

The AUTOMOBILE

Advantages of Motor Touring.

It is taken for granted that the person who expects to enjoy an outing via his motor car will put his machine in good working order before setting out. It is taken for granted that he will put water in the radiator, gasoline in the tank and oil in the engine, lubricate thoroughly and take along five fairly good tires.

The trip begins right from the kitchen. Only such baggage need be taken as will be required, and this will ordinarily not be much. And it can be loaded right into the car, saving all the worry of checking, transferring, and getting lost.

When the members of the outing event are three to five, as is apt to be the case when the whole family goes along or the neighbors are invited, the expense is apt to be less per mile per person. This tends to increase the enjoyment in proportion to the size of the party. The whole family is likely to be included up to the capacity of the car. For one more adds little, if anything, to the expense for gasoline and oil. And there is always room for one more in any car! This matter of economy is of tremendous importance and by use of the motor car makes delightful outings possible to many who otherwise could not afford to travel on wheels at all.

Traveling by automobile makes it possible to get to the desired destination with dispatch and comfort. When the party is ready the driver steps first on the self-starter and then on the gas and they are off at an amply rapid rate of speed as the law and good judgment in driving allow. There are no time tables to consult, no connections to miss, just splendid roads to cruise along, comfortable seats to sit on and good clear air to breathe.

The travelers can stop at any point of interest along the route and enjoy it to their complete satisfaction, then start on at any time. If there are side trips off the main line of the journey that they wish to inspect, a turn of the wheels of the car sends them off in the desired direction. If there are fishermen in the party, they can stop at this stream and fish for awhile, and, failing to lure the fish from its waters, they can ride on to that lake, where their luck may be better. If one tires of riding, it is easy to stop the car so that the occupants can get out for a seventh-inning stretch.

The outing problem is simplified when traveling by auto. If real good food is desired it can be taken along

in the car and cooked by the roadside or in some cozy grove. In many places there are public camping sites with stone fireplaces already built for the convenience of automobilists. Or food can be prepared along the route for picnic lunches. Or desirable hotels and restaurants can be found in the villages or cities along the way.

The matter of sleeping is quite as easily handled. There are many conveniences which can be carried along so that the motorist can find comfortable repose at night. Tents can be erected and patent cot beds unfolded, or some can sleep in the car or roll up in blankets and find out how the Indians used to do it years ago. If more conveniences are required, it is still possible to find sweet dreams in some hotel, inn or farmhouse.

Traveling by auto is one of the healthiest forms of recreation. There is always plenty of good clean air. A motor trip usually takes one out into the country, where the ozone is at its best. The danger of catching any contagious disease is practically entirely eliminated.

If a driver knows his business of driving and will use ordinary judgment in manipulating his machine, the danger from accident is no greater than might be encountered on board a ship or train. Certainly they are not as great as travel by airplane! In spite of the startling casualties and in spite of the reckless drivers that are loose on the face of the earth, a careful driver is not at all likely to have his outing marred by serious accident.

The owner of an automobile usually gets a certain satisfaction and enjoyment out of driving himself the vehicle in which he is traveling. He has a sense of being in control of his destiny which adds to his pleasure, and if the others who are along have confidence in his ability, to the happiness of the rest of the company.

Travel by auto makes for sociability. In no way can a group of people become better acquainted and get more pure fun out of life than by being associated together on a vacation via motor.

An outing by auto does not necessarily mean a touring car or sedan. A common sight along the country roads on a holiday is a huge truck loaded with a whole neighborhood of folks off on a picnic. Are they ever downhearted? So whether it's by truck or limousine, for all-round enjoyment no other travel vehicle has been found superior to the automobile.

PROBLEM OF GOOD ROADS IN CANADA

TREMENDOUS AREA WITH SCATTERED POPULATION.

At the Present Time 18,000 Miles of Main Roads—Highway From Coast to Coast.

The difference between national progress and retrogression may be pithily summed up in facilities of travel and transportation, and the maintenance of good roads is a matter which demands the unwavering attention of a modern country in no matter what direction it is making a bid for world prominence. National prosperity lies in a network of comfortable, easily travelled roads, and a country ranks among progressive nations according to its conveniences in accessibility and marketing.

The construction and maintenance of roads in Canada constitutes a problem that is particularly difficult. Canada is a land of tremendous area and small and scattered population. To adequately link up the settled areas of the country a network of roads is required which would be sufficient to render the same efficient service to a people many times as numerous. Upon a family of four persons in Canada rests the enormous responsibility of building and maintaining one mile of roadway and upon five average families the construction and maintenance of a mile of main market highway.

Again, the peculiarity of Canadian conditions creates the necessity for the maintenance of so many types of roads to accommodate the various methods of travel. Whilst the older settled cities and towns and the areas about them are most modern in every respect and their lines of communication as up to date as engineering can effect, there are many areas that have but recently emerged from the pioneering stages, and still other districts that are only being opened up to colonization and that must be served by roads of some kind.

The Penetration of New Areas. The prime consideration in road-building in Canada is possibly to enable the farmer to reach the markets with his product as conveniently and economically as possible, and this has first consideration in the drawing up of national programs. A second requirement is to maintain good means of communication between the larger centers and to adequately serve and

encourage motor tourist traffic, which is rapidly increasing every year and has become a not insignificant asset in Dominion revenue. The year the increase in the settlement and cultivation of farm lands makes necessary the penetration of new colonization areas, which can only be effected by the construction of roads which will permit new settlers to get into them with the least degree of trouble and inconvenience.

Canada is rapidly gaining a reputation abroad for good roads, consequent upon a Dominion-wide policy of co-ordinated effort, due to the foresight of Dominion and provincial governments and their co-operation in construction and maintenance. The Canada Highway Act of 1919 was a recognition of the important part played in the development of national prosperity by good roads and elicited the co-operation of all sections of the Dominion in maintaining a high standard. The bill made the sum of \$20,000,000 available during the following five years, to be divided among the provinces on the basis of population, with the expenditure of proportionate amounts by these provinces to a total of \$30,000,000.

18,000 Miles of Main Roads.

That the provinces are not limiting their expenditures to those amounts necessary to obtain the Federal grants is very apparent. In the five-year period after the passing of the Act, it was estimated that Ontario would spend \$60,000,000 on its highways, and this sum will undoubtedly be reached. Quebec highways prior to 1912 had cost \$40,000,000 in the work done upon them, and since that time \$30,000,000 has been expended. This year the province will spend \$7,500,000 upon provincial roads, by far the largest amount spent in years, due to the inclusion in the program of amounts for colonization roads into newly opened areas in Northern Quebec.

At the present time there are 18,000 miles of main roads in the various provinces and networks of communication branching off from them to serve the rural areas. In addition to the maintenance of these, new roads are being constructed each year. These serve to join up the provincial centers, and it is now the aim of the various governments to join up the provincial systems and provide a main highway across Canada from coast to coast, an undertaking not devoid of accomplishment and the accomplishment of which may be soon expected.

Excellent motor roads join up all the principal cities and the avenues to the international boundary are maintained at a fine standard. Last year half a million motor tourists visited Canada from the United States alone, staying for various periods

and the worst is yet to come



from one day to six months, and it is stated that the number of visitors staying one month has doubled within the past few years. In many cases the upkeep of such highways as Toronto-Hamilton, Ottawa-Montreal, Montreal-Quebec is paid for by the tourist traffic upon them, and the completion this year of the roadway of the Grand Circle Motor Tour, running from California in the south to Alberta in the north, linking ten national parks, and constituting the finest scenic motor tour on the continent, is expected to bring the Dominion an unprecedented volume of motor traffic.

The Result of Good Highways.

The importance every section of the Canadian people attach to the possession of good roads was evidenced at the last good roads convention held in Victoria, B.C., which drew from Atlantic to Pacific cabinet ministers, members of parliament, provincial and civic engineers and prominent business men from all sections of the Dominion, as well as attracting representatives of many states and the province of the exchange of views and expert opinions. It marked the halfway point in the progress effected since the passing of the Canada Highways Act and formed a point of retrospect as well as prospect. To date 204 agreements for Federal aid have been authorized for 5,125 miles of provincial road at an estimated cost of \$29,461,515. The total amount of provincial expenditures audited with respect to this work is \$15,974,591, and the total amounts of payments made with respect thereto is \$5,179,275. The total mileage of completed Federal aid work to the time was 1,400 miles and the mileage under construction 2,397 miles.

Continent Made by Insects.

Out in the Indian Ocean lies one of the strangest archipelagos in the world. More than fourteen thousand islands go to make it up. Most of them are quite tiny and few rise more than five or six feet above the surface of the water.

These are the Maldiv Islands, which few people have ever seen, since the waters around them are terribly dangerous for shipping. Every one of them has been built up by tiny coral insects. The smallest island contains a coral population many times bigger than the entire human population of the world.

The process of island-building is still going on; for every one that is to be seen above the surface there are a dozen others which, though continually growing upwards, have not yet become visible. In the course of centuries the sea will deposit sand and mud amongst the thickly-studded coral pillars, and so eventually a new continent will be born, a continent built up by little beings no bigger than flies.

Flowers That Tell the Time.

There are several varieties of plants which foretell changes in the weather, while not a few of them enable us to tell the time of day often with unerring accuracy.

When the flowers of the common chickweed expand fully, no rain need be anticipated for four hours or more. But should its small flowers be half concealed, it is advisable to prepare for rain.

When the flowers of the Siberian snow-thistle remain open all night, it is a sign that rain will fall the following day.

If by seven o'clock in the morning the African marigold has not opened its petals, prepare for rain during the day. The scarlet pimpernel and the convolvulus always fold their leaves upon the approach of wet weather.

The flowers of the alpine whitlowgrass, the feverfew, and the wintergreen have a peculiar habit of hanging down during the night as if they were asleep. This act serves to protect the fertilizing dust from injury by moist air or rain.

In addition to these there is a variety of flowers that close and open at certain hours with remarkable regularity.

The flowers of the goat's beard open every morning at dawn and close regularly about noon.

In the Malay States there is a four o'clock plant which opens its flowers at four o'clock in the afternoon and closes them exactly twelve hours later.

The flower of the common dandelion possesses a peculiar means of sheltering itself from the power of the sun. It closes its petals entirely when the heat becomes excessive. It has been observed to open in summer at half-past five in the morning, and to collect its petals towards the centre at about nine o'clock at night.

Why Handkerchiefs Are Square.

A handkerchief means literally a kerchief for the hand, the kerchief itself being a small sort of a shawl. Handkerchiefs originated in Italy, whence they gradually spread over Europe.

All shapes and sizes were used, till one day in the last era of the glories of the old French Court Queen Marie Antoinette remarked how much neater it would be if only square-shaped handkerchiefs were made.

So, on the 2nd of January, 1785, a Royal decree went throughout France that "the length of handkerchiefs shall equal their breadth."

And everybody still obeys that decree without knowing it!

In London there are thirty places of worship where the services are conducted in the Welsh language.

Can You Find Your Name Here?

Few people nowadays know the meanings of their Christian names, and they are chosen as a rule because they sound nice.

If, for example, we name a boy George, we may have no intention of making him a farmer; yet farmer is what the name means. Nor would we care for Priscilla to live up to her name, which means the little old-fashioned woman, or for Leah to suffer always from the weariness that the old Hebrew word denotes!

Our Christian names come to us mainly from the Hebrew and Greek of the Bible, from Latin, from French, and from the tongues of the East, as well as from Scandinavian and Old English.

Latin names are rather out of fashion nowadays, for there are fashions in names just as there are in clothes. Rufus—the ruddy-faced one—is occasionally met with, but Caesar, the boxes, is rare. We do, however, find Augustus (the majestic) and Paul (the little fellow) in fairly common use.

Woman's debt to Rome is a larger one. She has borrowed Stella (star), Dulce (sweet), Vera (truthful), as well as the names of months such as April and May, of goddesses like Diana and Juno, and a whole garden full of flowers such as Rose, Lily, and many others.

Besides Farmer George, Greek has given us Philip, the lover of horses, Alexander, the helper of men, Timothy, the god-fearing, and Andrew, the manly. Feminine appellations from the same source are Margaret, Marguerite, and Marjorie—all three words are really the same—meaning pearl; Dorothy, the feminine form of Theodore; Katherine or Kathleen, the pure; Agnes, which has the same meaning; and Irene, signifying peace. Jacynth has

rather a curious history. The word denotes a precious stone of blue color and in its proper form, Hyacinth, it was used as a man's name.

Most of the Hebrew men's names have pleasant meanings. John, for instance, stands for the Lord's grace, whilst David is the beloved. Jacob, however, from which comes our James, means the supplanter, and it is curious that in our history a would-be supplanter should have borne it in the person of the old Pretender who made a bid for the Throne in 1715.

Many of the women's names indicate that their lot was no easy one in those early days when they were regarded as vastly inferior to men. Mary or Muriel (they are the same name—signifies bitterness, and Deborah is the bee or the worker, in Anne, Anna, or Hannah, however, there is a more cheerful note, for all these words mean grace. Adam and Eve are Babylonian, not Hebrew words. They mean simply man and breath. Isabel is a Philistine word and the same as Jezebel.

Then we come to the real old English names. Henry should never be heaped, for his name means ruler of the home. But what is he to do if his wife is called Harriet or Henrietta, both of which have the same significance? Leonard must be as strong as a lion; Richard must be as strong too, but he must rule as well.

Ralph, originally Radulf or Radolf, is the red wolf. William means the helmet of resolve. Edward is the noble guardian, Frederick is the peaceful ruler.

Ethel should be noble, Freda peaceful, and Leonora lion-hearted. Hilda is the warrior-maiden, and if you add Mat to her name you give her strength, for Matilda, often shortened to Maud, means the maiden strong in battle.

The Weaver of Rugs.

The Weaver of Rugs has dreamed a dream
And brooded the summer through;
With tender love he's plotted his theme
And now the dream's come true.

He's spread a carpet over the hills;
Soft is its silken sheen
Of red and the color of daffodils,
Of rose and orange and green.

And a patch of blue reflecting
The color of autumn skies;
The pattern vague, but beyond compare
Are these clear, mysterious dyes.

Its knotted warp in the ground below
Holds close its shimmering pile,
The Weaver of Rugs has dreamed it so,
And this is the Weaver's smile.

The Weaver of Rugs has dreamed a dream,
Over the forest, field and stream,
And now His dream's come true!

World's Largest Ship.

The world's largest ship is the White Star Line Majestic of 56,000 tons. She carries enough linen to stretch for 187 miles. There are 77,000 seriettes, 3,000 beds, 2,700 pillows, 13,000 pillow-cases, 11,000 sheets, 1,500 bolsters, and thousands of other items. The blankets alone weigh seventeen tons.

More than 100,000 pieces of china and glassware are provided, and it is estimated that if the crockery was piled up it would form a column 1,200 feet high. If the washing and drying were done by hand, it would take five months to accomplish the feat.

Ten thousand knives and forks and 50,000 pieces of electro-plate form part of the Majestic's equipment.

Easy to Answer.

Billy was in tears when he came home from school.
"Teacher whipped me because I was the only one who could answer a question she asked the class," he sobbed.

His mother was indignant.
"Why, I'll see her about that! What was the question, Billy?"
His eyes lighted reminiscently.
"She wanted to know who put the glue in her ink-bottle!"

AN IMPORTANT PASSENGER WAITING AT THAT ISOLATED STATION.



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An Artificial Anthracite

"We must have an artificial anthracite; we must provide a substitute for that 'luxury fuel' without delay."

So says George Otis Smith, director of the United States Geological Survey. But how is an artificial anthracite to be made?

Out of "sludge," for one thing. It is the waste of the anthracite mines—coal in particles so fine as to have no market value. Production of it amounts to about 5,000,000 tons per annum. Mountains of it have accumulated all over the anthracite regions of Pennsylvania. Immense quantities of it have been washed down from the coal washers into low places, forming extensive beds fifteen or twenty feet deep.

It is perfectly good coal. All that is needed is to make it into briquettes suitable for burning in the household furnace or the family stove.

Every year about 45,000,000 tons of steam-size anthracite—tiny bits from three-eighths to less than one-eighth of an inch in size—are sold and used for steam coal. The price it brings is less than the cost of getting it out of the ground. But if made into briquettes for domestic consumption it would be worth much more money and would importantly help out the anthracite supply.

Already four or five plants in the anthracite region are manufacturing briquettes from this material. The thing ought to be done on a great scale.

Most important in the making of briquettes is the use of a suitable "binder" to glue the tiny bits together. Corn flour or other starch may be employed for the purpose; or the sulphite which is a by-product of the wood-pulp industry; or tar, such as coal tar or the asphaltic residue of petroleum refining.

All the Pennsylvania anthracite was originally bituminous coal. Heat converted it into its present form, driving nearly all the volatile elements out of it. Hence the smokelessness that renders it so desirable.

This being the case, why should not bituminous coal be transformed by laboratory methods into an artificial anthracite. It ought, indeed, to be practicable, and many experiments have been made with that object in view.

Briquettes have been made of bituminous coal, but no process has yet been developed that is satisfactory and cheap. The artificial lumps have a tendency to resolve themselves into the original coal dust when exposed to the high temperatures of the furnace or stove, owing to melting of the tar or other stuff used for a binder.

There were originally in the ground in the United States about 22,000,000,000 tons of anthracite. That was the total existing quantity, and one-fourth of it has been dug up and burned. According to George Otis Smith, there now remain approximately 16,500,000,000 tons of this smokeless luxury fuel underground. The demand for it is larger every year, owing to increasing population and the waning supply of natural gas, which has hitherto been used in great quantities for domestic purposes in place of coal.

The 16,500,000,000 tons of anthracite remaining underground would make a cube 6,510 feet long, 691 feet wide and 691 feet high. In other words, the cube would be somewhat more than one and a quarter miles on an edge.

The situation as regards our bituminous coal is very different, says an American writer. At the start there were about 2,100,000,000 tons of it underground—enough to make a cube ten miles on an edge. Such a cube would represent 1,000 cubical blocks each one mile long, one mile wide and one mile high. "We have taken out of the ground up to date only the equivalent of five blocks, so that we have 995 of them left."

The figures here given relate to coal available for mining. As for anthracite, the price of it is bound to go up steadily, and fifty years from now it will be a luxury obtainable only by the rich. A century and a half hence even they will not be able to get it, for it will be all gone.

We must, then, as Mr. Smith remarks, have an artificial anthracite, and for a future that is not far distant we must learn how to make it from bituminous coal.

Tempting the Pig.

They were at supper. During the meal the young man with the hearty appetite talked eloquently on things in general.

"Do you know, Miss Blank," he remarked, "I think there is a very intimate relation between our food and our character? I believe, don't you know, that we grow like what we are most fond of."

The fair girl smiled sweetly. "How interesting," she murmured. "May I offer you some more ham?"

Up to the Doctor.

Mrs. Potts' husband had been quite ill, but finally there came a change. When the doctor called and had a look at his patient he announced:

"He is convalescent."
Whereupon Mrs. Potts regarded the physician suspiciously; and her suspicion increased when he made no further comment but prepared to go.

"Well, you got no doctor, ain't you?" she demanded. "Ain't you got no medicine for dis 'ere convalescent?"