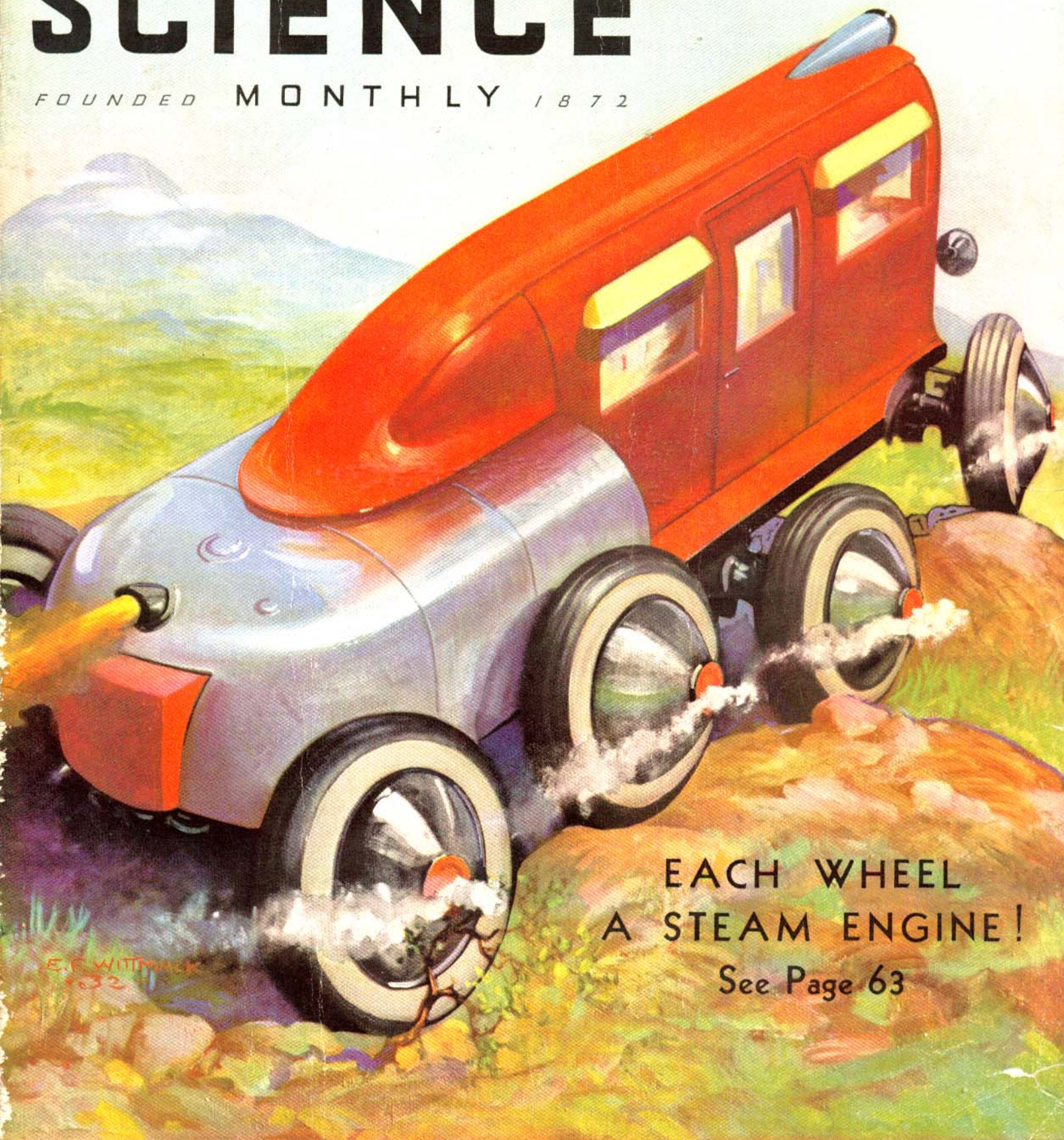


POPULAR SCIENCE

FOUNDED MONTHLY 1872

APRIL
25 CENTS

30 CENTS IN CANADA



EACH WHEEL
A STEAM ENGINE!

See Page 63

\$10,000 *in* **Cash Prizes**

SEE
PAGE
22

*BEWARE of Polish That Eats Away
Car's Lacquer, Gus Warns as He
Tells How to Keep Auto Like New*

By MARTIN BUNN



"There's stuff in this polish," Gus said, "that's sure to damage a car's finish"

Why Cleanliness PAYS on CHASSIS and MOTOR

"WHERE'D you get this stuff?" Gus Wilson asked as he picked up a gaudily decorated can that was resting on the edge of his partner's desk in the office of the Model Garage.

"That's a marvelous new auto polish, Gus," Joe Clark replied as he pushed aside the pile of bills in front of him. "A couple of swipes with that'll put a shine on the dingiest old crock you ever saw. We ought to be able to sell a lot of it."

Gus shook the can, then unscrewed the cap and moved it in front of his nose as he cautiously sniffed.

"Marvelous polish, eh!" he growled. "A couple of swipes give you a grand shine, do they? Well, I'll bet another couple of swipes or so'll take the finish off altogether. That would be grand stuff to sell if the Model Garage was in the repainting business. How much of it did the salesman stick you for, Joe?"

"Only a dozen cans," Joe replied. "He said it wouldn't hurt any auto lacquer. Are you sure it's no good?"

"My nose tells me there's stuff in it that's sure to damage the finish if you use it much," said Gus. "If you don't believe it, polish a spot on the fender of the service car every day for a week and see what happens."

At the end of the week, Joe called Gus over and pointed to a spot a few inches square in an inconspicuous place on the service car's rear fender. Although the finish glowed with a fine shine at that point, there was a small streak in the middle where the gleam of bare metal showed through.

"You win, Gus," Joe admitted, as Gus examined the spot. "Guess we'd better throw the rest of the stuff in the ash can."

"That's the place for it," Gus smiled, "only I hope it doesn't eat holes through the ash can!"

"What I want to know is, how does that fellow you call 'polishing Pete' get by with all the polishing he does without taking the finish off? He spends nine tenths of his time polishing his car and the other tenth riding around town to show people how swell it looks."

"IN THE first place," Gus said, "Pete knows a thing or two about polishing a car. He uses one of those hard wax finishes that takes a bit of elbow grease to apply, but which actually forms a protective coating over the lacquer. Then, instead of letting the car go till it's all covered with mud and grime, he goes over it with a duster when he gets home and then gives it a light rubbing with a clean soft rag. Road dirt and scum never have

a chance to harden on the surface of his car and so he doesn't have to dig away a lot of the lacquer itself to get a polish."

"But that can't go on forever," said Joe. "No matter how careful he is there'll come a time when the finish gets shabby and nothing but a polish with a bit of bite to it will restore it. What does he do then?"

"What every one else does," Gus explained. "He uses a good cleaner or one of the good combination cleaners and polishers."

"That's one of the things that people don't seem to understand about lacquer finishes. They don't check or crack and they don't peel or flake off as the old paint finishes did. But time takes its toll of lacquer just as it does of most everything else. After a while, depending mainly on how much ultra-violet light from the sun actually reaches the finish and also on changing temperatures, moisture, atmospheric gases, and so on, the extreme outside skin of the lacquer coating gets rotten and discolored. The only way you can bring back the finish then is to strip off this skin of broken-down lacquer so as to get down to good lacquer again.

"THAT'S why even the really good lacquer cleaners and polishers seem to make the color of the finish run onto the rag. It isn't color you see, it's the particles of dead lacquer being rubbed off that color the rag. If you let the finish go long enough without any cleaning at all, you can rub your dry finger over it and it will show the color of the dead lacquer particles."

"Then no matter what you do, the finish is bound to go in time, isn't it?" Joe broke in.

"Of course it is," Gus replied. "But if you take care of the lacquer finish on any car made today, it'll look fine as long as the car lasts. Of course, that doesn't apply to a car that is garaged in the street or back yard without shelter.

"Another thing lots of car owners don't know yet is how important it is to dry a car right after (Continued on page 126)

GUS says:

Lots of fellows buy their cars on the installment plan. Why not apply the same principle to your repair bills? Instead of letting things go till they pile up into a job that will nick you for a big roll, it's a lot easier to have repairs done as soon as they become necessary. If you let a lot of little items go till they all have to be fixed at once, the bill won't be nearly so easy to handle.

Genuine BRAND NEW CORONA Model No. 3 at NEW LOW PRICES

Now Only \$39.90 or on Easiest Terms Ever Offered (SMALL CARRYING CHARGE)



Yours for Only \$100 DOWN

Hurry! Hurry! Only a very limited number of these Brand New Coronas available at this Special Low Price and Easy Terms. Don't wait. Here's your chance to get a wonderful nationally advertised Corona at a real bargain. Has up-to-date improvements and carries our regular New Machine iron-clad guarantee. Remember this exceptional offer good only while supply lasts.

Sent on 10-Day Trial

Never before has the Corona been offered on such liberal terms. Don't hesitate one minute. Accept our generous 10-day trial offer and see for yourself. Compare its neat, perfect work; its beautiful, shiny finish; its smooth, quiet action and strong, sturdy compact design. The ideal typewriter for students, teachers, business and professional men.

Fully Guaranteed

Act At Once—only \$1. brings this shiny new Corona for full 10-days' trial—Write all the personal and business letters you want. If you decide to keep it send only \$3. a month until the special low price of \$42.90 (term price) is paid.

FREE Carrying Case

Beautiful leather carrying case with nickel trimming is included Free with each Corona while limited quantity lasts. If you have ever wanted a wonderful portable—here's your chance. Don't wait until it's too late. Send the coupon NOW.

Limited Offer

At this Bargain Price and unheard of easy terms—10c a day—these wonderful New Coronas will go in a hurry. Remember the Corona comes to you fully complete—book of instructions and all—nothing extra to buy. Send at once!



International Typewriter Exchange (Corona Division)
Dept. C-116, 231 W. Monroe St., Chicago.

Send the Corona F. O. B. Chicago for 10-days' trial at the special low price offered. I enclose \$1.00 deposit with the understanding that if I am not perfectly satisfied I may return it Express Collect and get my deposit back. If I decide to keep it, I will send \$3.00 a month until I have paid \$42.90 (term price) in full.

Name.....Age.....
Address.....
Town.....State.....

FREE The Book That has helped Thousands get Government Jobs!

Just send your name and address for my 32-page book, "HOW TO SECURE A GOVERNMENT POSITION." Tells all about CIVIL SERVICE. If you are a citizen, 18 to 50, you can get a steady government job at \$1850 to \$3200 a year. I was official examiner for 8 years. You pick the job you want. I'll help you get it. Get ready NOW for the next Railway Postal Clerk Examination! Write today for a copy of my FREE book. Address A. R. PATTERSON, Civil Service Expert, 164 Wisner Building, Rochester, N. Y.



AVIATION TRAINING

means earning-power in ONE YEAR!
One-year course qualifies for Transport Pilot's license at Parks Air College, world's largest civilian aviation school. Licensed since 1929 by U. S. Dept. of Commerce. Character emphasized; parents endorse Parks standards of training and discipline. Catalogue free.
PARKS AIR COLLEGE, Section 4-PS
Parks Airport, East St. Louis, Ill.

A definite program for getting ahead financially will be found on page four of this issue

CLEANLINESS PAYS ON MOTOR CAR

(Continued from page 74)

washing. Most fellows, after they get through washing off the mud and grime with soap and water, just let the car stand till it's dry. If you could rinse the car with distilled water, that would be fine, but any ordinary water contains chemicals, and every drop leaves a spot when it dries.

"The proper trick is to wipe off all the water drops with a piece of chamois leather. What's still more important is to see that the chamois is clean. Unless you frequently wash the chamois with soap and water, it'll pick up grit and scratch the finish."

"Seems to me," Joe grinned, "most fellows don't want to go to all that bother."

"Humph!" Gus grunted. "I'm a bachelor, and nobody cares whether I keep my car clean or not, but I should think you married birds would take the trouble to keep your cars clean just to keep your wives from jawing."

"After traveling through rain and mud, suppose you let the hose flow on your car gently to flush off the loose, wet mud, and then give a quick wipe with the chamois. Isn't that better than letting it dry and cake on so you have to give the car a regular wash?"

"It would be less work in the end, I suppose," Joe agreed, "once you got the habit."

Joe glanced toward the corner of the garage where the veteran auto mechanic's own car stood in its accustomed place.

"Yes," he nodded as he observed with renewed interest the spotless condition of Gus's two-year-old bus, "I think I'll treat my boat to a thorough cleaning and then try to follow your method."

Gus walked over to his car and lifted the hood. "Take a squint at that," he sug-

gested as he swung a drop light around so that its light fell on the motor.

"Gosh!" Joe exclaimed as he gazed at the motor, which looked as though it had been dolled up for an exhibition chassis. "You could eat your dinner off any part of that motor. What's the use of keeping the motor so clean when nobody sees it anyhow?"

"I wouldn't argue that point with you," Gus smiled. "But there are mechanical reasons why it's a good idea to keep the motor clean. In the first place a clean motor is easy to work on. Even so simple a thing as changing a spark plug is a filthy, disagreeable job if the motor is covered with road dust and oil. Also, it's a lot easier to see what you're doing on a clean motor. On top of that, a clean motor runs better because when you clean the motor, you just naturally clean the distributor head and the spark plug cables. Then, if you get caught in a driving rain, all their juice won't flow out through the damp muck that coats them."

"What's the easiest way to clean a motor?" "If you haven't air pressure as we have here, the best way is to fill a gasoline torch with kerosene and just chase the dirt off the motor with a fine stream of the liquid."

"Funny I never heard you suggest cleaning a motor to any customer," said Joe.

Gus laughed. "Sure I do," he protested. "If I think a fellow has gumption enough to appreciate the value of taking good care of a fine piece of machinery like an auto motor, I get him started right. Of course when I run into the kind of bird who only has the front of his house painted because the back doesn't show, it'd be a waste of time!"

TOMB OF MEXICAN "KING TUT"

(Continued from page 25)

The palaces and temples that once topped the pyramids have fallen into ruin, but a number of columns carved with human and animal figures and hieroglyphics still stand. In some of the pyramids, or mounds, are narrow vaulted chambers, and excavations have bared the ground plans of several buildings. The Mexican government has begun the restoration of one of the platforms, known as "The Platform of the North."

Where did the Zapotecs and Mixtecs get the precious metals and stones for the splendid ornaments and pieces of jewelry such as those found by Caso? By far the greater part of the gold supply came from Costa Rica and Colombia, though some was mined in southern and western Mexico.

Jade, found in eastern Mexico and Guatemala, was worked into ornaments in ancient times, but turquoise is rarely found in the oldest ruins. The Toltecs obtained it from far-away New Mexico, sending parrots and copper bells to the Pueblo Indians in exchange. Emeralds were secured from the famous Muzo mines in Colombia, and pearls appear to have been imported from the Pacific coast of Central America. Pearls of large size, as well as emeralds, were included in the loot sent to Spain by Cortez.

Several mysterious features, indicating Mayan influence, were found at Monte Alban, such as pointed arches in typically Mayan style. In the fifth tomb entered by the Caso party, a flat, distinctly Mayan skull was encountered.

According to Caso, the superb workmanship of the treasures from the seventh tomb shows a highly advanced stage of civilization. The filigree work is of the finest, some of the edges having been worked to paper thinness. One death mask, in Caso's opinion, is one of

the most beautiful gold-engraved objects in the world. It is plastered with gold and studded with turquoise.

Another sacred mask, representing the god Xipetotec, is one of the barbaric prizes of the collection. Xipetotec was the god in whose honor a woman was beheaded and the skin of her body worn as a dress by a dancer in weird religious rituals.

Important though Caso's discoveries are conceded to be by authorities on Central American civilization and history, they merely scratch the surface of the untold wealth that still lies buried at Monte Alban. Not quite two percent of Monte Alban has been excavated thus far, and archeologists believe the scientific and intrinsic value of the material that remains to be uncovered is enormous.

Further exploration next autumn may bring some of this additional riches to light. Then, too, a curious theory recently advanced by Professor Ramon C. Robles, a pure Mixtec Indian, who is federal inspector of schools for the State of Oaxaca, may be tested. According to Robles, ancient tunnels undermine much of the western half of the State of Oaxaca. Old Mixtec hieroglyphics, he announced, tell of such tunnels connecting all the principal Mixtec cities and fortresses with the capital and the royal city of Tilantongo. The longest of these tunnels, if Robles has read his hieroglyphics aright, stretches underground for thirty miles!

The ancient Mixtecs, Robles explained, built the tunnels for protection and quick communication by warriors between the principal strongholds, and one or two of them have been explored in the past. The others have caved in during various earthquakes, which also were responsible for much of the destruction of the temple city of Monte Alban.