



W. R. BROWN

THE AUTOMOBILE ELECTRICIAN.

AUTHORIZED DELCO AND REMY SERVICE FOR DOUGLAS COUNTY. SERVICE ON ALL TYPES OF GENERATORS, STARTERS AND MAGNETOS.

BATTERIES

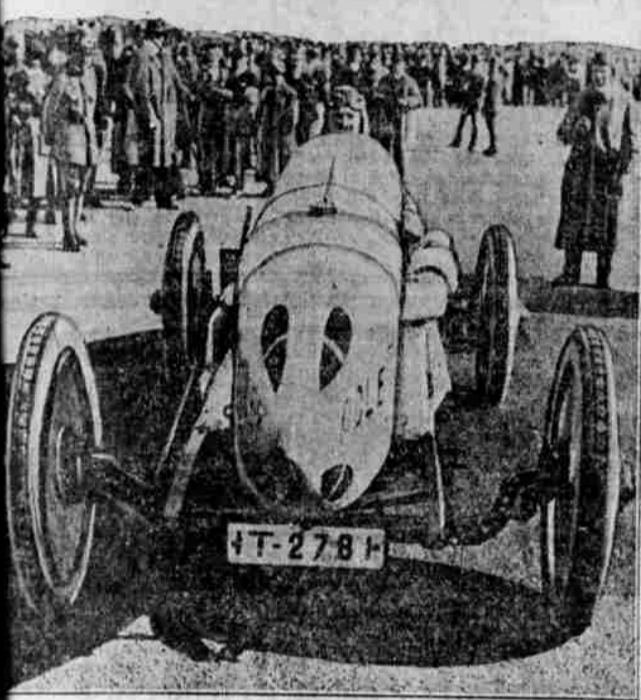
THE MARK OF THE STILL BETTER WILLARD AND THE SIGN OF BETTER SERVICE. ALL MAKES OF STORAGE BATTERIES RECHARGED AND REPAIRED.

AUTO ELECTRIC STATION

OAK AND PINE.

PHONE 136.

LATEST TYPE GERMAN RACING CAR



The photograph shows the eighteen-cylinder new German racing car "Ad" with Willie Kellner, the demon driver, at the wheel.

MOST EFFICIENT AUTO OPERATION

Saving of Gasoline Given Place of Greatest Consideration by Owner.

FUEL CONSUMED WHILE IDLE

Rapid Acceleration is an Expensive Luxury, Using More Gas Than Gradual Speed Increases—Other Little Economies.

Honest efforts to operate an automobile economically often fail because the driver does not, in many cases, understand the fundamental practices most important to good results. Although fuel is by no means the largest item of operating expense, gasoline savings are customarily given the place of greatest consideration and consequently deserve first mention.

The most flagrant source of gasoline waste lies in idling the motor. Many drivers believe gasoline consumption to be slight while idling and that by avoiding use of the starter, they are saving the storage battery. To be correct, the battery is much better off when used normally, not being allowed to remain fully charged and practically inactive for long periods of time.

On the other hand, fuel consumption, while idling is surprisingly great because the vacuum in the manifold is so low that a very rich mixture is required in order that the heavy fuel now in use may reach the cylinders.

Harm Done by Idling.

When idling, excessive amounts of gasoline collect in the manifold and valve ports—excessive carbon is formed—the motor overheats—and the raw gasoline dilutes the crankcase oil. Lubrication at this slow speed is inefficient because the splash from the connecting rods is minimized.

Rapid acceleration, although desirable in traffic, is an expensive luxury, using much more gasoline than gradual speed increases. Unnecessary and violent application of the speeds and brakes will wear the bands prematurely, strain every part of the car and speed tires toward the junk pile. On long stretches of open road the driver will obtain better results by using the hand throttle instead of the foot accelerator, if one is installed in the car. This is true because the uneven gas feed caused by the foot fluttering up and down on the foot throttle is eliminated, the hand throttle providing a steady flow of fuel to the engine.

Many drivers labor under the impression that it is economical to leave the spark advanced to the limit and run in high speed as long as the motor will hang on, but the spark should always be retarded as soon as the motor begins to labor. A continually retarded spark is equally harmful. The spark setting should always be adapted to the conditions under which the engine is operating.

Some Simple Matters.

Even simple matters, such as steering are important; the proper method of turning corners and minimizing switching back and forth when parking are important tire, transmission, rear axle and gasoline savers. The car will run most efficiently within a certain easily determined range of speeds. All of these things enter into this question of economical driving, exerting appreciable influences upon operating expenses. They are the fundamentals of skillful driving which the car owner will do well to study, because they result in smoother operation, sensible motor maintenance and true operating economy.

AVOID TROUBLE IN STEERING

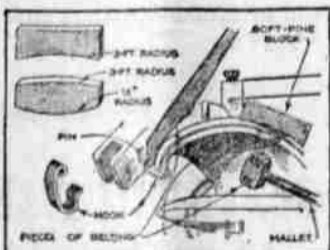
Knuckle Pivot Pins Should Be Greased at All Times to Prevent Becoming Rusty.

Lack of lubrication is the chief cause of hard steering. The steering knuckle pivot pins should be greased at all times. They have large surfaces, which cause a heavy draft, if dry and rusty.

REMOVING MUD GUARD DENTS

Illustration Shows Simple Tools of Special Service in Any Garage or Repair Shop.

Three simple tools that are of special service in the garage or repair shop, for restoring buckled and dented bodies and fenders, are shown in the drawing. The wooden mallet is faced with a section of heavy leather binding, and is used with the wooden supporting blocks, which are of soft pine. One block has a concave face



Tools Made From Soft Wood for Removing Dents From Fenders and Bodies and for Straightening Fenders.

while another is provided with convex faces of different radii. Various other sizes and shapes may be easily made to meet special cases.

A lever, about six feet long, is made with its lower face concave and is faced with leather or rubber. The end of this lever is provided with a hook that engages underneath a buckled fender in the manner shown, so that the fender will be restored to nearly

The Roseburg Garage

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FOR SERVICE CAR, PHONE 408.

its original shape.—Popular Mechanics Magazine.

AUTOMOBILE NEWS

Three thousand automobiles are registered in Cairo, Egypt.

Chicago led all other cities last year

with 5,527 automobiles stolen.

New York state has an automobile to every 14 of its residents and a licensed chauffeur to every three cars.

A patent has been granted for an automobile trailer shaped like a boat. It can be used to navigate waters.

Between 45 and 50 per cent of all automobiles sold in this country are

marketed on some deferred payment system.

The largest price decline of 1920, as estimated by the New York Federal Reserve bank, was in rubber, which fell 53.5 per cent.

In England the official automobile license tag must be kept in a small circular holder attached to the car and displayed near the windshield.

Notice the Successful Men You Meet



—all with Starched Collars

A recent visitor from abroad remarked on the prevalence of starched collars among American business men.

Said he, "You might almost call them 'symbols of the successful.'"

Next time you visit the club, the Chamber of Commerce—any place where leaders of men meet—see if this isn't so. Among the successful, all will be found to be wearing clean collars, smartly starched.

Starched collars and laundered shirts, they will tell you, are an index to character; evidence of self-respect and prop-

er pride of person. So real is the importance attached to good appearance that many big businesses have made it a rule that all members of their organizations shall wear starched collars only.

It pays to look the part—and men who know this will find in our laundry a service that makes this easy. We will put new style and comfort into your shirts and collars; give you linen that will be a business asset; conserve your collars while we cleanse them.

Get us on the phone today, and our representative will call for your next washing.

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