

# The Automobile

RATTLE IN CAR OFTEN MEANS TROUBLE NEAR.

The number of locks which are to be found on the modern automobile seems to be increasing as the years go by, and the total value of cars and accessories stolen runs up to even larger figures. There are locks on the steering wheel, the motor-meter, the transmission, the doors (of closed cars), the trunks carried on the rear and the spare tire.

While these might be considered as locking devices, they are not exactly what the automotive engineer means when he uses this term. He means the various devices which keep the different parts of the car in place and working effectively so that important bolts will not be loosened by vibration. It is the ideal of every manufacturer to have every nut set up snugly and properly locked in place. It should be the ideal of every driver of a car to see to it that they stay in this desirable condition. No motorist cares to have his car so conspicuously noisy from numerous rattles that everybody can recognize when he is driving by the sundry sounds his machine makes.

CHECK UP FOR DEVICES.

There is just one possible advantage that attaches itself to the clattering, namely, that no thief would ever consider stealing it. The noise of such a car would readily be recognized by the local police. However, the thief "vibration" may steal many of the parts. The new owner of a car after driving it for a few days should go over it carefully himself to check up on the locking devices or take it to a service station for this purpose.

When a person buys a new automobile he ought not to take too much for granted as to the snugness of nuts and he ought not to condemn the maker of the car too severely if he finds a few of them becoming loose after a few hundred miles' run. This is apt to happen in the best cars. It should be said that the manufacturers have gone to great lengths to equip cars with such locking devices for parts as will insure the greatest possible safety to automobile owners.

Many parts of a car are made fast through the use of bolts with the threads on them and nuts that turn on the threads and make the parts tight. In the past, more than that, it was the practice to have the bolts loosened so that two nuts could be put on. One was jammed against another in order to lock them in such a way that it would be impossible for them to come off. Then, to make doubly sure the nuts would not fall off, a hole was drilled into the bolt and a split steel pin called a cotter was inserted. Thus even though the nuts became loosened the cotter pin

would prevent them from falling off the bolt.

On some cars, instead of using two nuts, a single nut with notches in the head of it, called a castellated nut, was employed. When this nut was in place a hole was drilled through the bolt and the cotter pin was inserted in a pair of notches in the nut, so that it could not back off and become loosened.

However, lock washers are now used more often in place of lock nuts. The lock washer is made of hardened steel with two comparatively sharp projections causing by the spitting on the washer. When the nut is turned down on such a washer the sharp edges dig into the nut and the part which is being held into place. As a result, the nut is prevented from working loose. These washers are sometimes called split washers. In other places the head of the bolt is drilled and a wire is passed through it and made fast in such a way that the bolt cannot turn.

It is of extreme importance that the wheels of a car be securely locked on. Nobody wants a wheel to leave his machine when touring along a country road. Each front wheel is usually secured by two nuts. One acts as a lock nut and a cotter pin is added to prevent the wheel from coming loose in case the nuts should loosen up by any chance.

REAR WHEEL FASTENINGS.

The rear wheels, which are fastened rigidly to the axle shaft in all types except the full floating, sometimes employ a special lock washer and a single nut. This lock washer is constructed so that when it is placed over the end of the shaft it cannot turn on the shaft. It has ears which may be bent snugly against the flat surface of the nut to prevent turning on the shaft. If the rear axle is the full floating type, the wheels are held on by two nuts, the conditions being the same as the front wheels.

In the engine the wrist pin, which travels up and down the cylinder at the rate of about two thousand times a minute, is likely to work loose. If this happens it may come in contact with the cylinder wall. Since the wrist pin is made of hard steel and the cylinder wall is composed of soft cast iron, the cylinder may be scored. As a result grooves may be cut in it so that there is no possibility of keeping good compression in the cylinder.

Locking devices, like most other parts of an automobile, while reliable in the main, are not infallible and should be given the once over once in a while to insure the best motoring results.

## Freaks of the Famous.

Eccentricities of famous people provide a strange and surprising study, for many celebrities of the past have been obsessed with remarkable notions, and have engaged in freak hobbies and queer pastimes.

It is recorded of Daniel Webster that he had a peculiar fancy for painting the faces of his cattle, and he changed his color scheme frequently. One day the neighbors would see Webster's cows grazing in the park with their faces painted blue, and the following week the animals would appear with red-painted faces. Webster, it is said, delighted to mark the look of surprise with which his friends regarded the result of his strange hobby.

The ruling passion of Peter the Great was to ride about in a wheelbarrow, and many of his State visits to cities and towns were made in this manner. The monarch being wheeled along in his homely conveyance pushed by a perspiring manservant.

One of the favorite entertainments of William the Conqueror was watching a dog fight. His subjects, knowing this, used to send his dogs, and the king would select from these the biggest and fiercest types. Then he set them to fight in pairs, and would sit all day watching the combats.

Of a very different nature was George Washington, for though he loved fox-hunting, his main idea of the chase was always to try to capture alive a young fox cub, which he would take home with him. Then, patiently and with much perseverance, he would teach his captive tricks, which the cub later performed for the amusement of Washington's friends.

A Swiss traveller recently paid a visit to the underground town of Ghazal (for Aesaba), constructed under the sands of the Sahara Desert, in Tripoli, not far from the Mediterranean coast. It has a Mohammedan population of 30,000.

On the surface the only building visible is a small Italian military outpost, and the town, built several centuries ago, lies several hundred yards below. A winding narrow path leads down to the principal square, which is surrounded by houses resembling catacombs cut into sandstone and clay.

There are flats several stories high, in which goats, chickens, etc., share the rooms with their owners.

The subterranean city has two great advantages—a cool temperature all the year round and freedom from sandstorms. Its great drawback is a lack of light. Long before the sun sets it is dark there, and primitive oil lamps are lighted.

The greatest sufferers are the harem women, who must be in their rooms at sunset, and are not permitted to have lamps. Excellent water is obtained from wells, and ventilation, it is stated is good.

If a candle is too large for the candle-stick, the end should be held in hot water until it is soft. It can then be pressed into shape to fit the hole, and there will be no waste of wax, as in the case of shaving slices off the end.

An Epitaph.  
"He didn't have time to stop at the crossing; he has plenty of leisure now."

## A Poem You Ought to Know.

In March,  
William Wordsworth has made the English Lakes famous all over the world, and visitors from many lands visit Dove Cottage on the shores of Grasmere, and Rydal Mount, his later and larger house on Rydal Water.

The cock is crowing,  
The stream is flowing,  
The small birds twitter,  
The lake doth glitter,  
The green fields sleep in the sun,  
The oldest and youngest  
Are at work with the strongest;  
The cattle are grazing,  
Their heads never raising;  
There are forty feeding like one!

Like an army defeated  
The snow hath retreated,  
And now doth fare ill  
On the top of the bare hill,  
The ploughboy is whooping—anon—  
There's joy in the mountains,  
There's life in the fountains;  
Small clouds are sailing,  
Blue sky prevailing;  
The rain is over and gone.

## City Under Sahara Sands.

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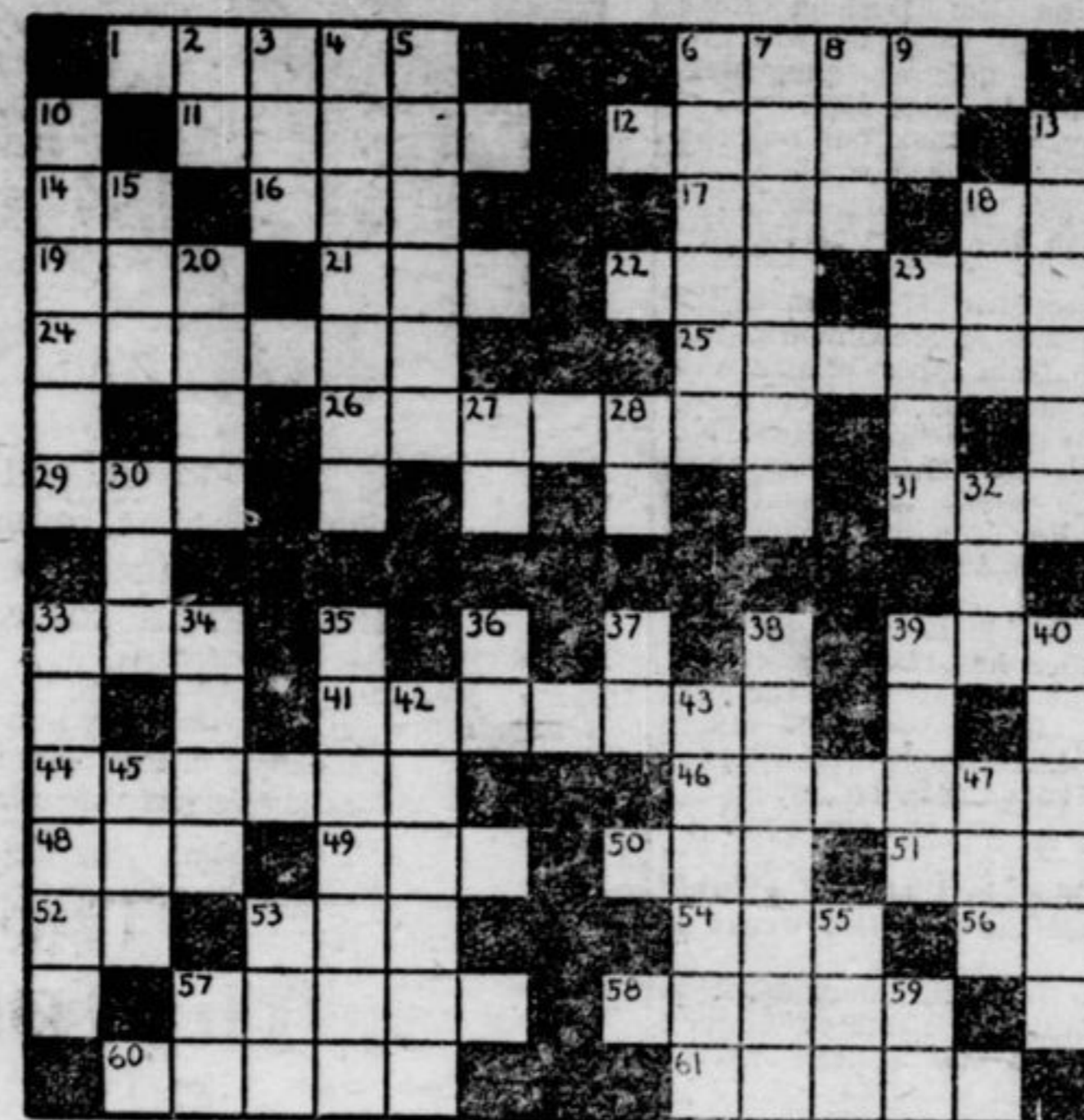
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## CROSS-WORD PUZZLE



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**SUGGESTIONS FOR SOLVING CROSS-WORD PUZZLES**  
Start out by filling in the words of which you feel reasonably sure. These will give you a clue to other words crossing them, and they in turn to still others. A letter belongs in each white space, words starting at the numbered squares and running either horizontally or vertically or both.

### HORIZONTAL

- 1—Familiar fruit
- 6—Hostler
- 11—To ring musically
- 12—To thwart
- 14—Suffix to form plural
- 16—Part of a priest's dress
- 17—A law school degree (abbr.)
- 18—Joint account (abbr.)
- 19—A serpent
- 21—Grand Lodge (abbr.-pl.)
- 22—Man's name
- 23—An obstruction
- 24—Entice
- 25—Forward
- 26—Forming an image of
- 29—Girl's name
- 31—Man's name (familiar)
- 33—Suffix meaning "of the nature of"
- 39—Secretary (abbr.)
- 41—Tell, relate
- 44—To win
- 46—Mistakes
- 48—Numbers (abbr.)
- 49—Insane
- 50—To go wrong
- 51—In no manner
- 52—Latin word meaning "in the same place" (abbr.)
- 53—Small compact mass of soft matter
- 54—Torn piece of cloth
- 56—A college degree (abbr.)
- 57—Satiates
- 58—A prescribed place
- 60—Sergile
- 61—Royal

### VERTICAL

- 2—A society for the relief of sick and wounded (abbr.)
- 3—Interjection
- 4—Wanderer or wayfarer
- 5—Symbol
- 6—A measure of capacity
- 7—Decisions, as of a judge
- 8—Aged
- 9—Meaning "all correct" (abbr.)
- 10—Allow as a deduction
- 13—Forgive
- 15—The sun
- 18—A container
- 20—Province of Canada (abbr.)
- 22—Post
- 27—Indefinite article
- 28—Preposition
- 30—A nobleman (abbr.)
- 32—Part of verb "to be"
- 33—Covertly sarcastic
- 34—Blows
- 35—To make alive
- 36—Physician's title (abbr.)
- 37—A South Atlantic State (abbr.)
- 38—A raised level space
- 39—Presently
- 40—Pertaining to a rib
- 42—A wreath for the head (rare)
- 43—Great fright
- 45—To move with a jerky motion
- 47—To take away from wrongly
- 48—Conflict
- 55—To silence
- 57—A continent (abbr.)
- 59—Southern State (abbr.)

## Don't Do It.

The way some people neglect their health is summed up by John Kendrick in the following verses:

You know the model of your car,  
You know just what it's powers are.  
You treat it with a deal of care  
Nor tax it more than it will bear.  
But as for self—that's different;  
Your mechanism may be bent,  
Your cabriolet gone to grass,  
Your engine just a rusty mass.  
Your wheels may wobble and your cogs  
Be handed over to the dogs,  
And you skip and skid and slide  
Without a thought of things inside.  
What fools, indeed, we mortals be  
To lavish care upon a car  
With not a bit of time to see  
About our own machinery!

## England's Short Parliaments.

The shortest Parliament in English history was summoned on September 20, 1399, for the purpose of deposing Richard II., and was dissolved the same day after fulfilling its task.

The Parliament which Charles I. summoned in 1625 failed to please that exacting monarch and was dismissed after five months, whilst the Barbones Parliament, named after one of its members, lasted a similar period. The Parliament of 1701 lasted a month longer.

U.S. Leads in Insurance.  
The United States carries more life insurance than all the rest of the world combined.

## Solution of last week's puzzle.



## Merely a Test.

Patrick McCarthy was being shaved by a very careless barber. He took the numerous gashes in stoical silence, but when the shave was over he gravely walked over to the barbers water bottle, took a mouthful, and with tightly compressed lips proceeded to shake his head from side to side.

"What's the matter?" demanded the barber. "You ain't got a toothache, have you?"

"Toothache, the devil!" said Pat. "No! I was only trying to see if me face would hold water without leakin'."

## Warning.

Prison Chaplain (to prisoner about to be discharged)—"Now, my man, try to remember what I said in my sermon last Sunday, and make up your mind never to return to this place."

Prisoner (deeply moved)—"Guv'nor, no man who ever 'eard' you preach would want to come back 'ere again."

## TWO INDIANS AND THEIR CHILDREN

Tired and cold and hungry, Mr. Vincent and his companion, who were canoeing in the Great Slave Lake district, were glad to see an Indian wigwam; it promised rest and food. When their canoe slid up the bank several children, nearly naked, fled and hid in the woods. Mr. Vincent went toward the wigwam, and a tall, surly looking Indian rose from a fallen tree and slouched toward him.

Mr. Vincent pointed to his mouth and asked for food, but the Indian shook his head. The visitor then held out his hands and said he should like to warm them at a fire, but the Indian again shook his head. Mr. Vincent looked round for the children who ran from him; he saw a tousled head here and there and inquiring, frightened eyes and sunken cheeks. Then he heaved and sunken cheeks. Then he heaved and sunken cheeks. Then he heaved and sunken cheeks.

A little further down the river on the opposite bank he came upon another wigwam. The barking dogs brought out a big Indian and four comfortably dressed boys. The Indian greeted the stranger heartily and invited him into his home.

"Plenty fish," said the Indian, waving aside the money that the visitor offered him. "Him cheep," Mr. Vincent spoke of the Indian on the opposite bank.

"Him my brother, Black Beaver!" said the Indian. "I, Joe Beaver, Black, he no like the missionaries."

"How often do you see missionaries up here?" asked Mr. Vincent.

"One, two, sometimes three times a year, but not for long," said Joe. "They come long way and stay so little, but we learn all we can while they are here."

Joe smiled on his wife and boys, and their dark eyes glistened.

He invited his guests to stay overnight, but they said they had to hurry on.

"Hear him boys sing," said Joe proudly.

Mr. Vincent looked into the fat and smiling faces of the boys; then he thought of Black Beaver's children, and he wondered.

Joe's boys sang a Christian hymn for him, and he praised them and gave each one a coin.

When Mr. Vincent returned to his home he did what he had never done before; he gave his pastor a generous subscription for the missionary fund.

"What does this new interest in missions mean?" asked the delighted minister.

"It means," replied Mr. Vincent, "that I have looked into the faces of the children of a Christian Indian."

## The River's Vindication.

I've true I've gone on the war path,  
I've smitten your cities and homes,  
I've cracked the walls of your stately halls,  
I've threatened your spires and domes.

I've spoiled your gardens and orchards,  
I've carried your bridges away,  
The loss is told in millions of gold;  
The indemnity you must pay.

But had I not cause for anger?  
Was it not time to rebel?  
Go, ask of the springs that feed me;  
Their rock ribbed heights can tell.

Go to my mountain cradle,  
Go to my home and see,  
Look on my ruined forests,  
And note what ye did to me.

These were my silver bowers,  
My beds of bracken and fern,  
The spots where I lie and rest,  
E'er to your valleys I turn.

These you have plundered and wasted,  
You've chopped and burned and scarred,  
Till my home is left of verdure bereft,  
Bare and lifeless and charred.

So I have gone on the war path,  
I've harried your lands with glee,  
Restore with care my woodlands fair  
And I'll peacefully flow to the sea.

—F. W. Nash in Canadian Life and Resources.

## The Mud and the Sunset.

One autumn evening at sunset two men were loitering on the picturesque old bridge at Battersby, England. One of them was a writer, hard-working but unsuccessful.

The river was at a low stage, at least three-quarters ebb, and on each side of it there were patches of shining mud, that reflected the glorious western sky, which turned the ooze into a mass of wonderful colors.

Though the writer was hungry, he forgot his hunger as he stood there watching. He was pleased to see the other man, also watching.

Presently the other man edged a little closer to the writer and remarked, "Throws up a 'sap of mud, don't she'?"

It was not the sunset he was seeing, but the mud. The glory that was thrilling him was lost on the other.

The world is there in those two men. They are representative; the whole world might be ranged behind one or the other—those who see the mud and those who see the glory. In life everything depends on the eyes we look with, and it is worth while to sacrifice almost all else if we may only get the right sort of eyes. Modern realism, so-called, is often the ability to see only mud. It is also a form of blindness, the inability to see the finer, purer aspects of life.

Cave drawings, 20,000 years old and depicting women dancers, found in a Spanish cave are described as the oldest fashion plates in the world.

## Forestry and Water-Power Developments Provide Cheap Newspapers.

While many means are used for the dissemination of news, the telephone, telegraph and radio, we cannot overlook the fact that the great distributor of news is the newspaper, says the Natural Resources Intelligence Service of the Dept. of the Interior. Back of the newspaper stands Canada's natural resources of forest and water powers. Newsprint is composed wholly of woodpulp, certain other chemicals being used only in the preparation of the pulp. In order to make the woodpulp a large amount of power is used. This power must be supplied at very low cost, for the reason that the product is a very low priced material, newsprint being sold to-day by the mills at a little over three and one-half cents per pound. It is estimated that a paper mill requires 100 horsepower for every ton of daily capacity—that is, a one-hundred-ton mill requires 10,000 horsepower. This power is supplied largely through the development of some of our magnificent water powers.

Not many people realize the speed with which newsprint is made. Machines have been installed within the mill that will make a sheet of paper 234 inches wide, and they are running at the rate of 800 feet of paper per minute. Taking the woodpulp in solution on the screen at one end of the machine, it is being wound on the roll at the other end in about one minute. This width of paper is divided into rolls of the length required by the different sizes of newspapers.

When we can put in an enjoyable hour or more reading our newspaper, at a cost of two or three cents, let us not forget that back of the paper, and providing the raw materials for its manufacture, are the forests and water-powers of Canada. For the benefits that the forests confer upon us let us reciprocate by guarding them against fire.



Hard Cash.  
First Citizen—"Has Zero made much money in the ice cream business?"  
The Other One—"He's made a cool million."

## Trials of an Editor.

Typographical errors and mistakes often seem extraordinarily funny to the reading public, but in the office where they occur they seem more like tragedies.

In an elaborate report of a Jewish wedding in the "Ohio State Journal" once said that the happy pair were followed closely down the aisle by the officiating rabbi. That seemed very funny to the light-minded, but it did not seem funny to the editor, especially when the bride's father called to see him about it.

## She Wouldn't Go.

A captain and his chief engineer, tired of endless debating on which one of them the ship could more easily dispense with, decided to change places for a day. The chief ascended to the bridge and the skipper dived into the engine-room.

After a couple of hours the captain appeared on deck covered with oil and soot.

"Chief," he called, "you will have to come down here at once. I can't make her go."

"Of course you can't," said the chief. "She's ashore."

## United States Motorists May Easily Holiday in Canada

Touring is one of the inducements to buy the car and is one of the principal uses to which it is put by a great many owners. Distance is so easily covered that every opportunity is taken to see new places and enjoy the benefits of the good roads wherever they may lead. This is well illustrated by the remarkable expansion of the American motor tourist traffic within the last few years particularly across the border into Canada. Canada has the natural attractions, agreeable climate, big game hunting, unexcelled fishing, waterways and scenery of supreme interest and other features that make her without a rival in the competition for the tourist traffic. Canada's highways are now comparable with the main highways of the United States and are being rapidly extended and improved.

### Distribution of Cars.

A study of the distribution of the enormous registration of automobiles in the United States emphasizes Canada's position in regard to American tourist traffic. More than 5,680,000, or 43 per cent of the total cars registered, are owned in States that border on the Great Lakes, and 1,750,000, or 47.5 per cent, are registered in the States that touch Canada or the international waterways. New York State, which lies within a day's run of Muskoka and the Ottawa Lakes districts and the Ottawa Valley, has 1,169,145 cars, Pennsylvania, which touches Lake Erie, has 1,088,387. Ohio, which also lies just across Lake Erie from Ontario, has 1,160,000 registered automobiles.

### Canada Very Close By Motor.

Over 3,000,000 cars are owned by persons who live within two days' run of Montreal, while over 4,000,000 car owners live within one day's run of Niagara Falls, Minnesota and North Dakota, immediately south of Manitoba, have 462,777 and 628,824 cars, respectively, and immediately south of these bordering states, Wisconsin, with 474,063 cars; Iowa with 569,353; South Dakota, with 127,400; and Nebraska, with 276,592 cars.

### Something Different Wanted.

Getting away from the normal is the ambition of every tourist and in this Canada offers inducements that will interest the most satiated traveler.

There is hardly a point on the Canadian border, that is more than one day's run from virgin and in some cases almost unexplored country. It is true that much of the hinterland of Canada cannot be traversed by motor car, but the opportunities for a change of transport to that of the canoe, pack horse, steamboat, etc., are as varied as the country is extensive. On the other hand to the tourist who prefers to stick exclusively to his car each province affords extensive roadways through areas of rare scenic attractions and abounding in large and small game and fish.

The Natural Resources Intelligence Service of the Department of the Interior at Ottawa will very gladly supply maps and special information regarding touring conditions in any portion of Canada to those who may be interested.

## Eat More Fruit.

It has been definitely established that iodine is an essential to health, and that in it we have a new elixir of life. Lack of iodine in the blood is responsible for many ailments, including goitre.

This lack of iodine is termed "iodine starvation," and to counter its effect it is necessary to absorb iodine into the system. The best way of doing this is by eating plenty of fresh fruit, vegetables, and common salt. Nature realizes the need of iodine, and we do much of her work by refusing salt and by peeling and boiling our fruit and vegetables.

Iodine is a perfect external germicide, and during the war its worth was realized as a first antiseptic dressing. Raw iodine should be taken only in reasonable doses, and always under the supervision of a doctor.

## A Sheaf of Sage Sentences.

There are all sorts of ladders by which to climb in the world, but so far as we have observed there is none of them that does not require to be scaled one rung at a time.

"There is plenty of room at the top," they say. Therefore help the other fellow to reach it with you.

Talking about ambition to get up in the world, we have noticed that it is most often realized by the chap who has the energy to get up in the morning.

Never make the mistake of thinking that you have to use dollar signs in order to spell success.

The fellow who regards a job as nothing more than a meal ticket is in danger of going hungry.

The survival of the fittest is, in large degree, the rule of life, but remember that it lies within your power to make yourself fit to survive.

## French Town as Undertaker.

The little town of Cruisery, in France, has gone into the undertaking business. For \$3 it will give anybody who wants it a first-class burial. All over the town gayly-colored posters announce that it is cheaper to get a municipal burial than a private one.

## FREAKS OF THE FOREST

In this country we take it as a matter of course to see apples and growing on trees, but if you find these fruits we saw such useful modifies as contents in the made shirts, or even plain but butter, we would certainly be that we were "seeing things."

In South Africa there is known as the milk or cow tree grows on barren, rocky soil and rain seldom falls, and the pear dry and somewhat thick roots lie rather than under it. In spite of its dried appearance, however, it is a refreshing milk if you made in its bark.

At sunrise, when the dew is abundant than at other times, natives within whose country the remarkable tree flourishes repair with sundry vessels and press "milk" it. The liquid is not sweet and nutritious, and with the air it assumes the appearance of consistency we associate with condensed milk.

This cow tree was first discovered by Baron Humboldt, and he crossed an even more extraordinary tree which bore ready-made milk. "In the forests of the Isthmus of Providence," writes Humboldt, "natives find their path to them on the trees. They cut off dried pieces and remove the milk without making any incision. The upper opening for the head, and two lateral incisions cut out to admit the arms."

In the South Sea Islands, in the Society group, grows a breadfruit tree. This fruit is the same shape and size as an apple, and on the end being a beautiful, snow-white substance revealed, which when prepared and cooked, becomes a soft floury as a boiled potato. The Islanders it is used in place of and forms an important part of their primitive menu.

The shea or butter tree also grows in the interior of Africa, and its seeds, the same size as a walnut, proper reason these husks are showing within little white seeds, which when prepared and then boiled, give forth a substance resembling our butter. This is a rich flavor, and has the effect of being able to keep a while without salt.

In the old books of natural history it is amusing to read the account of the weird and wonderful salt half-plant and half animal, which is believed to exist in foreign lands. The singular nature of these animals is the vegetable "hamb," which John Mandeville declared to be growing on a tree in Tartary.

He ingeniously describes it "little Beastie in Fleece, in B. in Blode as though it were a Lamb with outer Wollie." This is a good effort at drawing long bow, but, of course, what have been was no doubt a coat in full bloom, although in the accompanying illustration depicts a tree with a herd of sheep in its boughs.

Now and again when rosewood, bamboo, and other tropical trees, certain stones, pearls and opals are found, and a museum at Kew Gardens is that was actually discovered the shell of a coconut.

Such vegetable gems are valued by Indian princes, and passed as charms against other misfortunes.

These coconut pearls are identical in composition with found in oysters, although they do not possess quite the same lustre as the animal product, because the composition is less of lime, and there is little of the masses develop inside, and when an excessive amount of lime has been taken up by the tree.

What We Owe to the Electric Light.

Unimportant and trivial details often led to epoch-making ideas. Just as we are told that the first steam engine came from James Watt and the kettle on the hearth, so the twitching of legs played no small part in the history of the first electric light.

Professor Galvani, a noted scientist and anatomist, had a copper skewer through the hand of an iron nail in his lab. As soon as the copper touched the nail he noticed a convulsive twitch of the legs. That this was due to electrical influence he proved by putting a nerve in the frog's limb piece of zinc and a muscle with of copper. As soon as the metals were connected together a convulsive twitch took place. And it was being the first recorded use of the electric battery.

From the crude cell filled with water of 150 years ago, we to the modern dry battery and accumulator—truly a great achievement.

The Seed-scuttlers are a wide organization of men, women and children, more than half a million, pledged to scatter a half packet of flower-seeds along their roads every year.