

# AUTOMOBILE

## CROSS-EXAMINING AUTO AS TO WHY IT WON'T RUN.

Finding out the trouble with an automobile when it won't run is, according to experts, like running down a criminal. It is a process of cool and logical elimination. The motorist, unless he is an expert himself, reading sounds and signs with swift and unerring accuracy as to their cause, should first clear his mind of all prejudices and passion. Every preconception should be magnanimously dismissed from his thoughts, no matter how great his haste, how inclement the weather, before seeking the truth and nothing but the truth, he begins to cross-question the auto by trying one part after the other.

Nor is the process of elimination one which the motorist may follow according to his own notion. As in the courts of justice, and in the laboratory of the chemist, and of the mechanical engineer, there is a right order in seeking out the true cause. What this order is for the stalled automobile an expert describes in the following:

"If the engine stops on the road and pressing the starter pedal fails to start it, the first thing to do is to get the crank out of the tool kit and crank over the engine. If, with the gears in neutral, the engine cranks over hard, it indicates a lack of lubricating oil or a lack of water, which has allowed the engine to reach a temperature where the lubricant fails to perform its work. If the engine turns over fairly easy it is not necessary to look for oil or water trouble.

**The Second Step.**  
The next test is for compression. If the driver is not experienced and is unable to tell simply by the resistance to the starting crank if each cylinder has compression, he should open all petcocks except on one cylinder and turn the crank two revolutions, noting if there is a resistance for one-quarter of a revolution in the two revolutions. Compression occurs only on one stroke of the piston in the four-stroke cycle. Each cylinder should be tested in a similar manner, opening all petcocks except one on the cylinder being tested; see if the compression is practically equal in all cylinders.

"If one cylinder has very weak or no compression, the trouble will be found usually in the exhaust valve. First examine the push rod to see if there is clearance between it and the valve when the valve is supposed to be closed; if there is, the valve must be lifted out and the valve seat inspected for carbon. Sometimes a piece of carbon will lodge on the valve seat and, due to the hammering of the valve, will become fastened to valve or seat. For temporary repair generally it can be scraped off with a knife and the valve be ground in upon reaching the garage.

"If the trouble is not in the exhaust valve, it might be in the intake valve. In some types of engines the valve head may break off and get into the cylinder and when the piston comes up punch a hole in the piston head. A petcock may be loose so that it will jar open sufficiently to affect the compression and so cause the cylinder to miss fire. These troubles usually are confined to one cylinder and not to the whole engine.

"The gasoline in the bowl to be inspected. In the gasoline in the bowl of the carburetor. This may be determined by inspection, opening drain cock, or 'kicking'—flooding. If not examine gasoline tank and see if there is a supply; then see if the shut-off valve in the line leading to the carburetor is open; if so, drain the bowl

of the carburetor to get rid of possible clogging of gasoline pipe or carburetor screen, notice if the bowl fills up again in a reasonable time.

**Inspect the Manifold.**  
"Do not adjust the carburetor. If the engine has been running it is practically certain that the carburetor has not become out of adjustment. Inspect the intake pipe, or manifold, to see if it has been loosened by vibration. If the engine still refuses to run, put about a tablespoonful of gasoline in each cylinder and crank over the engine. If this runs the engine for a few revolutions it indicates that the trouble is in the gasoline system and leaves but the spray nozzle, which may have dirt lodged in it, or the auxiliary air valve, which may be stuck, as remaining causes.

"Next inspect the ignition system. The first thing to do is to loosen one of the wires from a spark plug and lay or hold it so the bare end will be one-eighth of an inch from the base of the plug and have some one crank the engine by hand or with the starter. If a spark does not occur, go first to the interrupter points and short circuit the fixed point with a screwdriver or other metal tool and see if there is a spark. Examine the points for dirt and see if they come together and open properly. Then examine the condition of the battery, testing it. Examine the connections on the battery, which sometimes jar loose; examine the wires leading to the interrupter and switch; see if they are loose or broken, or short circuited. This need not be done if the spark shows at the interrupter.

"Examine the distributor for moisture or dirt and see if the wires have become loose. If a magnet only is used, it is a simple matter to see if the interrupter points are making and breaking properly and if the distributor is clean and dry. If these appear to be all right the trouble is doubtless in the armature windings or the condenser and cannot be repaired upon the road.

**Testing the Spark Plug.**  
"The wires to the plugs may be burned or short circuited. If, with an apparently good spark, we have compression and there is a mixture passing into the cylinders, the trouble may be in the spark plug. To test a spark plug it is necessary to remove it, clean it and lay the plug with wire attached upon the cylinder; crank the engine and see if a spark jumps the gap. Widening the gap is necessary, because the spark will not jump so far under pressure as in the open air. If it does not jump, the plug may have a broken insulator or need cleaning. An extra set of plugs should be carried to replace those which become dirty; cleaning should be done in the garage. If uncertain about condition of plug, exchange it with one in another cylinder that is working properly.

"This covers most of the usual troubles experienced on the road. There are, of course, a great many other possibilities, but if these tests, carefully made, do not disclose the cause of the trouble, it is advisable that the novice send for a garage man. If one or two cylinders miss fire, the trouble is most likely to be caused through lack of compression or short-circuited spark plug. If the engine refuses to run, the trouble is most likely to be due to lack of gasoline or failure of battery or magnet.

**A Grave in France.**  
A grave in France, upon a wind-swept hill  
Once rent by shrapnel! Now the  
grave  
Of all-repeating nature clothes the  
place  
With living green, luxuriant o'er the  
chill  
Spent ashes of the dead. Joyously  
thrill  
The lark, a soaring song, floats in  
Of sunlight heaven, and there is scarce  
a trace  
Of war's wild tumult in a scene so still.  
The grave in hearts that gave, and  
giving,  
A grave in France! But darker, sadder  
far, broke  
In silence, sorrowing without sur-  
cease  
And yet they know, grief-stricken as  
they are,  
That what was sown with tears 'mid  
battle smoke,  
Should spring in flowers of freedom  
and of peace.  
—George L. C. Moore.

**Doing**  
By Dr. Frank Crane  
Doing clears the mind. Physical activity has a peculiar luminous effect upon the judgment.

The soundest views of life come not from the pulpit or the professional chair, but from the work-shop.  
To saw a plank; to paint a house crazily; to run a locomotive or raise a good crop of corn, somehow reacts upon the intelligence, reaching the innermost cell of wisdom, provided always that the worker is brave and not afraid of his own conclusions.

Doing makes religion. We thrust out religion with our own hands, and send it out with our own visions.  
Doing creates faith. Doubt comes from idle hours.  
Those who believe that the world is growing better are the men and women who are trying to make it better.

Doing brings joy. The sweetest of joys is the joy of accomplishment.  
Make love and you will feel love.  
Cease making love and you will doubt love.  
Be kind, steadily and persistently, and you will believe in kindness.  
Be unclean and you will soon sneer at anybody's claim to virtue.  
Be mean and you will cease to believe there is any goodness in the world.  
A man has his own destiny, his own creed, his own internal peace, his own nobility in his hands, for all the worthless wisdom of goodness which you have in your head and heart was soaked up from your hands.

**The Relationship.**  
Michael's mother had married again, and though Michael didn't in the least object to his new father, he was somewhat puzzled as to their relationship.  
"Mother," he said, "is this man my step-papa?"  
"No, dear, he's your step-papa."  
"Well, mother," continued the child, "you call me your little lad, don't you?"  
"Yes, dearie, you are mamma's little lad."  
"Then, mother," concluded Michael, "I suppose I must be my step-papa's little step-ladder."

**Very True.**  
The master was examining his class in mathematics.  
"Now," he said, "a plate is brought in, on which there is a jam tart. Well, I'm going to divide that tart. I am going to give Johnny one-fifth, Willy one-fifth, Tom one-fifth, and take one-fifth for myself. Now, James, tell me what would be left?"  
"The plate, sir," replied James.

## and the worst is yet to come



Big Ben Beaten.

An Irishman on a visit to London happened to pass the Houses of Parliament. He cast an interested eye at Big Ben, and after a little consideration, adjusted his watch by it.  
The next day he happened to pass by again, and pulled out his watch to see if it was correct. He looked very bewildered when he found that his timepiece had gained five minutes.  
With a final glance, full of contempt and scorn, at the towering Big Ben, he turned away, muttering to himself: "Arrah, ye great big spalpeen! Fancy letting a little watch beat ye!"

**Hydro in Italy.**  
Italy is building certain hydro-electric stations that will give that country 1,311,330 horsepower, double the amount existing five years ago.

He who spends for false pleasures loses what he had and gets less than nothing in return.

**Catching Crooks by Wireless**  
A sharp, cold wind blew up the St. Lawrence River from the East, and with it came the fog from the Atlantic. Four masts and a funnel loomed up indistinctly, away out on the waters where, a few minutes before, sunshine had held sway.

From the shadow of the wharf at Father Point a shot snuffed out and lost itself in the mist. The dismal horn of the lighthouse bony sent out its warning message.  
In the skiff four sailors—pea-jacketed, brass-buttoned, visor-capped officers of the pilot service—rowed with grim determination.  
On the steamer Montrose, five or six miles down the river, a nervous, carefree passenger paced the deck. "Half-speed!" rang the bells from the bridge.  
"What are we doing now?" inquired the passenger of Dr. Stewart, the ship's surgeon.

"This is Father Point, Mr. Robinson, and we take the pilot aboard here," replied the doctor. "You can see the boat coming out to meet us—yes, over there."  
"There seem to be a good many plights in the boat, doctor," remarked "Mr. Robinson." And as he scanned the approaching craft there was evident anxiety stamped on his face.  
"Yes," replied Dr. Stewart; "there are four."  
"Stop!" changed the bell from the bridge to the engine-room. The men in the skiff rested on their oars, a rope uncoiled neatly, and the little craft was drawn alongside the larger vessel.  
A few seconds later Inspector Dew, of Scotland Yard, and his companions stood on the deck of the Montrose. The little party stood chatting with the captain of the Montrose—Captain Kendall. Dr. Stewart and "Robinson" were walking up and down the deck. Inspector Dew glanced sharply at "Robinson." Yes, there was no mistake; he was his man.  
Quietly the inspector went up to "Robinson."

"This is the story of the first arrest ever made by wireless. That was twelve years ago, but it gives a hint of the possibilities of using wireless as an aid to the apprehension of criminals."  
"I want to see you a moment below," he said, turning to Chief Constable McCarthy, who had accompanied him, he said, "That's the man." "I arrest you in the name of the King," said McCarthy to "Robinson." "You are my prisoner. Anything you say will be taken down in writing and used in evidence against you."  
A few minutes later a woman's scream from below told that Miss Le Neve, still in her disguise as "Mr. Robinson's" son, had also been discovered and arrested.  
These arrests had been brought about by wireless. Two hours out from Antwerp, Captain Kendall had had his suspicions that amongst the passengers on his ship he numbered the wanted Dr. Crippen and Miss Le Neve. He made astute investigations and two days later was sure that he was right that he was wired to his owners.

They communicated with Inspector Dew, and the Scotland Yard detective rushed off to Liverpool to catch the next boat to Canada. It happened to be the Laurentic, and it landed him in Canada just before the Montrose arrived.  
On the morning of the arrest the following wireless had reached him from Captain Kendall of the Montrose:  
"Crippen is having breakfast. Suspicious out to the letter. Le Neve not yet—Kendall."  
Captain Kendall told Dew after deck and lock alike: "The wireless aerial and listen to the crackling electric spark as messages were sent out by the Marconi operator. Once he remarked, 'What a wonderful invention! That is the story of the first arrest ever made by wireless. That was twelve years ago, but it gives a hint of the possibilities of using wireless as an aid to the apprehension of criminals.'"

### Rippling Rhymes

Walt Mason

#### HOURS OF REST

Tired Father to his home repairs from labors in the mart, where he has climbed nine miles of stairs, until he broke his heart. That organ, in his manly chest, will be a total loss until long hours of healing rest he's safely put across. And if his wife is good and wise she'll grant him his repose, nor order him to swat the flies or weed the garden hose. Too often home turns out a fake because of endless chores; the man who earns the bread and cake can't saw off peaceful snores. The chicken house is full of cracks; he hears the housewife say: "The chicken lantern and an ax and fix them right away." Far better burn the stricken man who only yawns for rest, than worry due the tortoise pour, lets all the water through." The wife proceeds, "and our front door is badly out of true." All better let the old roof leak, the doors be hard to close, than bore a man who's worn and weak, whose muscles need repose. Let peace surround the aching dome when comes the close of day, for he who brings the bacon home should have the right of way.

## KARAKUL SHEEP IN BRITISH COLUMBIA

### PRODUCE PERSIAN LAMB AND ASTRAKHAN FUR.

#### Keen, Dry Atmosphere of Western Canada Suits This Hardy Breed.

Considerable interest has been centered in Canada on the progress of the introduced Karakul sheep, those natives of the sandy deserts of Bokhara whose young produce the fur known variously as Persian lamb, Karakul, and Astrakhan. A sufficiently definite success on a wide enough scale, would seem to have attended the efforts of Western Canada breeders to assure the building up in the future of an extensive and profitable industry, thus adding an interesting and valuable new phase of husbandry to the many sides of Canada's first occupation. The areas on the American continent where Karakuls can be successfully reared will always be limited and the proof that Western Canada possesses all the necessary qualities for the profitable pursuit of the new industry should result in encouragement to widen the scope of its activities.

In 1909 the first importation of Karakul sheep was made into America and from the progeny of this stock Canada received its first animals in 1913 when small flocks were distributed and established in Nova Scotia and Prince Edward Island. The following year Edward Island. The following year new flocks going to Nova Scotia, New Brunswick and Alberta. Though the majority of the original importations went to the Maritimes, they have not as a general rule developed so satisfactorily, and it is yet a question if the raising of Persian lamb will ever arrive at important proportions in that territory. In the crisp, dry climate of the West however, and other conditions which more closely approximate those of the animals' natural habitat, the first efforts resulted in a success entirely gratifying. The Karakul ranches of Dr. O. H. Patrick and the Alberta Karakul Arabi Sheep Co., near Calgary, have fulfilled their most sanguine expectations. The greatest proof of whose accomplishments is to be deduced from the manner in which branching out from them has taken place.

**A Pioneer Breeder.**  
W. H. Hawkshaw, a sheep breeder of Chilliwack, has been the pioneer of Karakul ranching in British Columbia and the years he has been engaged in breeding Karakuls is adequate for him to have acquired a deep and thorough insight into the advantages and drawbacks of the industry and to enable him to speak with authority and knowledge as to the future of Karakul ranching in British Columbia. His story makes interesting reading and his faith and enthusiasm after years of study and experimentation are the best augury of the successful establishment and expansion of Karakul ranching in Canada. He has been engaged in sheep raising all his life and his father brought out from England some of the first Shropshires and Cotswolds imported into Ontario.

An enthusiastic sheep breeder and closely following the progress of events affecting his interest, Mr. Hawkshaw read of the first Karakul to reach the American continent in 1909 and was immediately fired with a desire to possess some of the new animals, registering a determination to do so as soon as any became available. In the conviction that his own Cotswolds would make excellent stock for crossing, it was not until some years later that he was able to realize his ambition when from some of the progeny of the first American imported stock he was able to secure a flock from the ranch of the Karakul Arabi Sheep Co. at Calgary. This consisted of a purebred ram known as "Teddy Roosevelt," six pure bred ewes, and five grade ewes. Should they ever develop in British Columbia a Karakul sheep industry of proportions this was its original foundation.

**Cross Breed With Cotswolds.**  
The Karakul ram was crossed with Cotswold ewes to increase the number of part Karakuls and this process continues up to five ewes, giving the animals are eligible for purebred registration. Without exception the lambs born of the Cotswolds have been black, with the curly coat. All ewe lambs from such crossings were kept for breeding and the ram lambs from the crossings killed at birth. Even should the lambs die from exposure to being weak twins or triplets, there is naturally no loss of revenue. Grade skins have sold from \$10 up according to size and the quality of the cross, whilst the purebred skins have brought as much as \$250 a skin. Rams from the purebred ewes are valued at \$1,000. One sold for this figure last year, and this season the ranch will have nine such to dispose of.

In Mr. Hawkshaw's opinion, there is a bright future ahead of this industry in Western Canada and this blending of the livestock side of agriculture with domestic fur farming will develop into an asset of the first magnitude. As he points out, serious loss in the pursuit is almost impossible. The breeder of white sheep sustains the most serious and voluminous loss in the death of lambs shortly after birth. As Karakul lambs must be slaughtered at this period for their curly fur, the accidental death merely obviates the necessity of killing. Karakul mutton too is vastly superior to the ordinary variety and commands a price on the market about twenty-five per cent. above that of the ordinary varieties, being characterized by a superiority of flavor and the entire absence of any woolly taste due to the fact that the Karakul is a fur producing animal.

An additional source of revenue is the wool of the rams and ewes. This is longer and coarser than in the ordinary varieties of sheep but commands a higher price. The product is utilized in the manufacture of Persian

## British Towns Under the Sea

Remains of Shakespeare may have had the curiosity to search the map for Havenspur, which is mentioned several times in his plays. They would have to look a long time, for it is not there.

The sea has washed it away! Yet at one time it was one of the most important seaports in England. Not a fragment of it remains. In fact, the site of Havenspur is now many miles out to sea. Yorkshire has also lost the prosperous town of Elyde, and the last remnant of Old Kingston, its great church, vanished less than a century ago.

Shigness, now a thriving watering place, is all brand new, but there once was a fortified town of Shigness. Its fine castle and wall are now beneath the waves. Shipden, too, was a famous Norfolk port in the fifteenth century, but the last of it, the ruined wall of its castle, disappeared a few years ago.

Cromer was a suburb of Shipden, but the present town is quite new, for ancient Cromer is well under the sea. It is said that the bells of Old Cromer church can still be heard ringing when there is a gale blowing.

There is still a little town of Dunwich in Kent, but there is nothing about it, nowadays, to show that it was once one of the largest cities in England. As a port it was as great as Liverpool is to-day, and its harbor was constantly crowded with English, French, and Dutch vessels. It did not disappear "in a single night." Bit by bit the sea took toll of Dunwich. In 1328 a tremendous storm choked up the harbor. In 1349 four hundred houses, with many shops and windmills, slid into the sea.

By 1540 only a quarter of the city remained, and in 1877, during a fearful storm, the sea reached the old market

place and swallowed it up. A year or two later the town hall met a similar fate. To-day summer excursionists visit the ruins of the old priory and one or two very ancient houses. The rest of Dunwich is under the sea. A few carefully protected ruins on the sea edge are the last fragments of the old town of Reculver, not far from Margate, which was a famous place even in Roman times. It was not until the eighteenth century that the castle was swallowed up, and the church and churchyard lasted well into the nineteenth century.

**Will Britain Disappear?**  
The county borough of Brighton does not contain a fragment of the original town of Brightelmeston, which is now much further out at sea than any but the strongest swimmer ventures. It had 6,000 inhabitants, several churches, and a fort, but by the middle of the eighteenth century, all had disappeared except old walls sticking forthly out of the sand.

The fact that Old Shoreham Church still exists is accounted for by the further fact that it was built a long way from the sea, behind the old town which has long since disappeared.

In the old days Winchelsea was one of the Cinque Ports, a place of great trade and importance. In 1236 the sea first battered down its defenses, and fourteen years later swallowed in one night 300 houses and several churches. Then, in 1287, the catastrophe took place which demolished the town and caused its inhabitants to fly for their lives.

This was one of the most sudden invasions of the sea on record in Great Britain, and to-day not a single brick or stone is left to mark the site of old Winchelsea. Many villages and hamlets have also disappeared at various points of the coast, and the invasion of the sea is still going on!

**Adaptability to Western Canada.**  
The great adaptability of Karakul to Canada lies in their wonderful hardiness, and the Western provinces are particularly suited to them by reason of their keen, dry atmosphere. Lambs have been born in 30 degrees below zero weather and have suffered no ill-effects, whilst the mothers were not affected in any way. They are the hardest breed of sheep known and as such of a particular value to Canada. The ewes on an average weigh from 125 to 200 pounds and the rams about 225 pounds.

Sheep raising in Canada has experienced a pronounced revival in recent years which has been attended by enhanced interest devoted to scientific breeding. There are from the limitations imposed by the security of the stock on the American continent, relatively few pioneers of the Karakul sheep in Canada, but they have achieved such signal and definite success that there is every encouragement for a great expansion to the industry. Canada has set out determinedly to maintain her position as the fur store of the world, and whilst adding still another phase to her live-stock industry, is able, in a peculiar manner, to supplement the work of pioneering her ranches. The first pioneer phases of the pursuit will follow.

**Lumber goes up as forests burn down, take time to extinguish your camp-fire.**  
It is hard to build a concrete road without detours, and detours are poor advertisements of the country that they serve. The usual trouble is lack of foresight; the detour is not made until it is actually needed; therefore it is almost as impassable as the highway from which traffic is diverted. Detours should be graded a year in advance.

## Mysterious Shoals and Isles

Much puzzlement has been caused by mysterious shoals off the mouth of the Mississippi River. The remarkable thing about them is that they are not permanent; they come and they go. Inasmuch as the water all over the area in question is normally from 1200 to 1300 feet deep, how can there be any shoals?

Little attention would have been paid to the matter save for the fact that reports on the subject sent in by shipmasters have been persistent and descriptively circumstantial. One let us, for instance, notes a series of soundings on a course laid by compass from an anchored lightship, the leading recording 33 fathoms, 22 fathoms, and even 17 fathoms.

The Mississippi at New Orleans and for a long distance below that city is narrow and deep. Then, before reaching the Gulf, it branches out into what are called the "passes," two of which are navigable by the largest ships. Outside, in the Gulf, beyond the mouths of the passes, the water is of great depth. No shoals are known of great depth. Yet week after week reports from ship captains to the above-mentioned effect have been coming in. Investigation seemed to be called for, and the United States Coast Survey sent out a vessel for the purpose. Many lines of soundings were run back and forth over the area where the shoals were alleged to be located, and these were supplemented by the use of a "sub-surface contrivance which stays at a uniform depth while the water is being drawn. If it hits anything, a trigger is sprung, and the thing upsets, the vessel revealed no shoals; so the whole affair remains a mystery. To explain it, somebody has suggested

Music Stimulates the English Lesson  
Not long since, a high school teacher was explaining to a group of fellow-teachers some of the methods she used to make the English lesson more interesting and more effective. One plan was this:  
"We have used three experiments," she outlined. "In one the music sets the mood for the poem or story. In another the music would tell the same story as the literature—William Tell. In the third, music is used as one medium through which to express the idea—Spring as expressed by the musician, the artist, and the poet. We have also tried to have the children work out the ideas of the story from music before they have read the story at all. Then we reversed the order—study the story and apply the music. It is fascinating and it is practical, because the majority of English teachers can handle the material. A photograph is indispensable."  
"The value of this experiment to the English lesson was shown in the keen desire on the part of the pupils to read the story after the musical interpretation of the ideas had been given—also the attempt to express in words what the music suggested in oral English."  
"The experiments which we have been making recently in correlation of English with music, show some very interesting results and untold possibilities. We know that the English lesson is enriched. I frankly admit that in these experiments I have experienced for the first time the feeling that I am really teaching the beginning of the appreciation of music. Formerly I have tried the teaching of form in a simple manner as a beginning, but was disappointed in the results. In this new attempt I foresee an opportunity to teach the love of music, which is, after all, the real appreciation of music."  
"The more truth an error has in it the more dangerous it is."