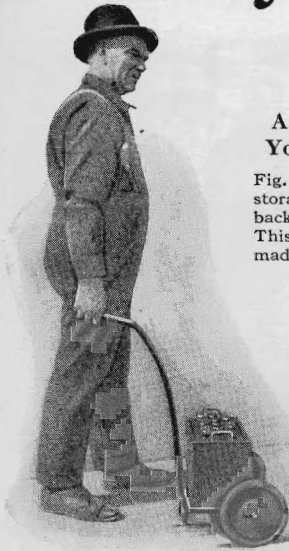


# Handy Kinks for Your Auto

## How to Carry Two Spares; a Tool Bag from an Old Tube



### A Gocart for Your Battery

Fig. 1. Carrying a storage battery is a back-breaking job. This is the way it was made easy by a garage man who has a lot of batteries to handle during the day

pedals, a tough wearing surface must be used. One of the cheap, metal step plates sold in the bargain stores is ideal for this purpose. Fasten it to the floor with the turned-up edge toward the dash, as shown in Fig. 4.

**A**DJUSTING the brakes is a job that usually requires the services of two men—one to hold the brake pedal down while the other adjusts both brakes so that they take hold at the same time.

As shown in Fig. 5, a device can be easily built that will make it a one-man job. A half-inch standard turnbuckle can be fitted with special sheet metal pieces shaped as shown, so that one will rest securely on the foot brake pedal while the other rests against the edge of the driver's seat. Turning the turnbuckle

**A**N AUTOMOBILE starting battery is an extremely difficult piece of apparatus to handle. Aside from the fact that it is very heavy for its bulk, there is always the possibility that the sides and top of the battery will be covered with a film of acid-soaked dust. Consequently the man who has to handle the battery hesitates about lifting it in such a way that the weight will be partly supported by the body. Such a procedure would be ruinous to good clothes, and even a pair of overalls will go to pieces very quickly if exposed to acid rot.

One battery service man has solved the problem by building himself the ingenious little hand truck shown in Fig. 1. It was made from a length of pipe, a piece of bent angle iron and the wheels from a broken kiddie car.

**W**HEN the spare tire rack is built to hold only one extra tire and rim, the usual way to carry two spares on long trips is to strap the extra spare to the one that is bolted to the tire carrier. If, however, your car is fitted with rims made with lugs attached, Fig. 2 shows how to carry a spare neatly without straps. T-head bolts are used and sections of half-inch pipe are cut the right length to be spacers between the two tires. They should be long enough so that the rubber does not touch. Use at least three bolts on small tires and four or five on the larger sizes.

**T**HE very serviceable tool bag shown in Fig. 3 is made from a piece of an old inner tube. Cut the tube about 1½ times the length of the longest tool that you want to put in it and then turn it inside out as shown. Fold neatly and compactly at one end, and bind as tightly as possible with a heavy rubber band also cut from the old tube. Turn right side out again, and, after inserting tools, close the end with another rubber band.

**I**N ORDER to prevent the wear caused by the heels on the floor mat just back of the clutch and brake

### Ten Dollars for an Idea!

**R**OWLAND L. Hill, of Saginaw, Mich., wins the \$10 prize this month for his suggestion of a practical way to carry two spares (Fig. 2). Each month POPULAR SCIENCE MONTHLY awards \$10 in addition to regular space rates to the reader sending in the best idea for motorists. Other contributions that are published will be paid for at usual space rates.

will permit holding the brake pedal down as desired while the brakes are adjusted.

**L**OCKING the gear shift lever in neutral is a good way to prevent unauthorized use of your car, and a number of cars are now regularly fitted with transmission locks to accomplish this purpose. An ordinary hasp bolted to the floor board and with the end bent up as shown in Fig. 6 will do very nicely if notches are cut in the bent-up portion to permit the bolting of the end of the hasp to the gear lever with an ordinary bicycle lock. Of course, such a lock will not stop a thief armed with a hacksaw.

**I**T IS simple enough to disconnect the wires and remove any part of the ignition system of an automobile, but the trouble comes when you try to replace the part and connect it up properly. Unfortunately, wire terminals all look alike and unless you mark them there is no way of telling to which binding posts they should be fastened. One simple way is to take a piece of string and as you disconnect a wire tie a knot around it as shown in Fig. 7. All you have to do is to remember the order in which you remove the wires—a simpler job than writing out a separate tag for each one. If you are disconnecting wires at widely separated points, use a different piece of string for each group.

**A**N OLD inner tube rolled up and wired to the center of the axle as shown in Fig. 8 can be used to prevent the frame from coming down solidly on the axle when you drive over an exceptionally heavy bump. It will also prove useful in case you break one or more of the front spring leaves. In the latter case, the tube should be rolled as tightly as possible and securely wired in place so that the constant pounding of the frame will not force it out of position. Of course if the spring leaves have broken in such a way that the pieces do not even keep the axle in position sidewise, you will have to use a piece of rope lashed around the shackles and the center frame to keep it lined up properly. At any rate you should drive with caution when anything is broken.

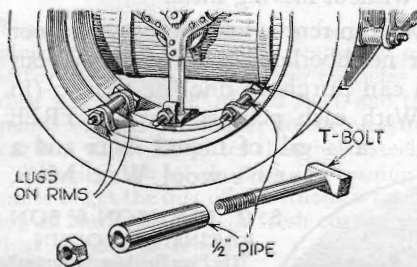


Fig. 2. T-bolts, nuts and short sections of pipe make it easy to take along an extra spare tire

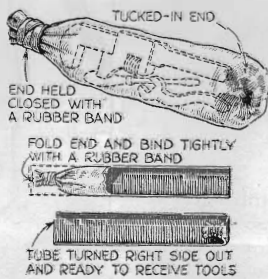


Fig. 3. A section of an old inner tube makes an excellent and serviceable holder for tools. It will not chew to pieces

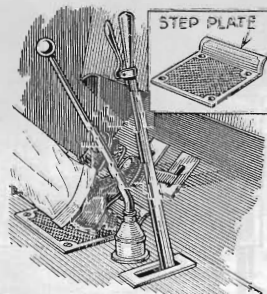


Fig. 4. Your rubber mat will last longer if protected by a cheap metal step plate

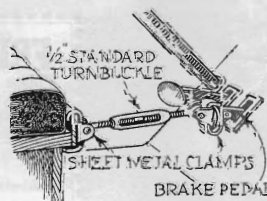


Fig. 5. This simple tool makes brake adjustment a one-man job. Heavy sheet metal feet are used

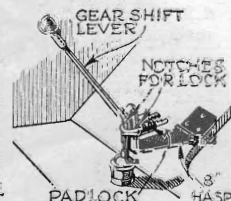


Fig. 6. A lock of this type will prevent unauthorized use of your car, yet permits pushing

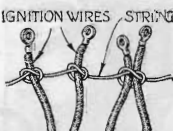


Fig. 7. Tie wires with string to help you remember the binding post to which each belongs



Fig. 8. A rolled-up inner tube will act as shock absorber if a spring should weaken