

## INVENTION

# Runaway cart inspired her

because of the risk of children falling out or carts tipping over.

Estimating that more than 20,000 children are hurt each year in shopping cart accidents, the American Academy of Pediatrics in 2006 called for safety improvements.

Paul Giampavolo, who leads an industry committee on voluntary standards, said he doubts that brakes would prevent the most common problem: children falling out of carts. Giampavolo, however, applauded the idea, saying he has tried to promote brakes as an additional safety measure.

"The idea has merit," he said. "I think there's a place for it."

Two retailers based in the Milwaukee area expressed doubts.

Kohl's Corp., which operates about 950 department stores nationally, issued a statement that its shopping carts are "not prone to rolling away."

Roundy's Inc., the parent company for Pick 'n Save grocery stores, likewise cited the sturdiness of its metal shopping carts, adding that its stores usually are surrounded by relatively flat surfaces, too.

Spokeswoman Vivian King said Roundy's officials always are looking for ways to improve operations at their 153 stores in Wisconsin and Minnesota. Brakes on shopping carts, however, has never received serious consideration, King said.

"If it was something we thought was necessary, we would do that," she said.

Hackbarth, who now lives in Ixonia, said it was outside a Pick 'n Save store in Watertown that she had the runaway shopping cart experience in 2003 that prompted her to design a brake system. Her toddler son was not injured in the mishap, which occurred because the hatch on her vehicle bumped her in the head.

She has since talked with other shoppers and has witnessed similar incidents, including some in which carts slammed into parked vehicles. She is not surprised that many such incidents go unreported.

"People are afraid to say something," she said. "If the cart gets away from you, is it your fault? Is it the store's fault?"

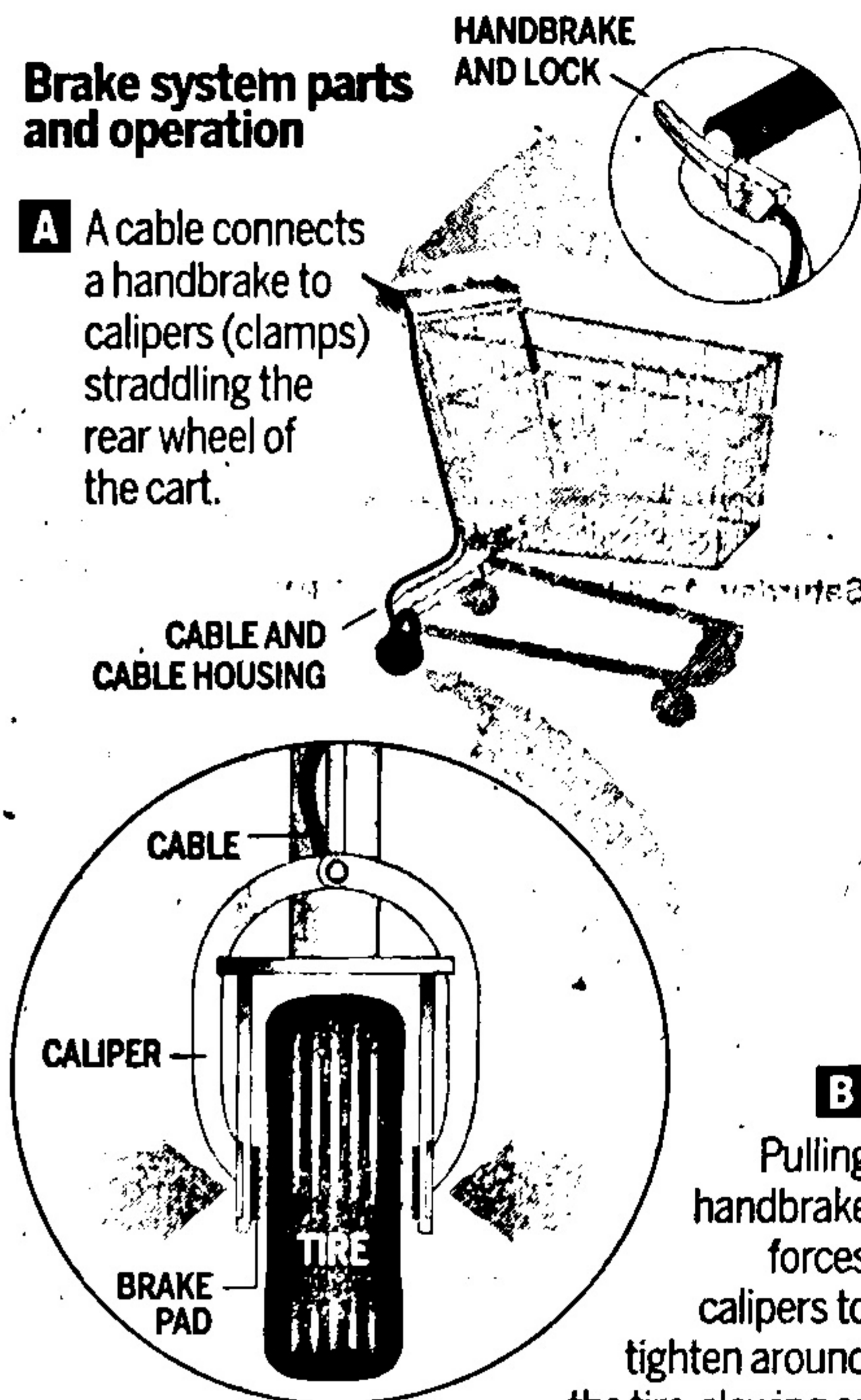
Hackbarth's brake operates much like the hand-operated brake on a bicycle. A lever attached to the shopping cart handle allows the shopper to squeeze calipers around the wheels — locking the brake in place, if necessary, whenever the cart is left unattended.

## A shopping cart with brakes

The brake design system for shopping carts could closely resemble the handbrake on a bicycle. The brake would regulate how fast or slow a cart could move and keep the cart from rolling away on inclined surfaces.

### Brake system parts and operation

**A** A cable connects a handbrake to calipers (clamps) straddling the rear wheel of the cart.



\* Diagram is schematic

Source: United States Patent Office

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The U.S. government issued a patent for the idea last August. It is not the first attempt at giving shoppers more control over their carts.

Wilmer Brubaker, a California inventor, received a patent about 10 years ago for a somewhat different brake that was operated by squeezing a bar parallel to the cart's handle. The idea never caught on with retailers, and Brubaker, now 87, has allowed his patent to expire.

"We couldn't get anybody to take it," he said. "It was before its time."

Timothy Hackbarth, who helped with the design and shares the patent, said he cautioned against making it too complicated. He urged her to consider a bicycle brake design.

Christina Hackbarth, a full-time homemaker whose previous jobs included bank teller and waitress, had never invented anything before. But her husband said she often is critical of an imperfect world, especially where her children are concerned.

"She's got a busy mind," he said. "When it comes to family, she does everything she can to keep them safe and make things right."