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How to Tame a Rough-Riding Car

A "High Brow" Learns from Gus the Trick of Smoothing Bumps with Shock Absorbers

By

MARTIN BUNN

THE young man behind the wheel repeatedly jabbed his toe down on the self-starter button until, in the end, the battery became so exhausted that it refused to spin the motor at all. And with each succeeding failure he became more flushed and embarrassed.

"You can have no idea how much I regret this unfortunate situation, Miss Wilder," he apologized. "Apparently some portion of the mechanism has become disarranged and in consequence the motor refuses to perform the function of propulsion."

"You mean it's busted?" suggested the pretty girl who occupied the other half of the sporty roadster's seat. "Then hadn't you better phone for some one to come and fix it? There's a house down the road that has a telephone, I'll bet."

"Your suggestion is most appropriate, I shall proceed to act on it at once," he agreed, as he hastily climbed out of the car and headed for the farmhouse.

Lucille Wilder gazed after him with a puzzled expression in her eyes. "Gosh!" she exclaimed to herself. "He's a funny sort. Must have swallowed the whole dictionary. Never heard so many fifty-cent words in my life!"

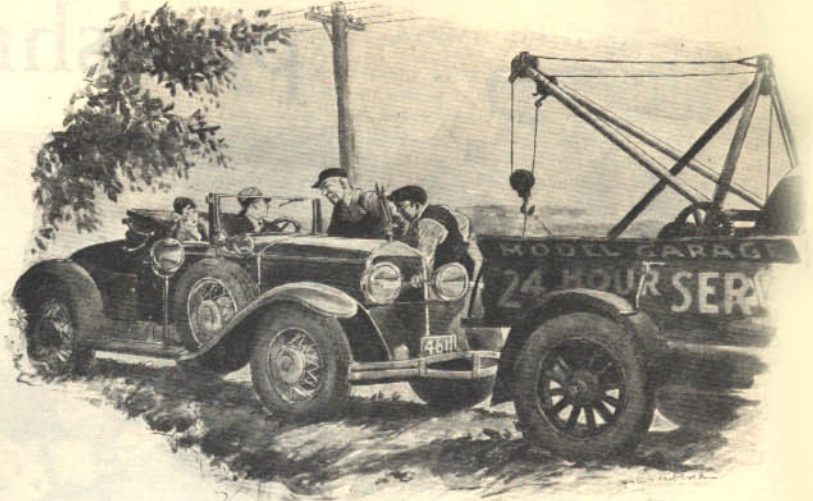
Joe Clark answered the phone at the Model Garage.

"Jason? H. Seymour Jason, did you say? Yes, we'll be right out with the service car."

Joe Clark popped out of the little office at the Model Garage with a broad grin on his face. "Hey Gus!" he called to his partner, Gus Wilson, the veteran auto mechanic. "This ought to be good! Do you know H. Seymour Jason, the town high brow? I don't know how come, but he seems to be busted down out near Parkville with a flapper in the car. Didn't know he had a car and he always bragged about having no use for women."

"The louder they brag, the harder they fall," grunted Gus, as he cranked the engine of the service car.

WHEN they reached the disabled car, Gus made a careful examination. Then he got Joe around to the back of the car and silently pointed to the gas gage. The tank was empty. "Slip a gallon or two into the tank while I keep 'em busy in front," he whispered. "With that funny dictionary lingo he shoots, the poor fellow'll have a hard enough time making



"This is very complicated," Gus frowned. "The induction of the requisite amount of combustible into the carburetor is impeded by a deficiency in the supply of the necessary liquid."

a hit with a girl without us making him out a bonehead."

Gus opened the hood again and began fussing with the vacuum tank. "This is very complicated," he observed with a frown. "The induction of the requisite amount of combustible into the carburetor is impeded by a deficiency in the supply of the necessary liquid flowing through this orifice which leads to the main receptacle."

Jason stared at him for a moment while his face took on an even more brilliant red. "You mean—"

"Yes, that's it," Gus interrupted hastily. "Besides that, your shock absorbers are on the blink. Car rides kind of hard, doesn't it?"

"Now that you mention it, Mr. Wilson," said Jason, "I have noticed that

the car goes through more than the usual amount of vertical motion when we pass over protuberances in the road."

Gus removed the pipe leading from the vacuum tank to the intake manifold and sucked on it until the vacuum tank filled from the gas Joe had put into the main tank. The battery had recovered sufficiently to start the motor.

The next day Jason appeared at the Model Garage.

"I wish to thank you, Mr. Wilson," he said, in his wordy way, "for handling the situation so diplomatically that my ignorance was not revealed to the young lady. To tell the truth, I purchased the car in order to promote her good opinion of me. So far, I fear I have not been very successful. The car rides so uncomfortably that I have been unable to carry on very much conversation."

Gus winked at Joe. "That," slyly observed the gray-haired mechanic, "probably is a blessing in disguise. As for the shock absorbers on that car, I can fix 'em all right."

Ask Gus—He Knows

THERE'S no sense in letting people walk all over you, but it won't get you anywhere to be too finicky about your rights when you're behind the wheel of an automobile. Lots of drivers go round with chips on their radiators instead of on their shoulders just waiting for the other fellow to crowd 'em or cut in on 'em. Maybe you have got the right of way—maybe the other fellow is hogging more than his half of the road—but what's the use of wasting energy jawing about it? The other fellow may be a new driver—you were yourself, once. He's got worries and troubles same as you have. Try meeting 'em a little more than halfway!

JASON grinned sheepishly. "Perhaps you're right," he admitted. "However, I will deem it a favor if you will explain just how a shock absorber accomplishes the desired result. I confess I'm somewhat confused on the subject."

"Nothing remarkable about that," grunted Gus. "Lots of motorists are in the same boat. Most of 'em, in fact, or they wouldn't buy so many phoney shock absorbers that anybody with the slightest knowledge of mechanics could see are no good."

"Most everybody knows what a spring is. If you ever went off the end of a springboard when you were in swimming, you know how you jumped on the end of the board and your weight pushed it down. Then the board snapped back and threw you into the air.

"Car springs (Continued on page 143)

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work like springboards turned upside down. Along comes a bump—"protuberance" in your lingo—and pushes the wheel up and compresses the spring, and because the car isn't stationary and the bump is, the spring shoves the car up in the air. Then when you come back to earth you pull your hat off one car and say, 'My, wasn't that an awful bump!'

"And if you slam into two or three bumps spaced just right on the road, you're likely to say something a lot stronger than that, because the car will get to bouncing up and down till you almost go through the top. Traveling over rough roads in a car that keeps bouncing like a regular bronco literally gives you a pain in the neck. Your head wobbles back and forth so much."

"Most interesting!" observed Jason. "Evidently the phrase 'pain in the neck' has a definite physiological origin."

"YOU'D have found it out for yourself if your shock absorbers had got any worse," said Gus. "The main job of shock absorbers is to keep the springs from kicking the car up in the air. That's all the strap kind do. As the spring compresses, the mechanism inside the shock absorber pulls in the strap or flexible steel cable. Then, when the spring starts to expand again, the shock absorber pays out the strap or cable against a strong brake which slows down the motion of the spring so it can't shoot the car up in the air. One of your straps was broken and the others were so loose they weren't working right."

"Now I comprehend," said Jason. "A shock absorber is a unidirectional device operating only during the expansion of the spring. If that is the desideratum, obviously any type of auxiliary spring could not fill the requirements because its action would be additive to the functioning of the main spring."

"You'll do," Gus smiled. "Quite a mouthful of words, but you've got the sense of it—and accurately, too."

"However, all shock absorbers aren't of the strap or cable type. A great many have a solid arm hooked to a lever on the shock absorber. They work the same as the strap type to keep the spring from expanding too fast and they also act to prevent the spring being jammed against the frame when you hit an extra heavy bump. You couldn't get that action out of a flexible strap or wire cable."

"What is the procedure in adjusting shock absorbers?" Jason questioned.

"**R**ULE of thumb, mostly," Gus stated. "Take the car out on a rough stretch of road and change the adjustment on each shock absorber until you get the car so it rides nice and smooth. One thing you want to watch out for is getting the absorber on one side tighter than on the other. That goes for either the front or back pair. If you do the car will have a corkscrew motion that's fierce. The trick is to have the adjustment as loose as you can and still get smooth riding."

By this time, Gus had replaced the broken strap and taken up the slack in the others so that the adjustment was approximately correct. "All finished," he announced. "I'll go out and adjust 'em for you or you can tackle the job yourself. How about it?"

"With your lucid instructions, I feel competent to attempt the work myself. Now if you will inject a supply of gasoline into the tank I shall be doubly indebted to you."

"That chap is no saphead even if he does waste a lot of good language," Gus growled to Joe after Jason had left. "Trouble is, if he ever gets up nerve enough to pop the question to that flapper, he'll wrap it in so much language she won't know what he's driving at!"



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