

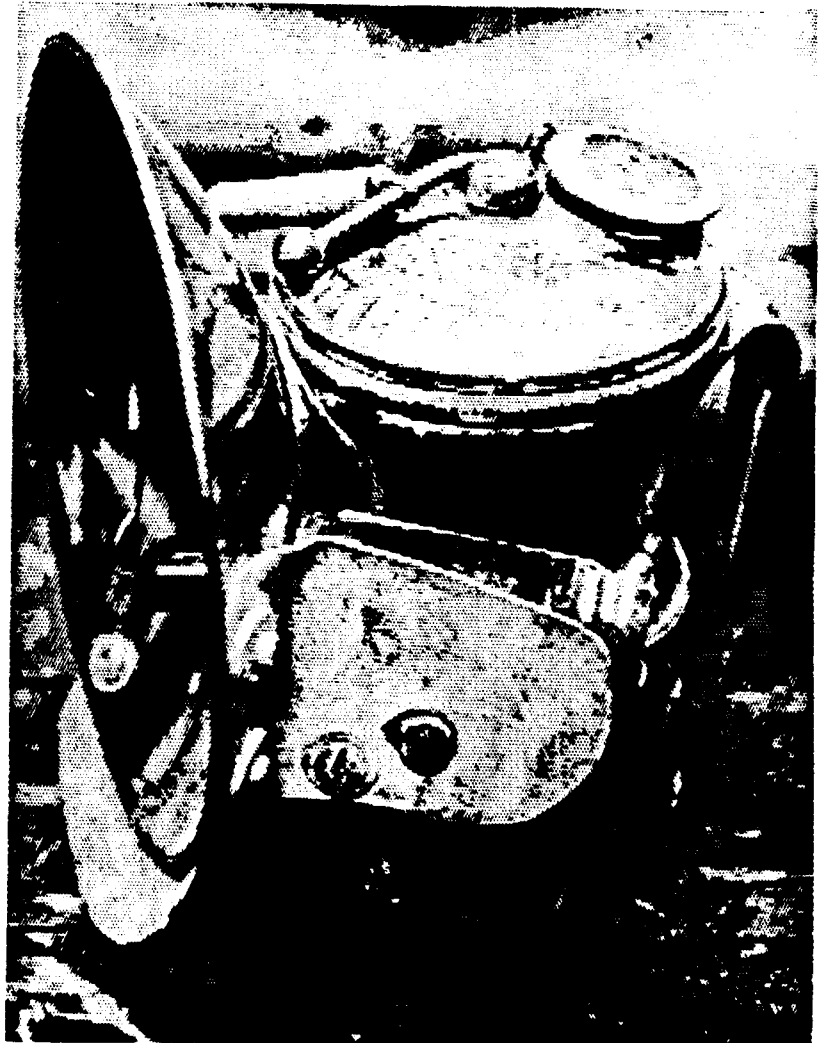
# speleonics 13 OCT. 1989

"BETTER CAVING THROUGH ELECTRICAL STUFF"

volume IV number 1

## CONTENTS

<b>LETTERS</b>	
James Savage	
Cliff Buttschardt W6HDO	
Bernie Roche .....	1
<b>NEWS &amp; ANNOUNCEMENTS</b>	
NSS Convention Report	
Complex Communications Scenario at NCRC	
Dayton Hamvention meeting report .....	2
Cavers on Video .....	8
<b>PIEZOELECTRIC IGNITION FOR CARBIDE LAMPS</b>	
John Ganter .....	3
<b>Rescue communications:</b>	
<b>FIELD-EXPEDIENT VHF DIRECTION-FINDER</b>	
John Moore (NJ7E) .....	6
<b>Navigation:</b>	
<b>GPS UPDATE</b> .....	6
<b>Notes on bats and ultrasonic translators:</b>	
<b>I BUILT AN ULTRASONIC RECEIVER</b> .....	7
Bob Parnass AJ9S	
<b>BAT RADIO</b>	
Charlie Thompson WB4HVD	
Shorter Articles from rec.ham-radio .....	7
<b>New Products:</b>	
<b>CASIO ALTIMETER WRISTWATCH</b>	
<b>KVH DATASCOPE ELECTRONIC COMPASS</b>	
<b>RADIO SHACK ELECTRONIC CAR COMPASS</b> .....	9
<b>VISIBLE CW LASER DIODES</b>	
<b>WAVEBOX FREQUENCY SYNTHESIZER</b> .....	10
<b>Resources</b> .....	10
<b>THE GEOMAGNETIC STORM OF 13 MARCH 1989</b>	
(reprint, relayed by John Halleck) .....	11
<b>UNDERWATER CAVE-RADIO BATTERY MANAGEMENT</b>	
Frank Reid .....	11
<b>LOW-NOISE ELF (ULF-RANGE) E-FIELD PREAMPLIFIER</b>	
John R. Wright .....	12
<b>EXPERIMENTAL HEART TACHOMETER</b>	
Danny L. Britton KB4TEP .....	13
<b>ALTIMETERS FOR CAVERS</b>	
Frank Reid .....	14
<b>Art:</b>	
<b>EARTH-AIR-FIRE-WATER-CAVES</b> .....	11
<b>ASCII BAT</b> .....	8
<b>CALCIUM CELL (reprint)</b> .....	(back cover)



### VINTAGE CARBIDE LAMP WITH PIEZOELECTRIC IGNITION

Piezoelectric spark-generators work even when wet, an advantage over conventional flintwheels. See John Ganter's article on page 3.

