CANNONDALE USA

SPRING /SUMMER 1974

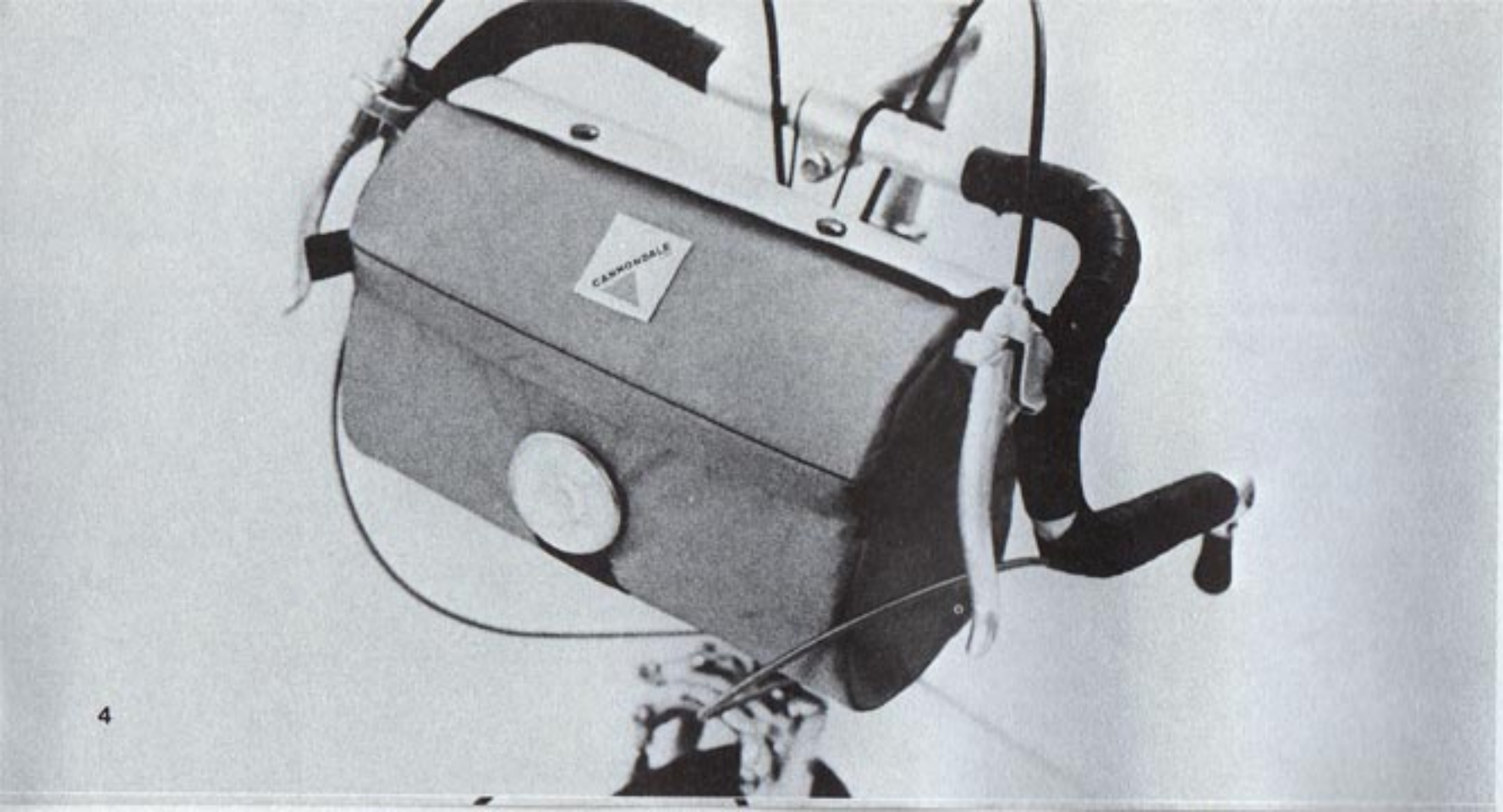
Bicycling

Backpacking

Early morning is a good time to leave. When the air's still fresh and cool from the night before, the roads quiet. But bicycle touring is enjoyable anytime. It brings you close to the earth around you . . . lets you taste the countryside. As Eugene Sloane states simply in The Complete Book of Bicycling, "Until you start using your bicycle on trips, you'll never really know how much fun cycling can be."

The planning takes weeks and is half the fun. You spend evenings pouring over maps spread out on the kitchen table or living room floor. Lists accumulate in your pockets like change. Then the morning arrives. It finds you, always, with things left to do. So while coffee brews you move quickly about the house collecting last minute items. Now out to the garage to put the bikes through a final check-down. Okay. You call the others to say you're on your way.

The edge of the sky is bleeding behind the trees as you coast silently down the driveway. You're gone!



Handlebar Pack BP 20

This pack is designed for use on drop handlebars. Its tension mounting suspension eliminates the need for a front rack. You can place your hands anywhere on the handlebars and not be hindered in steering or braking. The BP 20 has a black nylon anti-sway cord; a clear, weatherproof vinyl map case which snaps on top of the pack for convenient touring navigation; and a BMA 6-approved 100° front reflector — an important safety feature we urge you to use. For day trips and light loads, it's a really good pack.

Capacity: 423 cu. in.

Colors: Red, Canary Yellow, California Blue

patents pending

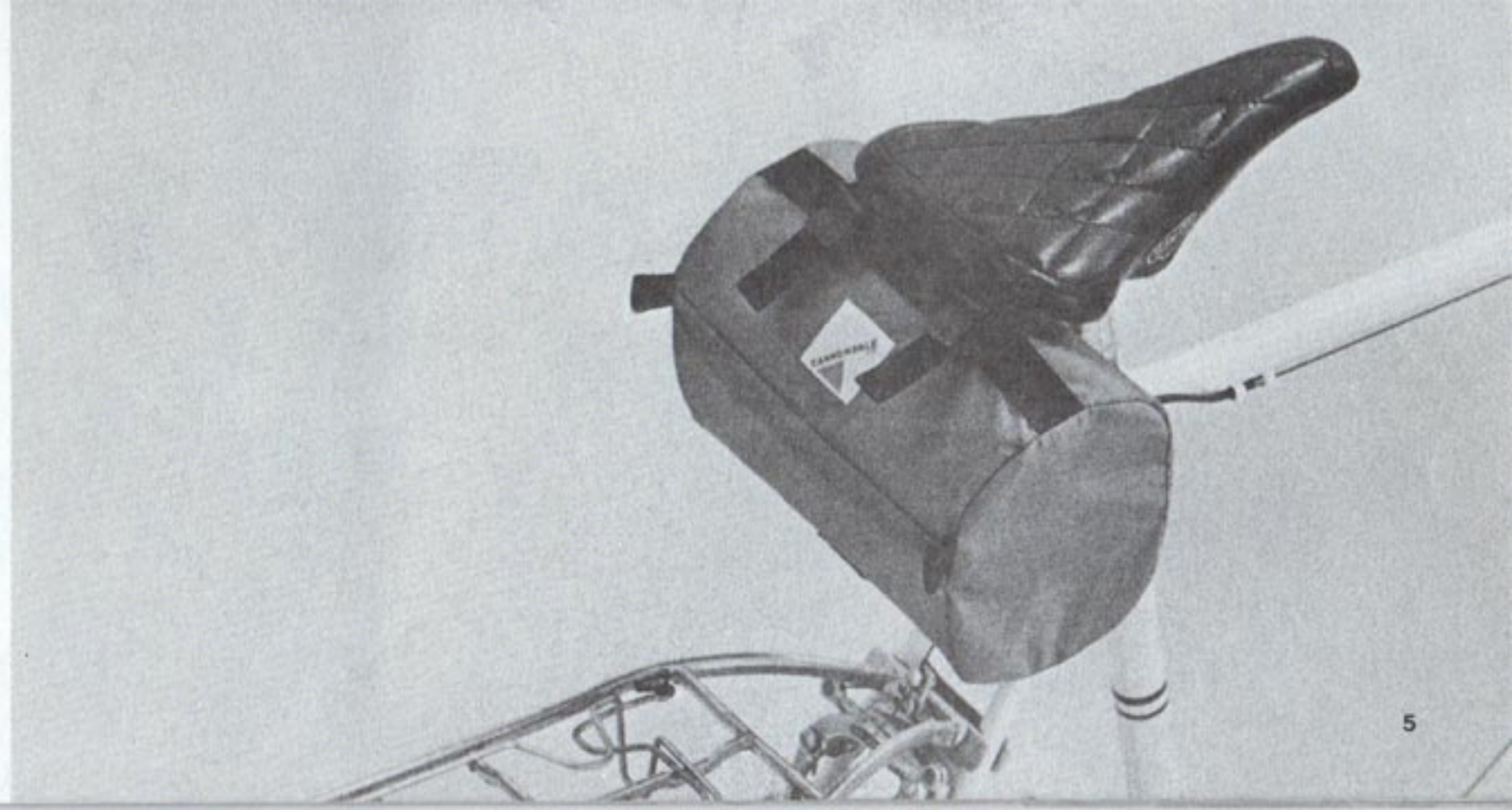
Seat Pack BP 21

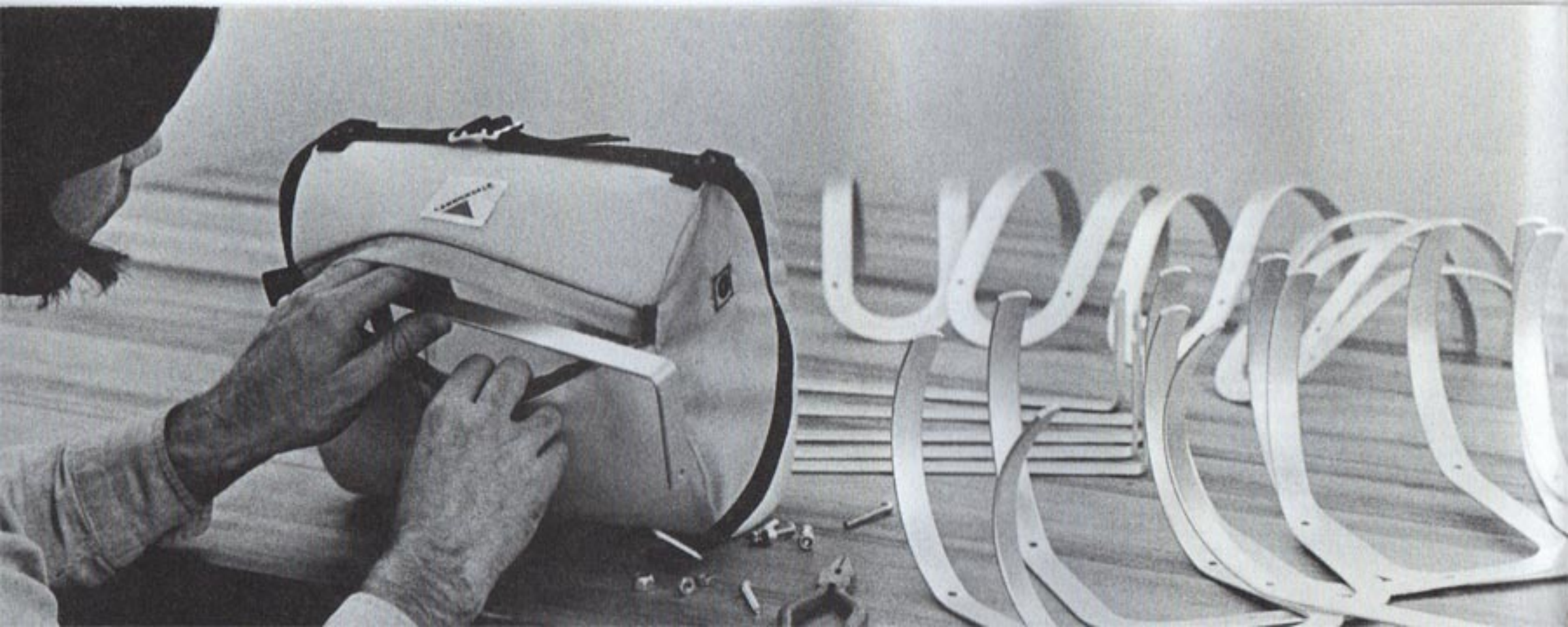
This basic pack has been popular since World War I, but Cannondale's modern lightweight materials, quick-release latches, polylined interior and convenient carrying handle have revolutionized the classic design.

Capacity: 264 cu. in.

Colors: Red, Canary Yellow, California Blue

patents pending





Handlebar Pack BP 23

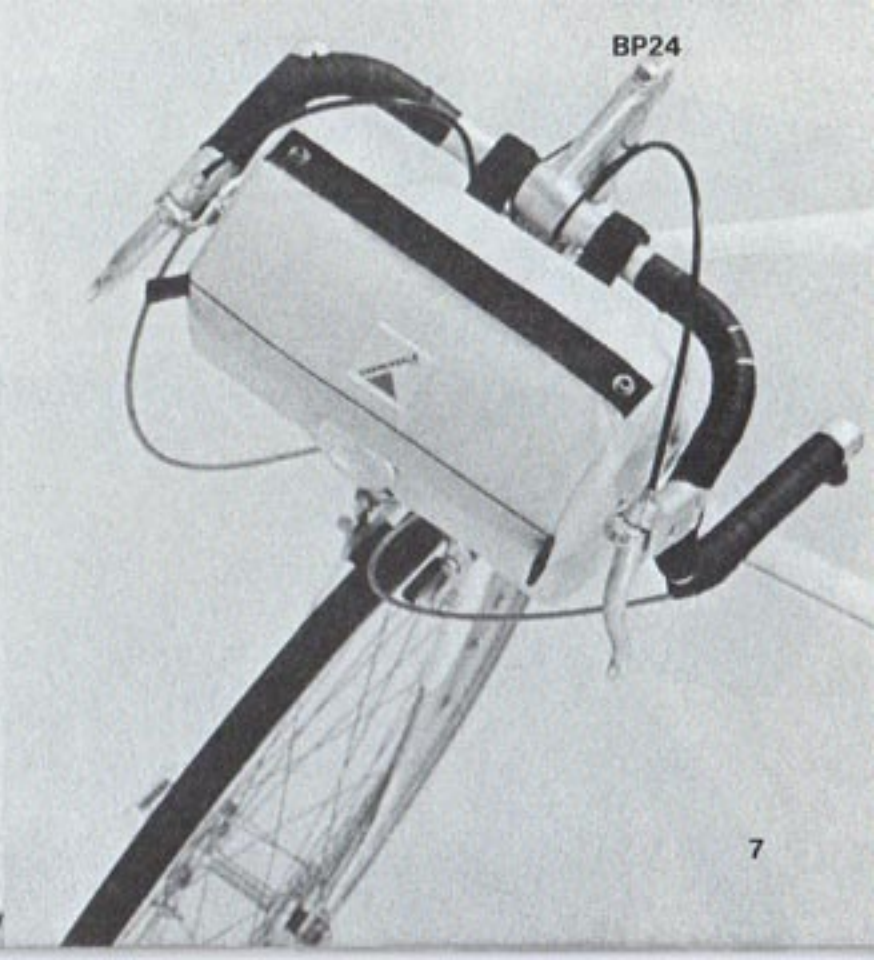
The BP 23 is 20% larger than the BP 20 and is equipped with an aluminum stay frame for stabilizing heavier loads. We recommend it for longer trips and touring. The pack has a belted webbed strap that adjusts to fit all drop handlebars, and our weatherproof map case, inner polyliner, anti-sway cord and BMA 6-approved 100° front reflector.

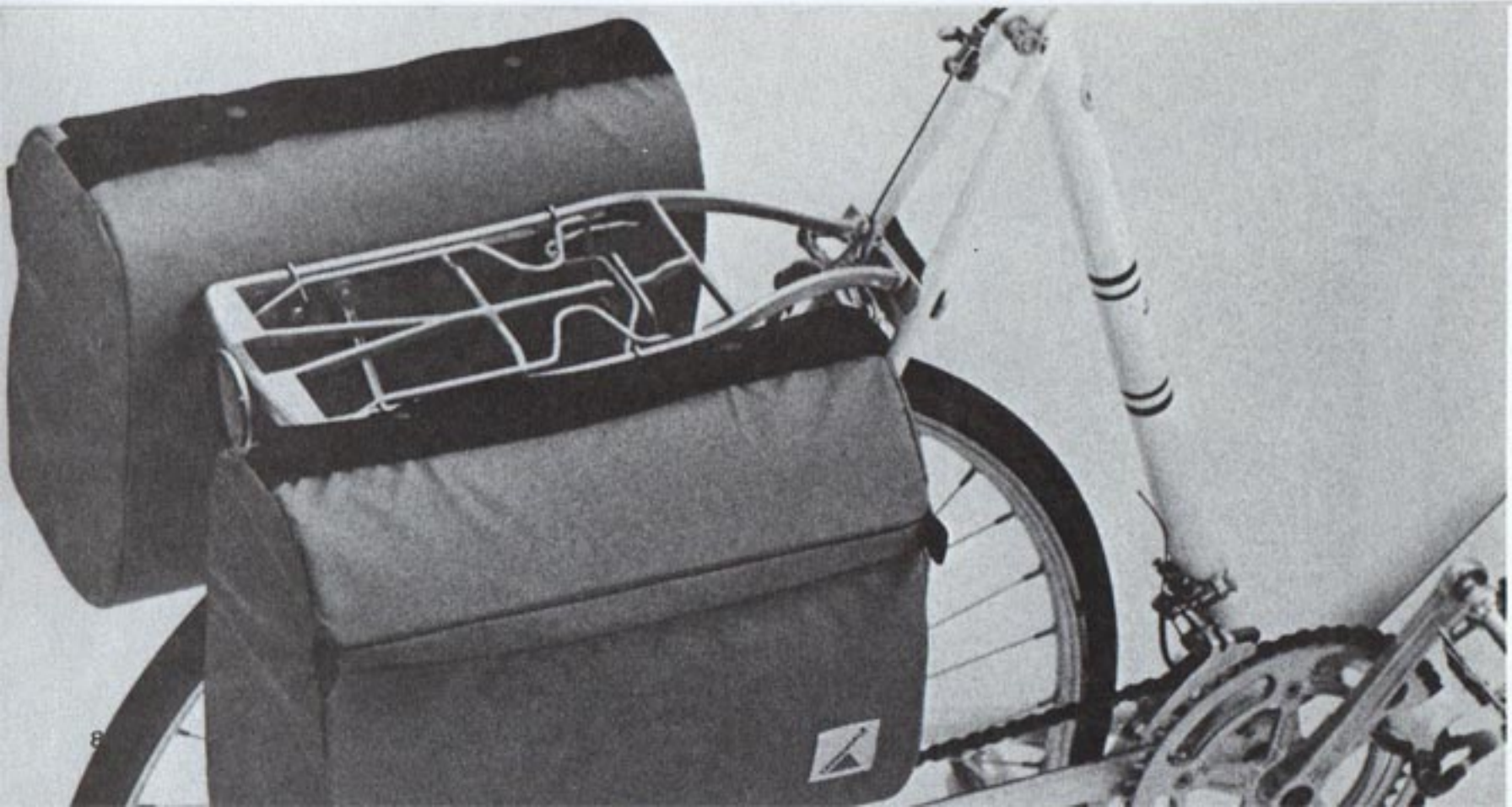
Capacity: 495 cu. in.

Colors: Red, Canary Yellow, California Blue patents pending

Handlebar Pack BP 24

Designed for upright or drop handlebars without safety levers, this pack is the same size as the BP 23. It has an internal contoured frame with mechanically attached stainless steel j-hooks which clamp over the handlebar on either side of the stem to provide exceptional strength and stability. Polyliner, map case, anti-sway cord and reflector are included. Capacity and colors are the same as the BP 23. patents pending



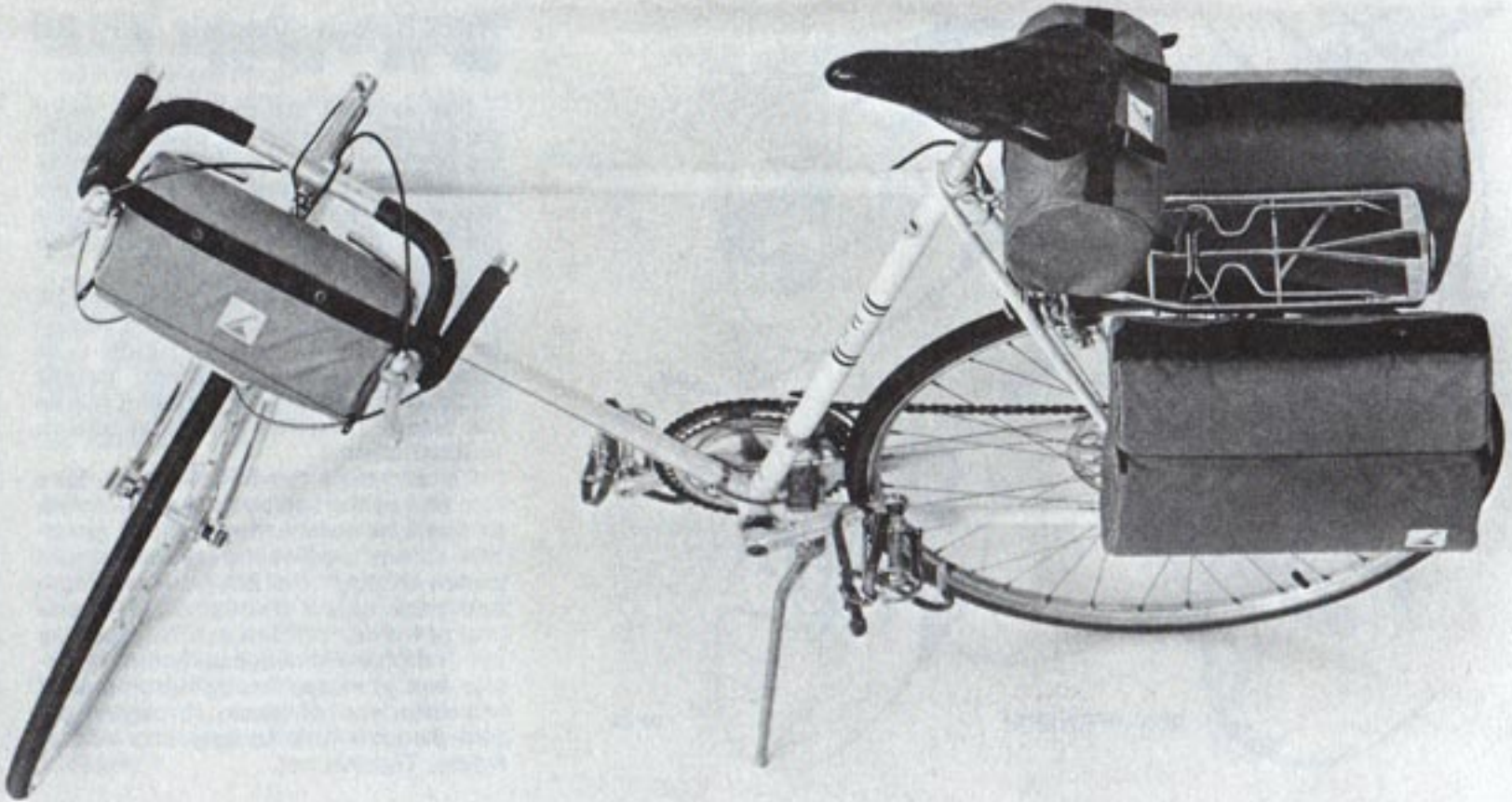


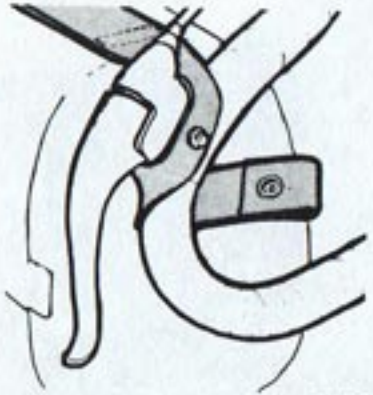
Rack Packs BP 22

patents pending

We've learned from our research and development in bikepack and backpack design that when you have to carry any significant weight, it's far better to rely on a mechanical support structure than on stitching. So we've fitted these new BP22 packs with a three-dimensional aluminum frame, and stainless steel hooks which hold the pack to the bike's rack. The hooks are fastened directly to the frame with screws that pass through grommets in the pack cloth. (We use the same principle in our Wilderness and Excursion Series backpacks.) The frame, in turn, supports a polyliner which evenly distributes the weight of the load over the entire bag. This positive new support system allows the panniers to hold considerably more weight without sagging or losing their trim shape.

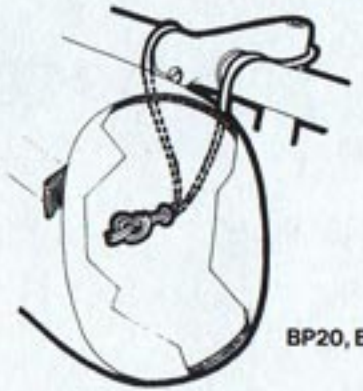
The new BP 22 Rack Packs are made of waterproof nylon pack cloth and come equipped with a shoulder strap for convenient carrying.



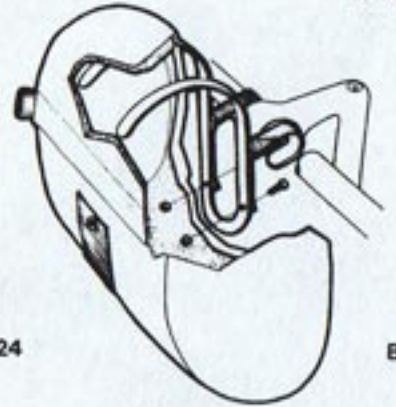


BP20, BP23

BP23



BP20, BP23, BP24



BP24

Handlebar Packs BP 20 BP 23 BP 24

For each of the packs, first insert the polyliner. Roll it up, place it inside the pack, release it and push the ends all the way into the internal pockets above and below zipper. Then force the liner to expand until it assumes the natural shape of the pack.

Both BP 20 and BP 23 packs can be mounted with the zipper facing you — for easy-access while riding — or away from you. To mount, center packs between handlebars and fasten the elastic mounting straps as shown in illustration.

To assemble the BP 23 frame, take one end of the top strap, pass a screw through its swivel, through the grommet at one end of the pack bag and punch through the liner. Insert frame and push screw through hole in one end of frame. Tighten nut. Now pass a second screw through swivel at opposite end of strap, through grommet at opposite end of pack, through liner and through hole in opposite end of frame. Tighten nut.

To assemble BP 24 frame, first insert hooks into hook covers on back of pack bag. Holes in the hooks line up with grommet holes in the covers. Next take a sharp object and pass through hooks, grommets and punch through liner. Then insert the stainless steel stay frame inside the pack and line up holes in frame with holes in the hooks, grommets and liner. Pass screws through hooks, grommets, liner and frame and tighten nuts on inside.

Attach reflector to the front of each of the packs by pushing attached screw through the grommet hole and liner. Then tighten nut on inside of liner.

If you want to use the anti-sway cord on any of the packs, punch a hole through the liner and out the grommet in the back of the pack with a sharp object (such as a pencil). Now make a loop in the cord and push it out through both holes. Slip the loop over the neck of the bike and pull the loose cord ends from inside until the pack is in a snug position. Then tie a double knot as shown in illustration.

Rear Rack Packs BP 22

ASSEMBLY INSTRUCTIONS: Follow instructions carefully so that the pack will perform properly.

(1) Insert polyliner, fitting ends into the two internal pockets on either side of zipper, then place aluminum frame inside pack.

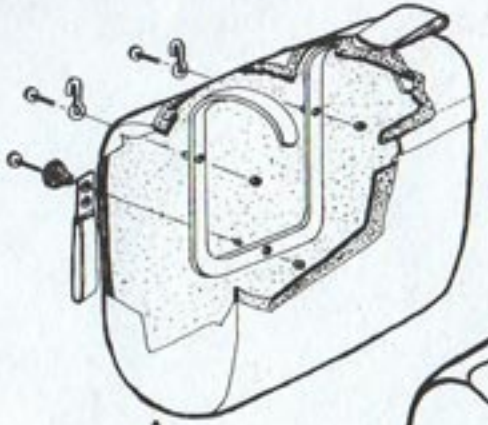
(2) Attach J-hooks to frame as shown in illustration A, passing screws through hooks, grommets, liner and frame. Fasten nut inside bag. (To keep the hooks from vibrating loose, tighten until the tip of the screw comes through nylon insert in end of nut. This is a vibration-proof aircraft fastener and should not need re-tightening.)

(3) Attach S-hook for tension strap as shown in illustration B, removing nut and screw at bottom of rack strut and running the screw back through hook, strut and hub joint. Tighten nut, making sure the open side of the hook is facing forward.

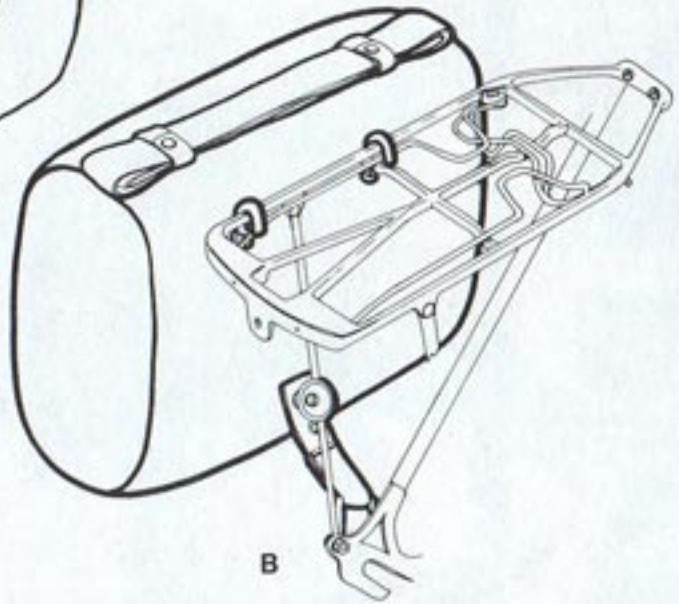
*** If you wear an over-sized shoe and/or use toe-clips, you'll want to offset the pack as far to the rear of the rack as possible for maximum pedalling clearance.**

On Pletcher and similar racks — those with the support struts extending to the wheel from approximately the middle of the rack — attach the black Lexan spool as shown in illustration A. Pass screw through spool and then through one of the two grommet holes in elastic strap — depending on the degree of tension you need. Now push the screw in this assembly through the bottom-center grommet in the pack, and through the liner and frame. Tighten as you did in (2).

The easiest way to mount the BP 22 on your bike is to pick the pack up by its handle, slip the tension strap over the S-hook and raise until the J-hooks catch on the top of the rack. If you use the Lexan spool, make sure that it is aft of the support strut (see illustration B). Otherwise, make sure the hooks catch the cross-members far enough back on the top of the rack to assure good pedalling clearance.



A



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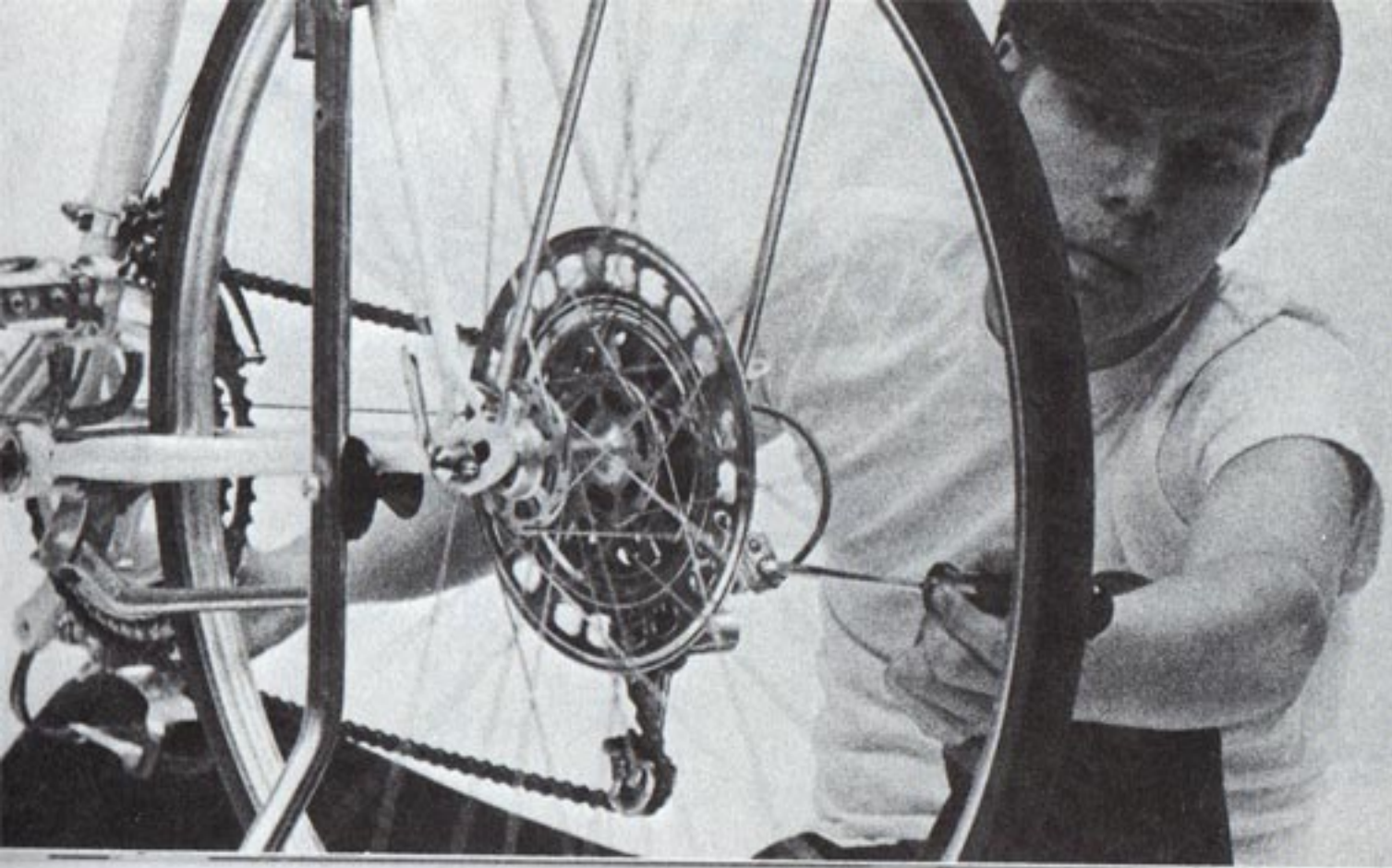


Good ten-speed bicycles are precision machines. The fine adjustment and tuning required to maintain their performance greatly enhances one's enjoyment of them. By learning to tune and repair your own bicycle, you save time and money, gain the satisfaction of being totally familiar with the machine you ride, and develop a working knowledge of bicycles that is indispensible when touring.

Tuning Stand TS 7

Our bike tuning stand is constructed of ¾" plated tubular steel and is extremely stable. Four molded rubber feet prevent sliding and grating. Three polished nylon spools cradle the frame and prevent marring of the bike's finish. There are no cumbersome clamps or hooks. The TS 7 will accommodate virtually every adult bicycle currently manufactured. When sitting on the floor the stand raises the derailleur approximately 20" off the ground — a convenient working height. When placed on a regular-sized table the TS 7 raises the bicycle to chest level.

Bicycle Carrier CR 16
Top or Trunk Mounting

Cannondale's new bicycle carrier has solved the problems found in most other existing racks. The lightweight, four-piece, tubular steel unit is easy to assemble and quickly mounts on the trunk *or* the top of virtually all American and foreign cars. The rack carries bikes vertically, and so keeps them high and clear of the exhaust pipes and road. And they never come into contact with the car itself.

Four rubber feet support the rack to prevent scratching. All clamps are vinyl-covered. The CR 16 can be removed in its entirety, even with bikes on it, in less than three minutes. The unit comes completely equipped with all necessary fixtures, mounts and straps. If you need to carry four bikes, you can buy two CR 16s for less than the cost of most four-bike units, and still have the versatility of two separate racks, mounted top and trunk.

Weight: 9 lbs.

Combination Lock BL 11

This heavy-duty combination lock operates on a system of stops you feel rather than see, so that it can be easily opened at night or when the face of the lock is turned away from you. The pressure cast body is resistant to hammer blows and vises. The case-hardened shackle resists cutting shears and has a malleable center to prevent shattering, even when chilled with Liquid Freon.

Chain & Lock BL 12

This 5-foot security chain will lock up both wheels and the bicycle frame to stationary objects as large as 20" in diameter (posts, trees, railings etc.). A special extender ring makes it possible to loop objects this large with one end while the rest of the chain secures the entire bicycle. This gives you the equivalent of a 7-foot chain without the additional bulk and weight. Urethane coating on the links and ring protects the bicycle's finish, eliminates the need for bulky, unattractive vinyl sleeves and provides for compact storage around the seat post or in bike packs. The chain has especially tight linkage which resists even professional bolt cutting tools and is constructed of 7/32" diameter, case-hardened steel with a tensile strength of 300,000 P.S.I.

Chain BL 13

The high security chain, described above, can be purchased separately.

Cable & Lock BL 14

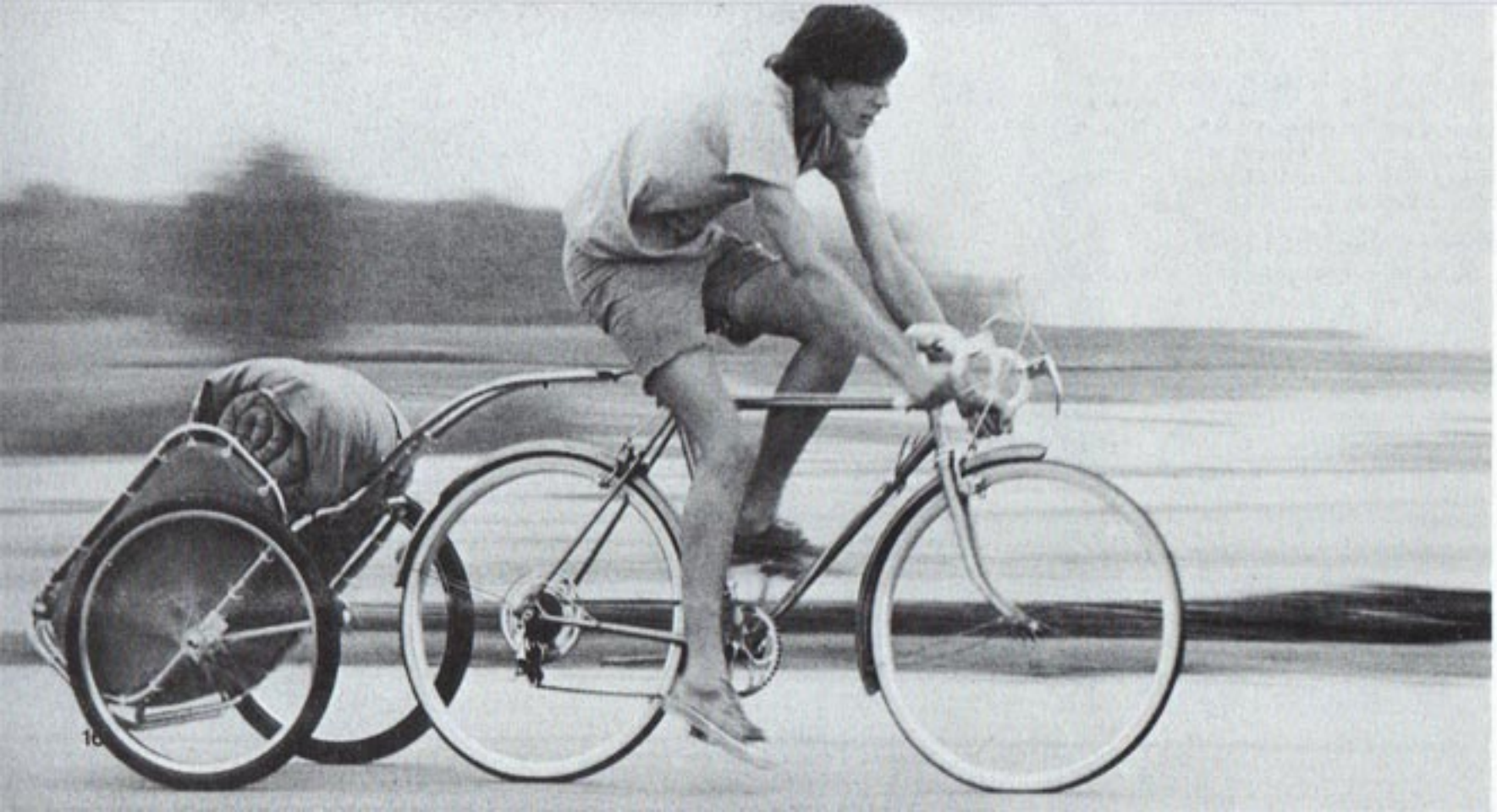
Like the BL 12, this 7' long, 5/16" diameter clear vinyl-coated aircraft cable has the extra length and flexibility for looping through a bicycle and around any suitable stationary object. The cable automatically recoils to a compact 3" x 4" size, making it ideal for storing in bikepacks, rucksacks or under the springs of your saddle. It has a tensile strength of 290,000 to 350,000 P.S.I.

Cable BL 15

The self-coiling bicycle cable, described above, can be purchased separately.

BL12

BL14



The Bugger®

Bikepacking has become popular in the United States only within the last three years, but for more than a century (since 1861, when the Michaux brothers began manufacturing rotary crank "bone-shakers" in France) cycling enthusiasts have racked their brains and wrecked a considerable number of bicycles in attempting to devise an effective means of maintaining bicycle performance while carrying heavy loads.

In 1970, Ron Davis and John Wistrand confronted the same basic problem and developed a solution — the first lightweight bicycle trailer in the world — the Bugger.

A rolling backpack, the Bugger rides on an angle (not unlike the pack it replaces) and transfers all excess weight directly to the road by its own tires. No weight is added to the bicycle itself.

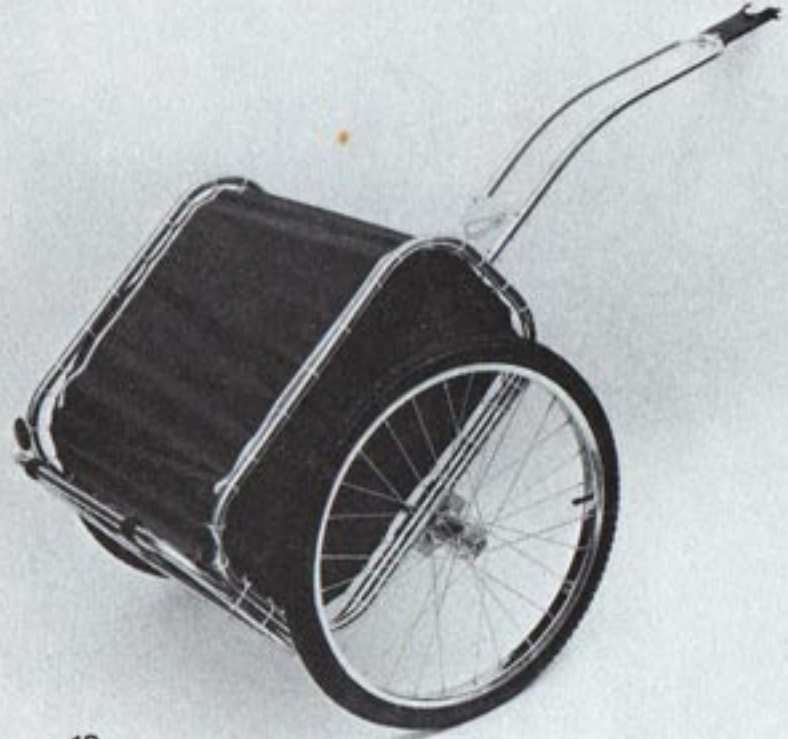
The unit attaches quickly to the seat post with a Lexan® hitch which flexes in vertical and rotational directions, absorbing the shock from bumps and curbs. The torsion control arm allows full freedom of movement, so that the Bugger looks and rides as naturally as part of the bicycle itself, and in no way interferes with the handling characteristics of the finest lightweight bicycles.

Energy Research Study

In 1973, the Bugger was chosen for an exhaustive research study on the energy requirements of certain recreational and occupational activities. The lengthy studies are presently being conducted and funded by the University of Tennessee at Knoxville under the supervision of Professor Hugh G. Welch.

The project includes both laboratory and extensive field tests on bicycle transportation and applied load carrying characteristics.

While the program has not yet been completed, reports on the Bugger to date are very favorable. The test subjects have carried similar loads in Buggers and on the bicycles themselves. All of them prefer the Bugger.



Bugger® BR 1

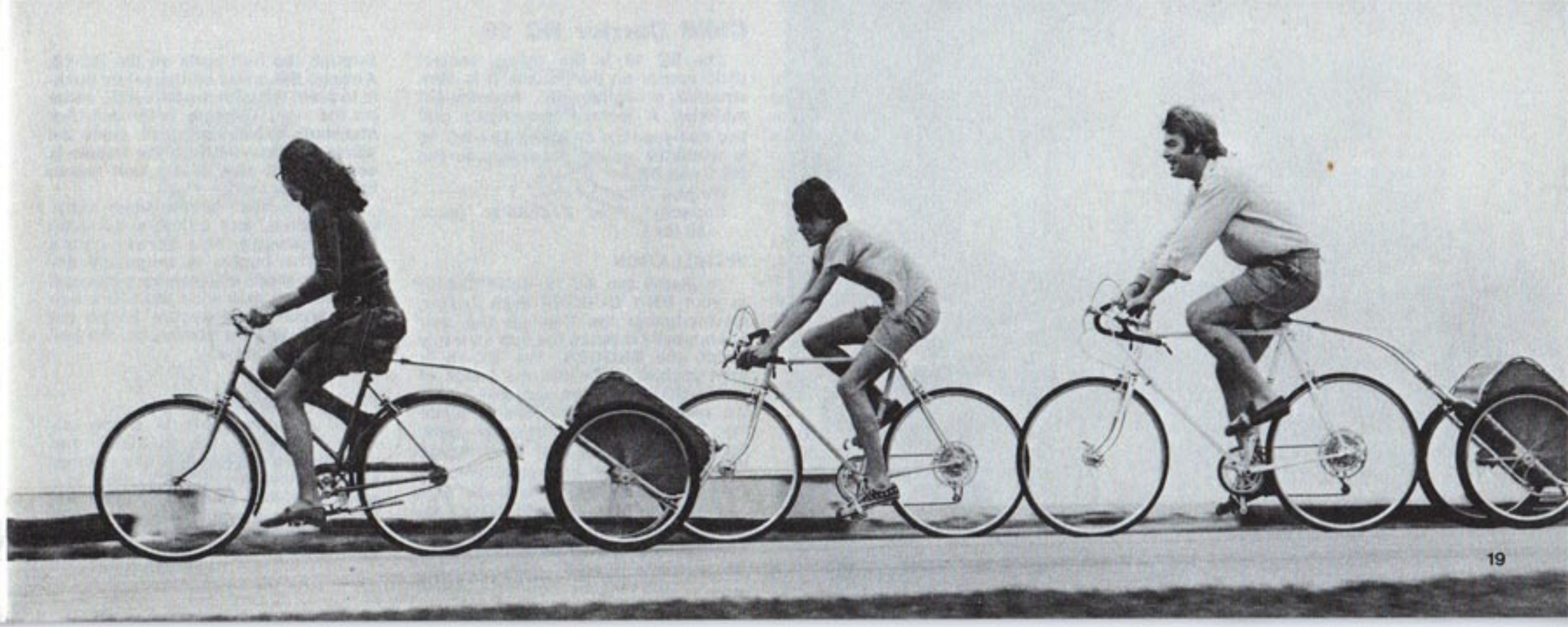
The BR 1 is constructed of strong, lightweight tubular steel and vibration proof fasteners with a waterproof nylon pack. It has premium 24″ tires, chrome-plated spoke wheels, heavy-duty hubs with shielded ball bearings and two SAE class (A) reflectors.

Weight: 24 lbs.
Recommended load limit: 80 lbs.
Load dimensions: 22″ x 24″ x 15″
Colors: Red, Cal. Blue, Yellow

Bugger® BR 2

This is a lightweight version of the BR 1. The open-sling design permits greater versatility in loading outsized equipment: i.e., tents, sleeping bags, cooking gear, etc. For specialized bikepacking, the BR 2 is ideal.

Wight: 22 lbs.
Recommended load limit: 80 lbs.
Load dimensions: 22″ x 24″ x 15″
Colors: Red, Cal. Blue, Yellow



Child Carrier BC 18

The BC 18 is the safest, easiest child carrier on the market. It is constructed of lightweight, high-impact material. A woman can easily pull two five-year-old children. The BC 18 is available as an accessary to the BR 1 and BR 2.

Weight: 7 lbs.

Capacity: 1 or 2 children (max. 80 lbs.)

INSTALLATION

To install the BC-18 Child Carrier in your BR-1 BUGGER Bike Trailer, merely unzip the flap all the way open, neatly draping the flap squarely inside the BUGGER. The BC-18 is then pushed *down* into the inside of the BUGGER with the armrests facing the rear. On the BR-2, simply place the BC-18 between the side rails, pushing downward and rearward to the rear rail.

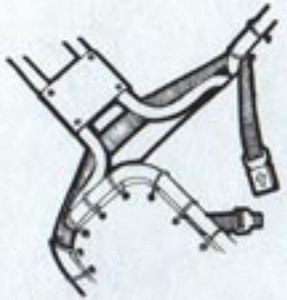
CHILD RESTRAINT

Next, feed the ends of the child restraint belt through the front rails and between the lacing as shown, then through the belt ports on the BC-18. Arrange the arrow on the safety buckle to point left with the adjusting slider on the right (looking rearward). For maximum adjustment ease, move the whole belt assembly so the buckle is near the left side of the unit (again looking rearward).

Always secure buckle when carrying children, and adjust slider until belt is snuggly held across child's waist. The buckle is purposely difficult for small children to release. If desired, you may slide the entire belt loop around and secure below the BUGGER, leaving nothing but the belt in the child's view.

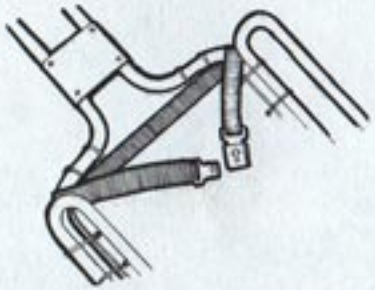
SECURITY CABLE

The security cable is simply attached between the BUGGER and your bicycle seat post, in the manner shown below. Arrange the cable in a clear position above or below the hitch, where it will not interfere with leg movements, or cause other distractions.



BR1 CHILD RESTRAINT

SECURITY CABLE



BR2 CHILD RESTRAINT

IMPORTANT!

Your BUGGER is a carefully designed unit, specifically calculated to compliment the riding and balance physics of an adult bicycle. Used properly, you will find that the unit tracks excellently behind your bicycle, and provides no notable effect on your natural balance in riding, cornering or banking.

The BUGGER is an attachment however, and requires closer attention to safe driving practices, not unlike those required when pulling a trailer by automobile. Ride your bicycle with care, avoiding high-speed turns, curbs and other obstacles.

Loading

For best control, the BUGGER should be loaded with care to maintain proper balance conditions. Avoid excessive loading (over 80 pounds) and maintain the load centered and slightly forward. Note: A severely rear-loaded unit adds unnecessary strain on the "Lexan"® hitch and reduces rear wheel traction on the bicycle.

Hitch Function

The General Electric "Lexan"® hitch is a marvel of the space age. Should it be called upon to do so, it has the ability to flex in rotational or vertical directions from its connection. Such a severe amount of deflection results in a progressively resistant force against the deflection. This is the secret of its function. It is to prevent a roll-over of the unit should you strike a high curb or obstacle with one wheel at high speed. The hitch pulls the wheel back down, at the same time absorbing almost all of the shock, with little or no disturbance to the balance of the rider.

Hitch Use

Properly loaded, under normal riding conditions, the hitch has no notable load on it, but stands ready to do its job, should the occasion arise. Used regularly under prescribed conditions, it will function for years of service and is guaranteed to do so. Conversely, if the unit is heavily rear-loaded, the hitch must flex excessively and constantly. This will drastically reduce its useful life, cause premature work-hardening, fatique, and ultimately, breakage.

Hitch Care

Protect the hitch from gouging seat springs, brake mechanisms, racks, etc. Sharp cuts, scores and abrasions promote fractures which rapidly shorten the life of the hitch.

Backpacking

One third the land mass of the United States, more than 760 million acres, is undeveloped, uninhabited territory, much of it still wilderness. For three centuries, a national compulsion to tame the continent led to the exploitation and effacement of the other two thirds.

What's ironic is that in the process of taking over the land, our advanced industrial society has created in us a desperate need to return to it.

Suddenly, and barely in time, we've begun to see that beyond the wonders of its natural beauty, the wilderness keeps the secrets of survival, ours as well as that of all life. We're finding that the spoils of "progress" — the luxuries and conveniences we've worked so hard to gain — are failing to fulfill us in any substantial, enduring way, while even a few hours in the filtered sunlight of a silent forest or along the pebbled shores of a glacial lake, restore the inner peace and satisfaction which modern civilization has taken away.

Colin Fletcher "re-remembers that happiness has something to do with simplicity. And so, by slow degrees, you regain a sense of harmony with everything you move through — rock and soil, plant and tree and cactus, spider and fly and rattlesnake and coyote, drop of rain and racing cloud shadow. You are free to go out when the world will let you slip away, into the wildest place you dare explore. When you get back at last from the simple things to the complexities of the outside world, you find that you are once more eager to grapple with them."

Shortly before World War II, Jan Bergan's tubular steel frame packs began replacing the heavier, traditional Trapper Nelson wood and canvas packs in use at that time. In the years following the war, the industry advanced rapidly. Space age materials and techniques were utilized by pioneers like Dick Kelty and Gerry Cunningham in designing and producing the predecessors of the lightweight packs we're familiar with today.

The state of the art was well advanced when the Cannondale Corporation was founded in 1970. We were convinced that we could improve upon the current designs, and initiated a broad research program. After intensive testing and evaluation of existing equipment, we came to two basic conclusions.

AN INTERNAL FRAME

First, an internal frame design had distinct advantages over an external frame. By permitting the pack to ride closer to the back, it ultimately meant more comfort for the user.

Moreover, experiments proved that internal frame packs could have equivalent capacity with considerably less mass and were trimmer, easier to handle and more maneuverable in bushwhacking and tight climbing conditions than the relatively unwieldly, ladder-like external frames. The innovations that resulted from these efforts are now incorporated in the lighweight, contoured internal frames of the Cannondale Excursion and Wilderness packs.

A "SUSPENDER" HARNESS

Secondly, we discovered that even a rudimentary wraparound shoulder harness with the multiple adjustments it afforded, together with a padded waist belt, was far superior to any other suspension system. A concentrated development program with virtually dozens of prototypes produced our current design (known around Cannondale as the "suspender" harness). This system has now been tested extensively both by our own people and outside professionals, and the reports are impressive.

The shoulder strap extensions are attached to the bottom corners of the frame. They pass up and across the pack on the diagonal, through a retainer patch in the upper center, over the opposite shoulder and down to the other corner, just like the old-type suspenders. Therefore, when you tighten the shoulder straps, you lift the bottom of the pack and automatically draw it into the small of your back. The pack's vertical alignment can then be adjusted by the two straps on top of the shoulder pads.

By comparison, the suspension systems of most competitive packs employ only one shoulder strap adjustment point, and the straps themselves do not terminate at the lower left and right corners, but rather at a point just above the shoulder blades. When these straps are tightened, the pack is raised and pulled in at the top and out at the bottom — the opposite of our system. This creates a pivot point in the top middle of your back, which is innately unstable and puts too much pressure on the front of the shoulders. Even those packs that do have two separate adjustment points largely nullify the advantages, by either not wrapping completely around the shoulders and down the back, or by failing to cross the extension of those straps and lift the pack from each bottom corner.

In Pleasure Packing, Robert S. Wood discusses a system similar to ours, which he calls "the load spreading harness", and he considers it "peerless". He does note, however, that some experienced backpackers are skeptical of its virtues because it is slightly complicated in appearance and costs more than the traditional system. Others claim, according to Wood, that when the harness is combined with an external frame, the pack tends to ride too far from the back and swing from side to side. We agree with Wood on both points — the "suspender" harness is expensive, but it's worth it; and its reduced efficiency on an external frame is yet another reason why the harness is most desirable when combined with an internal frame.

SOME WORDS OF CAUTION

Backpackers will forever argue about the characteristics of a good pack and which packs are best, but what it all comes down to is comfort, capacity requirements and a pack profile compatible with the terrain in which it will be used.

Because of the expense involved in buying equipment today, it is important that you fully satisfy these requirements before purchasing a particular pack. We suggest that you rent several packs from your local mountain shop and really give them a workout before deciding on one. In addition, we strongly recommend you read at least one of the following: Harvey Manning's Backpacking: One Step At A Time (Vintage Books, $2.95); Pleasure Packing by Robert S. Wood (Condor Books, $3.95); and Colin Fletcher's The Complete Walker (Alfred A. Knopf, Inc., $7.95).

Wilderness Series

After three predecessor packs, one and a half years of research and development and six months of testing and modifications, the Cannondale Corporation has introduced a distinctive new line of internal/external frame packs — the Wilderness Series. By using an internal frame design with the "suspender" harness at the top of the packs and an external extension of that frame with a wide padded waist belt at the bottom, the Wilderness Series combines the best features of an external frame design with those of an internal frame design.

The packs have approximately the same capacity as comparably sized external frame packs, with considerably less mass on your back. Their narrow profiles hug your body and hold the weight in close, which means a very comfortable carry and considerably improved maneuverability.

Previous internal frame designs have had several drawbacks. First, they have allowed a heavy pack to settle too low on the base of the back, causing premature fatigue. (It is important to support a heavy load on the small of the back, while containing the load itself above that point.) Second, they have not provided an adequate means of attaching a heavy-duty waist belt, and third, it has been extremely impractical, if not uncomfortable, to carry anything on the outside at the top and/or the bottom of the packs. These are the reasons, for instance, why we do not recommend the OP 50 for extended use and place a comfortable load limit of 26 lbs. on the pack.

The Wilderness Series solves these problems. The frame extends through the pack at the bottom where a wide contoured padded waist belt with anti-roll straps is properly positioned to support heavy loads. Straps are anchored to the top of the pack and to the back of the belt for carrying tents, ground cloths, sleeping bags, etc. The straps are captive so that they won't get lost when not in use but can easily be removed when the need arises.

The overall result is a superbly made line of large, medium and small capacity backpacks that are easier to handle and maneuver, and much more comfortable than any other packs we have tested.

Padded Waist Belt

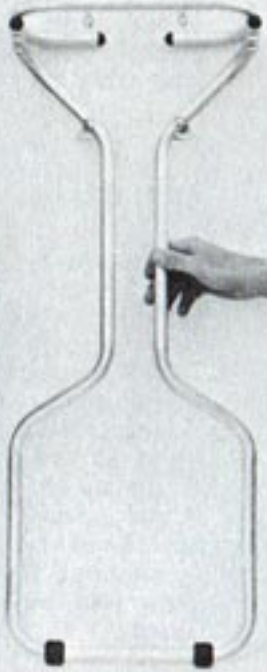
The waist belt system of the Wilderness Series packs has a wide padded back band, left and right belt sections and adjustable anti-sway straps which combine to produce a significantly improved system for supporting a pack.

First, the 5½" double band stretches across the back of the frame providing a stable platform for the pack on the small of your back; the double band conforms to varying back profiles and induces air flow. Secondly, two belt sections are sewn to the back band 8½" apart; together with the band they form a belt that fully encircles your waist, assuring maximum displacement of the load over your entire waist. Thirdly, the adjustable anti-sway straps connect the sides of the frame to the sides of the belt and thus anchor the frame, preventing pack sway.

The overall result is a more stable and a much more comfortable belt system.

Lexan® Belt Buckle

Lexan® is a space-age material developed by General Electric for specialized areas where a tough, virtually unbreakable material is needed. We've employed it with great success in our no-slip, quick-release belt buckle design. Its single-piece construction is capable of supporting several times the wearer's weight, yet it is a fraction the weight of steel. Moreover, Lexan's® low conductivity means that in sub-zero temperatures an ungloved hand won't stick to it, and in the hottest summer weather it won't transfer heat. It's the lightest, strongest, most functional belt buckle in backpacking that we know of.



Wilderness Series Specifications

- 400 x 400 denier double coated nylon pack cloth
- Tubular aluminum frame, 6063-T832 alloy with a 35,000 PSI yield strength.
- Fire red partition pack at inside top of main compartment (capacity 490 cu. in.)
- Dual zippered main panel opens on three sides for easy access
- Four captive straps (two on the top and two on the back of the padded waist belt) for lashing on tents, sleeping bags, ground pads, etc. All four can be removed easily if necessary.
- Cross-country ski loops.
- Double stitched axe loop and leather patch fitting.
- All strapping passes through frame-anchored swivels and is bar-tacked back to itself for maximum strength.
- Contoured 5" wide padded waist belt with anti-roll straps.
- Quick release Lexan® belt buckle.
- Fire-red belt pocket (capacity 32 cu. in.) which can be worn on either side. An additional belt pocket can be added for those who want to carry two.

OP 60

patents pending

- Large capacity for extended wilderness use
- Recommended for those 5'10" and over
- Two outside pockets (capacity 275 cu. in. each) with dual zipper pulls. These can be transferred from the sides to the back of the pack for a narrower profile, or two additional pockets can be added for increased capacity. Each pocket is attached with four Lexan® clevis pins and stainless steel retainer rings.
- Grommet flaps provided to accommodate two optional OP 65 pockets.
- Leather covered lift bar for ease in hoisting and handling. We suggest that you brand your initials into the leather cover, or mail us the cover postpaid and we'll do it for you free of charge.
- Dimensions: Depth — 8 in.
  Width — 14 in.
  Height — 24 in.
- Capacity — 3049 cu. in.
- Weight — 66 oz.
- Colors: Dark Blue, Irish Coffee, Desert Tan

OP 61

patents pending

- Compact size with good capacity. Ideal for four-day bushwhacking, climbing and cross-country skiing trips.
- Recommended for those 5' to 6'.
- Grommet flaps for adding two optional 275 cu. in. side pockets.
- Leather-covered lift bar for ease in hoisting and handling. We suggest that you brand your initials into the leather cover, or mail us the cover postpaid and we'll do it for you free of charge.
- Dimensions: Depth — 8 in.
  Width — 14 in.
  Height — 20 in.
- Capacity — 2594 cu. in.
- Weight — 61 oz.
- Colors: Dark Blue, Irish Coffee, Desert Tan

OP 62

patents pending

- Smallest in series yet ample capacity for week-end trips
- Recommended for women and young adults between 4'2" and 5'3"
- Two removable side pockets (capacity 275 cu. in. each)
- Dimensions: Depth — 7.5 in.
  Width — 10 in.
  Height — 18 in.
- Capacity — 1634 cu. in.
- Weight — 38 oz.
- Colors: Dark Blue, Irish Coffee, Desert Tan

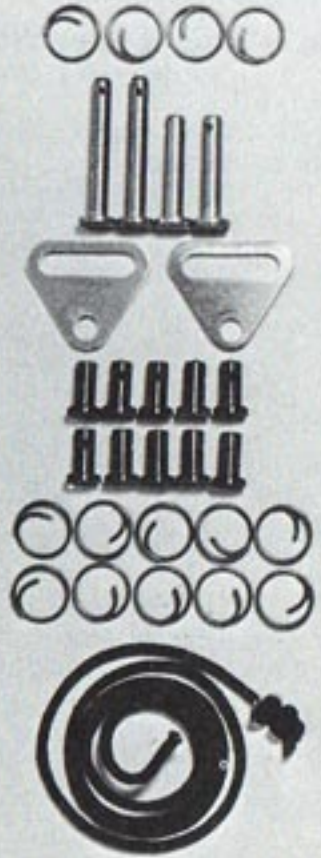
OP60

OP61

OP62

OP65

OP67



OP68

Outside Pocket OP 65

This is an optional pocket for the Wilderness packs. The OP 60, which comes with two removable OP 65 pockets, has grommets on the back for an additional two. On the OP 61, which doesn't come with pockets, two OP 65's can be added to the sides only.

Capacity: 275 cu. in.

Colors: Dark Blue, Irish Coffee, Desert Tan

Belt Pocket OP 67

You can put one of these 32 cu. in. pockets on each side of the waist belts of the OP 60 and 61. It is extremely useful in carrying anything small that you might need often or in a hurry.

Parts Kit OP 68

It's always wise to carry spare parts, especially on longer trips. Assembled for the Wilderness Series packs, the OP 68 contains: 2 aluminum swivels; 2 large and 2 small aluminum clevis pins; 10 Lexan® clevis pins; 14 retainer rings; and one black nylon tie cord.

Important!

The Wilderness Packs are designed to carry heavy loads with extreme ease. They employ the most sophisticated suspension system in backpacking. But the packs *must be properly fitted.*

Fitting The 60, 61 & 62

1. Tighten the back of the waist by pulling drawstrings.
2. Load the pack. Refuse to purchase this or any backpack until you have carried some weight in it. It is impossible to compare the relative merits of empty packs, or even fit them properly to your back.
3. Loosen all straps (A, B and C).
4. Swing pack onto back by means of the leather lift bar, and tighten waist belt.
5. Pull main shoulder straps (B) until pads wrap snuggly around shoulders. Pads must be touching your shoulders all the way around — front, top and back.
6. Now pull top straps (A) to bring the pack as close to your back as desired.
7. Finally, pull the anti-roll straps (C) back firmly to fit belt to your waist.

Excursion Pack OP 50

The OP 50 resembles the OP 40 Excursion pack it replaces — the trim, clean profile, three-dimensional stay frame, three-point "suspender harness" and padded waist belt with our quick-release, no-slip Lexan buckle are the same. But we've added several features from the OP 60 Wilderness pack: top straps for carrying a tent or sleeping bag, and large side pockets which are transferrable to the front of the pack. (Two additional side pockets, and two 32 cu. in. fire-red belt pockets, can be purchased separately and carried on the pack.) The permanent partition bag at the top of the main compartment is now standard equipment — it was optional in the OP 40 — and is fitted with a four-sided internal frame. (The partition packs are blue in the red OP 50s, red in the blue 50s.) We use the same size 12 Reda Trusew polyester thread by Coates & Clarke that's used in the Wilderness packs.

Weight: 46 oz. Capacity: 2300 cu. in.

OP51

OP52

Excursion Pack OP 51

This is a scaled-down version of the OP 50: it has the same stay frame, "suspender harness" and padded waist belt, partition pack, top straps and main compartment capacity as the 50. It doesn't carry side pockets.

Weight: 40 oz.

Capacity: 1950 cu. in.

Excursion Pack OP 52

This is the most professional daypack we've seen — it's a great buy. The OP 52 has the same "suspender harness" and internal stay frame as the OP 50 and 51, but smaller capacity. It doesn't have a partition pack or side pockets.

In our opinion, the 52 is the best daypack on the market.

Weight: 27 oz.

Capacity: 1525 cu. in.

Excursion Rucksac OP 53

A different kind of rucksack with a little different look. The elongated, contoured pack bag with drawstring has good capacity and is an ideal bike or school pack. The OP 53 has padded shoulder straps and a tough polyliner that runs down the back, across the bottom and a third of the way up the front to help support the load, stop book ends and other sharp objects from sticking into your back, and keep the bag from wearing through from the inside. The pack's top flap has a zippered, easy-access compartment that's useful for storing small items. When you secure the flap with its black nylon cord, it weather-proofs both the compartment and main bag.

While this is a strong daypack, we don't recommend a load of more than 12 pounds. For heavier loads, the OP 52 is a better pack.

Weight: 13 oz., Capacity: 850 cu. in.

OP 53

OP55

OP67

OP58

Outside Pocket OP 55

This is an optional pocket for the Excursion Pack OP 50. The 50 comes with two removable side pockets and has grommet flaps on the back for an additional two OP 55s.

Capacity: 275 cu. in.

Colors: Red, California Blue

Belt Pocket OP 67

You can put one of these 32 cu. in. pockets on each side of the waist belts of the OP 50 and 51. It is extremely useful in carrying anything small that you might need often or in a hurry.

Color: Fire-red

Parts Kit OP 58

Assembled for the Excursion Series packs, the OP 58 contains: 1 ring screw assembly; 2 stainless steel swivels; 2 vibration-proof fasteners; 1 snap & slide buckle; 4 retainer rings; and 2 small stainless steel clevis pins.

Important!

The Excursion Packs are designed to carry moderate loads with extreme ease. They employ the most sophisticated suspension system in backpacking. But the packs *must be properly fitted.*

Fitting The 50, 51 & 52

1. Load the pack. Refuse to purchase this or any backpack until you have carried some weight in it. It is impossible to compare the relative merits of empty packs, or even fit them properly to your back.

2. Loosen straps (A and B).

3. Swing pack onto back and tighten waist belt on top of your hips.

4. Pull main shoulder straps (B) until pads wrap snuggly around shoulders. Pads *must* be touching your shoulders all the way around — front, top and back.

5. Now pull top straps (A) to bring the pack as close to your back as desired.

Fig. 1

Fitting The OP 50 Frame

With the pack unloaded and the main compartment open and facing up, hold pack by the handle and the bottom of one vertical stay. Place across your knee at a point just below the interior partition bag and apply enough pressure to bend the frame. Repeat for the other vertical stay.

Now load the pack and put it on. Fit the "suspender harness" in accordance with the instructions with Figure 1. You may have to repeat these procedures several times in order to get just the right contour and air space for your back.

The stay frame and "suspender harness" in these Excursion packs provide great comfort with a pack load of up to 26 lbs. If you consistently have to carry more than this, then we recommend the Wilderness Series packs which are designed for heavier loads.

Duffle OP 64 patents pending

The traditional duffle has become part of the American sportsman's scene. Our stylish, compact version — the OP 64 — comes in the subtle colors of the Wilderness packs and has contoured black web hand straps, wide end pockets and a tough polyliner to maintain the bag's shape, make it easier to load and reduce wear. It's a good car bag — perfect for week-ends.

Weight: 14 oz.
Capacity: 1000 cu. in.
Colors: Dark Blue, Irish Coffee, Desert Tan

Duffle BD 10 patents pending

This duffle is a larger, simpler version of the OP 64 — without pockets or polyliner. It has contoured white nylon hand straps.

Weight: 12 oz.
Capacity: 1700 cu. in.
Colors: Red, California Blue

Hideaway T-91
Two-Man Tent patents pending

It has been our aim to advance the fields of backpacking and bicycling through innovative design and quality craftsmanship. We looked at contemporary tent design with this philosophy in mind and concluded that we could make a significant contribution to the state of the art.

Since the primary objective of a tent is to provide a comfortable shelter in a hostile or potentially hostile environment, we concentrated our efforts on the following facets of tent design and construction.

1. Fast-setting
2. A working vestibule completely protected from the elements
3. A warmer, dryer sleeping pod
4. Better ventilation
5. Improved stitching
6. Reduced Fire Hazard

Fast Setting

The primal need for a tent is to get yourself out of the weather and away from insects. A practical tent should therefore go up fast. Setting its tail directly into the wind, the T-91 goes up in 10 minutes (5 to 7 minutes with a little practice) with only two sets of poles and two stakes. In winds over 35 m.p.h., four additional stakes are provided for the tie-down tabs at the corners. (*See "Setting Instructions" for details).

A Protected Vestibule

The Hideaway's large front vestibule is a transitional shelter where you can get in out of the weather and out of wet gear without taking the weather in where you sleep. Protected down to the ground on all sides, the vestibule is fitted with two 5' zippered flaps that always provide a lee entry. This area also serves as a "mud room" for storing foul-weather gear, wet packs, muddy boots and anything too large or grubby to keep in the sleeping pod, but which you want kept dry and within easy reach.

The Hideaway T-91 has the largest, most practical and best-protected vestibule of any lightweight tent we have seen. For comfort in the wilderness, it is essential.

Warmer, Dryer Sleeping

Conventional tent design relies on the principles of evaporation and convection to control condensation by allowing an outside air flow between a waterproof fly and a breathable tent roof. The combination is more or less effective depending on design, construction and climatic conditions. Of course, the inherent assumption in this concept is that a cold, dry tent is preferable to a warm wet one.

The new system we've developed in the Hideaway T-91 insulates the sleeping pod from the outside air with a band of dead air space encapsulated between two layers of microporous rip stop nylon which together will keep out the wind and rain but still breathe. As a result, there is no meaningful air flow in the tent (unless mechanically induced by opening the screened flaps at either end — *see "Ventilation" section below) or in the air space above it. Therefore, most of the warmth liberated by the sleeping occupants (approximately 250 to 350 BTU's per adult per hour) is retained in the tent. As some of this warmth gradually bleeds thru into the dead air space above, a warm buffer zone (relative to the ambient air temperature) is developed which insulates the sleeping pod from the cooler outside air, greatly reducing the probability of condensation. This is true because warm air will condensate on a cold surface. The warmer that surface is, the less the probability of condensation. And the buffer zone in the T-91 keeps the inner surface warmer than the inner surfaces of conventionally designed tents.

Furthermore, should the temperature of the inside layer of nylon drop below the dew point (the temperature at which moisture in the air will condense), there will be considerably less condensation than would occur in tents of conventional design under the same climatic conditions. Again, this is true because the T-91's dead air buffer zone keeps the inner layer warmer than do conventional tents, and once the dew point is passed condensation occurs in proportion to the coldness of this layer.

The net result is a warmer, dryer place to sleep: one that does not require a heavy, expensive sleeping bag as long as the temperature is above 0° F. and the occupants use a good foam ground pad — for insulation as well as comfort.

Better Ventilation

As mentioned in the section on "fast-setting", above, the Hideaway T-91 should be set with its tail into the wind (*also see the "Setting Instructions", below) for the best ventilation. In this position, the aerodynamic shape of the T-91 induces flow-through ventilation, even on calm days. You can regulate the flow of air by means of the screen vent at the front and rear of the sleeping pod in conjunction with the zippered vestibule flaps.

Improved Stitching

We evaluated two methods of stitching in regard to the various types of construction used in the T-91, and we concluded that a double-needled chain stitch was superior for the high-stress, straight-away seams while a double-needled lock stitch was best for the detail work (zippers, reinforcements etc.) We've outlined the basis for our conclusions below.

1. A chain stitch is stronger than a lock stitch for two reasons: (a) There is approximately 40% more thread in a chain stitch and thus there is less strain on any given length of thread. (b) Because there is more thread there is more elasticity (1.4 units of thread will stretch farther than 1.0 units) and more elasticity means more give under the stress of wind, snow etc. Thus a chain stitch is less likely to "pop" than a lock stitch.

2. A broken chain stitch will not allow a seam to split as readily nor as far under continued stress as a lock stitch, because it tends to "jam" on itself rather than open up.

3. A chain stitch is considerably dryer than a lock stitch because it stretches, while a lock stitch pulls and elongates the needle holes, allowing more water to seep in.

4. A tent with chain-stitched seams will retain its original shape better and longer than a tent with lock-stitched seams. Again, due to the elasticity of a chain stitch, the seam tends to return to its original length to a greater degree than a lock-stitched seam.

In summary, we believe that the double-needled chain stitch is superior for long straight seam construction, especially where elasticity is essential to proper design function. Conversely, the lock stitch is more suitable to intricate and detailed sewing because a high standard of quality control is difficult to maintain with a chain stitch.

Reduced Fire Hazard

We have gone to considerable time and expense to make the Hideaway T-91 flame retardant. The chemical process used to treat the rip-stop nylon is sensitive and complicated. If the fire retardancy level is to be maintained, the information on the safety label, reproduced below, must be closely followed. One is sewn into the vestibule seam of every tent. Please read it carefully.

Cannondale Hideaway Tent T-91.

Serial No.	Manufacturing Date

THIS IS A FLAME RETARDANT TENT

The coated and uncoated rip-stop nylon used in the manufacture of this tent exceed the Federal Flammable Materials Act and are certified to meet or exceed the flame resistance requirements of CPAI-84. Dust, pollen and other airborne matter which may accumulate on surfaces increase the flammability of treated materials. Hose the tent down occasionally or cold rinse in a top-loading washing machine. Very hot water, strong detergents or alkalies used in the laundering of this tent may reduce its flame resistance characteristics. Use only mild detergents sparingly and warm water with gentle agitation. Double rinse, preferably in cold water, to remove all residual cleansing agents.

CAUTION

Keep away from open flame and high heat sources. Flame resistant coatings greatly reduce the flammability of lightweight materials but do not render the materials fireproof or heat resistant.

Specifications:

- Weight = 7 lbs., 8 oz.
- Dimensions:

  Sleeping Pod:
  Length = 86″
  Width = 33″ at rear, 71″ at door
  Height = 21½″ at rear, 51½″ at door
  Area = 33 sq. ft.
  Volume = 41 cu. ft.

  Vestibule:
  Length = 72″ from center of door to the point
  Width = 88″ at tent door
  Height = 58½″ at apex
  Area = 28 sq. ft.
  Volume = 55 cu. ft.

  Buffer Air Space:
  Area = 7 sq. ft.
  Volume = 11 cu. ft.

  Total Length = 13′ 6″

  Total Covered Space:
  Area = 68 sq. ft.
  Volume = 107 cu. ft.

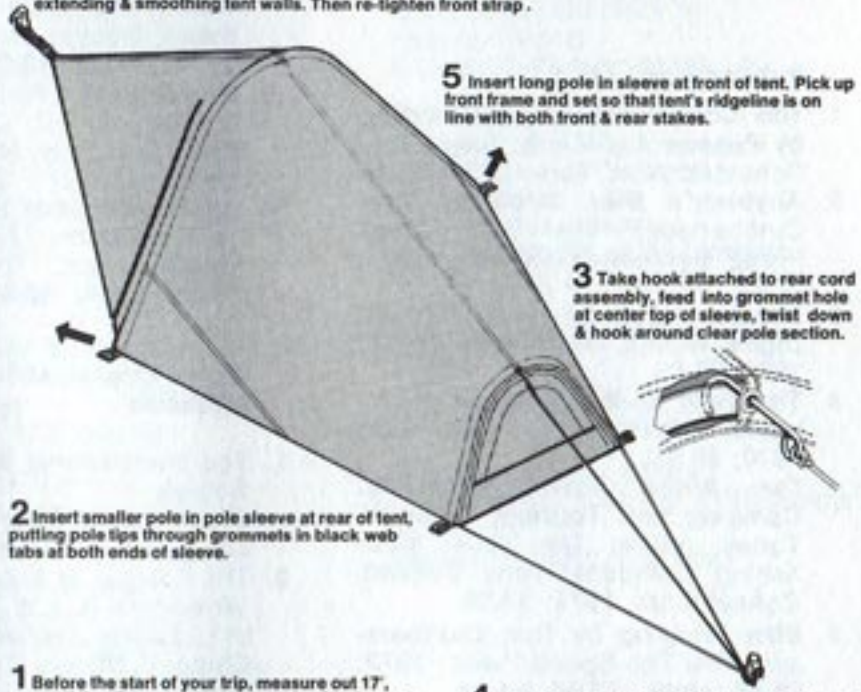
  Stuffed Dimensions:
  Length = 24″
  Diameter = 6½″

- Tent Materials:
  Tent roof, walls and vestibule = 1.5 oz. uncoated water-repellent rip-stop nylon
  Tent floor, 6″ sidewalls and rear panel = 2.65 oz. coated rip-stop nylon
- Thread = Filco polyester with cotton wrap, size 24
- Poles = shock-loaded, ¾″ diameter, 6061-T6 aluminum alloy with 23″ long, ⅝″ diameter polycarbonate tube bridge section
- Stakes = two 10″ orange anchor stakes and four 6″ yellow corner polypropylene stakes
- Colors:
  Tent and vestibule = Sand
  Coated floor = Sage Green

Lightweight Tent Stakes TP 5 & 6

These modified I-beam stakes have a wide face at the front for stability and strength and a narrow edge at the back to reduce friction when driving them into the ground. Made of one-pieced molded, high impact poly-propylene, they are lighter and tougher than any similar aluminum stakes we've been able to find. While no one stake is satisfactory for all terrain conditions, the TPs seem to be the best all-around compromise. They work fairly well in hard or stoney ground, packed sand, and iced or grain snow. Unless grossly misused or stressed in extremely cold conditions, they should not break or splinter.

The 10″ orange TP 6 is recommended for anchor lines, the 6″ yellow TP 5 for corner and fly tie-downs. Two TP 6s and four TP 5s are standard equipment with the Hideaway Tent T-91.



BICYCLING

Publications:

1. **The Complete Book of Bicycling** by Eugene A. Sloane; Simon and Schuster; New York; 1970; $9.95
2. **Anybody's Bike Book** by Tom Cuthbertson; The Ten Speed Press; Berkeley, California; 1971; $2.95
3. **Bicycle Digest** by Mark Thiffault; Digest Books, Northfield, Illinois; 1973; $5.95
4. **The Best of Bicycling** by H. M. Leete; Trident Press; New York; 1970; $9.95
5. **Two Wheel Travel: Bicycling, Camping and Touring;** Peter W. Tobey, editor; The Tobey Publishing Company; New Canaan, Connecticut; 1974; $4.95
6. **Bike Tripping** by Tom Cuthbersson; The Ten Speed Press; 1972; $6.95 cloth, $3.00 paper
7. **Northeast Bicycle Tours** by Eric Tobey; The Tobey Publishing Company; 1974; $3.95
8. **Bicycle Touring in Europe** by Karen and Gary Hawkins; Pantheon Books; New York; 1973; $8.95 cloth, $2.95 paper
9. **Bicycling For Fun & Good Health** by Kenneth E. Luther; Wilshire Book Company; North Hollywood, California; 1970; $2.00
10. **North American Bicycle Atlas** by Asa Warren; American Youth Hostel, Inc., publisher; New York; 1974; $2.50

Clubs, Organizations, Referral Agencies

1. The International Bicycle Touring Society
   846 Prospect Street
   La Jolla, California 92037
2. The League of American Wheelman (L.A.W.)
   5118 Foster Avenue
   Chicago, Illinois 60630
3. The Bicycle Institute of America (BIA)
   122 East 42nd Street
   New York, New York 10017
4. Bicycle Touring Information
   36 Grand Boulevard
   San Matea, California 94401
5. American Youth Hostels, Inc.
   30 West 17th Street
   New York, New York 10011

Information on Bikeways, Maps, Tours and Guides

1. (East of the Mississippi):
   U.S. Geological Survey
   Washington Distribution Section
   1200 South Eads Street
   Arlington, Virginia 22202
2. (West of the Mississippi):
   U.S. Geological Survey
   Distribution Section
   Federal Center
   Denver, Colorado 80225
3. Canadian Maps:
   Map Distribution Office
   Department of Mining & Technical Surveys
   615 Booth Street
   Ottawa, Ontario, Canada
4. European Maps:
   John Bartholomew and Son, Ltd.
   12 Duncan Street
   Edinburgh, England

BACKPACKING

Publications:

1. **Backpacking, One Step At A Time** by Harvey Manning; Vintage Books; New York; 1973; $2.95
2. **The Complete Walker** by Colin Fletcher; Alfred A. Knopf; New York; 1971; $7.95
3. **The Hiker's and Backpacker's Handbook** by Bill Merrill; Arco Books; New York; 1973; $2.95
4. **Backcountry Camping** by Bill Riviere; Doubleday & Company; New York; 1971;
5. **Backpacking For Fun** by Thomas Winnet; Wilderness Press; Berkeley, California; 1972; $2.95

6. **Mountaineering: The Freedom of the Hills;** Harvey Manning, editor; The Mountaineers Press; Seattle, Washington; 1967

7. **Pleasure Packing** by Robert S. Wood; Condor Books; Berkeley, California; 1972; $3.95

8. **Sierra Club Wilderness Handbook** by David Brower; Sierra Club, publishers; San Francisco, California; 1974; 95¢

Clubs, Organizations, Referral Agencies

1. American Alpine Club
   113 East 90th Street
   New York, New York 10028

2. American Forest Institute
   1835 K Street NW
   Washington, D.C. 20006

3. National Audubon Society
   1130 5th Avenue
   New York, New York 10028

4. Nature Conservancy
   1522 K Street NW
   Washington, D.C. 20009

5. Sierra Club
   1050 Mills Tower
   San Francisco, California 94104

6. Wilderness Society
   729 15th Street NW
   Washington, D.C. 20005

7. Appalachian Mountain Club
   5 Joy Street
   Boston, Massachusetts 02108

8. Colorado Mountain Club
   1400 Josephine Street
   Denver, Colorado

9. Green Mountain Club
   108 Merchants Row
   Rutland, Vermont

10. Federation of Western Outdoor Clubs
    Box 172
    Carmel, California 93921

Information on Parks, Trails, Maps and Tours

1. United States Department of the Interior
   GSA Building
   Washington, D.C. 20242

2. National Park Service
   Department of the Interior
   Washington, D.C. 20242

3. National Park Service
   Western Regional Office
   450 Golden Gate Avenue
   San Francisco, California 94102

4. Bureau of Land Management
   Department of the Interior
   Washington, D.C. 20240

5. Distribution Section
   U.S. Geological Survey
   Federal Center
   Denver, Colorado 80225

6. U.S. Forest Service
   Department of Agriculture
   Washington, D.C. 20205

7. (For regional maps):
   Superintendent of Documents
   Washington, D.C. 20402

8. Canadian Government Travel Bureau
   150 Kent Street
   Ottawa, Ontario, Canada

9. Map Distribution Office
   Department of Mines & Technical Surveys
   Ottawa, Ontario, Canada

* Also see appropriate listings under Clubs, Organizations, Referral Agencies

We could have chosen a trail or a cycling term and called our outfit Appalachia Inc. or the Rattrap Corporation. We might have named ourselves and the equipment we were designing after one of the founders.

I guess we never really gave much thought to what we should be called. The story of how it simply happened goes back to a day in the early winter of 1970, when our design studio, offices and workshop were still over the pickle store.

Mrs. Forrester had just stewed up a batch of pickle relish. We had all the windows open and Jäger was barking at the passing 9:27 from Wilton. For some reason, it occured to Jim that after two and a half weeks in the place, working days and nights, we still hadn't gotten around to having a telephone put in. So Pete Meyers, who is now head of our shipping department, was hastily dispatched to the pay phone across the street to order one.

Pete relayed the particulars concerning the order and was about to hang up when the operator asked, "Excuse me, sir, but how would you like this listed?" Peter paused. He looked out over the town green to the rusty cannon and inscription "dale", then back across the street to the old train station.

"Ah, why, Cannondale Corporation," he said.

WARRANTY

The Cannondale Corporation manufactures sophisticated backpacking and bicycling equipment for the serious outdoors enthusiast. Each product is carefully designed to do a specific job and the materials are carefully chosen for their performance and styling, regardless of price. We unconditionally guarantee the workmanship and quality of our product through our nationwide dealer network.

CANNONDALE CORPORATION 35 Pulaski Street, Stamford, Connecticut 06902