

FRONT lines

Don't laugh at the ivory tower; it's profiting from industry errors

At first, the business found Frank Merat, a professor of electrical engineering at Case Western Reserve University.

"We would get calls at the university all the time from attorneys looking for help," says Merat. "In their minds, college professors are instantly qualified as experts, and for the kind of help they need, you can't find someone in the phone book."

The attorneys would call to say that a client was being sued because a piece of equipment or a machine failed. Often times, someone was injured, burned or electrocuted. Could the good professor, they would ask, determine why the problem occurred?

After working on dozens of cases as a consultant and expert, Merat and Mark Podany—a staff research engineer at CWRU—founded PGM Diversified Industries to focus on forensic engineering.

Their most famous case was the electrocution that occurred in an RTA bus shelter.

Podany, who is PGM's president, now works at the business

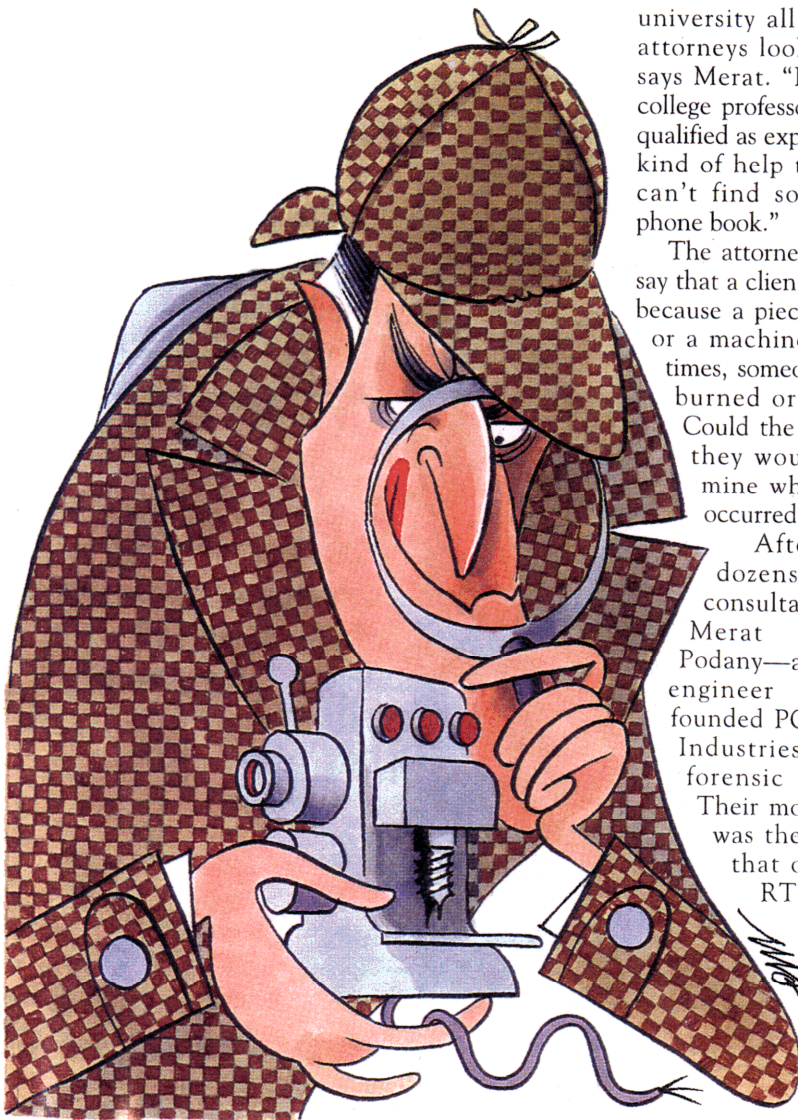
full-time while Merat works on cases as he continues to teach aspiring engineers at CWRU.

"I think this makes me a better professor," Merat says. "I have used examples from cases in class. Anticipating failures is one of the very necessary and real aspects of engineering these days."

PGM's typical job is the reverse of what engineers usually do. Instead of starting from scratch and designing and building a product, forensic engineers start with a damaged product—or the charred fragments, if that's all that remains—and work backwards to find the flaw. Findings range from improper installation to operator error to design flaws. Whatever the finding, with big money at stake, PGM makes sure the accusatory finger is pointed at the right party.

"Professors are accused of being in an ivory tower," Merat says. "With this, there's no tower. It's a very practical application, sometimes even mundane. In some cases, it looks mundane but ends up being abstract and obscure. It's like putting together a puzzle or solving a murder mystery. I like to think if Sherlock Holmes were around today, he might be a forensic engineer."

—Zan Hale



TOM SHEPHARD