

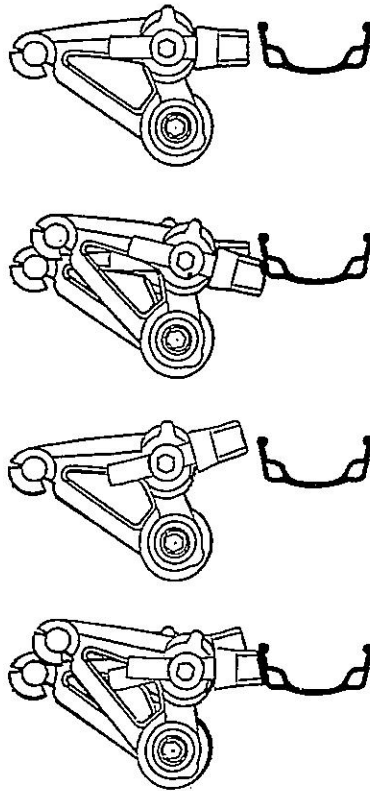
on the rear stays or the fork crown in front, so although the increased mechanical advantage of roller-cams puts greater forces on the frame, they apply their forces to a stronger part of the frame. The roller-cam brake provides a more solid feel than cantilevers, which is either good or bad depending on the rider's point of view. Some riders prefer the mushier cantilever feel which they say allows them to fine-tune the braking; roller-cam adherents swear by the undeniable rim-gripping power of a well-adjusted set of these brakes. Still a third school of thought has a cantilever front and roller-cam rear. This is an outgrowth of the observation that the stretching of the brake cable and the compression of the housing contribute some of the loss of efficiency in the braking system. Because the front cable is shorter it gives the front cantilever a more solid feel. The roller-cam will lock the wheel more easily than the cantilever because of its power-peak design, and some riders prefer a cantilever in front because it has less of a "hair trigger."

By contrast to roller-cams, cantilevers protrude from the frame, and can catch on panniers, clothing or even flesh. A frayed yoke-cable end on the left side of a Mafac rear brake can leave the Mark of Zorro on the thigh when the rider is pushing the bike. (When Shimano introduced their Deore cantilever brake, they put the bare end of the yoke cable on the right side of the rear brake. Good thinking.) Cantilevers are also more vulnerable to being broken off than roller-cams, not only because the arm protrudes to the side of the frame, but also because the pivot is a smaller diameter and holds the brake arm further off the stay or fork blade.

One problem with cantilevers appears when the pads are severely worn. Because of the location of the pivot, the pad strikes the rim at a progressively lower point as it wears down, and eventually can dive under the rim. Theoretically this could catch a spoke and air-mail the rider, but in practice all that occurs is an absence of braking. As a roller-cam brake pad wears it strikes the rim higher, which leads to less dramatic problems; the brake may lose efficiency because the cam adjustment changes, or if the pad encounters the tire it can wear out the sidewall.

A disadvantage to roller-cams appears when they are mounted under the chainstays and the rider encounters deep and sticky mud. Perhaps because these brakes were developed in a part of California where mud is not an ongoing problem, they are at their best when used

under relatively dry conditions. The small pulleys and cam plate are vulnerable to clogging by slime buildup, and this problem has spurred several manufacturers to develop add-on cloth covers for this vital area.

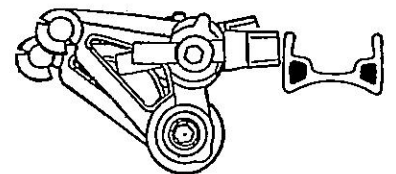


Mechanical Advantage

The basic measure of a bicycle brake's mechanical performance (as opposed to the performance of the brake pad) is how much pressure is put on the rim, i.e. the mechanical advantage of the brake. Mechanical advantage has two elements: the design of the system, and the performance of the components. An example of component performance is the amount of efficiency that is lost when the cable stretches. It is possible to design into a brake considerable amounts of mechanical advantage; however, every time the mechanical advantage is increased, it will require more length of cable pull to operate the brake, and it will increase the demands on the individual components, primarily the cable and housing system. The available length of cable pull is constrained by the design of the brake lever, which is in turn limited by the size and strength of people's hands.

The roller-cam is a variable mechanical advantage brake which maximizes the efficiency of available cable pull. In theory this design puts the greatest mechanical advantage at the point where it counts, i.e. just when the brake shoe contacts the rim. Because of this power peak the adjustment range is much narrower than that of the cantilever, and best results will be obtained if the rider makes sure the cable and pad adjustment keeps the brake centered in its power range. Adjustments for pad wear should be made by adjusting the pad rather than the cable, because shortening the cable moves the power point of the cam. If the cable is shortened too much, the brake will engage after it passes the power peak, and will be much less efficient. Adjustments for pad wear aren't that frequent, but riders who have two pairs of wheels with different rim widths may be forced to readjust on changing wheels. Depending on the design of the bike, the model of brake, and the wheel and tire in use, roller-cams can inhibit wheel changes if they don't open enough to allow the passage of the inflated tire. Efforts to use shorter chainstays complicate these clearance problems, and on some bikes the rider must deflate the tire to remove or mount the rear wheel.

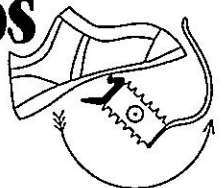
Continued on page 22



With cantilever brakes more vertical-sided rims such as this one from Weinmann make contact with the pad at a better angle. The location and angles of the cantilever braze-ons can vary from frame to frame and may make some rim profiles work better than others.

NO HANDS

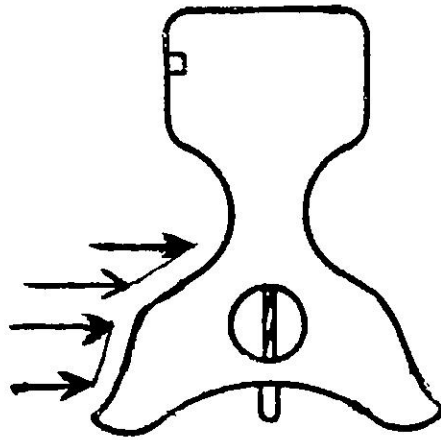
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Some versions of roller-cam brakes had rollers made of a composite material, which didn't work out. Now these brakes have aluminum or brass rollers, and if you have the old style it might pay to replace them. One interesting feature of the 1987 Suntour roller-cams is the presence of a small oil hole/grease fitting to lube the pivot.

Cantilever brakes are not quite linear in their mechanical advantage, because as the brake arm pivots, the tangent formed by the yoke cable moves slightly in relation to the center of the brake's arc. Although there is a theoretical power peak, for practical purposes performance is linear because the brake travels through a very small arc. This reduces the need for frequent adjustment. To quote Gary Fisher on the subject, "How often do you even have to think about your cantilever brakes?" Aside from watching for worn pads, not very often. A recent change in inexpensive "roller-cams" eliminates the bell-shaped cam plate and substitutes a straight-sided trapezoid, which gives the brake a linear power application. This solves some adjustment problems, but loses the variable mechanical advantage of the true cam, which is the idea behind the roller-cam in the first place.



Roller-Cam brakes are adjusted correctly when the roller is completely on the high leverage slope of the cam just before the pad touches the rim.

One manufacturer is experimenting with a hydraulic brake. Projected price range is about \$150 per bike.

Charlie Cunningham, who helped design the modern roller-cam, has made measurements of mechanical advantage in brake performance. According to his findings the maximum pad pressure exerted by cantilever brakes is in the neighborhood of 1.5 times the total cable tension. The theoretical limit of pad pressure on roller-cam brakes is about seven times the cable tension, although in practice the factor is between four and five because the high ratio requires more cable travel than levers can provide. The new center-pulls, which we will discuss below, have a pad pressure-to-cable tension ratio of about two to one.

New Designs

Enter the new designs. Manufacturers realize that since most existing bikes are equipped with one or the other type of welded-on pivots, any successful aftermarket attempt should mount directly on them with no additional welding required. The most common but by no means the only approach to this is a design similar to the old-style Weinmann or Mafac "center-pull" used on most road bikes before Campagnolo side-pull brakes became popular. The mountain bike version pivots on roller-cam studs mounted in the standard position. This design will hit the market from several directions soon. Interloc Racing Design has a version that we showed in our last issue, Shimano has the "U-Brake," and Dia Compe will also have a version with the inspiring name AD-990.

I tried a bike with the Shimano U-Brake mounted on the rear and I was impressed by the performance. It has the powerful braking of a roller-cam, and at the same time the lever travels through enough of an arc that it has a smooth touch similar to that of a cantilever instead of the toggle-switch "instant-on" feel of a roller-cam.

We've seen some interesting designs during our pokings and snoopings. One manufacturer is experimenting with a hydraulic brake. Bill Mathauser says his sealed-system hydraulic brake is currently made only for road bikes, but that the

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27.4 27.2 27.0
26.8 26.6 26.4
26.2 26.0 25.8
25.4 mm

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mountain bike market will be addressed soon. It's hard to dismiss the impact hydraulic brakes made on automotive technology, and Mr. Mathauser claims the bicycle version is just as much an improvement as the automotive hydraulic brake was over the "antique" mechanically operated brake. The major advantage to hydraulic brakes is that they are not subject to the cable stretching and housing compression that is the main loss of efficiency in traditional systems. Weight of the Mathauser brake set is about the same as for a set of Campy road brakes. Projected price range is about \$150 per bike, which keeps them within the realm of possibility, although they aren't likely to turn up on the newsboy's bike.

Another design we have seen is a screw-operated brake. The yoke cable rotates a spring-loaded drum on each side of the rim which turns a worm-gear and literally screws down the brakes. One reason this is so interesting is because worm gears are capable of delivering tremendous mechanical advantage. Since the pads on a screw-operated brake would travel in a straight line, they would not go out of adjustment as the pads wore down, as the roller-cam and the cantilever do. In this brake the mechanical advantage is related to the size of the drum. Changing the round drum to a cam would give a variable mechanical advantage similar to the roller-cam. Hmmm. Excuse me, I have to go out to the garage and do a little tinkering...

WORLD'S TOUGHEST?

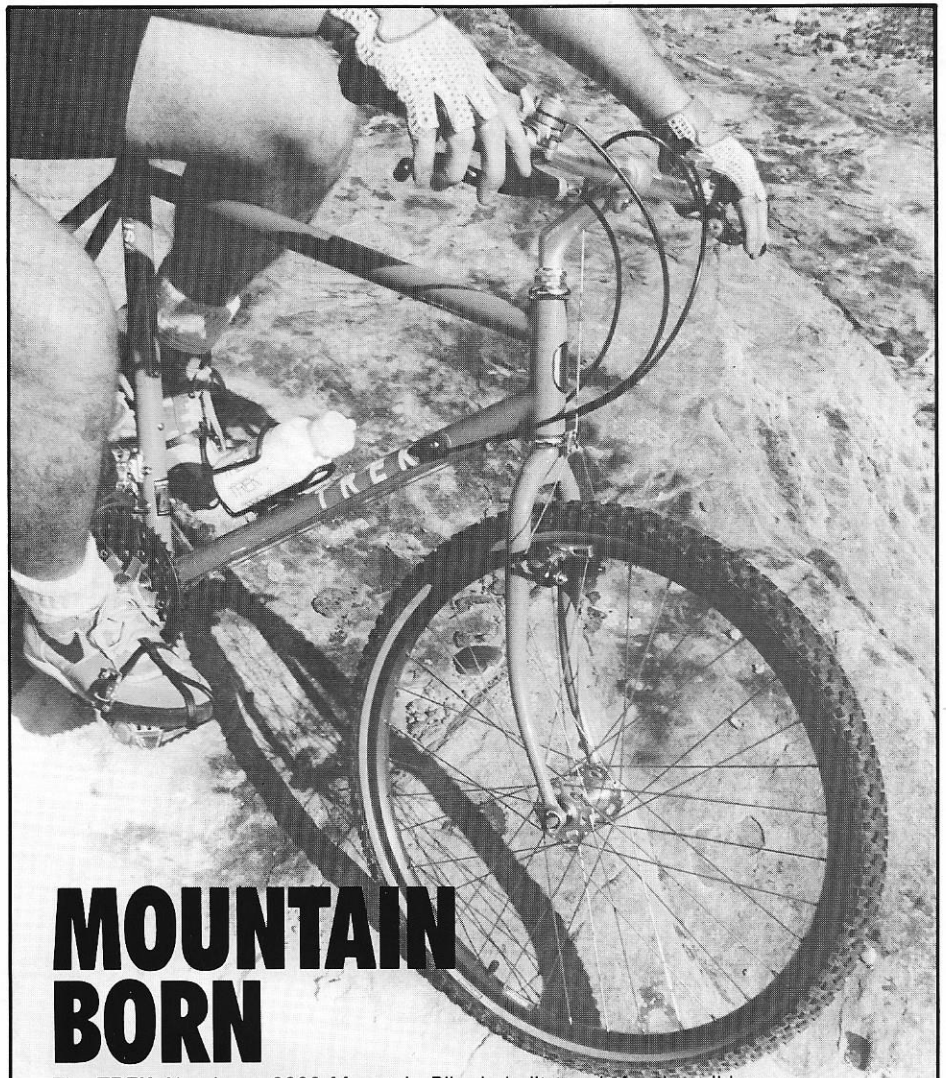
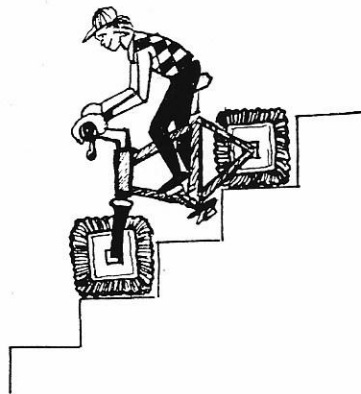
Are you ready for the toughest, I mean the really toughest, mountain bike race in the world? The Mountain Bikers of Alaska are staging the "Iditabike," a mountain bike race on the theme of the 1200 mile Iditarod dogsled race. Just like the dogsledders, the Iditabikers will go in winter, that's right, winter as in March, but the distance will be much shorter, about two hundred miles. The course includes a mandatory six hour rest stop at the halfway point.

Competitors will be required to bring studded tires and winter camping gear (temperature range -20 to +20), and a sled is recommended.

If you're interested, and think you're tough enough for this one, contact:

Mountain Bikers of Alaska
4107 Charing Cross
Anchorage, AK 99504
907-337-1962

The MBA (the more times you say Mountain Bikers of Alaska the the more you want to abbreviate it) has a club newsletter and a race circuit independent of any of the insurance and sanctioning problems found in the lower forty-eight. These guys obviously go for tough races, "...how about three laps around Alaska?"



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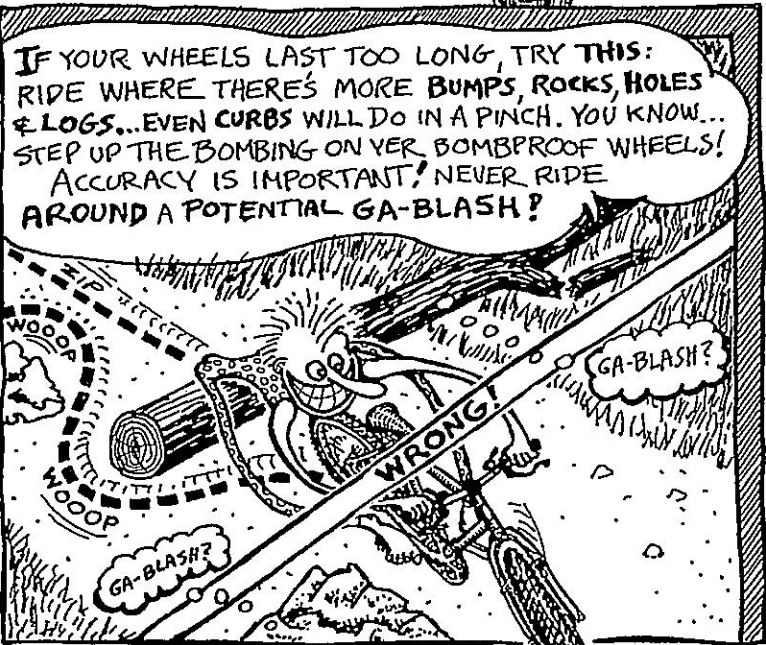
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WRECK TIPS

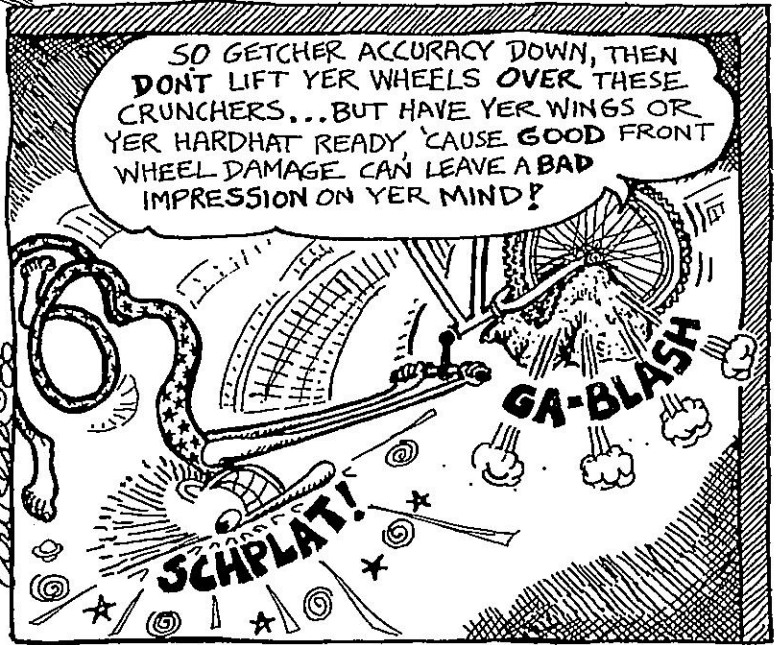
BY
T. TWE
BAILOUT

"INVERSE ADVICE AND TIPS THAT
AREN'T NICE, FROM A BRAIN FULL
OF BEANS AND 2 LEGS FULL
OF RICE."

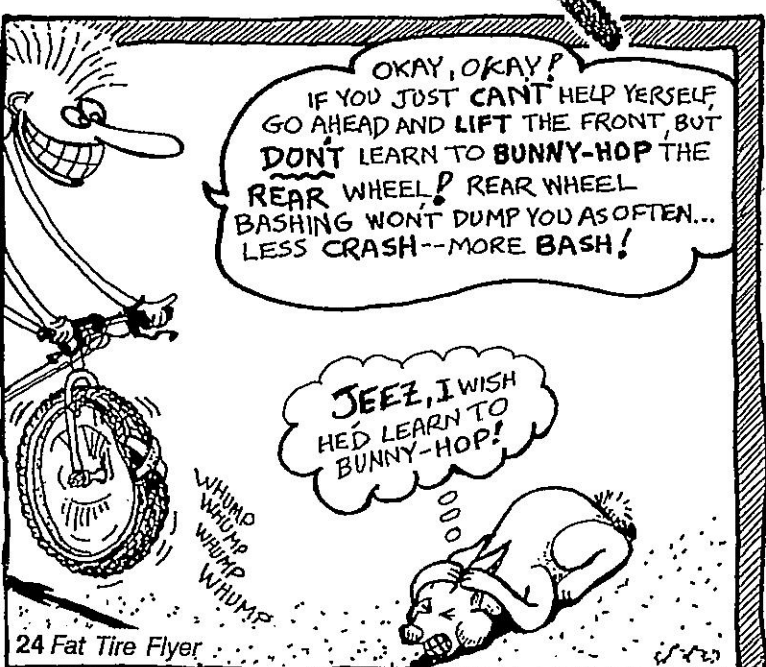
ALOT OF HUBBUB HAS BEEN SPOKEN ABOUT
BOMBPROOF MOUNTAIN BIKE WHEELS, BUT NUTS
LIKE ME AXLE 'OT OF AIR-HEADED 'QUESTIONS
ABOUT WHAT BEARING THIS HAS ON THE DUMPSTER
BRIMMING WITH TIRED WHEELGOODS IN MY BACKYARD.
MAYBE IT STEMS FROM BEING OPUN TO ANY POSSIBILITY,
OR AN IN-NIPPLE-ITY TO ACCEPT THE STATUS QUO.
TUBE 'AD? BUT YOU MIGHT BE IMPRESTA KNOW THAT
MY CIRCLE OF FRIENDS (LUNATIC FLANGE DROPOUTS)
BELIEVE THAT WHAT GETS BUILT MUST BRAKE DOWN.
'N' ILL SHOW YOU HOW!



IF YOUR WHEELS LAST TOO LONG, TRY THIS:
RIDE WHERE THERE'S MORE BUMPS, ROCKS, HOLES
& LOGS...EVEN CURBS WILL DO IN A PINCH. YOU KNOW...
STEP UP THE BOMBING ON YER BOMBPROOF WHEELS!
ACCURACY IS IMPORTANT! NEVER RIDE
AROUND A POTENTIAL GA-BLASH?



SO GETCHER ACCURACY DOWN, THEN
DONT LIFT YER WHEELS OVER THESE
CRUNCHERS...BUT HAVE YER WINGS OR
YER HARDHAT READY, 'CAUSE GOOD FRONT
WHEEL DAMAGE CAN LEAVE A BAD
IMPRESSION ON YER MIND?



OKAY, OKAY?
IF YOU JUST CANT HELP YERSELF
GO AHEAD AND LIFT THE FRONT, BUT
DONT LEARN TO BUNNY-HOP THE
REAR WHEEL! REAR WHEEL
BASHING WONT DUMP YOU AS OFTEN...
LESS CRASH--MORE BASH!

JEEZ, I WISH
HE'D LEARN TO
BUNNY-HOP!

WHUMP
WHUMP
WHUMP

24 Fat Tire Flyer

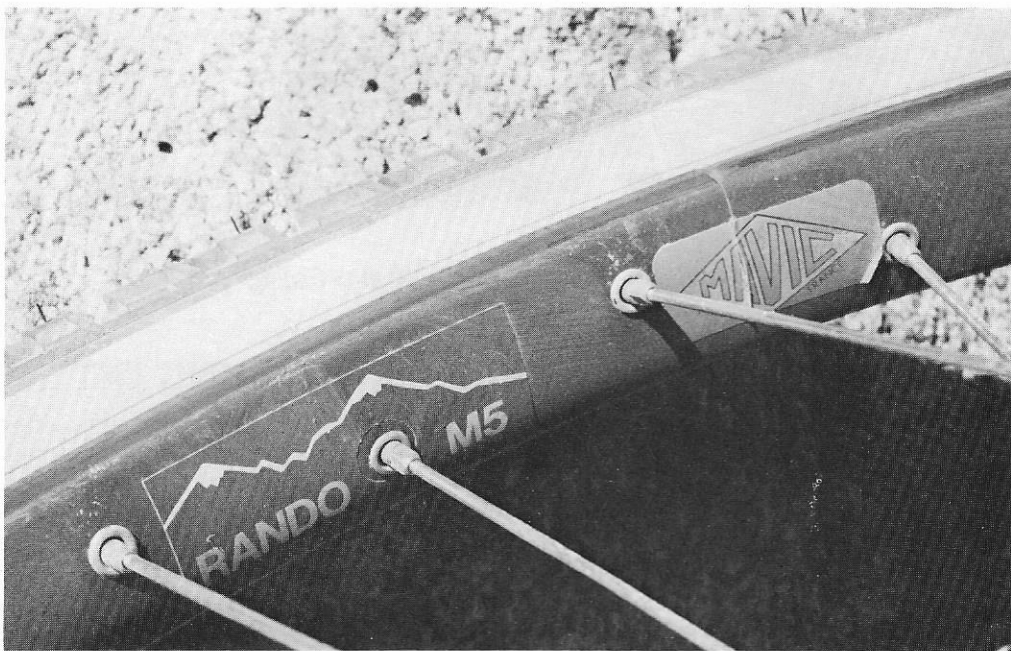


IF YER WHEELS ARE STILL TOO ROUND & TRUE AFTER
BIG HOSPITAL BILLS, GET A SPOKE WRENCH AND
TUNE YER WHEEL TO PLAY "WHEELS OF FIRE" WHEN
YOU RIDE AND STRUM THE SPOKES WITH YOUR PUMP.
SOME THINK YOU'RE SPASE TUNE ALL SPOKES TO
THE SAME NOTE. THAT USUALLY WOOGLES YER
WHEEL REAL GOOD, BUT **HOW BORING!**
I LIKE TO TUNE THE FRONT WHEEL TO
PLAY "TWILIGHT ZONE," AND THE REAR
TO "WALKIN' BLUES."

SWING LOW, SWEET
MOUNTAIN BI-KE
COMIN' FOR TA CARRY
ME HOME...

PLOINK
PLOINK
PLOINK

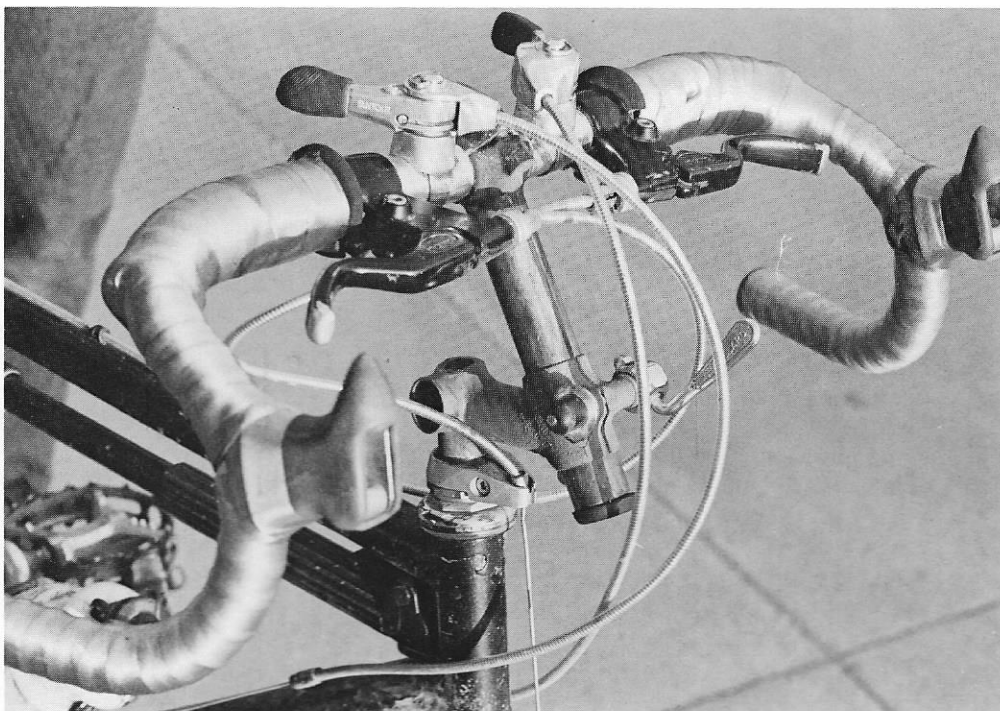
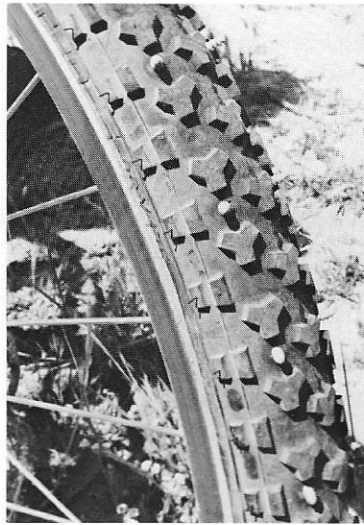
THANKS TO DON MERTLE.



Mavic M-5 rims are box section rims, with a relatively large profile. Dave Schneider, a top racer from Sylmar, California, reports that he has raced extensively on them and they are as strong or the strongest he has seen. A smaller M-4 is also available.

Wheel Trouble

Joe Sloup decided that he would try a bunch of sheet-metal screws through his rear tire to improve traction. The traction was improved, but the tire's ability to hold air went downhill. We're glad Joe did this research instead of us.



Uncommon Handlebar Option

Perhaps you thought you had seen every possible variation of the mountain bike handlebars. As The Terminator says, "Wrong." We're willing to bet that you haven't seen any like these by Tony Herich of Brand Eks Bicycles. A quick-release mechanism on the stem permits them to be raised or lowered at the touch of a finger. Note the brake lever and shifter positions. No comment. But why does this not have a Hite-Rite?



Fat Notes

All the news that's Fat to print

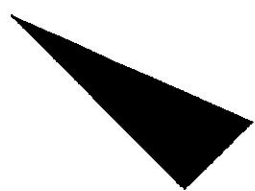
NORBA Video

While attending the recent NORBA National Championships we found ourselves involved as "color commentators" in the video production being assembled by John Dennis Productions of Atlanta, Georgia. The theory is that the completed one-hour video will then be sold to independent networks and stations across the country, making us all rich and famous, or at least famous.

We don't know when or if it's supposed to run in your area, so we urge you not to leave the vicinity of your tube and keep switching those channels. If you don't see us in six months, either call, scrawl or crawl to your local station and give them a piece of what's left of your mind.

NAMES, NUMBERS

We had to rush into print with our race coverage of the Nationals in the last issue, and in our haste we tripped over our typewriter and made a typographical error crediting Tracy Smith with being on the Ritchey U.S.A. team. Tracy rides for Cunningham Bicycles as we noted several other places in the issue. In the same result sheet we credited second place rider Max Jones with the same finishing time as Mike Jordan (2:01:40). Max finished four seconds faster at 2:01:36.



THIS MONTH'S GOOD CAUSE

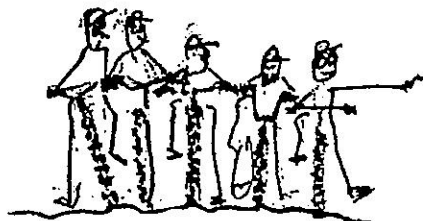
Good causes always get a little free ink from us. This issue we would like to mention the **Institute for Transportation and Development Policy**. The Institute sponsors a program to promote non-motorized transportation for basic travel needs in developing countries. In short, the idea is to supply bikes to Third World countries.

The Institute will take your tax-deductible cash donations, but the real focus of the program is to obtain used and unsalable bike parts that are currently gathering dust on the shelves of America's bike shops. Bike shop owners can write off the value of donated parts.

Some may not agree with the political stance of the Institute, whose programs include titles such as *Bikes for Africa Campaign*, *Bikes Not Bombs for Nicaragua*, and *The Haitian Development Fund*. Those who are interested may contact the Institute at:

Institute for Transportation and Development Policy
P.O. Box 5595
Friendship Station
Washington, DC 20016

Alan Bonifis



UNSPONSORED OUTLAW RIDES

One way to meet the insurance problem head-on is to sidestep the issue...Ole! We have a note here from the Anonymous Bike Club (A.B.C.) of Somewhere in California; it states, "*Weekly Rides: Meet at location on calendar—no fees—no wimps—no skinny tires. Guaranteed gnarly, brutal climbs, burly descents.*" A list of rides and meeting places is included. By the time this hits print the dates given will be past, but we'll try to get a few of the A.B.C. rides on next year's schedule.

STANDING OFFER

As we have mentioned in the past, we'll give a *free* subscription of any mountain bike club sufficiently organized to print a newsletter and send it to us. We'll start the subscription the instant we receive whatever it is you print.

On roughly the same subject, we would like to mention one of the off-shore publications for fat-tire riders on the other side of the Atlantic Ocean. It's a newsletter that reminds us of ourself about six years ago, an English effort called *Making Tracks*. Because it is geared strictly for the English rider, *Making Tracks* has no provision for foreign subscriptions (we get ours by trading subscriptions). Anyone traveling to England with a mountain bike would be well advised to get a copy for research purposes, but we read it for fun. We especially like the classified section advertising used bicycles and components. It's called "*The Lonely Parts Column.*"

Interested? Write to them at:

Making Tracks
c/o 55 Grafton Road
New Malden, Surrey KT4 3AA
England

From St. Paul, Minnesota we get a publication called *Mountain Bike Rider*, a good source of local Northern Midwest mountain bike (Great Lake bike?) news. Anyone living between Cleveland and Denver might look into the quarterly. Check with:

Mountain Bike Rider
P.O. Box 12121
St. Paul, MN 55112

We just received the first issue of the *Urban Nomads* club newsletter. The Nomads is (are?) a mountain bike club based in Washington DC, and the newsletter is geared (clever) toward events in that area along with items of interest to local readers and riders. East Coast riders should get in touch with the group at:

Urban Nomad
P.O. Box 5627
Arlington, VA 22205
(703) 533-9031
Event Hotline: (703) 533-7846

Troubleshooting: Creaks and Squeaks

by Aaron Cox

New shorts, clean socks, cool shirt, classic hat.

The Big Guy is ready for his mountain bike date. Big G. has spent twenty minutes getting his old spare bike ready to be ridden by the most recent Ms. Right.

She arrives, and together they pedal off into idyllic "Deer Heart Park."

Ms. (Most Recent) Right is riding "Old Faceful," the same bike that Big G. first rode, in the days of the off-road Genesis. In recent years Old Faceful has been relegated to the role of back-up bike by the most recent hybrid stallion in the Big Guy's bike menagerie.

Ms. (Surely) Right is a living, breathing, prime example of the 80s "fitness nut," I.R.A., "Me" Generation, and she puts the old work-horse through its toughest workout in ages. Out of the saddle Ms. (maybe Mrs.?) Right attacks the first hill with a ferocity matched only by an incessant, obnoxious and annoying squeak, which is repeated every revolution of the crankarm.

"What's that squeak?" asks Ms. (Kinda) Right. Big Guy shrugs, suddenly feeling very humble.

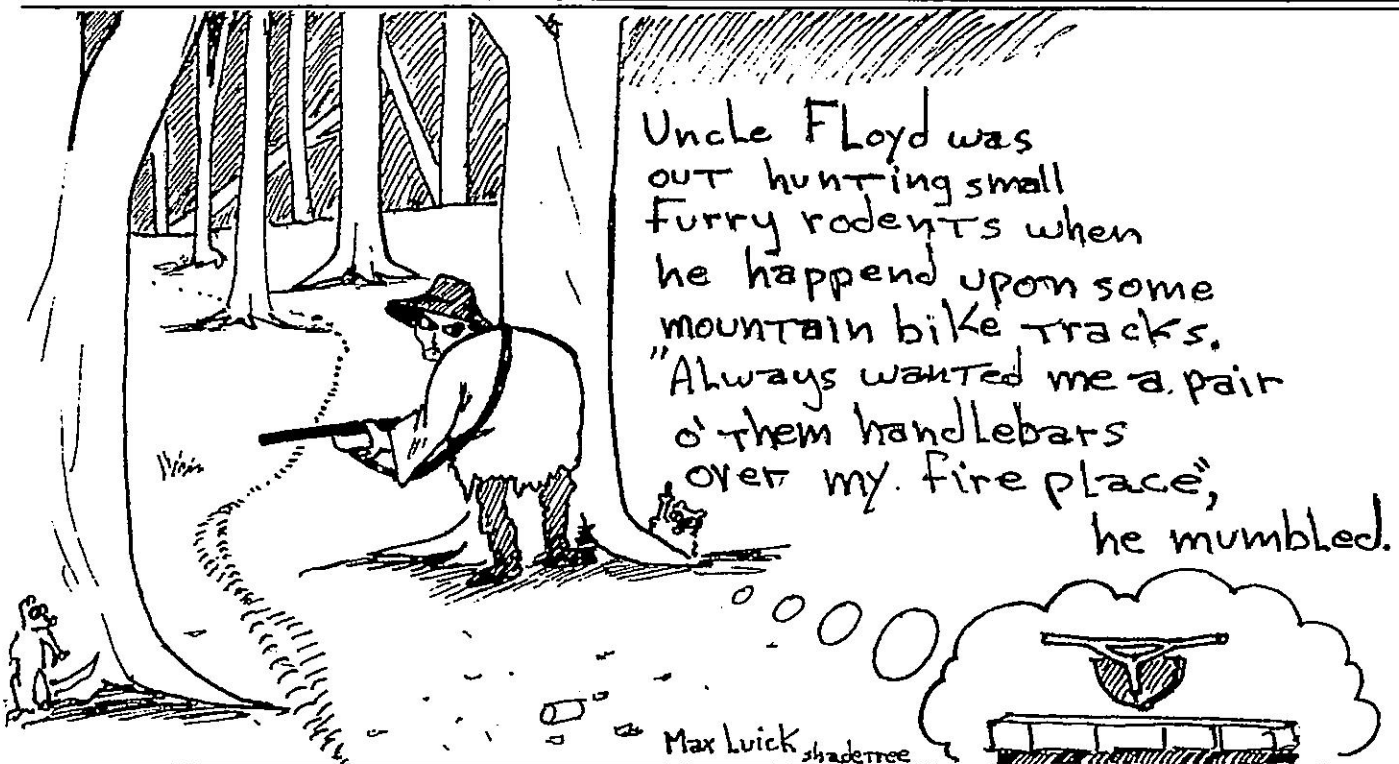
If the story is going to have a happy ending, somebody had better find that squeak and get rid of it, and quickly!

Isolating the Problem

The first step in isolating the problem is to ride the subject bike while sitting down and pedaling. Then, stop pedaling and coast. While the bike is coasting the only moving parts are the wheels, so if the noise persists, you can assume that the wheels are the source. Dry wheel bearings, loose spokes, or the rim rubbing against a brake shoe are all likely sources of an unwanted cacophony.

Next, pick the bike up off the ground and spin first one wheel and then the other to further determine the source of the noise. Dry bearings or a rim hitting the brake shoe should be immediately apparent, but loose spokes may only make noise while the bike is ridden.

Continued on page 28



If the noise goes away while you coast, the next step is to eliminate the seat/seatpost and the handlebar/stem assemblies. Try riding with no hands to check the handlebars, then get out of the saddle to see if the problem is in the seatpost. To cure problems in these areas, remove the bolts from these assemblies and grease all the threads and washers. Also apply a little grease to any surface that is in contact with another surface (i.e. inside the fork steering tube, and between the stem clamp and the handlebar). If you have an aluminum handlebar with a sleeve on the center, a creaking noise can occur because of metal fatigue inside the sleeve. With this kind of handlebar a creak may be the last warning before the bars break entirely.

Apply a little grease to any surface that is in contact with another surface.

Finally, if after riding with no hands, coasting, and pedaling standing up you have not determined the source of the elusive mechanical 'cricket', then the problem must be emanating from the drivetrain. The problem can't be in the chain, rear derailleur or freewheel, because of course you keep these components clean and lubed.

To check for a problem in the bottom bracket, take the chain off so the cranks can spin freely. Turn the cranks and apply a little lateral pressure on the arms (don't just let them spin with no pressure). By putting leverage on first one crankarm and then the other you can determine whether one of them is loose on the spindle. If one of the arms is loose, it is best to remove it and grease the mating surfaces, threads, and washer before retightening.

If both arms are tight but the squeak continues while the cranks are spinning freely, then the bottom bracket bearings are the likely cause. If such is the case you can sometimes lube the bearing, however some cartridge bearing units are more easily dealt with by having them replaced.

If the squeak mysteriously disappears when the cranks are spinning freely, the problem is in either the chainwheels or the pedals. Ride the bike using each of the chainwheels. Since the smallest ring on most cranksets has its own set of mounting bolts, a loose bolt will only complain when its chainring is being used. Once again, if one of these bolts is loose, it should be fully greased before retightening.

Your Move, Big Guy

Having followed all of these basic steps, the Big Guy is miffed to discover that the gremlin bicycle frog continues to croak.

It turns out that Old Faceful recently received a new pair of shintrap pedals. Big Guy spins each pedal to check for loose or over-tight bearings. No apparent problem. But wait! Close scrutiny brings to B.G.'s attention a slightly loose pedal cage. Those tiny flathead allen screws holding the replaceable cage onto the body had not been securely tightened at the factory, and now they require a tiny bit of grease on the threads (as well as a little grease between the cage and pedal body) before they are torqued down to a proper degree of fastener integrity.

So as Ms. (Must Be) Right lends the Big Guy the proper allen wrench to mend his ailing steed, tranquility is restored, and Old Faceful returns with quiet pride to the trail just in time for the happy ending.



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Chainsuck Follies

Drew comes down the mountain, carving corners, reflexes committed to actions better left unpondered. Left turn, slight uphill rise, shift down to the middle chainring, up out of the saddle, pedaling out of the corner, forward momentum ceases as the connection between man and machine is severed by

"Chainsuck."

Chainsuck; *noun:* the condition caused when the upper section of chain that is under tension is drawn downward between the rear tire and the right chainstay.

Chainsuck occurs when the chain tension is relaxed to the point where the chain is snagged on the side knobs of the rear tire and is drawn downward by the rotation of the rear wheel.

Variations of chain tension are created any time the freewheeling mechanism is in use, because there is some friction in the freewheel body that tends to drive the chain forward when the bike is coasting and the cranks are not turning.

When the chain is shifted to a smaller chainwheel there is a certain amount of lag time before the chainwheel RPM can be matched to the freewheel RPM, which creates slack in the chain. Other factors contributing to chain slackness can be the bike bouncing up and down, a cluster that is not freewheeling efficiently because of excess internal friction, or a rear derailleur that does not take up slack properly.

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In addition to all these factors, one of the most common ways to get sidelined with a case of chainsuck is by backpedaling. The technical aspects of mountain bike riding often require the rider to pedal backwards, and if the chainwheel, freewheel and rear derailleur are not in line with one another, the reverse rotation of the chainwheel will not be compensated for and excess chain slack will occur.

There are some basic preventive steps you can follow to avoid becoming one of the Afflicted.

1. Maintain a smooth-running drive train, particularly in the area of the freewheel mechanism and rear derailleur pulleys and pivot points.
2. When shifting to a smaller chainwheel, pedal smoothly and follow through with your pedal stroke until the chain is fully engaged with the chainwheel.
3. When backpedaling, try to do so with the chainline as straight as possible, or with the chain on the big chainring to keep it as far as possible from the rear tire.

Nobody's perfect, and we all ride with the risk of affliction. Afflictions require cures; those who relate to bicycles as kinetic art see chainsuck as a wound slashed into the soft underbelly of the craftsman/frame-builder (it thrashes the frame and finish). The only way to avoid this is to stop, gently remove the rear wheel, realign the misguided chain, and return the wheel to its proper position.

Drew sees his bike as a means to an end, however. He reflexively *uses his rear brake to momentarily lock up his rear wheel into a controlled skid, simultaneously pushing the pedals into a forward rotation.* The static state of the rear wheel allows the chain to be freed, and forward momentum resumes.



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CRESTED BUTTE 1986

We weren't very kind to the grandparent of Fat Tire Festivals in our last issue. In an article titled "Mountain Bike Classics" we panned the Crested Butte-Pearl Pass-Tour-Fat Tire Bike Week etcetera etcetera celebration, implying that the famous Pearl Pass Tour was, well, over the hill.

Having just returned from same, we must admit that even in the face of our editorial skepticism after last year's downbeat Bike Week, this year's event more than lived up to its reputation as a good time, and we recommend without hesitation that everyone and their spouses should attend next year. Participation was down a little, possibly due to the proliferation of events now on the calendar, which draw away riders. Another reason for reduced participation is that the publicity went out so late that many potential participants made other vacation plans.

Except for the late publicity, everything else about Fat Tire Bike Week seemed to go smoothly. The racing and trials events were much improved, and the race scoring was done by the experienced Specialized crew this year, a contrast from last year when officials were hastily recruited from the ranks of the vacationers. With increased industry participation and a professional management team in place, long-suffering promoter Murdock has reduced his blood pressure considerably and for the first time in years might even have enjoyed himself during Bike Week. At the traditional Bike Week Banquet, Murdock was so relaxed that he actually told a couple of jokes instead of chewing the edge of the podium as in previous years.

For several years the race schedule had been Bike Week's bike weakness in spite of the fact that the best racers in the country could be counted on to attend. Since 1983 Crested Butte had become the de facto training camp for Pro-Am racers preparing for the national championships, but in 1986 the numbers were reduced. Some teams, notably Ross, boycotted Crested Butte this year in reaction to last year's undistinguished races, and they missed out on an excellent ride. In the absence of Ned Overend and the strong Ross team, Max Jones tuned up for his second place finish a week later at the NORBA Nationals with a resounding win in the cross-country race. A bike "rodeo" featuring a log-pulling contest, the Observed Trials competition, a criterium on a mile and a half course, and the long race up Teocali Ridge were all up to anyone's standards, and the prizes were excellent. A drawing was held at the Fat Tire Banquet to give away a couple of new bike frames.

One interesting aspect of Bike Week was the "women only" ride schedule. Novice female riders were shown the fundamentals of mountain biking in spectacular surroundings by other women without the distraction of a bunch of macho males pushing the pace. These rides also gave the women an opportunity to dissect the social attitudes and monumental egos of a few of these same macho-man types, some of whom would be surprised by what was revealed and eventually leaked to the Fat Tire press. "Rookie of the Year" awards were given to two women who discovered an enthusiasm for mountain bikes that was matched only by their previous inexperience with the subject.

The focus of the week has always been the traditional Pearl Pass tour. Things have changed, and instead of a two-day, sag supported ride/campout/picnic with catered meals and a bus ride back from Aspen, the Tour is, well... Several years ago the logistics got out of hand for vehicle support of the huge group on the bad road at the high altitude in the fragile ecosystem, so there is no longer an "official" Pearl Pass Tour. But on Saturday morning of Bike Week, a couple of hundred people lined up with their bikes at the time-honored Grubstake Saloon starting line. Murdock addressed the throng briefly, then shouted something to the effect of, 'Go! Get out of here! Leave me alone!' and the mob rolled out toward the pass with or without any official sanction.

The Pearl Pass Tour is still an interesting and unique experience, but it's a different kind of experience from when it was when it was a supported ride. It's no longer just a ride/campout/picnic, it's a pilgrimage. Why else would hundreds of fat-tire bikies drag their machines to this beautiful but otherwise undistinguished and certainly remote place? All the published accounts seem to have made Pearl Pass a necessary entry in each rider's personal log.

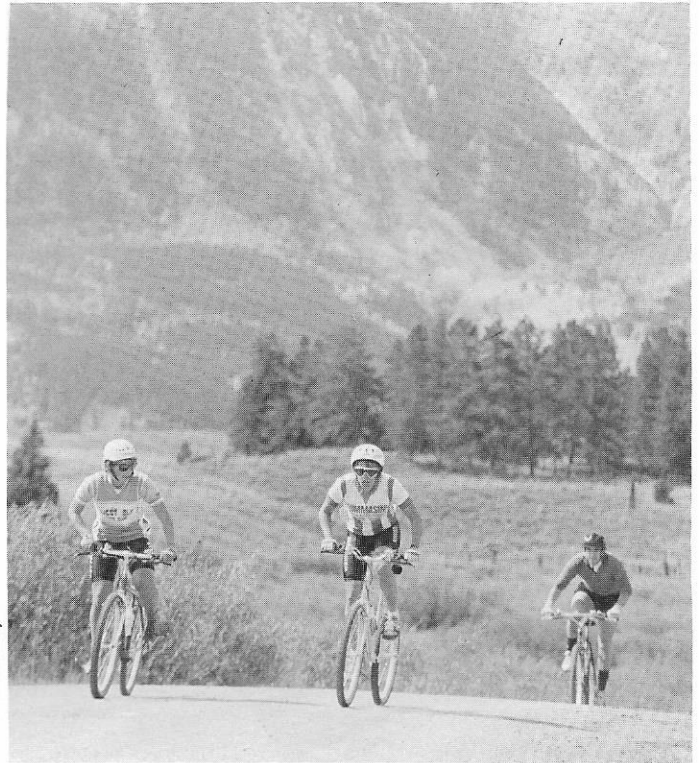
Having arrived at the top of Pearl Pass after six or seven hours of riding and trudging, most people are quickly driven back down to warmer climes and warmer climbs by the biting, frozen wind. Some opt to continue into Aspen in the ancient tradition dating from the last decade, but the majority just turn around and coast back to Crested Butte, a two hour descent that must rank among the finest in Gunnison County if not the world.



Charles Kelly



Charles Kelly



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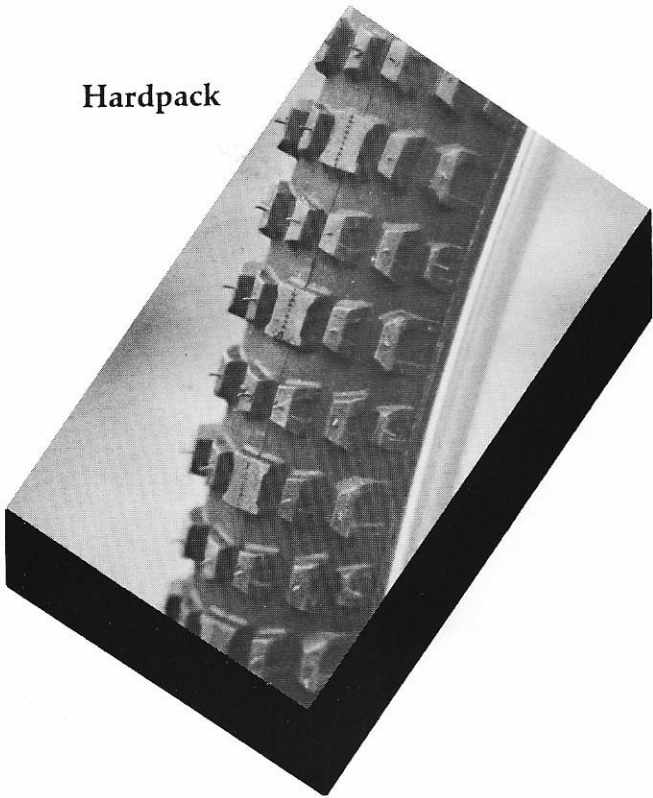


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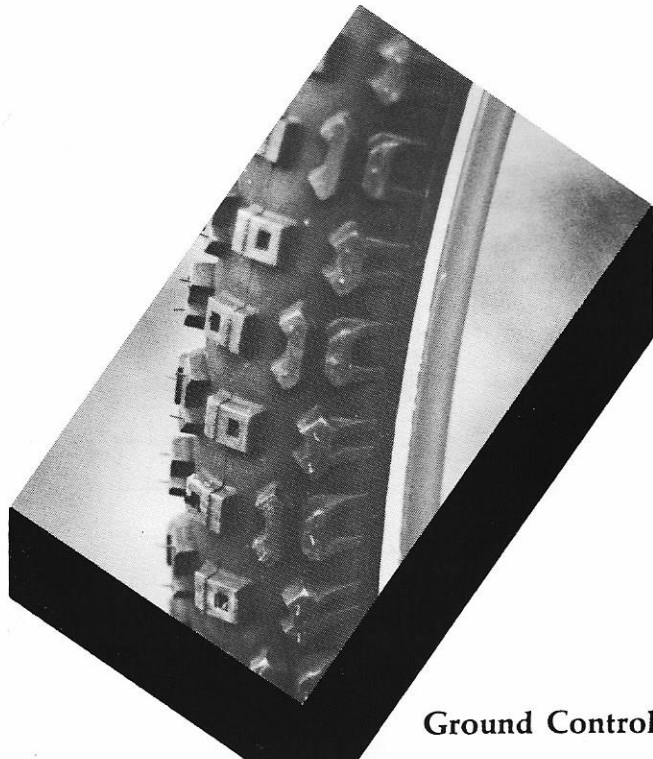
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TIRIES

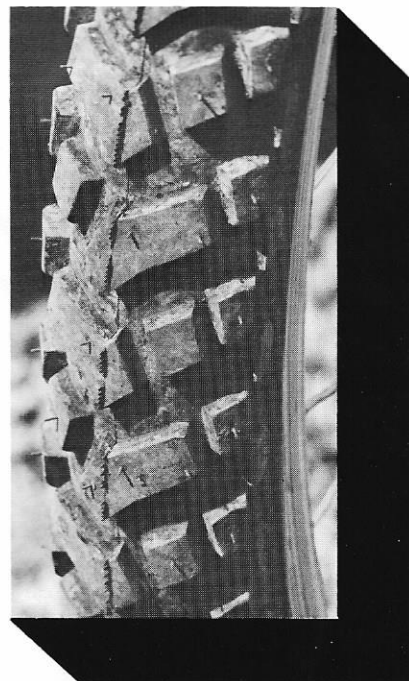
Hardpack



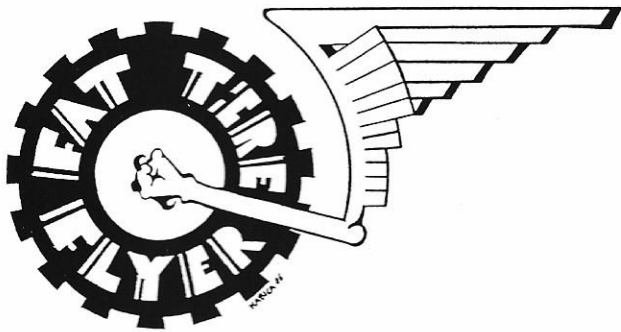
Crossroads II



Ground Control/S



Mitsubishi "Farmer John"



Specialized/Wilderness Trail

Wilderness Trail's new tire designs for **Specialized** include three new patterns in various sizes for a total of five new tires. The **Ground Control/S** (*lower left*) was conceived as an uncompromising all-out off-road performance tire. Re-engineering a well received tread and incorporating expensive Kevlar (R) arimid fibers seems extravagant, but these are the kind of incremental improvements that fanatic riders crave (and will pay for).

Ground Control S 26 x 1.95 - 600 grams

The **Hardpack** tire (*top left*) is a more conventional looking tread pattern and is relatively narrow for its height. The Wilderness boys say this is to provide more cushion to prevent tube pinches, along with a narrower profile for clearance between chainstays. The tread spacing is sculpted to work well in sticky mud, which isn't the Ground Control's strong point. The 1.5 size reportedly "will clear the tightest short-chainstay bike out there," but anybody worried about clearance with a tire this small is too "narrow-minded" to be serious about fat tires.

Hardpack 26 x 2.2 - 780 grams

Hardpack 26 x 1.5 - 520 grams

The **Crossroads II** (*upper right*) is an on/off road style with a modified center ridge or "edge connected center block" pattern which reduces the familiar knobby hum on pavement. (What is the point of fat tires if you can't unnerve road riders by drafting noisily close behind until the tension is so intense that they pull over). The silent connections cut the rolling resistance along with the sound, making it that much easier to pass.

Crossroads II 26 x 1.5 - 530 grams

Crossroads II 26 x 1.95 - 650 grams

Crossroads II 24 x 1.95 - 500 grams

Mitsuboshi

The latest version of the V-tread (*lower right*) is a variation of a tire that made the testing and evaluation rounds last spring. This down-home design has been documented on every patch of dirt worth plowing or mowing. I like them. The classic "Farmer John" tread design has been around so long that it is hard to explain why nobody else has brought them on line. With this distinctive and familiar styling half the country will buy them on their looks alone. (D.M.)

Fisher

The **FATTRAX** from **Fisher** has been beefed up from the original version to make it a little more durable. The newest version weighs 750 grams, and it is the biggest and fattest tire around. Although several racers used these tires successfully in 1986, Fisher says they were designed for fun. The large air volume and big knobs make the Fattrax a grabby tire with a lot of cushion.

Fattrax 26 x 2.2 - 750 grams



Fattrax

Ritchey U.S.A.

Ritchey U.S.A. entered the tire market with the **Quad-X**, which was the biggest selling after-market tire in 1986. The **Force Racing** was Ritchey's entry in the light tire market. Designed for high performance, the Force Racing was the first (but far from the last) off-road tire to sport a Kevlar bead. In addition to keeping the weight of the tire down to 595 grams, the Kevlar bead is flexible enough so a spare tire can easily be folded under the saddle. The Force tread pattern is designed specifically for dirt; it is a more open version of the Quad-X, without the connected center knobs. Size is medium-wide at 1.9.

The 1987 Ritchey line introduces the **Force Duro**, which is designed to be the compliment on the rear wheel for the Racing on the front. The Duro is a little wider at 2.0 and has 20% more rubber than the Racing. Both the Duro and the Racing come with either Kevlar or wire beads.

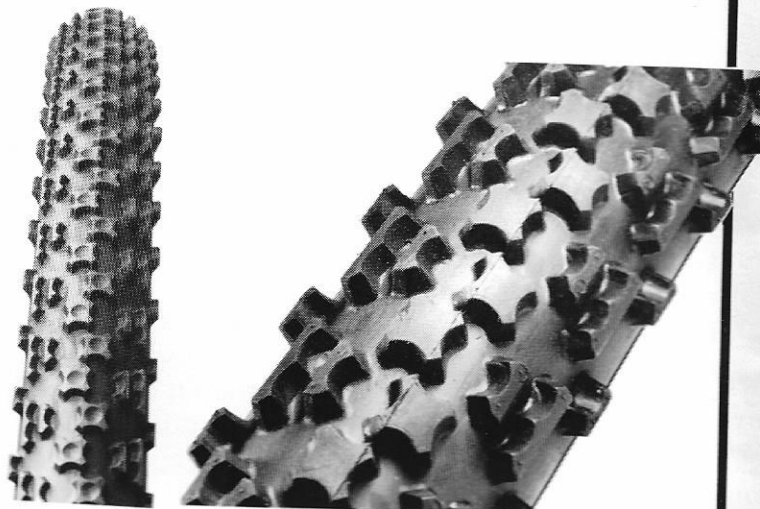
Quad-X 26 x 1.9 - 675 grams

Force Racing 26 x 1.9 - 675 grams

Force Duro 26 x 2.0 - 725 grams

Force Racing K 26 x 1.9 - 595 grams

Force Duro K 26 x 2.0 - 645 grams



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IRC

IRC has had one of the more popular tires for the last few years, the **X-1**, an ultra-knobby tire that comes in both 2.125 and 1.75 sizes. Because it came on the market several years ago and hasn't changed significantly, the X-1 design is a little dated and heavy, (the 26 x 1.75 is competitively light at 605 grams) but these tires are still a durable choice. This year in a response to the changing market, IRC introduces the **X-1 Pro**, a mid-size, lighter version designed especially for racing.

Another innovative in 1987 product from IRC is the studded snow and ice tire. A little heavy for general use at 910 grams, the **Blizzard** has 56 studs for traction on those slippery, snowy slopes. The IRC **Trial Winner**, as the name suggests, is for Observed Trials, and comes in both 24- and 26-inch sizes.

X-1 Pro 26 x 2.0 680 grams

Blizzard 26 x 2.125 910 grams

Trial Winner 24 x 2.125 880 grams

Trial Winner 26 x 2.125 975 grams

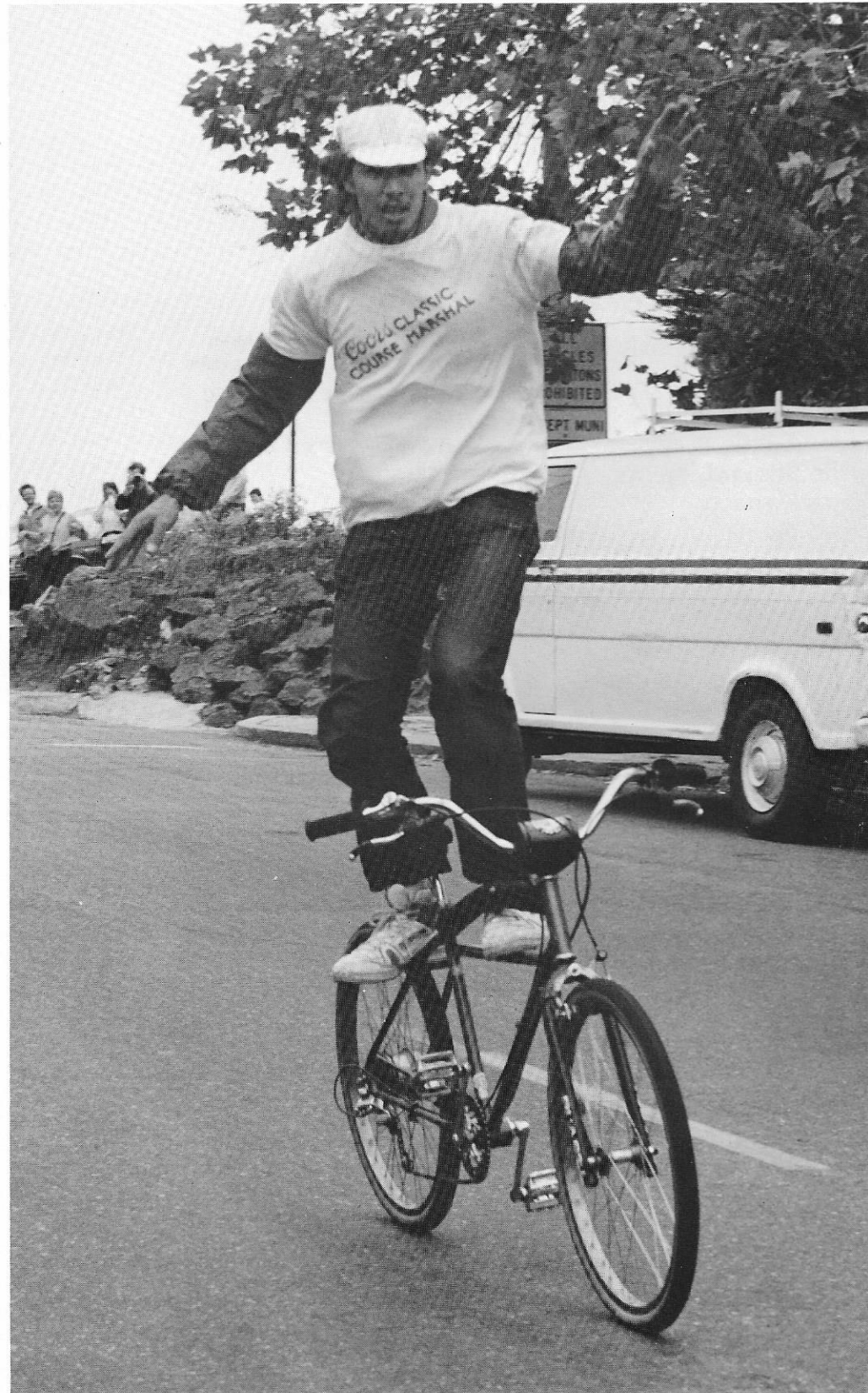


Fat Tire Surfing

Most mountain bikers are unaware that the typical fat tire bike can be used as an aid to surfing on dry land. There are two basic bike-surfing styles, which are analogous to board surfing and body surfing. In **Figures 1** and **2** the bike-surfer uses the bike as the surfing platform, in this case standing on the frame while he weaves his way through traffic down a steep San Francisco hill, the bike-surfing equivalent of dropping in on a thirty-footer at Wiamea Bay.

Figure 1.

Figure 2.



Charles Kelly



Figure 3.

Charles Kelly

The second basic method for bike-surfing involves getting a proper amount of speed from the bike and then abandoning the machine and surfing the hill on feet alone, the bike-surfing equivalent of body surfing. This works much better on dirt roads than it does on pavement. In Figure 3 we see a bike-surfer executing the basic off-road bike-surfing maneuver, a "Vibram" bottom turn.

Riding without a helmet is risky. Bike surfing in traffic is against the law. You should practice on your own driveway.

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LETTERS

Dear Fat Tire Flyer,

Received the latest issue the other day and passed it around the club house. You know how mountain bikers like to share, especially written material about the sport. Any our compliments to you on this especially thought provoking issue. We really liked and appreciated the coverage of the Hidden Valley Outlaw National Championships.

With racing fees on the increase and NORBA's fees going up next year we feel that a lot of sport riders will not be able to join in the fun of organized racing. It's really encouraging to know that other groups are feeling the same way and holding 'unofficial' events for the enjoyment of the riders rather than for the profit of the promoters. Two off the "most fun" outings last year were the unofficial Spring Runoff and the PBE. Since so much attention and blame of increased costs are placed on insurance premiums why not return to the justice of the old west and make people responsible for themselves instead of sue happy.

Of course that would mean non publicized, non sponsored, non paying get together. Sounds terrible. What would we ever do without all the "support" of the industry? Maybe have fun ridin' in the dirt and saving twenty-five bucks for ourselves instead of supporting the insurance industry. Oh well, enough of that. Hope you keep up the good work on the Flyer with meaty articles and less fashion. Who said that?

Take care and above all
KEEP DOIN IT IN THE DIRT
Mad Dog
THE Recon Riders

Charlie + Guys + Gals,

Thanx for the trials coverage you've offered the past few issues. As a trials fanatic I can only say more! more! If you would send results to these people they would be happy to run them.

Trials Competition U.S.A.
P.O. Box 283
Winchester TN 37398
Attn: Curt Comer

They mainly cover motor trials but recent communication with them brought out that they'd happily carry bike trials. Keep 'em informed. They're really good people.

Later;
Brent Mulhaupt
Lafayette, IN

American Handbuilt

FAT
CITY CYCLES

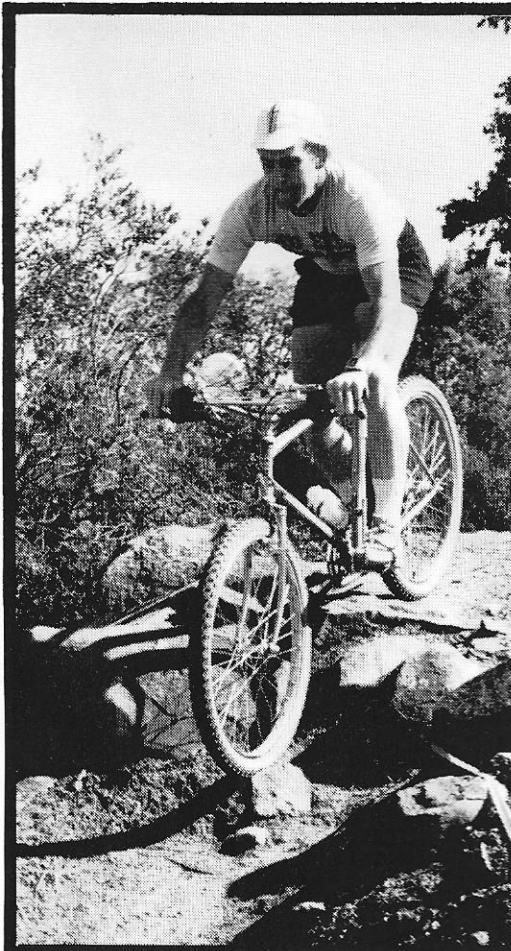
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Auburn, AL





Race Schedule

January 24-25; Rides and barbeque: *"Coyote Creek Clunker Classic,"* Anza Borrego Desert, CA

Contact: Ralph Elliott (619) 288-6789

February 22; race: *"Fur Rendezvous,"* Kincaid Park, AK

February 28; Marchi; stage race: *"First Annual Palmas Mountain Bike Challenge,"* Humacao, Puerto Rico

Contact: Robert Lieth (809) 726-3742

Contact: Mountain Bikers of Alaska (907) 337-1962

March 8; race: *"Iditabike,"* Wasilla, AK
Contact: Mountain Bikers of Alaska (907) 337-1962

April 19; race *"Whiskeytown Downhill,"* Redding, CA

Contact: Gary Larson (916) 243-7101

May 23, 24; stage race: *"Dirtstomper Stampede,"* La Crosse, WI

Contact: Nelson Johnson (608) 782-3480

May 25; race: *"Iron Horse Bicycle Classic,"* Durango, CO

Contact: Ed Zink (303) 247-4066

June 13, 14; races: "Rockhopper South," Big Bear Lake, CA

Contact: Pat Follet (714) 866-5239 or (714) 866-3501

June 20; race: "Plumline Sierra 7500," Bishop, CA

Contact: Don Douglass (805) 653-0431

July 5; race: "Revenge of the Siskiyous," Ashland, OR

Contact: Beverly Crafton (503) 482-1997

July 17-19; stage race: "Great Flume Race," Incline, NV

Contact: Max Jones (702) 832-0726

July 25, 26; races: "Southern California Championships," Big Bear Lake, CA

Contact: Pat Follet (714) 866-5239 or (714) 866-3501

August 2,; race: "Cascade Cruise," Bend, OR

Contact: John Byfield (503) 484-4975

August 15, 16; stage race: "Bud Lite Mammoth Cycling Classic," Mammoth Lakes, CA

Contact: Wally Hofmann (619) 934-3498

August 21-23; races: "NORBA World Championships," Mammoth Lakes, CA

Contact: Wally Hofmann (619) 934-3498

August 29, 30; stage race: "God's Country Fat Tire Challenge," La Crosse, WI

Contact: Nelson Johnson (608) 782-3480

September 4, 5; races, Observed Trials: "NORBA National Championships," Durango, CO

Contact: Ed Zink (303) 247-4066

September 11-13; stage race: "Chequamegon Fat Tire Festival," Cable, WI

Contact: Chequamegon Fat Tire Festival (715) 794-2577

September 14-20; races, Observed Trials, tours: "Fat Tire Bike Week," Crested Butte, CO

Contact: Murdoch (303) 349-7263

October 18; race: "Fall Classic," Big Bear Lake, CA

Contact: Pat Follet (714) 866-5239 or (714) 866-3501

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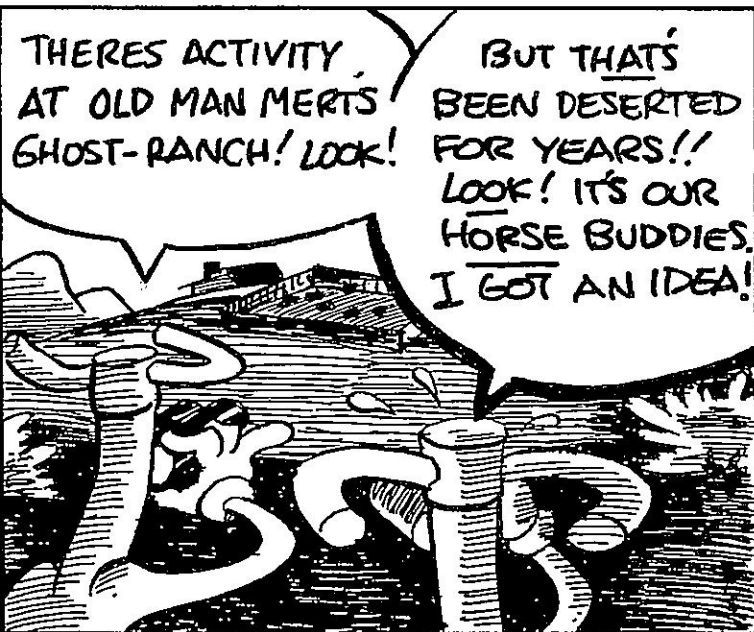
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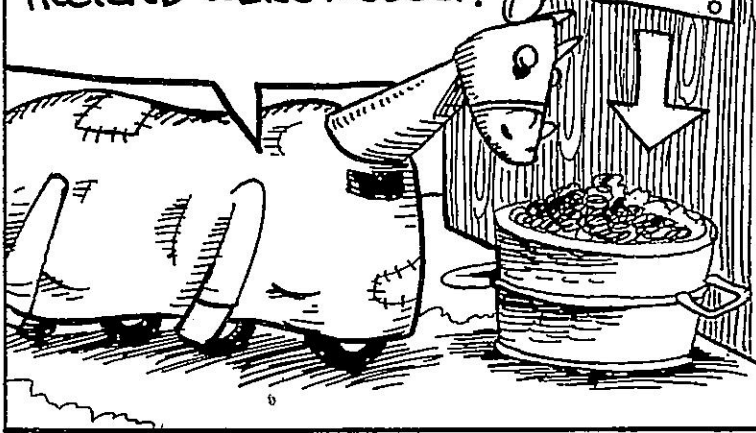


THE NEXT DAY:



≧ SNIFF-SNIFF ≦ DOPED UP FOOD! OUR PAIS HAVE BEEN DRUGGED! - QUICK - PRETEND WE'RE ASLEEP!

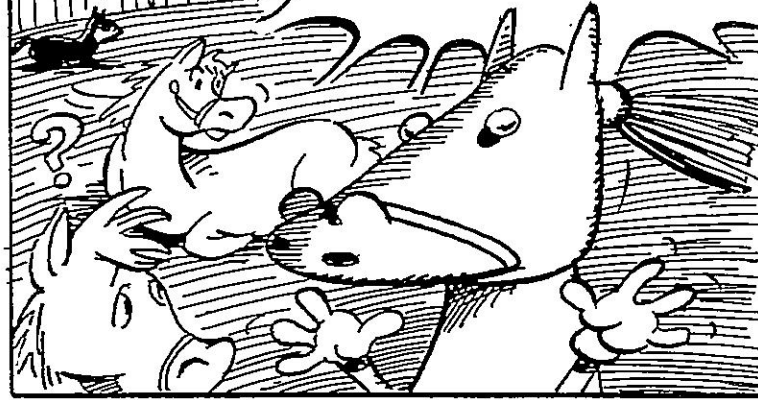
FREE HORSY-TYPE FOOD



SOON, INSIDE THE WALLS:

OH MY HEAD

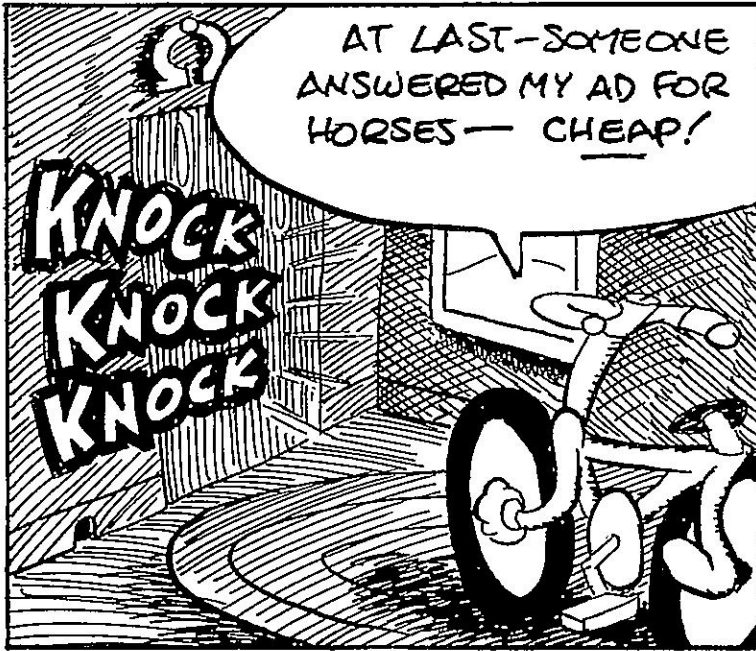
WAKE UP, GUYS! WE GOTTA GET OUTA HERE! TIME TO RIDE!



MEANWHILE, IN THE OL' MERT GHOST RANCH-HOUSE:

AT LAST-SOMEONE ANSWERED MY AD FOR HORSES - CHEAP!

**KNOCK
KNOCK
KNOCK**



LATER | TRAILS FOR ALL AND ALL FOR TRAILS! HUP HUP HUP!



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WELL, WHAT ARE YOU LOOKIN' AT?

