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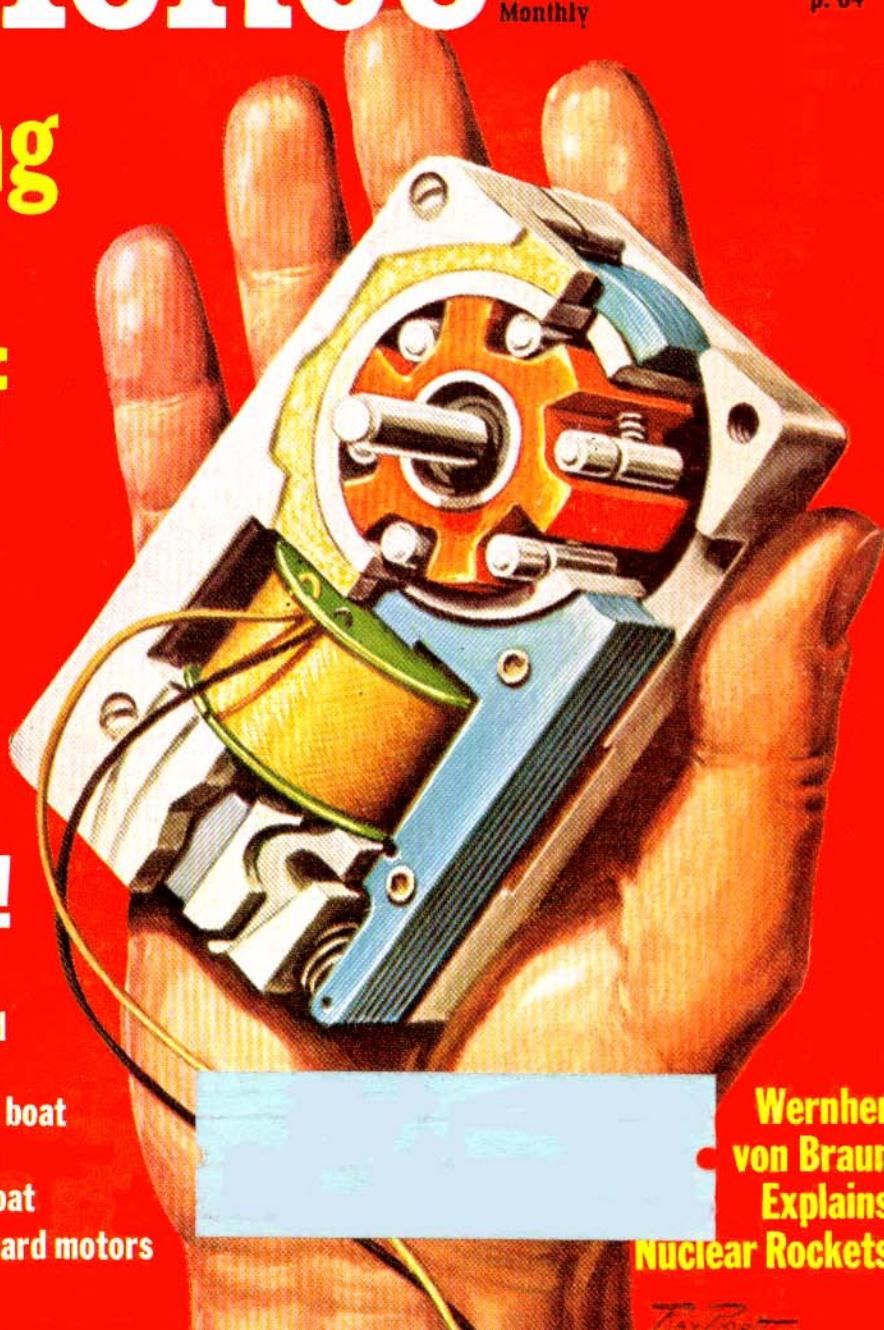
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Amazing New Kind of Motor

**Boats!
Boats!
Boats!**

22 PAGES:

- How to get started in boating
- How to buy a used boat
- In color: How to outfit your new boat
- Specs on all outboard motors



Wernher
von Braun
Explains
Nuclear Rockets

Gus Goes Gunning for Business

By Martin Bunn

"STAN," Gus Wilson called. "Stan," he called again, louder this time. "What are you doing out there?"

Stan Hicks appeared at the door of the Model Garage office. He carried a large book under his arm. "Just reading the new shop manuals, Boss. A good mechanic has to keep himself informed these days. Something you want?" he asked.

"You'll have to take care of things this afternoon," said Gus. "There's not much doing anyway. I'm going to run over to see Jerry Otis about that fleet-service contract I've been angling for."

"That ought to be a good thing, if you can bid it right," said Stan. "There must be 20 or 30 cars in that fleet."

"It'll take more than a low bid to get the business," Gus said. "Otis is a stickler for having his salesmen's cars in top shape. His firm lost a big order to a competitor a year or so ago because a company car broke down and made a salesman late for an appointment. Otis never forgot it."

Stan shook his head. "That was an expensive breakdown."

"Sure was," Gus agreed, "but not in terms of what it cost to repair the car. In fact, if I recall correctly, Mike Harris at the Highway Gas Station happened by and fixed the trouble on the spot with a piece of string."

"You're kidding," said Stan. "What could you fix on a car with string?"

"The primary lead to the coil rubbed against the cylinder head, and the insulation had chafed away," Gus explained.

"And of course it shorted out just when the car was needed most," Stan put in.

"Doesn't it always happen that way?" Gus chuckled. "Anyway," he continued, "Mike used the string to suspend the ex-



posed wire away from the engine, and the salesman raced off to keep his overdue appointment."

"And met the other salesman coming out of the plant," Stan ventured.

"That's right, and he was grinning like a Cheshire cat." Gus rose and reached for his jacket. "So you can see that I've got to sell Otis on the dependability of our work, not on how little it'll cost him."

"Be back late this afternoon," he called as the door closed.

Gus hadn't been gone more than half an hour when a car drove into the shop. It sounded as if someone had put a cage of canaries under the hood, with all of them chirping at once.

Stan looked up over the shop manual he had been reading, and swallowed hard as he recognized the driver. It was Jerry Otis, the man Gus had gone to see.



Gus stopped short as Stan gestured wildly and pointed to the man in the office.

Otis flung open the door and stepped out of the car. He glared at Stan. "Is this a repair shop or the public library?"

Stan jumped up, dropping the manual. "Sorry, sir. What can I do for you?" Then, seizing his chance to show off: "Been reading up on those new electronic distributors. Great gadgets. Last the life of the car, you know."

Otis ignored Stan's display of knowledge. "What do you mean, what can you do for me? Can't you hear that engine?"

Stan, deflated somewhat, continued trying to impress Otis. "Sounds to me like squeaky rocker arms. They're not getting any oil. Here, let me show you. I'll have the covers off in a minute."

He walked over to the car, raised the hood, unscrewed two nuts, and pried one of the sheet-metal covers off its cylinder head. The noise became louder.

"That's the trouble, all right. Spotted it

the minute you came in," Stan said, beaming with self-pride.

Otis was obviously growing impatient. "All right, Doctor Crankcase, but how long will it take you to fix it? I'm in a hurry. Can you do it while I wait? I need the car."

Stan smiled patiently, irritating Otis even more. "Not unless you want to wait here until tomorrow. Those oil lines are clogged with sludge. We'll have to take off the cylinder heads on both sides and dismantle the rocker-arm assemblies in order to clear the passages. Should be ready by tomorrow afternoon, though."

"That's what they told me at the car dealer's service department, so I came over here to see if Gus Wilson could do one of those mechanical miracles I've heard he performs. You're not Wilson?"

"No, sir," said Stan.

Otis looked around angrily. "Where is he, anyway?"

Stan hesitated, decided not to tell Otis that Gus probably was waiting for him at his office. "Mr. Wilson had some business to attend to. He should be back later this afternoon."

"Mr. Wilson!" Otis exclaimed. He peered into the office. "Who runs this place, or is it always like this?"

"Oh, Mr. Wilson is the boss," Stan replied. "I'm his chief mechanic."

"Well, I can't wait around all afternoon," Otis complained. "If I can use your phone, I'll call a taxi to take me back to the office. But you tell Wilson that I don't care if he has to work all night, and I don't care how much it costs, I must have this car running quietly first thing in the morning—and I don't mean 10 o'clock."

Otis picked up the phone. He had barely finished dialing when Gus walked into the shop.

"Couldn't get to see Otis, Stan. His secretary told me he dashed out early on some urgent bus . . ." Gus stopped short as Stan gestured wildly and pointed to the office, his face screwed up as though in pain.

Otis came into the garage at that moment. "Stop dancing around, young man," he told Stan.

He turned cold eyes on Gus. "So you're

Wilson. I suppose you were over at the plant trying to sell me on giving you the fleet-service contract I've advertised. Well, just forget that contract, at least for the present."

He moved closer to Gus and spoke low, "Listen, Wilson, I'm in a spot. The president of the company is coming out from the main office tomorrow, and he expects a guided tour of the plant and the community around it. As general purchasing agent, it's part of my job to keep the cars our sales and service people use in perfect condition. Now, how's it going to look if I have to drive him around in this squeaker? I've been intending to have it checked, but I don't put much mileage on it, just short runs, so I keep putting it off. Isn't there something you can do? I can't drive a VIP around in a calliope!"

Gus walked to the car. "Hmm, dry as a bone," he said, looking at the uncovered rocker-arm assembly. "Stan," he called to his assistant, "bring over the grease gun."

"Are you crazy, Wilson?" Otis demanded. "I'm no mechanic, but any fool knows you don't grease an engine."

"Mr. Otis," Gus replied softly, "I'm trying to help you. But it's getting late and we'll be here all night if I have to explain every move I make. Why don't you sit down and let me get on with the job?"

CONTINUED

The dodge that saved the day



Two college boys were on their way across a lake one warm spring evening in a borrowed motorboat of ancient vintage. They were dressed for a party—something special.

Almost from the dock, the old engine started to heat up. Then it began to slow down. They shut it off and made a hurried inspection. The dip stick was dry; not a drop of oil on it. There was no extra oil aboard.

Running the engine further would surely ruin the borrowed craft—and perhaps it wouldn't even get them back to shore, much less to the far side of the lake where the party was about to begin.

What to do?

Because of the age of the engine, one of the boys reasoned that it might be of the wet-base type where lubrication is done by the splashing of the crankshaft in the oil pan. If the oil level could be raised an inch or so, he figured, engine lubrication could begin again.

Fortunately there was a bucket aboard. Filling it with water from over the side, he then improvised a funnel from some newspapers he found under a seat. He poured two quarts of water down the oil-filler pipe. Since oil floats on water, this raised the oil level to a point where it could be reached by the crankshaft. With lubrication again, they were able to continue across the lake, with the engine working nicely.

P.S. The boys not only made the party on time, and had themselves a ball, but were able to go back home across the lake using the same oil-raising dodge.

Otis moved back a step. "Sorry, Wilson. Go ahead and do whatever you think you have to do."

Stan brought the grease gun from the bench. He, too, looked puzzled.

"Scoop the grease out of the barrel and pump the handle until the pressure chamber is empty," Gus said. "Then fill the gun with heavy oil—number 50."

Stan went to the bench, shaking his head. By the time he had returned with the oil-filled grease gun, Gus had uncovered the oil passage on each side of the engine, and had enlarged and tapped the holes to receive grease fittings.

Gus, a twinkle in his eye, told Stan, "Here's one you won't find in the shop manuals. Watch this."

He pressed the nozzle of the gun on one of the grease fittings and pumped the handle vigorously until the gun was empty. Then he went to the bench, refilled the gun with oil, and pumped it into the grease fitting on the opposite side. He handed the empty gun to Stan and bent over the engine to remove the grease fittings and reset the rocker shafts. Finally, he straightened with a smile of satisfaction and turned to Stan.

"That should do it," he said. "Start the engine up, Stan, and let's see if the birds fly away."

Stan winked knowingly at Gus. "I get it. What goes down should come up, eh?" He turned the key and the engine roared to life—squeaking as loudly as it had when Otis brought it in.

Stan and Otis both turned to Gus as though awaiting an explanation for this apparent failure. Gus said nothing. He stood quietly watching the engine.

A minute passed. It seemed like an hour. Then, slowly, one by one, the chirping rocker arms quieted.

In two more minutes the engine was purring silently except for the light, normal clicking of the tappets.

Stan shouted, "Look, the oil's circulating. See it running toward the return passages, Gus?"

Otis slapped Gus vigorously on the shoulder. "Wilson, you're everything I've been hearing about you. But what was all that business with the grease gun and the oil?"

Gus grinned. "Just a practical example of the irresistible force being applied to the immovable object."

"Come again?" asked Otis, raising his left eyebrow.

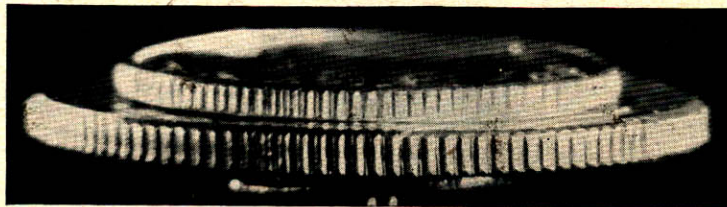
Gus continued with the lesson. "Those oil lines were plugged solid with sludge. On this make car, the passages don't run straight enough to clear them by rodding, so I applied about 10,000 pounds of hydraulic pressure to the obstruction and blew the lines clear. The grease gun supplied the pressure, and when I emptied the gun I knew the lines were open."

"That's good thinking, Wilson. But what caused all that sludge?" Otis asked. "This car's been driven so little it's practically new."

"That's just the trouble," Gus said. "Most folks don't realize that condensation is heaviest on short runs because the engine doesn't get hot enough to evaporate the moisture produced by burning fuel. When the moisture mixes with oil, thick sludge forms. I'd suggest you have your oil and filter changed the first chance you get, and remember to change the oil more often in the future."

Otis beamed. "I'll let you do my worrying from now on, Gus. Your irresistible force has moved me into offering you our service work. How about it?"

Before Gus could reply, a loud squeaking noise filled the shop. Both men turned with a start in time to see Stan pushing a dolly across the floor. He grinned sheepishly. "I've been intending to oil these casters. No sense putting it off. It's about time I got these birds to fly away." ■ ■



What's this a photo of?

ANSWER: No, not cogs or gears. They are side views of a dime and a quarter, showing the coins' milled edges.