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 into even larger figures. There are locks on the steering wheel, the moto-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 at present, it was the practice to have the bolts long enough 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 splitting 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 over which he ruled were made in this fashion, 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.

He—"My first wife married me for my money."

She—"How'd she make out?"

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—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.

A Swiss traveller recently paid a visit to the underground Town of Gharian (or Assabat), 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.

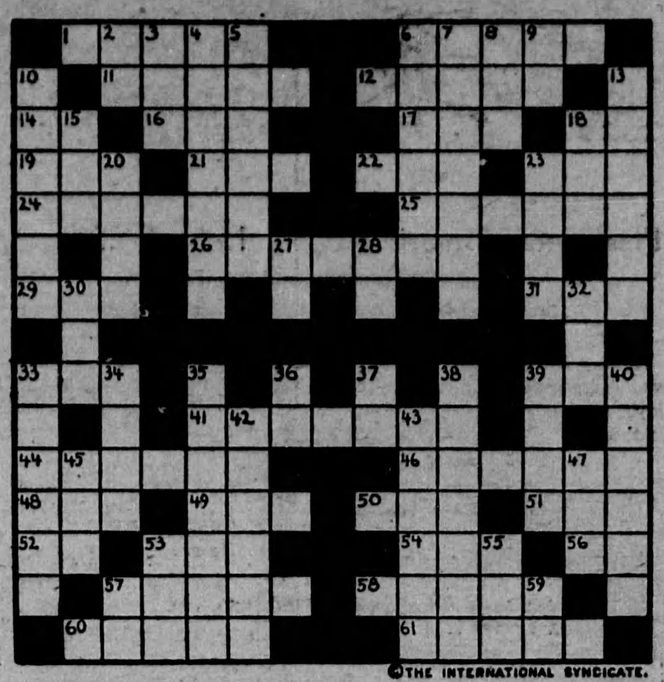
There are flats several stories high, in which goats, chickens, etc., share the rooms with their owners.

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.

CROSS-WORD PUZZLE



©THE INTERNATIONAL SYNDICATE.

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—Seraglio
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.)
23—Poet
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 wrongfully
53—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 cahburetor 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 ne'er a bit of time to see
About our own machinery!

England's Short Parliaments.

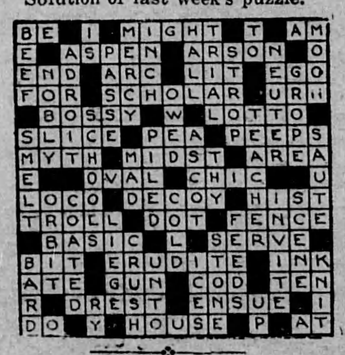
The shortest Parliament in English history was summoned on September 30, 1399, for the purpose of deposing Richard II., and was dissolved the same day after fulfilling this task.

The Parliament which Charles I. summoned in 1625 failed to please that exacting monarch and was dismissed after five months, whilst the Barebones 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 McCorthy 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 towards 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 he-
eyes and sunken cheeks. Then he re-

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 hartily and invited him into his home.

"Plenty fish," said the Indian, waving aside the money that the visitor offered him. "Him cheap."

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.

It's 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 silven bowers,
My beds of bracken and fern.
The spots where I lie and rest me
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 Battersea, 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 'eap of mud, don't she?"

It was not the sunset he was seeing, but the mud. The glory that was thrilling one 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 past few years 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, the "Ohio State Journal" once said that the happy pair were followed closely down the aisle by the officiating rabbit. 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."

Here are some of the houses erected by the British Red Cross Society at Norwich for disabled soldiers. They contain every labor-saving device known to modern science.