that is necessary for blade replacement.

#### Control:

**Depth of operation**—blade is raised or lowered by finger tip control.

**Angle**—blade can be set at any one of nine positions and changed easily by manual lever. Maximum angle  $45^{\circ}$  in either direction.

**Tilt**—blade can be tilted from level to  $12\frac{1}{2}^{\circ}$ .

**Pitch**—change of pitch is obtained by precision control mechanism on top link. This governs penetration.

#### Dimensions:

Over-all length of blade—72"

Over-all width of blade—12"

Width of removable cutting blade—6"

Over-all length mounted on tractor—11' 9"

Blade clearance at transport position—14"

#### Lubrication:

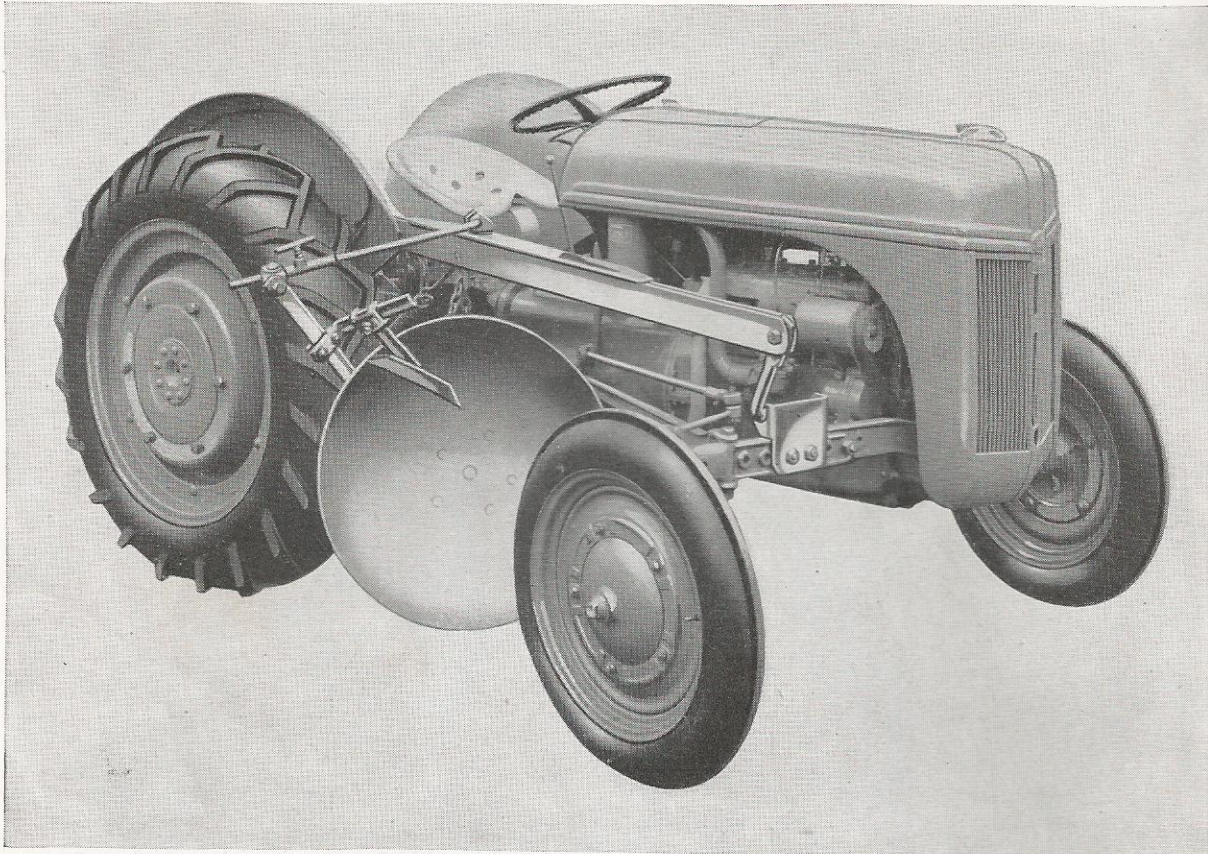
One point, standard pressure grease fitting.

#### Weight:

Shipping weight approximately 320 lbs.



# DISC TERRACER



• Advantages of the Ferguson System in making possible more efficient, more easily operated implements are clearly demonstrated in the design, construction and operation of the Ferguson Disc Terracer for the new Ford Tractor.

## EFFICIENT, SIMPLIFIED DESIGN AND CONSTRUCTION

Unit design makes the Ferguson Disc Terracer an integral part of the tractor, eliminating need for massive frame and wheels.

This simplified design and construction contribute both to low cost, and to more efficient work. The terracer is under positive control at all times. Location of the disc between the front and rear tractor wheels gives the operator exact control of both depth and furrow location, even on sharp curves. The terracer cannot be forced sideways by resistance of the soil, as with a pulled implement. Right front tractor wheel can

be set to run in the furrows, or over terrace. Thus the disc terracer can be kept close to the apron of the terrace.

Unit design enables the implement to be turned in the tractor's own length, thus continuing the terraces up close to fences, and simplifying the construction of short or intersecting terraces.

## EASILY ATTACHED

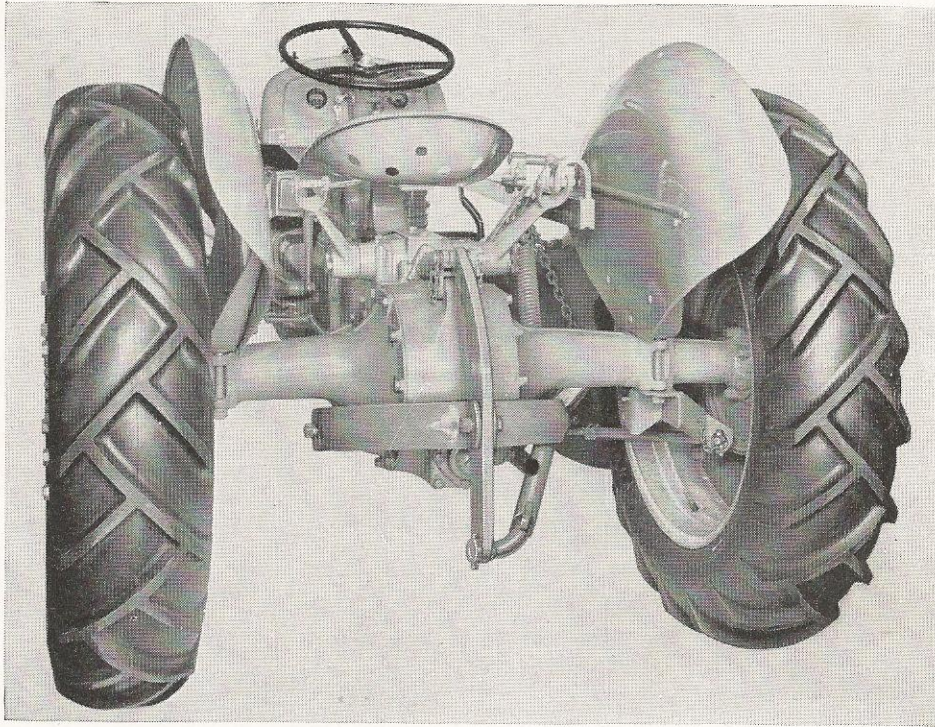
The Ferguson Disc Terracer may be attached to the new Ford Tractor in a few minutes, using the single standard open end wrench supplied with the tractor. It is not necessary to lift heavy weight in attaching the terracer.

## FINGER TIP CONTROL

The disc is raised and lowered, and depth is set or adjusted with the finger tip control lever of the hydraulic system. The disc angle control is easily reached from the tractor seat. Angle may be changed to meet varying conditions.



# DISC TERRACER



Rear view, showing rugged drawbar yoke, and connection to lift arm of the hydraulic system

## SPECIFICATIONS

**Mounting**—Disc located on right-hand side of tractor, forward of rear wheel to give maximum visibility and control. The terracer frame is rigidly mounted to tractor. The draft reactions are controlled by the Ferguson hydraulic system.

**Control**—Depth is set by use of the Ferguson hydraulic system hand control. Disc angle adjustment for various soils and speeds is within easy reach of operator.

**Frame**—High carbon steel is used throughout. Extra rigidity is built into the implement for extreme terracing conditions.

**Disc**—High quality steel, fully polished and heat treated. 28" diameter. Total possible angle adjustment is 12°.

**Disc Bearings**—Long life and efficiency are built into the disc by the use of two heavy Timken roller bearings.

**Lubrication**—Bearings are pressure-lubricated by use of Zerk fitting.



Showing connection to the Ferguson Hydraulic System

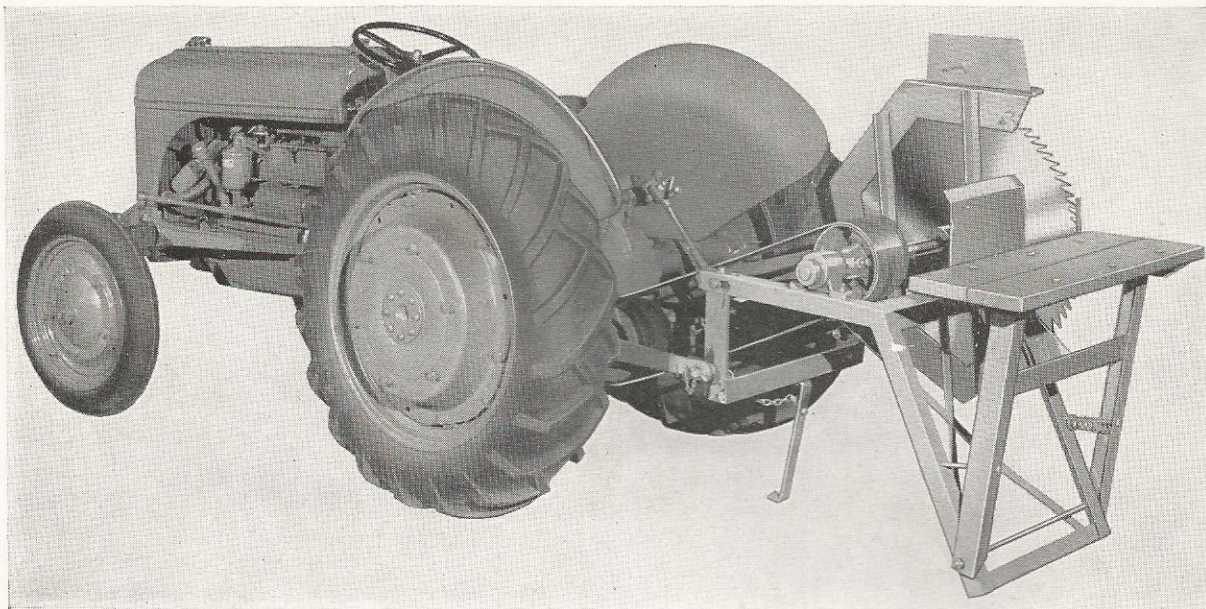
**Operating Depth**—Maximum operating depth in favorable soil conditions —14".

**Capacity**—Under average conditions it is possible to construct one mile of standard terrace in a ten hour day.

## FERGUSON DISC TERRACER

Type No.	Disc Diameter	Approximate Shipping Wt.
A-FO-20	28"	260 lbs.

# CORDWOOD SAW



## GOES TO THE JOB

• Cordwood sawing is made fast and easy by this new tractor-mounted power saw. You take the saw to the job rather than hauling the felled wood to the saw.

## AUTOMATICALLY ADJUSTS ITSELF

At the touch of your finger tips, the exclusive Ferguson hydraulic system lowers the saw to operating position. As soon as the frame touches the ground, it is in complete adjustment—ready to go to work. The belt tightens on the pulleys automatically. The power-lift mountings and the rigid steel lifetime construction of the frame hold the saw in perfect alignment. The tractor provides secure anchorage for the saw frame while in working position.

## EASY TO OPERATE

Actual operation becomes almost effortless as the weight of the log helps move the swing table toward the blade. When the sawed portion drops, the release of pressure on the coil springs makes the return of the counter-balanced swing table to its original position easy.

## SAFE TO OPERATE

When the job is finished and the frame is raised to transport position, the belt automatically loosens on the pulleys and the saw stops. For additional safety, 83% of the blade is covered. Only the portion that enters the wood is exposed.



Rests firmly on the ground in working position, anchored to tractor by three-point mounting.

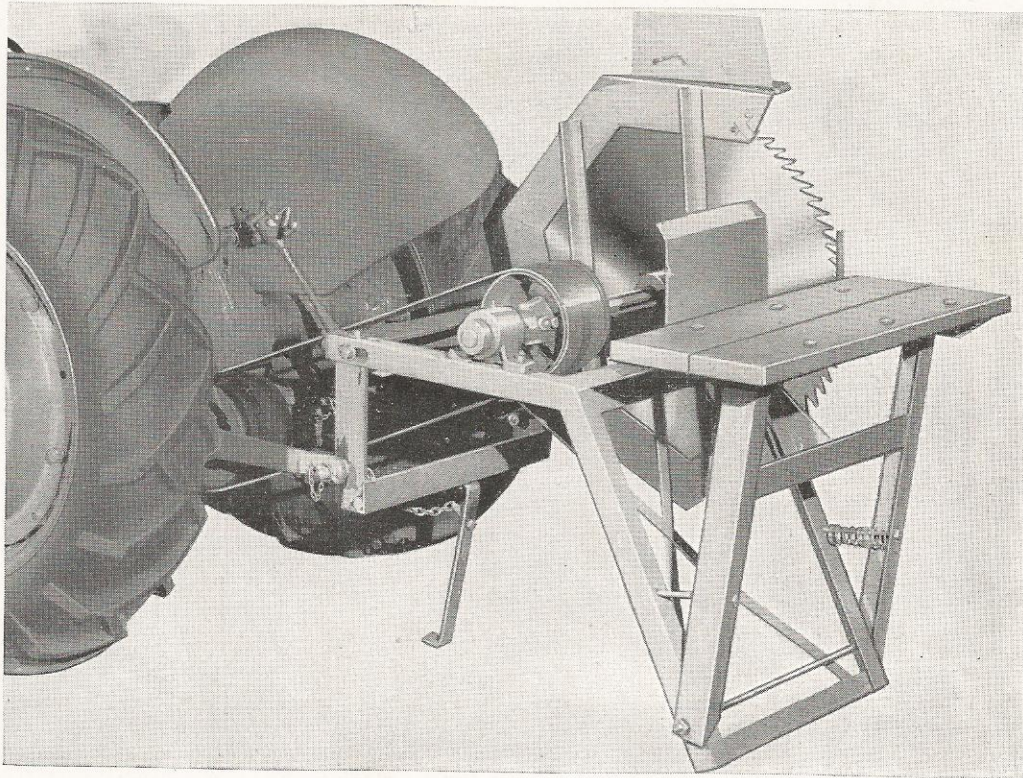


Saw is raised to transport position in one second—ready to move on. Belt automatically loosens on pulleys.



# CORDWOOD SAW

QUICKLY SET UP—AUTOMATICALLY ADJUSTED



## SPECIFICATIONS

**STEEL FRAME**—Welded, trussed, angle steel construction is extremely rigid, eliminating side play or twist which could bind blade. Frame rests on ground in working position. Tractor does not support weight, but provides anchorage.

**TABLE RETURN SPRING**—Proper tension of coil spring makes possible counterbalance action by returning table to position after the cut is made.

**SOLID SKID BASE**—Built of welded angle steel, skid base affords solid ground support for frame.

**AUTO-GRAVITY ANCHORAGE**—Three point connection to tractor, plus resting firmly on ground, provides rigid anchorage in working position. Saw is completely ready to operate when lowered. Belt tightens on pulleys as table lowers. Frame and tractor are automatically lined up—no adjustments to make—just start tractor engine and engage power take-off.

**NO SIDE DRAFT ON PULLEY**—Crowned pulley is located inside mandrel bearings so that force of belt pull is equalized resulting in no side draft on mandrel or frame.

**MANDREL**—Cold rolled steel mandrel runs true under high speeds. Saw blade fastens securely to mandrel by heavy reverse thread locking nut.

**ROLLER BEARINGS**—In dust proof housing, heavy roller bearings run with less friction, less vibration, and consequently require less power.

**PRESSURE LUBRICANT FITTINGS**—For easy protected lubrication, pressure fittings are installed on bearing houses.

**BELT ADJUSTMENTS**—Take-up bolts, one on either side of frame, make belt adjustment easy. Belt wear can be quickly taken up.

**POWER LIFT**—Saw is raised or lowered by tractor finger-tip control.

**BLADE GUARD**—83% of saw blade circumference is encircled by steel guard in working position. When not in use guard wing is lowered, covering blade to tabletop.

**PULLEY GUARD**—For operator's protection, steel pulley guard is fastened to table in back of pulley.

## DIMENSIONS

Length, over all.....	44"
Width, over all.....	40"
Height, over all.....	48"
Height of table.....	32"
Shaft size.....	1 <sup>7</sup> / <sub>16</sub> " Mandrel—1 <sup>3</sup> / <sub>8</sub> " Arbor
Shaft Length.....	32 <sup>1</sup> / <sub>2</sub> "
Pulley Size.....	6" Width—8" Diameter
Belt.....	4 ply—5" Width—7'7" Length
Blade.....	30" Standard Equipment (18" to 32" available)
Saw Speed.....	1200 RPM
Shipping Weight.....	220 lbs.

