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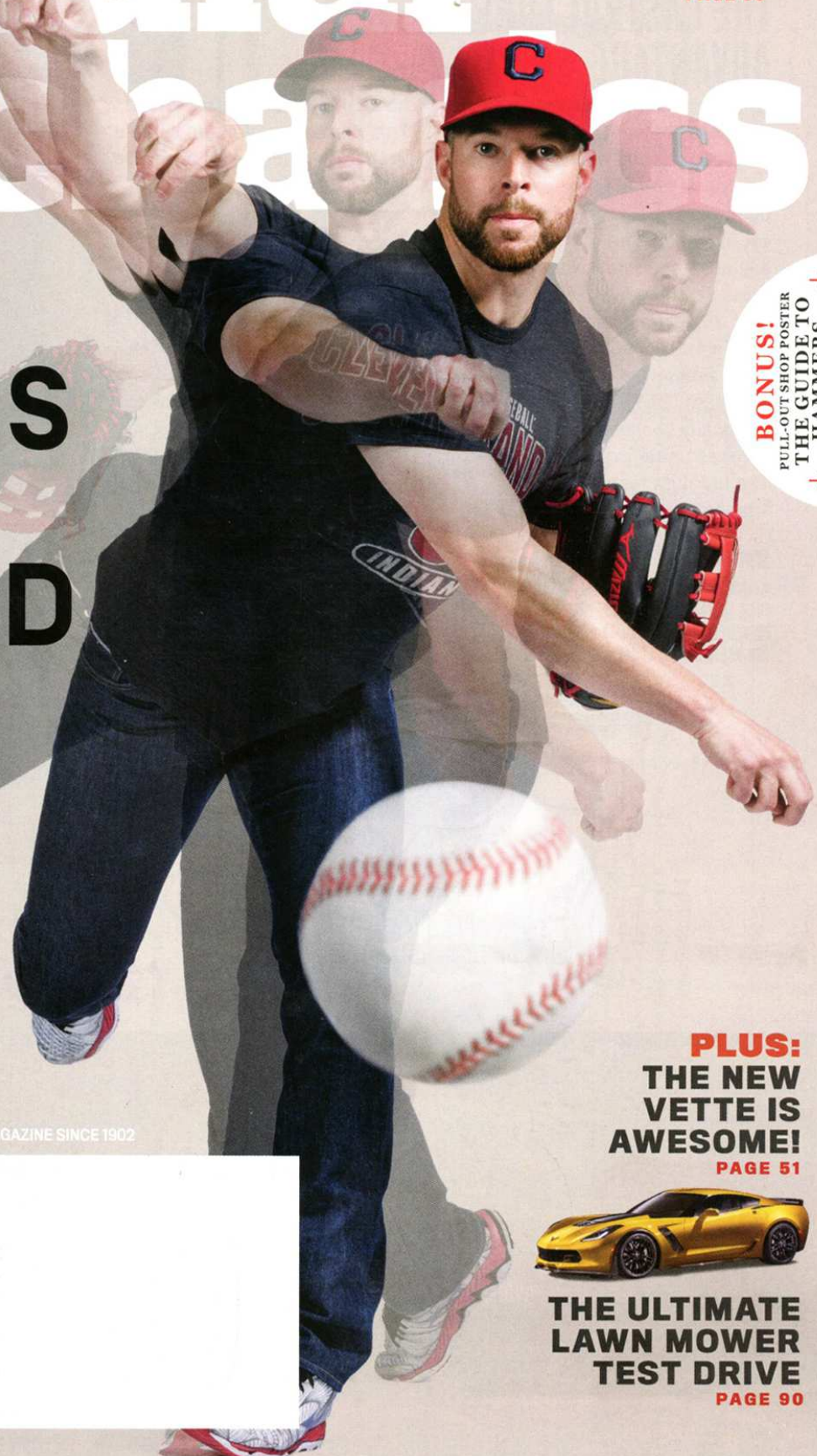
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Popular Mechanics

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42 THINGS YOU SHOULD KNOW HOW TO DO AT EVERY AGE

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THE ULTIMATE
LAWN MOWER
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SKILLS

HACKS

The bakery's hot smoker (at right) reaches temperatures of 300 degrees. Its cold smoker sibling (at left and below) used to be a dishwasher.



THE JUNKYARD COLD SMOKER

How a bistro chef transformed an old dishwasher into the ultimate kitchen machine. BY JOLYON HELTERMAN

THE COMMERCIAL DISHWASHER OUTSIDE PAIN D'Avignon bakery on Cape Cod, Massachusetts, is belching out plumes of blue-tinged smoke, which is exactly what Matthew Tropeano, executive chef of the bakery's on-premises bistro, wants. The dishwasher is a cold smoker, a machine that imbues food with smoky flavor without fully cooking it. Tropeano had been hoping to add the technique to the kitchen's capabilities for some time. "We were already doing a lot of hot smoking . . . sides of bacon, whole chickens, tomatoes, you name it," Tropeano says. "But all the excess smoke was going nowhere. All we needed was to capture it."

Tropeano approached Richard Leboeuf, the bakery's maintenance supervisor, for help finding a vessel he could use to piggyback onto his hot smoker, a Landmann Smoky Mountain series. Leboeuf immediately thought of a broken Jackson Warewashing Systems Avenger HT dishwasher he had sitting around in a warehouse. Leboeuf gutted the thing, removing the electrical wiring, the drain-line hose, the pressure-regulator valve, even the "built-in stainless steel booster heater with exclusive Sani-Sure technology." Then he added four-inch-diameter galvanized stove piping to funnel in the smoke from the hot smoker's vent.

The only remaining challenge was temperature control: The smoke that was exiting the Landmann was 300 degrees Fahrenheit, far too hot for cold smoking, which works best at 80 to 90 F. By fiddling with pipe length, Leboeuf landed on the optimal distance (five feet)

for the smoke to travel to drop the requisite 200-plus degrees by the time it enters the dishwasher. Thus cooled, it can smoke delicate ingredients such as bluefish and house-made duck sausage. "We recently stuffed an entire brie cheese with black truffles and threw that in there," Tropeano says.

A year later the repurposed dishwasher remains a workhorse, despite near-constant use. It turns out a commercial-grade washer—designed to keep hot water from spewing out all over the kitchen floor—is an ideal machine for containing cool smoke. So solid is its construction, in fact, that the chef expects he'll be replacing the hot smoker long before its cooler sibling needs any attention.

Just in case, he's been eyeballing a backup: a hot water tank the bakery just threw out.



THINGS YOU MIGHT ENCOUNTER AT THE BAR

REFRACTOMETER

He doesn't use it as often as a jigger, but Chad Solomon, co-owner of Dallas bar Midnight Rambler, often reaches for his Extech refractometer to make certain that the bar's cocktails are balanced.

The device, which resembles a small telescope, registers the amount of sugar in a liquid by measuring the refraction of light traveling through that liquid. Solomon uses his to make complex ingredients in-house, such as falernum, a spiced-rum base mixed with additional spices and lime oleo-saccharum, an essential oil from citrus and sugar. The refractometer ensures that Solomon can duplicate any ingredient within a 1 percent margin of error every time. It's like a measuring cup with a laser on it.

— ALIA AKKAM

➔ **TRY THIS AT HOME** If you don't have a dishwasher lying around, you can buy a \$100 handheld cold smoker called The Smoking Gun. Place your food in a covered bowl, insert wood chips into the gun, and use the gun's rubber tube to infuse smoke into the bowl.