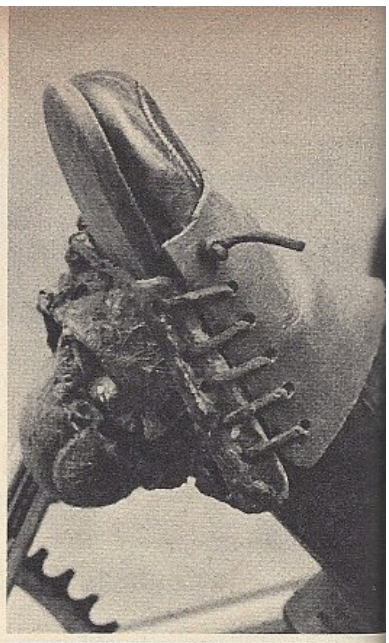

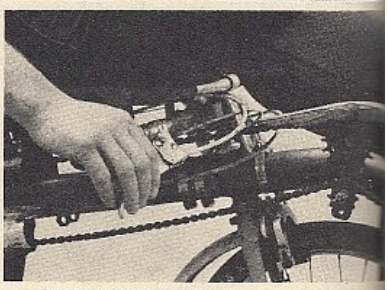

PHOTOS/THOMAS SAHAGIAN

Top left: David Gordon Wilson on the prototype recumbent he rides to work every day. Note the extra-short wheelbase and huge luggage carrier. Top right: One of Wilson's countless innovations is a toe clip compatible with fine dress shoes. Bottom: Wilson's steering tube cuts through the middle of the single frame tube. Note the two pulleys to change the orientation of the drivechain.

An Advocate Speaks

David Gordon Wilson, Co-Designer of the Avatar 2000, Talks About the Recumbent and Complacency in the Industry

Thomas C. Sahagian

"With this bike, I've never been beaten up a hill by anyone," David Gordon Wilson claims, somewhat immodestly. That's no surprise; Wilson, the antithesis of the fragile scholar, could probably beat most of us up a hill on a tricycle, never mind his recumbent.

A mechanical engineer and professor at the Massachusetts Institute of Technology who spends most of his professional time designing gas turbines and other high-tech propulsion systems, Wilson is nonetheless an avid cyclist who commutes treacherous Massachusetts Avenue to work every day.

He's had plenty of accidents — almost none his fault — enough to scare most cyclists into the prophylactic confines of an auto. But he is undeterred.

One of his cycling passions is safety. He's written about it for *Bicycling* (February 1978), and it was his chief motivation for designing the recumbent. Despite having edited the excellent *Bicycling Science*, Wilson doesn't know whether the recumbent is more efficient than a standard bike; he believes its safety values are enough to justify it.

Wilson ticks off the advantages: "Nerve damage in the hands, crotch and feet, a big problem on a regular bike, is nonexistent on a recumbent. The center of gravity is much lower. The handlebars are behind the rider so in a collision there's nothing to impale him, and the natural tendency to seize the bars is turned to advantage."

He goes on to mention that one frame size fits all, thus enabling a large reduction in production and inventory costs.

His criticism of the bicycle industry is blunt: "The executives don't ride bikes to work, so they have no idea of the safety or repair needs of the cyclist."

Wilson tosses off the fact that standard brake rubber is "terrible" in the wet, and with equal casualness mentions that the innovative sidepull brakes on his recumbent (see *Bicycling*, November 1976) were designed by himself and a graduate student in five minutes at his desk one afternoon.

"Every manufacturer we've shown it to admits that it works, but that they can't figure out why. It would probably cost about 25 cents extra per pair of brakes to make, but no one seems to be interested. Raleigh showed some interest, but I don't think anything's come of it," Wilson said.

Wilson insists on being called Dave, unusual in a man who is regularly called upon to advise presidents about subjects ranging from bicycle safety to alternative automotive power plants to the controlling of inflation.

"The way to curb inflation is to put a big tax on petrol and feed the money back at income tax time. But I'm not so involved in that end of things anymore," he said.

What he *is* involved in, judging by the fascinating gadgets that clutter his office, is a hand-powered "motor" for small boats, a machine-wound one-piece Kevlar bicycle wheel, the anti-smoking lobby; there seems to be no end.

But Wilson is as matter-of-fact about all these things as he is about the way he deals with dogs who attack him while he's riding: "I just bat them on the nose — they're no problem. It's much easier on the recumbent."

Consider this: bike design, bike safety, brake design; all that is a sideline for Wilson, a diversion. Imagine what he'd come up with if he devoted all this time to it. Better yet, don't bother. The manufacturers wouldn't build it anyway.