

The AUTOMOBILE

Keep Your Eye on the Garage Man.

Getting good work done on your car is a problem. I have been up against it at times when I have been too busy to do anything on the machine myself, and I know what it is. When it comes to finding ordinary trouble I believe I am as good as the average. But when it comes to some part of the car which I have no tools to fit and cannot afford to get them for what little work I have to do, I am ready to take the job to a garage man who is properly equipped.

I have found ways to get around high-priced and unreliable garage workers. There are a good many efficient men who fix automobiles, and there are a lot more who work on your car to put in time and charge you for it.

A small garage started up in our town about ten years ago which does no advertising, and no one would know it was there except by hearsay. I found out about it, and had some work done and liked it. I have sent others there. I am going there within a few days for some valve-grinding. This man says he gets enough to do without advertising. I once had a car run tight in the transmission. He worked nearly a day on it. After two days it tightened up worse than ever. I got it back in his shop. He fixed it again, and found the real trouble. I asked him what I was to be charged. He said it was his fault, and no charge, of course.

There are probably such men in your town. They usually own their own buildings, and do not bother with gasoline sales. That takes time from a regular garage man, and does not pay very well.

Besides this there is another opportunity to get first-class work done by a good man for less money—the private chauffeur. He often has time on his hands, and is an expert in most cases. Perhaps he has room for another car, and usually the owners do not object to his making a little on the side so long as it does not interfere with their own driving and care of cars.

Bill's "Hit-and-Miss Engine."

While over at Bill Morgan's the other day something was said by me about power farming.

"Talking about farm power," said Bill, "I've got one of the blindest and-miss engines, and the miss is so much in the majority that I guess I'll have to get a new one."

"How does it act?" I asked.

"Well, I can start it up all right," Bill replied, "but after it runs about ten minutes it will stop and I can't get it started again for about an hour. It used to be all right and only went to the bad recently. I had Rud Simpkins, who works at George Watson's blacksmith shop, to come down and look it over, and he said it was spavined or windbroken. I forgot which, and that I would have to buy a new engine."

"When an hour has passed can you start it again without any trouble?" I inquired.

"Goes off like a pet lamb," replied Bill.

"Looks as if the gasoline feed-pipe might be clogged," I suggested. "Let's look at it."

We went out to the shed where the engine was mounted and Bill started it on the first turn. True to his word, it ran about ten minutes and then stopped. We disconnected the gasoline feed-pipe and made an examination. Sure enough, it was almost completely stopped up near the tank outlet. We washed it out thoroughly and then reconnected it. The whole operation took about fifteen minutes.

We again started the engine and it ran on past the regular ten-minute period and did not show signs of stopping. It was evident, therefore, that we had hit the trouble. The engine would simply run till it used all the gasoline in the carburetor and then stop because it could not get fuel enough. The pipe was not entirely stopped, however, and enough gasoline would seep through in an hour to again fill the carburetor bowl.

DIVING BELL INVENTED BY SPIDER

It was claimed that the diving bell was invented by a spider. At least, we are certain that if it was not actually invented by him it was used by him long before our hydraulic engineers made one for the same purposes.

The diving bell, as is well known, is a cup-shaped body with open end down which is let into the water. The air is caught in the bell and keeps the water from rising beyond a certain level at any specified depth, and of course allowing any one inside to breathe and act as if he were on dry land. The improvement of the diving bell known as the caisson is a huge pipe which has compartments, into which air is pumped from above. The spider's bell is filled more in this manner than in the other.

The name given to these little spiders is very appropriate—the naiaids, of the family Arachnida. A naiaid will build a little house of waterproof silk held fast by strands fixed to neighboring blades of grass and stones several feet under the water. He completes the entire structure before filling it with air—as if he knew that the air would tend to make it rise to the top and thus hinder the attaching of the anchors.

But the method of getting air into their houses in perhaps the most peculiar and interesting of all instinctive acts of animals. Their abdomens are so made that a bubble of air can be caught underneath them. This the naiaid does, and swims in his house with it and turns it loose in the air structure. The process is repeated several times until the little house is full of air. Of course the open end of this house is down and this has to act also as the entrance to it. In the little water house the spider spends the winter and rears his young. The house also acts as a lair from which the spider can jump on unsuspecting prey.

Another peculiar thing about naiaids is that they never get wet. They have thousands of small hairs on their bodies which hold and keep the air

from being washed off when they enter water and so the air sticks and water cannot approach.

Scientists are acquainted with many other insect engineers but with none that approach naiaids in intelligence and skill. The water beetle is probably the only other one in their class. It builds a waterproof nest under water but does not live in it. It merely lays its eggs in the nest, seals it up and leaves.

The Mason bee, as its name implies, is a builder of structures of stone and mortar. The nest is attached to almost any solid structure and actually does consist of small stones cemented together with mortar. The house consists of many cells of oval shape, and into each an egg is laid. The cell is lined with silken webs by the mother, which gets out of it by a hole in its top. Before leaving, however, she hermetically seals up the cell and leaves the youngster to its fate.

However, such are the arrangements of nature, as soon as he gets to feeling his oats and consumes the food left him by his mother he finds himself supplied with tools hard and sharp enough to cut through the walls to freedom.

A member of this family found in England makes its own bricks, selecting brown clay for the purpose, which it mixes with saliva, rolls into small balls, which soon become hard, and then cements them together. These pellets are as large as small peas and one bee has been known to prepare as many as one hundred and fifty in a single day.

Could Probably Go.

"She seems a timid, flowerlike girl."

"Well?"

"Do you think her mother would allow her to go to the theatre without a chaperone?"

"Why, I think so, my boy. She drove a supply wagon in France during the war."

Two asbestos mats together will serve as a good flation rest.

ENGLISH SURNAMES.

Some Cognomens That Cause a Smile When Heard.

"If a party had a voice," to quote an unkind rhyme, "what mortal would be Bugge by choice?" And yet the pioneer Bugge was a man of substance, who dwelt in a manor house, from which he derived his name. The first Coward was no potrover, but a cow-herd, who tended his cattle; just as the first Rascal was no knave, but a man who probably bore some resemblance to a lean stag or rascal; and the original Snooks hailed from Sevenoaks, whose corrupted name he bore.

Hobson, a name at which some affect to scoff, is as venerable as it is respectable, for we read of a Lewis Hobbesone, a Suffolk landowner, in the days of Edward the Confessor; and the Buggins and Boggs, if they did not come over with the Conqueror, at least came over with some of his race.

Gottobed is no name to smile at, for it is a variant of Cuthbert, which means "war-bright," and the first Gottobed was probably a warrior of fame. Mieser is a synonym for "strength"; and Wildgoose signifies a "resolute hostage." Devil is merely De Ville, of honorable French ancestry, and bears no relationship to Hellman, whose ancestor was a Hellier, or Christ-maker, and probably a good Christian.

The Doctor.

He entered, and the sunshine seemed a golden graciousness he brought; As if the room, from eyes that beamed Benevolence, their warmth had caught.

The air, that all night long had been A fevered breath, became as cool As ferns that swing, a fretting screen Of shade, above a sleeping pool.

And, tender as a child's caress His fingers touched the burning skin With sympathetic tenderness; And cooled the scorching fire within.

I felt that I could sleep; and closed My eyes in one long sigh of rest; And calmly, for a moment dozed Like infants at their mother's breast.

Refreshing sleep, a breath's span long, I had; and dreamed of sunny rills. That rumped in radiance, liting soon To Heathered moors and brackened hills.

And sometimes came, from voice or eyes, An influence that seemed to swathe The soul with hope; like sunset skies Whose golden calms are creeds of faith.

I know that, soon, my song I'd sing, Of joyous life to sun and sky; And hear the litanies of Spring Which gladden as they glorify.

Money Isn't Everything.

"Money isn't everything," says the spendthrift as he scatters his wages to the four winds.

Then he reaches middle life, with old age in the foreground, vainly wishing for the return of the misspent coin. It may be true that money isn't everything, but one thing is absolutely certain. Old Man Money, if he is cultivated through life, will not desert the friend who has cultivated him. When every human friend has fled Old Man Money sticks. You can start him off with five or ten cents a day in early life and keep feeding him that amount all through life, and in old age you will have on your hands a rich old gentleman, albeit a pleasant and highly agreeable one.

If you find the rigors of the northern winter too severe, you may simply tap Old Man Money on the shoulder, and he lies you to Bermuda; if you are sick another tap on the shoulder brings you the best nurses and specialists the world affords. He's an agreeable old man, never disputes orders and is always ready for duty. He makes the proverbial busy bee and the equally industrious ant look like pickers, for he never rests. He's one size when you go to sleep and larger when you wake up. The older he gets the stronger he becomes. If you are a stranger in a large city, with no earthly friend to call upon, Old Man Money opens the doors of the best hotels and stakes you to the best of the town affords.

But money isn't everything at that. Among all the women of European royalty none has traveled so widely as Queen Mary of England, who has visited every continent, with the exception of South America, and almost every country of any importance.

ALCOCK AND BROWN WAR AIR VETERANS

BOTH HAVE HAD THRILLING EXPERIENCES IN BATTLE.

Capt. Alcock Was First to Bomb Constantinople—Lieut. Brown Fought on Western Front.

The Vickers-Vimy trans-atlantic attempt was a success because the engines and the structure of the plane proved as reliable during the flight as the men guiding the big bomber have shown themselves in the past. Both men have war records and rendered most gallant service before finally being brought down as prisoners during aerial exploits almost as hazardous as their marvellous air journey across the Atlantic.

Capt. John Alcock, leader of the expedition, is one of the comparatively few Britons who could fly before the outbreak of the war. His knowledge of aviation made him exceedingly valuable as an instructor, when Britain, unprepared, set out in 1914 to build up an air service to repel the raids of Zeppelins and big German biplanes. Capt. Alcock, who was born in Manchester in 1892, took out his first flying license in 1912. His principal pre-war exploit was the winning of second place in a great sporting event, the flight from London to Manchester and return, which avowed many Englishmen to be the realization that flying was a fact and not a theory.

When war flamed out, Capt. Alcock became an instructor at the army flying school at Eastchurch. His skill and daring in the air soon won for him a more important, if more dangerous post, that of chief of the "stunt" flying had not been so greatly developed, but it was realized nevertheless that a pilot must know how to manoeuvre his plane skillfully and intricately to confuse his opponent in an aerial battle. Capt. Alcock's risky task was to teach the young cadets these aerial acrobatics, hazardous in themselves, but possibly the means of avoiding the machine gun fire of the enemy.

Designed a Fighting Plane.

Later in the war Capt. Alcock was transferred to the Turkish front, where he was the first man to bomb Constantinople. Light scout planes were not furnished the aviators on this front, so Capt. Alcock designed and built a high speed fighting plane. This is said to be the only plane built by a flyer on active service with the British forces during the war. It was while harassing the Turks from the air that Capt. Alcock established a record for a long distance bombing raid. He remained in the air seven hours and flew 460 miles. On one of his trips over the Turkish lines in a heavy bomber Capt. Alcock's engine failed and he was compelled to glide down. He was taken prisoner and was held until after the signing of the armistice. He returned to England in the middle of December, 1918.

His experience with bombing machines during the war convinced him that the two engine type was capable of covering much greater distances than he had made on raids during the war. He expressed confidence that the Vickers-Vimy plane would take him across and finish the flight in Ireland with both engines running.

In appearance Capt. Alcock is typically Anglo-Saxon. He is fair-haired, with a round ruddy face, and is sturdy built. He is seemingly perpetually cheerful and gives absolutely no symptoms of temperament that sometimes flers as well as prima donnas. He is never addressed by his friends except as Jack, for the formality of John does not fit his joyful, easy going disposition.

Observer in Royal Flying Corps.

Lieut. Arthur Whitten Brown, who fulfills the triple duty of navigator, wireless man and relief pilot on the Vickers craft, is almost the physical opposite of his companion, although both are quick thinking and quick acting, traits picked up, or at least strengthened, by their experience in the war. Lieut. Brown, who was born in Glasgow in 1886, is quiet, slimly built and sharp of features. His complexion is dark and his eyes gray. He has a cheerful disposition. Indeed, all the flyers who intend to dare the Atlantic may be described as constitutionally optimistic, for the spanning of

Vickers - Vimy, Successful Trans-Atlantic Airplane, Was Built For Bombing Berlin.

Both the Vickers-Vimy and the Handley-Page machines were constructed in England during the war with a single object in view, to rain bombs upon Berlin with the frequency and terrific destruction that the Germans had hoped to reach in their Zeppelin raids on the British capital.

Their outstanding characteristics as bombing planes, great cruising range, heavy weight carrying capacity, reliability and swift speed, made them almost ideal machines for the trans-atlantic flight, toward which the eyes of British flying men turned when the necessity for bombing Berlin was past.

The Vickers-Vimy, although overshadowed by the huge Handley-Page, in turn dwarfs the little Sopwith in which Harry Hawker set out to blaze the North Atlantic trail. The Vickers-Vimy wing spread is 67 feet, while that of the Sopwith was 46 feet 6 inches. The plane, like the Australian, is a land machine. Capt. Alcock and Lieut. Brown took the same chance as did Hawker, with the exception that in their case they had two engines to rely upon and did drop their landing carriage and wheels as he did. On the other hand, they carried no collapsible boat.

Capt. Alcock and Lieut. Brown sat side by side in the rounded nose of the machine, with an instrument board containing all the oil, gasoline, air and engine speed and altitude gauges in front of them. The cockpit is just in front of the wings. On either side of it, mounted between the wings, are the two Rolls-Royce engines, with their spinning, invisible, four-bladed propellers in front of them acting as tractor.

Gasoline Instead of Bombs.

Equipped as a bomber, with a crew of three men, a bomb load of 1,146 pounds, 470 gallons of gasoline and other military material such as a machine gun, ammunition, etc., the machine weighed 12,500 pounds and could fly at 100 miles an hour. The weight of the armament and bombs is now necessary for the great gasoline supply used. Both the runner's cockpit, behind the wings, and the bomb rack have been replaced by great tanks.

Even with one engine out of commission the Vimy-Vickers could "limp" along at seventy miles an hour. Captain Alcock, before starting, firmly expressed the opinion that his plane could finish the flight even if one engine failed many miles from land. In any event, he could stay in the air long enough to call by wireless for aid and to hunt for a ship near which to land if motor trouble hit the plane midway in the journey.

Great strain was taken off the pilot in the long journey by the fact that the machine is exceedingly stable. Its inherent stability is such, it is said, that, being fitted with a compensating mechanism, it can be flown upward, downward or on the level without a hand on the stick. In other words, the plane will fly itself, although the pilot cannot, of course, relax his mental as well as his physical exertions.

British lines and descended safely, although most of Lieut. Brown's clothes were burned off and he himself suffered considerably. In another observation cruise Lieut. Brown's plane was brought down an Albatross, despite the fact that it was not officially a fighting plane.

Accident Led to Imprisonment.

In November, 1915, Lieut. Brown got out in a squadron on a long distance reconnaissance far behind the German lines. The carburetor of the plane went wrong in the air and the plane was compelled to glide to the ground. Brown was too busy destroying important military papers to brace himself when the plane landed on rough ground, and the crash landing jammed him so tightly into a corner of the cockpit that he had to be cut out. His thigh and one leg were broken and he was badly cut.

After treatment in German hospitals he was transferred to a German prison camp and eventually was sent to Switzerland. In 1917 he reached England. For the remainder of the war he was occupied in technical work for the Air Ministry.

A field marshal never retires, but remains on the active list and draws full pay till the day of his death.

The motors are Rolls-Royce products, as are those of all the other British contestants. They are of 350 horse-power each and are generally believed to be the most reliable British airplane motor at the present time. They spin the great four-bladed propellers at the rate of 1,080 revolutions per minute. The diameter of the four-bladed propellers is ten feet, five inches.

The engines are built with a streamline casing fitted about them so that they offer the least possible resistance to the great rush of the plane through the air. The radiators, just behind the propellers are octagonal.

The great bomber had its trial flight in Newfoundland on June 9. At that time Capt. Alcock said his plane made 112 miles an hour, although this, of course, was not with the full load with which he headed eastward.

The breaking away of the propeller generating current for the wireless apparatus soon after the start prevented the men from communicating with the shore. When it happened, Lieut. Brown noticed that the propeller had carried away with it part of the stay wires, but he did not tell Captain Alcock until after they had landed at Clifden. When Alcock learned of the accident, he said: "We would have turned back had I known."

Weather conditions were very bad during the trip and Lieut. Brown had to climb from his seat to clear the ice away from the petrol gauge. The two aviators said they were only once in real danger, when the machine went into a flat spin owing to the pilot being unable to know how the machine was moving. Lieut. Brown, noticing that the compass needle was swinging from side to side was the first indication that something was wrong, managed to get Captain Alcock to understand the difficulty.

The machine traveled at a rate of 140 miles an hour at times, and the pilot once found himself diving straight toward the surface of the ocean. He was so near the water that he had to "snatch" the machine from its dive so quickly that it almost looped the loop. He says the machine would have crumpled up had it touched the water at the speed it was then traveling.

First Atlantic Postman.

Capt. Alcock exhibited a bunch of rain-soaked letters which he had been asked to mail if the flight was successful, saying: "I am the first trans-atlantic postman, and I think that within twelve months we'll have an aerial trans-Atlantic service."

In landing in an Irish bog the pylons of the centre section, as well as the main spar of the lower plane, were broken, but the steel construction of the fuselage saved the machine from further damage. The two engines ran smoothly throughout the flight, and when the airplane landed there were still 290 gallons of petrol left in the tank, sufficient for a further flight of ten hours.

The trap is set with the current and is made fast by tying it to stakes driven into the ice. It is taken up every week or two, emptied and again lowered into the stream. The waters of the Yukon are very muddy and the fish cannot see the very muddy and catch varies from twenty to two hundred pounds a week. Fifty pounds a week to a trap is a good average yield.

Traps are often set under ice that is from four to five feet thick. The work of picking out the hole is done by means of a rude instrument like a narrow chisel, fastened to the end of a stout pole. With this the Indian, or more below zero, patiently digs through the ice.

Besides whitefish and pickerel, the fish of the more important fish caught. It is a large, smooth skinned fish, similar in appearance to the cod, and, like the cod, has an enormous liver which is rich in oil.

"Pill Boxes" as Cafes.

A Belgian Farmer who has returned to his shell-shattered fields near Poelcapelle has solved his own particular housing problem by converting an undamaged "pill-box" into a temporary home for himself and family.

"Pill-box" was always an unfortunate and misleading term for these concrete forts. Nearly all were rectangular and contained four or more large rooms. Very little work into comfortable and everlasting homes. Some near Boesinghe are already being fitted up as cafes, in anticipation of the tourist parties which will throng the battlefields as soon as passport and travel restrictions are relaxed.

Pie chimneys—to be had in most china shops for a few cents—will often save milk from boiling over. The chimney should be placed in the centre of the saucupan of milk.

—John Buskin.

FISHING IN THE GREAT YUKON RIVER

CHIEF SUPPLIER OF FOOD IN THE ALASKAN REGIONS.

Traps For Ice Fishing Set in Holes Dug by the Patient Indian in Blocks Five Feet Thick.

The Yukon River is the one big, outstanding supplier of food in Alaska. Without it the Indians inhabiting the valleys along the lower stretches of the river would either have to move to the coast, go further inland toward the headquarters of the river or die of starvation.

Fishing goes on the year around in the Yukon. The summer catch of salmon is far the most valuable, but the winter ice fishing is most picturesque and gives the Indians variety from what would otherwise be a steady diet of dried salmon. Eels, ling, whitefish, pickerel and other species are caught. The methods of ice fishing vary in different localities, the more important methods described by travelers are practised between Anvik and Tanana.

While the ice is still thin holes are cut through it at the mouths of the tributaries of the Yukon and nets are set for the great whitefish which weighs from fifteen to twenty-five pounds.

Toward the end of November the annual migration of eels up stream takes place. Fishing for them is one of the picturesque and often exciting features of autumn life along the great river.

As the eels are able to move but slowly upstream against the swift current, news of their approach is passed from village to village and the Indians are ready and waiting for them when they approach.

How Eels Are Caught.

The eels swim just under the ice. A large hole is cut through the ice and as the eels swim across the hole the fishermen jerk them out of the water. But little fishing gear is necessary. The Indian makes a sort of rude hook, consisting of a slender stick about six feet long, at one end of which is tied at right angles another short stick about five inches long, making a sort of capital "L."

The fisherman passes the arm of the "L" under the long ice, jerks up quickly with the handle and the eel is landed, stopping and wriggling upon the ice, where it soon freezes. The day's catch is thrown into sleds and taken to the village. The run lasts only one or two days, but in that time an expert fisherman often catches one thousand pounds of eels. The flesh is good for the table, but the eel is more valuable for its oil, which is used for food and for lighting purposes.

The fish traps for ice fishing are not set until the water is more advanced, but when the ice is frozen thick the traps are set in favorable places along the Yukon and in the smaller streams which empty into it. These traps are something like a wire rat trap in construction, only much larger. They are from five to ten feet long and three or four feet high and cylindrical in shape.

The fish enters the trap, much like a rat, through a funnel like mouth, a yard or two square, which runs down to a point in the trap, leaving just enough space for the fish to get through. Once in the trap there is no likelihood of the piscatorial prisoner ever escaping.

Traps Catch 50 Pounds a Week.

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