

# THE AUTOMOBILE

## Practical Paragraphs.

**Spring preservative**—One of the best preservatives for the leaves of automobile springs is flake graphite and lubricating oil mixed to a consistency of a paste and applied with a paint brush. This prevents the accumulation of rust and contributes to the easy riding qualities of the part.

**Gasoline logic**—A simple but frequently forgotten precaution in regard to filling the gasoline tank is that the mouth of the gasoline can should be carefully wiped off before filling to remove any dust or dirt that may have lodged there. Otherwise, in the absence of a strainer, the gasoline will carry the accumulated dust into the tank and later there will be trouble with plugged pipes or carburetor.

**Scratches on body work**—While a deep gouge in the car's body work will usually call for the attention of the coach builder, still the really skillful owner may be able by running into the scratch with wax and resin melted together and then smoothing off the surface and remaining to accomplish a satisfactory repair.

**Testing the mixture**—If the mixture is suspected of being too rich shut off the fuel in the tank and open the throttle. If the mixture passing into the cylinders is too rich the engine speed will increase as the level of the gasoline in the float chamber is lowered, since this operation weakens the mixture considerably. If the mixture is thought to be too weak the float chamber can be flooded while the engine is running and if this causes the motor to speed up it may be accepted as an indication that the mixture is not rich enough.

**Wheel inspection**—One of the most frequent causes of excessive tire wear

is faulty alignment of the front wheels, which causes them to scrape the tire along the road surface at each revolution. Whenever excessive tire wear develops the wheels should be inspected for misalignment, and if the car owner is not familiar with the method used in aligning he should have the service station do the job. The charge for aligning the wheels varies, but \$2 is about the average and this usually includes a complete inspection and adjustment of the steering mechanism from the front forward. Front wheels are always cambered and gathered; that is, they "toe in" in front making the distance from wheel to wheel in front less than that in the rear. At the same time the distance between the points of contact with the road is less than the distance between opposite points. These distances vary with different makes of cars, but usually the gather equals 3 per cent. of the tire diameter. Thus, with a thirty-four inch tire the gather will be gathered about an inch. However, the car owner who proposes aligning his wheels should get the exact figure from the manufacturer or from the service station.

**Refitting old pistons**—When an old set of pistons reaches the stage where replacement is necessary, it is sometimes possible to avoid this expense by having the worn set expanded or swelled. The process used for this is by heating the pistons one at a time in a bed of hot charcoal, which completely covers them. The charcoal is brought to a red hot heat and is then allowed to cool. When the piston is removed it is found to be considerably swelled, sometimes as much as .004 of an inch. Pistons so treated are not as good as new ones, but considerable expense is saved, and the clearance is returned pretty close to normal.

## LABOR STRIKES OF 3,000 YEARS AGO

### MUCH THE SAME AS AT THE PRESENT TIME.

### Interesting Account of Conditions in Egypt 1,200 Years Before Christ.

A new translation of an ancient Egyptian record—merchandise found on tablets buried at Thebes more than 3,000 years ago—gives the most interesting details about a labor strike which occurred in the ancient capital when hundreds of workmen decided they were not being paid a sufficient quantity of corn and fish for their daily labor, and that their hours were too long and their overtime not generous enough.

Having reached this conclusion after a number of conferences between the workers and their "chiefs" (the modern walking delegate often being one of the "scribes"), the workmen notified their employers, who were the "great princes," that they would work no longer until their wages were promptly paid and also a new wage scale was arranged.

The record reads almost as if it might be the history of a strike occurring yesterday—or to-day—taking into account, of course, the difference in the locale, the environment and the temperaments of the people 3,000 years ago.

The tablets were found in the excavation of some ruins at Thebes and are of great value in giving us a strong light on the social life of the antiquity, and particularly upon the labor conditions of Thebes 1,200 years before Christ.

### "Companies" of Craftsmen.

The translation shows that there existed at Thebes a large number of workmen employed in the erection of the necropolis. They were composed of metal workers, carpenters, artisans and similar craftsmen, who were always referred to by the officials—and of course the gentry of Thebes—as the crowd or "companies."

At their head was a chief workman who resembled the foreman of our present day, and to him was entrusted—in addition to the overseeing of his men—the keeping of a daily journal showing the record of the laborers.

These records show that the time sheet of today is no more than an elaboration of the daily recording of the workmen of ancient Egypt. There are even some old words for absence from work—the word "ill" being entered the greatest number of times beside that of the man's name; again, there would be that of "laziness" and occasionally the plea of taking a holiday in order to sacrifice to the gods, or because the wife or mother-in-law of the family suffered from some sickness.

This particular group of workmen was employed in the City of the Dead at Thebes during the reign of Ramesses IX.

It is one of the acknowledged characteristics of modern Egypt to-day that payments of any description are never made without delay. This was true of ancient Egypt as shown in the translations. The routine of delays to which the workmen were subject was the greatest factor in the labor problem at that time. Many promises were made by employers, but very often months would pass before payment would be made, and the men practically were starved into resistance and striking.

### Presented Their Complaints.

The supply of corn was due on the 25th of each month; in the month of Phammoth it was delivered one day late, in Phamuthi it was not delivered at all and the workmen went on strike, or, as the Egyptians expressed it, "strayed in their houses" and re-

### Lilacs.

Beside the farm-house, old and gray, The lilac waves its purple plume, And blossoms, bright with dewy spray, Shed all around a sweet perfume.

And as the purple banners toss Amid the breezes of the May, The heart turns back, with sense of loss,

To May-time and a garden gay.

There, lilacs bloomed beside the door, An enchanted spot it seemed to be, And one, whose voice is heard no more, Was there to share its joys with me!

And ever now when spring returns, And lilacs bloom beside the gate, For her loved voice my spirit yearns— While I can—only trust and wait.

—Helen B. Anderson.

### Use for Aluminum.

Owing to the property which aluminum possesses of producing a very high temperature when burned with substances that give off oxygen it has been employed for making a detonator or firing explosives which do not readily respond to the action of the detonating compositions generally used.

The aluminum is used in the form of a powder mixed with the other substances filling the percussion caps or detonators. The sudden high temperature induced by the pulverized aluminum results in a greater mechanical energy than can be produced with compositions not containing aluminum.

### Befast Again.

"A Irish Republican, taking his life in his hands, was delivering a passionate speech to a mixed crowd in Belfast."

He had suffered badly at the hands of one particular heckler, but at last his chance came.

"You think you're very smart, don't you?" sneered the heckler. "Well, just tell us how many toes has a pig got?"

"Take your boots off and count!" was the lightning reply.

There were no further interruptions.

### Rapid Sand Sifter.

A sieve shaken by compressed air machinery at a speed of 1,800 vibrations a minute has been invented for sifting foundry sand.

In nautical language a wind with a velocity of 60 miles an hour is termed a "whole gale."

## A NEW PHASE OF CANADIAN FARMING

### NOVEL BUSINESS IN CENTRAL ALBERTA.

### D. H. Bendick Operates Wild Game Farm Yielding Handsome Revenue.

A "discovery" has been made near Leduc, south of Edmonton in Alberta which adds still another phase to the myriad features of Canadian agriculture and in its present lack of competition suggests the way to the development of an expansive and profitable industry. This is no less than a successfully operated wild game farm, abounding in the feathered denizens of all parts of the world as well as those native to every section of the Dominion. The farmer is D. H. Bendick and he has built up an enterprise that is possibly unique in the Canadian West as well as having developed a most prosperous business on novel lines which is returning him a handsome revenue.

The farm very generally remains in the primitive state in which Nature created it, situated in Central Alberta's picturesque parkland with its open spaces and generous bluffs. A large enclosure with artificial lakes has been provided for the summer quarters of the waterfowl. No alteration or addition was required for other feathered inhabitants and with this exception the primal wildness is unchanged. Between fifty and sixty different breeds of the feathered tribes are bred on the farm including wild ducks, geese, turkeys, pheasants, grouse, prairie chickens, quail, pea fowl, guinea hens, and doves. The breeding stock on the farm at present time numbers nearly three hundred and this spring and summer it is expected that two thousand birds will be hatched and reared.

### An Accident Responsible for Venture.

The inception of this novel and profitable industry was largely accidental. Mr. Bendick, an ordinary Alberta farmer with, however, the instincts and tastes of the naturalist undeveloped. One day some years ago, whilst cultivating his fields, he came upon the nest of a wild duck and his sporting and naturalist promptings rebelling at the idea of destroying the eggs, he took them back to the house and placed them under a hen. The result was ten wild ducklings, all of which reached maturity without mishap and multiplied surprisingly the following year. Rather by way of expanding the industry his hobby than with any idea of profit, he followed up this success by importing some of the cheaper species of pheasants and since that time the farm has just grown and developed of its own accord into a business proposition returning very satisfactory revenue.

Other birds were added at different times, a permit from the Government being secured in the case of Canadian game birds protected by law. The question of operation was not from the first a simple matter, there being numerous difficulties to surmount and much hard study to be undertaken and mastered before the knowledge necessary for the care of the many feathered varieties was absorbed. An inherent love of the pursuit conquered all obstacles and now he has no trouble in rearing to maturity in substantial numbers, the birds of any breed.

Contrary to what one might suppose the market for this stock is excellent and staple. Hunting clubs and large estates in both the Eastern and Western United States are continually in the market for wild game birds especially good breeding stock, and are ready to pay good prices. In the past fall though Mr. Bendick had a numerous stock to dispose of, he was unable to meet the demand which came to him. Geese range in price from \$15 to \$110 and native wild ducks are worth from \$10 to \$50 per pair. Other birds bring anything up to \$150 per pair.

### Much Wild Game Abounds.

The province of Alberta, in fact the entire area comprising the Prairie Provinces, being so excellently supplied with wild game, naturally offers the best possible conditions for their raising under semi-domestic conditions. It is the general opinion that the wild birds arrive at a stupor maturity and reproduce more readily in this life than under the hazards of the natural existence. Two flowing wells on the farm supply water for the artificial lakes which are in the enclosure where the water fowl are kept. Long grass and brush surrounding the lakes supply the best of locations for nesting. The young birds are fed such animal foods as boiled eggs until they are old enough to eat grain. Some of the birds gather the greater part of their own food during the summer.

It has been found that wild ducks and geese which ordinarily lay only from five to eight eggs per season, will lay a second setting if the first is taken away, which may be hatched out by a barnyard fowl. The Canadian wild goose has been found on domesticated breeds and the experience with the Egyptian goose has been similar. Wild ducks on the contrary never entirely lose their wild instincts. Young pheasants can be raised as easily as chickens and this has been proved with a dozen different varieties. Wild turkeys, introduced from Kentucky, have done exceptionally well and completely out-classed in proportions the tame varieties. Some of these have attained a weight of over thirty pounds. The California quail, the Hungarian partridge, the Canadian prairie chicken, and Chinese pheasants have all been bred successfully proving extraordinarily hardy.

### The Two Words, "skirt" and "shire," were originally the same.

## ROMANCE OF A CHINESE PRINCESS

### GAVE THE SILK INDUS. TRY TO THE WORLD.

### Patronized by an Empress of the Celestial Kingdom Who Invented Loom for Weaving.

This is the day when almost every one uses silk in one form or another. Indeed it might be difficult to find a woman who cannot boast of being the possessor of it in a very much needed and useful form for daily use. Curiously enough, as things grow into common use with us we lose sight of the romance back of them that gave birth and the story of silk and the silkworm are full of romance and interest.

Silk has its birth in China and was discovered a few thousand years ago, it has been said, by a young girl as she idly played jackstones under a mulberry tree with a handful of cocoons. A Chinese Empress gave to the infant industry her patronage and her willing hands in labor; cultivated the wild silkworms, planted groves of mulberry trees for their development and invented the loom on which to spin the silk. And for centuries the cultivation of the silkworm was a royal industry, empresses tending and developing the cult in all its branches, including silkworm farms, the dyeing and weaving of the fabrics, the culture, in other words, of the whole art of silk production until what was one empress's pleasure—an infant industry—became in time not only a royal pastime but an imperial art of an imperial people.

The empress who gave the first great impetus to the industry is said to be one of the three greatest women of Chinese history, and was the wife of the Emperor Huang-Ti, who reigned twenty-six centuries before the Christian era. She it was who grew the mulberry trees and encouraged all the people both high and low to do so. She studied the silkworm, improved on the rearing of it and on the reeling of the silk, she invented the loom and perfected it for the weaving of the wonderful patterns that were afterward sold for their weight in gold not only in China but in India and Persia and in far distant Greece, where the luxury loving people prized them as priceless treasures.

Secret Given to the World. Silkworm raising is an exacting industry, yet every Chinese Empress since that time, and all the ladies of nobility as well as the peasant women of scattered countryside, have practiced regularly the art of sericulture, and what was known only to China, who guarded her secret for centuries, was spread by a woman over the world.

A Chinese princess married an Indian prince, and in the living of her headpiece she carried seeds of the mulberry tree and eggs of the silkworm. From that time the silk industry has spread over the world.

It has well been called the story of a woman's movement, and man has been an interloper, and a somewhat recent one at that, having done much in the line of the commercial development of silk; but the honor and history of it, as well as its use to-day, belong to woman.

The silkworm of commerce belongs to the group known as the silkworm moth, and many of this family spin large quantities of silk in making their cocoons. This species do not live long, and in their perfect state require very little food. The cultivated silkworm requires great care and quietude and is hypersensitive to changes in temperature, so that in China the girls who tend them give up their lives practically to the work, being selected for their gentleness and quiet, cheerful natures.

These girls are very thinly clad, so that they may be sensitive to the slightest change of temperature in order to protect the silkworm, and the sheds in which the silkworm is kept must be well ventilated, weatherproof and kept immaculately clean.

### Tended by Girls.

The silkworms love all sweet odors, and the fragrance of blossoms nourishes them; so that often garlands of flowers are strewn over the sheds where they are kept. The attendant girls must not only be quiet in all their movements, but even their food must be sweet and wholesome, their breath sweet. From the time that the first worm is hatched and the last has spun its cocoon they require most skillful and unremitting attention. It has been said that for greater warmth the best cocoons are sheltered in the bosoms of the attendant girls, and then they must be quiet indeed.

The silk producing organs of the silkworm are two long glands with a viscid substance that extend along the body and end in the mouth, and in the spinning of the silk each fibre is found to be double, being derived equally from both glands.

The silkworms of China and of India, when in their perfect state, are about an inch in length, the female of the species being larger than the male. They are whitish in color, with broad, brown bars across the upper wings. When in the caterpillar stage they eat the leaves and tender parts of plants and trees, preferably the mulberry tree, on the leaves of which the eggs are laid. Soon after the eggs are laid the females die and the males soon follow them.

The eggs are very numerous, about the size of a pinhead and bluish in color; they are fastened to the surface on which they are laid by a gummy substance which when dry is of a silky texture. The eggs are laid about the end of June and are not hatched until the middle of the following April, when the mulberry leaves begin to open.

At first the caterpillar is only about one-quarter of an inch long, but grows rapidly, some of them to three inches in length. They are usually yellow, but some are darker, and, whilst growing, they change their skins four or five times. Before changing its skin the

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To control cucumber-beetle, use a mixture of one part of calcium arsenate and twenty parts of land-pesticide. This will not only poison and repel the beetles, but will act as a fertilizer. Apply with a shaker made by punching holes in the bottom of a tin can. Make the first application when the young plants are first through the ground. During fair weather, make two applications a week. Usually four or five applications are needed in a season.

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Crabs are not usually looked upon in the light of a nuisance, but there are some species which cause bother and alarm. Oddly enough, the fisherman of Japan has a supreme contempt for the gigantic crab of his coast, which has pincers ten feet in length, and when moving along the bottom of the sea with its claws spread out covers an area of twenty-two feet or so. The destructiveness of certain species of crab in the West Indies is remarkable. On Grand Cayman they are as heartily detested, and in the latter they are great burrowers, and in localities where they are plentiful—and they multiply with the rapidity of the rodent—nothing is safe from them. They will eat even the eggs on which a hen is setting as greedily as the hen herself if she does not run away, and just as readily the leaves of seedling coconut trees. They effect in the West Indies practically the same great degree of destruction on the young cocoons as the East Indies. In each instance some 8 to 11 per cent. of the seedlings have to be replaced, if they are planted in newly cleared ground from which the crabs have not been thoroughly cleared out.

### These land crabs destroy vegetation and are responsible for frequent patches of bare soil in the bush, which, when the crabs are gone, soon become covered again. Into their holes they take things for which they cannot con-

caterpillar stops eating and becomes lethargic, but at other times it eats voraciously.

### Four Weeks a Caterpillar.

When the caterpillar is ready to change into the chrysalis or pupa state the glands become much enlarged. When ready to spin the cocoon it ceases again to eat and spins first a rough fibre, which becomes the exterior of the cocoon. Then it spins within this a finer substance, and this is the valuable fibre from which is reeled the silk. A single fibre of silk is from 800 to 1,000 yards in length. The silkworm is about four weeks in the caterpillar state; it takes about three days to spin its cocoon, and remains about three weeks in the chrysalis stage before it emerges the perfect insect, the butterfly—fit emblem, as the ancients made it, of the soul.

When the cocoon is finished the watcher know it by the ceasing of sound within the shell. Then the cocoons are treated with temperate heat to destroy the chrysalis within, as if it emerges it will break the fibre of the silk. There are several methods of treatment, and great care must be taken in reeling the silk from the cocoon so as to have the threads of equal thickness. Reeled silk is called raw silk.

### Mothers of Men.

There's a force for good, wielding its power in every country and clime. Swaying our destinies, shaping the hour; 'Tis the power of love that's divine, In city or town and over the seas, From times far out of our ken, It lifts us from trouble, our fetters it frees— It's the power of the mothers of men.

Washing our sins away with her tears, Giving her all for our needs, Smoothing our pathway, calming our fears, Curbing our hates and our greeds; Toiling through heartaches, failure and pain, Ready for laughter again, That is the theme of the world's great refrain— It's the power of the mothers of men.

### More Phonetic Spelling.

"Mamma," said a little five-year-old, "will you please tell me how to spell 'tunkin'?"

"'Tunkin,' dear? I don't know of any such word. Why do you ask?"

"'Cause I want to write, I love my teacher more than tunkin' tell."

### Trapping Tigers With Bird Lime

The idea that a hunter could trap wild animals with no other aid than bird-lime seems ridiculous, yet this is the favorite method adopted by natives of Sumatra, in the East Indies. The bird-lime is made from the gum of trees. In catching tigers or elephants the hunter spreads the lime where the animals will pass, and covers it with leaves. When a "cat" animal puts his foot in the gum he does not attempt to run away, but tries to bite the stuff from his feet, and then gets it on his face.

As he tries to rub it off he plasters it over his eyes, and when he is thoroughly covered with it he is so helpless that he can be caged without much trouble. He spends weeks of his captivity in trying to remove the lime from his fur.

Monkeys are captured in bird-lime smeared on the limbs of trees, but another way of catching small specimens is by means of a sweetened rag in a bottle.

The bottle is covered with green rattan and tied to a tree. The monkey puts his hand through the neck and grabs the rag. He cannot pull his hand out while it is doubled up with the rag in it, and he hasn't enough sense to release his hold. He fights with the bottle until the arrival of the hunter, who presses the nerves in the animal's elbow and forces him to open his hand and leave the rag for the next monkey.

Dynamiting for fish is a great sport among the Malays. The dynamite is exploded in a stream, and the natives rush off, some in boats and some swimming, to collect the fish that rise to the surface.

Another method of catching fish is by the use of drugs. For this purpose

## Mighty is the force of motherhood!

### It transforms all things by its vital heat; it turns timidity into fierce courage, and dreadless defiance into tremulous submission; it turns thoughtlessness into foresight, and yet stills all anxiety into calm content; it makes selfishness become self-denial, and gives even to hard vanity the glance of admiring love.—George Eliot.

### The Orchard is My Parlor.

The orchard is my parlor. The carpet is of grass. The apple trees are rockers. The brook's my looking glass.

The walls are tumbled fences. My ceiling is the sky, And little folk of feathers, Stop in, when passing by.

They like my crooked rockers For their little crooked toes; With me they swing and gossip Through every wind that blows.

The butterflies are welcome, And every greedy bee. They know the apple blossoms Are cups of honey tea.

My parlor has no windows Or doors or any plan; It's just where folk of feathers May drop in when they can.

An Honest Auctioneer. "Gentlemen, I can't tell about the horse; he is blind in one eye," said the auctioneer.

The horse was soon knocked down to a man who had been greatly struck by the auctioneer's honesty, and after paying for the horse he said: "You were honest enough to tell me that this animal was blind in one eye. Is there any other defect?"

"Yes, sir, there is. He is also blind in the other eye." He is also blind in the other eye." He is also blind in the other eye.

Poor Gets Benefit. Princess Mary's wedding presents which have been on view at St. James' Palace since March 8, have now been exhibited for the last time.

Unofficial estimates put the aggregate attendances at a round 150,000; and it is reckoned that receipts should be somewhere about \$50,000, the money going to charities.

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## THE AVERAGE AND SUCCESS

### When we take upon ourselves the excitement of reading statistics we soon come to the realization that what is called the average is pretty low.

When we consider the average yield of corn, wheat and other crops, the average production of the dairy cow and the average losses from pests and diseases as well as the average income of the farmer, it makes one wonder how some folks get along.

Take, for instance, the average yield of corn, 26.6 bushels per acre, this would produce an actual loss on the crop, even in a high-priced year. Then compare this average with the eighty and the hundred-bushel yields that are produced by those who make a business of growing corn.

If it takes a little more than the average yield to cover the average cost of production, one can readily see that it is the average plus the fifty, sixty or seventy bushels which spells success. It's the plus that brings the profit.

It may cost a little more to grow the big crops, but besides growing larger crops, these plus men grow better crops; and therefore, because of the quality, they often get a better price per bushel. The few added cents in cost and care means added dollars in profits.

Isn't it possible that the most of us are like the old hen who was trying to spread herself? Wouldn't it be better if we covered less ground but covered it better? And wouldn't we be more likely to hatch out better crops in doing so?

### Light from Shell-Fish.

After experimenting for eight years, an American scientist has succeeded in producing actual artificial light by chemical means.

The discoverer is Dr. Newton Harvey, of Princeton University, and the substance upon which he worked is "luciferin," which is obtained from a tiny Japanese shell-fish about the size of a flea. "Luciferin" is very like the material from which glow-worms produce illumination, but before Dr. Harvey's discovery scientists had never succeeded in obtaining light from it after it had been separated from the fish.

Dr. Harvey found that "luciferin" regained its vitality for a short time if placed in contact with oxygen, and a secret substance which causes "luciferin" to give off light for as long as is required.

This light-giving substance is dissolved in water, and in a dark room gives a blue flame strong enough to enable a person to read at four feet.