Lazy Dollars

Dollars merely *safe* are not performing their natural function. They are not working. They are not doing the owner or the world any good.

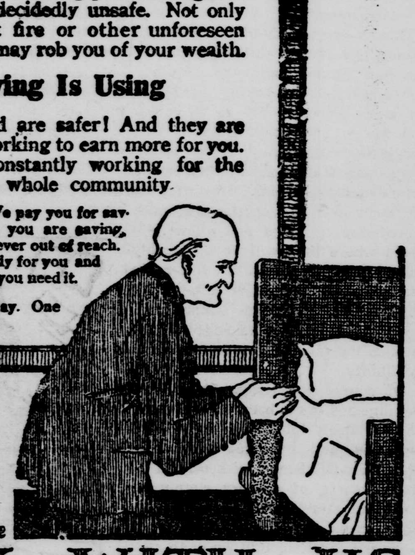
Moreover, most hiding places thought to be safe are decidedly unsafe. Not only thieves, but fire or other unforeseen happenings may rob you of your wealth.

Saving Is Using

Dollars saved are safer! And they are constantly working to earn more for you. They are constantly working for the good of the whole community.

Consider this. We pay you for saving. And while you are saving, your money is never out of reach. It is always ready for you and easy to get when you need it.

Start with us today. One dollar will do it.



To Save Your Money and Make Your Money Safe

Messages to Seekers of Success

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Prices of all Superior Models are as follows:

Commercial Chassis	$395
Two-Passenger Roadster	490
Five-Passenger Touring	495
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Five-Passenger Sedan	795
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is established when you make The Caroline County Bank your depositary. You are assured of safety for your funds and facilities that are right up to the minute in newness.

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The Caroline County Bank

GREENSBORO, MD.

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YOUR BANK CAN HELP YOU

SCHOOL DAYS



ESSENTIAL TOOL KIT FOR ANY CAR

There Are Many Little Accessories That Are Both Important and Necessary.

(By ERWIN GREER, President Greer College of Automotive Engineering, Chicago.)

When it comes to tools one may better have too many than too few. Tools are easily misplaced or lost and it is of vital importance to see to it that the tool kit is well supplied before starting on the tour.

It is surprising how few motorists check over the tool kit before starting on their trip.

During recent rambles over the country I encountered many disciples of the "Will-You-Lend-Me" club. On one occasion I met a fellow from a nearby state who was starting on a tour of the west. His car had stopped for some reason unknown to him and he asked assistance.

He Had No Tools.

I soon traced the trouble to the gas line and asked him for a wrench with which to remove the coupling. He said he had no wrenches, but he thought he had a pair of pliers some place in the car. These he brought forth after diligently searching under both front and back seats. They were of the side-cutting variety, with the jaws both broken. I soon remedied the trouble with equipment from my own tool box and advised my less fortunate friend to drop into an automobile accessory store and provide himself with a set of tools.

Many Little Tools Needed.

Aside from these special tools there are many little accessories to the tool box that are both important and necessary. A tow rope, extra light bulbs, tire repair outfit, jack and pump, ignition wrenches, socket wrench set, iron wire, tape—many are the additions that prove a life-saver when the car gives trouble. Boxes of assorted pins, bolts and nuts and washers, should be included when the list is made.

SHARP CORNERS RUIN TIRES

Experts Claim It Takes Off Tread as in Skidding—It Weakens Side Wall Fabric.

Taking a sharp corner without slackening speed means poor service from tires. Although everyone knows that it is inviting accident, there are still many who will take a sharp curve without taking their foot off the accelerator. The practice is responsible for as many collisions as any other one thing.

But even where nothing happens to car or driver, there is something happening to the tire. The tendency of the car to sway to the side as it takes a corner puts a severe strain on the casing. Tire men claim to some extent it takes off the tread as in skidding. More serious is its effect on the fabric. It weakens the side wall fabric, and brings nearer the day when the tire must be discarded.

In proportion to the population there are ten times as many telephones in the United States as there are in Europe.

They say there are drivers who will listen to something about their pocket when they are deaf to advice on living a longer life. This class should think about their tires when they are approaching the sharp corner and the dangerous curve.

MOTORIST'S EMERGENCY KIT

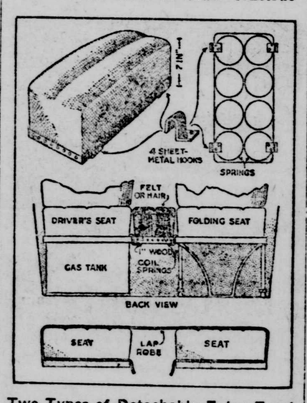
Need Contain but Few Items for Tire Troubles, but These Are of Great Importance.

A motorist's emergency kit need contain but a few items for tire troubles, but these are vital and none should be omitted. These necessities are tire tape for tire or ignition trouble, a cold-patch kit for punctures, a blowout patch, a can of soapstone and a tire gauge.

ADDITIONAL SEAT IS HANDY IN SEDAN CAR

Will Be Found Useful in Certain Kinds of Machines.

In a sedan, where it is often desired to carry a sixth passenger, the addition of a detachable, upholstered seat to fill the gap between the front seats is both convenient and practical. Such a seat may be six inches wide by 14 inches long. The upholstering is about seven inches deep. The base of the seat is of wood, about half an inch thick. On this is placed either five or six coil springs, such as are used in chair construction. A felt or hair pad is fastened over the top. The detachable seat is then covered with the same material used for the interior coverings. The bottom of the seat is fitted with four metal hooks to catch over the edges of the adjacent seats.



Two Types of Detachable Extra Front Seats Are Illustrated, Which Will Be Found Useful.

In an emergency, the sixth passenger can also be accommodated by means of a robe which is stretched across the adjoining seats and carried under the extreme edges. With the two end passengers seated, he will find the hammock-like robe quite comfortable for riding.—Popular Mechanics Magazine.

The City of Chicago has almost twice as many telephones as the entire continent of South America.

Pressure of Wind.

The pressure of wind as one feels it fanning the face or in the struggle against the gale, increases in a ratio very much more rapidly than the increase in miles an hour. Mathematically, it is reckoned in the ratio of the square of velocity. For example, the pressure exerted by a 10-mile breeze as compared with a 50-mile gale, is not as 10 to 50, but as 100 to 2,500, which are the squares of the velocities. Thus, in breasting a gale a person receives 25 times as great an impact as that of a ten-mile breeze, which is sufficient to snap out a flag flying from a pole. The pressure of the ten-mile breeze at ordinary air density, is only 0.36 pounds to the square foot, while that of the strong gale is nearly ten pounds. The average adult, garbed for out-of-doors when a gale is blowing, presents a considerable area to its violence, and a great force smites him. No wonder the natural impulse is to turn the shoulder to the blast and reduce the area against which the pressure can act. Wind pressure also varies with the nature of the air itself; the icy gale of winter is heavier and exerts a greater force than one of equal velocity in summer.

HOW'S THIS?

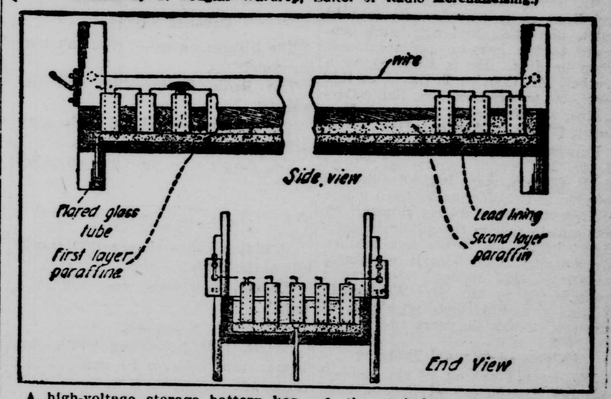
HALL'S CATARRH MEDICINE will do what we claim for it—rid your system of Catarrh or Deafness caused by Catarrh.

HALL'S CATARRH MEDICINE consists of an Ointment which Quickly Relieves the catarrhal inflammation, and the Internal Medicine, a Tonic, which acts through the Blood on the Mucous Surfaces, thus assisting to restore normal conditions.

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RADIO

(Edited by G. Douglas Warthrop, Editor of Radio Merchandising.)



A high-voltage storage battery has been used by the radio laboratory of the bureau of standards for over four years, and has given excellent service. Many calls have been received for information regarding such batteries. The particular batteries to be described are used to furnish plate current for a generator of undamped radio-frequency current. The electron tube used is either a VT-2 or a type P pliotron, or their equivalents. The current for the first tube may range from 5 to 30 milliamperes, while for the latter tube it may be 150 milliamperes, depending on the plate voltage used. It is necessary that a constant current of small value be available.

Elements.

The individual elements composing this battery are type LT chloride accumulators. The following data are taken from a catalogue:

Type	Size of Plate	Number of Plates	Discharge in Amperes For 8 Hrs. 1-5	For 5 Hrs. ¼	For 3 Hrs. 2-5
LT....	3½"x1"	2			

Normal Charge-Rate Amperes	Dimensions of Glass Jar Length	Width	Height	Weight in Pounds Electrolyte 1-5	Complete ¾
1-5	1½"	1⅜"	4⅝"		

The batteries were made up, using twelve cells per row and four rows to the tray, giving about 100 volts when charged. The illustration shows the arrangement as employed at present, with one exception, which will be mentioned later. Wooden trays were made up of ¾-inch lumber measuring 11¼ by 19 by 4 inches deep. Legs 1¾ inches long were placed at each corner. Vertical supports 12 inches high were fastened at each corner of the tray so that the trays might be built up in stacks if desired, thus occupying a minimum of floor or table space. The trays were given two coats of black insulating varnish, allowing plenty of time for drying between coats.

Melted paraffin was poured into the tray and allowed to harden. The glass jars, the top of which had been dipped in paraffin for about an inch down the side, were then put in place and one end of the tray blocked up about two inches. More paraffin was poured in until it came within about one inch of the top at one end and about three inches from the top at the other end. After the paraffin hardened and the tilting blocks were removed a sloping surface resulted which is convenient for washing out any acid or dirt. A flared glass tube was put through the bottom of the tray at the lower end to drain off any water or acid.

Plates.

The plates for the battery come in pairs, consisting of one positive and one negative plate joined by a lead link, the plates going in adjacent cells and being supported by the lead link. The battery was made up in such a way that its terminals were at the opposite end from which the tray is drained.

Chemically pure sulphuric acid is diluted to bring the specific gravity to 1.210. Directions for mixing the electrolyte may be found in any handbook on storage batteries. The electrolyte in the jars should come about one-fourth inch above the top of the plates.

Paraffin covers were made for the cells. The majority of covers in use consist of one long cover for each row of cells. The paraffin was poured into a wooden mold or trough about 1½ by 18¼ inches, forming a piece about one-quarter-inch thick. While the cover was still warm, it was removed from the mold and placed on top of the row of cells, where it was pressed down and conformed to the tops of the jars and lead links. In the center above each jar a considerable depression was made and a small hole made for gases to escape. This method gives a convex surface to the under side of the cover, so that the spray forming when the cell is charging collects on the cover and forms droplets which are returned to the electrolyte. As would be expected, the covers have reduced the evaporation greatly in addition to keeping dust out of the cells. When the batteries are on charge no spray or fumes are noticeable in the room.

Terminals.

Each terminal of each battery comes out to the blade of a single-pole double throw switch mounted on the vertical supports of the tray. The lower terminals of all positive terminal switches are connected together, the same being true of the negative terminal switches. By throwing all of the switches downward, the batteries are placed in parallel either for obtaining 100 volts or for charging from the 110-volt direct current mains. The batteries are connected directly to the 110-volt mains through small fuses when charging. The upper terminals of the switches are connected in series, positive to negative, and have suitable binding posts attached to each pair of switch terminals for the wires from the radio-frequency generator. By a suitable throwing of switches any voltage from 100 to 600 may be obtained with these batteries. The voltage obtained of course depends on the number of trays. When operating the larger electron tube, three of the batteries may be in use while the other three are being charged.

Quite a number of these batteries have been used by the radio laboratory of the bureau of standards and have been entirely satisfactory for supplying a small constant current as is necessary for electron tube generators. To obtain best results batteries must be given some attention to see that the jars are kept filled with distilled water to a height somewhat above the top of the plates and are charged from time to time. How often the batteries are charged depends on how much they are used. It is preferable to charge them oftener and keep them well charged than to use them to the limit, charging them only at wide intervals or when nearly run down. The trays should be washed out once in two or three weeks with clean water to remove any collected acid or dirt.

Maintenance.

As has been previously stated, storage batteries of this general type (using same type of element) have been in use in the radio laboratory for over four years. While no definite data have been collected to show the useful life of such high-voltage batteries, some very conservative estimates may be given. The life of such batteries is greatly influenced by the care afforded them. Good care includes keeping the jars and wax free of acid spray and dust; keeping jars properly filled; keeping within the proper ampere-hour charge and discharge rate; and if batteries are not normally used at the specified discharge rate, they should be exercised about every two weeks by discharging, through a resistance, at the proper discharge rate and then recharged. Batteries of this type which have been given proper attention have been in use for over four years and are yet quite serviceable. Others have gone to ruin in six months for want of care.

(© Radio News.)

THE NEW VAMPIRE

A WAG, A MOAN AND A BLANK DESPAIR

(With Apologies to Rudyard Kipling.)

A fool there was and he got the desire,
Even as you and I.
He bought some tubing and lots of wire,
Even as you and I.
He wrapped it round and took off taps,
And said the thing may work, perhaps?
Even as you and I.

A panel he got and then switch points,
Even as you and I.
A condenser next and wire for the joints,
Even as you and I.
He set the parts up as per directions,
And cussed at burnt fingers when soldering connections,
Even as you and I.

He purchased a tube—it cost him five bucks,
Even as you and I.
'Twas worth 30 cents—if you take 'em by looks,
Even as you and I.
An "A" battery, too, and, of course, also a "B,"
What the difference was—well, he couldn't see,
Even as you and I.

He read up on microfarads, talked of megohms,
Even as you and I.
But, 'twas finally finished and he put on the 'phones,
Even as you and I.
He listened for days and nary a sound,
Till some poor fish told him he needed a ground!
Even as you and I.

(© Radio News.)

Mica Condensers Best.

During the selection of parts for the radio set a grid condenser that is constructed of mica should be chosen. Paper condensers are not recommended, because the capacity varies with the temperature and humidity. In many cases the paper condensers have been known to absorb moisture, causing leakage across same.

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