

BULLETIN *of the*

S*ydney*

U*niversity*

S*peleological*



S*ociety*

Editorial

In a packed issue this month, we have two trip reports from Richard McNeall, a couple of cartoons, a map and brief description of some of the drains around Sydney Uni from the University surveyor, an article from Mike Lake on a battery charger (if he gets it in on time) plus the crossword, and all the usual stuff.

Losses incurred recently through normal running expenses, etc. mean that the club is basically broke. Only your subscriptions, now due, can help (there is an ad in this issue to that effect).

Very soon there are a number of major trips on. Everybody interested in a Nullabor trip will be pleased to know that there is one on during the first three weeks of December. Yet more Jenolan trips are either mooted or planned, and there are a couple of Spring Creek Canyon trips. Or if you want to do Jerrara Canyon, there is a day trip there too.

Usually the Bull is printed (now) on the same day as the committee meeting. Keeping this date sacrosanct is proving to be difficult for me at the moment (exam time), but next year things should be getting back to normal. As usual, we are having problems with our printing, as the SRC printer is yet to be seen working properly. The Union Resources Centre Roneo is currently the one we are using. Eventually, hopefully, we should get things back into order once we settle down.

Naturally, I am exhorting our readers to write more articles. Everyone who feels that they could contribute something to the Bull are welcome to try - articles, cartoons, trip reports, things of general interest, puzzles, etc. - all are greatly appreciated. Unless, of course, they are too foul to be published. SUSS members should perhaps be going back to caving now that winter is over, so perhaps we can expect more trip reports. So keep those articles coming!!

Mark Twigg

Present : Yarangobilly

August 15 - 23

Mike Lake
Guy McKenna
Judy Clarke
Mark Hunter
Richard McNeall
Mick Garben

Kristin Young
Ann Gray
Nick Melhuish
Phillip Cole
David Cole

Saturday

Arriving at the guides' office, Mike and Mick were informed of our assignment for the week - to locate and describe 18 caves. These caves had already been located, tagged and described, but the guides seemed anxious to have more information on them. We were also to survey several of these and photograph their entrances.

Sunday

We woke up to find the sky overcast. Little did we know that we would not see the sun again till next Sunday. Using the inadequate directions given to us by the guides, we were unable to find any of the caves we were looking for. We returned to the guides' office after a wasted morning to get some map coordinates.

As the flooded Yarangobilly River seemed inviting (5 deg. C, 8 km/h), Ann, Mick and myself decided to have a dip. Nick heroically rescued Ann from the far side (using the bridge). Mick and I got out under our own steam, and ran for the fireplace.

Monday

Phillip and David arrived early after a miserable skiing trip.

After hiking the necessary few kilometres into the nearby pineforest, we explored Y95. This is the nicest cave in the area, with an interesting climb and a pretty pool at the end. It is about 20m long. We also had a look at the mudslide equipped (sic) Y101-102. At 35 metres, it is by far the longest cave in the area.

We then split up. Mike spent the day in the cottage because it was raining; Nick and Ann went to look at Y100, while Mark, Mick and I remained in the forest locating about a dozen of the 18 caves. The only interesting one was Y72, a sinkhole with extremely good prospects for digging. The rest of the caves were short and unspectacular.

Guy, Judy and Kristin arrived late that night with engine trouble (Bloody Volvos)

Tuesday

Bad Day -

- 1/ My car was stripped
- 2/ It was cold, windy and snowing
- 3/ We ended up doing nothing

4/ Mark's car reached 65 m.p.h.!!!

Wednesday

We returned to the pineforest to look for Y97 [which doesn't really exist] and Y98 - a very tight, very dirty 20m cave which took all day to find.

Half of us then went to Tumut {6 pubs}. Ever seen Mike swinging round a no-standing sign?

Thursday

Back to the pineforest to finish off surveys and descriptions, while others went off the survey some other holes. Guy discovered an untagged cave with a deep pitch which he couldn't descend.

That night, organised by Kristin, we completed the vast amount of paperwork required by the rangers. Judy fried and salted half a can of Guinness. She said it tasted horrible.

Friday

We found out that almost all the survey work we did had already been done by S.S.S. After this annoying discovery, we visited the excellent Eagle's Nest Cave which was very wet at the time.

Saturday

No caving, but we made good use of Phil and David's skis.

Sunday

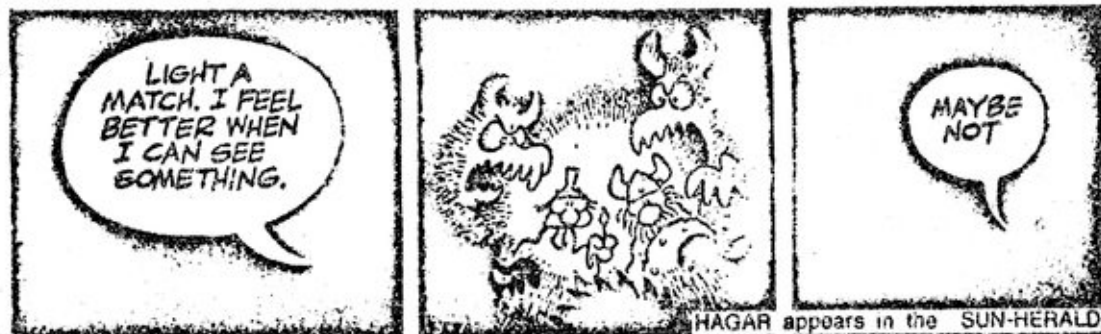
Although we largely enjoyed the week, we left with the feeling that the work we had done was going to be of little use to anybody.

Richard McNeall

A SUSS Committee Meeting : ?

HAGAR THE HORRIBLE —

By Dik Browne



SUBSCRIPTIONS ARE NOW DUE

for 1981 - 1982

So please pay SOON !!!!!

Otherwise, you won't be getting
this very professionally printed
bulletin for much longer!! Also, I'm
owed some money by the club, and
it can't pay me because it's BROKE
So if you don't pay SOON, I'll
come round to your place and rip
your bloody arms off!!

Full & Associate:	\$8.00
Prospective	
& Corresponding:	\$4.50
Family:	\$10.00

Please give your money to Bruce Welch

**YOUTH SAVED
FROM CAVE**

POLICE have rescued a youth, 18, trapped for almost nine hours in one of the Bungonia Caves near Goulburn.

Craig Tazewell, of Goulburn, fell back into the Argyle Cave when he became exhausted climbing out on a knotted rope at 3 pm yesterday.

Quentin Naughton, 19, of South Hill, via Goulburn, who was climbing with Craig, raised the alarm.

Goulburn Police rescue Squad used a special harness and tackle to lift Craig clear at 8.30 pm.

Jry
Cauling
huf

The University of Sydney

TOWERS AND TUNNELS WITHIN THE UNIVERSITY

The following are a list of interesting towers and tunnels, some of which will be seen during lunch time tour. It may, however, not be possible to obtain entry to all.

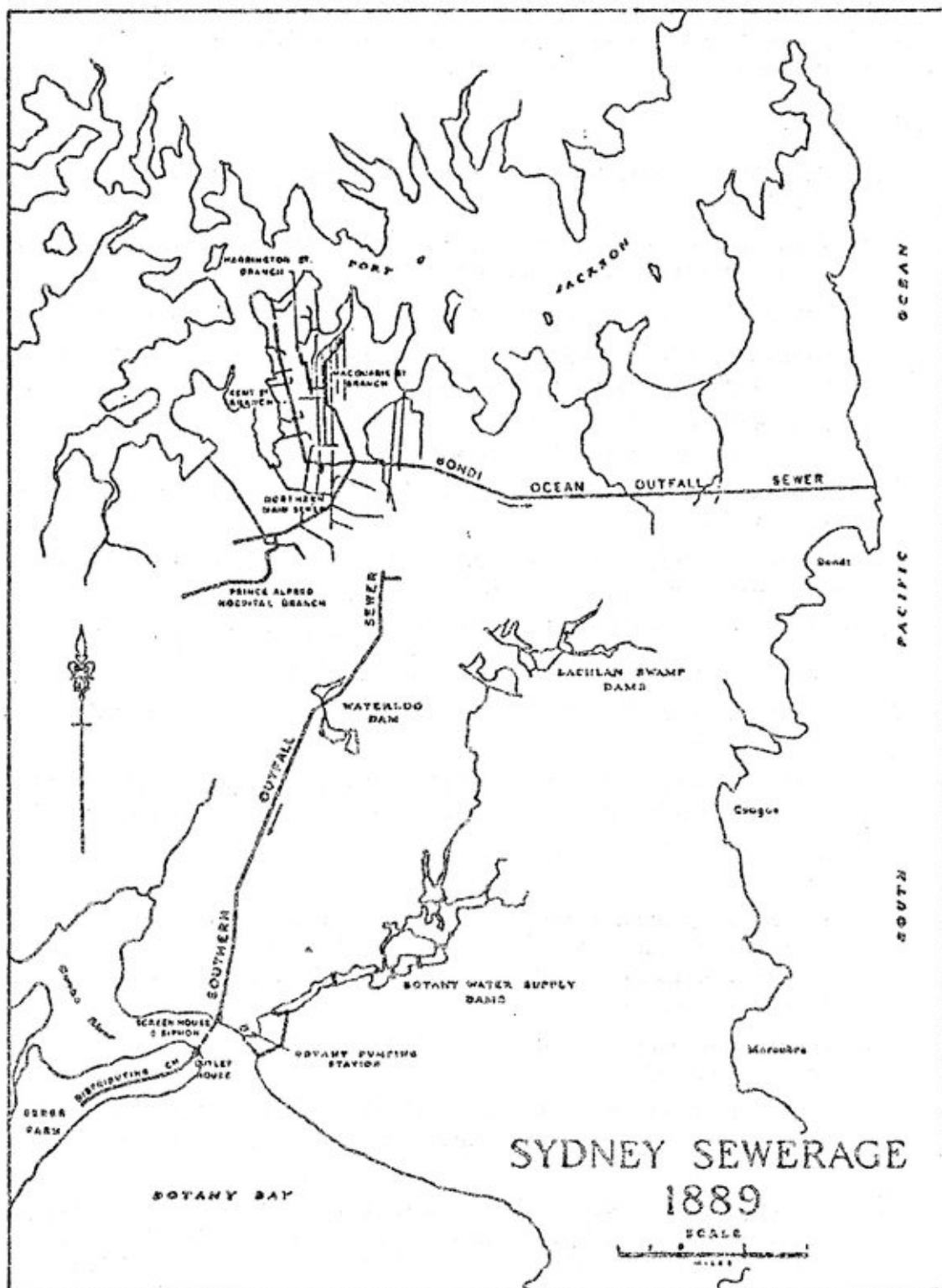
Towers

1. Main Quad. Great Tower - this well-known tower includes the Carillon.
2. Main Quad Great Hall Nth. East - this interesting little tower leads to the roof of the Great Hall.
3. Western Tower - an interesting location for a barbecue.
4. Macleay Building Towers - these towers are probably overwhelmed by the adjoining higher building.
5. John Woolley Building Tower - includes the Donaldson clock and interesting views of slate roofs.
6. Badham Building Tower - built 1888, probably gives interesting roof views.
7. Anderson Stuart Tower - can be seen from Cleveland Street and probably gives good vista.
8. Madsen Building Tower - reasonable view of campus.
9. Physics Building - reasonably high, good view.
10. Institute Building Twin Towers - interesting construction from inside.
11. Civil Engineering - modern brick tower enclosing a water tank.
12. Old School Bell Tower - imposing structure for one bell.

Tunnels

1. Engineering Wind Tunnels - Woolley Building 4 x 3 - an interesting piece of technology of the early 1940's, not strictly a tunnel. Additional modern tunnels in Mechanical & Aeronautical and Civil.
2. Badham Building, the Graffiti Tunnel - is well-known pedestrian way.
3. Madsen Building Tape Tunnel - really an underground corridor but was used to calibrate instruments such as surveyor's tapes.
4. Prince Alfred Sewer Sub-Main - a venerable tunnel, passes under Architecture Building, Madsen Building and behind Physics. Its vent stack is visible on St. Paul's oval. Access to it is unlikely.
5. Maze Crescent, former Alma St. Telecommunications Tunnel - a rather large and long tunnel which runs under Merewether Building and under Seymour Centre to Mechanical Engineering. It contains most of the trunk telephone cables from Sydney to Melbourne.
6. John Woolley Building - 50 ton testing machine equipment tunnel. This tunnel still has the old cast iron beams that were part of the large testing machine now at Darlington.

R. C. Clarke.
5/8/81.



Jenolan

September 26-27

Present :

R. McNeall
M. Lake
G. McKenna
M. Garben

J. Bonwick
M. Bonwick
P. Boulton

After a comfortable mid-morning start, we entered Spider, arriving at the river in time for lunch. At this point, Mike Garben ploughed headlong into the wall with his helmet off. Strangely enough, it didn't seem to hurt him very much.

Guy and I went straight to the new extension to explore an aven he had seen on a previous trip, leaving the others to visit Caverna Alba. (See note at end)

The aven comes off a passage north-east of the Cloisters, and while we couldn't scale it, we did manage to get up through a tricky hole in the wall. This lead to an L-shaped chamber about 10m long. A passage came off this, and we followed it for about 40m. The passage was approximately 3m high and 2m wide. Large portions of its floor were covered in small pools like the floor of Caverna Alba. The passage ended in a large bell shaped chamber 25m high, 15m long and 10m wide. A slot in the floor connected to the rockpile at the end of a very pretty passage which was discovered in March.

We couldn't find any more passage, so we met up with the others. John and Patrick couldn't fit through crystal crawl to the Cloisters, and were in for a long wait. We surveyed from Crystal Crawl to the Cloisters, and did a bit of digging at Guy's "End of the World" dig. Mike Lake got stuck when the roof "collapsed" on him. It was, however, easy to pull him out.

Exiting the cave without incident, we spent what was {for a few of us} our first night at the new campsite. It was quite pleasant, with a fair view and plenty of wood, but it is a bit of a hassle having to drive to it after a day's caving.

It snowed the next day so we went home.

Richard

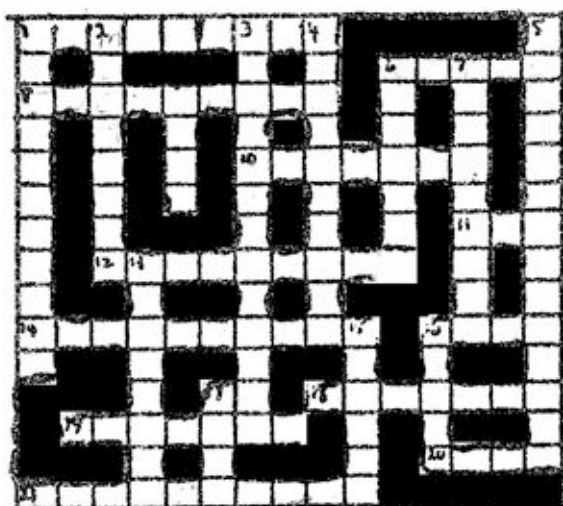
McNeall

Footnote
Caverna Alba Visit

As the SSS contingent possessed sophisticated camera equipment we visited this superb chamber so that SSS could take photographs. They were well pleased with the beauty of this spot but less pleased with my etriers which got them there.

Mike es

Lake



ACROSS

1. Deer meals get somewhat confused by a bewitched aunt. (9)
6. Lycra's stretchiness makes it ideal for a member of SUSS. (5)
8. Stoop, fool, in order to push up on these when prussiking. (4,5)
10. Being schooled but not sconded at Wyant. (3,4)
11. Look over our w.c. ! (3)
12. A skee love run, I always go head over heels (4,4)
14. A nun earthed below the ground? (10)
16. Have a go! Gamble! Don't stand there with your mouth open! (4)
17. Sounds like (2)

18. Count in a bar how many remove the Schweppes from their drinks (7)
19. It's now hutchies give way to these winter homes (7)
20. A lonely scream is not on (4)
21. Feeling red? Our president certainly is. (10)

DOWN

1. Sounds like the 6th letter's like a wattle, as is Lydia Pinkham's compound in every case. (11)
2. Lunar lactose found in windy caves? (8)
3. & 9. You peek a floor belo' if you do this, and you won't get hurt (4,6,3,4)
4. The 2SM sin agent on a mission? (10)
5. Och, a legal stoic should be concerned about things relating to the study of the last day, hootman! (14)
6. I guess where this caving area is? (6)
7. Sounds like the first and second letters are cut for a jaunt on the harbour, not down a rope! (9)
9. See 3 dn. (4)
13. What Dgar Llen Oe's aven kept saying? (8)
15. Don't shun Ted, he's being pursued. (6)
16. Yonder Bungonia without a red bunion, but it still hurts (5)
17. A lithe editor considers you old. (4)

Solution to last month's crossword

ACROSS : 2. Speleology; 6. I'll clip hope; 9. ed; 10. Bungonia; 11. Once; 14. Sea rescue; 17. T.C. ; 18. prussik; 20. elite; 22. Pike Lake; 24. dossier;

DOWN : 1. Reimburses; 2. Scientist; 3. Lycanthropy; 4. Others; 5. Good; 7. IRA; 8. Evening (see 5 dn); 12. Ensuing (Ensuing is an anagram of penguins minus the p:- the musical abbreviation for piano, which means softly); 13. Helictite; 15. Eclipse; 16. Squeezes; 19. Rope; 21. mad;

Hope you had fun!

AUTOMATIC CAVING BATTERY CHARGER

Introduction

This article describes a battery charger suitable for 4 volt lead acid batteries and operation from 240 volt, 50 Hz mains supply. After a caving trip the battery can be connected to the charger and left unattended for several weeks.

The charger is short circuit proof and cannot damage itself or the battery if the latter is connected the wrong way round. Keys for the charger, like the one on the car battery charging plate, can be purchased at exorbitant prices and it is best to obtain one. My charger has now been in successful operation for one year without failure, so I feel confident with regard to its reliability. More importantly, however one's battery receives correct charging and consequently will maintain optimum performance over many years.

Circuit Operation

(If you are not familiar with electronics skip this stuff and go to next section).

The programmable unijunction transistor (P.U.T.) forms part of a standard relaxation oscillator circuit which produces output pulses at a frequency of 300 Hz when, and only when, the caving battery is connected. These output pulses are of insufficient amplitude to directly drive the gate of a silicon controlled rectifier (S.C.R.).

Hence they are delivered into the base of a transistor T_1 which initiates conduction thus causing a current surge through the 1 : 1 signal transformer.

This d.c. current surge is derived from a diode (IN 4007) and capacitor (220 μ F). The current surge induces a positive* going pulse into the gate of the S.C.R. Some P.U.T. oscillator overshoot results in negative pulses (these are bad for SCR's) which are removed by the small silicon signal diode pointing towards the SCR gate. The other signal diode limits the cathode-gate voltage to under 1.7 volt or so.

When the SCR conducts a charging current of 0.5 Amps flows from the main transformer through the bridge rectifier (which can be purchased as a single unit), the 10 Ω resistor, the SCR and into the battery. A green L.E.D. across the 10 Ω resistor turns on when charging occurs. As the battery voltage rises, the 3 signal diodes in series start to conduct and eventually the voltage at the base of transistor T_2 is sufficient to turn this on which short circuits the .022 μ F capacitor in the relaxation oscillator. Thence no output pulses are produced, the SCR stops conducting and charging ceases. The 100 Ω resistor continues to conduct a trickle charge (10 mA approx.) into the battery, which is adjustable via the 1K Pot in series.

Hunting now sets in when the battery voltage falls a little and the circuit starts charging again. This will be indicated by the green L.E.D. flashing on and off, this is normal and is the means by which charge rate is reduced towards the end of charging. The 1K potentiometer before the 3 signal diodes in series determines the battery voltage which will turn off the full charge rate.

Adjust it until the green L.E.D. just stops flashing when

a fully charged battery is connected.

By the way a red neon light is connected to the mains to indicate that it is connected and on at the mains switch. There is no on/off switch on the charger as it is the caving battery voltage which automatically turns on the oscillator upon connection.

Consequently a short circuit of the output will mean there is no voltage and the charger will turn off automatically except for the small trickle charge. Finally a fuse should be included for full protection.

*(Signal transformer wires must be right way round to do this - check with a C.R.O. if possible).

COST AND INSTALLATION

Transformer was	\$8
Plastic Case	\$6
Battery Key	\$5
Total cost about	\$20 to \$30.

This is cheap compared to commercial chargers which are not nearly so good anyhow.

The unit can be assembled on a slice of veriboard and installed in a plastic case so that the metal key can be screwed on to the top. The case I purchased measured 13 cm. x 13 cm x 8 cm

SIMPLETON OPERATING INSTRUCTIONS

1. Plug into power point and switch on mains
Red neon will come on. This is normal.
2. Connect battery.
Green light will come on. This is also normal.
3. Push under bed and forget until next caving trip.
This is normal.

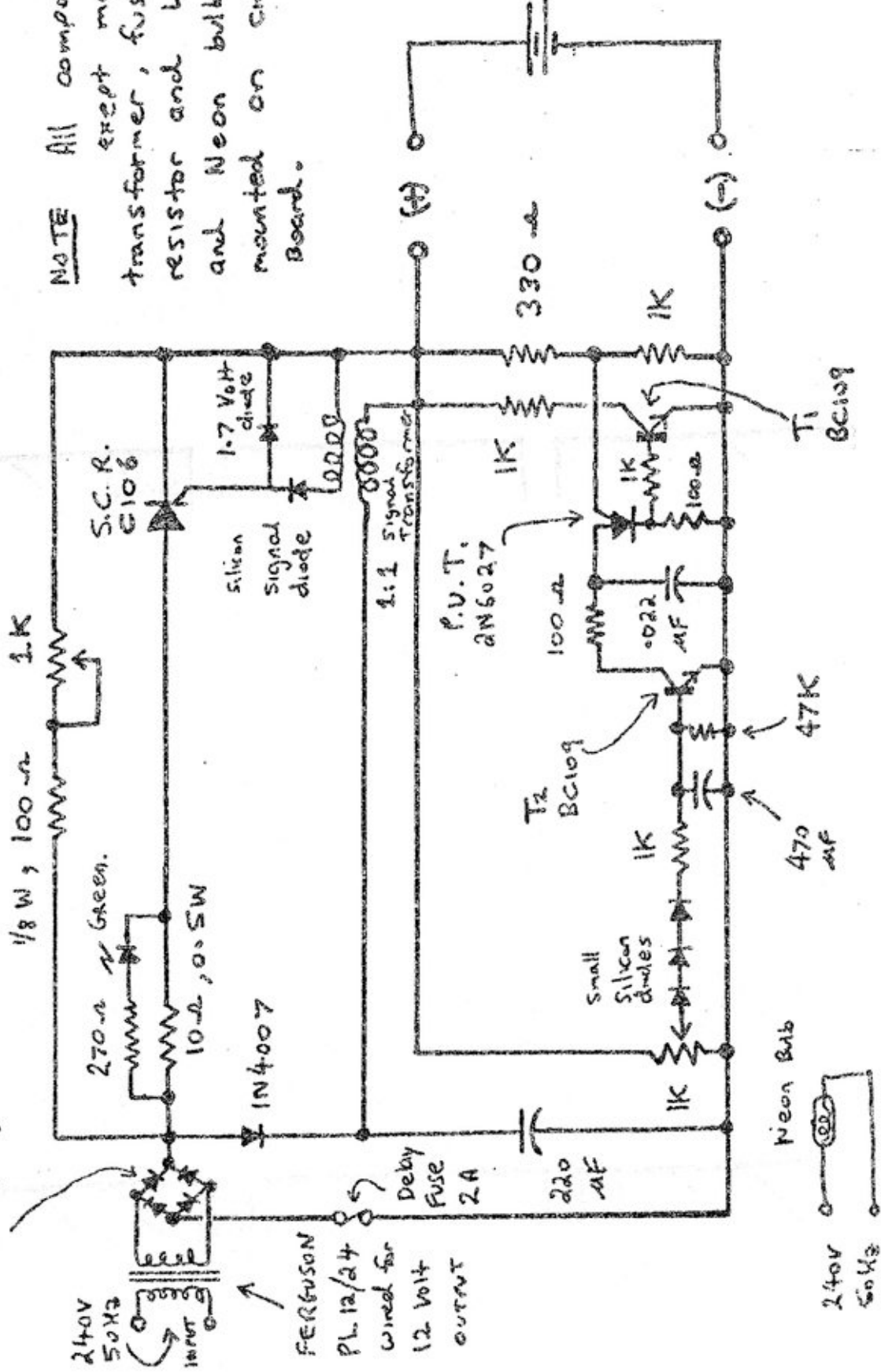
GOOD LUCK.

Mike Lake.

AUTOMATIC CHARGING BATTERY

4 Rectifier diodes
IN 4007

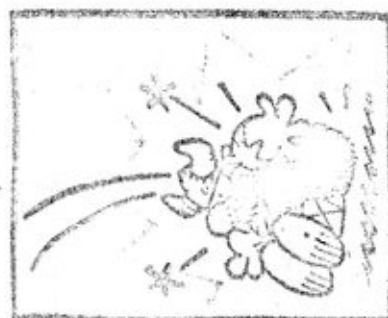
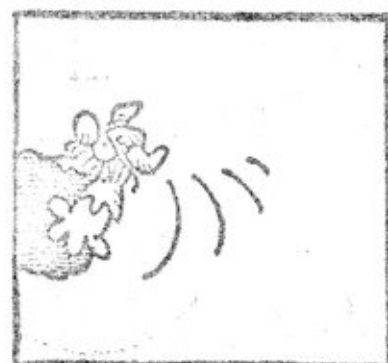
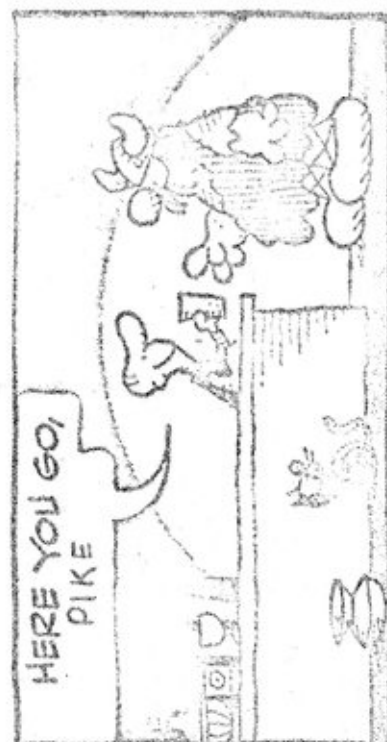
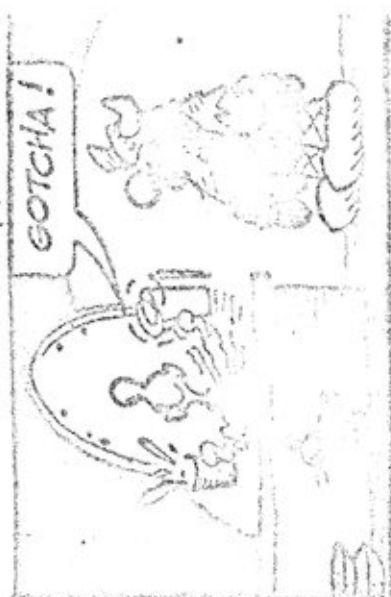
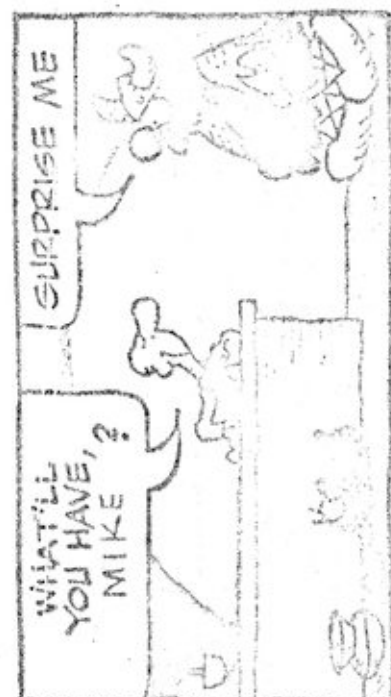
CHARGER.

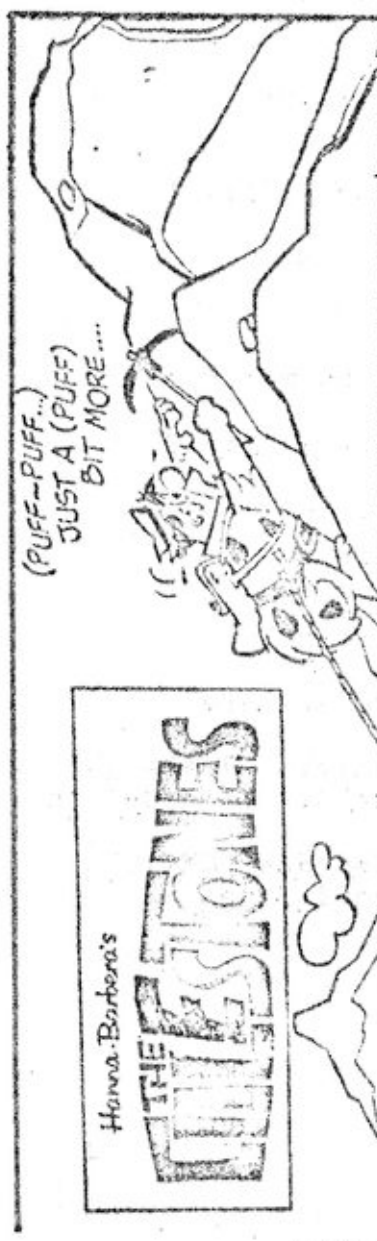


Neon Bulb



Mike Lake.





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NEW ELECTIONS TO THE REMOTE & INACCESSIBLE PEACES SUBCOMMITTEE
Bryan Cleaver, Helen Turton, Geoff Innes.

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Sunday 22nd Spring Creek Canyon. Contact Ian Mann, 631 4321 (h)

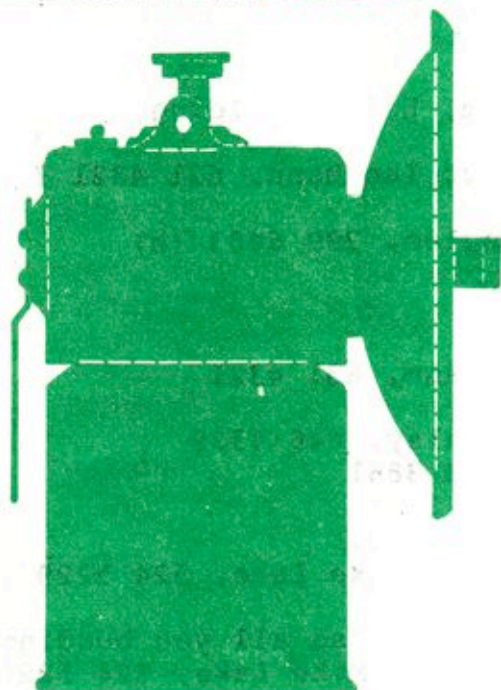
December

1st 3 weeks Nullabor. Contact Roy Winstanley, 646 4339
or Ivan Desailly, 773 3861

Friday 11th Spring Ck Canyon. Full moon trip, so all you budding lycanthropes take note! Contact Mike Lake, 524 5229

Sunday 13th Claustrol Canyon. Contact Ian Mann?

SUSS Bull 21(6): 85



SUSS

BULLETIN
 of the

SYDNEY UNIVERSITY
 SPELEOLOGICAL SOCIETY

BOX 35, HOLME BUILDING,
 UNIVERSITY OF SYDNEY,
 N.S.W. 2006

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