



## **Bloomington Business Helps Hoosiers and Healthcare Workers Improvise COVID-19 Protective Face Masks Faster by Mass-Producing Contoured Face Mask Frames**

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BLOOMINGTON, Ind.--(BUSINESS WIRE)--Bloomington-based Garden Tower Project is helping to protect against the spread of COVID-19 by mass-producing face mask frames for healthcare providers and communities. The food-grade, durable frames offer a no-sew, affordable solution for individuals to easily cover their face with material they have access to.

The frames are created to be paired with widely available filter materials or a basic sewn mask. The flexible frame contours around the wearer's nose and mouth to improve the seal and help reduce the transmission of aerosols, which may spread the coronavirus, according to the latest [research from the National Academy of Sciences](#).

Garden Tower Project converted equipment at its injection-molding partner facilities in Indiana to produce the face mask frames from high-quality plastic using a 3D-printing design, making them the first and only frames in mass-production and available to consumers. More than 20,000 of the frames are already shipping nationally, and Garden Tower Project has sourced Bloomington community members who cannot otherwise work to package and send the orders.

"When we saw the frame design, we realized we could use our expertise with injection-molding and our tooling to take it from an idea to a physical product, and make it at a low cost," said Joel Grant, Garden Tower Project business partner. "Garden Tower Project is small and adaptable, and we knew we could help our community and many others by producing these face mask frames."

The face mask frame model was adapted from a 3D-printing design made by Mark Fuller, a Cincinnati-based senior manufacturing engineer for General Electric. This design makes it possible for companies with injection molding tools to easily mass-manufacture the frames.

Garden Tower Project is also facilitating an increase in production of the face masks around the country. The company has sent the digital part files and mask frames to other companies with injection-molding equipment, including Celanese Corporation.

"It's more important than ever to spread innovation that protects people quickly and easily," Grant said. "We hope that our production model will enable companies around the country to produce the face mask frames and, as a result, prevent further spread of the virus."

The face mask frames are available for families in [packages of six, with two small, two medium, and two large sizes](#) for \$8.54 with free shipping in Indiana.

For communities, healthcare providers and essential businesses, the frames are available in packages of 72 for \$68.74 and packages of 864 for \$585.00 with free shipping in Indiana.

### **About Garden Tower Project**

Garden Tower Project is a small, socially-responsible company based in Bloomington, Indiana with big ideas. Our Garden Tower 2™ food-grade composting container garden is empowering people toward their own food security and transforming the face of gardening and food sustainability. To us, food security is more than growing your own food—it is about growing healthy food. Learn more at [gardentowerproject.com/](http://gardentowerproject.com/) and follow us on [Facebook](#), [Twitter](#), and [YouTube](#).

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FEATURED

## A shift from gardening towers to mask frames amid pandemic

By Laura Lane The Herald-Times  
Apr 20, 2020



Erin Duff from Garden Tower Project wears a face mask held in place by a plastic contoured frame the company now makes. (Courtesy photo)

Early on in this pandemic, Joel Grant thought the wearing of face masks would be effective in slowing the spread of the coronavirus.

He held this view even as health officials recommended against them for anyone other than health care workers.

The advice has since changed: Wear a face mask in public places.

"I have always thought that discouraging their use was, and excuse my language, a BS message," Grant said last week.

"The misinformation is part of our motivation. I have been pro-mask from day 1, and when we saw that we could get this product out in large numbers to the public, well, that's what we have done."

"The product" is a plastic contoured face mask frame that provides a simple solution for people to cover their face by improving the seal around the nose and mouth to prevent the transmission of COVID-19. The frame fits over layers of fabric or a simple mask, holding it firmly in place.

Grant has diverted his Bloomington-based business away from plastic gardening towers and toward face mask frames that are being shipped around the country, more than 20,000 so far.

"I am part of that community that was looking at this early and trying to find a way to control the spread," he said.

His Garden Tower Project started out in Bloomington in 2010, using Kickstarter funds to launch a business that makes large plastic composting containers in which gardens can be planted and nourished by a worm-generated compost system.

The enterprise has converted equipment at its injection-molding facilities to produce the plastic face mask frames, using a 3D-printing design. Grant said they are the only mask frames in mass production, and are easy to use.

He modeled the frame on a design created by a General Electric engineer in Cincinnati that utilized injection molding equipment. The design has been shared with other injection-molding businesses in order to further increase production.

They may encounter a shortage of some items. For instance, Grant is waiting for a 500-pound shipment of 3/8-inch elastic to arrive from China for the frame-making process.

In the meantime, Grant said large rubber bands — “we’ve cleared them out of a lot of business supply stores” — are being used instead. The business has three packing locations, where several workers are packaging orders in envelopes and sending them out.

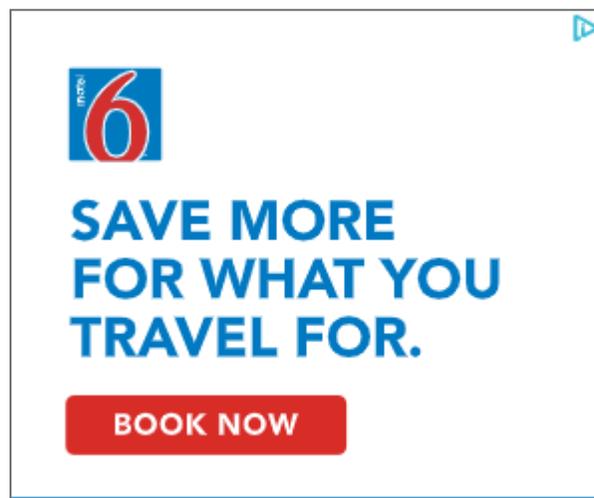
With demand increasing, it’s about five days before an order gets shipped. Anyone can order the frames: a pack of six costs \$8.54, with free shipping in Indiana. Details are at the bottom of the business website

“Everyone, it seems, is making masks, so it could be that as the supply increases, the need for them and our mask frame may become a non-issue in the next few months,” Grant said.

But for now, his focus is away from a product that sells for hundreds of dollars to one that costs less than \$2 and may help stem a health crisis.

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