

# Motorcycles and Bicycles

BY A. N. B.

## ELECTRIC EQUIPPED MACHINE

Now that the modern motorcycles can be had with a motor generator, set for lighting the head, tail and side lights, as well as furnishing juice for the horn, we have had many enquiries as to the care and attention of the same.

A good set requires very little attention, if it gets its little attention at regular intervals. A little oil now and then on the bearing, not too much nor too often.

One must not forget the battery needs water—clear or distilled water—not ordinary water out of the tap.

The battery solution should be kept about 1/4-inch above the top of the plates. If the solution is low the battery will not charge to capacity.

If you neglect to keep the solution at the proper level it might mean a ruined battery.

All modern mag. dynamos have an automatic cut-out, so it is impossible to overcharge your battery. Also a controller, whose purpose it is to control the current charging the battery, keeping it the same at all speeds of the motor.

The Reading-Standard lighting system consists of a Bosch mag. dynamo, which combines one unit, an independent magnet for ignition and a direct current lighting dynamo. In no way does one affect the other.

With this system no current is drawn from the battery or generator for starting, the mag. being used at all times. The battery used is the well-known "Exide" battery. It is of the non-spillable type, the only attention to be given same is to add distilled water every ten days, to keep to proper level. On these machines the horn is concealed in the headlight. This outfit is only supplied on twins.

On the Excelsior the Midco system is used. In this outfit the generator, transformer and circuit-breaker are embodied in a generating outfit which takes the place of an ordinary magnet. It is entirely automatic and requires no attention, except an occasional oiling.

The Henderson boasts of a separate system—a magnet for ignition—and a separate generator for the lighting. The generator is a built-in part of the motor. A Ward-Leonard controller regulates the current output and keeps the light uniform at all speeds. An Exide storage battery supplies current for light when used in traveling at low speeds. The generator, of course, charges the battery with an automatic cut-out to prevent its discharging back.

This is a product of the General Electric, who have service stations all over the country.

The Bony generator is used on the Harley-Davidson, as well as an Exide battery, which has already been mentioned. The only thing the manufacturer restricts is larger bulbs than are supplied with the machine, except a small 3 c. p. light, which may be attached to the sidecar.

The generator is a built-in feature, being a magnet dynamo attachment. It furnishes a high tension alternating current for ignition, and a 6-volt direct current for lighting purposes, as well as keeping the battery charged.

The Indian is equipped with the well-known Spittford magnet dynamo, which charges the Edison battery. The lights and horn are drawn from the battery at all times, which keeps the current at the same point at all times. This system is designed to operate with the battery, but in emergency running (should the battery be disabled) the motor should not be run at a greater speed than 20 M.P.H. for more than 100 miles. The Spittford also have a branch in Toronto.

**HOT TAR ROADS.**  
We had occasion to go along St. Clair avenue on Monday afternoon, and while passing over the west side of the bridge, near Bathurst street,

counted no less than 3 cars and 2 motorcycles making tire repairs. At this spot the roadway is tarred and there is no gravel or earth on the top of the same. When the writer went over it it was like a lake. Hot tar and hard tires don't agree.

## C. W. A.'S BIG RACEMEET.

Formal announcement is made that the Canadian Wheelmen's Association will conduct a big sport demonstration in Toronto for patriotic purposes on Saturday, August 11. The outstanding feature of the meet, which will be staged at Exhibition track, will be the appearance of four of the world's greatest professional racing men, Arthur Spencer, the Toronto boy who has not been seen in action for two years, and who now holds the title of 1917 National Champion; Frank Kramer of East Orange, N.J., who held the National title for sixteen years; Rex McNamara, the Australian champion, and Bill Spencer, brother of the title-holder. They will be the Canadian professional champions.

The crack amateur riders from various cities of Canada will compete for Ontario Provincial Championships, and there will be several short motorcycle races. One of the big novelties will be a half-mile high wheel race in which a number of old-timers will participate. The entry of Frank Radway of London, who won the 100-mile championship of Canada at Rosedale track in 1893 has already been accepted for this race. Fred St. Onge of Montreal, the former professional champion, has also entered.

The date of the racemeet has been designated as "Cyclists' Day for Suffering Soldiers," as the proceeds of the meet are to be turned over to the military hospitals. In this connection it is interesting to note that Park Commissioner Chambers has consented to act as trustee of the gate receipts for the seven events on the program. A number of bicycles are among these donations. In addition Alderman Donald McGregor has donated two valuable prizes for ticket-selling contest. The manager of the meet is W. M. Gladish, 1268 Gerrard street east, from whom entry blanks and additional information may be secured. There will be no entry fee for competitors.

## GETTING DECALCOMANIES FOR OLD MACHINES.

Motorcycles and Bicycles Dept., Gentlemen:  
Under this heading in last week's Sunday World, we noted that you are under the impression that transfers were chiefly obtained from Austria, Germany and Belgium before the outbreak of the war. For your information we would say that, whereas formerly some were imported from Germany, the great bulk of the transfers used in Canada were made by us here in Toronto, or by United States firms. So far as we are aware, transfers have never been made in Belgium, nor have we ever seen a transfer made in Austria. Your readers might receive the impression that Decalcoman-ies were supplied chiefly or wholly from the countries with which we are at war, whereas the fact is that 90 per cent. of all the transfers used in Canada have been made either in this country or imported from England, Ireland and the United States.

The above letter, which we are glad to publish was received from a Toronto firm, and we will be pleased to furnish any information on inquiry. Editor.

## MOTORCYCLIST HURT THRU GLARING HEADLIGHT.

Mr. White, Jr., a well known Triumpher rider of Oakville, was returning home on the new highway

## Los Angeles County Has 76,771 Cars

Some idea of the volume of the automobile business done by Los Angeles may be obtained from the report published in Motor West showing that during the first five months of 1917 there were 6,610 cars purchased in that city. The amount spent for new cars was above \$4,500,000, basing an average price at \$730. The report shows that on June 1 Los Angeles had 48,721 motor cars and 38,070 owners. In Los Angeles County outside the city there are 26,946 car owners, or a grand total for the county of 75,771 automobiles. Los Angeles County now has more cars than were owned in all of California five years ago.

after dark the other night and when about a mile and a quarter east of Oakville met a car equipped with glaring headlights which were full on the side of the road. The car was running on a horse and buggy.

Mr. White's father who was in the sidecar as well as himself, was knocked unconscious. We glad to say they are both doing fine. But it is high time the headlight bylaw was enforced.

## QUESTIONS AND ANSWERS.

**Lighting Dynamo.**  
I am looking for a compact dynamo for electric lighting, the machine to fit above the magnet. I would like to have this dynamo driven by chain any gear from the magnet drive.

The Spittford Electrical Company, Newark, N.J., maker of the Dixie magnet, should be communicated with in this matter. B. C. Generator Company, of Los Angeles, Cal., makes the A. B. C. Generator, at present designed for belt drive, but no doubt this dynamo can be had for chain drive.

## Needs an Overhaul.

On my 1915 twin motor I find that it no longer has the power it had last season. I have had the carbon cleaned out and the valves ground, but she has no longer the snap and vigor she had in 1916. Carburetor adjustments do not help matters.

If your motor has not been overhauled since you had it, we strongly advise you to have this done or do it yourself. In all probability, the cams are worn and the valve gear will need adjustment. Note if there is any leak and shiny places on the carburetor cam and that the roller on the needle valve arm works freely. If there is a flat place, get a new cam from the maker of your machine.

**An Impractical Idea.**  
I have a motor which is hard to start and would like to know if I can fit a storage battery to make starting easier. I propose to wire up the battery to the magnet contact breaker for the purpose, and ask you to give a diagram for this wiring.

You cannot use the arrangement you suggest as it will not work properly, because the magnet contact breaker is too heavy for the magnet. Much can usually be done by readjusting the carburetor, and it will be well to see if the magnet is dry, as this is often the cause of hard starting. Let your local dealer look over the magnet.

**Cables Touch Frame.**  
My 1916 model twin motor occasionally misses while riding rough stuff, but runs all right otherwise. I have examined the timing gear, valves and inlet passages and find things satisfactory. Please locate the trouble for me.

With your type of machine the spark plug cables swing against the tank or brace tube when riding over rough stretches, and we presume that this is your trouble. Run the motor in a dark place and wiggle the cables, noting if a spark jumps to the frame. If so, tape the plug terminals and terminal wire using rubber bottle, nipples and tape, or shorten the cables.

Triumph riders will be pleased to know they can now be supplied with parts and repairs by Herb Greenwood at 58 Greenwood avenue.

## CHANDLER IS VERY ECONOMICAL CAR

Dealer Conducts Tests That Average Over 22 Miles Per Gallon.

Gasoline tests for mileage made by the Borderland Motor Company, Chandler dealers at Phoenix, Ariz., with a Chandler during the past week have sustained some remarkable figures. On two occasions better than 22 1/2 miles to the gallon have been secured on trips which have extended beyond the 100-mile mark. On another trip of about half this mileage the Chandler performed remarkably with better than 22 miles to the gallon.

The tests for mileage were conducted by the sales force of the Borderland Company and were made for the express purpose of ascertaining just what figures members of the sales force could quote as official mileage tests in that district for their cars. Every character of road in the valley was used in the tests, including the mountain trail road from Phoenix to Globe.

The valley test for the car's gasoline mileage was conducted by Glen A. Martin of the Borderland Company. In a Chandler four-passenger roadster Martin drove 112.4 miles on an even five gallons of gasoline, or an average for the entire distance of 22 1/2 miles per gallon.

Before Martin started the test run he drained the gasoline from his tank. He then put an even five gallons of liquid into the tank. In a large sealed can in the car he carried enough gasoline to bring him back to the city after the five gallons in the car had been exhausted.

On the entire trip he drove his car as near the 20 mile per hour mark as possible and never once did he exceed this speed.

In the hill test between Phoenix and Globe, Leo Weaver, also a salesman for the Borderland Motor Company, maintained the 22 1/2 mile per gallon mark when he returned last week from the mining camp district. In the entire 118 miles from Phoenix to Globe he consumed five gallons of gasoline, an average of 23 1/2 miles per gallon.

The third test was conducted inside the city limits and most of the run was over the paved streets and in traffic where it was necessary to slow down, often almost to stop. This trip not only demonstrated the gasoline mileage attained by the car but showed also the great flexibility of the Chandler under pressure. In traffic the car could be throttled down to a speed slower than a man can walk, and in a few feet could be pushed up a speed in excess of the city's legal limit.

## HUDSONS WINNING SPEEDWAY EVENTS

Take Many Firsts—A Very Remarkable Racing Team.

The victory of Ira Vail's Hudson Super-Six special in the Minneapolis speedway championship race is the latest feat in the remarkable campaign of the Hudson cars this year. Ralph Mulford and Billy Taylor, driving two other Super-Six specials, took first and sixth places. In the 50-mile consolation race the three Hudsons finished second, third and fourth. Vail's Super-Six established a new track record on the main track, beating the former record by more than 7 miles an hour.

Not a great deal in the way of winning has been accomplished by the Hudsons on the speedway. The Hudson company's main purpose in placing a team on the speedway was to demonstrate the superiority of the Super-Six. While the Super-Six racing specials are not slow cars, neither are they the fastest cars on the speedway by any means. In every race in which they have been entered this year, more than 60 per cent. of the cars pitted against them have been faster.

Yet in six big races they have entered, they have won three. In the three they failed to win they took second—Cincinnati, Chicago and Indianapolis. They broke track records for 150 miles at Seattle and Omaha. Ralph Mulford's Super-Six special established new American speedway records for 150 and 200 miles at Chicago.

In some of the races—notably at Seattle—Hudsons practically monopolized the leading positions, taking first, third and fourth.

In the six main races the Hudsons have taken first, second, third, fourth, fifth, sixth, seventh and ninth. Out of all the starts only one Hudson has failed to finish, due to a guard rail collision at Chicago. All other Hudsons have finished in the money. These records do not take into account numerous Hudson victories by Super-Six specials driven independently of the factory. Glenn Breed of Salina, Kansas, has entered five races and won all of them with his Super-Six special. Jerry Rotherth won the free-for-all at Cincinnati. Hickey and Conway, driving Hudsons won second and third in one free-for-all at Uniontown. In another on the same speedway Hickey took second place.

In the Hudson Super-Six specials have decisively wrested the American speedway championship from foreign made cars, which have long dominated the contests.

The endurance of the Hudsons has been the principal factor in its speedway success. They were able to keep going when faster cars yielded and broke down under the terrific abuse of high-speed racing.

Yet the Hudsons were not planned for racing cars. The cars which have made these records were taken from the Hudson stock production and converted when faster cars yielded and broke down under the terrific abuse of high-speed racing.

The changes which were made, could be made in any Hudson Super-Six at a small cost, according to the Hudson engineers, who say the racers could be turned out in quantity at less than \$50 in excess of the Super-Six stock price.



Exclusive Equipment on All Overland Cars

## Spark Plug Dependability

The satisfactory performance of any motor depends, to a very large extent, on the efficiency and dependability of its spark plugs.

The best evidence of Champion Dependability is contained in the fact that all Overland and Studebaker cars, as well as all Fords, Maxwells and a hundred other makes are equipped at the factory with

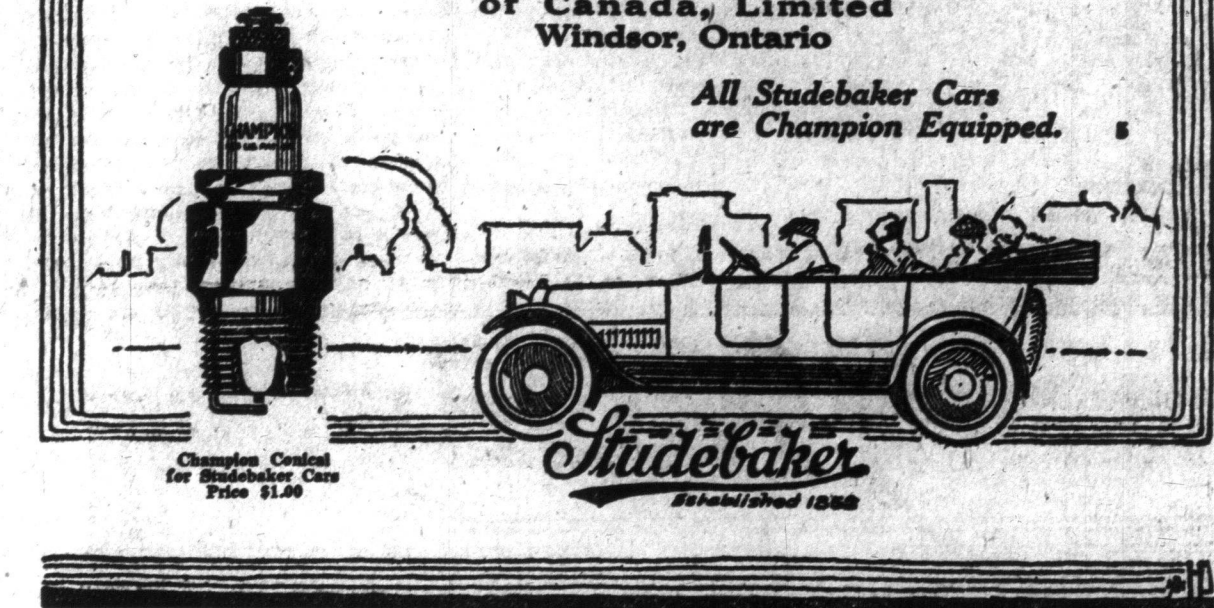


The absolute Dependability of Champions is the result of years of specializing in the making of spark plugs exclusively. Each requirement of every kind of gas engine has been carefully studied and a type of plug has been developed and exhaustively tested under emergency conditions to insure a 100 per cent efficient service in each type of motor.

Tell any supply dealer the name of your motor and he will sell you a Champion that is guaranteed; viz: "Complete satisfaction to the user—Free repair—Replacement or Money Back". Be sure the name "Champion" is on the porcelain.

Champion Spark Plug Co. of Canada, Limited Windsor, Ontario

All Studebaker Cars are Champion Equipped.



## FRANKLIN MAKES WORLD RECORD

Does 82.8 Miles on One U. S. Gallon of Gasoline—Average Was 42M.P.G.

One hundred and seventy-nine telegrams, directed to the Franklin factory at Syracuse, all stating how far a Franklin car traveled on a single gallon of gasoline on Friday, July 13, make up the aggregate a complete story of present-day motor car thrift, that is national in its significance.

These telegrams gave the report of the national Efficiency demonstration, conducted by Franklin dealers in practically every section of the country, and recorded a grand average of 40.3 miles on a single gallon of gasoline. Most notable among the runs was the one at New Haven, Ct., where Cowles Tolman established a new world's record for a stock car by running 82.8 miles on one gallon of gasoline. Detroit registered second, with a record of 71.6 miles; Akron, third, with 69.4 miles; and Meriden, Ct., fourth, with 69.2 miles.

Eighty-six of the 179 entrants had individual averages of better than 40 miles. There were 19 Franklin cars which did between 50 and 60 miles on a gallon, and even, such an unusual mileage as 60 was exceeded by six dealers.

The manner in which the demonstration was conducted, conformed essentially to the accepted rules for economy runs. By setting aside a certain day on which to make the test, it was possible to get weather conditions that struck an average for the entire country. As it happened, during the day many points in the middle west and along the Atlantic coast had rain and wet roads to contend with, while on the Rocky Mountains, in the greater part of the Mississippi Valley, and in some of the southern Atlantic states, high winds were prevalent most of the time. In order to offset any advantage of wind or grade, it was required that each car double back over the same course traveled in the outward trip, and in so doing it was planned to have the run terminate as nearly as possible at the same point as that from which the start was made.

All preparations, such as measuring the one gallon supply of coast cars, gasoline, inspection of the separate gasoline container and connections,

## ELGIN CO. BREAKS OUTPUT RECORDS

Popular Six to Be Handled Locally by Auto Sales of Canada, Elgin Distributors.

A little more than a year ago the Elgin Motor Car Corporation, of Chicago, commenced operations in a small building containing 8,000 square feet of floor space. The factories of the Elgin Co. now cover more than 108,800 square feet of floor space. According to a statement issued by Mr. C. S. Rieman, founder, vice-president and general manager of the Elgin Co., Elgin Six sales have increased more than 2,000 per cent. during the past six months over the entire sales of 1916; thus breaking all known records in the history of motordom for rapid growth.

The Elgin Co. now has on its books more than 1,800 stockholders, among whom are 161 bankers. Since January of this year plants Nos. 1, 2, and 3 of the Elgin Co. have been taxed to their very limit, working nights and Sundays in order to supply the great demand for Elgin sixes throughout the continent.

In addition to adding several thousand square feet to the factory's floor space, the great influx of orders has made necessary the erection of two huge canvas tabernacles which now house the testing department. These large circus "big tops" insure the careful examination of each car before shipment, so that in no way whatsoever will quality be sacrificed to speed in production.

The Auto Sales Co. of Canada have been appointed Elgin distributors and are soon to open showrooms in Toronto.

Approximately 75,000 licensed automobile drivers' badges will be required in Pennsylvania for 1918, according to an announcement of the state highway department. They will be smaller than those of 1917, oval in shape with a key-stone and black enamel lettering.

**SCRAP TIRES**  
WE WILL BUY YOUR WORN OUT TIRES at 6 1/2 cts. per lb. Tubes at 12 1/2 cts. per lb.  
L. ROTHBERG & SONS  
40-42 ELM ST.—Phone M. 5777

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NO greater dollar-for-dollar tire value on the market today. We recommend these famous tires—they meet every test for quality and service. Buy at least a pair and put them to a comparative test. Learn what Fisk Value means.

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Write to us at once for Fisk prices. Meet the demand for these famous tires in your vicinity.

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