AUTOMOTIVE SECTION

PLAN TO RELINE BRAKES ON AUTO

Work Should Be Done Before Commencement of Snow-Covered Streets and Highways

MUST FOLLOW INSTRUCTIONS

Before Removing Brake Carefully Note Which Is Top and Bottom of Assembly and See Just How the Spring Is Inserted.

Long and strenuous touring during the summer months just past naturally causes wear and tear on brake lining, which should be given careful attention by car owners before the

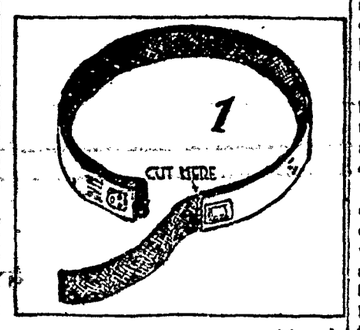

Fig. 1—Measuring the New Lining.

commencement of the snow-covered pavements and slippery roads, says a writer in the Chicago Tribune.

While the task of relining brakes is one primarily for an experienced repairman, the operation can be performed by those who enjoy doing their own work if they will but devote the time required to do it efficiently, the method to be followed being explained herewith:

First, purchase the new lining in one piece, cutting the necessary lengths after the wheels and brakes have been removed.

The correct length of material is obtained by laying a tape measure around the outside of the external brake band, making an allowance of about one-half inch overlapping at the edges of the band opening. This gives the proper length for one external brake, from which one and one-half inches should be deducted for the length of the internal brake.

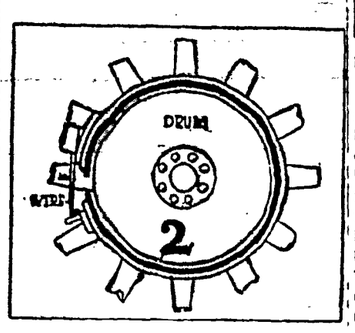

Fig. 2—Wire the Band to Hold It in Place.

To Prevent Slipping.

To guard against any accidental slipping after the rear wheels have been jacked up, place the axle on good strong horses. If the latter are not available, block the front wheels securely to prevent the car from rolling ahead or back off the jacks. Be sure that you are thoroughly familiar with the method to be followed in removing the wheels from your particular make of car. If necessary, or at least doubtful, consult your book of instructions. Follow the instructions minutely.

A large clevis pin, on the back of which is first a washer and then a cotter pin, holds the toggle connections of the brakes in place. The toggles should be disconnected with the brake shoes and the adjustment screw removed from the guide that acts upon the anchor bar. With the removal of the coil springs that are attached to the band the brake will be ready to be taken off.

Here a word of warning may be necessary. Before removing, carefully note which is the top and which is the bottom of the assembly, and see just how the spring is inserted between the guide and the anchor bar; the exercise of care at this point will prevent trouble when the brake is ready to be replaced. All grease around the dust guard and axle stub should be removed and the parts thoroughly cleaned with gasoline.

Now put the band in a vise and with a cold chisel and hammer chip off the copper rivets that hold the lining to the band, then drive out the old rivet ends with a punch.

Allow for Overlapping.

It is necessary in cutting the new lining to allow for overlapping for the reason that the rivet holes at this point are very close to the edge, and to leave the lining short here would allow it to tear when the holes are drilled. See Fig. 1 for the method of determining the correct length. If the old lining can be removed intact it can be used as a guide in obtaining the new measurements. As the average private garage generally lacks the tools used in this work at service stations simpler means have to be employed.

In marking the lining for the holes lay the wheel on the bench or floor [illegible] and put the lining and [illegible] the drum as shown in Fig. 2. Wire the band so as to hold it in place correctly. With a pencil or soapstone stick and using the holes in the band for a template, mark the lining. A harness leather punch is used in making the holes.

Secure the lining to the band in its proper position with the aid of a few small bolts and nuts. Next countersink the holes so the rivet heads will be below the surface of the lining. A countersinking tool made for this purpose produces the most satisfactory results, but if one is not available one can get good results from a wood screw countersinking tool and a brace. If the latter is used it should be sharp or the lining will tear.

Should Have Vise.

If you do not possess a vise, place the band on the bench in such a way as to prevent it from slipping away, and with the countersink bit countersink each hole. Do not go too deep on this operation, only enough to allow the rivet heads to be well below the lining surface.

Unless there are two people, one holding the band and rivet bar while the other is using the hammer, it is almost impossible to get along without a vise.

Fig. 4 shows a way of using an old bolt held in a vise with the head of the bolt resting on the arm of the vise to give solid foundation. Insert a rivet through the lining and the band and, with the whole in place, as in Fig. 4, the head of the rivet resting on the bolt, draw the rivet snug with a rivet set, or a short piece of gas pipe. A few blows will be enough to draw the rivet head and the lining tight and in place. Avoid too much pounding, as it will tend to draw the rivet deeper in the material and possibly weaken to the point of breaking through.

It may be found that rivets are too long or too short; not more than three-sixteenths of an inch should protrude through the band. In riveting these ends use quick light blows,

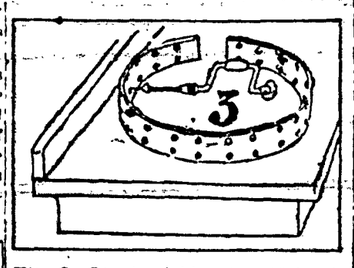

Fig. 3—Countersinking the Holes in the Brake Band.

as heavy ones will draw the rivet head in the lining too tight. This operation is performed with the brake in the same position as when using the rivet set. Do not remove the bolts that were used as temporary holdings until the holes not occupied by bolts have been filled with rivets. This completes the foot brake, and the same methods are used in relining the internal or hand brake.

For Internal Brakes.

With the exception of the marking of the holes the methods just described are applicable to the internal brake. It is not necessary to put the shoe in place with the lining, as with the external band. When the lining has been cut, making the same allowance for the ends as was given in the foot brake, mark and attach this end with bolts in its proper place on the shoe.

After stretching the band over the shoe, mark and punch the holes that are opposite the split in the band. Do the same with the last two holes and complete the temporary attachment. The riveting follows the same

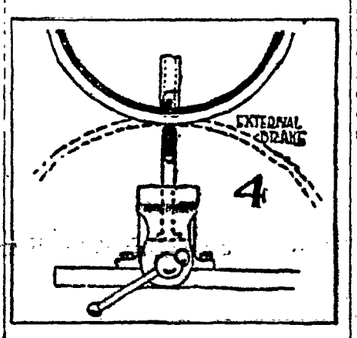

Fig. 4—How to Use an Old Bolt and a Piece of Pipe as a Rivet Set.

course as in the foot brake. Replace the brakes, being careful to secure every part in its proper position. It will be necessary to make a complete readjustment. Before putting on the wheels, clean the bearings and pack them in fresh grease. Much brake trouble is caused by the leaking of grease into the brake mechanism. In order to remedy this, for a time at least, cut a thick strip of felt long enough to be wrapped around the axle bar three or four times. The felt should be of sufficient thickness to fit snugly between the bar and the housing when wrapped around the shaft.

Don't leave your automobile standing under a tree that throws off a gummy substance, as it is hard to remove and may eventually spoil the paint on your car.

* * *

Battery Tips.

Cover the plates with water.

Turn on the lights when the battery becomes hot.

Test the battery every two weeks with a hydrometer.

Always be sure to have sufficient pure distilled water in the battery.

When filling the battery, wipe the surface clean of moisture and dust.

Relieve the work of the battery when starting by retarding the spark, and only using a single short pressure to the starting button.

TUBE THAT REPAIRS ITS OWN PUNCTURES

Described as Most Ingenious Device Attained So Far.

When Inflated Pressure Is Set Up Sufficient to Close Hole Made by Ordinary Puncture and Keep It Closed.

Here is an inner tube that repairs its own punctures and it is described in the Scientific American as the most ingenious attained up to date on this perennial problem. The inventor makes his tube with a circumference considerably greater than the inner surface of the casing for which it is designed. The extra rubber is taken care of and it is made possible to insert the uninflated tube inside the shoe

Tube Repairs Its Own Punctures.

by deep corrugations that are molded around the tube, as indicated in our diagram, which shows the uninflated tube in position in the casing. When it is now inflated and forced by its contained air to conform to the shape of the casing, a pressure is set up along its outer wall which is claimed to be sufficient to close the hole made by any ordinary puncture, and keep it closed. The "compression tube" is made in Tulsa, Okla., and has been in rather extensive use in the Southwest, with very good results.

George W. Henner
One of the directors of the Rochester Auto Dealers Association.

AUTOMOBILE NEWS

An automobile should never be pushed backward by the radiator it is not strong enough.

* * *

Perfect vaporization of the gasoline means more thorough combustion, and consequently less carbon deposit.

* * *

Several flagrant tire abuses, which are becoming common, resulting in blowouts prematurely, can be avoided by proper care.

* * *

Too abrupt dimming of automobile headlights is a menace to the driver on account of the sudden change from brightness to darkness.

* * *

An automobile tire, invented in England, is made of solid rubber, having three deep air chambers cut into it from the side against the wheel rim.

* * *

High speed turbine pumps have been designed to be mounted on passenger automobiles and operated by their motors to enable them to [illegible] fire engines.

AUTOMOBILE GOSSIP

Be sure the jack is quite secure before taking off the rim or wheel.

* * *

Proper lubrication of the brake control mechanism of a motorcar is most essential.

* * *

Sheet metal parts, which are allowed to rub as a result of loose bolts, develop bad squeaks.