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APRIL 2011

Volume 21 Number 3

# IronWorks®

## LAURA KLOCK'S MEMPHIS CHOPPER



**SPIFF YOUR RIDE**  
BAGGER GEAR BUYER'S GUIDE

**WWII INDIAN 841**  
SEASONED CITIZENS

**IW GARAGE**  
JIMS TOOL TECH

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RICHIE'S TURBO FXR • CAO SADDLEBAG INSTALL • BIKETRONICS BAGGER AUDIO**





# 24

## ON THE COVER

Volume 21 • Number 3 • Our 173rd Issue

Credit for Laura Klock's jewe-like Memphis Chopper goes to everyone who punches the clock at Mitchell, South Dakota's Klock Werks. It was an "all hands on deck" build, finished in the race to get to Michael Lichter's Eternal Combustion Show in Sturgis last year. The bike's graceful lines and striking paintwork exemplify the type of bikes Klock Werks has produced for almost a decade and a half. Turn to page 24 to go behind the scenes on its genesis.



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## SPOTLIGHT

### Germany's Bike Farm

Oh give me a home, where the hogs like to roam... but this one is across the pond! In Germany, actually, a country of craftsmen and engineers who know a thing or two about the mechanical arts. Gerhard Remmert has taken his countrymen's passion to heart, turning out remarkable hand-built machines over several decades and garnering worldwide accolades in the process. Come on and look around the Bike Farm with IW.



## Investment

**M**eddling Editor Paul Holdsworth and I took a road trip in December on behalf of *IronWorks*. Our agenda was partially editorial, partially business. There were people and machines I wanted to get close to with camera and recorder, and Holdsworth wanted to do some ad sales missionary work.

Why did we travel at what is a pretty miserable time of the year, a time of the year most sensible folk would hole up in their nice warm crib and call it a season? I mean, this is December we are talking about and one never knows what one will find once they leave the safety of their abode. I brought the iPod for amusement during long hours of travel time. Shuffle never let us down once, and an expansive/diverse music collection kept us entertained, amused, sane, and filled in the gaps between rants and conversation.

As is our habit, we had a packed agenda that took us to visit a whole bunch of people over the course of a cold-as-hell, snowy seven days. Memorable visits were with Ron and Mike at Chicago Harley where we got a grand tour of a very well stocked and tooled-up dealership. This is a monster facility and has some tremendous capability and talent within its walls. As an aside, I saw what has got to be the largest single room of stored customer HDs ever. Far underground, this crypt holds an ungodly number of machines—750+ and room for 500 more—all sleeping with their siblings until spring. It was a cool visual of something you just don't get to see that often, if at all.

Visiting Andrews Performance in Mt. Prospect, IL, was cool. You interested in spotless automated manufacturing environments? In CNC tooling centers as big as a shed? In a company that has embraced innovation, technology and diversity? Well if these things interest you, check out Andrews. They have it going on. I am hopeful our visit with Mike and Gary results in some good info coming our way, because these folks have some mad knowledge locked up in their walls that I am itching to tap for *IronWorks*.

Hoppe Industries in Kenosha was up



next. Visiting with John is a treat. What a good guy and a smart inventor. You'll see some of his new thinking in this issue in the products section. We talked business, had a good meal, a few adult beverages, and then all too quickly our visit was over. John's a good guy, a great host, a bundle of enthusiastic energy—and his products are rock solid. It was cool to see his place.

Working our way up to urban Milwaukee, we spent a full day with the crew at Cook Customs where I got to do what I like to do best—shoot bikes, listen to stories, and ask questions of smart and talented people with opinions. It was great, really a wonderful visit where we got to spend some quality time with Dave Cook, JP, Colleen Swartz, and Warren Heir. What a talented, swell bunch of people. We got to know each other a bit and I came away with a deep appreciation for the work that Dave Cook is doing. No real surprise there; Dave is an AMD champ. It was also excellent to become acquainted with Warren Heir of JR's Cycle Products to learn about the machines he builds—traditional '60's and 70's era chops—and his products, which include slick hubs for customs. We needed to beat feet after my shoot was done, so I will have to take this crew up on their offer of a down and dirty Milwaukee tour next summer. It should be...brilliant!

Fort Madison, Iowa, home of Don Hotop, was next. The local HyVee serves a mean breakfast special and we didn't want to miss it. The sticky buns are killer. The bikes coming out of Hotop's shop are also killer and you'll see one of them in the next issue as a result of me crawling around in

the dirt during a 25-degree morning. The visit was special. Here is a man with 35 years in the V-twin business that couldn't be easier to talk to and spend time with. He's knowledgeable but not a know it all, he's mellow and easy going yet the bikes he builds and the parts he designs are anything but—they are stunning showcases of tasteful, bold detail and exemplify the essence of the hot rodder's art. Quiet, understated muscle and purpose is a theme through all of Don's two-wheeled work.

Mitchell, South Dakota was a planned stop. We spent a solid day with Brian and Laura Klock and their team of welcoming and warm associates. Both Holdsworth and I commented to ourselves as we left, "What a nice bunch of people." That kind of sums up our visit to Klock Werks: nice and very productive. You are getting one of the bikes in this issue, Laura's Memphis chop, and there's another Klock machine on the way in a following issue. This is a business that has persevered through some pretty challenging times and they look to be clearly focused on the future—and it looks pretty good when seen through a clear and tough Klock Billboard Flare windshield!

Leaving the Klocks to head further west put us squarely in the middle of a nasty blizzard with gale force winds on I-90. This was at night only to make it more interesting. After peeling my fingers off the steering wheel, I consulted the Nuvi 660 for lodging options. GPS rules in these situations and we'd located and paid for two rooms (from the car) within 10 minutes of realizing that there was just no way we'd make it to Sturgis. We made it as far as Wall that night and felt real fortunate to have snagged our rooms whilst cruising at

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## A Mile a Minute

STEPHEN BERNER

an aggressive 5mph on 90 west because by the time we'd gotten off the road, the state had closed it and there was a bit of confusion with people hunting for lodging on this evil night. Holdsworth and I found a tavern close by, ordered beverages and some bison burgers, and felt fortunate to be seated inside in the warm. We needed GPS to find our way back the two blocks to our motel, the whiteout was that bad.

The next day saw us slide our way West to Sturgis on the icy highway. We had a great lunch at the Knuckle Saloon with Tom of Drag Specialties, visited the Sturgis Museum, got a good cup of joe at the Sturgis Coffee Company, took some pictures of Sturgis in the off season, and worked our way to Rapid City, where I was to fly out of the next day. Holdsworth would continue on for another two days. Holdsworth dropped me off and we said our goodbyes. It had been good travelling with him. We are, luckily, simpatico road tripping partners.

I caught up with Dan, friend and manager of the Prairie's Edge in Rapid, and had a few beverages and some fine grub at the Firehouse with him. Man, what a treat to be able to just sit and talk normally, something we can never do during Bike Week. I crashed hard at the Hotel Alex Johnson, a great old rehabbed Rapid City landmark, and the next morning left for home, which was a whole 'nother adventure.

So we'd invested seven days away from our families, two flights, a week's worth of motels and mediocre meals. We'd travelled many miles by car and seen many people. I'd shot some great bikes, grabbed some video, and felt good about what we'd accomplished. We'd shown respect to people by coming to visit them, to leave our comfy chairs and see how they make it happen. It was an excellent investment of time, money, and effort, to be able to see people outside the usual Cincy/Daytona/Sturgis cycle. To be able to just hang out and talk about what makes us tick and how we can work together.

If you don't make the investment, you don't get the good stuff. And life's too short to settle for anything but the good stuff, don't you agree?

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## Simplicity and Good Engineering

When I was about 18-years-old, cruising along the main highway in New Zealand on my Honda CB 100, a bike caught my eye going the opposite way. I turned around and chased the bloke down and made him pull over. I marveled at his bike's design for what seemed like ages on the side of the road. It was a WWII Indian and that's when my love affair with Indians started. Eventually I found an Indian I could afford and started making the parts I needed, as I didn't realize at the time there were suppliers in America.

On the other hand, being a Kiwi I get my rocks off on making my own stuff anyway. This was when I became fascinated with the engineering side of Indians. Some of my own first parts as well as some brand new out-of-the-box Indian parts failed within 500 miles, so out came my thinking cap to solve these issues. Fast forward over 32 years later, having designed and engineered over 2500 different parts for Indians in California, and I've got a pretty good handle on the engineering of the whole motorcycle.

My favorite parts are always engine parts but in the big picture of things I have the utmost respect for the old time engineers as it was all by smarts back then with only manual machinery to produce the parts. No computer to do part failure analysis or CNC machining equipment for easy manufacturing.

In 1920 Indian introduced its new engine/tranny design platform where the tranny bolted up to the back of the crankcase. This design stayed with Indian until the end (1953) with only some strengthening improvements as power increased over the years. Indian's nice compact engine and tranny design allowed for more freedom of design for the rest of the motorcycle, which also makes for a bike with a very low center of gravity and outstanding handling.

Engineering wise Indian was ahead of Harley in some areas, yet in other areas they were not. Being financially strapped, they couldn't make the upgrade to OHV and synchromesh trannys. In Indian's defense their Flathead would still give a Knucklehead a good run for its money and surely the Flathead was still reliable and cheap to produce.

Indians had two cam gears, each with



one lobe on it. The front lobe operated both the front intake and exhaust valves while the rear cam did likewise on the rear cylinder. The front cam was driven by the pinion shaft gear, which in turn drove the rear cam. Each lobe is machined directly onto the backside of each gear. The front cam lobe operates two cam followers, which are pivoted upon a stationary shaft.

Each cam follower in turn pushes upon a pushrod, which has an adjuster screwed in at the valve contact end. The valve then makes contact with the adjuster which is where the valve clearance is obtained. This arrangement allows for performance variables by designing various lobes as well as altering the length of the cam follower to accomplish various pivot ratios. The nice thing about this arrangement is it had simplicity and minimal parts to accomplish its given task while providing durability and reliability. That had always been the thinking with the Indian engineers.

The oil tank was built into the front of the right side gas tank. By being in the front, it was continually cooled by the air passing over it plus the gas in the remainder of the tank transfers heat away from the oil. The oil lines from the tank to the engine are also out in the breeze so these, too, aid in transferring heat.

I'm into mechanical simplicity when I ride

bikes. In today's world with modern computerized and electronic gizmos all around us I find riding classic Indians a mechanical wonderland of simplicity. This mechanical simplicity has taken me all over this great nation and the world, getting me from A to B and back to A—and everywhere in between—with ease while making every mile absolutely a ton of fun.

I've had some good laughs along the way and one of the biggest I had ever had was on one of my cross-country trips. I was filling up my 1948 Chief with gas in the middle of BF Egypt, Arizona, and a guy pulled up in a fancy Ford pickup with two matching baggers on a matching trailer. He was looking good. I couldn't help but laugh and wonder, "Why does this guy have two of the sweetest built touring bikes on the market yet they're on a trailer?" I couldn't resist and had to strike up a bit of a conversation.

"G'day mate. Do those bikes run?" I asked.

He replied, "Yes. Why?"

"I just wondered," I said.

He never got it. **IW**

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