The state of the s	1969	1969		1969	1969
CYCLING DIVISION	Income	Expenses	BAKER TRAIL DIVISION	Income	Expense
Trip Fees	\$140.00	The state of the s	Beker Treil Guide	8 \$75.00	\$40.00
Equipment Rentals	240.00		Maintenance		179.00
Cycle Seles and Purch.	143.00 (8)	\$325.00 (5)	Shelter Construct	1 on	340.00
Parts and Supplies	TAIL IN	132.50	Baker Trail Patch		100.00
Cycle Club Patches	25.00	120.00	TOTALS:	325.00	659.00
Tread Mill	Br. Manny	65.00	TOTALD,	367.00	0,9.00
Cycle Club Expenses		15.00	NEWSLETTER OPERATION	· ·	
TOTALS:	548.00	657.50		<u>a</u> .	hen
TOTALO:	740.00	651.50	Printing		450.00
CANCEING AND RAFTING DIVI	DE CONT		Mailing		150.00
	AND THE PERSON NAMED IN COLUMN TWO IS NOT THE PERSON NAMED IN COLUMN TWO IS		Advertisements	100.00	50.00
Trip Fees (canceing)	150.00		TOTALS:	100.00	650.00
Cance Rentals	550.00	00 00			
Ma intenance	A 1 120	20.00	CENTRAL OPERATIONS	100	
A.W.W.A. Dues		8.50	Pass Sales (1% in		
Garage Rent		48.00	in membership)	ricourport't	
Paddles and Life Pres.		83.00	Banquet Subsidy		80.00
Trailer		10.00		100.00	olde brut
Bost Show	A VIIIdi	25 00	Telephone		110.00
Trip Fees (rafting)	45.00	100			LIC GO GO
Reft Rentals	390.00	732			
Raft Sales and Purch.	20.00	140.00	Netional Office		
TOTALS:	1155.00	288 50	President travel		
al surprise bearing on	1177.00	A STATE OF THE PARTY OF THE PAR			110.00
HIKING DIVISION			and misc. dues		alest town
	100.00				50.00
Trip Fees	190.00	60.00			OANU - US
Equipment Purchases	07 00	60.00	Secretarial Expen	ses	150.00
Equipment Rentel	27.00	-	Program		65.00
TOTALS:	217.00	60.00	Movie Projector-1		300.00
			Trip Insurance		220.00
CLIMBING AND CAVING DIVIS	ION	ablant 01	Fire & Theft Insu	rance	75.00
Trip Fees (climbing)	50.00	I'm ninit man	The second secon		20.00
E-uipment Rental	12.00	nett make bil	V. Pres. Subsi	dy	THE COLUMN
Rope		32.00	Sales Tex		50.00
Safety Helmets		30.00	Public Relations		75.00
Descending Sets		18.00			20.00
Trip Fees (caving)	40.00		77.4 - 4 4 - 3 - 7 - 41		20.00
Carbide Lamp Rental	10.00	Alexander -Y	***		
TOTALS:	112.00	80.00			25.00
MARKET TO THE RESERVE OF THE PARTY OF THE PA	d Grant Walter				
WINTER SPORTS DIVISION			Hqts. (Incl. \$30.		105.00
Trip Fees	30.00		cycle shop imp	rov.)	a coldad
Crear Country States			Miscellaneous	-	10.00
Cross-Country Skiis		100.00	TOTALS:	1990.00	1495.00
and Toboggan Purch.	ded andrea	100.00	A STATE OF THE PARTY OF THE PAR	Con	Stancy F
and Sales	60.00		SUMMARY: Income \$4		
TOTALS:	90.00	100.00	Expense- 4	816.00	
TANK DE LOUIE . THE BOOK WELL	erid number of		Net Income	7.00	
MISCELLANEOUS PUBLICATION	S DIVISION		Net Anticipated inco	cease in c	apital due
Handbooks	10.00		operations is \$7.00		
Canocable Waters Wall	Map15.00		Income (Controlled by		
Canoeing Guide	100.00	30.00	for use in current		
Hiking Guide	50.00	DE AA			\$ 3.
Intro. to Pgh. Council	moditorist in	to a man	Mellon 5% Certifica		
Forbes Trail Guide		E common bred			
Cycling Guide		35.00			220,
Multilith Machine	- Washington	600.00	American Investors		The state of the s
Typewriter Sales	60.00				
		20.00	Total.		\$398.0
Equipment Repairs	North-Saucet		Total ded reform		
oth les pass to acted			to remy algors only		
			Mf & Mond I traduc		
	arregan selo		Miles and the state of the stat		

GENORAL - SEATANT BARY JAMES - 11/20/89

THE 30-SPEED BICYCLE by Michael Hurwitz

On most bicycle trips in the Pittsburgh area one frequently encounters hills which the average cyclist cannot ride up and which tire even the good cyclist on a 10-speed bicycle. The exhausting climb up hills is not comfortable, en-joyable or efficient. The most efficient way of cycling is to maintain constant rapid rates of pedal rotation and an approximately constant power output. In order to do this in hilly country one must have a very wide range of gear ratios available.

Most lospeed bicycles used in this area have a ratio of gearings of about 21 to 1. For example, the standard Schwinn 10 speed has a low gear of 38 inches (one rotation of the crank moves the bicycle 38 xwinches) and a high gear of 96. It is difficult to obtain a much wider gear range than this with a deraileur mechanism. To extend the range of gear ratios I decided to use a Sturmey-Archer 3-speed hub in conjunction with a 10-speed derailleur system. This combination gives me 30 different speeds and extends my lowest gear down from 38 to 28 and my highest gear up from 96 to 128, nearly doubling the range.

The modification proved to be a remarkably simple operation. The Sturmey --Archer bub is the same diameter and width as the standard hub used on 27" wheels and it uses the same number of spokes. Thus the Sturmey-Archer hub is spoked to a 27" rim in exactly the same way as a standard Hub. The rim is offset from the center of the hub toward the cluster by the same amount of either hub.



The Pittsburgh Bicycle Club will hold its next meeting on TUES., APRIL 15 at 8 pm in the Hostel building.

PROGRAM: CYCLE REPAIR Fixing flat tires, adjusting the bike for maximum efficiency, adjusting bearing in the head, crank and wheels, and adjusting the deraileur will be discussed.

inside of the cluster and then pressed this unit onto the four pronged driver of the Sturmey-Archer hub. The steel ring (0.D.1.805 inch, I.D. 1.345 inch, thickness .30 inch) is the only special part I need to make the modification.

The modification to 30-speeds was made on a Schwinn Super Sport bicycle and it was tested on several cycle trips last fall. I found that with the new lower gears I could ride up hills with much more comfort and less fatigue. The gears on the Sturmey-Archer bub can be shifted more quickly and easily than the deraileur and I found myself shifting the bub gears more frequently than the dereileur. these gears I can shift while at a stop or while pedaling up a steep hill. The major disadvantages of using the Sturmey-Archer hub are that a couple of poundsare added to the bicycle and there is somewhat more friction in the bearings and gears. In my opinion, the advantages noted far outweight the disadvantages.

I am planning to build a wheel with a 5-I used a Sturmey-Archer hub with a 64" speed Sturmey-Archer hub and a cluster axle and replaced the single gear on it with a 33 or 34 tooth low gear to obtain with a 5 gear cluster. I took a 14 to a low speed of 21". I will be happy to 28 tooth Regina cluster from a Schwinn supply more details and assistance to any bicycle and removed the free wheeling one wishing to use Sturmey-Archer hubs mechanism. I press fitted a steel ring along with deraileur gears.