



Staff photo by Larry McDevitt From left, David White, Ian White and Kathleen Pilla display a pair of shoes with retractable heels at DesignDesign in Kennett Square.

KENNETT SQUARE — Ian White put his best foot forward when he started working with David Handel, a South Jersey radiologist who had designed an adjustable high heel for women's footwear but had let its patents lapse.

White, an engineer and industrial designer with DesignDesign, an industrial design firm here that recently merged with Centerline Design, took Handel's design and put it into practice, he explained during a recent demonstration of the Camileon heel in his sun-filled office.

The black heel, made out of aluminum, plastic and stainless steel, adjusts with a quick tug and a locking click from 1½ inches to 3¼ inches, said Donna Handel, whose friends know her as Lauren. (She is David Handel's younger sister.)

The higher heel folds up under the arch of the shoe and is barely visible.

Women needn't take off their shoes to change the heel height; they just need to sit down for a moment. No special tools are required, either.

The two Handels formed Camileon Heels Inc., based in Ardmore, to bring the adjustable heel from concept to reality. And they hired DesignDesign, and Ian White, a 2002

mechanical engineering graduate of Drexel University and, before that, a graduate of Avon Grove High School, to help them do just that.

White went through more than 100 heel designs, from paper to computer-aided design and prototypes, before designing the current model.

The heel and its steel shaft attach to the shoe body with four screws, unlike most heels, which are affixed with nails and an automated nail gun.

The Handels first considered manufacturing their shoes in China, but soon realized they needed to rely on Italian shoe know-how to design a common last — the anatomical form of the shoe — to fit both heel heights. They also wanted to use stretch leather, something the Italians know well.

The heel itself is made in China; Ian White traveled there to teach the manufacturer quality control.

Camileon Heels sells its shoes on its own Web site, camileonheels.com, as well as on zappos.com, the biggest Internet retail shoe site.

Surely, these shoes are for the well-heeled; they do not come cheaply. The stylish models sell from \$290 to \$305. Lauren Handel eventually wants to sell styles ranging from the mid- to high-\$200s. Versions with lower prices than that will have to wait.

Styles today range from year-round staples like pumps to sling-backs with rounded or pointed toes. Colors are neutral: navy, black, bone and brown. Sandals and a line of boots are in the works.

Lauren Handel wears Camileon heels all the time, the lower heel for walking, the higher one for business meetings and style.

“These heels have saved my life,” she laughed, remembering many a dash to catch a plane or train with the lower heel firmly in place.

Said Eileen Lewis, fashion strategy director for Zappos, “Camileon Heels have the comfort factor and the fashion factor. Women don’t have to buy them for the gimmick.” She can testify to the shoes’ comfort, often wearing them when she walks to work.

While not yet a Camileon customer, Kathleen Lick Pilla, president of Centerline Design, which merged with DesignDesign earlier this winter, can see the advantages. She wears high heels to work every day and, especially when she then keeps on the stilettos in the evening, “My feet are absolutely killing me,” she said.

Eventually, the market for these shoes could be huge, once they’re truly discovered and prices nudge lower.

Consider these statistics: Almost 80 percent of adult women wear high heels some of the time, 39 percent every day for work, according to the American Podiatric Medical Association. And 90 percent of all female visits to a podiatrist are caused, at least in part, by wearing high heels.

An American Academy of Orthopaedic Surgeons survey found that nine out of every 10 women polled said their shoes hurt their feet.

Yet women won’t stop wearing high heels anytime soon. “Not wearing high heels isn’t an option for many,” Handel noted.

It’s been said that men love to ogle women (and women’s legs) in high heels. It’s no wonder — a Harper’s Index survey found that the average woman’s buttocks protrude 25 percent more in high heels than in flats.

David Handel first dreamed up an adjustable heel in 1989 when, from the confines of a New York City taxi, he watched as otherwise well-dressed women strode down Fifth Avenue ... in sneakers. Observing his two young sons play with Transformers for hours on end, he figured there had to be a way to transform high heels into lower heels, much like his sons transformed vehicles into robots.

Thus began an almost 20-year obsession with bringing his vision to reality, his sister and Ian White helping him to get there.

A visibly proud David White said of his son, "Ian is an unusually gifted mechanical problem solver. When other tiny kids were placing building blocks two and three high, Ian constructed towers."

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