

PUBLISHED BY FORD MOTOR COMPANY OF CANADA, LIMITED, FORD, ONTARIO, CANADA

No. 8

JANUARY, 1925

Vol. 6

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WINTER OVERHAUL

HOW often have you promised your old friend, your Car, that you would have it overhauled during this season?

We would like to point out that now is the right time to have this work done, as we are offering a special price on labor during the months of January and February. Our idea in doing this is to hold our staff together during the winter months so that we will be in a position next Spring to give you the same dependable service that we have given you in the past.

As Ford Dealers we are more vitally interested in the performance of Ford Cars than any other Garageman in the district. You are, therefore, assured of honest workmanship.

We will re-bore and re-babbitt your Ford Engine, labor charge only \$25.00, and guarantee it free from oil pumping or your money refunded. Other labor charges on an equally low basis.

We specialize on Ford Cars and have equipped our shop accordingly.

Our workmanship is guaranteed and you are assured that nothing but Genuine Ford Parts will be used for replacement purposes.

Try our Hi-Test Gas and you will use no other.

We earnestly solicit your repair work.

FORD SALES AND SERVICE

INGERSOLL, ONT.

F. W. STAPLES

EXIDE BATTERY

A similar card mailed to owners should help you during your winter service campaign.

Tractor Brake Adjustment

From inquiries received at this office it is evident that dealers are failing to instruct owners how to correctly adjust the transmission brake on the Fordson tractor.

In order that there may be no misunderstanding as to how this adjustment is made, we are outlining below the correct procedure to follow.

Remove the foot plate which is located on the right side of the transmission, and expose the adjusting screw "A," Fig. 41, located at the lower end of the clutch lever. It is extremely important that this screw be adjusted so that a gap of not less than $\frac{1}{8}$ " or more than $\frac{3}{16}$ " is obtained between the head of the screw and the upturned lug "B" on the brake shaft.

It is absolutely essential that this clearance be maintained in order to allow some movement of the clutch pedal to throw out the clutch before bringing the brake into operation.

Failure to do this will cause the brake to drag, resulting in excessive wear of the plates.

The Ammeter

At an engine speed of 15 miles per hour or over and with the third brush correctly adjusted, the ammeter should show a reading of from 10 to 12 amperes with lights turned off.

If the engine is running at 15 miles or more per hour and the ammeter does not show the above reading, first inspect the terminal posts on the ammeter, making sure that the connections are tight, then disconnect the wire from the terminal on generator cut-out and with the engine running at a moderate speed, take a pair of pliers or a screw-driver and short

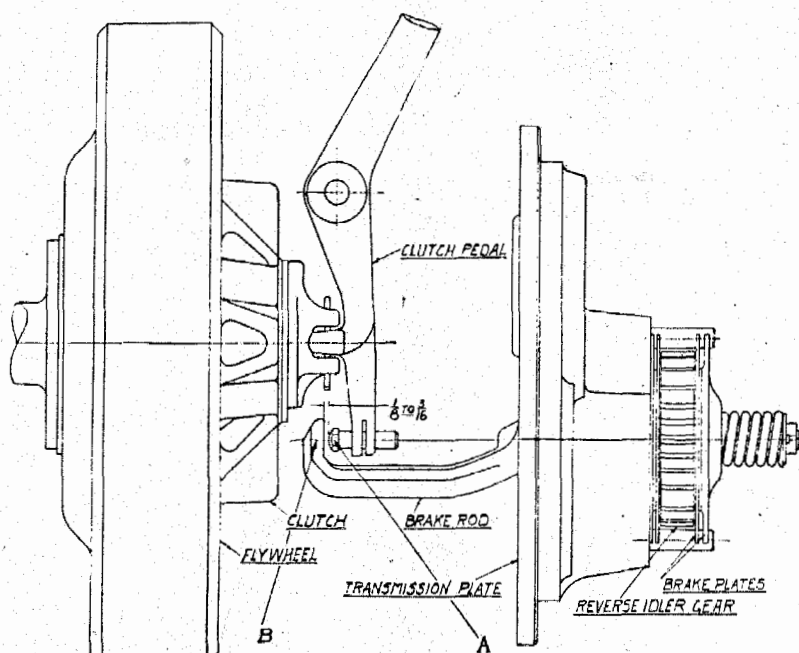


Fig. 41

circuit the terminal on the generator to the generator housing. If the generator is O. K. a good live spark will be noted. (Do not run the engine any longer than is necessary with the wire disconnected.) Next inspect the wiring from the generator through the ammeter, to the battery for a break in the insulation that would result in a short-circuit. Remove the dust cap from the end of generator and thoroughly clean the generator commutator, using for this work a fine grade of sand paper which has been slightly oiled. With the motor running, hold the sandpaper against the commutator with the fingers until all dirt has been removed and a bright surface attained.

When adjusting the third brush, under no circumstances should force be used in tightening the clamping nut. The clamping nut should, of course, be run down sufficiently far to prevent the third brush holder from moving. When force is used in tightening the third brush clamping nut, there is a possibility of damaging the insulation which will cause a ground and failure of the generator to deliver a charge.

New Design Crankcase Oil Tube

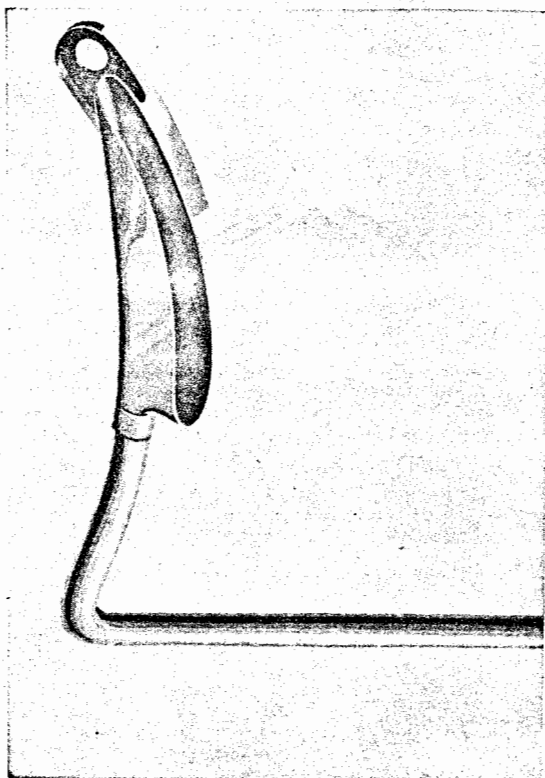


Fig. 42—New

An engineering change was recently made in the crankcase oil tube changing the length of the funnel from $1\frac{1}{2}$ to $3\frac{5}{8}$ ". Figs. 42 and 43 shows the difference in the size of the old and new design oil tubes.

This improvement permits the new design funnel to collect and deliver to the front end of the motor approximately twice as much

oil as was possible with the old style. This is especially advantageous when travelling in mountainous country where steep inclines are frequently encountered. Also, during cold weather when the oil has become congealed and the oil flow is necessarily slow when the engine is started, the larger amount of oil collected by the new type funnel insures the oil reaching the front end of the motor con-

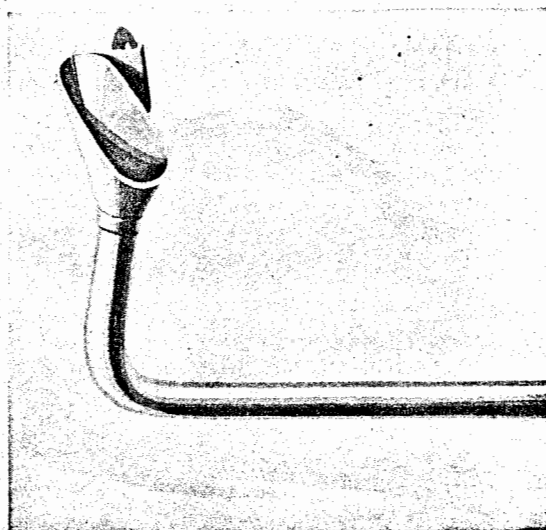


Fig. 43—Old

siderably more quickly than would be possible with the old design.

This change also decreases any possibility of clogging of the oil pipe as the additional amount of oil which is collected by the new funnel increases the oil pressure in the pipe sufficiently to carry away any foreign matter that might accumulate.

Magnets Sold Only in Complete Sets

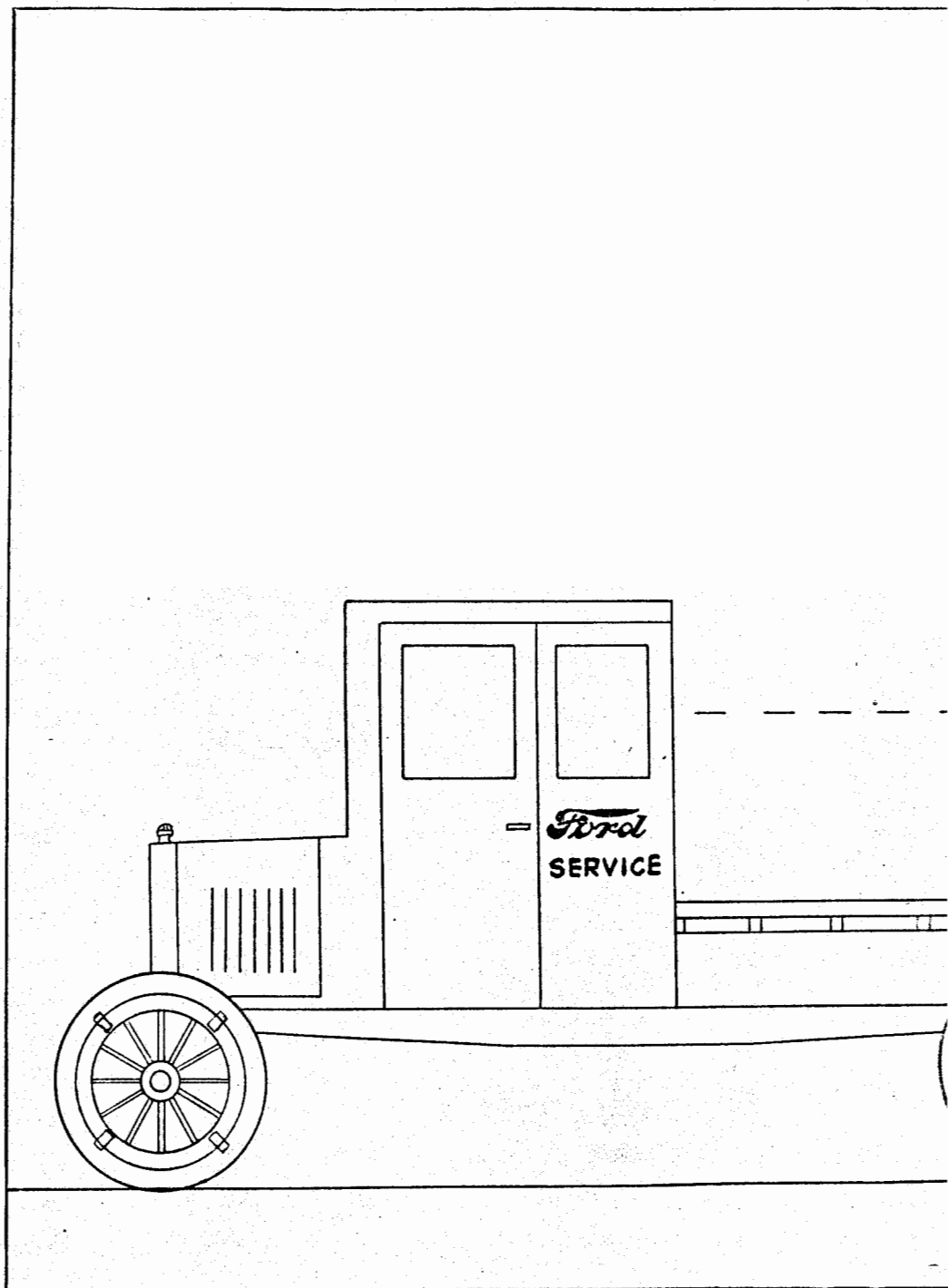
When necessary to replace a magnet due to breakage or other causes, an entire set of new magnets should be installed rather than replacing only the damaged part.

When the amount of time and labor necessary to install these parts is taken into consideration, it would be extremely poor practice to install only one new magnet. Furthermore, when one magnet has been broken there is always a possibility that the other magnets have been damaged or weakened and under such circumstances the in-

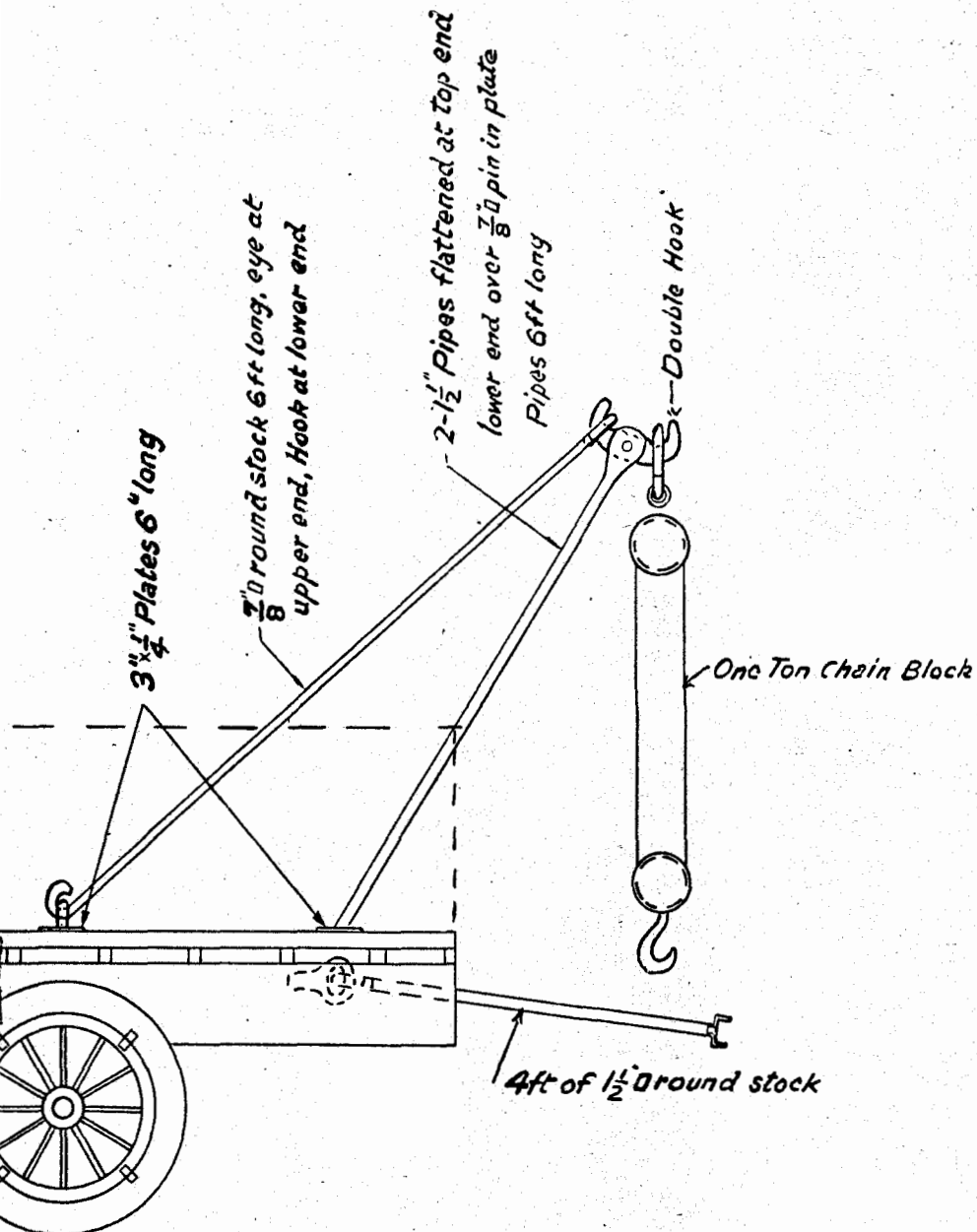
stallation of but one new magnet would result in the strength of the new part being reduced to that of the weaker ones.

New magnets are furnished by us only in complete sets. The new magnets at time of shipment being placed on a board in identically the same relation to each other as when installed on the fly wheel. Extreme care should be taken when assembling new magnets and lining up the magneto to see that the faces of the magnets are exactly $\frac{1}{32}$ " from the faces of the magneto coil cores.

AN EASILY MADE



WRECKING CRANE



CRANE ON SERVICE TRUCK

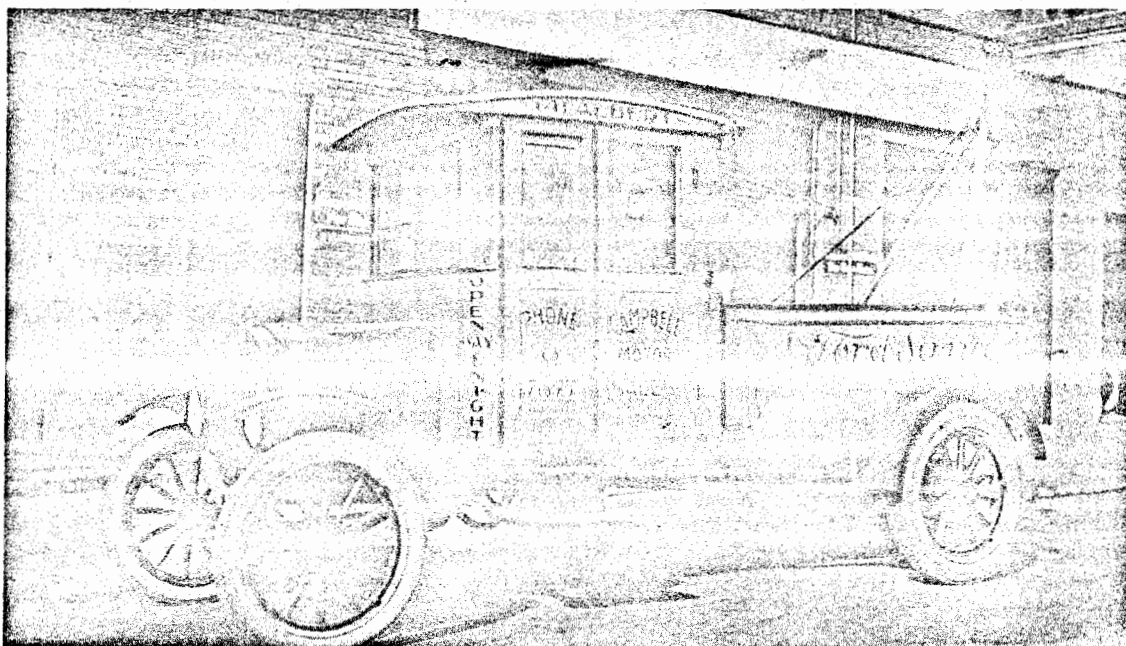


Fig. 44

Simply Made Wrecking Crane

Figure 44 illustrates a simply made wrecking crane built and used by Campbell Motor Sales, Ottawa. On the preceding page we show a drawing with the necessary measurements and details which will enable you to quite easily build such a crane on your service truck. One of the advantages of this crane lies in the fact that it can be disassembled in a few seconds and placed in the body of the truck making a much neater installation than where a crane is sticking up above the body at all times. The material used in this is as follows:

One piece $\frac{7}{8}$ " diameter round stock 6' long with an "I" at the upper end and a hook at the lower end. The hook at the lower end hooks into an "I" which is fastened to a plate 3" wide by $\frac{1}{4}$ " thick by 6" long. The "I" on the upper end of the rod fastens over the rear end of the double hook. The rear supports (2 in number) are made from $1\frac{1}{2}$ " pipe flattened at the top end and the lower end fits over a $\frac{7}{8}$ " diameter pin in a plate. These pipes are 6' long. The double hook can be easily made by a blacksmith. The hoist has a simple differential chain hoist of standard manufacture. The towing bar is 4' long and made from $1\frac{1}{2}$ " diameter round stock. One end of the stock is made with an "I" which fastens to a clevis under the body. On the rear end of the bar is located another clevis which is attached to the front or rear of the car in order to keep it from swinging against the truck.

Horn Adjustment

Figure 45 illustrates one type of electric horn used on a Ford car and although we use two different types the adjustment and operation are almost identical. The armature and contact spring at "A" must be separated from .010 to .020". This distance may be adjusted by bending the end of the contact bracket. The striking pin should be adjusted so that the armature at "A" touches contact spring just before end of striking pin at "B" touches diaphragm. Contact spring support should be bent down at "C" to give slight pressure on contact points. To be sure that contact points line up properly a narrow flat nose plier should be used for adjustment. In the past we have received a large quantity of horns which were returned to us as being defective, but upon examination were found to only need a slight adjustment which could easily have been made. By following the instructions given herewith you should be able to adjust the horn and not whether it is actually defective or not before returning it to the Branch. If the customer is not satisfied with the tone of his horn this can be adjusted within certain limits by loosening the nut at the top of the striking pin and screwing the pin down with a screw driver until the desired tone is produced.

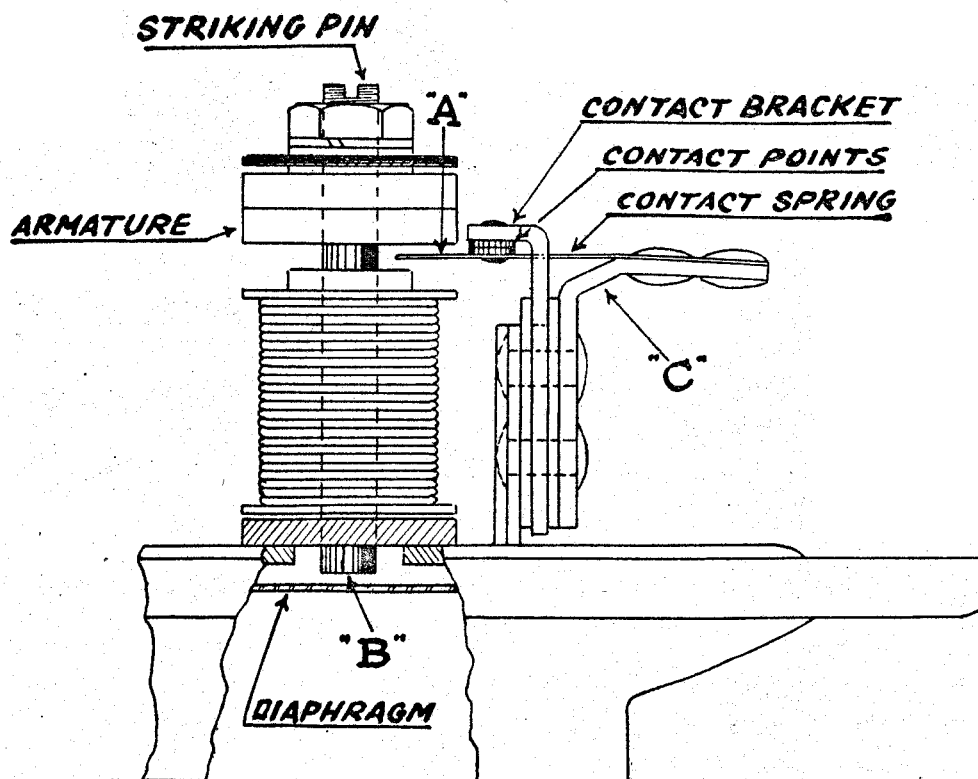


Fig. 45

Holder for Bendix Cover Screw

Figure 46 illustrates a simple holder which can be made up for inserting the bendix cover screw. This is made up of a metal tube of sufficient size to allow a screw driver to be inserted. The end of the tube is bent upward as shown in the lower drawing and the screw

is placed in the slot with a screw driver against it to keep it in place. The assembly is then put in place and the screw started after which the holder can be removed and the screw tightened up with a screw driver.

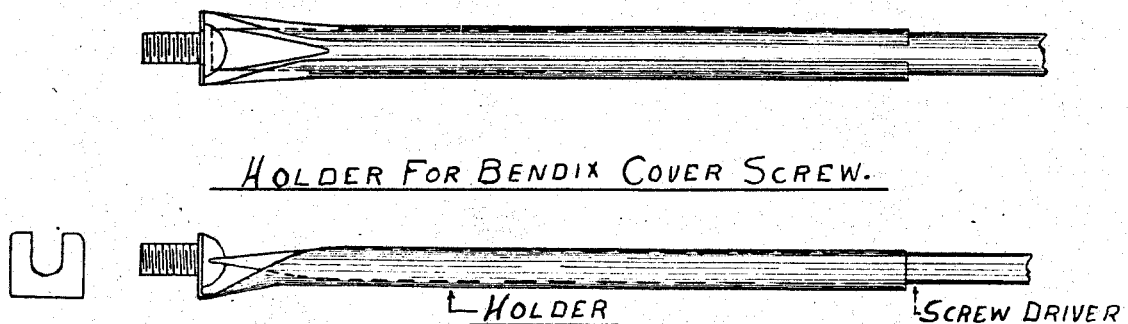


Fig. 46

Carbon Monoxide Poisoning In Small Garages

The newspapers recently carried a news item of the death from carbon monoxide poisoning of a prominent Baltimore man, who was found dead in his garage with the engine of his automobile still running. With the onset of colder weather such accidents will probably increase in frequency and automobile owners are warned of the danger involved in running a gasoline engine in a small closed space for any considerable period of time.

In tests of the exhaust of a small 23 horsepower automobile engine it has been found that it discharged approximately 25 cubic feet of gas per minute, samples of which gave an average of 6 per cent carbon monoxide, or 1.5 cubic feet of deadly carbon monoxide gas per minute. Of course larger engines will give off more. Now a ratio of 15 parts carbon monoxide to 10,000 parts of air is considered a dangerous concentration to be exposed to for a considerable time, and the small 23 horsepower engine in "warming up" and giving off only one cubic foot of carbon monoxide per minute would contaminate the air of a small closed garage, 10 by 10 by 20 feet, to the danger point in about three minutes.

Carbon monoxide is a colorless, tasteless, and almost odorless gas. Its poisonous action depends on the fact that it has a much greater affinity for the hemoglobin of the blood than has oxygen—hemoglobin attracting carbon monoxide about 300 times as strongly as it does oxygen. By combining with carbon monoxide, the hemoglobin of the red blood corpuscles is prevented from giving up its oxygen to the tissues. Death results from paralysis of the respiratory apparatus.

The attack of carbon monoxide poisoning comes on insidiously, and consciousness is gradually lost. Even though the victim may become aware of the danger he is often unable to escape from it because of the great loss of motor power.

The automobile worker in a small garage is most frequently the victim. It, therefore, behooves every dealer to warn customers who run their engines in small garages to see to it that the room is properly ventilated by having the windows and doors opened if he expects to run the engine for even a few minutes.

Correction

On page 42 of November, 1924, Service bulletin we have made a misprint under paragraph headed "Action of Third Brush." The first part of this paragraph should have read as follows:

"The Third Brush like the lower Pos. (+) Brush is Pos. (+) also and insulated from the brush holder assembly. However, unlike the Lower Brush it has no set position and may be moved on the brush holder in such a way as to bring it into or out of the most economical position for taking off current. When it is moved toward the lower Neg. (-) brush or in the direction of rotation it will be in more direct line with the lower Pos. (+) brush and in a more advantageous position to

collect current causing a stronger flow through the fields. When it is moved toward the lower Pos. (+) brush in opposite direction to the rotation of the commutator it loses much of its efficiency and cuts down the charging rate of the generator by weakening the field magnetism. Illustration No. 33 is correct. This is supposed to be taken in a position so that if you were looking through the housing of a generator from the pinion end you would see the brushes in the position as they are shown in the illustration."

Will you therefore make this correction in your copies of the November Service Bulletin so that the information will be correct?