

Teacher turns manufacturer



FOUR OF EIGHT 3-D PRINTERS are seen as they build face-shield holders in the basement of **Tom Gill**'s home in Scott Township on Wednesday. The Central Columbia High School science teacher is creating the shields for health-care workers during the coronavirus pandemic.

Central science staffer swaps toilet paper for plastic to feed factory making face shields

By **MICHAEL LESTER**
Press Enterprise Writer

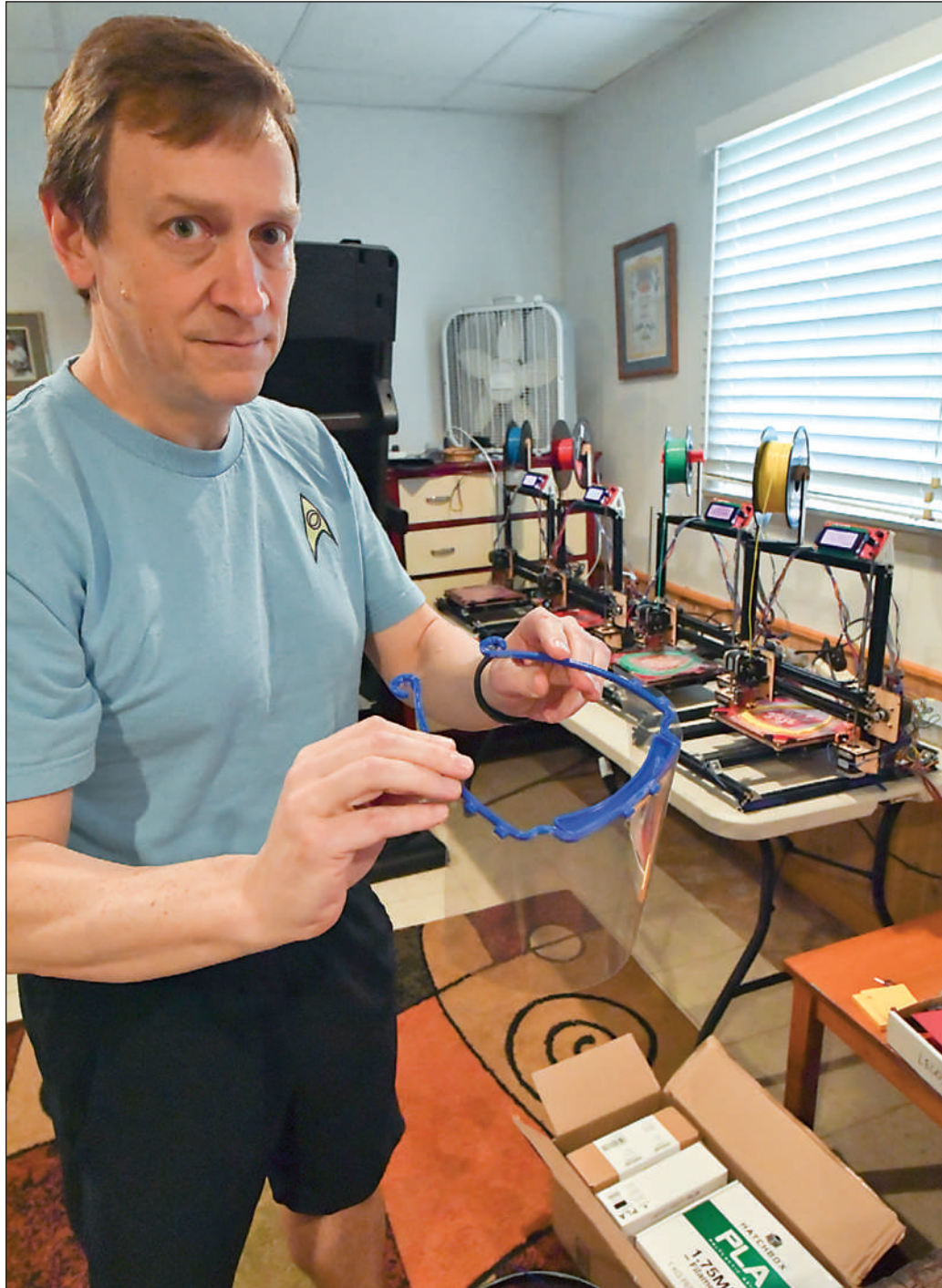
BLOOMSBURG — Central Columbia High School science teacher Tom Gill last week launched a small-scale factory inside the basement of his home.

Gill is using eight 3-D printers to manufacture face shields for health care workers.

Demand for those protective shields has taken off so much amid the coronavirus pandemic that Gill ran out of the plastic raw material needed to make them.

So Gill this week turned to friend Eric Albert, a professor at Penn College of Technology in Williamsport, asking if Albert had any reams of the stringy plastic filament needed to form the visor parts of the shields Gill was making.

Albert did, in fact, have some of that fila-



TOM GILL holds a completed face shield after the bracket came off one of the 3-D printers in his Scott Township basement Wednesday. **More photos, page 5. PHOTOS BY JIMMY MAY**

ment. But Albert wasn't prepared to just give it away, according to Gill.

In return for the filament, Albert asked for one thing in short supply these days: toilet paper.

It just so happened, Gill said, that he was well stocked where TP was concerned and had 16 rolls he could surrender for barter.

So, Gill and Albert met discretely Monday in a Penn College parking lot in Williamsport for what Gill jokingly described as a covert drug deal-like transaction.

"You got the stuff?" Gill asked Albert. "I got the stuff," Albert replied.

Relic used for masks

Since transferring Central Columbia's eight 3-D printers to his Bloomsburg-area home last week, Gill's basement has been "whirring with printers from sunrise until late at night," to manufacture protective face shields, Gill said.

The shields, designed to protect health
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A COMPLETED face shield bracket and shield sit on a table in **Tom Gill's** Scott Township basement. He is able to print about 100 a day for health-care workers to protect them from exposure to the coronavirus. **More photos, page 1. PHOTOS BY JIMMY MAY**

Shields

Continued from front page

care workers from the dangerous germs spread by coronavirus patients, combine a plastic "visor" that fits snugly around the forehead with an attached thin plastic film shield covering the face.

The material Gill decided to use for his protective shields is a teaching profession relic: the 8½-by-11-inch clear plastic transparency sheets teachers once used with overhead projectors.

Gill, who's taught at Central 30 years, said those transparency sheets became obsolete about 15 years ago when Central Columbia shifted to digital projectors and had been otherwise collecting dust in storage boxes ever since.

Gill said he knows of at least 3,000 transparency sheets at Central, and he's been told there may be thousands more.

Last week, Jeff Kay of the

Montandon-based Central Susquehanna Intermediate Unit approached Gill and technology teachers across the 17 districts CSIU serves about the shield project.

'I'm a UPS driver'

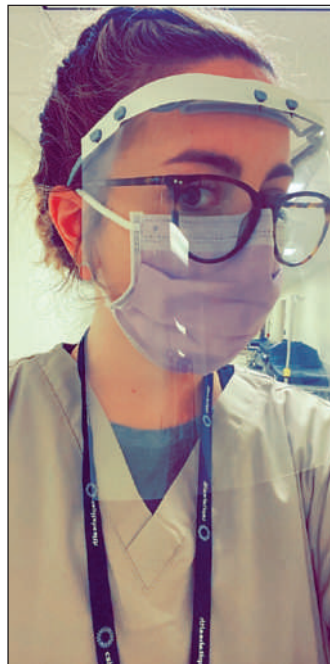
Kay, who lives in Riverside and formerly coached Danville girl's soccer, explained he was approached by former CSIU boss Geoff Craven, who sits on various community boards, about how the CSIU might help in a project underway to manufacture and distribute "PPEs" — personal protective equipment — to medical providers nationwide.

Kay contacted Gill and other technology teachers working for the 17 districts CSIU serves looking for help.

In addition to Gill, teachers from Berwick, Milton and Shikellamy were among those who offered to help, since they had the 3-D printers needed to make the shields.

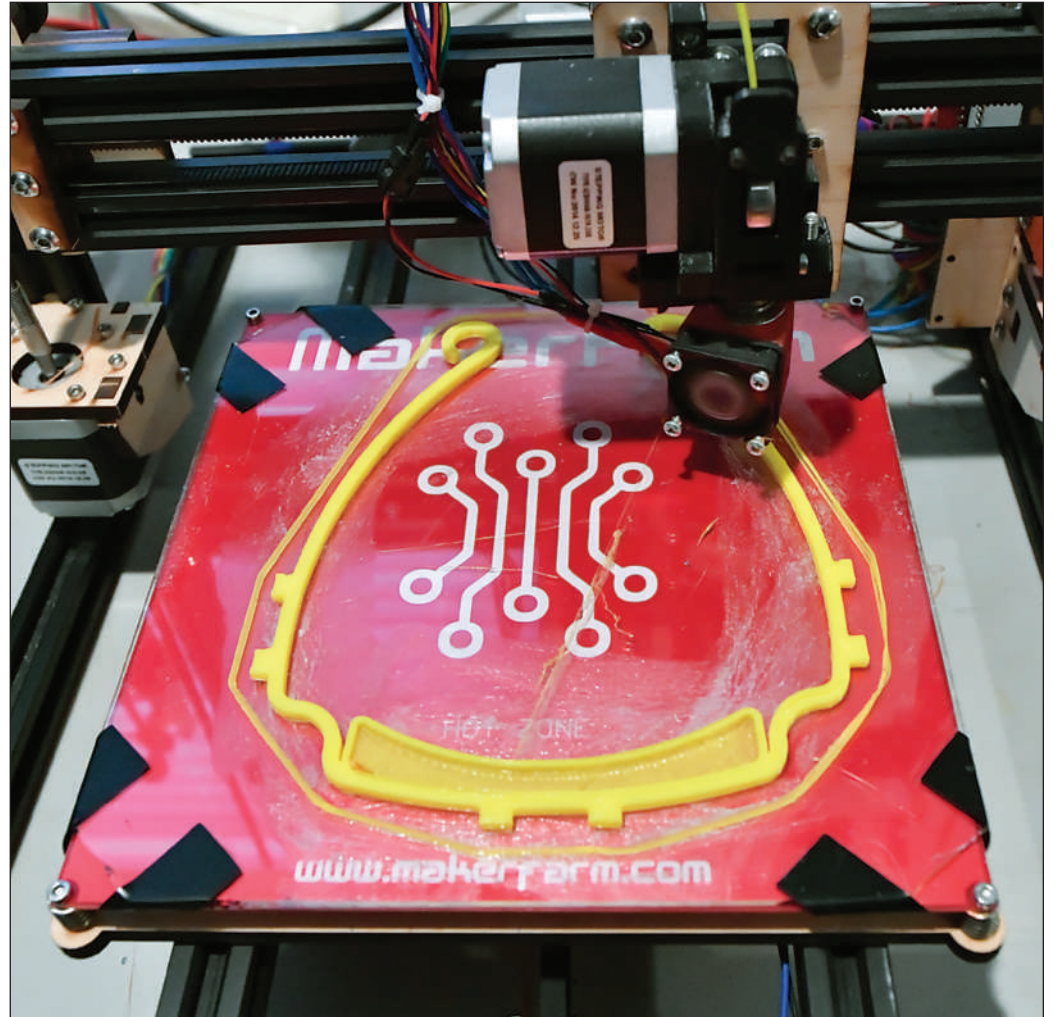
"This has become a second job that I didn't need," Kay said with a laugh Tuesday.

"I've literally become a



Special to Press Enterprise
TOM GILL'S DAUGHTER, Hayley Kay, displays one of the face shields her father printed.

UPS driver. I go out, and I drop off supplies. Tom will put his completed frames on his porch for me to pick up."



A 3-D PRINTER lays down a layer of plastic as it builds a face shield Wednesday.

'It's amazing'

Gill said he is producing 100 shields per day — 400 total as of Tuesday — that will be distributed to health care workers on the front lines treating coronavirus patients.

Gill said shields already were distributed to the Susquehanna Valley Medical Specialties between Bloomsburg and Berwick.

Another batch likely will be sent to a hospital in Hazleton, which has been the Luzerne County community hardest hit by coronavirus.

Geisinger heart doctor Sandy Green of Danville is among those leading local efforts to equip health care providers nationwide with

protective equipment that is in short supply.

"They're fantastic," Green said of Gill and Kay and their efforts. "It's amazing what a small group of determined people can put together. I think these [shields] will potentially save lives if we get them in the right places."

"The work that Jeff is doing and the resources they are sharing are the true definition of charity and community service. The time these people are putting into this is amazing."

'It hit home'

Kay's daughter, Hayley Kay, probably would agree.

Hayley Kay is a 2011 Danville High School graduate

who works as a clinical pharmacist in a hospital emergency room in Trenton, New Jersey.

Jeff Kay sent one of the manufactured shields to his daughter, seeking a review from someone on the front lines treating coronavirus.

"It hit home when I gave one to my daughter," Jeff Kay said. "When she said, 'This will keep me safer,' that's when it kind of hit me that these things we are doing ... might be saving life and potentially, possibly preventing the spread of the virus."

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