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WAR DEPARTMENT
MAINTENANCE MANUAL
AND PARTS CATALOG

TRAILER, FULL, FLAT BED,
8-TON, MODEL CPT8 SPECIAL

JANUARY 18th, 1943

THE TRAILERS COVERED BY THIS MANUAL ARE
MANUFACTURED BY THE FOLLOWING CONTRACTORS

THE FRUEHAUF TRAILER COMPANY
DETROIT, MICH.

THE WINTER-WEISS COMPANY
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WAR DEPARTMENT

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G. C. MARSHAL,
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*Major General,
The Adjutant General.*

TM 5-9032

Combined

SGV TD

**OPERATOR'S MANUAL
MAINTENANCE MANUAL**
and
PARTS CATALOG
for
**TRAILER, FULL, FLAT BED
8-TON, MODEL CPT-8 SPECIAL**

Manufactured for
CORPS OF ENGINEERS
by
THE FRUEHAUF TRAILER COMPANY
Detroit, Michigan

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PART I

OPERATOR'S MANUAL

SECTION I

Introduction

1. PURPOSE AND SCOPE.—These instructions are published for the information and guidance of the using arms charged with the operation, maintenance, and repair of this materiel. They contain descriptions of the major units and their function in relation to the other components of the trailer, as well as instructions for operation, inspection, and maintenance.

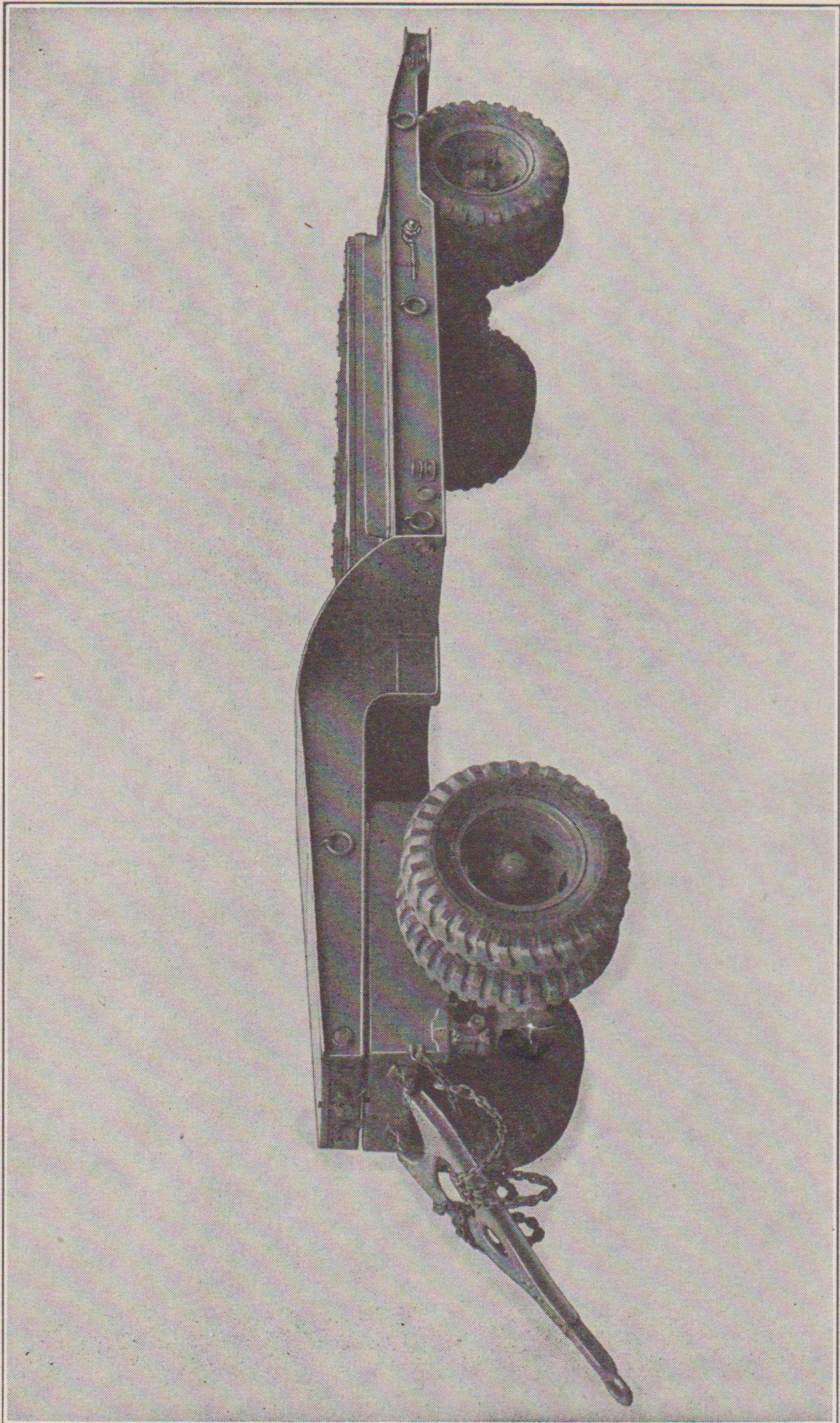


FIGURE 1. 8-TON, LOW BED, PLATFORM TRAILER

SECTION II

Description and Characteristics

1. GENERAL DESCRIPTION.—This 8-ton, low bed platform trailer is designed so that it may be pulled behind almost every type of heavy duty towing vehicle.

a. *Identification.*—(1) This vehicle is illustrated in Figure 1 and it is distinguished by the low drop-frame, and low bed type of platform. The frame is an all-welded unit of pressed, formed hi-tensile steel. A drop forged eye is riveted to a drawbar of pressed steel. Safety chains are attached to the front of the frame. The trailer is mounted on disc type dual wheels at the front and rear. The front and rear axles are of I-beam design.

(2) *Designation.*—The trailer serial and model numbers are on a plate located at the front of the right, or curb side, main frame side rail. This serial number is also stamped on the main frame side rail just below the serial plate.

b. *Mobility.*—This trailer is designed for travel on highways. Its ability to travel cross country depends upon the tractive ability of the towing unit.

c. *Body.*—(1) *Loading Skids.*—The trailer is equipped with two loading skids.

2. AXLES.—The two axles are of the one-piece I-beam type, cambered, drop forged, heat treated, chrome molybdenum steel. They are made of S. A. E. 4140 steel with a 3" x 4 $\frac{1}{4}$ " I-beam section. The spindle diameter is 2 $\frac{7}{8}$ " ground to accurate limits. The axles and wheels are equipped with heavy duty tapered roller bearings. Simple adjustments of the bearings are made through large castellated nuts and a hardened D-washer.

3. BRAKES.—The brakes are of a double anchor, two shoe, heavy duty internal expanding type. They have a 16" diameter and a 6" width. The brake lining is $\frac{3}{4}$ " thick with a breaking area of 420 square inches. The brake shoes are provided with eccentric adjustment in addition to slack adjuster on the cam shaft. This slack adjuster provides for 360° adjustment on the cam shaft. The cam shaft bearings are of the self-aligning ball bearing type. Actuation of the brakes is by air chambers mounted on the axle. The braking system includes an air tank reservoir for full emergency feature; hand parking brake taken off the cam shaft through the slack adjuster is also provided. Trailer hose connections are provided at the front with dummy couplings fastened to the trailer with chains.

4. DRAWBAR.—The drawbar is constructed of pressed steel, a drop

forged eye is riveted to it. The drawbar is hinged at the front of the gear frame by means of hinge brackets secured with bolts.

5. **ELECTRICAL SYSTEM.**—The wiring system is the 6-8 volt type. The fuse box is located at the drop in the frame on the curb side. Fuses are $1\frac{1}{2}$ amperes capacity. The lighting equipment includes four commercial clearance lights, four clearance blackout lights, one combination blackout stop and tail light at the right hand rear and one combination service stop and tail light and blackout tail light, located at the left hand rear of the trailer. The blackout switch is located on the side rail on the curb side, at the front. A jumper cable supplies current to the trailer through a socket on the curb side of the front frame member.

6. **FRAME AND LOW BED PLATFORM.**—The frame in the low bed is made up of pressed steel channels and formed steel. The unit is welded throughout. A tool box is built into the frame at the front of the trailer. There are four lashing rings on each side. An angle is welded to the rear cross member for coupling the loading skids. The flooring is of $1\frac{3}{4}$ " oak bolted into position with flat head carriage bolts.

7. **SPRINGS.**—The trailer is equipped with four springs at the front and four springs at the rear. Both the main and auxiliary springs are of the semi-elliptic type. They are constructed of silico-manganese steel. The main springs are 45" long and $3\frac{1}{2}$ " wide. The auxiliary springs are 31" long and $3\frac{1}{2}$ " wide. All leaves are nested and cupped in the center to protect a nickel steel center bolt. The springs are held in alignment to each other by four clips riveted to the leaves. The springs are secured to the axle by heat treated U-bolts. The main springs are shackled to spring hangers at each end.

8. **TIRE CARRIER.**—The tire carrier is of a cable type. The tire is pulled up to the frame, where it is fixed into position by means of stud and stud nuts, by turning a nut which protrudes through the side member. A ratchet catch holds the tire while the nut is being fastened to the stud. A safety pin is installed below the ratchet catch, to prevent accidental release of the ratchet.

9. **WHEELS AND TIRES.**—The wheels are of 20 x 9"-10" demountable, ventilated steel disc type. There are ten mounting studs, $11\frac{1}{4}$ " bolt circle, and a $6\frac{1}{8}$ " dish. Tires are 9.00-20 10-ply dual pneumatics, mud and snow type grip, front and rear.

SECTION III

Operating Instructions and Controls

1. CONTROLS.—The controls are employed according to the usual trailer-truck combination practice. The driver must become thoroughly familiar with the location and use of all control devices before attempting to operate the vehicles.

a. Hand brake.—The hand brake is located on the right side of the trailer at the drop in the frame. Turning the wheel down, in a clockwise direction, applies the brakes. The hand brake can be used as a parking brake or as a supplement to the truck brakes, when descending extremely steep grades with a heavy load.

b. Light connection.—This vehicle is equipped with a light socket at the front crossmember of the frame.

c. Blackout switch.—The blackout switch is located on the right or curb side of the main frame. There is no “off” position on the switch. It is either at a blackout position or at a standard light position. The switch is operated by means of a coin or screw driver. The flow of current is controlled at the towing vehicle.

d. Tire carrier operating nut.—The tire carrier is located on the left, or road, side of the trailer. The operating shaft protrudes through the main frame. By removing the stud nuts on the spare tire, and releasing the catch on the ratchet, the tire will fall to the ground. The tire is raised to the carrier by means of cables operated by turning the shaft nut, using the square end of the wheel wrench and handle.

2. COUPLING TRAILER TO TRUCK.—*a.* When pulling the trailer behind a truck or another semi-trailer, the draw eye at the end of the drawbar is placed in a pintle hook and locked by means of a pin provided for that purpose.

b. Safety chains.—Attach the hook end of the trailer safety chains to the two eyes provided on the rear end of the towing vehicle.

c. Jumper cable.—Connect the jumper cable between the trailer and towing vehicle.

d. Air hoses.—Connect the air hoses to the trailer. Care should be taken to be sure that the service air hose connection is hooked up with the service trailer air line and the emergency air hose with the emergency trailer air line. Both hoses and trailer connections are tagged. Switching of hoses makes impossible the release of brakes, once set.

e. Open air valves on towing vehicle.—Release the parking brake on the trailer.

3. DRIVING TRUCK AND TRAILER.—*a. General instructions.*
—The truck and trailer combination is driven in much the same manner as the straight truck. The following hints, however, should prove helpful:

(1) It is good driving practice to test the operation of the trailer brakes before stepping up to full operating speed. Check the air supply on the dash gauge. It should not be less than 60 lbs. for proper application.

(2) The operation of the lights should also be tested.

(3) When turning corners, care should be taken to allow for the fact that the trailer rear wheels turn "inside" the turning radius of the truck.

(4) When backing, the truck should be steered in the opposite direction to which it is desired that the trailer be turned.

4. BRAKING TRUCK AND TRAILER.—*a. General instructions.*
—The trailer brakes should be applied in coordination with the truck brakes. The trailer brakes should not be expected to carry the entire braking load. Such abuse will result in rapid lining wear and greatly reduce the life of the trailer brakes. The following braking procedure is recommended:

(1) Trailer brakes should be applied easily and released when they grab, as a grabbing brake is not operating with maximum efficiency. For maximum braking efficiency, keep tires just short of the skidding point.

(2) When parking the trailer for an extended period, set the hand brake.

5. UNCOUPLING TRAILER FROM TRUCK.—*a.* Set the hand or parking brake on trailer.

b. Disconnect safety chains, and place the chains at front of side rail of the main frame of trailer.

c. Disconnect jumper cable.

d. Shut off both air valves on the tractor truck.

e. Uncouple the two air lines at the front of the trailer. Use care not to permit hose coupling to drag in the dirt.

f. Couple the dummy hose couplers to emergency and service lines on trailer. Dummy couplers should be connected at all times when the trailer is not in use to prevent the entrance of foreign matter into the braking system.

g. Disconnect the drawbar eye from the pintle hook on the tractor.

h. Pull the towing vehicle ahead until the two units are separated.

SECTION IV

*Inspection — Lubrication — Adjustment*1. DAILY INSPECTIONS, WHEN IN OPERATION.—*a. Purpose.*

—(1) To insure mechanical efficiency, it is necessary that vehicles be systematically inspected at intervals in order that defects may be discovered and corrected before they result in serious damage.

(2) Cracks that develop in castings or other metal parts may often be detected upon the completion of a run, through the medium of dust and oil deposits.

(3) Suggestions toward changes in design prompted by chronic failure or malfunction of a unit or group of units; pertinent changes in inspection or maintenance methods; and changes involving safety, efficiency, economy and comfort should be forwarded through technical channels at the time they develop. Such action is encouraged in order that other organizations may profit thereby.

b. Prestarting inspection.—(1) Check brakes.

(2) Inspect tires for inflation and casing injuries.

(3) Check lights.

(4) Check tools and equipment.

(5) Check to see that draw eye on trailer is properly hooked and locked.

(6) Check pintle hook on towing vehicle.

(7) Check safety chains.

c. Inspection during operation.—(1) During operation, the driver should be alert to detect unusual sounds, noises or driving characteristics which indicate abnormal functioning of the unit.

(2) Only under exceptional circumstances should a trailer be operated after indications of trouble have been observed. When in doubt, the vehicle should be stopped and assistance obtained. Inspection during operation applies to the entire vehicle and should be emphasized throughout the driving instruction period.

d. Inspection at the halt.—At each halt the operator should make careful inspection of the vehicle to determine its general mechanical condition. Minor defects detected during the march together with defects discovered at the halt should be corrected during the halt, and proper disposition of the vehicle should be made so that unnecessary delay may be avoided and major failure prevented.

e. Inspection after operation.—At the conclusion of the day's operation an inspection should be made similar to that made at halts, but more thorough and detailed. The inspection should be followed by preventive maintenance. If defects cannot be corrected, they should be

reported promptly to the Chief of section or other designated individual. The following points should be covered:

- (1) Check springs and spring hangers.
- (2) Check axle and axle U-bolts.
- (3) Check wheel studs, tighten loose stud nuts.
- (4) Inspect frame for cracked welds.
- (5) Check spare wheel and tire; secure replacement if necessary.
- (6) Drain moisture from the reserve air tank, by means of the pet-cock at the bottom of the tank.

2. MONTHLY LUBRICATIONS.—*a. Lubrication.* (See lubrication chart for the type of lubricant, when to lubricate, and the method to follow in lubricating the assemblies and sub-assemblies listed below.) (Figure 4.)

- (1) Fifth wheel circle plate.
- (2) Fifth wheel bolster plate.
- (3) Drawbar hinge.
- (4) Underconstruction, includes lubrication of:
 - Spring shackles
 - Brake shoe cam
 - Brake anchor pin bushings
 - Cam shaft bracket
 - Slack adjuster
 - Anchor plate bearings
- (5) Wheel bearings.
- (6) Parking brake, includes lubrication of:
 - Cross shaft journal
 - Parking brake hand screw
 - Parking brake rod clevis pins

3. MECHANICAL INSPECTION AND ADJUSTMENT.—*a. Bolster plate.* Examine for sheared bolts. Replace.

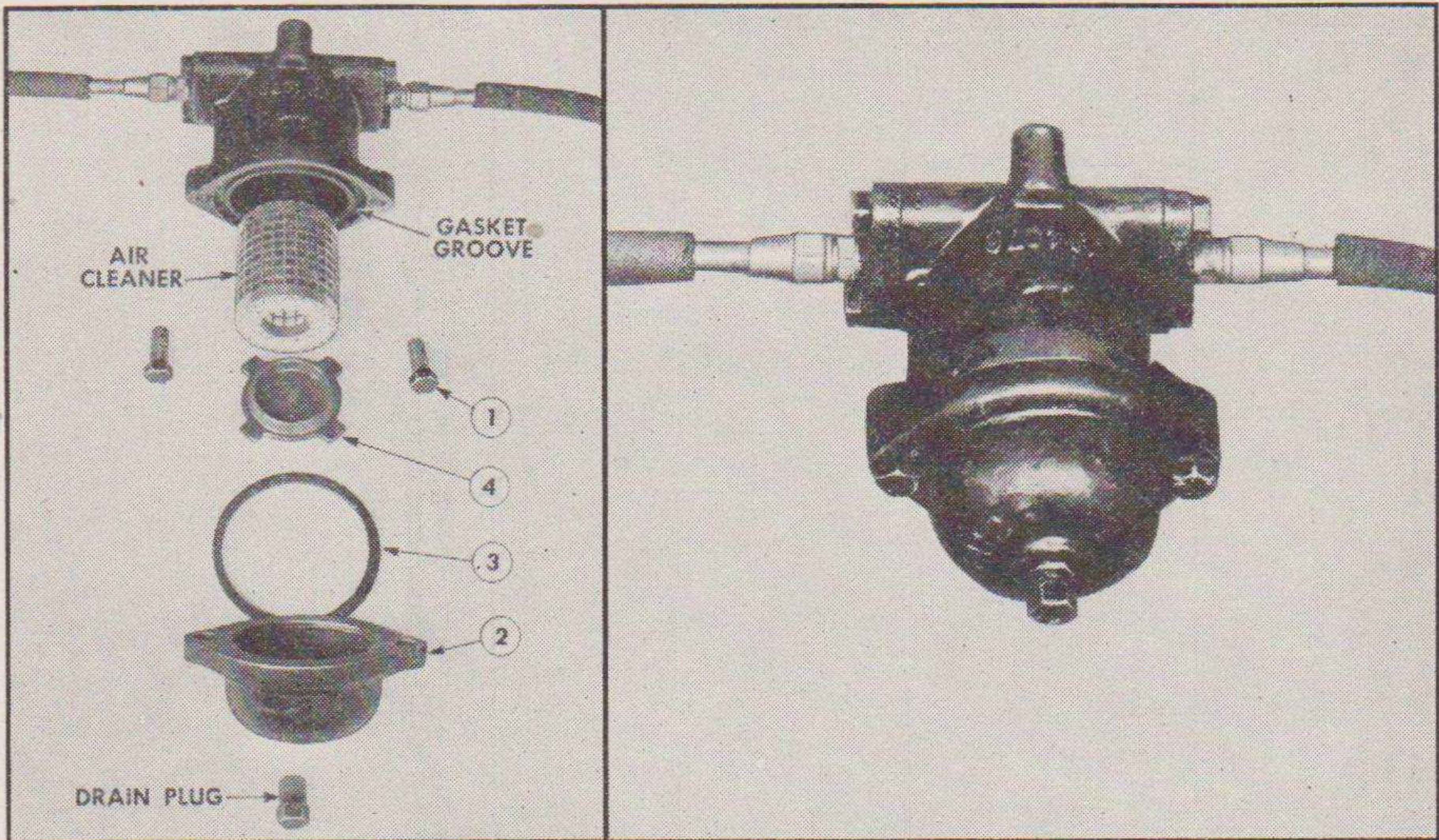
b. Drawbar hinge.—Wobbly drawbar—check for excess play. Rebush.

c. Lights.—Check all lights and wiring for operation.

d. Underconstruction.—(1) *Axle:* Check alignment.

(2) *Springs and shackles:* Check for broken spring leaves, worn shackle bolts or bushings. Replace springs, replace shackle bolts or bushings.

(3) *Brakes:* Check linkage and operation. Tighten loose hose line connections. Check front end couplings. Adjust brake for equalization at slack adjusters if required.

FIGURE 3. AIR FILTER—
DISASSEMBLEDFIGURE 2. AIR FILTER—
ASSEMBLED

Drain the moisture from the air filter about every 2000 miles. (See Figure 2.)

Remove the filter cartridge every 10,000 miles and wash in gasoline. (See Figure 3.)

(4) *Radius rods:* Check for worn bushings and bearings. Check adjustable radius rod and tighten pinch bolts.

e. Wheels.—Tighten wheel nuts. Check bearing adjustment by removing hub cap. Adjust if necessary.

4. EVERY FOUR MONTHS.—or every 5,000 miles (oftener under hard service conditions).

a. Wheels and Bearings.—Remove, wash and repack and adjust bearings.

b. Brakes.—Check lining and drums; adjust brakes for equalization. Lubricate brake cams and rollers with lubriplate.

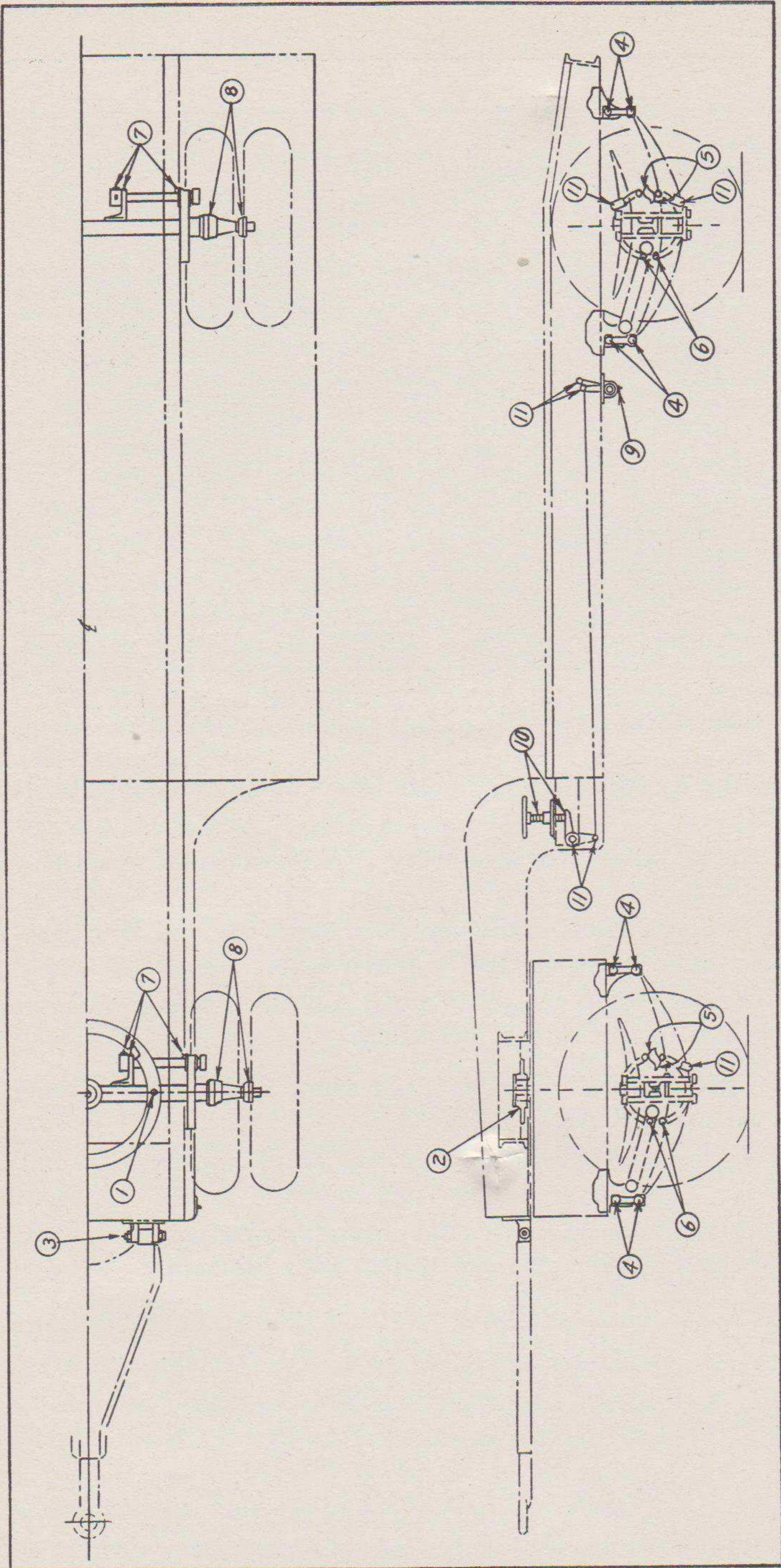


FIGURE 4. LUBRICATION CHART

<i>Location</i>	<i>Type of Lubricant</i>	<i>Method of Application</i>	<i>When To Lubricate</i>
1. FIFTH WHEEL CIRCLE PLATE	WB	Hand or Power Grease Gun	Every 1,000 Miles.
2. FIFTH WHEEL BOLSTER PLATE	CG	Hand or Power Grease Gun.	Every 1,000 Miles.
3. DRAWBAR HINGE	CG	Hand or Power Grease Gun.	Every 1,000 Miles.
4. SPRING SHACKLES	CG	Hand or Power Grease Gun.	Every 1,000 Miles.
5. BRAKE SHOE CAM	CG	Brush or Hand Paddle.	Every 1,000 Miles.
6 BRAKE ANCHOR PIN BUSHINGS	PO	Oil Can.	Every 1,000 Miles.
7. CAM SHAFT BRACKET	CG	Hand or Power Grease Gun.	Every 1,000 Miles.
7. SLACK ADJUSTER	CG	Hand or Power Grease Gun.	Every 1,000 Miles.
7. ANCHOR PLATE BEARINGS	CG	Hand or Power Grease Gun.	Every 1,000 Miles.
8. WHEEL BEARINGS	WB	Hand Paddle.	Every 5,000 Miles.
9. CROSS SHAFT JOURNAL	CG	Hand or Power Grease Gun.	Every 5,000 Miles.
10. PARKING BRAKE HAND SCREW	WB	Brush or Hand Paddle	Every 2,000 Miles.
11. PARKING BRAKE ROD CLEVIS PINS	OE 10	Oil Can.	Every 5,000 Miles.

NOTE: All Lubrication Points Are Painted Red.

KEY

OE 10—OIL, ENGINE, SAE 10

CG—GREASE, General Purpose

No. 1 above 32°

No. 1 or No. 2 above (plus 32° to plus 10°)

No. 0 (below 10°)

PO—OIL, Penetrating

SECTION V

Tools and Equipment

1. INTRODUCTION.—Because the trailer has very few wearing parts, the tools have been kept to a minimum. Moreover, the trailer is operated with trucks carrying tools suitable for general care, maintenance and preservation. Accessories should not be used for purposes other than as prescribed and when not in use should be stored in the places or receptacles provided.

2. TOOLS.—Tools issued with the vehicle are illustrated in Figure 5.

a. *Kit.*—Included in the tool kit assembly are the following:

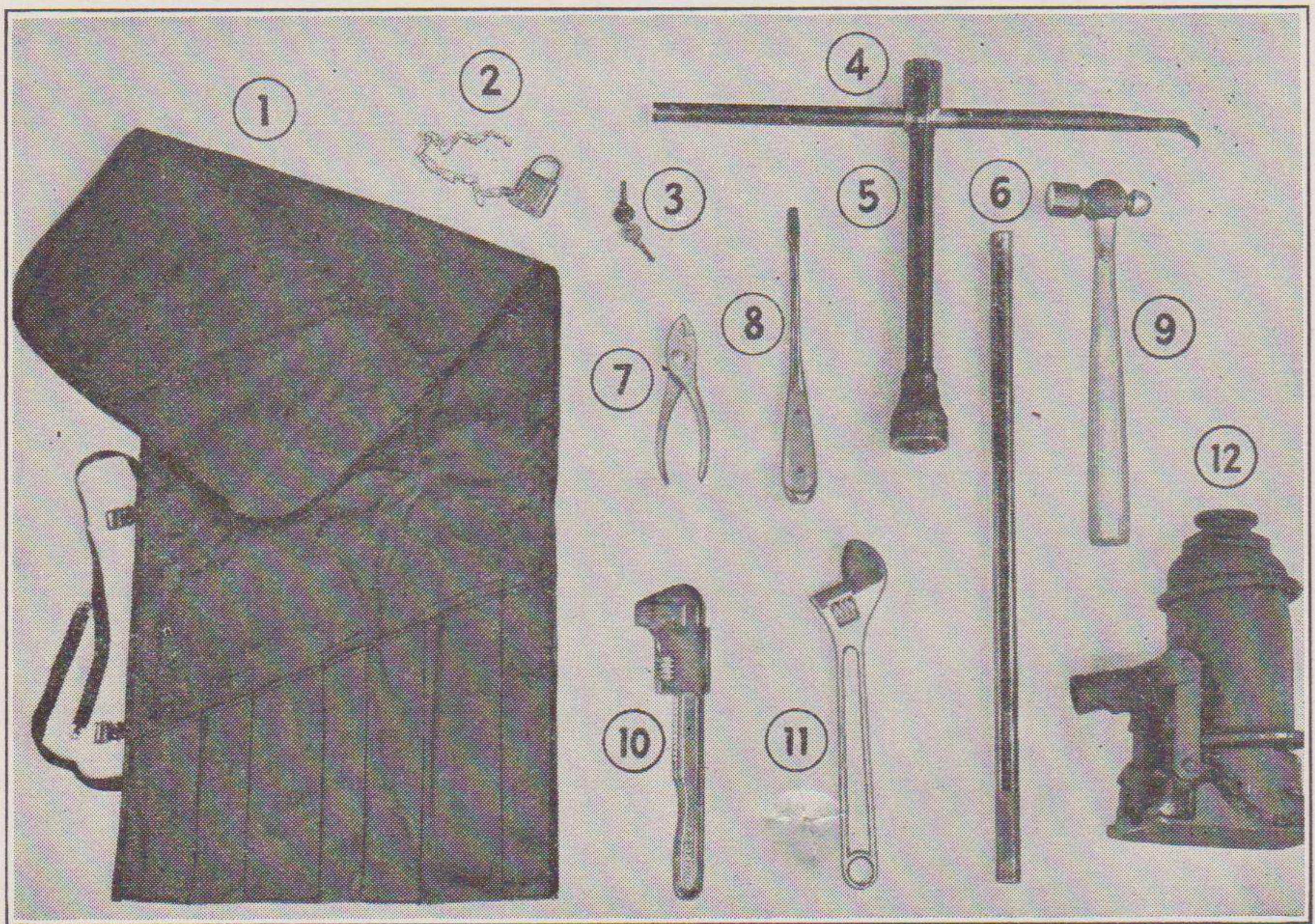


FIGURE 5. TOOLS

<i>Item</i>	<i>Quantity</i>	<i>Remarks</i>
(1) Kit, olive drab roll	1	
(2) Lock for tool box	1	
(3) Keys for lock	3	
(4) Wrench handle, wheel nut	1	
(5) Wrench, wheel nut	1	
(6) Handle, hydraulic jack	1	
(7) Pliers, combination	1	6"
(8) Screw driver	1	5/16" x 6"
(9) Hammer, ball pean	1	1 lb.
(10) Wrench, monkey	1	

- (11) Wrench, adjustable 1 3/4" box end
- (12) Jack, hydraulic 1

3. EQUIPMENT.—The equipment issued with this vehicle is illustrated in Figure 6 and contains the items listed below:

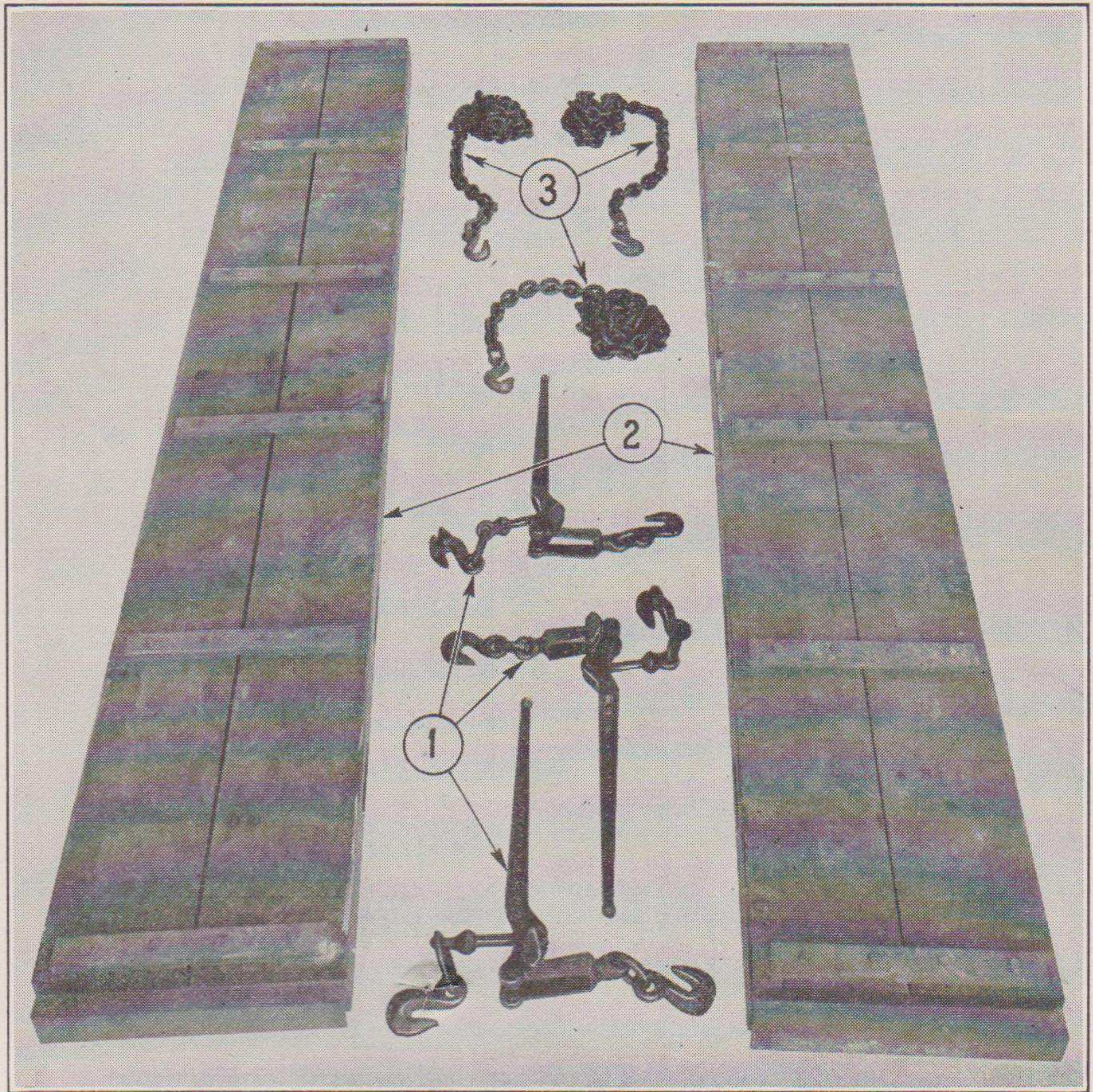


Figure 6. Equipment

Item	Quantity	Remarks
(1) Load binder	3	
(2) Loading skids	1 pair	8-ton
(3) Log chains	3	
(4) Spare tire	1 each	(Not Illus.)
(5) Spare tube	1 each	(Not Illus.)
(6) Spare wheel	1 each	(Not Illus.)

SECTION VI

Shipment and Storage

1. SHIPMENT BY RAIL.—*a. General Procedure.*—In case of shipment of individual vehicles or where the organization does not accompany its transportation, vehicles are turned over to the Quartermaster for shipment. In such a case the Quartermaster is responsible for furnishing the necessary personnel and material for loading and blocking equipment. Vehicles are usually shipped on flat cars (36' to 60' long), gondolas (36' to 60' long), and these types of cars with wooden floors are most desirable because of the ease of loading and blocking.

b. Preparation of railroad cars.—Transportation must be inspected to determine if the cars are in suitable condition to carry the load safely to its destination. Solid floors are required. All loose nails, debris and projections not an integral part of the car and the prescribed blocking must be removed.

c. Preparation of vehicles for loading.—If troops are not traveling with their vehicles, all loose property and tools should be packed and secured in boxes.

d. Facilities for loading.—Whenever possible vehicles should be loaded utilizing permanent end ramp and platform. Movement from one flat car to another along the length of the train is made possible by cross-over plate, or a spanning platform after dismounting the car hand brake. An improvised ramp can be made from railroad ties.

e. In securing or blocking a vehicle, three motions (lengthwise, sidewise and bouncing) must be prevented.

(1) Material for blocking on wood floor cars should be not less than 2" x 4". Blocks cut from material 6" x 6" or 8" x 8" are preferable. Ordinarily straps should be placed over the axle and secured to the floor in lieu of damaging the floor by inserting hooks. Canvas, cloth or burlap should be placed between the rubber and the blocks to reduce wear. Blocking should be snug to eliminate play. In case of metal floors, blocking between the sides and end walk is required.

(2) The trailer parking brake should be set.

(3) Equipment moving from manufacturer to arsenal or proving grounds, or from arsenal or proving grounds to army post, or individual units moving from one army post to another *must* be placarded "DO NOT HUMP."

(4) Further details on loading are to be found in "Special Supplement Containing Rules Governing the Loading Mechanized and Motorized Army Equipment"; also, "Major Calibre Guns for the United States Army and Navy, on Open Top Equipment" published by the

Association of American Railroads, Operations and Maintenance Department, April 1, 1941.

2. **SHIPMENT BY WATER.**—Preparation is, with certain modifications, the same as that indicated for rail shipment if the vehicles are accompanying the troops. Special attention must be given to rust prevention, however. All exposed unpainted metal and working parts should be greased.

3. **LIMITED STORAGE.**—Vehicles in this category are those which are ready for immediate service but not used for less than 30 days. The vehicles must be cleaned and lubricated thoroughly before they are placed in storage and the various types of nonmetallic materials must be protected according to existing regulations. Brakes will not be set.

4. **INDEFINITE STORAGE.**—Vehicles in this category are those which will not be required for service for an indefinite period.

a. Storage conditions.—Vehicles will be stored in closed buildings or covered sheds if available. In lieu thereof, cover by tarpaulin. Storage surface should be solid, free from crushed rock, deep dust and oil surfacing and properly drained. Vehicles should be raised and blocked to keep the tires off the ground. If not completely serviced and maintained, each vehicle is tagged to indicate what repairs are required before it is returned to service.

b. Parts removal.—Tires are removed and stored as indicated below.

c. Tires.—Pneumatic tires and tubes should be kept in a cool, dark, dry place. Used casing should be repaired, cleaned and wrapped in burlap, paper, or cloth, and stored vertically side by side. Tubes should be deflated, removed from the casing, cleaned, repaired, folded loosely and stored in pasteboard cartons. Care should be taken that there are no sharp folds and that a small amount of air should be left in the tube to keep creases from forming.

d. Bodies.—All exposed metal parts of the body and chassis should be slushed thoroughly, except, of course, the wooden floor. Oil drained from a crank case, gear oil thinned with crank case oil, or oil purchased for the purpose may serve as slushing oil.

e. Equipment.—All tools and accessories will be repainted or regreased if necessary.

f. Inspection of vehicles in storage.—Inspection of vehicles in storage will be made not less than once each month, under the direct supervision of a commissioned officer, to see that instructions are being complied with.

PART II

MAINTENANCE MANUAL

SECTION I

Safety Instructions

1. SAFETY INSTRUCTIONS.—*a.* Because the trailer is a relatively unstable unit, greater than ordinary precaution must be followed if accidents are to be avoided. Therefore, before working on the wheel assembly, springs and axles of this unit, it is strongly recommended that the following procedure be followed at all times.

b. In changing the axle on the front gear, put the jacks on solid wood or other material that will make a sound footing. Use four jacks, one on each corner; do not attempt to crawl under the job when jacked up unless blocking is placed under the frame to catch it in case it should drop. Follow the same procedure in changing the rear axle, but it is only necessary to use two jacks.

c. When raising the front end of the unit, NEVER connect the chains to the main unit frame. Rather connect them around the gear frame and lift the two units together.

(1) However, when attempting to separate the main frame from the gear an exception will be made,—the chains should then be fastened to the lashing rings on the front of the main frame.

SECTION II

Axles

1. **AXLE ALIGNMENT, FRONT.**—*a.* Jack or hoist up front axle, remove the wheels, measure the distance between center of front top shackle Alemite to near edge of axle spindle—the measurement on both sides should be identical. (Refer to Figure 7.)

b. If an adjustment is required, use the adjustable radius rod.

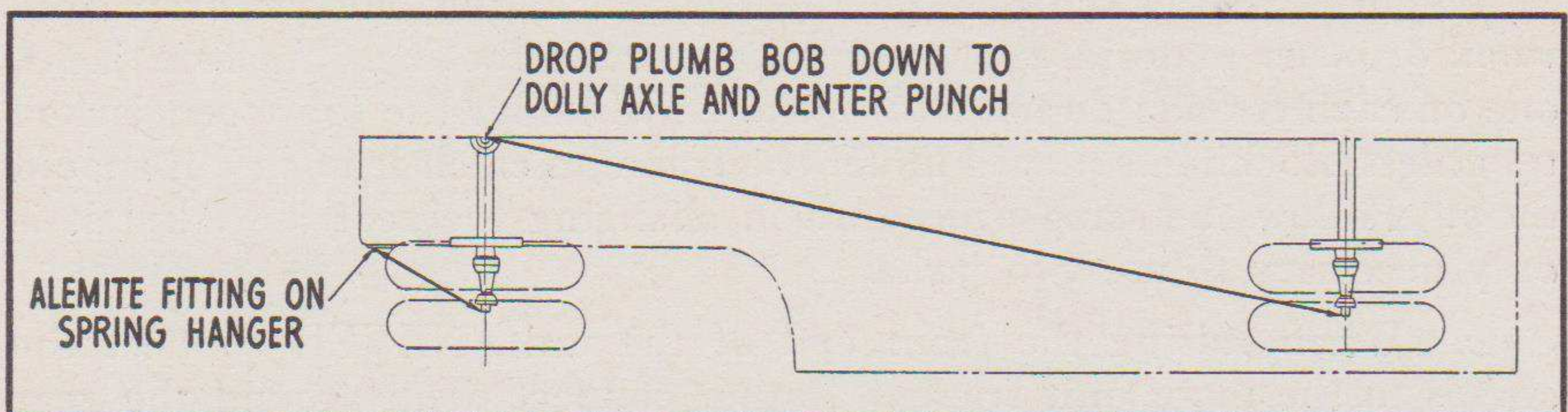


FIGURE 7. FRONT AND REAR AXLE ALIGNMENT

2. **AXLE ALIGNMENT, REAR** (Refer to Figure 7).—*a.* Jack up the trailer, using two jacks, and remove the wheel and hub assemblies.

b. Level the rear end of trailer by adjusting the jacks.

c. Drop a plumb bob down through the hole in bolster plate located under the tool box cover. (Refer to Figure 33.)

d. Place center punch mark on front axle, where plumb bob comes to rest.

e. Using a steel tape, measure the distance from center punch mark to near edge of the rear axle spindle at both sides of the trailer. Distance from center punch mark to edge of the rear axle on the right or curb side of the trailer should be not less than $\frac{1}{8}$ " or more than $\frac{1}{4}$ " shorter than the same distance on the road side—anything within this range is acceptable.

f. If adjustment is required, use the adjustable radius rod. Loosen the two pinch bolts on the rod and turn the hex adjusting nut to either shorten or lengthen distance between near edge of the rear axle spindle and center punch mark, as required. The ideal distance is one which is $\frac{1}{8}$ " shorter, from center punch mark to near edge of rear axle spindle, on the curb side than on the road side.

g. Once the required distance has been secured turn the pinch bolts on the adjustable radius rod down tight to fix the position of the rear axle.

3. **DISASSEMBLY TO CHECK AXLE CAMBER OR BENT AXLE.**

—*a.* Remove wheel assembly.

b. Place jacks under both sides at the rear of the body rather than under the axle, or hoist from rear crossmember inasmuch as a jack under the axle will interfere when checking for camber.

4. CHECKING FOR BEND (Refer to Figure 8).—*a.* Place the axle gauge in position on the front side of the axle.

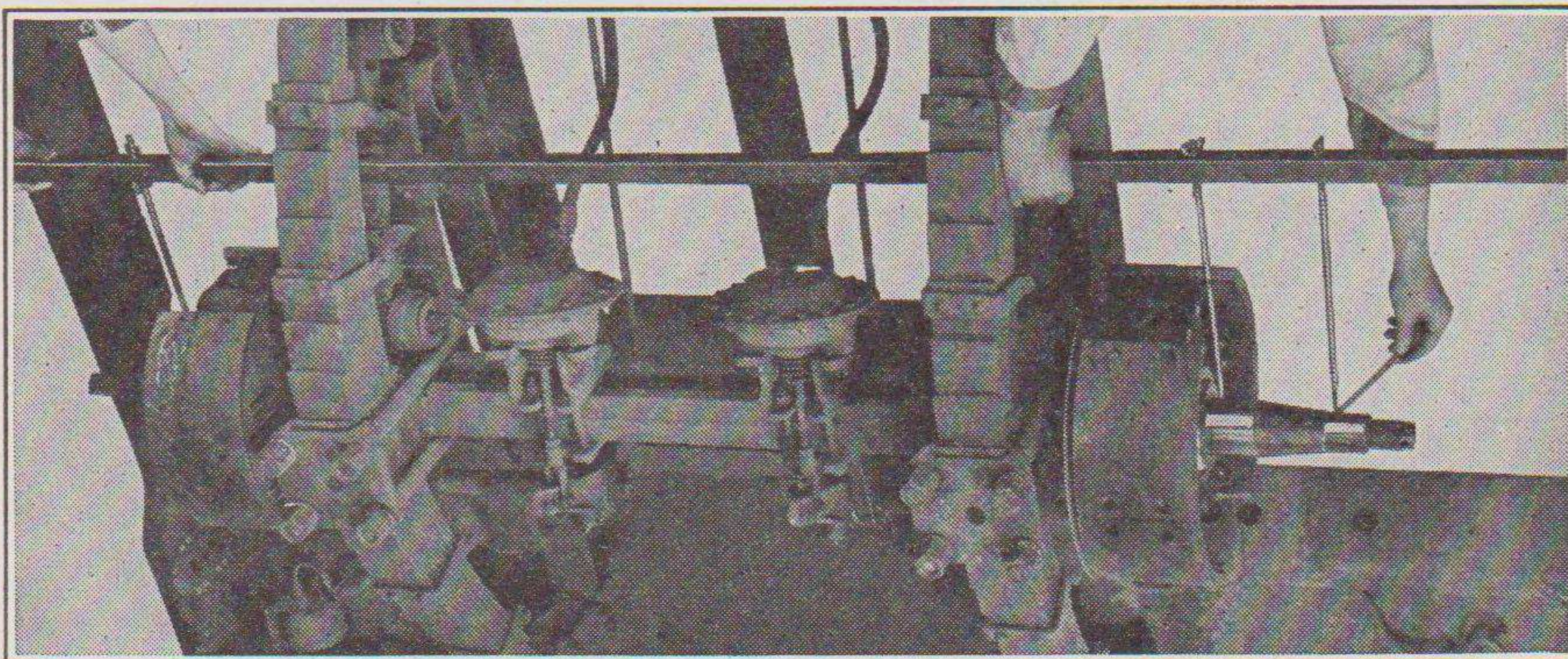


FIGURE 8. CHECKING AXLE FOR BEND

b. With the single pronged end of the gauge held firmly against the inner bearing surface, adjust the double prongs on the other end of the gauge until they contact the inner and outer bearing surface.

c. Now move the gauge over to the rear side of the axle. If either of the two prongs fails to make contact, a bent spindle is indicated. Use a feeler gauge to determine the amount of the bend. If it is in excess of .002 replace the axle.

d. If checking both sides of one spindle reveals no bend in the axle, turn the gauge end for end and check the other spindle without disturbing the setting of the prongs.

e. If there is clearance at either bearing surface, check with a feeler gauge. If the prongs are in contact at both points, the axle is not bent.

5. CHECKING FOR CAMBER (Refer to Figure 9).—*a.* Set the points of the axle gauge in exactly the same position on the axle and in the same manner as outlined in points *a* and *b* of Checking for Bend.

b. Place the gauge directly under the axle.

c. Clearance will exist between the inner prong and the bearing surface. Clearance should not exceed .080 or be less than .060. If camber is not within the proper limits, replace the axle.

6. AXLE REPLACEMENT (Refer to Figure 10).—*a.* Hoist up the trailer at the rear of the body and remove wheel assemblies.

b. Place a mobile jack at center of axle or a wood horse as a safety device and as a means to move axle out.

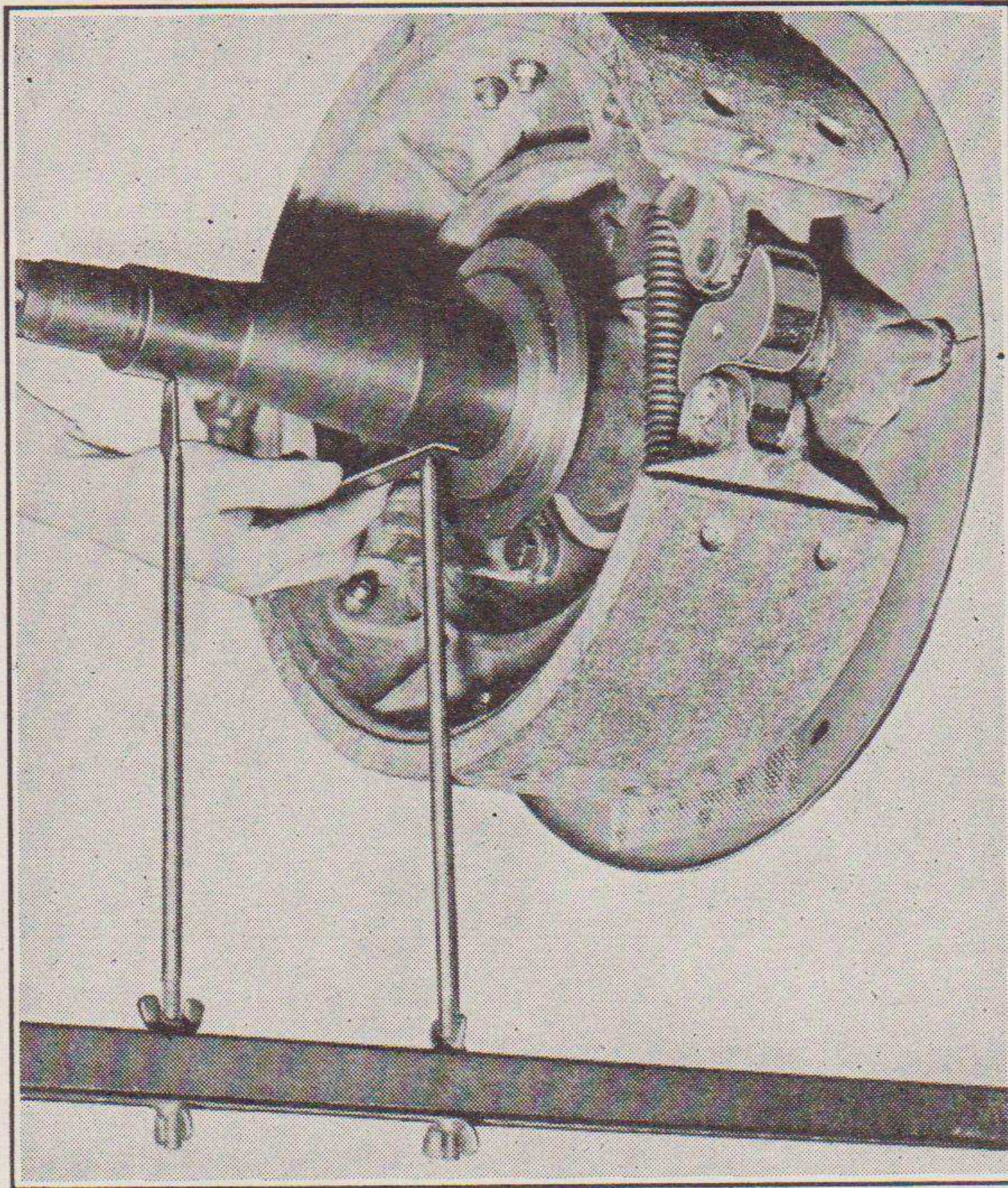


FIGURE 9. CHECKING FOR CAMBER

- c. Remove the spring "U" bolts. Remove the rear spring shackles, allow both springs to drop at rear.
- d. Disconnect the two air hoses leading from emergency relay valve to axle brake chambers.
- e. Disconnect the parking brake rods at the slack adjuster.
- f. Using the mobile jack or wood horse, slide or pull the axle out.
- g. Strip the axle of all brake operating parts by removing the bolts holding the brake chambers and cam brackets to the axle.
- h. Mark an "L" on the left hand brake assembly and an "R" on the right hand assembly for identification when reassembling. Remove the brake assemblies by taking out the eight bolts holding brake adapter mounting plate to axle flange on both sides. (Figure 11.) Lift the complete assembly off axle.
- i. When installing a new axle make sure the $\frac{1}{2}$ " dowel pins are in the axle dowel pin holes, and then reverse the above procedure.

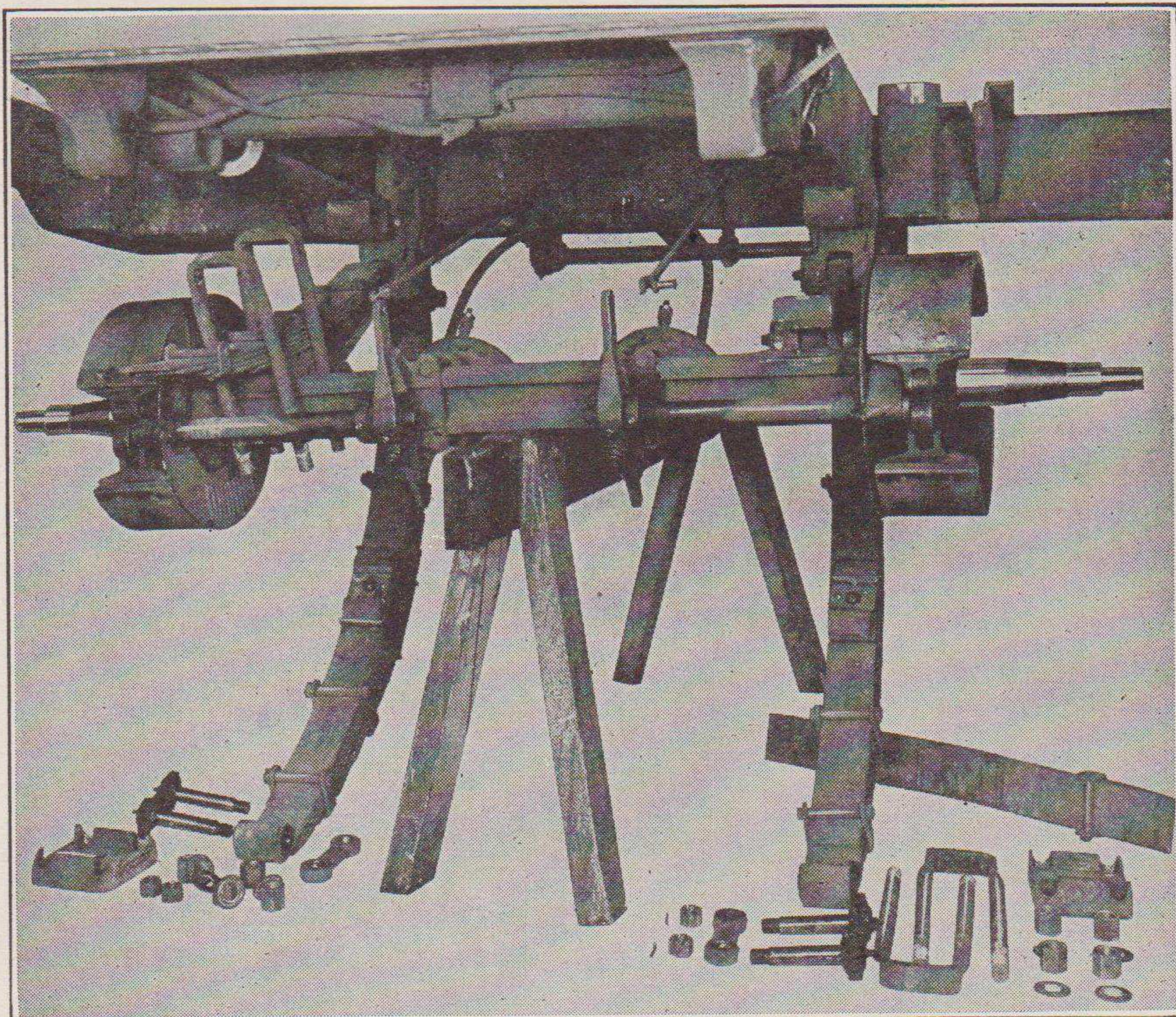


FIGURE 10. REPLACING AXLE

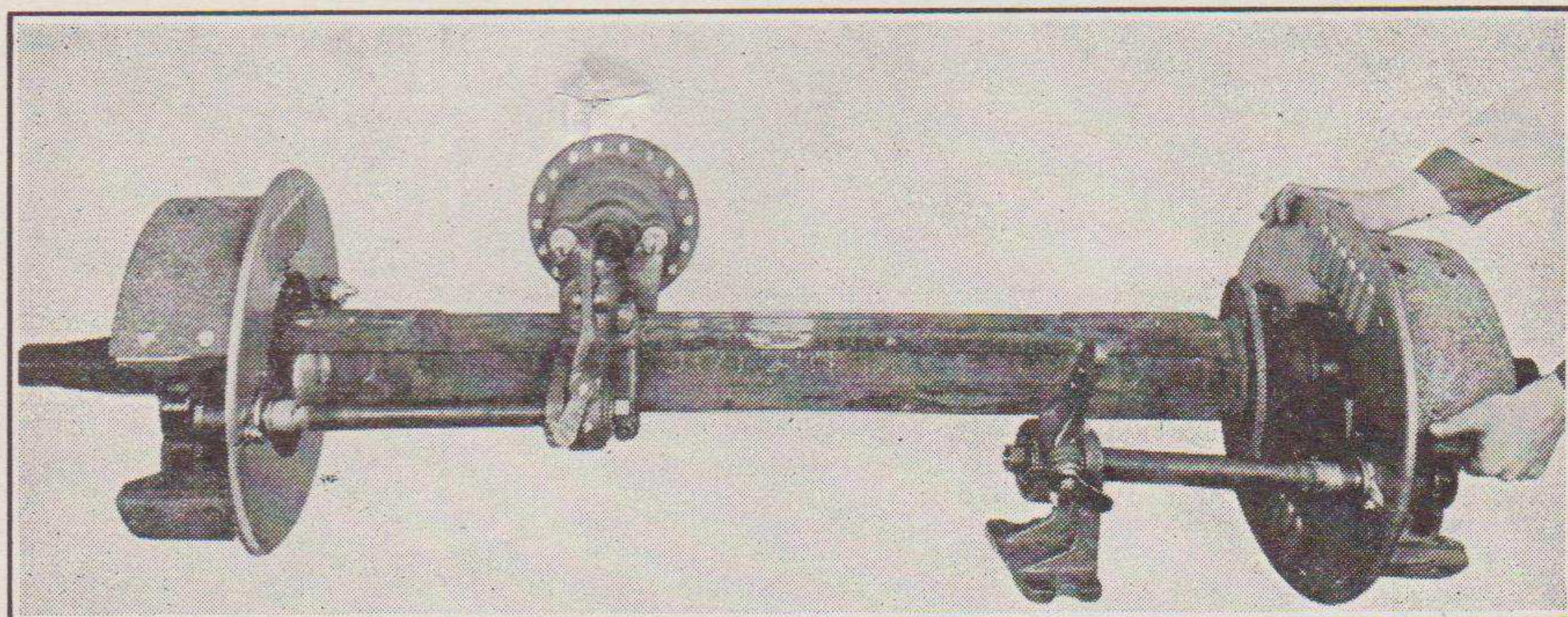


FIGURE 11. REMOVING BRAKE ASSEMBLIES

j. CAUTION: MATCH THE TWO DOWEL PINS IN BOTH THE RIGHT AND LEFT SIDES OF AXLE—ONE ON TOP OF AXLE BETWEEN AUXILIARY SPRING CHAIR AND AXLE, ONE IN BOTTOM BETWEEN SPRING CHAIR AND AXLE AT EACH END OF THE AXLE.

7. DRILLING DOWEL PIN HOLES IN REPLACEMENT AXLES (Refer to Figure 12).

a. Place axle on two wood horses and follow layout procedure in the reference figure.

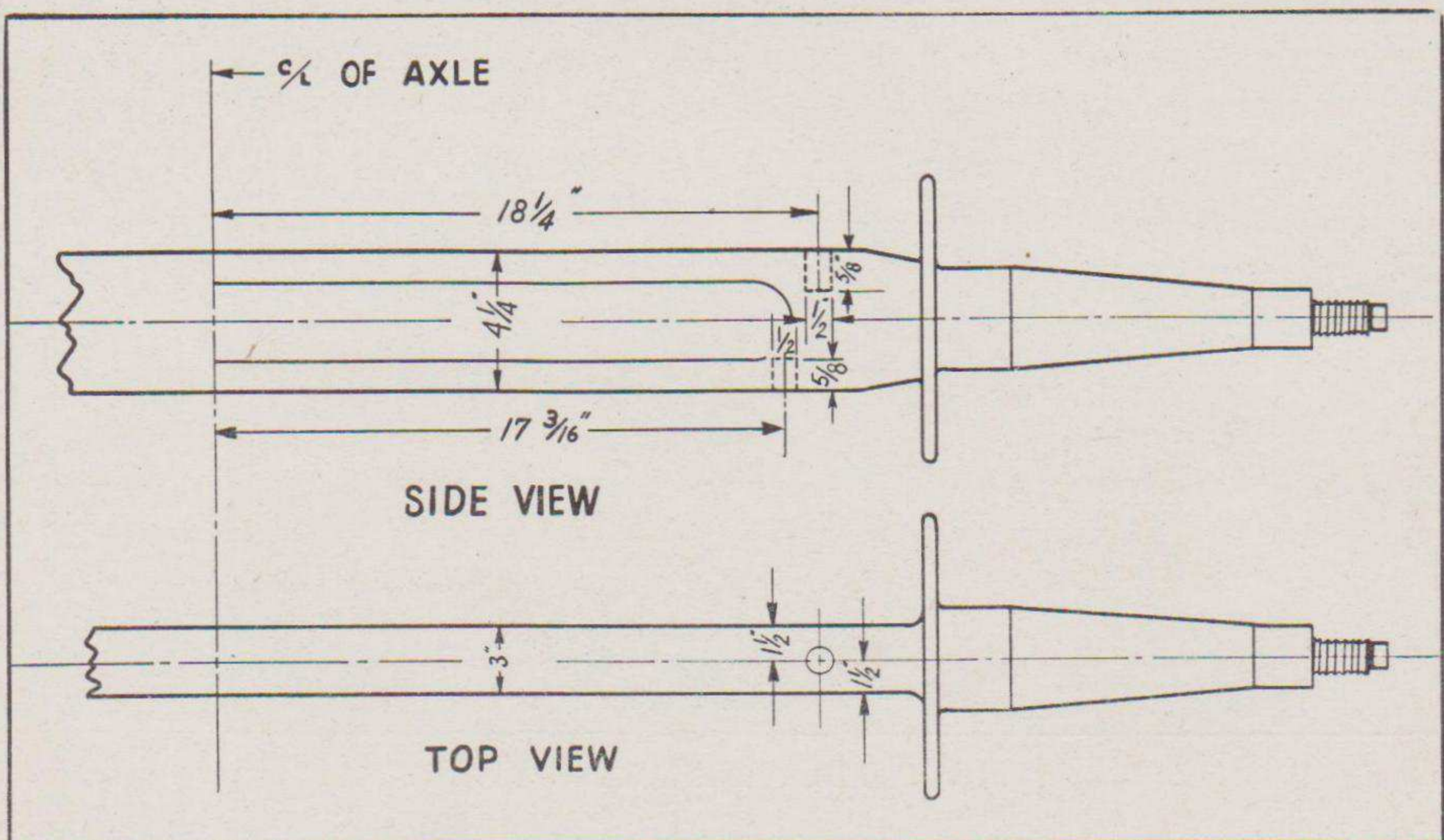


FIGURE 12. AXLE LAYOUT DIAGRAM

8. AXLE—Service Diagnosis & Remedy

SYMPTON AND PROBABLE CAUSE

PROBABLE REMEDY

HARD PULLING—“WANDERING”

- | | |
|-------------------|---|
| 1. Out of line. | 1. Re-align axle by means of adjustable radius rod. |
| 2. Bent axle. | 2. Replace. |
| 3. Out of camber. | 3. Replace. |

INSIDE TIRE WEAR

- | | |
|-------------------|-------------|
| 1. Out of camber. | 1. Replace. |
|-------------------|-------------|

SCUFFED TIRES (Both Sides)

- | | |
|-----------------|-------------------|
| 1. Out of line. | 1. Re-align axle. |
| 2. Bent axle. | 2. Replace. |

SCUFFED TIRES (One Side)

- | | |
|-----------------|--|
| 1. Bent axle. | 1. Replace. |
| 2. Loose wheel. | 2. Tighten wheels and adjust bearings. |

SECTION III

Brakes

1. MINOR BRAKE ADJUSTMENT.—*a.* Jack up both wheels.
b. Turn slack adjuster wing wrench or adjusting nut at each wheel clockwise, until the wheel cannot be turned.
c. Back the adjusting wing wrench off two notches, or enough more so that no drag is felt on the wheel.
2. BRAKE RELINING.—*a.* Visual inspection of brake shoes and linings can be made without removing wheels from the axle. Simply remove the two dust shields, which are bolted to brake adapter with six $\frac{1}{4}$ " cap screws. This exposes the assembly to check for lining thickness, grease on the lining, etc. (Refer to Figure 13.)

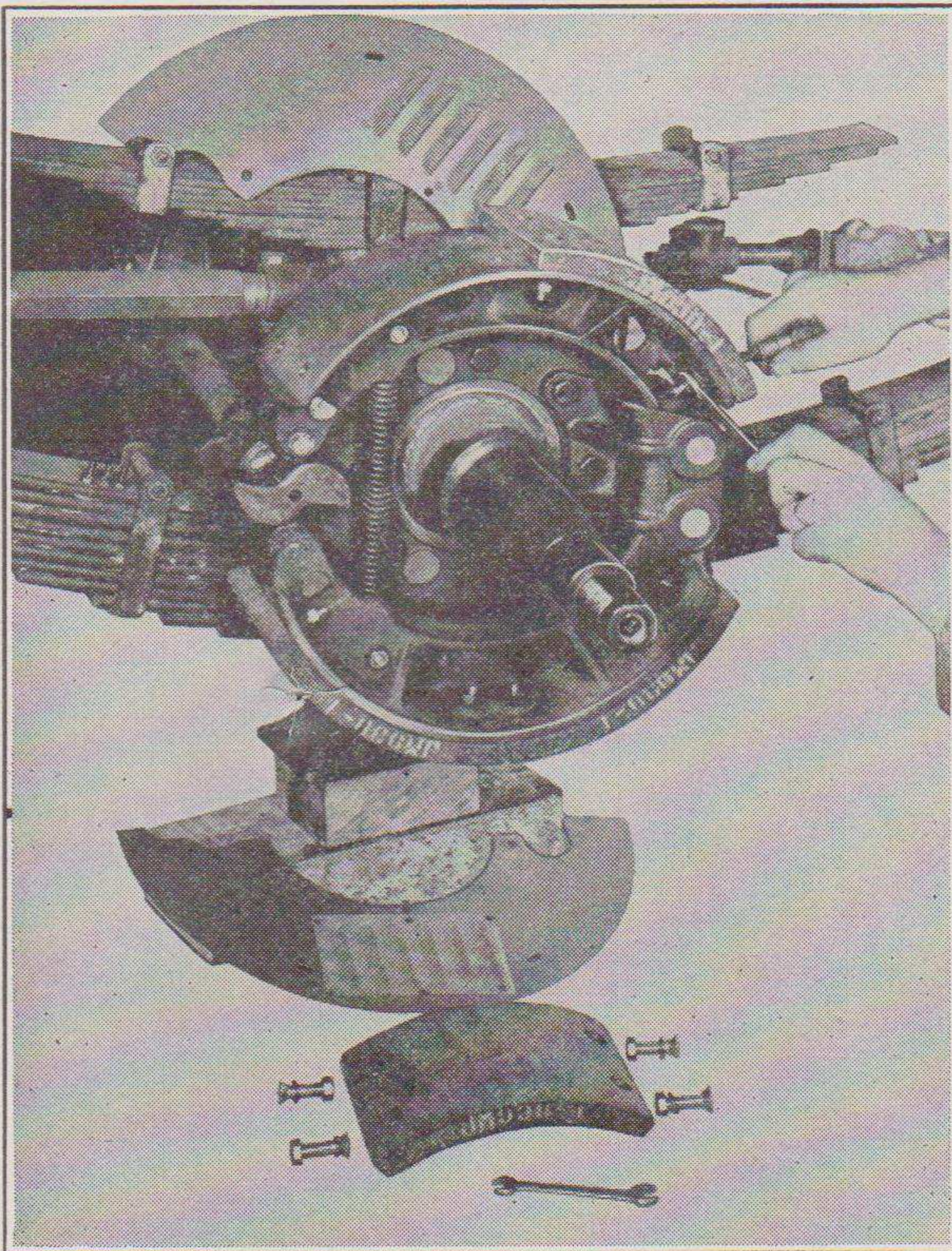


FIGURE 13. RELINING BRAKE SHOES

b. It is essential that all four brake blocks be replaced when relining.

c. If inspection reveals the necessity for new lining proceed as follows:

(1) Remove wheel, hub and drum as an assembly. (See instructions for removing hub assembly in Wheel Section.)

(2) Remove all four blocks of brake lining using a wrench and screw driver on the four brass nuts and screws holding each section to shoe. (Refer to Figure 13.)

(3) Clean all foreign matter from the shoes and install new brake blocks.

(4) Adjust the brakes in accordance with the major brake adjustment procedure.

3. BRAKE DRUM REPLACEMENT—*a.* Brake drums should be replaced when cracked or badly scored. Heat checking, unless severe, does not call for brake drum replacement.

(1) Remove wheel and hub assembly.

(2) If changing drum on the front wheel, block the wheel at both sides and remove the drum by removing the ten nuts holding it to the hub assembly.

(3) If changing a drum on the rear hub, place wheel wrench handle in hub vents, and remove the ten nuts holding drum to hub. (Refer to Figure 14.)

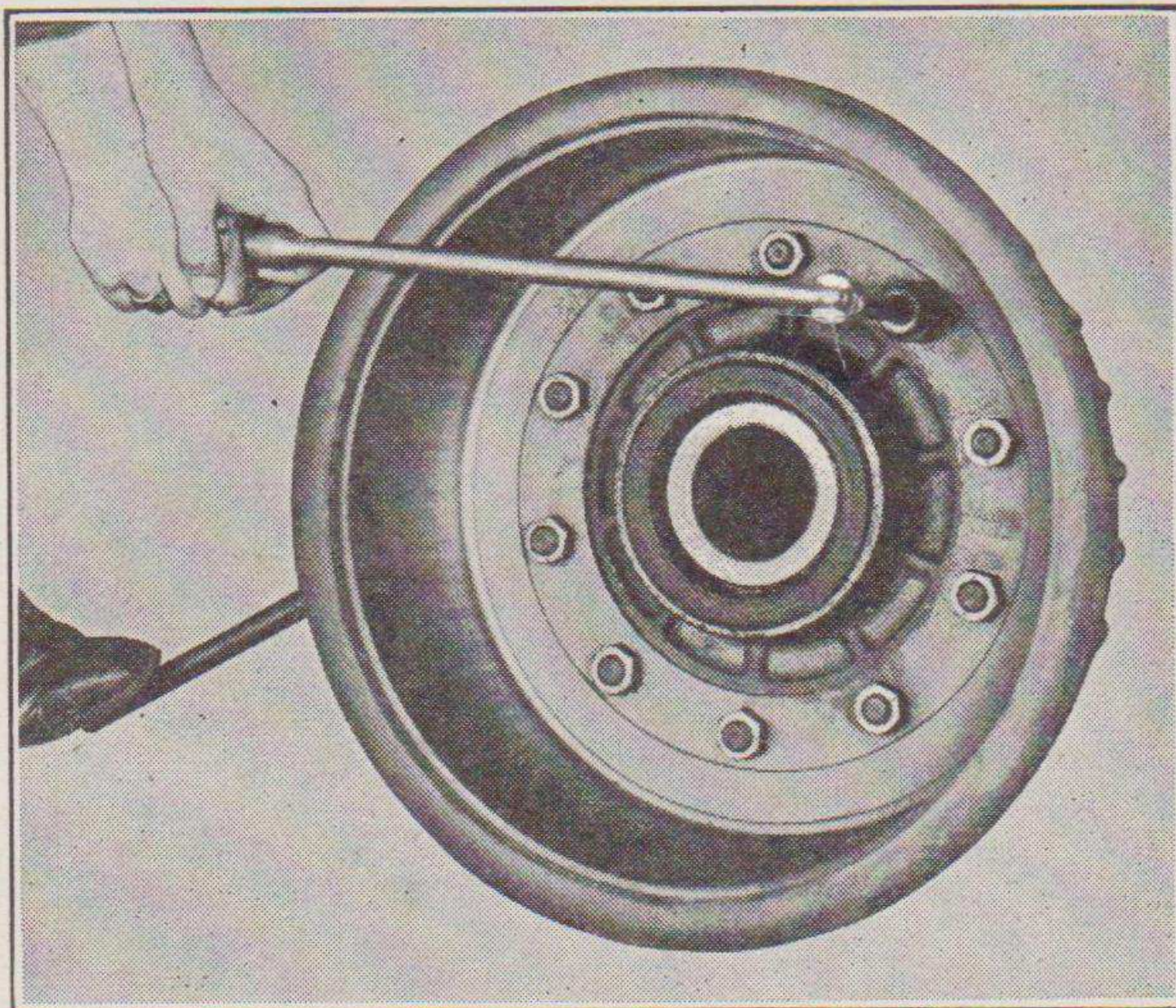


FIGURE 14. REPLACING BRAKE DRUMS

(4) Remove any rust or dirt in the drum pilot and install the new drum.

(5) Successively tighten opposite nuts to bring the drum down evenly to prevent its cocking on the pilot.

(6) Prick punch each nut at two opposite points to lock in position.

4. MAJOR BRAKE ADJUSTMENT.—*a.* The procedure which follows applies only when new linings or drums have been installed.

(1) Loosen both nuts on both anchor pins so that the anchor pins can be moved freely.

(2) Replace the wheel and drum assembly. If it fails to move on freely, slack off on the slack adjusters through counter-clockwise movement of the slack adjuster wing wrench and centralize anchor pin eccentrics.

(3) With the wheel in place, turn the slack adjuster wing wrench clockwise until the shoes are tight in the drum.

(4) Turn the eccentric anchor pin either to right or left as you tighten up on the slack adjuster until the brake shoes are centralized in the drum.

(5) Using a feeler gauge, set the clearance at .010 at the eccentric end and .015 at the cam end of the brake shoes.

(6) Tighten lock nuts on the anchor pins while holding anchor pins firmly in position with a wrench.

5. HAND PARKING BRAKE (Refer to Figure 15).—*a.* The hand parking brake is located on the right side, at the drop in the frame. Turning the wheel in a clockwise direction applies the brakes.

b. Replacing the wheel.—(1) Drive the pin (23), in the wheel hub out and tap the wheel off the screw (26).

c. Replacing screw.—(1) No attempt should be made to straighten a bent screw.

(2) Remove the two bolts (10) from the bell crank (9).

(3) Remove the wheel from the screw and turn the bell crank off the screw.

d. Replacing cross shaft levers.—(1) Remove pinch bolts (19) holding levers to cross shaft.

(2) Remove journal from one end of shaft, disconnect brake rods, and drive the levers off.

6. ADJUSTING HAND PARKING BRAKE.—*a.* Usually the hand parking brake requires little attention, the minor brake adjustment taking care of parking brake adjustments. However, when an adjust-

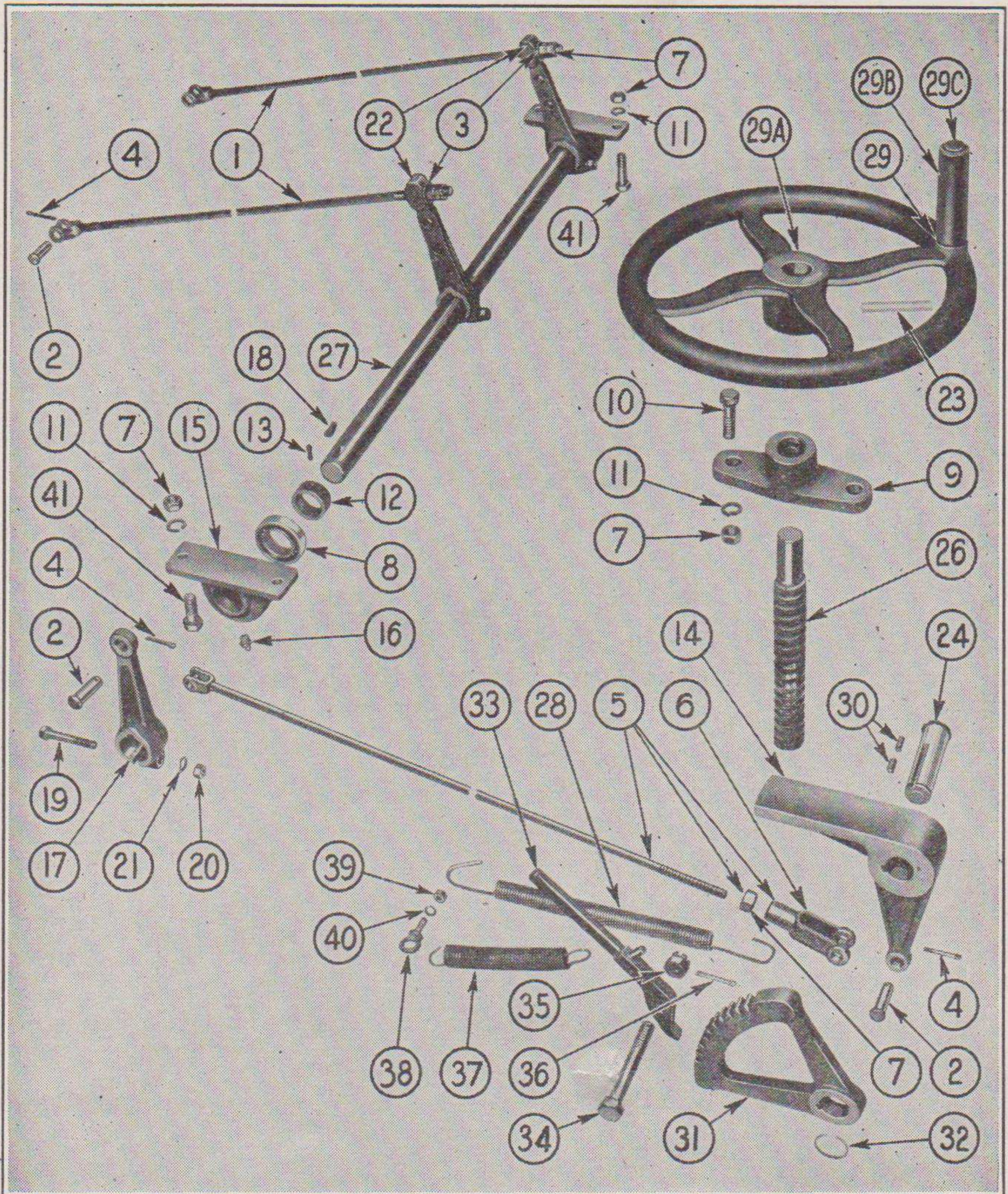


FIGURE 15. HAND PARKING BRAKE ASSEMBLY

ment is required, it consists, essentially, of shortening the brake rod.

- (1) Remove clevis pin in top hole of the slack adjuster arm.
- (2) Loosen clevis lock nut on brake rod and turn clevis to shorten the rod about $\frac{1}{4}$ ".

(3) Install brake rod in the slack adjuster arm and turn wheels with the parking brake wheel in "off" position to determine whether they still turn freely. Drag usually indicates that the brake rod has been shortened too much and should be adjusted accordingly.

(4) Assuming that the wheel still turns freely, set the parking brake wheel. If the wheels fail to hold firmly shorten the brake rod until they do.

7. BRAKE SHOES.—*a. Replacing Brake Shoes* (Refer to Figure 16).

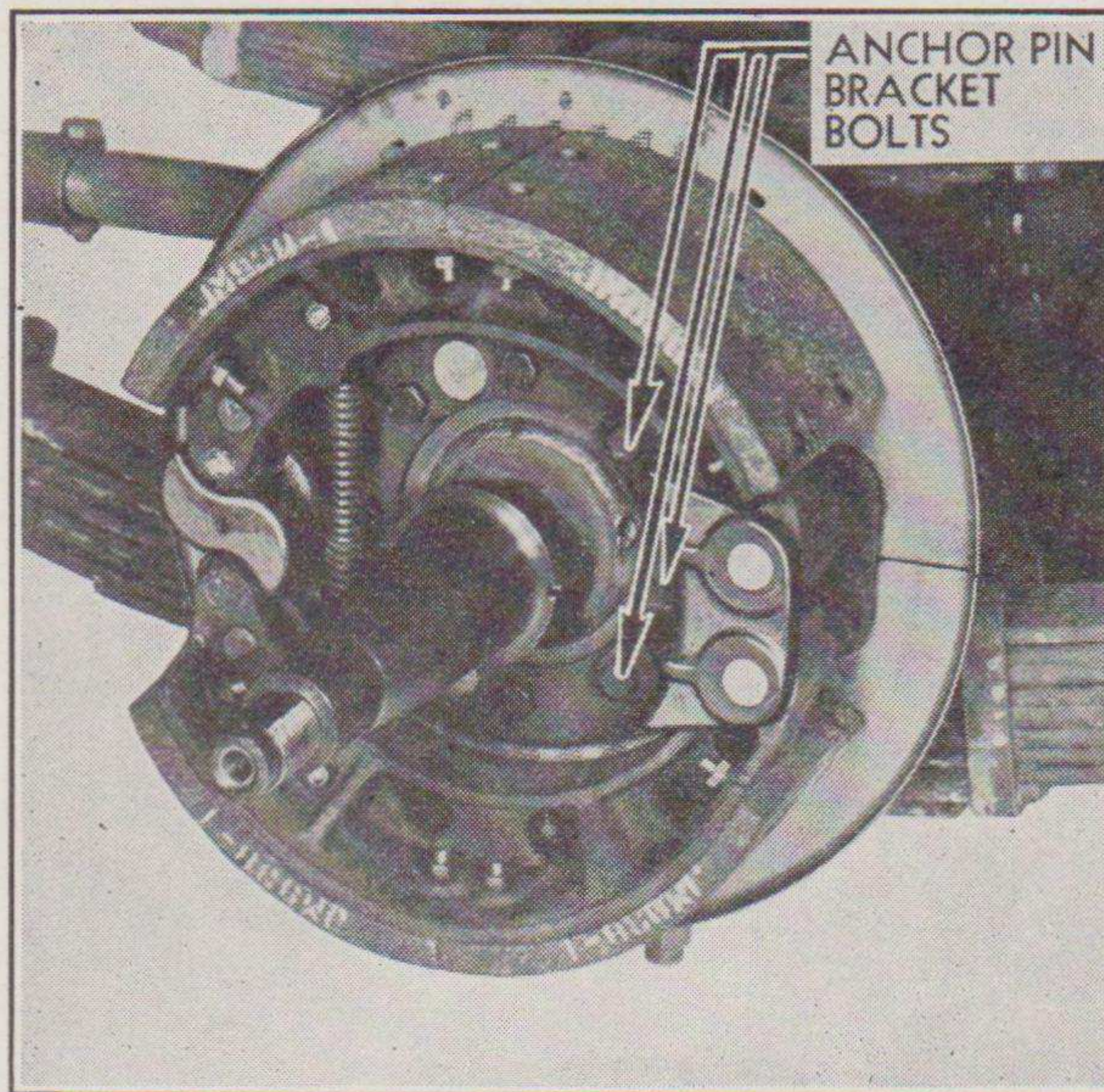


FIGURE 16. REPLACING BRAKE SHOES

(1) Remove the the three bolts holding the anchor pin bracket to the brake mounting plate.

(2) Tap the anchor pin bracket free of the anchor pins and pull both shoes free of the assembly.

(3) Remove the brake shoe return spring by removing the bolt holding it to each shoe.

(4) To install, reverse the procedure outlined above after cleaning the "S" cam and anchor pins; spreading a thin coat of grease over both.

b. Rebushing Brake Shoes.—Each shoe has two Oilite bushings at the anchor pin end. To replace worn bushings:

(1) Drive out the old bushing.

(2) Press or drive in new. Drive new bushings in with care as a mushroomed or burred bushing will retard free movement of brake shoes, both in application and release. These bushings come reamed to proper dimensions.

c. *Replacing Brake Shoe Rollers.*—The brake shoe roller on each shoe is held in place by a shaft fastened by three heavy prick punch marks on each side. Roller shafts may be driven out and rollers replaced without removing the shoes from the assembly.

8. CAMS (Refer to Figure 17).—a. *Replacing Cam.*—Cams come in rights and lefts. When replacing them, care should be taken to place the proper cam on the proper side. Cams are stamped on inner end with a number, even number is right, odd number is left.

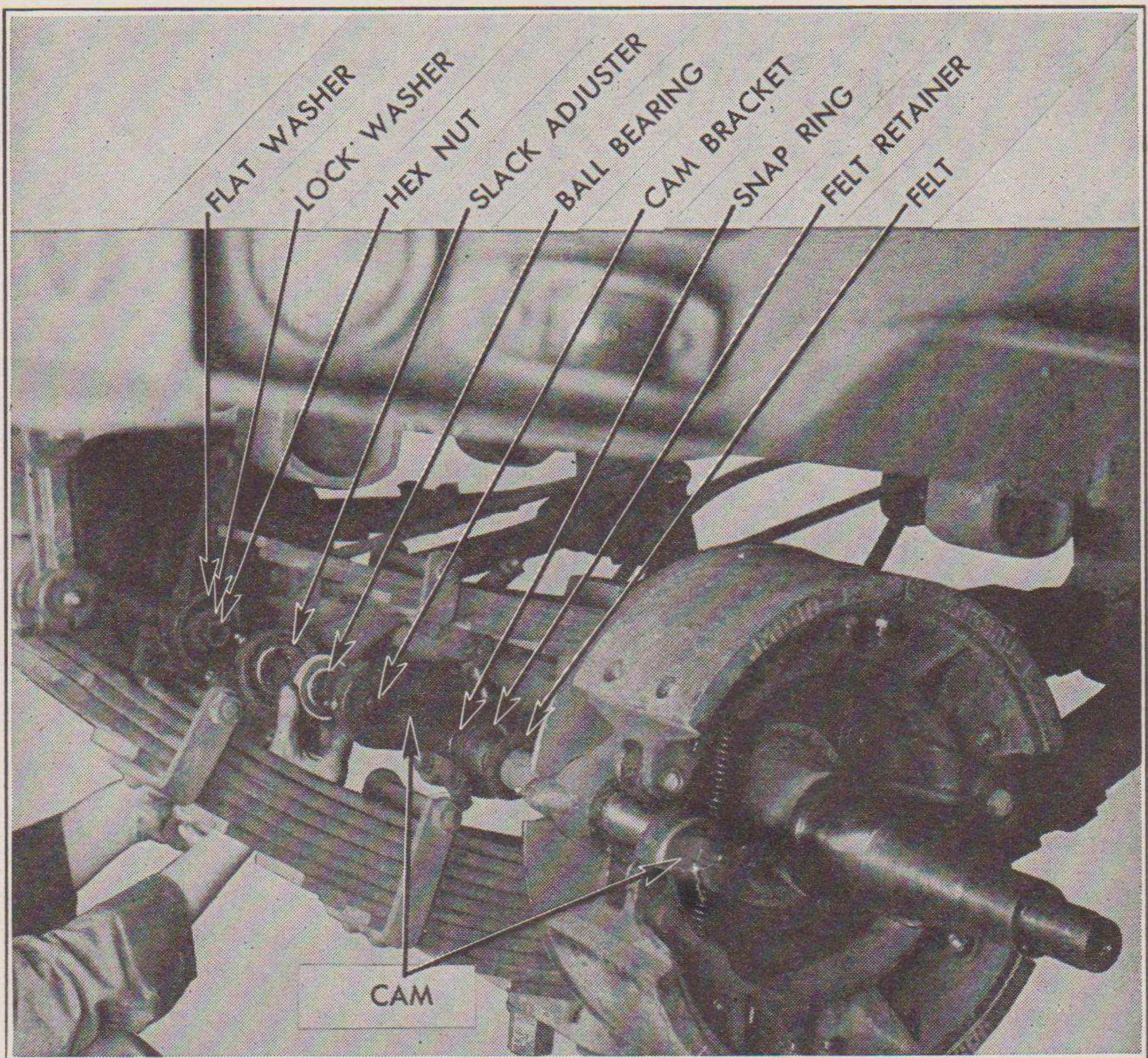


FIGURE 17. REPLACING CAM SHAFT

- (1) Remove wheel and hub assembly.
- (2) Remove nut and lock washer at the slack adjuster end of the cam.
- (3) Remove brake rods from slack adjuster arm and tap slack adjuster off cam spline.

(4) Pry the snap ring free and drive out the cam.

(5) To replace the cam hold the brake shoes apart and insert cam in position. Care should be taken not to harm the needle bearings in the mounting plate brake adapter. Reverse the procedure outlined above.

b. Replacing Cam Needle Bearing.—Cam needle bearings will usually last indefinitely if properly lubricated. However, if they are damaged through accident, or in removing and replacing cam, proceed as follows to replace them:

(1) Remove the two bearings in each mounting plate adapter either individually or both at one time by driving them out with a hammer.

(2) Place the new needle bearings into position and tap gently to start them evenly.

(3) Place pieces of flat wood against both brake adapter and bearing and squeeze the bearing into position with a C clamp. Bearings should be flush with the outer edges of the adapter.

(4) Inspect to make sure bearings do not cover lubricating hole.

c. Replacing Nice Ball Bearing in Cam Bracket.—(1) Remove the slack adjuster. (See Cam Replacement Instructions.) (Refer to Figure 18.)

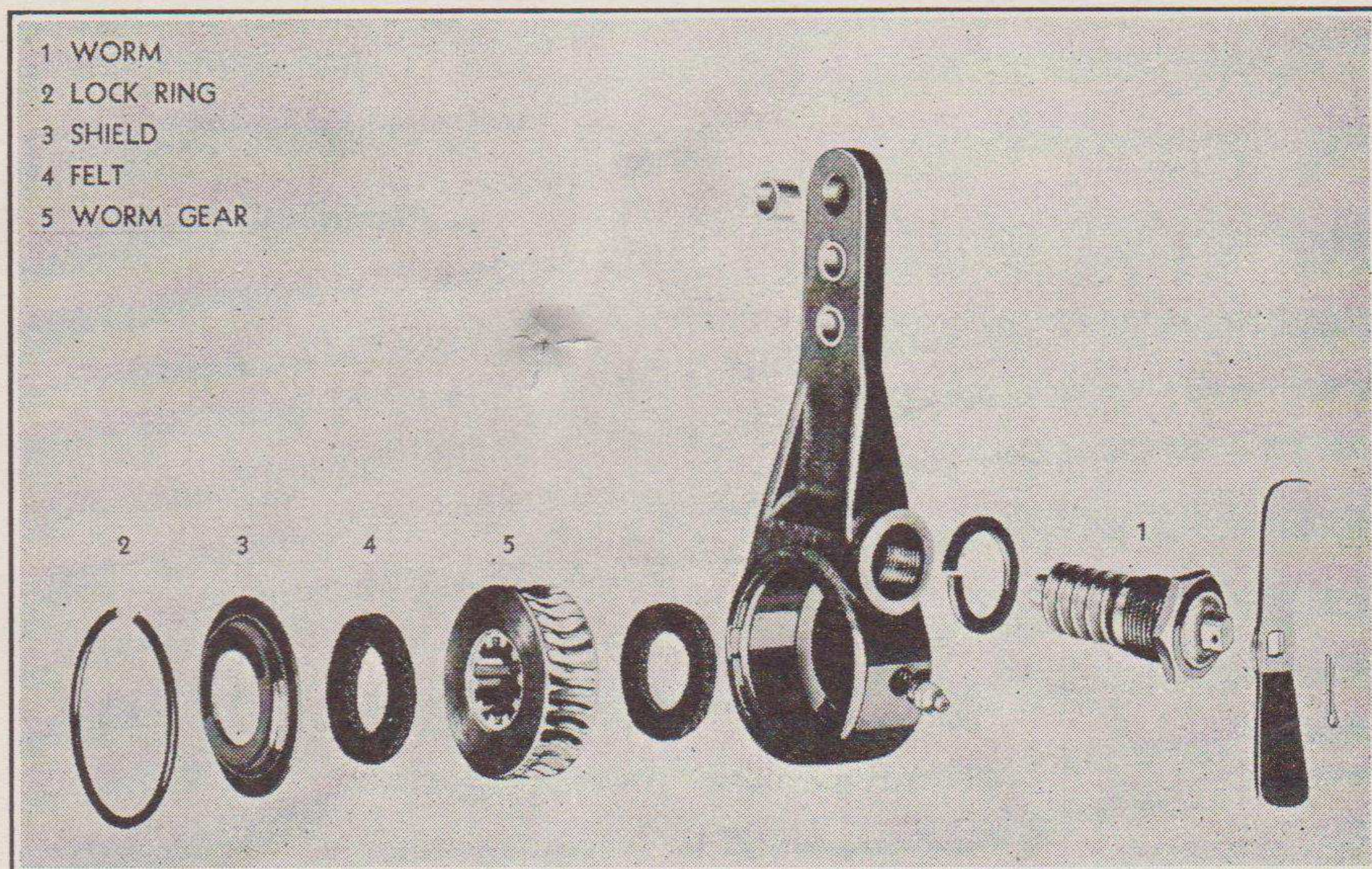


FIGURE 18. SLACK ADJUSTER ASSEMBLY

(2) Tap the outer side of the cam bracket and the Nice ball bearing will usually work out.

(3) If this fails, remove the Alemite fitting, insert a small screw driver in the Alemite fitting hole and pry outward against the bearing. Continue tapping the slack adjuster bracket with a small hammer.

9. **SERVICING SLACK ADJUSTER.**—*a.* If turning up on the slack adjuster winch wrench fails to bring the brake shoes up against the drum, the worm or worm gear is usually worn or stripped. To replace these parts, proceed as follows:

(1) *Replacing Worm and Worm Gear* (Refer to Figure 18).

(a) Remove the worm (1) at the wing wrench adjuster by turning out on the hex nut holding it in position.

(b) Inspect the worm. If it is stripped replace it as an assembly.

(c) If the worm is in good condition pry the lock ring (2) free on the slack adjuster end, remove the shield (3), felt (4) and worm gear (5). If the worm gear is stripped, replace.

(2) *Rebushing Slack Adjuster.*

(a) Drive out the old bushing. Insert the new bushing.

(b) Ream to $\frac{1}{2}$ " diameter.

10. **THE BRAKE OPERATING SYSTEM.**—*a.* Assuming that a check of the air pressure shows that this is up to normal—60 lbs. or over—and yet the brakes will not operate satisfactorily, generally, the source of the trouble will be found in the relay emergency valve. In such a case it is usually desirable to remove the emergency valve and replace it. However, if a new valve is unavailable, check the operation of the various diaphragms within the emergency relay valve as outlined in the procedure which follows. Check the valve stems for wear also. If wear is indicated, these parts should be replaced. Do not attempt to grind these valves. By failure of the brakes to function, we mean failure of the brake chamber to push the slack adjuster into the forward or "on" position. The brakes may fail due to the fact that they are improperly adjusted. Failures of this nature should be handled through adjustment of the brakes as outlined in the brake adjustment procedure.

11. **BRAKE DIAPHRAGM.**—*a.* *Testing and Correcting Leaks in the Brake Diaphragm.* When making leakage test with soap suds, a 3" bubble in 3 seconds is permissible.

(1) Apply the brakes.

(2) Paint the edge of the diaphragm with soapy water.

(3) If leakage is detected, tighten the bolts uniformly around the diaphragm until it disappears. Never tighten the bolts to the point where the edge of the diaphragm starts to bulge inasmuch as this greatly weakens the diaphragm.

(4) If the diaphragm is defective, air will escape around the rubber boot on the brake rod when the brakes are applied and the diaphragm must be replaced as follows:

(a) Remove the brake chamber from the trailer by removing the two chamber nuts which hold it to the axle mounting bracket, disconnect the hose assembly and pull the clevis pin at the slack adjuster arm.

(b) Place the chamber in a vise and draw a nail or other sharp object across the chamber edge to mark it for re-assembly.

(c) Remove the bolts, replace the diaphragm and tighten bolts as outlined in step (3). (Refer to Figure 19.)



FIGURE 20. BRAKE CHAMBER—REPLACING SPRING

FIGURE 19. BRAKE CHAMBER—DISASSEMBLY

b. Replacing Brake Chamber Springs, Pressure Plate, Rods, Boots.

(1) Follow the procedure outlined above for the disassembly of the brake chamber.

(2) Remove the brake push rod and install the new spring. Make sure the spring is seated properly on pressure plate. (Figure 20.)

(3) Bent or worn pressure plates should be replaced.

(4) Slightly bent brake push rods may be straightened, if severely bent should be replaced.

(5) Worn boots should be replaced.

12. EMERGENCY RELAY VALVE.—All diaphragms should be replaced once a year.

a. To Clean or Replace Diaphragm A. (Refer to Figure 21.)—

(1) With the valve held firmly in a vise, remove cover. (Figure 22.)

(2) Lift out the diaphragm guide ring (Figure 23), remove cotter key, nut and washer holding the diaphragm to the guide. Lift out the diaphragm and replace.

(3) Reassemble by reversing the procedure outlined above.

b. Cleaning or Replacing Intake Valve. (Refer to Figure 21.)—

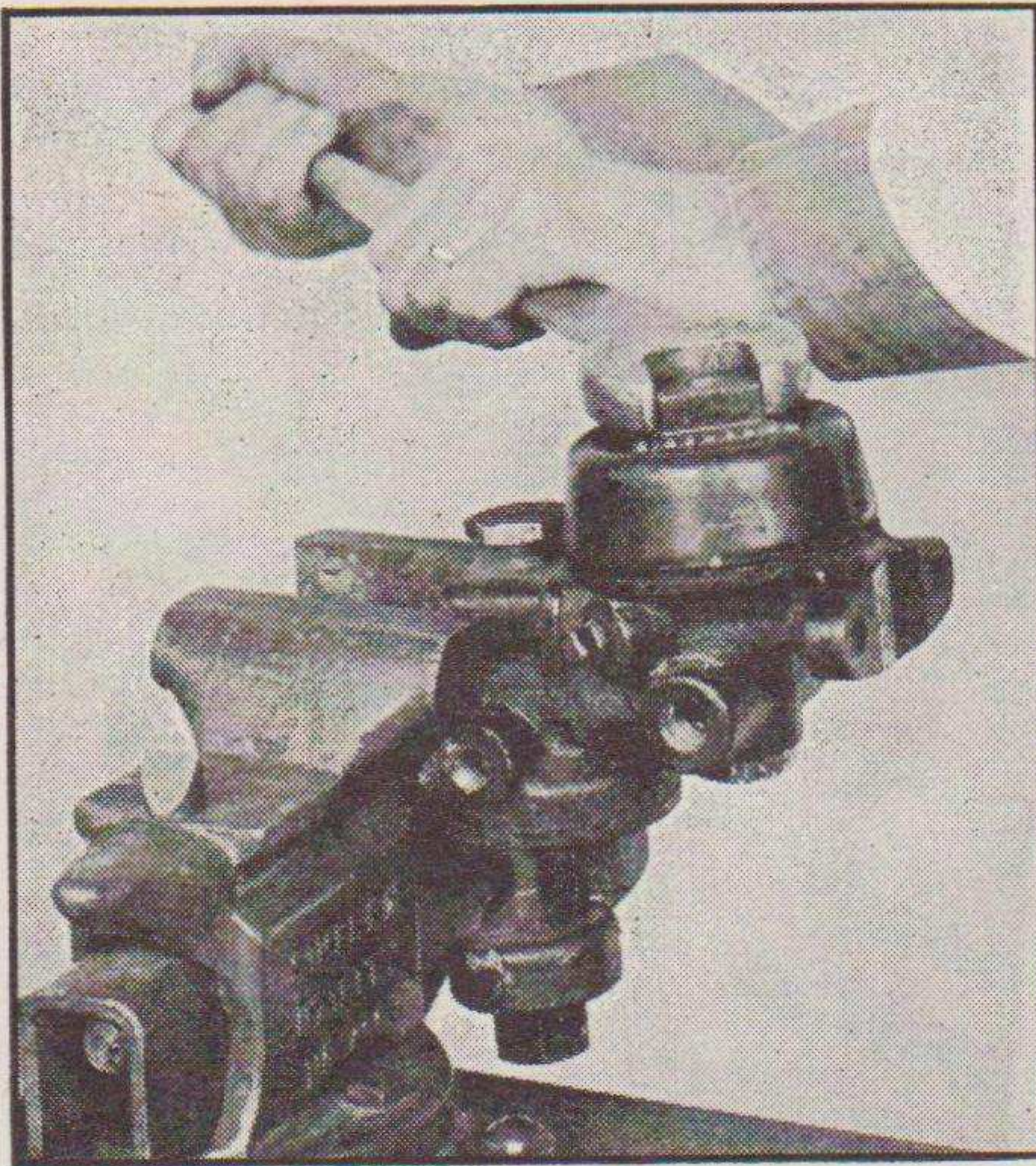


FIGURE 22. REMOVING VALVE COVER

FIGURE 21. RELAY—EMERGENCY VALVE

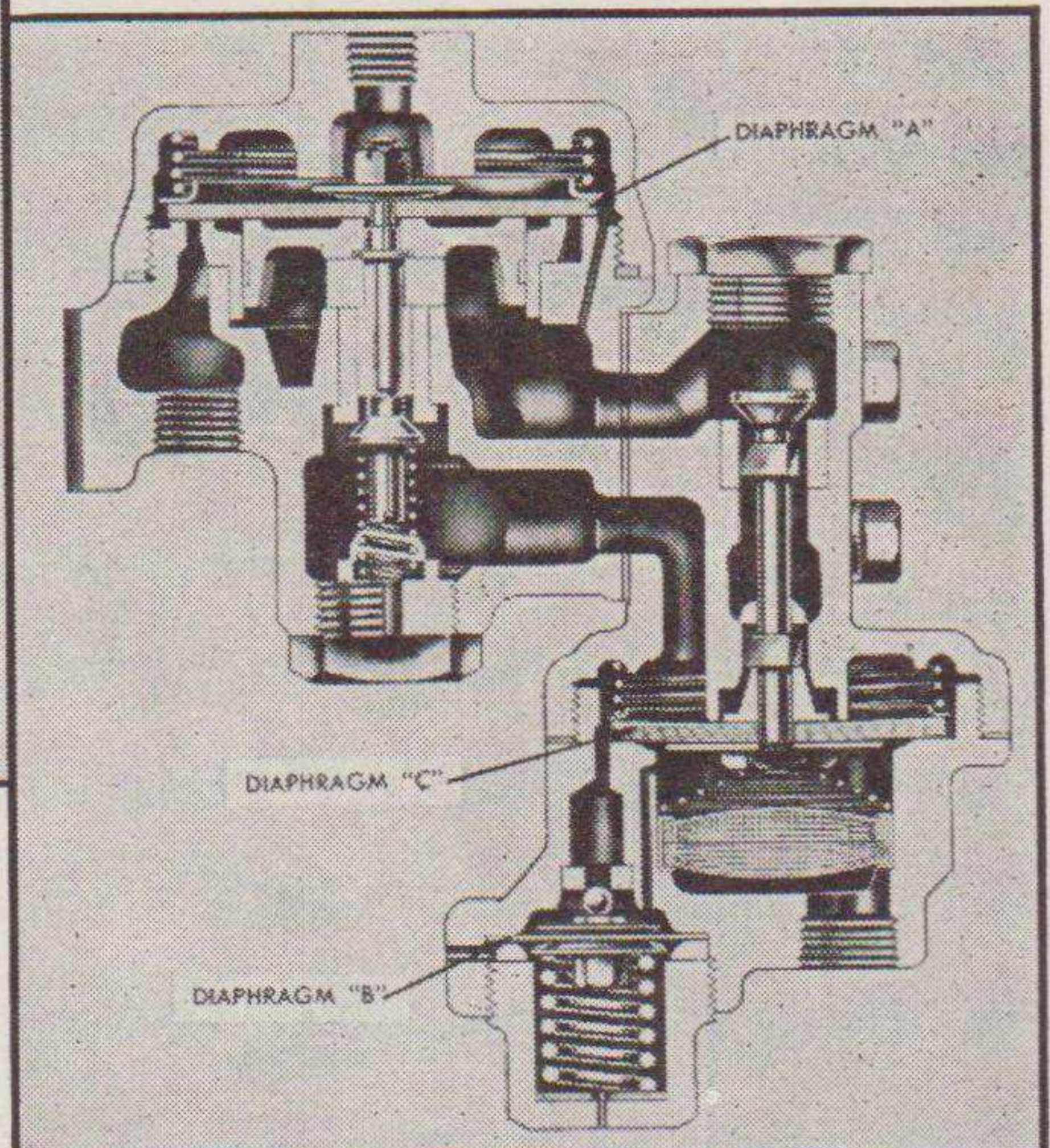


FIGURE 23. REMOVING GUIDE RING.

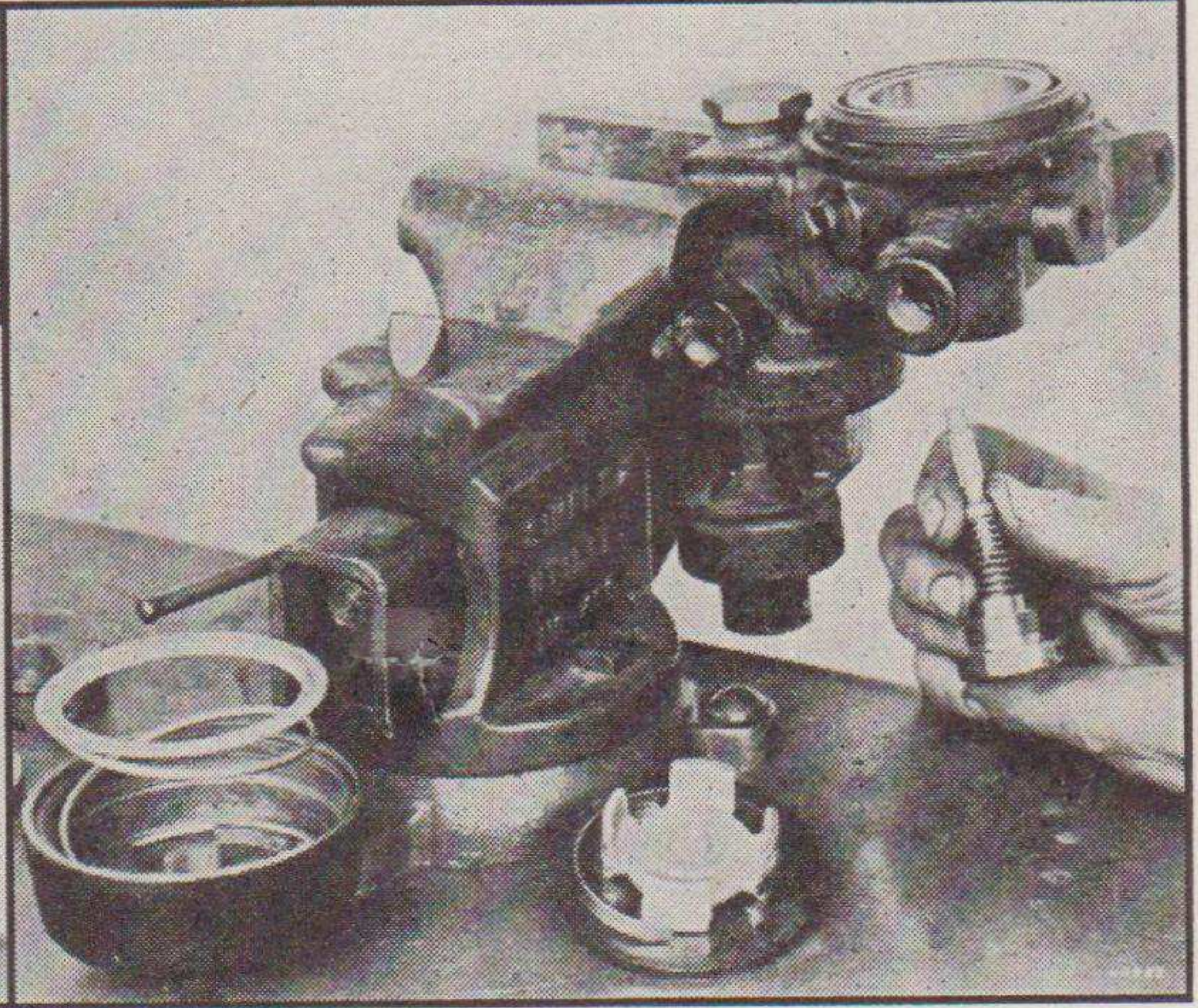


FIGURE 24. REMOVING INTAKE VALVE

- (1) Remove the cap nut.
- (2) Extract the intake valve with a pair of long nose pliers.
- (3) Clean. Replace. (Figure 24.)

13. TEST FOR LEAKAGE—RELAY VALVE DIAPHRAGM "A" AND INTAKE VALVE (Refer to Figure 21).

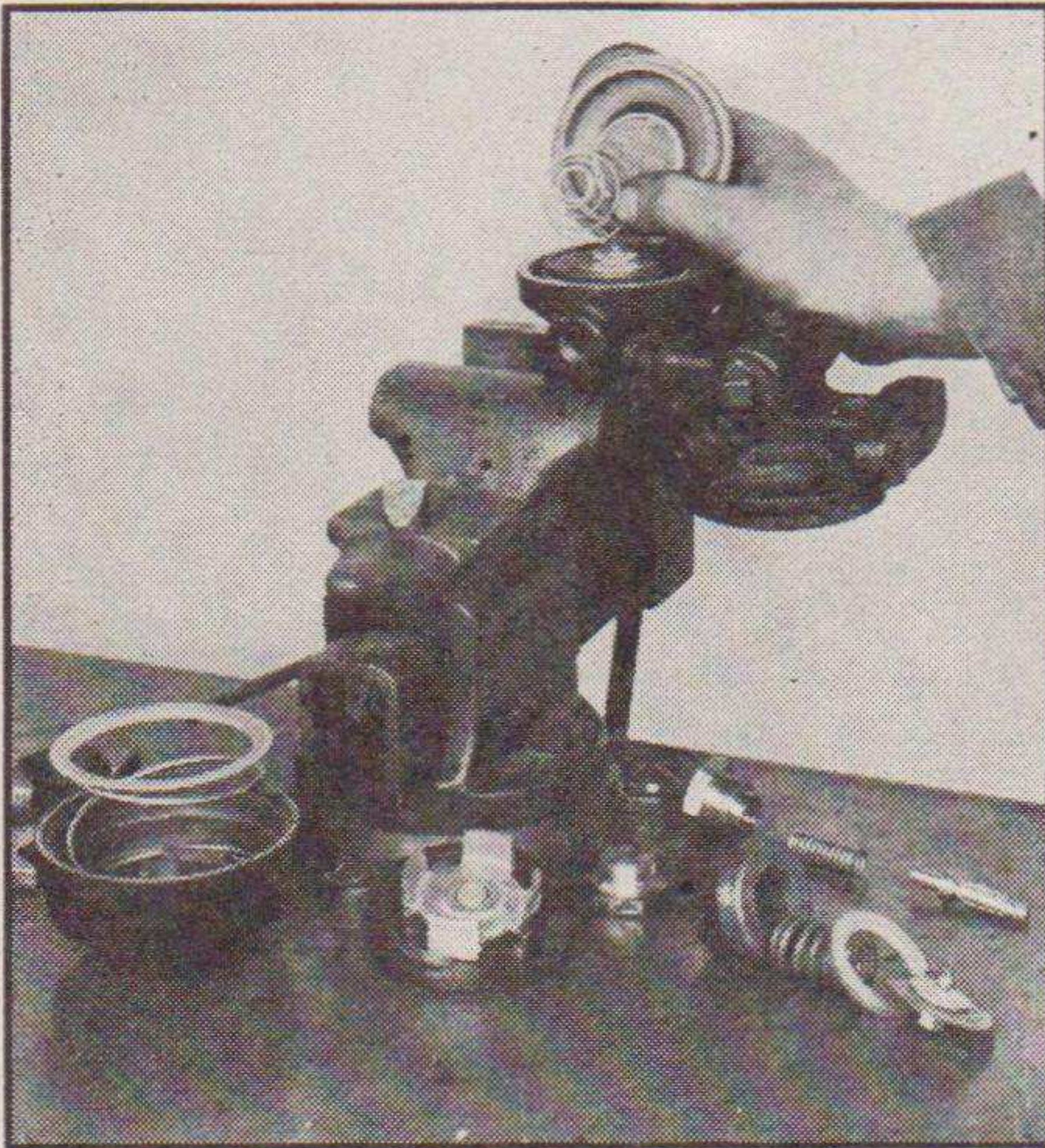


FIGURE 26. LIFTING OUT SPRING AND STRAINER

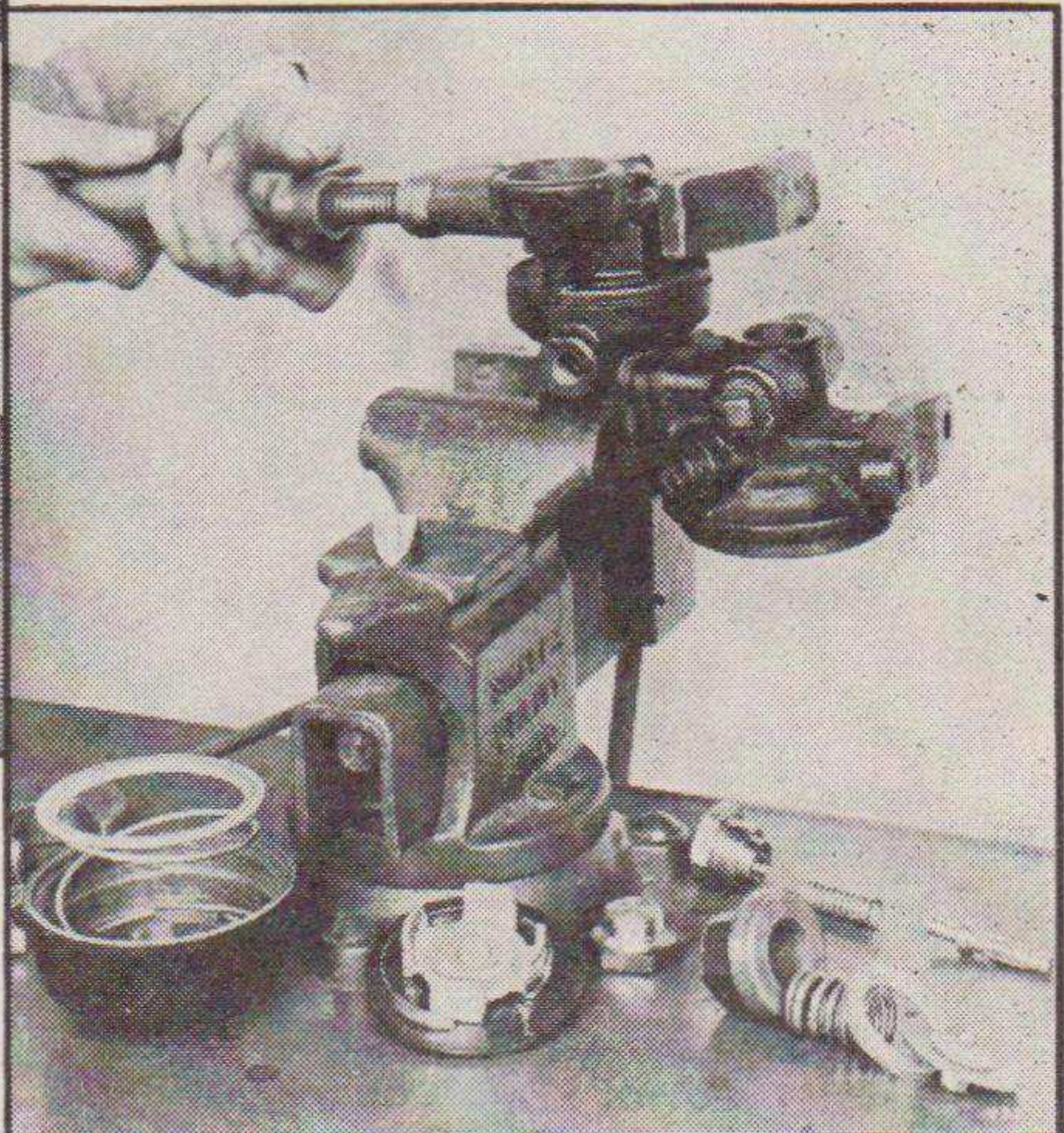


FIGURE 25. REMOVING DIAPHRAGM COVER BODY

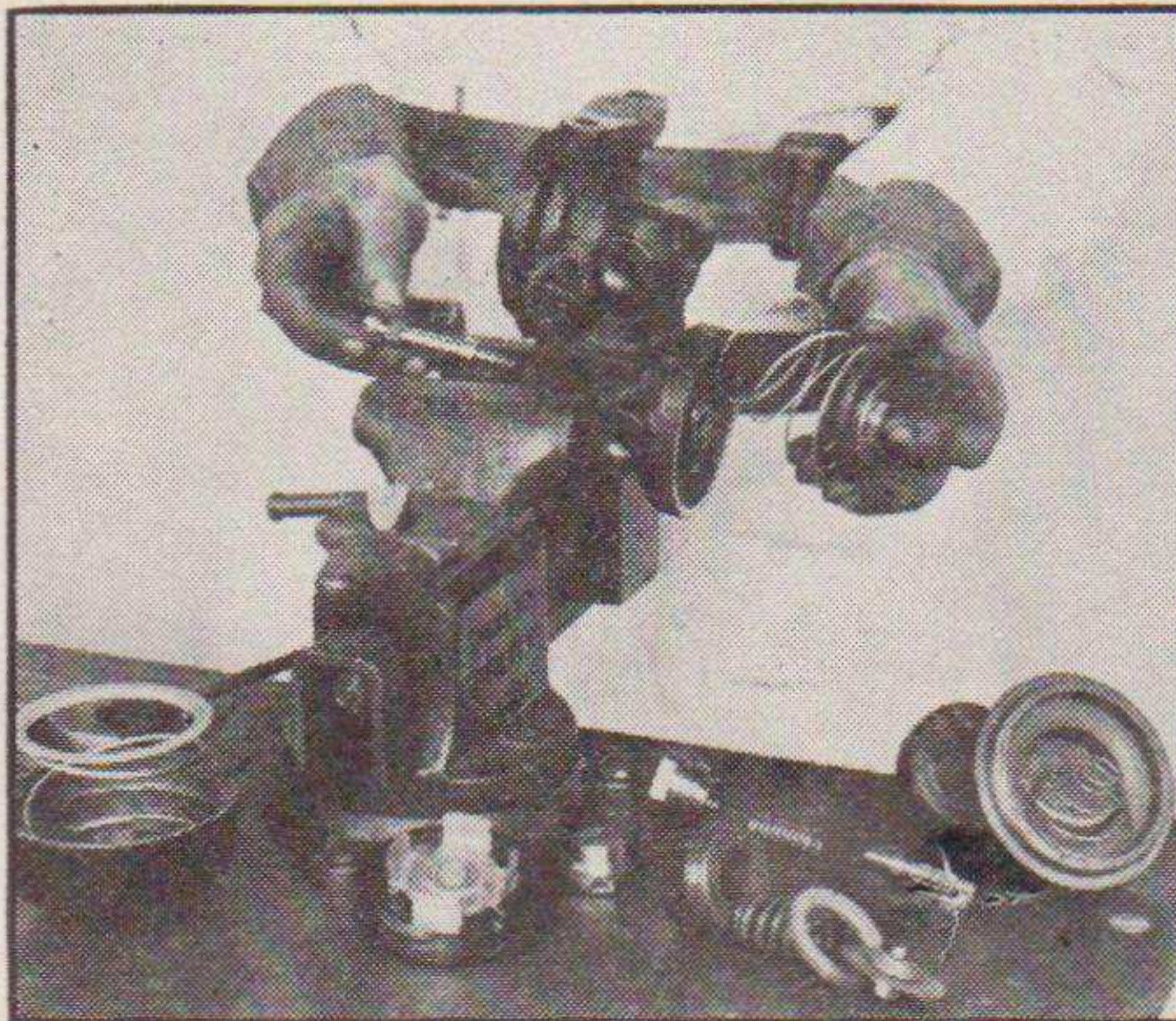


FIGURE 28. REASSEMBLING VALVE

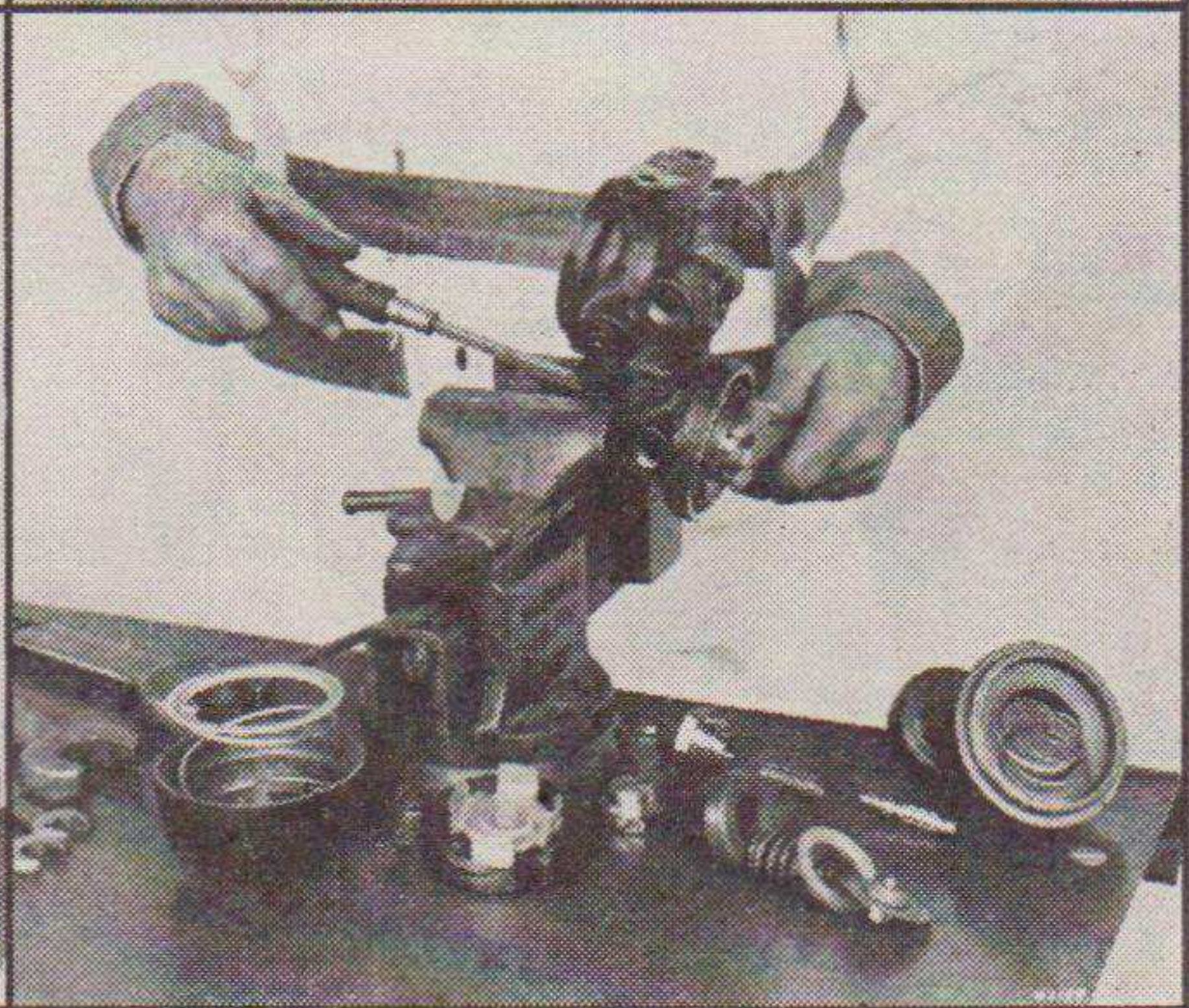


FIGURE 27. REMOVING VALVE

- a. When making leakage tests with soap suds, a 3" bubble in three seconds is permissible.
- b. Release brakes; cover port with soap suds to detect the supply valve leakage.
- c. Apply brakes; cover port with soap suds to detect relay valve diaphragm leakage.
- d. With relay valve in emergency operation, cover this port with soap suds.
- e. Leakage in excess of the first test is caused by the emergency valve not seating properly.

f. Cleaning or Replacing Diaphragm "B" (Refer to Figure 21).—

- (1) Remove cap, spring and diaphragm.
- (2) Remove stem lock nut. Lift diaphragm and diaphragm follower from stem. Clean or replace.
- (3) Reassemble by reversing the procedure outlined above.

14. TEST FOR LEAKAGE — EMERGENCY VALVE DIAPHRAGM "C" (Refer to Figure 21).—*a.* With relay-emergency valve in emergency position, cover port with soap suds to detect emergency diaphragm leakage.

b. Cleaning or Replacing Diaphragm "C"; Washing Strainer (Refer to Figure 21).—(1) Remove diaphragm cover body. (Figure 25.)

(2) Lift out spring and strainer. (Figure 26.)

(3) Remove cap nut. (Figure 27.) Insert screw driver into slotted top of valve and remove diaphragm lock nut. Pull out the valve stem and diaphragm.

(4) Clean the strainer and diaphragm in gasoline. Install a new diaphragm if necessary.

(5) Reassemble by reversing the procedure outlined above. (Figure 28.)

15. BRAKE LINES.—*a.* Proper hook-up of the brake lines is essential to the safe operation of the braking system.

b. Facing the vehicle, the service line is on the left, the emergency line is on the right and both are tagged.

c. A $\frac{1}{2}$ " copper tubing runs from air reservoir tank to emergency relay valve.

16. REPAIR OF DAMAGED TUBING.—*a.* When air line tubing becomes kinked or bent, cut out the damaged section and splice in a new one using standard brass Westinghouse ferrule type three-piece union.

17. REPLACEMENT OF HOSE COUPLING PACKING RINGS.

—*a.* Hose couplings are provided with rubber packing rings which act as gaskets to seal coupled hoses. In time, usually about a year, these become worn or distorted and should be replaced. Simply pry out the old packing rings and push in new ones.

b. Use of dummy hose couplers prevents the entrance of foreign matter into the braking system. They should be used whenever the hoses are not coupled.

18. BRAKE—Service, Diagnosis & Remedy

SYMPTOM AND PROBABLE CAUSE

PROBABLE REMEDY

SLOW BRAKE APPLICATION

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Low brake line pressure. 2. Bent rod in chamber. 3. Excessive travel in chamber push rod. 4. Restriction in line. 5. Leaking diaphragm in brake application chamber. 6. Dirt under relay exhaust valve or diaphragm. | <ol style="list-style-type: none"> 1. Check air pressure at tractor coupling ends. Air supply should not be less than 60 lbs. for proper application. (See tractor maintenance manual for service procedure.) 2. Straighten or replace. 3. Give brakes minor adjustment. 4. Clean or replace tubing or hose. 5. Tighten chamber bolts or replace diaphragm. 6. Clean relay valve diaphragm. |
|--|---|

SLOW BRAKE RELEASE

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Low brake line pressure also results from slow brake application. 2. Brake valve lever on tractor not returning fully to stop. 3. Binding cam or binding slack adjuster. 4. Brake chamber rod travel. 5. Restriction in tubing or hose. 6. Improper seating of valves in relay emergency valve. | <ol style="list-style-type: none"> 1. See tractor maintenance manual. 2. Adjust operating rod. See tractor maintenance manual. 3. Lubricate and align properly. 4. Give brakes a minor adjustment. 5. Clean or replace. 6. Clean or replace valve with a reconditioned unit. |
|---|--|

EMERGENCY BRAKES FAILING TO HOLD

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Dirt under emergency valve, diaphragm and emergency valve stem. | <ol style="list-style-type: none"> 1. Clean or replace emergency valve, valve diaphragm or valve stem. |
|--|---|

NOISY SILENCER

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Worn rubber washer. | <ol style="list-style-type: none"> 1. Replace washer. |
|--|--|

SECTION IV

Draw Bar

1. **REBUSHING DRAW BAR** (Refer to Figure 29).—*a.* New draw bar bushings (3) come from factory reamed to the proper diameter and care should be used when replacing the new bushing not to burr or mushroom their ends in installation.

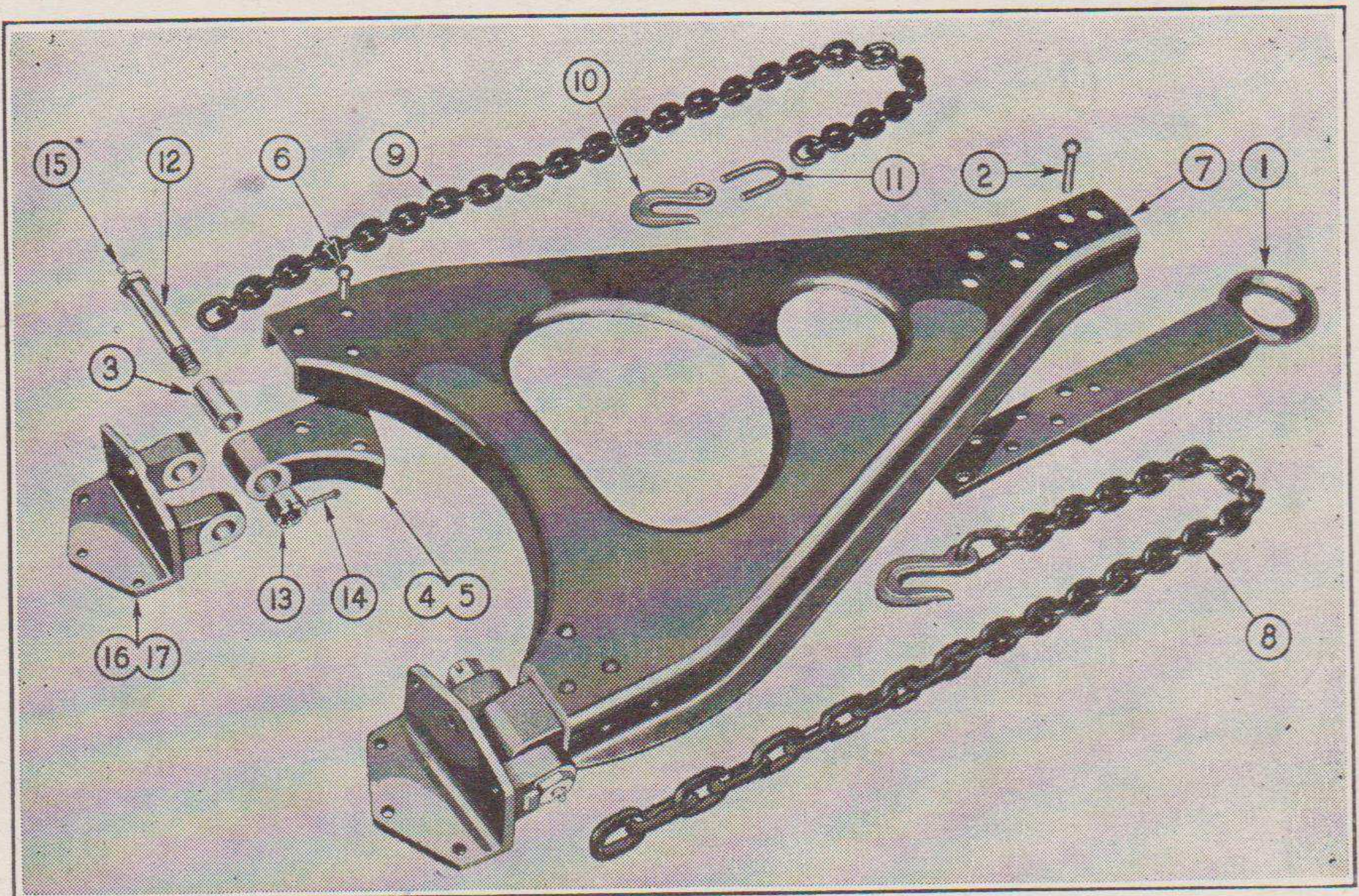


FIGURE 29. DRAW BAR ASSEMBLY

(1) Remove the draw bar (7) from the converter gear at the frame brackets (16) by removing the cotter pins and castle nuts (13) from the hinge bolts (12) and driving out hinge bolts (12) with a heavy hammer and bar.

(2) Remove the old bushing (3) by skimming down one side of the steel bushing (3) with an acetylene cutting torch, using care not to cut the casting (4). Bushing can then be driven out with $1\frac{3}{4}$ " diameter steel bar, or pressed out on arbor press.

(3) Using an arbor press, put the new bushing into position.

(4) Try bolt (12) in the bushing (3). If the bolt will not go in, ream to $1\frac{1}{2}$ " diameter.

2. **REPLACING EYE** (Refer to Figure 29).—*a.* This operation can be performed with the draw bar attached to the converter gear.

(1) Cut off the top heads of the seven $\frac{5}{8}$ " rivets (2), using a torch or a cold cut.

(2) Hit the eye (1) with a sledge hammer to free the eye (1) from the draw bar (7). Do not attempt to drive the old rivets out with a punch.

(3) Bolt the new eye (1) into position with two bolts.

(4) Drive five rivets, remove the two bolts and drive the remainder. Do all bucking from under side of draw bar (7).

3. REPLACING AND REPAIRING SAFETY CHAINS.—*a.* Safety chains are held to the front crossmember with welded U-links. By cutting off U-link a complete safety chain can be replaced.

b. Bent hooks can be heated and bent back to their natural shape. Hooks can be replaced by cutting the link next to the hook and by using a $\frac{1}{2}$ " cold shut link. Any part of the chain can be spliced, or links replaced through the use of cold shut links. Whenever cold shut links are used the open ends should be clamped together and welded.

4. INSTALLING DRAW BAR FRAME BRACKETS (Refer to Figure 29).—*a.* Bolt frame brackets (16) to the frame crossmember using three $\frac{1}{2}$ " bolts in each bracket.

b. Place the draw bar in place and insert hinge bolts (12), leaving the nuts (13) off.

c. Drive five rivets in each bracket (16). Remove the draw bar and finish driving the rivets. By following these instructions all possible chance of the draw bar (7) not fitting the brackets (16) is eliminated.

5. RIVETING AND INSTALLING HINGE BRACKETS.—*a.* Cut rivets and welds from hinge brackets (4).

b. Bolt replacement hinge bracket (4-5 Right and Left) to draw bar (7), using three $\frac{7}{16}$ bolts.

c. Install draw bar (7) to frame brackets (16).

d. Drive three rivets, remove bolts and finish driving.

e. Remove draw bar from frame brackets (16) and weld. By following the above instructions you eliminate all possible chance of the draw bar (7) not fitting frame brackets (16).

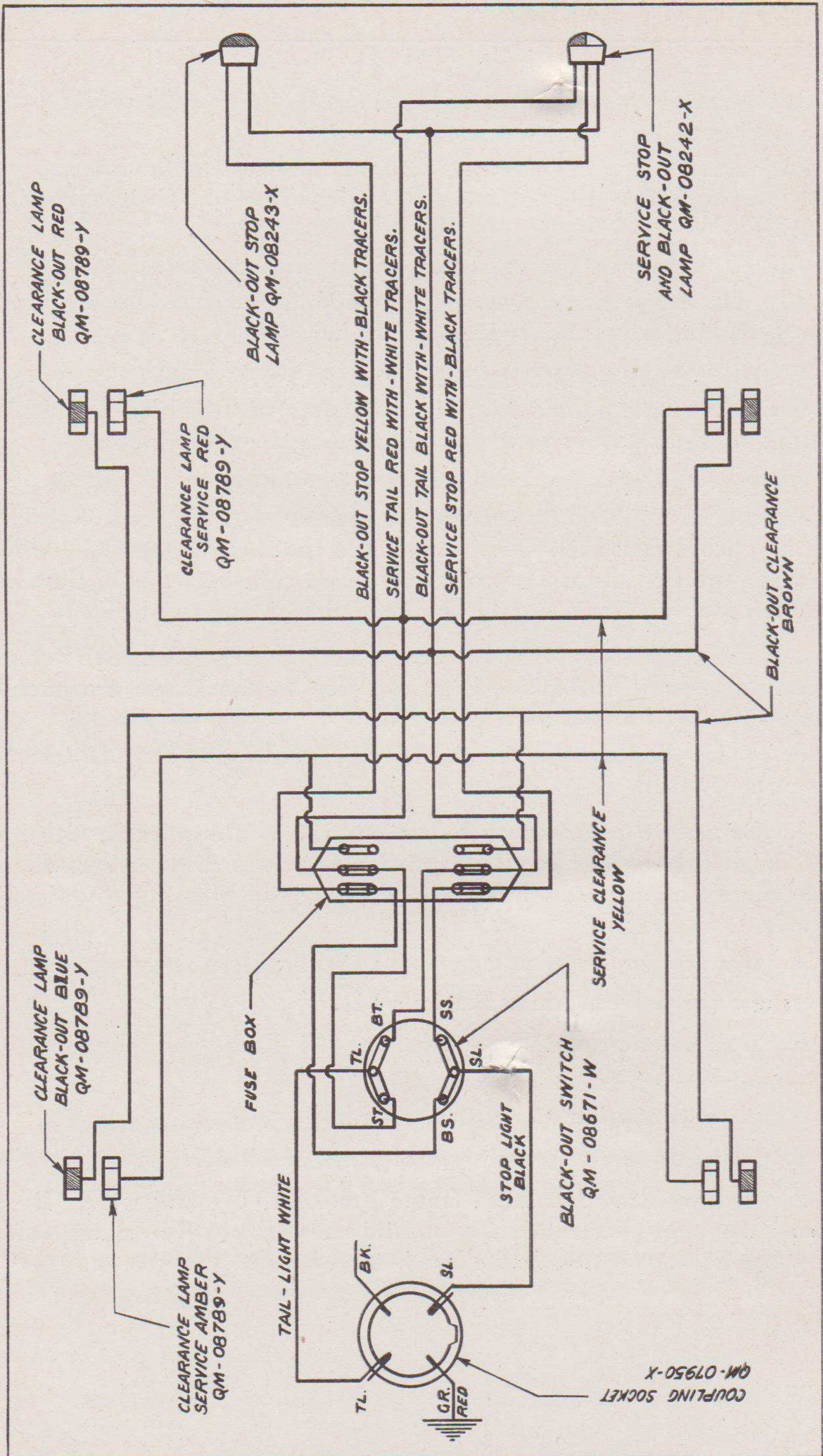


FIGURE 30. SCHEMATIC WIRING DIAGRAM

SECTION V

Electrical System, Lights

1. **WIRING.**—The general electrical circuit diagram shown in Figure 30 illustrates all of the electrical circuits used on this vehicle. With this diagram, the various circuits can be traced and wiring replacement made. All electrical units are shown in their relative position. Each wire in the electrical system is of a distinctive color. A key to these colors will be found on the circuit diagram. (Figure 30.)

2. **LIGHTS.**—The lighting equipment on this trailer includes two commercial clearance lights, two clearance blackout lights, one combination blackout stop and tail light, one combination service stop and tail light and blackout tail light.

a. The combination service stop and tail light and blackout tail light is mounted at the left hand rear of the trailer. The combination blackout stop and tail light is mounted at the right hand rear of the trailer.

b. The lense on each blackout tail lamp is designed to produce two beams. This design is such that when one truck is following a preceding truck at a specified safe distance, these two beams will merge into a single highly visible beam.

c. To insure the accuracy of construction necessary to produce this effect, the bulb is soldered to the lense retainer and the lens and filter are crimped to the retainer to form a complete unit. When the bulb is burned out it is necessary to replace the complete bulb unit. (Refer to Figures 31 and 32.)

d. *Blackout switch.*—The blackout switch is located on the right, or curbside, of the side rail, at the front. The switch is operated with a coin or screw driver. It is either at a service or blackout light position. There is no "off" position. Flow of current is controlled by the light switch on the truck.

e. The fuse panel is located on the left hand side rail at the drop in the frame. The panel is protected by a steel box cover, held to the panel by two wing nuts. Fuses are of 1½ amperes capacity.

f. *Lights not working.*—Insufficient current to work the lights may be due to poor connections in the socket of the towing vehicle or trailer. To remedy, clean up and tighten all connections and grounds. Check plugs and sockets for corroded or dirty blades. To remedy, scrape or sand blades clean, or replace.

(1) If there is sufficient current to the trailer and yet all lights fail to burn, check the fuses. Replace if burned out. Check the wiring. If broken, tape or replace. Check connections, grounds, and the bulbs. Clean and tighten connections and grounds; replace burned out bulb assembly.

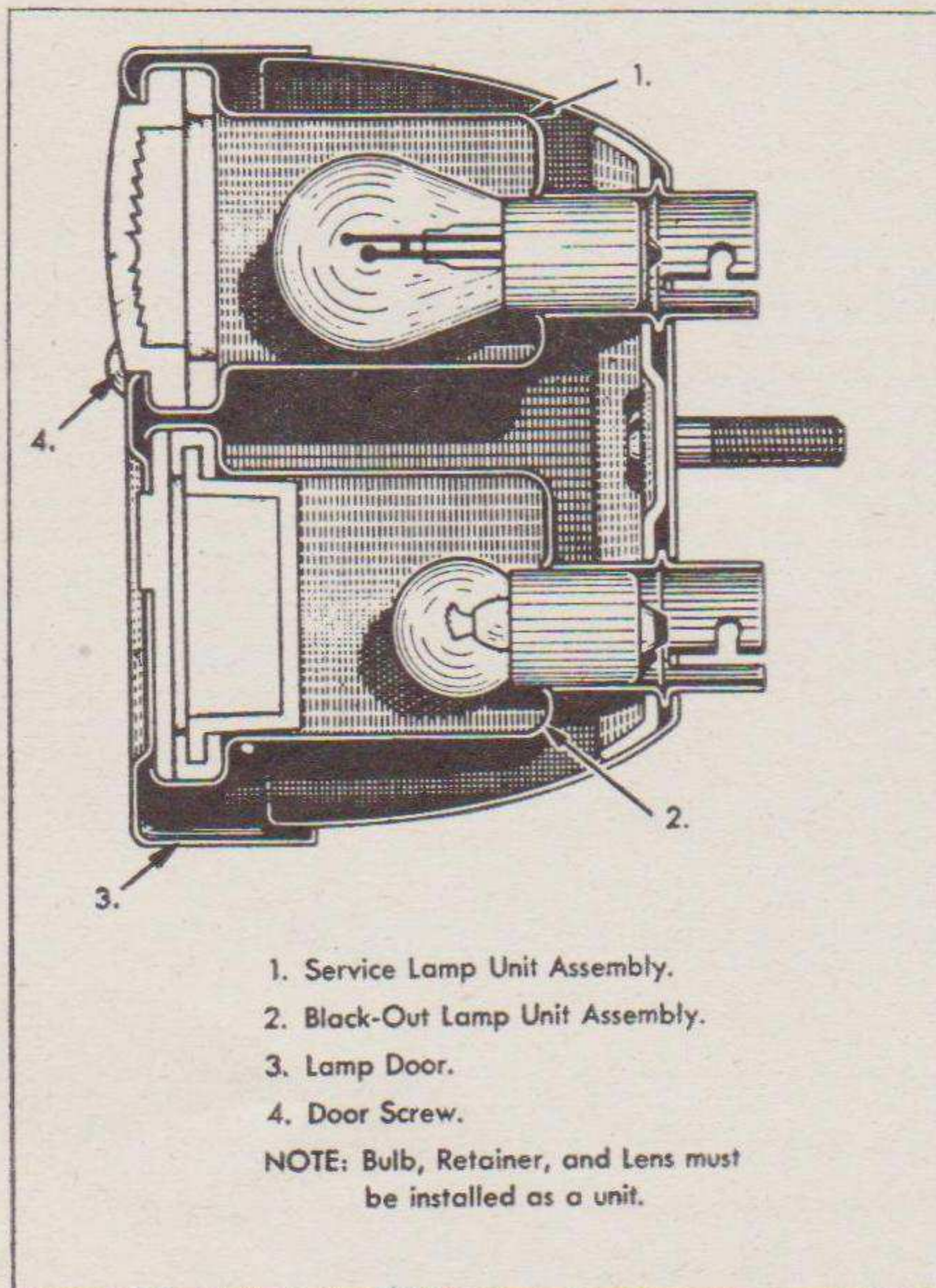


FIGURE 32. SERVICE STOP AND TAIL LIGHT, BLACKOUT TAIL LIGHT

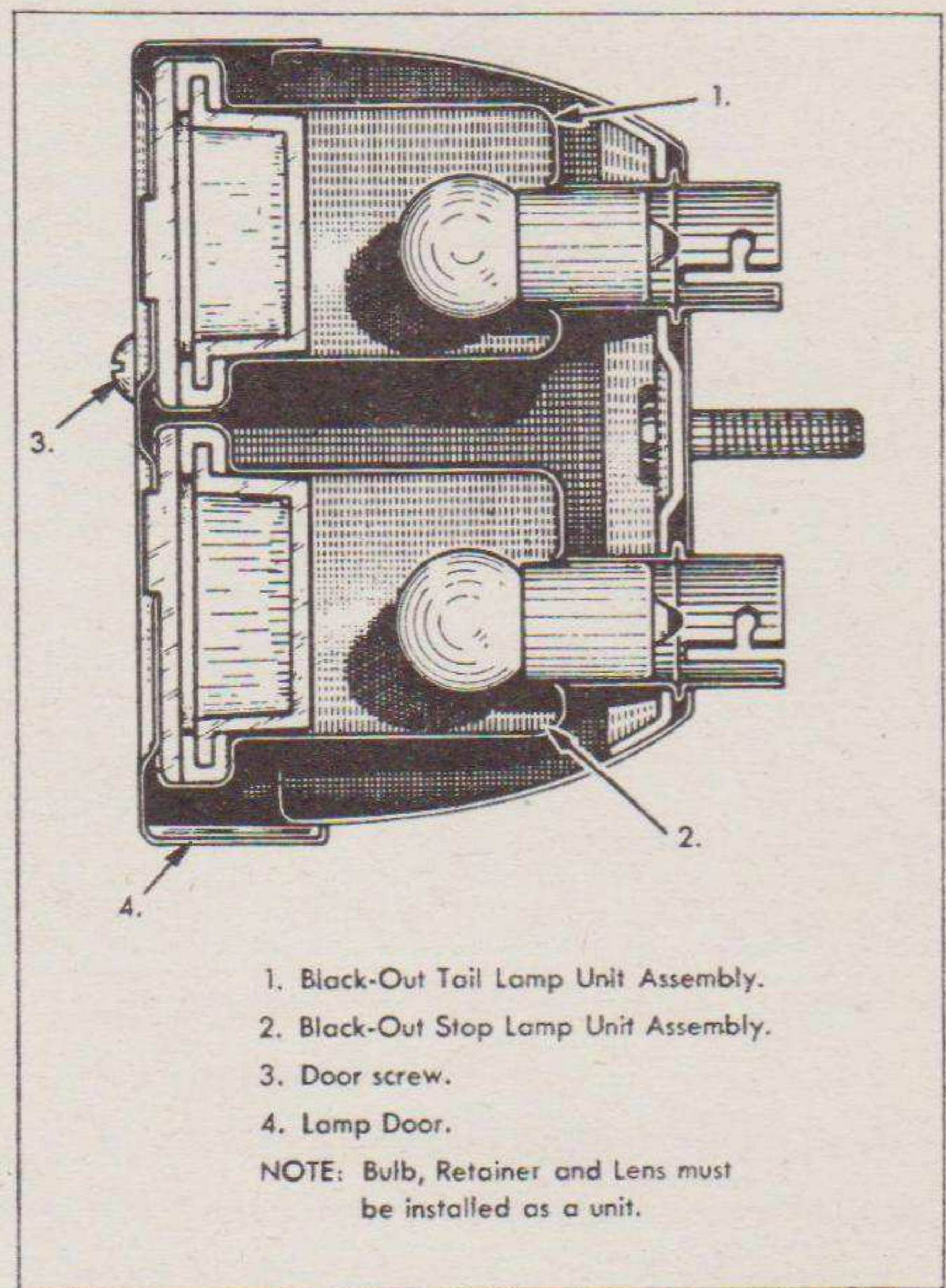


FIGURE 31. BLACKOUT STOP AND TAIL LIGHT

SECTION VI

Frame and Platform

1. GENERAL.—Due to the exceptionally rugged design of the frame used in this trailer, very little attention is required to maintain its dependability. However, trailers which have been in a collision, upset or accident of a major nature may have bent or twisted crossmembers which will require attention.

2. STRAIGHTENING BENT FRAME MEMBERS.—Frame members may be straightened through the use of heavy I-Beam, jacks and chains. The use of heat is recommended provided the metal is not heated to an extreme. Heat only to a dull red. Extreme heat weakens the structural characteristics of the frame members.

3. REPLACING FRAME MEMBERS.—Severely bent and twisted members should be cut out and replaced.

4. REPAIRING SECTION OF A MEMBER.—*a.* Cut across the outside of the damaged section at a 30 degree angle, insert the splice section, and arc weld. By cutting at a 30 degree angle the cut and weld are distributed over a greater area and result in a stronger weld.

b. Back up all spliced joints with a plate or channel reinforcement extending about 6" on each side of the joint on the inner side of the channel. Put one 1" diameter hole in every four square inches of space on the splice plate or channel. These holes are to be used for plug welding.

c. Whenever possible, all section splices and reinforcements should be arc welded. This method is recommended for all frame repairs. A 1" plug welding hole should be welded solid with bare welding rod. For the remainder of the welding use a coated rod.

5. REPLACING HANGERS.—*a.* Cut all welds holding spring hanger to the frame and drive it off.

b. Grind remnants of old weld off the frame, using a hand grinder.

c. Place replacement hanger in place and reweld in a $\frac{3}{8}$ " x $\frac{3}{8}$ " continuous weld.

6. REPLACING BOLSTER PLATES (Refer to Figure 33).—*a.* Remove the lock screw and nut holding plate to lower bolster.

b. Place a wood horse under front crossmember of gear frame. This will prevent gear frame from falling at the front.

c. Uncouple air hose which runs down through center of gear frame at the axle.

d. Connect the hoist chain to the lashing rings and raise frame away from the gear.

e. Burn out the old rivets.

f. Bolt the new bolster plate in place, using 2" hollow bolt. Drive four rivets, then remove the four bolts and continue driving rivets. Grind top of rivets flush with the bolster plate. (Refer to Figure 34.)

NOTE: Hollow bolt is inter-changeable with plate and cap screws used on a few early units; and should replace them when serviced.

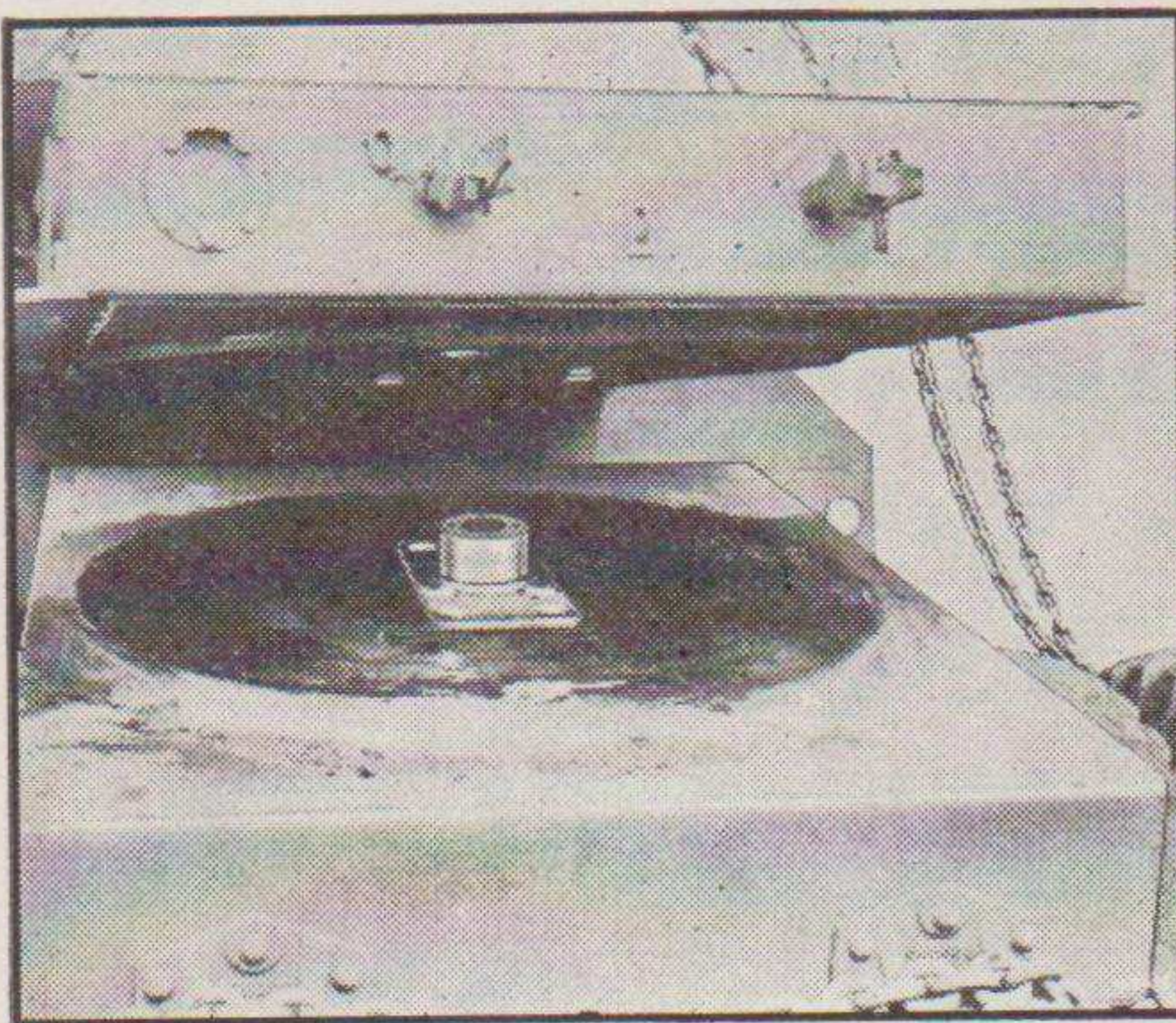


FIGURE 34. TRAILER AND GEAR
DISASSEMBLED

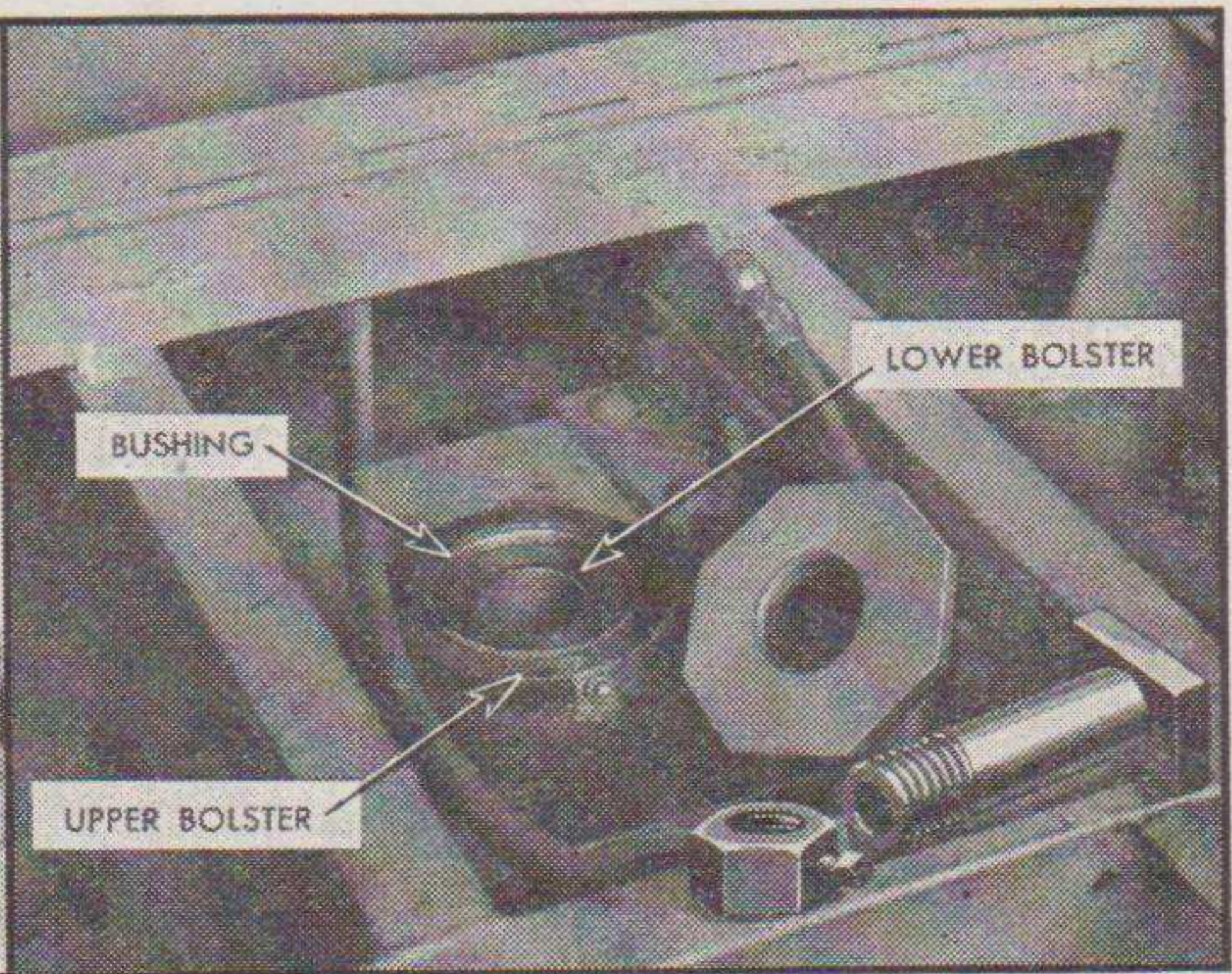


FIGURE 33. REMOVING BOLSTER
PLATE BOLT

7. REBUSHING UPPER BOLSTER PLATE (Refer to Figure 33).

—a. Uncouple front of unit frame from the gear frame as instructed in paragraph 6.

b. Cut down one side of bushing using a cape chisel and drive out bushing.

c. When replacing the bushing, wrap a long chain around frame at the bolster. Place a hydraulic jack between the new bushing and the chain. Use the jack to press the bushing into place. This bushing comes from the factory reamed to the proper dimensions.

CAUTION: WHEN PRESSING THE NEW BUSHING IN, BE CAREFUL TO PLACE THE BUSHING IN THE BOLSTER SO THAT THE OIL HOLE IN THE BUSHING WILL LINE UP WITH THE OIL HOLE IN THE BOLSTER.

8. REPLACING PLATFORM FLOORING.—a. Remove the worn flooring by removing the flat-head carriage bolts.

b. Lay the new boards on the platform and then drill the holes for the carriage bolts. Bolt the boards in place.

SECTION VII

Springs

1. REMOVING MAIN SPRING (Refer to Figure 35).—*a.* This can be accomplished without removing the wheel or hub assembly.

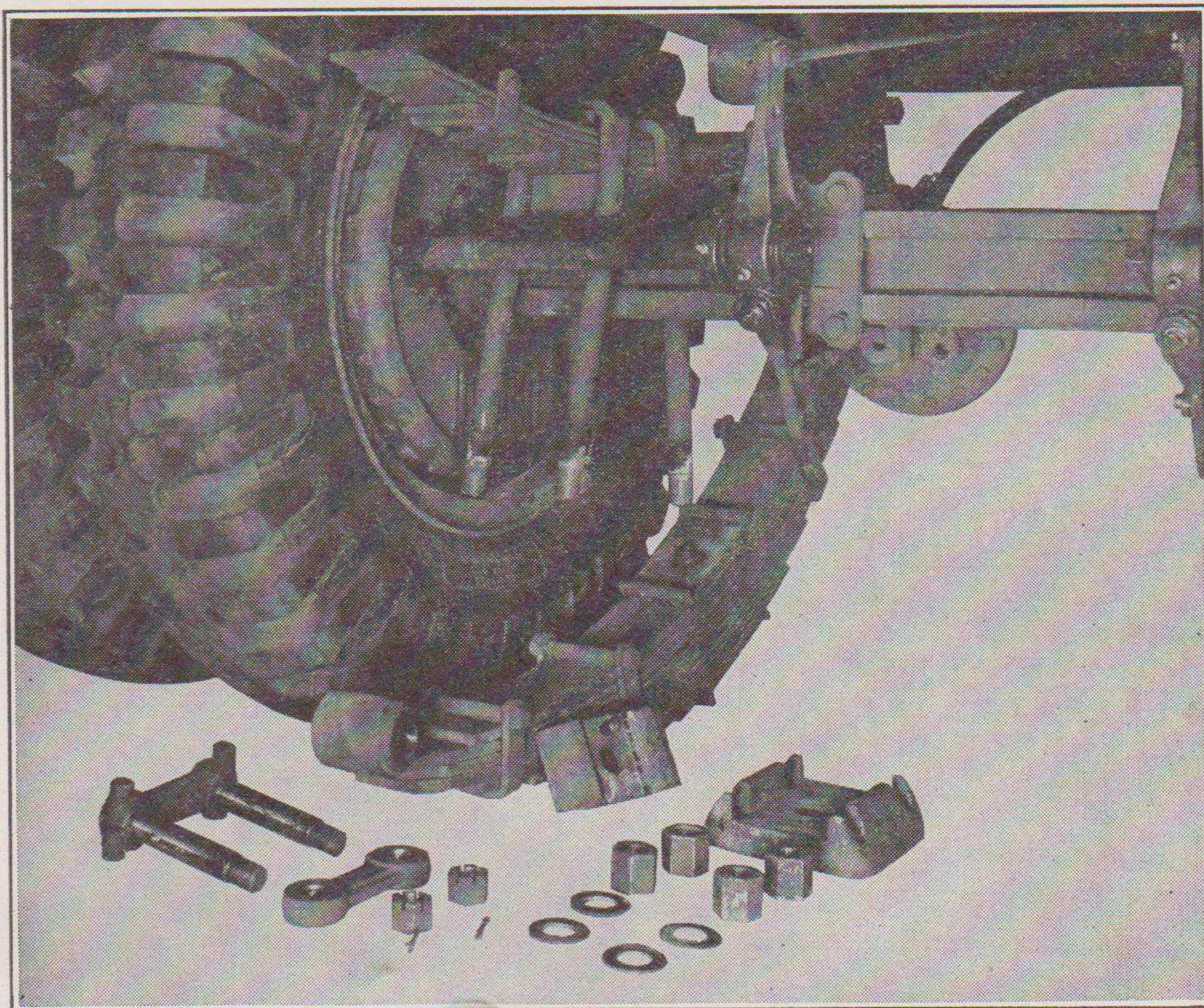


FIGURE 35. REMOVING SPRINGS

- (1) Place jack under rear crossmember to hold body up; and under rear axle to hold axle in position.
- (2) Remove the four U-bolt nuts and drive the U-bolt plate down.
- (3) Remove the shackle pin nuts at one end of the spring.
- (4) Drive the shackle pins out. Keep clear as one end of the spring will drop to the floor.
- (5) Remove the second shackle bolt in the same manner as you did the first to complete removal of the main spring.
- (6) To install the main spring, reverse the procedure outlined above.

2. REMOVING THE AUXILIARY SPRING.—*a.* Remove the main spring.

b. Tap both U-bolts upward.

c. Remove the U-bolts. Pull the U-bolts forward at an angle of about 60° as you lift them out in order to secure clearance under the frame member.

d. Remove the auxiliary spring.

2. SPRING REPAIR.—*a.* With the spring between two wooden horses, place a C clamp in the center of the spring and tighten down.

b. Remove the center bolt.

c. Remove the four clip bolts and clip spacers. Remove the C clamp.

d. Heat all loose spring clip rivets with a torch and use a ball peen hammer to tighten from the countersunk side of the spring leaves.

e. Replace all broken spring leaves.

4. REPLACING BOTH SPRINGS.—*a.* When replacing both springs, check the arch of the springs prior to installation—it can vary as much as $\frac{1}{4}$ "—and install the spring with the greatest amount of arch on the curb side. Always keep the spring clip bolts to the inside and nuts to the outside when springs are mounted. This eliminates possible tire damage.

b. Using a piece of straight board as a level, place it across the main leaf from end to end. Measure the distance at the center bolt from board to bottom of spring to determine the arch.

5. REBUSHING SPRINGS AND HANGERS.—*a.* Hoist up unit at body until spring tension is relieved.

b. Remove shackle pin nuts and lift inner shackle off shackle bolts on one end of spring only.

c. Drive upper and lower shackle pins out in one unit using a copper hammer.

d. Inspect the shackles for wear. If worn, reverse them when re-assembling. In other words, place the smooth side of each shackle toward the wearing surface. Do not change the position of the shackle from the inner to the outer side of the spring.

e. Outer shackles are easily removed. Remove the two pinch bolts and drive out the shackle pins.

f. Place a $\frac{15}{16}$ " x $\frac{13}{16}$ " bushing driver in bushing hole and drive the old bushing out with a heavy hammer.

g. Place the new bushing over the small end of the bushing driver and drive in. A 1" washer between the shoulder of the bushing driver and the new bushing will act as a stop when driving, prevent the bush-

ing from going in too far, and prevent the end of the bushing from becoming "mushroomed."

h. After the new bushing has been installed, ream to 1" diameter.

i. Install shackle bolts and repeat the rebushing operation on the other end of the spring.

j. By removing the shackle bolts from only one end at a time, the spring is held firmly in place while the bushing is being driven out and in and strain is removed from the spring clips.

6. MAINTENANCE SUGGESTIONS.—*a.* Springs should be given frequent visual inspection under hard service. Springs should be checked immediately if trailer does not ride level.

b. Spring shackles should be drawn up tight enough to take up all play caused by wear, but not too tight to prevent free action of shackles and shackle bolts.

c. U-bolts should be kept tight—checked frequently. Loose U-bolts are a possible source of spring breakage.

d. The spring center bolt should also be kept tight at all times.

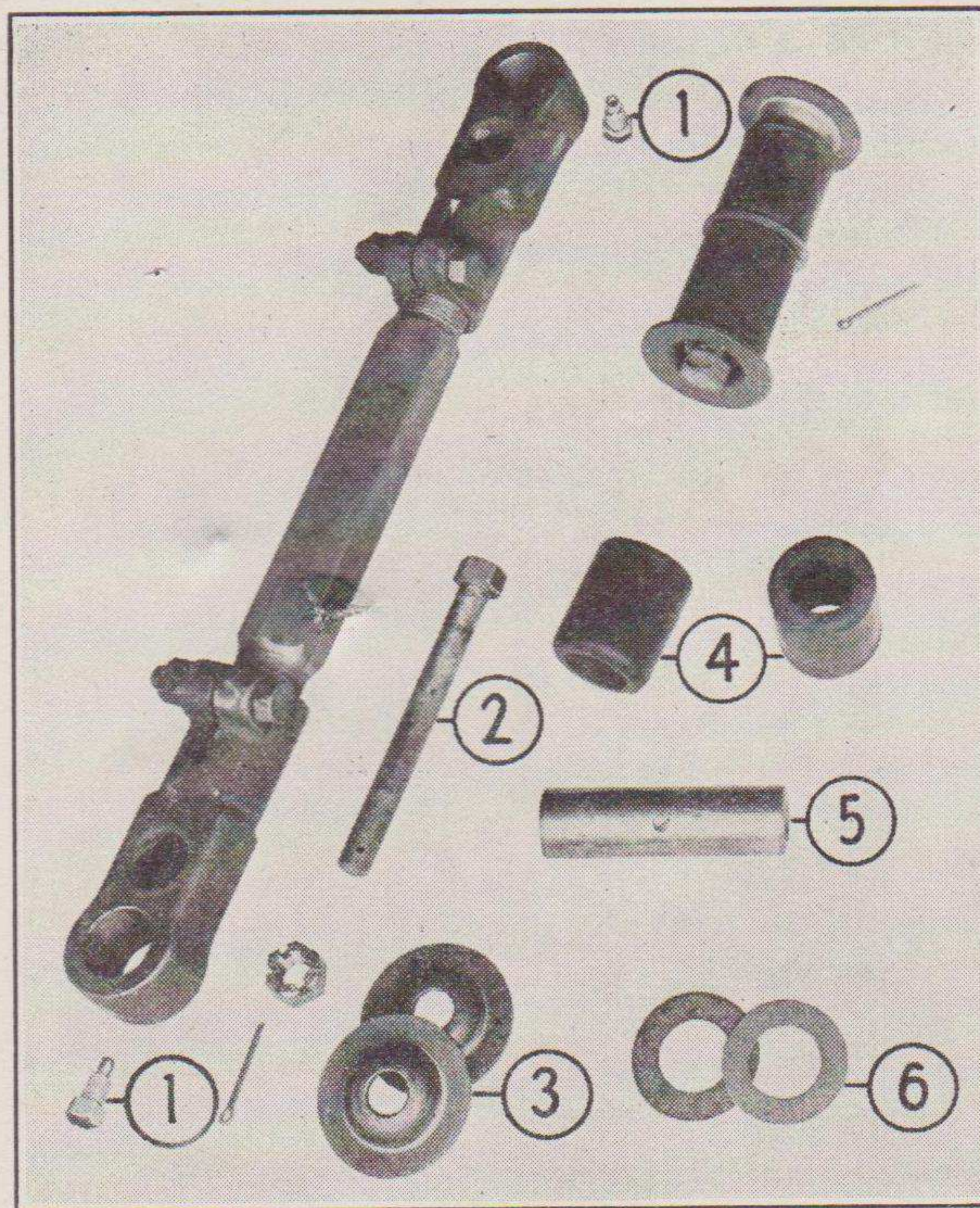


FIGURE 36. RADIUS ROD ASSEMBLY

e. Spring clips which hold leaves in alignment should be tight, but not so tight as to restrict free movement of leaves. Frequent inspection of clips should be made and they should be tightened up when necessary. Loose clips permit leaves to shift, which will cause shearing of spring center bolt.

7. RADIUS RODS.—*a.* Only in very rare instances do radius rods require replacement. Failure is usually due to accident, or bending under extreme shock. And, though one radius rod is adjustable, the other fixed, the replacement procedure is the same for both.

8. REPLACEMENT OF RADIUS RODS (Refer to Figure 36).—*a.* Remove the set screws (1) and bolts (2) at each end of the rods.

b. Remove the inner and outer washers (3).

c. Tap out the bolts (2) with a 1/2" punch and hammer.

d. Remove the rubber bushings (4) at both ends of the rod. Twist them out, using a pair of pliers.

e. Drive the pins (5) at both ends out, using a hammer and bar. Inner washers (6) will fall out.

f. Re-install by reversing the above procedure. Whenever radius rods are replaced, the axle should be realigned, in accordance with the axle alignment instructions contained in the Axle Section.

9. SPRINGS—Service Diagnosis and Remedy

SYMPTOM AND PROBABLE CAUSE

PROBABLE REMEDY

HARD RIDING

1. Insufficient lubrication.
2. Overloaded.
3. Uneven load distribution.

1. Lubricate spring shackles.
2. Load vehicle only to rated capacity.
3. Distribute load evenly.

OVER FLEXIBLE

1. Over lubricated.
2. Spring leaf clips broken.
3. Broken spring leaf or leaves.
4. Loose spring shackles.

1. Spring leaves do not require lubrication.
2. Replace.
3. Replace
4. Tighten.

UNEVEN RIDING

1. Broken spring leaf or leaves.
2. Uneven load distribution.

1. Replace.
2. Distribute load evenly.

SECTION VIII

Wheel, Hubs and Bearings

1. The wheels used on this unit require no service—barring damage due to collision. Replacement rather than any attempt at repair is recommended.

2. REPLACEMENT OF WORN OR BROKEN STUDS.—*a.* Remove inner and outer wheels.

b. Remove hub from the axle and place on the floor with the inside of the drum up.

c. Remove nut from the stud (or studs) which you wish to replace.

d. Using a $\frac{5}{8}$ " punch, drive out the broken or worn stud.

e. Turn the hub and drum over and place the new stud in position. Make sure that the shoulder on the stud is placed so that it will fit into the groove in the hub after stud is driven into position.

f. Drive the stud into position using a copper hammer.

g. Turn the wheel over with drum up, tighten nut.

h. Clean all foreign matter from drum and replace the wheel.

3. TIRE REPAIRS.—*a.* When removing wheels for tire repairs, it will be seen that all studs and nuts are marked with the letters "L" or "R" which indicate left and right. And, while nuts are not interchangeable, the wheels themselves are. They may be used as inner or outer, right or left.

b. Since the entire load is carried out to the wheels through the studs, care should be taken to draw up wheel nuts tight and with equal pressure at all studs.

c. To insure a tight wheel fit, follow this simple procedure:

(1) Make sure all countersunk holes in wheels are clean, free from dirt or "piled up" paint.

(2) Draw up the sleeve shaped nuts which hold the inner wheel in place. Apply pressure evenly on all nuts by progressively tightening opposite nuts until all are down very tight.

(3) Slide on the outer wheel and draw up the outer stud nuts in the same manner as outlined above.

d. It is good practice when mounting wheels to place the valve stems opposite each other for easy tire inflation.

4. REMOVING TIRE FROM WHEEL.—*a.* Permit the air to escape from the tire by removing the core from the valve stem. Then insert a tire tool in the slot provided for the purpose on the rim and pry down while tapping the opposite side of the rim with a hammer.

b. When reinstalling the tire, inflate before installing the tire and wheel on hub. Before inflation make sure that the lock rim is properly seated in the groove.

c. CAUTION: ALWAYS WRAP TWO SAFETY CHAINS LOOSELY AROUND TWO DIFFERENT POINTS OF THE TIRE PRIOR TO INFLATION. THIS SAFEGUARDS AGAINST POSSIBLE SERIOUS INJURY SHOULD THE OUTER LOCK RING LET GO DURING INFLATION.

5. CARE AND INSPECTION OF TIRES AND TUBES.—a. All tires on this trailer are built to sustain the weight of the loaded trailer.

b. However, unless the recommended pressure is maintained, the tires will not function as they should and in consequence safe, economical operation of the trailer will be affected.

c. Tires should be checked every 500 miles or 6 days. Correct air pressure is 55 pounds. Wheels should be checked to insure that they are true running.

6. REPLACING TIRE CARRIER (Refer to Figure 37).—a. Procedure.—(1) Remove the ratchet nut which extends through the side rail by using a punch and hammer and driving out the pin which couples the ratchet to the operating shaft.

(2) Remove the four bolts which hold the tire carrier to the frame, and lift out.

b. Cable replacement.—(1) Procedure.—(a) Remove the cable from the spool, removing the $\frac{3}{8}$ " bolt and the flat washer, and unwinding or pulling the cable off.

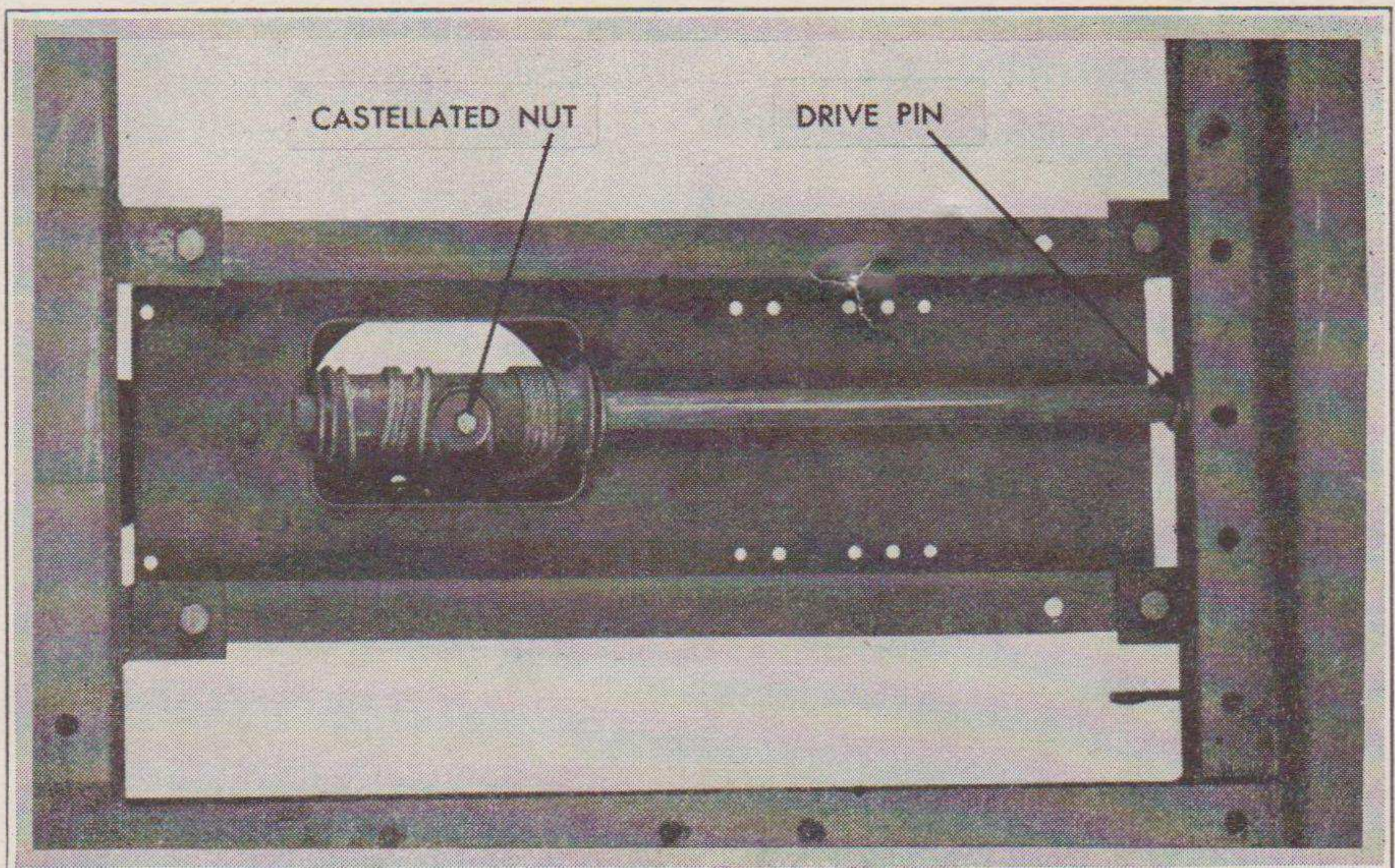


FIGURE 37. TIRE CARRIER

b. Before the cable can be removed from the spool, the cable clamp must be removed from the pick-up plate.

c. To replace the cable, reverse the above procedure. (Refer to Figure 37.)

7. REMOVING HUB ASSEMBLY, REAR AXLE.—*a.* To remove the axle hub assembly from the axle, the following procedure is recommended:

(1) Remove the outer and inner tire wheel assembly, pulling tires out as illustrated in Figure 38.

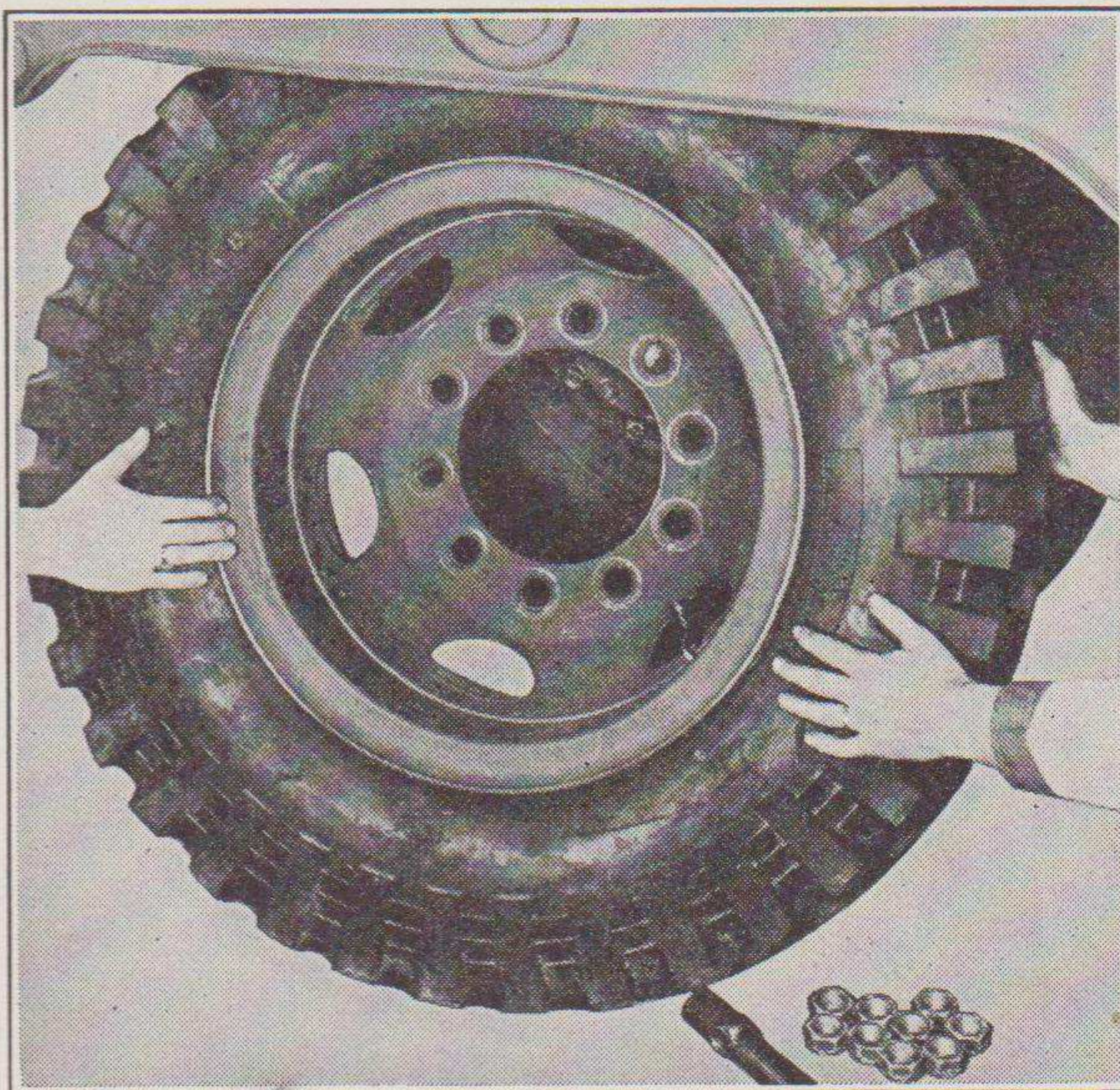


FIGURE 38. REMOVING REAR TIRE

(2) Take out the four cap screws on the hub cap, pull the cotter key from the axle nut and remove the axle nut by turning it in a counter-clockwise direction.

(3) Now place a screw driver under the outer bearing, pry gently and tap D washer with a hammer as illustrated in Figure 39. The D washer and bearing may also be removed as the hub is pulled off.

(4) Pull the hub off. If the hub will not slide off freely once the outer bearing is removed, it is usually because the brake shoes are dragging. This drag is easily removed by slacking off the brake adjustment through counter-clockwise movement of the slack adjuster, adjusting nut.

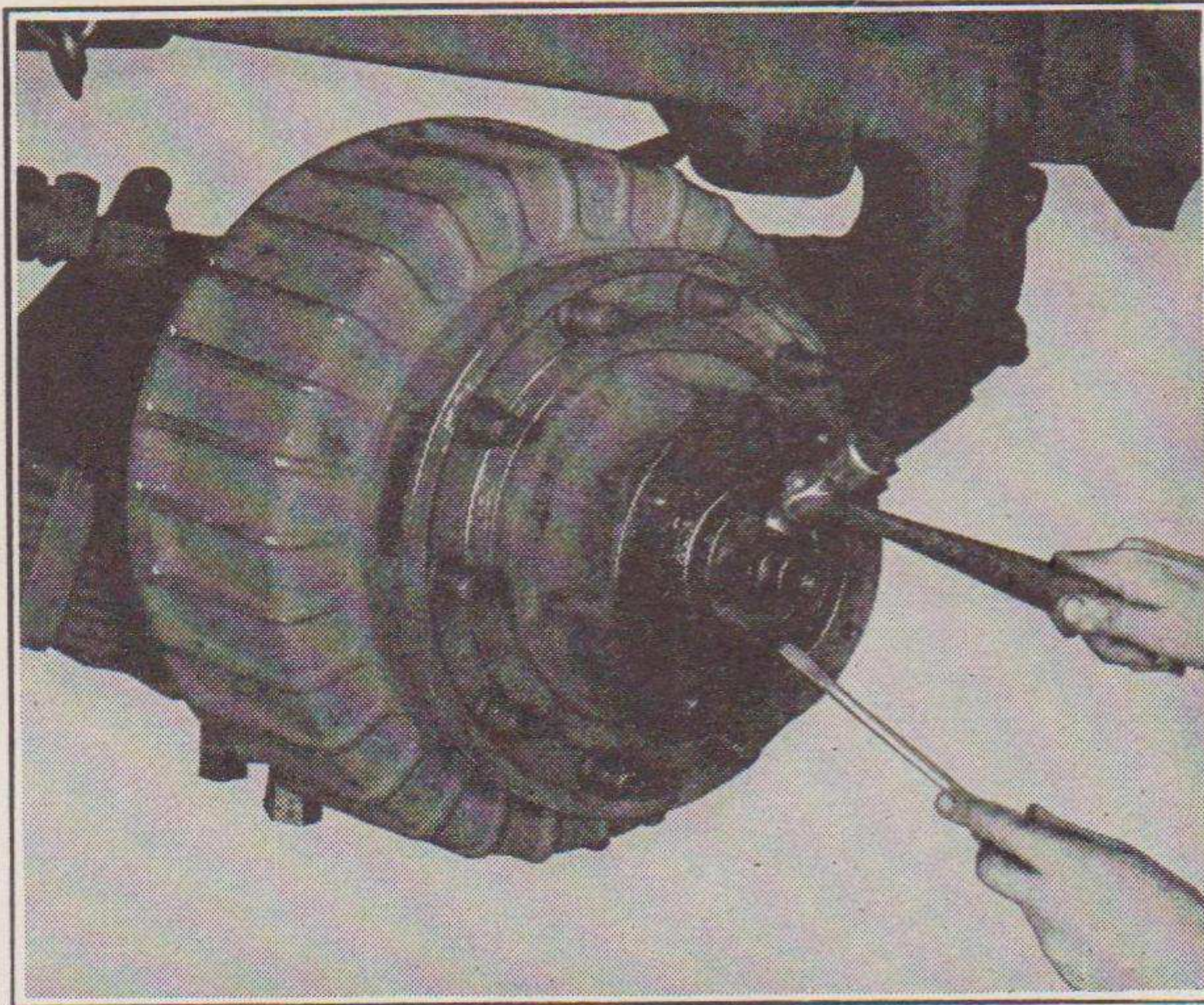


FIGURE 39. REMOVING D. WASHER

8. REMOVING HUB ASSEMBLY, FRONT AXLE (Refer to Figure 39).—*a.* To remove the axle hub assembly from the axle, proceed as follows:

(1) Hoist the front end by connecting the chain to the front crossmember of the gear frame.

(2) Place a greased steel plate or wood plank under both dual tires to utilize as a skid for the removal of hub and wheel assembly in one unit. The hub assembly with wheel intact is too heavy and cannot easily be removed otherwise.

(3) Take out the four cap screws in hub cap, pull the cotter key from the axle nut and remove the axle nut by turning the nut in a counter-clockwise direction.

(4) Now place a screw driver under the outer bearing, pry gently and tap D washer with a hammer. (See Figure 39.) The D washer and bearing may also be removed as the wheel assembly is pulled off.

(5) Pull the wheel off, using the greased skid plate to facilitate its removal.

9. INSTALLING HUB ASSEMBLY.—*a.* Before installing the hub on the axle, all bearings should be washed in kerosene or gasoline, a stiff brush employed to remove all foreign matter, and bearings thoroughly inspected for pits, chips and signs of wear. All dirt apt to get into hubs should also be removed.

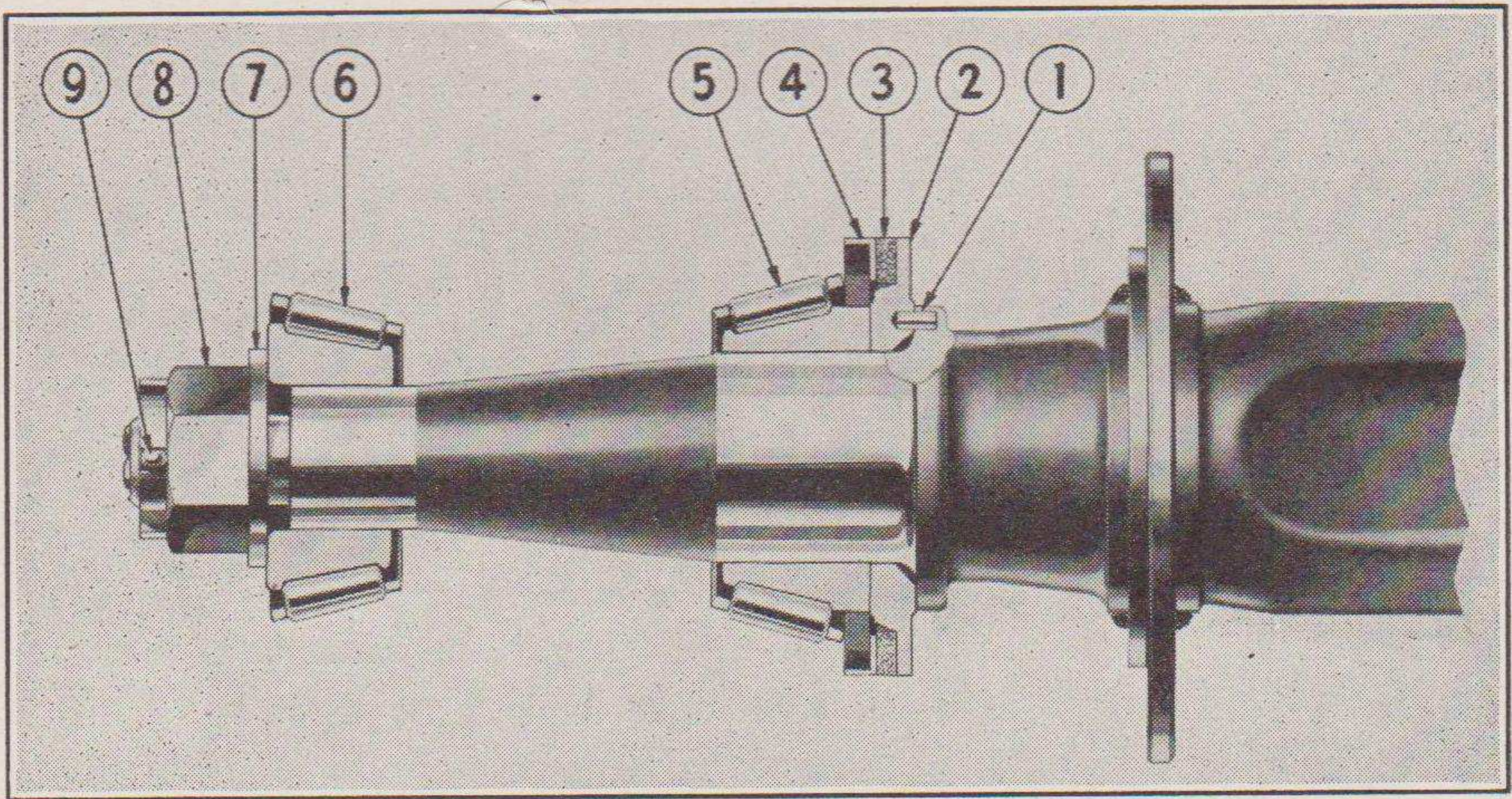


FIGURE 40. AXLE—CUTAWAY VIEW

b. To install the hub, proceed as follows: (Refer to Figure 40.)

(1) Repack the space in the hub between the two cups with new grease. Put about a $\frac{1}{8}$ " layer of grease on the inner and outer bearing cups and repack both inner and outer bearings.

(2) Now place the inner bearing (5) in the hub.

(3) Insert the compression ring (4) with its flanged side toward the *inside* of the hub. Place the felt grease retainer (3) next to the compression ring.

(4) Place the dust collar (2) on the axle spindle and lock it into place by means of the metal dowel (1) which fits into a slot on the spindle and a hole in the dust collar. The wheel is now ready to slip on.

(5) Using a greased skid plate, slide the wheel on the spindle. Place the outer bearing (6) in the hub and install the D washer (7).

(6) Turn the axle nut (8) up tight, then slacken off about $\frac{1}{3}$ turn. Test for excessive end play. Use a bar. Rest one end on the floor and lift up on outside tire. By working the bar up and down while holding one finger on the cage of the outer bearing, excessive play is quickly detected.

(7) With the bearings properly adjusted, fit cotter key (9) into wheel nut, fill the hub cap $\frac{1}{3}$ full of grease and reinstall with cap screws. Turn the wheel. If the wheel fails to turn freely, check for brake drag by means of the slack adjusters. If this fails to correct the trouble the felt grease retainer probably slipped out of place during assembly. To correct this difficulty, remove hub assembly and reinstall

10. REMOVING BEARING CUPS.—*a.* Place a soft steel bar on the inside shoulder or edge of the cup to be removed. Using a heavy hammer, hit first one side of the cup and then the other. By alternating in this manner the cup will come out straight with the cup bore. Danger of wedging of the cup in the bore is minimized.

11. INSTALLING BEARING CUPS.—*a.* With the wheel on its side, start the new cup square with the bore and so that its smallest inside diameter will be on the inside when it is in place.

b. With a piece of hard wood or soft steel over the cup drive it in until it is flush with the outer edge of the hub.

c. Now place the old cup over the new one in the same manner as in step *a.* and drive the new cup in until it is absolutely tight with the cup bore flange. Be sure that the cup is properly seated because if it is not it will alter the distance between the bearing centers and make impossible proper reassembly of the wheel.

12. LOOSE CUPS.—*a.* When the bearing cup becomes loose in the hub, replace the hub.

b. Emergency repair of loose cups can be accomplished by using a center punch to reduce the diameter of the bore. Simply use a heavy center punch and put about 12 punch marks per square inch about the diameter of the side wall of the cup bore where the cup normally fits.

13. BEARING AND CUP INSPECTION.—*a.* Bearings and cups should be cleaned and inspected whenever wheels are removed. Pitted or chipped bearings or cups should be replaced.

PART III

SPARE PARTS LIST

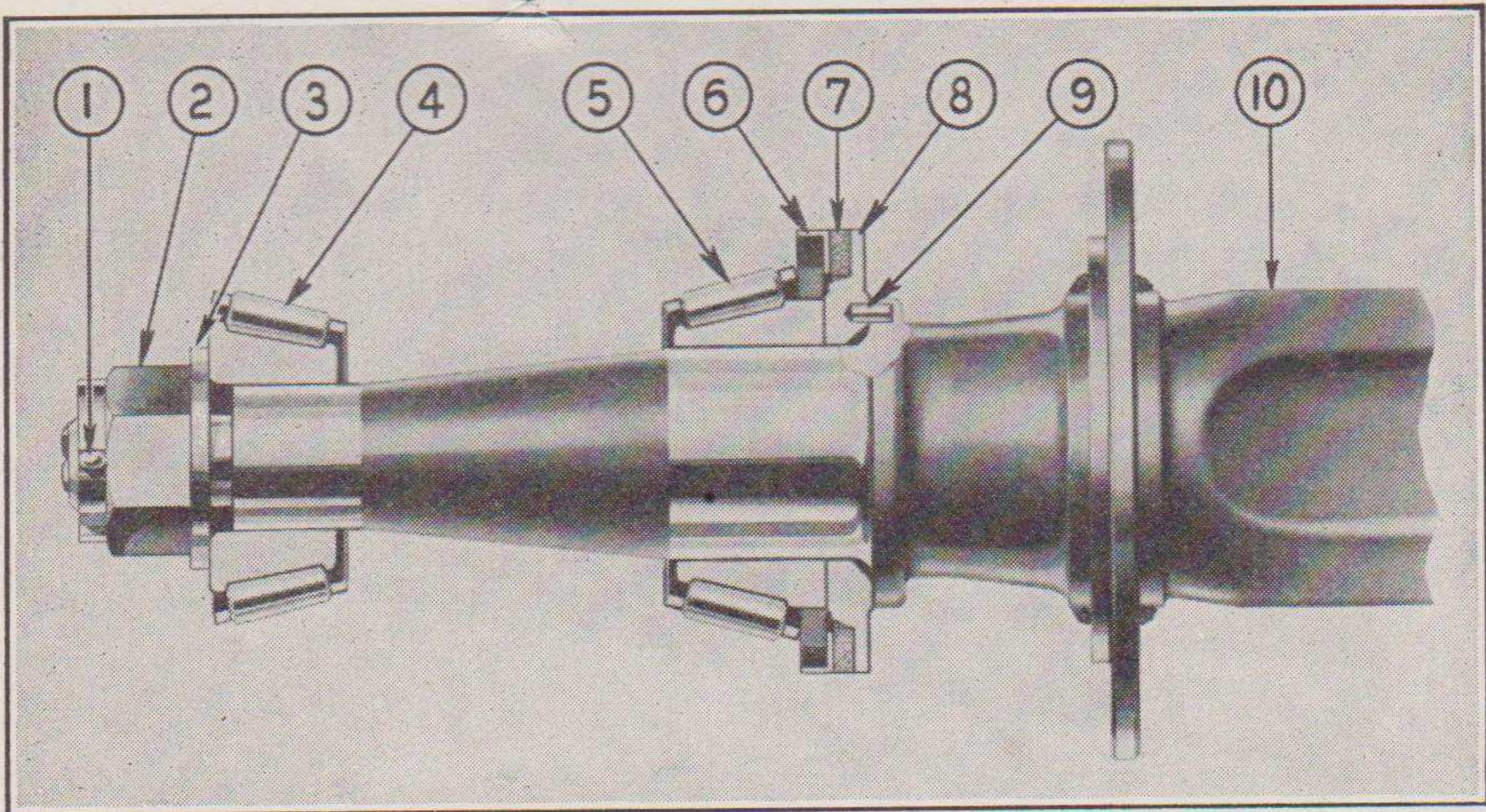


FIGURE 41. AXLE ASSEMBLY

SECTION: *Axle—Front and Rear*

(FIGURE 41)

Key No.	Part No.	Name	Quantity
1	103425	Pin-Cotter $\frac{1}{4}$ "x $2\frac{3}{4}$ "	4
2	530088	Nut-Castle $1\frac{1}{2}$ "	4
3	530085	Washer-Dee-Axle	4
4	534746	Bearing-Outer No. 5565	4
5	534747	Bearing-Inner No. 5752	4
6	530368	Ring-Compression	4
7	530370	Washer-Felt	4
8	534996	Collar-Dust	4
9	534591	Pin-Dowel-Dust Collar	4
10	534503	Axle-Model 2 ($3 \times 4\frac{1}{4}$ ") $6\frac{1}{2}$ " Tread	2

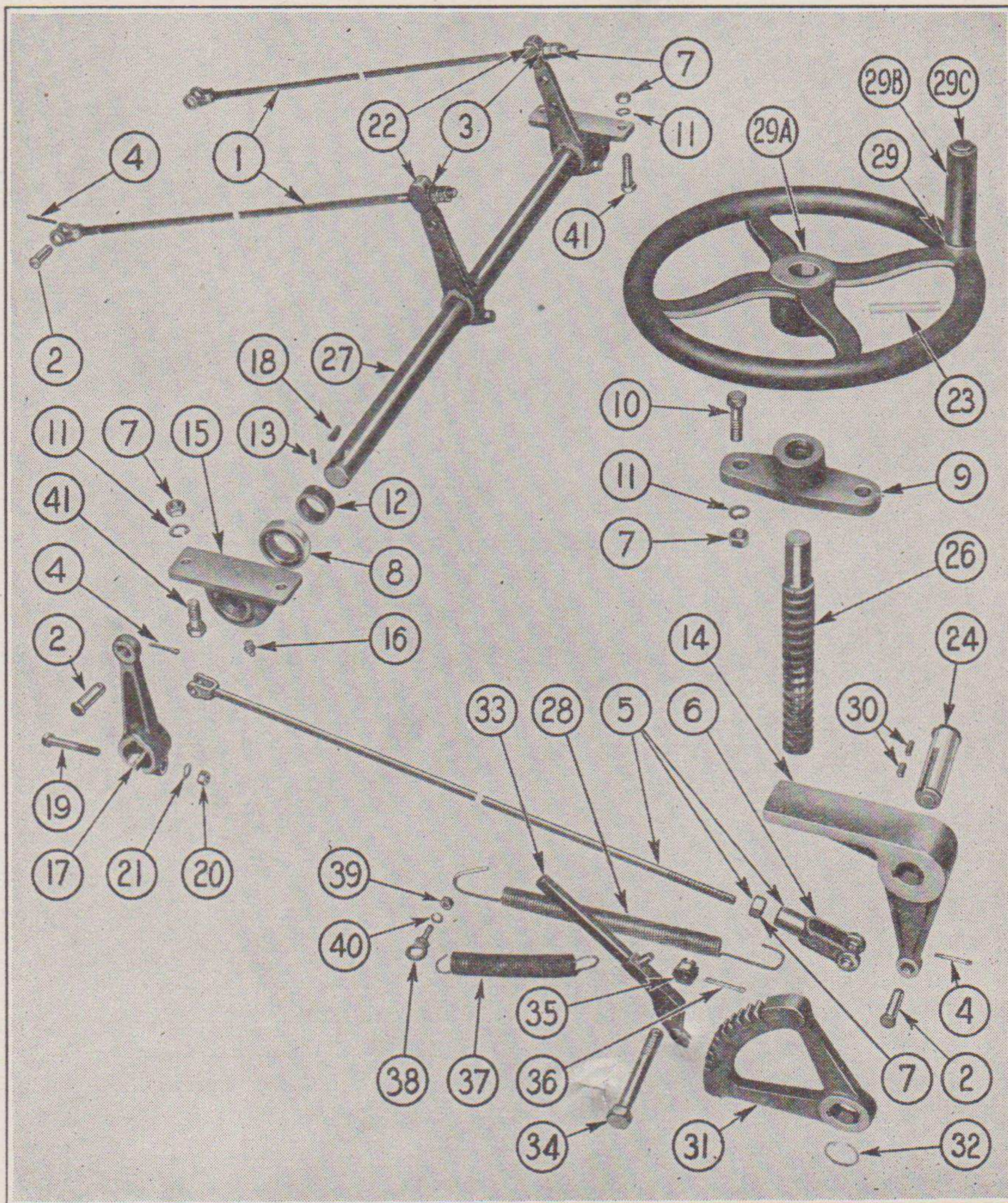
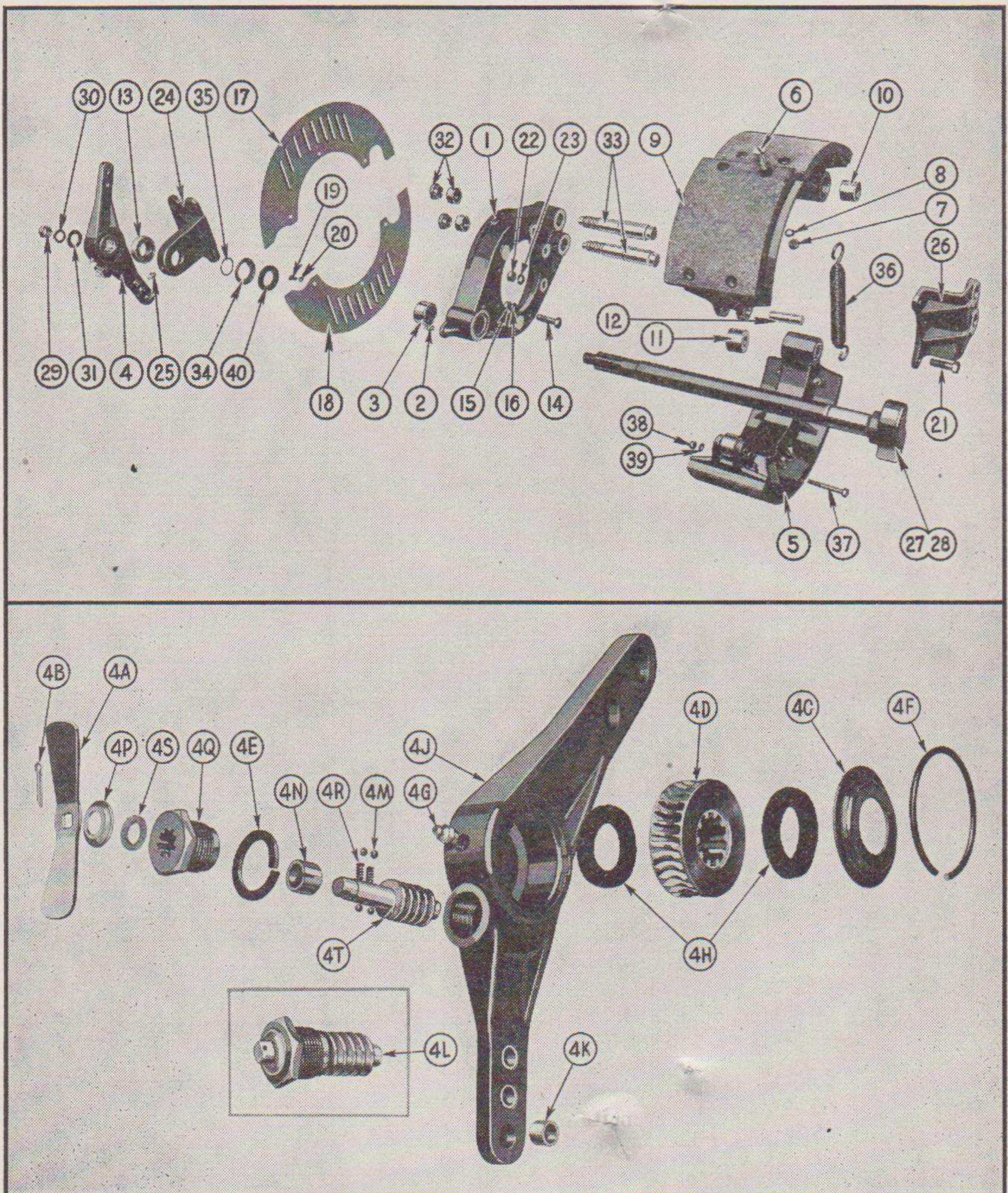


FIGURE 42. HAND PARKING BRAKE ASSEMBLY

SECTION: *Hand Parking Brake*
(FIGURE 42)

Key No.	Part No.	Name	Quantity
1	51459	Rod-Brake Lock-Assembly—3'-3½"	2
2	114787	Pin-Clevis ½"x1 ²⁷ / ₆₄ "	2
3	106265	Washer-Flat Large ½"	2
4	108630	Pin-Cotter ⅛"x ⁷ / ₈ "	2
5	51457	Rod-Brake-Assembly—7'-9½"	1
2	114787	Pin-Clevis ½"x1 ²⁷ / ₆₄ "	2
4	108630	Pin-Cotter ⅛"x ⁷ / ₈ "	2
6	104039	Yoke-Adjusting-SAE ½"	1
7	103028	Nut-Hex. ½"-20	7
8	533368	Bearing-Ball	2
9	536232	Bracket-Brake Screw	1
10	100053	Bolt-Hex. Hd. ½"-20x1 ³ / ₄ "	2
7	103028	Nut-Hex. ½"-20	2
11	103323	Washer-Lock-Med. "A" ½"	6
12	533677	Collar-Cross Shaft	1
13	102430	Screw-Square Hd. Set, Rnd. Point ¼"-20x1½"	1
14	536275	Crank-Bell Brake	1
15	532492	Journal-Cross Shaft	2
16	119512	Alemite with Ball and Spring ⅛"	2
17	501204	Lever-Brake Cross Shaft (5")	1
18	113782	Key-Woodruff No. 15 ¼"x1"	1
19	106288	Bolt-Hex. Hd. ⅜"-24x2¼"	1
20	103026	Nut-Hex. ⅜"-24	1
21	103321	Washer-Lock-Med. "A" ⅜"	1
22	532750	Lever-Slide Bar	2
18	113782	Key-Woodruff No. 15 ¼"x1"	2
19	106288	Bolt-Hex. Hd. ⅜"-24x2¼"	2
20	103026	Nut-Hex. ⅜"-24	2
21	103321	Washer-Lock Med. ⅜"	2
23	630298	Pin	1
24	536277	Pin-Bell Crank	1
26	536203	Screw-Hand Brake	1
27	536178	Shaft-Cross-Parking Brake	1
28	535610	Spring-Brake Return	1
29	51485	Wheel-Hand Brake-Assembly (631936)	1
29-A	631936	Wheel-Hand Brake	1
29-B	630027	Handle	1
29-C	630028	Pin	1
30	536278	Key-Square-¼"	2
31	536276	Ratchet	1
32	630838	Ring-Lock	2
33	674756	Handle Release	1
34	241860	Bolt-Handle Release	1
35	103028	Nut, hex, SAE ½"-20	1
36	103386	Pin-Cotter	1
37	536111	Spring-Return	1
38	532147	Bolt-Eye	1
39	103024	Nut-SAE-¼"	1
40	103319	Washer-Lock-¼"	1
41	100052	Bolt-SAE-½"x1½"	4



TOP: FIGURE 43. BRAKE ASSEMBLY
BOTTOM: FIGURE 44. SLACK ADJUSTER ASSEMBLY

SECTION: *Brakes—Internal—Front and Rear*
(FIGURES 43 AND 44)

Key No.	Part No.	Name	Quantity
1	51220	Plate-Mounting-Brake Adapter-As'mbly (535098)	4
2	109461	Alemite with Ball and Spring 1/8"	4
3	535017	Bearing-Needle	8
4	51200	Adjuster-Slack-Assembly (Front) (534724)	4
4	51202	Adjuster-Slack-Assembly (Rear) (534790)	4
4-A	535927	Lever-Adjusting	4
4-B	103385	Pin-Cotter 1/8"x1"	4

Brakes—Internal—Front and Rear (Continued)

Key No.	Part No.	Name	Quantity
4-C	534731	Felt-Retainer-Slack Adjuster	4
4-D	534725	Gear-Worm-Slack Adjuster	4
4-E	534014	Washer-Lock-Slack Adjuster	4
4-F	534732	Ring-Snap-Felt Retainer	4
4-G	109461	Alemite with Ball and Spring 1/8"	4
4-H	534730	Washer-Felt-Slack Adjuster	8
4-J	51208	Housing-Slack Adjuster with Bushings-Assembly	4
4-K	533066	Bushing-Slack Adjuster	12
4-L	51240	Worm-Slack Adjuster-Assembly	4
4-M	534739	Ball-Retainer-Slack Adjuster	16
4-N	534740	Bushing-Worm Retainer	4
4-P	534919	Felt-Retainer-Worm	4
4-Q	534727	Retainer-Worm	4
4-R	534729	Spring-Worm Retainer-Ball	8
4-S	534918	Washer-Dust Worm, Slack Adjuster	4
4-T	534726	Worm-Slack Adjuster	4
5	51262	Brake-Shoe-Assembly (533973)	8
6	114687	Screw-fl-hd., USS-3/8"-16x1 1/4"	64
7	102635	Nut-Hex. Med. 3/8"-16	64
8	103321	Washer-Lock-Med. "A" 3/8"	64
9	535348	Block-Brake (16"x6")	16
10	532866	Bushing-Oilite	16
11	533979	Roller	8
12	533980	Shaft-Roller	8
13	533368	Bearing-Ball	4
14	535027	Bolt-Brake Adapter Mounting	20
15	103028	Nut-Hex. 1/2-20	20
16	103323	Washer-Lock-Med. "A" 1/2"	20
17	535772	Shield-Brake-Dust-LH	4
18	535773	Shield-Brake-Dust-RH	4
19	106972	Bolt-Hex. Hd. 1/4-20x1 1/2"	24
20	103319	Washer-Lock-Med. "A" No. 14 or 1/4"	24
21	535028	Bolt-Brake Adapter Mounting	12
22	103028	Nut-Hex. 1/2-20	12
23	103323	Washer-Lock Med. "A" 1/2"	12
24	533967	Bracket-Cam	4
25	109461	Alemite with Ball and Spring 1/8"	4
26	533974	Bracket-Eccentric Anchor Pin	4
27	535105	Cam-Medium-LH	2
28	535106	Cam-Medium-RH	2
29	103031	Nut-Hex.-Jam-3/4-16	4
30	103326	Washer-Lock Med. "A" 3/4"	4
31	106268	Washer-Large-Flat 3/4"	4
32	534079	Nut-Lock	8
33	533975	Pin-Eccentric Anchor	8
34	535018	Retainer-Felt	4
35	535019	Ring-Snap-Cam Shaft	4
36	530135	Spring-Brake Shoe	4
37	100031	Bolt-Hex. Hd. 3/8-24x2 1/2"	8
38	103026	Nut-Hex. 3/8-24	8
39	103321	Washer-Lock-Med. "A" 3/8"	8
40	534730	Washer-Felt-Slack Adjuster	4

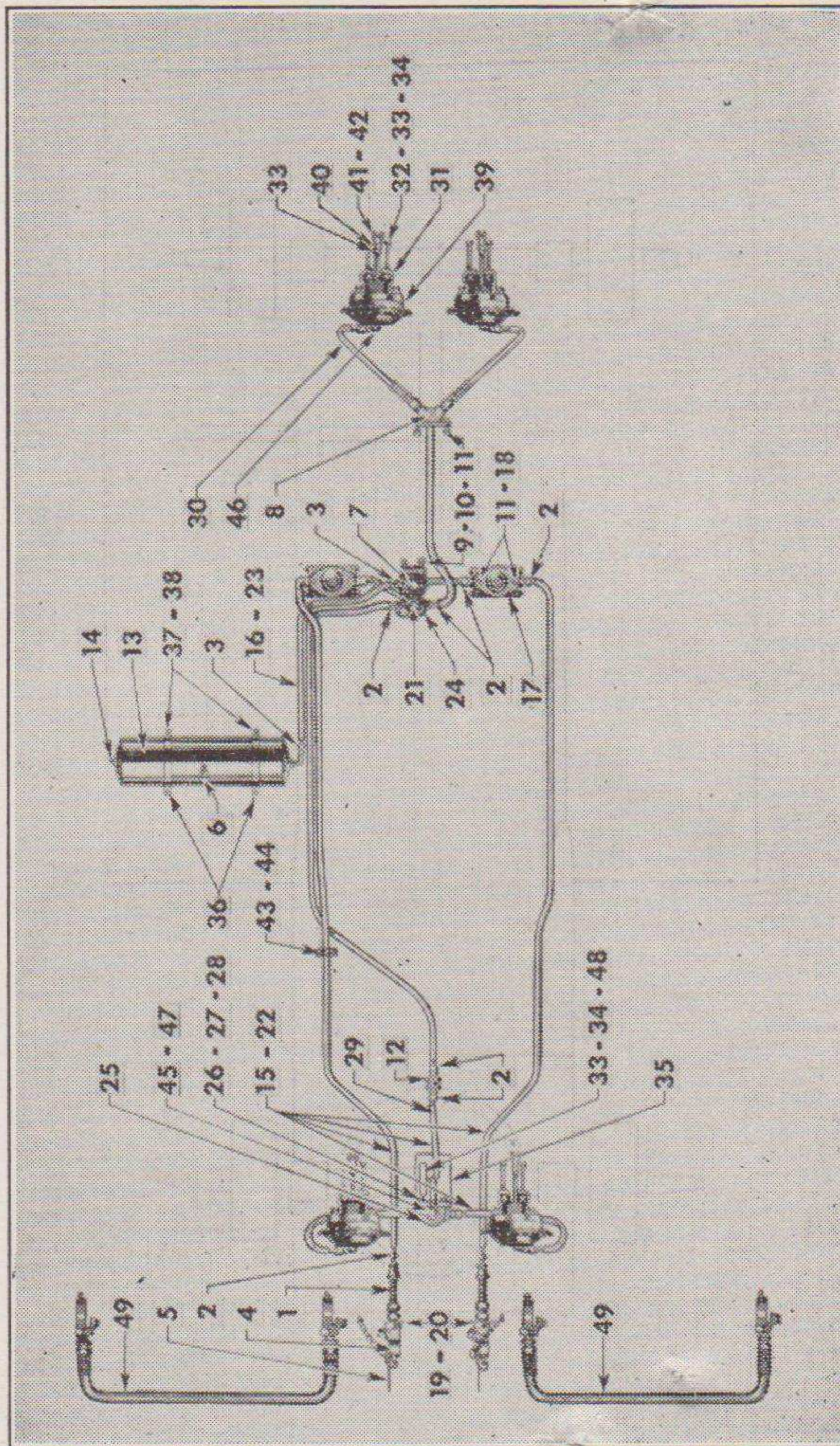


FIGURE 45. BRAKE OPERATING PARTS ASSEMBLY

SECTION: *Brake Operating Parts*
(FIGURE 45)

Key No.	Part No.	Name	Quantity
1	536213	Stud-Clamping (WAB-205730)	2
2	535300	Connector- $\frac{3}{8}$ " Tubing $\frac{1}{4}$ " Pipe Thd. (WAB-205053)	14
3	535306	Connector- $\frac{1}{2}$ " Tubing $\frac{3}{8}$ " Pipe Thd. (WAB-217525)	2
4	534533	Coupling-Air Hose (WAB-220165)	2
5	535910	Coupling-Dummy (WAB-220636)	2
6	534434	Cock-Drain- $\frac{1}{4}$ " (WAB-215310)	1
	535304	Elbow- $\frac{3}{8}$ " Tubing $\frac{1}{4}$ " Pipe Thd. (Top of Valve) (WAB-205102)	1

SECTION: *Brake Operating Parts*
(Continued)

(FIGURE 45)

7	536110	Fitting-Exhaust (WAB-221087)	1
8	536185	Fitting-Frame (WAB-201938)	1
9	100027	Bolt-Hex. Hd.- $\frac{3}{8}$ "-24x $\frac{1}{4}$ "	4
10	103026	Nut-Hex.- $\frac{3}{8}$ "-24	4
11	103321	Washer-Lock Medium- $\frac{3}{8}$ "	8
12	536214	Coupling-Frame Tubing (WAB-205465)	1
13	536175	Reservoir WAB-215730)	1
14	103867	Plug-Pipe- $\frac{3}{8}$ "-18	2
15	Stk. # 1043	Loom-for $\frac{3}{8}$ " Tubing	44 $\frac{1}{2}$ '
16	Stk. # 1044	Loom-for $\frac{1}{2}$ " Tubing	3'-10"
17	*536108	Air Filter (WAB-221022)	2
18	100134	Bolt-Hex. Hd.- $\frac{3}{8}$ "-16x1"	4
19	535302	Tag-Emergency (WAB-201499)	1
20	535301	Tag-Service (WAB-201500)	1
21	536187	Connector-Tubing- $\frac{3}{8}$ " Tubing Thrd. (WAB-205824)	1
22	Stk. # 1041	Tubing- $\frac{3}{8}$ " copper	16'
	Stk. # 1814	Tubing- $\frac{3}{8}$ " Steel	32'
23	Stk. # 1042	Tubing- $\frac{1}{2}$ " Copper	4'
24	†535303	Valve-Emergency Relay (WAB-220353)	1
25	535310	Valve-Quick Release (WAB-205000)	1
	WAB-202588	Spring, for quick release valve	1
	WAB-202587	Spring Seat, for quick release valve	1
	WAB-211379	Diaphragm, for quick release valve	1
26	100014	Bolt-Hex. Hd.- $\frac{5}{16}$ "-24x1"	4
27	103025	Nut-Hex. Thin- $\frac{5}{16}$ "-24	4
28	103320	Washer-Lock-Plain $\frac{5}{16}$ "	4
29	51455	Hose-Air Brake-Assembly (WAB-221216)	1
30	51456	Hose-Air Brake-Assembly (WAB-221217)	2
31	532977	Bracket-Brake Chamber Mounting	4
32	120911	Bolt-Hex. Hd.- $\frac{1}{2}$ "-20x4 $\frac{3}{4}$ "	16
33	103028	Nut-Hex.- $\frac{1}{2}$ "-20	22
34	103323	Washer-Lock Medium "A"- $\frac{1}{2}$ "	18
35	536177	Bracket-Quick Release Valve	1
36	536159	Bracket-Reservoir	4
37	116399	Bolt-Hex. Hd.- $\frac{3}{8}$ "-16x6 $\frac{1}{4}$ "	8
38	102635	Nut-Hex. Medium- $\frac{3}{8}$ "-16	8
39	‡534374	Chamber-Brake (9") (WAB-215092)	4
40	104039	Yoke-Adjusting-SAE $\frac{1}{2}$ "	4
41	103498	Pin-Clevis- $\frac{1}{2}$ "	4
42	103385	Pin-Cotter- $\frac{1}{8}$ "x1"	4
43	532894	Clip-Tubing	16
44	102542	Screw-Drive-Rnd. Hd. # 10x1"	16
45	119931	Bushing-Reducing- $\frac{3}{8}$ " to $\frac{1}{4}$ "	1
46	119113	Elbow-Street-45°- $\frac{1}{4}$ "-32	2
47	120063	Elbow-Street-90°- $\frac{3}{8}$ "	1
48	533030	U-Bolt-Bracket-Tee	1
49	51156	Hose-Jumper-Assembly	2
	Stk. # 1045	Hose-Flexible- $\frac{1}{4}$ " I.D.	16'
	535308	Connection- $\frac{1}{4}$ " Hose with wire- $\frac{1}{2}$ " Pipe Thd. (WAB-215535)	4
	534533	Coupling-Air Hose (WAB-220165)	2

* For Breakdown—Refer to Fig. 48.

† For Breakdown—Refer to Fig. 46.

‡ For Breakdown—Refer to Fig. 47.

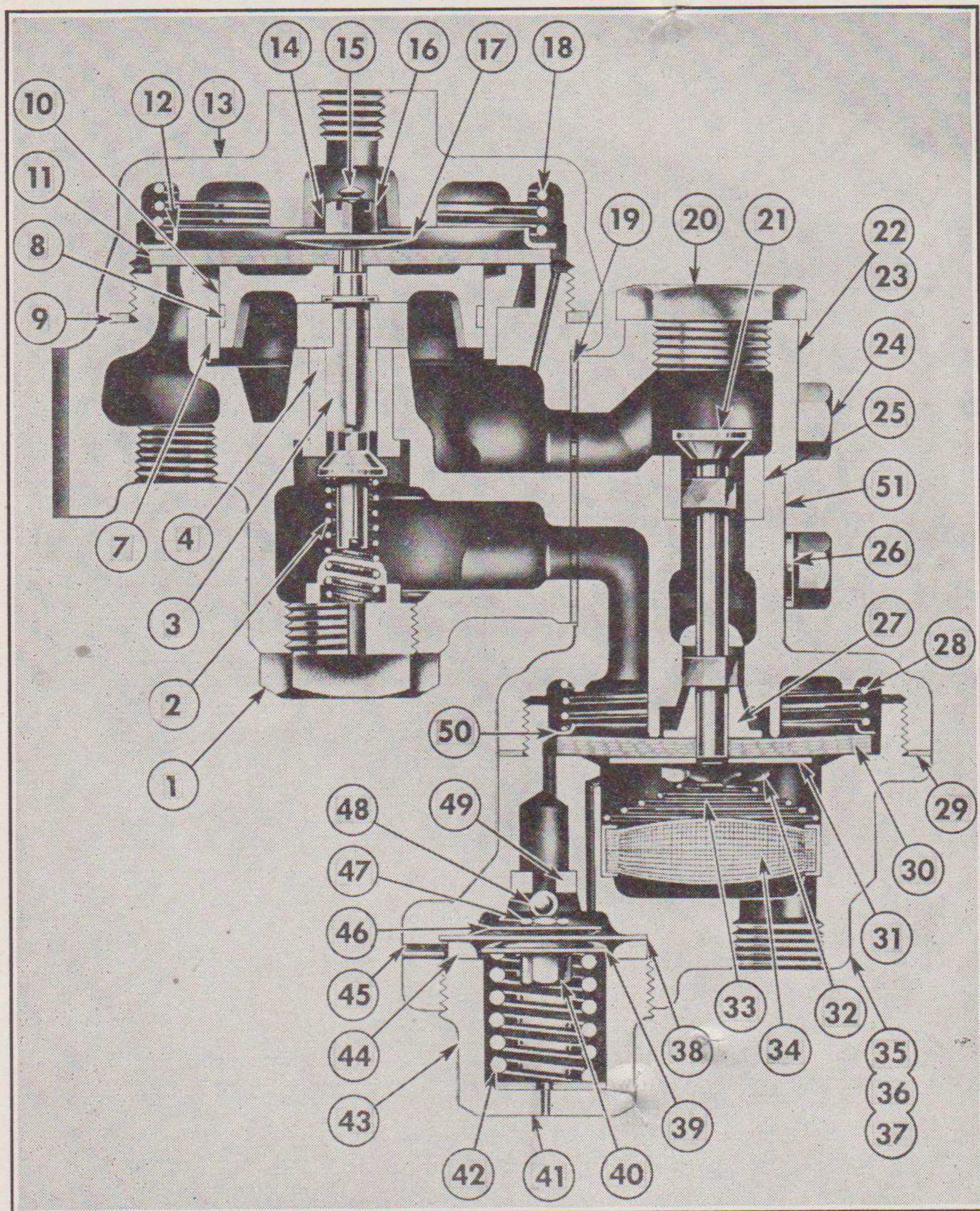


FIGURE 46. RELAY-EMERGENCY VALVE

SECTION: *Brake Operating Parts—Relay Emergency Valve*

(FIGURE 46)

Key No.	Part No.	Name	Quantity
	WAB-220353	VALVE-Emergency Relief	1
1	WAB-202692	Nut-Cap	1
2	WAB-202699	Spring	1
3	WAB-202693	Valve-Intake	1
4	WAB-202690	Seat-Valve	1
5†	WAB-216071	Body-Complete	1

SECTION: *Brake Operating Parts—Relay Emergency Valve*
(Continued)

(FIGURE 46)

Key No.	Part No.	Name	Quantity
6	WAB 204568	Body	1
7	WAB 212135	Bushing-Diaph. Guide	1
8	WAB 202869	Ring-Diaph. Guide	1
9	WAB 211367	Gasket-Cover	1
10	WAB 204650	Guide-Diaph.	1
11	WAB 202695	Diaphragm	1
12	WAB 202697	Seat-Spring	1
13	WAB 202691	Cover	1
14	WAB 203016	Pin-Cotter	1
15	WAB 204651	Screw-Diaph.	1
16	WAB 203227	Nut-Diaph.	1
17	WAB 202696	Washer-Diaph.	1
18	WAB 202698	Spring	1
19	WAB 202735	Gasket	1
20	WAB 202741	Nut-Cap	1
21	WAB 203379	Stem-Valve	1
22*	WAB 215204	Emergency-Assembly	1
23	WAB 202746	Body-Emergency Valve	1
24	WAB 203388	Bolt-Hex. Hd.	1
25	WAB 202736	Seat-Valve	1
26	WAB 202982	Washer-Lock	1
27	WAB 202743	Support-Diaph.	1
28	WAB 202738	Spring	1
29	WAB 202747	Gasket-Cover	1
30	WAB 202744	Diaphragm	1
31	WAB 213387	Washer	1
32	WAB 200029	Nut-Lock	1
33	WAB 204056	Spring	1
34	WAB 204055	Strainer	1
35-	WAB 220305	Diaphragm-Cover Assy.	1
36‡	WAB 220304	Diaphragm-Cover Complete	1
37	WAB 213225	Diaphragm-Cover Body	1
38	WAB 213227	Diaphragm	1
39	WAB 211541	Follower-Lower Diaphragm	1
40	WAB 211542	Nut-stem lock	1
41	WAB 213229	Shim	1
42	WAB 213228	Spring	1
43	WAB 213230	Cap	1
44	WAB 213226	Ring	1
45	WAB 213224	Pin	1
46	WAB 211595	Follower-Upper Diaphragm	1
47	WAB 211538	Stem	1
48	WAB 211539	Ball	1
49	WAB 211537	Seat-Valve	1
50	WAB 202737	Seat-Upper Spring	1
51:	WAB 220829	Valve-Emergency	1

† Includes Items No. 4, 6 and 7.

Item No. 7 cannot be replaced in the field.

* Includes Items No. 23 and 25.

- Includes Items No. 36 to 49, inclusive.

‡ Includes Items No. 37, 45 and 49.

: Includes Items No. 20 to 50, inclusive.

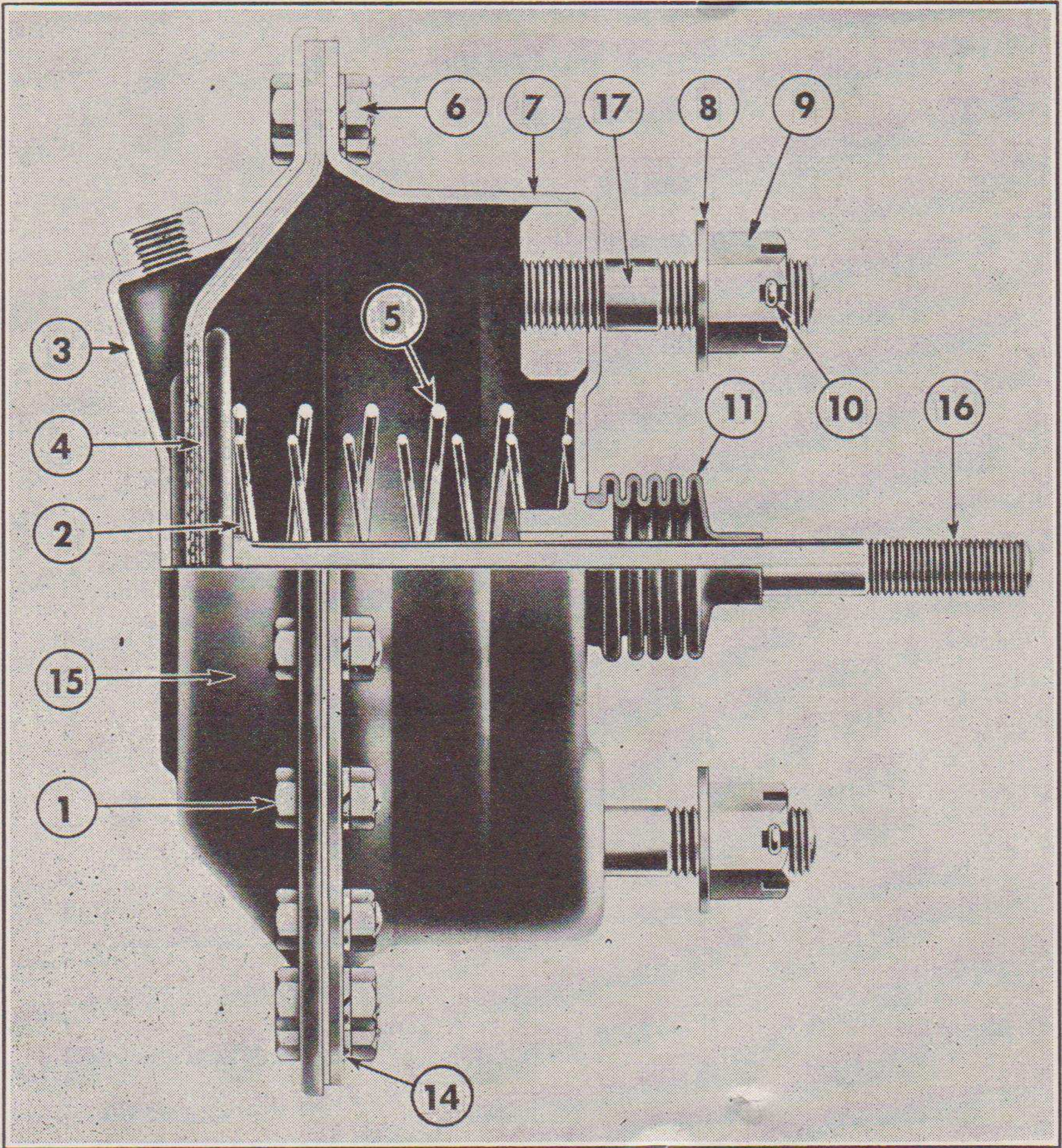


FIGURE 47. BRAKE CHAMBER

SECTION: *Brake Operating Parts—Brake Chamber*

(FIGURE 47)

<i>Key No.</i>	<i>Part No.</i>	<i>Name</i>	<i>Quantity</i>
	WAB-215092	Chamber-Brake	4
1	WAB-203148	Bolt-Hex. Hd.	48
2	WAB-203589	Seat-Spring	4
3	WAB-202880	Plate-Pressure	4
4	WAB-200001	Diaphragm	4
5	WAB-203587	Spring	4
6	WAB-203145	Nut-Hex.	48
7	WAB-217269	Plate-Non Pressure	4
8	WAB-203173	Washer-Lock	8
9	WAB-203172	Nut-Hex.	8
10	WAB-203156	Pin-Cotter	8
11	WAB-201687	Boot	4
12	WAB-202978	Nut-Yoke	4
13	WAB-203019	Pin-Cotter	4
14	WAB-201318	Washer-Lock	48
15	WAB-215092	Chamber-Brake	4
16	WAB-205129	Rod-Push	4
17	WAB-202941	Stud	8

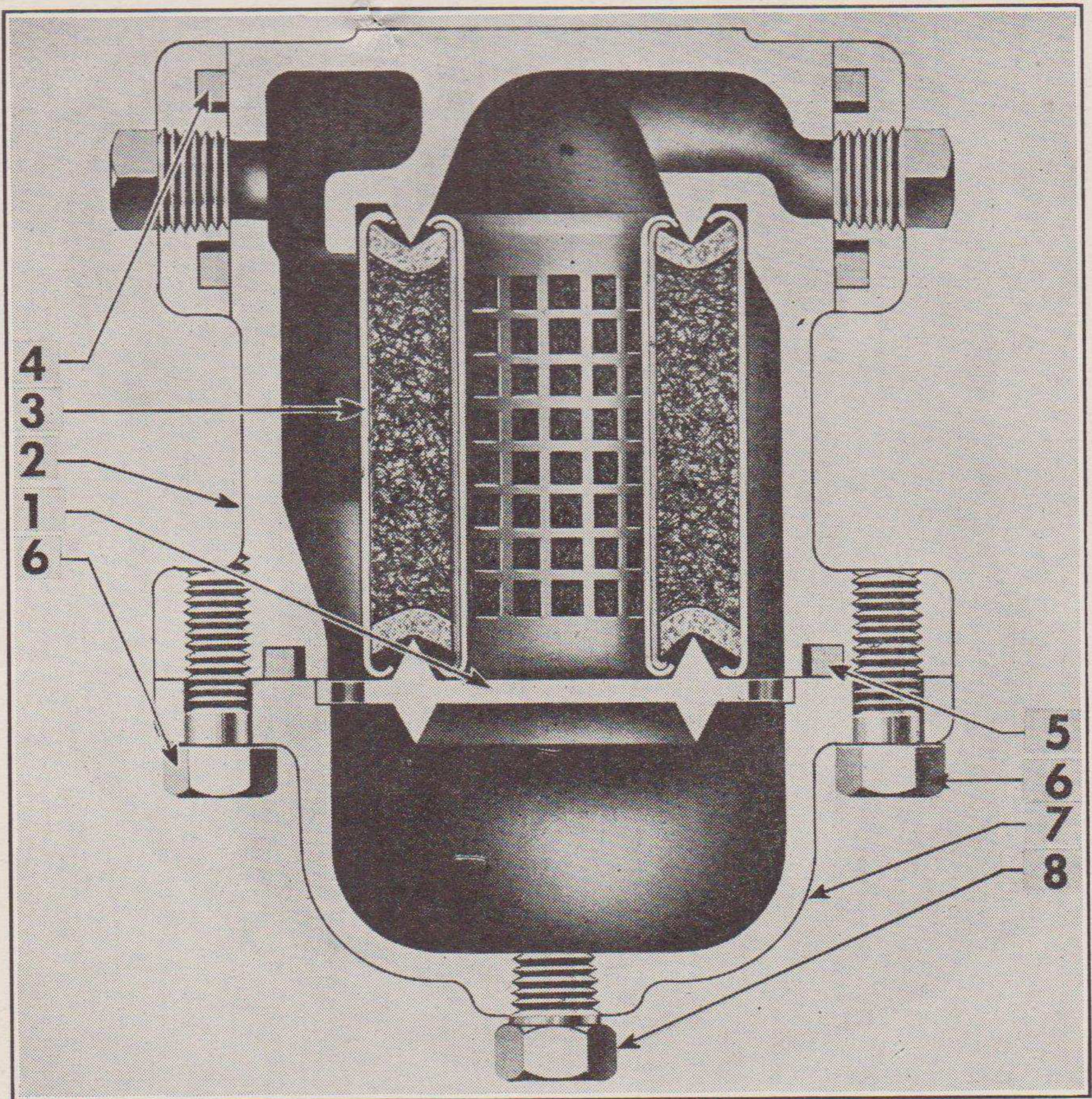


FIGURE 48. AIR FILTER

SECTION: *Air Filter*

(FIGURE 48)

Ref. No.	Part No.	Name	Quantity
	WAB-221022	AIR FILTER	2
60- 1	WAB-214171	Support, strainer	2
60- 2	WAB-214169	Body	2
60- 3	WAB-221053	Strainer	2
60- 4	WAB-214174	Gasket, flange	4
60- 5	WAB-214173	Gasket, body	2
60- 6	WAB-210897	Bolt, hex.-hd.	4
60- 7	WAB-214172	Chamber, dirt	2
60- 8	WAB-213530	Plug, pipe	2

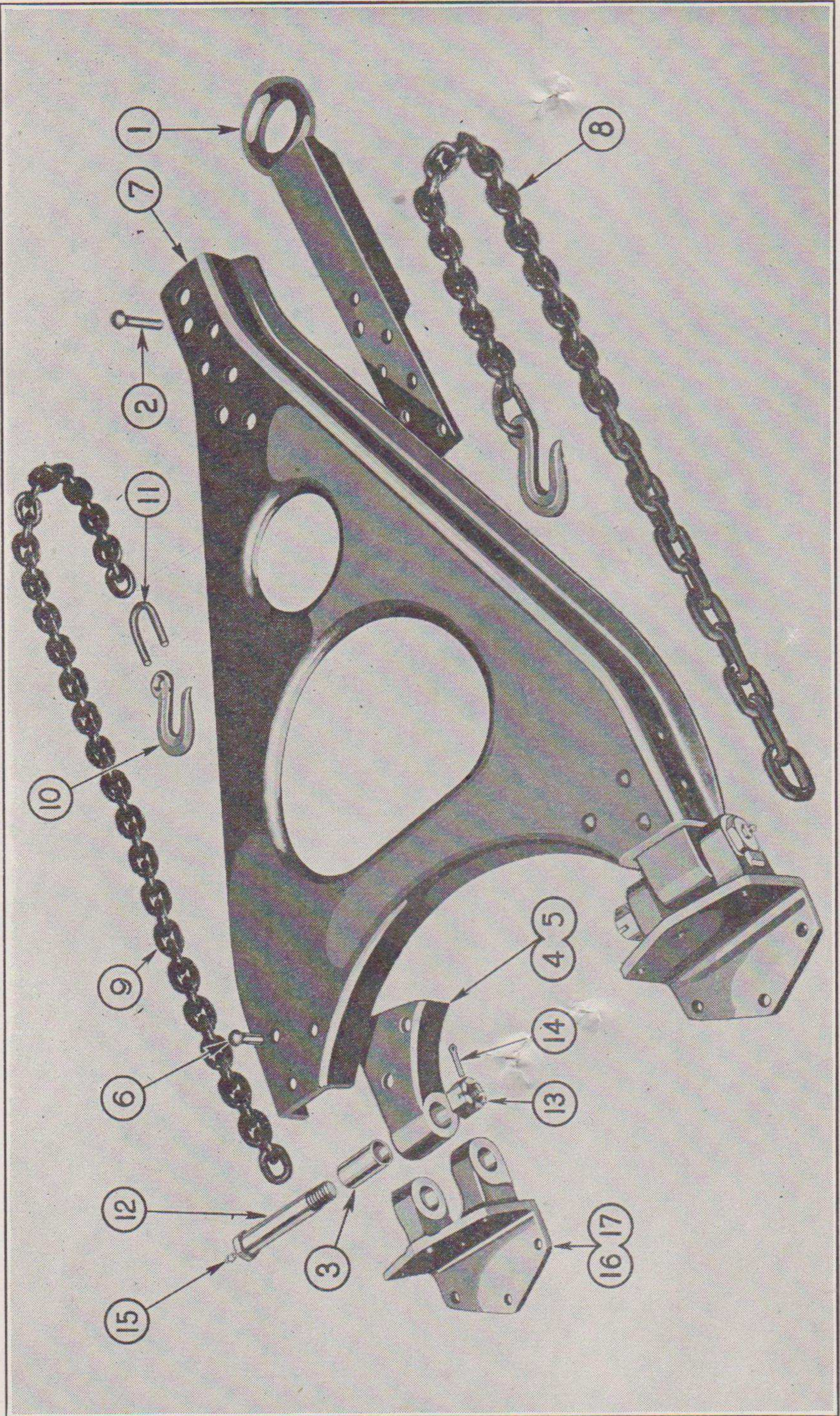


FIGURE 49. DRAW BAR ASSEMBLY

SECTION: *Draw Bar*

(FIGURE 49)

	52105	Bar-Draw-Assembly	1
1	675557	Eye-Draw Bar	1
2	138071	Rivet-Rnd. Hd. $\frac{5}{8}$ "x $3\frac{3}{8}$ "	7
	52097	Bar-Draw-Assembly-4'0"	1
3	595255	Bushing-Draw Bar	1
4	600001	Bracket-Draw Bar Hinge-LH	1
5	600002	Bracket-Draw Bar Hinge-RH	1
6	110438	Rivet-Rnd. Hd. $\frac{7}{16}$ "x $1\frac{5}{8}$ "	10
7	599996	Plate-Draw Bar	1
8	54921	Chain-Safety-Assembly	2
9	675505	Chain	2
10	675503	Hook-Grab	2
11	599809	Link-Chain	2
12	560503	Bolt	2
13	119260	Nut-Thick Hex. Slotted $1\frac{1}{8}$ "-12	4
14	103411	Pin-Cotter $\frac{3}{16}$ "x2"	4
15	109461	Alemite with Ball and Spring $\frac{1}{8}$ "	4
16	52107	Bracket-Draw Bar Frame-LH	1
17	52108	Bracket-Draw Bar Frame-RH	1

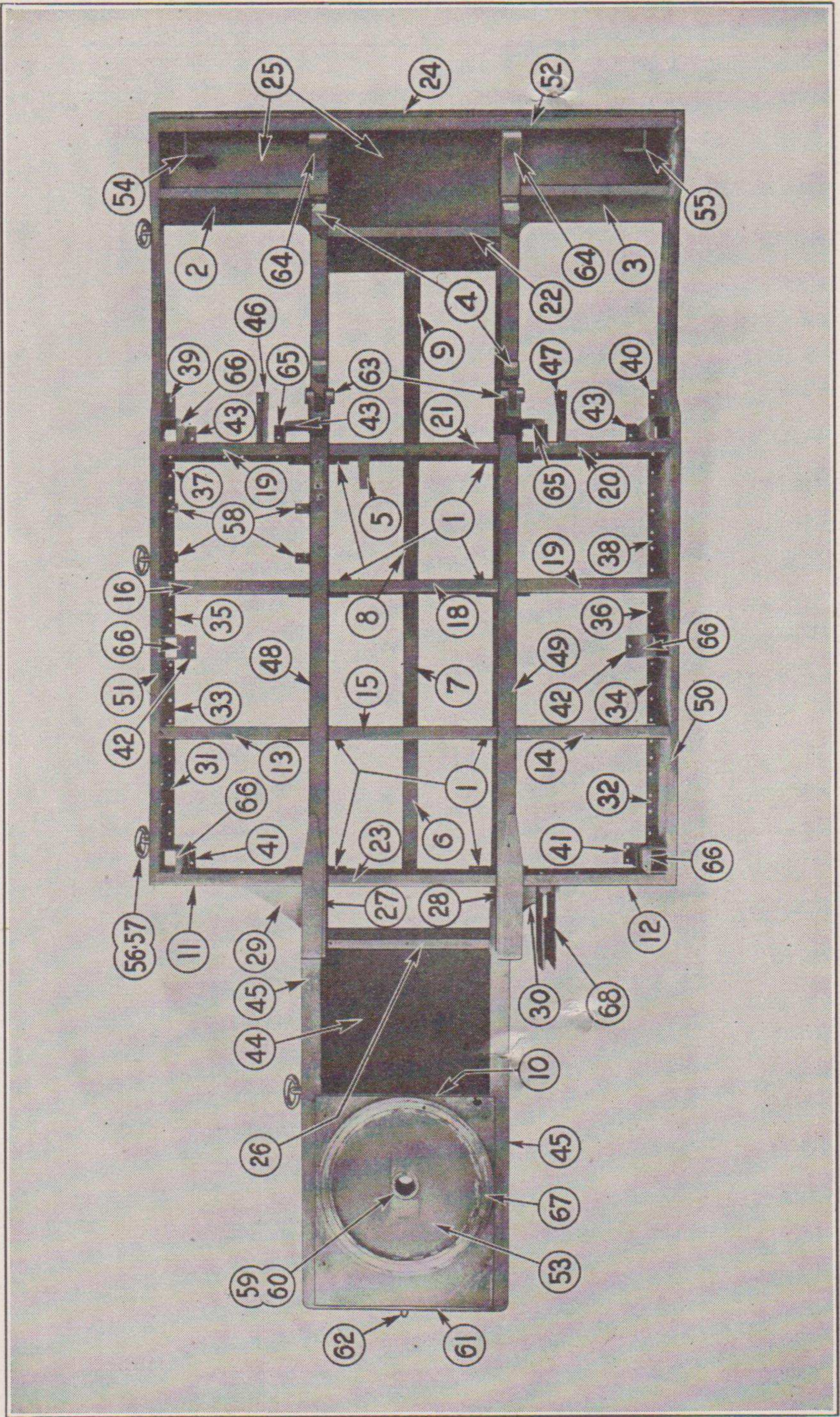


FIGURE 50. FRAME MAIN (PLATFORM)

SECTION: *Frame—Main*

(FIGURE 50)

Key No.	Part No.	Name	Quantity
	80020	Frame-Assembly	1
1	600850	Angle-Support-Air Cleaner	2
2	800135	Crossmember-Box-LH	1
3	800136	Crossmember-Box-RH	1
4	565059	Bracket-Spring	4
5	600430	Support-Brake Cross Shaft	1
6	600665	Member-Center	1
7	600666	Member-Center	1
8	600667	Member-Center	1
9	600668	Member-Center	1
10	600422	Crossmember	1
11	800127	Crossmember-LH	1
12	800128	Crossmember-RH	1
13	800129	Crossmember-LH	1
14	800130	Crossmember-RH	1
15	600647	Crossmember	1
16	800131	Crossmember-LH	1
17	800132	Crossmember-RH	1
18	501336	Crossmember	1
19	800133	Crossmember-LH	1
20	800134	Crossmember-RH	1
21	600653	Crossmember	1
22	600656	Crossmember	1
	600623	Crossmember-Second	1
23	600626	Crossmember-Center	1
24	600657	Crossmember-Rear	1
25	800146	Plate-Deck	1
	600851	Support Crossmember-Deck Plate	1
26	600642	Plate-Drop	1
27	600601	Reinforcement-Rib Drop-LH	1
28	600602	Reinforcement-Rib Drop-RH	1
29	600640	Plate-Wing Drop-LH	1
30	600641	Plate-Wing Drop-RH	1
	600852	Fill	2
31	600607	Angle-Floor Support-LH	1
32	600608	Angle-Floor Support-RH	1
33	600609	Angle-Floor Support-LH	1
34	600610	Angle-Floor Support-RH	1
35	600611	Angle-Floor Support-LH	1
36	600612	Angle-Floor Support-RH	1
37	600613	Angle-Floor Support-LH	1
38	600614	Angle-Floor Support-RH	1
39	600615	Angle-Floor Support-LH	1
40	600616	Angle-Floor Support-RH	1
41	600617	Angle-Floor Support	2
42	600618	Angle-Floor Support	2
43	600606	Plate-Floor Support	4
44	600669	Plate-Front Deck	1
45	600603	Flange-Gooseneck Bottom	2
	600604	Plate-Gooseneck Top Flange	2

Frame—Main (Continued)

Key No.	Part No.	Name	Quantity
	600605	Plate-Gooseneck Top Flange	2
	600629	Plate-Gooseneck-Web	2
	601176	Guard-Alemite	2
	601177	Guard-Brake Line	2
46	600663	Outrigger-LH	1
47	600664	Outrigger-RH	1
48	600596	Rail-Main-LH	1
49	600597	Rail-Main-RH	1
50	600391	Rail-Side-LH	1
51	600392	Rail-Side-RH	1
	600670	Rib-LH	1
	600671	Rib-RH	1
	600672	Rib-LH	1
	600673	Rib-RH	1
	600600	Rib-Front Hanger	2
	600598	Rib-Rear Hanger-LH	1
	600599	Rib-Rear Hanger-RH	1
52	600659	Plate-Reinforcing	1
	600661	Rail-Skid	1
	600662	Rib-Skid Rail End	2
	600660	Spacer-Skid Rail	1
53	600675	Plate-Steering Circle Base	1
	600643	Rib-Stiffener	2
	600624	Support-Upper Bolster-LH	1
	600625	Support-Upper Bolster-RH	1
54	600577	Bracket-Tail Light-LH	1
55	600578	Bracket-Tail Light-RH	1
	600644	Bar-Tie	4
	601185	Bar-Tie	4
56	600620	Ring-Tie	8
57	600621	Staple-Tie Ring	8
58	600853	Angle-Tire Carrier Support	4
	600677	Rib-Triangular	3
	55010	Bolster-Female-Assembly	1
	100076	Bolt-Hex. Hd.- $\frac{5}{8}$ "-18x1 $\frac{1}{2}$ "	8
	103030	Nut-Hex.- $\frac{5}{8}$ "	8
	103325	Washer-Lock Medium "A"- $\frac{5}{8}$ "	8
	600579	Angle	2
	119229	Rivet-Rnd. Hd.- $\frac{5}{8}$ "x2 $\frac{1}{4}$ "	16
59	590015	Bushing-Upper Bolster	1
60	590017	Plate-Mounting-Female-Heavy Duty	1
	109461	Alemite with Ball and Spring- $\frac{1}{8}$ "	1
	54469	Cover and Hinge-Assembly	1
	600423	Plate-Cover	1
	600425	Hasp	1
	600424	Hinge	1
61	55013	Crossmember-Front-Assembly (600622)	1
62	600619	Staple-Hinge	1
63	53166	Hanger-Spring Front-Assembly (599097)	2
	560750	Bushing-Spring	2
64	53167	Hanger-Spring Rear-Assembly (599098)	2
	560750	Bushing-Spring	2
65	55009	Pocket-Stake-Assembly (600426)	2

SPARE PARTS LIST

Frame—
Main

Frame—Main (Continued)

Key No.	Part No.	Name	Quantity
	600427	Rib	2
	600426	Pocket-Stake	2
	600428	Rib-Closing	2
66	54470	Pocket-Stake-Assembly	6
	600427	Rib	6
	600426	Pocket-Stake	6
67	55014	Circle-Steering-Assembly	1
	600674	Circle-Steering	1
	119512	Alemite with Ball and Spring- $\frac{1}{8}$ "	2
68	51458	Bracket-Brake Operating Shaft-Assembly	1
	100051	Bolt-Hex. Hd.- $\frac{1}{2}$ "-20x $1\frac{1}{4}$ "	4
	103028	Nut-Hex.- $\frac{1}{2}$ "-20	4
	103323	Washer-Lock Medium "A"- $\frac{1}{2}$ "	4
	536180	Angle-Plate-LH	1
	536181	Angle-Plate-RH	1
	100051	Bolt-Hex. Hd.- $\frac{1}{2}$ "-20x $1\frac{1}{4}$ "	8
	103028	Nut-Hex.- $\frac{1}{2}$ "-20	8
	103323	Washer-Lock Medium "A"- $\frac{1}{2}$ "	8
	536179	Plate-Tie	1

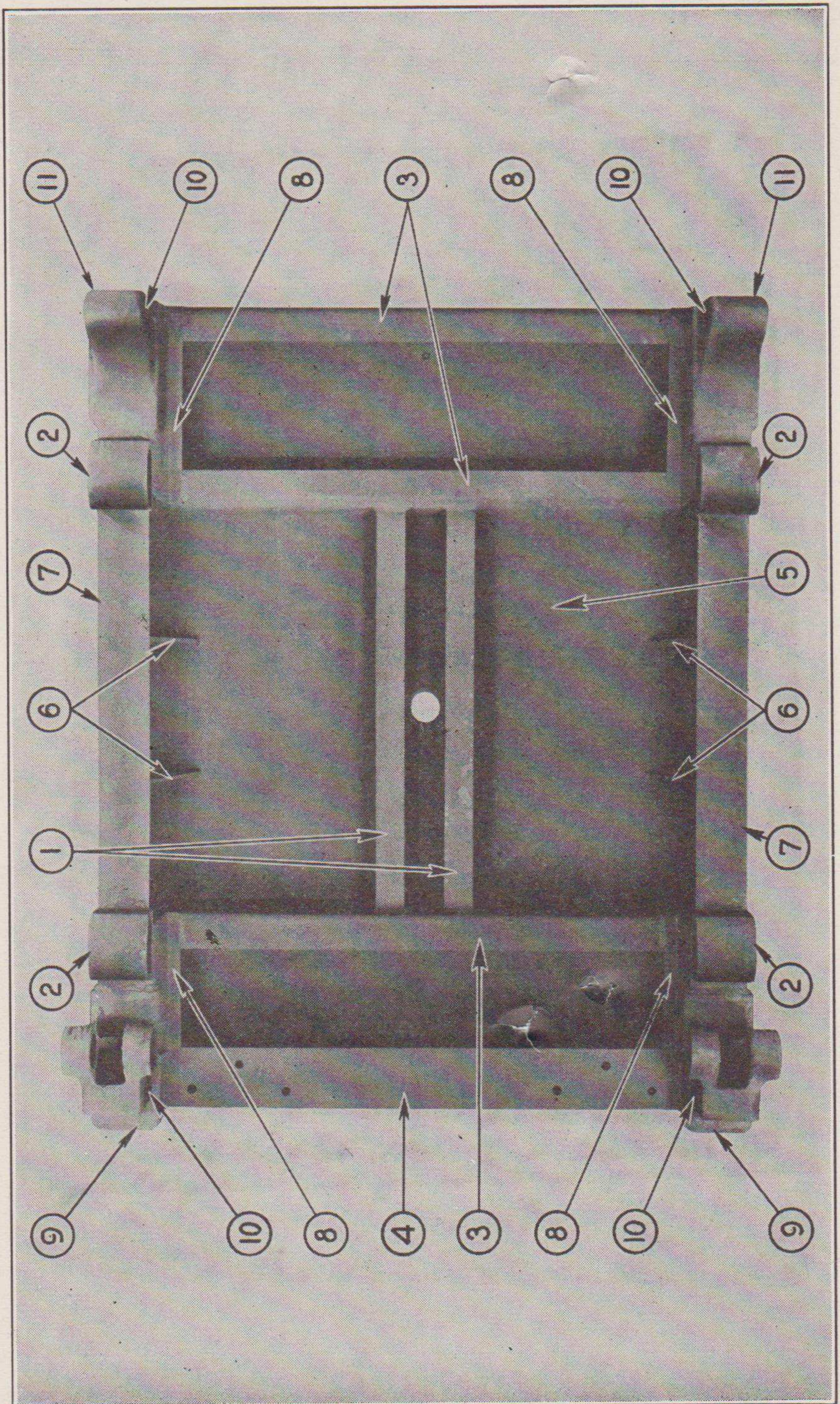


FIGURE 51. FRAME GEAR (DOLLY)

SECTION: *Frame-Gear*

(FIGURE 51)

<i>Key No.</i>	<i>Part No.</i>	<i>Name</i>	<i>Quantity</i>
	55011	Frame-Gear-Assembly	1
	600581	Plate-Bolster-Male	1
	138064	Rivet-Rnd. Hd.- $\frac{5}{8}$ "x $1\frac{5}{8}$ "	8
1	600591	Channel-Bolster Plate Mounting	2
2	565059	Bracket-Spring	4
3	600589	Crossmember	3
4	600588	Crossmember-Front	1
5	600592	Plate-Deck	1
6	600593	Plate-Gusset	4
	600594	Plate-Gusset	8
7	600586	Rail-Side	2
	600590	Staple-Safety Chain	2
8	600587	Angle-Spring Hanger Reinforcing	4
9	53166	Hanger-Spring-Front-Assembly (599097)	2
10	560750	Bushing-Spring	2
11	53167	Hanger-Spring-Rear-Assembly (599098)	2
10	560750	Bushing-Spring	2
	600580	Plate-Bolster-Flange	1
	50806	Pin-King-Assembly	1
	651425	Pin-King	1
	651426	Flange-King Pin	1
	242209	Nut-King Pin	1
	102949	Screw-Cone Point-Set $\frac{3}{8}$ "x $\frac{3}{4}$ "	1

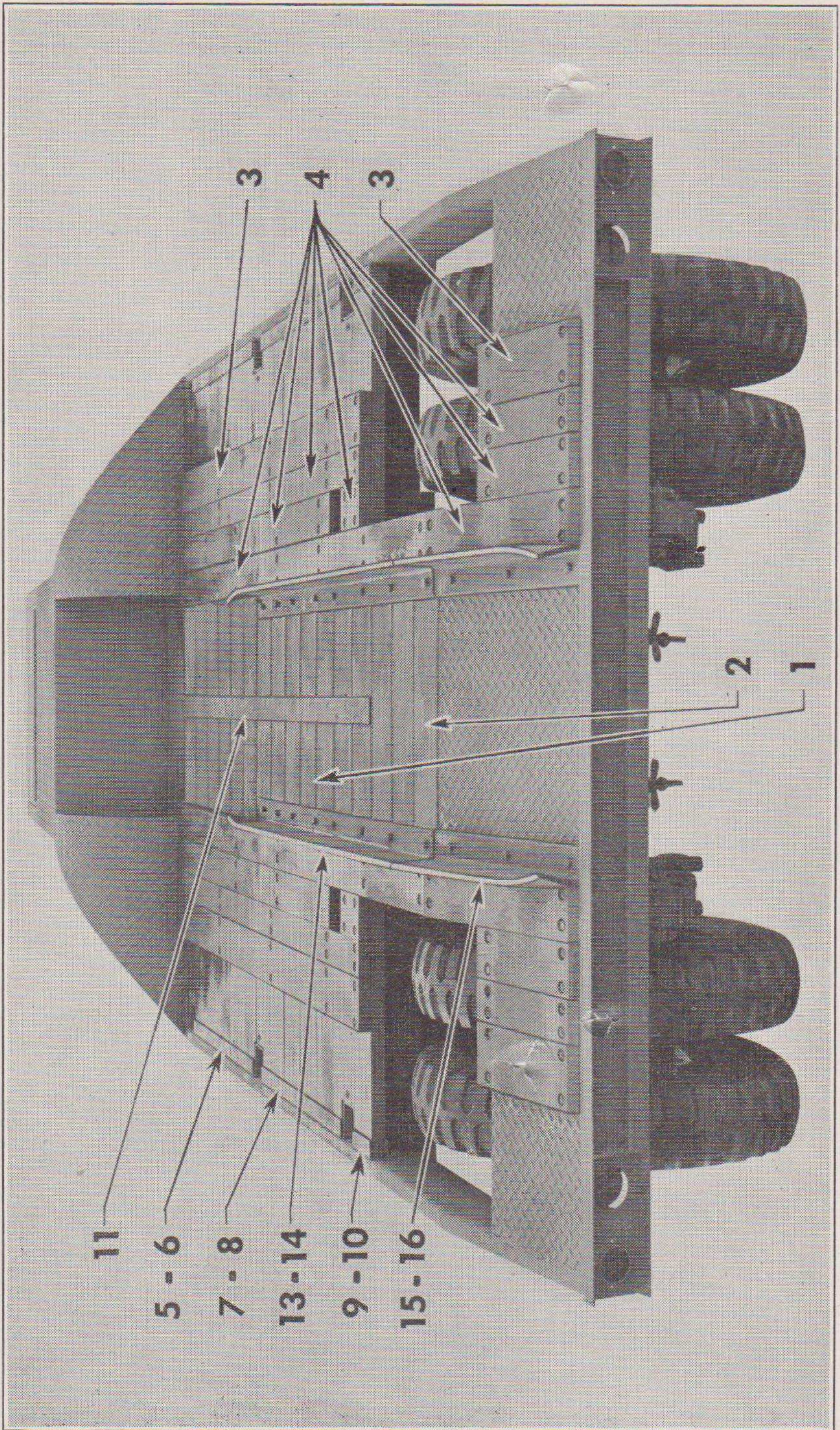


FIGURE 52. FLOORING

SECTION: *Flooring*

(FIGURE 52)

Key No.	Part No.	Name	Quantity
1	Stk. # 1239	Flooring, 1-5/8" x 7-1/4", vertical edge grain-Douglas Fir, (kiln dried)	As req'd.
2	Stk. # 1240	Flooring, 1-5/8" x 9-1/2", vertical edge grain-Douglas Fir (kiln dried)	As req'd.
3	Stk. # 1241	Flooring, oak, 1-3/8" x 10"	As req'd.
4	Stk. # 1242	Flooring, oak, 1-3/8" x 5"	As req'd.
5	242671	Strip flooring, L.H.	1
6	242672	Strip flooring, R.H.	1
7	242673	Strip flooring, L.H.	1
8	242674	Strip flooring, R.H.	1
9	242675	Strip flooring, L.H.	1
10	242676	Strip flooring, R.H.	1
11	242677	Strip flooring	1
12	800097	Screw cap, flat head, 1/2-13 x 3"	70
13	600682	Angle guide, L.H.	1
14	600683	Angle guide, R.H.	1
15	601174	Angle guide, L.H.	1
16	601175	Angle guide, R.H.	1
	100052	Bolt, hex-hd., SAE, 1/2-20 x 1-1/2"	6
	100054	Bolt, hex-hd., SAE, 1/2-20 x 2"	14
	100056	Bolt, hex-hd., SAE, 1/2-20 x 3"	16
	109139	Bolt, rnd-hd. carriage, 1/2-13 x 2-1/2"	43
	109141	Bolt, rnd-hd. carriage, 1/2-13 x 3-1/2"	86
	109142	Bolt, rnd-hd. carriage, 1/2-13 x 4"	16
	109143	Bolt, rnd-hd. carriage, 1/2-13 x 4-1/2"	2
	103328	Nut, hex., SAE, 1/2-20	36
	114774	Nut, hex., common, 1/2-13	217
	103323	Washer, lock	253
	106265	Washer, flat, large	64

SECTION: *Miscellaneous Frame Parts*

Part No.	Name	Quantity
54922	Binder-Load-Assembly, two-way grab hook type	3
54830	Ramp loading assembly	2
50849	Chain-Load Binder-Assembly	3
675503	Hook, grab	6
599809	Link, chain	6
600679	Chain, load binder	3
501337	Plate, name	1
132768	Screw, rnd-hd., No. 8-32 x 3/4"	4
120622	Nut, common hex, No. 8-32	4
121841	Washer, lock, medium "A," No. 8	4

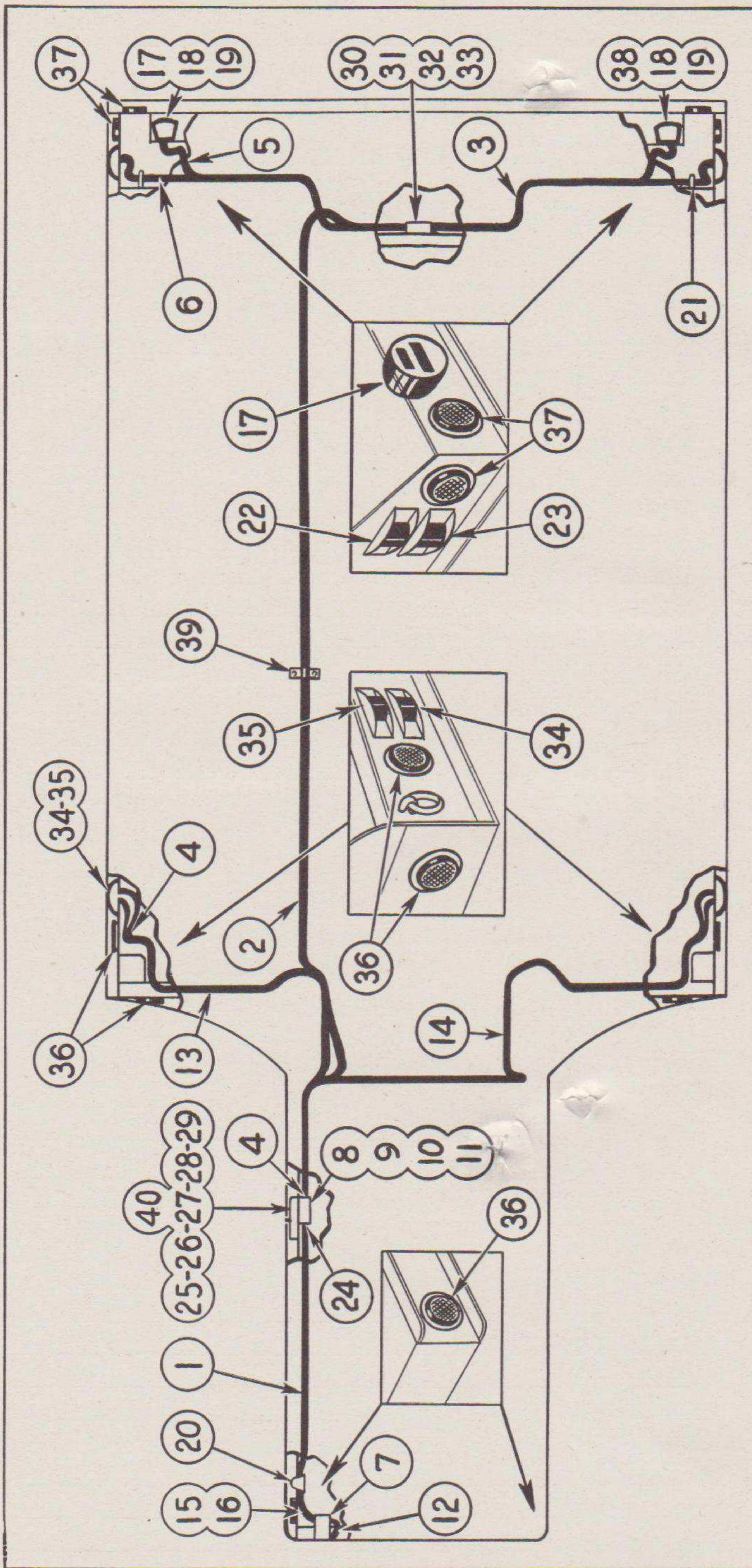


FIGURE 53. LIGHTS AND WIRING EQUIPMENT

SECTION: *Lights & Wiring Equipment*

(FIGURE 53)

Key No.	Part No.	Name	Quantity
1	54894	Cable-BO Switch to Fuse Panel-Assembly	1
2	54903	Cable-Front Junction to Rear Junction-Assembly..	1
3	54905	Cable-Junction Box to Service Stop and Tail and BO Tail	1
	320588	Bushing-Anti-Short	1
	675191	Cable-Anchor	1
4	675060	Connector-90° Angle	1
	675480	Ferrule-Light	2
	675479	Shell-Light	2
	675497	Loom	2
	675477	Plug-Double Contact	1
	675478	Plug-Single Contact	1
	54906	Cable for LH Tail Light Cable-Assembly	1
	54778	Contact-Assembly	3
5	54899	Cable-Junction Box to BO Stop and Tail Light- Assembly	1
	320588	Bushing-Anti-Short	1
	675191	Cable-Anchor	1
4	675060	Connector-90° Angle	1
	675480	Ferrule-Light	2
	675479	Shell-Light	2
	675497	Loom	2
	675477	Plug-Double Contact	1
	675478	Plug-Single Contact	1
	54778	Contact-Assembly	2
	54900	Cable for RH Tail Light Cable-Assembly	1
6	54904	Cable-Rear Junction to Rear Clearance Lights- Assembly	2
7	51310	Socket-Coupling-Assembly	1
8	54895	Pig Tail-Fuse Panel-Assembly	1
9	54896	Pig Tail-Fuse Panel-Assembly	1
10	54897	Pig Tail-Fuse Panel-Assembly	1
11	54898	Pig Tail-Fuse Panel-Assembly	1
12	54850	Wire-Ground-Assembly	1
	54887	Cord-Jumper-Assembly-9'	1
13	54901	Cable-Junction Box to RH Clearance Lights- Assembly	1
14	54902	Cable-Junction Box to LH Clearance Lights- Assembly	1
15	54907	Wire-Socket to Switch-Assembly	1
16	54908	Wire-Socket to Switch-Assembly	1
17	320593	Tail Light-Blackout Stop	1
18	120375	Nut-Hex.-1/4"-20	2
19	120380	Washer-Lock Medium "A"-1/4"	2
20	320518	Switch-Blackout	1
21	675063	Bracket-Cable-Curbside	4
	320559	Bushing-Anti-Short	3

Lights and Wiring Equipment—(Continued)
(FIGURE 53)

Key No.	Part No.	Name	Quantity
	320588	Bushing-Anti-Short	12
22	320625	Light-Clearance-Blackout-Red Lens	2
	120622	Nut-Common Hex.-No. 8-32	8
	121841	Washer-Lock Medium "A"-No. 8	8
	132768	Screw-Rnd. Hd.-No. 8-32x $\frac{3}{4}$ "	8
23	320624	Light-Clearance-Red Lens	2
	120622	Nut-Common Hex.-No. 8-32	8
	121841	Washer-Lock Medium "A"-No. 8	8
	132768	Screw-Rnd. Hd.-No. 8-32x $\frac{3}{4}$ "	8
4	675060	Connector-90° Angle	5
24	675059	Connector-Straight (Tite-Bite)	9
25	690085	Cover-Fuse Panel	1
26	106653	Fuse-20 Amp.-1 $\frac{1}{4}$ "	2
27	690006	Panel-Fuse	1
28	690007	Gasket-Fuse Panel	2
29	675630	Box-Junction-Front	1
30	675102	Box-Junction-Rear	1
31	133049	Bolt-Rnd. Hd. Slotted- $\frac{1}{4}$ "-20x1"	2
32	134551	Nut-Common Hex.- $\frac{1}{4}$ "-20	2
33	120380	Washer-Lock Medium "A"- $\frac{1}{4}$ "	2
34	320487	Light-Clearance-Amber Lens	2
	132760	Screw-Rnd. Slotted Hd.-No. 8-32x $\frac{1}{2}$ "	8
	120622	Nut-Common Hex.-No. 8-32	8
	121841	Washer-Lock Medium "A"-No. 8	8
35	320488	Light-Clearance-Blackout	2
	132760	Screw-Slotted Rnd. Hd.-No. 8-32x $\frac{1}{2}$ "	8
	120622	Nut-Common Hex.-No. 8-32	8
	121841	Washer-Lock Medium "A"-No. 8	8
36	320657	Reflector-Amber	6
	132768	Screw-Rnd. Hd.-No. 8-32x $\frac{3}{4}$ "	24
	120622	Nut-Common Hex.-No. 8-32	24
	121841	Washer-Lock Medium "A"-No. 8	24
37	320658	Reflector-Red	4
	132768	Screw-Rnd. Hd.-No. 8-32x $\frac{3}{4}$ "	16
	120622	Nut-Common Hex.-No. 8-32	16
	121841	Washer-Lock Medium "A"-No. 8	16
38	320592	Tail Light-Service Stop and Tail and Blackout	1
	123179	Nut-Hex.- $\frac{1}{4}$ "-20	2
	120380	Washer-Lock Medium "A"- $\frac{1}{4}$ "	2
39	320493	Strap-Pipe to fit .632 Conduit	35
	134551	Nut-Common Hex.- $\frac{1}{4}$ "-20	35
	133043	Screw-Rnd. Hd.- $\frac{1}{4}$ "-20x $\frac{3}{4}$ "	35
	120380	Washer-Lock Medium "A"- $\frac{1}{4}$ "	35
40	690008	Stud-Fuse Panel	2
	103128	Nut-Wing Type "A"- $\frac{5}{16}$ "-18	2
	102634	Nut-Hex.- $\frac{5}{16}$ "-18	2
	103320	Washer-Plain Lock- $\frac{5}{16}$ "	2

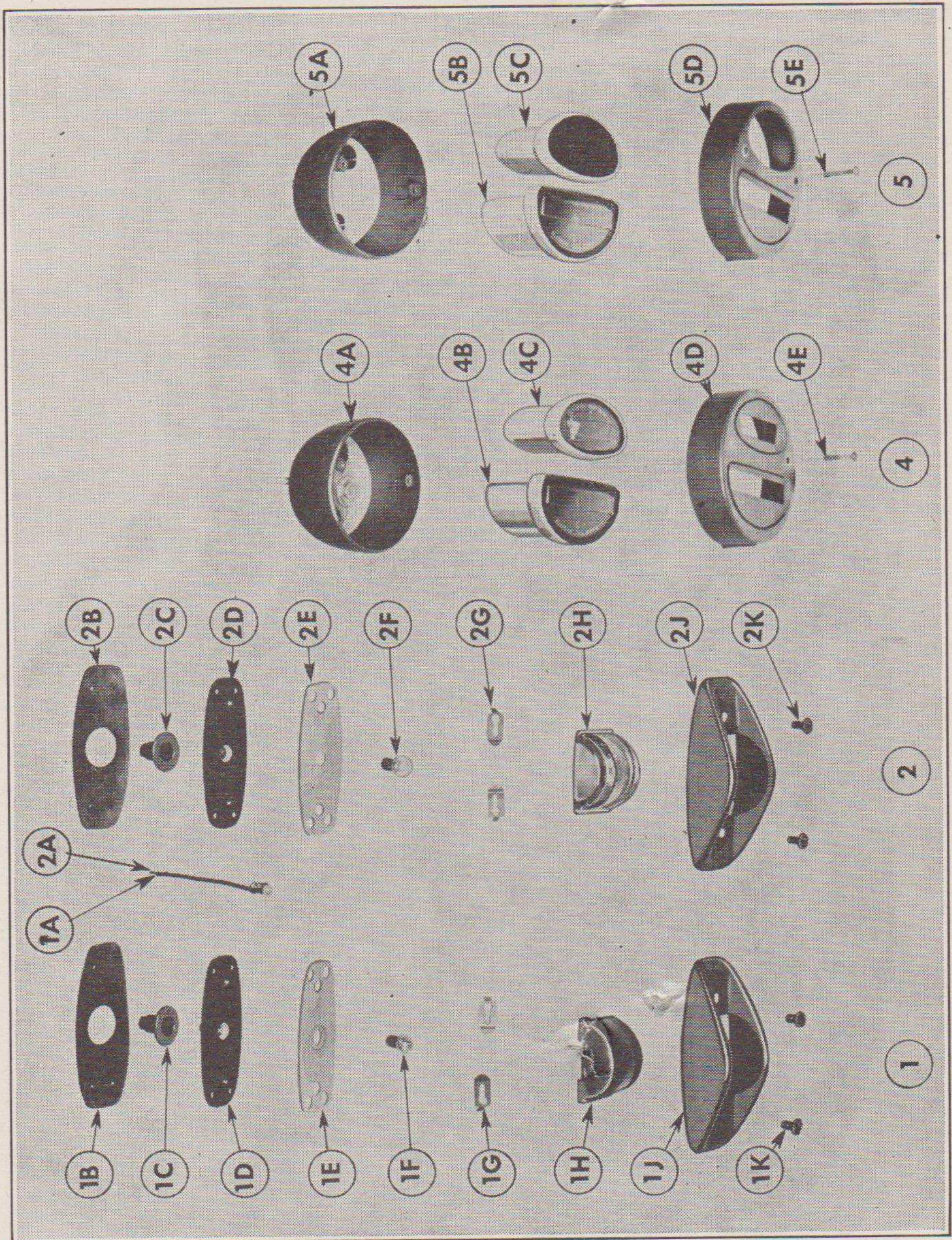


FIGURE 54. LIGHTS

SECTION: *Lights*

(FIGURE 54)

Key No.	Part No.	Name	Quantity
1	320488	Light, clearance, blackout, blue lens assembly—complete (KD-541)	2
1A	KD-7136	Wire, pig-tail	2
1B	KD-5140	Gasket, rubber—only	2
1C	KD-4684	Nipple, rubber	2
1D	KD-9526	Plate, backing	2
1E	KD-2878	Gasket, lexide	2
1F	No. 55	Bulb, 1-1/2 C.P., 6-8 volt	2
1G	KD-1996	Clip, retaining, lens	4
1H	KD-4446	Lens, and KD-8014 blue Filter with Casing, assembly	2
1J	KD-1135	Housing, clearance light	2
1K	KD-6777	Screw, brass, 1/4" SAE	4
1	320625	Light, clearance, blackout, red lens, assembly—complete (KD-541)	2
		NOTE: Same components as 320488 with the exception of Ref. No. 1H. (Omit KD-8014 blue filter and use KD-8013 red filter.)	
2	320487	Light, clearance, amber lens, assembly—complete (KD-541)	2
2A	KD-7136	Wire, pig-tail	2
2B	KD-5140	Gasket, rubber—only	2
2C	KD-4684	Nipple, rubber	2
2D	KD-9526	Plate, backing	2
2E	KD-2878	Gasket, lexide	2
2F	No. 55	Bulb, 1-1/2 C.P., 6-8 volt	2
2G	KD-1996	Clip, retaining, lens	4
2H	KD-4393	Lens, amber, clearance light	2
2J	KD-1135	Housing, clearance light	2
2K	KD-6777	Screw, brass, 1/4" SAE	4
2	320624	Light, clearance, red lens, assembly—complete (KD-541)	2
		NOTE: Same components as 320487 with the exception of Ref. No. 2H. (Omit KD-4393 amber lens and use KD-4392 red lens.)	
4	320593	Light, blackout tail and blackout stop, assembly—complete, 6 volt (CB-9210)	1
4A	CB-9212	Housing, blackout tail and blackout stop light	1
4B	CB-9225	Unit, blackout tail light, assembly, lower, 6 volt (320678)	1
4C	CB-9234	Unit, blackout stop light, assembly, upper, 6 volt (320677)	1
4D	CB-9232	Door, blackout tail and blackout stop light	1
4E	CB-9233	Screw, machine, rd-hd., No. 8 x 1-1/4" SAE	2
5	320592	Light, blackout tail and service stop, assembly, 6 volt (CB-9207)	1
5A	CB-9212	Housing, blackout tail and service stop light	1
5B	CB-9225	Unit, blackout tail light, assembly, lower, 6 volt (320678)	1
5C	CB-9218	Unit, service stop light, upper, 6 volt (320676)	1
5D	CB-9231	Door, blackout tail and service stop light	1
5E	CB-9233	Screw, machine, rd-hd., No. 8 x 1-1/4" SAE	2

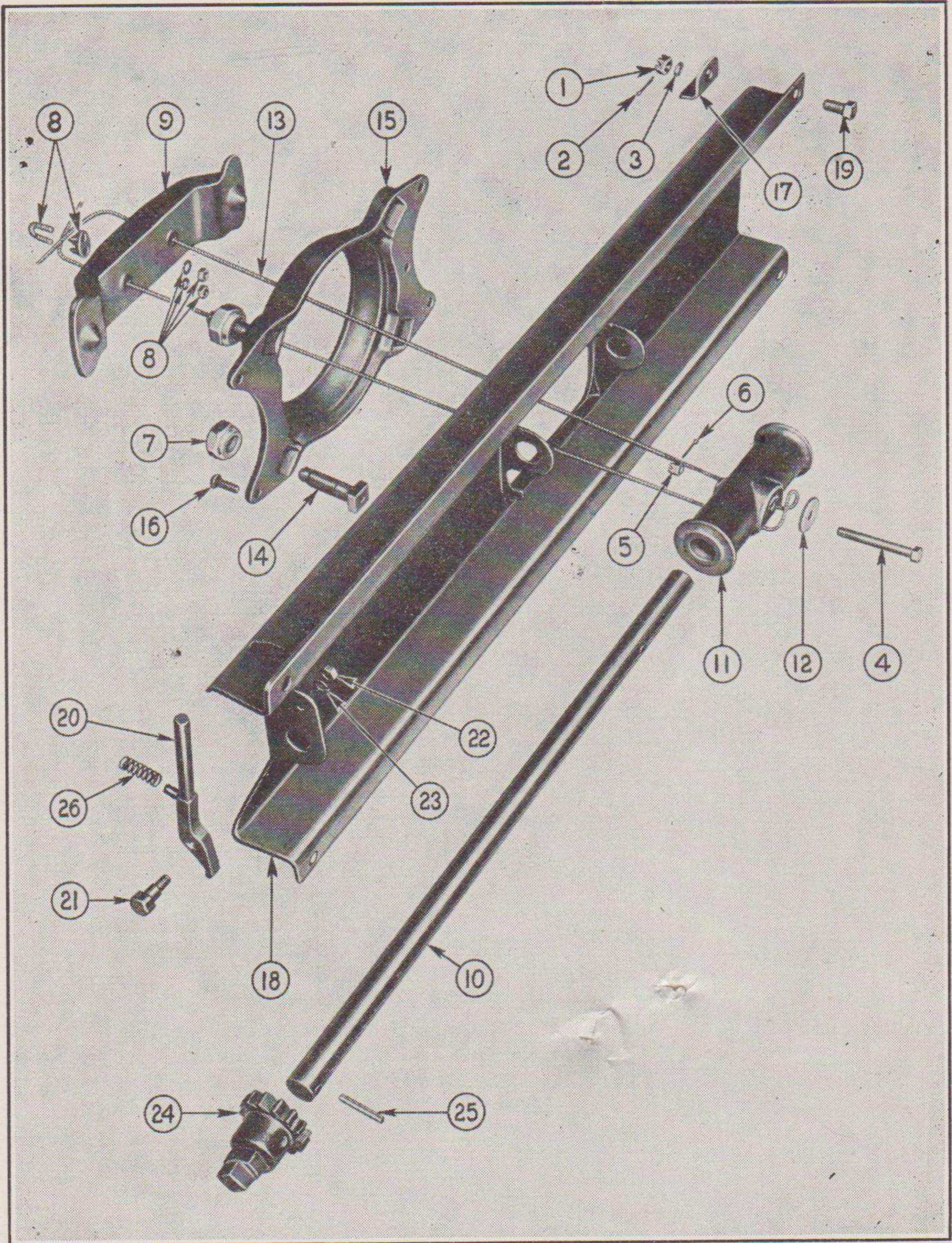


FIGURE 55. TIRE CARRIER ASSEMBLY

SECTION: *Tire Carrier*

(FIGURE 55)

Key No.	Part No.	Name	Quantity
	54839	Tire Carrier-Assembly Complete	1
1	102647	Nut-Hex. Slotted- $\frac{1}{2}$ "-20	4
2	108636	Pin-Cotter- $\frac{3}{32}$ "x $\frac{1}{8}$ "	4
3	103343	Washer-Flat Small- $\frac{1}{2}$ "	4
4	630605	Bolt-Hex. Hd.- $\frac{3}{8}$ "-24x3"	1
5	119252	Nut-Hex. Slotted Thick - $\frac{3}{8}$ "-24	1
6	103374	Pin-Cotter- $\frac{3}{32}$ "x1"	1
7	674777	Cap-Nut- $\frac{3}{4}$ "	4
8	674772	Clip-Wire Rope-Complete	1
9	674775	Saddle-Tire Carrier Lifting	1
10	675759	Shaft-Spare Tire Carrier Crank	1
11	675170	Drum-Spare Tire Carrier Rope	1
12	675180	Washer-Spare Tire Carrier Rope Retainer	1
13	675181	Wire-Rope-Spare Tire Carrier	1
	54838	Crossmember-Tire Carrier-Assembly	1
14	674774	Bolt-Tire Carrier	4
15	674776	Bracket-Spare Wheel Carrier	1
16	104116	Rivet-Rnd. Hd.- $\frac{3}{8}$ "x $\frac{1}{8}$ "	6
17	674753	Reinf.-Corner	4
18	675556	Crossmember-Tire Carrier	1
19	674913	Bolt-Mounting-Tire Carrier	4
1	102647	Nut-Hex. Slotted- $\frac{1}{2}$ "-20	4
2	108636	Pin-Cotter- $\frac{3}{32}$ "x $\frac{1}{8}$ "	4
3	103343	Washer-Flat Small- $\frac{1}{2}$ "	4
20	674756	Handle-Tire Carrier Crankshaft Release	1
21	674758	Bolt-Tire Carrier Crank Shaft Release Handle....	1
22	114494	Nut-Hex. Thin- $\frac{3}{8}$ "-24	1
23	103321	Washer-Lock-Medium- $\frac{3}{8}$ "	1
24	675663	Ratchet-Spare Tire Carrier Crank Shaft	1
25	142358	Pin-Taper Groove- $\frac{1}{4}$ "x $\frac{1}{2}$ "	1
26	674759	Spring, release handle	1

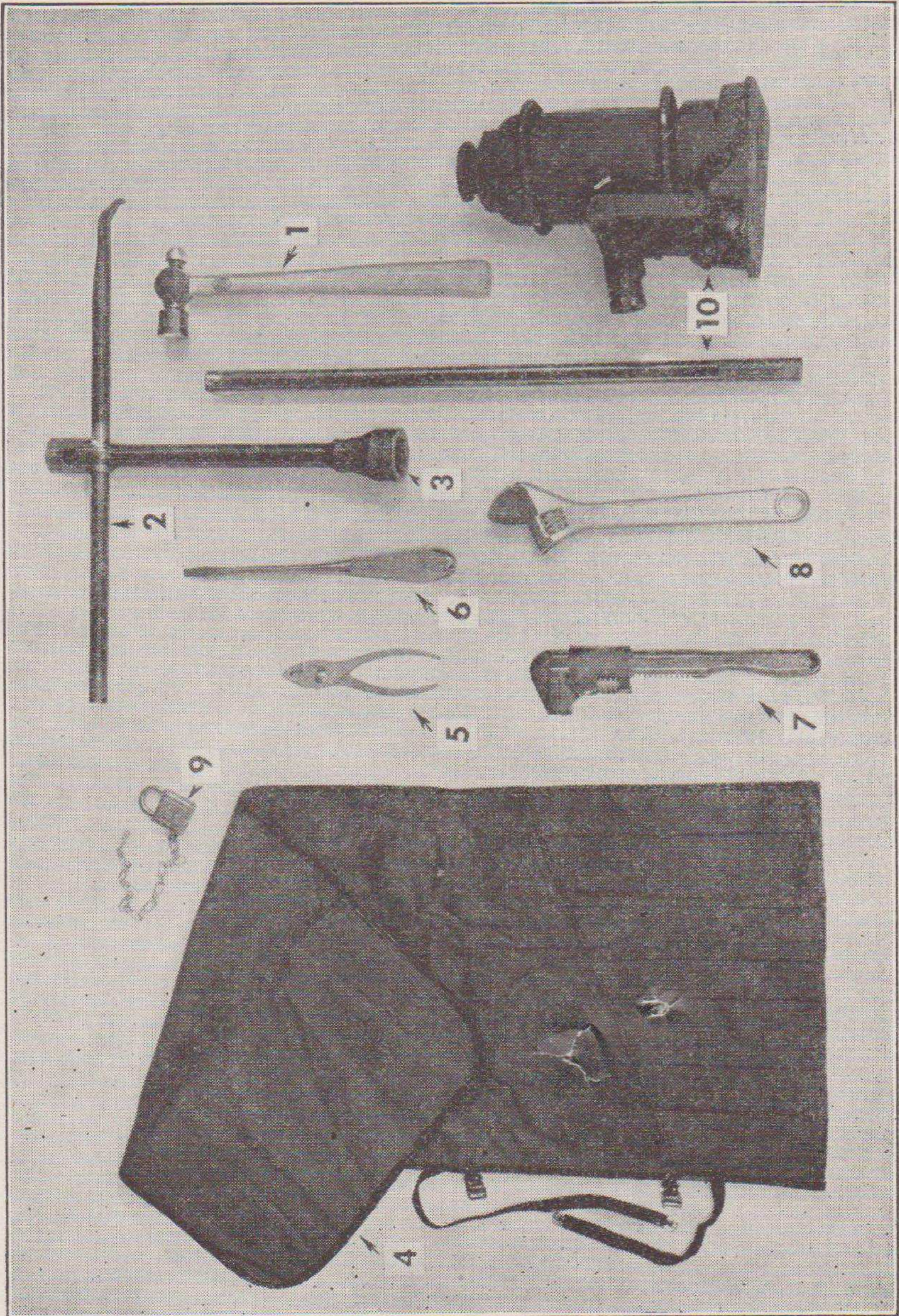


FIGURE 56.

SECTION: *Tools*

(FIGURE 56)

<i>Key No.</i>	<i>Part No.</i>	<i>Name</i>	<i>Quantity</i>
	50865	KIT, tool, complete, assembly	1
1	676293	HAMMER, round pattern, ball peen, 1 lb.	1
2	675165	HANDLE, wheel wrench (Budd # 17899)	1
3	675164	WRENCH, wheel (Budd # 18806)	1
4	501318	KIT, roll tool	1
5	676276	PLIERS, 6" combination	1
6	676278	SCREWDRIVER, perfect handle, 5/16"x6"	1
7	676275	WRENCH, auto, 11" (Vlchek # WA 511-S)	1
8	676279	WRENCH, 12" diamond adjusting calk	1
9	675128	LOCK, pad (per Federal specifications FF-P-101-A)	1
	131014	WASHER, flat, small, # 6	1
	131044	WASHER, lock, med., # 6	1
	134530	NUT, common, hex., # 6-32	1
	132719	SCREW, rd-hd., # 6-32x1	1
10	54929	JACK, Walker, 12-ton hydraulic, # 945 and handle, assembly	1

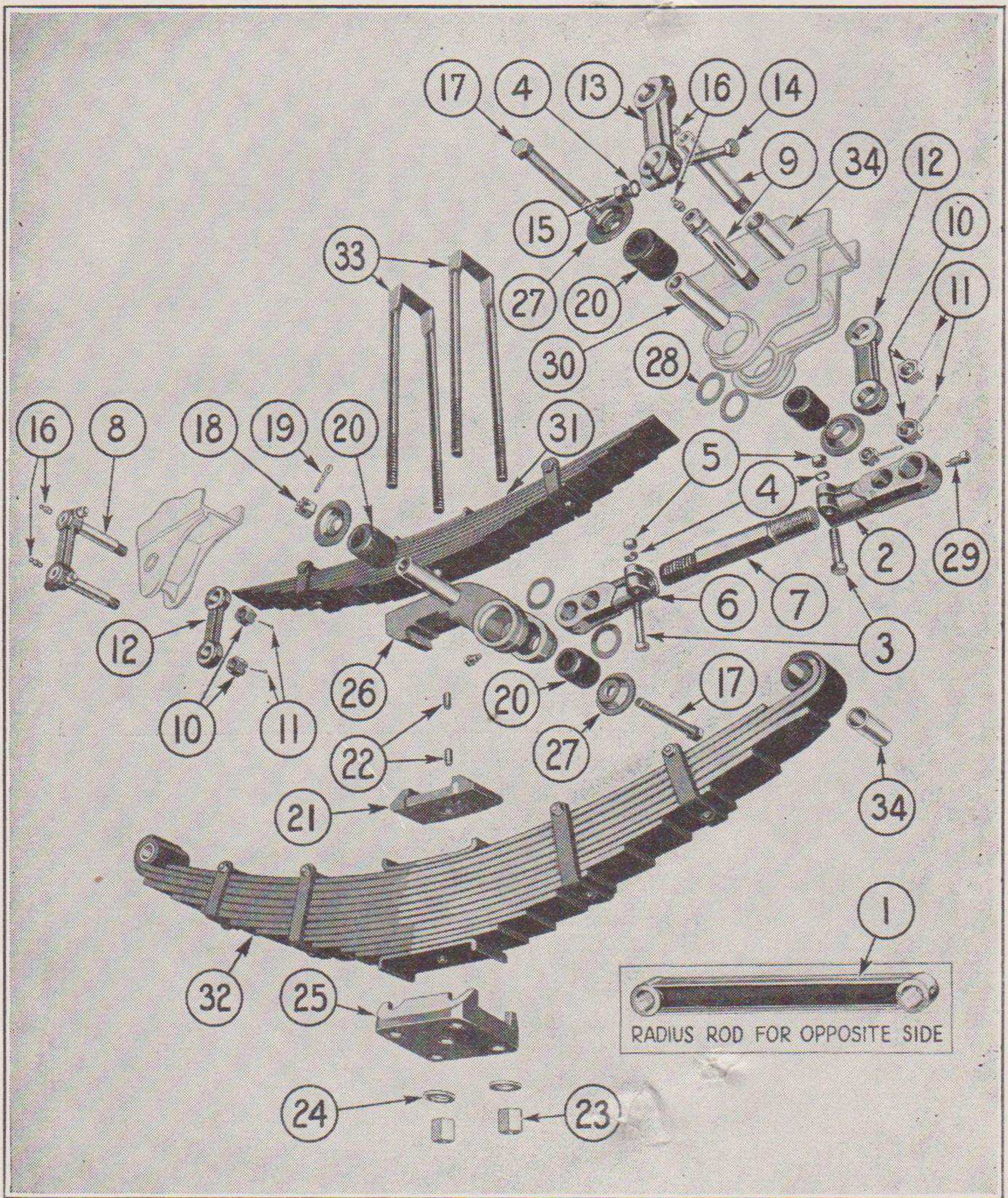


FIGURE 57. UNDERCONSTRUCTION ASSEMBLY

SECTION: *Underconstruction*

(FIGURE 57)

Key No.	Part No.	Name	Quantity
1	53300	Rod-Radius-Assembly	2
	53302	Rod-Adjustable Radius-Assembly	2
2	564650	End-Adjustable Radius Rod	2
3	181436	Bolt-Hex. Hd. 1/2"-20x2 1/4"	2
4	103323	Washer-Lock Med. 1/2"	2
5	240826	Nut, Hex., 1/2"-20	2
6	564651	End-Adjustable Radius Rod	2
3	181436	Bolt-Hex. Hd. 1/2"-20x2 1/4"	2
4	103323	Washer-Lock Med. 1/2"	2
5	240826	Nut, Hex., 1/2"-20	2
7	565135	Spacer-Adjustable Radius Rod	2
	53301	Shackle-Complete-Assembly	8
8	53060	Shackle-Assembly	8
9	563961	Bolt-Shackle	16
10	119258	Nut-Thick Hex. 7/8"-14	16
11	103387	Pin-Cotter 1/8"x1 1/2"	16
12	560402-A	Shackle-Spring-Inner	8
13	563912	Shackle-Spring-Outer	8
14	101440	Bolt-Hex. Hd. 1/2"-20x2 1/2"	16
15	103028	Nut-Hex. 1/2"-20	16
4	103323	Washer-Lock Med. 1/2"	16
16	109461	Alemite with Ball and Spring 1/8"	16
17	563825	Bolt-Radius Rod Spindle	8
18	123027	Nut-Hex. Thick Slotted 5/8"-18	8
19	103387	Pin-Cotter 1/8"x1 1/2"	8
	106267	Washer-Flat Large-5/8"	16
20	563400	Bushing-Radius Rod Spindle	16
21	563865	Chair-Spring-5/8" Rise	4
22	560836	Pin-Dowel 1/2"x1"	8
23	560245	Nut-Double 1"	16
24	103348	Washer-Small Flat 1"	16
25	563965	Plate-U-Bolt	4
26	565140	Radius Rod Bracket	4
27	563823	Retainer-Rubber Bushing-Outer	16
28	564270	Retainer-Rubber Bushing-Inner	16
29	563497	Screw-Spindle Lock	8
30	563824	Spindle-Radius Rod	8
31	565138	Spring-Helper	4
32	565139	Spring-Main	4
33	565137	U-Bolt	8
34	560750	Bushing-Spring	16

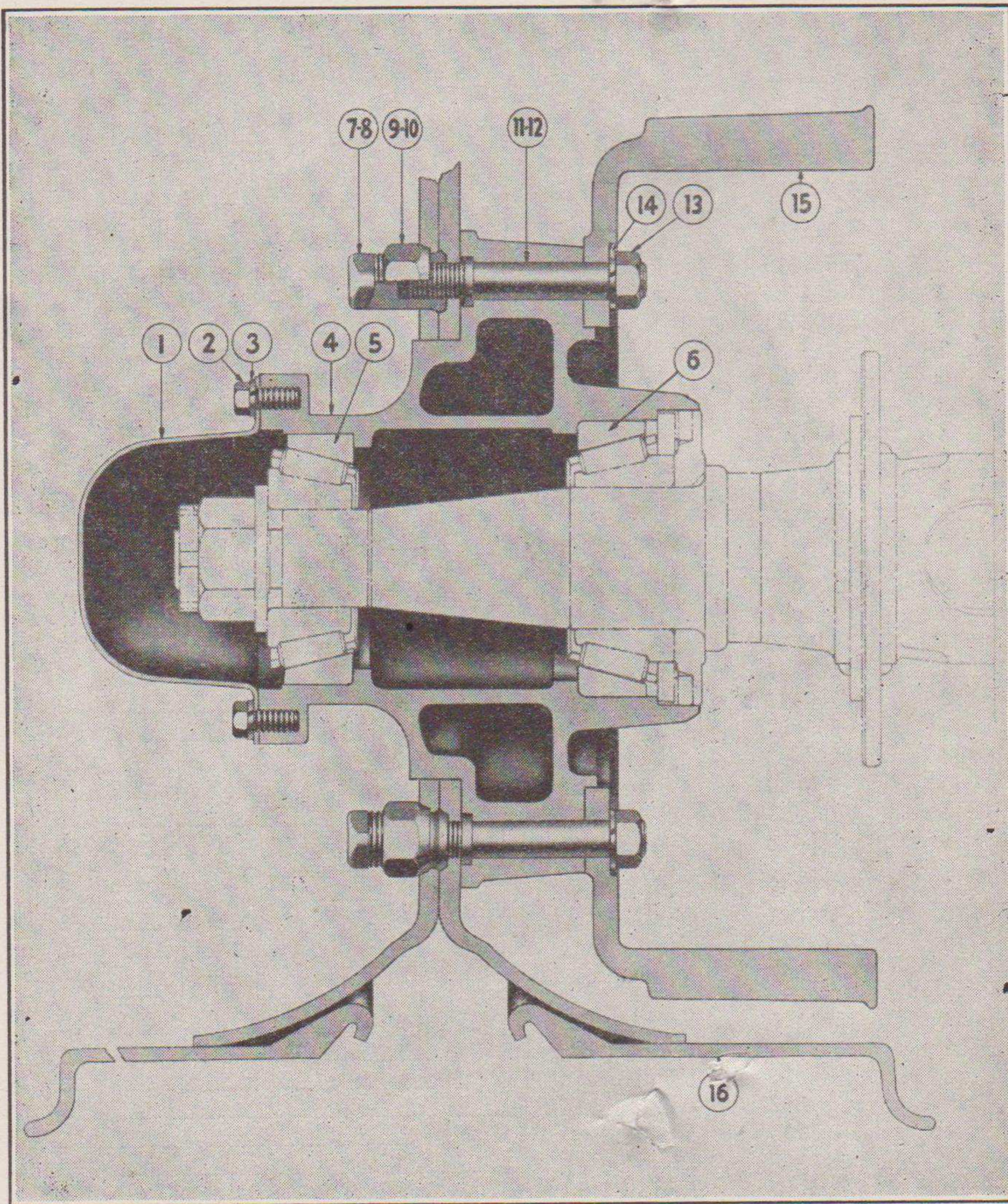


FIGURE 58. WHEELS, HUBS AND DRUM ASSEMBLY

SECTION: *Wheels, Hubs and Drums*

(FIGURE 58)

Key No.	Part No.	Name	Quantity
1	536156	Cap-Hub	4
2	100145	Bolt-Hex. Hd. $\frac{7}{16}$ "-14x $\frac{3}{4}$ "	16
3	103322	Washer-Lock Med. $\frac{7}{16}$ "	16
4	532939	Hub	4
5	534757	Cup-Bearing-Outer No. 5521	4
6	534758	Cup-Bearing-Inner No. 5720	4
7	536078	Nut-Double Cap-Inner-LH (Budd 43809)	20
8	536079	Nut-Double Cap-Inner-RH (Budd 43808)	20
9	536080	Nut-Double Cap-Outer-LH (Budd 43812)	20
10	536081	Nut-Double Cap-Outer-RH (Budd 43811)	20
11	536076	Stud-Budd-LH (Budd 16857-LH)	20
12	536077	Stud-Budd-RH (Budd 16856-RH)	20
13	117054	Nut-Hex. $\frac{3}{4}$ "-16	40
14	103326	Washer-Lock Med. $\frac{3}{4}$ "	40
15	535831	Drum-Brake-16"x6"	4
16	536158	Wheel-Budd No. 44460-D1	9
	675558	Tire-9.00x20-10 Ply, Mud and Snow Grip	9
	675225	Tube (For 9.00x20 Tires) TR-175-E12	9
	675226	Flap (For 9.00x20 Tires)	9

NUMERICAL PARTS LIST

<i>Part No.</i>	<i>List Price</i>	<i>Page Nos.</i>	<i>Part No.</i>	<i>List Price</i>	<i>Page Nos.</i>
# 55	.15	81	54903	3.89	77
Stk. # 1041	.15'	59	54904	.97	77
Stk. # 1042	.20'	59	54905	1.94	77
Stk. # 1043	.04'	59	54906	1.15	77
Stk. # 1044	.05'	59	54907	.072	77
Stk. # 1045	.34'	59	54908	.072	77
Stk. # 1239	.28 bd. ft.	75	54921	9.83	67
Stk. # 1240	.28 bd. ft.	75	54922	17.25	75
Stk. # 1241	.20 bd. ft.	75	54929	26.35	85
Stk. # 1242	.20 bd. ft.	75	55009	1.66	70
Stk. # 1814	.18	59	55010	23.47	70
50806	6.70	73	55011	160.56	73
50849	18.25	75	55013	7.24	70
50865	44.14*	85	55014	24.77	71
50895	1273.61	69	100014	.02	59
51156	18.75	59	100027	.02	59
51200	9.50	56	100031	.03	57
51202	11.30	56	100051	.04	71
51208	5.25	57	100052	.04	55, 75
51220	13.15	56	100053	.05	55
51240	2.70	57	100054	.072	75
51262	14.70	57	100056	.06	75
51310	2.16	77	100076	.07	70
51455	3.44	59	100134	.02	59
51456	3.03	59	100145	.03	89
51457	2.20	55	102430	.036	55
51458	5.08	71	102542	.01	59
51459	1.04	55	102634	.01	79
51485	8.93	55	102635	.02	57, 59
52097	24.70	67	102647	.02	83
52105	71.14	67	102949	.036	73
52107	15.48	67	103024	.01	55
52108	15.48	67	103025	.01	59
53060	4.60	87	103026	.02	55, 57, 59
53166	7.95	70, 73	103028	.02	55, 57, 59, 71, 87
53167	5.65	70, 73	103030	.03	70
53300	5.90	87	103031	.05	57
53301	4.60	87	103128	.03	79
53302	7.85	87	103319	.20 per c	55, 57
54469	11.45	70	103320	.01	59, 79
54470	1.51	71	103321	.01	55, 57, 59, 83
54778	.018	77	103322	.01	89
54830	70.52	75	103323	.01	55, 57, 59, 71, 75, 87
54838	10.30	83	103325	.02	70
54839	21.56	83	103326	.01	57, 89
54850	.108	77	103328	.036	75
54887	17.53	77	103343	.01	83
54894	1.19	77	103348	.03	87
54895	.072	77	103374	.10 per c	83
54896	.072	77	103385	.15 per c	56, 59
54897	.072	77	103386	.20 per c	55
54898	.072	77	103387	.20 per c	87
54899	1.84	77	103411	.01	67
54900	.90	77	103425	.018	53
54901	1.48	77	103498	.011	59
54902	1.80	77			

*Estimated.

Prices subject to change in event of variation in manufacturing and service costs.

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<i>Part No.</i>	<i>List Price</i>	<i>Page Nos.</i>	<i>Part No.</i>	<i>List Price</i>	<i>Page Nos.</i>
103867	.08	59	242671	2.77	75
104039	.30	55, 59	242672	2.77	75
104116	.02	83	242673	2.77	75
106265	.02	55, 75	242674	2.77	75
106267	.02	87	242675	.65	75
106268	.03	57	242676	.65	75
106288	.03	55	242677	6.44	75
106653	.03	79	320487	1.84	79, 81
106972	.01	57	320488	2.66	79, 81
108630	1.19 per c	55	320493	.05	79
108636	1.08 per c	83	320518	1.75	77
109139	3.89 per c	75	320559	1.80 per c	77
109141	4.57 per c	75	320588	1.80 per c	77, 79
109142	4.93 per c	75	320592	4.70	79, 81
109143	5.29 per c	75	320593	4.70	77, 81
109461	.03	55, 56, 57, 70, 71, 87	320624	1.80	79, 81
110438	.02	67	320625	2.95	79, 81
113782	.05	55	320657	1.22	79
114494	1.58 per c	83	320658	.90	79
114687	.06	57	501204	4.07	55
114774	.02	75	501318	2.23	85
114787	.05	55	501336	5.87	69
116399	.08	59	501337	1.30	75
117054	.04	89	530085	.20	53
119113	.20	59	530088	.50	53
119229	.14	70	530135	.25	57
119252	.02	83	530368	.15	53
119258	.10	87	530370	.45	53
119260	.28	67	532147	.15	55
119931	.14	59	532492	1.50	55
120063	.15	59	532750	2.00	55
120375	.76 per c	77	532866	.15	57
120380	.01	77, 79	532894	.01	59
120622	.72 per c	75, 79	532939	31.10	89
120911	.09	59	532977	1.50	59
121841	.72 per c	75, 79	533030	1.50	59
123027	4.32 per c	87	533066	.05	57
123179	.01	79	533368	1.70	55, 57
131014	1.40 per c	85	533677	.45	55
131044	1.84 per M	85	533967	2.20	57
132719	.58 per c	85	533974	1.80	57
132760	.36 per c	79	533975	.60	57
132768	.01	75, 79	533979	.30	57
133043	.01	79	533980	.15	57
133049	.01	79	534014	.05	57
134530	.65 per c	85	534079	.30	57
134551	.02	79	534374	18.50	59
138064	14.76 per c	73	534434	1.00	59
138071	.05	67	534503	92.85	53
142358	.05	83	534533	3.15	59
181436	.06	87	534591	.01	53
181440	.06	87	534725	2.50	57
240826	.0612	87	534726	1.25	57
241860	.11	55	534727	.45	57
242209	3.92	73	534729	.01	57
			534730	.02	57

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534731	.05	57	536232	3.56	55
534732	.02	57	536275	5.18	55
534739	.02	57	536276	1.66	55
534740	.20	57	536277	.61	55
534746	9.43	53	536278	.119	55
534747	13.49	53	560245	.15	87
534757	7.31	89	560402A	.70	87
534758	8.94	89	560503	1.40	67
534918	.01	57	560750	.55	70, 73, 87
534919	.10	57	560836	.15	87
534996	2.15	53	563400	.25	87
535017	.65	56	563497	.05	87
535018	.04	57	563823	.05	87
535019	.01	57	563824	.55	87
535027	.04	57	563825	.35	87
535028	5.29 per c	57	563865	1.40	87
535105	9.60	57	563912	1.90	87
535106	9.60	57	563961	1.10	87
535300	.25	59	563965	2.30	87
535301	.13	59	564270	.05	87
535302	.15	59	564650	2.50	87
535303	48.50	59	564651	2.50	87
535304	.30	59	565059	4.75	69, 73
535306	.40	59	565135	1.60	87
535308	.95	59	565137	6.05	87
535310	5.00	59	565138	7.63	87
535348	7.34	57	565139	31.61	87
535610	.32	55	565140	4.36	87
535772	.95	57	590015	4.00	70
535773	.95	57	590017	15.90	70
535831	29.02	89	595255	1.25	67
535910	.85	59	599809	.35	67, 75
535927	.10	56	599996	18.83	67
536076	.79	89	600001	8.30	67
536077	.90	89	600002	8.30	67
536078	.61	89	600391	15.26	70
536079	.61	89	600392	15.08	70
536080	.29	89	600422	3.85	69
536081	.29	89	600423	4.18	70
536108	19.60	59	600424	1.04	70
536110	2.00	59	600425	1.19	70
536111	.18	55	600426	4.50	71
536156	1.40	89	600427	.05	71
536158	35.64	89	600428	.14	71
536159	.22	59	600430	3.60	69
536175	12.30	59	600577	1.40	70
536177	.655	59	600578	1.40	70
536178	3.38	55	600579	1.10	70
536179	.95	71	600580	1.48	73
536180	1.15	71	600581	21.95	73
536181	1.15	71	600586	5.90	73
536185	1.50	59	600587	.72	73
536187	.25	59	600588	5.69	73
536203	3.13	55	600589	4.64	73
536213	1.50	59	600590	.15	73
536214	.80	59	600591	2.20	73

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600592	14.76	73	600672	1.69	70
600593	.72	73	600673	1.62	70
600594	.22	73	600674	35.86	71
600596	43.81	70	600675	10.73	70
600597	44.17	70	600677	.36	70
600598	1.58	70	600679	15.42	75
600599	1.51	70	600682	8.78	75
600600	1.66	70	600683	9.86	75
600601	2.41	69	600850	.36	69
600602	2.41	69	600851	2.63	69
600603	9.61	69	600852	.072	69
600604	5.47	69	600853	.32	70
600605	1.12	70	601174	4.97	75
600606	.18	69	601175	5.69	75
600607	.76	69	601176	.29	70
600608	.72	69	601177	.97	70
600609	1.12	69	601185	.68	70
600610	1.12	69	630027	.25	55
600611	.72	69	630028	.25	55
600612	.76	69	630298	.05	55
600613	1.40	69	630605	.05	83
600614	1.40	69	630838	.02	55
600615	.79	69	631936	8.21	55
600616	.58	69	651425	1.62	73
600617	.50	69	651426	.86	73
600618	.47	69	674753	.05	83
600619	—	70	674756	.30	55, 83
600620	1.01	70	674758	.15	83
600621	.10	70	674759	.02	83
600623	4.86	69	674772	.10	83
600624	2.41	70	674774	.95	83
600625	2.88	70	674775	1.15	83
600626	7.52	69	674776	2.05	83
600629	9.72	70	674777	.20	83
600640	9.14	69	674913	.15	83
600641	9.14	69	675059	.15	79
600642	10.51	69	675060	.65	77, 79
600643	.50	70	675063	.22	77
600644	.47	70	675102	2.10	79
600647	6.08	69	675128	2.34	85
600653	6.16	69	675164	1.25	85
600656	6.48	69	675165	.45	85
600657	8.75	69	675170	1.00	83
600659	2.77	70	675180	.05	83
600660	.90	70	675181	2.20	83
600661	2.30	70	675191	.25	77
600662	.79	70	675225	—	89
600663	1.80	70	675226	—	89
600664	1.98	70	675477	.43	77
600665	3.89	69	675478	3.71 per c	77
600666	2.99	69	675479	.072	77
600667	3.24	69	675480	1.84 per c	77
600668	3.49	60	675497	3.35 per c	77
600669	16.42	69	675503	.70	67, 75
600670	1.37	70	675505	7.65	67
600671	1.51	70	675556	3.12	83

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675557	47.52	67	WAB-202690	.45	60
675558	—	89	WAB-202691	1.75	61
675630	3.45	79	WAB-202692	.70	60
675663	.86	83	WAB-202693	2.15	60
675759	2.09	83	WAB-202695	.35	61
676275	3.02	85	WAB-202696	.30	61
676276	.61	85	WAB-202697	.30	61
676278	1.19	85	WAB-202698	.65	61
676279	4.03	85	WAB-202699	.15	60
676293	1.55	85	WAB-202735	.15	61
690006	.70	79	WAB-202736	.25	61
690007	.02	79	WAB-202737	.15	61
690008	.10	79	WAB-202738	.30	61
690085	.45	79	WAB-202741	.55	61
800097	.10*	75	WAB-202743	.25	61
800127	5.26	69	WAB-202744	.15	61
800128	5.04	69	WAB-202746	6.95	61
800129	4.86	69	WAB-202747	.15	61
800130	4.86	69	WAB-202869	.25	61
800131	3.96	69	WAB-202880	1.75	63
800132	4.14	69	WAB-202941	.25	63
800133	4.14	69	WAB-202978	.03	63
800134	4.14	69	WAB-202982	.005	61
800135	7.74	69	WAB-203016	.01	61
800136	7.74	69	WAB-203019	.005	63
800146	30.24	69	WAB-203145	.02	63
CB-9212	.50	81	WAB-203148	.03	63
CB-9218	—	81	WAB-203156	.03	63
CB-9225	—	81	WAB-203172	.07	63
CB-9231	—	81	WAB-203173	.02	63
CB-9232	.20	81	WAB-203227	.03	61
CB-9233	.02	81	WAB-203379	1.45	61
CB-9234	—	81	WAB-203388	.10	61
KD-1135	—	81	WAB-203587	.40	63
KD-1996	.05	81	WAB-203589	.20	63
KD-2878	.05	81	WAB-204055	1.00	61
KD-4393	.25	81	WAB-204056	.20	61
KD-4446	—	81	WAB-204568	8.75	61
KD-4684	.08	81	WAB-204650	1.30	61
KD-5140	—	81	WAB-204651	.25	61
KD-6777	.05	81	WAB-205129	2.45	63
KD-7136	.08	81	WAB-210897	.05	65
KD-9526	.20	81	WAB-211367	.15	61
WAB-200001	2.50	63	WAB-211379	.65	59
WAB-200029	.11	61	WAB-211537	.30	61
WAB-201318	.005	63	WAB-211538	.30	61
WAB-201687	.40	63	WAB-211539	.35	61
WAB-202587	.15	59	WAB-211541	.40	61
WAB-202588	.45	59	WAB-211542	.20	61

*Estimated.

CB—Corcoran-Brown Lamp Division, Cincinnati, Ohio.

KD—KD Lamp Co., Cincinnati, Ohio.

WAB—Bendix-Westinghouse Automotive Air Brake Co., Elyria, Ohio.

NOTE: All the parts on this list bearing a prefix are to be purchased directly from the manufacturer.

Prices subject to change in event of variation in manufacturing and service costs.

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WAB-21159540 61	WAB-214172 3.60 65
WAB-21213590 61	WAB-214173 2.85 65
WAB-21322403 61	WAB-21417435 65
WAB-213225	..... 2.10	..... 61	WAB-215092	..... 18.50	..... 63
WAB-213226	..... .15	..... 61	WAB-215204	..... 7.90	..... 61
WAB-213227	..... .16	..... 61	WAB-216071	..... 13.20	..... 60
WAB-213228	..... .15	..... 61	WAB-217269	..... 8.00	..... 63
WAB-213229	..... .05	..... 61	WAB-220304	..... 3.50	..... 61
WAB-213230	..... .40	..... 61	WAB-220305	..... 5.00	..... 61
WAB-213387	..... .11	..... 61	WAB-220353	..... 48.50	..... 60
WAB-213530	..... .25	..... 65	WAB-220829	..... 26.95	..... 61
WAB-214169	..... 9.90	..... 65	WAB-221022	..... 19.60	..... 65
WAB-214171 1.25 65	WAB-221053 2.50 65

WAB—Bendix-Westinghouse Automotive Air Brake Co., Elyria, Ohio.

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