

KALKE

MURPHY

GRAIN STIR·ATOR®

PIONEERED IN 1960

STIR·ATOR

MODEL 171

OWNER'S MANUAL

INSTALLATION
and
OPERATING
INSTRUCTIONS





WARRANTY


Valid ONLY after completion and return of WARRANTY CARDS.

The Kalke-Murphy Grain-Stir-Ator is guaranteed for a period of one year, to be free of defects in material or workmanship, when properly installed and operated, in accordance with the instructions in this booklet. Warranted parts will be exchanged F.O.B. Mason City, Ia., without charge to the user. Damage resulting from negligence voids the warranty. Warranty does not include labor, installation or delivery of replacement parts.

Electric motors are covered by the warranties of the respective manufacturers. Electric service centers are located in all regions. Consult your dealer.

The Grain-Stir-Ator Warranty, and the liability of David Manufacturing Company, its distributors, dealers, and agents is limited to replacement, without charge, of defective parts, as outlined above. No other warranties, express or implied, shall apply, in any circumstances.

The manufacturer reserves the right to make changes in specifications or prices without incurring obligation on previously-produced merchandise.



IMPORTANT

BEFORE OPERATING THIS EQUIPMENT

PLEASE READ THE OWNERS MANUAL

FINAL INSPECTION CHECK LIST

1. HAVE YOU READ THE OWNER'S MANUAL COMPLETELY, YOURSELF? STUDY IT!
2. Is there at least 11" clearance between the top of the track and the lowest part of the roof or roof braces?
3. Are the track splices correctly installed? Consult the diagrams in the OWNERS MANUAL.
4. Is the trolley installed correctly (Cable connector toward center of bin) and does the connecting rod slide freely on the steer horn?
5. Are the set screws holding the yoke to the frame and the receptacle pipe to the yoke tightened, the cotter pins spread, and the receptacle facing downward?
6. Is the suspension tee properly hung, LEVEL, with the end loops down, center loop up, and suspension U strap inside the center loop (see diagrams)?
7. Is the suspension tee so positioned that the pipe to which the chain and power cord attach is at right angles to the chain and cord, as in the diagrams? Are the chain and cord as shown (cord slightly looser than chain, higher up)?
8. Is the frame of the Stir-Ator about 1" higher at the center of the bin for each 18' of bin diameter?
9. Are augers 3" off the drying floor at the bin wall?
10. Were the augers notched with a file (NOT a torch) where the clamp bolts serve as a driving key?
11. Was no more than 24" cut off the top end of the augers, with any over this amount cut off the bottom end, with the bottom flighting welded at the end?
12. Did you note the instructions NOT to weld flighting at the top end of the auger?
13. Are you sure the electrician connected the black and white wires to the 230-volt terminals in the operating switch, and the green wire to ground?
14. Are you keeping a record of the serial number for each owner?
15. Did you make sure the owner received his OWNER'S MANUAL?

INSTALLATION *and* OPERATING INSTRUCTIONS

KALKE MURPHY GRAIN-STIR-ATOR

DAVID MANUFACTURING COMPANY MASON CITY, IOWA

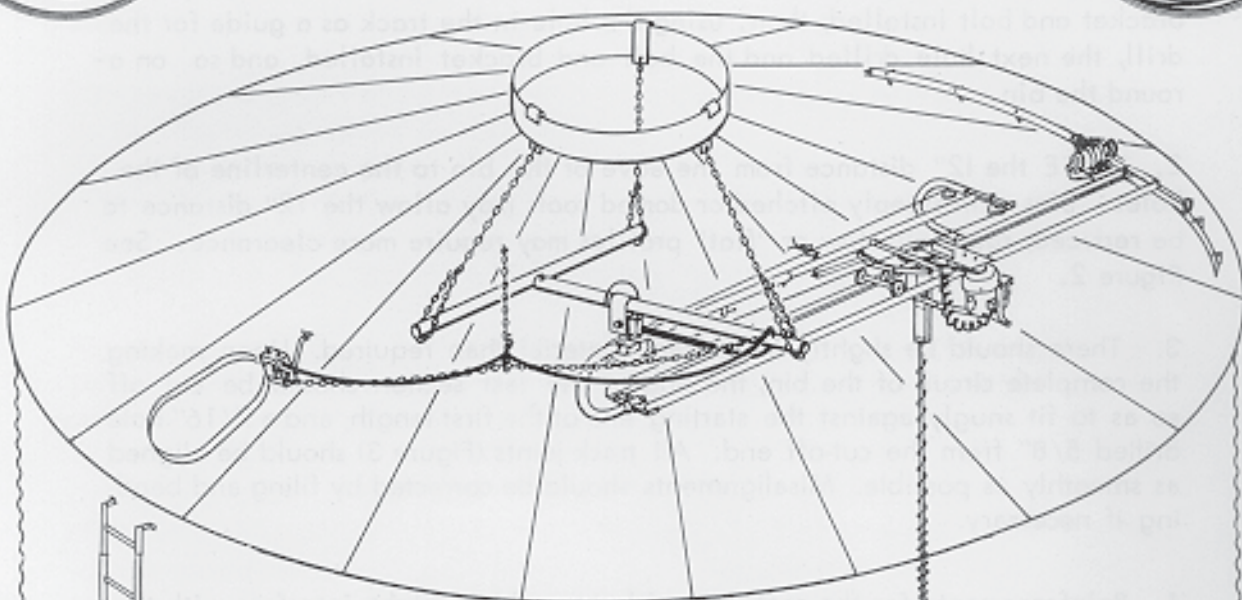


FIG. 1

SINGLE-AUGER INSTALLATION

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INSTALLATION OF THE STIR-ATOR IN NEW BINS (except Behlen*)

1. Before starting to assemble the bin, the complete Stir-Ator, less auger, should be laid in the center of the concrete pad. The top ring of the bin metal is assembled in the usual way. The Stir-Ator wall track is then installed as shown in Figure 2 and 3, Page 7. The 5/16" holes for the track bolts should be drilled in the bin metal progressively; that is, starting with a double-hole end of a track section, the first hole is drilled and the three-hole connector, track bracket and bolt installed; then, using the hole in the track as a guide for the drill, the next hole drilled and the bolt and bracket installed, and so on around the bin.

2. NOTE the 12" distance from the eave of the bin to the centerline of the holes. Bins with steeply pitched or domed roofs may allow the 12" distance to be reduced; roofs with low or "flat" profiles may require more clearance. See Figure 2.

3. There should be slightly more track material than required. Upon making the complete circuit of the bin, the end of the last section should be cut off so as to fit snugly against the starting end of the first length, and a 7/16" hole drilled 5/8" from the cut-off end. All track joints (Figure 3) should be aligned as smoothly as possible. Misalignments should be corrected by filing and bending if necessary.

4. Reinforcements for the roof or roof ladder which might interfere with the movement of the Stir-Ator should be trimmed off as indicated in Figure 2. If this cannot be done, the 12" distance from eave to bolt holes must be increased proportionately.

5. Because the Stir-Ator auger runs very close to the bin wall, NO INSIDE WALL LADDERS CAN BE INSTALLED. A portable ladder is advised and can be obtained from your dealer. AND SKID PLATES SHOULD BE PUT ON ALL DOORS THAT EXTEND INTO THE BIN OVER 2½ INCHES.

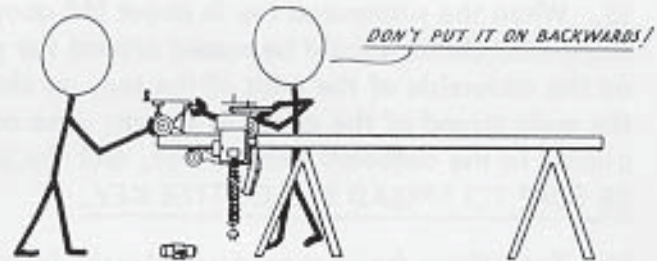
6. The bin roof is then assembled and the three suspension chains are dropped through the fill hole, with the suspension hooks spaced about equally or 120° apart, around the fill hole collar, as shown. See Figures 1, 4, and 5.

7. To assemble the Stir-Ator, place the bridge frame on two sawhorses and remove the in-board frame pivot.

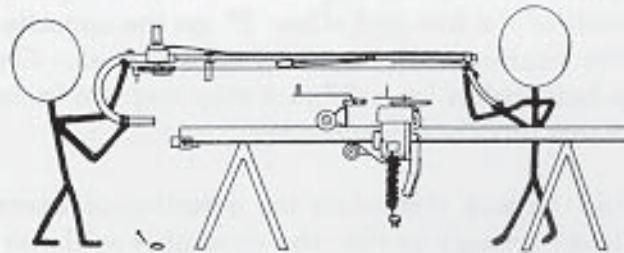


** Behlen installations are the same as for existing bins. See Page 6.

8. Slide the trolley on to the bridge rails with the connecting rod end going on last. Replace the inboard frame pivot as it was before.



9. Remove the large cotter pin and 2" ring from the parts bag, and insert this part into the inboard frame pivot, and the yoke end into the socket on the side of the frame. Spread the cotter pin and tighten the set screw in the frame socket.



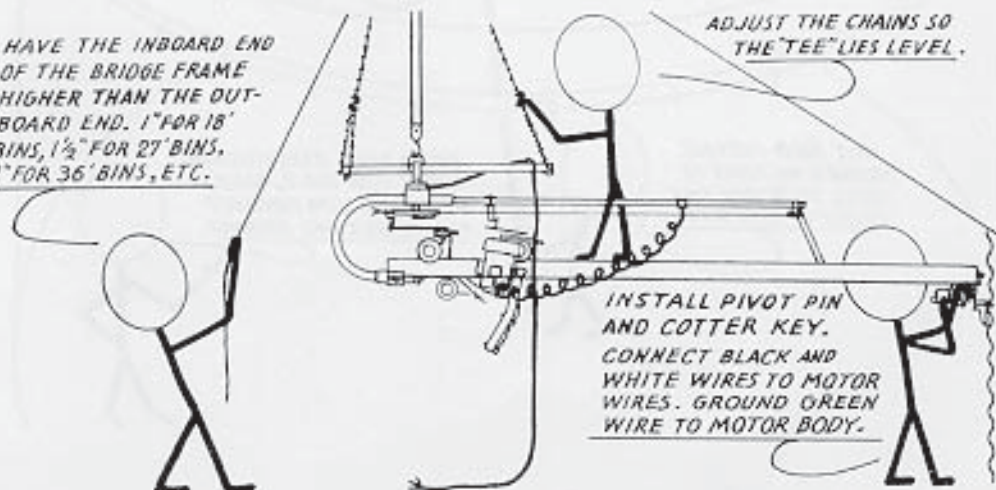
10. Put the junction box arm into its socket with the receptacle facing downward, and tighten this set screw. Assemble the suspension "tee" and attach it to the superstructure with the small loops at the ends, down. See Figure 4 and 5.

11. The track unit with the gearmotor is placed on the wall track. Remove the cotter key and pivot pin from the outboard frame pivot.



12. The inboard end of the Stir-Ator is now ready to be raised into position, using a chain hoist or block-and-tackle if necessary. Hook the lifting hook into the "lifting loop" shown in Figures 4 and 5. Raise the outboard end manually. By securing the trolley at the inboard end as shown below, the outboard end will not be too heavy for two men, even on ladders, if necessary.

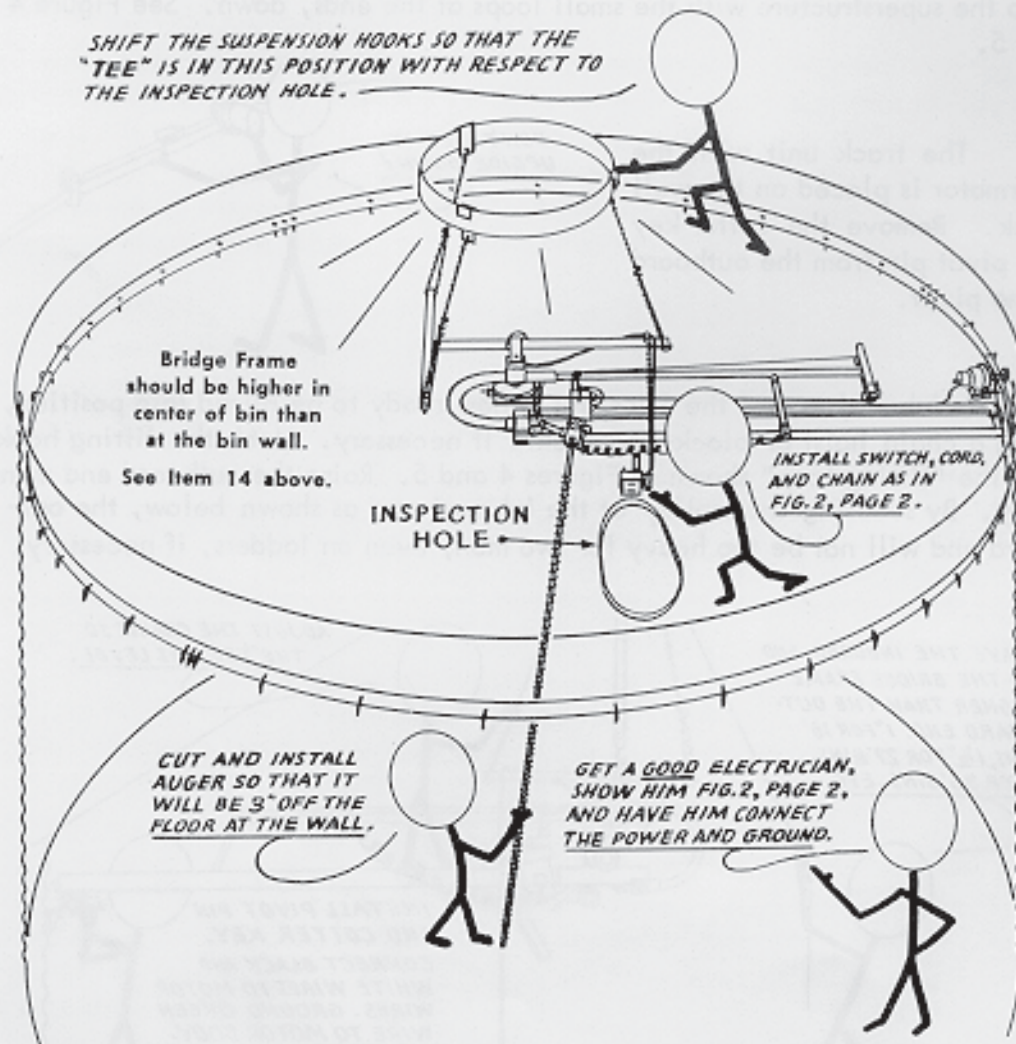
HAVE THE INBOARD END OF THE BRIDGE FRAME HIGHER THAN THE OUTBOARD END. 1" FOR 18' BINS, 1 1/2" FOR 27' BINS, 2" FOR 36' BINS, ETC.



13. When the suspension tee is about 16" above the eave level, the ends of the suspension chains should be passed around the pipe ends, through the small loops on the underside of the ends of the tee, as shown, and the S-hooks secured to the main strand of the chain as shown. The outboard end of the bridge frame is placed in the outboard frame pivot, and the pivot pin and cotter key replaced. BE SURE TO SPREAD THE COTTER KEY.

14. The bridge frame should be slightly higher at the inboard end than at the wall. The easiest way to do this is to sight along the frame toward the opposite wall of the bin and allow 2" on the opposite wall for every inch the center of the machine is to be raised above level. One inch for an 18 foot bin; one and a half inches for a 27 foot bin; and two inches for a 36 foot bin are the measurements usually recommended.

15. Be sure that when the adjusting of center height is finished, the tee is level enough so that the ends of it will not be hit by the rotating Stir-A-Tor. Then shift the suspension hooks (if necessary) to cause the stem of the tee to lie at about 90° to the line from the S-hook welded on top of it, to the inspection hole.



16. Install the switch box above the inspection hole as shown in Figure 2, Page 7. Be sure the Stir-Ator will not hit it, and do not forget the brace. NOTE the CLEARANCE requirements in Figure 2, Page 7.

17. The power lead-in cord is passed through the closed loop on top of the suspension tee, See Figures 4 and 5, and connected to the "LOAD" (lower) terminals of the switch. See Figure 2, and the tag on the power cord. The end of the restraining chain with the S-hook is hooked to the lever on the switch handle, and the other end of the chain hooked on the open hook on the suspension tee. A few links should be allowed for adjustment of chain tension after the Stir-Ator is in operation, and the rest of the chain removed. Consult Figure 2, Page 7, for the best method of holding the chain and power cord up out of the line of travel.

18. It is important to have the chain sufficiently tighter than the cord so that undue turning of the suspension tee, which will occur if the trolley becomes fouled or de-railed, will cause the switch to stop the Stir-Ator. This is a safety shut-off feature; DO NOT RUN THE STIR-ATOR UNLESS THIS SHUT-OFF IS IN WORKING ORDER. BE SURE TO OBSERVE THE CLEARANCE REQUIREMENTS AS SHOWN IN FIGURE 2, PAGE 7.

19. Electrical connections consist of plugging the Twist-Lock plug into the receptacle, and, connecting the 18-2 coil cord to the two loose-end wires inside the fuse box. The Scotchlock connectors are inside the fuse box. See Figure 6, Page 11. Connect the gearmotor as shown in Figures 4, 5, and 6.

20. The bin is then completed, including the drying floor. Have the drying floor level and flat. The Stir-Ator auger is then stood up along side of the Stir-Ator trolley and measured for cutting to length. The auger should clear the drying floor by three inches at the bin wall. The Stir-Ator should have been ordered with the auger only slightly longer than required for the bin so that a minimum of shortening of the auger is needed.

21. Up to 24 inches may be cut off the top end of the auger (and no more than this should have to be removed) with any over this amount to be taken off the bottom end. If the bottom end is shortened, the flighting should be securely welded to the shaft at the cut-off end. DO NOT WELD THE FLIGHTING AT THE TOP OF THE AUGER; this is purposely left un-welded to minimize distortion and weakening of the shaft. Be careful not to "nick" the shaft in removing flighting at the top.

22. The auger and the flighting should be cut off with a HACKSAW, and the coupler notches made with a large RAT-TAIL FILE. DO NOT USE A CUTTING TORCH FOR THIS WORK.

CHECK V-BELT TENSION on the off-set auger drive after auger is installed.

23. A professional electrician should be employed to bring the power line to the Stir-Ator. THE BIN MUST BE GROUNDED.

INSTALLATION IN EXISTING BINS (and new Behlen tanks)

24. "Installation in New Bins" should be read completely.

25. Installation in an existing bin is more work than in a new bin at time of erection, mainly because of the ladder climbing and awkwardness of installing track and hoisting the Stir-Ator up into position. If the bin is full, it will be easier to install the track than in an empty bin, but usually more difficult to install the rest of the machine. A half-full bin presents such problems that it should not as a rule, be attempted.

26. In a full bin, the auger must be screwed down through the grain until stopped by the drying floor, then brought back up three inches for cutting to proper length. Refer to No. 20, 21, and 22, under "Installation in New Bins".

27. A careful inspection of the bin should be made to remove any internal obstructions which might interfere with the operation of the Stir-Ator. This will include shortening the ends of the bin bolts which protrude, roof and roof ladder braces (Figure 2), inside spouts, and removal of inside wall ladders as discussed in No. 4 and 5.

28. Starting the Stir-Ator in a full bin may prove difficult. The auger should be turned by hand, using a short wrench or plier to free it in the grain. If more force is required, the best method is to place a short plank on the grain by the auger, screw the auger down through the grain as far as possible by hand, and then pull the auger up through the grain by the use of a jack placed between the plank and the auger coupling, repeating this process as often as necessary to loosen the grain so that the motor can take over.

29. Do NOT apply excessive pressure to the auger shaft with large pipe wrenches or other such means to force the auger to turn; damage to the wall track, the Stir-Ator structure, or the bin wall may result.

FIG. 2
WALL TRACK AND SWITCH INSTALLATION

FOR SWITCH WIRING, SEE PAGE 11.

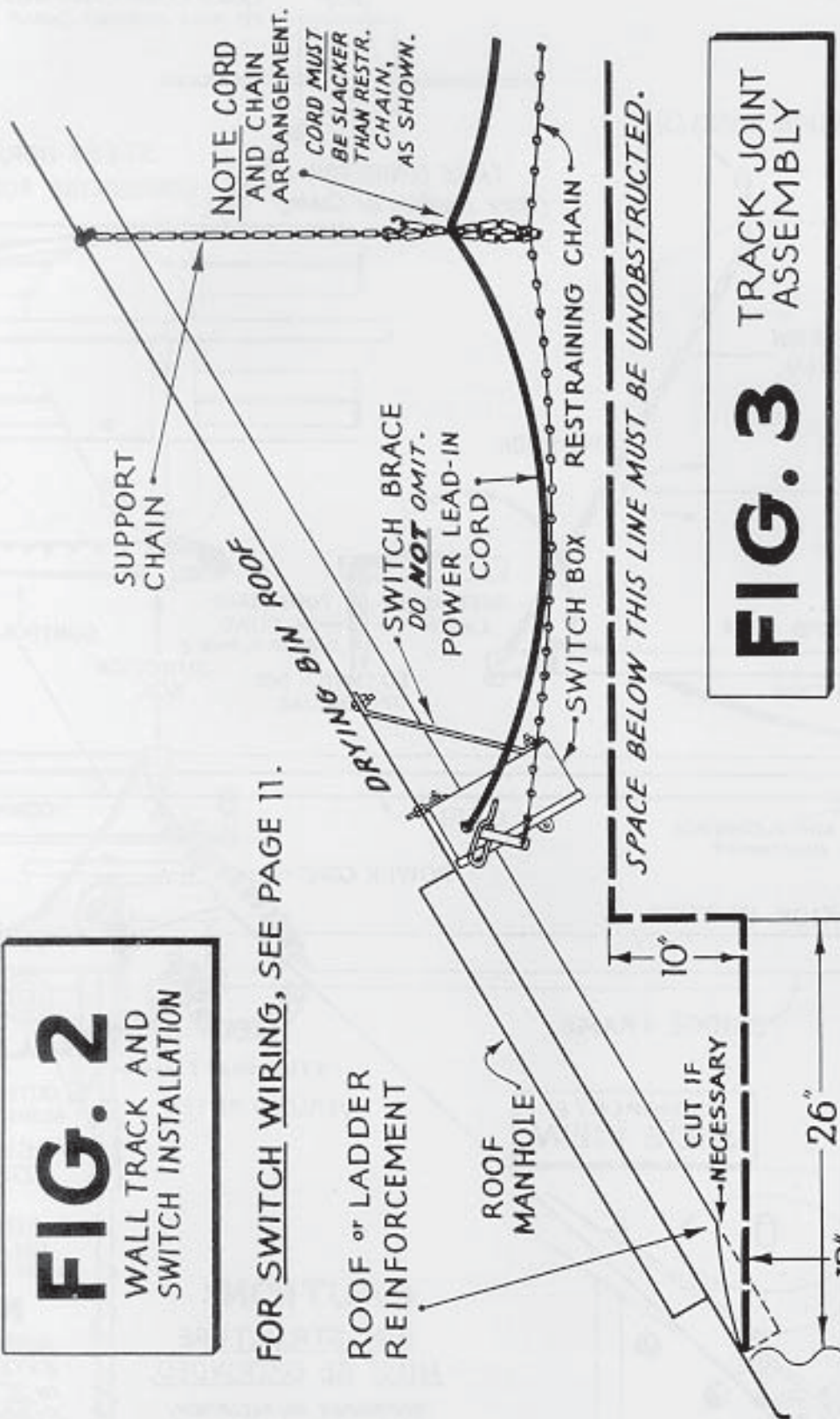
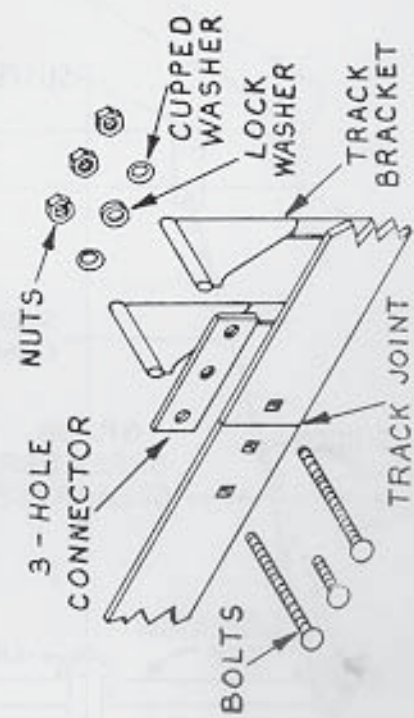
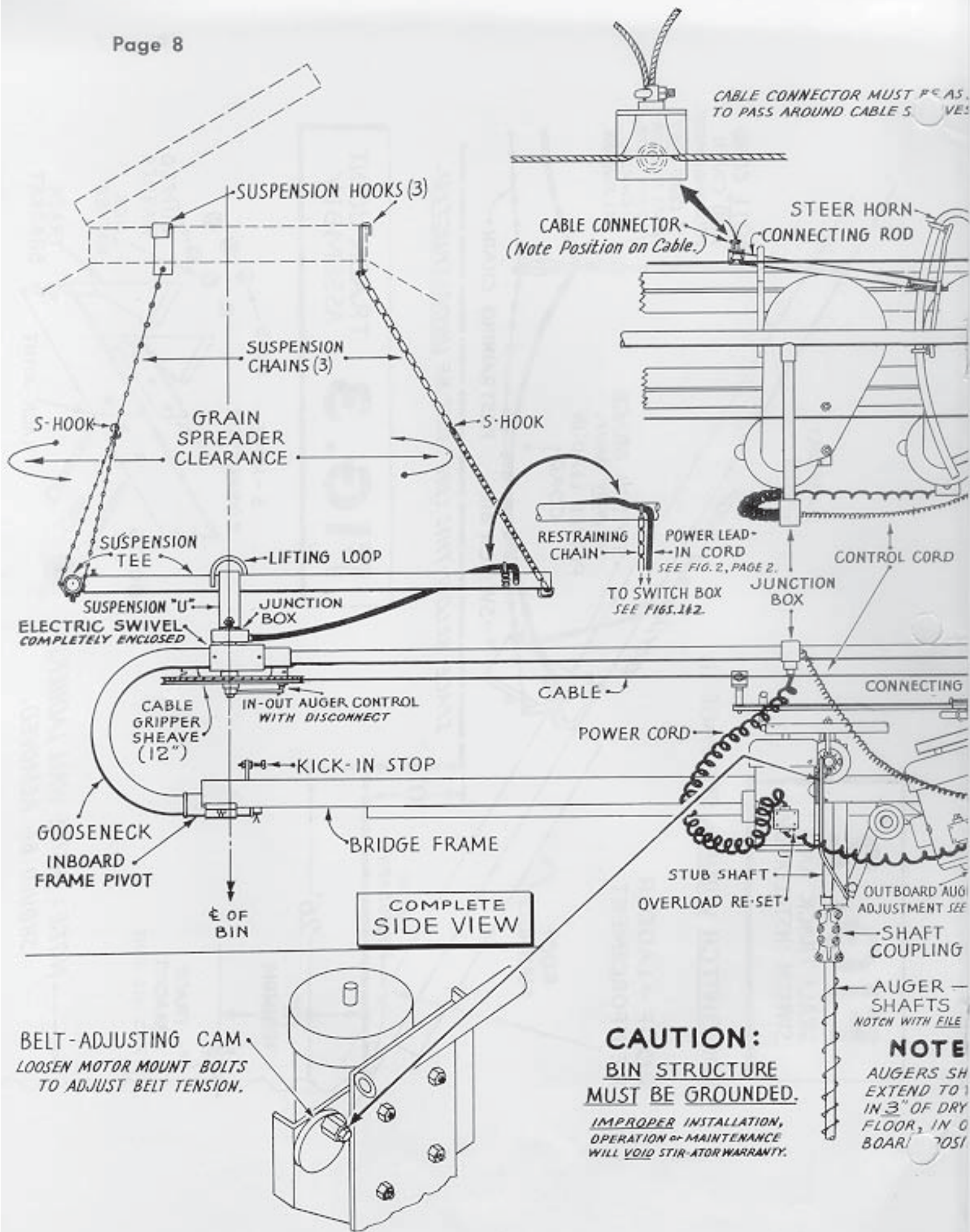


FIG. 3 TRACK JOINT ASSEMBLY



NOTE: INSIDE WALL LADDERS SHOULD BE REMOVED.



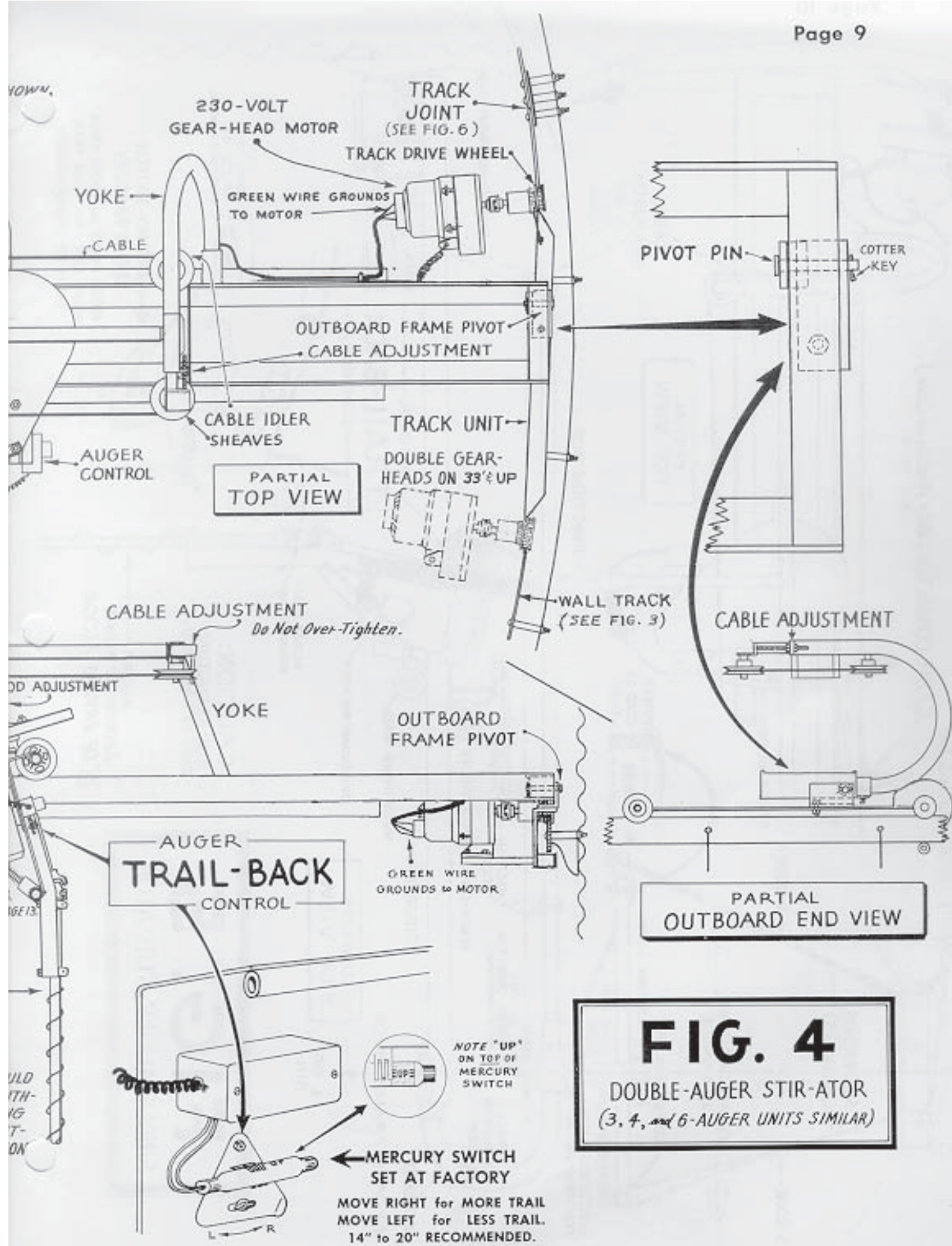


FIG. 4
 DOUBLE-AUGER STIR-ATOR
 (3, 4, and 6-AUGER UNITS SIMILAR)

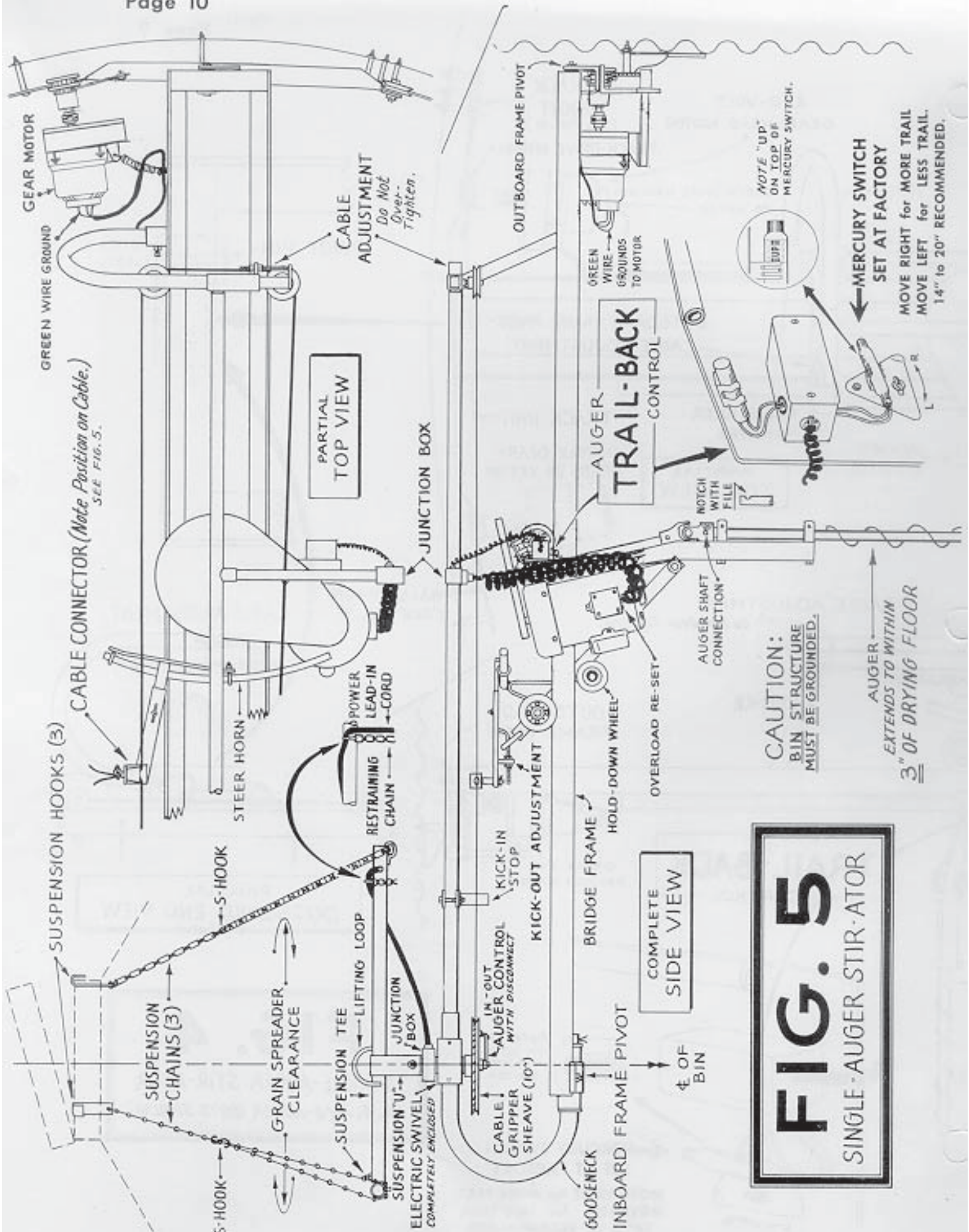


FIG. 5
SINGLE-AUGER STIR-ATOR

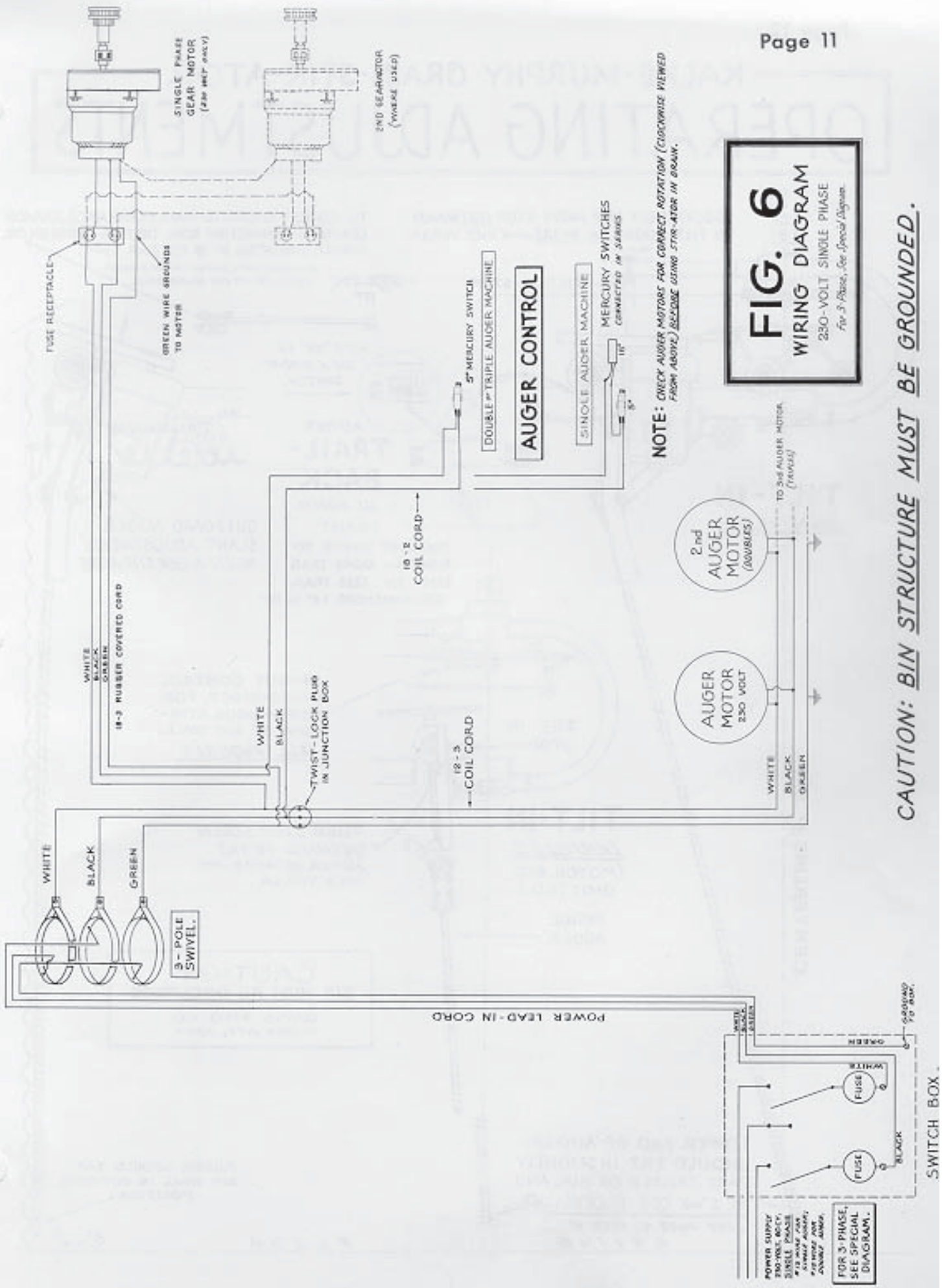


FIG. 6
WIRING DIAGRAM
 230-VOLT SINGLE PHASE
For 3-Phase, see Special Diagram.

NOTE: CHECK AUGER MOTORS FOR CORRECT ROTATION (CLOCKWISE VIEWED FROM ABOVE) BEFORE USING STIR-MOTOR IN GRAIN.

CAUTION: BIN STRUCTURE MUST BE GROUNDED.

POWER SUPPLY
 230-VOLT, 60-CY.
 SINGLE PHASE
 15 AMP. MAIN
 BREAKER
 10-2 COIL CORD
 12-5 COIL CORD

FOR 3-PHASE,
 SEE SPECIAL
 DIAGRAM.

SWITCH BOX

POWER LEAD-IN CORD

WHITE
 BLACK
 GREEN
 18-3 RUBBER COVERED CORD

GREEN WIRE GROUNDS
 TO MOTOR

SINGLE PHASE
 GEAR MOTOR
 (230 VOLT 60CY)

2ND GEAR MOTOR
 (WHERE USED)

12-5
 COIL CORD

10-2
 COIL CORD

5" MERCURY SWITCH
 DOUBLE 1/2 TRIPLE AUGER MACHINE

AUGER CONTROL

SINGLE AUGER MACHINE

MERCURY SWITCHES
 CONNECTED IN SERIES

2nd
 AUGER
 MOTOR
 (DOUBLE)

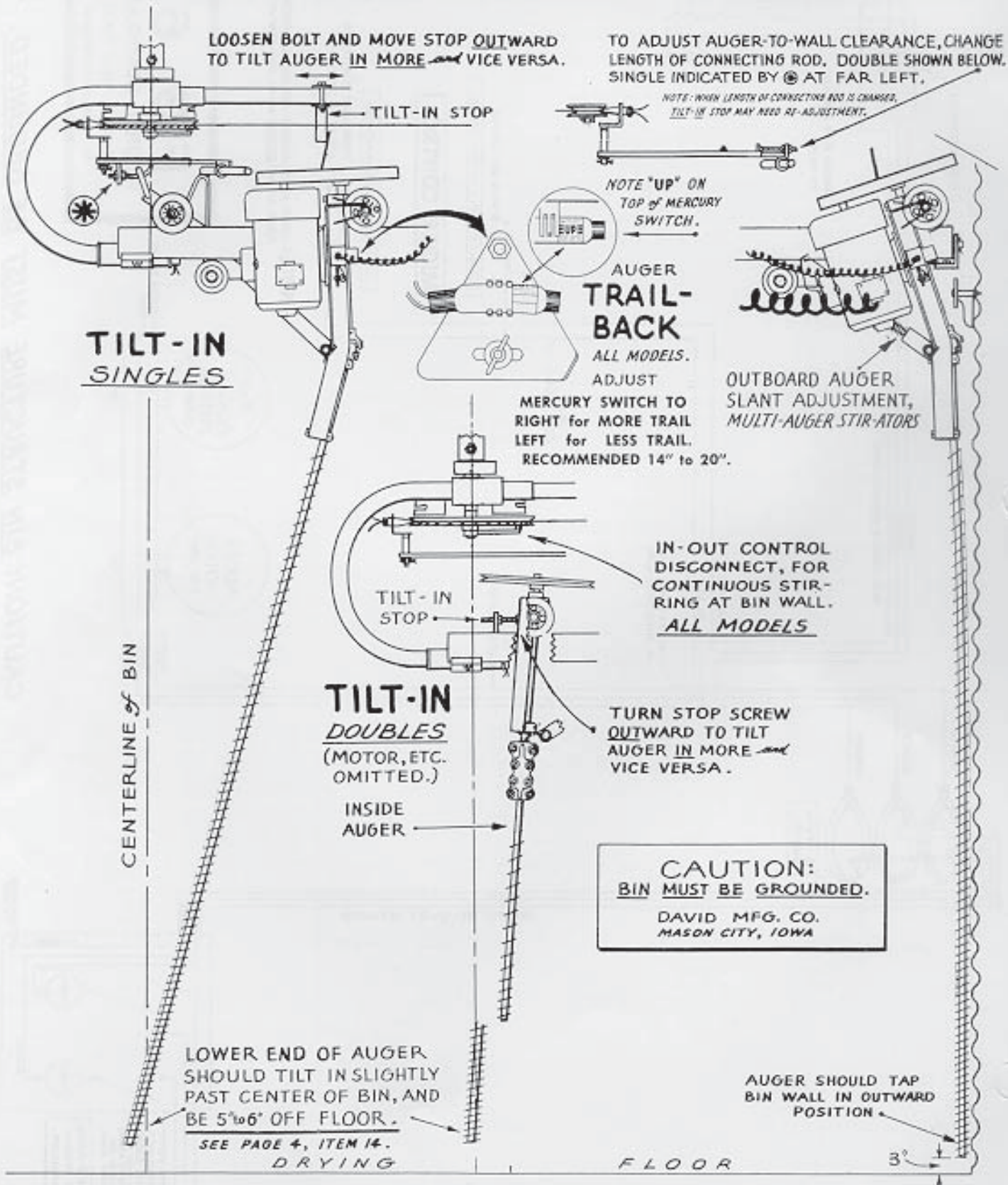
AUGER
 MOTOR
 230 VOLT

TO 2nd AUGER MOTOR
 (TRAVIS)

WHITE
 BLACK
 GREEN

GROUND
 TO BOX

KALKE-MURPHY GRAIN-STIR-ATOR OPERATING ADJUSTMENTS



LOOSEN BOLT AND MOVE STOP OUTWARD TO TILT AUGER IN MORE and VICE VERSA.

TO ADJUST AUGER-TO-WALL CLEARANCE, CHANGE LENGTH OF CONNECTING ROD. DOUBLE SHOWN BELOW. SINGLE INDICATED BY @ AT FAR LEFT.

NOTE: WHEN LENGTH OF CONNECTING ROD IS CHANGED, TILT-IN STOP MAY NEED RE-ADJUSTMENT.

NOTE *UP* ON TOP OF MERCURY SWITCH.

AUGER TRAIL-BACK
ALL MODELS.
ADJUST

MERCURY SWITCH TO RIGHT for MORE TRAIL
LEFT for LESS TRAIL.
RECOMMENDED 14" to 20".

OUTBOARD AUGER SLANT ADJUSTMENT,
MULTI-AUGER STIR-ATORS

IN-OUT CONTROL DISCONNECT, FOR CONTINUOUS STIRRING AT BIN WALL.
ALL MODELS

TURN STOP SCREW OUTWARD TO TILT AUGER IN MORE and VICE VERSA.

TILT-IN DOUBLES
(MOTOR, ETC. OMITTED.)

INSIDE AUGER

CAUTION:
BIN MUST BE GROUNDED.
DAVID MFG. CO.
MASON CITY, IOWA

LOWER END OF AUGER SHOULD TILT IN SLIGHTLY PAST CENTER OF BIN, AND BE 5" to 6" OFF FLOOR.

SEE PAGE 4, ITEM 14.
DRYING

AUGER SHOULD TAP BIN WALL IN OUTWARD POSITION

FLOOR

3°

ADJUSTMENTS OF THE STIR-ATOR

A study of Page 12 will reveal the adjustments to be made on the Stir-Ator. A gentle tapping of the auger flighting against the bin metal, becoming more pronounced at the seam bolts, is normal. It is this wall scouring which is interfered with by inside ladders, etc., and is the reason for urging their removal. Distance between auger and bin wall is adjusted at the connecting rod, as shown in Figures 4 and 5, on Page 9 and 10, also Page 12.

After adjusting the connecting rod, adjustment should be made at the "TILT-IN" STOP, which, as will be noted, is different for single and double-auger machines. The purpose of this stop is to cause an inward slant of the auger when the trolley is at the inboard end of its travel along the bridge track, so that the lower end of the auger goes about six inches past the center of the bin.

The transparent mercury switch controls the trailback of the auger, in the direction of travel around the bin. This mercury switch is set at the factory for normal trail-back and should stop the movement of the machine when the bottom end of the auger is 14 to 20 inches back of a vertical line from the auger shaft bearing to the floor.

For more trailback, loosen the wingnut and move the mercury switch bracket to the right; to the left for less. Do not move the bracket more than 1/16" at a time. See "Operating Adjustments", on Page 12.

The black mercury switch (singles only) controls the slant of the auger toward the center of the bin, and does not function unless the auger assumes too great an inward slant, which will occur under some conditions as the trolley starts outward from the center of the bin. The machine should continue to run around the bin wall track at the maximum inward auger slant, but stop if greater slanting of the auger occurs.

CABLE ADJUSTMENTS are made by the "Cable Adjustment" shown in Figures 4 and 5, which moves one of the cable idler sheaves. Do NOT over-tighten the cable. Be sure the cable idler sheaves will turn freely and that the bearings in the sheaves are greased.

Adjustment of the AUGER DRIVE BELT is done by sliding the motor in or out on the slotted mounting holes in the motor base. If additional belt adjustment is needed, loosen the set-screws securing the motor mounting bracket to the trolley body, move it out slightly and retighten the set screw. Do not have the V-belt unnecessarily tight, as it is hard on motor bearings and will shorten the life of the belt.

OPERATION OF THE STIR-ATOR

The successful drying of grain is as important as any other phase of your farming, and like other farming operations, can be learned best by combining science, experience and common sense.

The primary function of the Stir-Ator is to save time and money in your drying bin and improve uniformity of your grain by mixing, loosening and circulating the grain during the drying process. The Stir-Ators should be started as soon as there are three feet of grain in the bin and operation continued throughout the filling, drying and cooling. Periodic use of the Stir-Ator in stored grain, with or without use of the fan, will improve chances of preserving the grain and destroying insect infestations.

The temperature of the air used for drying in bins ranges from 70° to 150° or even higher. The lower the temperature, the slower will be the drying. High temperature will dry faster but less uniformly, and possibly damage the feed value of the grain. A plenum temperature of 90° to 110° is generally regarded as the best compromise between speed and quality. At this temperature, the Stir-Ator will usually hold the moisture variations to within 1%.

WET GRAIN at the BIN WALL may be a problem in grain stored in the drying bin. This can be minimized by keeping the difference between inside and outside temperatures not more than 30 degrees and allowing more time for drying. A higher level of grain at the center will allow more air flow at the wall, and the wall liners now being offered by several manufacturers are an excellent condensation preventative, allowing higher drying temperatures to be used.

Continuous stirring at the wall or other position is accomplished by unhooking the drive link under the cable drive sheave, running the trolley to the desired position, and hooking the drive link up to one of the hook slots above the sheave. For continuous wall stirring, position the cable connector between the cable idler sheaves.

The Stir-Ator and fan-heater unit should be "matched" for efficient drying. Over-drying of bottom grain, with scallops and channelling in the upper layers, is a frequent result of using a single-auger Stir-Ator with a large capacity fan-heater and high temperature. Channelling occurs in the first few hours of operation and a Stir-Ator with more augers is the remedy, if high production is desired. Conversely, over-stirring with low heat and air flow will result in slow drying and loss of heat. Single-auger Stir-Ators should be used in smaller bins (under 24' diameter) and 3 to 5 h.p. fan-heater units. The larger the bin and fan-heater unit, the more augers needed. See Stir-Ator Chart SA - 5 at your dealers.

It is important to have enough outlets for the moisture-laden air in the top of the bin. Four manholes (open) are generally regarded as desirable, with six becoming standard in the largest bins. The roof should be wedged up so that moisture will drip outside the bin.

DRYING GUIDE

DRYING IN GRAIN DEPTHS OF OVER 18 FEET IS NOT ADVISED

The recommendations below are for drying bins without wall liners. If wall liners are used, higher temperatures can be used without worry of bin wall moisture, consequently a faster fill rate also can be used.

20% to 24% moisture test grain from the field is very easy to dry. Grain depth of up to fifteen feet can be used in one fill.

25% to 28% moisture test is usually the most profitable harvest-drying range. The drying bin can be filled to twelve feet depth the first day. The second fill can be started after the moisture test of the first fill has dropped to 20%.

For grain in the 28% to 30% range, two fills of 7 or 8 feet each is recommended. Temperatures should not exceed 100 degrees for the removal of the first 10 points of moisture. Then, if desired, heat can be raised.

Drying grain with 30% to 35% moisture is inefficient, but is sometimes done out of necessity. Under such conditions, three fills of 5 or 6 feet each are suggested with temperatures not over 90 degrees for the first 10 points moisture removal.

Grain testing over 35% moisture should not be harvested for drying except under emergency conditions. Harvest damage will be excessive, and drying will be difficult and expensive. The only course to be followed under these conditions is to fill slowly and supervise constantly. Recommendations of the bin or fan heater unit, if applicable, should be followed.

NOTE: The higher the moisture of the grain, the lower the starting temperature should be, to minimize wall condensation and insure highest quality grain.

STORAGE

The Stir-Ator is an excellent tool to aid in the preservation of grain stored in the drying bin. Some experimentation has been done with storage of grain in the 16% range by use of the Stir-Ator to prevent formation of "hotspots" and insect hatchings. Such a program should be undertaken with caution, and frequent inspections made. The Stir-Ator guarantee does not extend to this use, although successful tests have been made.

Users of the Stir-Ator sometimes want to utilize more of the capacity of the bin for dry grain storage by heaping dried grain over the Stir-Ator. This is not recommended because the downward pressure of the grain on the Stir-Ator when the bin is emptied will possibly bend or break parts of the machine, or collapse the roof of the bin.

MAINTENANCE OF STIR-ATOR

Lubrication of all moving parts and checking of belt and cable tension with each binful are the principal items of maintenance of the Stir-Ator. The auger shaft bearings, universal joint, trolley wheels, and cable idler sheaves have grease fittings; other moving parts are taken care of with an oil can. The "Steer Horn", to which the connecting rod is attached should be oiled, waxed or greased before the start of your drying operation, and again afterward, to prevent rusting. Check cable sheave to remove grain packed in the groove.

Wear on auger flighting varies widely, depending on amount of use, dirt, or sand in the grain, type of grain, etc. In average farm use, an auger should run for two or three years. Worn augers do not work ahead through the grain as well as new ones, and lose their ability to move grain at maximum capacity.

PROBLEMS?

1. Auger motors do not run? Check fuses in switch box; try overload re-sets on motors. Be sure plug is in receptacle properly. Test motor connections for 230 volts.
2. Gear motor does not run? Check the $2\frac{1}{2}$ A fuses at the gearmotor (they may be at fault but look okay; try another). Check for loose wiring connections; test for 230 volts at motor connections. Test mercury switch for "on-off". If the gearmotor has been taken apart, the rotor may drag. Correct this by tapping housing until rotor turns freely.
3. Augers do not turn? See item No. 1 above. Also check belt tension, pulley keys, couplers, and test to determine if auger may be stuck in the grain.
4. Trolley does not move in or out at least 30" per revolution of the Stir-Ator around the bin? Check the connecting rod to be sure it is not binding on the steer horn or at the cable connector. Be sure the connecting rod is not adjusted too long, jamming the trolley into the end of the frame and binding up at the first cable idler sheave. Also check trolley hold-down wheels for being set up too tight or caught on the main-frame. Look to see if the trolley wheels are all on the frame properly.

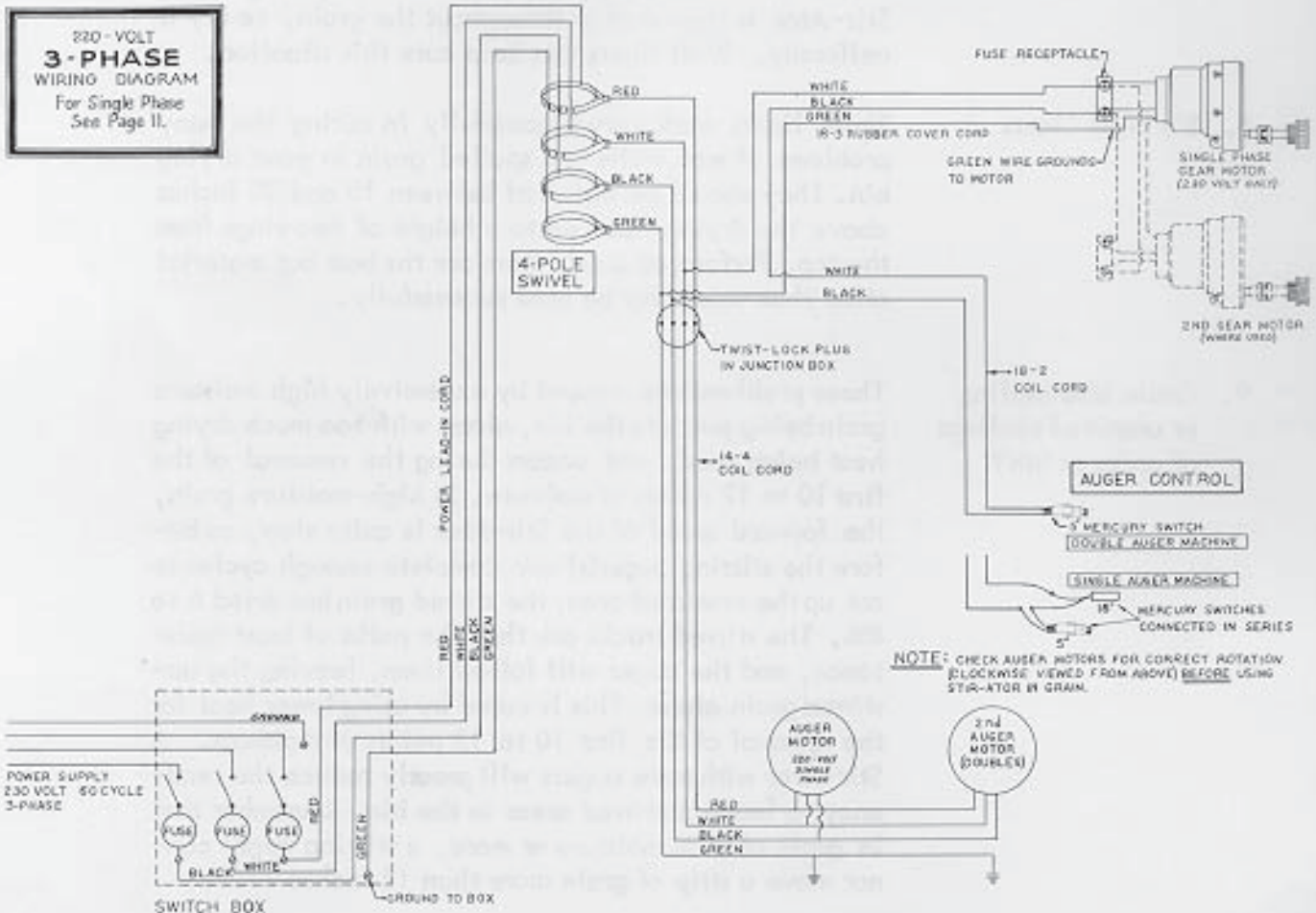
PROBLEMS?

- | | |
|---|--|
| 5. Grain at center of bin not stirred? | Check "Tilt-In" adjustment (Pages 12 & 13) |
| 6. Auger does not go out to the bin wall? | Check "Tilt-Out" adjustment (Pages 12 & 13) |
| 7. Wet grain at bin walls? | <p>Stir-Ator auger is not getting to the bin wall. See Pages 12 and 13. Grain very high in moisture and/or too much heat being used. See the "Drying Guide", Page 15. Cold outdoor temperatures and high heat inside the bin cause excessive condensation on bin walls. Keeping grain higher at the center of the bin helps to force more drying air up at the wall. Too many fines in the grain can cause poor drying. The Stir-Ator can be locked to the outside wall for the first 6 or 7 feet of fill to increase air movement at the wall. Normal cycling of the Stir-Ator is then started throughout the grain, to dry it uniformly. Wall liners can help cure this situation.</p> |
| 8. Bin Wall Liners | <p>These liners work very successfully in curing the many problems of wet walls and spoiled grain in your drying bin. They should be installed between 15 and 30 inches above the drying floor up to a height of two rings from the top. Perforated steel liners are the best but material other than steel may be used successfully.</p> |
| 9. Grain channelling or unstirred scallops of grain in bin? | <p>These problems are caused by excessively high moisture grain being put into the bin, along with too much drying heat being used, and occurs during the removal of the first 10 to 12 points of moisture. In high-moisture grain, the forward speed of the Stir-Ator is quite slow, so before the stirring auger(s) can complete enough cycles to cut up the unstirred area, the stirred grain has dried 6 to 8%. The stirred tracks are then the paths of least resistance, and the auger will follow them, leaving the unstirred grain alone. This is cured by using lower heat for the removal of the first 10 to 12 points of moisture. A Stir-Ator with more augers will greatly reduce the tendency to leave unstirred areas in the bin. Remember that in grain of 30% moisture or more, a stirring auger cannot move a strip of grain more than 12 inches wide.</p> |

PATENT NOTICE

The Kalke-Murphy Grain Stir-Ator is manufactured under exclusive license for United States Patent Numbers 3,156,541, 3,251,582 and 3,580,549. Infringing manufacturers, sellers, and users are subject to prosecution in the Federal Courts.

STIR-ATOR is a registered trade-mark of David Manufacturing Company.



CAUTION: BIN STRUCTURE MUST BE GROUNDED



WARRANTY


Valid ONLY after completion and return of WARRANTY CARDS. (See inside front cover).

The Kalke-Murphy Grain-Stir-Ator is guaranteed for a period of one year, to be free of defects in material or workmanship, when properly installed and operated, in accordance with the instructions in this booklet. Warranted parts will be exchanged F.O.B. Mason City, Ia., without charge to the user. Damage resulting from negligence voids the warranty. Warranty does not include labor, installation or delivery of replacement parts.

Electric motors are covered by the warranties of the respective manufacturers. Electric service centers are located in all regions. Consult your dealer.

The Grain-Stir-Ator Warranty, and the liability of David Manufacturing Company, its distributors, dealers, and agents is limited to replacement, without charge, of defective parts, as outlined above. No other warranties, express or implied, shall apply, in any circumstances.

The manufacturer reserves the right to make changes in specifications or prices without incurring obligation on previously-produced merchandise.



"THE PIONEER WITH THE PREFERRED PATTERN"

