FREE SAMPLE

THE

RECUMBENT CYCLIST

A Journal for Human Power Enthusiasts

SUMMER 1990--VOL. 1 NO. 2
Published, Edited and Produced by Robert J. Bryant
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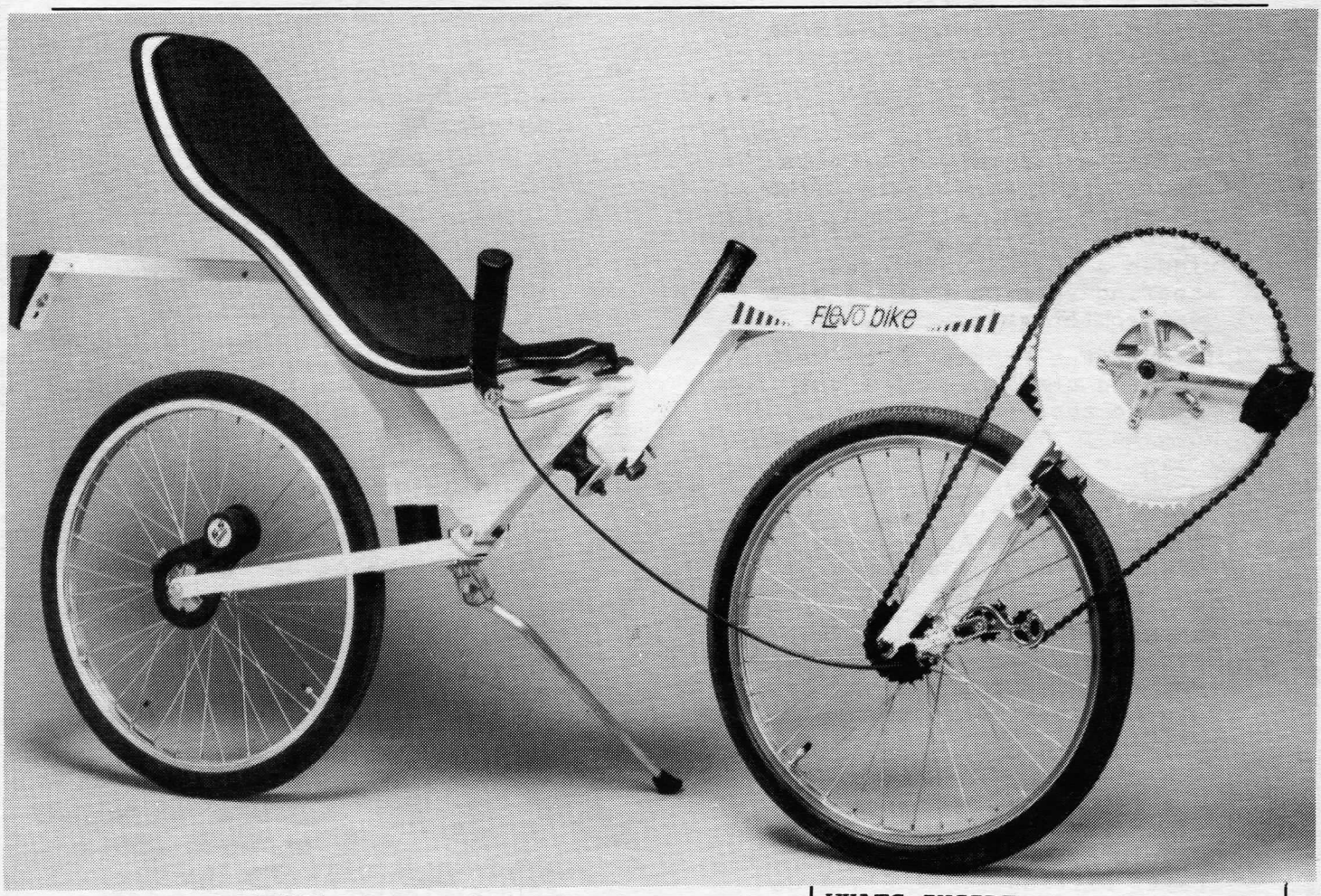


FLEVO bike

COVER STORY PAGE-11

WHATS INSIDE:

Mini-Review
The Counterpoint Presto

The Presto is the most innovative SWB recumbent to come along in quite a while. I have test-ridden it several times over the last two years. The bike I rode on this occasion was a gorgeous Rhapsody Blue version. The first thing you will notice about the Presto is the two 20" wheels, the second is the modified stem/ handlebar extension, similar to the one on the Lightning P38, except the Presto's reclines back and forth to allow easy entrance to the seat. The Presto's seat is the same on found on the Opus tandem, and is among the most comfortable recumbent seats that I have ever sat in. The stem/ bars feel strange until you actually slide up into the seat, the riding position is wonderful! I really liked the reclining stem. Although, since my original test, I have ridden a custom underseat steering version that is also very comfortable.

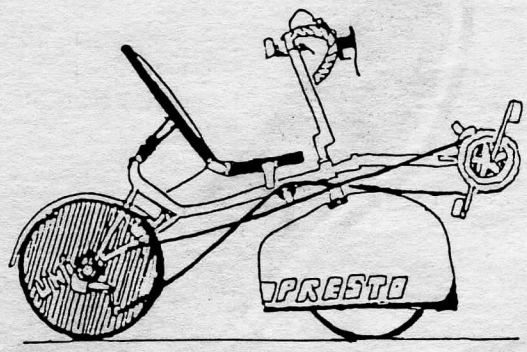
I found the Presto to be very fast and stable, once I got used to the very short(36.75") wheelbase. The '90 version has a little quicker handling due to the new cro-moly BMX racing fork with a little less rake. To correct this Angle Lake has added a steering dampener to the headset.

The handlebars on the newest version are extra-wide flared drop-bars and bar-end shifters This is a near perfect hand position.

Some riders have commented that the Presto seat height makes planting your feet on the ground during stops and starts difficult. At 6', I do not have this problem, but I can see how this could become a problem for a shorter rider.

For the '90 model, the seat side rails have been shortened by 1.5" and the seat frame is now powdercoated black.

The Presto's 20" wheels perhaps account for the added seat height. This along with the optional folding boom, makes the bike very compact. The one drawback to the small wheels is gearing. The Presto is not designed to take a triple crankset. So a wide gear range is hard to obtain, stock gear range is (approx.) is 30-93 gear inches. I am of belief that a recumbent should have a very-wide gear range. By wide, I mean a low in the low-mid 20's and a high of just over 100 (gear inches).



The Presto is a fine machine and a real contender in the limited SWB market. I particularly like all of the innovations--the movable stem and the sprung seat, yes suspension, a very simple, but workable suspension design. The price of our test-bike was $1499, which is the base price for the limited production '90 Presto. If you are interested in a SWB recumbent, you should check out the Presto. With its fine craftsmanship and top quality components, but best of all, it is a absolute blast to ride..**

The Counterpoint Presto is sold exclusively by Angle Lake Cyclery, 20840-Pacific Highway So., Seattle WA 98188 USA 206-878-7457

Robert J. Bryant

The Recumbent Club of America

Recumbent Cyclist

Presto Specs. on Page-10

FUTURE-BIKE

"Cycling in the '90s"

It really makes my day when I open the latest issue from one of the main stream bike magazines, and find an HPV-related article. They seem to be so few and far between. There have been a few recently that I thought were worth mentioning.

The February '90 Bicycling Magazine had a story on "Bicycling in the 90's". Along with predictions of electric gear shifts and suspension for Mountain Bikes, a great quote from friend of Human Power, Chester R. Kyle PHD, here is the quote, "For recreation and commuting, tradition will yield and a significant number of recumbents will be used. They make lots of sense for safety and comfort, eliminating sore hands, chafed rear ends and worries about falling on your head. You sit in an easy chair with your feet forward, your body close to the ground, and your head comfortably erect for good forward vision." Amen.

"Original Thinking", an article in the June '90 issue of "Bicycle Guide", by Christopher Koch. I was really impressed, the abreviation "HPV" was used three times! Human Powered Vehicles was actually spelled out so we would know what they are. The article is actually very good. A quote by the author Christopher Koch sums up the evolution of the upright bicycle, "When you consider that the bicycle has looked virtually the same for 100 years, its easy to see why some observers believe that the bicycle industry follows the **Ronald Reagan School of Original thinking**, just find your mark and read the card."

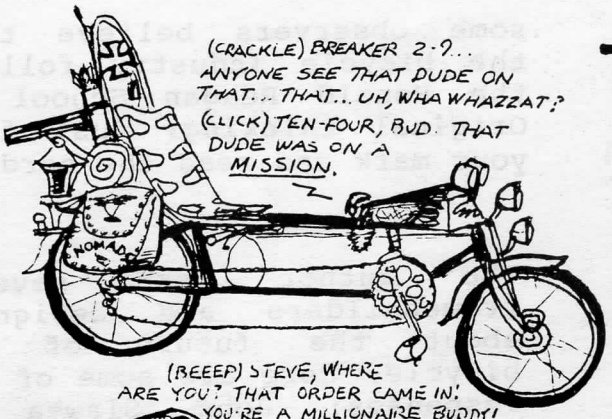
The author asks several framebuilders and designers about the future of the bicycle. Here are some of the responses; John Slawta of Landshark Bicycles in Pacoima California had visions of a frame building kit of PVC plastic, glued together and activated by ultravoilet light. I hope that the tubes are long and large diameter for HPV use! (ed.)

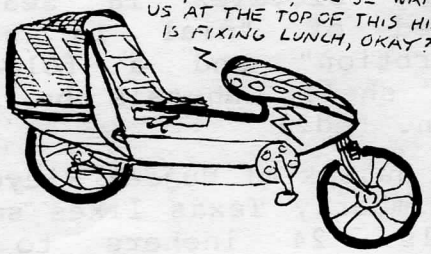
Glenn Erickson of Erickson Racing Bicycles in Seattle talked of "dial in shock absorbtion" and a foldable rain shell. Where's he from again. (ed.)

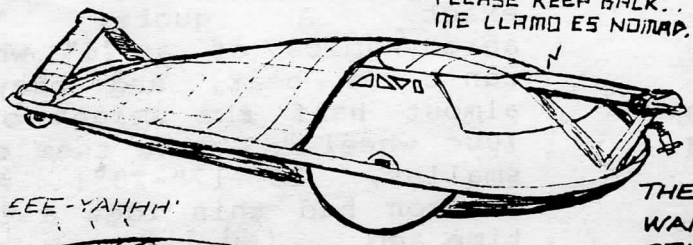
Skip Hujsak of Hujsak Bicycles in Wimberly Texas likes small wheels, 24 inchers to be exact. A quote, "The aerodynamics of a 24" wheel can't be beat, and they're almost half the weight of a 700c wheel." I like them even smaller, 16"-17"-20"! Alex Moulton had this idea a long time ago.... (ed.)

The best ideas came from "Original Thinker", Gary Fisher, of Fisher Mountain Bikes in San Rafael California. He's after the **"Ultimate HPV"**, a sleek commuter vehicle I imagine, although the word "recumbent", was not mentioned. Here is a quote from Garys vision, "I'd love to see elevated bikeways built like wooden velodromes where you're totally covered in a pipeline that would go in one direction, and you'd have

continued on Pg-9







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Artwork by Dan Burdick of San Jose California

Originally Published in "The Journal of High-Tech Nomadness"

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CSPC: THE POOR MAN'S COMPOSITE

Have you ever wanted to build a custom enclosure, oddly shaped structure, waterproof canopy, camper shell, or special box — only to be frustrated by the cost and effort involved in fabrication? You know the scenario: without facilities for this kind of work, you end up spending far too much, compromising your design with scrounged junk, or simply forgetting the whole damn thing.

This is the mode I was in when designing the Winnebiko's new trailer (or WASU, for Wheeled Auxiliary Storage Unit). I knew what I wanted — a lightweight, waterproof, aerodynamic structure with wheel wells, special flanges for equipment and antenna mounting, sealed access panels, a 72-watt solar lid, and so on. But how would I build such a thing? I even considered hacking up one of those hideous black plastic tool bins they sell for pickup-truck beds.

I described the whole problem to Dave Berkstresser one evening. Dave is one of those wizards who can sketch a dozen unique solutions to any mechanical problem that seemed impossible only moments before, and is the designer of the eccentric, agile, and swift Vacuum Velocipede human-powered vehicle.

"Build it with cardboard," he told me, taking a sip of beer.

"No, seriously," I replied.

"I am serious," he insisted. "Take a hot-glue gun, throw together your basic shape out of an old refrigerator box, then fiberglass over it. I made a kayak out of cardboard once."

The elegance of his suggestion was instantly obvious. All sorts of structures ranging from airplane wings to transit boxes for delicate equipment are made of *composites*, structures that consist of two walls separated by a "matrix." Usually some kind of foam or honeycomb, this core is what keeps the thin walls at a constant distance and provides the dimensionality and moment that keeps them from collapsing. Some of these materials, such as Hexcel, are among the most high-tech structural materials available.

And garden-variety corrugated cardboard is a close analogue! It is used everywhere you look for very good reasons: it's strong, light, and cheap. Covered with fiberglass, it's waterproof, good-looking, and stronger still. And best of all, it is infinitely hackable... if you screw the design up, you can *always* scrounge more cardboard and brush on some more goo.

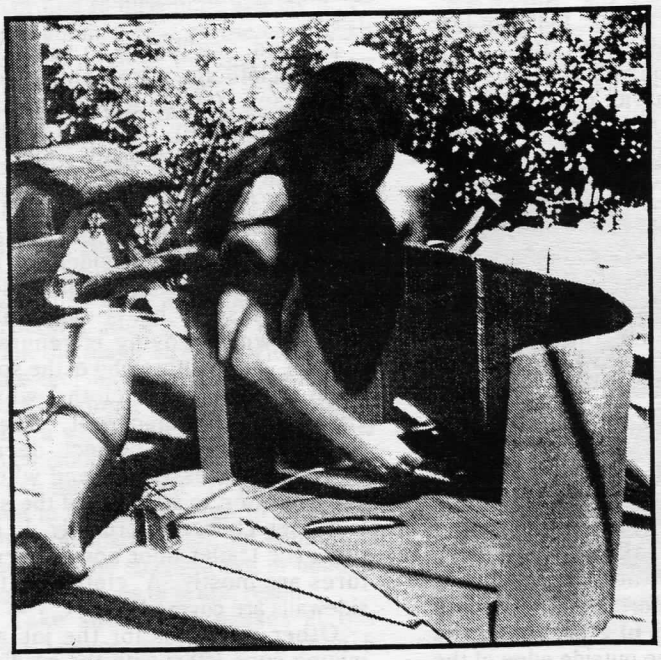
Heh.

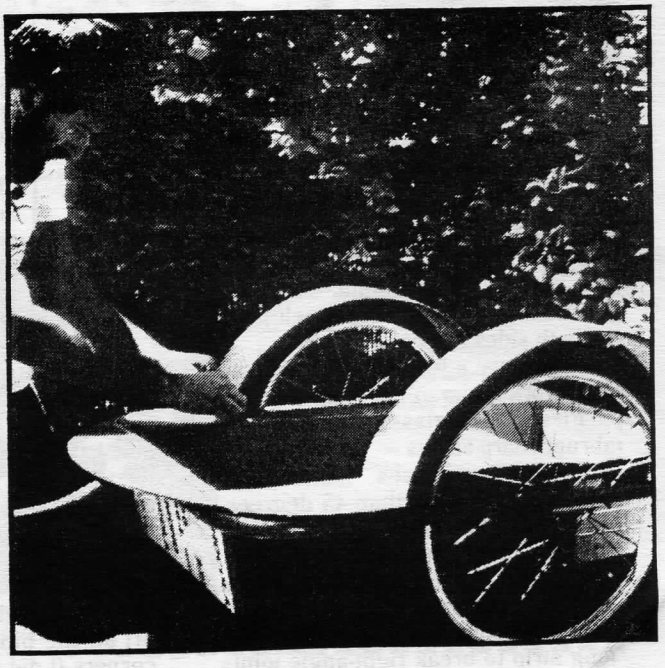
Needing a name for this wonderful discovery, Dave and I puzzled for a while and finally came up with CSPC... or Cellulose-core, Silicon-matrix, Polyester-filled Composite. And now, a few months later, I'm building the Winnebiko 3's communication and power systems into a blazing-yellow custom trailer that looks like a cross between a '56 Buick and a solar-panel-encrusted satellite.

CARDBOARD CONSTRUCTION

The first step in building anything using this method is to noodle over it for awhile, sketching and perhaps even making models until you know what you really want. Then buy a hot-glue gun (typically about $15) and lay in a good supply of cardboard.

A note here about materials. Corrugated cardboard comes in all sorts of styles (never thought about this before, did you?), ranging from heavy thick mushy stuff to thin, brittle material that cracks when you bend



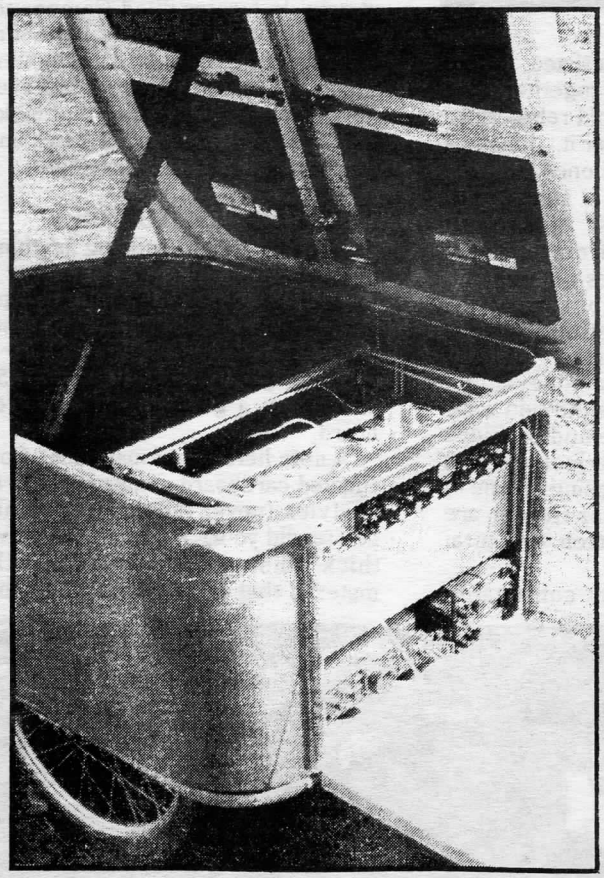


CSPC Composites

By Steven K. Roberts
Used with permission

it. Somewhere in between is the right stuff — look for a good stiff feel, thin walls, and consistent corrugations. There's no reason to go with heavy cardboard for strength: all we're trying to do here is hold the two fiberglass layers in a fixed relationship. Get material that feels clean and light, and hasn't been walked on or creased.

Now you can start construction. Using a metal yardstick and a good sharp knife (X-acto or retractible), cut the pieces as you need them, being conscious of "grain" wherever



you have to make a bend. At every junction, run a bead of hot-melt glue, on both sides if necessary.

There are a few tricks that make later work easier...

First, fiberglass doesn't like abrupt sharp angles — it will gap and leave ugly air spaces. Don't make any angles sharper than 45 degrees, or any right angles with a bend radius of less than a half-inch or so. You can usually get away with using a circular sander or rasp to brutally round the edges, but if you can add a long strip to break right-angle joints into a couple of 45s you'll be better off.

Gentle simple curves, like the front of my trailer, can be distributed uniformly over a large surface by pre-bending the cardboard over a table edge, parallel with the corrugations, one step at a time. By carefully creasing the material at every wave, it will hold a smooth curve — though the inside surface will be rippled and cause lots of tiny air gaps. It turns out that this doesn't matter much.

Dave swears that he has made compound curves by carefully analyzing the corrugation pattern and making tiny, well-placed incisions with a sharp knife. I find this astonishing, but knowing Dave, it's probably true. Experiment.

Edges can be messy. They became in issue in two parts of the trailer: the outside, exposed rim of the solar lid; and the edges of the long stabilizing strips that add strength to walls. Details in a moment, but be aware that every exposed edge will take extra effort and try to keep them to a minimum.

Don't create any situations where you won't have easy access later during the glassing process. Over time, you'll intuitively recognize the behavior of the stuff, but for now just make everything as open as possible. Really tight spots may be better approached using two or more parts that are later joined — it will keep resin off your elbows, and probably look better.

Once you have the cardboard structure intact, stare at it, play with it, and think through all the ramifications of the design. It will be hackable later if you forget something, but it's a lot *more* so now. If there's anyplace you will have a bolt compressing the surface, mash the cardboard flat so it won't collapse and loosen later; wherever there will be major stress, add reinforcement. Smooth off all the blobs of glue, round the corners (I did the outside edge of the solar lid by gluing on half-round pine, sculpted smooth on the corners), and mentally run through the glassing process.

Like it? Time to make it permanent.

CLOTH AND GOO

When you go out looking for fiberglass material, you'll find yourself deluged with options (unless you go to the local hardware store, in which case you'll have too few). In California, the best supplier is Tap Plastics, and the personnel are quite knowledgeable about the fiberglass cloth and resins they sell. There are a couple of basic choices...

First, polyester resin versus epoxy. Polyester is cheaper and much less nasty to work with, but is less strong. Your application will determine which makes more sense — I used polyester. Also, be aware of the meaning of "surface curing agent" — a waxy additive that seals the layup to help it cure. Problem is, it also interferes with adding additional layers. Avoid this entirely, and use structural layup resin or bond coat, not surfacing resin. My personal preference is the thixotropic structural layup resin — it's easy to brush on, doesn't sag or puddle, and cures quickly. You'll also need catalyst, which is the highly poisonous Methyl Ethyl Ketone Peroxide. If weight is critical, you can add millions of tiny air pockets by mixing "micro balloons" with the resin.

Second, you'll need to select the kind of cloth you want. This is very important, for it will determine weight, flexibility, cost, and appearance. It's also very much a function of the job. On the trailer, I used Tap "A" and "C" weight cloth, the latter being lighter (5.85 oz per square yard, .01" thick). Considering that your base material is cardboard, going with super heavy cloth, thick mat, or woven roving is generally overkill. At the other end of the spectrum is light "deck cloth," which cures almost transparent. Again, think through the project, decide where the stresses are and where you just want to waterproof the surface, then choose accordingly. In my case, the trailer floor and lid structures are mostly "A" cloth, and the sidewalls are covered with "C."

Other materials for the job are mixing cups (start with the graduat-

ed paper measuring cups, then once you get the hang of it you can switch to old tin cans), stirring sticks, cheap brushes, acetone for cleanup, paper towels, and scissors. You also need to decide how you want to keep the stuff off your hands, and **TAKE THIS ISSUE SERIOUSLY!** These chemicals have a cumulative effect when absorbed through the skin, and you may get away with sloppiness for years then suddenly develop an agonizing, lifelong allergic reaction to resin and catalyst. The homebuilt aircraft world is full of sad stories about people who sold their partially-built planes after careless habits made dealing with fiberglass impossible.

When I started this project, I used rubber gloves and kept a bar of Neutrogena handy. The gloves were loose and sloppy, and led to more of a mess than doing it barehanded — but it took a while to develop techniques of dealing with the brush and mixing can (like always wiping at the seam so you know where not to touch). After a few sessions, I abandoned the sticky gloves and tried to be careful, washing after every batch. Now I use Glove Cote, which is a lanolin-based cream that's supposed to keep you safe.

OK, ready to start? Take the phone off the hook. A batch under normal thermal conditions will only last about 10-15 minutes, so you don't want interruptions. Mix the stuff according to directions and lay down a preliminary coat on the cardboard surfaces you'll be working on first — this helps adhesion and is quite necessary. When the batch starts to thicken, STOP — it won't soak in, and will have the opposite effect instead.

Now cut your first pieces of cloth and lay them on the cardboard, which should be tacky. The wrinkles will brush out. Start laying up the structure, adding layers where you think the major stresses will concentrate (corners, support points, etc). This is where the art comes in — after a while you'll just *know* how much cloth to use and how thickly to brush on the resin. In general, you want to use just enough to make the cloth transparent, but not enough to puddle. The strength lies in bonded cloth, not globs of brittle resin.

Take successive passes at the work, never mixing more than 5 ounces of resin or so unless you're covering a large area with a large brush. Overlap the cloth by a few inches, and keep working at it until you feel that the coverage is complete. Notice the material's reluctance to take sharp bends... this is how you gradually home in on the constraints that affect the initial cardboard design. On exposed edges, let the wetted cloth hang off — *don't* try to wrap it around.

Finishing the edges is easy if you do this. After it's all dry, you can slice the excess cloth with a sharp knife, then use a file to remove any sharp points. It will look terrible. But now mix up a small batch of Tap 500 plastic filler and work it into the exposed corrugations with a plastic squeegee, then file and sand after it dries. The result will be a smooth, waterproof edge that takes paint easily and completely conceals the truth — that the core of this beautiful structure is an old cardboard box!

FINISHING

How pretty do you want this? If you've come this far, you'll have a rather ugly brown material, with lots of ragged overlaps and texture variations. If the need is purely structural, this may be the place to stop.

There are two ways to add color. First, as I did on the trailer's underside, you can mix special concentrated pigments with the resin (I used black). This in no way alters the surface texture, but it does hide the big Hotpoint logo which would otherwise show through the cardboard.

The other way is with paint, and this is another one of those areas where time, money, skill, experience, and luck all conspire to yield either beauty or a giant mess. I did the trailer lid with a yellow epoxy paint and had all sorts of problems — now I need to sandblast it off and try again. The body is another story: Maggie put her old auto-body skills to work during a full week of applying Tap 500 (like Bondo) and sandpaper, finally perfecting the surface with glazing putty. We then took it to Charles Tripp in Los Gatos, who did a beautiful job of spraying on DuPont Imron (a fiesty thoroughbred of paints, not for the poor or faintheart-ed). The stuff is over $100 a gallon and can cause respiratory failure if you spray without breathing apparatus, but it looks great.

And there you have it. The trailer, for a moderate amount of time and money, looks professional enough to prompt people to ask where I bought it. I grin and tell them it's just some old cardboard boxes, glass, goo, and paint. They don't believe me.

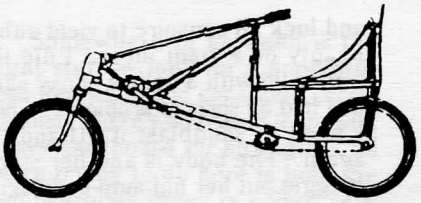
I do have one final suggestion if you try this on your own structural fabrication problems. Do an unimportant test project first to get most of the mistakes out of the way. That first layup will seem awkward and messy, with the cloth buckling and resin dripping down your chin. But give it a chance... it works! ♦

NOTE: To find out if there is a Tap Plastics dealer near you or to request a catalog, call the company headquarters at 415-829-4889. Since a number of the chemical products involved with this kind of work cannot be legally shipped, they are unfortunately not a mail-order supplier, but there are 15 stores on the west coast.

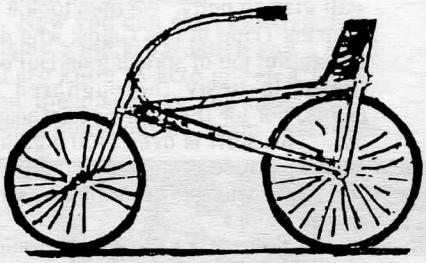
The highway engineer gets a new pocket calculator for his birthday . . .

This article was written by Steven K. Roberts.
Originally appearing in "The Journal of Hi-Tech Nomadness"

Drawings not to scale.



"Velocar"



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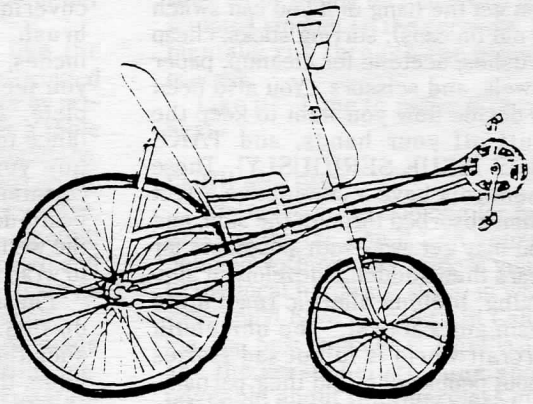

"Ravat Cycloratio"

THE HISTORY OF THE SHORT-WHEELBASE RECUMBENT part 1

Believe it or not, recumbent bicycles as we know them go back as far as 1895 when a man named Challand built a recumbent in Belgium. This was not a short wheelbase, but probably leaning more towards a medium wheelbase. The real turning point occured in the mid-thirties when a relatively unknown french bicycle racer, Francois Faure, riding a recumbent bicycle built by Charles Mochet shattered speed records for the mile and kilometer riding the **"Velocar"**. The result of this all this was that recumbent bicycles were banned from all UCI racing, a rule that is still in effect today. The Velocar was a long-wheelbase recumbent, it looks like the predecessor to the Easy Racer. Now on to the short wheelbase recumbents.

The **"Ravat Cycloratio"** was a true short-wheelbase recumbent. Built in Italy and imported to England by the Cyclo Company in 1936. So the design became known as the Cycloratio. As you can see the Cyclo has a very short wheelbase, about 31". The bottom-bracket is also very high off the ground-28". The wheels are 27 X 1¼" rear and a 18 X 1-3/8" front. It also has a very steep 75 head angle. The frame is built of oval steel tubing. I have seen two different seating configurations on these. The first had a sprung leather bicycle seat with a padded backrest, the second just a padded seat/backrest combination. This short-wheelbase recumbent was years ahead of its time. If you compare the design to modern day SWB recumbents, you will see many similarities. From the thirties through the sixties I could not find any documentation on any short-wheelbase recumbents. So from here we go to the mid-sixties.

Special thanks to David Gordon Wilsons article "Evolution of Recumbent Bicycles and the design of the Avatar Bluebell" and to Mike Eliasohn for his article, "Antique Recumbents".***

If you would like to add something to this series on the SWB recumbents or you have additional pre-1930's info.--let me know.

Robert J. Bryant

"EDITORS DESK"

Welcome Recumbent Cyclists,

Yes, you noticed, I changed the Newsletters name! The Recumbent Cyclist will cover the same topics as the old NWHPVA Newsletter. The main reason for the change is your Editors overwhelming interest in land HPV's of the recumbent design. I will continue to welcome any articles on Air-Land-Sea HPV's, maybe even an article on a weird upright bike once in a while. Over the next year you will notice even more changes, I will be doing new graphics and around the first of the year, laying out the newsletter on a computer. If this is your first issue, I

Continued on Page 11

"FUTURE-BIKE, Cycling into the '90s" continued

air piped in, in the direction you are going, so you'd have a perpetual tailwind. Its quiet, its lightweight, and you could elevate it 20,40 or 60 feet in the air to eliminate hills." Now here is an Original thinker! Imagine a bike freeway from Seattle to Portland, STP in four hours!(ed.)

The same issue (Bicycle Guide, June '90) has a road test on the Alex Moulton ($4100) Speed.

In the June '90 issue of Bicycling Magazine, there was a review of the "Michael Browning First Edition", a new suspended upright bike from England (where else ?). The new bike is Campagnolo Equiped and sells for $2950.. Browning did not answer my inquiries, so if you want to read more about this bike, take a look at Bicycling Magazine. My sources tell me that Mr. Browning was said to have spent a lot of time in and around the Moulton Factory and Museum in Bradford on Avon, England. My source, who remains anonymous, says that the new Browning looks very similar to a rejected Moulton design ? Note: Alex Moulton also rejected the recumbent design.....

Robert J. Bryant

RECUMBENT NEWS

RADIUS SPEZIALRADER Many of you have heard of the famed European suspended LWB recumbent. A local bike shop may become a dealer for Radius. If things come together, prices will be around $2000. for a complete bike - More later. **INEXPENSIVE RECUMBENTS** ? Milt Turner, Mr. Laid Back Bicycles, has a SWB recumbent called the LBB Jr. Built of mild steel-square tubing, and sells for only $318. complete! This could be the most inexpensive recumbent ever. Milt also has a Hi-Performance version, the LBB '90, made from chromolly round tubing that is currently available in frameset only for $396. Rumors persist that Milt sold out his first batch very quickly! For more information send $1 to : Turner Enterprises, PO Box 36158, Los Angeles CA 90036. **FAIRINGS** Gordon Mallett from Indiana builds Breeze-Eeze fairings. They are made for underseat-steering LWB recumbents of aluminum frames and nylon bodies. (in several colors) I have ordered one for the Millennium-Tailwind, so we'll see what they are like. They will sell for around $100. **HuDyn it** ? I have found a great book on three wheel recumbent trike designing and building. 25 chapters and 80 pages, well worth the $32. post-paid price. It is like taking a college course in HPV design! Hudyn Vehicles, PO Box 22444, Indianapolis IN 46222. **COUNTERPOINT PRESTO FANS** Angle Lake Cyclery has sold out of the first batch of '90 Presto's. the second batch will be ten bikes, eight of which are still available. They are non-fold models. The frame only price is $899. Complete bikes are available starting from $1499. **LONG-LIVE THE ROULANDT**--yes, its true, the dutch Roulandt is still being built. Contrary to earlier rumors that they had ceased production. **CYCLO-PEDIA** The famous build-it-yourself recumbent "Econ-Bent" has a new surprise, front suspension! **DH-RECUMBENTS** University Cyclery in Houston Texas is building a LWB recumbent with a 56" wheelbase! (large frame size has a 60" WB) The DH looks like a cross between a Ryan and a Tour Easy. It has upright steering that comes up from the front derailleur tube (about mid-frame) via a stem extension and it has tourist type handlebars. The fork and stem are connected with a steering rod/linkage. The DH has a seat similar to the Tour Easy and it is mounted way far back. Prices start at $995. University Cyclery, DH Recumbents, 4007-G Bellaire BLVD, Houston TX 77025.....RJB

The Counterpoint Presto Cont'd

Presto Specs:

Rims & Tires	Sun Metal/ 20 X 1.5 or 1-1/8"
Hubs	Suntour XCD 36H
handlebars	Flared or altered "drops"
Brakes	Dia Compe BMX or std. side pull
Brake pads	Aztec
Derailleurs	Suntour GPX
Crankset	Suntour GPX (chainrings 44/56)
Freewheel	Suntour GPX 12-26
Shifters	Suntour Bar-Con 7spd
Weight	28 (non-fold), 30 (fold)
Wheelbase	36.75"

The "Performance" option is also available ($1599), it includes: 20 X 1-1/8" Panaracer tires, Time-Sport pedals, higher gearing and Cinelli cork bar tape. A folding boom, front fairing and trunk are also available options.----RJB

Flevo bike

The Futuristic "Flevo" is a Dutch SWB Recumbent with front wheel drive and rear wheel steering (yes, it's true!). The Flevo is also fully suspended through the use of rubber blocks. This is some Bike. I have had a very difficult time getting information on this vehicle.

For more info. on front-wheel drive, Harper and Traylor offer plans, which will be outlined in our next issue. Both Builders swear by FWD! On rear-wheel steering, NWHPVA's own Craig "Dr. Recumbent" Cornellius, is an expert, see his latest article in the Spring '90 IHPVA's "Human Power".--R.J. Bryant

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hope you enjoy it enough to join up!

The next few issues will be very exciting! I am planning a Recumbent Building Plan Buyers Guide. Also, Human Power Editor, David Gordon Wilson is doing an exclusive article for my SWB Recumbent series. I'll bet you can hardly wait to read that!

Please keep me posted on your Fall projects. Pictures and comentaries will get published. Look for the next issue in Early November. If you know of anyone who would like a Sample Copy, please have them send a SASE, and we'll get one right off to them! Happy Pedaling,

Robert J. Bryant, Editor and Publisher

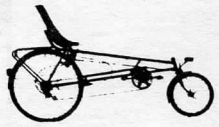
CLASSIFIED ADS: Ads are free to members. Commercial ads rates are available on request.

CLASSIFIEDS:

FOR SALE: DeFelice Bitubular LWB 18 spd, drum brakes, rack, $550 obo, 206-632-8330 (WA)

FOR SALE: Lightning Cycle Tailwind LWB, underseat steering, custom built. New cond. 206-255-9479 (WA)

***FOR SALE: ROULANDT Recumbent, good cond. $475, also misc. Roulandt parts. 206-232-3802* (WA)



FOR SALE: Quadra-Ped hand and foot powered trike. Richard Rau built, three years old, 20" wheels and 60 gears! $1500. 503-638-4255(OR)

"The Recumbent Cyclist"

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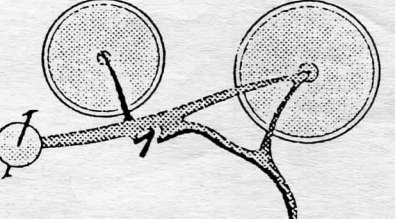

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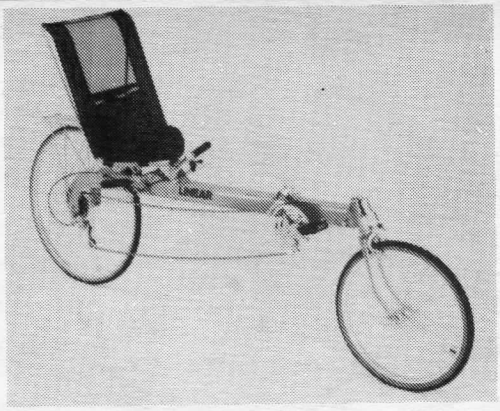

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