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Popular Science

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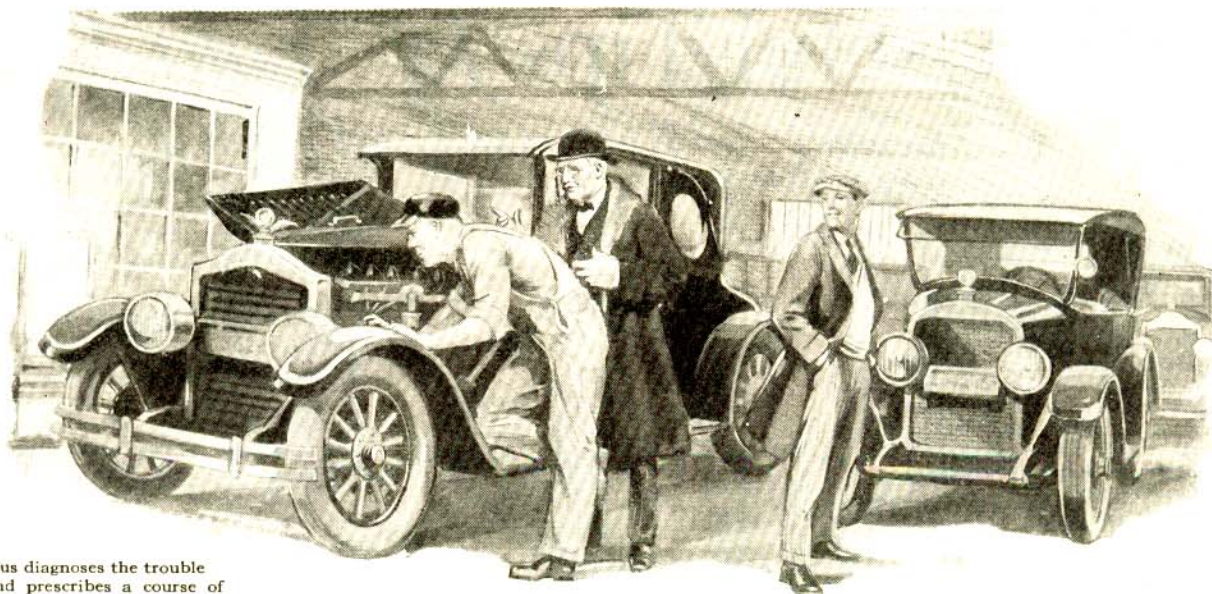


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MARCH

25 CENTS



Gus diagnoses the trouble and prescribes a course of treatment for the doctor's car

Your Car Is As Old As You Make It

The Hardest Kind of Daily Usage Needn't Age It Unduly If You Will Inspect and Service It Regularly, Says Gus

By MARTIN BUNN

GUS WILSON was exceedingly busy at the Model Garage. His partner, Joe Clark, had been wrestling with the "flu" for the past week, and having to do two men's work hadn't improved Gus's temper. Consequently the old mechanic's face wrinkled into a scowl when the garage door swung open to admit young Walter Sanson.

"Hello, old socks!" Sanson called out cheerily, struggling to shut the door against the heavy March wind. "Can I get a little free advice today?"

"Huh!" snorted Gus. "This is one of my busy days. I ought to charge you a dollar a word. What do you want to know?"

"Just look over my car and tell me if it needs overhauling. If it does, I want you to do all the hard work and I'll do the easy things myself," suggested Sanson smilingly.

"Run the bus in," Gus ordered briefly.

Sanson did as directed. Another car that had driven up at that moment followed him in, and the driver, a stranger to Gus, sat behind the wheel watching the repairman as he inspected Sanson's machine.

"How long ago did we overhaul it?" Gus inquired, listening to the motor with critical ear.

"Must be nearly a year and a half now."

"I meant how many miles ago," Gus growled. "Time doesn't cut any ice. It's the number of miles that counts. A car might still be a youngster several years after it left the factory if the owner drove it only a couple of thousand miles during that time. Another bus might be a tottering old wreck in less than a year just because it had been driven several



What Was Wrong With Spratt's Car?

THE name of the winner of the \$25 prize for the most accurate explanation of the trouble with Spratt's car and the best method of curing it, will appear in our next issue. The judges are now busy with the large number of entries received in this contest, which was announced in the December issue.

times past the ten thousand mile mark."

Sanson glanced at his speedometer. "Figuring your way, this boat is about ten thousand miles older since we overhauled it last."

Gus prodded and poked around for several minutes. "She doesn't need overhauling at all," he finally announced. "Everything seems to be tight. It wouldn't do any harm to scrape the carbon and grind the valves. Take it away now and don't bother me any more."

"What can I do for you?" he continued, turning to the distinguished looking occupant of the other car.

"I'm Dr. Holmes of Easton," the stranger began, somewhat pompously. "I was visiting a patient down this way when I heard a peculiar noise in the motor, and I want you to tell me what's the matter."

"Start her up," suggested Gus as he raised the hood. After listening to the motor as it idled, he yanked the throttle open and shut two or three times, short-circuited the spark plugs one after another, and finally examined the running gear with extreme care.

"**W**ELL, Dr. Holmes," he said as he straightened up from his inspection, "this car is in bad shape. The motor needs overhauling. The brakes need relining, and there's a whole lot of other things that ought to be attended to. When can you leave it here long enough so I can go over it carefully and make a definite estimate on the cost?"

Dr. Holmes' eyes snapped.

"Stuff and nonsense!" he retorted angrily. "This car was purchased new less than five months ago, and you are attempting to swindle me. Why, I just overheard you tell that young man that his car did not need any work done on it, and his car has gone at least twice as far as mine. If that's the way you do business, I'll take the car elsewhere!" And he started to climb in behind the wheel.

"Just a moment, Doctor," said Gus. "Did you ever hear of premature old age?"

"Premature old age?" repeated Dr. Holmes. "What has that to do with it?"

"A whole lot," Gus asserted. "You know what happens to a young fellow if he stays out late nights and doesn't pay any attention to (Continued on page 154)



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Ali Hafed, a Persian farmer, sold his acres to go out and seek his fortune. He who bought the farm found it contained a diamond mine which made him fabulously rich. Ali Hafed overlooked the great opportunity at his door to go far afield in search of wealth—which illustrates a great truth.

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The World's Woodpile

(Continued from page 153)

used over and over again. Only fire destroys it forever, and when the value of paper is more generally known, little will find its way to the furnace.

Perhaps no scientific achievement in utilizing the tree equals rayon, the wonderful new artificial silk, in future promise. Already close to a hundred factories are producing rayon and its products. Many a silken thread today comes from the spruce tree, and from its waste parts, at that.

From cellulose in other forms industrial plants are making a constantly increasing number of useful products, including artificial leather, gun cotton, smokeless powder, wrapping twine, phonograph records, linoleum, sausage casings, composition shingles, paper ropes, furniture reed, and so on. We have scarcely begun to find the possible uses for this basic material, some of which can be grown, harvested, processed and finished, with an ease and speed far exceeding the mining and smelting of metals.

Surrounded with wood, from the cradle to the grave, we should find a place somewhere for all the wood that grows. There are big rewards today for men who develop new methods to reduce the woodpile.

Your Car Is As Old As You Make It

(Continued from page 65)

his health. He gets old before his time. That's what's the matter with your car—premature old age. You use this car to call on patients. You start it up and drive a few miles and then it stands until it gets cold again. Evidently you use the choke too much, and that means that oil in the crank case is diluted every little while with a lot of unexploded gasoline that condenses on the cold cylinder walls and gets down where it ought not to be. On top of that, I'll bet a hat you buy oil and gas by the quart anywhere you happen to need it. The rear tires show that you put on the brakes without any regard for the rubber or the brake lining. From the look of the spring shackles, there hasn't been a speck of grease put in them since the car left the salesroom!"

"WHAT do you expect me to do—let the motor run all the time I am calling on a patient, and then squirt oil on every joint before I drive off?" interrupted the doctor sarcastically.

"Certainly not, Doctor," Gus went on. "I just wanted to point out that you are putting your car up against the hardest kind of service any auto can get, and you haven't given it proper care. Your speedometer shows barely five thousand miles. Sanson's car, here, has gone twice that, but he uses it only on long trips and he takes care of it like a baby."

"Perhaps you're right," the doctor admitted, "but how did you diagnose the case so quickly? What are the symptoms of this premature old age?"

"The process of doping out what is wrong with a (Continued on page 156)



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Your Car Is As Old As You Make It

(Continued from page 154)

car." Gus answered, "is a whole lot like finding out what is the matter with a human patient when he comes into your office. First thing you do is ask the patient what he does for a living, so's you can get a line on what's most likely to be causing the trouble. You said you were a doctor. Then you study the patient's complexion, feel his pulse, sound out his lungs, and make him hop around. I looked for neglect of lubrication and found it. Then I speeded up the motor, and I could hear a shuffling rattle that indicated pistons worn too loose. There was a dull thump that told me the center main bearing wasn't as tight as it ought to be, and short-circuiting the spark plugs tells a story of poor compression, leaky valves and loose connecting rods."

"I APOLOGIZE for speaking hastily," smiled Doctor Holmes. "You see, I bought this car after I had used a cheap car for several years. I had had trouble right along, and now I thought if I bought a good car it would give longer service without going to the repair shop so often."

"That's what a lot of people think, and they're all wrong," Gus asserted positively. "A high grade car will last longer than a cheap one only if it receives good care. Neglect sometimes will cause more trouble with a good car than with a cheap one, just because the working surfaces on a good car are fitted closer and wear a lot more because they get so hot when the lubrication goes bad."

"Then you would advise a cheap car for my use?"

"Not at all, Doctor," replied Gus. "Only I'd suggest that if you don't want to do the work of taking good care of your car, you'd better arrange with a reliable service station to go over it once every two weeks or a month and see that it is kept in adjustment and lubricated properly. Of course you can't expect any car to last forever on the kind of use a doctor has to put it to, but it ought to go ten thousand miles before it gets as bad as it is now after only five thousand."

"YOU can do a lot, too, to cut down the extra wear caused by so many stops and starts. Use the choke just as little as possible. Throw a blanket over the hood when you are only going to stop for a few minutes, so the motor won't get stone cold. Let it idle slow a few moments each time you start it up before you throw in the gears and drive off. Putting your brake on more carefully will make the brake linings last thousands of miles more than you got this time. And don't forget that the best oil you can buy is none too good for a fine gasoline motor. That's my course of treatment, Doctor!"

"All right," agreed Dr. Holmes meekly. "I'll leave the car here tonight, and you get it back in shape as soon as possible. Then I'll try to keep it that way." "Gosh!" exclaimed young Sanson, who had been hanging around taking in every word. "You sure made the old boy climb off his high horse!"

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