front cover

March 1355 ---------- No. 10

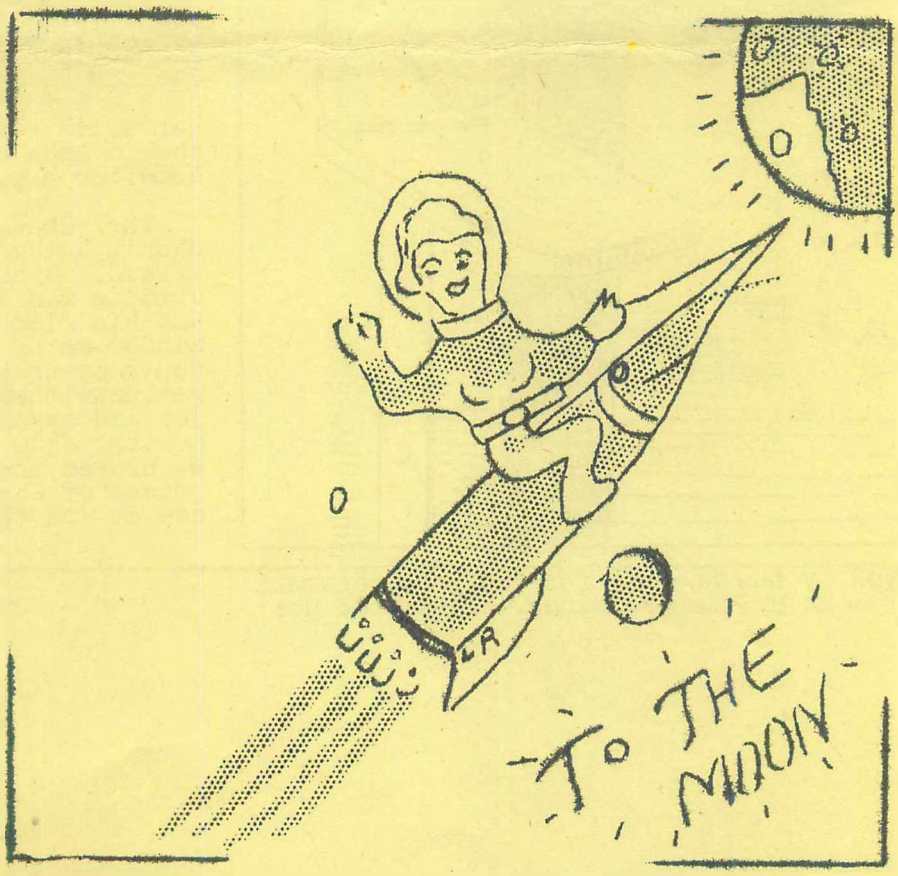
ANDROMEDA

AN ELEVENTH (count 'em) FANDOM PUBLICATION

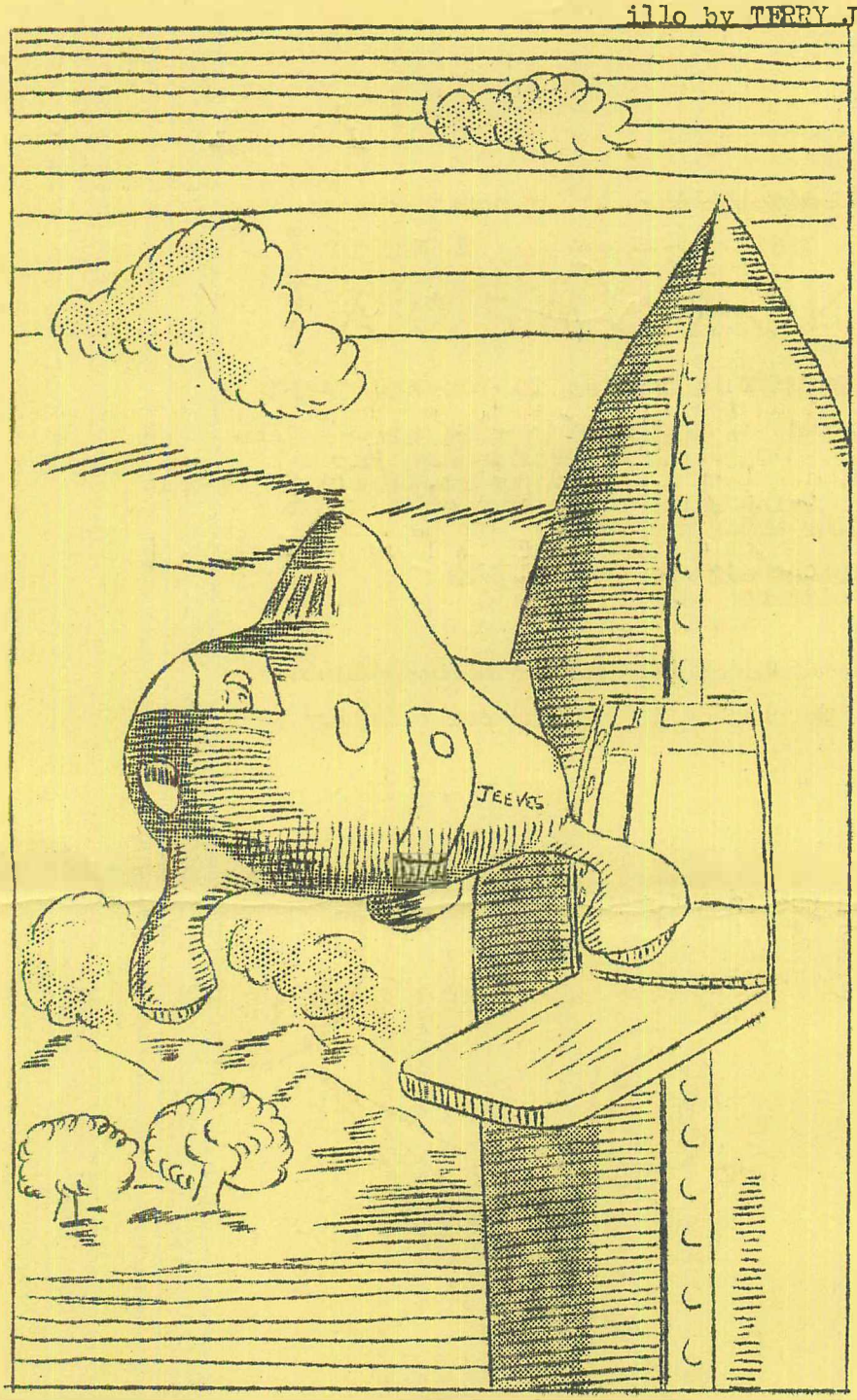
ANDROMEDA is published by Pete Campbell, 60 Calgarth Rd, Windermere, England. 4d (5¢) a copy or by exchange. Advertising rate: 7/- per page, smaller areas pro rata.

Assistant editor: PAUL ENEVER
Art editors: GEORGE WHITING
and DON ALLEN

There. We said it ! But who cares anyway ?



illo by TERRY JEEVES



POST-CRYPT

68 Leopold Road,
Wimbledon,
London SW 19.

Dear Pete, Comments re &ROMEDA--

Front page. Why does "LR" keep putting these 'orrible faces all over the place ? Wouldn't a fannish cartoon be a better means of utilising the spare gaps ?

I suspect you of getting in a sly dig at FISSION with this back-dating lark. February 1455 indeed. What are you going to do with the 24th issue ? Make it B. C. ?

The two yarns "Judas" and "Mark XIV Smith" were quite definitely the best fan-fiction you've yet published, but who's Clive Jackson ? I've not heard of him before, but if he can write stuff like that I should know of him---a newcomer or a pseudonym ?

The "Ghoul Changling" didn't interest me I'm afraid. Brian Varley's article was interesting, and his film comments reminded me of the serious & you-know-what article (as yet unwritten) by Pete Taylor and myself about the cartoon film ANIMAL FARM. We braved the atrocious prices of London cinemas to see it and thoroughly enjoy-

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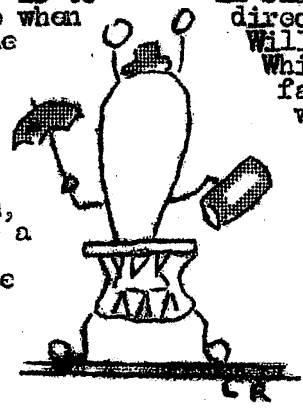
ed it. When it comes round to you ~~Liddy Proviniials~~ er, out-of-town chaps, go and see it. Any fan should find it both enjoyable and amusing.

About Ken Slater's article---thanks, Ken, for pointing out those drawbacks. Actually I've found out another: providing I didn't insure the stuff I mail and none of it went astray or got damaged before reaching the buyer, and I got together enough capital to be able to buy sufficient variety at a low enough discount, I'd be supplying the material to the fan at about 4% cheaper than the fan's cheapest source of supply. Which would hardly be worth either his or my time and trouble. And assuming I put 9 hours a week into it I'd be working for about 4½d an hour..... I think my scheme had better wander off into a quiet corner and die a natural death---though one possibility is that of fen making cheap sources of material known to each other.

Your envelopes are very cheap indeed, Pete, and I hope the supply at that price continues as I'm going to make full use of it in the future. Also Geoff Wingrove's stencils at 13/6 and 9/- per quire are very useful.

And now to "Post Crypt". You know, Arthur Thomson's gonna love you---I don't think ! Not only do you leave out the "h" in his surname, but you put in a "p" that just ain't there ! You wanna watch yourself now he's on the staff of HYPHEN ---they'll be calling you Ptee Cummvel or something similar !

Re: Don Allen's letter. I'm very tempted to reply to it in a nasty tone as I'm sure that's how he meant it to be read. The insinuations were both catty, unpleasant and highly uncalled-for. He's lucky his initials aren't H.J.C. or I'd sue him. However I'll assume he meant his remarks to be merely fannish criticism, and not cheap insults. I quote "The most trufannish thing to do is to buy the paper at wholesale price when ordered, and the faned to pay the price plus postage". So you think that's the best thing to do, do you ? Right, well here are the reasons why that wouldn't work. The scheme, if it worked as I first suggested would be a good thing for fandom, would it not ? Then it would be a pity if it had stopped after a few weeks, wouldn't it ? Because if I charged only cost plus postage, what would happen if



(1) A fan writes to me and asks details, I reply and give them to him: cost of my mararials and postage 3d. He replies and wants say three reams of green foolscap, and asks how much; I reply telling lowest offer I can make, cost of my second letter 3d. I then send him his order at wholesale price plus postage. Total loss on one customer 6d. And if I dealt with 25 customers a week, the loss would be quite considerable.....

(2) I'd have to have a variety of materials on hand, and a list of them--- say 200 duplicated 3-page lists.....paid out of my own pocket, of course !

(3) I write to various wholesalers (say 20) asking their prices and comparing them to get the cheapest. They probably charge 3d for catalogues, and that together with postage costs makes me about 10/- out of pocket. I ask for samples, and I don't think they'd be given away for nothing--- more expense. No, I doubt if there's any trufan willing to be that philanthropic. A small loss is one thing, but at that rate it would be too much.

Now, I'm not wanting to blow my own trumpet, but I run a S.F. Postal Library that up to now has meant a steady loss of up to £1 a month. So I don't think anyone can accuse me of being in fandom just for what I can get out of it. How much do you lose on S F SATELLITE ? If anything at all I'll bet its nowhere near so high a percentage loss as mine is on the library--- remember, I'm still at school, and that means a pretty low wage.

And now we come to the most laughable part of the letter. Once more I quote, "I'm in fandom for the fun of it.....and I don't like anybody who makes a living out of it." Well, did you hear that, Slater ? You've got to stop this profit-making. Even though you built up just about the best fan organisation in the world when you worked on Operation Fantast its no excuse. You are making a living out of fandom at the moment, so quit it---Don Allen says so ! The same goes for that faned-cum-S.F. club-creater Tony Thorne, and his confederate Mike Tealby---you're implicated in Slater's foul "money-making racket" as directors, so quit it quick. And as for Willis, Clarke, Bulmer, Ashworth & White, Campbell, and all you other faneds---if you're making a profit with your fanzines then stop---you aren't Trufans. Who says so ? Why Don Allen says so ! And as for the Manchester fen, they made a profit on the Mancon. Heinous crime ! No matter if you spent months of work, sweating your guts out, worrying yourselves silly over whether it would be a success, you have no place in fandom !!! So Don Allen says.

The letter, I notice, ends rather abruptly with "Besides I" and then no more. Did you censor it, Pete ? And as to your remark about duelling with zap-guns, I

think that for Don Allen it would be more appropriate if I used a 40 millimetre field howitzer.....Relative values, you know.....

Egobooishly,

JOHN B. HALL

((By the Great Ghod Gidher, John, but that was some mouthful. As long as all the letters in the last three "Crypts". Now to answer some of your points in the order of appearance:

You should have heard of Clive Jackson, the great SLANT writer, famous for the hard covers between which he has been published.

The 8½ x 5½ envelopes I'm using were bought from General Trade Clearings Ltd., 82-90 Seymour Place, London W 1. I got 2,000 (minimum order) at 29/4 per 1000. They don't advertise duping paper in their catalogue, but many other kinds of office material and equipment are supplied in bulk. (special reductions on quantities of 50,000 or more !) Before I'm able to use the 2000 myself, they'd deteriorate from damp---thus I'm cutting losses by flogging 'em off. However, to offset postage which was higher than expected, the price is now raised to 4/- per 100.

For two reasons, John, you or any other London faned should be in a favorable position to go ahead with your scheme: (1) in London you've quite a few potential customers within a short distance---thus a saving on rail and maybe postal charges; (2) as a faned yourself, you could eventually use the stock yourself, if no-one bought it! I normally get 12 or more reams of paper at a time, two or four quires of stencils and up to six tubes of ink--- and that's for one small fanzine ! Now compare the 16-page ANDRO with the 170-page EYE.....

Almost the entire membership of the Surrey Circle, except Arthur Thomson Himself, have sent me dire warnings to watch my spelling in future (please accept my hasty apologies, Arthur !). To ensure fannish justice, the SC are hereby empowered with the right to call me anything they like (signed WPCampbell witnessed by L R.).

The "Besides I" on Don's letter last ish should have had correcting fluid on it, but I forgot. The full sentence--- which was not censored, merely ommitted for lack of space---reads "Besides I don't think that he'll be able to get paper cheaper than 6/6 per ream which is what I pay for mine !"

Just for the record, as they say, my view is that (1) John is entitled to make a profit, but (2) he won't.

c/o Marcus Bishop,
267 Hessle Road,
Hull, Yorkshire.

Dear Pete,

You know, come to think of it, I don't think I'm very impressed with John Hall either. I must have read the bit about the 20% extra on the cost price of the stuff, but somehow it must have missed registering on my foggy fannish wits. Strange really, because, like Don Allen, I detest anything which seems to smell of huckstering. I particularly hate those people (I won't call them 'fen') who are so kind as to sell Stateside fen 1/6d British prozines at 35/ a throw...about 100% profit.

Oh Ghod! More bloody fan-fiction ! Look, I know you have to get rid of the stuff somehow, but can't you flog it to Bert Campbell or the John Spencer crudzines or somewhere ? Of course, the two stories in thish may be the most wonderful thing to hit fandom in the last decade, but I wouldn't know because I haven't read them; nor am I likely to. All this fan-fiction gives ANDRO the appearance of a completely fuggheaded publication (which it isn't). And is K.H.Brunner any relation to John? Incidentally, who balled up the Allen illo for "Judas"? Did you do it or did he do it himself ? That face was lousy !

Cheers,

MIKE WALLACE.

((John Kilian Houston Brunner is all one guy; and Don Allen stencilled the illo---making a darn good job of it too ! Wassamatter, Mike, someone soured you on fanzine fiction ?? Read "Judas" then let me know what you think. If you (or anyone) is not satisfied with any of the yarns you find in ANDRO, return your copy to me and I will publicly devour it ! How's that for a guarentee ? Unfortunately, I cannot perform this gastronomic feat at the Cytricon, as I won't be there; so as clients can hardly be present at the actual devouring, I will merely offer to return evidence in the form of some spitted-out fragments. OK ?

* * * * * * * * * * *

"The fiction's good, too.....I <u>like</u> it."

---D. RICHARD HUGHES.

((Egoboo ! Thanx, Richard !

* * * * * * * * * * *

((One more letter.....try page 9...

COURSE COMPUTERS FOR SPACESHIPS.

BY GEORGE WHITING.

"...and the pilot walked across to the control board and punched the new course into the computor. "We're all set for Mars now," he said laconically...."

Thus is astrogation often lightly dismissed in sciencefiction stories. The computor (or whatever the author decides to call it) does all the work, it being merely necessary to punch a few buttons and sit back. Sounds simple, doesn't it ? I used to think so too, until I got to discussing the problem with an airline navigator ; this article is the result. I am, in this short article, discussing only the broad outlines of astrogation and the basic principles on which a course computor might be designed. A book would be required to cover the subject thoroughly. I hope to stimulate you to argue with my conclusions. I am here concerned only with Solar System navigation ; if man ever journeys starward, although the basic problem of astrogation will remain the same, the techniques employed will need to be different, especially approaching light velocity. Don't forget the stars aren't where you see them now.

Before discussing the principles of a course computor it is first of all important to consider the type of problem it will be called upon to solve and the basic data it will need to solve it. The essence of astrogation is to arrange for two moving bodies to meet at a given point in space and time. The course of one body - a spaceship - can be controlled, the course of the other - a planet - is known and invariable. In principle the astrogator's problem resembles that of the anti-aircraft gunner, who knows that to hit a moving plane he must aim in front of it, at a point where shell and plane will arrive together.

Ever tried lying on your back trying to hit a moving fly with a peashooter ? It will give you a good idea of the elements of the problem. The anti-aircraft gunner must, of course, solve his problem in micro-seconds because the time of flight of his shell is correspondingly small. To solve the problem for him he has the services of an electronic computor known as an anti-aircraft predictor. This equipment embodies the basic principles of a spaceship course computor and with modifications could be used in that role : unfortunately with its auxiliaries it may weigh over a ton ! However, the astrogator's task is this much simpler - HIS target, a planet, follows a definite known course, thus simplifying computor design.

To function, an anti-aircraft predictor must be supplied with a certain minimum amount of information; obviously no problem can be solved without information. One of the things it must know is the present position of the plane, and this is supplied to it, usually from radar, as a bearing in degrees, an angle of elevation and the range in yards. (See Fig.1)

COURSE COMPUTORS FOR SPACESHIPS.

The bearing is with respect to grid North, the elevation as an angle above the horizon and the range from the gunsite. This information defines the position of any object from a given point (in this case, the gunsite) in three dimensions.

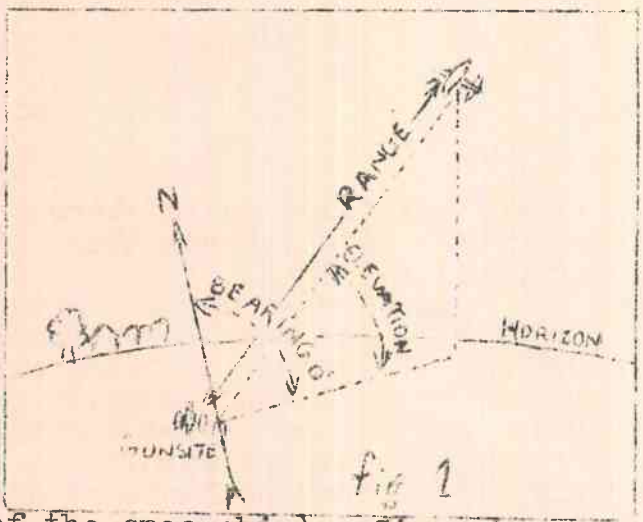


fig 1

In outer space, however, there is no North, no horizon to act as reference points, so what will the astrogator use ? Most probably the stars since they are pin-points and relative to our time-scale, fixed; plus a Solar System chart or charts. In this respect the astrogator will resemble his earthbound opposite number, the navigator.

The predictor will also require to know the speed of the shell (corresponding to the speed of the spaceship). Since the target plane is moving, range, bearing and elevation fed to it from the radar will be changing constantly. From the rates of change of these quantities the predictor calculates the future course of the aircraft, and it is in this respect more complex than a course computor. It then supplies the gunner with information on where to point his gun so that shell and plane will arrive at the same spot together. Similarly, the course computor in a spaceship will tell the pilot where to point and direct the ship so that he will meet his destination. It may even do it for him through an automatic pilot.

We have roared up out of Earth's atmosphere and now, in free fall, are ready to begin our journey. What essential information must we feed to the course computor to enable it to plot a course for it ? Let me briefly summarise it :

a) Our present position and the present position of our destination - another planet. The positions must be defined with reference to some fixed point - Sun or stars - and perhaps plotted on a Solar System chart to give us our range (straight line) from our destination.

b) Details of planetary orbit of our destination including perturbations, obtainable from astronomical tables.

c) Our average speed throughout the voyage, agreed on beforehand. This will be affected by any course corrections applied. It is not possible just to turn an object in space (it will go side ways at its original speed); it is necessary to cancel out the original velocity first. Note: Our speed must be defined with reference to some fixed point, say relative to the sun which, relative to the planets, is fixed.

d) Details of the orbits of other planets. Where did I put that chart? To avoid straightline courses

passing through the Sun or another planet, a curved course may be necessary. More complications.!

e) Details of any perturbations likely to be introduced in our course by the gravitational attraction of other planets and the Sun.

Now the best accuracy which any computor is capable of is governed by the accuracy of the information supplied to it. The accuracy of the information at our disposal - at the present state of astronomical knowledge - might bring the ship within a thousand miles of the planet. Might! Remember the distance of the Sun is known only within plus or minus ten thousand miles, a high degree of astronomical accuracy, equivalent to measuring an object nine inches long to one thousandth of an inch. Incidentally, to forestall argument, radar is less accurate, even, in finding the distance to the Moon. This brings me to two of my main conclusions, viz :

1) It would be necessary to make corrections to the spaceship's course during the voyage to reduce cumulative errors, requiring constant checks and observation.

2) In any preliminary course calculated a safety margin must be allowed to enable the ship to arrive ahead of the planet ; it may not be capable of chasing it.

As a final clincher let me say that even to take advantage of the accuracy outlined above it would be necessary to set the ship's course to within less than 1" of arc - or the angle subtended by a human hair (dia. 1/500th. of an inch !) held at a distance of thirty four feet away from you. Quite a tricky feat, swinging a ship to that accuracy. And if the fuel supply is so lean as to prevent us from making course corrections during the voyage, may I suggest that we go back home - LET ME OFF !

Given the information outlined in the previous paragraphs, a competent astrogator could, in time, plot his course without the aid of a computor. A ship's navigator solves similar problems daily, although his destination does not move. On the other hand the astrogator can, for most of the time, anyway, see his destination and make observations and corrections accordingly. The main advantages of an electronic computor are speed and accuracy, but for most of the voyage it is just so much dead weight. Most certainly the astrogator would be trained to work without it, in case of breakdown.

This brings me to my third conclusion : that the only course computor a spaceship would carry would be the astrogator - no key punching, please ! He would, of course, be in radio communication with a spacestation or Earth where such a computor would be installed. They might have to make allowance for the time lag of the radio in their calculations. Aboard ship he could have a simple numerical computor like an office adding machine to help him in his calculations.

One further point. I have assumed that all our movements from planet to planet take place in the plane of the elliptic and can therefore be plotted on a two-dimensional Solar System chart, thus

simplifying matters considerably. Unfortunately not all planets move in the same plane.

The course computor will be required to solve mainly trigonometrical problems, but since it will deal with moving bodies elements of the calculus are introdiced as well. Invariable information - planetary orbits, gravitational effects - would be supplied to it or built into it by punched tape, card, specially cut cams or graduated resistors, in the same way that shell trajectories are built into an A.A. computor.

To learn how a course computor will operate it is instructive to consider how a modern computor solves similar problems. Take the simplest trigonometrical problem it would have to solve, the solution of a right-angled triangle. Relating this to A.A., find the height of an aircraft when range and angle of elevation are given. (See Fig. 2.)

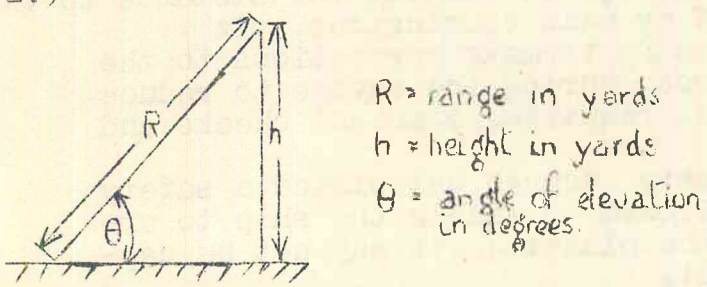
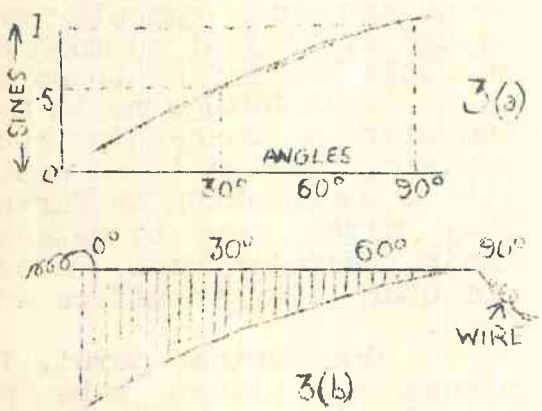


fig 2.

Now this problem is solved by the simple trigonometrical relation, h = R sine θ, which with the aid of a set of mathematical tables we could work out in a few minutes ; the computor in microseconds, in the following manner.

First the essential data is converted into a form which the computor can use. Range is converted into voltage at, say, ten yards equals one volt. This voltage, derived from a carefully regulated power supply, is controlled in magnitude by a variable resistor calibrated in yards. This potentiometer can be adjusted manually or remotely by means of a servo system drive. The angle θ is translated, not into a voltage, but into the angular movement of the slider on another potentiometer whose resistance varies in accordance with a sine law. Let's slow down a minute and take a look at the construction of this potentiometer.

Plotted graphically the sine of each angle from 0 to 90° against the angle gives us a curve similar to fig.3 (a). Cut an insulated former to the shape of this curve and wind it <u>evenly</u> with resistance wire. (fig.3 b). Now bend it in a quarter-circle and calibrate the angular movement of the slider from 0 to 90°. (fig. 3c). The slider runs on the flat edge, of course. Now the resistance between slider and the 0° end of the potentiometer (X in 3c) will vary as the sine of the slider's angular movement. Set the slider at angle θ and resistance will be proportional to sine θ. This serves the computor in lieu of a set of sine tables. Now to consider the way this potentiometer is used in the circuit.



Reference is made to fig.4. The potentiometer is fed across its ends with a voltage proportional to range (1 volt to 10 yards). The angular position of the slider is set to θ degrees The resistance between slider and common return is proportional to sine θ. So by Ohm's Law, Volts = Current x Resistance, the output voltage tapped off by the slider will be proportional to R sine θ, i.e., h the height and the answer we seek. This voltage can be used to operate a voltmeter calibrated, say, in yards of height or fed into another circuit for further computation. Note at 0 degrees output will be maximum and equal to R - (sine 90°=1) i.e. at 90° height equal s range. Fair enough ?

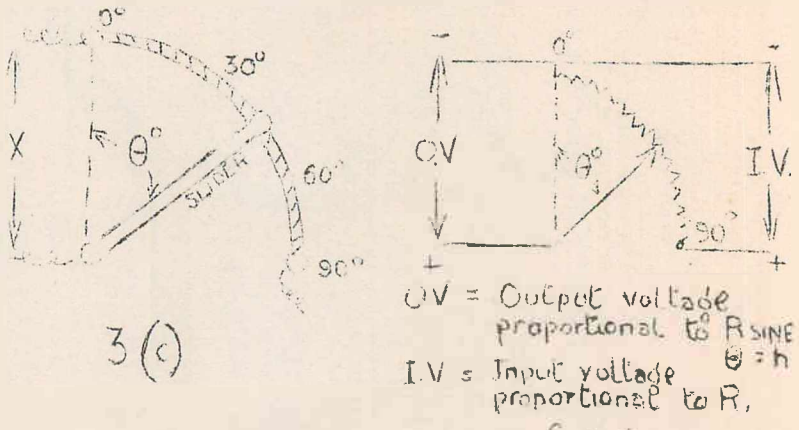


fig 4.

That in its bare essentials is how a modern electronic computor might solve a trig problem. In actual equipment complications are introduced by electronic dc. amplifiers used to isolate the input and output of the potentiometers from external loading which would alter their resistance. These dc. amplifiers in turn are supplied from electronically regulated supplies and balanced to prevent spurious outputs. The potentiometer sliders, although they could be set manually, are driven by servo systems which could be operated from punched tape - even push buttons. The course computor would supply as its answer either a punched tape for feeding to the automatic pilot or a series of setings for same.

To those who have stayed with me this far I say Thank You. Now let me hear your arguments.

-----THE END-----

****

POST CRYPT (cont'd from page 4)

6 Tudor Close,
Cheam, Surrey.

Dear Pete,

Arthur Thomson will kill you ! One P and no H---watch out at Kettering, Pete---he pulled a zapgun on us t'other day !

And who the hell is Don Allen ?

Now look, I ain't sticking up for Johnny just because he's pointing a zapgun down my neck, nor am I sticking up for him because he's a SCite, but I do not like these people who don't think before they write, and Don Allen's one of 'em.

Constructive ideas about how he could put his system right, yes Don, but there's no need to go off the deep end like that. I've just reread John's letter in &-8 and its a pity he mentioned he'd make a profit like that. Previous to writing that letter, Johnny had told me that any profit would go to cover overheads, but does he mention that in his letter ? Nevertheless, all you had to do, Don, was to point out his mistake quietly and politely. Anyway, I for one don't care if he does make a profit ! It would be most unfannish, but if I got my supplies cheaper, why the hell should I care ?

Cheers,

GEOFF WINGROVE.

((Most interesting inside information there, Geoff.....

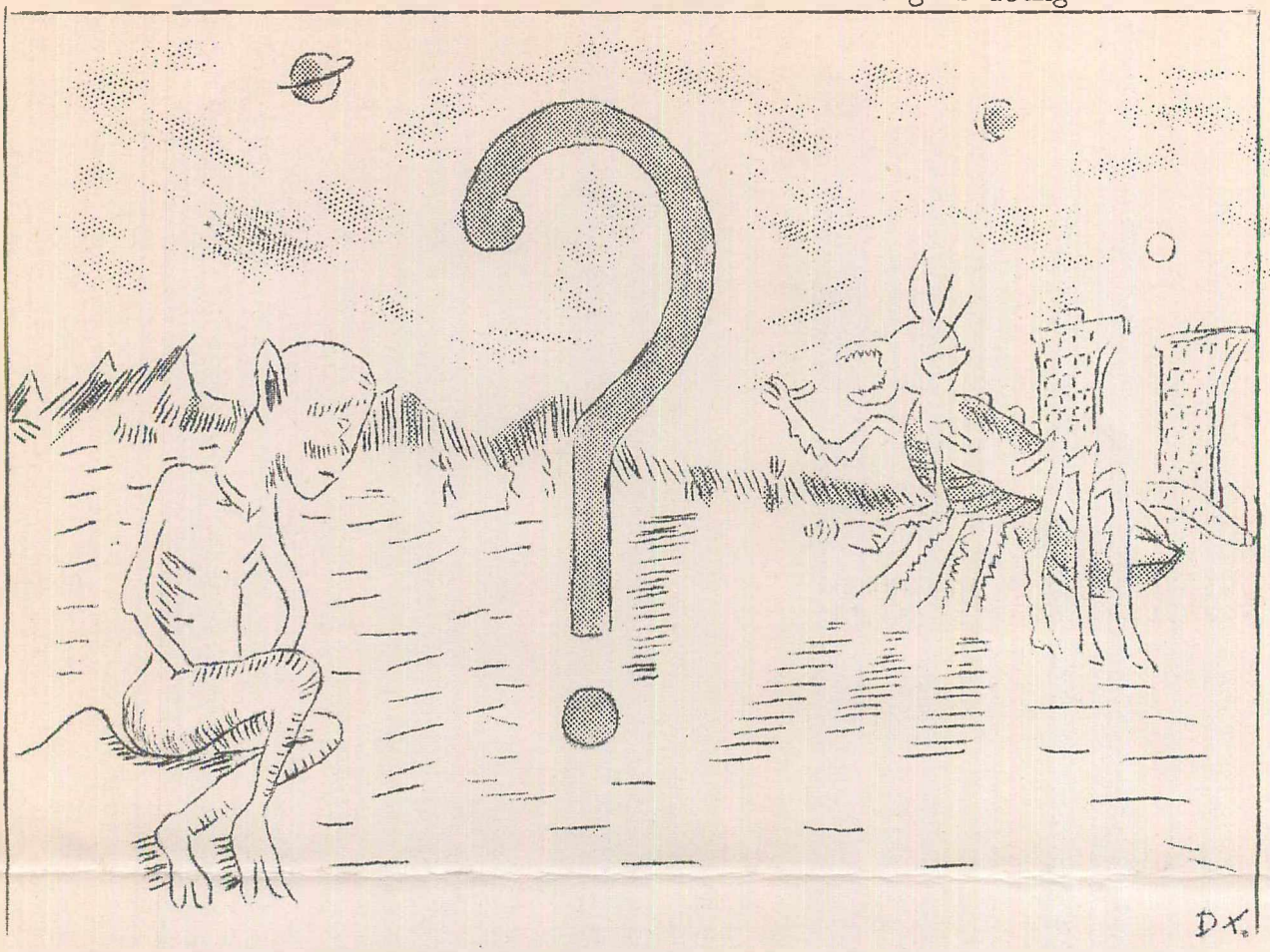
* *

RANDOM THOUGHTS

"Hekto is a filthy mossod of reproduction."

--R.I.Peace

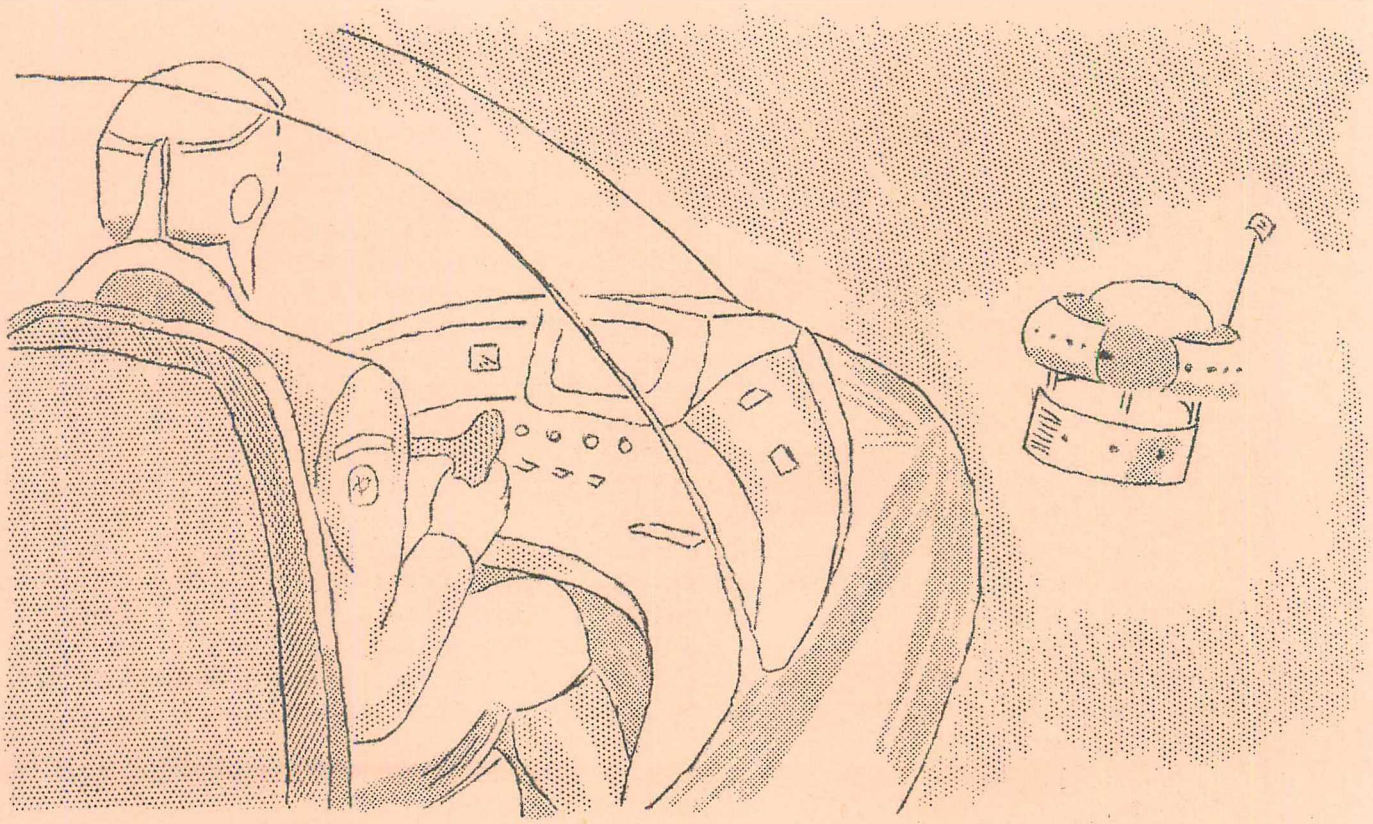
Illustrator: Douglas Young



Alien Thoughts

by CHICK LESLIE

Perhaps afar an alien face,
Peers at stars in Outer Space,
And dreams about a civilisation
Where slaves are freed from domination;
And racial hatred seems so small
Against the cosmic might of all.
Where races mix in sweet benevolence,
Not ruled by a tyrant's cold malevolence.
Perhaps with four legs and a hundred feet
All kinds of people you may meet;
An opposing thumb may win the day
On other worlds so far away.
Or with tentacular arms with tips like bands
They may mingle with folk with fibrous hands.
A faceted eye may no longer be
Imperative for alien folk to see;
Perhaps they 'see' in another way
Where sight is not needed to show the day;
And perhaps from across the star-strewn space
May come a gentler, nobler race.
With orders from the Powers That Be
To set the innocent alien free.



TIME WARP.

BY DALE GRAEME

Mind alone can travel backwards in the fourth dimension but, on the other hand, mind is so used to having a body that it just cannot imagine itself without one.

Mike was bored. This was no life for a rich-blooded, virile, handsome guy ; well, at least he had rich blood - genuine grade AX type and nobody could deny that. So an assignment with Interstellar Control in some of the civilized systems of the galaxy would have been more fitting to one of his calibre.

He could still see the Chief's face beaming at him from behind the polished chrome desk at headquarters.

"I've detailed you for Perimeter duty, Janson. Good for you. Keep you out of trouble."

Mike snorted disgustedly. Perimeter duty ! Huh ! It was more like a modern form of the ancient punishment they called solitary confinement. Why didn't they scrap the old micro-wave stations, anyhow ? Economics, he supposed. It would cost too much to establish force lanes way out here on the Edge. If he had lived before the first Atomic Era they'd have called him a lighthouse inspector. As Engol the Vegan always said - micro-wave stations were antiques. Nobody ever used them now except perhaps an odd barbarian ship travelling between the various systems scattered along the Edge. Every vessel in the Federation Fleet was equipped with force lane navigation so that the old electromagnetic beams were unnecessary. Heck !

What was the good of philosophising on the merits or demerits of micro-wave stations ? He still had his job to do.

The next halt would be Station Number 5783, now only some ten million miles distant. He had switched off the supra-light drive some time ago: all that remained, therefore, was to sit back and let the auto-pilot bring him in. On the visiscreen a tiny speck of light in the abyssmal blackness steadily grew larger while the computors clicked out the ever-decreasing distance. At five million miles Mike switched on the energy beams which would activate the airlock doors at the station. A few minutes later the speck on the screen had enlarged to a small planet, lit only dimly by its distant sun except where the tall tower of the micro-wave station splashed its blinding light over the barren rocks.

"Station 5783," muttered Mike. "One more and one less."

He was checking the subatomic generators down in the basement when the alarm bell went. He cursed. Just his luck to be caught in an energy storm. He rushed up to the Frequency Control room, where red warning lights were burning and a geiger chattered spasmodically. Meters indicated that radioactivity outside was already high, and mounting steadily.

He gazed through the thick quartzite windows above the control desk, into the terrifying velvet of inter-galactic space, then down to the harsh contours of the planet's surface. There was no visible emission - the planet had no atmosphere to ionise - but from out of those infinite depths were sweeping waves of pure energy, a hurricane of invisible death.

It was many decades since McKellar, the famous explorer of the Galactic Rim, first encountered and recorded the existence of those terrible storms. They raged in vast cyclones in inter-galactic space only occasionally penetrating a galaxy, but when they did and should a small sun lay in their path, a super-nova was the result.

Mike knew that thick walls of insulating matter and a powerful force screen protected him from the cosmic menace, yet even so he felt a little apprehensive. His one hope was that Station 5783 did not lie in the main stream of the waves and it was small consolation that such storms were short-lived.

"I'll be a pile of cosmic dust if the old genny doesn't hold out," he muttered, grimly.

He checked the records. Generator last examined fifty years ago : and all the equipment was over a hundred years old. The force screen was of an obsolete design but it would probably resist the peak of the storm. The chatter of the geiger annoyed him and he switched it off.

One thing remained to be examined ; the powerful light at the top of the tower. He entered the elevator and was smoothly and swiftly carried to the light-beacon room. Here everything seemed in order. The great discharge tube emitted its blinding white glare and the cooling plant was in operation. Mike switched off the power. After a moment's blindness his eyes began to discern the room, now lit only by a few concealed fluor tubes.

Uh-huh ! There on a wall panel gleamed a small red light. Some time in the last fifty years a condenser circuit had fizzed. Of

course one of the many emergency circuits had immediately taken over but he would have to repair this faulty one. It was after he had finished the job that he looked outside the transparent walls.

"Gods of the Cosmos !" he exclaimed. No longer was the tower surrounded by intense blackness; instead there was a blue haze. The Huntzon effect, which meant only one thing. The force screen was becoming saturated.

Alarmed, he lost no time in returning to the Frequency Room. The scene was far from reassuring, for the meters registered intense outside activity. This must be the peak of the storm, he thought. He tried the geiger and was startled by its sudden loud staccato. There was one thing he could do - switch off the radio transmitters. They were useless, anyhow, as long as the force screen remained in action and their power could be diverted to strengthen the screen. He did so, and for a while the suddenly comforting blackness came back, but then was driven away by an even brighter blue haze.

When he heard the second warning bell ice-cold panic began to run its fingers up and down his spine. Padioactivity was leaking into the station. What was now a trickle might soon become a flood and then.....

Mike thought of all the comfortable jobs he'd had and all the good times that went with them. It didn't seem right that he should die here, at the back of beyond. He pulled himself together with a jerk. This was ridiculous. Auto-suggestion could kill a guy and he'd already prepared himself a cremation box.

Maybe the output of the generators could be stepped up. He'd try it, anyway. At least it was better than going morbid. He passed the frequency control desk and stopped suddenly.

The transmitter was on again !

He hadn't switched it on ; besides, the frequency range was different.

There must be someone else in the station.

No, that was impossible. Noone could have entered the airlock without his being aware of it.

It was then that he began to feel the lightness. A strange numbness was spreading over his body and he felt intoxicated without being giddy. He was alive, yet his brain received no sensory stimuli but sight.

Alive ! The word jumped in his mind. Maybe this was death ?

He glanced down at himself. His body was still there but it had a curiously hazy quality as though he were looking at it through an out-of-focus lens. He pinched himself and felt nothing.

Strangely, this haziness did not include the control room, for the panel in front of him was clear and distinct. He looked again at the transmitter switch. How, in the name of the Cosmos, had it been switched on ? And the frequency ranges.....?

The only warning he had of the stranger's arrival was the opening of the inner airlock door. He was a big man ; judging by his height and generally human appearance, an Astronian.

Mike rushed to meet him.

"How the blazes did you get in ?" he started to ask, then re-

alised how far away the words seemed. He couldn't even be sure he had spoken them ; they might have been mere mental projections.

The Astronian ignored him completely, walking straight to the control desk. Mike's brain was a confusion of bewilderment allied with fear. Was this a ghost, or was he ? He strode to where the hulking figure bent over the rows of knobs, intending to find out who the fellow was, but as his hand reached out to swing the Astronian round he saw through the windows into space.

The blue haze was gone. The meters...? He swung round. They lay at zero. So the storm had passed !

The Astronian suddenly straightened and turned round. He looked straight at Mike, but there was no acknowledgment in his eyes. He stepped forward and Mike instinctively stood aside, his hand still raised. The Astronian's shoulder went right through it.

Mike fell back in amazement. "Who the devil are you ?" he tried to say, but his larynx would not respond.

By this time the big man was at the visi-screen on the far side of the room. Mike followed, in a daze. He was beginning to feel like an invisible spectator in a dream sequence.

The screen showed the unchanged splendour of the stellar depths, and something else. A spaceship gleamed in the void and, as it grew larger, Mike recognised it as a Thraxel ship of very old design. Soon it filled the screen and every detail of its structure was plainly visible, even the insignia on the bows standing out clearly.

The Astronian's hand slid to the firing button of the station's disintegrator beam. Mike watched, horrified, as he pressed. A blinding flash lit the visi-screen and when it died the ship was revealed, plunging to destruction, a great gash torn in the stern. It passed rapidly out of screen range and then, some seconds later, a fearful, thundering reverberation shook the station and a flaming orange glow shone through the quartzite windows.

Mike rushed over and looked out on the barren surface of the planet. Less than a mile away the wreckage of the spaceship lay, lit by a pall of glowing radioactive gas which hung like a curtain over it.

Something clicked in Mike's mind. He had seen this incident before, somewhere. No, on second thoughts, he hadn't seen it, he'd heard it on the librophone - Annals of Galactic History: The Mystery of the Wrecked Spaceship on M-W Station 5783. It had belonged to a small Perimeter race who were partly dominated by the Astronians.

Mike stared round at his strange companion, the story clear in his mind. The ship had been lured to this station by false radio beams and then destroyed, killing important members of the Thraxel race. The Astronians blamed the Caplhods, a nearby planetary empire who then retaliated by reversing the charges, claiming that the Astronians had more to gain by the disaster than they. The outcome was a ruinous galactic war and like so many wars in history, no one ever actually knew who had staged its provocation.

He looked again at the visitor from space and realisation dawned on him. It had been Astronia, after all, and he had been an eyewitness of the historic event. The stress of the cosmic storm had brought about a time slip, a thing that was known to have happened before, and the long past scene had been re-enacted before him. He

staggered over to the orbital position indicator. It read 230°. The planet's position when he arrived had been 330°. It had retrogressed 100° - the equivalent of one hundred years, Earth time.

He stared stupidly at the indicator for some seconds, his senses reeling. He half turned to look again at the Astronian but a wave of nausea swept over him. He collapsed backward over the instrument panel and as he slumped to the floor his hand brushed over a small shiny lever.

They found him lying where he had fallen.

"He must have thrown the emergency call switch before he blacked out," said one.

They lifted his limp body onto a stretcher and carried him into the airlock.

"Must have been that energy storm. It was enough to upset anyone's equilibrium," said another. As they carried him into the waiting spacecruiser of the 2nd Galactic Squadron he began to babble deliriously.

"The Astronian...walked through him.....must be dead. I tell you I can see through myself. Time warp, that's what it is....One hundred years..."

His rescuers listened, smiling. "He's got it bad," said one.

"He'll get nothing but nice cushy assignments after this," said another.

"Yeah, they'll keep him well away from the Edge. Once a guy has had radiation sickness he's no use for lonely jobs like the one this guy had," observed a third.

"Stand by for blast-off." The command thundered through the inter-com.

There was a growling roar which steadily rose to an almost inaudible whine, a gentle lurch, and the craft was spaceborne.

Behind them Station 5783 receded and diminished to a dim speck of light against a velvet background. Soon it was gone completely ; swallowed up in the blackness of inter-galactic space illumined here and there by distant misty nebulae.

THE END.

EDITORIAL

Every three months we give out prizes to the most popular contributors, and the time has now come for you to elect the prizewinners for the First Quarter, '55. So when you've read the present issue and the two previous issues (Jan., Feb., and March '55), let me know the names of those writers and artists whose work you like best. Winners will be announced next issue. There's not space here for a detailed description of the set-up, but anyway the details are as given in the December '54 issue.

I'd also like your votes on one or two other matters: First, should the mag have two staples (for more elegant appearance, or one only (for easy handling)? Second, do you prefer the large or the small typeface ?

During the April-May-June quarter there'll be only one issue, and that will be devoted to mine own drivellings---an OMPAzine in fact. Letters, columns if any come in, and fillers will be used, but of course there's no prizes for that ish.

John Hall has just completed the new library stock-list of the London (formerly Lakeland) S F Organisation. This is Britain's second-largest fan-club, and operates a very large magazine library. Write to 68 Leopold Rd, Wimbledon, London SW 19, for details.

As mentioned elsewhere, I won't be at Kettering this year, but here's all good wishes to those who do go---and don't forget to tell me what happens there....!

(Letters in plain sealed envelopes opened first.)

BACOVSA

illo by R. F. Mooney