

# Designed to age well

■ Technology is bringing about new products that encourage independence for the elderly and handicapped.

By Jennifer Maddox  
SCRIPPS HOWARD NEWS SERVICE

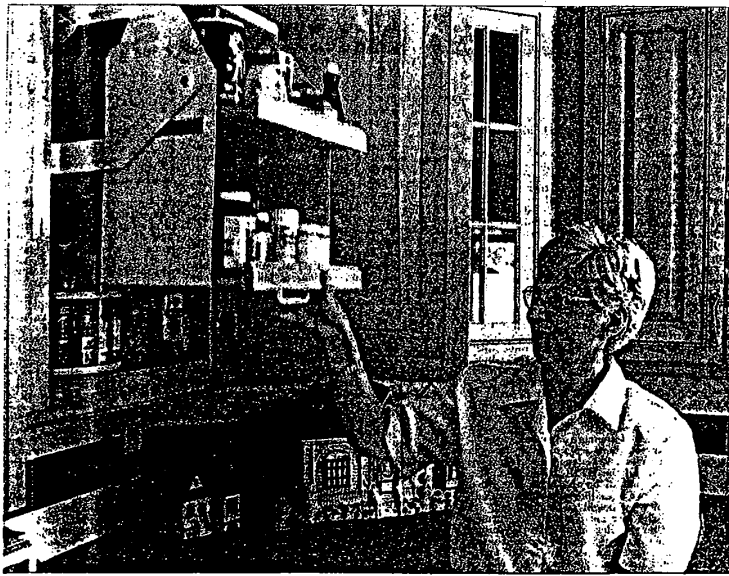
Maybe it was the spaciousness. Or else it was the easy-to-reach kitchen cabinets. Betsy Frazen couldn't put her finger on why this house seemed so appealing as she and her husband went house hunting last summer.

But she kept coming back to it.

"I went through here and thought, wow, this is pretty neat," said Frazen, 60.

The "neat" thing about this house in suburban Richmond, Va., is that it incorporates a concept called Universal Design, which was originally conceived as a way to design buildings that could accommodate disabled people.

Frazen and her husband, Dean, 56, are able-bodied. But like many others, they are looking towards retirement and wanting to stay put. They don't want their homes to become obstacle courses should they develop a disability as they age. And they are fueling emerging



SHELVES THAT PULL OUT to reduce reaching are one of the modifications in Betsy and Dean Frazen's home that are central to Universal Design, which tries to make homes more accommodating for people with disabilities or who are older.

In the bathroom, the decorative towel racks are slightly thicker than usual. They are actually grab bars. And the shelf extending from the bathtub helps someone sit down and swing their legs over the ledge.

markets of home design and new technology so they won't have to.

Before it was sold to the Frazen's, the house was showcased for a year as a special project between the AARP, the local Richmond Realtors association, and area contractors. Among its features: wider doorways for wheelchairs; better lighting for the visually impaired; and no stairs coming into or out of the house.

Dean Frazen points out the electrical outlets at the top and bottom of his home's extra-wide staircase. The width and the outlets are for an electric chair lift, should they ever need one.

In their huge bathroom, the decorative towel racks are slightly thicker than usual. They are actually grab bars. And the shelf extending from the bathtub isn't just for candles or magazines. It's to help someone sit down and swing their legs over the ledge. The stripe on the edges of the Corian countertops in the kitchen and bathroom isn't just decorative; it's designed to provide clues to a visually impaired person.

The Frazens point out dozens of other details such as these that make their home user-friendly — from raised electrical outlets (no deep bending) to a built-in ironing board.

"Even if you're not handicapped, these are the kinds of things that make sense," Dean Frazen said.

For people who do have disabilities, new technology is bringing about hundreds of new products that encourage independence.

"This is the next frontier of research," said Joseph Coughlin, director of the Massachusetts Institute of Technology's newly established AgeLab, known more formally as the Technology for Healthy Aging Laboratory.

Since medical advances are allowing people to live longer, he said, "we have to make sure we can live and live well during the time we have bought ourselves."

One of the lab's major areas of research involves transportation. MIT is working with car makers to develop products that will enable seniors to drive better.

"Transportation really is the glue that holds our life together," Coughlin said. "Without transit, it's equivalent to sentencing (seniors) to life in prison."

Among new developments in the works:

- New options on cars that will make room for and store wheelchairs and walkers. "Nobody wants an older person's car that looks retrofitted. You want it to be seamless," he said.

- Toyota is working with MIT to develop a small electric car to be marketed to residents of adult communities, so they can get around town easily.

- The lab is also researching "intelligent transportation systems," such as audio warnings if a car is too close to another object.

In the health care field, entrepreneurs Alan Letzt and Steve Brown have come up with ways to help people better manage their home routines, from taking medications at the right time to remembering daily exercise.

Letzt, of Burke, Va., quit his job at a marketing and engineering firm nine years ago when his mother complained she couldn't remember which medications to take at which time of day.

The result is Jerry the Pharmacist, which will be released in select pharmacies in Virginia and Ohio at the end of the year, and throughout the country early next year.

It's the size of a pocket calculator and designed like a pager, beeping each time a pill needs to be taken. Push the button when it beeps, and a recorded voice tells you what you need to do. Push another button when you've finished. A third button will advise you what to do if certain symptoms or complications arise from a certain drug.

Steve Brown's Health Hero Network has a more advanced version for people whose health care needs daily monitoring. Brown started his company 10 years ago, and on March 30 rolled out the Health Buddy.

An online service posts daily questions to patients on a small screen at home, asking them how they feel, whether they've taken their drugs, or if they've developed any adverse symptoms. An answer indicating trouble is immediately routed to a case manager who will call the home.

The result is that health problems are identified early, before the point where someone has to be rushed to the hospital. Health Hero's clients are mainly health plans, who give the devices to patients with chronic health conditions to head off huge hospital costs, Brown said.

"Our fundamental proposition is to replace a \$10,000 hospitalization with a \$100 doctor's office visit," he said.

In other areas of research, a University of Buffalo study documents the cost-effectiveness of various "assistive technologies" and home modifications on the frail elderly.

The 18-month study, published in the Archives of Family Medicine, found that people who

had an array of devices available to help them get around better in their homes spent less on hospitalizations and in-home nursing care than those who didn't have the extra devices, such as no-slip carpets, grab rails and balancing aids.

"We have demonstrated that the cost of intervention is far less than being institutionalized," said professor William Mann, director of the University of Buffalo's Rehabilitation Engineering Research Center on Aging and chief author of the study.

But most of that intervention is not covered by Medicare.

"I want them to change their policy," Mann said. "We need to be more liberal in the way we consider what things should get covered."

Medicare officials acknowledge such concerns. But the federal Health Care Financing Administration, which funds Medicare, is bound by Congress on what it can cover, said Dr. Jeffrey Kang, director of the agency's Office of Clinical Standards and Quality.

"I think that kind of study would inform Congress," Kang said. But it also begs the question of what is a medical issue and what is a housing issue. What we're really talking about is changes to people's housing."

In the housing arena, designers and builders are catching on.

"The community of designers really understands that there is a need for design that is inclusive in every way," Irma Dobkin told a group of builders last week during a conference organized by the National Association of Home Builders. Dobkin is an interior designer who specializes in Universal Design.

"What I'm hoping to do with the building community is to sensitize them," she said later. "It's beginning to happen, but we've been preaching it for 10 or 15 years."

The builders were listening. Louis Tyler, whose Maryland company merchandises home interiors to large adult communities all over the country, was ready to hire Dobkin as a consultant. "I've learned a lot from her," he said after her talk.

Meanwhile in Richmond, the Frazen's intend to adopt many of their new home's features when they get ready to build their retirement home in Virginia's mountains three or four years from now.