



## HOW CAMERAS & BINOCULARS USED TO SMELL (RR-10)



A guy was riding his mountain bike when the front brake cable (center wire) broke, and the straddle wire for the cantilever brakes fell, caught onto the front tire treads, he went head-first over the bars, and now he's a quadriplegic. He happens to be black, and as a result of the accident his skin is turning whitish here and there; and also as a result of the accident, he can't sweat, so he needs extra special care.

The evidence showed the cable was damaged by a small diameter stem-mounted pulley, but this isn't about pulleys; it's about making your bike failsafe. Failsafe isn't the same thing as foolproof. *Failsafe* means that the bike will still be safe if something fails. A safety net makes a circus tightrope failsafe. *Foolproof* is—well, something no bike can ever be.

That bike accident is a major reason there's a move away from cantilevers toward V-brakes. With V-brakes, there's no centerwire to break, and no straddle wire to fall down and catch on the knobs.

Cantilevers aren't inherently dangerous, but most are not failsafe, either. (Some newer ones are—if the center wire brakes, the arms don't flop open enough to pull the straddle wire onto the tire.) Anyway, put some kind of a catch between the straddle wire and the tire. It's easy if your fork (the kind you ride with) has a hole in the crown area—you just get a longshafted 6mm bolt, or even a dowel of some

kind, and stick it in there securely, making sure it sticks out far enough to catch a falling straddle wire. Or get some kind of cord or wire, loop it around the straddle wire, and tie it up to something, like the stem or bars. You might as well do it soon.

Liability is becoming an issue with us, because liability insurance, covering frames alone, costs about \$8,000 a year. Waterford makes our frames, but the insurance companies consider us the manufacturer because our decal's on it. Thank goodness nobody is mad at us, or has gotten hurt. On a happier note, we're doing well, thanks to you. Work is hard, but you've made it fun, and we can't ask for a lot more than that. Maybe cheaper insurance. — Grant

### Not Inside RR-10:

- AN INSIDE LOOK AT OUR TYPOGRAPHICAL MAKEOVER ETC.
- MAKING BICYCLE ADVOCACY YOUR OTHER FULL-TIME JOB: WHO TO WRITE, WHAT TO SAY, HOW TO FOLLOW UP, HOW TO GET YOUR FRIENDS INVOLVED—NOT THAT THERE'S ANYTHING WRONG WITH THAT!!!!!!
- WHAT TO DO WHEN NO BAR TAPE QUITE MEASURES UP: ALTERNATIVES THAT COST SURPRISINGLY LITTLE AND TAKE A WHOLE LOT OF TIME. (THAT'LL BE IN RR-11)

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## CELEBRATING THE MUNDANE

# DROPOUTS

DROPOUTS, FOR THE MOST PART, GO IGNORED BY ALL POSSIBLE PEOPLE—PROBABLY BECAUSE THEY LACK GLAMOUR AND DO GRUNT WORK. THEY CAN BE FORGED, CAST, OR MACHINED; FROM STEEL, TITANIUM, OR ALUMINUM. FIFTY TIMES OUT OF A HUNDRED, WHEN A BIKE FRAME BREAKS IT'S AT THE RIGHT REAR DROPOUT; AND AS OFTEN AS NOT IT ISN'T THE DROPOUT'S FAULT. FORTY OR EVEN EIGHTEEN YEARS AGO IT WOULD HAVE BEEN PRETTY NEAR IMPOSSIBLE TO WRITE AN INTERESTING STORY ABOUT DROPOUTS, BECAUSE THERE WAS SO LITTLE VARIETY (AT LEAST, AMONG FINE BICYCLES). THERE'S A HUGE VARIETY THESE DAYS, WHICH JUST PROVES THERE'S MORE THAN ONE WAY TO HOLD THE HUB AXLE. IT'S STILL GOING TO BE HARD TO MAKE THIS INTERESTING, BUT LET'S SEE HOW IT GOES.

—GRANT



ropouts are the things that stick out the ends of the fork blades, seat stays, and chainstays, and hold the wheel axles. They're categorized by the orientation of their axle-holding slots: Horizontal dropouts have nearly horizontal slots; vertical dropouts have nearly vertical slots; semi-vertical dropouts are in between. Technically, "track dropouts" don't exist: If the wheel can't drop out of the frame when it is released (it can't on a track bike), then how can the thing holding it be a dropout? Sometimes front dropouts are called "fork ends" and rear dropouts are called "ends." That's probably better, but it's hard to learn a new language.

## HORIZONTAL DROPOUTS

### Advantages:

- By moving the wheel forward or backward in the slot, you can adjust the wheelbase by as little as two and as much as twelve millimeters. Whether or not you'll be able to notice the difference is another matter, but one irrefutable advantage of this horizontal movement is that it allows you to tension the chain without using a rear derailleur. That means 1) If you wreck your rear derailleur on a ride and have to route the chain around it, you can shorten the chain appropriately and still ride home without a floppy chain; 2) You can, for fun, take off your rear derailleur and convert your bike to a one-speed (put the chain on whichever cog feels best) or a fixed gear bike (take off the freewheel and screw on a fixed cog).
- If your bike has short chainstays and tight clearance and you break a rear spoke, a horizontal dropout will allow you to move the wheel backward in the slot, which will increase wheel clearance between the chainstays. It's ten times more fun to ride a wobbly wheel home when it clears the stays than when it doesn't.

### Disadvantages:

- It takes two seconds longer to remove a wheel, and three seconds longer to install it. *Maximum.*

Horizontal dropouts have fallen out of favor lately for three reasons:

- 1) Road frame chainstays have gotten so short that there's no room to move the wheel forward to remove it—it runs into the back of the seat tube before it drops out! Not all road frames suffer from this disease, but many of them do.
- 2) Index shifting requires the rear derailleur to be located more or less directly beneath the rear axle. Although all horizontal dropouts allow this, most also allow you to move the axle into a more rearward (index-incompatible) zone. Rather than trust you to keep the axle where it's supposed to be for indexing, makers just use vertical dropouts to protect you from yourself, and from having to 'splain this to you.
- 3) It takes a little more practice (five minutes) to learn to smoothly remove a wheel from horizontal dropouts. Vertical have a shorter learning curve, and thus are an easier sale.

## VERTICAL DROPOUTS

### Advantages:

- Faster, easier wheel changes. Since there's no horizontal slot for the hub axle to move around in, the wheel sort of centers itself. There is nothing in the world wrong with that, but it's a light year from a godsend.
- Less quick-release clamping force required. This allows you to use marginal quick-releases with aluminum grippers, which tend not to bite in well enough to hold the wheel securely in a horizontal dropout. The vertical dropout places metal directly in front of the axle, effectively blocking its movement. This can be an advantage if

you're in a race and get a wheel change and the guy putting the new wheel on the bike, in his haste to get you going again, doesn't clamp down hard enough.

- More fender-friendly. Since the wheel drops straight down and out without moving forward, you don't have to give the tire more fender clearance at the front end. Functionally this is worth **two** beans, but aesthetically it's quite nice to have the fender stay equidistant from the circumference of the tire. If your frame can't take fenders, this advantage doesn't count.

#### *Disadvantages:*

- You can't convert to a one-speed or fixed gear because you can't tension the chain. Not without a special chain tensioner, anyway, and they're hard to come by.
- The derailleur tab tends to be longer on vertical dropouts, and under the microscope in the laboratory, this places the cogs farther from the upper derailleur pulley, slowing shifting. The shortest possible on a horizontal dropout is 26mm; most horizontal dropouts are **24** to 25mm. A 2mm difference in tab length is splitting hairs ridiculously.

**Rereading that, it sounds to me as though I really don't like verticals, and so I'm making light of their advantages. No! I do like verticals. They're a smart design. Trivia: Jobst Brandt may have invented the vertical dropout, and it's possible the first Campy models were heavily influenced by a set he left in Cielli's desk drawer some years ago. That doesn't answer the question "where did Jobst get those?," so let's assume he made them or had them made.**

### SEMI-VERTICAL DROPOUTS

#### *Advantages:*

- Just what you'd expect: They allow faster wheel changes than horizontals and verticals. On a vertical dropout you have to rotate the rear derailleur rearward in order to get the wheel to clear it. The wheel clears more easily if the frame has semi-verticals because the wheel slides forward before dropping out. Not a big deal, but it's an advantage when fast wheel changes are critical (whenever that may be).

#### *Disadvantages:*

- There's no real disadvantage to these. If you want to single-speed a bike, they aren't the best choice, but other than that they're a sensible design. I used to think semi-verticals were stupid, until cyclocross rider (and vet National champ) Tim Rutledge pointed out some advantages I never would have noticed. He told me

some cyclo-cross racers prefer horizontals because when the wheel drops out it has more or less a free fall, without having to pull the rear derailleur back out of the way; and yet verticals tolerate weak clamp forces better than do horizontals. Tim says, and it's obvious in hindsight, that semi-verticals do a pretty good job of neutralizing the disadvantages of both horizontals and verticals.

### MANUFACTURING METHODS

#### *Materials*

**Low-carbon steel.** Traditionally they're made of low-carbon steel, and low-carbon steel is pretty much ideal for dropouts. It's ductile, meaning it's not brittle; it's easily formed by forging; it tolerates heat from the brazing torch; and it's generally more than strong enough to do the job if it's designed well.

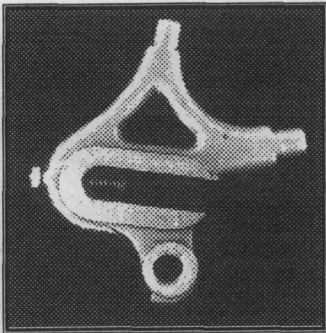
**Chrome-Moly (CrMo) steel.** Not as easily forged as low-carbon steel, and I don't know of any forged CrMo dropouts. They're investment cast, typically.

**Stainless steel.** This can be cast or forged, and made from either the popular **304** series stainless or the hifalutin' **17-4**, all with good results. Henry James dropouts are cast **304**; we often use forged **304** on Rivendells; George P. Wilson dropouts are cast **17-4**. Stainless is nice because the clamping surfaces are clean and paintless, so there's no paint to chip. But stainless dropouts are far from the only way to go, mainly because paintchipped dropouts are not a big deal. They sound worse than they look and are.

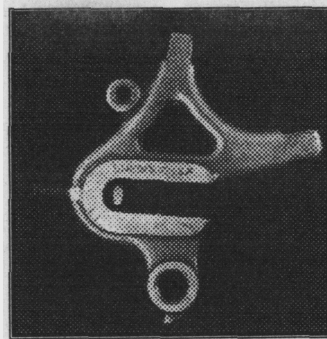
**Titanium.** Either the common **3-2.5** alloy or the higher strength **6-4**. Don't be put off by those numbers, but don't expect a thorough explanation here, either. Some makers feel the higher-strength **6-4** Ti is too hard to be used in horizontal dropouts (the skewer gets no bite)

**Aluminum.** I tried to get samples for this story; none came. I didn't **try** all that hard, though—just a couple of phone calls and faxes. These days, it seems the big deal with aluminum dropouts is their replaceability; if you break one, you can probably unscrew the broken piece and screw back on a new one. It might be a good idea to carry a few with you, too. I don't like the idea of aluminum dropouts, mostly because I've seen too many of them break. No letters, please.

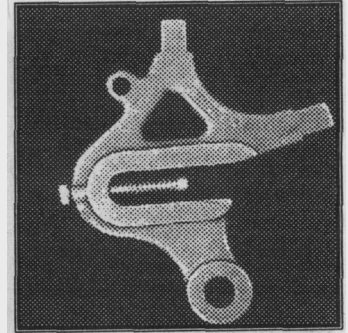


**CAMPAGNOLO 1010A**

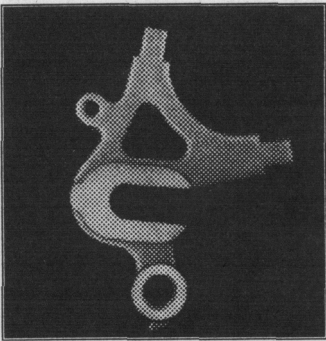
An older, classical Campy design that ruled the late '60s through the early '70s. The slot is 37mm long, allowing for relatively huge variations in wheelbase

**SHIMANO SF-1**

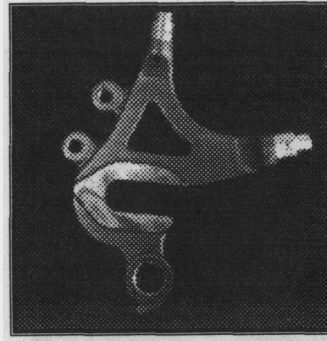
Remember when Shimano kind of copied Campy designs? They never did it quite as much as SunTour, but this one is from those days, and it's a terrific dropout. Forged, low-carbon steel. 33mm Slot: 26mm drop. We used it on many Rivendells until our supply ran out.

**SIMPLEX**

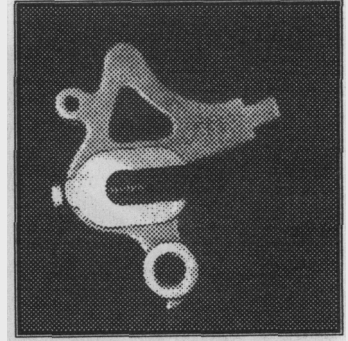
More unusual than it looks at first. The derailleur tab has no stop or threads, so the only derailleur you can use on it is a Simplex, which doesn't require either. The eyelets are unthreaded as well; the French method of fender mounting doesn't rely on them. Presumably low-carbon steel, but you never know, with the French. Matching 35mm slot and drop.

**TECNOCICLO 1070**

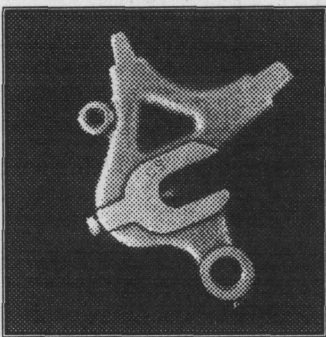
Tecnociclo makes Campy dropouts, and this one's really close to the Campy 1010A, the one used on 90 percent of Italian race bikes, Richard Sachs frames, many others. The same slot length—26mm, but with 1mm extra drop (25mm). Tecnociclo uses a special carbon steel that it claims suffers less from heat than come others. This model here has been marketed under the Columbus brand.

**TECNOCICLO HERON/RIVENDELL**

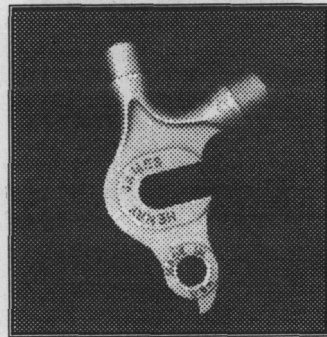
This is one we designed for Herons and now use on some of the Rivendells. It's builder-friendly, because the tendon (leg) ends are round, and fit into the round tube ends better than do the standard rectangular tabs; and this allows it to be silver-brazed, rather than brass-brazed. (Silver brazing is a lower-temp process; generally desirable, but not a huge benefit with dropouts). It is forged 304 series stainless, and the eyelets come on it. Slot: 25mm, drop, 25mm.

**TECNOCICLO 1071**

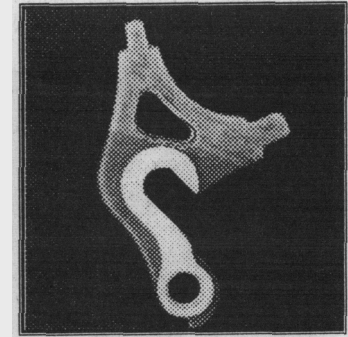
The main deal with this model is the absence of a fully developed upper tendon. The rounded nub allows a builder to accommodate a wider range of chain-stay-to-seatstay angles than is possible with normal dropouts. (small frames have 64 to 68-degree cs/ss angles; bigger frames go up to around 76-degrees.

**REYNOLDS**

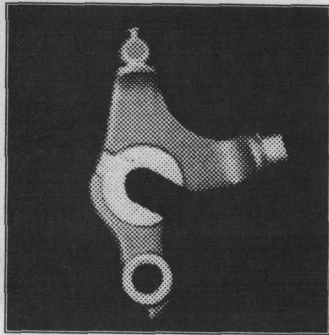
Typical in the sense that it's a tab-style, forged low-carbon steel model, but atypical in its super short 19mm slot, and its thick rear end. Only two possible explanations: Either someone at Reynolds once saw a dropout break at the adjuster-screw hole and overreacted to that by putting so much metal there; or they were designing it for indexing, which doesn't allow the adjustability a longer slot would have offered. This one is shown with the spring on the inside of the slot, but compressed all the way. 29mm tab. I love Reynolds tubing, but not this dropout.

**HENRY JAMES**

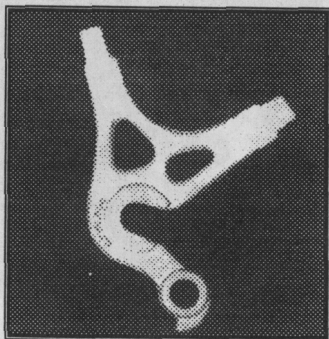
Investment cast 304 series stainless steel. It looks greyish like the carbon steel dropouts because it ain't been polished yet. The plugs are builder-friendly and allow silver-brazing. It comes with no adjuster screw—smart for a dropout with such a short (20mm) slot. Drop is 24mm. Smart design if you don't need adjustability.

**TECNOCICLO #1060 (VERTICAL)**

A typical vertical. If you look closely you can see the drop is 29mm (center of axle hole to center of derailleur-mount hole. There's no room for the axle to move fore-and-aft, so you can't easily tension the chain with a vertical; but that's what derailleurs are for, anyway.

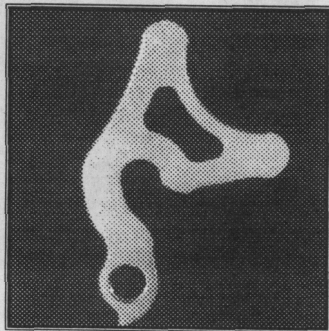


**TECNOCICLO #1055 (SEMI-VERTICAL)**  
Not merely semi-vertical, mi amigo; there's a lot going on with this outside the slot. The lower tendon is a silver-braze-friendly plug; the upper tendon has a ball which allows a wider variation in chainstay/seatstay angles than another plug would have, yet it still allows the builder to straight-cut the tube end.



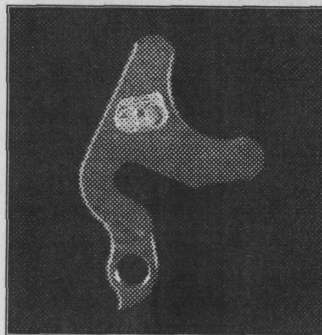
**GEORGE P. WILSON**

A contemporary of Art Stump, and no doubt a fan. George is a metallurgist and used to be an engineer in a SouCal investment casting house, and that combined with a love of bicycles lead to some of the prettiest lugs and dropouts ever made. He completely worshipped at the altar of 17-4 stainless, so that's what these vertical are made of. Very pretty and still available, though rarely used, as they're costly and nobody knows about them. Drop is around 28mm.



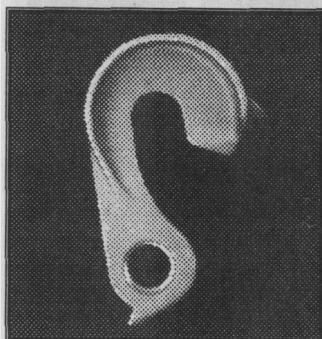
**MERLIN VERTICAL**

Excellent design, with a short 26mm drop, machined from 6-4 alloy titanium. Like other machined dropouts, it **looks** better on a bike than out in the open.



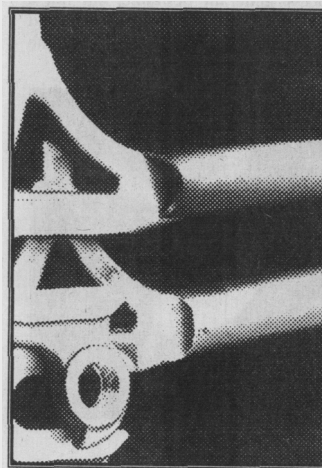
**LIGHTSPEED SEMI-VERTICAL**

This is the one used for the Eddy Merckx frames. Short (good) 24-25mm drop, made of 6-4 alloy titanium. Should be strong and functionally wonderful, but like many machined pieces, it lacks superficial surface detailing, character lines, whatever, that give a part a face. Not a drawback or criticism, just an observation, and subjective at that.



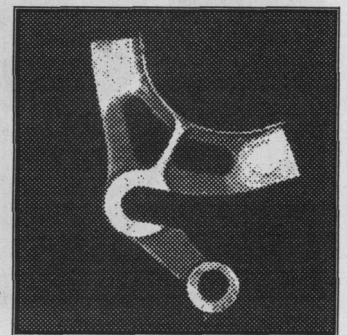
**JOE BREEZE "DROP IN"**

Cast CrMo designed for fillet-brazing or tig-welding. Lacking real tending, it accommodates any chainstay/seatstay angles, and offers a broad surface for a strong connection. Clever design. 28mm drop.



**Top:** A typical forged dropout before brazing. Notice the large gap the brass must fill.

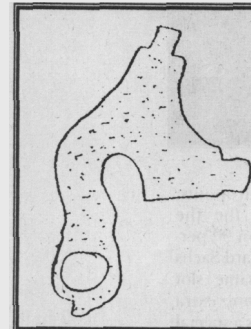
**Bottom:** Brazed. There are many ways to stylize this area; shown is the basic, diagonal rut. Easy, clean, looks fine!



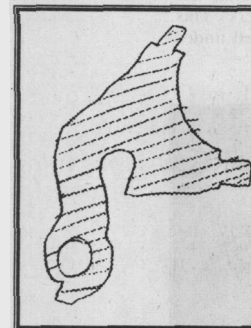
**ART STUMP**

Art Stump probably deserves a whole book; and at the very least a long chapter in a Who's Who Among Smart Bicycle Guys That You've Probably Never Heard Of. Art was/is into strength and beauty and light weight, and this is his wild vertical design. The tabs are really flat, and require the builder to braze-in semicircular plugs between them and the tube—way too much work for most builders, but necessary for silver brazing. Note the pretty radius between the angles. Investment cast CrMo, I think.

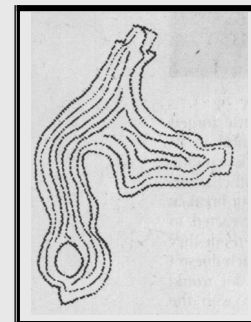
**Bad illustrations of grain structure in cast, forged, and machined dropouts. Done in 1 minute, at the last second.**



**CAST**  
GENERALLY  
GRAINLESS.  
ACCEPTABLE  
FOR RIGID  
DESIGNS ONLY.  
REQUIRES MINI-  
MAL CLEAN UP  
BEFORE BRAZ-  
ING/WELDING.



**MACHINED**  
ONE-DIRECTION-  
AL GRAIN, LIKE A  
PLANK-0-WOOD.  
STRONG IN ONE  
DIRECTION.  
ACCEPTABLE,  
GIVEN A GOOD,  
RIGID DESIGN.



**FORGED**  
FORGING IS  
GREAT. IT GIVES  
GRAIN TO THE  
PIECE. FOLLOWING  
THE CONTOURS.  
MAY BE THIN  
AND STRONG.  
BRAVO!



# YOUNG ARTISTS & WRITERS

BACK IN THE '60S THE OAKLAND TRIBUNE HAD A SECTION WHERE KIDS COULD WRITE STORIES OR POEMS AND DRAW PICTURES AND HAVE THEM PUBLISHED. THAT WAS A GOOD IDEA, SO WE'LL DO IT HERE.

## RULES

1. Writing entries must be submitted freehand, on paper.
2. Since this is a bicycle publication, every entry should contain at least one use of the word bicycle or bike or some variation of it. It doesn't have to be story about bikes, it just has to have the word "bike" (or some variation) at least once.
3. Poetry is good, but "free verse," is cheating. Try for rhymes.
4. If you submit a picture, please make a bicycle part of it. Make the picture about 1/4 the size of this page.
5. This is not a contest.
6. Entrants should be between 4 and 12, but in order to avoid age-based comparisons, we won't print ages..
7. We will clean up minor spelling errors or punctuation, but do your best!

To eliminate the possibility of your entry getting lost in the shuffle, send it to our old, still current but rarely used address:

**Rivendell Bicycle Works**  
**Kids Section**  
**1547 Palos Verdes #402**  
**Walnut Creek, CA 94596**

Include your name, age, boy or girl, address, and the name of your Rivendell-member relative. We will try to publish as many as possible, but space is limited, *so* there's a chance yours may not make it. All entries will be acknowledged, though. **You** may submit entries between Sept 12 and October 21, 1997. Below are a couple of entries to kick it off.

## THE MAGIC BICYCLE

by Sarah Durant

I It was my birthday -July 17. I was turning 8. Mom was making pancakes downstairs. I love pancakes. When I got downstairs my little sister molly was sitting on a present which was on the couch. I pretended not to see her. Mom or Dad had probably tole her to hide it. Molly fumped up and gave me the card which said...

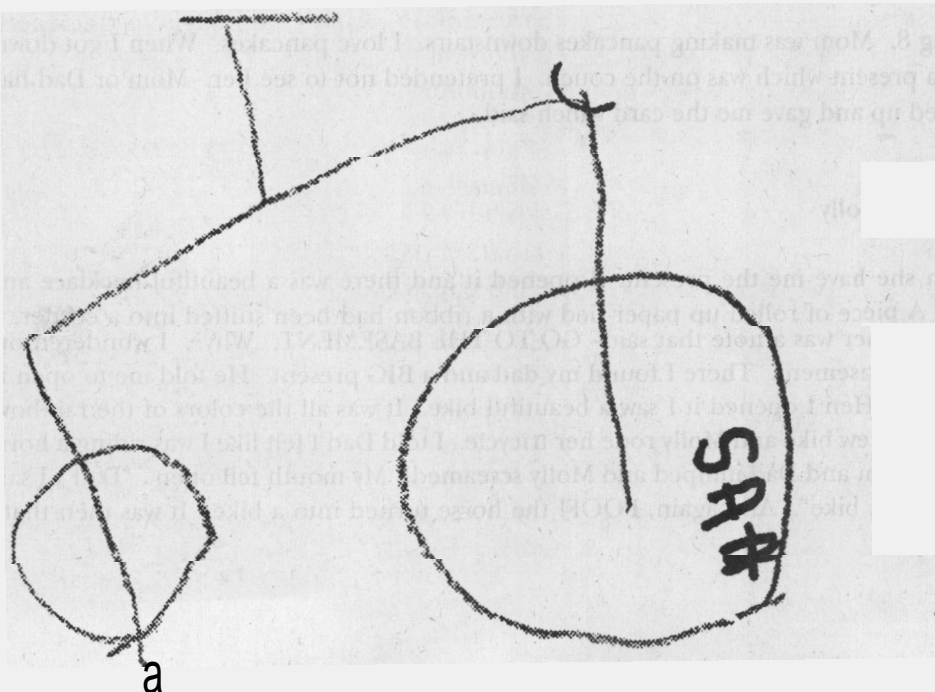
Happy Birthday  
 Love, Your 2-year-old sister, Molly

I hugged her and said thank you. Then she have me the present. I opened it and there was a beautiful necklace and bracelet - but that wasn't all. there was. A piece of rolled up paper tied with a ribbon had been stuffed into a corner. I untied the ribbon and found the piece of paper was a note that said- GO TO THE BASEMENT. Why?, I wondered out loud. I decided to find out, *so* I went to the basement. There I found my dad and a BIG present. He told me to open it. He also said that it was from Mom and him. Hen I opened it I saw a beautiful bike. It was'all the colors of the rainbow! After breakfast we went for a walk. I rode my new bike and Molly rode her tricycle. I told Dad I felt like I was riding a horse and POOF! the bike turned into a horse. Mom and Dad jumped and Molly screamed! My mouth fell open. "Dad", I said in a shaky voice, "This is nothing like riding a bike". And again, POOF! the horse turned into a bike. It was then that I knew that I had a magic bicycle.

## THE BICYCLE PROBLEM

by Kate Petersen

Rachel was thinking. Thinking about her future. Thinking about what a humiliating future she was going to have. "I'm doomed", she was always saying to herself now. You see, she was going to a different school this year, and that wouldn't be a problem except...Rachel had a bicycle. She loved the bicycle and she didn't have any others. It was so broken down it was embarrassing to ride. At her other school all the kids had been seeing her ride it since it was new. This was different. The first day of school came. Rachel wished she was on the other side of the world. She just knew she wasn't going to live through the day. Then an idea came to her. Last year she was practically the only person in her class that hadn't had their mom drive them to school. She was going to ask her mom to this year. She said yes! Rachel jumped for joy! The first few months went by smoothly; Rachel got friends and did her lessons and her teacher Ms. Rosemary was very understanding. Rachel always looked forward to school until one gray morning when she slept in until 8:00. "Dumb alarm clock", mumbled Rachel, "You don't even work!" She got up for breakfast and that was when Mom came in. "Honey", she said, "I'm **sorry** you slept in too late. I can't take you to school today. I got your bike out. "But Mom...", Rachel wailed. "Don't 'but Mom' me.", Mom said in a firm voice. "I'm leaving NOW!" The door slammed. All was quiet. Rachel thought her life had come to an end. 'I'll walk', she thought, but it was miles to school. 'I'll run', she thought, but by the time she got there, she would be so tired she wouldn't be able to do her lessons. There was no other choice. Rachel would have to ride her bicycle to school. When she got there, she decided that she was not going to face the embarrassment of going in. She hid in the bushes where she and her friends played. At recess her friends came out to play in that very spot. "Why were you out here all morning? Everyone has been wondering where you've been.", said Emma. "Yup", seconded Maria, "And what is this rusty, broken-down thing doing here? We better throw it away. I'll do it." With panic, Rachel said, "No, no, let me do it please...PLEASE!" "I hate to lie, but I've got to save it without the humiliation," she thought. "Rachel", Maria said in an upturned voice, "You know something that you're not telling us. Get it out." "Well", Rachel paused, "it's my bicycle. I didn't want you guys to know. You won't like me anymore." Emma spoke up. "Rachel, don't tell me you thought we weren't going to like you anymore just because of the way your bicycle looks!" "Well", said Rachel, "you might have." Everyone laughed. "What kind of friends did you think we were?!" And from then on, Rachel thought about what people were really like before she reacted and she lived a happy life.



 BICYCLE ILLUSTRATION

by Samantha Boulanger



# HOW TO CARRY HEAVY LOADS

REPRINTED FROM LE CYCLISME, ISSUE No. 5. DECEMBER 14, 1946. SUPPLIED BY FRANK BERTO!



Although we don't want to convert the bicycle into a delivery van, it is often necessary to carry packages, which can be large or small, light or heavy. It is necessary to carry these on a machine that seems ill suited for the

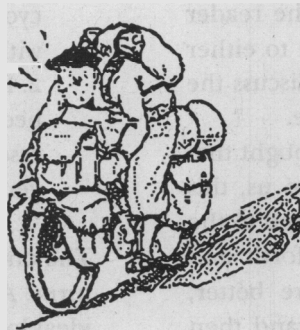
task because of its instability and fragility. Nevertheless, what can a bicycle carry?

During the four years of the German occupation of France and during the following year, there was a complete lack of gasoline or even the right to drive a car. This caused large numbers of people to discover the bicycle. Though they had been completely unaware of the bicycle, these occasional cyclists soon realized that the bicycle was indeed a practical machine before it became a recreational vehicle.

It is practical for many reasons: it is lightweight, its ease of management, its small size, and its affordability.

However, it wasn't enough to travel rapidly with small

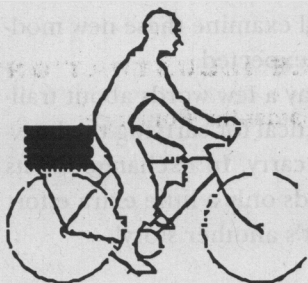
effort, it also became necessary to use the bicycle as the only means of transporting packages and loads (whatever needed to be carried.) On the other hand, pedicabs soon proved that a pair of strong legs could transport heavy loads.



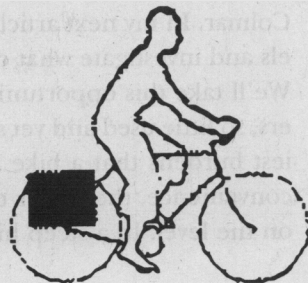
Thus it was that luggage racks became popular. They were used for trips out to the countryside to trade goods for food with the farmers, who were recognizable, by their hobnailed boots. The goods could be abandoned if necessary, if the cyclist was stopped by the French or German police or by the German army supply officers.

On the out bound trip, the front panniers and the rear basket would carry shoes, clothing, or tobacco. On the return trip, they would carry butter, eggs, lard, and vegetable oil.

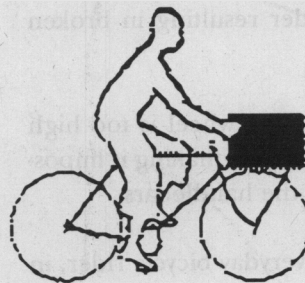
Everyone who owned a bike, myself included, began to pedal either a solo bicycle or a tandem. Experienced



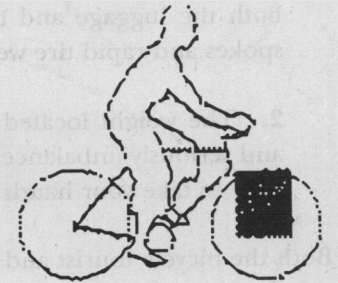
*The classic placement on the rear luggage rack. This is worst solution. The weight is carried too high and the bicycle is harder to balance. The rear wheel is overloaded and the rear tire wears more rapidly.*



*This is progress. The weight is closer to the center of gravity and the imbalance is minimized, but there is still excess weight on the rear wheel.*



*The front rack is even better. The front wheel carries less of the cyclist's weight. The weight of the front luggage does not cause too much unbalance for a normal cyclist.*



*Finally, if the burden is shared equally on both sides & the front wheel and rigidly attached, at the center of gravity and even a little lower, the best solution is found.*

cyclists (like me) discovered a new use for the bicycle-cycle camping. Loaded with **40** or **50** pounds, one could still cover **80** or **100** miles in a day over country roads with less traffic than the main routes, thanks to the development of the freewheel.

During the winter of **1944-45**, we ran out of fuel for our fires. My friend and I traveled in the middle of the night because of the restrictions. After about **15** miles, we arrived at a place where we knew that we could find firewood.

We loaded **70** pounds into a sack on the front rack and a **100** or **50** pounds onto a small trailer. **As** long as the road was flat or slightly downhill, all was well. Hill climbing with a **4619** fixed gear was a bit much. None the less, all the family kept warm thanks'to the bicycle.

### THE LUGGAGE RACK.

The lengthy preamble was meant to remind the reader that a bike can carry heavy loads without harm to either the bicycle or the rider. Now, I would like to discuss the best and most practical location to carry baggage.

The rear rack was created first and everyone thought that it was wonderful. However, it seems horrible to us, this assembly of flat iron, riveted together and attached to the bicycle frame. The packages slide back and forth and bump against the seat stays. Soon there were better, lighter rear racks, first made from sheet steel and then from aluminum and finally brazed from tubing and rigidly attached to the rear triangle. Attachment bolts rigidly secure the fenders. This is a satisfactory place to carry light loads, such as a raincoat or a jacket, towel or tools or a spare tire. Nonetheless, although the rear rack can carry "luggage," it has two flaws:

1. The rear wheel is overloaded by the weight of both the luggage and the rider resulting in broken spokes and rapid tire wear.
2. The weight located above the wheel is too high and seriously unbalances the bicycle making it impossible to take your hands from the handlebars.

Both the bicycle tourist and the everyday bicycle rider, in

both city and country, can successfully attach *two* panniers on either side of the rear rack. Packages can be placed in these panniers and thanks to their lower position, the second problem is eliminated but the first remains!!!

### HOW TO CARRY A LOAD.

When one is looking for a solution to a problem, it is good to refer to previous problems that have already been solved by dire necessity, without technical research but rather by common sense. Let's look at the bicycles that are used for grocery and newspaper delivery. The weight is carried in carrier above the front wheel and in front of the handlebar.

#### *There are two advantages:*

1. The front wheel does not carry very much of the cyclist's weight. **So** it can support the delivery load without damage.
2. For normal riding, the balance is not compromised because the rack is rigidly attached and it becomes in essence, part of the handlebar. Thus, it causes no dangerous repercussions.

The only difficulties are starting **off**, rapid stops, and tight turns. Although the weight is in front, this is still not the ideal location.

Therefore, one should mount a rear rack and pannier carrier on the front wheel with panniers on each side. The problem is solved.

Well, not quite yet. Is it logical to carry those limp and ugly panniers even when they are empty in the hope or fear of having to carry a package?

I believe that the solution was approached by some of the custom builders at the Duraluminum Grand Prix at Colmar. In my next article, I will examine these new models and investigate what can be expected.

We'll take this opportunity to say a few words about trailers, **so** little used and yet **so** practical for carrying the heaviest burdens that a bike might carry. In exchange for its convenience, the trailer demands only a little extra effort on the level. In a steep hill, that's another story!



BY PETER KELLEY

# NO MORE GLOVES, NO MORE SUNGLASSES



The other day I was descending into the setting sun when Grant asked how I could ride without sunglasses. It was bright and sunglasses would have helped, *so* it was a logical question, but I don't wear them anymore.

When I first started riding, I just wore gym shorts, t-shirt, tennis shoes, and a back pack. Over the years I shed most of that and acquired cycling shorts, shoes, and a jersey. Gloves came eventually. Sunglasses too, after I saw Greg Lemond in his hideous Oakleys. I always thought the Bell Biker was an ugly helmet, but I got one of those *also*, and by then I felt totally equipped.

Ten years of riding had passed from the gym shorts days, and I and every other rider I knew had the new look. It had become hard to recognize one another—I could ride right up to a friend and have no idea who it was, unless I recognized the bike; *so* rather than looking at faces, we looked at bikes. There were no more familiar faces to look at, just gear. We all looked like American gladiators. I'm sure we frightened children when we rode by.

The new wardrobe wasn't just high tech, it was also com-

plicated, and took a while to put on. I used to have the time, but now that I am older my time is tighter and my rides are shorter, and I was spending too much time dressing and less time riding because of it. I began to envy runners for their simplicity. All they need to get ready are shorts and shoes. I hate to jog, *so* to save time I began shedding the garb. I didn't shed all of it, I just tried to simplify. I shed the gloves and sunglasses, and I'm out the door sooner because of it. But it isn't just the time saved. Simplifying my cycling wardrobe puts me in a different frame of mind when I ride, and this new frame of mind suits my current style and approach to riding better. My rides are less intense because my costume is less intense, and I like that.

I am not as protected, but I still have great bike rides, and besides, I don't want to insulate myself entirely from what my ride is all about • it is exhilarating, exciting, difficult, and painful. The feeling of having to be protected makes riding less enjoyable. I still wear the helmet, but other than that I *try* not to look like I am from another planet when I get on my bike. I just want to ride it.

## CATALOGUE FLUBS & FIXES

### PRICE FIXES

1. p. 76: The 5 Brother hickory shirts are \$25, not \$20.
2. p. 74: The Bondhus 4mm handle-wrenches are \$6, not \$9.
3. p. 36: Priest bars are \$20, not \$38.
4. p. 88: Wool tights are \$77, not \$12. That was gloves.
5. p. 84: The bottle and cage combo is listed twice. The price for the combination is \$12.
6. p. 63: The ALE straps with buckles are \$15, not \$5. They come with the buckle pads, and the buckle pads alone are listed correctly at \$5, so \$15 wouldn't make tons of sense.

### FRAME-SPEC FIXES

The road frame downtubes are 31.75mm up through 61cm. Although if you really have to have the skinnier downtube and the fancier lugs on a 62cm or larger frame, we can do it for a \$30 upcharge.

### OTHER

1. We're now out of Maroon jerseys, size 6. It's doubtful we'll get more of them in, since a) they're Italian, and Italy pretty much closes all of August, and September is a "catch-up" month for them, and American orders are a low priority, and we don't want to get the long-sleeve wool jerseys in March, which is what it would be.
2. The current, version 1 Nitto rear rack fits perfectly on most road frames size 55 and smaller, and on Rivendell All-Rounders size 54 and smaller. Rack design is no piece of cake, but we've learned tons about it in the last month and now Grant, who is writing this, thinks he's a pretty good. It is not one of those things about which you can devote your entire life to and still just scratch the surface of knowledge about.

# MAD RAMBLINGS ABOUT CYCLING FASHIONS



Bad guys in movies, and often in real life, wear sunglasses because it avoids eye contact with potential victims, making mahem easier.

Sunglasses are sexy, to whatever extent they're sexy, because they don't let you see the person's eyes, so it's easier to concentrate

on the other portions. Visible eyes sometimes add too much depth and history for that.

The root of "cool" is feeling powerful and invulnerable, ready for anything and confident that you can handle it, and that look comes with sunglasses, because they hide eyes which may have a hard time disguising fear.

Things like uniforms, sunglasses, and makeup and war paint have evolved and are highly functional, and good people wear them all (the war paint may be harder to relate to). But one of the psychological reasons for them is to take the human out of the equation and to separate the wearers not only from others, but from themselves, too. They allow us to behave differently without selling out completely. That's why prostitutes wear tons of makeup—and I'm not saying *only* prostitutes do, so don't yell at me); and that's probably why Michael Jackson does.

Warpaint helped Indians get in the mood (most "Native Americans" call themselves that, by the way). Armies and gangs have their uniforms. I don't think I'm pioneering a new thought by suggesting what we wear affects how we and others perceive us; and somehow, this relates to bicycle riding costumes.

A big deal in our neck of the woods is Critical Mass, a huge group of civil-disobedient cyclists riding through the streets of San Francisco the last Friday evening of every month, to give motorists a taste of what it feels like to be on the short end of the transportation stick. Not a bad idea.

But it's suits versus knickers, Coach versus Timbuk2, skin versus Revlon, helmets versus hair (apologies to bald people). People on both sides shake fists and yell and generally tempers flare and war's in the air. I'll bet it would be more peaceful if everyone wore the same clothes and nobody wore sunglasses, because it's harder to get angry at someone who seems more like you, or at least more like a person.

The typical high tech cycling outfit makes us look like freaks, and when we're out on the road in a big pack of

lookalikes, it's hard for noncyclists, and even other cyclists, to relate. They never dress anything like that, and probably don't know anybody who does. We've insulated ourselves from the sun's glare, the bar's tape, the pedal's metal, the saddle's whatever, and from everybody else, cyclists and noncyclists, as well. It's beyond "function before fashion," or "form follows function." The issue here isn't the simple costume, or the neon green that helps people see us/not hit us; it's the loud and shouting clothing and accessories that demands attention and flash slogans, advertisements and logos out at the world.

I'd never discourage anybody from wearing a helmet, but the helmet is one highly visible thing that makes cyclists different from everyone else. Low key protection is available, but it's generally all white and nerdly roundish. If it's too late for low-key, duct tape will solve that. If you have one of those helmets that warn you against putting adhesives on it, well, I don't know.

Peter has given up sunglasses, but I can't do it. I sometimes wear gloves, too, especially if I've overshellacked my bar tape (more than 3 coats is "overshellacked") and it's downright slippery. But even when I'm shaded and gloved, I usually make up for it by riding in a regular shirt. Friend and Rivendell member Eric House is the Champ of Non-Jerseys, and puts me to shame. I believe he's owned one or two cycling jerseys in his life, and they were given to him by well-meaning friends. But what he rides in is a longsleeved, button-down oxford cloth shirt; and he rides farther and faster than anybody I know except John Stamstad.

Sports that become popular, in general, are those whose costumes don't disguise the participants a whole lot. When non-cyclists see costumed riders, it must be harder to see themselves doing that—sort of like watching a football game, as opposed to volleyball or even baseball. So if popularizing cycling is a goal, normalizing the look of its participants is a good idea. I don't expect riders to change their ways "for the good of the sport," but it's something to think about, or even to disagree with, anyway.

Sometime in the next month, go for a ride in sneakers and weekend wear. It's addicting. Even if you get hooked, you won't want to give up your regular cycling costume altogether, but once in a while it just doesn't matter.

BY BRIAN WALKER

# TRANSATLANTIC CLUBROOM

THIS WONDERFUL ARTICLE FIRST APPEARED IN THE JANUARY 1971 *BICYCLING*, WHICH WAS THEN *BICYCLING!*. MEMBER KEVIN MONTGOMERY SENT IT TO US. WE TRIED TO REPRINT IT WITH PERMISSION, BUT WERE UNABLE TO LOCATE THE ORIGINAL PUBLISHING COMPANY. IF YOU, READING THIS RIGHT NOW, OWN THE RIGHTS TO THIS, OUR SINCEREST APOLOGIES, AND WE'LL SEND YOU A HUNDRED DOLLARS.



As you and I, gentle reader, will probably never meet in person, I thought it might be a good idea if we were to give a few pages of our magazine a sort of cycle-tourist's winter clubroom atmosphere, where we could enjoy a yarn or two, look at each other's machines and equipment, and indulge in a spot of mutual criticism and interest. You may justly reply, this fella Walker is always talking to **us** in his articles; he's always searing our eyes with his scratchy little drawings - don't we have enough of him, already? To which my answer could well be, 'Yes, but just you give me a chance: I see a lot more of you in *Bicycling's* pages than you see of me, and during last year I entertained quite a number of you in my home, and I just have spent scores of hours answering your letters, and I enjoyed every minute of it. Not only that, I can boast of being an Honorary Member of the Charles River Wheelmen of Boston, no less, and we Easterners don't stand no nonsense from nobody, so thayuh.'

Seriously, it might not be a bad notion, if, for instance, we compared bikes. I'm always seeing yours, so perhaps you'd care to look at one of mine? Let's look it over bit by bit, detail by detail.

To begin with, we British tend to ride bigger frames than you appear to though I may carry this tendency to excess, I am five feet ten and a half inches tall, my inside leg measurement is 32 inches, my feet 10-1/2 inches toe to heel, and I weigh 162 pounds. My favorite orthodox bike (as distinct from my nonhons) is a 15-year-old Jack Taylor Tourist: it has a 25-1/2 inch frame, 6-1/2 inch cranks (165mm—ed.), 23-1/2 inch top tube, 2-1/2 inch handlebar extension (sorry for the intrusion, this will be the last, but that works out to 6.35cm. —ed.), the last three measurements being center-to-center, and my 18 inch-wide Marsh Level Grip bars reach forward a further 6 inches and have a 4 1/2 inch drop. Aesthetically this makes my machine look very compact, handlebars and saddle (Brooks B27) being level and low down on the long top tube, with the mini-

num of handlebar stem and seat pillar showing. The large frame size gives a steering-head length of 8-1/2 inches and an overall feeling of great lateral and vertical stability. I have no fancy lug-work on the frame, and being a Jack Taylor (therefore the Rolls-Royce of the cyclingwork, I think we would agree) (*in his dreams—ed.*) all control wires are bare, running through integral guides. Nothing is clipped on to my frame—bolt holes, brackets, cable-guides are all part of the frame. My ideas about the ideal touring bike and Jack Taylor's are identical.

Living in the English countryside means that I must always have practical and efficient mudguards - fenders to you - and that indispensable item on the front mudguard, a mudflap; this keeps feet, chain, gears, etc. clear of direct surface dirt, grit and water. Considerable club riders fit a flap on the rear guard as well to prevent closely following riders fathing prey to "rear-wheel measles," a singularly unpleasant complaint in a dairy-farming country like Somerset, where the lanes at times appear to be paved entirely with cow manure. For extended camping tours, I have fore and aft pannier carriers, the front one carrying a sensibly sized headlamp, the rear light being integral with its mudguard. Incidentally, the dynamo is fitted forward of the left-hand-side stay, where its spray in *wet* weather fouls neither chain, brakes (nor) legs. The Benelux Tourist gear copes happily with the ten ratios from 27-inch to the mid-eighties (I can never remember ratios), the cranks being tough, slim, Williams' racing pattern, with Chater-Lea oil-sealed pedals. My all-leather toe-clips I described in the June camping number of "Bicycling!"

Wheels? Well, my original Weinmann alloy rims are getting somewhat thin, now; I use heavy-gauge spokes. consequently I never suffer breakages, despite the camping and rough-stuff I like to indulge in. My hubs are large-flange alloy, pressure-lubricated with sealed bearings - Blumfield Airlites (no longer made, worse luck). On another bicycle of mine, I have not had to adjust - let

alone clean – the front Airlite hub since 1951. With most hubs nowadays, one has to run oil into the hub’s side flange, washing in whatever grit is present – a most primitive procedure. Tubular tires are useless for touring (a dozen sticky-patches weigh less than a dozen tubulars!) but I am cautious, using flint-catchers) in my case a piece of leather thonging riding loosely over the tire from two studs brazed on the insides of the forks, just under the crown; and on the insides of the seat-stays, just under the bridge. Tubes and covers are liberally talo’d to ease possible tire removal and replacement, while in summertime, a few spoonsfuls of water are pumped into the tubes to stop the activities of those familiar deflating “heat-devils.”

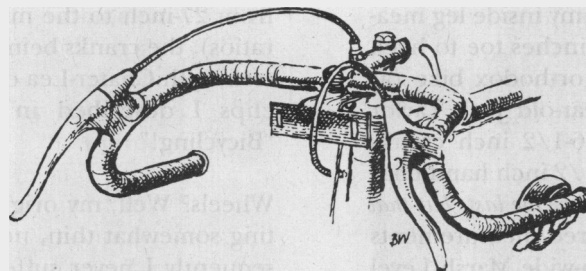
Luggage-carrying? For normal touring and everyday cycling the British use the traditional capacious saddlebag; in it one can stow **all** the spare clothes, food, toilet gear, brewing-up kit necessary for the longest tour, while side pockets take tool-kit, camera, maps, etc., the rolled cape being strapped on top, all handy, protected by the body from the elements and away from mud and dust.

Clothes—now there’s a subject! True, we don’t have the extremes of heat and cold that you do, but we have everything else, and all year round sometimes. I’ll stick my neck out and say that for real wet weather, there is nothing to beat the big plastic cape. It should be big enough to cover the handlebars and extend down to the fork crown, and at the back it should be long enough to protect the saddlebag. It has fabric thumb-loops to prevent it from blowing up over your face, and a tape inside at the back, which, tied loosely around the waist, prevents air turbulence lifting it up behind. Most capes are ventilated right across the back to cut down perspiration, while the whole of it being open underneath allows good air circulation and complete freedom of movement. The “sou’wester” hat gives complete rain protection, but does limit vision and hearing to the rear – the parka-type hood is not favoured for the same reasons – *so* I wear an oilskin ski-type hat, supplemented by a luxurious silk neckerchief **to** stop rain seeping down my collar. Depending on the season, I wear **a** cotton or woolen shirt – over this, if necessary, a thicker or thinner woolen sweater. Never drip-dry materials – these get awfully chilly and clammy with unabsorbed sweat.

The universal all-the-year-round British standby is the hoodless, shower-proof, gaharline wind-cheater: hip-length, its six pockets carefully placed and zipped, its front Zip beginning about six inches from the bottom of the

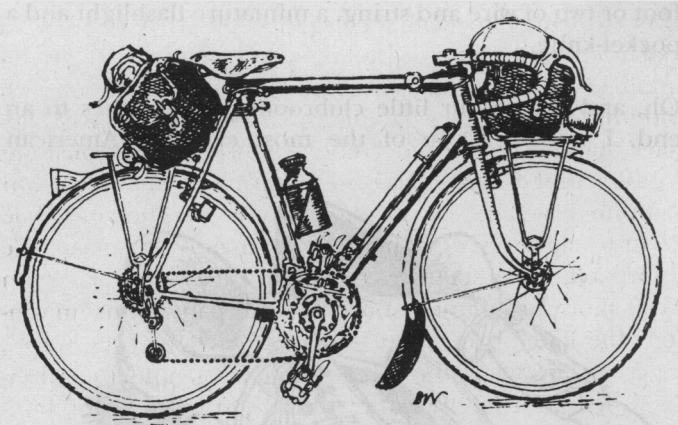
front opening to facilitate leg-movement. It is always a sober colour of fawn, olive green or black – partly to harmonize with rural surroundings, (I expect you agree with me that nothing gets gaudier, ghastlier and ,more cheap-jack than hectic-colored Trendy Fun-Clothes in a pleasant rural setting – Nature has so much more taste than our fashion-designers) partly because the traditions of true British tailoring demand it, but mainly to make the inevitable travel-stains less obvious. I like to wear cotton driff shorts in summer, and whipcord “pantaloons” in winter, the latter being double-seated, hard-wearing, warm, and buckle below the knee. Long woolen socks, nylon-reinforced for cold weather, short cotton socks for summer, and above all, good leather cycling shoes. I apologize for being rudely critical, but honestly, I can’t imagine anything worse than the baseball-sneakers I see worn in photographs by American cyclists. They are clumsy, bulky, restrictive of ankle movement, uncomfortably soft on rat-trap pedals and in toe-straps, and offer no resistance to wind or rain, and the soles don’t “breathe” naturally. For goodness’ sake, wear good leather cycling shoes with normal walking heels, firm substantial non-protruding soles, generously laced and tongued, reinforced in the proper places for pedals, straps and clips, and kept waterproof with saddle-oil, dubbin or wet-proof polish.

If you are fussy about your feet getting wet, try making **a** pair of oilskin or plastic spats, but never, never **would** you find me in rain trousers – I get wetter with perspiration than with rain- besides, it’s all extra weight. For touring I carry **a** spare pair of leather sandals which squash flat in the saddlebag and which I can wear while my shoes are drying out overnight. Incidentally, I never carry a lounge suit or tie **as** I have seen others do – if well-cut and practical cycling clothes are not acceptable to your fellow hotel guests (or whoever they may be) then that is their misfortune, and it is their benighted ignorance and stupid snobbery which is to be pitied. **As** for gloves, lined or unlined soft oiled leather, according to taste and climate, but keep down the bulk—you will want to be able to operate those brake levers without fumbling. **As** for the commuting cyclist, I feel that your best bet is to keep a change of clothes and a rough towel at your place of work – one enlightened industrialist I know provides changing rooms, clothes-dryers, hot showers and tea-vending machines for **his** cycling workpeople. Need I add that he is **a** keen cyclist himself and has a devoted and faithful staff? **for** belt-away from main hand-holds, easily accessible, protected from accidental damage.



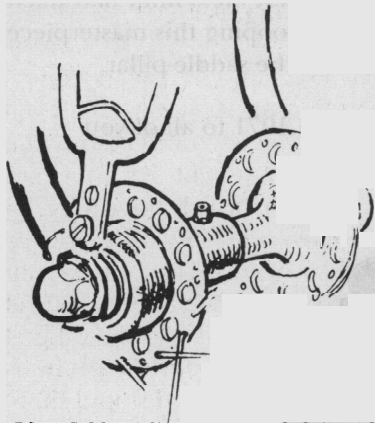
*Marsh level-grip handlebar-wide, long reach, shallow drop – ideal for touring. Arms out wide allow good breathing and circulation of air around the body. Note slotted plate for quick release handlebar-bag. Also note logical position*





Note compact lines of the large-framed bicycle. Large saddlebag and handlebar bags are ample luggage space for the most extended tour. Long steering lead gives added lateral stability.

Well, that's the man and his machine—let's look at the accessories and gadgets, necessary and otherwise. We all know from your history and your Westerns that the American citizen regards it as his inalienable right to bear arms, (Alright, alright - I know, it was all the fault of those confounded British colonialists) But really, the American



Blumfield airlite pressure lubricated, sealed, large-flange hub. The hub drawn here has not been stripped or rin?? adjusted since 1951.

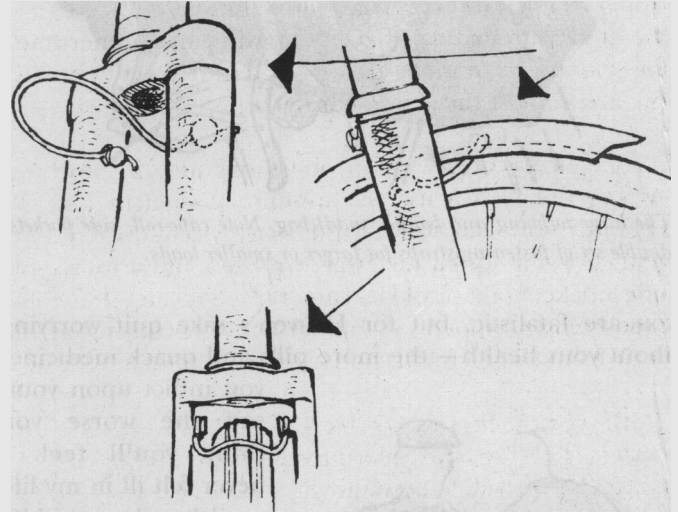
cyclists's attitude to dogs does seem to me, to say the least, somewhat fidgety and over-zealous. I didn't know whether to be horrified or hilarious when I first saw the ammonia squirt-guns carried by visiting tourists. I've yet to meet the dog I couldn't quell with a good substantial bicycle pump and a withering broadside of well-selected

As I have said before, I am again cluttering oneself up with unnecessary equipment. You get so concerned about it all, worrying about where it all is, carrying round all this

Anglo-Saxon oaths, but probably my primitive attitude is conditioned

by living in a country where the policemen are unarmed, save for a pocket-truncheon. Two things to watch for with clogs - if his tail is up, he's out for a bit of unmalicious fun and will treat your ankles as a healthy, impersonal challenge; if his tail is down, he is a dog of doubtful moral stature, cunning to the extent of dodging from side to side of your wheels, but basically he's a coward. If a dog is persistent, get off your bike and go for him—and don't forget to write, telling me the result: I have often wondered whether it would work.

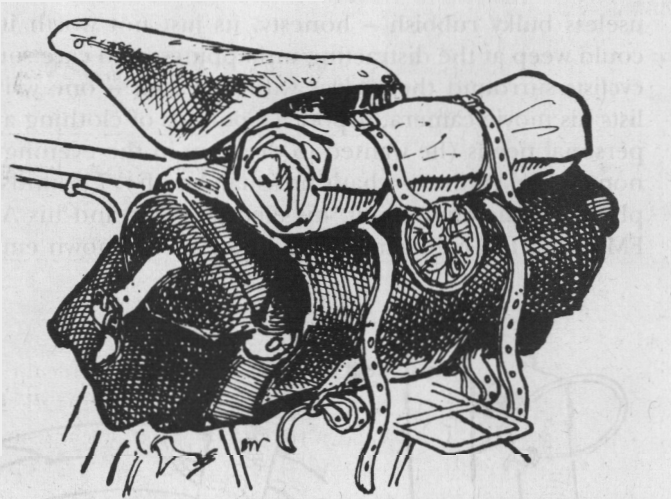
useless bulky rubbish - honesty, its just not worth it. I could weep at the distracting unhappiness and care some cyclists surround themselves with. On tour - one writer lists his movie camera, tripod, 17 pounds of clothing and personal needs (he wanted to dress up in the evening in non-cycling clothes - what's he ashamed of?), 7 pounds of photographic equipment, his electric razor and his AM-FM radio. His medicaments, pills for every known emer-



Three views of a simple, leather thong flint-catcher (for removing flints, splinters, thorns, etc., as soon as they are picked up, before being forced further into the tire).

gency from seasickness to allergies, his powders and his body lotions would have stocked a home for hypochondriacs with an old ladies' beauty parlour next door. He has obviously not heard of the cassette recorder advocated by another writer, nor did he tabulate his blood-pressure counts or cholesterol levels, gloomily touched on by yet another writer. But he did go on to inform us that to record these epics of human endurance, he carried two camera bodies, three lenses and a (further?!) tripod. To do the writer justice he made no attempt to disguise his bewildered, harassed, and flustered attitude to life, and it is to his undying credit that he is making a resounding success in bringing his cycling activities well into line.

Cynicism apart. You know, it is all unnecessary. Leave it at home. You're just blurring life, wrecking your own enjoyment, ruining the healthy appreciation of everything around you; you are still in the toils of the Great Big Twentieth-Century Rat-Race, which, by rights, you should contemptuously have left behind you the moment you mounted that glorious, efficient and simple - repeat. simple machine, your bicycle. That poor fellow's strained muscles, perplexed mind and tortured bike! Keep your first-aid kit down to a few bandages, a roll of gauze and a tube of antiseptic ointment. Have an anti-tetanus jab if



The large webbing and leather saddlebag. Note cape-roll, side pockets, double set of fastening straps for larger or smaller loads.

you are fatalistic, but for Heaven's sake quit worrying about your health – the more pills and quack medicines



Typical British tourist in cool weather: corduroy or gabardine cap, windproof showerproofed windcheater—with six, well-placed, zippered pockets, roomy cut, adjustable waist-straps, cut away front opening for easy leg movement, storm-cuffs. Double-seated, whipcord "pantaloon" with adjustable straps below knee. Nylon reinforced woolen socks. Leather cycling shoes.

you inflict upon yourself the worse you think you'll feel. I never felt ill in my life until I took out a Life Insurance policy and began worrying about it; since the, in my fevered imagination I have had every vile disease in the book, even including a severe attack of Merulius lacrymans, which a scientific friend told me later, with a stifled grin, was the Latin name for dry rot.

Lastly, tools and spares. Common sense will tell you to take only sufficient spanners to cope with all nuts and bolts, a small screwdriver, miniature pliers, puncture repair kit, spare gear and brake cables, light bulbs and a small oil-

can. For an extended tour, take a spare brake block, spare spokes, spoke key, chain link extractor, and if you are really apprehensive, a spare rear spindle. **And** at all times, a

foot or **two** of wire and string, a miniature flashlight and a pocket-knife.

Oh, **and** before our little clubroom gossip comes to an end, I must tell you of the most exquisite American



Leather cycling shoes—stiff soles, soft uppers, and reinforced toe-strips.

Accessory I saw last year. It **was** an ordinary cycle-lock, **but** attached to it **was** about half a fathom of 3 inch-link marine anchor chain. Moreover, the owner, bless him, had fixed his bike to a lamppost by loosely looping this masterpiece of modern iron-mongery around the saddle-pillar.

Ah well. Happy spring touring in 1971 to **all of you**



Plastic cape. Vent at back is held slightly open with stiffened net material. A tape tied around the waist prevents cape from flying up behind. thumb-loops prevent the cape from blowing over the face.

BY ED STILES

# TOURING WITHOUT PANNIERS

REPRINTED FROM THE NOW DEFUNCT CYCLIST MAGAZINE. I COULDN'T LOCATE THE PUBLISHER. IF YOU'RE IT AND STILL OWN THE RIGHTS. PLEASE LET US OFF THE HOOK FOR \$100.



braced myself as the train lurched to a halt, the baggage car doors blew open and a lanky English cyclist burst in with his machine.

The bike, like most British club cycles, was adequate but nothing special, as faded from use as the jersey Don Stead wore. His shorts, likewise, had seen miles of rain and hedgerows, a small hole telling tales of the road on one thigh.

Stead's athletic entry was not unusual. Trains do not dally in Britain and cyclists load their bikes quickly or not at all.

While I studied Stead's bike, he showed equal interest in mine.

"You're not just out for an overnight, are you?" he said, aiming this classic British understatement at my Trek, which groaned under front and rear panniers, a sleeping bag and a pile of other gear.

It did represent a colossal mound next to the lone saddlebag Stead carried. While we talked, he quickly unfastened the bag, grabbed his pump and locked his bike to the baggage car's wire mesh.

I envied Stead's lightly loaded machine, remembering my recent struggle with the car's pannier-grabbing doors. We found a seat in an adjacent coach, and I worried about theft at every station stop — a fear Stead didn't share since his valuables rode neatly in the saddlebag on his lap.

"You ought to try British-style touring," he remarked. "Pack a few things in a saddlebag, stay in youth hostels and bed-and-breakfast establishments and enjoy yourself." That, he said, would heat lugging half the U. S. gross national product through Cornwall's steep hills.

I didn't think much about it at the time; advice is as common as saddle sores where cyclists congregate. I've never met a cyclist who didn't know the, "best" way to do everything.

But a few days later Stead's remarks surfaced among the mental flotsam the brain navigates on any long hill. Few places offer coastal Cornwall's chances for hillside meditation. Nothing big, nothing that by itself earns a reputation, just one harbor village after another, each tucked between a mile-long descent and a mile-long climb — many at 1-in-5 grades, more than enough at 1-in-3.

I needed a calendar, not a bike computer, to register my progress on this particular day, a muscle-busting bout of 20 miles and six hours. Once, in a 25-inch gear on a 1-in-5, one of those tiny English ladies — the kind who do track stands on their hoary, grocery-laden three-speeds. passed me, smiled sweetly and said, "Lovely little gears you have there, my dear."

Stead's advice appealed to me, while I lay on the pavement. Road rash has a way of reducing theory to concrete reality.

The next post office got my sleeping bag and most of my camping gear. Stead was right; I was carrying too much gear.

Well, as these things go, post offices' became regular stops over the next few days. I sent home enough tools to start a bike shop, a few changes of clothes and my extra shoes. The remainder was packed in panniers. **And** that system seemed fine for a while.

But after I looked back for traffic and bounced off a hedgerow in a narrow lane, Stead's advice appealed to my better judgment while I lay on the pavement. Road rash has a way of reducing theory to concrete reality.

"Large pannier bags are best avoided," Stead had advised. "They sit well back to clear the heels and are far outside the wheelbase. It is my opinion that they make handling unpredictable.

"A saddlebag puts the weight where a hike is meant to carry it," he added, "at the saddle."

On the train that sounded as sensible as sew-ups for loaded touring, everything I've ever heard or read said to keep the weight low, and that meant panniers. Now, from a new perspective, I recalled that the panniers had never done much for stability.

At Bridgewater the front and rear panniers shipped out for the States, I found a bike shop and grabbed the last Karrimor No. 1 saddlebag (the biggest they make) off the shelf. Down the street, another shop sold a small handlebar bag for the overflow of a few lighthweight items I couldn't squeeze into the Karrimor.

Saddlebags have been around for the better part of a century, which **has** given even British industry time to work out the wrinkles. The Karrimor had a stiffener in the bottom to keep it from sagging when not fully loaded and several roomy outside pockets. Two straps fastened it under the saddle and a third attached it to the seat post to keep the bag from swaying. The top flap even included **two** straps for attaching my poncho **to** the outside of the bag. That proved to be no frill in Wales, where drizzle is a way of life.

"Inventive devils, these British cyclists," I thought, and

realized that talking to Stead meant talking to a century of cycling tradition, despite his disclaimer that after riding **all** his life he is just beginning to see England.

I left Bridgewater and headed for Cheddar Gorge after lunch, amazed at the difference. I rode a rock-stable hike that charged up hills and didn't careen like a runaway freight on the down side.

And the bike looked better. Touring bikes with **hags** hanging from handlebars to rear reflector look like overstuffed motor homes taking the Continental tour fully outfitted by Samsonite.

At the end of the month-long tour, I checked into a bed-and-breakfast place about two miles from London's Garwick Airport and spread my gear out on the floor to pack for the flight home.

There was still plenty of room to walk around without stepping on everything, and I realized I had kept about what Stead had recommended as the train had clattered through Southern England and into the West Country, "Not too much and nothing unnecessary," he said.

#### JOE Z'S CARRADICE TIP

...for those who would like to carry a Carradice bag but don't have quite enough clearance. Try this:

1. Take the top straps and turn them around backwards.
2. Fasten the buckles **INSIDE** the bag, then cinch them **up** tight to the seat.

This will give you at least two inches more clearance, so if you've got a small bike that can't quite fit a Lowsaddle, or a middle-sized bike **that** otherwise can't quite accomodate a Nelson Longflap, this will make the difference.

#### MOUSTACHE H'BAR BAG NEWS FROM CARRADICE

By the time you read this we'll have a front handlebar bag for Moustache Handlebars. And it will have been sent to Nitto, who has agreed to build a rack/support for it.

Assuming the bag arrives in a form closely approximating our design, it will be roughly the shape of a flat square, roughly 9" x 12" x 3" tall—big enough to carry papers, folders, a small camera, clothing and sun—well, the usual stuff.

We hope to have racks and bags by December. We expect to have them by February.

#### FLASH! CARRADICE TO BUILD BAGS FOR GREENPEACE

Some chapters of Greenpeace are pickier than others when it comes to the environmental impact of making the stuff it uses, (Note: this is the worst sentence that will ever appear in these pages.) and the Swiss chapter is among the pickiest. They've asked Carradice to make bags using organic cotton (**from** Denmark), non-electroplated buckles, vegetable-tanned leather straps and trim, and some kind of green dyes. Carradice is working on it, and we'll keep you posted.



## TRANSCRIPT OF A TELEPHONE CONVERSATION WITH



# TOM RITCHEY



Shortly after Z got hooked for life, Z started riding with a club (The Diablo Wheelmen), and one of the faster riders, a guy named Rick Baldwin (who beat Greg LeMond in the Berkeley Criterium one year) rode around on the funniest looking ten-speed I ever saw. It was also the prettiest, and it was a Ritchey. A few years later Z ordered one on a phone call I'll never forget. Z had the nerve to ask questions about why he did this, why he did that; and Tom said to me "look — most of my customers have already had their Colnagos and Masis and Cinellis, and now they want the best. If you haven't gone through that, go through it, and then come to me." This from a 23-year old kid, and I was born before he was.

Whenever bike and frame people talk about frame builders, sooner or later Tom Ritchey's name will come up. And inevitably the words "prolific" and "efficient" will crop up, because he is unquestionably the most prolific and efficient frame builder in the world. Fast. But most of the time when words like prolific, efficient and fast are applied to a person or a process, there's the understanding that there's a tradeoff in quality, beauty, or some other desirable, because there usually is. But Tom's own fillet-brazed frames look—in the purest sense of the word—perfect. He's at a level—and he's been at that level since he was a punk—where his fellow framebuilders don't seem to regard him as competition. Since even framebuilders are human, there is a certain amount of envy; but it's overshadowed by respect, admiration, and a hint of the type of reverence usually reserved for old or dead people. Yet Tom, who is now 40, is younger than his peers.

Tom would be easier to relate to as a reasonably normal mortal if it stopped right there with frames. If he managed to achieve this level of skill by sacrifice. If, in his pursuit of the perfect frame, he'd given up riding and bathing and family. But he still rides, he still washes, and his family has always come first to him. In other words, there's more to him than bikes.

A friend of mine works for Tom, and he (the friend) told a story about Tom. This guy, let's call him Joe (real name: Joe) has been around bikes forever, has impressive credentials of his own, is not easily impressed, and I've never known him to exaggerate. He said "Tom can pick up a frame, hold it at arm's length, and tell you whether it's perfectly aligned or not. And if it's not, he can tell you by how much, and to which side, and I'm not talking about a frame that's way off, but one that's off by a millimeter. At first Z didn't believe it, but every time Tom says a frame is off by that much, we put the frame on an alignment table, and he's always right."

Tom flat out knows more about bikes than anybody alive, and Z say that with the same confidence I'll tell you that the sun will come up tomorrow. That's the end of the gush, now here's the interview.....

**Grant Petersen: How did you get started in bikes, riding and building, and what were the early years like?**

Tom Ritchey: I always liked building things. When I was thirteen I built an electric car—

**GP: So you were the one who started that...**

TR: Well no, but I did build one, and my dad showed me how to braze it together. That was my first big project, before any bike frames.

**GP: Do you still have it?**

TR: I wish I did, but no—I sold it to some local guy. It was a pretty neat car, and I'd cruise around the neighborhood in it. Really quiet. I wish I hadn't sold it.

**GP: What about your first bike frame? How did that come about, and do you remember it very well? The details, the tubing, and all?**

TR: Of course I remember it. It was lugged, and I built it from Faulk tubing, which was sort of an entry-level but decent tubeset, and it was all I could get. It was hard to get tubing then, in 1972.

**GP: Did you have a bike before that? Were you riding or racing then?**

TR: I had a Cinelli, I got it used. It rode well, but I want-

ed to make my own.

**GP: What color did you paint it, and do you still have that frame?**

TR: It was red, and somebody stole it, I think, from my porch.

**GP: How did you...I don't know...how did you come to get such confidence, such self-confidence so early? Not many fifteen year olds have whatever it takes to build their own frames.**

TR: My dad was always encouraging me, being a good mentor. He showed me how to put tubes together, and after that it just seemed natural, I took to it right away. I built that first frame for myself, then I built one for a friend or two, and I started repairing other frames—good American and Italian racing frames that broke or somehow needed a new tube or whatever.

**GP: And that must have been a good education...**

TR: It was. All these frames I'd heard of and known of and sort of admired for years...I was taking them apart and finding out what shortcuts they took in building them.

**GP: Did the quality vary a lot? Which were the better ones?**



Tom at 13 with his first tubular metal project, and electric car.

TR Oh yeah. The Masis and Cinellis of that time were pretty good. They were brazed with brass, and in taking out the tube I had to be careful not to use too much heat or I'd ruin the lug, but I'd braze in a new tube using silver, and none of my repairs ever failed. In some ways, repairing frames is harder than building them.

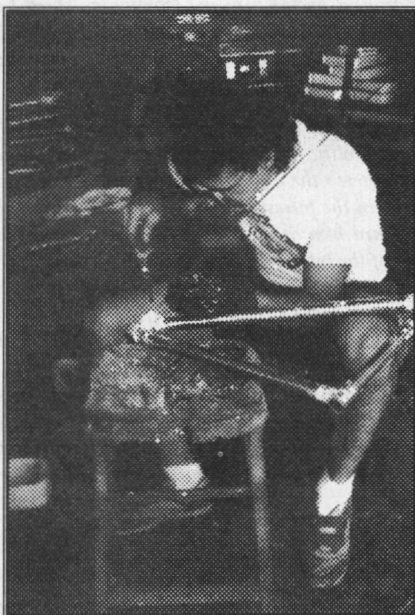
Then, I remember being a young racer kid, going into the local good bike shop, and the head mechanic there, Steve Aldridge—he was a National team mechanic and had this big reputation for his skill—he made a comment about how they could teach monkeys to build frames. He's a friend now, but at the time it hurt my feelings, and I think, with criticism, you can either be intimidated by it and crawl into a shell, or you can try to prove people wrong, and that's what I've always tried to do. So I went out there and raced hard and rode my bike hard and one year I just about won every race—and I was racing with the seniors, fast guys who were older than I was. Some of them wanted my frame or the specialty parts, the parts I used to modify and make really light, things like seat posts, saddles, stems, even threadless stems and headset. I had time trial bikes that weighed 15 pounds—

**GP . . . a threadless headset? Like headset?**

TR *Before* Aheadset. I remember being heavily criticized by Jobst for making that (laughing).

**GP: What was the design like or what didn't he like about it and how close is it to headset? Do you have one now—one of the originals?**

TR Unfortunately, no. It would have been good to have at around the time Aheadset was happening, but somehow or other it disappeared, no evidence, no proof. It's okay, though. Anyway, Jobst didn't like it because it wasn't a standard design, and Jobst has always been a strong, and I'd say really positive influence on me. Standards are important and you shouldn't take trying to change them lightly. Back then, especially, it was not a popular thing to do, to change standards. From Jobst's point of view, he figured "if it breaks down and I'm in the hoonies, I want to be able to go to any bike shop, find a bolt and put it in." I could appreciate that and I started to look more into why things were made and developed into certain standards. Jobst's criticism helped me learn to appreciate the masters and the original designers. So I would go off into a certain direction and use myself as a guinea pig, show up on a long and pretty hard Jobst ride with something that



Tom brazing

was way out there, get chastised for it, come back, think about it, and come up with something more realistic. I'd take chances on myself because I was looking for every advantage I could get as a racer. And my bikes did seem to work better, and definitely weighed less than just about anyone else's. People considered it an advantage and they

wanted that advantage, and I have continued to do that with my parts ever since. I've been lucky that other builders, guys who are on some level competitors, but are friends first, guys like Joe Breeze and Steve Potts have been supportive.

**GP: Some of those early things were way out there by any standards—those forks with topless crowns, and the one pound saddle seat post combination . . .**

TR: I still have a couple of those . . . yeah, yeah, take out the steel rails throw in an aluminum tube, make an aluminum post that had a special clamp . . . they're lighter than anything today. And 4 or 5 ounce stems.

**GP: A lot of the Ritchey bikes that were being raced back then had Weinmann 500 side pulls, the cheapest brakes money could buy at the time. You could get them for \$15. . .**

TR: Yeah. I don't think they make a lighter brake than a Weinmann 500 even today.

And Huret Jubilee derailleurs, so light, and beautiful. They had fully adjustable cones. . .

**GP So you were racing superlight bikes. You're 6'2" or 6'3" and you ride what size frame and how much did your race bike weigh?**

TR When I was fully competitive, I was 140 pounds and 6'1", but I've chunked up to 6'2" and 175. I can ride these light bikes because I ride with finesse. But everyone is motivated a different way. Back then, Jobst had a pair of steel handlebars, and he still rides a 6-speed freewheel, but he says "I don't shift gears very often." He is the ultimate minimalist.

**GP: How many lug frames have you built and how did you happen to go from lugs to lugless. Why?**

TR. I built a lot of lugged frames at the same time I was building lugless. At the beginning a lugged frame took me less time than a lugless one, and it wasn't until I developed the knack for making a lugless bike that I got the benefits from the lugless and could build them more efficiently. It took a couple of years.

**GP: How many frames do you think you've built now? Do you have records of them all? Or do you . . .**

TR No. All I could do is kind of rough calculate the

numbers. I do probably have records but they . . . It would take someone a while to piece together . . . I'd say somewhere between 5,000 and 10,000 personally, built bikes.

GP: But that's a **5,000** range, I mean most builders could come a little closer than that.

TR: I've got to calculate 25 years. . .

GP: **We have time. . .**

TR: The first year I built maybe 3, the second year I built probably 50, the third year, when I was eighteen, I built two hundred and fifty. . . .

GP: **Two hundred and fifty frames before you could vote? When you were still in school? Did you do have time to do your homework? How did you manage that?**

TR: I had a unique work experience credit for my business and for my cycling. I went to school between 8:30 in the morning and at 11:40 I got out to do my training. In my junior and senior years, I was kind of doing a special program at school.

GP: You never had any formal instruction in welding or brazing or . . . .

TR Nothing formal, but as I said, my dad showed me how early on. I was a quick study and I paid attention to people giving me advice, and I guess I understood things from an intuitive level, and tested my ideas on myself (laughing). I **was** lucky to have people around me who were interested in me succeeding. I think everyone needs that—mentors, people to watch out and make sure they are not going down the wrong path. I had plenty of people, like my father and Jobst that, you know, looked after me and gave me advice.

GP At your peak of building . . . how many frames a year?

TR There **was** a year or two where I think I built over 1,000.

GP These are **all** fiilet-brazed? How long does it take you to build a frame, I mean, just say with a pile of raw parts, unmitered tubes, things like that?

TR **Ah**, you know I really don't like to . . . I've never liked to answer that question. It's now **a . . . there's . . .**

GP Are you concerned that people **w**like. . . maybe you can build it fast and people would say "well if it takes him

**only** an hour, now come he charges **so** much?" Daniel Rebour (bike parts illustrator) had a good response to that. He said something like, "It may have taken me **30** minutes but it took me **30** years to get to the point where it takes me **30** minutes." But

when you **talk** about building a **1,000** in a year and, presumably, you were **also** riding you bike at that time and having some **sort** of a life outside of riding and building frames . . . . you must have been fast.

TR Um, you know, all I can say **is** that I have gotten to the point that I spend about **10** percent of my time building frames, the rest of it running the business and designing parts.

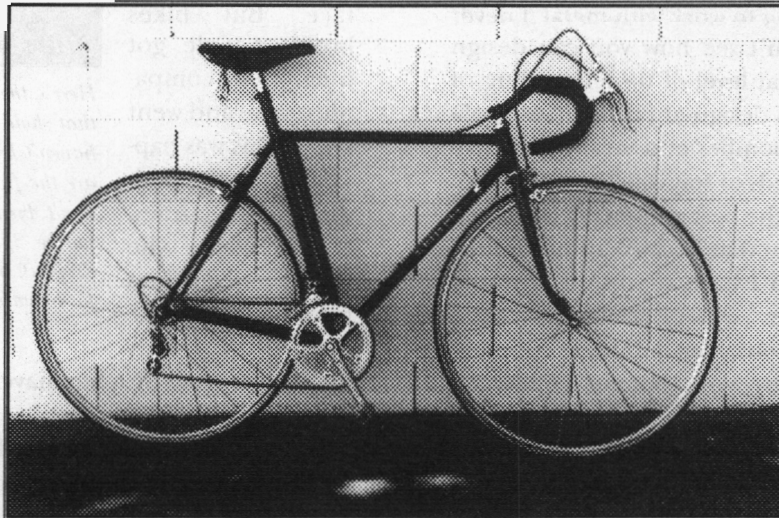
GP: How many frames do you still build, **all** yourself, fiilet-brazed?

TR I think this year I've built about 100 bikes.

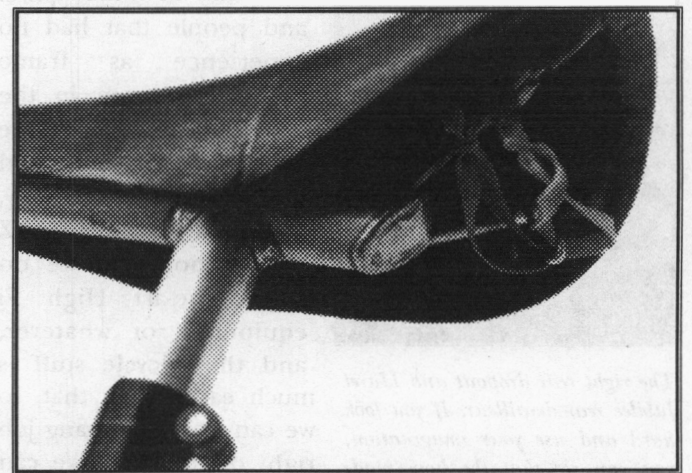
GP **OK**. Back to the time thing—how long? I'm **curious**. People want to know this Nobody's going to begrudge you your efficiency, **and** you've already given **us** clues.

TR Okay, okay . . . If you gave me a tube set at 8 a.m., I could probably finish the bike and even paint it before lunch time and have time for a couple of coffee breaks.

GP How long for **each** individual joint, and is it stressful,



*Tom built this bike for his dad. The extended seat tube allowed him to chop the seat post down to a few inches—the idea being that an inch of seat tube weighed less than an inch of post. Tom's strut-style stem was the first modern-day use of such a style. It clamped directly onto a sleeve brazed into the fork steerer.*



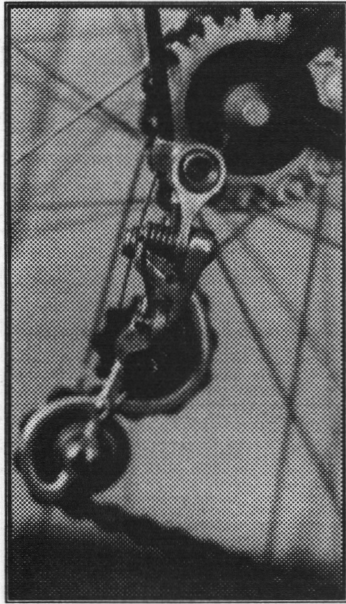
*2. This saddle/seatpost/tubular tire carrier combination weighs about a pound. It began with a Unicanitor saddle, drilled out from underneath. The rails were cut, and in their place is the aluminum tube, which T's into the post itself. Not adjustable, but each was custom made for the rider. The rubber band widget is a tubular tire holder.*

**a full-concentration effort? It seems that after all these frames and joints, you might get pretty relaxed with it all.**

TR I'm not uptight. There is, you know, no reason once you have the skill, to be anxious over things. To me, frame building is therapeutic. After {business issues and pressures} I find myself just wanting to work with metal. I never want to give it up, and I don't see how you can design good components without that level of understanding of the frame. A frame when it is designed correctly, is probably as sophisticated as a B-1 bomber or a Stealth, or whatever that thing is called. It needs to stay together and serve its purpose. Sometimes, I am the best guinea pig for doing that and I gladly give myself to that because of how much I enjoy riding and how much I have at stake if anything would fail in the wrong hands.

**GP When you were starting out, was liability a concern? Did you have insurance? Were your parents concerned that "our son is building these frames that people are riding them and they are going to get hurt and they are going to sue?" "At what point did you get liability insurance?"**

TR You know, it wasn't. . . it really wasn't until . . . I can't remember the exact time when liability became an issue, but from the start, people like my dad and Jobst pressured me to do things correctly or not at all, and not to take unnecessary risks. I've made a couple of mistakes, but I'm



*The right rear dropout and Huret Jubilee rear derailleur. If you look hard and use your imagination, you can see that the home-made derailleur hanger has three lightening holes drilled in it. The Jubilee itself weighs 140g. No excess metal!*

the guinea pig myself, and those mistakes never killed me, and I've learned from them. Liability issues didn't really start to surface until I'd say the mid-80's when so many people were getting into the mountain bikes out of other sports and people that had no experience as frame builders or even in the bike industry. They were starting to make stuff, and had the attitude that "wow, I am from the XYZ Corporation and we do state-of-the-art High Fi equipment or whatever, and this bicycle stuff is much easier than that, so we can do a whiz-bang job right off the bat. We can make this handlebar 102 grams. We've got state-of-the-art materials and testing and engineers and a

whole bunch of resources and ...

"—it just . . . you know, all looked so good on the surface. But bikes broke, people got hurt, new companies came and went and as this was happening, in the middle to late eighties, I realized the whole industry was becoming a target.

**GP: How many employees does Ritchey have now and are you the sole owner?**

TR We have about 25 in the U.S. and about 10, 11, 12 in Switzerland. We're pretty lean, for all we do. I am still the **only** product designer in the company, but I don't spread myself as thin as I used to. I try to stay focused on developing new things.

**GP: What is a typical day for you like?**

TR I get up about 6 a.m., grab some java and start to answer my faxes. I work on new product development a couple three or four hours. Then I go into the shop and work on the lathes, the mills, brazing things, making samples and prototypes for my own testing or the team's. The new marketing ideas—I have to evaluate them, deal with team issues and mechanic's questions—are we going to take this part or that to the trade show? Build the special team bike? Modify derailleur hangers if the derailleur doesn't have the right wrap? The days are full, and I try to get in a ride at the end.

**GP: How much are you able to ride, still?**

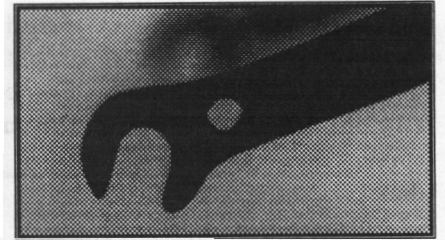
TR On the average, you know, between 150 and 200 miles a week and maybe 8,000 to 10,000 miles a year. . . I have a few different bikes, mostly so I can test my parts and other people's parts on them all.

**GP: How is your mountain bike set up?**

TR. I've got a couple with full suspension, but the one I ride most of the time, at least right now, has no suspension. Thomas (F., team rider) has been playing with it this winter, too. Actually, it's what I call passive suspension.

**GP What's that?**

TR Well, you have so much elasticity in each of the combined inner reacting components that you end up with suspension and you end up with it in a way—well, not the way of a big, classic, suspension bike these days is defined, and it is really fun to ride. There are, you know, a certain amount of people that can appreciate it and go really fast



*Here's the front dropout, and if you think that hole is an integral rack eyelet, you haven't been paying attention. Less obvious are the five holes in the dropout face. They don't break through to daylight, but save maybe 3g. I've never seen a broken front dropout, but nevertheless, we're showing these for historical purposes only.*



on them.

GP: Um.

TR That is actually not my favorite bike.

GP: What ~~is~~ your favorite bike?

TR: My road bike.

GP: One thing. . .your. . .I don't know if your bikes are still this way, but the ones I'm familiar with always had a . . .there was a clearance for fat tires on them even though they were lightweight Ritchey racing bikes you always designed clearance in them *so* you could fit fatter tires in them. Are you still doing that?

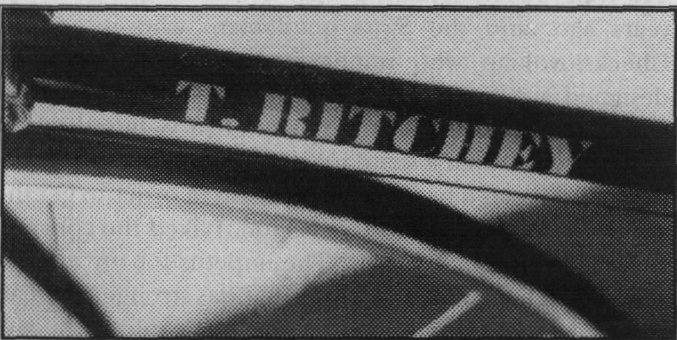
TR:Of course. You've got to be able to ride in the mud.

Have you ever **had** enough mud pack into your forks that it throws **you** over the handlebars? I try to design *so* that won't happen.

GP: *So* your road frame designs haven't changed much.

TR Not a lot.

GP: Back to the more current **things**. On the mountain bike tires—why *so* many? You've got a lot of special condition tires. Then you have good all-around tires. What drives all **of** these tire designs? Is it external pressure from dealers, the sales department, **or** what? It seems out of control. After all the riding that you have done on road



*The first Ritchey decals. Down the centerline, if you can read it, is "Custom built for MY POP." The earliest Ritcheys had the name of the rider there.*

tires, off road, you know, it just seems a little **bit** inconsistent, based on your experience riding pretty much slim slick road tires in dirt, to have mountain bike tires with specific treads for specific conditions—hard pack, loose pack, mud, not mud, going **fast**, all-around. . . .

TR: It's not out of control or inconsistent. I design racing tires and tires for different conditions all around the world, and on any given day and on any given course, one tire tread will be faster, and if **you** want that advantage, **you** need a *good* selection to choose from. Riding off road **is** different, obviously, than riding on road—the conditions vary **so** much more. As for riding bald road tires off road, I find that fun and challenging. It's not necessarily because they work better than a big knobby tire.

GP: What about the blue thing (some Ritchey tires now have blue sidewalls—ed.)—was that influenced by Continental with their Indian brown side walls? I think they look a little funny, and Peter here thinks nobody will buy a tire because it's blue, but a lot of people will refuse to buy it because its blue. How do you feel about the blue sidewalls, really?

TR Blue is just blue ... an identifying crazy color. The casing does have improvements and people tell us we draw people's attention to the uniqueness of the tire and the identity of the tire **is** blue.

GP: **OK**

TR: It's a very sophisticated, carbon kevlar weave of fabric and homogenized molding in the latex structure that improves the function of the casing. So for people that are extreme users and want the best, **you** know, there are improvements to be had with that tire.

GP: My favorite Ritchey part is just the *crank*, and I'm kind of concerned about the future of that just because the one we sell and the one I like is the standard drive, the 110x74. **Do** you have plans to continue that crank? What do you think about that crank? What do you think about the cranks in general? We seem to have a hard time getting them, and we do pretty good with them.

TR: Well, . . .

GP: **Is** the crank going to hang around? **And** the loose-ball Logic bottom bracket?

TR: Um. You know, we will continue to make the crank **as** long as there is business to be had, but things are changing. When I designed it, there were lots of bottom brackets out there with 120mm (or *so*) spindles, but now everything's shorter, so the crank won't work with them, and the bottom bracket won't work with everyone else's new cranks. So as a mountain crank, it has its challenges. But it's one of the best road cranks designs that are out there as far as Q-Factor, and chainwheel placement relative to bottom bracket goes.

GP Well the only difference between the road and the mountain logic is just the mountain you could put a third ring on and the road one I guess that piece has been cut off it.

TR No. Different forging . . . .

GP **OK**, it's a different. . . .

TR: That *half* of the forging is different.

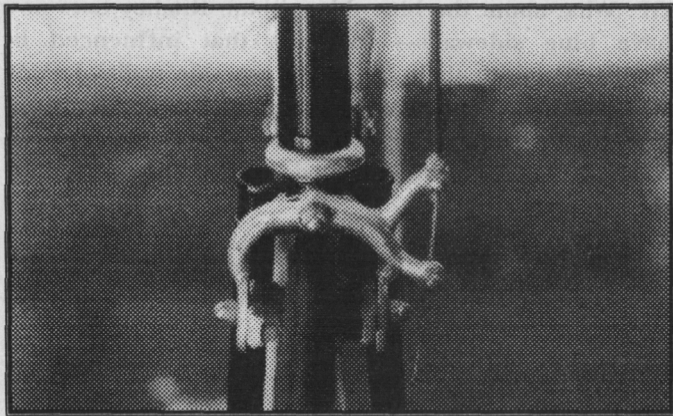
GP: Yeah. **How** big are the production runs that you have to do for about. . .

TR 1,000.

GP: 1,000? *So* if there is no more market for standard drive 110x74 triples, um, they probably aren't going to be around and . . . .

TR Well, **as** I said, well... I'd like to answer that question a little differently right now. The 2 x 9 (*new Ritchey concept*





*Tom's homemade double-plate, topless fork crown is the ultimate expression of light weight. This bike was built to ride in the relatively rainfree hills south of San Francisco, in Northern California. In rainy weather they could be covered with duct tape?*

that uses 2 chainrings with 9 rear cogs, instead of 3 front and less than 9 rear—ed.) has the advantages of the standard drive and the compact drive rolled into one. You get is the nice efficiencies of a standard system and the great weight saving and ratio advantages of a compact system. I think if you were to test the new system, as a 2 x 9 whether it be the 2 x 9 or a 2 x 8—

**GP: It would be a 2 x 6 in this case probably. . .**

TR: Well, whatever, I think you'd be impressed.

**GP: Well, I'll take a closer look at that but my concern is also just for road triples and . . .**

TR I don't know if you need a road triple. There is a better range to be had without such a crossover.

**GP: But just for a normal rider who wants wide range gearing and wants to buy a new crank and he is already set up in wheels, I'd hate to see the current Logic triple go out of production because . . .**

TR (sounding frustrated) Well, duly noted, and that's all I have to say on the subject. You wanted me to comment on crank design just how much is going on right now. Well, everyone is making a crank. Everyone thinks that they can make a crank, but the initiation fees—costs of making forged cranks—are so high. So people who wanted to avoid that, maybe with CNC machined cranks, got into it, and now there are piles of broken CNC'd cranks. It doesn't make sense. If even cold forged cranks sometimes break at point A, how can someone make a machined crank in the same cross-section or size and think it'll hold up? They don't. I was criticized for being stodgy, not very open minded, and, you know, ultimately, these companies have made piles of bad cranks recall them and come to the same conclusion.

**GP: Um, what has been . . . what are some of the positive things that have come from the Epic Team, your "non-**

**merger" merger with Mike Sinyard. Does Specialized spec more Ritchey parts? That must be nice.**

TR: It's a hard fought spec. I tell you, man, they're particular about what they use and they are very demanding and are actually more demanding than any of my other customers.

**GP: Are they going to use Ritchey tires?**

TR: I think that is probably going to be the one main area they are going to hold out on (laughing), but the alliance is still new and there is a lot of, you know, things that we haven't really . . . we been both so busy running our companies and we run them individually that sometimes we lose track of each other, but there is administration business side behind the scenes that goes on that helps Ritchey 'helps the potential growth of Ritchey and Specialized that is . . . is for the most part the advantage of the alliance.

**G P On the OCR rim (a rim design to reduce spoke asymmetry and equalize spoke tension and therefore make a stronger wheel), whose design is that? I heard that it came from Switzerland and then you've got it and now Bontrager has one. What is the story of the OCR Rim of the origins of it?**

TR Well you know, many people saw the original concept years ago, and the Swiss gentleman, who is actually Checkslovakian who immigrated to Switzerland—he designed a completely dishless wheel, but it had problems. Mainly, his design was way too heavy—hundreds of grams heavier than a standard rim because of the torsional windup created by the spoke tension in order to get the advantage out of the dishless section. I liked the concept, but wanted it much lighter. The impetus for my interest was the 2 x 9—I wanted a wheel that was stronger than an eight-speed, but with one more cog, so I could use a conventional system for that. I realized there was no way to take the entire dish out of the wheel, so rather than drop the whole concept I satisfied myself with getting rid of half the dish, and in doing that, lots of things had to be redesigned.

**G P When did you first try the rim?**

TR Well, I built a test rim about two years ago . . .

**G P You built the rim or you built the wheel?**

TR: Both.

**GP: How did you build the rim?**

TR You know, you have to build a rim, you have to make a rim, you have to design an extrusion and pull it off and . . .

**G P So you designed the rim and someone built it.**

TR Yeah, I designed the rim and had the rim made . . .

**G P OK, I was surprised there for a moment.**

TR And the first sample came out at 415 grams or so. in a 24mm width, and the wheel went together in 15 minutes barely.

**GP** You build your own wheels still?

TR Yeah.

GP: And you can build a wheel in **15** minutes?

TR Yeah, probably less. Anyway, I built it intentionally without much care, just to really test the concept, and I rode it recklessly, stressing the wheel side to side, on bug hops and bumps, coming **down** at an angle—all the bad things you can do to wheels. It stayed true, and I thought, “Man there’s something good here, and I hope we can pull it off.” As far as the original patent goes, and the way it was written, and the changes I made, we weren’t infringing. I was so jazzed, but Thomas (same Thomas) was skeptical when he first saw the prototype.

I wanted him to race it in a big race in Georgia, but he resisted because it wasn’t “proven.” But I just said, “Do it and trust me” and our wheel-builder Joe Young built a wheel really quick; well I don’t know how quick, actually, but it must have been quick, because—

**GP: —probably at least 15 minutes**

TR: —and Thomas raced it the next day, and it held together great, no tension problems at all and also just taking out half the dish was such a significant amount . . .

**GP: Well, yeah, well . . . What’s the availability going to be like in different sizes and different widths?**

TR: We’ve got road . . . I’ve got a road set right now. I am testing a rear rim right now that weighs 385 grams.

**GP: Where are the rims made?**

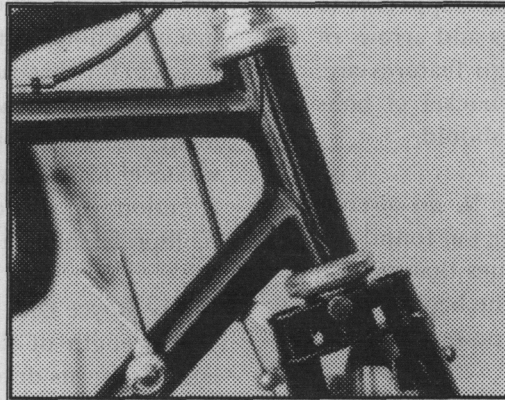
TR: Ambrosion in Italy makes some, and some are made in Taiwan.

**GP: I’d like to get some of the road rims, but 385g sounds too light. I hear about Mavic may stop making the MA2 and if that happens we’ll need a replacement, but . . .**

TR: Yeah, well this is as much if not more of an advantage for road wheel and than as a mountain bike wheel. We’ll have wider ones, too—maybe around 22mm wide.

**GP: Enough bike parts. How many children do you have and how old are they and do they ride bikes? Do they . . .**

TR: Three kids. My eldest son Jay just turned 15, Annie’s 11 and Sarah is 13. They ride bikes for fun and sometimes I get them on longer family rides and we explore places together, but their bike is more . . . kids ride bikes for fun and . . .



*Rear view of the fork crown. Note also—if the reproduction of the photo allows it—the lugwork and finishing. Tom is best known for his lugless frames, but his older lugged are as fine as any, ever, by anyone.*

**GP:** Don’t we all. How long have you been married?

**GP:** *So* you got married when you were 21? Wow, that’s pretty neat.

TR Yeah, marriage is a tough road and it’s a great road. You know, you persevere and are committed to making it work, and it has a lot of great things to offer.

GP: Well, *so* you’ve got three kids and you’ve done a lot of traveling and that **kind of** makes it hard on Katie. I mean, it’s a lot of work. She got a tougher job than you do.

TR: Yeah, yeah.

GP: But it must be easier now the kids are teenagers at least. In those early years, that must have been, I cannot imagine.

TR: Yeah, its, you know . . .

**GP: She must have put up with a lot.**

TR: Yeah, she’s a blessing. We’ve traveled as a family quite a bit too which is one of the nice things about my job.

**GP: Is there anything you want to do with bicycles before you retire or die?**

TR: I think that every part is open to be made better and there are, of course, parts I cannot talk about that I am working on as far as the development stage that sometimes take a year, sometimes take five years to sort out all of the problems and connect the dots. I’m looking for a better experience riding my bike. I’m looking for product to work better for me, and as long as I still keep riding my bike and love

it, which I cannot imagine doing anything else more enjoyable, I’ll continue to think about how to make parts better.

**GP: Well, good, thanks a lot. We were trying to do this second take a little bit faster, but it took more time. I tell you, when I got home last night and put the tape in and heard nothing but silence, nothing but silence. I was fast forwarding it, flipping it over, trying to just jump around, trying to find something, and nothing was there.**

TR: Well, I hardly ever get a chance to talk to you anymore so, and think its for me, a friend, time well spent . . .

**GP: Well, its still a lot of time. Between yesterday morning and now this morning, we’ve gone over three hours, so thanks a lot, Tom.**

TR: All right.

**GP: See ya.**

TR: Bye.

BY KEVIN CAMERON

# DEVELOPMENT POWER

REPRINTED WITH PERMISSION FROM CYCLE WORLD MAGAZINE, A MOTORCYCLE MAGAZINE, MARCH 1997, AND IT'S A BULLSEYE, EVEN THOUGH THE FIRST SENTENCE DROPPED ME LIKE A HOT POTATO. THANKS TO MEMBER NICK LUCICH FOR CALLING IT TO OUR ATTENTION. IF YOU READ SOMETHING YOU THINK WE'D ALL ENJOY, PLEASE CUT IT OUT AND SEND IT IN.



It's always fun to debate whether 'tis nobler in the mind to use inverted-bucket tappets or to endure the outrageous slings and arrows of rocker arms. Advanced design features are, however, just an unproven bucket of bolts until development makes it all work as it should.

Here is an example: During World War II, no aircraft engine whose design was begun during the war found any significant use in that conflict. The engines that did the wartime job were already in existence at the beginning of hostilities, and were pushed to higher power levels by constant development.

Today, 50 years later, mechanical systems remain extremely difficult to optimize and make reliable. Despite computer-modeling, improved materials and all the other advances that have occurred, engine development still requires cycles of testing to destruction, detail redesign and re-testing until the desired performance and reliability are obtained.

This makes Ducati look very sensible in making year-by-year updates to its basic 851 design of 1985, while others, replacing entire engine designs every three years or so, may be abandoning their children before they are full-grown. The others are trying, with the aid of all the most sophisticated methods, to make their machines into winners (in one sense or another) straight off the drawing board, and modern engineering encourages us to believe this is possible. Computer models give us the power to design around troublesome things like crankshaft torsional vibration, con-rod bolt failure, etc.

We know that despite this, modern sports/racing engines continue to have traditional troubles (like camdrive failure) during development. Computer models are not yet able to erase all problems before they occur. Experienced human engineers must then let the engine tell them what it wants — that is, read the evidence in the failures, understand the failures, then redesign around them.

Maybe what I'm saying here is irrelevant beside the reasonable assertion that manufacturers design their machines not to win races or set records for durability, but to sell in the showroom. To thrive in the marketplace, conventional wisdom assets, motorcycles must instantly implement the latest buzz-acronyms in metal-ATAC, EXUP, whatever technological pot banging it takes to get market attention. All this demands (ready for the buzz-phrase!) "compression of the product development cycle."

Henry Royce said, "Invent nothing. Inventors go broke." The strength of Rolls Royce in building aircraft piston engines was its development department. Royce's designers were not innovators but developers, and they did it brilliantly — not designing so much as evolving an engine, as if it were a living organism responding to a harsh environment. Time and again, a small, intelligent change to the shape of a hard-pressed piston, con-rod or crankcase greatly increased its durability. That's development. They used the engine itself as a model. Call it the exact logic of steel and aluminum, contrasted with the approximate logic of silicon — today's computer modeling.

The production of technical novelties as a marketing tool forces breakthroughs to be scheduled. While Ducati uses development in the old way, to build the strength of one basic design, the new philosophy tempts others to leap straight from generation to generation of machine. A brand-new design attempts to make every element good right from the start. Development keeps what is proven in an existing design and fixes what is unsatisfactory. Which task is more likely to succeed?

"Ah, yes," says the modern engineer, "history makes good reading, but today product cycles must be compressed or you miss the boat, sales-wise. That means simultaneous engineering with computer-modeling, concept to showroom in one giant, simulated, optimized, perfectly accurate, money-savings leap."

This is a beautiful ideal, and may work in the consumer-

electronics industry or in econobox auto engineering. But where state-of-the-art mechanical systems are concerned, too little is perfectly known, so computer modeling is harder to do and less accurate. Look at the troubles with the latest World Superhike 750 Fours: Despite application of all the big guns of modern engineering, these designs had lackluster first seasons.

Although marketing insists that new model must be piled upon new model to keep sales healthy, demand for the children of Ducati's long developed 851 remains high. It is possible that this highly developed machine has (dare I say it) classic appeal? With all the miracles of marketing, there's still no such thing as an instant classic. That status has to be earned, which takes time and trial by fire. Compressed product development leaves no time. The purpose of the development used to be clear: to produce a more reliable, more capable product. Today, that purpose is no longer so clear because the needs of marketing have become so desperate. Now, development gives us many things that are merely new, not necessarily better — or indeed even of any value at all.

Ducati has shown an alternative that works: capable classic status instead of a new model every five minutes, and long-term performance development instead of starting over before the previous design has matured. The constant rush of new models is motivated by an unexamined assumption: that motorcycles are commodities like consumer electronics — whoever is first to market with a shiny new gadget will win the pot. This ignores the special status a long-running model can earn through time and development.

Confusing development with marketing stops good engineers from perfecting their work. It brings technically advanced but immature products to market. Ducati is doing the free market and us a favor by taking its alternative route, reminding us all of the value of continuing development. It's also showing that motorcycles need not be commodities, that classic status can work even for a modern sporting motorcycle.

## SOME LIKELY DEVELOPMENTS IN THE NEXT FEW YEARS

### 1. WHEELS WILL LOSE THEIR SPOKES

Spoked wheels will continue to lose popularity, partly because they're so labor-intensive, and labor is the most costly part of a bicycle; and partly because as molded wheel technology continues to advance, the cost to build a wheel will plummet, and the profitability will far exceed that of spoked wheels.

### 2. DERAILLEURS WILL DIE COMPLETELY (20 YEARS)

They'll gradually die out, replaced by internal gearing. One reason for this is that manufacturers will target China, and China's current bicycle support infrastructure—dealers and repair people—are largely unfamiliar with derailleurs, and it will be much easier to get them to give up their Flying Pigeons in favor of a more

advanced version of the same bike, with no-maintenance internal gears. As China becomes more familiar with Western ideas, it will be critical, in the selling of bikes in China, to give them a Westernized flavor. So the U.S. market—long a flat one—will be used a model for the Chinese market, and in order to do that, we'll have to be riding the kinds of bikes the manufacturers want to sell to China.

### 3. TREK WILL REINTRODUCE LUGGED STEEL FRAMES.

Once TREK has tapped out the high tech bicycle possibilities, it will, out of pure nostalgia, reissue the kinds of bikes it used to make before it got big. This will happen before the year 2002.



# HOW TO GET A COMPLETE. BUILT-UP RIVENDELL BIKE

WE COVERED THIS BEFORE, BUT THIS ONE'S UPDATED, DIFFERENT, AND WE STILL GET MANY REQUESTS FOR IT.

## HOW IT WORKS

1. Pick your parts. If you don't know exactly what you want, list the things you must have—a Ritchey triple. Shimano bar-end shifters. Brooks saddle, or whatever. That'll leave some blanks. You may know that you ride on bad roads, and want strong wheels and a comfortable ride, and we can recommend specific parts that will do you right.

2. Tell us your budget. These days most bikes run between \$2100 and \$2500. Don't hesitate to be honest with us about how much you can or won't spend. If it's plain not going to be enough, we'll tell you up front, and there's no shame in that. If, on the other hand, your honest budget is \$3,000, don't think we'll pad your order until that summit is reached, because we won't. In fact, we take great pleasure in getting you the best bike possible at the lowest price possible. We aren't discounters, but our prices are far lower than a bike of this quality would sell for in a bike shop, because we buy and sell as direct as possible.

## ASSEMBLY

Gary or Peter can build your bike. Both charge \$120 and it takes 2 weeks. They build bikes on their own time, which means you pay them with a separate check. You have to sign a waiver. Usually, Gary builds bikes for mid-west and east coast customers, and Peter takes the westerners. They both build good bikes, and it's up to you who you pick. If you want shellacked handlebar tape, have Peter do it here in California, and Grant (me) will do a terrific shellac job.

## FREIGHT

\$50 anywhere in the lower 48. If Peter builds your bike, that's in addition to the \$35 freight to get the frame shipped from Waterford to California. You'll just have to add pedals, put on the front wheel, stick in the seat post, and hook up the brakes. The bikes are packed in custom boxes, the tubes are coddled in pipe insulation tubing, and there's more than \$28 in packing material per bike.

In the next column we show pricing for a complete Rivendell Road Standard with typical options. It would be easy to take away a couple hundred; hard to add that much. Prices are estimated, and may change, etc.

Item	\$
Frame & Fork.....single color paint.....	1100
Headset.....our favorite Tange-Sekei .....	40
Bottom Bracket....Phil Wood, the right length....	130
Crank..... Ritchey triple, standard chainrings .....	200
Front Wheel ..MA2/Phil/brass nips/butted spokes	135
Rear Wheel .....above.....	135
Tires .....Avocet 700x32.....	50
Tubes.....two perfectly normal new ones .....	8
Rim Strip .....Velox, the World Standard.....	6
QR Skewers ..two:SunTour, Shimano, or Specialized..	16
Handlebar .....Nitto #185 .....	38
Stem.....Nitto Technomic Deluxe.....	32
Bar Tape ..... Tressostar.....	6
Shellac.....upon request, western build.....	0
Shifters .....SunTour bar-ends.....	42
Rear Derailleur ..... SunTour XC Pro.....	62
Front Derailleur ..... SunTour A5000.....	25
Pedals..... MKS (brand) RX-1 (model)....	85
Straps ..... (say "ay-el-eeeeee!!)....	15
Clips .....	12
Freewheel .....Sachs 7sp 13 x 28 .....	42
Chain ..... Sachs M55.....	19
Brake Levers .....SunTour Cyclone.....	23
Brake Calipers .....SunTour Cyclone.....	40
Brake cables, housing .....SunTour hardliner.....	5
Saddle ..... Brooks B.17.....	65
Seat Post ..... Nitto 1-bolt.....	33

.....Parts total	1252
..... minus 5% discount	-63
.....Parts total	1189
If Peter builds it, freight to California	35
Assembly, either Peter or Gary	120
Freight complete bike to you	50
Parts, Labor, Freight total	\$1359 to \$1394

**Grand Max total, not including tax in CA \$2459 to \$2494**

*Note: 5% parts discount applies if you buy all the parts from us and pay on a single invoice. Many of you ride clipless pedals, and we don't sell them, so you can get your own and still qualify for the discount. And if you've just bought some handlebars with the idea of stashing them away for your Rivendell, we can make allowances there, as well. In general, though, try to stick to the spirit of the offer. Thanks.*

## LETTERS

Dear Sir,

I have read your literature on frames on the net and am writing for your advice on an idea I have had for a frame for myself in England. You suggested a 531 fork with 753. I am thinking of having a 53cm frame (21.5in) in Reynolds 853 and for comfort thought that a 531 front fork would also be a good idea. I am 136 lb and 5ft 4.5" small. I would welcome your comments. I ride approx 1600 ml/yr, tend to enjoy! climbing, so have climbed the main Tour of France peaks in the Alps and the Pyrenees and the foothills of Mount Hood (Oregon). I average overall 16-18 mph so favour a racing bike. I also unofficially compete with friends on our trips to France. I fell off my 22" 46 years old (26 lb) Rudge aero clubman last year whilst cycling Land's End to John O'Groats (1000 miles) and ruined the 27" lightweight front wheel so have decided to get modern. I am proposing mavic 700C sup wheels antl a Campag Athena groupset although the preferred cassette range 12-24 seems unobtainable. The only real problem is whether the 531 forks would be a good idea with the 853 frame. Your advice on this or any other aspect would be greatly appreciated.

Regards,  
David Watkins

David, 853 is good tubing but in your case it doesn't offer any practical advantages, especially if you're talking about a silver-braced frame. It's sort of like buying a cereal spoon at a silverware store, and asking for the strongest one. It is luggable, and is repairable only if it's lugged. The "TIG-only" rumors don't tell the whole story.

853 was developed as a prestigious tube Reynolds could offer tig-welders, since its existing prestigious tubeset (753) has so many self-imposed restrictions on building.

A 531 fork is a good fork on any frame!

The Campagnolo and Mavic combination is always good. If extracting the absolute top value out of your dollar/pound is the goal, I always recommend a Ritchey triple, as I think it is a perfect, absolutely perfect triple, and the price isn't all that much more.

Gmnt

Hello!

I have two questions. Is in one cap that has three differently colored panels on it or are there three options for single-colored caps. The description in #8 could be read either way.

And...I've wanted a Rivendell frame, but two things have held me up: money and choosing between an AR or a Mt. frame. I may (or may not) have enough money soon so I want to try to solve the other problem.

I like some of the feature of both the AR frames and the Mt. frames and my intended use falls somewhere in between. I would ride this bike primarily on rides that incorporated pavement and dirt/gravel roads, but I would often venture onto singletrack. I think that the AR would serve this purpose best, but I tend to favor extra standover height on the rough steep stuff. I don't want to compromise fit by simply going with a smaller AR frame, so that left me to explore the possibility of the Mt. frame with its sloping top tube. The things that I like about the AR, though are its shorter chainstays, steeper head tube angle, and lower bottom bracket. But, none of these differences are tremendous, so it might be smarter to just commit to one or the other and get on with it. My questions are these: would the Mt. frame handle noticeably "slower" than the AR frame?

If so, would it be possible to have a frame made that incorporated features of both—namely, AR geometry with a sloping top tube? Does this fit within the acceptable Rivendellian bounds? If so, does this differ radically enough to require new drawing and jigs (and therefore an upcharge) or would this be simple enough to fit into the "road frame with canti-bosses" category?

thanks for your time,  
Tim M.

The A/R would do all you're asking the bike to do, but the mountain is not far from it, either. As for the sloping top tube, it slopes UP, not DOWN, so standover is reduced (most mtn frames slope down. the tube angle and direction may be similar, but we our frame sizes are actual, and the tube slopes up from the seat lug, not down from the head lug). To get more standover, you just go down a size or so. If you know

your saddle height and what bars you plan to ride, the actual frame size is easy to determine. The A/R drop has increased 5mm to 50 (lower bb still) and the mtn drop has gone from 43 to 45...and in the smaller sizes, the head tube angle is the same. The mtn just has a longer front center and top tube—better for steep dropoffs.

The A/R feels like a road bike on the road; the Mtn bike feels...not quite that way, but not worlds off, either. Noticeably slower, yes, but if you've never ridden an A/R that doesn't mean a lot. It does not handle like a mountain bike, and I mean that in a good way. I'm not making this easier, I know.

Variations from the std geometry are custom if they require cutting tubes differently (and thus mitering differently, and possible bending lugs).

In an effort to get away from customs, which are costly and not much fun to pay for, we've added about 8 sizes in each model.

Many people suffered confusion at my bad descriptions, sorry. The hats are all one color. Grant

I seem to recall seeing in the RivReader an article on an alternative way of teaching kids to ride; the bike in the article was a monster tired two-wheeler. Sound familiar? I'm guessing it might be in RR-2 or -3 since I've scattered those to friends but can't recall which friends at this time.

If it was indeed in one of the RR's could you tell me where to contact the designer/developer of this concept. You see, my mother works in a rehabilitation center for disabled children, and she and a co-worker are developing a program to teach these kids to ride bicycles and adapting bikes as necessary. They are researching alternative bikes that may be more stable or are alternatively propelled (i.e. trikes, handbikes, and more unusual stuff like rocking bikes, etc.). Right now, my Ma's co-worker is trying to re-invent training wheels where the move the training wheel closer in to the bike rather than higher off of the ground; to my intuition, this seems like a wrong approach, but I haven't seen it yet so I guess I'll reserve judgement for now.

So, if you have any ideas or leads on any related topics that would be greatly appreciated, too.

Thanks, Dave Anthony

The article is in RR3, and was written by Prof. Richard Klein of the University of Illinois (Champaign campus). The gist: 1) Wide tires are more easy to balance and learn on than are skinny ones; 2) A flat ground contact patch is easier to learn on than is a round one; 3) Small bikes naturally fall faster and are inherently harder to ride, yet kids have no choice—so to compensate, you make the bike hwy; 4) Tricycles and bikes with training wheels are steered by turning the handlebars (like a car), but bikes are steered by leaning. So kids have bad habits to unlearn when they ventre onto two wheels; 5) A good training bike is buildable and not patentable, and Dr. Klein can show anybody how (his classes have built them), but nobody is producing such a bike commercially. One of our subscribers had a 7-year old daughter who was terrified of bikes and couldn't ride one. Dr Klein taught her how in —I think it was minutes. The father was astounded and grateful.

Hi,

I have a Carradice lowsaddle longflap I bought in England. I also had a bunch of (three) vialights that had busted mounting points. So, I took of the lense and bored two holes in the black plastic of the case. I then sewed the vialights right to the side pockets and back of the carradice bag. It provides good up-high visibility, and they've withstood 6 months of daily abuse so far. By the way, I also have the Carradice bag quick release, and it is ugly & heavy but works. It does look prone to fatigue failure where it attaches to saddle rails, but it hasn't broken after 8 months and as many crashes. Icy around here. Before I got the quick release I attached my bag to my Brooks Pro saddle by running zip ties between the rear saddle frame and the leather of the saddle. They were sturdy enough, except when I crashed.

—Ted

Ted, the bag requires loops in the saddle or on the mils. Several makers have concocted things, we've sold a few, but none are ideal. IF YOU'RE creative and resourceful and not turned off by unslick solutions, you can come up with a way to attach the bags. It's particularly easy on a Pro, because the mils are so far back and so vertical. You just need to somehow affix a horizontal rod across and between the upper part of the rails, just below the saddle. Keep it from slipping. There's no pushbutton solution, but there are plenty of elbow grease, and bite-the-tongue ones involving some or all of the following: tie wire (like bailing Wire, but stronger), zip ties, nuts and bolts, a wooden dowel or a metal rod, maybe some tape, maybe not.

We will have a **peel** solution in time. It's been

an ongoing project for more than a year and a half, but never the sole focus of our efforts. Let's hope Craig comes up with something. Grant

Hi Rivendell,

I am thinking about using a moustache bar on my road bike. Would you recommend using the same size stem as you would with a drop bar (3tt Merckx bend)?

Terry, Hillsboro, OR

No, go 3 to 4cm shorter. Road bars have a flat section next to the clamp, and you spend a lot of time there. Moustache H bars don't have that flat urea, so you spend more time forward, in the sideways brake ~~bars~~ hoods. So to compensate, a shorter stem. As a starting point, position the brake levers horizontal, and with the tips (where the cable comes out, in the case of standard ~~bars~~) about 13cm apart.—G

I've re-read RR VII and started thinking about bottom bracket height, bee's wax blobs on wires, physics, and bike handling. So far I've barely got past the blobs, but I do have an explanation why it's easier to balance the blob on the end of the 18-inch coat hanger. First, let's simplify the problem. Let's suppose the wire has no mass (this type of simplification is often done when teaching basic physics and engineering). Further, replace the blob at the bottom of the coat hanger with a blob at the end of a one-inch wire. Again, let the wire have no mass. So I can easily illustrate this on paper, we can also restrict it to two dimensions, up/down and left/right, with no loss of generality. Suppose you have each wire perfectly balanced, blob high and the base of the wire on your fingertip. The force from the weight of the blob passes through the wire to your finger. Equivalently, physicists consider the wire to be pushing straight up through the blob with a force equivalent to the weight of the blob. Now, move your finger one-inch to the left. The force passing through the wire forms a leg of a triangle. The height between your finger and the blob corresponds to the proportion of the force pushing the blob up (divide 17.95 by 18). This proportion is much greater for the blob on the end of the 18-inch wire than the blob on the end of the 1-inch wire. (71 divided by 1). This means the blob on the 18-inch wire has more force pushing in the up direction. Now consider what happens when you try to recover. The short wire puts a large proportion of your recovery effort into moving the blob sideways; frustrating your efforts. I think this captures the most important points. A fuller analysis would

probably involve multi-variable calculus.

Another issue in bike handling is the pivot point. One common assumption with a bicycle is that the pivot points are the tires' contact patches. The blob on the 18-inch wire can be used to illustrate that this may be a questionable assumption. When balancing the blob, you may notice that when you move your finger the blob actually moves very little (assuming you are doing a decent job balancing and the blob isn't falling rapidly). For a more extreme example, try balancing a yard stick; the middle portion (its center of mass) should move very little. This illustrates that from the perspective of the blob, the pivot point is the blob's center of mass.

One frame builder I've talked to (Tom Bruni, beautiful tandems) claimed that at slow speed the most important, pivot point was the tire contact patch but at high speed the important, pivot point was the center of mass of the bike and rider. He cited the experience of a motorcycle manufacturer that lowered the center of mass for a racing motorcycle. Since this spread the mass of the cycle/rider system, the claimed result was slower handling. This was because the two most concentrated weights, motor and rider, were now further from the center of mass. I cannot confirm this, but it does sound plausible. It is analogous to a figure skater that pulls her arms in to spin faster and spreads her arms to slow down. The same amount of energy will make an object spin faster if the mass is closer to the center of rotation.

Confounding the matter, while the blob has only the wire and gravity acting on it, a bicycle has forces applied at the seat, pedals, and handle bar. Adding this to the various frame geometry factors and gyroscopic effects from the wheels leads to a very complicated situation. I think that most items of conventional wisdom capture only one aspect of the system.

Regarding the "Technical Editor's" comment on how the weight of the seat affects handling, I regularly ride with wide variations of weight carried in a seat-bag. I do not see where greater weight at seat level makes the bike more stable. If leaving the seat off a bike makes it feel squirrely, perhaps it's just fear from having an unprotected backside.

—Guy Marcil

Hi guys,

Grant made a comment in the latest RR about selling crochet back gloves. I still use these myself, and after giving up on leather gloves (tend to rot after grtting

soaked in sweat), I found Pearlizumi's "cotton crochet glove, #8501". It's comfortable, modest padding, traditional crochet back, washable, and doesn't mind stewing in sweat. Retail at about \$20. Prior to this, I was fond of some leather gloves from Descente that had crochet backs. Just got tired of them turning green and decaying after getting sweaty all year. As always, I wish you guys the best of luck and success with your business. Ask Grant not to go too far overboard with his pet projects. There's only *so* many crazy people out there who would actually put fenders on a bike or cherish their 20 year **old** Campy hubs (myself included), *so* I doubt you'll be selling large numbers of frames. There's a limit to how much variety you can offer or how much special tooling you can afford if you only sell 100 units (just an example). I like to think that the world will eventually realize that friction shifting is good enough, that not everyone should have a bike with criterium geometry, that 6 sprockets in back are adequate, and a Brooks saddle can be your best buddy for a long time, but *...as* Grant knows from the Bstone days, it's hard to seduce people with the **old** tried and true stuff.

By the way, I enjoyed the article by Mr DeLong about gears. I think I still have some old issues of Bicycling with his gearing articles. I can't buy a freewheel or chainwheel without setting up a quick spreadsheet to check where the gear sizes end up and determine if I have duplicates.

—Steve Kurt

I was involved at the retail end of the cycling industry for over ten years. I managed a shop from the time of index shifting's infancy until just recently. My decade of bike shop profession spanned indexable 6, 7 and 8 speed systems from Shimano, Suntour, Campagnolo and Sachs. During that time the compatibility of drive train components between manufacturers (something that is NOT a concern with friction shifting!) was a major issue and a constant headache. I think it would be interesting to know some of the technical details that affect rear derailleur design and consequently make interchangeability the headache that it is. Perhaps an article in the Rivendell Reader addressing the rear derailleur design issues such as stroke length, cable anchor placement, slant parallelogram design, link plate length and spacing (and what ever other technical concerns go into rear derailleur design) would be of interest to all members. I'm sure the last thing you need (and have time for) is

to have someone ask for a specific type article to be written for RR, but since the RR has addressed other tech issues I thought this might be an appropriate request. If this topic is totally out of the possible, or of absolutely no interest, could you at least offer a suggestion as to where such information can be obtained? I've had no luck in uncovering any info.

—Scott E. Main

*I want suggestions for the Reader, always, and they don't come often enough. Your question is a good one. I know the answer in general (it has to do with parallelogram design, leverage, and shift lever detent spacing), but Frank Berto would probably have enough words to say about it to make a story, and I'll ask him. Actually, I don't have to ask him. I'll just print your request, and he'll read it. We'll see. I'm glad you like the RR. The next one's due in two weeks, and it's actual 4 a schedule. I think it'll be better than RR8, which I didn't like all that much, but not as good as RR10, which is shaping up very well. Grant*

**The following is a letter Rivendell member John Stamstad emailed to Wendell employee Gary Boulanger. Reprinted with permission.**

This is a disorganized stream of thought about a race. The Iditasport Extreme is a human powered ultramarathon starting in Knik, Alaska and ending about 350 miles later in McGrath, Alaska. This route follows the first, and-most difficult 350 miles of the Iditarod Sled Dog trail. Race organizer Dan Bull announced that the event would be a wilderness race held in the spirit of the Klondike. Which means the trail would not be marked, there would be no safety precautions taken, and there would be very few rules.

Record warm temperatures turned the first part of the course into slush. At the starting line, I lined up at the back of the pack, the skiers went to the front because they would be faster in this snow. But as soon as I crossed the start line, I turned around and headed in the opposite direction. I had seen in the race maps an alternative route to get to the first checkpoint, it was a few miles further but most of it was by road. It was pretty funny to look back and see the other racers get halfway across the lake and then look at me and wonder what the heck I was doing. I told Brian Toddeshini of my plan and we rode this section together, making it to the Little Su checkpoint more than an hour ahead of the first skier and almost two hours before most of the cyclists. This checkpoint was a mandatory camp over stop. Racers must camp out in the snow

with the gear that they will carry for the entire event. The first racer in the previous night then leaves at 8am the next morning, with everyone else leaving in a staggered start based on their arrival times. Low temperature that night was 19 degrees F. After leaving Little Su river the next checkpoint is Skwentna, 80 miles north.

The warm spell created large sections of overflow on the river. This overflow is an expanse of 1-4 foot deep water on top of the ice. Sometimes there is a way to go around it and sometimes you must go straight through it. On the way to Skwentna I took a shortcut that turned out to be a 3 hour detour that ended up right where I turned off. But I got back on course and arrived at Skwentna after 13.5 hours of riding and pushing—an hour ahead of the first skier and an hour and a half ahead of the first biker.

But from that point we were supposed to continue on up river for 8 miles where we'd intersect a trail to the next checkpoint. Problem: the river was impassible because of overflow and open water. We were told of an alternate trail, and that we'd never find it at night, so we should wait for daybreak.

A few of us tried to find it anyway, failed, and got only 2 hours of sleep that night. The following morning everyone left at dawn tied for first. The day was colder, so all of the slush was now ice. The riding was fast, but every time my front wheel hit an icy rut, I sailed over the bars. At one point I was pushing the bike up a hill, staring at my feet, when I heard a loud snort and saw a cow Moose with calf charging, kicking at me. I retreated before she got to me (she got within a few feet), and we stared at each other from a relatively safe distance, while I worried about everybody catching me while I was blocked by the moose. Moose like these trails because the alternative is walking through 6 feet of deep snow. I tried yelling, and finally got real close and when she took one step off the trail, I sprinted for it. After 14 hours of very hilly and bumpy riding I made it into Rainy Pass Lodge, 2.5 hours ahead of the next rider, Brian Toddeshini.

It was stormy there, and I was told that, not only was the trail snowed in to the top of the pass but that on the other side, no trail had been broken yet this year. They planned on breaking the trail the day after next, so I sat there for a day and a half while everyone else caught up to me. In the morning everyone left—all tied for first. The trail was not possible to ride and in some sections was difficult to walk. Eighteen hours of hiking with a bike later,

I reached the Rohn checkpoint. I stayed long enough to fill up with food (GU) and water and headed out to ride the final 190 miles without stopping. (38.5 hours later I rode into McGrath.)

The trail out of Rohn was full of holes made by buffalo and wolftracks, and I came around a corner and nearly plowed into a Bull Buffalo. We both froze for a second, staring at each other from about 10 feet away and then he took off down the trail 30 yards and stopped. I rode up and shined my light in his eyes, and he ran another 30 yards down the trail. We repeated this, and eventually he headed into the trees. That night the temp finally dropped to 0 degrees F.

After daybreak I entered the Farewell Burn, home of a gigantic forest fire years ago. Nothing's there anymore. The whole way across it—about 60 miles—I saw only a black wolf.

A couple of miles before the checkpoint of Nickoli, I met 2 Athapaskan natives checking their trap lines. One offered me a Pepsi and I almost cried, I wanted it so bad. For the last 30 hours all I had thought about was drinking something carbonated. After leaving Nickoli, the finish line in McGrath is only 50 miles down river, but it's a long fifty. You get to a point where you can see the search light from the airport and you think the town must be just on the other side of the next hill. 2-3 agonizing hours later you finally make it there. When I got off the bike I could barely walk. I felt perfect until the point when I realized that I had finished, and then my body just shut down, I could barely move. The next morning it was -25 degrees F in McGrath. Race started on Feb 22. I finished 5 days 5 hours later on the 27th.

### The End of the Raven —by Edgar Allan Poe's Cat

On a night quite unenchanted, when the rain was clownward slanting,  
I awakened to the ranting of the man I catch mice for.

Tipsy and a hit unshaven, in a tone I found quite craven,  
Poe was talking to a Raven perched above the chamber door.  
"Raven's very tasty," thought I, as I tiptoed o'er the floor,  
"There is nothing I like more"

Soft upon the rug I treacled, calm and careful as I headed  
Towards his roost atop that dreaded bust of Pallas I deplore.  
While the bard and birdie chattered, I made sure that nothing clattered,

Creaked, or snapped, or fell, or shattered,  
as I crossed the corridor;

For his house is crammed with trinkets,  
curios and weird decor - Bric-a-brac, and junk galore.

Still the Raven never fluttered, standing stock-still as he uttered, In a voice that shrieked and sputtered, his two cents' worth -  
—"Nevermore."

While this dirge the birdbrain kept up, oh, so silently I crept up,  
Then I crouched and quickly lept up, pouncing on the feathered bore.  
Soon he was a heap of plumage, and a little blood and gore -  
—Only this and not much more.

"Oooo!" my pickled poet cried out,  
"Pussycat, it's time I dried out!

Never sat I in my hideout talking to a bird before;

How I've wallowed in self-pity, while my gallant, valiant kitty  
Put an end to that damned ditty"— then I heard him start to snore.

Back atop the door I clambered, eyed that statue I abhor,

Jumped - and smashed it on the floor.

—Larry Fasnacht

*Larry, this is serious poetry, a fantastic work, and deserves a larger i m than the Reader. Good job! No kidding—I really enjoyed this. By the way, you may be fascinated to know that my dad was childhood friends with a Jim Poe, a directed descendent of Edgar Allen; and Bob Von Shulgan (sp?), a good wood-carver. -G*

Editor -

I thoroughly enjoyed reading Frank Berto's article Rear Derailleur Development Since D-Day (as I thoroughly enjoyed the rest of your publication). Thought I'd add a couple rather dated recollections. The Huret Allvit used on Schwinn Varsitys and other bikes in the sixties and seventies had a steel housing to "protect the derailleur if the hike fell over." In practice, the long steel housing functioned as a lever that guaranteed the derailleur would bend out of alignment if bumped in a fall. Fortunately, the shop I was at in that period had a big honkin' fork blade straightening tool that also functioned quite well to bend Hurets hack into position. The plastic Simplex Prestige derailleurs that came on Peugeotts and the like in the same period were, as Frank said, flimsy. In addition to twisting and flexing, they were prone to

what we called the "Mysterious Simplex Syndrome". Upon a typical teenager's clumsy shift, the top pivot spring would rip its way out of its plastic retainer, leaving the device dangling uselessly from the frame tip. The solution was always the same: R and R with a SunTour.

—Kevin Montgomery, San Diego

**Why "black"? Why "blues"? Which One?**

I noticed in the new catalogue that you describe various items as "The Taj Mahal of ..." and was wondering if you're referring to the magnificent marble structure in India or the black blues artist?

—George G., San Francisco

*This may and/or may not fall into the category of questions, the answers to which sometimes are and sometimes aren't "if you have to ask, you'll never know."—G*

**Remember the Greyhound?**

**Greyhoundfile/Rivendell member J.T. Spanos sent us a short paragraph about greyhounds, explaining why they're so fast. I think he photocopied it from something that may have been a book, so rather than reprint it without permission, I'll rewrite it:**

When most dogs (and horses, for that matter) run, all four feet are off the ground only once per stride—when the feet are tucked and contracted underneath the body. But with greyhounds and other "sight hounds" (whippets?) there is another phase when they're completely airborne. This so-called "double-suspension gallop" extends the greyhound flight, helping it run faster, and is made possible only because its hack is so supple. This style of running is tiring, so they lack endurance.



# PROJECT UPDATES

## 1. HERONS.

Ted has the first prototype, says it rides just like a Rivendell, and he likes it. Wford will build two more, a road and a touring, and we'll ride those here. Colors are undecided, was going to be a silver and a blue, but now maybe a red and a blue or red and silver. Hope to have actual production sometime this November. I've got most of the brochure ready, just need final prototypes for pix.

## 2. LEATHER BRAKE LEVER HOODS.

Brooks agreed to do them, and we should have them in stock by late Fall.

## 3. NITTO/RIVENDELL RACKS.

The front system as it is works only on Rivendell All-Rounders and Mountain/Expedition frames, so if you have one of those, please buy some racks! The rears are more versatile, and we now will have rear racks in two sizes—M, to fit frames up to 56cm, and L, for bigger ones. We get 10 protos of the L's this September, and if they're good, we'll go ahead with them. Robert Beckman may design for us a "high rider" style front rack.

## 4. HANDLEBAR BAG FOR MOUSTACHE H'BARs.

Carradice says they made one, but we've not seen it. Maybe by the time this goes to print we'll have it, in which case there's probably a picture of it on this page. Once we get it, we'll send it to Nitto, who will then build a rack for it. The system will work with Moustache H'bars, which is the whole point.

## 5. THE LUGGED STEM.

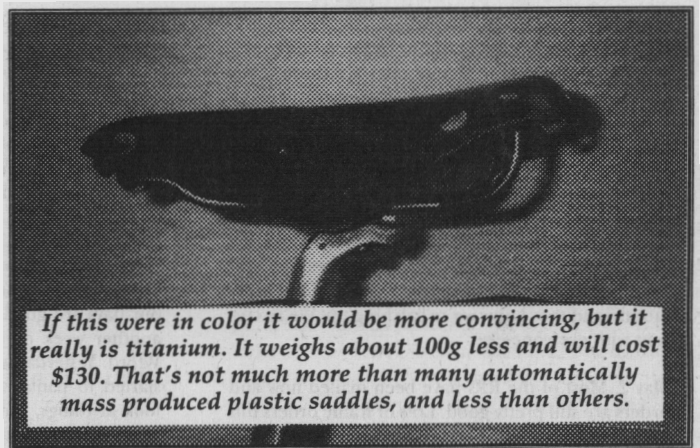
This requires more time than we're able to give it. As it stands, we're looking at local investment casters, and we're also hoping to get it cast in 17-4 stainless. Then maybe we can use Columbus's Metax stainless tubing. Maybe, if, maybe, if. By the time you read this we'll have final drawings of the lugs.

## 6. B.17 W/ TI RAILS. UP THERE TO THE RIGHT.

We got a sample, and it's here on this page somewhere. There will be a couple cosmetic changes. It needs to be lighter grey, for one. It weighs 439g—100g/3.5oz less than the Taj Mahalish steel-railed one.

## 7. FRAME BROCHURE

It was either this Reader or the frame brochure, and the Reader won. Now that it's done and the frame brochure



pix are taken, we'll go ahead with that. It's kind of a drag, though, since we may have a few new colors by January, and it'll cost us at least \$2500 to make the brochure. I hope we'll get it back in sales, but it's hard to say. We're printing about 2,000 of them, and if you're interested in a frame, please ask for one.

## 8. ALE BROWN LEATHER TOE STRAPS.

We're asking for something in a baseball-mitt brown. ALE is pretty easy to do business with, and I'm optimistic.

## 9. SHOES.

The English shoes are a hassle and costly, so we aren't taking any more orders for them. However, if you have the patience of a \_\_\_\_\_ and low expectations, give us your name and size and we'll see what we can come up with.

## 10. NEW FRENCH-STYLE DROP-BAR H'BAR BAG.

We got one in Japan, made by an outfit who just folded, and sent it off to Carradice. It's right up their alley, it's a great design—boxy, like the TA bags—and we're asking for a tall and a short model, so it'll fit a variety of bikes. Furthermore, we'll politely hound Carradice for samples, and I honestly expect to show it in RR-11, which, by the way, will be mailed—believe it or not—in October. Probably the 31st, but October nonetheless.

# PROGRESS REPORT

**IF YOU HAVEN'T READ THIS BEFORE: THE PROGRESS REPORT IS MY PERSONAL JOURNAL OF STARTING AND MAINTAINING THIS BUSINESS. I'M NOT A GOOD BUSINESSMAN, I GET FRUSTRATED, THINGS DON'T ALWAYS WORK OUT THE WAY I'D LIKE THEM TO, THERE ARE UGLY SURPRISES, AND SOMETIMES I JUST NEED TO VENT. YOU DON'T HAVE TO READ IT, BUT I HAVE TO WRITE IT, AND ENOUGH OF YOU HAVE TOLD ME YOU ENJOY READING IT (MANY OF YOU HAVE SMALL BUSINESSES OF YOUR OWN, AND CAN RELATE), THAT I'VE DECIDED TO KEEP IT PUBLIC. —GRANT**

April 13.

We started mailing RR9, and we've been doing well for several weeks now. Frame sales are down a bit, but the brochure may help that. Heron will help. I'm happy about everything except the credit card debt, which I thought was \$23K but is really about \$49K—from those early days when we bought lots of stuff and didn't have enough business credit, and had to have the stuff anyway. It would be so nice not to be filling in holes, but that's what we're doing. It's good to be able to do it. We're some behind with Wford, but we pay them at least 3 weeks out of every month, and they know we're catching up. We're current with everyone else.

May 2. Most of the RRs have been mailed now and orders are still pretty good. Lots of frame orders this week, maybe five. The LongLow/Heron crowns are still out there, not in except for a few samples (which we tested, and they passed). But the dropouts are here and the crowns will come soon. We're getting low on XC Pro cantilevers, and probably shouldn't even put them in the next catalogue. We're taking in what seems like a lot of money every week, but we have hills of \$4K to \$10K every week, and payroll every other. So it's still filling holes instead of making mounds. A Bstone reunion happens this weekend, and it'll be fun.

Yesterday a guy called and asked to be taken off the list (de-subscribed). I asked him "did we do anything to offend you?" but he said "no—I just don't need the mail. Besides, I read the last two issues and they didn't do anything for me." That hummed me out for the day. Why couldn't he have just not renewed? Anyway, I'm trying to make the RRs better, and we'll see how it goes.

The frame brochure and catalogue are coming along, but they'll cost so much to print that I'm not especially eager to finish them. I need someone to say "here's \$10K, no strings attached, do them right and soon."

We're insuranceless but looking into it. We got a quote of \$12,000 per year for property and liability coverage, which seemed a bit high. So we talked to a dealer who pays \$1,700 a year, which we could probably handle better than a fire. We'll get more quotes today.

May 7. Oh, let's see....Aziz didn't come in yesterday, and he didn't come back Thursday after taking his (laughter) home. So I don't know what to think about that. Maybe he can't stand working here. He's not familiar with hikes, and that probably makes ship ping out Cyclone brakes less exciting and a little stressful. He's scheduled tomorrow, and I hope he comes.

Rank of America cold-called yesterday and suggested we take out a line of credit with them for \$50,000. They also want our bank card business, but we're

definitely sticking with Mechanics bank for that, since Mechanics opened us when nobody else would, and even opened up Jeff with his small business, just because he knew us. We could use the credit to consolidate our \$35K credit card debt, which is now on 8 different cards, all under my own name.

We got a quote for insurance—\$2,400 per year for \$1M on property and liability. I'm getting another quote from Mark, but I think he won't be able to come close to that. It's time we had insurance, I guess. Sales are good, but we're out of Nitto stuff and Carradice stuff, and that's slowing things down. Still our days are good, and Mary says if we keep it up another week or two we'll be all caught up with Wford. Yesterday we got 5 orders in the mail, and I started to panic again. Peter takes a longer term look at things, but I see trends immediately, even when they aren't there. We got 19 envelopes today, many Questionnaires, but mostly orders. Frames are going okay, though we're still two weeks shy of the LongLow crowns.

We've picked Heron colors. One of them is a greyish greenish blue that Peter thinks looks too much like Celeste, but I say no way. If someone held a gun to my head and asked "is this blue or celeste?" I'd say "please don't shoot—CELESTE!" but it's really not. The other color will be sort of a dark silver. The decals will be ready in a couple weeks, and the name plate prototypes will be here in 3 weeks or so.

We're getting lots of Questionnaires back, and some people hate the interviews, some want more of them. That's the problem with asking questions—you get conflicting answers, and whichever way I go now SOMEONE will think I'm had for not listening. Anyway, I called Tom Ritchey today and he said yes to an interview, said he's read our other ones and can handle any question. So, good. I'm looking forward to it.

Garrett at Bike Guide-Bicyclist wants to run the Bstone '94 catalogue aluminum story, and I have reproduction rights to it, so it'll show up there sometime in the next few months. I'm sending half the money to Jennifer.

The Nitto racks arrive in 3 weeks or so. Really late, but they'll be good. I realized too late that the fronts won't work with the LongLows, so we need another version for them. With our relatively high minimums, that ought to kill any hopes of positive cash flow for the next several months, but the racks are good. We also need a pure (standalone) low-rider and high-rider front racks.

Yesterday our trading company hero George found 120 more sets of Campy Gran Sport sidepulls, and we're getting them. We also found, though another source, about 110 pair of DiaCompe AGC 251 brake levers. Ted may buy them, and we'll buy from him.

May 10. Works been great. Peter's been working hard, organizing stuff, helping so much. Orders are

coming in, it ran't be any better (except we're out of Nitto stuff as usual). And Carradice. But everyone's amazingly tolerant and understanding, and I'm very happy. After getting home and eating and getting Kate and Anna to bed, it's usually 9:30 and I ran't bring myself to typing in a Prog Rep, but things are good, they have been for awhile, and I'm optimistic. Heron decals should have been here by now, but we've still got time. The LongLow crowns are late, as are the dropouts. Minor things that make me want to push buttons and have things happen. Out of Brooks saddles again.

May 21. Today was hard. Orders have fallen off a lot, and we got more returns today than we got orders in the mail. Several phone orders, though, and one pretty good one. But a very difficult customer, not a member, hummed us out. He wants to buy a saddle-hag, but it's not going to fit his hike, and he wants us to custom head an Uplift, and he said "I saw a bunch of saddlehags in an old Schwinn brochure, and when you guys must be making some kind of huge markup on those, but you're the only people who have them." And earlier in a conversation with Peter, he said "I'm a perfectionist, so please look the hag over carefully before you send it." I called him up trying to dissuade him from buying, saying "these hags are made of natural materials, sewn by people in England who've been doing them for years, but it's not a Nasa project, and there are some variations, blah blah blah," and eventually I said "I don't think you're going to be happy with it. I think you'll just end up returning it, and so maybe it'd be best if you didn't buy it in the first place," but he's persisting. He's going to call tomorrow with some more information about his hike and saddle height. His hike is an Eddy Merckx Ti (he said "ever heard of it"), and he was squawking about the price of saddlebags. He didn't know where the bottom bracket was on his hike, or what it was, but had I "ever heard of it?" Peter, who is as relaxed and congenial as anybody I know, said he was the most difficult person he'd ever talked to, and I was glad to hear it, so I know it wasn't just me.

We're finishing up the photos for the frame brochure, and the catalogue is coming along. I've been expecting a story about tying and soldering, and another about shellac, but maybe the authors have forgotten.

Last week for the first time ever we put money in a savings account (different from the stem lug tooling account). But if things keep going like this, we'll go through it fast. Printing costs will be at least \$6,000, and that's due soon.

I need to interview Tom R. for #10 soon. He's expecting a call. I've had no time, but he's not waiting, just expecting.

May 22. We got a notice from the county today,

something about Escapement Tax, and I can't understand it, but the pessimist that I am, it looks to me like we owe \$15K in what it calls a penalty, for 1995 and 1996. It works out to about 10 percent of our inventory value combined for both those years. But nobody ever told me about that, and we have an accountant, and he never said anything. It's too late to call the number on the paper today, so I left a message with our accountant, asking him to call me tonight at home with something good to hear. We can't owe that much. What for? It makes me mad that the county can send out a notice like that without any translation.

Sales are slowing still, but we sold another frame today. The tronhling guy from yesterday is off our hacks now—his saddle height is too low for the hag, even with the uplift. and so he can't get one. I sent him back his money plus a couple dollars extra, and good riddance to him. He just makes me shudder.

I can't stop worrying about the Escapement Tax. I wish I could think of someone to call tonight. I must know an accountant somewhere. I'll call Andy. He's not an accountant. but he may know.

He didn't know. But the county can't just make you pay them 10 percent of your inventory value, just for having a business! Who'd want to have a business in Contra Costa County if that was the case? Do Nordstrom and The Gap and all the small retailers pay 10 percent? What are we supposed to do—keep no inventory? This makes me so mad. It's hard to do anything, even or especially read a book to Anna, because I don't know if they think we owe \$15,000 or whatever it is. If it's a real tax, it makes no sense. And why didn't they say anything last year? It's going to be a long night.

May 23. Yay, Mary called, and the guy said it was a tax on tooling, not inventory, and we owe \$1,000 only. I feel \$15,000 richer and will give Peter a \$1,000 bonus to help pay for his and Ann's wedding. What a relief, but why was there no indication of that on the letter? It makes me mad, but I'm still happy.

Mar 28. Well, I really blew it today. I did a great interview by phone with Tom Ritchey, about 90 minutes, everything asked and answered, just great, and we were going to get great old photos to go with it, and it was going to be the best thing in RR10, and the tape didn't take it. I even tested it beforehand, and now it didn't work. What happened? I probably tested it on line 3, then called again on 2, and that was it. Nothing's less spontaneous than a second-time around interview, and I ran out of time in again, but Tom probably ran out, and I don't feel like asking. What a pisser. I'm so incompetent I could tire myself. I'd give \$500 to get it back. Even if there is a second time around, no way will it be the same. I'd ask a question, and we'd both be thinking "well, just like last time...." Forget it. Crap. I hate it. It's times like this when I just have to think "I don't have poison oak all over my rorrrh: my family's healthy. I ran walk. I don't have gum surgery tomorrow, and I'm not a cave man with a raging toothache." That's the only way to get past it.

The prototype Heron name plates are here, and they're good, but some color changes will make them better. A darker bird, for one.

I'll just have to call Tom tomorrow and tell him what happened and hope he does it all over again. The spontaneity will be lost, though. Assuming he has the time. He'll do it, but what a pisser.

I hope he does it. I'm just glad it wasn't my first job

for a magazine, and I discovered on the plane back from Uruguay that the tape was blank, and it's still a 10-hour flight, or something.

The George Wilson dropouts arrived today, so I'll shoot them soon. They're 17-4 stainless, and it's magnetite. The magnets jump on it just like iron.

We're down to five or so catalogues, so we've got to rank out the next one soon. Jeff's going to draw the rover art.

I just can't get over this interview thing. It was so good and I blew it so bad. Everything, and it's just gone. It's not as though I'm good at lots of things here. I'm a crappy businessman, I'm disorganized, I forget, I don't follow through all the time—There are just so few things that I can do, and the Reader is one of them, and I was so happy with that interview, so pleased with it, just proud of it and so much looking forward to sending the tapes to Jennifer to type, getting it back and having a whopping 8 page interview with photos and all kinds of good stuff, and then I blow it. I checked the tape, I was reading DirtRag tonight, with the Gary Helfrich interview, and that reminded me of it. Then I read Le Petite Livre Jaune by Daniel Rebour, and in the wheel building section it reminded me of the wheelbuilding part of the interview. It's such a drag, such a bother, so stupid. It makes me hate all electric and electronic things. It never would have happened in print, but it wouldn't have been as good, either. I'll call Tom in the morning and see how he is with another. But it won't be the same. I'll ask the same questions, but asking them without knowing the answers is a million miles away from asking them KNOWING the answers. I'll call up Tom at 830 or so and the tape will be running and I'll tell him what's up and let's see. I've got to get that again. If he knew how much I want it....

That's enough, this is pathetic. It's 12:25 a.m. and Mary got us Jerry McGuire to watch to take my mind off this, and that's some long movie. If we don't get the Tom interview, I'll ask Harold Bridge.

Pino called today, his usual semi-angry self, demanding and insistent and frustrated. I've just got to do what I can do and what I can't do, Peter can do.

We're looking at another place, slightly bigger, but laid out better for us. Rent's about \$600 month MORE, but if we can lock it in for 3 years and try to get more members to help offset it, maybe we can do it. I wish we could hire Ariadne. I think I need to reshoot the blue bike for the brochure, maybe this weekend. I've got to get that interview again.

May 29, morning. I slept bad and now I've got to go in and call Tom and ask him if he'll take another hour and a half. I am not looking forward to this.

May 29, afternoon. I got the interview. We had a good day, and ended it with a good ride. I've made two copies of the interview, so I don't lose one.

June 10. We've been doing well day to day, but the catalogue is coming along slowly because I don't have time to work on it. It'll cost a lot to print and mail, and I'm not sure how many we'll print. Five thousand last time, but maybe more this time, and maybe we'll even mail them to all the original BOB list, since I think many of them didn't get any mailings before. Then we'll give them a couple months to respond before cleaning up our list. Jeff's going to draw a hike for the cover. I'm not sure how it'll look, being line art, but his drawings look good by themselves, so it'll probably be okay.

We found more Simplex 5500 derailleurs, more Tressostar colors, too.

June 18. Good news from Brooks—they'll do a small saddlebag for us if we can order enough of them, and a B.17 in Ti, which they say never breaks even though other saddles with Ti rails do. It'll be grey. Gwynn wants one to show on the Merlin show bikes, so he'll get the first one, probably the prototype.

July 3. Business is good but I'm stressed out from lots of things, and I'm not happy. Things that it seems like normal people could slough off. I'm not sloughing off. My tendency is to stew and implode. Sales are good, but the catalogue is taking a toll, and RR10 is going to be late, and little things with the Nitto orders (timing) and with Wford are hugging me a lot, making me wish I worked for a temp agency. But we just paid off our credit cards with the \$35K line of credit the bank gave us (all gone now), and things really are going well on paper, which is to say we're able to make payroll earlier in the week, and paying all the bills without sweating it so much. We're trying to get our own tires. We're trying, still, to nail down the rack details, and maybe Robert Beckman will help us with something there. We've been out of Ritchey cranks for a long time, and they're due here in two weeks, and that'll help. The Heron thing is coming along slowly. I remember last year when everyone was predicting a February intro. I said June, and now I'm saying October. Things happen, everything that ran slow it down slows it down. A frame came in with the buyer's name on it, and it wasn't Ron's doing, and it didn't look like I expected, and it's hugging the crud out of me. I complained to Wford and to Gary, and now I'm ready to send it back. That'll make things real crappy, because the painter's daughter wrote the customer's name, and it would be the ultimate insult to pay a couple hundred dollars, including freight and all, to get rid of it, and it's not as though that's the point, but the point is don't practice on our frames, please. But if I do that, the painter will hate me. Anybody at Wford who has to deal with it will hate me for lateralling this one to them to handle, and worst of all, the signer's feelings will be hurt. So what do I do? Have it repainted locally, get some decals from Gary, and find a local pinstriper to paint the name? Do I say "it's only a name, it doesn't look so bad" and let the buyer take it like that? Whose standards does it have to meet? It doesn't meet mine, and I feel responsible. I need to talk to someone about this, but everyone I ran talk to will get defensive, and I'm not in the frame of mind to be able to deal with that. Writing it here is therapeutic, but it is abusing the others involved! I don't want to do that. It's nobody's fault, it's just not quite right. Nobody died, nobody is paralyzed, but it's not right, and it's right and wrong, and this is not right. Damn!

July 15. Business is good considering lots of things, but we sure need the Nitto and Ritchey stuff, and I've got to get cranking on RR10. The catalogue's done, too many typos as usual, but at least we'll have it in the mail by Friday. Joe's going full time, and Alan may work a day a week. I don't know how I'll get three more RRs out this year, but that's the deal, four a year, so I've got to do it.

The racks are a pain. I hope RB comes through with a good front hi-ride. The rears don't go on the larger sized All-Rounders, so we need to get some adapters. Maybe Eric can make them.

The catalogue photos came out terrible and I'm not sure why. It's okay. The frame hrorrhure will make up for part of that.

I've got to get the Rithey interview hark, and a few more pictures. I've got to finish the stem lug design and get quotes on that. It's taking way too long. I feel like I can't do anything really good, really efficiently.

August 14. The UPS strike is hold lots of stuff hostage, and it's starting to be a drag. Fortunately we can still ship as usual, since we do Priority Mail on just about everything. We can't get parts from QBP though, since they're shipping orders of \$350 or more only.

We have eight frames, with about \$5,000 due on them that we've been holding, waiting for UPS to end it, but Wford made some arrangements to ship them through the mail, so that'll be good. This newsletter will be really late, as will the frame brochure. I still need a pic of a road frame, and then final layout. I mean road BIKE. I can shoot mine, but it's all heat up and blue, anyway, and the A/R we're showing is the same color. We can't show Peter's because his has some style things we no longer do. So I don't know about it.

We're barely making it through these weeks. Huge hills—for printing, mostly, and NITTO stuff. We've got all these racks coming in that don't quite fit all panniers so I sent out a letter to the Carradice owners offering them the racks below cost, and will include instructions on how to adapt them for any hags, not that they'd ever need to. It's simple, I did it. You just file a small hole, get a stainless sheet metal screw, screw it in, and use some JB weld to secure it absolutely forever. Anybody who embarks on a tour ought to be resourceful enough and flexible enough to handle that, but I blew it in the first place by making it necessary.

I've got the camera somethingorother these days. I'm not sure what to get. Maybe nothing.

The first Herons have been built now. They go together well. I hear, and we'll get a prototype in a week or so. The ears were too much of a pain to deal

with—screws and all, and they weren't lining up just right, so we gotta grind off the ears and epoxy them on. Wford didn't know we were doing the badge, and J got a little irked, thinking we'd snuck it in on him, but that was never the intent or the case. It's hard to communicate with everybody all the time long distance, but I believe the h'badge is our call, and from the start I said we wanted it and were going to get it from the same guys who make the Rivendell one. J's okay with it now, I think. Now we pick colors. We were going to go with a soapy green and a silver, but the soapy green looks too much like celeste, unless you know your celeste, which most people don't; so we'll do a blue instead; and the silver is "too transparent," meaning it shows every file mark or something, and may not last as well without a clear coat; so we'll go with a caramelly brown. I think. The headbadges or name plates or whatever they are look nice.

Carradice says Greenpeace of Germany or Switzerland or someplace wants to use its bags, but wants them out of organic cotton, with a few other ultra-green touches. We may get some of those, too. I'm hoping we can be out of debt (to the bank) by next February, but it'll take a good Fall and Winter to do that, and that means we've got to have inventory and come out with Readers on time. I wish I could work on them during the day, but it's always a 10 p.m. to midnight kind of thing, and weekends, and that's family time, and there's no way around it for now.

Aug 24. We made it into the Wall Street Journal today, pretty fun, and got lots of calls. I'm not sure if that paper's readership will like our kind of bike stuff, but it was a good article. I think Cannondale must be seething, though. I don't know how they felt about it, but that comment about trying to make last year's bikes obsolete didn't sound good. Maybe it sounds good to some people, and maybe Cannondale is happy with it, but I wouldn't be.

Aug 26. We've been having good days. The past three weeks have been huge bill weeks—totalling almost \$27,000, but somehow we paid them all, and now it looks easier for a while and we have to sock away money to pay for some more lugs and stuff. I think we need to sell some stock to the current small band of investors to raise some money we'll be needing in 6 months.

Ned got his custom 69cm frame yesterday, and the dropout was damaged because the keeper fell out, but it'll be a relatively easy fix, we hope, because it'll cost a lot if it isn't. Peter got his All-Rounder finally, and it should be built up in a day or so, and I'll photograph it for the frame brochure. I'm torn between cameras, don't know whether to get a view camera, a Mamiya 7, a Pentax 67, or some kind of Rollei. I've ruled out the others. Nobody around here stocks the Pentax or Mamiya, but they can order it, and I figure if they're that uncommitted I'd rather just buy mail order.

The Bicycling column will be out in a month or so. I hear Garrett went from Bicycle Guide to Bicycling, but haven't heard from him about it. Nitto and Brooks continue to be inventory problems. They're both staples and we need them and like them, but they're so hard to get. There are no replacements, though, and we're working on a plan to get them in better. The new tire we're planning—it COULD be here as early as December, but things always go so slow. Avocet is so often out of the 32s, Specialized is changing the Armadillo sidewalls red, for some funny reason, and with Rithey going blue, I just don't know. We need to do it ourselves, I think.

I've got no time to work on the RRs and three months to put out three of them, if we're going to make the 4-year promised, which we will. Maybe a Maynard interview in number 12, or Phyllis.

## SUMMER FLYER

### MOSTLY THINGS THAT AREN'T IN THE CATALOGUE

#### Sheepskin water bottle covers—\$8

I was thrilled when I found a source for these, especially since I didn't even know they existed. Then I forgot to put them in our catalogues, so nobody's been buying them. You're supposed to soak them in water, then the water (in the leather) evaporates, keeping the drinking water cool. To be frightfully honest, a wet sock works better, but this is more classy and less floppy. Assorted shades of brown. You're supposed to soak them really good, and as the water evaporates, it keeps your quid cool. I'd be lying if I said "it works better than a wet sock" but a wet sock can't hold a candle to a sheepskin bottle cover in the looks department.

#### SunTour sealed derailleur pulleys—\$12

I remember reading in VeloNews that if Fignon had ridden with sealed pulleys he'd have won the '89 Tour. In any case, these are good pulleys that go on all derailleurs. They're sealed, smooth, and stay smooth.

#### Bullseye sealed derailleur pulleys—\$18

The first aftermarket derailleur pulley. Made in Burbank, America, by smart guy Roger Durham. Silver or Red, and these too go on all derailleurs.

**BOB Shades—\$14**

Good basic sunglasses that screen out all the ultraviolet, ninety-percent of the infrared, and are optically correct, so you don't strain your eyes to make up for bad lenses. ANSI-approved fake glass. Dark green, late '50s styling.

**Ambrosio tubular rims—\$22**

The widest (21.5mm) all silver tubular rim we could find. Good for any tubular, and better than skinny rims for fatter tubulars, like the CDMs. Stout, around 450g to 500g (rims always vary a lot). 32 Hole only.

**Campionato Del Mondo tubulars—\$45**

I know what you're thinking—why did the price go up so much from last time? Well, last time we imported them directly, and this time we're buying from someone who does. So they cost us a lot more, but our markup is still fairly low, and if you don't think these are worth every cent, then you haven't seen them. A full 28.3mm wide, they mount straight, they ride great, they rarely flat.

**Modolo/Mavic sidepull calipers—\$40 per pair**

Silver, short reach with nutted bolts (you can use them on frames made for allens). These are the same grade as Modolo Speedy brakes. Some say Mavic, some say Modolo, and we'll try to match them for you, but no guarantees.

**Mavic 144bcd x 54t chainrings—\$20, 2/\$18, 3/\$15**

It's crazy for chainrings to have such a fine finish on them, but these do. If you can live with these sizes and you need 144t rings, stock up now because because because these are cheap.

**Green Army sox—\$5**

Real Army sox, but you don't have to have survivalist-leanings to like them. Part wool, part cotton. Not quite over-the-calf length unless you have really short calves, but still longer than average. State shoe size.

**Quick-Release Training Devices—\$5!**

Back in the Bstone days we had these made as a countertop aid for dealers, to teach customers how to properly operate the hub quick-release. Not many dealers bought them, so I/Grant got them cheap, and we're selling them for \$5. Hand brazed, nickel plated, smaller than a breadbox. Holds a front hub. If you work in a shop and don't have one, get one! If you don't work in a shop and you know how to work a quick-release, there's no pressing need. Perfect front hub display stands.

**Shimano Deore front hubs, Q/R style but no q/r. 36H—\$12**

Deore is one step below Deore XT in the Shimano lineup, and these are good hubs, real cheap. Silver, good-looking, fine. These and a SunCR-18 700c x 36H or a Ritchey rim (see below) will build into a

good strong touring, commuting, everyday-rough stuff wheel.

**Ritchey Rock 450 Rim: 700c x 36H—\$16**

Ritchey's hybrid-style rim, but still light by our standards (450g). It's 21.3mm wide, between an MA-2 and a CR-18. Single eyelet, parallel sidewalls, nice silver finish, a good, strong, light, reliable rim at a Nashbar-blowoutlike price. Fits tires as skinny as 700x23, as fat as 700 x 38.

**Sun CR-18 m: 700c x 36H—\$20**

At 22.5mm and 540g, it's stouter than the Ritchey. Better for fatter tires and heavier loads and rougher streets and trails. Both are excellent rims we endorse completely; the Ritcheys just cost us less, so we sell them for less.

**Built Wheels using either of the above rims and Deore Hubs, and either DT or WheelSmith spokes—\$90**

Tough, strong wheels, hand-built and as close to perfect as wheels get. The wait is a week, shipping is \$5, and this should be separate from any other order. Butted spokes, brass nipples, 3x rear with 2x or 3x fronts (our choice, depending on what spokes we have the most of). A good bargain, a great wheel. (We can do rears as well; ask for details.)

**Dropout paperweights—\$15**

Neat, second-step forgings of dropouts, and if you like bike stuff but don't really need anything to make your bike go, these make perfect desktop clutter for anybody who can't get enough bike stuff.

**Resource Revival Bottle Openers—\$8**

We profiled Graham Bergh's Resource Revival in a past issue, but as a reminder: It takes discardable bike parts and makes them into smart, natty, functional implements and furniture. Nothing tacky, either. We'll carry more in the future, but wanted to start it off with this bottle opener. No picture, but good cause, and only \$8.

**BOB coin purses—\$1**

Vestigial booty from the Bstone days. Made by Kwikoin, the original and still the best.

**M.A.F.A.C. Tool kits in real leather pouches—\$16**

If you like and understand French stuff and go back long enough to know Mafac and like little nifties, dance a jig or whatever because these are right up your alley and rare.. They're cute, and the wrenches seem to be good quality. If you can't use the entire selection, replace the odd ones with real allens or something.. Assorted small tools: if you have to ask "what tools do I get?" then you should probably just buy non-M.A.F.A.C. tools.

**NOTE**

For most of the next 7 months, if you order a Nitto Technomic Deluxe stem in a 10, 11, or 12mm extension, we're going to send you another Nitto stem—a model we call the K.K.—that isn't exactly a Tech Dlx, but is fungible—cold forged, long quill (190mm, in fact), pretty, and with a 26mm clamp. We found a local source for this other stem, and so it allows us to buy almost just in time, thus improving our cash flow and leaving us room on our always whalloping Nitto orders for other stuff that we can't get here.





*Coupons. Members only.*

# FIVE RIVENDOLLARS



MINIMUM **\$50** PURCHASE



**Good through Oct 16, 1997**

members only

# SEVEN RIVENDOLLARS



MINIMUM **\$100** PURCHASE



**Good throux Halloween 1997, and no combining, please.**

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