

THE AUTOMOBILE

SOURCES OF CAR NOISES SHOULD BE LOCATED AT ONCE

Can the people in your neighborhood tell when your car is passing their place, even in the night, by its various and sundry rattles? A distinguishing rattle of a car might be of value in locating the thief in case your machine is stolen. But the clattering noises that some autos give out certainly do not add to the pleasure an owner ought to get out of driving and they do not make for peace in the neighborhood.

There is no end of noises which may develop from the chassis of a car and make it clank, clatter and click like a mowing machine as it goes over the highway. Often they are extremely difficult to locate, being at times so obscure as to defy detection even by an expert automotive mechanic.

Such was the trouble with a car which developed a sharp click whenever it was started forward or backward. It ran quite a long time before it was possible to discover just what and where it was. It was somewhere in the back, but so hidden as to defy detection. The rear axle was of the floating type, the construction in which the driving shaft is connected to the hub of the wheel by a number of flutings on the shaft, into which corresponding projections of the flange fitted. These had become worn and allowed sufficient play to cause a noise.

Trouble Detected by Feeling.

By walking alongside of the rear wheel while the car was being started and stopped it was decided that the sound came from the hub of the wheel. The hub cap was removed, and by placing the finger on the hub flange and end of shaft at the same time the play was detected by the sense of feeling, though it was hardly visible to the eye. The trouble was overcome by having the shaft welded to the flange.

There have been cases where the wheels were keyed on and where the keys had acquired sufficient play to cause a continuous knocking, especially when the machine was being driven at low speed. This sort of knocking is more likely to occur with the four-cylinder, slow-speed engine than with the high-speed, many-cylindered type.

A mysterious knock may sometimes be traced to the torque rod, when it becomes loose at the forward end, or to worn torque tube bearings, and in some cases the bolts fastening the torque rod to the rear axle become

loosened or worn, causing a knock, especially when going over bumps or dropping into holes.

The brake rods become worn and set up a continuous clatter on rough roads, and this noise is accentuated if the tires are kept inflated at too high pressure. As a matter of fact the car owner has the choice between the greatest life for his tires and accompanying rattles and discomforts and riding at a sufficiently low pressure to subdue these noises and make life in a car worth living. Of course, there will be an attendant higher wear of tires. Where the wear cannot be taken up by adjustments or using new bolts or pins, often the rattle may be ended by wiring a spiral spring to the frame and rattling part. This keeps it taut.

Keep Bolts Lubricated.

Worn spring shackle bolts will not ordinarily cause knocking or rattling, but when going over bumps or holes the rebound of the body is sufficient to make the looseness audible. It can be overcome by having a new bolt put in, and prevented by keeping the bolts well lubricated.

Worn steering-knuckle pins and tie-rod bolts will sometimes be found responsible for knocks and rattles in the front end of the car. The remedy is obvious and the location of the noise not so hard to find.

In addition to these we have rattles due to tools being thrown loosely into the tool box, and sometimes from the body bolts having become loosened. The lamps occasionally fall loose and the license plate bracket is sometimes so loose that it is audible as well as visible.

There are other knocks due to broken gear teeth and other broken parts, and sometimes these broken teeth, loose nuts, bolts or pins in gear or differential case become wedged between the gear teeth and cause a knocking that is not hard to locate, albeit rather expensive to repair.

And then there are the knocks and rattles from the hundred or more accessories which are attached to the chassis of many cars and which, sooner or later, develop defects and noise.

The up-to-date, well-designed car in perfect shape is practically noiseless, and if a knock or rattle develops it indicates that something is worn or out of adjustment, and needs attention. The owner who takes care to have all parts properly lubricated and kept tight need fear none of these annoyances, and proper attention means lack of annoyance when out touring, while slovenly habits will advertise themselves to everyone along the road.

An Odd Use for the Phonograph.

Many popular ideas regarding the cries of animals are altogether wrong. This is shown by experiments carried out recently by means of phonographs to discover the sounds which creatures really make.

It is commonly supposed that sheep "Baa." What the animals really say, according to a phonographic record, is something like "Maa." A close examination of the mouth of the sheep shows that the animal cannot form the letter "B" at all.

How many people, if asked to imitate a dog barking, would say something like "Bow-wow"? But the dog does not say this at all. On the phonograph the sound is just like "Wow-wow."

Most people refer to the growl of a

tiger. This creature does not growl at all. Its cry has been shown to be a kind of cough. This resembles a sort of "Wout-wout," although, as a matter of fact, it is very difficult to put the noise into words.

Two birds were tried in order to see what kind of a noise they make. Crows are said to "caw," but the sound they actually make resembles "haw." It was shown that pigeons do not "coo," the cry they utter being more like "hoo."

Bamboo has been found successful as a reinforcement of concrete piles for use along a Chinese railway. Four strips of green bamboo, tied together at 1-ft. intervals with square loops, also of bamboo, are placed at each corner of the pile and run lengthwise with it.

Canada's Fur Auction Sales

During the month of September the fourth sale of the Canadian Fur Auction Sales Company took place at Montreal, when the same gratifying indications of the successful building up of a national fur market as have characterized the previous sales since their inauguration in the spring of 1920 were exhibited. More than one million dollars worth of furs, in the main the product of Canadian traps and ranches, were disposed of, the high quality of the product arousing much comment, and the prices, in the face of general conditions, being considered very satisfactory.

The significant feature of this sale, as of past sales, most pleasing and encouraging to the national movement to build up a Canadian fur market for Canadian furs, was the keen international interest evinced in the proceedings, buyers having arrived at Montreal from London, Paris, New York and most of the fur centres on both continents. Skins, though in the main a Canadian product, had also arrived from all parts of the world, there being consignments from the Southern United States and some having even travelled from far off Afghanistan by way of the Khyber Pass to India on camels, a distance of over 1,000 miles, and thence to Montreal by parcel post.

The pelts offered for auction at the sale comprised practically every animal trapped or farmed for its fur. There were 146 silver fox pelts, mostly from Prince Edward Island, sold at various prices up to the record of \$800, whilst a small selection of white foxes sold at figures ranging round

\$40. A total of 24,613 skunk skins, mostly of Canadian origin, found buyers at prices as high as \$5.60, a big advance over the spring prices. Fifteen thousand and American opossum and 6,994 Persian Lamb skins were featured in the sale; there was a large aggregation of otter and beaver, whilst 3,423 red fox skins brought an average of well over \$30. A collection of mole skins totalled fifteen thousand.

In the opinion of the management the proceedings of the auction were successful beyond expectation. Prices for the better grade of furs were considerably higher than in the spring whilst medium grades maintained their standard. Beaver, otter, fisher, marten, mink and lynx sold uniformly at twenty per cent. in advance of spring prices; racoon had advanced ten per cent., muskrat thirty per cent., and bear as high as fifty per cent. Otter sold for around \$45, lynx \$45, and bear \$22.

The Montreal and Winnipeg fur sales, as periodical events of international interest, may now be considered to be firmly established, and in the secure standing she has achieved, the Dominion has assurance of permanence and increasing importance for her national fur market. As the world's premier fur producer, both in quality and quantity, Canada has too long lost much of the accruing revenue by permitting the fur crop to go to foreign markets for auction, and the success of her first fur sales evidences that from the long established fame of her products she has no difficulty in attracting to her sales the world's best buyers.

—and the worst is yet to come



THIS LIFE IS WHAT WE MAKE OF IT

THEREFORE AVOID IMITATION.

Think and Create for Yourself. It Will Add Immeasurably to Your Enjoyment.

"How little we make of life considering what it offers," said a friend of mine recently.

That is perfectly true writes Geoffrey Rhodes. Most of us pass our time in a mechanical round of trivial interests that we magnify to fill our thoughts and days. The big crowd of us live an involuntary existence hardly requiring any original thought, sheepishly moving in a narrow rut of soul-destroying routine; devoid of new ideas or original thought.

Instead of making life a joyous pilgrimage, we allow it to degenerate into a tedious journey, affording few interests and little enjoyment.

It may be a fact that there is nothing new in this old world of ours, but all the same the old truths have to be freshly explained to each generation as it comes along. And today we have so many toys with which to amuse ourselves that we have almost forgotten how to play.

Play is not the counterpart of work. It is the opposite of toil, and that is quite another thing.

The Way to Your Better Self.

No one is expected to like toilsome labor. The only benefit we get from our elaborate machinery is that it takes the drudgery off one's shoulders. But work is what gives the zest to play. If all work and no play makes Jack a dull boy, all play and no work is infinitely worse.

We are surrounded by opportunities for enjoyment for ourselves and our fellows. All we have to do is to take advantage of them.

We all crave for the same thing: only some call it happiness, some health, some wealth. If we take the trouble to define our wants we shall find that they all come to the same thing. The millionaire only hangs on to his money-bags because he can use them to procure health and happiness. If he goes about the job intelligently he is quite as sensibly employed as the poorer man saving a few dollars to take his family on a holiday. May they both be successful!

After all, what does the magic word success itself mean? All these terms so much in use are purely relative in their interpretation.

I may be fairly successful at writing an article for a newspaper, but I am sure that I should be a hopeless failure on the Stock Exchange. I know a man with a big banking account who has been what is called successful in business; but he is hard put to it to express himself clearly in half a dozen lines on a postcard. He would certainly not be a success as a journalist.

We all have our little triumphs and our little failures; stepping-stones to our better selves.

Indeed, what is sport but just obstacles in our own path, placing for the sake of the fun of overcoming them? That is the spirit to cultivate. Enterprise, initiative, will-power, resolution, call it what you like, it is the same, the determination to face facts boldly and not timidly like a child in the dark.

A Heritage of Wisdom.

Self-knowledge and self-government are the two requisite qualifications for the enjoyment of life on this planet. We have to remember that we live in an emotional world of opinions and not in an Aladdin's cave. And it is our personal estimation of things that gives them their worth, nothing else.

The old Duke of Argyll used to tell an amusing story in this connection.

He was once remarking in the Highlands on the beauty of a copse of oaks on a mountain side.

"Yes," said the laird, "but I think they would look prettier still in the corner of a banking account!"

As the duke pointed out, he felt that if the question of intrinsic value of the timber was concerned, it seemed to him that more real wealth was represented by the oaks standing on the landlord's land than a mere ink mark in an account-book. But the laird evidently thought otherwise.

After all, everything is useful to somebody somewhere. We all know that even dirt is only matter in the wrong place. Our greatest treasure is undoubtedly the noble heritage sleeping in the very drops of our blood. Deep down in our hearts and minds, beneath the fleeting fancies and ideas of the hour, lies a wealth of wisdom and experience gathered by our parents and their parents again before them, bequeathed unconsciously by them to us, their children.

All this experience and wisdom is there ready when needed; but we must give it an opportunity of rising to the surface before it can be available for use. That means we must occasionally stand aside from the noise and the bustle of existence to give ourselves time for thought.

Feeling, thinking, doing. They must all share our attention in turn if we wish to make the most of our talents.

Keep Moving All the Time.

We must cease to accept our ideas from our neighbor ready made. We must think things out for ourselves. It will add considerably to our enjoyment of life, and increase our mental powers to an extent almost beyond belief. To use our brains is to improve them. An old proverb says that "What we don't use we lose." So, on the converse, what we use to advantage, we improve immensely.

Get at the why and the wherefore of everything. Don't be satisfied with hearsay evidence. Follow the scientific plan. It is the only common-sense method of learning one's way about the world. Sift all facts given you and eliminate the rubbish.

When at last you have the pure metal refined from the alloy, study it well and see what you make of it. It will repay you. Weigh up evidence as the baker weighs the loaf, and then you will have something definite, something useful added to your store of knowledge. Systematic thought is a bracing pastime.

A disorderly mind is like a stone in your shoe; it will give you no peace till you put it right.

When all is said and done, Life itself is the supreme proof that with all its troubles it is a gift worth having.

Only don't mark time; always advance!

Clinched It.

Aunt Jane, who was a spinster, came to visit her sister and family of four children. And from the very first auntie was very much given to offering advice to her sister on the way to feed, dress and treat children, generally. The sister listened in perfect good humor, but not so Sally, her efficient helper. And frankly, Sally said so. "Look here, Miss Jane," she began, "What do old maids like you and me know about raising children? We ain't never had none and a person has to have children to know how to raise them."

Aunt Jane smiled a tolerant smile. "Oh, not always, Sally," she returned. "Now take those little chickens out there. Don't you think you know more than their mother? You feed—"

But Sally interrupted her. "Yes, ma'am, I feed them, but that's what you mean. But I ain't never yit taught any of them to scratch—have I?"

The fastest trains in the world are said to be two on the Great Western Railway, which at certain stages of their journeys travel at a speed of 78.5 miles per hour.

Stories of Famous People

One of the most-travelled men in the world is Mr. J. J. Virgo, the world representative of the Y.M.C.A. He has covered over half a million miles in every quarter of the globe, and it is his boast that he has ridden in every type of vehicle known to man, from a motor-car to the primitive carts used in China.

"When I was twenty-one," he told the writer, "I became the general secretary of the Y.M.C.A., refusing a partnership in a good firm of accountants to do so. During the war I was national secretary, visiting all the battle-fronts and speaking to two million soldiers. Now I am going to Australia to begin another world tour."

Mr. Virgo has been in shipwrecks and train smashes, and has had many other narrow escapes from death.

A most nerve-racking journey has just been completed by Professor Soddy, of Oxford University, who brought \$350,000 worth of radium from Czechoslovakia to England.

There were two grammes, and during the journey they had to be guarded day and night against robbery. At Munich the train was fired upon, and a bullet struck the Professor's couch.

The largest quantity ever transported, the radium probably will be placed temporarily in Oxford University.

A good story is told about himself by Sir Arthur Conan Doyle, the famous author of the "Sherlock Holmes" series of detective stories.

"After lecturing in New York," Sir Arthur says, "I read in the papers that 'as the author advanced to deliver his lecture, a thrill of disappointment ran through the assembly.' The audience had expected to see a cadaverous-looking person with marks of cocaine injections all over him."

Just over eighty years ago James Brooke, a young Englishman, left his home and went abroad. He arrived at Sarawak (Borneo), and in course of time was proclaimed Rajah. For twenty-eight years he ruled over a territory comprising 45,000 square miles, and with more than 500,000 population.

The present Rajah, Charles Vyner Brooke, succeeded in 1917, and is worthily carrying on the traditions of the Brookes. He married in 1911 Sylvia, the younger daughter of Lord Fisher.

Cured by Fruit.

During the Seven Years' War only fifteen hundred sailors and marines were killed in battle, but the loss from disease was close upon 134,000, and nearly all these died of scurvy.

It is only by looking at records such as these that we can realize what a terrible thing scurvy was to our forefathers. From the sixteenth to the eighteenth century it was killing its millions all through Europe. It was, indeed, a far greater scourge than yellow fever or cholera to-day.

Nowadays scurvy is almost unknown. It exists only in very remote mining camps where men are cut off for many months at a time from civilization and have to live entirely on tinned or meat food.

Scurvy causes bleeding of the gums and nose. The limbs swell, the teeth fall out, the sufferer collapses and dies.

It is now known that scurvy is caused by being deprived of fresh vegetable food, but even people so situated that vegetables are beyond their reach need fear nothing so long as they have plenty of lime-juice.

It was the importation of the lime from the West Indies into Europe that killed scurvy. All ships likely to be a long time at sea have to carry lime-juice and to allow the men a certain amount.

Indeed, on a whaling ship, or a sealer, the skipper generally sees to it, personally, that each man takes his "whack" daily.

The lime, which is a small kind of lemon, is medicinally the most valuable fruit in existence. It not only prevents scurvy, but, if taken in time, cures it; and it will also cure many forms of blood-poisoning, if taken in sufficient quantities.

As many as twenty times a day are sometimes prescribed, and the cures effected are amazing.

Choosing Brides for Turks.

Marriage in Turkey is a very prosaic affair, it being in a majority of cases quite a business matter. When a man wishes to wed, his parents obtain a list of houses where eligible girls are to be found, and the mother then calls at these.

"What can your daughter do?" she asks, whereupon embroideries, carpets, rugs, etc., are exhibited as evidence of the girl's handiwork. If these are approved by the mother, she takes the goods home to her son and induces him to marry the clever young woman.

If, on the other hand, she does not think much of the work, she makes some diplomatic excuse, and passes on to another house on the list. If, however, the young man is not liked by the girl's parents, the mother is advised to seek elsewhere.

In Sweden and Norway, a legal marriage at one time was not allowed to be solemnized until both parties had produced certificates stating that they bore genuine vaccination marks.

Some of the older houses in Holland have two doors, which are used for marriages and deaths only. By one door the bride and groom enter, and through the other they are carried out when dead.

Ropes from Bananas.

Though Manila rope is not so reliable as hemp, it is much cheaper, and for certain purposes it is better. It is used on board ship and in numerous other ways. The name comes from the chief town of the Philippine Islands, where it is made.

The rope is made entirely from the stalks of the leaves of a species of banana. These stems contain a coarse, tough fibre which native laborers extract by hand.

When they have been cleaned, dried, and sorted, the fibres are ready to be sent to the factory. It is the finest of them that make the best rope. The coarser fibres are not sufficiently flexible to stand the twisting and bending that must be endured.

Machinery spins them into a kind of yarn not unlike coarse wool. The next process is to twist several yarns into a strand. Three or four strands are then placed side by side, and passed through the laying machine, which twists them together into a great rope that will hold a battleship.

Eye Items.

Thousands can see the same object at the same time. That seems nothing extraordinary, yet really it is a miracle! It is only possible because in the wonderful scheme of things an object throws off from its surface millions of rays in all directions. Each person, according to his position, seizes literally, on one of these rays, and travels along with it, ocularly, to the object.

The eye is pained by a sudden light. Why? It is because the nerves of the eye are hardened with rays before the pupils have had time to contract and receive them.

Again, if we have a well-lighted room and go into the street, everything seems much darker than it actually is. That because the eye pupils, contracted indoors, have not had time to dilate and catch the lesser rays outside. "Getting used to the dark" is merely waiting for the pupils to dilate.

Cats, Owls, and Tigers see in the dark because they have the power of enlarging at will the pupils of their eyes, and thus collect all the scattered rays of light there are, which are present even in "darkness."

Do we know why we can see ourselves in a mirror? It is not because the mirror is a mirror, but because the rays of light from our face, striking against the glass, and unable to pass through it because of the "backing," are thrown back again to our eyes. They rebound, in short.

Finally, with two eyes we apparently ought to see double, and we do! But the two images fall on the two retinas simultaneously, and are combined in one. There's more in the eye than one would think!

Can Bees Tell the Time?

A French expert declares that bees are able to tell the time.

This ingenious Frenchman conducted an interesting experiment. He began by breakfasting in the open air at seven o'clock, partaking of light preserves. Precisely at ten o'clock the table was cleared. At the midday meal no sweets were served; but at four o'clock in the afternoon there was a light lunch with sweets.

Within a week all the bees in the neighborhood seemed to get wind of what was going on, for they came in such swarms that they covered the table, and the meals had to be served indoors.

For weeks the visits of the bees were as regular as clockwork. They omitted the midday meal because no sweets were served then.

Subsequently a jar of jam was placed in a window for the first five minutes of every hour during the day. Within a short time the bees made hourly visits with such regularity that the time of day could be judged without reference to a clock.

Barbers as "Best Men."

In India haircutting seems to be the least important of a barber's duties. Because of his numerous lines of trade he is in constant demand.

On the occasion of a birth the Hindu barber is the man employed to carry the eventful news to relatives, and at a funeral he shaves the heads of the living—and the dead.

The Hindu hairdresser has no shop, and, unlike our barbers, he displays no poles, signs, or symbols. He can be seen strolling near the bazaars with a small bundle under his arm or carrying a little bag.

He bores the girls' ears and noses for the various rings which are worn, while he will undertake almost any surgical operation. Besides births and deaths, he attends marriages. At a wedding this busy barber acts as "best man."

New Canned Food.

A newly patented kind of food, put up ready for the housewife's instant use is prepared by mixing fine-chopped meat with milk and a little flour. The paste thus formed is filled into molds and exposed to heat, whereby the contents undergo slight shrinkage and acquire a sort of "skin." The molded masses are thus easily dropped out, to be thereupon put into cans, which are sterilized and sealed.