



Bed bugs, like these above, live inside mattresses and bed frames. They feed on blood and their bites can create painful allergic reactions in human hosts.

De-bugging the bed

Central City Concern staffers design a new bed bug-resistant bed with nationwide appeal

BY JAKE THOMAS
STAFF WRITER

Richard Klosterman had heard about them. The lady across the hallway from his apartment had them. And then he had them.

Several years ago, Klosterman remembers waking in the middle of the night and feeling something crawling on his head. Whatever it was would fall into his hands and sometimes burst, leaving blood on his hands — his own blood.

"I heard stories about bed bugs, but I had never seen one," said Klosterman, 65, recalling his experience with the parasitic insect that lives on the blood of humans and have made a comeback in recent years.

He got all the information he could on bed bugs and used powders and sprays to combat them, but they always came back. He kept finding them in his bed frame along with their droppings, which damaged his furniture. It got to the point where his dog became frightened of the bugs, he recalls.

Klosterman finally broke down and alerted the staff at his building. Exterminating bed bugs is an arduous process, lasting about four weeks. When they were done, they gave Klosterman a new bed — one that's uniquely designed to keep the pests from ever coming back.

Bed bugs have made a dramatic resurgence in recent years, infesting hotels, hostels and apartment buildings from coast to coast. As a result, Central City Concern — Portland's largest social-service provider that operates 1,600 residential units in 20 different properties, including Klosterman's building — has developed a bed bug-resistant bed that's meant to be as inhospitable as possible to the dreaded insects, giving providers of low-income and transitional housing a new tool to combat them.

Branded the "Central City Bed," the patent-pending beds don't look too different from their more conventional counterparts, but they have subtle features aimed at deterring the pests, while making their detection and extermination swifter and easier.

"If they can harbor in the bed close to the

host in between meals, then that's ideal for them," said Herb Draper, a CCC facility maintenance manager, in the basement of one of the nonprofit's administrative offices where models of the beds are displayed in what resembles an Ikea showroom.

Draper explained that the bed frames, which he helped design, are made from steel angle iron with a stretch-steel surface. They also have a powder coating, which forms a slick casing. These attributes, he said, make it more difficult for the bugs to climb up the beds in search of a meal. The beds also have flared-out legs to keep them away from walls, where the bugs might hide or crawl up.

More conventional wooden frames, with their cracks and crevices, provide the flat-bodied bed bugs with more places to crawl in and wait for their host to go to sleep, said Draper.

"Bed bugs like rough surfaces; they like porous surfaces," said Draper. "A box-spring is a perfect example."

According to CCC spokesperson Kathy Pape, the beds are encased in a blue medical-grade nylon that is sealed internally, making it more difficult for the bugs to enter. The mattress also has no piping, quilt stitching or zippers, which bed bugs get past and hide inside, she said. The bed frames can also be stacked 10 high, according to Pape.

After an infestation occurs, more conventional beds need to be sent to the landfill because there's no way to be certain that bed bugs aren't hiding deep inside them, said Draper. The bed bug-resistant beds, he said, are different, allowing for easier inspection of residential units when there is an infestation or when a resident moves out, he said. So far, none of the beds have been disposed of, he said.

Several years ago, public health agencies began to see an increase in reports of bed bugs. The parasites had been largely eradicated in the mid-20th century, but had made a comeback, likely because they had developed a resistance to pesticides, international travel had increased, the awareness of them had decreased, and local



PHOTO BY JAKE THOMAS

From left, Central City Concern's Marcus Young, social enterprises project manager, Sarah Porter, office manager, and Herb Draper, facility maintenance manager, stand with CCC's in-house bed bug-resistant bed. The beds are being sold to agencies across the country as a way to control the nation's bed-bug infestations.

pest-control programs had declined.

"Everyone agrees that bed bugs aren't going to go away," said Matt Davis, senior program specialist at the Multnomah County Health Department.

Davis said that it was about 2005 when bed bugs became a problem for social-service providers and government agencies. Two years ago, he said, the county along with other government entities, nonprofit organizations and housing providers formed a work group to share ideas on how to deal with the pests.

In 2010, CCC began producing its bed bug-resistant beds and began using them first in Madrona Studios.

Draper said around the time bed bugs began to become more present, the purchasing and maintenance staffs at CCC recognized the need to have a bed that was better designed to deal with the pests. Realizing that there were no beds designed to deal with bed bugs on the market, CCC began developing the beds with input from its various departments, said Draper.

"I love it because when you learn about it, you realize how simple it is," said Davis of the beds, describing them as a low-cost way of dealing with the problem that doesn't use toxic chemicals.

So far, CCC has installed the beds in about 650 of its units.

And news of the beds has spread nationwide as providers grapple with keeping bed bugs out of their buildings. CCC has sold nearly 1,300 bed frames and over 200 mattresses to like-minded organizations along the West Coast, as well as in Connecticut, Delaware and Philadelphia. A full-size frame runs \$460, and a twin is \$380.

"The less hospitable the environment (for bed bugs), the less you'll have a problem, and the beds contribute," says Rachel Duke, supportive housing program director at Bud Clark Commons, which uses the beds in most of its 130 residencies. She says that the beds work with its overall strategy of preventing bed bugs through education, as well as other tactics, such as a heat treatment room, where tenants' belongings are exposed to such high temperatures that any bugs hiding in them die off.

Shannon Singleton, program manager at the Royal Palm housing facility, said that the beds helped make eradication of the bed bugs much easier because they left them with no where to hide.

But the beds make the biggest difference for residents who are no longer riddled with anxiety from the pests.

"It's a real relief to sleep and not have these things crawling on you," said Klosterman.

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