

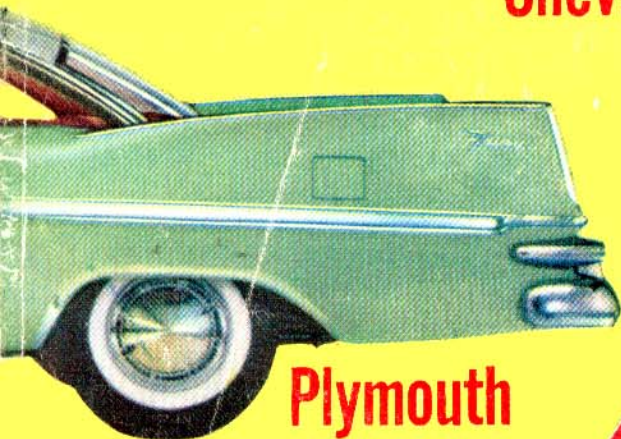
# POPULAR SCIENCE

FACTS, FIGURES, COLOR PHOTOS

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## Comparing the Big 3

**Chevrolet**



**Plymouth**



**Ford**



# Gus Mends Some

*The car was brand-new and ran like a dream—but Steve begged Gus to find something wrong with it*



# Fences

By Martin Bunn

STROLLING towards the Model Garage, his jacket flung over one arm, Gus Wilson looked up at the early-morning sky, cloudless but hazy—a promise of Indian summer after a premature cold snap.

“Hope it holds for the barn dance,” he mused, catching sight of the pile of pumpkins Stan Hicks, his assistant, had arranged in front of the pumps. Stuck in the center was a sign, “Are You Squared Away for the Square Dance? Get Your Tickets Here.” At the bottom sprawled a young man, his crew-cut head pillowed between two pumpkins.

“Hi,” Stan greeted his boss. “Look what I found when I opened up this morning.” He pointed to a big, new, shiny car parked off to one side, and then to the sleeping figure. Gus recognized Steve Jenkins.

“What’s your young Jenkins sleeping off?” he asked. “Thought he was off to college.”

“Home for the holidays,” Stan said, “and for the barn dance—I guess.”

“You guess?” Gus draped his jacket over a pump standard. “What’s the story?”

Stan shook his head. “He was here when I arrived. Said he’d been up all night trying to find something wrong with his father’s new car. Then he asked for you and fell asleep, like you see him there.”

The kid had busted something and was afraid to bring the car home, Gus figured. “Check the car?” he asked Stan.

“First thing,” Stan answered. “Nothing wrong; it runs like a dream. I’ll show you.” He slipped behind the wheel, turned the ignition key and stepped on the starter. The engine purred.

“Mr. Wilson!” It was Steve, getting to his feet. “I’m in trouble, Mr. Wilson, real trouble.”

“Not car trouble,” Gus said. “If I remember, you were top man in auto mechanics back in high school, Steve. Listen to that engine.”

“That’s just it, Mr. Wilson. There must be something wrong.” His young voice hit a falsetto. “There *has* to be.”

“Your dad know you took his car?”

“Oh, sure. It’s not my father that’s after me—it’s hers, Cathy’s.”

“Cathy McShane?”

Steve nodded. “He said he’d blast me



*“Guess I can fix this old clunker,” Gus told McShane. “It’s those fancy new cars that develop unpredictable troubles.”*

with a shotgun if I ever came out to his farm again."

"If Bert McShane said that, he must have had a reason."

"Well, not really, Mr. Wilson. You see . . ."

THE story came tumbling out. He had taken Cathy to a movie and on the way back the car had stalled. Instead of walking the girl home, Steve had been eager to show off his mechanical skill. He had practically taken the engine apart without finding anything wrong. Then Cathy, who had been sitting behind the wheel, had stepped on the starter, and the engine caught. But by that time it was after midnight, and Bert McShane, who was waiting up for them, blew his top.

"And now," Steve finished, "when Mr. McShane learns from my dad—they got a business deal on—that there's nothing wrong with the car he'll really come after me with a shotgun."

"It's not that bad," Gus said.

"That's what you think, Mr. Wilson. But you see, Cathy let slip where the car conked out—Lookout Point."

Gus nodded sympathetically. Lookout Point was the local lovers' lane. That wouldn't sit well with the father of any pretty teen-age girl.

"The car did stop last night, honest, Mr. Wilson."

"I believe you, Steve," Gus said. "Wait till I get my toolbox and we'll take a spin. Maybe your gremlin will show up again."

They were barely out of town, with Gus at the wheel, when the car suddenly died.

"That's just what happened last night," Steve said. He watched as Gus ran the starter. Each time he returned the key from the START position to ON, the engine died.

"Get me a jumper wire out of my toolbox, Steve, and we'll get her started and back to the shop."

"Any ideas, Mr. Wilson?" Steve asked as he handed over the wire.

"I'm not sure," Gus said as he hooked the jumper wire between the battery and the ignition terminal of the coil. "But I suspect that you've got an intermittent open in the ignition circuit."

Steve looked puzzled. "Guess I better brush up on my auto mechanics."

"You see," Gus went on, "this car has a voltage-dropping resistor in the ignition

circuit to drop the ignition low voltage from 12 volts to about 7.5 volts. The starter solenoid engages a separate circuit, direct from the battery to the coil, to feed a full 12 volts for starting. That's probably why the engine runs on the START position yet stops when I return the key to ON."

"Maybe a rough spot in the road shook something loose in the regular ignition circuit?"

"Could be," Gus said. "Might be a faulty ignition switch or maybe a broken resistor winding. Anyway, you probably jugged something back into contact while you worked on it out at Lookout Point last night."

Steve was silent on the trip back.

"Cheer up, Steve," Gus said as they pulled up in front of the Model Garage. "At least we'll find the trouble so that your father won't have a breakdown and blame you for mistreating his new car."

"It's not that, Mr. Wilson. Even if I can prove now that I wasn't lying to Cathy's dad, I'd never be able to get him to hear me out. Cathy is a swell girl, and we had a date to go to the barn dance Saturday night. That's off, I guess." He sighed and got out of the car.

GUS, knowing better than to offer sympathy, began checking the ignition circuit from battery to switch with a voltmeter. Then he checked voltage at both sides of the resistor. No amount of jiggling could make the meter hand waver.

Scratching his head, Gus looked at Steve and said, "It can't be open between the output side of the resistor and the coil. That wire is common to the starting circuit and the normal ignition."

Steve had noted each check. "Maybe this is pretty stupid, Mr. Wilson, but you checked *on* the wire end terminals at the resistor. Could there be a cold-solder joint or something, inside the double-wire plastic terminal at the output side of the resistor? I built a radio once that wouldn't work because of a cold-solder joint."

"You may just be right, Steve." Gus dug for his pocket knife.

He sliced the plastic coating from the terminal, exposing an unsoldered wire that missed connection by a few thousandths of an inch.

They looked at each other and grinned.

"This setup to provide 12 volts for

starting is pretty keen," Steve remarked as Gus repaired the unsoldered wire end.

"Particularly for cold-weather starts," Gus agreed. "But it can be dangerous. With what amounts to two ignition circuits, one for starting, and one for running, the engine can run even with the switch off. Be sure the car is out of gear when you're working on it."



"Oh, I see—we thought this was the rumble seat."

"Thanks, Mr. Wilson—and thanks for the safety tip." Looking at his watch, he added, "Gee whiz, I have to run. Dad will be needing the car."

"Wait a minute, Steve. I'll put this on your father's account, but let me give you a receipted repair bill. Maybe it will help you get back into the good graces of Cathy's dad."

"It will take a miracle if I'm ever to see her again," the boy replied glumly.

Gus watched him drive off, lit a pipe and puffed away thoughtfully. "A miracle. I wonder if maybe I can perform Steve's 'miracle' by driving out to Bert McShane's farm?"

AS GUS drove down the road that passed the neat McShane farm, he spotted Bert mending a fence. Pulling the choke on his service car full out, Gus waited for the engine to cough, sputter and die. Then he got out, opened the hood and looked under.

"Hey, Gus," McShane called. "Want me to call a wrecker?"

"No, thanks, Bert. Guess I can fix the old clunker. Sure have had it long enough to be on to her quirks. It's those fancy new cars that develop unpredictable troubles."

"Yeah?" McShane bit.

"Yep." Gus closed the hood and wiped his brow. "Why just today some kid brought his dad's spanking new '58 model

into the shop. The boy was out on a date last night when it stopped on him for no reason. After he monkeyed with it for quite a while it ran fine. We took it out on a rough road and didn't get a mile before it stopped the same way. Real tricky. Turned out to be a bad connection someone had made at the factory."

"Is that a fact?" McShane commented.

"Well, I'd better go now and let you get on with your job. Mighty important

job that, Bert—mending fences."

"Yeah, Gus."

THE sound of music and laughter came from the big red barn as Gus drove up that Saturday night. He parked and handed a ticket to Stan Hicks at the door. A couple danced by, waving to him. It was Steve Jenkins and Cathy McShane, decked out in blue jeans and gingham.

Gus waved back as he walked over to a refreshment table where Mrs. McShane was chatting with Steve Jenkins' parents. "Where's Bert?" he asked.

"Right here, Gus," came McShane's voice from behind. "Drop in to remind me again how important it is to mend fences?"

"No, Bert. Just happened to hear the music and couldn't resist it."

"Sure—'just happened.'" McShane winked. "Like your service car 'just happened' to quit as you passed my farm?"

Gus grinned sheepishly. END

*Next month: Gus clears the way for Christmas.*