

John Deere

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MODEL:

24X42" & 28X50"

Threshers

**OPERATOR'S
MANUAL**



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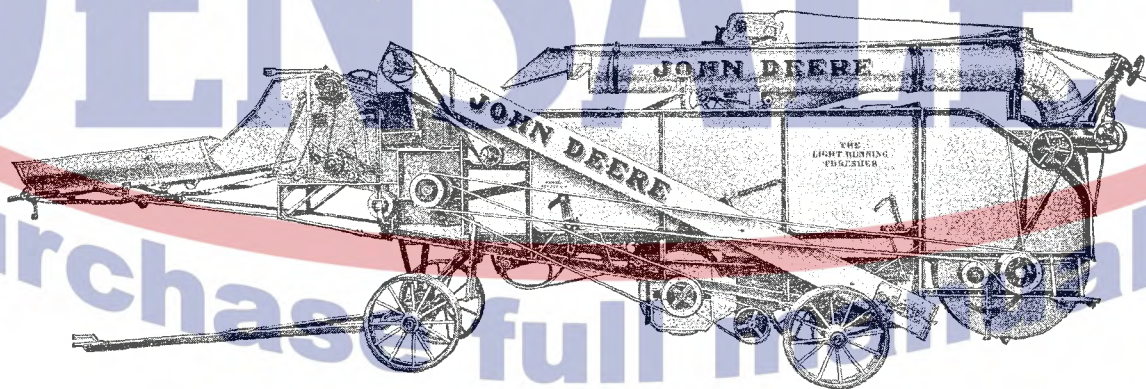
READ AND FOLLOW THESE DIRECTIONS CAREFULLY

INSTRUCTIONS FOR OPERATING JOHN DEERE THRESHERS

(24 x 42" and 28 x 50")

SAVE THIS BOOK

Put it away where you can find it and you will be sure of prompt repair service during the long life of this machine. The parts listed are all for your Model, making it easy for you to get repairs at all times. *This book will save you money and trouble—keep it.*



With List and Illustrations of Repair Parts

JOHN DEERE HARVESTER WORKS

OF DEERE & CO.

EAST MOLINE, ILLINOIS, U. S. A.

Manufacturers of Grain, Corn and Rice Binders, Combines, Corn Pickers, Field Ensilage Harvesters, Threshers, High-Lift Enclosed Gear Mowers, Mower Knife Grinders, Sulky Rakes and Extensive Power Equipment



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CYLINDER (Continued):

Slotted holes in supporting angles for cylinder shaft bearing boxes provide adjustment for taking up end play. No end play should be allowed the cylinder though it must turn freely and **bearings must not bind.**

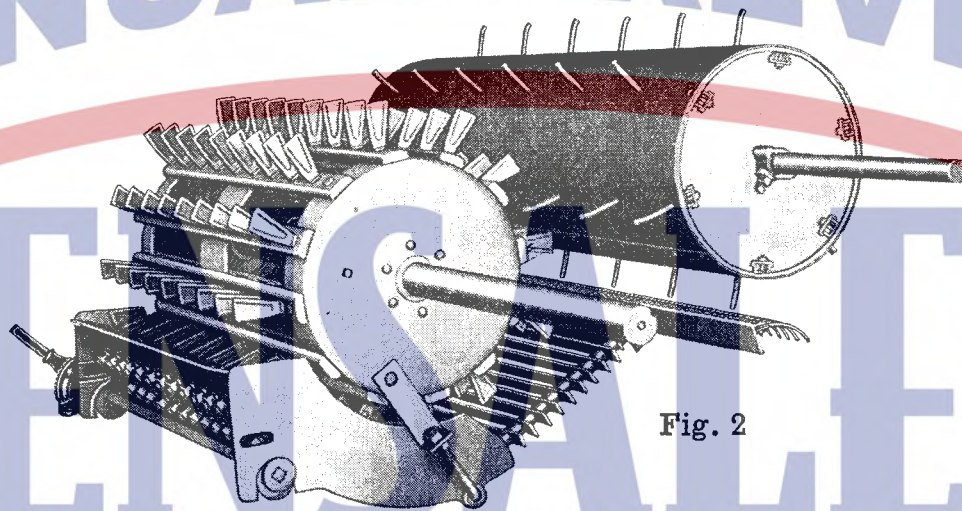


Fig. 2

CONCAVES:

Use only enough concave teeth to thresh clean, see page 13. Damp grain, or varieties that are hard to thresh require more rows of concave teeth, set high, than dry grain or where there is an abundance of light straw. Too many rows of teeth are likely to crack grain and break up the straw, resulting in overloading the shoe.

Concaves are raised or lowered by means of the adjusting lever on right side of the cylinder, see Fig. 2. Be sure to loosen cap screws through cylinder housing holding concave hangers (one side only) before attempting to raise or lower concaves.

Do not set concaves higher than necessary. If raised too high grain will be cracked and the straw will be broken up too much, making the work of separating difficult. If set too low, heads of grain may pass through unthreshed. Do not adjust concaves while machine is operating. After raising or lowering concaves, be sure to tighten nut on lever and cap screws in cylinder housing. Secure lock nuts.

The work of separation and cleaning is easier if the work at the cylinder and concaves is not overdone. For threshing most coarse grains, two or three rows of concave teeth will usually be sufficient, if the proper speed is maintained and especially as long as the teeth are new. It is better to use two rows of concave teeth set fairly high, than to use four rows set low. The more teeth used—the more power required.

Corrugated teeth can be furnished for threshing clover and other grains and seeds that are difficult to thresh. (See page 11.)

CONCAVES (Continued)

To Remove Concaves: Loosen cap screws in cylinder housing and shift concaves back and forth a few times with adjusting lever, to jar out dirt and dust which sometimes wedges them. Remove shield at front of cylinder. Slide concaves out over concave adjusting shaft. If concaves stick in circles, lay bar in concaves, raise concaves then rock cylinder back and forth to work concave loose.

Three concaves completely filled with teeth and two bar grates are furnished with machine.

Ordinarily concaves should be placed in front—grates at rear. In some conditions, when using 4 rows of concave teeth, operator may get better results by placing grate between the filled concaves; when using 2 rows, suction is increased by replacing concaves in the middle position.

Concaves must set so that cylinder teeth are evenly spaced sideways between the teeth in front row on one side and those in the next row on the other. The spacing between the cylinder and concave teeth when properly adjusted, and the teeth straight is $5/32''$ with concaves in the high position. If concave teeth set closer to cylinder teeth on one side than the other, the opening will be too great on one side, permitting heads to pass through unthreshed, and grain will be cracked and the straw will be broken up too much on the other.

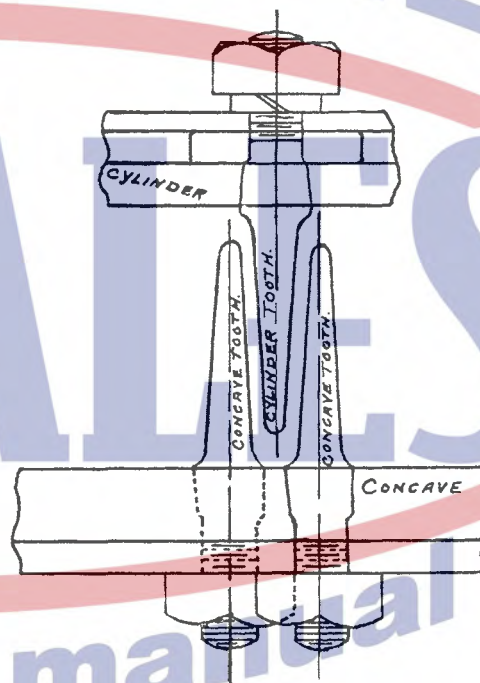


Fig. 3

To obtain proper clearance: Loosen lock nuts and cap screws (front and rear) through cylinder housing toward which concaves must be moved. Take up corresponding cap screws in opposite housing until desired tooth clearance is obtained. Secure lock nuts on both sides. **Turn cylinder at least one complete revolution to make sure teeth have the proper clearance and adjustment.**

Concaves have a special adjustment at the rear, see Fig. 2. Ordinarily, this rear adjustment need never be touched, but in extreme conditions, or in threshing seed crops, it is sometimes necessary to use it if other adjustments do not produce the desired results. **Lower** concaves at rear if straw is light and dry and is being broken up too much and **raise** in conditions of tough straw where grain is not being threshed from heads. It is always important to have the concaves open slightly wider at the rear than at the front. Be sure to tighten lock nuts after this adjustment is made.

STRAW RACK:

Keep rack clean to insure free passage of grain. Rack needs little attention outside of keeping it in proper repair and bearings tight.

Straw Rack, Grain Pan and Shoe Pitmans should be inspected regularly and any play in bearings taken up. Adjustment is made by loosening lock nut, removing shims and turning cap screw **in**. Bearings must not bind. Be sure to set lock nut after making adjustment. Shaft collars at sides of pitmans should be set reasonably close to prevent side play. Keep set screws and lock nuts tight.

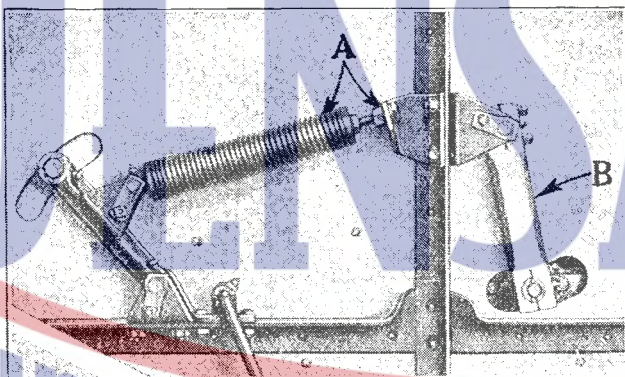


Fig. 5

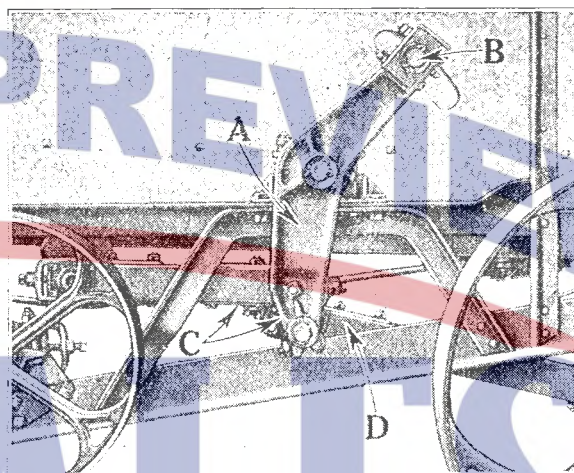


Fig. 4

Straw Rack Counterbalance Springs should have 1/2 to 5/8" stretch when adjusting bolts are hooked over brackets at "A", Fig. 5, with rack in the extreme rear position. **At NO time should coils of springs come tightly together when machine is in operation.**

SHOE AND WIND:

Use as much wind as possible without blowing over grain. It should be sufficient to float the chaff. The volume of wind is adjusted by opening or closing the blinds at the ends of the fan housing. Tighten wing nuts to hold the adjustment. Adjustment affects sieve on side **opposite** which adjustment is made. Because of side winds, it is not always advisable to make the same amount of adjustment on both sides.

The wind from fan is **directed to the proper point on the sieves by an adjustable wind board**. Lower lever to throw wind to the rear, and raise lever to throw wind to the front of shoe. Wind board should be set to direct the wind about one-fourth to one-half the way back on the sieves. Place wind well to front when sieves are heavily loaded.

As a rule, **Fan Port** should set in the **low** position and the wind directed by the wind-board, but when sieves are heavily loaded and grain is inclined to go "over", place wind well to front by adjusting Fan Port. Fan Port is adjusted with lever on right-hand side. **Raising Port** directs wind to the **front**, and lowering it directs wind to the **rear** of shoe.

If shoe is operated too fast, grain will "go over"—if too slow, sieves will be overloaded.

Even feeding is important. If wind is set for heavily loaded sieves, grain will blow over if load is not maintained. Do not "overdo" the work at cylinder and concaves.

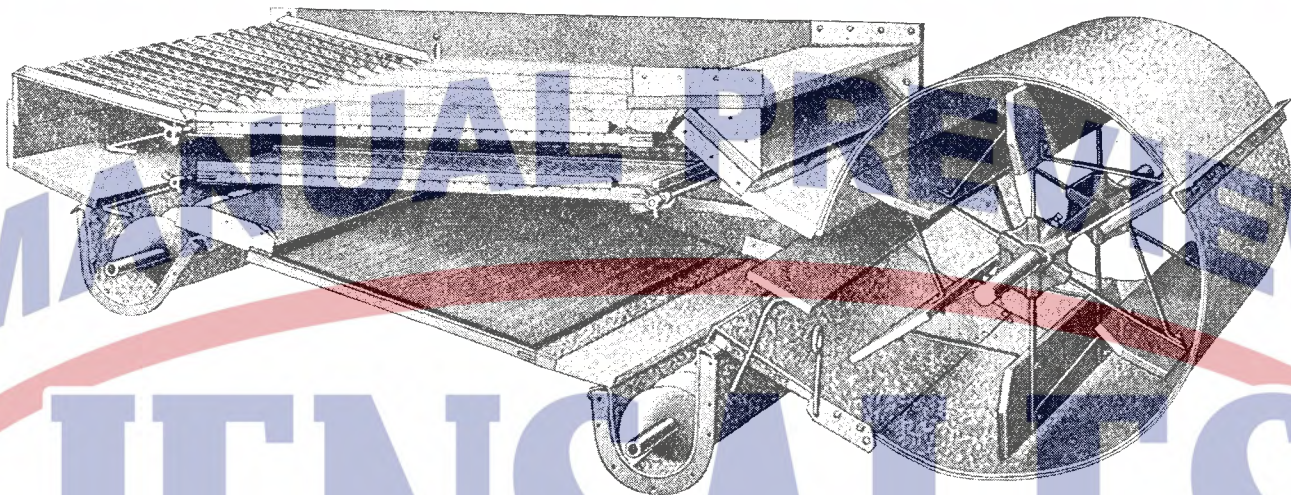


Fig. 6

ADJUSTABLE CHAFFER:

Lever to adjust chaffer is located at right-hand side of shoe. Pull lever **out** to **close** chaffer, push **in** to **open**. Close chaffer as much as possible and **still** save the grain. Ordinarily chaffer opening should be $1/2''$ to $5/8''$ for oats and $3/8''$ to $1/2''$ for wheat. If chaffer is closed too much, tailings will be excessive and grain will go "over"—if open too wide, lower sieve will be overloaded. Excessive tailings will result in cracked grain.

Rear end of chaffer is adjustable for height. As a rule, chaffer should be level—chaffer is level when secured at third hole from top, at rear. Lower chaffer slightly at rear if it overloads.

Chaffer Extension or Tailings Finger Bar at rear of adjustable chaffer is set **up** or **down** by adjustable end board at rear of shoe. It should be raised only in dry, light grain, or where grain is inclined to go "over". Ordinarily, end board should be set so that tailings finger bar is on a level with chaffer—this is the low position. Adjustment of end board provided by loosening thumb nuts under blower housing. Tighten nuts holding end board to hold finger bar at desired adjustment.

If grain is damp, weedy or if tailings are excessive, replace Tailings Finger Bar with No Choke Chaffer Extension—AS1310—24", AS1312—28".

To Remove Chaffer: Disconnect chaffer adjusting lever. Remove rod holding rear end of chaffer—lift chaffer out of shoe.

ADJUSTABLE SIEVE:

Lever to adjust sieve is located directly under chaffer adjusting lever. Pull lever **out** to **close** sieve—push **in** to **open**. With blast properly regulated and placed, sieve should be opened as wide as possible and still clean the grain. Ordinarily sieve openings should be from $3/8''$ to $1/2''$ for oats and from $1/4''$ to $7/16''$ for wheat. Watch the grain through hand holes in shoe sides as it passes through sieves, the grain going into the wagon or sack, and the tailings in the tailings elevator, to check the adjustment. If sieve is closed too much, tailings will be excessive—if opened too wide, it will result in unclean grain.

ADJUSTABLE SIEVE (Continued):

In difficult conditions of wheat, rye, or barley, where there may be an excessive amount of straw joints or other foreign material of about the same size and weight as the grain, a 9/32" round hole wheat sieve instead of the adjustable sieve may give better results.

Adjustment is provided at both ends for position of lower sieve. In average conditions sieve should set nearly level. **Sieve is level** when it is secured at **second** hole from top at **front** and in **lower** hole at **rear**.

In some conditions better cleaning may be done by raising front end of sieve slightly. Special sieves for Flax, Clover, Timothy, etc., are listed on pages 12 and 13.

To Remove Sieve: Disconnect sieve adjusting lever. Remove rods holding sieve. Lift sieve out of shoe.

Weed Screen for Shoe Floor: Keep screen clean. Screen can be cleaned through hand holes in shoe sides by rubbing screen with a lath. In conditions where it continues to clog, remove and replace with shoe bottom plate. Bottom plate is shipped in shoe. Screen is shipped in rear of Thresher.

TAILINGS ELEVATOR CONVEYOR CHAIN should be tight enough so chain will not jump or climb sprockets and loose enough so that buckets or flights will drag on bottom of elevator. Chains running too tight will wear bearings.

To Adjust: Turn nuts **onto** adjusting bolts at lower end of elevator to **tighten** chain and **off** to **loosen**. Adjust both sides evenly, then tighten lock nuts. After making conveyor chain adjustment, the tension of the chain driving tailings auger should be checked.

WIND STACKER:

Special drive which oscillates pipe slowly and reverses direction automatically is furnished when ordered. Turret gear has a series of holes for trip pins. With pipe fully extended, a movement of turret gear equal to the distance between holes for pins gives approximately 6-ft. movement at hood end of pipe. Trip lever operates between pins. By proper placing of trip pins any desired arc of swing is secured.

When oscillating stacker by hand, lock reversing gear clutch out of mesh, by swinging latch to rear over clutch shifter and lug on frame. When operating with power, swing latch to front over lug on trip lever.

When threshing long, tough grain, if the straw is inclined to lodge in the wind stacker housing, insert special gathering hook in hole provided in stacker fan; bolt balance weight on opposite side of fan to maintain its balance.

Tapered Roller Bearings on Wind Stacker Drive Shaft should be adjusted when there is noticeable end play. If adjustment is necessary remove lock on bearing box at inside of drive pulley and turn adjusting nut **in** until pulley binds **slightly** when turning, then **loosen** nut slightly until fan turns free and easy. Replace lock.

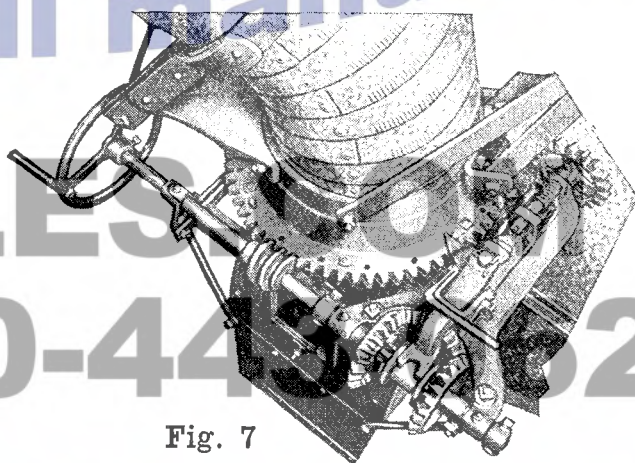


Fig. 7

WEIGHER:

Hart Weighers require little attention but all parts should be properly adjusted.

The elevating chain should have proper tension. If too tight, it will cut sprockets and if too loose, is apt to jump a tooth on lower sprocket and break the chain.

A speed of 300 R.P.M. on head shaft should be maintained.

See that hangers are perfectly free and do not bind.

Trip pin stop should be placed so that blank part of gear is directly under drive pinion when weighing hopper is closed.

Trip pin should rest squarely against stop and about 1/8- to 5/32-inch deep when hopper is closed.

Hopper valve should swing freely and rest evenly against stop on back of hopper to prevent leaking while hopper is filling.

Hopper valve pitman should be loose on pins when valve is closed so it will act quickly when trip stop releases.

For further information, see Instruction Sheet in Envelope.

WEIGHTS OF GRAIN AND SEEDS PER BUSHEL:

Alfalfa	60 lbs.	Flax	56 lbs.
Barley	48 "	Millet (Common)	50 "
Beans (White)	60 "	Oats	32 "
Beans (Soy)	60 "	Orchard Grass	14 "
Buckwheat	52 "	Peas	60 "
Blue Grass	14 "	Red Top	14 "
Clover	60 "	Rye	56 "
Clover (Sweet)	60 "	Timothy	45 "
Corn (Kafir)	56 "	Wheat	60 "

SHORT METHOD OF DETERMINING APPROXIMATE NUMBER OF BUSH-ELS OF GRAIN IN BIN OR WAGON: Multiply the length by height and then by width (in feet). Multiply the result by 8 and cut off the right-hand figure. The result is the approximate number of bushels. For example, 12-ft. L. x 10-ft. W. x 6-ft. H. x 8=576.0.