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Gus Teaches the Professor a Lesson

By Martin Bunn

NOW that you have a helper, Stan," said Gus Wilson, "I'm going to the city to buy that new equipment for the Model Garage."

"Sure, Boss. There isn't much Ted and me can't handle for half a day."

"Keep an eye on him. He's a natural

mechanic, but a bit cocky. That's the kind who sometimes goofs."

"Will do, Gus. No job goes out until I've checked it."

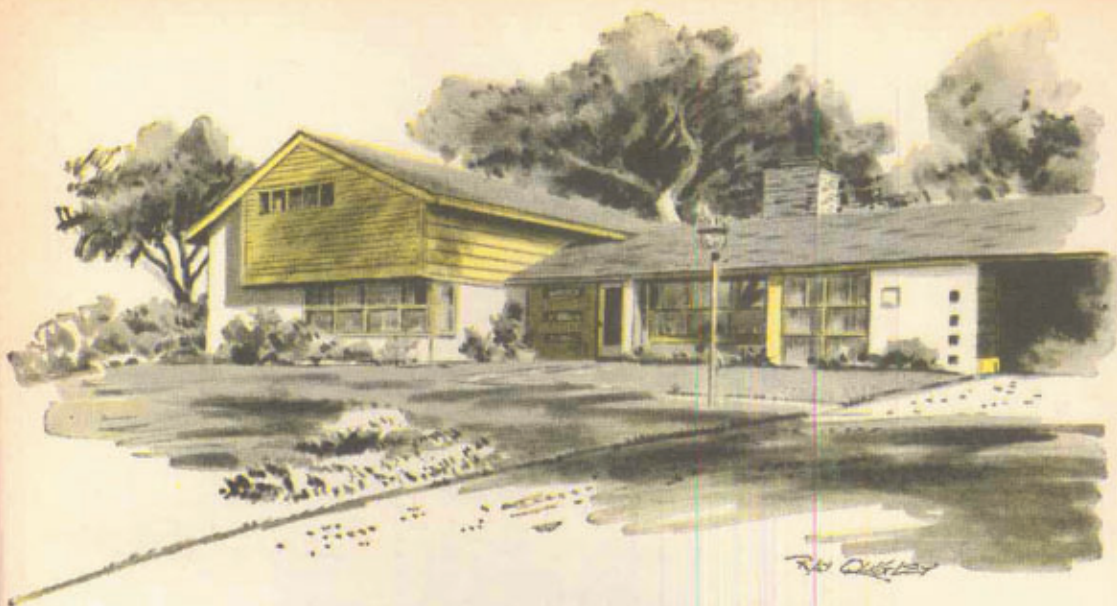
"Okay," said Gus, getting into the wrecker. "Use my car for road calls."

"Uh—just in case, Boss, would you tune in on the CB radio on your way back?"

"If you get into trouble," said Gus

The little professor brandished a big notebook. "I have it here calculated," he told Gus. "The volume of air is too small."





sternly, "handle it yourself!" As the wrecker rolled out, he added: "I'll turn the radio on at ten past the hour."

BETWEEN routine jobs and selling gas, the afternoon passed quickly. The gawky, red-headed teen-ager who had talked Gus into hiring him for the summer seemed to be in three places at once.

"Hold it!" roared Stan as the youngster, racing back from the pumps, made a leap over a big floor jack. "If the boss catches you doing that, he'll either bawl you out or fire you. Want to bust a leg sliding on an oil spot?"

"Nuts!" remarked Ted.

"Better watch it. Did you tighten the drain plug on that oil change?"

Ted's gamin face screwed itself into an expression of strained patience. "Think I'd forget a simple thing like that?"

"What're you going to do now?"

"Put this gas money in the till, drive the oil job off the rack, put new plugs in that Chevy and . . ."

"You'll burn yourself out before you can vote. And you'll burn out the engine in that Plymouth you drained," finished Stan scathingly, "because you never did put fresh oil back in."

Confidence oozed from the youngster. "Gosh—well, I was going to."

He bounded off. Stan noticed, approvingly, that he wiped the tops of the cans before puncturing them.

A yellow convertible rolled in at three. Stan did a double-take on its driver, a pretty girl with corn-silk hair.

"I need service in a hurry," she said apologetically. "This car skips and misses at times. A gas-station man said it needs new points, but he didn't have the right ones."

"We'll put them in, Miss."

"There's more. My father was leaving on an important trip, when *his* car died right in the driveway."

"I'll go there while my helper puts in those points. What's the address?"

She gave it, then stared at Stan until he felt a glow creep up his throat.

"Anything else, Miss?"

"I'd better tell you about my father. You probably never heard of him, but he's famous in his field—thermodynamics. That trip is to present a paper at the Polytechnic Institute . . ."

"Thermodyn—that's physics?"

"The science of quantitative relations between heat and energy," replied the girl, as if quoting. "He's a consultant for big engineering firms. He knows all about engines—on paper. He'll try to tell you what to do. But he doesn't really know about automobiles."

Stan grinned confidently. "Don't worry about that, Miss . . ."

"Tannenbaum. German for fir tree." She got out of the car. "Four o'clock?"

"Sure thing, Miss Tannenbaum."

A loud if squeaky whistle issued from the back of the shop as the girl left.

"Fir tree?" piped Ted. "Willow would be more like it."

"That'll do," retorted Stan. "You put in and adjusted points yesterday. Can you do it again?"

"Easy as falling for that chick."

"I'll be back before you finish, anyway," was Stan's parting shot.

STANDING in the driveway of the two-car garage stood a four-year-old luxury V-8. Stan saw that the key had been left in it. He opened the hood, made sure that the coil lead was unbroken and both its terminals uncorroded and firmly seated, then turned to come face to face with the owner.

A round-faced little man in his fifties, he carried a notebook and pencil. Two clusters of white hair over his ears flanked an otherwise bald head and a huge iron-gray mustache.

"My daughter sent you, yes? But with this engine it will be no use." He tapped a page covered with symbols and figures. "My calculations show there is not enough volume of working fluid."

"I was checking the wiring," returned Stan. "Will you try the starter?"

With a shrug, the little man got in. The engine chugged over—and caught. Working the throttle linkage, Stan gunned it to make sure it was taking fuel. "Must have been dirt in the gas line," he said.

Tannenbaum got out, shaking his head. His blue eyes looked right through Stan. ". . . an error in the isothermal compression figures? I must rework them . . ."

He trudged off, still muttering. Stan grinned, checked the automatic choke to make sure it had opened, and dropped the hood. The engine was still idling handsomely when he shut it off.

"**I** PUT the points in," said Ted. "Didn't want to leave the shop alone to test-drive the car, though."

"I'll take care of it later," said Stan.

But he was just finishing a job of his own when the phone rang. Stan listened, stammered a reply, and hung up.

"I've got to go out again," he muttered disgustedly.

Taking along a set of points, a condenser, and a dwell meter, Stan returned to the Tannenbaum house. The big car stood a few feet from where he had left it. Leaning on a fender, his pencil flying, was the professor.

"As I told you," he said as if Stan had never left, "for adiabatic expansion is not enough working fluid—"

"Yes, sir. Your daughter says you tried

to start on your trip again but the car quit after a few feet. I'll check the fuel system . . ."

"Fuel schmool! Fuel makes heat only. What must expand to push the piston? Air. Air iss the working fluid—only we haff not enough!" He poked at the sheet of figures. "Thermodynamics you cannot fight!"

"No, sir." Stan raised the hood, disconnected the fuel

line at the carburetor, and triggered the starter solenoid. Gas promptly gushed forth.

Reconnecting the line, he turned to the distributor and removed the points. They were badly pitted. He installed new ones and the new condenser, then set the points with the meter.

The engine came to life instantly.

"It's okay now," said Stan firmly.

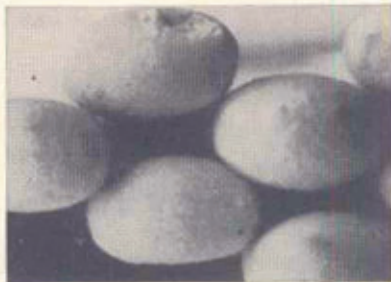
The professor regretfully closed his notebook. "So? Then it is time to go."

He went into the house. Stan gunned the engine, slammed the hood, and left.

AT TEN past four, Gus switched on the two-way radio in the wrecker.

"Some grief, Gus," began Stan. He told what he had done on Tannenbaum's car. "While I did that, the girl took her car out before I could check it. Now she's back, says it won't do over 20. And her dad's car quit dead for the third time. Could you go there?"

What's this a photo of?



ANSWER: Not potatoes or dinosaur eggs—just the magnified heads of some book matches.

"Okay," said Gus, turning off the radio. Sitting in his big car, a coat and briefcase beside him, was the professor. He got out as Gus came up.

"Perhaps you will understand." He brandished a big notebook. "I haff it here calculated. The volume of air is too small. At isothermic compression . . ."

Gus nodded soothingly, flung up the hood and lifted off the air cleaner. Gas squirted into the carburetor throat on cranking. He opened the air cleaner, in-

AHARASSED Stan met Gus when he drove in. Beside a yellow convertible a pretty girl gave the impression of stamping both feet while standing still.

"Ted set the points right, Boss. But that engine breaks up at any speed over idling. The timing light shows the spark doesn't advance at all. But the vacuum line's okay, and the diaphragm couldn't go that bad all in one hour."

Gus walked over to Ted. "Have any trouble at all installing the points?"

"Naw. A breeze. I dropped a screw, but found a good one in the scrap bin."

"Show me which one."

Ted pointed to a screw in the distributor that held on and grounded the stationary points.

Gus took it out. "Thread's okay. How is it different from the one you lost?"

"Just a bit longer, maybe."

"Long enough," said Gus, "to bottom and lock the spark-advance plate. Get a new screw from the stock room, Ted."

Ted scurried off. As the girl was paying the bill, her father drove in.

"My daughter iss here?" he asked. "Ach, Helen, the

Institute Meeting iss next month. I forgot it was postponed!"

The girl grinned wryly. To Gus, the professor continued, "My apologies. I found the error in my calculations. There was enough air, after all."

"No," said Gus, producing the hood liner. "Not while this sagged over the air intake. It let enough air leak by for idling, but suction clapped it on tight when the throttle was opened, and it choked the engine. Want it put back?"

"Later maybe. We go now, Helen?"

"**M**EAN to say he really spotted that trouble—on paper?" asked Stan.

Gus grinned. "Well, somebody had to get under the hood, too. But I learned something—never ignore a clue."

"Me, too," put in Ted. "Don't use just any screw out of the scrap box."

"I like what I learned better," said Stan.

"What's that, Stan?" asked Gus.

"Her name," said Stan. "Helen." ■ ■



spected the filter. It was clear. Leaving the air cleaner off, Gus turned the key. The engine started normally.

Tannenbaum shook his head. "I must at once recheck my figures . . ."

He disappeared into the house. Gus put the car into Drive, ran it up and down the driveway twice. Then he replaced the air cleaner and closed the hood. Again he put the car into Drive and stepped on the gas. The sedan moved—but the engine gasped to a stop.

When he opened the hood again, smell and sight told Gus the carburetor was flooded. A leaky float or jammed float needle? But they'd flood if the engine was revved with the car standing.

Thoughtfully Gus looked at the fiberglass hood insulation. In many cars a corner or two dangle loose. Here all were tight—but the middle of the blanket bellied out.

Carefully he pulled the sheet off and rolled it up. Closing the hood, he tested the car again. It ran fine.