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THE RIVENDELL READER

Issue No.

Issue No.

30

Late Summer 2003



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30

A QUARTERLY FOR BICYCLERS



When "Spam" Meant One Thing: Good Lunch!

WE GET ASKED A LOT whether we're ever going to offer a bike with a threadless steerer, and we are. We aren't against threadless steerers or the Aheadsets that go with them on principle. We just prefer quill stems because they make it easier to raise the bars, and they look nicer.

At some point in the next couple of years we'll probably do a threadless bike, but first we have to find a good way around the adjustability problem. This winter we'll offer a lovely fillet-brazed Nitto clamp-on stem for existing threadless bikes. But it won't fit any bike we make right now.

IF YOU ARE A FOOD-LABEL READER, you know what to expect with cheap baked goods and snack foods—the big block of 5-point type listing the chemicals, colorings, dough conditioners, and preservatives. I was surprised lately to find out that Fritos have just corn, corn oil, and salt. Plain potato chips have just potatoes, some kind of oil, and salt. Big deal that half or more of the calories are from fat—at least it's real food. I was also surprised to see that the first ingredient in a Power Bar is high fructose corn syrup. Did it used to be that way before General Foods bought them? I don't know, but it'd be interesting to have an old label to compare. I wish they'd change that, anyway. I want no fructose corn syrup.

One of the reasons we all ride is so we can eat without gaining weight. But it's easier to eat calories than it is to burn them, and eating a couple of Healthy Energy Bars on your ride wipes out 45 or more minutes worth of calories burned, and that's assuming those minutes were grunting up a hill. The bicycle can be a good weight-reducing machine, but more often than that, and more important, it's a way for stocky folks to exercise comfort-

ably, and without getting wet or stressing their joints.

I think selling the bike as a weight-reducing device is a bad way to go, because it lumps it in with stairsteppers, rowing machines, treadmills, and stationary bicycles, as just another thing to do so you'll feel better afterwards. The thing is, you won't "feel better afterwards" often enough if you don't enjoy it enough while you're doing it. It's good to try to make most of your rides the kind that you'd like to do every day forever.

That's often impractical. My 14-year old daughter, Kate, just entered high school, and being part of a bike family that owns two cars but hates to drive them, she's under a small amount of pressure to ride her bike to school. The route goes straight up a ridge that ascends about 500 feet in less than 2 miles (most of the climbing happens within a mile, with stretches of 15 percent grade—and I know my grades). She has a heavy load of books, and there are social pressures to not arrive at school super sweaty. I've made it clear that she can call off any ride and we'll drive her if it gets to the point where she's resenting me, or the bike. I'm riding with her, for company, and so I can eat more and not gain.

On her second ride to school, we arrived there just in the nick of time, and Kate asked me to park her bike so she could just run to class. We have an agreement that I won't pedal right up to school with her, so I was surprised that she wanted me to deal with her bike on campus, but I did. She left me with two bikes on the sidewalk about a hundred yards from school, and lots of other kids were walking to school, so I waited for a likely candidate, and asked him, "Hi, want to ride this bike just up to the school? It's my daughter's, it'll save you some walking and it'll help me

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THE RIVENDELL READER

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out....?" The question made him feel uncomfortable, but he mustered a "no, man" and hurried on. So I ghost-rode it as I pedaled my bike, and worked my way up through the milling students to the bike rack.

It was designed for about 16 bikes, but it was set up against the gym building in a way that made one fourth of the spaces not usable. It was still jammed with 16 bikes, and there were five or six bikes, including Kate's that were just leaning up against trees or the building.

I thought, "This school needs a new bike rack," and researched bike racks and found the basic, galvanized steel model that holds 16 bikes and costs \$289. I contacted the school and offered to buy it for them, and they actually went for it. I expected the plan to get foiled by bureaucracy, but no. Anyway, if your child's school needs another rack, we'll buy it. Up to four racks, first come/first served, and try to make sure that they really need it. We've had a good Summer so far, thanks to many of you, and a few bike racks won't kill us. Let's make it the \$289 model. It's just fine.

Remember in RR29, we told you that Brooks was bought by Selle Royal (Italy, big company), and that, don't worry the new owners won't wreck it, and may actually make things even better? I didn't really believe it, either, but I figured that we might as well encourage good things. But actually, things are looking up, and here's the latest word on...

The B.17. Brooks is going to make it with a new rail configuration that lets you shove it back farther; not an ultra-boon to folks who ride our frames (which already have shallowish seat tube angles), but a great thing if you're on a normal bike with a too-steep seat tube and you can't get your saddle back far enough. That's a common situation.

The Swallow. Remember, this is the ancient, then-superlight cutaway Brooks model, a stealth style that hasn't been made for years, and collectors go nuts for. Well, Brooks is making it again for Spring '04 delivery, and according to my contact there, it'll be made "just like the best of the old ones, but with all hardware titanium. It'll be the lightest Brooks ever." That's a good thing, but I'm not giving up my B.17 for anything.

Bags. (Brooks used to make lots of bike bags): There will likely be at least 3 models, for the most part named the same as their long-forgotten models from 68 years ago. There will be a "Challenge Tool Bag," a "Tool Roll," and another bag that was described as "basically, a tool bag with a sunglasses case that zips up and slides inside. Not as faithful a reproduction as the other models, but close enough, and a good bag."

Then there are some larger saddlebags, but they won't come along so quickly. As I write this, Brooks is showing them at EuroBike, a trade show over there, but the show samples are too impractical and expensive for reselling (I've heard), so Brooks is looking, with a telescope, at other possible manufacturing sources. We'll keep you informed as we hear and see more. When they're available and if we like them, we'll offer them.

When the spectator in the Tour de France leaned over and hooked Lance's handlebars with the loop of his musette and caused Lance to crash, it was a bummer for all, but Lance still won, and I'm glad. I want him to win 6 in a row and then retire. But the aftermath of the crash—an uphill crash, by the way, probably not too fast or hard—provides some food (see page 1) for thought. Here's a quote from *VeloNews*'s August 18 issue, page 15:

"Armstrong didn't know that when his (bike) smashed into the pavement, the chainstay had cracked. After he had completed his winning attack on the cracked frame, Armstrong revealed, 'When we took the back wheel out of the bike, the frame fell apart.'"

Bikes shouldn't be expected to be both lightweight and accident-proof, but it's hard to imagine that sort of crash stressing a chainstay. It's a good thing the stage ended at the top of a mountain, I think.

A question I often wonder and may have posed in the *Reader* before, but it bears repeating is this: Would the Tour be any less exciting if the riders were limited to one bike for the whole thing? Racers could replace tires, chains, and anything that was damaged in a crash, but other than that, one bike and one set of wheels. And throw in a dirt road stage, like they show in photos of the old tours. Think of the positive effect that

kind of Tour would have on the common road bike.

Kathleen Hannon, who is profiled in this issue, has quite a story to tell about her recent ride in Paris-Brest-Paris, that once-every-four-years-except-for-war-years 750+ mile ride. This was a PBP year. At the time we took her photo all was well and she and bike were ready. Then she went to France a few weeks early to ride around there, and then, about ten days before the Ride, she got in an accident and bent up her bike—the same one you see there on page whatever. She called us and we sent her a replacement frame cheap, and she mailed her original here to have it repaired, which it will be. A local bike shop made her new frame into a bike, and then a couple of days before PBP, it was stolen from the basement of the house she was staying in.

I'd have taken that as a sign that Maybe I Shouldn't Ride, but Kathleen showed up at the start of it with her number (earned by doing all of the qualifying rides), and no bike. She asked if anybody there among the spectators had a bike she could ride, and one guy did, and she rode it and finished in the 90 hours or less they give you to complete it.

I hope this issue helps to dispel a myth that we hate or refuse to put or let anybody else put modern equipment on our modern bikes. You'll see the article. There is nothing distasteful about equipping a Rivendell with the best modern stuff, when that's what you want. The point I've been lousy at making is that being the latest offering doesn't lock in being the greatest offering. You still have to evaluate it using some standards, and those standards should be yours. I don't love carbon this & that because to me, it's baked acrylic fiber held together with a plastic resin, and its strength is dependent on the integrity of the resin, which doesn't hold up as well as real metal does to ozone and nicks. It has proven to be strong in theory and on a computer screen, but not so great in real life. I don't like to see new riders applying computer-knowledge to bikes, figuring the new versions *must* be better than the old, or else why would they make 'em? Software development is still at the evolutionary stage where you can expect great gains. Bikes and bike parts, with a few exceptions, are at the stage when you can expect big companies to look for ways to lower manufacturing costs and sell the high tech, because high tech commands a high price, but almost always means lower manufacturing costs. Many modern parts work better than their ancient equivalents. Not all change is a bad conspiracy to cheapen our lives, but keep in mind that bike market is flat, not growing, and big companies have to change things every few years in order to get folks to buy new. You have to know how to evaluate the goods. Do 10-speed clusters benefit anybody in Florida, where the high point in the state is 349 feet, and it's a freeway overpass? Does any tourist benefit from 9 speeds and increased wheel dish? Nitto is a bright spot—a small, 48-person, family-owned business that makes things the best way possible, and hopes the world likes the result. There's a Nitto interview in this issue.

In one of our recent email updates I mentioned that we still had 95K in debt, and that started an online discussion. Well, \$95K is not that bad, and it's getting better. I'm not going to talk about money any more, because it causes a ruckus. We're a small company, with small-company issues and challenges, but we're making progress. It could be better, it could be worse, but right now we're doing okay. Thanks for your tremendous support. We're lucky to be here, that's for sure.

I hope you enjoy this issue. I'm lukewarm on it, myself. I got bogged down with things and got distracted by other things. I'm a little concerned about page 50. I don't want you thinking all we do is rave about our stuff. Naturally we like it, and it's hard to get the word out in the big publications, so we've got to toot our horn some in here. On the other hand, we *are* qualified to talk about the things we make.

We now have a toll-free number: 1 (800) 345-3918. Don't be shy about using that number. It costs us \$0.06 per minute, cheap even here.

—Grant

Mail

Note: The first letter is reprinted from some 30+ -year old *Bicycling* magazines I have. It doesn't reflect any opinions held here; I/Grant just got a kick out of them and thought you might, too. Apologies in advance to any Luxembourgiens. I'm sure things have changed. —G

Luxembourg's 5-Star Hostels

I found your piece on "Hostels" Europe's Cyclist Hostels" in the May issue amusing. In it was a photograph of the hostel in Luxembourg – among others – the thrust of the short article being hostels were good places to stay and those pictured were specifically nice. ("the lovely hostels pictured here").

I hope your article will lead no one to the Luxembourg hostel, or to Luxembourg at all. The Luxembourgiens are the most sullenly hostile people I have ever come across and their hostel is a nightmare. It is dungeon-like to begin with, but worst of all are the people who run it. My wife was shaken out of her sleep (literally) in the middle of the night by the wife of the manager to rent a sheet for the night otherwise they would kick her out. The son of the innkeeper took pleasure in giving anyone coming a difficult time with passports, identification, and anything else his sick mind could think of to give us a hard time. (We stopped there a year ago.) I have never met a young boy who was so unnecessarily nasty.

Unfortunately, Icelandic Airlines uses Luxembourg as their European stop. I strongly advise anyone unlucky enough to land there not to leave the airport, but to immediately board the next bus to Amsterdam, Paris, etc. (They leave right from the airport.)

I understand not all hostels are this bad. I don't know. After this one I never tried another.

—Edward Loewenstein, Pennsylvania.

Something We Hadn't Thought About With Dual-Pivot Sidepulls

Dual-pivot sidepull brakes have a disadvantage that is shared by no other brake type: the calipers do not "float" to follow an out-of-true or decentered rim. When you apply the brakes, the two calipers move an equal distance toward their respective side of the rim and continue to move an equal distance after contacting the rim, regardless of which one reaches the rim first.

This means that if your rim is decentered (or if the brake is not centered over the rim), and you apply the brakes, the pad on one side will contact the rim first and then continue to move inward, thereby pushing the rim to one side, until eventually both pads are contacting the rim. Thus, for light braking, only one pad will contact the rim and produce braking action,

and for heavy braking, the rim will be distorted toward the side which originally had the larger gap to the pad, and the braking force will still be greater on one side than the other. For a large relative decentering, the wheel distortion is severe.

Similarly, if your wheel is out of true, you will experience much greater brake pulsations, since the above described effect is occurring to varying degrees through each rotation of the wheel. For a significantly out-of-true rim, these pulsations can be serious.

This effect is not just theoretical; I notice it unless my wheel is trued to a greater perfection than I can achieve (considering my wheel quality). I mentioned this to a very knowledgeable, nationally known expert on bicycle mechanics, whom I highly respect, and his comment was "keep your wheels true". This is not an adequate answer for those who want a bike which keeps going on a long tour, without constant tweaking of the wheel trueness, and which will get you home (or even through a multi-day tour) after an accident which knocks your wheel out of wack a little (or which knocks it out of whack a lot, but which you perfectly totally re-true).

All other types of brakes, on the other hand, float and follow the rim if it is out of true or decentered. Thus, minimal pulsations and minimal wheel distortion, and more reliable, safer, and more pleasant braking. Center-pivot sidepulls are great, but they do require more hand strength than dual-pivot sidepulls.

—Thomas Papetti

What's Necessary For Indexing Makes Friction Shifting Better, Too

Indexing led to great advances in drive trains – though indexing itself is not one of them.

Indexing goes way back in time. The Shimano "Positron" system was an early, low-end experiment, and it never worked well. But in the early eighties Shimano introduced an indexed downtube shifter that worked great and was a success with riders. When these systems first hit the market, I had this conversation with my friends Joe and Joe.

Both Joes were road racers. Joe was a Cat 2 while Joe was a Cat 3. Cat 3 Joe was describing the slick new shifting to the skeptical Cat 2 Joe. "It's really cool!" said Cat 3 Joe "Instead of feeling around for the gear, the lever just clicks from position to position, and it jumps from perfect alignment to perfect alignment. You never miss a gear!"

"So what's the advantage?" asked Cat 2 Joe.

"O.K., imagine you're near the end of a road race. You're going downhill – not too steep – and the road curves to the right and goes uphill

steeply. You hit the bottom and, as you begin going up, you drop two cogs to hammer up the hill. Now, you may jam the regular shifter to the correct position, and you may not. If you don't, you're in the wrong gear and you get dropped. With the index, you just move two clicks and you're there – no mistakes!"

"Seems like a lot of work for special circumstances," the less than enthusiastic Cat 2 Joe said. I was skeptical myself.

The market had other ideas, though, and within a few years indexing replaced friction universally. This was quite an achievement because, though simple in concept, it took quite a bit of engineering to make it work reliably. On an old five speed freewheel, the cogs are flat stampings with smooth sides and even, square teeth. With friction, you could drag the chain as far as necessary to get it to catch on the desired cog. But with indexing, the indexed position is in perfect chain ring / cog alignment – no over travel. Experience showed that well-worn clusters shifted better than new ones; so worn tooth shapes were designed into new parts.

Also, non-indexed housing was too mushy to provide the precision required by indexing, so a new type of housing was developed using longitudinal steel wire filaments that did not compress, adding to shifting precision.

The chain's side plates were bulged outward so the chain was quicker to catch the teeth of the cogs. Even the derailleur was not immune. It was discovered that sometimes the point of index lay beyond the travel of the rear derailleur, causing much consternation for the rider who could not hit the last click. This was solved by the addition of a spring loaded hinge to the arm that held the cable fixing bolt, allowing the arm to keep moving after the derailleur stopped – thus achieving the final click.

Are there ongoing maintenance issues? Other than replacing spectacular housing failures on bikes kept in the sun, continuous precision cable adjustments to maintain alignment is the only tedious chore particular to the index system. Adjusting barrels on the rear derailleurs aid in this – don't forget to pre-stretch those new wires!

One might ask, "Gee! Was it really worth all the hassle?" Unless you're racing, or just like push-button bicycling, it is not. If, however, you are old enough to have ridden a bicycle with a total of ten possible gear combinations, and have labored up many a hill in the wrong one, then you can appreciate indexing's smooth, positive shifting.

I still much prefer friction shifting, because the component changes necessary for indexing make it so easy. Hallelujah!

—John, Arizona

Likes SOPs (step-on-pedals)

I read your article in the last Reader about SOP's and you mentioned dropping you a note with any thoughts.

A few years ago I completely fell for the marketing hype. Both my road and mountain bike had SPD's and, at the time, I thought they were the greatest thing...ever. Sure, I was having phantom knee pains and I couldn't move that cleat back as far as I wanted to...and I felt like a dweeb going to store after a ride and clippety-cloppety-ing around the store in my skin tight lycra...and I felt the pressure to go fast whenever I took a ride since I was all kitted up. But what choice did I have?

Recently I switched to Step-On-Pedals—the kind you can pedal on either side, in any shoes. WOW! All of a sudden, long, gradual climbs felt easier, because I could move my foot around. The best, I found, is moving the foot forward so that the arch is over the pedal....it feels like every leg muscle is working to the maximum. Moving my foot back feels like it activates different muscles and I can keep going.

Also, I can run errands after the ride and not feel like a loser since I am wearing regular clothes and common shoes.

All my bikes have SOP's now. I have not had any knee pain since I made the switch. I feel like a stronger rider.

Overall, SOP's have completely changed how I ride. I like being able to shift my feet around and take advantage of different muscles. I love not having to "get dressed" to take a ride. And I love returning my bikes to the functional machines that they are, as opposed to the one dimensional specialty bikes that they had become. —Paul Puntous

One More Pro-SOP Letter, Okay?

I have worked overseas a bit as an economist. If you believe anything about economic theory, then you believe that collectively at least, a society will perform the duties of living in the most efficient manner possible. If, as an observer,

you don't understand why something is being done the way it is, you can conclude one of two things: the entire population that you are observing is stupid, or, you need to do more research until you understand why things are done the way they are.

I've observed many people commuting, transporting heavy loads, going to the market, etc. in different countries adopt a foot-forward pedaling position. These are people that are not working out, are not interested in fashion, fitness, racing, or anything other than getting the job done as easily as possible. Are they all stupid, or is there something going on that begs more research?—Derek Wilson

COSS (clamp-on stem stuff)

I just got your latest catalog and re-read the Quill Stem or Clamp-On Essay, and have a few comments:

1. Clamp-on stems have adjustable height too—you can just move spacers from under the stem to above them. Adjustability isn't infinite, but if you have a variety of spacer thicknesses in there, it is for all practical purposes adjustable enough. Adjustments usually only require a single 5 mm allen wrench, too.

2. The BIG disadvantage of clamp-on stems that you didn't mention is that you have to adjust headset bearing play every time you remove or adjust the height of the stem. In theory that's trivial, but it's easy to not get it right when you are making field adjustments. Compared to the Threaded Locknut That Decides to Come Loose For No Apparent Reason 50 Miles From Home On A Mercilessly Bumpy Road When You Have Nary A Locknut Tool And It's Raining Buckets problem, though, it's pretty trivial.

3. Aesthetics of clamp vs. quill are obviously subjective, but I would argue that either design is generally pleasing to the eye when it meets (or is close to) one of the following criteria:

- a) the extension is parallel to either the top tube or the down tube
- b) the extension is at a right angle to the head

tube

There's something about parallelism and right angles that seems to be universally appealing to most people. Clamp-on stems can look good.

4. Even if you're fat like me, a lighter bike (all other things being equal) is more fun to ride. Since an Aheadset-type setup generally removes about 4 oz. from the weight of a bike, it deserves a good hard look-see. Lose four ounces here, and four ounces there, and pretty soon you've justified carrying an emergency can of beer on all rides.

Thanks for listening— Steve B.

PS What are the chances of getting Nitto to make the noodle bar with anatomical straight sections in the drops?

Hi Steve,

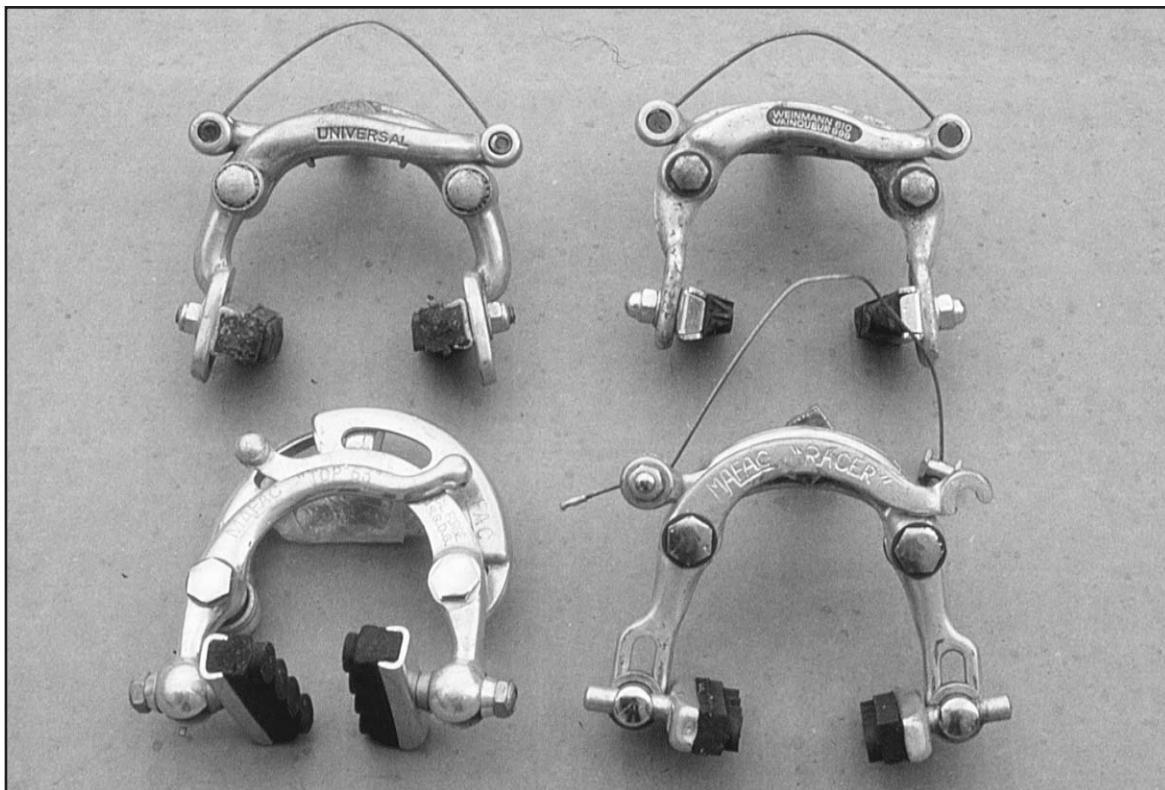
You bring up some points I hadn't thought of, about clamp-on stems. I think this debate will go on forever, though. The fact that both sides have defenders must mean they both work, and that's the stance I'm taking. Not sure about your 4oz weight reduction notion, though. It depends on so many other things, as you know. Probably it is best to talk about actual figures on a case-by-case basis. As for Nitto doing a Modolo-ized bar: I don't know what the patent issues are, but I have a much better solution in any case. It's one of those "visit your local hardware store" solutions that I generally hate because MY local hardware store never seems to have the thing I'm supposed to be getting; but: PVC pipe, about 3/4-inch, super thin. It's dirt cheap. Buy some and cut about a 2-inch section. Then cut that in half, and place each half where you want the flat spot to be. If you're a neatnick, cut deepish U-slots in each end, so they'll snug up to the bars better. It's a good thing PVC is so cheap, because you'll wreck a few before you nail it. Then tape the PVC-halves in place, wrap over them, and off you go. We showed how to do this in an old catalogue; maybe we'll show it again online. Anyway, it gives you the flat spot where you want it, and allows you to put the brake lever anywhere—which Modolo bars don't. —GP

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Different makers, different brake pads: Clockwise from top left: Universal (Italy, "road" pads), Weinmann (Switzerland, "road" pads), Mafac Top 63 (France, ball socket pads), Mafac Racer (France, "mtb" pads)



Centerpull Brakes

by Jan Heine

The Rise

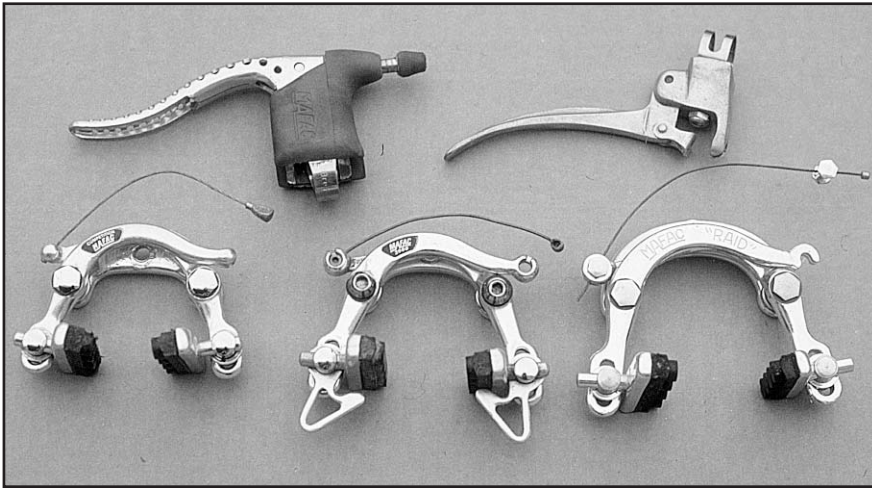
In the early days of cycling, braking seems to have been somewhat neglected. At the time, high rolling resistance and poor roads meant that if you wanted to stop, you just stopped pedaling. In addition, without a freewheel, braking was best accomplished via the pedals.

But it didn't take long to realize that the faster you go, the better you need to be able to stop. Numerous brake designs were developed during the 1930s, mostly in France and England. Many of them were sidepull brakes as we know them today, but cantilever brakes and other designs also were available. Centerpull brakes made their first appearance around 1936 with the British Resilion Cantilever, which was not a cantilever brake as we know them, but a centerpull brake that clamped onto the fork legs or seat stays.

Centerpull brakes as we know them became popular after World War II in France. In 1951, the famous Mafac Racer brakes were introduced, originally intended for racing bikes. Mafac, already famous for their cantilever brakes (another classic design) and their quality brake levers, outdid themselves with these. Forged arms, with a carefully researched geometry, and good brake pad material (for

the time) meant that these brakes provided more stopping power and better modulation than anything else—by far. Almost overnight, they appeared on almost every quality racing bike the world over (with the exception of Italy perhaps). Within six or seven years, cyclotourists followed suit, especially once they realized that with brazed-on pivots, you get a very elegant, lightweight and even better performing brake. Most of the brakes that were common around 1951—be it the cantilevers from Mafac or René Herse, the Alex Singer cam-actuated brakes and others - were made obsolete by the Mafac Racers, and many older machines were retrofitted with the new stoppers.

Other companies followed suit and introduced centerpull brakes: Weinmann, Universal, Ballila and others. Mafac kept their advantage by introducing new models: Top 63 and Tiger featured a very smart ball-socket attachment for the brake pads, allowing for easy adjustment of brake pad toe-in. Later, the Racer was downgraded with plastic bushings instead of brass, but still with forged arms. In this form, it was found on many bike-boom bikes of the 1970s, easily the most advanced component of the entire bike. At the top end, the models "2000" (basically a Racer with more polish) and "Competition" (shorter reach) were still the equipment of choice for expensive bikes.



Mafac centerpulls came in three different lengths. The shortest reach Mafac Competitions have about as much reach as “standard reach” brakes. You go up from there to the Racer/2000 model (here shown with wheel guides), and the Raid provides even more reach. The Raid model was a popular choice on René Herse tandems. The barrel adjuster for fine-tuning pad-to-rim distance is built into the brake lever. The “city bike” lever on the right has no adjuster... (Also note the different styles of straddle cable. The Raid on the right uses a standard shift-lever cable.)

The Fall

One word: Campagnolo. While not always the best engineered, Tullio Campagnolo’s products were beautifully finished, backed by a large advertising budget, and used to sponsor 90% of professional riders from the 1960s onward. Maybe even more importantly, Campagnolo marketed the concept of a “gruppo.” No longer did a cyclist have to source parts from various makers, but you could just order a full “Nuovo Record” gruppo and be assured the admiration of your peers. The “Record” brakes became widespread around 1970. Even though they offered inferior performance (Campy said they were intended to “modulate speed,” not to stop the bike), that was the beginning of the end for centerpulls.

The problem was compounded by those cheap bike-boom bikes. While the Mafac brakes on these bikes were a good design, they were compromised by cheap, unlubricated cables, steel rims and poor adjustment. Cheap imitation center-pulls were spec’d on many bikes, further soiling the image. In fact, most Americans remember the bike-boom bikes for their awful brakes, and dragging a foot on the ground soon became accepted practice to slow these bikes. And many of us thought the Mafac brakes were to blame.

When the bike boom collapsed, so did Mafac. Cantilever brakes long had been considered obsolete in France, so Mafac did not have anything to offer for the new mountain bikes. The company vanished around 1984. Other makers were gone already or followed suit within a short period of time.

The Technology

Center-pull brakes make a lot of sense. It is an elegant solution: Symmetrical brake forces are best handled by a symmetrical brake. As so often in engineering, what looks right is right.

Compared to sidepull brakes

The long lever on the cable side and the short lever on the pad side gives centerpulls a huge mechanical advantage over sidepulls. Just like a bolt-cutter, where long arms and short jaws allow you to cut through thick steel bolts.

Reduced flex and light weight

Brakes flex mostly due to the rotating force of the rims, which the brakes clamp when applied. Flex occurs between the pads and the pivots and in the pivot itself. Placing the pivot high (on a sidepull brake) allows maximum flex for two reasons: There is a lot of brake arm to flex, and the mechanical advantage of the rim to the pivot is greatest,

because it has such a long lever. Putting the pivots near the pads (as on a centerpull brake) reduces flex considerably. Brazed-on pivots help to reduce flex even further, but even the standard crescent-shaped bridge connecting the arms does not flex much. As a result, the arms above the pivots can be incredibly skinny, as they don’t need to resist flex. That is where the weight savings of a centerpull originate.

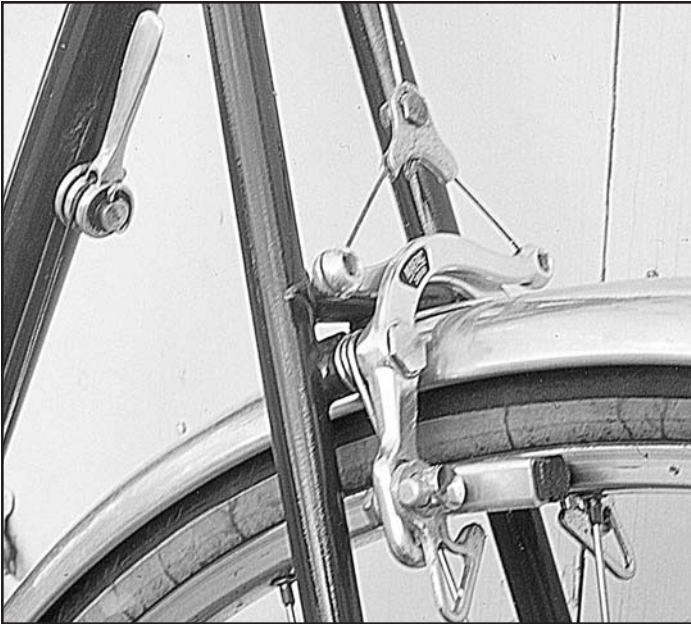
The large size of the pivots further decreases flex. And since the pivot on centerpull brakes is on the fork leg, adding reach does not increase the flex or change the mechanical advantage. So there is no incentive to go to short-reach brakes.

Compared to cantilever brakes

Centerpulls seem to offer more stopping power and better modulation. And they don’t stick out on the sides, so they are less vulnerable in a crash, don’t get in the way of panniers or rider’s heels. In France, few bikes were equipped with cantilevers after 1960, because the superiority of centerpulls was obvious. (An exception was cyclocross bikes, where the added mud clearance is useful.) As a result, old Mafac cantilever brakes are rare in France, even if they are relatively common in North America.

Compared to modern dual-pivot brakes

Modern dual-pivot brakes were the first to equal the braking power of centerpulls, but at the expense of shorter reach. I am not sure whether they provide as much modulation. But more importantly, even the “standard reach” models now available from Shimano don’t leave much room for fenders. I also think dual pivot brakes are overly complex and heavy. Just by looking at them, it’s hard to tell how they actually work.



Mafac 2000 brakes, on brazed-on pivots, with wheel guides, on a 1990 Alex Singer randonneur bike. The shift lever on the seat tube controls the generator under the bottom bracket for the lights. Also note the spot-on fender mounting.



If you checked all the “options” on the Cupertino Bike Shop order form in 1965, this is what you got for \$ 231.75: Spence Wolf spec'd Mafac Top 63 brakes for those willing to pay a little extra.

Riding Impressions

These theoretical advantages are borne out in everyday riding. My first quality bike with centerpulls was a 1965 Cinelli Supercorsa set up by the famous Spence Wolf with Mafac Top 63 brakes. It was almost unused when I bought it in 1995. I was surprised by the great feel and stopping power of the Mafac brakes, despite the pads being 30 years old. Currently, most of my bikes feature centerpull brakes, usually with brazed-on pivots. They provide great stopping power—one finger is enough in most situations. But more importantly, they offer great feel and modulation, so applying a brake in mid-turn, even when cornering hard, is no problem.

Pros and Cons of Different Types

Over the years, centerpull brakes were made in many different models. They can be classified into three groups: Threaded brake pads: These brakes take “standard” sidepull brake pads. Usually, they were introduced by makers of sidepull brakes (Weinmann, Ballila, Universal). Smooth post (“mtb”) brake pads: Mafac already offered cantilever brakes when they introduced the Racer centerpulls. So it made sense to use the same pads. Ball-socket pad mounts: These were used on the Mafac Top 63 and Tiger models. They allow toe-in adjustment of the pads (without bending the arms or filing the washers). Since the height adjustment is in the connecting piece, they are less suitable for brazed-on pivots.

My pick

The original Racer is the most elegant design. It is simple, accepts standard “mountain bike” brake pads, the straddle cable is a shift lever cable, and straddle cable height can be adjusted to fine-tune braking performance. The ball sockets of the Top 63 are a nice feature, but expensive to machine, and they require special pads.

Finally, I prefer brazed-on mounting posts, not so much for their slightly improved performance, but for their elegance and light weight. Modern Alex Singer randonneur bikes still are equipped with Mafac Racer brakes, which were introduced more than 50 years ago. They have not been bettered.

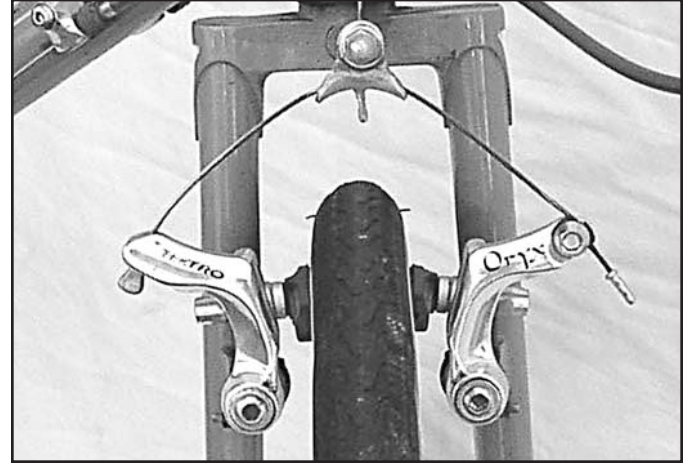
Center Pull Plans Here At RBW

We've been wanting somebody to reintroduce center pull brakes for a year and a half, more or less. As noted in an earlier issue, Dia-Compe got rid of the tooling for its Mod. 610, with pad-reach of 55-63, which would be just about perfect for any of our uses. But they have 140 pairs in stock, and we're getting them. They still have the tooling for the longer reach Mod 750 (pad reach: 63 to 78), and we're asking them to use that to make us some SILVER brand CPBs, with some useful features not found in the originals. We want a better finish, a lighter spring, and better pads. It just takes time, and we're shooting for Spring of '04.

Jan loves centerpulls, as do most riders who still use them. But not everybody is a fan, and the arguments for sidepulls are different (naturally) but compelling, as well. Today as ever, there's more than one way to skin a cat. But the two main cat-skinners—Shimano and Campagnolo—have less than negative infinity interest in CPB, and that means their copycats don't, either. So thank goodness for Dia-Compe, eh? —Grant

Comparing Centerpulls & Cantilevers

If you're already emotionally committed to one, it's unlikely any comparison will change your mind. Sometimes comparisons, whether the subjects are brakes or something else mechanical, throw in mathematical formulas which prove one's superiority over the other. I/Grant am not smart enough to do that, so you'll find none of that below, but you should also consider that if you can't perceive a difference in use—if it takes math to prove something you can't feel—then the difference is mostly in your head, anyway. Finally, I know that both types are, technically, “centerpulls,” because they're both activated by a center-pulling cable. But I choose to use the common language here, rather than model ideal behavior. (A2 Sheldon!)—GP



Weight: The same. If you collected six samples of each, there'd be lightish and heavyish ones of both.

Ease of set-up: Centerpulls. If you had to set up your brakes before every ride, this alone would make centerpulls the clear winner, but you don't...so “ease of set-up,” isn't that important. But centerpulls win, anyway.

Feel (Stiffness, mushiness): Almost a tie. You can stiffen or mushify either style by doing different things with the brake shoes, cable hangers, and straddle wires (especially in the case of cantilevers).

Power: Another tie. Jan there loves his centerpulls, and he's a smart guy with lots of experience with both styles. But there are other riders, usually with less centerpull experience than Jan, who like their cantilevers just as much as Jan likes centerpulls.

Tire clearance: Cantilevers win here, but it's an issue only when the tire exceeds about a 700x40. In other words, for mountain-bike sized tires, get the cantilevers, because centerpulls won't work.

Fender clearance: If you're using tires 700x38 or smaller, it's a tie. Cantilevers win above that, but centerpulls offer plenty of clearance with road wheels up to a 700x38, provided the builder makes the forks the right length and puts the bridges in the right place. But he's got to do that with cantilevers, too. So it's a tie.

Pannier clearance: Cantilevers stick out more than centerpulls (which don't stick out at all). So centerpulls win.

But still, most modern cantilevers (the only exceptions being models made in Estonia especially for cyclo-cross) are of a “low-profile” design, which don't stick out and hit your panniers. There may be some combo that doesn't work, but we can't think of it.

Appearance: See the photos. They both look fine to us.

Other: Centerpulls are the odd ducks, in that these days they're spec'd as original equipment only on fancy, French-inspired road and touring bikes, usually costing \$3,500+. And yet for the most part, long-time riders still associate them with cheap 10-speeds from the '70s. There's no middle ground. Cantilevers, on the other hand, have been common for years on high-end mountain and touring bikes, and virtually all cyclo-cross bikes, so they have familiarity going for them. They don't have to prove themselves; it's centerpulls that have to reprove themselves to riders who are unfamiliar with them. At this time, our Spring '04 line includes a Saluki model, which, if all goes well, will come with centerpulls. But we don't expect anybody to follow that lead, and we fully expect to sell fewer bikes because of it. Centerpulls, for as much sense as they make, will still scare off most customers. The only question is: Are you among 'em?

Summary: They both work fine and it would be hard to make a strong case for one over the other when used with 700x38 or smaller tires. For fatties, cantilevers win.



Mrs. Noriko Yabashi, an employee, and Mr. Akira Yoshikawa, Nitto's president and main designer.

an interview with Mr. Yoshikawa from NITTO

How did Nitto start, and where did "Nitto" come from?

This company was founded by my grandfather in 1923 in Arakawa, Tokyo. It started off as a chrome plate factory for handle bars, which then became solely a manufacturer of handle bars by my grandmother's time. It will be 80 years of producing bicycle parts in September 2003. (In 1992, Nitto Handlebar Manufacturing became Nitto Co. Ltd.) I don't know why we are "Nitto"—it happened before my time here. It was the former president's time.

What were Nitto's first products? Do you still have samples of them? Have you always and exclusively made bicycle parts?

I don't think we have anything from the first production—that would be 80 years ago. But we have some parts that are 60 years old, and if anybody wants it, we'll send it to them. As for other parts, about 10 years ago we started making automobile parts, but it didn't last long,

because our bike business started picking up again; and we haven't gone back to car parts. We prefer bicycles, so now we make only bike parts.

How big is Nitto?

We have 48 employees—forty men and eight women. About 20 percent women. Our factory is 5000 tsubo, and I believe one tsubo is about 35 or 36 square feet. So, if it's 36 square feet, that would make the factory about 180,000 square feet

What's the average age of the women?

It's hard to say, and I don't ask. But I know three are about 21, and two are about 40. Our best fillet brazer and lug brazer is a woman of about 40. Her name is Mrs. Noriko Yabashi. She is good with the fillet. In general, most employees are in their 40s, but we have four or five young ones, around 20. In the past two, three years, one or two have joined each year. About five years ago, a fellow of 72 years retired after

fifty-seven years with us—he started when he was fifteen, and was a lathe and milling machine specialist. He received an award from the city of Tokyo for his dedication and continued work over the years. It really was quite remarkable. About 80% of our employees have been with us for over 10 years. The turnover rate is pretty low.

You worked for Shimano once, didn't you?

Yes, but I started my bicycle career at Nitto before I actually graduated from college. Then, when I graduated college in 1971, I went to Shimano and studied engineering, cold-forging, quality control, and cost management. After 7 years, in 1978, I rejoined Nitto. We have a good relationship with Shimano, of course. We know them quite well, and have been friends for many, many years.

You've made parts for Shimano, too. And who else have you made parts for?

Well, it is supposed to be confidential, but of course everyone knows we made parts for Specialized, Ritchey, Cannondale, and maybe some others.

These years most suppliers go to Taiwan or China for much less expensive parts. When was Nitto busiest, and how did the bike boom of the '70s, and the mountain bike boom of the '80s affect production?

Our biggest growth period occurred between 1965 and 1975. Those were the best years. After the bike boom, business stabilized until the mountain bikes became popular. That's when Gary (Fisher) and Tom (Ritchey) paid us a visit, and we started to make bars, stems, and seat posts for them.

I've seen a photo of Tom Ritchey teaching a Nitto employee to fillet braze. When was that?

I think Tom taught us to fillet braze in 1987 or 1988. He wanted us to make the Bullmoose handlebar, which was popular then. He is particular about the shape of the fillet, and we videotaped him teaching our best welder at the time, Mr. Fukushima. We were making about 10,000 Bullmoose handlebars a day then. In the US, you can't compete with the prices from Taiwan, they are less than half price. Of course, the personnel expenses are drastically different. Then he went back to the U.S., and returned a month later to check up on us to see if it really was coming out as he had said. At about the same time, Tom also taught Ishigaki-san, at Toyo. Tom's brazing torch was very easy to use and I think his brazing rod was something we didn't have in Japan at the time, something especially for fillet. So now we fillet-braze stems, racks, cages, and some frames, too.

After the stem, the Bullmoose was done, we



Mrs. Noriko Yabashi is one of eight women who work at Nitto, and the best brazer of the bunch. Every lugged stem you get from us, she brazes. She'll be brazing more this fall, and we'll have them in stock in December or January.

were getting bored of the Bullmoose when Mr. Fisher approached us to make the single extension stem, and after that we phased out the Bullmoose.

You supply all the Japan postal workers with handlebars and stems. How did that come about, and how long has it been going?

There were originally three or four companies manufacturing handlebars for the Ministry of Posts and Telecommunication. Nitto became the only company as our handlebars were very sturdy, easy to use and the least likely to rust. We've been doing it for more than 40 years. Since the parts are for the government, the government supplies all of the specifications.

Are those bars and stems exclusive for the government, or can anybody buy them? And how come they have rod brakes, rather than some normal kind of cable brake?

No, anybody can buy the bars and stems, but they aren't the fashion most riders want, of course. They're good for the mailman, who rides 30km to 40km everyday gathering mail from each box and delivering it, and using the brakes at every stop. With this kind of use, the rod brake

is more durable than the cable brakes, even if they're well-maintained and lubricated.

During the '70s, what percent of your business was exported, and how much was for Japan. And, what's it like today?

In the '70s, 30% was export, 70% for the domestic market. Now, it hardly reaches 20% for export. It was high in the '80s as well, around 30%. In the '90s it dropped to 20% and now it is still around 20%.

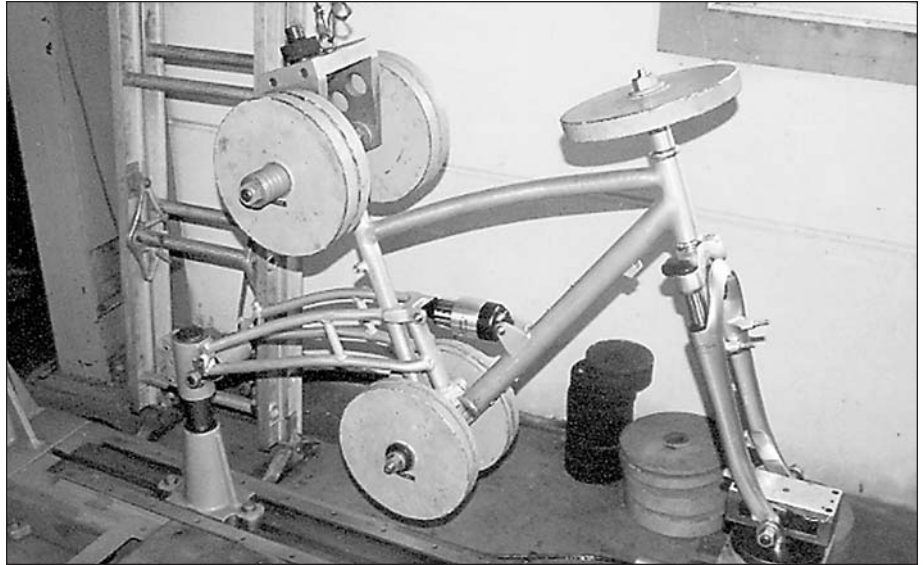
Nitto's traditional stems and handlebars—the Pearl and some of the Technomics—are a lot like Cinelli's older models. Which came first, Cinelli or Nitto? And talk about Italian design, in general, and any influence they've had on Nitto's style.

Well basically, most of the Japanese handlebars in the old days were the Raleigh type, made with a built-in rod brake lever. But in the '70s, Nitto's president traveled around the world and saw many types of bicycles, which influenced him. He bought Campagnolo parts and wanted to sell them in Japan, and decided he wanted to make parts for road bikes. The Pearl stem, with a flush (allen) nut for the handlebar clamp, was something he came up with after he studied the European stems. At the time, it seemed quite odd to the Japanese. But Mr. Cinelli encouraged him to go about his design. The Cinelli stem was tightened in the rear. We showed him what we had made, a stem that tightened from the front. Cinelli said that he had come up with a design that was very similar but that we should go ahead with ours and that he would withdraw his idea. The old man Cinelli used to think about handlebars every waking minute, and it turned out that his idea was similar to ours. In the end, he withdrew his, and Nitto produced the Pearl model, which we still make. It looks like a Cinelli 1/A—I think that's the model.

As for Italian design in general, I think it is wonderful. Only a country with such rich culture could create such amazing design.

After the "yen shock" of 1985, Nitto lost many customers to Taiwan. How did this "exodus" (mass migration) affect Nitto as a business, and you personally? Were you sad, angry, disappointed?

We still had American customers when it was 80 yen to a dollar. The products like the long neck stem (Technomic), that we consider our specialty, sold even when the yen was strong because they were already



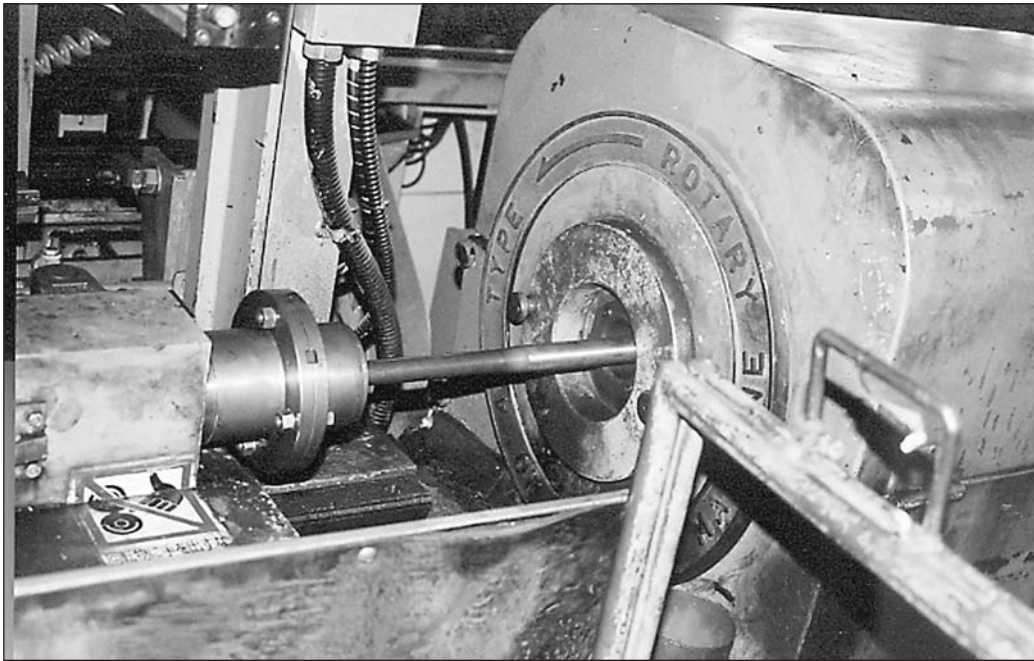
Nitto makes a few frames these days, too. Here's a fancy one they're build for Shimano's futuristic bikes (auto shifting, computerized this and that). It's aluminum, suspended, and undergoes rigorous shaking with lots of weight on it. Simulating, perhaps, a Sumo warrior riding it down a bumpy road for years and years.

fairly developed, established products. It was harder with the newer products.

In 1972, I've heard, there were many handlebar and stem makers in Tokyo alone, but now you're the only one left. That seems odd, since your focus is so high-end, and it seems that the high-end bike market in Japan is relatively small, with all the commuter bikes and all.

Yes. Well, there used to be 37 manufacturers in just this part of Japan, and we are the only ones remaining. Maybe 10 percent of our bars and stems go to the government, but the majority of our production is road and specialty shapes, including bikes for commuter or everyday bikes. I think our attention to detail and quality has made the difference for us. Even for non-sports use, for instance, the quality matters here. For instance, if a woman is buying a bicycle just for herself and for doing errands, a bicycle under 10,000 yen (\$80) is sufficient. But when it comes to carrying her child, not only does she want the safest bicycle, she wants a better bicycle than her neighbors. Whether it be on Bridgestone or Maruishi, she will want it to fulfill a whole other range of criteria: Is it sturdy? Does it rust? Will it last a long time? Sure, Chinese parts are popular because they're so inexpensive, but when you figure quality, the aesthetic beauty, how comfortable it is to use for the rider, our handlebars stand out.

The high quality has helped us survive. I think that if you focus too much on the numbers and cost, it is inevitable that the quality will suffer. We make sure that each handlebar is carefully checked after it is made. We



Drilling the stem quill. Nitto holds the drill bit stationary and spins the quill, which you can see sticking out of this chamber. By keeping the bit stationary, there's no tendency for it to drift and find, maybe, its own way through the quill. This way assures a concentric drilling.

also make sure to continue providing products for the enthusiasts, and high end market. Even when there were far more sales with the handlebars for the utility bicycles, we continued to make the more high-end handlebars. Now we are seeing growth in this area. With "mini-cycles" (utility bicycle with small wheels) it is all about the cost.

Nitto's quality is legendary, but more so in Japan than outside Japan. Of course, knowledgeable bike people in the U.S. know about Nitto, but "Nitto" is not generally a familiar brand.

Yeah, we don't advertise very much. For traditional Japanese people, it is thought that if one makes good products, that the people will buy, that the products will speak for themselves. Even if one does not advertise as long as it is of the highest quality, it will sell. Quality is everything. I think things are changing now where we have to let people who are buying handlebars for the first time know about the advantages to buying our products, or simply to provide more information. There will always be first time buyers and we do need to advertise in order to establish ourselves to them as a brand they can trust.

Yes, we do need to advertise more. We, including the chairman, were very happy and grateful when you introduced Nitto in your catalogue. It gave our customers a fuller picture of who we were as a company.

Talk about your size, about growth, where you're headed. Could you get bigger and still maintain

quality?

You mean the direction of the company? Well, being a Japanese company, we have the highest personnel expense in the world, so I think we are interested in accommodating the bicycle enthusiasts who are looking for high-end, quality products. Instead of trying to please the masses, we are happy to provide quality products for the varying needs and wants of the enthusiasts and racers.

As for the size of the company, I think it is fine as it is. If you have been in this business like we have for quite some time, it is hard to make changes. It seems impossible to be adventurous and take risks when you have such a tradition, a way of doing things, and have been making

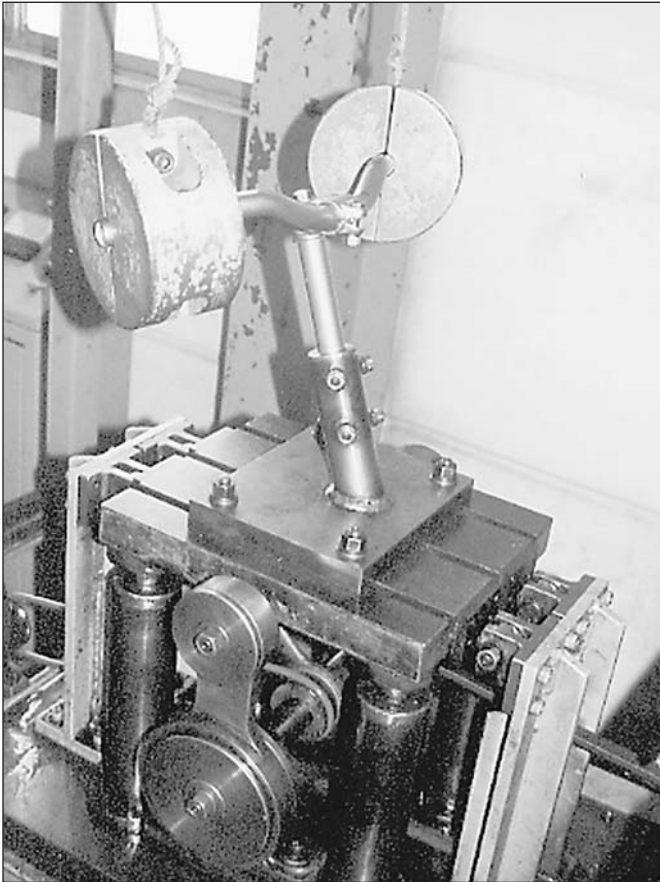
parts for 60-70 years. It is easier to say, "Well, it's worked well this way thus far, why change it?" Although now, there is so much activity in the market in one year, about as much activity as five years back then, that we have to try new things or else our handlebars will become really old and outdated. But anyway, we aren't as concerned about growth in sales, we just want to continue to provide quality products.

Nitto's testing facility is well-known among industry insiders and customers. Without naming names, does Nitto test handlebars and stems for other manufacturers? Do they always pass your tests?

Yes, Specialized has asked us to test their parts many times. We test products from other companies to give our opinion on whether or not it is OK. We have not been asked by Taiwan or the US though—except for Specialized, as I said.

I've heard that Nitto developed stem and handlebar tests for JIS (Japanese Industry Standard). Is this true? Are Nitto's standards higher than JIS?

Let's see, how should I put this?—The JIS, Japanese Industry Standard, was originally established by component companies so it is pretty lenient. Just because a product passes the JIS standard doesn't assure anything. It is easy to pass. Mountain bike standards are different. They are regulated by the industrial association. But anyway, a top manufacturer must set its own standards. How tough the standard is another question. Basically, a thousand handlebars sold means there are a thousand



Handlebar testing. The stem quill is fixed in a heavy-duty clamp to eliminate flex, so all the stress will be placed on the bars. Weights are added and the oscillation tailored to the particular test.

people using our handlebars, even if one brakes or bends, it is only one tenth of one percent, but it means that a person may be in an accident because of us. So, we are internally extra strict, because we want to make sure than everything is safe.

You're ultra-conservative when it comes to weight and strength. Have you ever been asked (by a customer) to "relax your standards and just make it weigh __ grams"?

Regarding the weight aspect, we have in the past, with Tom Ritchey, tried to be number one. When it comes to making the world's most light component, there are always new products that will be lighter or the materials may change, the production method may change. The more handlebars one makes, the greater the chance that there will be a faulty one—it is mathematical.

Of course, we will not make anything below our standards, even if a customer asks us to do so under their name. When it comes to new products, we are especially diligent and put the products under a strict inspection.

For a 200lb road rider, how light can a bar be made and still pass your standards?



A finished lugged stem. Since we show photos of it being made, it seems only right to show this one of the finished stem. We're taking orders for these now. Delivery sometime this Winter. \$200...

The lightest is 260g. About 250-260g. If you try to make it lighter than 200g, you have to use 7075. You have to use better grade material.

So the 7000 series is stronger?

The tensile strength is higher, yes, but the problem is that, when there is high impact, the 7075 breaks because it is brittle. With the 2000 series, it bends easier. We think this is safer for the customer if it bends instead of breaking.

I've heard that aluminum handlebars should be replaced every five years. Do you agree with this? Even if they have not been crashed?

The life span of aluminum is shorter than steel. If you make an aluminum handlebar and don't even use it for ten years, it is significantly weaker than when it was new. We know that our handlebars and stems are quite strong, of course, but when they are aluminum, it is safest to replace them before they break, or show signs of breaking. It is a personal judgement from the rider, as to when to do this.

Over the years, and still now, you've made solid forged aluminum stems and tubular TIG-welded ones (CrMo). I understand that they all have to pass your tough tests, but which is stronger?

The aluminum used in our forged stems is essentially an extruded material, and it has a grain, like wood. It has a strong direction and a weaker direction. But when we forge it into the shape of a stem, the grain follows the

shape, so you don't have a problem. For the same weight in aluminum, in our tests, the forged is stronger than the non-forged steel stem. It isn't as simple as declaring one stronger, though, because there are other variables, such as the type of steel, whether it is heat-treated or not, and so on. But anyway, we always test.

Nitto products are well-known for their beauty. Who designs most of them?

We don't have a designer, and 80% of the designs come from within. I do most of the designing. The writing by the handlebar clamp, Pearl, was initially designed within the company but was not very good because it looked too Japanese. As for graphics, I don't do that as much. I think that for some things, like logos, using a designer would help us keep up with the times. If its OK to use the old ones, we don't mind using them. We are now considering making the company logo smaller and making the product name larger like Shimano did with Dura-Ace, Ultegra, and 105.

But making your name smaller would make it harder to become known outside of Japan, say in the USA.

Oh, maybe you are right. The US is such a large market so there are probably more people who don't know about Nitto.

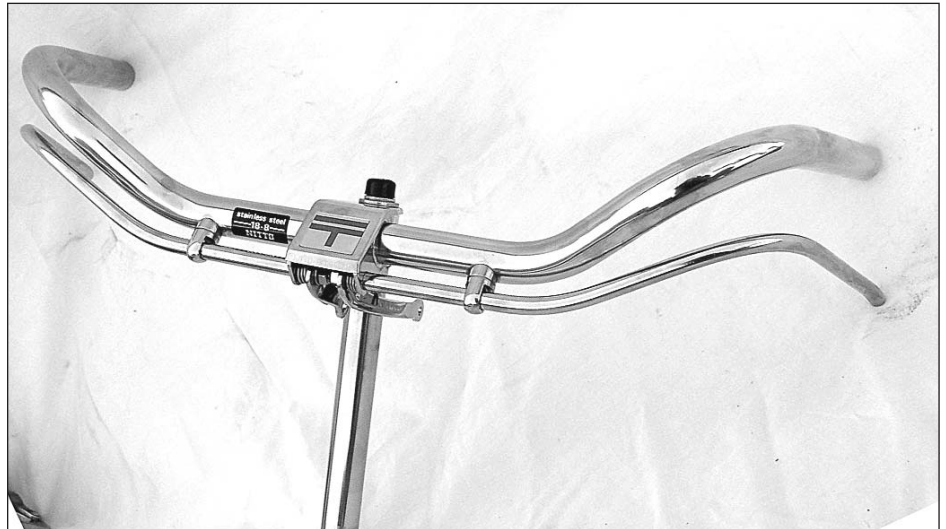
The Nitto crest that you engrave into the handlebar sleeves on your drop bars looks great, but it doesn't look Japanese. Where did it come from?

My uncle designed it, it was about 40 years ago. There were many entries for the design, and the company chose the one that represented something similar to the family crests in Europe. And, he was a significant man in the company, of course.

Have you ever considered making other parts besides bars, stems, seat posts, racks and bottle cages? The idea of a Nitto crank appeals to me....

We tried to make a CrMo crank, using tubes, but it took too much time and effort for what the customer actually benefits. Cranks are difficult. It has to not oscillate, and there are so many different things to consider. We want to produce things that customers will really be able to enjoy. The derailleur, out of all components, is very difficult to design because it shifts, it moves. We prefer to make bicycle parts that don't move.

But of course if there are any good ideas, we will



Nitto makes all the bars and stems for the postal service. This one shows the rod brakes (part of the assembly). A bike chain attaches to the center portion and pulls the brakes into the rim. Simple, strong, and better suited to mail bikes than cable-operated brakes.

think about it. We want to be flexible.

Well, I still like that crank idea, and I know we could sell a few hundred of them per year, even if they cost \$350. But I know it'd take a long time to get that project off the ground, so forget it for now. Is there good riding around here?

It is better near this new factory, than the old one. Up in Fukushima it is better, though. I tour in that area 6 times a year, with a group of old friends. I'm in it, the chairman, the sales director, also Mr. Mitsui, all from Nitto are in it. And the former president of Bridgestone, Mr. Akama and the president before him, Mr. Chozaburo Yamaguchi are in this group as well.

Do you have children and family? If so, do they work at Nitto, or have any bicycle interests?

Well, they are still students. It would be nice if one or two would take over the company. But it is up to them, you know. There are three.

What are your other interests? How much time do you have to pursue them?

At the moment I don't have interests other than cycling. Well, I guess I have fishing—fishing with my children. Also, art, I enjoy going to exhibitions, museums, and galleries, with my wife.

When do you plan to retire?

Well, when I feel like I've reached my limit. Our chairman is 78 now, and he hasn't retired, so maybe I have many years to go. It is something that one must decide on one's own time, and so far I haven't decided at all.



Thirty years ago, and up until the artless '90s, all good handlebars had engraved crests of some sort. To our knowledge Nitto's the only modern maker who still does it. Another example of how Nitto follows its own path, thank goodness.

What is your favorite Nitto product, and why?

The one that left the most impression or impact would have to be the Bullmoose handlebar. It was when no one had the faintest idea of what a mountain bike was. Gary Fisher and Tom Ritchey brought the Bullmoose handlebar to us, as I've said. Yes, that would have to be it. Also, the new CrMo stem is impressive, the thin-gauge tubing, the way the forging made such a light and strong handlebar. Next, it would have to be Shimano's DI II bicycle. You rode it yesterday, the red one. It suggests a direction of bicycles in the future. We built only about 60 or 70. The retail price is 380,000 yen, about \$3,500, or so.

Where do you get ideas for new products?

There are three main areas we get our ideas for products. First, there is always, what I would want...what I wish for myself. Secondly, there are ideas that come through the shops that we deal with who get requests from their customers who compete in road and mountain and triathlon. Thirdly, we get information from the marketing research of the various bicycle companies. But mainly, when I ride. I always think of ways that it can be made more fun, enjoyable. Its hard to really get new ideas without riding.

Where did "Crystal Fellow" (seat post model) come from? It seems an odd name for a seat post, or anything else, for that matter.

Our chairman came up with the name and a sketch of the design. Afterwards, it was turned over to the R&D group where they together came up with the prototype. The seat pillar took about three months to make into a product and two months for the handlebar stem.

Fine, but why "Crystal Fellow"?

Oh. "Fellow" came from the idea of friends or brothers, which you may call your fellows. The styling of the handlebar and seat pillar are similar, like a family fellow, or between friends or brothers/sisters.

Tell us about the bottle cage design. Did you do it on a computer?

No, the chairman sketched it by hand, on paper. I made the production drawing from the "pencil and paper" sketch that the chairman had drawn. At the time, a few years ago, we didn't have a computer. Now we have one, but still sketch our original ideas on paper. When you send us your hand-sketch, it is the same way. I make it neater. Some aspects of design are best done by hand, because it gives a better result. And, the hand drawing is often faster. We transfer a hand drawing to the computer if we need to; but of course the hands are the most important.

We offer Nitto bars, stems, seat posts exclusively, and are currently working on new models with Mr. Yoshikawa. Nitto products are the best of their type in the world. They are consistently beautiful, sometimes shockingly so, if you're used to normal fare; and they are thoroughly tested and strong. Every good bike deserves *something* from Nitto.

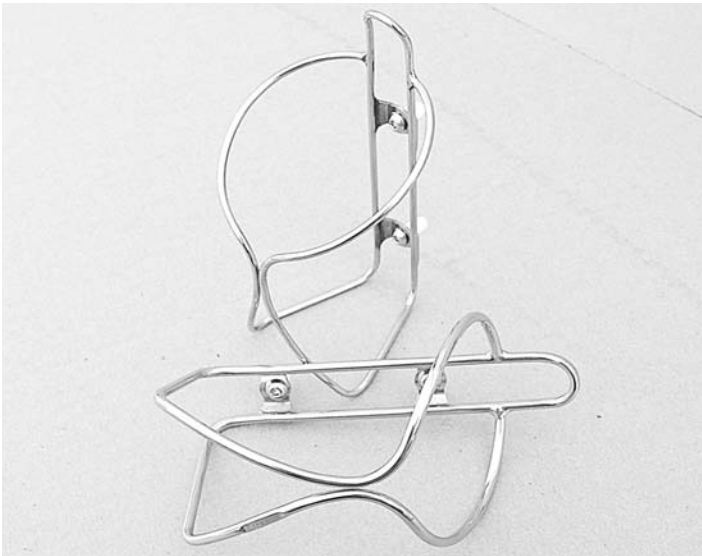
New Nitto Racks, the 80th Anniversary Bottle Cage, and Then Shimano's new Cantilever. None Available Yet.



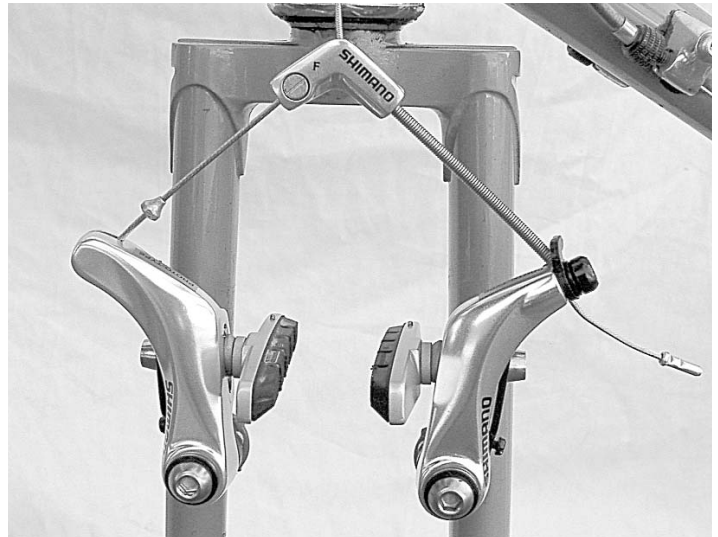
Working name, the R-14. It's a lot like our current mini-rear rack, but it attaches to the seat stays instead of the seat post; and it's a little longer. The new attachment isn't something we regard as an upgrade, but it does allow easier leveling on odd-sized bikes. And it's slightly longer. Eventually we'll have a trunk bag for it, and in the meantime it's still a fine saddlebag support, and useful for strapping on a stuffsack full of overnight gear, in the one-in-a-million chance you don't have a saddlebag. It attaches to the dropout eyelets or seat stays.



This one showed up by surprise, but now we're going to design a bag around it. Nashbar and Topeak and probably others already make bags that unintentionally fit it. It adjusts and attaches the same as the fabled R-14, and we show it here attached to the seat stays. It could go lower on the stays, or to the dropout eyelets; it'll come with long enough rods to do that with. The rack loops you see are guides for straps. The lower loop on this model, well...it'd be easy enough to find a use for it. No name for this one. Let's call it Funny Boy for now.



To commemorate its 80th Anniversary, Nitto made a new bottle cage almost identical to the current one (which is not being discontinued). This one's fatter, 4mm tubular stainless, and at 48g, weighs 5g (about 1/6 oz) less than the other. Here are both. You can tell which is which, but it's not ultra-obvious. Expensive.



Here's a prototype of Shimano's new cantilever brake, which they slot in at just below Ultegra level. It has a linear spring, different from older models. The finish is fine, and it seems to work fine, although nobody here has tried it yet, since we just got it. Price, about \$50? Availability? We'd guess sometime in the early Spring.



There is no contest to see how many things you can find wrong with this picture, which isn't the same thing as saying we think it's a great idea to ride skyscraper-style next to a barbed-wire fence. This photo was from the late '60s or early '70s. I believe it was shot in what is now the Silicon Valley area, south of San Francisco. We'd like to know the story behind it and see what the parents and kids are up to now, so—don't waste your life on this, but if you happen to know, contact us for a \$500 gift certificate, providing we can publish the follow-up.

Point of View

Riding is fun and good for you and good for the planet, so why don't more people do it? There are probably many reasons, but I'm focusing on one of them: The weird clothing, mainly.

Some people and most industry experts say the way to get more people riding is to create new exciting technologies, like they do in computers, photography, and electronics. The logic is simple and hard to argue with, and it is this: Bikes are durable, the number of bike riders is fairly constant, and if people aren't made to feel as though they need to upgrade to keep up with their neighbors or the technology, they won't do it. Why buy a new \$400 bike if it is just like the \$400 bike you already have?

Other experts say the way to boost sales is to make the riding environment more friendly, and it's likewise hard to argue with that. We all know people who don't want to risk their lives, or get honked or yelled at; and so they don't ride. They go to gyms and exercise to CNN, which is fine. There are lots of advocacy groups fighting for more bike-friendly cities. It's a good fight, but the U.S. isn't Holland and never will be. It's just too late. Most urban planning hasn't planned for the bicycle.

Everybody seems to agree that bikes compete with inline skating, video games, soccer, skiing, paragliding, skateboarding, and fishing for disposable income.

Large bike makers agree that it's increasingly difficult to sell just as many bikes this year as last. That's a worry for companies whose empires require that they make and move from ten thousand to one and a half million bikes per year. (The biggest bike company in America is Trek, with annual sales of about 590 thousand.)

All of those reasons make some difference, and cumulatively they add up to something, but I think, if the goal is to get more people onto bikes, I think it would be more effective to stop making it seem like such an intense, high-tech activity that requires a special costume. Make it seem normal to hop on a bike and pedal. Don't make would-be riders think they they have to wear funny things in order to be comfortable or efficient.

New riders don't care about efficiency and wind resistance, and have no fear of scraped hands and sore crotches until these ideas are planted in their brains by salespeople and the literature that goes along with selling specialty clothing. Then, all of a sudden, *wow—this is more complicated than I'd expected. Special shoes? Jerseys made of what? You mean I'll get hypothermic if I wear a cotton t-shirt?*

When you're going from being a civilian who wears normal clothing to a cyclist, it's a lot easier if the first step is to become a cyclist who wears normal clothing (which some of us feel is just as high on the evolutionary scale, anyway).

The costume is a *huge* thing. I know bike-only clothing is functional, but outside of the peloton—or at least off the bike—it's too weird. Riding a bike is fun, but even fun things shouldn't have high hurdles. What's a high hurdle? I'd say a 5-minute costume change is a high hurdle. It's certainly that if all you plan to do it ride around the neighborhood for 10 minutes. You want to do it low-key, without attracting any attention. You don't want your neighbors asking hey, what are you training for? You might feel self-conscious enough already, just being on a bike, and colorful specialty clothing makes it worse.

The bike industry, meaning manufacturers, distributors, designers, marketers, dealers and salespeople generally have a hard time seeing it that way. They think it's a win-win situation when they offer the customer the chance to buy gloves or sunglasses, because gloves can protect your hands, and sunglasses can protect your eyes. It doesn't stop there, though. Helmets save heads, padded shorts protect crotches, tight jerseys slice through the wind, and pedaling with special bike shoes will make you way more efficient. I don't personally buy all that, but that *is* the spiel.

The entry-level bike may cost \$360, but the costume can easily run another \$150. On a \$360 bike sale, that's too much, but the main thing isn't the money, it's the message, which is: Riding a bike right is more complicated than you imagined. To be comfortable and efficient, and to fit in, you have to wear specialty clothing. Trust us, we're the experts, and everybody does it.

Almost all sports have their specialty clothing, but most of the time it's not as specialized as cycling clothing is. You can play softball in your Hard Rock Cafe t-shirt, and who cares? You can shoot hoops in the same shirt, or go fishing in it, or skateboarding, and nobody will tell you how much better life would be if you only had the right clothes. You can be yourself while recreating,

Obviously, pedaling a bike is different from those things, and some differences in clothing are just natural. Plus, there's nothing wrong with dressing up for your ride, just as you'd dress up for the opera. A ritualistic costume can add to your pleasure, and even to your performance, if it gets your riding juices flowing.

But in the bike industry, there's way too much emphasis on specialty clothing. Wicking this, aero that, protective them things. When non-riders see only costumed riders, they get the wrong message, and just go on to something else that doesn't require weird clothing. Of course, the clothing may be part of the attraction for some riders, too. You just can't tell, so I think it would be best to tone it down, a lot.—Grant



This one's called a 55cm, although it's not exactly clear why. It seems smaller than that, and the tape comes to 55cm only if you take it to the top of the seat lug. In any case, as spec'd with the Nitto drop bars, it's best for short-legged, long-torsoed riders between about 5'3" and 5'6", which shouldn't surprise anybody. The main triangle is butted CrMo. The forks are CrMo. The stays are high-tensile. The parts are low-end Shimano, but all aluminum. The rims are 26-inch (not 650B), and wear Panaracer semi-nubby tires, good for road or trail. The bike weighs about 28 pounds complete with all you see here, plus a lock. More details on the page next door.

The Panasonic Frenchy

A look at an interesting bike that'll never be sold in this country; the point of it all being that sometimes some neat thinking happens behind the scenes and well out of the mainstream.

Panasonic is Japan's second-biggest bike company, behind Bridgestone. Panasonic (which also goes by *National* in Japan) makes about 500 thousand bikes per year. Of those, forty percent (200 thousand) are lugged, which makes them the biggest lugged steel bike maker outside of India. Nobody here exactly knows what's going on bikewise in India; but the Indians make tons of bikes, that's for sure.

Big Japanese bike companies tend to be conservative, and Japanese bike companies are smart enough to know their customers and to focus on them; and that makes this bike all the more unusual. It's obviously inspired by the great French Singer and Herse touring bikes, and I bet it came about because somebody there at Panasonic/National likes the Frenchies and wanted to do a bike of similar style but one with a prayer of selling in Japan. I'm guessing that, because I saw a similar thing happen at Bridgestone in 1982 and 1983, before I

worked there. The first Atlantis bike on record was a Bridgestone bike that was a whole lot like this Panasonic model, but fancier and more expensive—it was about \$1,000 back then, which would make it \$2,500 now. But it had the same French inspiration.

This Panasonic is more of a people's price, though. I imagine it's made for teenagers and the working class who probably know about Alex Singer and Rene Herse, but also know those bikes aren't in the cards for them, and are happy to have a much less expensive and quite respectable semi-knockoff.

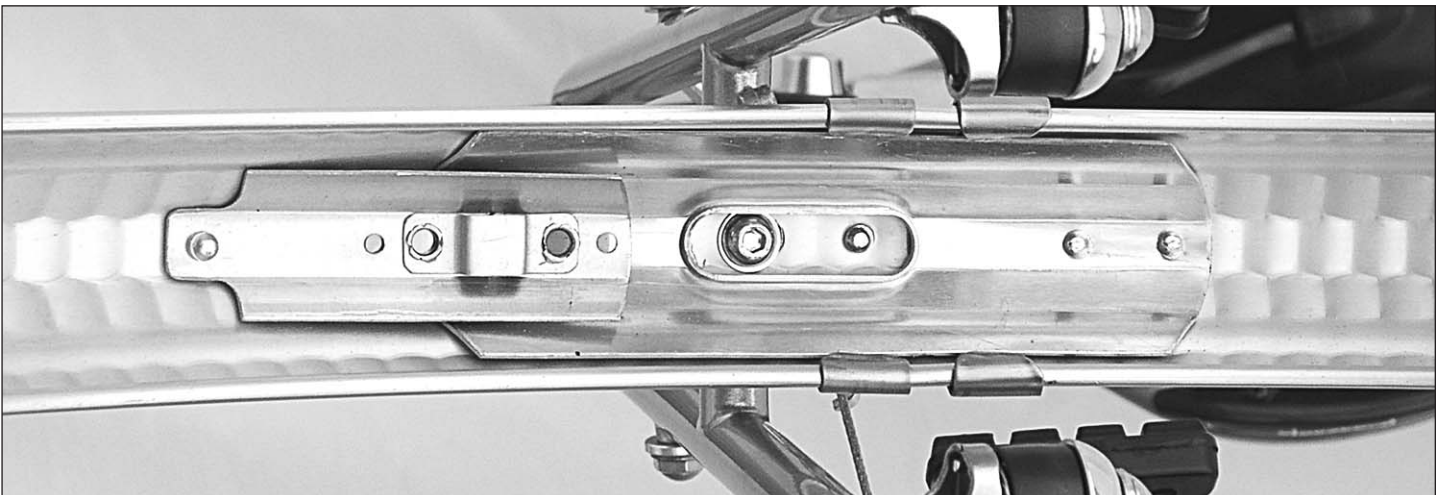
It's still not cheap—\$900; but the overall look is delightful, and the bike works. And it looks a heck of a lot better than most \$900 bikes sold in the U.S. This one is not sold here. We show it to you just so you can see that not all high-volume bike makers are exclusively in love with extreme bikes. Craig, our summer intern, bought this one for his girlfriend.



The functional complication to the left simplifies the build at the expense of aesthetics, but sometimes that's a smart thing to do, and given the price of this bike and the fact that it comes with a Nitto bar and stem and front rack, and fancy fenders, it's not a big deal, so no squawking!



The pressed steel lugs are simple and nice. The paint is light blue. The headset is a Tange copy of an old Stronglight V-4 model. A smart design, it allows one-handed adjustments, and is one of the most under-appreciated designs in the entire world of bikes. Note the knurling on the cup, and the mating teeth. That's the secret. A good headset, and too inexpensive for its own good.



When was the last time you saw two-piece fenders? And more to the point, what *is* the point? It befuddled me/Grant, but one of our guys, who requested anonymity in case he's wrong, said: "Maybe it's a travel-aid. You remove the back part of the fender for easier packing." Yeah, maybe.



Lots of detail here. The Presta valve comes with a Schrader adapter. The fenders have a wingnut to allow easy separation; and are the "turtleback" or "hammered" aluminum that makes folks swoon so much. They are a perfect match for the tires and bike. Finally, notice the unusual style rack mounts (instead of hourglass style).



We like weep holes in bottom brackets, because water does get in through the seat post, and it might as well drain out, too. A weep hole doesn't make the bike, but its inclusion, without fanfare, indicates that somebody was thinking and looking out for you.



Cyclist's Palsy (Ulnar Neuropathy) (numb, uncoordinated hands)

by Riv member/Mayo Clinic doctor John Reach

John Reach, M.D. is a second year Resident in Orthopaedic surgery at the Mayo Clinic in Rochester MN. He received his undergraduate and medical training at Yale and at Georgetown. Ultimately he joined Rivendell a few years ago, and has agreed to write a few medical columns for us, this being the first of them.

You've been riding two hours and notice numbness in your pinky. Soon, pins and needles have spread to your ring finger and you're your grip is getting weaker in that hand. What's going on?

You've got ulnar neuropathy, first diagnosed in cyclists more than 100 years ago, and still so common in cyclists that in the Orthopaedic literature it's called "cyclist's palsy."

How Does It Happen?

It occurs when pressure builds up around the ulnar nerve, at the base of your hand. As the pressure mounts, blood-flow to the nerve decreases. Pressure may directly injure the axons (long cell body extensions) which make up the nerve as well. It's the same thing that happens when your arm or leg falls asleep. First, you lose sensation; next, you feel the pins and needles; finally, you can't use your muscles.

Why is it so common among cyclists?

Because the ulnar nerve is so vulnerable when you grab the handlebars. It enters at the heel of the hand through a tunnel-like structure called Guyon's canal. This tunnel is formed by bones and ligaments of the wrist (the pisiform bone, hamate bone, transverse carpal ligament and volar carpal ligament). Continuous pressure from a handlebar and road vibration lead to swelling in this enclosed space, and the swelling cuts off blood flow and leads to nerve damage.

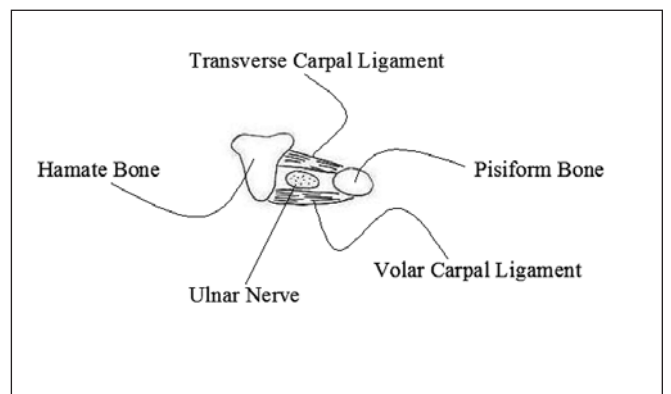
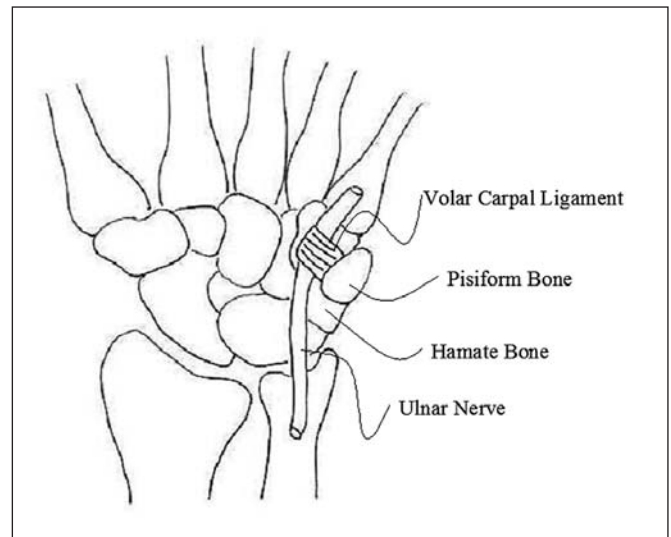
(Just because your hand tingles doesn't mean you've offended your ulnar nerve at the wrist. A benign fluid collection – a ganglion cyst – may be to blame. The nerve may also be compressed at a number of locations on its trip from the spine past the elbow to the hand. For example, the Ulnar nerve is in actuality the not so amusing "funny bone" bumped at the back of your elbow. Finally, hand tingling may be symptomatic of a more central disease: thoracic outlet syndrome, amyotrophic lateral sclerosis (Lou Gehrig disease), and syringomyelia, among others.)

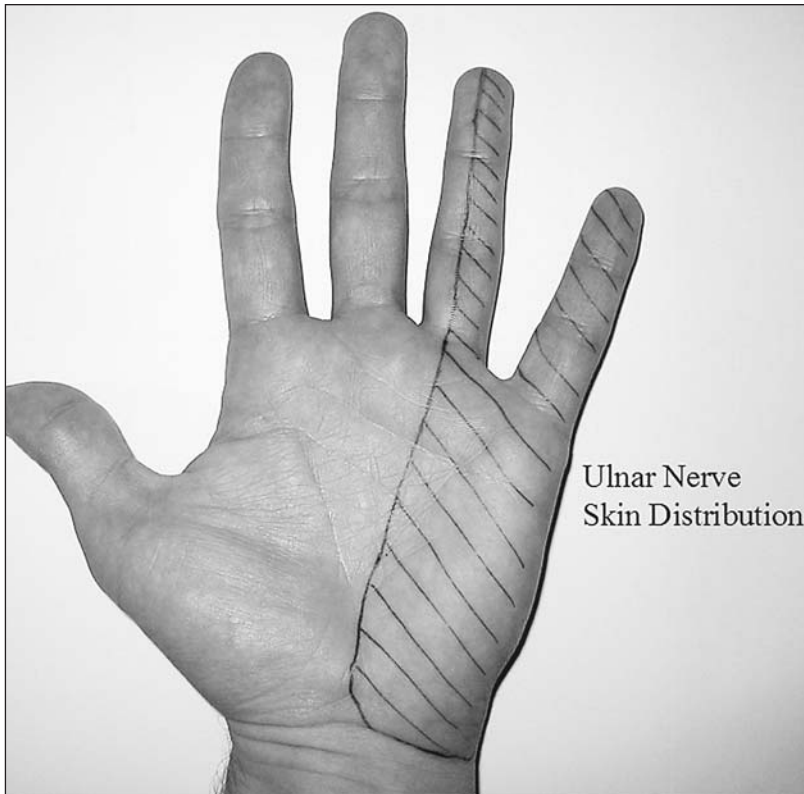
What should you do if you have these symptoms? See

your doctor. Depending on the severity of the damage, it may take 3 to 6 months of rest to cure. If you like to ride, or if you need to ride, that's not what you want to hear, so it's much better to prevent it in the first place.

How To Prevent It

Proper riding technique seems to be the long-term cure for this palsy (2). Make sure your bicycle is properly



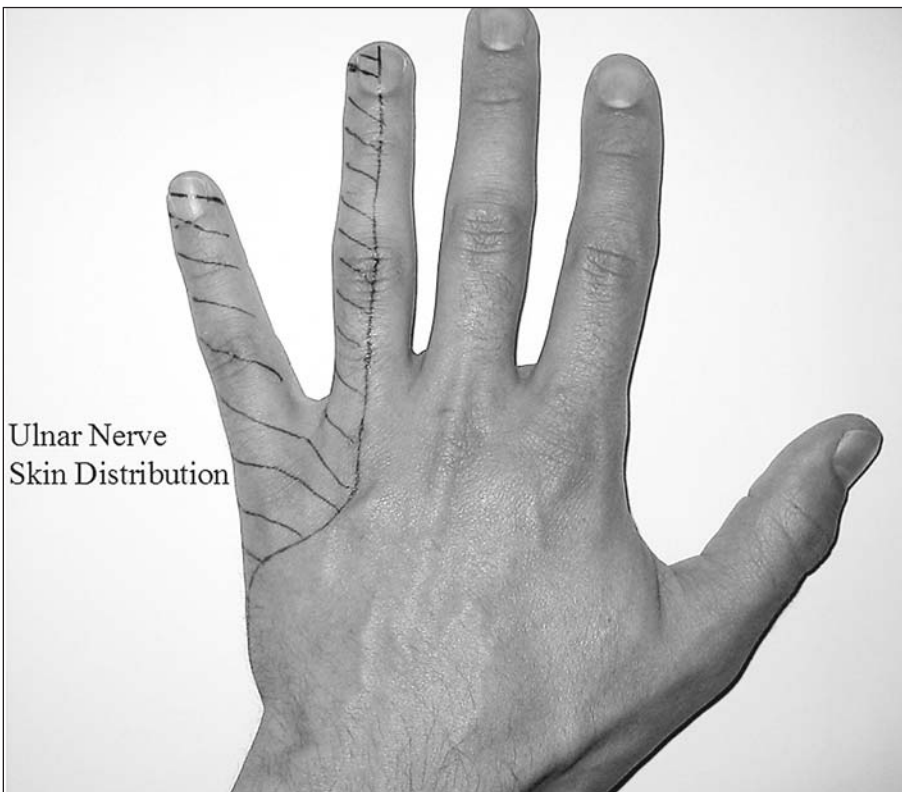


sized with less than a third of your body weight on the handlebars (3). In the short-term, a switch from drops to aerobars or an upright handlebar may unload the nerve.

Change Your Hand Position Frequently

Every three to four minutes is best; and put more of your weight on your saddle (4). If all else fails, a surgical procedure not unlike a carpal tunnel release (for the median nerve) can will decompress the canal at the wrist. But it's best to prevent it, obviously, and that's not hard to do.

(1) Destot M: Paralyse cubitale par l'usage de la bicyclette. *Gaz Hop* 69: 1176-1177, 1896. (2) Brandsama, JW: Manual Muscle Strength Testing and Dynamometry for Bilateral Ulnar Neuropraxia in a Surgeon. *J Hand Ther.* 1995 Jul-Sep 8(3) 191-4 (3) Gardiner KM: More of bicycle neuropathies. *N Engl J Med* 292(23): 1145, 1975 (4) Noth J, Dietz V, Mauritz K: Cyclist's Palsy: Neurological and EMG Study in 4 Cases with Distal Ulnar Lesions. *Journal of the Neurological Sciences* 1980, 47: 111-116. (5) Colton & Hall Atlas of Orthopaedic Surgical Approaches Butterworth-Heinemann Ltd. Cambridge UK 1991 (6) LeLee & Drez Orthopaedic Sports Medicine: Principles & Practice. WB Saunders Co. Philadelphia 1994



This information is not meant to replace the advice of the physician who cares for you. The information is designed to support, not replace, the relationship that exists between a patient and his/her existing physician. All medical advice should be considered incomplete without a physical exam, which is not possible without a visit to your physician. This advice is meant for informational use only. Please contact the author at ortho_doc1 @ yahoo.com if you wish to make copies of this article.

Diagrams by author based upon references 5 & 6.

More Cheer To Come!

Doctor John Reach has a list of cycling-related topics to write about, and we'll bring you a new one in each issue. Now, I know reading about injuries and afflictions isn't joyous, but it's good to know some of these things, sometimes.

When STI? When Bar-Ends?

by Mark Abele

Mark Abele works here and rides a lot. He's fast, good, friendly, experienced. He's 45, and races the road some (5th in Districts this year) and cyclo-cross full-time during that season.

I ride both STI and Bar-End shifters. The STI is on my road racing bike and the bar-ends are on my cyclocross bike. I think STI shifters (or Campy Ergo, their equivalent) are mandatory for road racing, because you can shift from the hoods or the drops. This is a great feature and probably safer when riding in a fast, tight group.

I prefer bar-ends for cross racing because they are more durable and less likely to fail from contamination (i.e. falls in dirt or sand). And if I break one, it's a lot less expensive to replace. Cross races also tend to string out, so tight pack riding isn't something to contend with. When you aren't going fast in a tight bunch, having the shifters right under your hands isn't important. You may like it, but that's not the same as its being important.

For any non-racing application, I recommend bar-ends, and here's why:

1. Reliability. For the most part, STI shifters are quite reliable. But they have lots of small parts, so there's more potential for something to break. If your shifter gets contaminated or damaged and the indexing fails, you may be stuck with one or two gears for the rest of your ride.

On the other hand, if the indexing fails on a bar-end, you just switch to the friction mode and continue riding with all of your gears. This point is especially important on a tour. You don't want to be with just two speeds and lots of hills between you and the next bike shop.

2. Safety. Some folks say STI levers are safer, because you don't need to move your hands from the bars to shift. But for non-racing application, moving your hand to the end of the handlebar isn't that inconvenient, especially with shallow drop bars. When you shift, both hands are still on the bars, so there's no loss of control. If you have a medical problem that makes even that small amount of movement inconvenient, of course that's another issue.



John Does It; So Can You

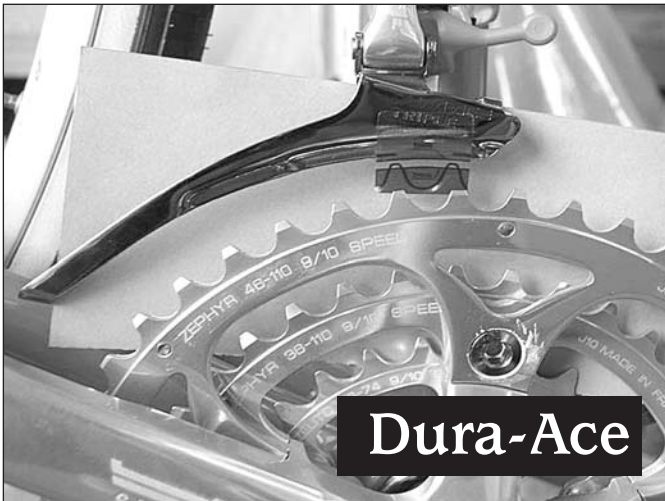
The Baggins Adam is a saddlebag, but John fetches us lunch using it on the front, mounted on these Moustache Handlebars. The same bike has a Hoss in back, so that's why this Adam has to go up front. But it works fine, and we've used a similar arrangement with big Carradine models, too. As always, some creativity goes a long way.



A Fine Mini-Pump

First off, mini-pumps are tolerable at best. They're at a huge disadvantage, compared to frame pumps, because they're just too small, and you can't pump as much air per stroke. So where a Zefal HPX might require 65 strokes to reach 105 or whatever, you can count on 3 times that for a mini. Plus, they're more awkward to use. But Mark uses one because he rides cyclo-cross and dirt trails, and a frame-pump makes it hard to shoulder the bike. John carries a mini because he shoulders his bike up the steps to the train platform, and is tired of knocking his frame pump off (he didn't use a strap to hold it on.) Plus, a mini is less likely to be swiped. All in all, there are places for minis, and the Silca shown here is the best we've tried, although we've tried only maybe four. We expected the Silca to lose, figuring: they don't care, it's not their market, and those Taiwanese are probably sharp as tacks and out to conquer. Well, the Silca was way easier to pump, ten times easier to hold, got a Ruffy-Tuffy up to rideable pressure in more strokes but half the time, and weighs just 4 ounces, compared to about 9.5 for a Zefal HPX frame pump. It telescopes as you pump, and when the plunger is pushed all the way in, it doesn't pinch your non-pumping hand.

We started off doing this just as a public service/review, but our testing results were so dramatically in favor of the Silca, and it's not all that easy to come by in bike shops, so we decided to carry it. Part number 28-023, \$16. Worth it if you want a mini.



This is how high you have to set the Dura-Ace triple front derailleur on a low bb bike and a 46t chainring. It's too high.



Here's a 105 triple front. It's still higher than we'd like it to be, but it's a lot closer to the ring than is a Dura-Ace. It can be closer to the ring because it has a shorter tail.



See how close it comes to the chainstay? And that's with the derailleur set too high! Set it right and the tail of the Dura-Ace will hit the chainstay. Shimano could solve this by lopping off 8mm of tail, which would mean you couldn't ride a 26 front x 12 rear combo, but who cares about THAT gear? Compare the tail of this cage with the 105/Ultegra and you'll see the extra length that causes the trouble. Remember now, it's a problem only with sub-50t chainrings on 700c bikes with low bottom brackets. But that rules out some smart bikes and smart gearing. Dear Shimano: Please fix it.



This 105 derailleur's tail comes as close to the chainstay as does the Dura-Ace—but when shifted to the outer ring, the cage is much closer to the chainring, for better shifting. The Dura-Ace is marginally prettier and whoppingly more expensive, but the 105, for our loot, is a better design. The Ultegra, by the way, fits just like the 105.

Why We Like Shimano's 105 & Ultegra Front Triple Derailleurs More Than the Dura-Ace

The Dura-Ace is too long. It works fine on a conventional racing triple set-up, with a large (52t) chainring, but we think that size ring is too big for most uses, and we prefer big chainrings of 46t or 48t. (For reasons we go into in our catalogue and won't repeat here). And as you also may know, we like low bottom brackets, because they make a bike feel better and corner better. But here's the thing: When you combine a nicely designed bike with a low bottom bracket and practical 46t or 48t chainring...well, when you set the front derailleur up properly so the outer cage clears the top of the big ring by 1 to 2mm, then, when you shift to the inner ring, the low tail of the cage smacks the chainstay. To avoid that, you have to raise the derailleur, but when you do that, you make the shifting worse and increase the likelihood of overshifting to the outside of the chainring. You might wonder Why This is the Case. Why is the cage so long? Well, the only practical reason for having a cage so long is to allow you to ride a small (like 24 to 28t) front chainring x small (11 to 14t) rear cog. That's a gear combination you shouldn't ride, anyway. So in a sense, the Dura-Ace front derailleur is designed to let riders ride in foolish combinations, and that in itself wouldn't be so sad, but this "benefit" comes at the expense of being able to use it on smart-designed bikes with practical gear combinations.

Paris-Brest-Paris 2003:

A Q & A with a rookie. Namely, Marty Kaplan



Here I am, the one on the left.

Short bio: Age, job, hobbies....I'm 53, an organizational consultant, and besides bikes, I like motorcycles, skiing, kayaking, hiking—things that require movement.

When did you start riding bikes seriously, and how soon after that did you decide to train for PBP? And describe your training? And is it fun? I started riding 6 years ago. My sister-in-law died of AIDS, so I rode the AIDS Ride. I liked the ride and just kept riding. I started doing some centuries and doubles with a friend of mine, and she introduced me to randonneuring and encouraged me to do PBP. My training isn't particularly envy-inspiring. I take 3 to 4 spinning classes a week, which I actually like, and I ride 30 to 80 miles on weekends, in the hills. I sprint up to the hills from Berkeley. And I've liked the Wednesday night rides with you and Mark and the Diablo group, up Mt. Diablo. That's the most intense riding I do.

How did you go about picking a road bike? With PBP in mind, or just as a general road bike? I bought a steel LeMond at first, then after 5 years, which is just about a year ago, I got a Colnago CT-1, with \$600 Campy Neutron wheels. It cost me about \$5300, and it's a nice bike, but I found I kept modifying it to make it suitable to long rides; and it's a 59, which by your standards is too small for me. I rode all of my PBP qualifiers on it, but was never comfortable. Then I started reading RoadBikeRider.com and learned of the existence of another kind of bike—more comfortable, more durable, and with old-world details, which appealed to me. Eventually I ran into a fellow who has a Rambouillet, and he suggested a Romulus. Then I came by and bothered Mark a lot, and ended up with a 63. I got it for the looks, ride, comfort, and price. On one hand, it wasn't easy to buy another bike so soon after having spent \$5300 on a fancy one; but on the other hand, a whole bike for \$1700 or so seemed cheap.

Do you ride alone or with a group? Both, like everybody. I do

social rides with groups—except for your Wednesday ride up the mountain, which is too fast to be social—but I like the solitude of riding alone, too. At least I think I do.

How nervous or confident were you about finishing PBP in the allotted 90 hours? Were you shooting for a particular time? I did the qualifiers, so I know I was good for at least 600K. But PBP is twice that, and I was most nervous about how my butt would hold up on a B.17, which I'd never ridden a long distance on. So on my training rides I tried to sit down as much as possible. I wore two pair of shorts, used bag balm and Neosporin as prevention, and didn't have a problem at all down there. My right ring finger and pinky got numb, though. They're still a little numb. I should have padded the bars.

Did you ride with people you knew, or did you just go with the group? Both, of course. I started out with Americans I knew, but it breaks up, and you ride by yourself or with others. One time I was the only foreigner in a group of French riders, and I noticed they stay together more. And they ride close to one another and touch each other to reposition one another and reshape the pack. I was alone a lot, too. At one point, at night, I couldn't see bike lights in front or behind me for a long time, and started thinking, "Did I get off course?"

How long before your first nap? And describe the sleeping situation? Thirty-two hours. That's how long it took me to get from Paris to Brest, the turnaround. I slept for 3 hours before heading back. Most of the sleeping arrangements were fine—some riders slept in ditches and along the roads, but you could sleep at the control stations along the route, too. They had cots, and people there who'd wake you up when you wanted. Showers were available and cheap, and 3 Euros (about \$3) buys you a nutritious but institutional meal. I'd planned to eat mainly gels and powdered drinks, but after enough of that they didn't agree with me anymore, so I went to real food.

What was it like at the checkpoints? It was fine. The locals would greet you and cheer you on. Many of the riders had their private support cars there and waiting (a controversial practice, since some riders think PBP should be unsupported, (as it used to be—ed.). I wouldn't call it "chaotic" at the checkpoints, but if you didn't have a plan, I could see how it might seem that way.

Riding at night—any crashes? You or others. I think one guy died. A friend saw him on a stretcher, and the paramedics were trying to provoke some sign of life, but there was none. He thought he was dead, but I can't say, and I doubt we'll read about it. There were lots of crashes, but other than the one fellow, I didn't hear of anything serious. Riding those long hours, and at night, on unfamiliar roads and next to lots of other tired riders—the crashes are going to happen, but I lucked out.

Did you have any mechanical problems? No, nothing.

Any knee pain or other rsi-type things? No, except for the numb fingers I already mentioned.

Are you a one-timer, or will you ride it again? I'd like to ride it again. I wish it were next year, but I imagine I'll ride it in 2007, too. We'll see. I had a lot of fun.

When Tyler Hamilton continued to race the Tour de France after breaking his collarbone early on, most people sat around clapping and admiring him. Me, too. Then Rebellious Rich here started popping off with remarks along the lines of he should've stopped; they shouldn't have let him go on. And John here, who is about a million miles from being a goggle eyed racer worshipper, didn't exactly take offense to that notion, but he didn't agree with it. They both make good arguments. I don't have a stand on it, not anymore. Here they both make their cases. Over and out.—Grant

Should Tyler Have Finished the Tour?

Rich says:

Break a bone, you're out of the race, so you don't risk further injuring yourself and other riders.*

When it was announced that Tyler Hamilton was continuing the race after breaking his collarbone, most people were amazed and awe-struck, full of admiration. I was incredulous.

Professional bicycle racing today is a culture of super-human feats, glorifying pain and suffering, and making heroes out of people who make bad decisions. Everyday folks watching professional riders probably aren't very attracted to the pastime of riding a bike, for transportation or pleasure. At least not by what they are watching. And when they see someone with broken bones getting on a bike, "riding through" the pain and being held up as an icon of heroism and courage, I would imagine that when the awe and disbelief wear off, they might think twice before getting on a bike to ride themselves. After all, it's dangerous! And it hurts! Who wants that?

Tyler Hamilton, for all his courage, tenacity and strength, took a huge gamble, and the Tour organizers took a big gamble in letting him do it.

Does that make his accomplishment something to herald as a heroic, monumental feat? No. He's not entirely at fault though. There's the culture of professional racing/sports, the huge amounts of money involved, and the super-charged hierarchy of professional cycling. But in the end, the final decision was his – and he made the wrong one, in my opinion.

There should have been at least one voice saying "don't do this at home, in fact, don't do this at all!" amidst the frenzy of hero- and pain-and-suffering-worship going on at the time. And there hopefully will be some more sober discussion about racers riding with serious injuries, in the future. For now, I'll have to settle for my own little "platform," and say, "Tyler, you made the wrong decision. I hope when you're an old, retired cyclist at age 33, you still want to ride, and are able to enjoy yourself to boot! And next time you break a bone, let it heal before you get back on the bike."



John Says:

Let The Guy Ride And Mind Your Own Beeswax While You're At It.

Professional bike racing is risky, people crash and sometimes die, but the riders are adults, and should be able to do what they want.

If I was racing and I broke my collarbone, I'd quit. If I was in the Tour, and there was another guy who had broken something and insisted on Staying The Course, I'd steer clear of him, to be safe.

Whether Tyler or other broken-bone finishers are heroes depends on their motivation. If it's greed or ego, no. If it's finishing their job and not wanting to let down their teammates, yes. Judging other people's motivation is pretty risky in it's own way, though.

Is a guy with a broken collar bone selfishly putting others at risk for personal glory? It's hard to say, but, personal glory might not have much to do with it at all.

Who can say he's creating more risk for other riders than a guy who didn't train hard enough and could conk out at any second on a steep climb on a 90 degree day? Or the reckless rider, or the one with bad judgement? It's a risky sport, and if you're not up for that, then play croquet.

The whole Broken Bone Angle was played up because it's a good story. From my experience, I think there's a point at which the body won't let the mind push it around anymore. It will shout "ENOUGH" and quit.

Lastly, the Role Model Issue. I doubt a guy racing with a broken collarbone is setting a bad example for impressionable kids, but past a certain point, that's not his problem. Just because a guy rides a bike doesn't mean he's a role model, any more than a person who plays guitar on MTV or takes your tickets at the movies.

People choose their role models. People don't necessarily choose to be them.

You ride your horse, and I'll ride mine. Without a helmet sometimes, but that's another story.

* other than your little finger



Many of you remember Robert Kurosawa, known in the Bridgestone days as Pineapple Bob, because he grew up in Hawaii and his hair used to look pineapple-like in the way it flared out. He was a friend, and he modeled the bikes in most of the catalogues and ads. These days he's still a friend, and we're lucky to have him working alongside us here at Rivendell...where aside from being half of the Robert/Mo World's Best Packing & Shipping Team, he continues to think about the bikes he rides every day, and comes up with fancy ways to solve problems and make unworkable combos workable.

It comes from a deeply rooted philosophical refusal to ride anything unmodified. It's a way that tends to complicate bike-life when it should be easy; but on the other hand, it's sort of like going for a survival hike with the Ultimate Woodsman.

The bike you see part of to the left here is Robert's 52cm Bstone XO-1 with a fork from a 55cm one. Since the fork was a lot longer, the threads for the headset didn't come down nearly far enough to adjust the upper bearing. This situation is rare but certainly not unheard of, and in fact, on the Mercian tandem we just got in here (see all the photos on the right), we faced the same situation. We could have threaded the steerer more, but it's tedious and puts a lot of wear on expensive tools. So Robert made it work without adding threads, and now, actually, it's even better than it woulda been. A good case could be made for this being the New Standard Way, but it's too late.—GP

BOB'S HEADSET TRICK

Something you'll probably never have to do, but then again, you never know. If you're a bike mechanic, this is something you ought to know about. It's a better way to go than just adding more threads.

What are the advantages of Aheadsets and their knock-offs, anyway? That is a fantastic question.

Some say it's on-the-ride adjustability, since you can do it all with an allen wrench. We put that into the "Undeniable, yet minor advantage" pile, since it is easy to properly adjust a normal headset, and once that is done, it'll keep its adjustment quite well. In some cases, not all, they're a hair lighter.

Frame and fork makers love threadless headsets, because it keeps them from having to thread the steer tube. That's nice even in steel, but it's virtually a requirement in aluminum, since threading would weaken it too much. Carbon fiber can't be threaded. It would kill it.

Anyway, I recently got a Mercian tandem, the only lugged tandem I could find (and a beautiful one), and the only tandem still made that takes normal stems (although they can do threadless versions, too). And

when I put the fork in, whoa, the threads didn't even come close to where they had to be to use a threaded headset; and I'd planned to use a threaded one, and didn't have a threadless one.

So while I was stewing in this sad situation, figuring I'd have to cut about 45mm of threads, Robert and Mark went to work on it, unbeknownst to me. Mark took the upper cup of an Ultegra headset and ground out the threads with a Dremel. This is NOT the kind of thing that needs the precision of a lathe, so if you do this, don't bother your friend-the-machinist with it. A dremel, which you ought to have if you're a do-it-yourselfer, does the job in five minutes, and the slight imprecision doesn't make any difference, because this piece is self-centering. All you have to do is get rid of the threads.

Then you'll need a modern threaded headset locknut, one with a plastic seal in it, that you can pry out.

File out the upper cone threads



File out the threads from a threaded headset's upper cup. Do not ask your machinist friend to do this for you. You don't even need a vise.

Pry out the seal from a spare locknut



Go to your local bike shop and ask kindly if you might purchase a used locknut from an old headset. If it's not too old, it might have a cheap plastic fake seal in it, and if that's the case, pry it out. If it's a real old model, it may have a lip on it, which you'll need to grind off. This piece will substitute for a Genuine Aheadset's "star-fangled nut," to lock in the adjustment. You must be able to thread it onto a steerer without the plastic seal or metal lip stopping it.



1 Assuming the bottom headset is installed, press in the upper bearing.



2 Then slide on the now-threadless upper cup. There's no going back now...



3 Install whatever spacers, then the hanger, and another spacer on top of it, as you like.



4 Now screw on the spare headset locknut that's been stripped of its seal. This is now a substitute for a "star-fangled nut."



5 Finally, stack on additional spacers if you like, put on the real locknut, and as our Freedom friends like to say... voylaw!
This stack here is high. You can tailor it to your needs. It's ready to accept a regular old quill stem, so you still have more room to adjust the bars vertically.
One neat thing about this way—and let's face it, there should be something neat about it because you have to clear a couple of hurdles to do it—is that you need only enough threads for the absolute locknut, so even if you have a relatively short-quilled stem, it's easy to get the bottom of it, or the top of the stem wedge, away from the threads. On all of our bikes we use minimal threading anyway, so it's not a problem, but on other bikes it's definitely a problem.
So....how do we conclude this?
Well, if you have an old bike that's too small, and you can get a longer for for it, you can do like Robert did with his XO-1 over there.



Same Frame, Three Bikes

Three identical 59cm frames equipped with three radically different parts packages designed for different kinds of roads and riding. Just to show that good clearance gives you options; and that you can put super modern gear on a Rivendell...

We had Curt make three identical 59cm frames, and then asked Joe Bell to paint them three nice colors, and then Mark and Robert assembled them three distinctly different ways. To illustrate how versatile a road bike can be when it's designed right; and to give you ideas on how to build up your Rivendell, Rambouillet, or any other road frame you get from us. It's not that you have to get a road bike from us, but there aren't many other road frames out there that'll let you mount any tire larger than a 700x28. So that's why we're showing off these Rivendells. In hindsight, we should have done this

with Rambouillet or Romulus frames, but at the time our build queue was down to five, and we thought we'd assuage Curt's nervousness some by sending him three more orders. Now the queue is over 40, as people get their orders in before the price increase.

Eventually we'll sell all of these bikes. We'll announce it in an email update, so if you aren't on that list and you think you can ride a 59cm (if your saddle height is between 74.5 and 76, it'll be fine), then get on the list so you'll have a shot at them. They'll be sold exactly as they're equipped here. —Grant



Here's Larry. He's set up for fire trails and bad roads, with Panaracer Pasela 700x37 tires and interruptor brake levers, which you can barely see if you look at the top of the handlebars. More specs in the chart on the next page.



Here's Curly. He's a road double with Ruffy Tuffys and a mix of Dura-Ace (mostly) and Ultegra (bb and brake calipers). It's a color we call Mythril, a luscious silvery blue.



Here's Moe set up as a smart, versatile road double. Ritchey Logic crank, 46 x 34 rings. More specs below.

| Larry | Curly | Moe |
|--|--|---|
| details | details | details |
| <p>Size: 59cm</p> <p>Set up for: Fire roads, commuting</p> <p>Wheels: Mavic Open Pro 32H on 105 hubs, Panaracer Pasela 700x37 tires.</p> <p>Crank/bb: TA Zephyr 172.5 46/36/26, Phil</p> <p>Shifters: Shimano</p> <p>Brakes & levers: Shimano Tiagra & Tektro levers, Ultegra std reach calipers</p> <p>H'bar/Stem/tape: Nitto Dream 44, Technomic Deluxe 11, yellow cloth</p> <p>Saddle/post: B.17 steel, Crystal Fellow</p> <p>Ders: 105 both</p> <p>Chain: SunRace silver</p> <p>Cassette: 12x28 silver SunRace 8sp</p> <p>Color: Silver with cream details</p> | <p>Size: 59cm</p> <p>Set up for: Weekend Speedy rides with clubmates who have Litespeeds.</p> <p>Wheels: Mavic Open Pro 32H on 105 hubs, Ruffy Tuffy tires.</p> <p>Crank/bb: Dura-Ace 172.5, Ultegra BB</p> <p>Shifters: Dura-Ace 9sp</p> <p>Brakes & levers: Shimano Ultegra std reach calipers, Tiagra levers</p> <p>H'bar/Stem/tape: Nitto Noodle 44, Tech Deluxe 11cm, blue cloth</p> <p>Saddle/post: B.17 Ti Crystal Fellow</p> <p>Ders: Dura-Ace</p> <p>Chain: Dura-Ace</p> <p>Cassette: Dura-Ace 12x25 9sp</p> <p>Color: Light blue metallic, cream details</p> | <p>Size: 59cm</p> <p>Set up for: Rolling road rides, not with clubmates who spin out 53x12.</p> <p>Wheels: Mavic Open Pro 32H on 105 hubs, Ruffy Tuffy tires.</p> <p>Crank/bb: Logic 172.5 w/46x34, Ritchey BB</p> <p>Shifters: Silver Bar-Ends</p> <p>Brakes & levers: Ultegra, Tiagra</p> <p>H'bar/Stem/tape: Nitto Noodle 44, Tech Deluxe 11cm, blue cloth</p> <p>Saddle/post: B.17 Ti Crystal Fellow</p> <p>Ders: 105</p> <p>Chain: SunRace</p> <p>Cassette: SunRace 12x28 8sp</p> <p>Color: Mythrill (silvery blue) with cream details</p> |
| Weight & Notes | Weight & Notes | Weight & Notes |
| <p>The bike rides great, even on smooth roads. It feels light, cushy, no problem. Begs to go on dirt. Weight: About 23 1/8.</p> | <p>If you gotta have Shimano's best, but you want a classic frame for it, this is the way to go. More useful gearing would be 48x39. Weight: About 20.5</p> | <p>All-around road bike for non-racers who don't live where it's super hilly. Or for strong guys in the hills. Weight: About 22 1/4.</p> |

Delta Cycle's Gravity Rack

(A Review of Something We Like But Don't Stock. Mainly to prove that not everything we review is just to fatten our personal wallets. Your bike shop can get this.)

Reviewed by Craig Bessenger, who worked here for a while and may again.

Sometimes you need a bike rack. Yes, bikes can be stacked in garages and stuffed under porches or leaned against every spare piece of wall, if one lives in an apartment and isn't privy to storage areas. Maybe the resistance to racks, or at least my resistance, has something to do with owning what amounts to a piece of bike-specific furniture. The other issue with racks, this a more practical matter, is that many need to be bolted somewhere, which involves drilling holes. Not necessarily a problem, unless the holes need to be drilled in something you don't own, like say an apartment you rent.

But sometimes you need a rack, nitpicks aside, and the good thing about this rack from Delta is that there aren't really any of those nitpicks to put aside. It's inexpensive but not cheap, there's a difference there, and it dulls some of the bike furniture pain. It's not hewn from billet aluminum, but it's only \$80 and seems sturdy enough for its lot in life. The rack is made of shiny aluminum tubes and the gentle curves give it a sleek look. Just don't assemble it outside on concrete, or the shiny metal will get scratched up.

Those curved legs down at the bottom there stabilize the rack, and mean you don't need to drill holes anywhere in your home. The rack is freestanding and just tilts up against any wall, a lot like a ladder that you can hang bikes on. It sounds more precarious than it is. There may very well be some formula at work here to guarantee stability, like the legs must curve out 1/16 of the height or something along those lines, but the result is that if you tilt the rack against a wall it won't fall over. Even if you knock against it, hard. The mobility of the rack is a blessing in that it can be trundled about as necessary, perhaps out of the living room and into the hallway if guests are coming, or just a foot to the left if you realize you didn't leave enough clearance for the closet door.

The rack will hold two biggish bikes (a 61cm and 58cm pictured), and do it with more clearance than shown here, assuming you follow the directions and splay the holding arms out. When one set of arms is set wider than the other, the bikes are held in two different vertical planes, and



The Delta rack in its native environment. The clock peeking out from behind the wheel of the Atlantis is glowing because it's a neon clock, and a nice one. It was made by Rivendell Member Ian Macarthy, who you can read more about in this issue.

should bump tires and handlebars less. We didn't have the directions, and if we had I still might not have done it right, but it worked out fine anyway. Trivia: Delta makes lots of racks and names them all after famous artists. This one also goes by Michael Angelo.

—Craig B.

www.deltacycle.com, or your local dealer



Riding the Nobles Trail

From Winnemucca, Nevada...to Chico, California

by Henry Kingman

Cars have muscled cyclers off the flat, direct roads between most points, face it. That's why I was delighted to discover an improbable exception: the best way into Northern California from the east comprises dirt roads where you might not see a car for weeks at a time.

I found this route when Sonoma County, CA Bike Coalition Executive Director Ted White (filmmaker behind "Critical Mass" and "Return of the Scorcher") invited me to his club's Annual General Meeting in January to speak on "combining bicycle transportation and recreation." How better to address the thesis than ride there?

I set up a borrowed XtraCycle Free Radical on my old Paul Barkley fillet-brazed Soft-Ride mountain bike. These two odd and brilliant designs were meant for each other. The

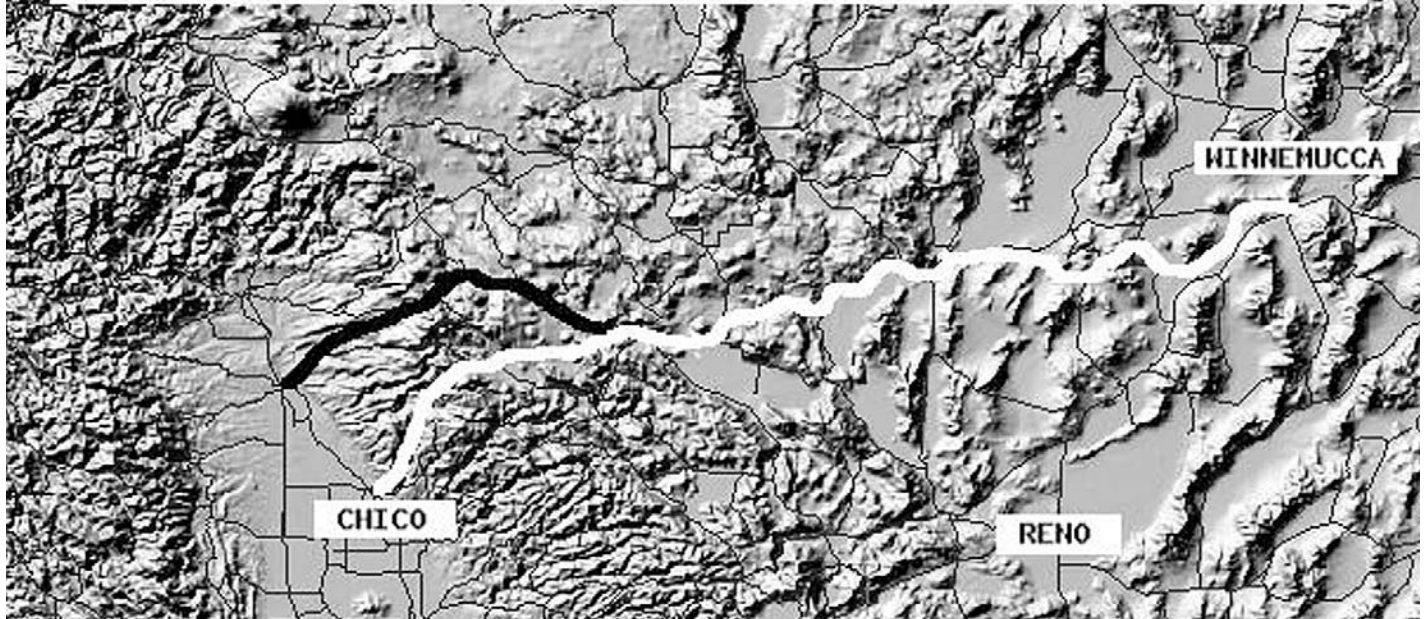
Xtra lets you carry 250 pounds, which would trash the stoutest MTB wheel unless the rider, at least, were suspended. A load-suspended off-road touring bike would be a good thing.

The route I followed is one of Nevada's oldest emigrant routes. The most practical route for mammal-powered vehicles, it served for a decade as the main supply route between Northern Nevada and California prior to the transcontinental railroad. Today, it has dwindled into obscurity, not a bad thing if you like pedaling the road less traveled.

William H. Nobles discovered the route in 1851 and promptly renounced prospecting in order to promote it. Backed by investors from (Old) Shasta and primed with a

WHITE LINE: Henry's route

BLACK LINE: Original Ft. Reading - South Pass - Honey Lake Wagon Road



Hoar frost at first light, about 0°F., at Kamma Pass.



I smiled too late for the self-timer. Trail's end on 395.

measure of hyperbole ("At no point along its entire length does it deviate from a straight line by more than ten miles") he went to Washington, D.C. where, in 1854, he was granted \$300,000 to improve it. However, he became distracted in Minnesota on the way back, accepting the mission of blazing a route through St. Paul to a new gold field in Canada.

Meanwhile, teamsters brought supplies from Chico to the Humboldt mining district along the route and returned with high-grade ore from Unionville, Star City and Dun Glen (ghost towns near present-day Winnemucca). In 1862 alone, some 85 tons of flour were shipped along this route to people like Samuel Clemens (read Twain's account of Humboldt days here:

<http://www.mindspring.com/~eliasen/twain/roughing/roug h28.html>).

With the success of the Honey Lake Wagon Road, Susanville and Chico merchants dreamt of their towns becoming powerful centers of shipping and commerce to

rival San Francisco, according to Susanville dentist Robert Amesbury, whose *Nobles Immigrant Trail* (1967) appears to be the only book ever published on the Nobles trail.

Then, in 1862, the Civil War broke out.

Nobles joined the military to serve as an officer. More important to the demise of the Nobles route was this: the North and South had long fought over the first transcontinental railroad. With Southern secession, the North won by default and a route from Sacramento, Calif. to Omaha, Neb. was quickly approved (though construction began only after the war had ended). The route was chosen not for being the best or easiest route, but because it most directly linked California and Nevada mining centers with the U.S. Government.

Amesbury, near his book's conclusion:

"If Crocker, the giant, who pushed the first railroad over the Sierras, eastward to Donner Lake and later Reno, had been perhaps more considerate of human life and a little



Frozen mud road at first light near Skeddadle Ridge.



Finally, coffee. Near Susanville.



Old and new markers at this unique site. Susan's son placed the newer marker for the mom he never knew.



Bathing hour at Trego Hot Springs.

less concerned with the limitless wealth this railroad was to bring him; if he could have heard in the still nights the screams of the coolies echoing in the caverns as they fell from ropes that often broke as they hung along the canyon walls pecking holes for the dynamite that opened the rail bed; if Theodore Judah, the original developer of this railroad had talked a little more persuasively of Nobles', the pass which seemed to Judah's mind the most logical; if Nobles, himself, would have been favored with the development of his road instead of the Civil War; if Alvinza Hayward, the Virginia City multimillionaire, had put the rival railroad through this pass he contemplated, the final page of this story might have been far different."

The selection of pictures here are from the section of the trail between Winnemucca and Susanville, where I detoured south to Chico. By doing so, I missed out mightily, I learned later from the U.S. Forest Service, which states unequivocally on its Web site: "The best way to experience the Nobles Trail is by driving State Highway 44

between Susanville and Shingletown."

In all, the stretch from Winnemucca to Susanville covers about 250 miles, of which 35 are paved, 60 are gravel, 20 are mud lake-bed and the balance gently graded primitive dirt roads. But half a dozen tiny springs trickle wanly next to the whole route, two hot. Night temperatures in January are near zero. Daytime temperatures in summer may be well over 100, with nights close to freezing. Heavy wind and dust are common. Nevada's richly mineralized mountains make for spectacular or desolate views, depending on your point of view.

I covered this stretch in five leisurely days, seeing one person, a sourdough miner, the first three days and (not counting Gerlach, a tiny railroad town where I over-nighted), only two — a drunken buckaroo atop a windmill and a fine art potter transplanted from Berkeley — in the second half.

Early on, the route passes the grave of Susan Coon, who



Emigrant Trail marker at fork of Applegate-Lassen (r) and Nobles Trail (L).

died in childbirth at the age of 40 in 1860. A stonemason in her party spent the night fashioning a tombstone. Cared for by two women in the party, the child survived and returned, late in life, to Nevada. A lifelong resident at Humboldt House, on learning the man's name, was able to lead him on horseback to his place of birth, one of the best-preserved emigrant graves in all the West.

At the same site, Antelope Springs, two additional graves belonging to whites done in by Indians in 1862 are marked by stones. The white man's habit of camping at springs—disrupting native hunting patterns—sometimes led to strife in a harsh land with desperately slight margins of survival. Relations were especially poor in 1862 because of white miners in the lawless Comstock kidnapping native women.

The route neatly bisects the Burning Man site of the last few years: take a kitchen garbage bag and, along with bullets and casings from the rifle range days (“before the well ran dry” say locals) you'll find enough Burning Man “artifacts” to fill it half full while crossing that narrow corner of the vast Black Rock. Pioneer relics are more elusive.

This suggests a question: what would time-travelling pioneers at Burning Man think? Would they recoil or delight at their progeny enjoying the means to throw the world's wildest frat party at the very locus of their harshest travails? Lassen remarks, “These are happy grounds for the future generations of America. It is for us, the pioneers, to discover and hold them.”

Burning Man drew 30,000 groovy people looking to get their ashes hauled last year—mind you, I was a dispassionate observer, the local, a desert curiosity who went on a whim since it was only 75 miles from my door, spitting distance around these parts.

The section along Smoke Creek features many residual

wagon ruts, still clearly visible after 150 years or more. At Robber's Roost, on the California border, begins a long downhill stretch of slumgullion, gumbo dust that turns gluey when wet. I got up at 3 a.m. to ride this part frozen under a full moon.

The Nobles was the main supply road to Northern Nevada, but is only one of the many trails in the BLM's Black Rock Emigrant Trails Conservation District. As the days warm I look forward to exploring this whole area more extensively, with gratitude to the Xtra Cycle company for supplying equipment that makes carrying a comfortable margin of good food and gear not only possible but a pleasure.

What I Took

- 1-gallon water jug, 2 big bottles, 1 liter of Coke.
- Sleeping Kit: 10-pound bedroll (Australian); 2-lb down bag; 2-inch cloth-covered foam pad; 2 14-inch stakes made out of 1/2-inch rebar; 2 5/8-inch hardwood poles.
- 2 weeks of food, in case I was snowbound.
- 2 pr wool tights (one mainly for sleeping).
- 3 wool shirts (one mainly for sleeping).
- 1 wool jacket with nylon/wind front..
- 3 pr bike shorts.
- 3 pr thick socks. 1 pr of boots, 1 pr riding shoes
- 1 pair of fleece gloves with wind overshell.
- 1 wool hat with visor
- 35mm camera with 75-200 zoom.
- MSR X-GK stove and a liter of fuel.
- Maps, GPS, Grundig radio.
- Katadyne water filter.
- 2 messenger bags: 1 for clothes, 1 for food/stove.
- Stuffsack for miscellaneous.
- Baggins Hobo bag.

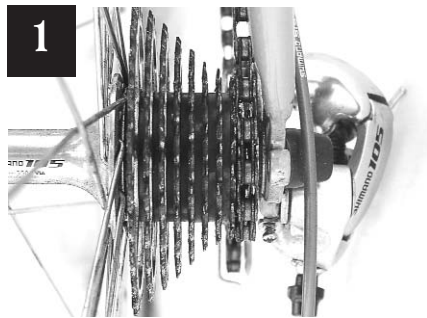
More About the Xtracycle

It's a smart way to haul loads that are hard to haul any other way. It's basically a retrofittable rear end to a normal bike (a normal mountain bike is ideal). The rear half of the bike extends way back there, but handling is remarkably unaffected. Xtracycle makes all kinds of attachments, including one for carrying children, and on my Xtracycle, that's the most fun of all. An Xtracycle makes a great touring bike, and not just for extreme touring, like Henry does. If you've got an extra bike around and can spare \$350 to \$400 to convert it, see Xtracycle.com.—Grant

How To Remove and Install a Rear Wheel

Remove it in 5 Steps

I bet 75 percent of the riders you see on a typical bike path, and 15 percent of those you see on the road, and 24 percent of those who buy a new bike costing between \$300 and \$1,500 don't know how to remove and install a rear wheel. It ought to be taught when you buy, but it's unexciting & easily overlooked, and then, once you have the bike and are riding it, it's hard to go back for instruction. So, here's how.



1 Shift to the small rear cog.



2 Open the brake's quick-release.



3 Open the rear wheel's quick-release.



4 Rotate the derailleur body rearward.



5 Push the wheel down and forward.

Put it back in in 4 Steps

This is harder, and honestly, it's a complicated thing. Anybody who tells you it's easy is just trying to boost your confidence, which is a bad thing to do unless they're doing it just so you're at least open to learning how, and they figure if you think it's hard you won't even want to try. But make no mistake—it's a complicated task. You have to do everything just right or the bike will reject the wheel, and you'll still get greasy hands.

But there are only four steps, and this photo-sequence here makes it as easy as any photo-sequence can.

The thing is, if you don't know how to do this, you should do it ten times in a row before putting the bike aside and declaring, "yeah, I got it now." Because, if you do it now just once and don't do it again for several weeks, chances are you'll blow it. So do it over and over again, and don't let anybody who already knows how to do it show you how. You have to go through all of the steps yourself. As always, that's the only way to learn anything.



1 Put the chain onto the small cog.



2 Slip the axle into the dropout.



3 Close the wheel's quick-release.



4 Close the brake's quick-release.

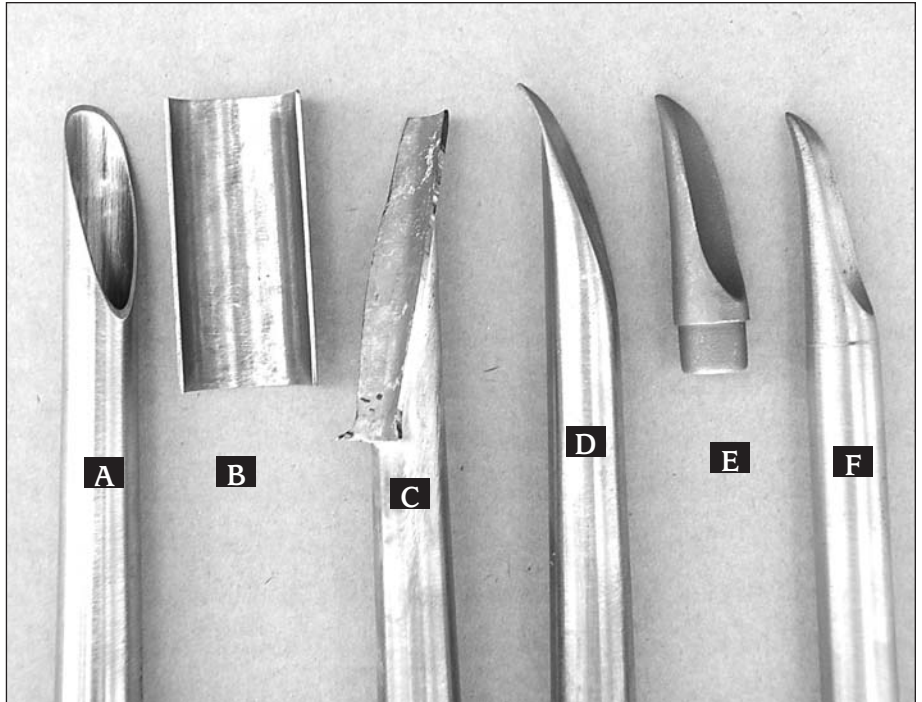
Caps versus Plugs

A behind the scenes look at an aspect of frame building that has nothing whatsoever to do with how to deal with baldness.

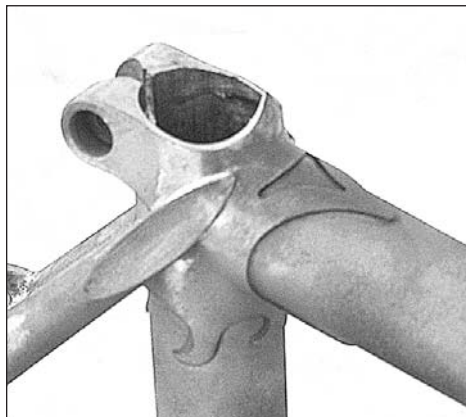
The bicycle frame's mystery spot, to many folks, is where the seat stays join the seat lug. Because how does a round tube get a point? There are as many ways to do this as there are googolplexths of protons in Jupiter, but the most labor-intensive way is braze a cap, or plate of metal, to the open end of the seat stay to seal it up. Then you braze that to the seat lug. The other two common ways are "fastback" style, in which the seat stays are brazed directly to the back of the lug, or sometimes to the back of the seat tube itself; and with plugs, which is where you cut the seat stay off straight, and braze into it a plug that's shaped to look like a cap.

Thankfully, plugs have not been called "cheater's caps," and since we use plenty-of-'em in our frames, we'd hate to see that start. I/Grant feel strongly about lots of bike things, but this isn't one of them, and when you order a made-to-measure Rivendell, you can pay \$75 more and get caps, if that's your wish, or you can get plugs. Some folks like the idea that the builder had to work harder to make the cap, and when you order up a hand-built, full-zoot frame, that's an understandable emotion, although you shouldn't go around bragging about how hard it was to make your frame. It's not a case where, "Well, in for a penny, in for a pound—I may as well go with the cap!" If you like the cap, we'll do it and charge for it, but in the end it's such a tiny part of the frame. But it's up to you!

In any case, in the photos here, Rivendell builder Curt Goodrich shows the steps he takes to make a cap, and explains what he's doing in the accompanying captions.



A. A cut and filed seat stay, ready for action. I can choose any angle. B. I start with a half-round section of tubing... C. ...which I braze onto the seat stay. Then I grind off most of the excess... D....and after grinding, I file it smooth so it looks like this. E is a seat stay plug, and it's fairly hollow; F is a plug after I've brazed it onto a seat stay. D & F weigh the same, in this case. You might think they shouldn't, because D has more metal; but they do. Maybe because I use more brass with D.



Left: The seat stay brazed onto the seat lug, on a bike I recently finished for J. O. Right: A finished & painted seat cluster made with a plug. Right: A complete and painted Rivendell road seat cluster made the normal way, with a plug. Looks nice!

A lot goes into building a fine steel bicycle frame, and the more you know about the process, the more you can appreciate them. In that way, it's like anything else that's artsy and requires hard-to-come-by skill. This installment is maybe the fourth or fifth inside process we've shown in the Reader, and we'll try to keep it up.

A Look At Lugs, Part X

(the tenth time we've done this in the Reader)

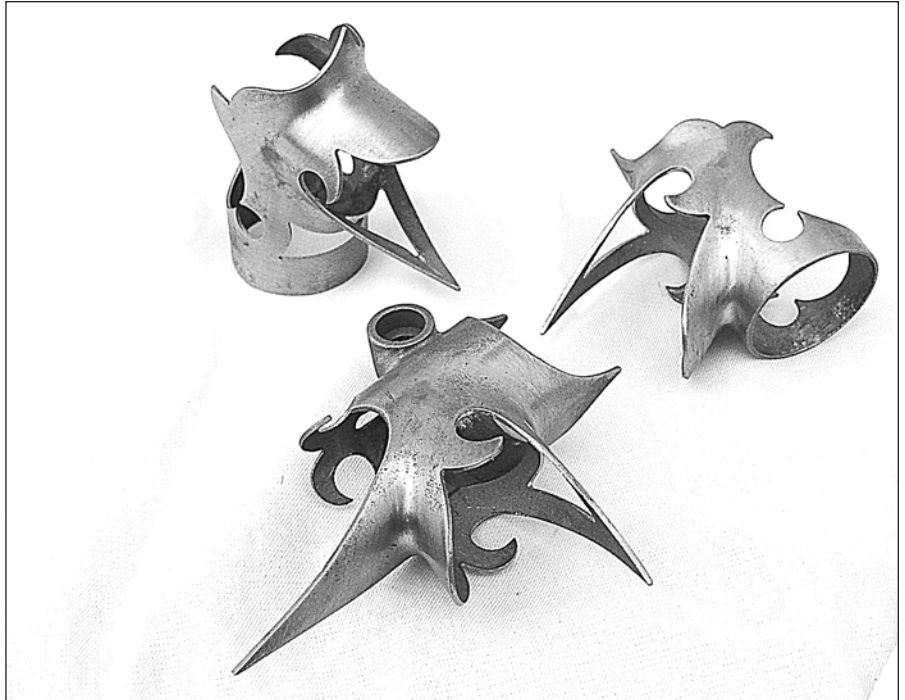
You'd never know, by reading normal bike mags and visiting normal bike shops, that there's a tremendous resurgence—fancy talkers would even call it a renaissance—of lugs. A good portion of the credit goes to Kirk Pacenti, who was recently let go from his post as custom frame designer at Litespeed, perhaps because of his involvement and passion for lugs. But that's another story.

A few issues ago we had a page about Kirk, and about how he's designed and contracted Long Shen to make really fine cast lugs with enough metal to serve as a canvas for a skilled and patient craftsman to carve up in a creative sort of fashion.

Small lugged frame builders, and there are no other kind, have been buying and carving and doing some Great & Fancy work. Here we show you two examples—one from the relatively unknown Wesley Gadd, and the other from the Ultra Famous Richard Sachs. Both of these lug sets were on display a few months ago at Dale Brown's Cirque du Cyclisme, sort of a celebration/conclave of traditional bicycle craftsmanship and styles, held annually in North Carolina.

There is certainly a whole lot more to a frame than fancy lugs. For a frame to be good, it has to be strong (safe), straight, well-designed, fit right, suitable for the intended use, and on and on. But once you've got that down, why the heck not have some nice lugs there to look at, as a bonus?

Let's say you eschew fanciness in all facets of your life. That's okay, too. Fancy lugs, simple lugs, medium fancy lugs—it doesn't really matter, and you don't have to lock in to one style only. The important thing, of course, is that there are lugs there, and that's getting rare these days. Kirk's contribution is fueling new interest in lugs, and some good, artsy things are coming out of it. Wesley Gadd and Richard Sachs show two of at least 500 possible designs.



Wesley Gadd's carved-up Kirk's lugs. Wesley is not a commercial frame builder. He builds for himself and a few friends, not full-time, not ready to carve some up for you. We're showing them here just to show you that good things happen below the radar, too.



As you know from reading RR29, Richard now has his own new lugs. But these here are his modernized version of the classic Nervex Pro lug set. You can tell they aren't the originals, because they're neat and clean, and have a head tube extension.

Member Profile: Ian MacArtney

Where were you born?

I was born in Caracas, Venezuela. I moved to England when I was three, and grew up there. My dad was a petroleum geologist, and he was assigned in 1962 to develop an oil patch in the North Sea. So my dad was the first guy to do oil development in the North Sea. I was 14 when I left England.

What was your first bike?

It must've been a Raleigh. Bicycles are much more a part of life in England than they are here. As a kid, you're expected to ride your bike everywhere. Part of growing up was bicycle riding rules, it was a part of the education program, learning the rules of how to ride a bike on the road. It was much more serious, which was great. And I still have my first Raleigh 10-speed, it's flamingo pink. I bought it in 1970. It's still hanging from the garage roof at my mother's house. Ten-speeds in England were very hard to find, they never really caught on like they did here. The British took a dim view of derailleurs and felt that all anyone really needed was a three-speed. My next 10-speed was a 1977 Motobecane Grand Record. Now I have a Rivendell.

How did you get interested in neon, and how did that lead to your business?

I first saw neon on visits to the States. Out in Wyoming there was the Wagon Wheel Club, and there was a pole that stuck up through the sign with five rings of neon on it, that chased back and forth, up and down. It was really wacky, Las Vegas-looking, out in the middle of Wyoming. That sign was probably built in the early 1950s. Later, I found some old neon tubes discarded at a defunct sign shop in Colorado in 1981. I was fascinated with these handcrafted tubes of light. One was an arrow in green neon, and I thought, *Wow— tube of light in a shape!* One of the tubes was broken and I found a place near Greeley to have it repaired. Then I discovered the whole process of making neon at that small neon shop, and I was hooked. Back then neon was really a dying trade. From the boom of the '30s, neon signs were being replaced with Plexiglass. That was in the '50s and '60s. The Earth movement of the '70s didn't help either, since you can't get earth tones in neon! When I moved to Grand Rapids in 1982 all (three!) of the glass benders were old men who learned their trade in the '30s and '40s, and to them neon was simply signs. To me it was *tubes of light*. I wanted to do as much with them as I could—make individual art pieces, lighting applications such as delineating architectural fea-



tures on buildings, recessed light covers...and signs! I worked at an ad agency and spent my free time picking up old neon and making wild art pieces with old tubes. I probably had 25 different neon things going on in my apartment! I junked out several old Holiday Inn neon signs and had tons of glass hooked up on chasers. It was fun. I sold neon to friends and finally quit my job in 1983. I had one customer, to do neon for a bar, and a toolbox. I figured I would find somebody else after the job was done. One thing led to another and here I am. Six employees (down from 10 last summer—it's been horribly slow!), 11,000 sq/ft building and more in debt than ever.

What is it about neon that makes it useful in clocks?

Well... everybody needs some kind of a clock, at home or

Member Profile: Ian MacArtney

work. People need clocks, and I like neon, so it made sense to make neon clocks for home or business use. I can train somebody to make neon circles in four months – far shorter than to do traditional neon lettering, which takes years. Clock assembly takes only a matter of weeks of training, although years to know all the ins and outs of the 10 different models. Neon in the clocks is simply as either a lighting element and/or a decorative element. Clocks are also a great fit with neon, round!

When was neon discovered? Does it have any other applications?

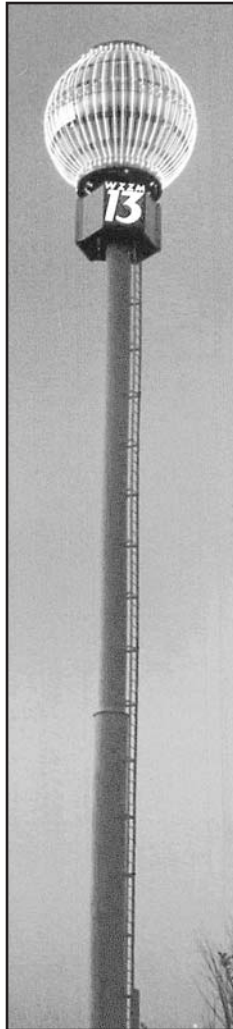
It was discovered in 1856 by Heinrich Geissler, and was developed by Georges Claude in France in the early 20th century, who patented the electrode (one on either end of a tube and is necessary for the high-voltage to energize the neon—making it floress—give off light). Claude made the first neon sign imported into the US, in 1923—a Packard sign that still works today! He sold franchises in 1924 for \$100,000!

Do you always use neon or are other types of gas ever used?

Well, neon gas is an orangeish red and out of that we get pink and orange with phosphorus coated tubes. You can't get blues, greens, or yellows from neon, so for those we use Argon. But neon or argon—it gets lumped as neon, anyway. We combine gasses with colored glass or coatings to get different shades. As I said, everything but earth tones.

How long will a neon clock last?

Mine will last a lifetime. The clock movements are made in Indiana with military grade motors and all-brass movements. I've taken apart clocks made in the '30s with the identical movements still working. I don't mean nearly identical, or "same concept." I mean the same company's *identical* movement. Our transformers contain just iron and



Ian cuts the wires on the Channel 13 Weatherball, on the way to a full restoration. The 15' diameter stainless steel ball mounted on a 120' pole in Grand Rapids is overlaid with 2880' of neon. A new one built today would run somewhere around \$200,000.

copper, no circuits to fail. The cases are all metal and glass. Only the tube supports are injected molded polycarbon plastic! My clocks are made by hand using the best materials, really expensive stuff, and they're as well-made as a clock can be. The lights don't wear out or go dim, either. Neon (or argon) tubes are a cold cathode form of lighting—the electrodes don't get hot to energize the neon unlike a typical florescent bulb which is Hot Cathode and requires a little element that eventually burns out. But neon is also less bright, operating at 8 to 60 milliamps whereas your florescent light fixture is 400 milliamps. These are lifetime clocks, not throwaways. You can buy cheap neon clocks, but they use cheap materials, don't last, and can't be repaired.

In my office I have 80 cakemixers and blenders. Most

Member Profile: Ian MacArtney

notably a blender made by Fred Waring in 1936. A beautiful stepped job, in chrome, with a glass jar. To turn it on simply turn the jar/top piece! Still works great. That's my inspiration. To synthesize the great engineering, chrome, utility, and neon. I want people years from now, to admire my clocks the same way I admire that blender.

Talk a bit about how your signs and clocks are made, the process of construction (how the gas is actually trapped in the tube, for example)...

First I bend the tube. Then I weld the electrodes on, and out of one is a "tubulation"—a 5mm tube we use to attach to our "manifold" —a processing station. We suck all the air out of the tube and use extremely high voltage to create an arc between the electrodes inside the tube. This heats up the glass, and sterilizes the tube for the very small amount of rare gas we inject when it's cool. It's still under high vacuum when we're done. It's a lot of work for one circle or tube for sure. The skill is in the glassworking to make sure all the welds are good so nothing leaks. The tiniest crack and it's all over.

Where are they made?

We assembled everything here in Michigan. Major housing parts are made in Chicago on my tooling, plated in Chicago, powder-coated here in Grand Rapids. All the neon is done here in my shop. Transformers come from Illinois.

Any really strange, interesting, or unique products that you've made?

Well...I made a 42" diameter clock for the US station at the South Pole cafeteria! Real custom job—brushed and anodized natural housing, blue dial with 'N's' for all the numbers (as all points North!) with a laser-cut acrylic continent. Blue and white neon. Or how about a sign for a strip club—"Showgirls" in animated neon, bouncing along up and down, and the whole thing rotating just like a real trashy neon sign should! Recently I restored a "weatherball"—a 15' diameter stainless steel ball with 2880' of neon overlaid in three different colors—red (Warm weather ahead), blue (cooler in view) and green (no change foreseen). Mounted on a 120' pole for a local TV station www.wzzm13.com (go the weatherball link for a live cam shot!) I originally took the neon off of it in 1987 when it was dismantled here in Grand Rapids!!

What's your favorite ride?

Over the pass from Tensleep to Buffalo, Wyoming. Sixty miles, 5,000+ feet of climbing then decent. Did it on my Atlantis a couple of years ago. I'm glad I had my triple. My

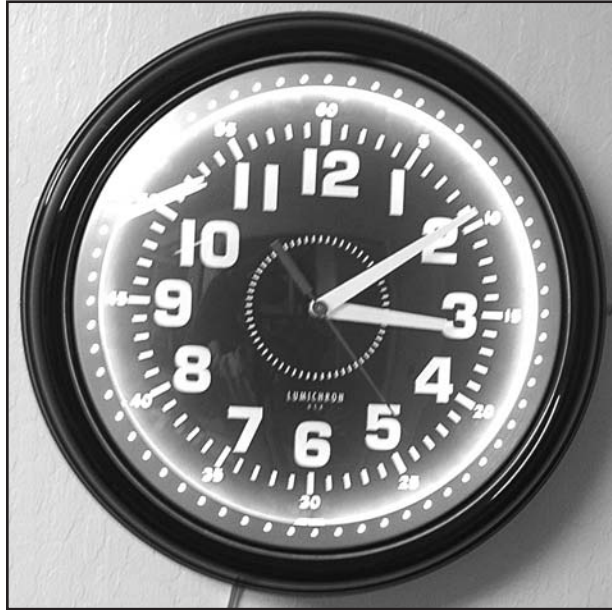
dream ride would be Bed & Breakfast around England or New Zealand. But I'd settle for Pedal the Peaks.

The bike you ride the most?

My Atlantis all winter with steel studded Nokia's, Roly-Poly's in the spring and fall—it's my 'wet bike;' my Rambouillet for when it's a bit damp; my Road when it's dry and all summer, those are my most ridden bikes. My Road is the choice for centuries, which I'll ride several of this summer and fall.

At one time I had six or so bikes, all with the same drivetrains, tires, steel frames and so on. It was sort of a joke, I thought, because how could anyone tell the difference between them? Over time I discovered that I could actually tell a difference. The bottom line was that the Rivendell Road had the best overall ride. I can't put my finger on it, but the ride is the best. Stiffness (climbing), agility, stability, comfort, weight, etc. Add to that the beauty factor (a new JB paint job this spring from black to red/cream with gold outlining), it's just an amazing bike! The Atlantis is a comfortable ride, but slower. It's a great bike for spending eight hours on.

As much as I want to do long bike rides, about all I can handle with family (wife, three children, 5, 11, 13) and work is morning workouts (a 13 mile sprint around a lake while everyone is asleep), and longer (sometimes long) rides on the weekends in the summer.



Here's one of ours. It costs less than \$200, looks great, never needs winding, is 15-inches across, and due to the nature of neon, it will be glowing brightly for 80 years or until the nail that's holding it up pulls out of the sheetrock.

while everyone is asleep), and longer (sometimes long) rides on the weekends in the summer.

Lumichrom

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Want To Be Here Sometime?

If you're a Rivendell member with your own small business, maybe it would be good to expose you to the rest of our members. We won't do you any harm, and maybe somebody out there will like what you have and want to get it from you. You need not be a Rivendell owner, just a member. You can't find out about this and join contingent upon our doing a story on you. But over the years we've learned that scores of our customers have their own bakery, or microbrewery, or book restoring business...and that's what we're looking for. Contact by regular mail only. Be patient. Don't send us anything that must be returned. Let's see how this goes. Two pages in the Reader. Ian got 3, because he was the first. But you'll get two. Send to:

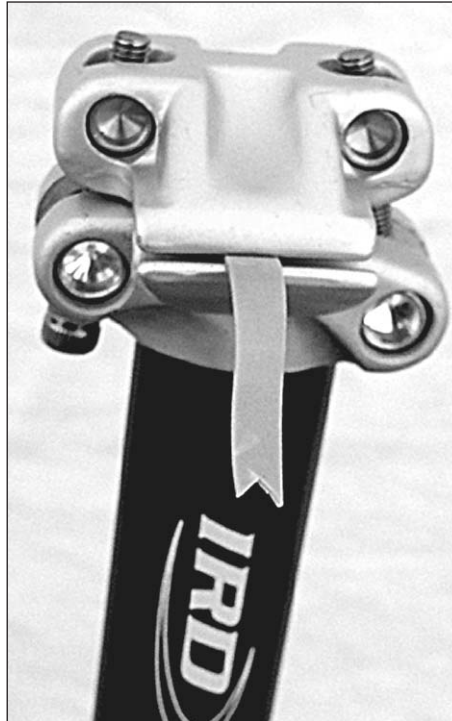
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Outer Space Weirdos Inhabit Seat Posts

Like their cousins the shoe tops, seat posts have been known to stare right back at you when you look at them a certain way. If you can't see faces here, ink in some pupils where you think the eyes might be, and see how that works for you. *Take that, shoetops!*



Back in the Bstone days, I recall the Taiwanese parts guys referring to the seat post on the left, a Taiwanese knock-off of a Campy post, as "ET".



This IRD model is the most convincing seat-post related proof yet of extraterrestrialsim.



The other one is unidentified, but seems a normal American no-offset style. Though we know it's from outer space, it looks more like a pirate or a jungle warrior or a gypsy, egging on all challengers with the come-hither finger-like fangs and African earrings.

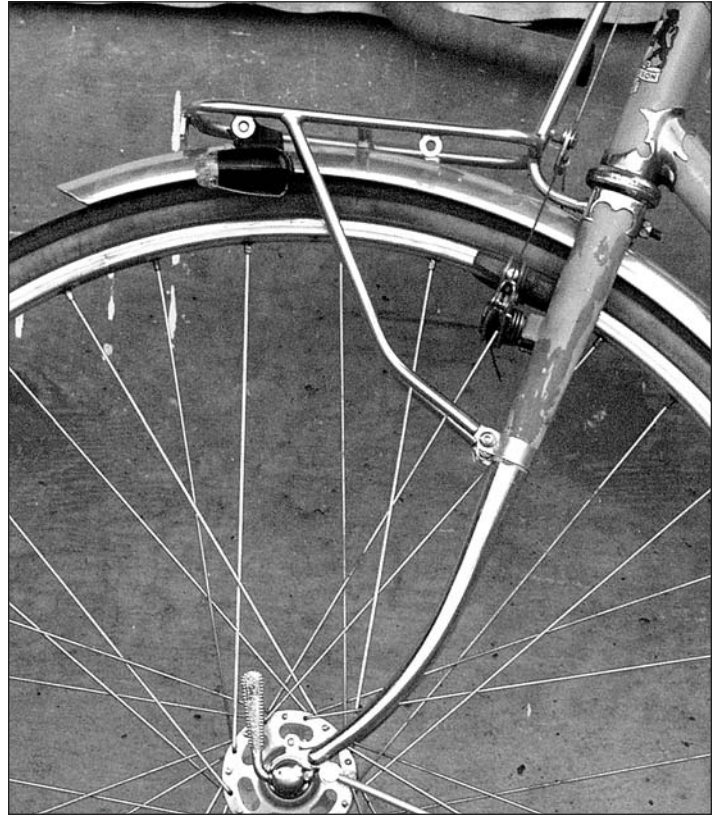


Pa Cartwright's Panniers Shippable October 25

These were a pain, but boy are they good. The L and R bags are separate-but-joinable by the panel you see there (lace them any number of ways, or use zip ties). So you can use one or both at once, and the same set of panniers works as regular rear panniers, or as low-rider fronts. You have to buy into our crudely simple design approach to appreciate them, but once you're there, these are the only bags you'll want or need. To keep the price down to \$115, we eliminated the type of cleverness that overwhelms Topeak bags, for instance. Rather than five outside pockets, you get zero. Rather than two mesh catch-alls, you get zero. Rather than built-in reflectors, wing it yourself (it's easy). Rather than DuPont's latest version of Cordura, you get waxed cotton that's been virtually unchanged for 50 years. Rather than super-convenient Fastex buckles, you get no buckles at all, but a foot-long piece of Genuine Minnesota Alder you can fasten straps or cord to. The photo shows Irish straps holding things down, but you have to figure out your own straps (it's easy, we supply suggestions). For sheer simplicity and utility, and for real (not fantasy) touring, you'll find these Pa Cartwright panniers to be just right. Instructions included. Capacity, about 2000 sq. inches/pair. Available October 25. Part No. 20-082; \$115.



Brand X late '80s. Fatter lower legs, less rake, straight section before the dropout.



Brand X early 70s. Skinny lower legs, more rake, swoopy bend continues to dropout.

A Tale of Two Fork Rakes

Forks are a lot like canned food labels and advertising art in general, in that the older ones looked better than the newer ones. There may be some exceptions. I mean, certainly you can dredge up a hideous 30-year old fork off of a crummy bike, and compare it to—well heck, Richard Sachs seems to be dominating this issue anyway, so let's say you could compare it to one of his forks—and in that case, the newer fork would win.

But when the comparison is more apples-to-apples—meaning equivalent quality bikes from way back then and now—you could mix up a batch of 60 forks 50-50, and have no problem whatsoever separating the olds from the new ones, even if they were all steel and had fork crowns.

The straight-bladed fork is particularly hard to warm up to, no matter what it's made of. For me, anyway. On these forks, the blade sockets are offset at the fork crown, so the forks still have rake, even though the blades don't curve. It's a manufacturing shortcut, which would be a good thing if it didn't look so harsh.

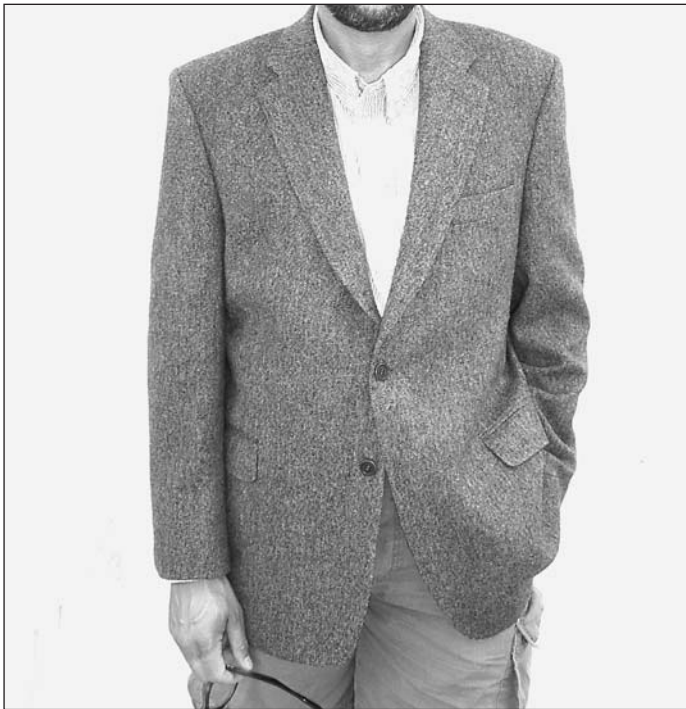
Carbon forks don't look good, either, and most of them aren't designed with looks in mind, anyway. A friend who works for a cycling publication in Taiwan, said that

when carbon forks first appeared, the makers tried to simulate the bends on nice steel forks. But when they slenderized the carbon and gave it a low, small-radius bend, the forks broke. So they went back to a large, banana-style radius, which put the bend up much higher on the blade, where it couldn't flex and snap. I think that's a good idea, since a fork is one of the last things you'd want to break on a bike.

Back to the two forks shown: The one on the left is typical of a modern steel fork rake. To my way of thinking, and considering the scarceness of steel forks these days it's quite a nice looking fork by modern standards.

But look at the old fork to its right. The curve is smaller and lower, the blades themselves are slender (as only steel blades can safely be), and it has a graceful look to it that the other just doesn't have. The new blades have a diameter of 13.5mm at the dropout, and the old ones are 11mm. The thinner old blades can be bent tighter without crumpling. Nobody makes fork blades that skinny anymore. The closest to them that we've found is an old-pattern Reynolds blade that shrinks to 12.5mm at the bottom; and we use this as the standard blade on lots of custom Rivendells (for sidepulls). But I think I'd even rather have the 11mm blades up there.

Good Things Review



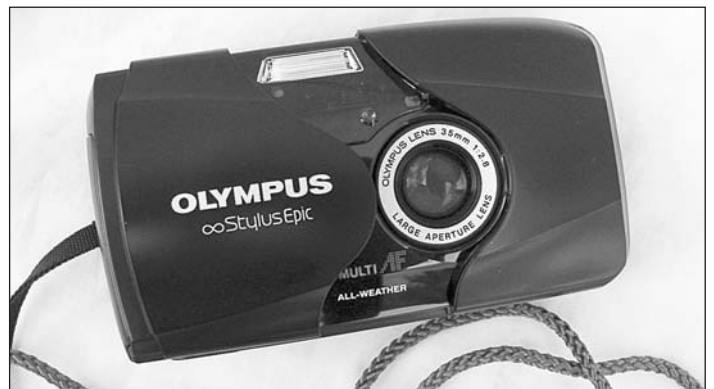
Donegal Tweed Jacket. If you've got all the indoors-only Euro-styled & China-made designer jackets you need, or you're just looking for one that's more manly and still won't get you kicked out of fancy places, go straight to Ireland via the web. For \$299 plus maybe \$30 shipping, you choose among 23 Donegal tweeds, with reasonable customizing thrown in free. From Murphy of Ireland (murphyofireland.com). A small, super friendly, personal business. Mention that you heard about them here, just for fun.



Zanfel. I/Grant grew up living with poison oak, and got at least 2 cases every summer. I'd get it on my hands, go to the bathroom, and you know the rest of the story. Back then all we did was slather it in Calamine lotion, or pour bleach on it (but not down there). Recently, there's been Tecnu, which works okay, but takes several days to work. But now this stuff—Zanfel—reportedly gets rid of it in 30 seconds when you follow instructions. One of our members has already tested it and says it works as well as Paul Harvey promises. Ph: 1 800 401-4002 Website: zanfel.com. Now the Zanfel zinger: A 1 oz tube costs \$40 at Rite-Aid. If you've ever had a bad case of oak, you know what a bargain that is. Gone in 30 seconds, it claims. That's worth \$250, easily.



Gransfors-Bruks Mini hatchet. It's made in a hundred-year-old forge in Sweden, where they take their cutting implements seriously (the Swedes also being known for their saws). Made by Gransfors-Bruks, it's just 10.5-inches long and 13.5oz—which means it's light enough to take touring, where it will eventually pay its weigh in making campfires and adding just that much more security when you get up at night to go to the bathroom (note: That is a joke.) And it's short enough to fit into a handlebar bag, which makes it ideal for commuting. See Gransfors-Bruks.com. We'll sell them after Thanksgiving, as the ultimate manly stocking stuffer. Price, about \$80.



Olympus Stylus Epic. Fixed-lens point-and-shoot cameras are going the way of A-frame backpacking tents, and now there are only three left. Everybody wants zoom lenses, but a fixed lens is way less likely to foul up on you or need repair, and this one, at f2.8, is really fast, good for low light. It's the next best thing to the discontinued Yashica T4, and some folks like it even more. It's just 2 1/4" x 4 1/4" x 5.3oz. It shoots fine photos, and is ideal for cycling. Less than \$90, and lots of places have it.

Descent Without Brakes

By Duane Hutchinson (Reprinted from an old issue of Bicycling!...early '70s)

My bicycle quickly gathered speed as I followed the ribbon of asphalt threading its way down through dark oak trees. The cool wind felt good on my face. Perhaps I could get down to the valley and make camp before it was completely dark. With only fifteen miles to go and going perhaps thirty-five miles an hour at times, I shouldn't take too long.

Thirty-five miles an hour? It seemed as if I might be doing fifty at the moment. Already I had to lean low on the curves. The slope down seemed steeper in its way than the upward climb had been.

During mid-afternoon I had begun the long climb up to the Cumberland Gap. My lightweight bicycle was loaded with forty pounds of camping gear, and I was determined to cycle across the range of the Smokey Mountains.

More than one passerby along the road had warned me about what lay ahead. In the first place, they agreed, I would never be able to ride up the mountain. They claimed no one had ever done it. Eyeing my bulky baggage they assured me that with all that extra weight, I would be worn out from just pushing the load to the top on foot. But their real concern was with the trip down the other side of the mountain once the summit had been gained. Unless I kept in very careful control, bicycle and all would go careening over a cliff. Thus cautioned, I remembered having seen the wreckage of a truckload of shelled corn, which had taken its driver to the bottom of a steep Ozark ravine. Probably corn would be growing there for years to come.

Still undaunted, I continued the grueling ascent. The climb started badly because at the sign announcing the beginning of the Cumberland elevation I was already in my lowest gear. It was hard work. Cars passed and appeared to go so easily up the grade. My weight to power ratio was very poor, and I was suffering now under the weight of my equipment. But the camping gear would pay off in dividends during the days ahead.

I was standing on the pedals now, and would have to



remain out of the saddle most of the way. The alpine gear I ordered had not arrived, but vacation time had.

The miles slowly slipped behind me as the afternoon wore on. It occurred to me that, if the natives were right, I might be the first to conquer the Cumberland Range on a bicycle! This idea spurred me on (even though I was sure many cyclists had made the crossing) until I spotted the sign announcing Cumberland Gap reflecting the last rays of the setting sun.

After a gasping rest I began to consider the descent. The warnings of the natives seemed to have a new seriousness now. Nevertheless, I felt that many things could be done to keep a bicycle from running away. "There won't

be any trouble," I thought with smug confidence. This should be the time to enjoy victory, not to indulge in worry over the future.

I checked over my luggage and tightened a strap here and there. The heavy tubulars looked all right, and were stuck fast to the rims. I pulled up the collar of my poplin jacket. It was cold here on top, and it would be colder by morning.

With a resolute shove I rolled past the orange sign warning: "Danger! 15 Mile Slope. Check Brakes. Use Lower Gear." The fading sun clothed the distant peaks and ridges in amber, but the valley looked dark and mysterious. What curves and unknown danger lay ahead I could not guess.

Now as I plummeted down the other side of the mountain, I could feel the pressure on my forearm as I crouched down on the drops of the handlebars. Just as I saw a sign announcing a sharp curve ahead, I heard a car coming up from below. I applied the brakes lightly to stop my acceleration. It would be better to be going a bit slower in case one car might be passing another. Because it took a surprising amount of force to slow my pace, in growing desperation I squeezed the brake levers with all my strength. Two cars swung around the curve ahead. It wasn't until they had gone on past me that I could smell the hot rubber of my brake blocks. They were taking a lot of punishment.

Just as I was thinking about the dangers of deferred maintenance, my front brake cable snapped. A terrifying chill swept through me as the bicycle seemed to leap forward.

For a split second I must have been mentally paralyzed because I remember how the trees came at me from the side of the road at the curve. I lay into the turn so quickly that I hadn't time to get the inside pedal up and it sent chips flying as it scraped the pavement. I survived the curve, and was relieved to see a straight stretch ahead. It didn't look so dangerous. Perhaps I could zigzag here a bit to slow my momentum. I began to whip from side to side, taking the whole road for my slowing maneuver. The grade didn't look particularly steep yet the ricocheting tactic seemed to have no slowing effect whatever. Sometimes in the mountains, I learned, even the level-appearing placing can be very steep. It was rather a cruel optical illusion at this point to race toward destruction on a safe-looking stretch of road.

I pressed my gloved palm down hard on the front tire, but the glove was too thin to offer sufficient protection. The wind ripped at my clothes and made tears stream in

rivulets from my eyes back into my ears.

A series of "S" curves came up this time. I was too busy to read the signs, which probably warned me to be cautious. I tired wedging my shoe between the tire and the frame on the front wheel. This had a braking effect, but it also could bring sudden disaster if the shoe drew in too tightly and locked the wheel. The thought of an end-over flip at this speed unnerved me. Anyway, I was so busy with curves that I needed my legs on the pedals for balance. "Oh, don't let there be any loose gravel!" I gasped.

Another curve disclosed a car immediately ahead of me. This time the car was going the same way I was going—down—but at a fantastically slow speed it seemed. I had to turn sharply to avoid hitting it; it came up so fast. As I flashed around it, the driver gaped in amazement. How I wished for some way to grab on to him.

My eyes were streaming so much in the cold wind that it was hard to see. It was getting darker. The cars I met had their parking lights on. In the midst of my agony I wondered, ridiculously, what sort of speed record I

might be setting. Two more cars going down; I passed them as if they had been standing still, but I could tell by the squeal of their tires that they were going fast too.

I had visions of myself plastered flat against a big boulder or flying off into space to end up who knows where. A sharp curve was coming up fast, but there was no rock. The curve just seemed to tip up with nothing but ruddy sky on the other side. Thank God for curves that are banked properly.

I started the curve low inside, lying down as flat as I dared, and taking the whole road, coming upright in the other lane. No cars? Yes, headlights, but far enough down the road to let me get back into my own lane again. If no, it wouldn't be a bloody boulder but a car bloody with me all over the grill. Close! I made it this time, but one more curve and a well-placed auto could end my whole adventure—if not my life.

Even as I prepared for the worst, the best came. A slight turn in the road and a "Y" appeared. The highway turned and led on down the mountain, but the road, which appeared to go straight ahead went up. It was smooth enough to take my speeding mount even though it was a dirt road. Sailing onto the "high road" I felt the beatific sensation of slowing down. I slid to a stop on the crest of a knoll and saw laid out below me the twinkling lights of a town in the valley. I had counted death for fifteen plunging miles and I was still alive.

I lay into the turn so quickly that I hadn't time to get the inside pedal up, and it sent chips flying as it scraped the pavement. I survived the curve, and was relieved to see a straight stretch ahead. It didn't look so dangerous.

Bikewear For Hot--n-Muggy Weather

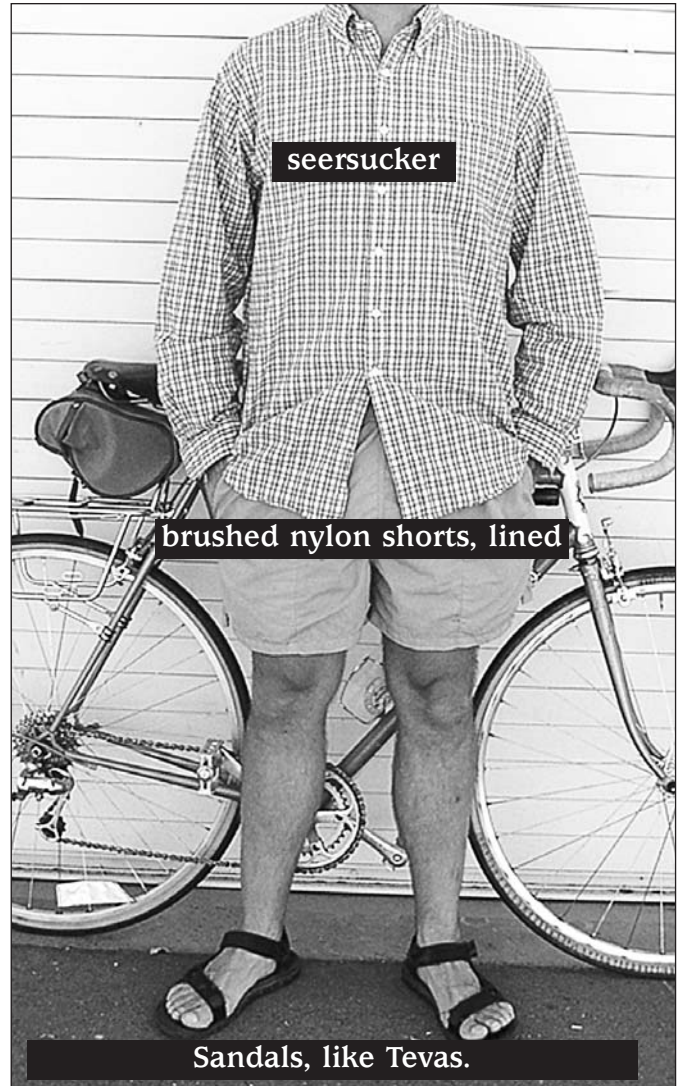
When the temperature's up around 100°F, or 90°F with high humidity, and you're just out for some solo exercise or you've got to get somewhere, and you don't have any particular need to Look Like Lance, then you'll cause no ruckus and will probably be more comfortable if you dress down. Here's a way that works.

Top: Seersucker is great, because the crinkles keep it off your skin. Long-sleeves are the shadiest, but are hard to come by (Bean's Spring catalogue has them, but they sell out by June). Short-sleeves are fine, but less arm shade. No seersucker? Any light woven shirt. Optional: Sleeveless wool undershirt. Take it with you, anyway, if you'll still be riding in the evening.

Bottoms: Andiamo underwear with lightweight nylon baggies. The baggies usually have a thin liner, and for shorter or less sweaty rides, that'll be all you need down there. For longer rides, Andiamos add comfort and soak up sweat, both plusses. We prefer this to any "casual" bike short with a built in diaper. This way, you can wash the shorts and undies separately, as needed.

Feet: Sandals! Shimano if you click-in, or Teva/Teva-copies if you don't. With or without socks. Variation: Sneakers. It's not a matter of protection in crashes as much as protection from stickers or mud. Either way, fine.

Don't dismiss this hot weather system until you've tried it. For hot weather rides at less than race pace, it's hard to beat. And since you probably have all the component parts in your closet already (except for maybe the seersucker, which you should have in there), the investment is minimal; and you can wear everything off the bike, too.



What's Wrong With This Picture?

Don't be so quick to say, "Puffy shirt." This rider, not one of us, is wearing a short-sleeved seersucker shirt, tucked in. The wind enters the sleeves and neck, poofing the fabric away from his skin. That provides shade without the feeling of hot fabric on skin. Aerodynamically—well, our catalogue explains how much importance we place on that, but still, it's not so bad. It's not flapping. It's fairly smooth.

Another approach is to leave the shirt untucked. You'll still get the benefits of puffiness, but the shirt will flap. What you give up in aerodynamics, you gain back in convection, since a flappy shirt fans you as you go.

The baggy shorts do the same: Shade without hot fabric on your skin. The shorts here are belted, but we generally prefer normal lightweight supplex nylon water shorts, like the ones shown in the other photo.

This is no cover-boy/get-a-date look, and we don't expect bike shops to start selling casual clothing, but for hot weather, it is hard to beat. What's to lose? If you don't like it, you can still wear the clothes to the beach, grocery store, or fast food joint.

So: What's wrong with this picture? Send a postcard (only) with your answer to: RBW/What's Wrong? • Box 5289 • Walnut Creek, CA 94596. The first 30 correct answers win a \$20 Gift Certificate. Include your name and member number.



The Romulus and Redwood versus a Normal Modern Road Bike

Everybody here is so proud of the Romulus & Redwood, and in 17 years of designing and spec'ing bicycles, I've never seen a road bike so well-designed and equipped for so little money.

They're hand-made by experts who go slowly and care a lot. All of the fittings are investment-cast, well-designed and proprietary to us. The clearances are correct, so you can adapt it to wet weather and rough roads, easily. You can ride comfortably all year long, in all weather, and you can ride it on surfaces way out of a normal road bike's league.

Compare it to any off-the-shelf side-pull-equipped road bike. Will that bike fit a 700x38? Probably not. Will it take fenders with a tire up to a 700x35? Good luck. Does it have eyelets? Unlikely, because hot-shots snicker at them, and why put eyelets on a bike that can't take fenders and is unsuited to carrying anything larger than a CO2 cartridge and a cell phone? Can you get the handlebar up to or higher than saddle height? Unlikely, certainly not elegantly. If you break a rear spoke, will the tire still roll through the frame? Probably not, because they never put enough clearance back there.

Typical modern road bikes are slightly lighter, but they get their lightness by toeing the line between strength and durability, by using materials that are lighter by volume than CrMo, but not nearly as tough. In any case, most of the weight difference is in the parts, and the lighter parts are either way more expensive or not as safe. Any frame that's way lighter is an accident away from the landfill.

So the typical modern road bike is a fair-weather, smooth-road bike that's not going to be nearly as comfortable on longer rides, and won't likely even be rideable if you break a spoke. The Romulus & Redwood are smart, versatile, strong, comfortable. We ride them, too, and that's how we like them.

Graphics! The soft pearly blue of the Romulus (and equivalent green of the Redwood), and the simple graphics and the real head badge look just right and aren't too loud.

At \$1550 (no saddle/pedals/bar tape) to \$1700 (typical "complete" price), the Romulus and Redwood are priced right in there with barely-over-entry-level road bikes, but they're made to last a lifetime. These are comfortable, classy, intelligent bikes you won't outgrow.

We didn't put any throwaway parts on them. If you're used to Dura-Ace or Ultegra, you may turn up your nose at 105, but I think it's the peak of Shimano's value. The Romulus and Redwood have Dura-Ace bar-end shifters, which are the only 9-speed indexable ones made (with friction option). And the crank is a Sugino XD, which is far and away the best value out there in a crank. It's a smart 110/74 bolt pattern, and we've equipped it with 48x36x26 rings, which is a way more useful way to go than a standard racing triple 52x42x30.

The Ruffy-Tuffy tires are the best cornering tire (along with the Roll-y Pol-y) we've ridden, and with an extra mm of tread and a kevlar belt, they're as flat-resistant as a lightweight road tire can be. And, you'll get at least 3,000 miles from a rear.

We have about 15 left in each size, and expect them to be gone by mid-December. There will never be a better value, even from us, on a road bike. So, if you want a super good road bike you'll ride for 20 or more years, for the same price as you'd spend on a mediocre bike there's no way you'll be riding in 8 years, get a Romulus or Redwood. You can buy from us direct, or from one of about a dozen dealers nationwide. Find them at: (rivbike.com/html/bikes_romulus_10.html)

If you already have one, thanks—and good choice.

Who Eats the York Mint Patty?

(a quiz)

Albert ~~Eisenstat~~ Einstein made up a similar quiz and said that 98 percent of Americans couldn't get the answer. It isn't clear whether or not that's a slur on us Americans. All I did was substitute bike stuff for non-bike stuff, so if you complain about the quiz, complain to the heirs of Einstein (heirsofal.com), not me. Unless I've unknowingly changed some detail, and now the quiz is either unsolvable or has multiple answers, but I don't think that's the case. If you take this quiz and want to win a prize for a correct answer (there is only one question, there in the title), then it's no fair discussing this online. In fact, and at the risk of getting a whole bunch of folks steaming mad, I'll even go so far as to say that IF this quiz is discussed online, then nobody will win anything, even if you're not guilty. It's one of those cases where somebody really can "spoil it for the rest of us," so to speak.

There are 5 riders in a row. They're riding leftward to Olde Mille Ponde. Each wears a different color jersey, eats a different snack, uses a different saddlebag, rides a different brand of bicycle, and uses different handlebars.

Leslie is wearing a red jersey. Kim has a banana in a Banana bag. Jean, from France, rides Noodle bars.

The rider in the green jersey is immediately in front of the rider in the grey jersey. The Romulus rider is looking forward to eating a PBJ under the shade of the tree by the Ponde. The rider on the Atlantis is wearing an orange jersey. The rider in the middle has Moustache Handlebars. Lynn cannot see a saddlebag of Any Sort.

The Rivendell rider is next to the rider who is looking forward to eating fig bars when they get to the Olde Mille Ponde.

Next to the Atlantis rider is the rider who the rest of the group describes as a "Black Licorice fiend."

The rider on the Rambouillet has Albatross bars. Tall Alex rides a Redwood.

The Rivendell rider is next to the rider with Dove bars. Not the cold kind that come on a stick.

When they all get to Olde Mille Ponde, who will eat a York Mint Patty? (assuming it hasn't been eaten and is not being saved or traded. Just assume that whoever carried it will eat it. We are not trying to trick you.)

This is an individual quiz, not a group one. Pretend you're in school. It is not fair to hunt for answers, or compare notes or talk about it online. If we get wind that any of that has happened, then the whole quiz gets thrown out, no questions asked. But if that doesn't happen, winners will be awarded a \$13 Gift Certificate.

Entries must be postmarked before November 15, 2003. No fair complaining or demanding that we honor your perfect score just because you got this issue after that. Around here, cut-off dates are semi- sacred...unless you're a lawyer, in which case, take your time, we'll be here.

Name:

Member No.

Address:

City:

St.

Zip

Answer:

Mail to:

RR30 York Mint Patty Quiz

Box 5289 • Walnut Creek, CA 94596

or fax to: (1 (877) 269-5847 (1-UPS COW LUGS)

Who Rides a Rambouillet?



Kathleen Hannon

Age: 25

Job: Building engineer

Hobbies: Ski touring and bike touring

Favorite books or author: John Steinbeck

Favorite movie: Harold and Maude

Favorite Food: Lentils and rice

Years riding: 25

Typical ride: From San Francisco, across the Golden Gate bridge to the fire roads in the Marin headlands. Then back.

Dream Ride: Europe to the Pacific Ocean, over the mountains

Other bikes owned: Battaglin, Ritchey Super Comp mtn bike, Schwinn cruiser

Why this bike? I like brevets now and I needed a good bike for comfortable, long-distance riding. I'm riding this bike in Paris-Brest-Paris this year. It's in the middle of August. (Note: Kathleen crashed this very bike about 10 days before PBP and called us for help, or something. We got her a replacement frame fast and cheap in 4 days, and her damaged frame is being fixed and will be made as good as new. So then she'll have two.)

Kathleen is the kind of rider who, without any effort at all, makes insecure guy riders quiver, and insecure women riders go into a funk. She tackles long, adventurous rides with a carefree attitude, doesn't think or care too much about her bike. She just rides a lot. Two weeks before PBP, while in Switzerland, she crashed her Rambouillet and buckled the tubes. Most people I know would have freaked out, with two weeks to go before a huge event like that. Kathleen called from a pay phone in Geneva, was all ready to get it fixed over there, but we sent her a new frame anyway, and she'll send her old one (pictured) back, and Curt will fix it. Then she'll have a spare; not a bad thing.—GP

Who Rides a Rivendell?



Bob Cauthorn

Age: 47

Job: VP of Digital Media, *San Francisco Chronicle*

Hobbies: playing with my children, hiking, riding

Favorite books or author: *Times Arrow*, *Martin Amis*, *Prague* (by Arthur Phillips), and I'm rereading *Moby Dick* for the tenth time—it's still stunningly modern and fascinating.

Favorite movie: *The Sacrifice*; any Hitchcock.

Favorite Food: Something with a lemon in it.

Years riding: 42

Typical ride: All over San Francisco, over the hills, over curbs, cutting through traffic. Street riding; and weekend rides in the uncongested outlying areas.

Dream Ride: Across the U.S., then to Europe. Then kind of everywhere.

Other bikes owned: Seven Alaris, Moulton FX-80, Brompton T-3.

Why this bike? Craftsmanship matters in this world, and at the same time, it rides like a dream and is a good urban warrior. It kicks butt when you need to get frisky on the streets. It wants to chase buses and tour the country. It's elegant, tough (name: Buster) and brilliant. I ride it to work and home every day, *and* on the weekends. Plus, and don't take this the wrong way but it's true, it's so beautiful that even the local homeless people just want to look at it.

When Bob came over to pick up an order, we got to talking, and I asked him about his commute to work, down Market Street in San Francisco. It's a lousy street to ride on, if you ask me, so I was surprised to hear Bob yelp so enthusiastically about it—mainly about how fast he goes on it. He clicked his cyclometer and revealed that today's top speed was 47.8mph, noting that he generally hits between 47 and 50mph every morning, Monday-thru-Friday. I've gone 52mph once, down a steep road in the Berkeley hills. The fastest I can go down the Local Mountain is 38. So, at near 50mph, wow—which shoulder does the tie fly over? —GP

One Centimeter

by Maynard Hershon

Once upon a time, my friend Judy ordered a bicycle from a fine shop here in Tucson. It was her dream bike, a frame built just for her by a local builder, assembled with new top-level parts. The shop measured her and studied her position on her old bike. They ordered the frame and parts, including the appropriate bar, stem and saddle, so the new bike would fit her perfectly.

There was no package-price. The bill reflected charges for each item at full price. This part is this much, that part is that much. Assembly is included. Here's the total...

When she went in to pick it up, it was glistening, lovely, worth every penny. She'd brought cycling shoes and shorts so she could sit on the bike and clip into the pedals for a last check, to ensure the bike was indeed perfect for her.

When she was in the saddle and clipped in, the store's bike-fitter looked long and hard at her position, especially her reach to the bars. He decided Judy would be better off with a stem one centimeter longer -- so her handlebars would be just a bit further from her new bike's saddle. The setup was one centimeter from perfect -- in his view.

In the days before threadless steerers and handlebar clamps that unbolt, switching stems was a lot of work. You had to unplug and untape one side of the bar, remove the brake lever from that side and probably undo the tape holding the brake cable to the bar.

You had to loosen the stem binder and remove the stem from the steerer without kinking the brake or shift cables. Then loosen the clamp and wiggle the bar out of the stem.

At that point, you could reassemble with a shorter or longer stem, hoping that the one you'd just removed hadn't become scratched and hard to sell. Lotta work.

With that in mind, the shop guy told Judy they intended to charge her 10 dollars for the stem-swap. The 10 bucks was n't payment for the new, longer stem. That, they'd exchange. They just wanted to cover the labor.

Judy was stunned. She'd just spent hundreds of dollars for a bike designed and made just for her. The good bike shop had fussed and fretted over small-stuff so her bike would fit her perfectly from the first pedal-stroke. Somehow it didn't. Now they wanted to charge her to make it fit the way they'd assured her it would. Is that fair? She didn't think so.

I don't believe Judy said anything at that time. I know she took her bike back to that shop for post-sale services and re-truing of the wheels. Stuff that was part of the deal.

She never spent another dime there. It's been more than 10 years since the day of that bike sale and stem change, when the shop lost her forever. Let's look at what happened.

No doubt the guy who suggested the stem change was sincerely looking out for Judy. He must've felt strongly that she needed a longer stem, because he wasn't going to make

friends in the repair shop, asking them to partially dismantle a slick new bike they'd just built.

When he told Judy the stem change was not part of what she'd already paid for, he didn't ask her if the \$10 charge was going to spoil an otherwise fine bike-buying experience. If he DID ask, Judy must've brushed off the question, not wanting to sound cheap or overly demanding.

By the way, some shops today (in the age of production pro-bikes) not only charge for labor to change the factory stem, they sell you the new stem and hand you the original one. Hey, it's not new anymore. Hard to sell. YOU keep it.

My feeling is, the shop that sold Judy her bike had a right to charge her for that stem-change. It's not assembly labor, it's RE-assembly labor. They didn't try to charge her for the new part, only for the time it took to install it.

Bike fitting, despite all the technically advanced systems available to shops, is not an exact science. You can design and build up a bike as painstakingly as you have time to do. Still, when the customer sits on it the first time, you often see where you might have done things differently.

You might see that someone like Judy needed a slightly longer stem. But the salesperson should've asked Judy if that \$10 charge seemed unreasonable or insulting. Evidently he didn't. He figured she'd understand that the store had to pay someone to do the work. He hoped she'd gracefully accept the extra charge.

On her part, she didn't speak up, telling him it did indeed seem unfair. She just went away -- permanently.

Because the salesperson tried so hard to do a perfect job, he unwittingly cost the store a previously loyal, happy, high-end customer. Had the guy never said he felt the bike needed a stem change, Judy surely would've ridden contentedly off into the sunset on her new bike.

And bought a few others from the same store since then.

What would you tell that guy?

Would you tell him to keep his mouth shut about last-minute changes, even if he believes they'd be beneficial? Would you tell him never to ask for payment for unforeseen changes - although the repair guys will resent his giving away their labor?

Would you tell him that he should be more attuned to his customers' responses? How attuned is attuned enough?

The salesperson has to be super knowledgeable about all aspects of cycling, metallurgy, musculature, marketing and manufacturers' suggested retail prices. He has to deal with sincere shoppers and utter time-wasters. He has to keep the Oakley cases dust-free. And he has to read minds.

All for \$8 an hour. Sound good to you? Me neither.

The Catalogue Page

including some items offered for the first time. So please look it over. Also, any order for \$100 or more with at least one item from this page (the rest can be from the catalogue or online) gets free shipping.



SILCA Mini-Pump
#28-023...\$16

Made famous in the Rivendell Reader. Presta valves only. 4oz. It's telescoping, easy to pump, but still takes a 100 strokes to get it a Ruffy Tuffy to 45 psi, which will get you home.



ROSCOE Floor Stand
#19-071 \$20

This little bugger makes life easier, and will get plenty of use. Anybody with more than one bike ought to have one.



English Dumbbell #19-063 \$5

One of cycling's ancientest tools, this dumbbell costs next to nothing and fits hex nuts from 6 to 15mm. We consider it as essential as a Roscoe floor stand. Made by the same maker who introduced it 70 or so years ago. Not just nostalgic and cheap, though—it's useful, and we like it.



Obenauf's Leather Goop:
4oz Tub
#31-344 \$8

The best leather preservative we've used, and

our top recommendation for leather saddles, leather trim on our bags, shoes, boots, belts, and ball gloves. If you've got leather, get a tub of this. Developed by firefighters, and made with beeswax and propolis (another bee-made substance). No bad smell. It works great.



LADDIE 2-Pack #31-372...\$1

If you had to take one writing instrument anywhere in the world, and you couldn't get a replacement or refills, you'd be nuts not to make it a Laddie. Made in the U.S. by Dixon Ticonderoga, it's fatter than a normal pencil, with thicker lead that never breaks, lasts almost forever, and rarely needs sharpening. Any stationery store sells cheap, 2-hole sharpeners, and the fatter hole works for the Laddie. But if you become as enamored with them as one of us here is, you'll want to get a bolt-down/semi-industrial sharpener. Office Max sells a Boston model (made in the U.S.) for \$16 and gives them a longer point than the hand-holds. It's not the Ranger 55 (the one recommended in our catalogue), but it's just as good, from a practical viewpoint, and it's simple to get. Anyway, one dollar for two pencils that'll last you years. You can't beat that.



TOMBOW ERASER
#31-043 \$2

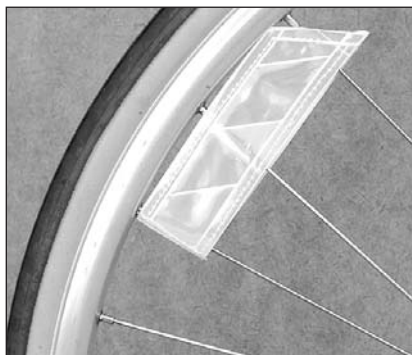
The preferred companion piece to the Laddie. It's white,

and all the Bstone engineers and dignitaries use this one. Seventeen years ago, I brought out my Staetler-Mars and challenged Tom Iijima to an eraser test, and his Tombow blew mine away. Apologies to any of you who work for Staetler-Mars. You never know what you're getting into when you make a statement like that. Anyway, these things are not imported into the U.S., so give up finding one at Office Max. Plus, they're enough of a hassle to get that we're probably going to drop them. So buy a few of them now.



ANKLE REFLECTOR
31-370 \$5

I've used this reflector for more than 19 years. It has more reflective surface area than any other, and has uses off-the-ankle, too: As a bike reflector on the seat stays above the brake; as a pump-securer to prevent fall-offs. But mainly, it's for your ankle, where its up & down movement tells folks you're pedaling a bike. White or yellow Reflexite, no choice, both are fine and reflect like mad.



WHEEL REFLECTOR
#31-371...\$5

At night it helps you be seen and instantly identifies you as a cyclist. No substitute for lights, but when you're caught out there without lights, man, one of these could prevent severe whiplash or worse. Weighs a few grams, doesn't throw the wheel off balance or mess with spoke tension, and it goes on and off in two seconds. Super bright Reflexite. White.



Wooly Tank Top
\$28
SM #22-343
M #22-344
L #22-345
XL #22-340

These are super all-wool Australian-made undershirts that are the result of a miscommunication, and as a result, they aren't in the catalogue. We have the ones in the catalogue, the sleeveless. These are more

undie-style still, but without the super thin straps that some have. They're light, all-superfine merino wool. You can't beat them for a base layer. They're long in the body, so you can even cut them off and make neck warmers or sweatbands. The raw edge won't unravel. These are good, and a great deal for \$28.

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