

News From the Realm of the Motor Wise

FACTS OF INTEREST FROM MOTOR WORLD

Hundreds of Thousands Being Spent for Roads Across the Border.

LITTLE CONVENIENCES

On the First Engines Charges Were Exploded by Hot Tube—Electric Spark Perfects This Feature.

At the present time Tennessee is building more permanent roads than any other state in the union. The one great project, the Memphis-Bristol road, which is now under course of construction, when completed will be the longest continuous macadamized road in the country, covering 62 miles. Already \$500,000 has been spent on it, and it will take at least 7 other years for its completion. The highway will pass through 23 counties and 82 towns, Knoxville and Nashville are among the towns through which the road passes.

An entirely unnecessary use of the brakes is one of the chief causes of excessive tire wear. With the exception of those occasions when it is imperative to check the car as quickly as possible, the use of the brake should be dispensed with. Braking is greatly overdone by most drivers, and the habitual use of powerful foot and hand brakes cannot but prove injurious to the tires, owing to the sliding of the wheels which ensues before the momentum of the car is overcome.

On the first engines which could be styled internal combustion motors the ignition of the charge, whether powder or some sort of gasoline mixture, the builders met with many obstacles in their efforts to get a quickly-burning mixture. Until the time the hot tube was tried the ignition of the charge was far from reliable, and many discontinued their experiments with internal combustion motors, being unable to devise means of exploding the charge.

A large field for the motor truck is open in the coal delivery business, and demonstrations are daily making converts to the truck way of doing business. In many cases have been conducted tests, perhaps as much for their own information as in the hope of selling their machines to the parties in whose delivery systems they have installed a truck for a test period. Occasionally the little piece of rubber, located in the tire tube valve cap, cracks and tears when changing tires.

SPEAKS OUT HIS FIRM BELIEF

THAT THERE IS NO BETTER MEDICINE THAN DODD'S KIDNEY PILLS.

Mr. Liskard Man Tells the Public What He Thinks of the Remedy That Never Fails to Cure Diseased Kidneys

NEW LASKEARD, Ont., March 29.—(Special).—Mr. Isaac Grant, well-known and highly-respected here, is a firm believer in the old and still-growing belief that Dodd's Kidney Pills are the sure cure for all forms of kidney disease.

Mr. Grant is outspoken in his belief. "Any person suffering with kidney disease," he says, "should use Dodd's Kidney Pills, as there is no better medicine on earth today." When a man makes a statement like that he believes what he says. Hundreds of others in Canada are making the same statement every day, and for the same reason. They have used Dodd's Kidney Pills not only cure their backache or rheumatism or dropsy, or other ailment at which they are alarmed, but they build up the system and make you feel stronger and healthier all over the body.

Dodd's Kidney Pills cure the kidneys, and cured kidneys mean pure blood. Pure blood cures the ailment by making the body strong enough to shake off any and all disease.

also sometimes it affects the plunger. A small amount of soft solder dropped into the cap makes an excellent substitute, the metal being sufficiently soft to bed itself against the end of the valve and make a perfectly airtight joint. It will not adhere to the other metal.

Pipes and passages of acetylene generators should be periodically blown through to be sure they are clear, and if there is a cotton filter for the gas this should be changed occasionally if it seems to require it. Especially should it be seen that the different parts of the generator go together freely and that they can be fastened in accordance with the maker's instructions.

Even a little thing like a hot muffler discharge pipe sometimes may cause surprising loss of power. What is generally done, however, is to cause the exhaust gases to seek other outlets—usually through the blowing out of gaskets in the connecting pipe line, or the inserting of the muffler out, so that the device be of the poppet type and opening outward.

The latest invention for covering automobile footboards is a matting made in picturesque designs from aluminum. One cannot slip on it, and its metallic composition makes it easy to clean. It is also almost indestructible.

In ten months American makers have shipped to other countries 12,196 automobiles worth almost \$13,000,000, with Canada accounting for about a third of it.

A great majority of manufacturers are using metal to metal brakes; some of them have adopted cast aluminum lined with cast-iron working against iron shoes.

The use of powdered soapstone in the mold when casting babbit will greatly improve the flow of metal; it insures a full mold and a clean-cut casting.

The front wheels should not be adjusted so loosely that they are allowed to wobble. Neither should nuts be screwed up so tightly that there is an excess amount of friction caused by the pressure created. When the wheels begin to give signs of play it is time that the required adjustment be made.

WATER STREETS WITH MOTOR APPARATUS

First Apparatus of Kind in America in Use at Pensacola, Florida.

An innovation in motor vehicles turned out recently is a sprinkler for Pensacola, Fla. A large cylindrical water tank is mounted on a regular commercial chassis, with complete sprinkler equipment. The capacity of the tank is 300 gallons and the car is calculated to do the work of several horse-drawn sprinkling carts.

The car was shipped to Florida last month and is now doing service on the streets of Pensacola. The motor sprinkler does not muddy the roads, the way ordinary slow-moving sprinkler carts do. It wets the ground evenly and yet thoroughly by reason of its ability to traverse the route several times while horses are doing it once.

Motor sprinkler systems are new in this country, but have been used extensively for years in Germany, France and other European countries.

TESTING STEEL

Unique Devices Put All Manner of Strains on Metals.

The physical laboratory is probably the most interesting to the layman. Here stands a great battery of powerful machines, especially designed for testing steels against the strains of twisting, pulling, rubbing and vibration. Silently and without apparent effort one of these machines will take a bar of steel and pull it apart in the middle. Another will twist it until it breaks. The third will vibrate it in a way that multiplies many times the strains of use on the hardest road. The limit of flexibility is determined by another machine. All of them register automatically the amount of misuse the steel will stand up to the breaking point. It is a commonly known fact among steel makers that, when Studebaker gets through testing a piece of metal, its engineers know more about it than the man who made it.

OPERATE MOTORS BY KEROSENE GAS

Device Invented to Make Use of a Less Expensive Fuel.

START ON GASOLINE

After Running for Few Minutes, Switch Over to Other Tank, Perhaps Automatically.

By heating vaporized kerosene, utilizing the heat produced by the exhaust a method has been developed of using this comparatively inexpensive liquid as a substitute for gasoline. The problem is one that has puzzled the best engineering talent in this country and Europe ever since the introduction of the internal combustion motor, which is steadily gaining ground against the heavier steam power plant, even in large units.

Several successful kerosene and heavy oil engines have been developed in the last few years, but until now it has not been found practicable to use kerosene in the ordinary gasoline engine of standard type. The device is under the control of a company with a plant in Long Island City.

The Method Employed.

The producer, which varies in length from 11 to 26 inches and in diameter from 5 to 8 inches, having a weight of from 20 to 30 pounds, is mounted close to the engine and attached to the exhaust manifold in the same manner as a muffler. The kerosene is vaporized by passing through a mixing valve and the vapor is drawn by the suction of the engine through a tortuous passage, about twenty feet in length, contained within the producer.

The thin walls of this passage are surrounded by the hot exhaust gases, which heat the vaporized kerosene. It is a simple matter to conduct the gas to the carburetor, where the proper amount of air is added, and it is then ready to be taken into the cylinders and exploded.

It is necessary, however, to start the engine in the ordinary way on gasoline. After running for three to five minutes the kerosene is turned on and the gasoline turned off. In the land control the proper time in which to change over is indicated by a dial thermometer on the producer. In the automatic control the shifting of the fuel and the control of heat are controlled by a thermostat, which also governs the temperature of the gas entering the cylinders, thus maintaining perfect control of the engine under all conditions of speed or load.

Should the engine stop for a sufficient length of time to cool off below the point of gasification it will automatically shift back to gasoline, so that the operator can crank his motor at any time with full confidence that it is on the proper fuel to start.

AGES TO BUILD THE AUTOMOBILE

Motor Car of Today Evolved From Study of Science of Locomotion.

PHAROAH'S CHARIOT

Followed by Bullock Carts, Horse Litters, Carriages, and "Horseless" Carriages.

It required centuries to build the modern motor car, according to an Indianapolis automobile manufacturer. This statement is based upon a review of the evolution of the science of locomotion and the manufacturer declares that everything in this world is progressive; has a link that connects it with the past, and one with the future, and that therefore no one invention stands completely alone. Attention is called to the fact that from C. 1400 there is a record that shows the desire of men to overcome time and distance, and to aid in this they used chariots in times of war, in races and for private use until long after the Dark Ages. The chariots of the Egyptians are spoken of in Genesis when Pharaoh, the prime minister, said: "Take your chariots out of the land of Egypt."

The bullock cart was used in 500 A. D. It was a peculiar vehicle, especially as it did not contain one particle of metal. This cart was a step further than the Indian method of using two branches of a tree on which a platform was tied and the branches dragged on the ground behind a horse.

Among the Romans about 1000 A. D. the horse litter was used by patricians and their equipages numbered many varied colored affairs of state and for private driving as well. Slaves and horses were used to carry these litters that did not have wheels. During the latter years of the Dark Ages the old Roman roads, fallen into ruins by neglect, made their use almost impossible. The only method of transportation in those days was on the backs of mules and horses. Gradually royalty and wealthy people revived the use of carriages. The carreta was a two-wheeled cart, a descendant of the ancient chariot. This was the method of travel about A. D. 1250. It was in the Middle Ages that the introduction of wheels with spokes is found, so far as records inform. Horses were used, but the driver never rode in the vehicle, but always rode on the back of the horse.

Four-Wheeled Vehicles.

Here is where the direct ancestor of the modern survey came into use, and was called carriages, having four wheels. Extensive decorations were used on these vehicles, which were popular about A. D. 1500. Young men considered it a disgrace to ride in the Queen Elizabeth coach in 1571 because it was considered a woman's prerogative to ride. Small wheels were introduced in front of the large ones in the rear about A. D. 1700. This permitted the carriage to turn in much shorter space. The chaise is kind of a "second cousin" to the ancient chariot. Its special characteristic is that the body is suspended on long wooden shafts. The calash steps and high wheels are also features. Even today some types of these vehicles may be found. About 1855 the

BRINGING DAD HOME FROM WORK.



A TYPICAL SOFT COAL MINER AND HIS LITTLE GIRL.

phaeton came into service. This is a light four-wheeled affair.

The Bicycle.

The closing years of the 19th century saw the bicycle come into common use. This is considered a descendant of the "daudy," or hobby-horse. Everyone is more or less familiar with these different types. The automobile, which followed the bicycle, was first called the "horseless carriage." Thus the entire effort of man for years to provide quick, efficient and comfortable means of transportation all has its relative importance. Every step has stood upon the previous one, and made the following one possible. The automobile is the evolution of many years of work and study.

LUTHER THE MOST HUMAN OF HEROES

His Service to the World Did Not End With Giving Liberty in Church Thought.

With his book "Martin Luther: the Man and His Work" (Century Company), Arthur Cushman McGiffert adds his name to the long list of biographers and critics of the great Reformer. In size his book measures less than half the elaborate volume in Prentiss Smith, reviewed recently in The World. After the thought of the moment, Dr. McGiffert places the accent on the interest in Luther as a man rather than as a theologian. He says: "He was very human, this hero of ours, fiery-tempered, passionate, imperious, lovable withal, warm-hearted and generous to a fault. Full of contradictions, he had the frankness and carelessness of genius, and what he was he showed, and what he thought he said, without concealment or diplomacy."

"Like a Cromwell or a Napoleon in his mortal coil, he was like our own Lincoln in his human sympathies, his simplicity of character, his transparency of honesty." Like him he was too in his quickness of perception, his quaint humor and his homeliness of speech. And as to the work done by this most human of men:

"Luther's service to the modern world was not exhausted in the religious and intellectual liberty he did so much to make possible. In breaking with the Roman Church he broke also with the traditional principle of ecclesiastical control over civil affairs. The state is wholly independent of the church, he taught, and its sphere is altogether different. Many other Protestants, while recognizing this, and denying the right of the church to rule the state, insisted upon making the Bible the supreme law-book in civil as well as in religious affairs. But this too Luther denounced as mischievous. The Bible, like the church, has had to do with religion, not politics. The state is to be governed according to natural reason. Statesmen, not theologians, are to be its guides. "The political implications of such a position as this are almost incalculable."

A PERSONALLY CONDUCTED HOME-GOING—EVEN BABY HELPS.



The anthracite miner and his family of "kidds" carry pa's pick and shovel home to the ending of the strike; so the mine is taking transportation "allowance" of coal; after April 1st he has to buy his fuel; up until now his little children were "allowed" to pick up fallen coal by the "generous" coal mine owner.

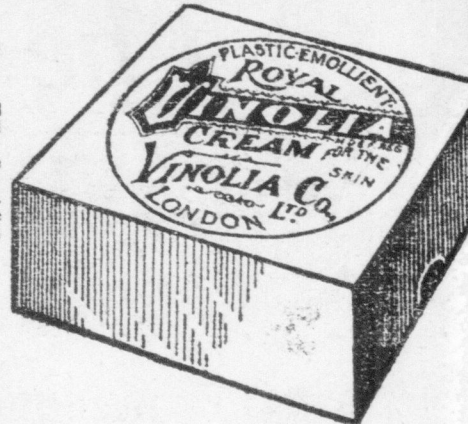
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GERMAN ELECTION

Continued From Page Seventeen.

block, 155,000 Radicals, and less than 565,000 Socialists. There are 137,000 Socialists in Hamburg, and 3,000 only of the parties of the Right. There are 43,000 in Nuremberg and only 7,000 of the Right; 44,000 in Hanover and 17,000 of the Right. Majorities are as enormous on the other extreme. The ten best Zentrum seats in the Rhine province consists of 10,000 "Socialists," 2,000 Conservatives, 28,000 Liberals, and 232,000 Zentrum—an average clear majority of 19,000. In this very Rhine province the socialist vote has increased from 238,000 to 333,000 in the last four years. The constituencies in this province run from 23,000 electors to 127,000. With an equal distribution of electoral areas the Socialists should have had nine seats instead of five in the Rhine province, the Zentrum 17 instead of 26.

It is, of course, in the agricultural districts of the west that this unfair distribution of seats gives the Conservative Junker a chance. Such constituencies go as low as 13,000, and close by is the Teltow, in the suburbs of Berlin, with 339,000 electors, surely the largest constituency in the world—279,000 went to the poll.

RESTRICTIONS ON GROCERS IN SEVENTEENTH CENTURY.

Shopkeepers in the seventeenth century was subject to other restrictions than those respecting prices. It was enacted that "Any person using the Trade or Mystery of the Grocer should not either by themselves or any third party directly or indirectly keep more than one shop at the same time." Grocers were also forbidden to sell any commodities except "raysons, currants, sugar, spice, soap, candles, molasses, gunpowder, shot match, tur, pitch, rozen, tobacco and pipes, cotton wool, cotton yarn, starch, blading, rice, linseed oil, white and red lead, olive, prunes, figs, Spanish white alabaster, alum, almonds, brimstone, lampblack and candle rushes."—London Chronicle.

SOVEREIGNS AS COLLECTORS.

The ex-Sultan Abdul Hamid had in his palace the finest collection of precious stones ever brought together, some of which were recently sold in Paris. The tastes of the Czar Ferdinand, of Bulgaria, run in the same direction. His collection of diamonds, sapphires and emeralds is estimated to be worth £500,000.

The Kaiser, we are told, has a passion for old uniforms and boots and shoes of antiquity. Bavaria's Regent has a love for old beer pitchers, especially those of his own country of the middle ages.

The late King of Sweden possessed a magnificent collection of rare books, engravings and medals, while Ludwig I, of Bavaria, rejoiced in a collection of umbrellas.—London Globe.

WOMAN'S MOST SUCCESSFUL MEDICINE

Known All Over The World—Known Only For The Good It Has Done.

We know of no other medicine which has been so successful in relieving the suffering of women, or received so many genuine testimonials, as has Lydia E. Pinkham's Vegetable Compound.

In nearly every community you will find women who have been restored to health by this famous medicine. Almost every woman you meet knows of the great good it has been doing among suffering women for the past 30 years.

Fox Creek, N. B.—"I have always had pains in the abdomen and a weakness there and often after meals a soreness in my stomach. Lydia E. Pinkham's Vegetable Compound has done me much good. I am stronger, digestion is better and I can work with ambition. I have encouraged many mothers of families to take it as it is the best remedy in the world. You can publish this in the papers."—Mrs. WILLIAM S. BOURQUE, Fox Creek, N. B.

In the Pinkham Laboratory at Lynn, Mass., are files containing hundreds of thousands of letters from women seeking health, in which many openly state over their own signatures that they have regained their health by taking Lydia E. Pinkham's Vegetable Compound, many of whom state that it has saved them from surgical operations.

Silver Spoons

knives, forks and serving pieces, in many exquisite designs, are stamped

1847 ROGERS BROS.

This brand is known as "Silver Plate that Wears" and is made in the heaviest grade of plate. Satisfaction is guaranteed. Sold by Leading Dealers

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GIVEN AWAY FREE

For correct solutions of A.B.C. Puzzle.

Read Carefully if You Wish to Win a Money Prize.

"Simple as A.B.C." the old saying is. This puzzle may look simple, but it is not, and you will find it puzzling enough.

The puzzle is to count the number of A's, B's, and C's in the square. State how many of each letter you find.

To the person who sends in the highest correct count we will give the sum of Twenty Dollars (\$20.00).

Should two persons send in equally correct answers for the first prize the first two prizes will be divided between them, each receiving the sum of Seventy-five Dollars (\$75.00). Should three persons send in equally correct answers, the first three prizes will be divided between them, each receiving the sum of Sixty Dollars (\$60.00). Should four persons send in equally correct answers, the whole sum of Two Hundred Dollars (\$200.00) will be divided between them, each receiving Fifty Dollars (\$50.00). And so on in like proportions.

DO NOT SEND ANY MONEY

We mean exactly what we say. We do not ask you to send us any of your money. There's only one simple condition (which does not involve the spending of any of your money) to be complied with.

If you think you can correctly count the A. B. C's, write to-day, as this advertisement may not appear again. We will reply at once, saying whether your answer is correct or not and will send you a full prize list, together with particulars of the simple conditions mentioned above.

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