

The AUTOMOBILE

PREPARING THE CAR FOR LONG TOURS.

"With the touring season well on its way, motorists should not embark on trips of any length without first making sure that the car is mechanically right," is the advice of an expert. "This does not mean that your car should have a general overhauling before starting, but if there have been any little noticeable (not imaginary) irregularities existing, consult a good mechanic. Don't judge the condition of your car by the mileage it has covered. The number of miles registered on the speedometer of some cars may be near the 500 century mark, yet the cars may be in a far better mechanical condition than some showing 50 or 70 per cent. less.

"Careful and systematic lubrication is always necessary, but be sure your car is well lubricated before starting on your trip. Be guided in the lubrication of your car by the lubrication chart in your instruction book. Don't overlook a single point of lubrication shown on the chart. It appears to be common practice to lubricate what seems to be the most important places, ignoring the balance. You might get by with this during town or short distance driving, but by no means take chances when touring. You cannot foretell what might happen if a brake shaft should stick, or a steering connecting rod run dry.

"Tires are usually the highest of an extended trip. Your car should be equipped with the best tires in your possession, the poorer tires to be used as spares. Keep your tires inflated, according to the recommendations of the manufacturers. Don't run on partly inflated tires. This breaks the casing and the increased friction generates more heat. For proof of this, place your hand on a properly inflated tire and on one under inflated after a drive of fifteen miles or more and note the difference."

YOU NEED THESE THINGS.

1. A spare inner tube with a box of valve insides.
2. Two extra spark plugs—one spare per cylinder.
3. Two blowout patches.
4. An air pressure gauge.
5. A few extra bulbs.
6. Automatic windshield cleaner.
7. A pound of cup grease.
8. A can of hand soap and a handy can of Three-in-One lubricating oil.
9. A package of wiping cloths.
10. Extra fan belt.

11. Oil and grease gun.
12. An extension luggage carrier.
13. A roll of tire tape and a couple of good, substantial straps.
14. A Guide Book.

And if you are fortunate enough to have a small baby, the new style of baby hammocks take up very little room and are a great comfort when touring.

PRACTICAL PARAGRAPHS.

Too Much Clearance.—When the intake valve tappet has too much clearance it closes too early for the engine to absorb a full charge of fuel. The result is that the engine on full throttle forks as if the throttle were only part way open. On the other hand, when the clearance is insufficient, hot gases leak through, burn out and forcing frequent repriming. It may even be necessary to resurface.

Wheel Alignment.—Whenever the car has suffered a bump of any kind, a crash against the curb, or anything of the sort, the wheels should immediately be tested for alignment as a force them out of correct alignment, which will lead to excessive tire wear.

Novel Tool Rack.—A very ingenious tool rack for flat tools may be made by boring a number of holes in a board, each hole being just large enough to take the head of a clothespin. Clothespins are then driven into the holes and the cleft ends are used to receive the tools. The pins may be made secure by a small wire nail driven through their heads into the board.

Oil Filter.—As a means of separating dirt, metal, dust, etc., from used oil, the filter, which may be made in the following manner, will be found very efficient: Fasten a piece of muslin or cotton cloth to a metal or wooden ring large enough to fit over the top of a can, drum or other vessel. The cloth should be left a little slack, and into the shallow bag so formed a quantity of sawdust is placed. The oil to be filtered is poured through and leaves its foreign matter behind in the sawdust.

Making Starting Easy.—Here is a good suggestion for easy starting: Should the engine refuse to function with the throttle wide open the trouble may be overcome by giving the crank a turn or two with the throttle wide open and the ignition switch off. Then crank the car with the throttle partly closed and the ignition on.

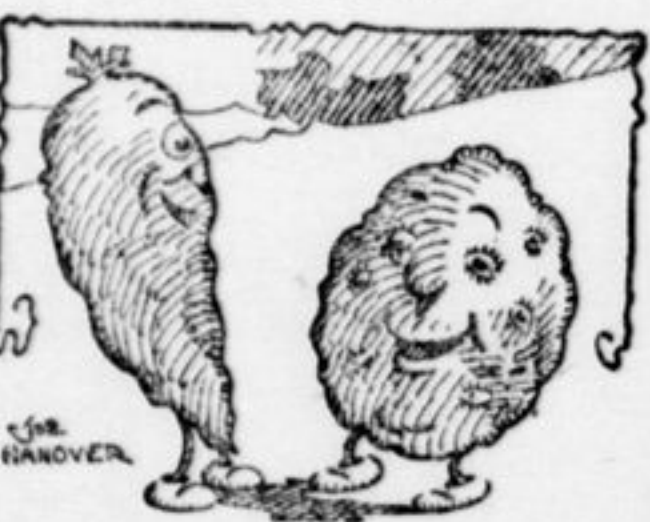
A Medicine Mine.

Most of us think of a mine as producing only such minerals as coal, copper, or lead, but in the United States there is a unique mine which produces medicine. It is situated on one of the salt-giving hills of the State of Texas. The first settlers found a hole in its side where the native Indians had dug out the mineralized soil, which they called "sour earth."

The white men, being far from any towns and medical aid, found that it was quite effective as a medicine. Some years later a company found the soil to be composed of salts of calcium, magnesium, and sodium, besides some iron, and manufactured a patent medicine from it.

After being dug from the mine the earth is allowed to stand for some days in specially ventilated sheds, where it undergoes a form of oxidation. It is then boiled so as to dissolve the salts, and is filtered to remove the solids.

The liquor is placed in bottles, labeled, and finally sent off to the markets to be sold as an excellent remedy for rheumatism, indigestion, and almost all internal disorders. It is also an effective antiseptic.



Very Strong.
Carrot—"Is he very strong?"
Potato—"Yes, indeed. Strong as an onion."



J. S. McKinnon
Past President of the Canadian Manufacturers' Association, who has been appointed director of Canadian Exhibits at the British Empire Exhibition.

Eclipse Facts.

An eclipse of the sun is one of the simplest things imaginable. It is caused by the moon coming between the earth and the sun when they are on the same plane.

There are three kinds of eclipses—total, partial, and annular. The partial eclipse is when the moon only passes before a part of the sun; a total one is when the moon covers the whole of the sun from view; and an annular one is when the moon, being further from us and appearing smaller, leaves a ring of light outside its own disc.



"NEW CANADIANS" ARRIVE IN WINNIPEG
A party of Swiss and Dutch immigrants arriving in Winnipeg en route to their new homes in the west. It is reminiscent of the old days when Europeans were pouring into Western Canada.

Why the Sea is Salt.

Why should water in the sea be so salt? It is fed by rivers, which bring down a constant supply of fresh water. But is river water perfectly fresh?

Try a little experiment. Fill one tumbler with water from which all the salts have been extracted, and another with river water. Now taste them. You will have no difficulty in distinguishing them. The flavor of salt in the river water will be quite noticeable, for all so-called "fresh" water is tinged with the salts in the earth.

As streams and rivers run through the land, they melt away the soft pieces of the soil and carry them to the sea. In the soil are salts of various kinds, the commonest being sodium chloride, the chemical name for the salt which appears on our tables at meal times.

For ages past, salts have been washing down into the sea, where they have accumulated. The heat of the sun evaporates the water of the ocean, but this only serves to make the sea more salty, for the sun does not suck up any of the salts.

Seeds as Beads.

Beads are one of the oldest witnesses to the vanity of mankind.

The oldest beads were simply stones with holes through them, which, owing to their bright color or peculiar shape, took the fancy of the finder, who threaded them on a strip of hide or fibre. Later, when we became more civilized, beads made of wood carved into fantastic shapes were in favor. Some beautiful examples of both kinds can be seen in the British Museum.

Enlightened races have a passion for stringing together various objects as beads. Human teeth, brightly-colored insects, seeds, and even whales' teeth, are worn in this way.

The word bead comes from "beads," the old English word for prayer. It has an interesting origin. In olden times, as a person repeated his prayers, they were counted by ticking off by one a string of small pierced balls which were threaded together, and in time these balls came to be called beads.

A standard dictionary of China contains 40,000 characters.

Baking and Scraping.

He raked and scraped
Until he had saved
The money for the seeds.

He raked and scraped
A plot of ground
For all the different breeds.

He planted them,
Then raked and scraped
To keep away the weeds.

His neighbor's hens
Now rake and scrape
And have most pleasant feeds.
—Maurice Morris.

Like Mother Makes.

A fond mother took her schoolboy son into a tea-shop.

"Would you like a scone or do you prefer a roll, dear?" she asked. "Without a moment's hesitation the youngster chose a roll; but when the food arrived he seemed to cast a longing eye on the scone.

Mother—"This is your roll, darling."
Son—"Do you prefer the scone, mother, or would you—"

Mother—"You said you wanted the roll, dear—don't you want it?"
Son (Choosing scone)—"Well, mother, I didn't know scones were like this. I thought they were like those you make."



"Jack said you bored him."
"I used to board him about half the time when we were engaged. He grafted half his meals on us."



THE LONG AGO

As we journey to and fro, we old graybeards fume and fret; things grow fiercer here below, worse and worse, already yet; in the hallowed Long Ago things were different, you bet. Young folks hit a sober gait, and the night lights didn't glow; children took their lectures straight, for a lecture beats a show; people went to bed at eight, in the saintly Long Ago. On a shelf upon the wall stood good volumes in a row; moral tales and sermons all, things the people ought to know; scribes had brains instead of gall in the snowy Long Ago. But a young man I have loved with a talk along this line, says, "Oh, gaffer, you have scored things I thought exceeding fine, and you've told me how you soared in the blissful Auld Lang Syne. All the world was sinless then, you have often told me so; but I've heard from other men, relics of the Long Ago, that you'd find a boozing ken every hundred feet or so. Here's a street, oh, ancient wight, stretching out for verst on verst, and there's no saloon in sight, by the Demon Rum accursed; there's no beck beer sign bedight with a legend prompting thirst." Then I lean against a fence feeling hollow, weak and gray, for the youth is talking sense—all those dens are done away; and I bid him journey hence till I think up things to say.

The Sun and His Family

By W. R. Stokes, F.R.A.S.

To the dweller on this earth the sun is the most magnificent, as well as the most important, object in the universe. It is the largest body in the solar system—larger than all the planets put together. This is necessary according to the power called the Law of Attraction or Gravitation.

Every atom of matter draws to itself every other atom, and the larger the body of atoms the greater the attracting power. In order that the sun may attract to itself every one of the planets it is necessary that it should be larger than all of them put together.

The sun occupies the centre of the solar system and is the mainspring of all the planet movements; by reason of its attraction or gravitational pull the planets are kept in their proper paths.

A Mystery of Nature.

What is gravitation? That great discovery by Sir Isaac Newton is still a mystery of Nature. What it is, the means by which it acts, or why such a force should exist at all, are questions to which we have no answer. What it does every schoolboy knows; what it is, no one knows. The children of to-day may live to see this secret revealed, and it is thought by many that it will be on the lines of magnetism.

The solar system consists of the sun and all the heavenly bodies that move around it and are controlled by its gravitation. The sun is a great ball of fire, and the part of its surface that is visible to us consists of clouds of incandescent metallic vapor. Its surface is so hot that iron, nickel, copper, and tin are present in a gaseous state. The sun's heat sustains all animal and vegetable life on earth; gives color to flowers; has stored up heat in

our coalfields; forms the clouds by condensing moisture from oceans and rivers; and causes winds, resulting in the waves which aerate the oceans.

It is the sun which makes the earth spin once in twenty-four hours, giving us night and day. The sun causes the earth to travel round it at the rate of 68,000 miles an hour, and, owing to the tilt of the earth, gives us spring, summer, autumn, and winter.

To us the sun and moon appear almost the same size, but the diameter of the sun is 866,000 miles, whereas the diameter of the earth is 8,000 miles and that of the moon 2,000.

If the sun were a great hollow ball, and the earth and moon could be placed in the centre of it in their relative positions, the moon could continue to circle round the earth inside the sun and leave plenty of room to spare. The sun is so immense that it could hold about 300,000 globes each the size of the earth!

An aeroplane travelling at sixty miles an hour, day and night, would, if such a journey were possible, take about 165 days to reach the moon, but 176 years to reach the sun.

While the sun is 93,000,000 miles away, the moon is only 240,000 miles distant. What would happen if the sun went out? We should at once be involved in unending night, and, very soon, in eternal frost. All seas and rivers would be frozen, and all life on the earth would speedily come to an end.

Few of the discoveries made by astronomers are more surprising than that of the sun's motion through the celestial spaces. Followed by its family—planets, asteroids, comets, and meteoric systems—it is ever rushing onwards through space at a rate of 700,000 miles a day.

Natural Resources Bulletin

The Natural Resources Intelligence Service of the Department of the Interior at Ottawa, says:

While Ontario, being an inland province, has no sea fisheries, the great lakes provide a very large output of many species of edible fish, as do also the many interior lakes. Ontario in 1929 produced 88,561,583 lbs. of fish, valued at \$2,991,093. Herring provided the largest output, being 13,143,510 lbs., with whitefish next, with 6,808,730 lbs. Trout were taken to the amount of 5,025,109 lbs., blue pickerel 3,379,524 lbs., and coarse fish 3,379,524 lbs.; white pike, dory, perch and carp were over one million pounds each. Of the provinces having no sea fisheries Ontario is far in the lead in fish production.

Mere Talk.

It is not necessarily a mark of strength to be silent. There are those who are still because, to save their lives, they could not think of anything to say. By nature empty and dull, they found it too laborious to "improve" their minds. If they could sit back and have predestinated knowledge handed them in chunks, as at motion-picture shows or certain kinds of lectures, they would take it. Whatever learning can be imbibed or inhaled without conscious effort on their part they would accept. But to go out of their obese and vegetating selves in quest of experience and fact would not appeal to them. They will shuffle through a torpid life to an insipid eternity somehow. Meanwhile, the whole of the real business of living goes by them like a procession with a band, and they have no part in it. What is the use of them? They might as well not be.

Though there are plenty of men of action who are professionally terse—men whose stories we long for and never get—most of the good talk issues from those who are in the thick of things and are making them move. Of course, there are finicky idlers, who fancy they are artists, like the author who boasted that he spent the morning putting in a comma and the afternoon taking it out. If that meant infinite patience in a genius, the rest of us might bow our heads in acquiescence. But in this case it only signified the decadent trifling of an elegant idler, whose fastidious product amounted to nothing when it was done.

The chatter of such general loafers does not signify. What really matters is the formulated sense in speech of men in sober earnest, with all they have and are in everything they do. Willingly do we listen when one talks "who saw life steadily and saw it whole." He went somewhere (though physically he may not have stirred) and he came back and told us what he learned. He did not seem to be speaking from any passionate infatuation with his own art of words. He evidently felt that what he said to us might interpret life as being for some one else; and so he spoke.

In listening to oratory, the first question we raise is that of the speaker's sincerity. If the man is not in and behind the utterance, the listener feels and knows that here is but a hollow, fragile and reverberant shell, uninhabited by substance. He listens to one who, no matter how adept a juggler, has come to regard language as the end and not the means. He misses the tremendous moral impact of a conviction, so possessing the soul of a man that it must find utterance and reach the inner room of another's heart.

Summer.

Summer, Queen of Seasons,
With her smiling train
Comes in radiant splendor
O'er the land to reign.

Following in her pathway
Myriad charms are seen,
Jubilant streamlets,
Flowers of varied sheen.

Blue skies, glorious sunshine,
Fragrance-laden breezes,
Orchards' pleasant fruitage,
Fields of waving grain.

Full of joy and pleasure,
Are the long bright days
And to the Gracious Giver,
Thankful hearts we raise.

—Mrs. A. F. Calder.

An Exciting Game.

The noise coming from upstairs was appalling. Mother, making cakes in the kitchen, at last could stand the commotion no longer. Hastily washing her hands, she started to mount the staircase when she found that the noise was proceeding from the nursery. She went up the rest of the flight, and on reaching the top she shouted:

"Children, children, what are you doing? What on earth is all this noise about?" Little Willie's eyes were bright with excitement as he replied:

"We've had grandpa and Uncle Henry locked in the cupboard for the last hour. When they get a bit angrier we're going to play Daniel in the Lion's den."



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