

Crash Test Dummies Key to Schirmer Murder Investigation

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A forensic engineering firm that uses crash test dummies in a simulation was key in helping police charge a former Monroe County pastor with murder in his first wife's 1999 death in Lebanon County.

Arthur Schirmer, 64, former pastor of Reeders United Methodist Church in Jackson Township, was charged last week in the death of his first wife, Jewel Schirmer, 50, while already awaiting trial in the 2008 death of his second wife, Betty Jean Schirmer, 56, in Monroe County.

ARCCA Inc., based near Philadelphia, used crash test dummies to simulate a fall down basement steps in Arthur and Jewel Schirmer's former Skyline Drive home in North Lebanon Township.

In April 1999, when he was pastor at Bethany United Methodist Church in Lebanon, Arthur Schirmer called emergency medical technicians to the home and told them he had returned from jogging to find Jewel at the bottom of the basement steps.

She was bleeding from the head with a vacuum cleaner cord wrapped around one leg.

Nothing Suspicious

Police were contacted, but did not respond due to the nature of the call.

"A 911 call goes out to police, ambulance and, if a fire's involved, the fire company," North Lebanon Township Police Chief Harold Easter said. "Any officers on duty at the time will prioritize and decide, depending on what else they have going on, whether to respond to that call or if there's something more urgent going on elsewhere."

EMTs responding to the Schirmer residence found nothing suspicious and therefore did not call police, authorities said.

Jewel Schirmer died the next day in the hospital.

With evidence of her having suffered a heart attack at the time of her death and the head injury being found consistent with either a fall down the steps or contact with a blunt object, the manner of death was ruled "undetermined."

Struck vs. Fall

When Arthur Schirmer was charged in Betty Jean's death in 2010, police in Lebanon County took another look at Jewel's death.

ARCCA was contacted in February 2011 to do a simulation at the former Schirmer residence in North Lebanon Township, authorities said. The house, which is up for sale, was vacant during this time.

Though ARCCA officials said the firm cannot comment on details about simulations in pending court cases, police said this particular simulation showed Jewel Schirmer's head injury came more likely from being struck than from falling down the steps.

"It's hard to say how often we get called in on murder investigations, but this definitely isn't the first one we've been involved in during our 25 years in business," ARCCA Chairman and CEO Alan Cantor said.

"We conduct research as well as simulations for investigations in criminal and civil cases. For example, our work has led to the U.S. Army making seats to better protect personnel in vehicles from mine blasts, as well as better protection for people in the backs of ambulances."

Space Shuttle Work

ARCCA also helped come up with better ways to protect astronauts after the fatal 1986 space shuttle Challenger explosion, and helped authorities locate the point of origin of TWA Flight 800's fatal explosion over New York 10 years later, Cantor said.

The firm employs more than 200 veteran engineers, experts and consultants with professional credentials and extensive experience in their chosen fields, according to its website.

Among ARCCA's clients are insurance companies, law firms and corporate safety, claims and risk management departments.

Don't Take Sides

"When we're involved in simulations for criminal cases, it's usually for automobile accidents," Cantor said. "Though the dynamics of a simulated crash or fall usually aren't questioned, the findings can sometimes be disputed, such as how many times did a vehicle roll over or how hard was the impact."

"We look at the independent data, we remain objective and we don't take any sides," he said. "We've had some attorneys use our findings in trials, and others tell us they won't use our findings because it hurts their cases."

In this case, based in large part on ARCCA's simulation findings, the manner of Jewel Schirmer's death was changed from "undetermined" to "homicide," and Arthur Schirmer was later charged with her murder.