The StairWalker

Blue A
Walking Aids with Stairs

UCSF Disabilities Statistics Center study on mobility device use:

- **1.8 million** Americans use walkers
- Only 39.3% of mobility device users live in houses with just one floor
- 62.1% of mobility device users must climb steps to get in or out of their homes
- Only 9.6% of mobility device users have added stair-climbing features

Our contact, Luis Loya (Access Planner for Kessler McGuinness and Associates) verifies need for product.
Current Products

Stair lifts:
• Person sits on chair, which then climbs up the side of the wall

Expensive:
• Cheapest are about $2,500

No walker:
• Will not bring up the walker, so person lands on the upper floor without walking aid
Current Products

US Patent 6,453,921B1:
- Retractable legs
- Activated by gripping handle

Safety risk → falling
- 1/3 of people 65 and older fall at least once a year
- Fear of falling is main fear among elderly, above robbery and financial fears

Requires hand dexterity, which elderly often don’t have
The StairWalker

- Attaches to the railings
- As the user pushes the walker up against the bar, the StairWalker moves up too
- The StairWalker will not fall back down
How It Works

- Walker attaches to a crossbar at the front
- Rubber rollers to firmly grip the railing
- Uses ratchets to keep from falling down
Features

- **Safety** – prevents user from falling
- **Mobility** – helps users have full access to their walkers
- Low **cost**
- Requires minimal **installation**

Critical parts:

- Properly compressible rubber rollers to grip rail
- Sliding enough to push it up
- Interfacing with the wall and existing railing
Further Considerations

Range of railing shapes and sizes:

- Attach a baseline track to the railing, sold with the StairWalker.
- The box could clamp onto the railing from the top, or from the side.

Going down stairs:

- Orient the rollers on each side in different directions. Lock one side each time, depending on direction.

For railings that do not start at the first step, include rail extension.
Further Considerations

Range of railing shapes and sizes:

- Attach a baseline track to the railing, sold with the StairWalker.
- The box could clamp onto the railing from the top, or from the side → 

Going down stairs:

- Orient the rollers on each side in different directions. Lock one side each time, depending on direction.

For railings that do not start at the first step, include rail extension.
Can be an aid and asset to the 1.8 million Americans who use walkers.
References


• “Use walkers to lower the risk of falling” India eNews, 5 February 2008 http://www.indiaenews.com/europe/20080205/95666.htm (1 October 2008).
