

Keeping a cool head on a bike

Inventor devises air-conditioned helmet for motorcyclists.

BY CHARLES FLEMING

Motorcycle helmet companies have tried for decades to invent a helmet that could keep the rider's head cool in hot weather.

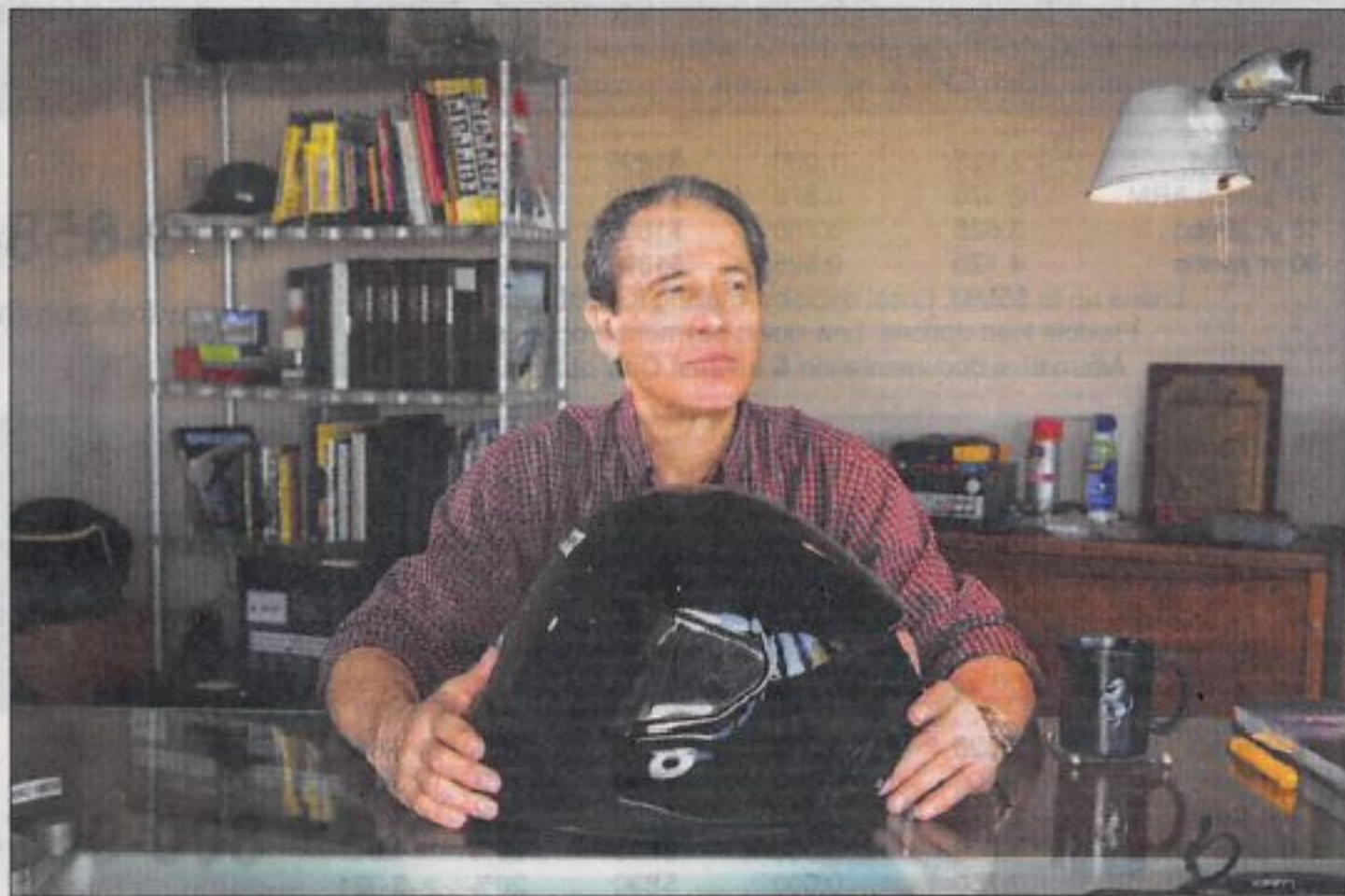
Now a local entrepreneur appears to have done it.

Steve Feher has been thinking about beating the heat for a long time. In the early 1960s, in his native Honolulu, the future inventor did his first patent drawings on a room fan and a desk fan. He was 11.

As an adult, he found some success patenting a ventilated blanket to keep patients cool in the hospital operating room.

Then he struck gold, and became wealthy, with patents on similar thermoelectric principles, applied to automobiles, that cool the seats in vehicles built by Rolls-Royce, Bentley, Ferrari, Infiniti, Lexus and GM.

The royalties from that



JAY L. CLENDENIN Los Angeles Times

STEVE FEHER'S air-conditioned helmet, called Mr. Cool, includes two fans at the back of the helmet. Power comes from a wire connected to the bike's battery.

invention earned him "many millions, maybe a little more than \$10 million," Feher said — money that made it possible for him to pursue still more inventions.

Now, having spent the last seven years in Los Angeles, Feher has applied the technology to headgear. He

has invented, patented and manufactured what may be the world's first practical air-conditioned motorcycle helmet.

Stylish, lightweight and certified as protective, Feher's Mr. Cool helmet uses two small fans and a thermoelectric device housed at the

back of the helmet and powered by a wire connected to the motorcycle's battery to blow air through the helmet liner. This creates cooling over the vascular system in the scalp, resulting in an overall sense of chill.

The technology, proven
[See Helmet, C6]

Helping motorcyclists keep their cool

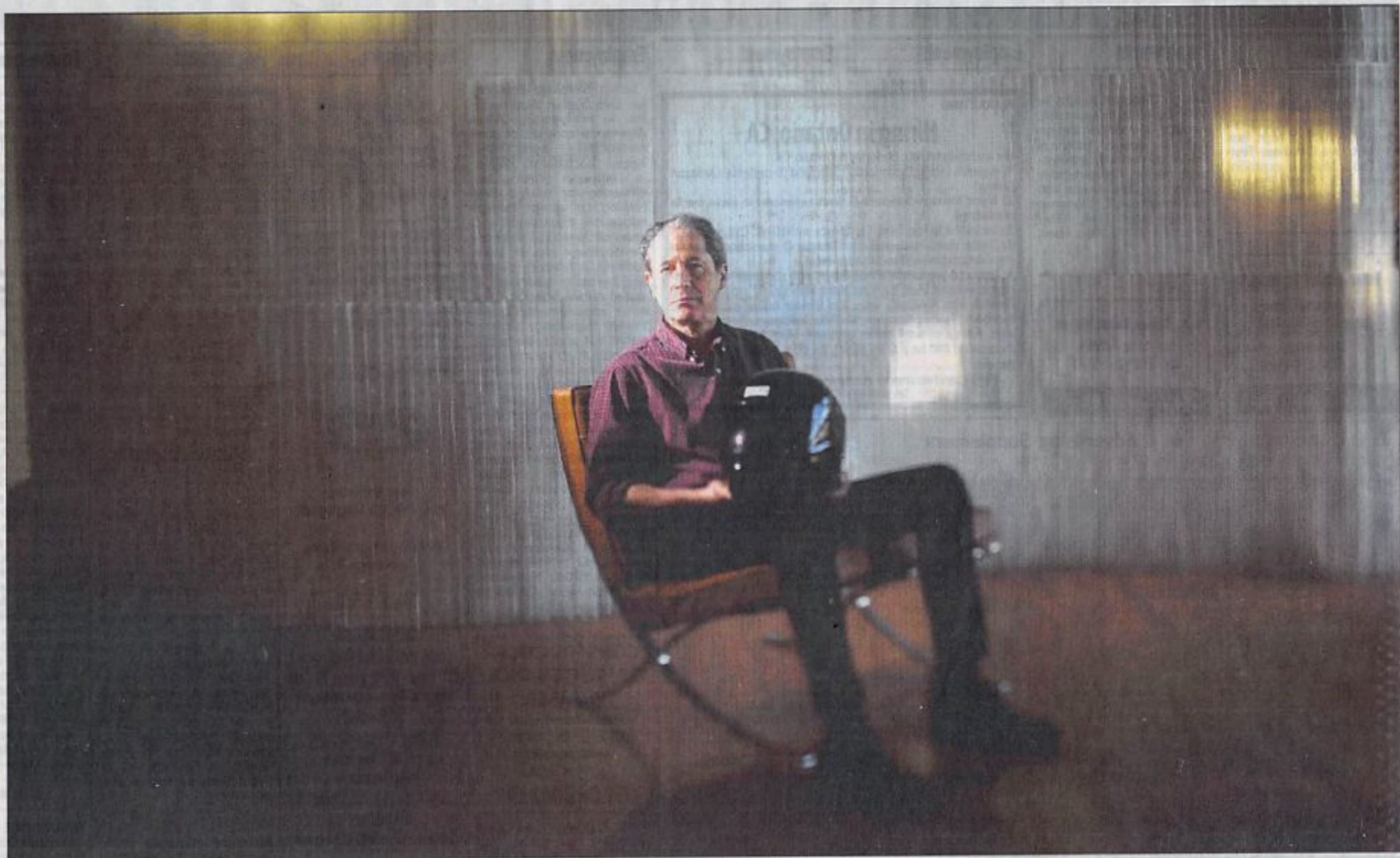
[Helmet, from C1] effective in car seats, could provide welcome relief to motorcyclists in warm climates, where high temperatures can make summer riding uncomfortable, sweaty and even unsafe, as riders with hot heads may have difficulty staying focused on the road.

It may even encourage riders to wear helmets in places where they aren't required by law.

"It's more comfortable to ride with the air-conditioned helmet than it is to ride with no helmet at all," Feher said.

Feher, 66, lives alone in Beverly Hills in a mid-century house with sweeping city views. Spartan and spare, it looks as much like an office as a home. The living room is dominated by a huge exercise machine. The den is filled with cardboard boxes.

An avid motorcyclist and driver — and self-educated after high school — the trim, soft-spoken Feher currently owns a Ducati Multistrada 1200, a Mercedes-Benz AMG G65, a Smart Car 451 Brabus Coupe and a Ferrari 458 Italia.



The strictest test of the Mr. Cool helmet so far, he said, was riding the Multistrada in the San Fernando Valley on an afternoon when the temperature was 114 degrees.

"The AC helmet made it tolerable," Feher said. "I wasn't even perspiring."

My experiment with Feher's helmet proved inconclusive. The day wasn't hot enough to give the prototype a proper test. But I did ascertain that the temperature inside the helmet seemed to drop as the ambient temperature rose. It was more comfortable and felt cooler when it was 85 degrees outside than it had at 75 degrees — the opposite of the effect in a regular helmet.

Otherwise, it behaved like a conventional helmet, though it was slightly larger and about 4 ounces heavier than a traditional full-face helmet. Although the rear-

STEVE FEHER'S patents on certain thermo-electric principles have been put to use in cooling the seats in vehicles built by Rolls-Royce, Bentley, Ferrari, Infiniti, Lexus and GM. His AC helmets will be sold online and in retail outlets, starting this year, for around \$500.

mounted fan produced an audible whir, there was no noticeable sucking or blowing sensation inside the helmet itself.

Feher believes this technology will have wider applications. He has produced subsequent patents that demonstrate the effectiveness of the thermo-electric head cooling system for bicycle helmets, equestrian helmets, welding helmets and even a baseball-style cap for runners.

He has also patented a similar system that would warm helmets for snowmobile riders.

"He's a real inventor," said Alberto Alberici, an executive with Lazer Helmets, a Belgian company that makes headgear for motorcycling, cycling, snowmobiling and other sports.

The potential is there: Motorcycle helmet sales in the U.S. number around 1 million to 2 million units a year. Bicycle helmets top 15 million units. Snowmobile helmet sales are about 1 million units annually.

Feher has given Agoura-based Helmet Solutions, founded by former KBC executive Kirk Chung, exclusive license to produce the AC helmet. Helmet Solutions may also handle the bicycle and snowmobile side, too, Feher said.

Chung said two distributors with whom he met recently said they could envision moving 50,000 units a year within three years of introducing the new technology.

"It's such a unique helmet, and it's a high price point, so it's hard to tell,"

Chung said. "But I think the market could be huge."

The AC helmets will be sold directly to consumers online and in some retail outlets, starting this year, for around \$500. Helmet prices vary widely, but that's higher than entry-level helmets made by HJC, Bell or Icon, but comparable to mid- to high-end headgear from manufacturers such as Shoei, Bell, Arai or AGV.

Mike Ungureanu, general manager of BMW Motorcycles of Burbank, said he sees a clear market for the product in places such as California and Florida — if it's high enough in quality and low enough in price.

"It has to be affordable and worth owning," Ungureanu said. "But at that price, that would be a very sellable product."

Safety expert David Thom, who tests helmet technology as a consultant for the El Segundo firm Collision & Injury Dynamics, agreed that a product such as Feher's would find a market, particularly in Southern California.

But he expressed concerns about how the addition of a fan and fan motor might affect the rider in a crash.

"When you change a helmet to put hardware on it, the question is if you happen to fall and hit the helmet at that location, is the outcome good, bad or benign?" Thom said.

Feher said he has invested more than \$1 million of his own money in the research, testing and prototypes of the AC helmet, plus many years of his time.

He'd like to get it launched now, so he can return to other experiments in thermo-electric cooling. He's already perfected a cooling mattress pad that he believes would have wide appeal to anyone, anywhere, who's ever tried to go to sleep on a hot night.

Chung understands motorcyclists and industry executives may be skeptical, as he was when Feher first contacted him.

"Many major companies have tried to make this kind of helmet in the past, and they all failed miserably," Chung said. "Now people say, 'Yeah, yeah, right,' when I tell them about it. The only way to experience it is to wear one and see."

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