

The AUTOMOBILE



Proper Oiling is Essential.

A low-grade oil cannot meet the special requirements of Ford lubrication and will cause wear on the accurately made parts of engine, clutch and transmission.

In the Ford engine one oil must lubricate three entirely different mechanisms. One oil must meet the requirements of the engine parts, the transmission gears and the disc clutch.

For the engine, proper oil should be heavy enough to resist intense heat and thus prevent heavy carbon deposits and avoid boiling the water.

For the transmission gears the oil should be extra heavy to cushion the gears and prevent noise and wear.

For the disc clutch the oil should be light enough to prevent danger to the operator from "dragging," especially when starting the motor in cold weather.

These three different conditions demand a compromise in the body of the one oil used. Light oil cannot efficiently lubricate the Ford engine, transmission and gears.

Use of unsuitable oil will soon cause even the highly efficient engine to show certain undesirable effects. Automobile engineers have analyzed these results as bucking or jerky engine, carbon and dirty spark plugs, engine knocks, overheating and loose bearings.

Each of these five operating conditions was further analyzed as follows:

A bucking or jerky engine may arise from any one of six causes—carbon deposits and dirty spark plugs, worn or leaky piston rings, pitted or sticking valves, engine worn by sediment in the lubricating oil, uneven spark plugs or too lean or too rich an explosive mixture.

The first four of these causes are usually the direct result of faulty lubrication. How to correct this difficulty is explained further on in this article.

The fifth cause of bucking—uneven spark plug gaps—is easily corrected by fitting a smooth ten-cent piece between the points; 1915 and earlier models a trifle closer. See that all four plugs have the same gap.

The sixth cause of a bucking engine—the wrong mixture—can also be quickly corrected by following this

simple rule for carburetor adjustment. Warm up your engine. With the car standing and the engine running, enrich the mixture and then cut down the amount of gasoline fed by the carburetor until the engine begins to slow down. Then increase the supply gasoline slowly, till the speed is restored—but not a notch beyond this point. This adjustment gives the ideal mixture neither too "lean" nor too "rich."

Carbon deposits and dirty spark plugs are frequently due to inefficient lubrication, also to wrong carburetor mixture and to worn pistons and rings.

The carburetor adjustment is explained above. Mechanical faults can be remedied by installing gas-tight piston rings.

Too much oil, or the wrong oil, causes carbon deposits and dirty spark plugs.

Oil that is too thin works up into the explosion chambers in large quantities. Oil that is too heavy carbonizes rapidly in the cylinder. Oil that breaks down under heat forms voluminous black sediment.

Any one of these three conditions increases carbon deposits and soots up the spark plugs.

Engine knocks are due to one or more of the following causes: Pre-ignition due to carbon, worn connecting rods, worn bearings, loose-fitting piston rings, piston striking a cylinder-head gasket, too advanced spark or wrong carburetor adjustment.

Notice that the first four causes of knocks usually result from inefficient lubrication. The remedy of the last three causes is obvious.

The commonest cause of overheating, and the one that is most often overlooked, is faulty lubrication—the use of poor oil not suited to the engine or the use of too much oil.

To avoid overheating first make sure that your engine is efficiently lubricated. Then look for trouble elsewhere.

The Ford engine runs at unusually high speed and high temperature. You can readily see that unless the lubricating oil maintains a durable, frictionless film between these metal surfaces rapid wear will surely result.

Loose bearings, one of the principal causes of knocks and loss of power, are the direct and inevitable result of using the wrong oil.

Wisps of Wisdom.

It doesn't take a botanist to discover a blooming idiot.

Jealousy is the homage that infernal pride pays to merit.

The man who controls his temper governs his worst enemy.

A delusion is our idea that our friends never gossip about us.

Be what your friends think you are. Avoid being what your enemies say you are.

Worry is a form of cowardice. It is born of fear and comes from the consciousness that we are not equal to cope with the obstacles that confront us.

Parents themselves must be taught the value of an education. They are not fit to have children if they do not want them to enjoy even greater and better privileges than their own childhood knew.

Secret is Out.

"Why does a woman's hat cost so much more than a man's? Surely, the trimming can't account for more than a fraction of the difference."

"Certainly not. But you must remember that it costs more to sell a hat to a woman. A man seldom takes up more than two minutes of the salesman's time, while a woman will keep the entire sales staff busy for half a day."

The tailor of the future will take his measurements for a suit of clothes with the camera. A special tape measure marked with big figures is fitted from the neck to the feet, and three others round the back, waist, and hips. A photograph is then taken of the tailor's client from the front, side, and back. The tailor thus obtains a permanent record with all the necessary measurements.

What Did They Really Mean?

Words are indeed clumsy things with which to convey thoughts, and the most carefully constructed speech can give to another only an approximate idea of the originator's real meaning. It may be safely asserted that it would be impossible to make any statement of the simplest fact with certainty that the hearer would exactly comprehend the speaker's meaning. Even an apparently unequivocal "yes" or "no" may be misinterpreted.

Not only is it difficult to the point of practical impossibility to surely understand another, but, after a lapse of time, a person will not always understand what his own words were meant to convey—as a stenographer is sometimes quite unable to read his notes when they have become "cold." This may sometimes be due to the fact that an education and experience develop the mind, words assume different meanings, the first meaning being forgotten.

Famous authors have not infrequently been unable to explain the meaning of their earlier writings. For instance, when Jacob Beowulf was on his deathbed, some reverent pupils came and begged that before he died he would explain to them difficult passages in his works. "My dear children," the great mystic said, "after vainly pushing over the lines, 'When I wrote that I understood its meaning, and no doubt the omniscient God did. He may still remember it, but I have forgotten.'" Klopstock's admirers likewise were baffled by one of his sentences. The writer said and then slowly turned the words in his mind, then shook his head and said: "I cannot recollect what I meant when I wrote it, but I do remember that it was one of the finest things I ever wrote, and you could do better than to try to explain it."

your lives to the discovery of its meaning!" Cardinal Newman, in his old age, frankly acknowledged that he had no idea what he meant when he wrote in his famous hymn, "Lead, Kindly Light," the words:

And with the morn those angel faces smile
Which I have loved long since and lost awhile.

And yet, to many persons, those lines do not seem in the least ambiguous or susceptible of but one interpretation.

Browning merely laughed when asked what certain passages in his poems really meant, and declared, "Upon my word, I don't know what it means. I advise you to ask the Browning Society; they'll tell you all about it." And at that, there may have been more truth than jest in the suggestion—it is quite possible that careful students of the works of an author might come closer to the true original meaning of an obscure passage than the author himself.

Concerning "Moses from an Old Manse," Hawthorne once said: "Upon my honor, I am not quite sure that I entirely comprehend my own meaning in some of these allegories; but I remember that I always had a meaning, or at least thought I had."

A difference of opinion by author and reader as to the meaning of a phrase was evidenced once when Goldsmith was asked if he meant tardiness of locomotion by the word "slow" in the first line of the "Traveller":

Remote, unfriendly, melancholy,
Goldsmith replied, "Yes," Johnson immediately called out, "So, sir, you do not mean tardiness of locomotion; you base this assumption of mine which comes from a man in solitude." Certainly, in this case, it was the critic and not the author who realized the true meaning of the word.

—and the worst is yet to come



Water-Throwing in the Argentine

The discomfiture of the pompous official sanctuary in Rio de Janeiro is really pained to observe how Sir Edward's spotless garments had suffered. Considerably ruffled, he sat down to continue an elaborate memorandum that he was drawing upon the new Argentine customs tariff. Presently our housekeeper, a German, Frau Bauer, entered the room demurely and made her way to Sir Edward's table. "Will His Excellency be so kind—" she began; and then suddenly, with a discreet titter, she produced a large pomito from under her apron and, secure in the license of carnival time, thrust it into his collar and proceeded to squirt half a pint of cold water down his back, returning swiftly with elderly coyness amid an explosion of giggles. I think I have never seen a man in such a furious rage! Nevertheless, he was after all a good sport. When he had eased his mind sufficiently he snapped out:

"It is impossible to do any serious work to-day. Where can one buy the infernal squirts these idiots use?"

"Shall I buy you some, Sir Edward?"

"Yes, a lot, and the biggest you can find!"

I did so; and we parted. Returning home hours later after a moist but enjoyable afternoon, I saw a great crowd gathered at the junction of two streets, engaged in a furious water fight. The central figure was a most disreputable-looking man with a sodden wisp of hair and a collar that should have been; remnants of a tie trailed dankly down, his soaked garments were shapeless, and his head was crowned with a sort of dripping poultice. He was spanking water in all directions, like the Crystal Palace fountains in their heyday. Every squirt was accompanied by shouts such as "Take that, you foolish female, and that, you fat feminine Argentine!"

With grief I recognized in this damp reveler Her Britannic Majesty's minister plenipotentiary.

Balsa Wood.

During the war "balsa" wood was the material used for the 70,000 mine buoys which, stretched across the North Sea, proved so effective a barrier against German submarines.

When we wish to express the limit of lightness, we say that a thing is "light as cork;" but balsa, which is the wood of a tree native to the tropics of America, is lighter by one-third than cork.

It is not at all like any other kind of wood. Instead of having a fibrous structure, it is composed of hollow, thin-walled cells containing nothing but air. To prevent it from rotting, it has to be treated chemically by a process which, incidentally, renders it waterproof.

This curious wood is used for hydroplane pontoons, for toy airplanes, for surf-boards and for sportsmen's decoys. Relatively to weight, it has far greater structural strength than any other kind of wood. It is coming into extensive use for refrigerator compartments on ships, and is thought likely to prove equally serviceable in refrigerator cars and cold-storage warehouses.

Alone.

Why should we faint and fear to live alone,
Since all alone, so Heaven has willed, we die?
Nor even the tenderest heart, and next our own,
Knows half the reasons why we smile and sigh.

—John Keble.

She Should Worry.

Mistress—"I think you handle those fine china dishes very carelessly."
Jane—"Don't worry, ma'am. They are so light that they won't hurt me, even if I dropped 'em on my toes."

"Dead for the Fatherland"

The spirit that prevails in the Regions Libérées (liberated districts) of France, says Mr. Stephen Gwynn in the Nineteenth Century, is gratitude for victory. Although that spirit is best shown in the common every-day life, I felt it also in a function where the expression of it was self-conscious and deliberate, though the ceremony was as simple and naive as a ceremony can be.

On the Sunday that I spent under his auspices, the sous-prefet was engaged to inaugurate a memorial to one of the little hamlets behind Noeux les Mines. The official function was fixed for three o'clock, and we were to have our dejeuner with the maire, who appeared in tall hat and frock coat, with the tricolor sash round his waist, yet, despite his costume, looking the prosperous farmer that he was.

We went out from our repast to the platform, where two local bands blared out the Marseillaise in the village street all overarched and hung with tricolors; we got on the platform along with the Socialist mayor of an adjoining mining village—all very friendly together. M. le sous-prefet made a pleasantly eloquent speech in good set phrase—and so far it was a little like many other ceremonials. But it had one incident new to me that I suppose is reproduced whenever

such a memorial is set up in France, and that seemed to show admirably the French instinct for what is commemorative and for what is dramatic. At the foot of the monument stood the village school-master, a tall quiet man with long, drooping red moustaches, essentially civilian in appearance; but he wore on a captain's uniform the emblem of the Legion of Honor and the croix de guerre with bar. Standing there, this representative of the local soldiery called a roll—only about a dozen names, for a commune is a small place. As each name was called a child knelt to the name came forward, and answering, "Mort pour la patrie," laid a bouquet of flowers by the pillar. The mayor's little daughter, in her white dress and red cap, was one of those who answered, and her brother had a wonderful sheaf of phlox and Cichelmas daisies. It was almost strange, where two local bands blared these droll to see how small boys bustled up crying their "Mort pour la patrie" as if it were the catchword in some game. Yet somehow the thing took you by surprise; I felt as if an unfair assault had been made on my emotions. But for all that it was a festival, not a funeral; the dominant note was given by the trumpeted Marseillaise and the bright streamers; it was an expression of victory and of gratitude for victory.

The Power of a Plant

A correspondent says that he put one of the growing pears on a tree in his garden into a square glass bottle, which he fixed against the wall. He then watched from day to day to see what would happen.

Gradually it filled the bottle, flattening itself against the square sides, and at last burst the glass walls of its prison.

Some time ago a heavy paving-stone began to rise on a pathway in a country town, and when it was removed to see what had caused the disturbance a mushroom was found growing underneath. Soft and pliable as the fungus might seem, it was more powerful than the dead weight of the stone, which must have been half a hundred-weight.

Enormous weights have been lifted by vegetable marrows, some years ago one which was growing under an old disused cart, from which the wheels had been removed, actually raised this from the ground. Cucumbers, too, have performed prodigies of valor. One young cucumber found its way when very young and thin through the middle of a large marrow-bone, and as it grew larger and larger the inexhaustible force it exerted split the bone.

At one place in the Tyrol the roots of a larch grew downward through a

clef, and as the root thickened it split the stone and raised part of it, weighing more than a ton, a distance of a foot. At Cambridge, in one of the main streets, there is an iron fence which has been absorbed by a growing tree, so that several of the massive iron uprights have disappeared inside the trunk.

The only thing that some of these trees cannot resist is the strangle grip of another plant that encircles them. In England honeysuckle often kills a tree like the beech, while in tropical forests many of the creepers kill the trees up which they climb, and then save themselves from falling by throwing out long branches to neighboring trees.

The tiny root hairs of our common wild plants, though so fine as scarcely to be seen, push the particles of earth and the stones on one side and penetrate into the soil like a gimlet. Experiments have been made with beans which have been grown in water spread over quicksilver, and the roots have been found actually to force their way through this heavy metal.

Another wonderful instance of the power of a growing plant is the way in which the sap is pumped up to the remotest leaves. The force of the rising sap has been found to be equal to a pressure of twenty-two pounds.

Making Yolks White.

A scientific poultry breeder in Italy has succeeded in producing eggs with perfectly white yolks.

It appears that the yellow color of an ordinary egg-yolk, which is sometimes intensified to a bright reddish hue, is due to a pigment called "carotin." The same pigment gives to carrots their familiar hue, and hence the name bestowed upon it.

The yellow legs of Leghorn chickens, and of some other breeds, owe their color to carotin, which, as it would seem, is a rather common coloring substance in nature. There is much of it in corn and in the green feed supplied to poultry.

The experimenter found that by entirely eliminating carotin from the food given to his chickens, he was able to produce Leghorn hens of the white variety with white yolks and white beaks, and the yolks of the eggs they laid were white.

London was the first city to use coal.

Lords of the Near East

A world tired of the sounds and the scenes of war is paying little attention to the drama that is being played out in Asia Minor. The Greeks are making their last effort against the Turks. The Greek must win, or the Greek will lose all he has gained in other wars. King "Timo" is making the last throw and for high stakes.

The Turk is between two forces. He is facing his enemy the Greek, and the Soviets are forcing their help up on him. Russia is crowding down again from beyond the Black Sea to help the Kemalists. England is watching, with more uneasiness than London admits, this Soviet-backed menace to Suez and to India.

The Turks are loath to accept Russian help, and they are wise in that reluctance. They fear that if Russia ever comes to Asia Minor that Russia will stay. In stating that the Russians are willing, nay eager, to give help, Gladstone, Turk Nationalist spokesman in Italy, says:

"No Russians have landed so far. We do not want Russian troops in Anatolia, for we realize that if they ever come it will be to stay and their presence would menace our independence."

When Moscow was Moscow of the Kremlin and the old Czar, Russia wanted a safe gate to warm water. When Russia became the Great Russia of St. Petersburg, Russia moved toward the Golden Horn and Dardanelles.

A people's rulers may change and its Government may change, but the old dreams and desires are likely to live on. The Russia of the Soviets is as anxious as any older Russia to reach a great ice-free port. And the Russia that comes after the Soviets will strive and strain to get or to keep an outlet to the world through the warm seas.

The Turks will accept Red help or it will be thrust upon them. Lenin is emerging as the long-expected Russian dictator. He knows the road to Constantinople. Russian instincts will pull him in that direction. A Soviet Turkey under a Lenin-placed commissar will put Lenin astride the Suez Canal and cut England off from the East.

The Kemalists are enraged that the Greeks, "our former slaves and servants," should attack them. It passes their understanding that a "mere dog of an infidel Greek" should dare assault those under the great banners of the Caliph.

The Turk sees himself becoming a slave that he may buy back his "former slaves and servants." Lenin sees himself as overlord of the Near East, master of the gates to India and mucker of British sea-power.