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The Zeppelin Grows Up -
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Knocks That Tell of Motor Ills

Unusual Noises Are Symptoms of Trouble, Says Gus, But Don't Let Your Ears Spoil the Fun of Driving

By MARTIN BUNN

"I hear that? There it is again!" Bancroft exclaimed, as he gaped at the tip of his ear near the hot exhaust manifold in the attempt to listen more closely. "I tell you there's something wrong with that motor."

Gus Wilson listened intently for a few moments.

"Mr. Bancroft," said the veteran auto mechanic, "there's nothing wrong. What you hear is the clicking of the valve tappets. I can set 'em tighter if you want me to, but I'd advise against it. If the tappets are set too tight the valves may not seat when the motor is cold, and the valve seats and the faces of the valves get burned. I'll check 'em to make sure they are as tight as they ought to be."

After Bancroft was convinced that his motor was properly adjusted and had driven away, Gus turned to Joe Clark, his partner in the Model Garage. "It's all right for a man to be fussy about the condition of his car," he growled, "but that leave Bancroft makes me tired. He's always got his ear working overtime trying to hear knocks and things in the motor."

"They're not all that way," grinned Joe. "Fellow left a car here last night just after you'd fixed it. The windshield wiper was on the blink and he wanted it fixed. He spent ten minutes bragging about what a fine car it is. There it is over in the corner. Start the motor and see what you think of it."

Gus reached in and pushed the starter pedal with his hand and the engine started at once.

"Suffering cats!" he shouted, to make himself heard above the clattering and thumping of the motor. "I don't see that the owner of this car has anything to be proud of. Sounds terrible to me."

"Is that all?" snapped the sarcastic voice of the owner, who had arrived just in time to catch the end of Gus's remarks. "Trying to drum up trade, are you? Maybe the car is a bit noisy, but I wouldn't hesitate to start for the coast in that bus any day."

"You could start easy enough, Mr. Dobey," said Gus, noting the name of the owner on the repair ticket, "but it's kind of doubtful if you'd get there. Too many things in the motor in bad shape. Let's take it out on the road so I can hear what's wrong."

"Now," said Gus as they started down the road, "keep it running smoothly about fifteen miles an hour till we get to the top of that hill."

"What's the sense of going so slow?" Mr. Dobey inquired.

"At fifteen miles the normal motor noises don't amount to much, and you stand some chance of hearing the queer ones."

They drove on for a short distance, and as they started up the grade Gus said: "It's kind of hard to do the knocks when there are so many different ones, but that light knock is either loose piston rings, a loose piston, or both."

Those muffled knocks indicate that at least two of the connecting rod bearings are loose, and that thump like somebody pounding on a block of wood with a mallet is the main bearing. The other jumpy thumping noise means the motor is loose in the frame. Of course the sharp, metallic knock means thick carbon deposits on the cylinder head and the top of the piston. The rest of the clatter comes from the valve mechanism. You might as well turn back now."

"What are you trying to do, kid me?" sneered Dobey. "The motor couldn't be as bad as that. How do I know you're not just trying to get away with a fat bill for overhauling?"

"Say, mister," Gus smiled, "I've been in this business long enough to know what I'm talking about. You stick around while I yank the motor out of the frame, and if any of the things I say are loose turn out to be tight, I'll do the rest of the job at half price."

"Fair enough," Dobey admitted as they rolled into the Model Garage. He watched closely as Gus got the portable crane ready to hoist out the motor.

"Of course if only piston rings and a loose connecting rod needed to be replaced," said Gus, "there'd be no sense in going to all this trouble. We fix things like that by dropping the oil pan. But your main bearings are in bad shape, and I'd rather get the engine out where I can do the job right."

"Now before I start," Gus continued, "take a look at the bolts holding the motor in place. This one here is so loose you can turn it with your fingers. If you'd kept on running the motor in that condition, the pounding would have busted the motor support and then you'd..."
Mystifying with a Magical Ink Bottle

By GEORGE S. GREENE

YOU have probably noticed the sensation caused at social gatherings by someone, perhaps disguised as a gypsy, who was able to "tell fortunes." Here is a trick which will go the professional amateur palmist one better and with which you can excite double the amount of curiosity. It can be guaranteed as a sure cure for "peepers" parties.

The performer sits facing the spectator across a parlor table in a side room. On the table is an ink bottle. The spectator is requested to write a question secretly and to fold it and place it in the ink bottle. After several moments the performer, in a mysterious manner, answers the question and gives the information desired.

The secret lies in the preparation of the innocent-appearing ink bottle. It has a hole drilled in the center of the bottom, and fitting loosely in the hole is a brass tube that extends up to the bottle mouth. The question goes into the brass tube. Then, as the performer moves the bottle about the table as if "making a spell," he allows the tube to drop into his lap. This he does easily by pulling the bottle slightly over the edge of the table in front of him as shown above.

He "concentrates" with one hand over his eyes, while looking downward under this cover and reading the question which his other hand has removed from the tube and opened.

At the conclusion, or even before the question is answered, the question slip may be restored to the tube and the latter returned to the bottle, to be fished out afterwards and handed to the amazed spectator.

The illustrations show how to "trick" the bottle. The hole is drilled with the sharpened point of a file. When you have succeeded in making a small hole, enlarge it with larger round files. Do not hurry; for best results the glass must be filed away slowly in fine powder.

Paint the inside of the bottle black. When the paint is dry, fill all but the space for the tube with plaster. This is done by inserting a waxed paper tube through the bottom hole and pouring the plaster around it at the wider mouth of the bottle, as shown in the illustration immediately at the left. When the plaster is hard, there is a smooth socket or guide for the brass tube.

The trick is that the bottle, if presented with reasonable care, is never detected. With sufficient adroit mystification and "patter" from the performer, the effect on the spectator is astonishing.

In his next article, Mr. Greene will describe several effective pocket tricks which can be shown anywhere.