

# Duplicating Without Gears!

A SYMPOSIUM EDITED BY  
A VINÇ CLARKE

## FOREWORD

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The genesis of DUPLICATING WITHOUT TEARS can best be explained by the foreword to what might be called the first edition, the original one-copy, typewritten chain-zine:

"As of September '52 I've been wallowing in duplicator ink for something on the order of 5 years, and to my annoyance find that I'm still learning. I don't mind learning, but if I'm still re-discovering what to someone else is everyday knowledge, then I want to know...but fast. Also, there are sure to be more innocent fans attempting to put out 'zines in the future. It seemed to me that it would be a Good Thing if I were to put down all the oddments, the quirks, the tips, the things to do and the things not to do that I've discovered, and to pass the result along to all those folk who I know are in a similar position, so that they can add their quota for my benefit. Thereafter, this 'zine will be kept circulating at regular intervals...."

As you might guess, the regular circulation didn't work out. Through various causes the 'zine took months going around, but the second preface, for the second round, had something extra to add:

"....In the interim, I have had a good deal of professional experience with office stationery, including duplicating materials....I am glad, and rather surprised, to find, however, that most of the information contained herein is not only still valid, but is not generally known in the field where one puts a stencil on an electric duplicator, pushes a button, stops back and watches the sheets fly out. This is still, as far as I know, the only collection of its kind, and for that reason I propose to duplicate it in a limited edition when it returns from (this) round...."

But the third circulation had to take place, for the fanzine boom of late '54 had started and there was no time to duplicate the now-large mass of material. The original collection, itself a large packet, had been swollen by other people's tips, corrections, catalogues, examples, etc. So once again it was sent around:

"This year (1954) has been marked by the discovery of fandom by Gestetner; they've sent around leaflets and in the London area representatives have called on fans. Nothing much has come of it except that Gestetners have been slightly shaken by the weird things fans have been doing with duplicators, and a number have received copies of the Gestetner booklet; I estimate that you'd need something like £150 worth of equipment to turn out the equivalent of the letter...."

The fourth and last circulation started in October '54, and finally came back to me in late '55. Since then it has been my intention to digest the information therein and duplicate it instead of sending it around again, one reason being that the four-inch thick pile of matter contained so many irreplaceable documents that I was terrified of it being lost.

So this is DIT. I'm not so egoistic as to believe that it is the last word in duplicating; there are many things about which I'm still seeking information, and further notes will be gratefully received, but I hope what is set down here will be useful. If YOU don't find anything fresh, it may help someone to whom you can pass it.

DIT will be published in parts, and will be sent as available to members of ONPA. Extra copies will be run off and will be available for a small charge to other fans when the complete 'zine has been published.

## SO YOU WANT TO PUBLISH A FANZINE?

If you've reached that peculiar state of insanity amongst s-f fans in which you must publish your work or that of others, you'll find a bewilderingly wide choice of method in the madness. In the past practically every modern process of duplication (with the exception of the multiple printing press) has been used, and the end products have been as varied. Fanzines have been produced on toilet-rolls, Hoebius strips and sand. A completely edible fannish Christmas card is in existence, and once upon a time some now-famous authors contributed to a carbon-copy fanzine.

But the general workaday choice for the common or garden fanzine must be a method of duplication which will produce legible copies of typewritten mss and hand-drawn art-work in quantities ranging from 40 to 1000 copies at an economic price. This specification is well filled by the Stencil Duplicator, usually called, on the 'bath-mat' principle, the Duplicator. In the USA use is still made of the proprietary term "mimeograph", as cameras used to be called "kodaks", but in Britain this name has never won favour.

DUPLICATING WITHOUT TEARS is primarily concerned with the Stencil Duplicator, therefore, and references to the availability of material concern the UK. Attention will be given to other methods and to the US scene in separate sections.

### THE STENCIL—WHAT IT IS

When you go to a stationers shop and ask for duplicating stencils, you will find that they are packed in 2-quire boxes, a quire being 24 stencils. In each box there should also be approximately 16 sheets of carbon paper and 48 strips of gummed paper in perforated sheets. If you buy your stencils in smaller quantities the stationer should give you carbons and gummed strips in proportion.

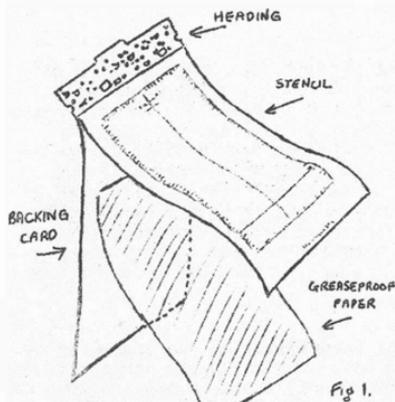


Fig. 1.

easy to change headings on stencils, as will be explained later, but in general it's better to buy the specific heading for the machine which you are using if possible.

The third element in the stencil is the backing-card, attached to the heading and serving as a protecting surface to the back of the stencil. The junction with the heading is perforated so that the backing can be torn off when the stencil has been put on the machine. There should also be a sheet of grease-proof paper between the backing-card and the stencil when bought, to aid in protecting the latter.

The actual stencil sheet is approx. 15" x 9", and is made of paper with very long, open threads, which has been coated with a colloid plastic or an acetate-based solution. This coating, on the usual type of stencil, has a limp and rather heavy quality, and its appearance is wax-like, the face of the stencil being matt and the back having a slight sheen. The usual colour is white, and it has a semi-translucent quality similar to tracing-paper. Coloured stencils are common in the US, indicating different types of stencil, but here the white is the usual finish.

This sheet is gummed at one end to the heading, which is a piece of card pierced with holes or having tabs, the purpose of which is to make a quick and firm attachment to the duplicator by fitting the holes etc. to similarly placed studs on the machine. Some stencils are sold as 'Universal types', for any machine. It is quite

## HEALTH AND CARE OF STENCILS

A lot of nonsense is talked about the fragility of stencils. In the pre-war days, when stencils were wax-coated they were fragile, and it was dangerous to crease them too much for fear of the wax cracking. With the plastic finishes now available it is reasonably simple to crumple up a whole sheet into a ball and then smooth it out and use it. This is a salesman demonstration trick, and is naturally not recommended for general practice. It's similar to frying an egg on a pavement in a heat-wave...it can be done but it's wanton vandalism. It's worth noting that a creased stencil can be used if the waxy coating hasn't been pierced, but it is liable to develop cracks after several hundred copies have been run off from it.

Keep the stencils in a cool, dry place, with the greaseproof sheet left in them until use. After use, if the stencil is wanted again, dry off the ink between pieces of newspaper (and, if thought necessary, wash with an ink-solvent), and keep between grease-proof paper again. If you are uncertain as to whether you want to use the stencil again or not, just take it from the machine and store it between newspaper pages...some of the ink will dry on the stencil and will have to be washed out with turps (white spirit) or some other solvent if it is used again, but it is the quickest method of storing. Special storing files can be obtained from the larger manufacturers (Gostetner, etc.). A reasonably neat method of storing is to take several issues of a paper similar in size to RADIO TIMES, open out at the middle, take out the staples and restaple along the long edge. This will give you a kind of storage book of a convenient size.

Stencils tend to dry with age and to grow lighter and less pliable. Very cheap ex-ELSO stencils can sometimes be obtained which show these faults, and it's best for a beginner not to use these until he has had some experience with the types of backing used for various thicknesses of stencil cutting.

## MUTANT STENCILS

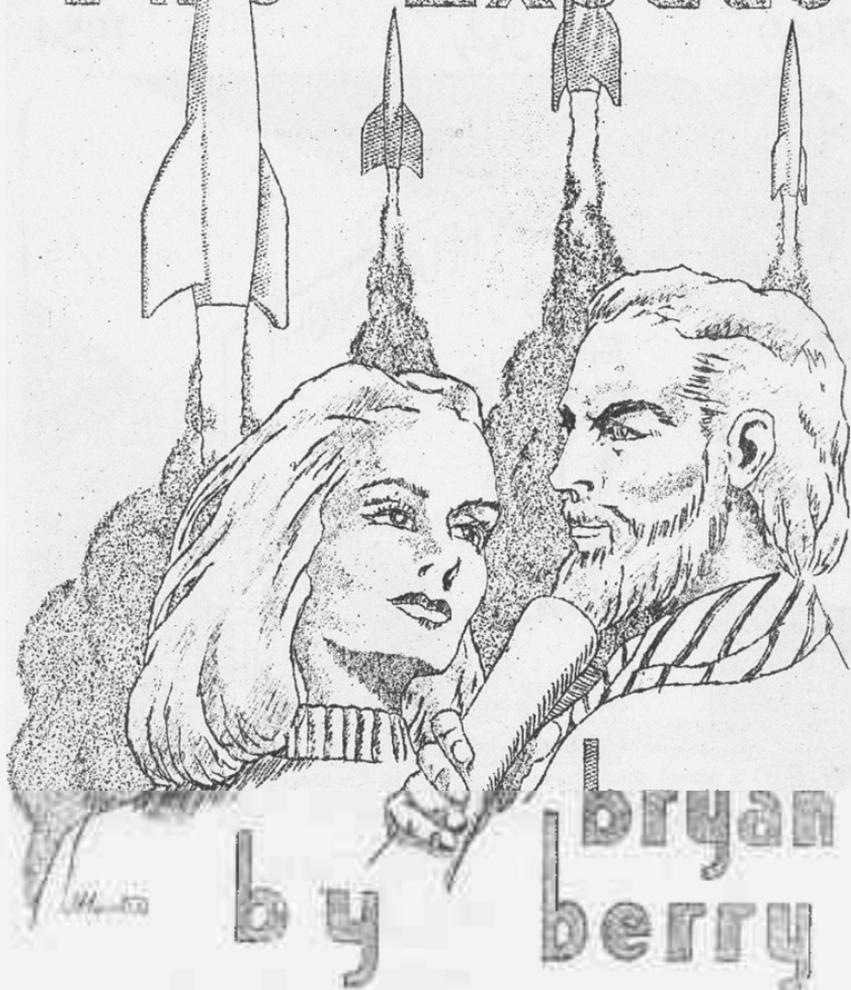
As noted, the size of the stencil for the great majority of machines is 15" x 9", although at least one firm issues a smaller size for their own special machine. Gostetner also sell small headings and drawings already cut on stencil. Most firms stock stencils which are supposed to be better for drawing than the ordinary typewriter stencil, but the latter has been used by countless fans with good results. Apart from the photo-stencil, to be discussed later, the only wide variant is the new brush-stencil. This stencil is coated with a special wax which is dissolved by a solvent instead of being 'cut' in the normal manner, and is extremely useful when large black areas or heavy lines are wanted. The fanzine TRIODE has experimented with covers by brush stencil with some success but they are not yet in very wide use, principally because it is (at present) extremely difficult to cut them by typewriter or shading plate in the usual way.

## PRICES

As of mid-1956, the usual shop-price for single stencils is in the region of 1/- each; below that, they're cheap, above, dear. The price diminishes in proportion to the quantity bought, and it is possible to obtain from wholesalers in 5-quire lots for as little as 6<sup>1</sup>/<sub>2</sub>d each. No hard and fast rules can be set out for buying, on this item or any other mentioned. If you are starting as a fan-publisher, find out from those with greater experience of the current market prices and the fairest ones.

Note that in the duplicating world the stiff plastic stencil used to trace letters or figures is known as a Lettering Guide.

# The Exodus



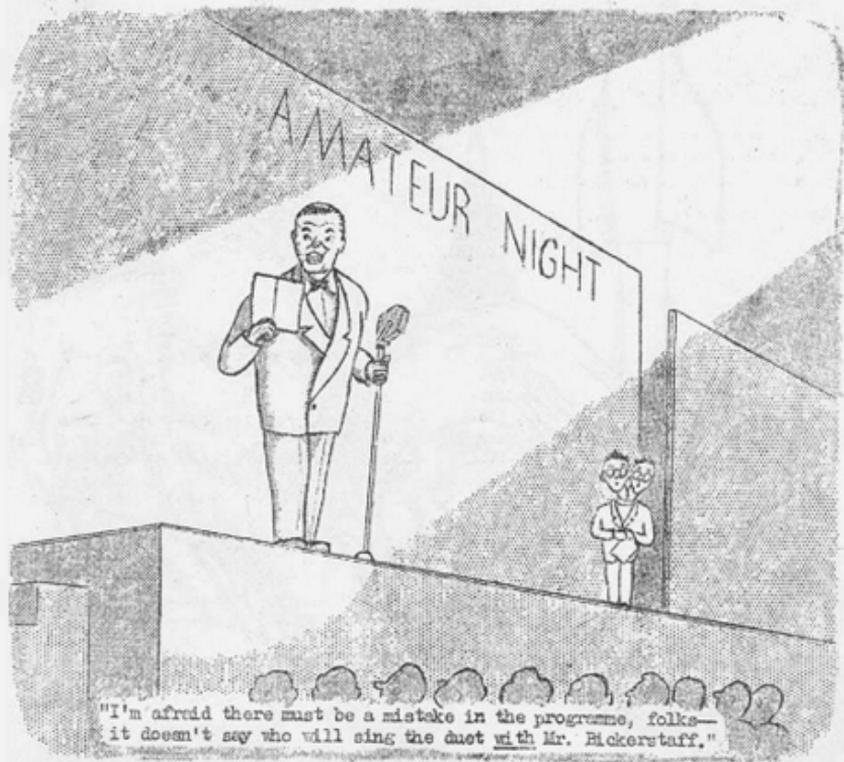
by bryan berry

# HYPHEN

No. 9

July

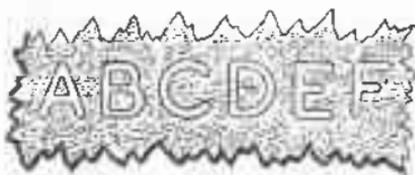
1954



BRITISH ORIGINAL  
EDITION

INCLUDING SUPERMAN CONOTES

# STENCIL CUTTING THEORY & WHAT YOU CAN DO IF YOUR PRACTICE ISN'T PERFECT.....



ONLY THREADS HOLD THE CENTRES OF THE 'B' & 'D' AND THE TRIANGLE OF THE 'A' IN PLACE - AND, IN FACT THE WHOLE ILLUSTRATION

To cut a stencil you don't put on your Teddy-baby clothes and slash at it with a razor. In fact, a sharp edge is definitely not wanted! Stencil cutting is the removal of the 'wax' on it so that ink can be pressed through when it is on the duplicator, but the paper threads ~~must~~ be left intact.

This latter is the major difficulty in stencil cutting. If you cut through the threads, then there is nothing to keep, say, the middles of 'o's in place, or the middle of any circle cut in the wax.

The threads are too thin to impede the flow of ink, and if a well-cut stencil is held up to the light it should be quite possible to see through it where it has been cut. Anything less than this, even if the line or letter examined is lighter or more translucent than the surrounding stencil, means that the ink cannot pass through it.

If you use carbon paper, be careful that the ink from the carbon sticking to the stencil wax doesn't give a false impression of the depth of cut.

If you do err and on examination find that parts of your stencil are not cut deep enough, it is possible to get a slightly better result by the use of Developing Fluid. This is known by several trade names, even JESBO calling it Developing. It is available in small bottles which have a brush attached to the cap, and it is extremely like petrol in most respects. Painting an 'under-developed' area on a stencil will help to dissolve just a little of the 'wax' left in badly-cut lines. It can also be used when the stencil is actually on the duplicator, when it also thins the ink in the area to which it is applied. Like many duplicating requisites, developing fluid is not usually found except at the bigger office stationers.

The opposite to Developing Fluid is Correcting or Stopping Fluid. This is an invaluable aid to any stencil cutting, for it enables most cutting mistakes to be rectified. The liquid is painted over an unwanted word or line in a stencil, slightly dissolves the wax but dries almost immediately, leaving a thin skin which serves as a fresh surface and which can be re-cut if needed. It should be applied as thinly as possible, the offending cut first being rubbed with a thumb-nail or a cleaning-brush handle or something similar to smear a little of the surrounding wax into it. Used with care, correcting fluid can be made to 'spot-out' practically any small area, although if possible it should not be used more than once over any one place.

The text-books issued by duplicating firms state that when a mistake is made in typing the offending word or letter should be raised from the stencil backing by means of a pencil inserted between the wax and the backing, the word then painted out and time given for it to dry. This is useful advice when the fluid is merely painted on in great gobs, as might be expected of a teen-age office typist, but in fact is only needed when the fluid is used in such quantity that (a) it might seep through the wax and stick it to the backing and (b) it takes a long time to dry (ie 2-3 minutes.) From experience, I would say that the quickest method is to: rub the wax to diminish the size of the cut; brush lightly with the fluid; smear this across very

very lightly with the ball of the thumb. The fluid should then be dry almost as soon as you can re-align your typewriter carriage again. Here again, the quantity of fluid needed can best be learnt from experience, but always remember it's better to err on the meagre side; letters that aren't quite blotted out can always be spotted out afterwards when the stencil is out of the machine.

The fluid dries with a stiffer finish than stencil wax, and therefore if you wish to type over it again hit the keys harder. When the stencil is put on the duplicator make sure that the corrected spots are not 'proud' and standing away from the inked surface by placing a piece of paper over the places & rubbing.

The fluid should never be left uncapped, and the cap should be screwed on tight when not in use. The fluid usually thickens near the finish of the bottle, and instead of trying to use this on the main typescript or art which has to be corrected reserve it for odd abrasions and creases on the stencil which sometimes show up after the stencil has been placed on the duplicator.

Correcting fluid is usually coloured red or blue, to enable corrected mistakes to be spotted and scrutinized more carefully than the rest of the stencil. Quality varies slightly, and British fans should be careful of 'Swallow' brand blue correcting fluid, which if brushed on too hard will eat away the stencil.

If you run out of correcting fluid, a substitute can be found in nail-varnish. As it is thicker than the correct liquid, use as thinly as possible.

It's difficult to see how a corrected line has 'come out', but if in doubt a torch held at the back of the stencil will show how the second cutting has penetrated.

For large areas of the stencil which have been torn the best remedy is gummed paper; the thin white type, as in address labels and the perforated paper given with stencils is preferable to thick paper (such as brown gummed rolls). On a rotary duplicator the stencil is constantly curving and flattening, and thick stiff paper will have less elasticity and tend to fall off when dry. Scotch tape ('Sellotape') does not hold very well on the wax surface and is unreliable.

Stencil Varnish is comparatively little used; a thick brown liquid, its use is as a glue, to attach in pieces of stencil such as patches or illustrations which have been cut separately. Unless you are doing a lot of this, correcting fluid makes a good substitute. (see ill.)

## STENCIL CUTTING WITH A TYPEWRITER

A test section for showing how a piece of stencil can be fitted into text or illustration. This is deliberately outstanding as an illustration. A test section for showing how a piece of stencil can be fitted into text or illustration. This is deliberately outstanding as an illustration.

On each stencil are printed guide lines for various sizes of paper, with injunctions such as "Do not type above this line" etc. Be very cautious in the use of these lines and the figures running down each side of the stencil and along its top and bottom. Although most duplicators can cope with any cutting carried out between the marked lines, it's better to check if the stencil will printed on someone else's machine. Hold a sheet of paper against the stencil before starting and note where the best places are for starting

and finishing, and note the numbers. It makes for neatness if all pages begin and end on the same numbers and saves time on adjustment when duplicating.

If you are going to have an elaborate drama heading or an illustration on a page roughly outline the position with a soft pencil (see below) first, so the typing doesn't intrude where it's not wanted. Always type first and illustrate afterwards...the process of winding the stencil into the typer after cutting a drawing on it may damage the latter and in any case will close the lines up through pressure of the rollers.

Also note that when paper goes through a rotary duplicator it is first of all gripped between rollers somewhere in the first half-inch at the top. Any typing or illustration here will become blurred and torn very quickly, so always leave the top half-inch (at the minimum) free of cutting.

Reference was made to pencil marking on stencils above. Never use a hard pencil for lines or illos...the point will remove the wax. One of the thick 'Black Prince' or 'Black Magic' pencils is best, and the 'Chinagraph' crayon-pencils for writing on glass are admirable.



A CARTER ILL. FROM NYE JUNE '47.

OVER TYPE

To type on a stencil, remove the greaseproof paper and insert a sheet of carbon paper face up (ie. the wax of the carbon is against the wax of the stencil) and wind into the typewriter. When the lines at the top of the stencil appear, adjust the stencil in the typer so that it is straight. Note, however, that occasionally one comes across a batch of stencils in which the heading is out of adjustment and even perfect alignment with the printed lines will be of no use - the duplicated text will be slanting. If this happens, the stencils on the batch should be returned to the seller, or failing that, the typist should align the typewriter with the heading and not the lines.

Next, the typewriter should be set to 'Duplicating'. On almost all machines the ribbon-change mechanism has three positions, and one, usually marked with a white dot or cross on the typewriter fascia, puts the ribbon out action altogether. This is the position for stencil-cutting; the ribbon must not be used at all.

The keys should be hit with a more staccato touch than with normal typing, but it should not be necessary to hit them harder. In fact, stops and commas should be treated more lightly, if possible.

The letters will appear on the stencil face in faint black outline. This is because some of the carbon wax sticks to the stencil. In addition, the stencil wax which is cut out sticks - in the main - to the carbon, giving a slightly thicker cut and preventing the interior of the machine from receiving fragments. But you will soon notice that certain letters - notably the 'a' and the 'e' - are growing indistinct, and you may notice a small grey impression in the middle of the 'o'. You will find that the open spaces in these letters and others have filled with wax, and this has to be brushed out if you want to cut a clean stencil. A fairly stiff brush should be used, but not one with brass 'bristles'. Cleaning should be done quite frequently; on some elite face typewriters once every paragraph (elite is 12 characters to the inch, elite is bigger, only 10 to the inch) as the present machine. Cleaning fluid, mostly carbon-tetrachloride, is available, but is not much more effective than ordinary dry brushing.

In general, it is dangerous to attempt to wind a stencil backwards out of a typewriter; not only may projections catch and tear the already-cut portion, but the heading is difficult to extricate from the interior rollers which press on the platen.

It is obvious that not only the force with which the type is hit will affect the amount of wax removed from the stencil, but also the amount of this force which is absorbed by any cushioning effect at the back of the stencil. On the theory that an office typist with a standard machine will hit harder than is really good for the stencil, many machines are fitted with cork platens instead of the standard hard composition type. This is to cushion the blow of the type, and it works quite well on the standard machine, particularly if the typist is 'heavy-handed.' It should not, however, be used on a portable, as it reduces the cut too much.

On a machine which is cutting stencils too deeply (i.e. middles of 'o's and other letters are falling out etc.), the answer is to put some 'backing' behind the stencil. This can be almost anything...a sheet of duplicating paper, another sheet of carbon backing on the one already present (this latter is useful as you then get a copy on the backing card), the original sheet of greaseproof paper, etc. There are many possibilities, and experience is the only guide. Similarly, a backing sheet of stiff material such as acetate or a manufacturer's plastic sheet can be inserted if the cut is not deep enough, the solid backing improving it.

The question of a suitable backing is one of the most important in typewriter stencil-cutting, and many different effects can be obtained. For instance, a soft backing, which cushions the blow of the type, will also have an effect on the width of the letters, widening them. However, if your type is sharp enough and you want to cut a slightly thicker letter, the best method is to wind in a sheet of 'pliofilm' (an acetate similar to cellophane but softer) on the front of the stencil, so that you cut through it. Plioilm is cheap and the same sheet can be used several times before blurring and the general effects of the cutting make it useless.

Incidentally, stencils can of course be cut without the carbon backing, but not only will the letters be very much thinner, they will also be difficult to see on the stencil.

The manufacturers of the 'Barda' spirit duplicator issue a special backing sheet of paper similar to greaseproof but about .005 thick, quite effective as a stencil backing. Gestetners also have a 'cushion sheet', which is similar to a stencil but with blue dye on the threads instead of wax. This can be used as a carbon and also as a writing/drawing sheet backing, but is most effective when used in conjunction with the letter. Another Gestetner product is an 'oil-board' for much the same purpose as a backing-sheet. Gestetners are quite a problem in this respect...they appear to produce several differently named articles with much the same purpose.

It's asking rather a lot of a typewriter, especially a portable, to roll up an assorted mass of papers...stencil, heading, backing, etc...to an accurate line every time; for instance, there are different degrees of friction between the surfaces. It's wise to assist the platen by pulling the stencil up gently with one hand as you push the platen arm with the other.

Incidentally, it is a fact that stencil-cutting causes more wear to the typewriter than ordinary typing. I have also heard of platens being affected by cold in the stencil wax, but have had no personal experience of this.



**T**HE KNIFE was a thin, tapered sliver of steel. Razor edged, needle-pointed, a knife designed for slashing, for thrusting, for throwing. The knife of a killer. My knife.

I held it in my hand, letting the cold steel caress my naked thigh as I honed the paper-thin edge in an automatic reflex pattern. It was raining; the swollen belly of the sullen heavens had parted with a flash of thunder and spilled its guts on the earth below. It was cool and sweet, filling the air with its gentle murmur, splashing from the low eaves, laughing as it fell.

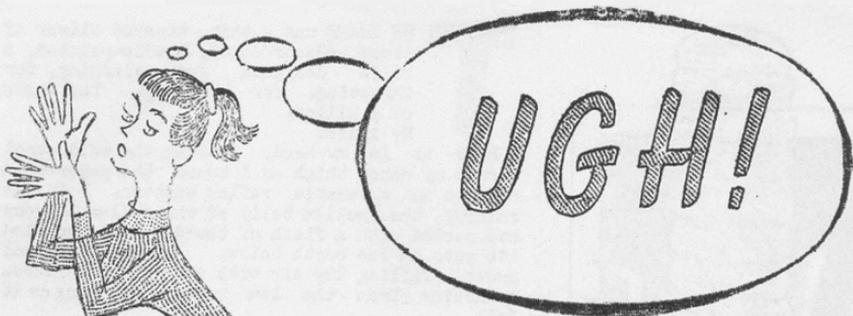
I liked the rain. It reminded me of blood, of the red tide of liberated life, gushing from the piping like a fresh-made wound. Thick and red like an old rare wine.

He was slow in coming. I did not know his name or who he would be and so I waited, huddled in the shallow doorway, the knife kissing my thigh. Listening -----

The man came splashing down the alley, weaving a little, his breath heavy with the raw odour of alcohol. I tensed, the knife reluctantly leaving the warmth of my thigh and, as he came abreast, I stepped behind him. The heel of my left hand clamped beneath his jaw, the palm against his mouth, the tip of the index finger slipping into the socket of his right eye. My right hand lifted the knife.

It was still raining when I returned to the cave. I stopped carefully over the heaped rubble, my naked feet gripping the wet stones, and paused as I heard a murmur within. Two voices, one that of a man, the other that of a woman. The one voice was unfamiliar, the other..... Rain fell against my bare teeth as I heard her laugh, sigh, murmur with sweet surrender. My woman. The woman who tended my care and administered to my wants, a poor thing I had taken in, fed, clothed after a fashion, beat rarely, and even when hungry harmed hardly at all. My woman.....with a man!

The knife adjusted itself to my hand as I entered the cave. I would face the man, show him with whom he had to deal, watch the fear and terror wash the lust from his face...and then.. I smiled as he turned towards me. Smiled, and poised the knife, giving him time to watch the play of light over the blade, the redness on its tip, the redness around my mouth. I smiled as I stood, not speaking, not moving, waiting for him to sag, to crumble, to whine. I enjoyed the moment to its full, it was as well I did. He had a gun.



Kerry Turner - 54

No. 2.

# DRAWING ON STENCILS



For hand-drawn illustrations on stencils a 'stylus' is used. There are two distinct types, the dart-type and the ball-point.

A

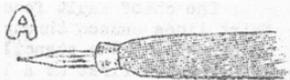


The dart-type stylus (see Ill.) is merely a metal point, slightly rounded at the tip, which is attached to a pencil-formed holder. Different firms sell many forms of this, which is the oldest and the most generally known, but only the handles differ, not the point. This type of stylus can easily be home-made from an old dart, a steel knitting needle or a similar object. The only universal rule is that the



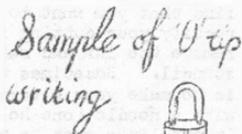
point must not be sharp and needle-like, or it will catch in the threads of the stencil and, pulling them, tear the stencil.

The ballpoint-type stylus, as its name implies, has a small ball on its tip (See Ill.) This type can be obtained with various sizes of ball, and has a distinct advantage over the dart-type in drawing heavy lines, or when casual, quick drawing is required. The ball-point is not good for very fine work, but for almost all other types it is superior to the old dart stylus.

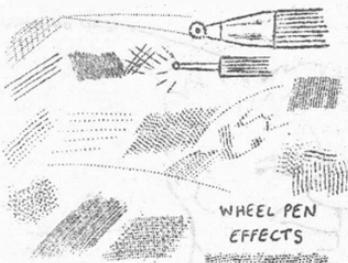


ACTUAL SIZE OF BALL POINT STYLUS

A ball-point stylus can be made from an old ball-point pen, although this will naturally give rather thin lines and wax may become a nuisance by clogging the socket and building up around the ball.



A third type of stylus has a 'U'-shaped tip (see Ill.) and is particularly suitable for writing signatures and other work which has to simulate pen work, the tip producing thin and thick breadths in a curved line. This type can be made by hammering a small netting staple into the end of a pen-holder.



WHEEL PEN EFFECTS

The wheel-pen (see Ill.) is an important feature in the stencil-cutter artist's equipment, for it can be used to produce all kinds of shading effects except large areas of even shading. It consists of a small toothed wheel able to revolve freely at the tip of the pen, and when this is drawn across a stencil it produces a dotted line or whatever pattern has been cut into the wheel rim. In the hands of an accomplished artist the effects that can be obtained by two or three different designs in combination are almost unbelievable.

The only way to make a wheel-pen is to mount small cogwheels, the sort of wheels found in a watch, at the end of a holder, and the operation is likely to be so tiresome you will probably find it better to buy the manufactured article.



Apart from the usual types of wheel pen and stylus described, there are a number, mostly issued by Messrs. Gestetner, which are for specialist purposes. One stylus has a compass attached; there are wheel pens that draw continuous lines of varying thicknesses, etc. There are even cash-column styli which draw single and double lines at fixed intervals, and a music stylus for drawing the five lines of the staff. Another music stylus is designed to remove a note circle from the stencil to mark a note. Most duplicating firms issue a list of their drawing implements and will send on request.

When drawing with styli, it's unwise to attempt to cut long continuous lines. Greater control over the finished product is obtained if the lines are made up of continuous dashes, one dash starting just before the finish of the previous in line. Stencil drawing is, in fact, similar to pencil drawing in many ways; the same small, shading-like motions are employed.

With wheel pens of the shading type (dotted lines), fairly long lines can be used. To produce large areas of shading, press the wheel against the stencil and, keeping the pressure constant, use a scribbling motion. In this, as in many other aspects of duplicating, practise is the best teacher.

The chief fault found in duplicator drawings, apart from the extremely faint lines caused through inexperience, is the tear in a stencil where two lines meet. The stencil is weakened by one line being cut, and another start-off from the first at a low angle often produces the tear. If possible, always approach a line already drawn, never start away from it.

If, when the stencil is placed on the duplicator and you run off a copy, you find that you want to add to or alter your drawing, the whole-hearted way to rectify your cutting is, of course, to take the whole stencil off, wash it to remove the ink and make your alterations, taking great care when replacing the stencil. Sometimes this is too much trouble, though, and the best alternative is to make your alterations while the stencil is on the machine by pricking it with a needle (one held in an old ball-point pen holder does very well). Continuous lines must be made with a series of disconnected dots, for it's fatal to draw a line owing to the soft backing of the stencil, not to mention the danger of spoiling the silk-screen of the duplicator.

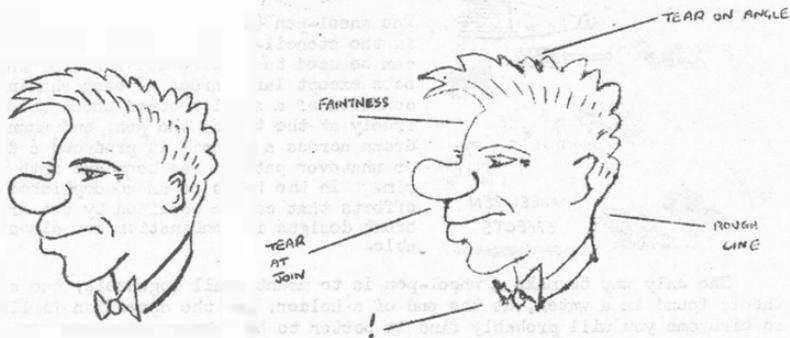
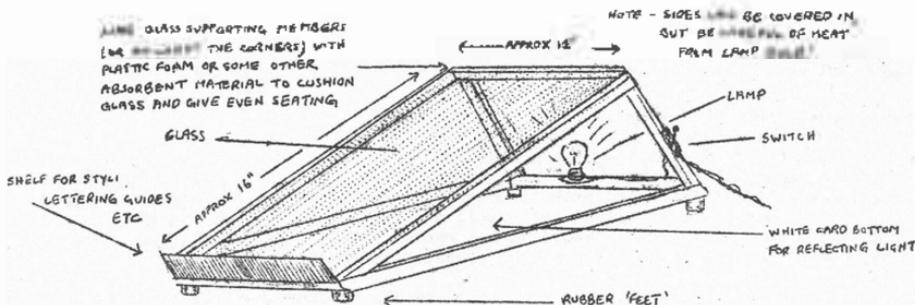


FIGURE 2. HEAD - DRAWING ON LEFT EXECUTED WITH BALL POINT STYLUS ON DRAWING SHEET. COPY WITH PART-TYPE ON GLASS BACKING TO SHOW THE EFFECTS OF TEARS AND FAINTNESS.

It's obvious that one must have a firm and solid backing for cutting stencils by hand, and at first sight a sheet of glass laid under the stencil would seem to be the answer. But although this can be used, the surface is too slippery and is likely to lead to the stylus point pulling the threads of the stencil. The best surface is that of a commercial 'writing' or 'drawing' sheet. This is a piece of plastic impressed with a pattern simulating a silk screen. This gives a slightly roughened surface which is ideal.

Some rather curious effects can be obtained by deliberately using a soft surface on which to put the stencil when drawing - say, a piece of cloth stretched over a piece of glass, but there is less control than with the orthodox writing sheet.

The writing sheet is almost indispensable, and it is best used with an instrument known as a 'mimescope'. In its essentials, the mimescope is a small writing desk with an inclined top made of glass. A light inside the desk will shine up through the glass and through a stencil if it is placed (with a writing sheet) on top. There is then no need to use a carbon sheet to show if the lines of the drawing have been correctly cut...the light indicates it at once. The mimescope is also useful for proof-reading stencils and for spotting out small errors. The common commercial model costs in the region of 10 guineas but it is, of course, possible to construct one quite easily if one uses wood instead of metal and disregards the elaborate settings (with which to rule straight lines, etc., on the stencil) which are incorporated in the expensive models. A typical framework is illustrated below



The mimescope is also very useful when it is desired to cut a piece out of or insert a piece into a stencil. The writing sheet should be taken off and the glass plate damped with water; the stencil will stick to this without moving and, if the air-bubbles which form underneath are pressed out, the stencil-cutter can join pieces with extreme accuracy.

## LETTERING GUIDES

Most firms which supply duplicating requisites have a range of 'lettering guides'. As previously noted, these are stiff plastic stencils cut into the shapes of letters, numerals and signs, and make an immense difference to the appearance of the finished work. A few examples:

ABcd? \$ ABS ACAB 4 5 NTAS &

When lettering guides are used, a light pencil line should be drawn across the stencil, and the bottom of each letter and figure cut should rest on it. Most guides are marked to show the width of stylus to be used, as in the guides for line-letters the point of the stylus mustn't waver inside the cut-out letter of the guide.

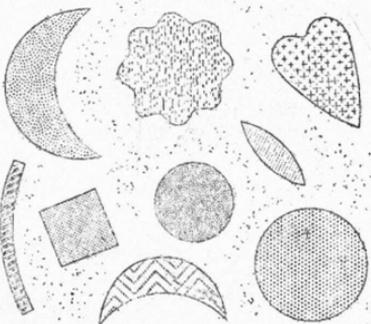
As far as I know, no one has produced a way of manufacturing the guides at home...to be thick enough to guide the stylus the plastic must be too thick for any sort of cutting within reach of the amateur. There are a few substitutes, however.

The easiest to use is our ally, tracing paper. An alphabet can be copied from a book on lettering or type-script on to tracing paper, and re-traced on to the stencil when needed. Substitutes can be found in juvenile stencil outfits with oil-card guides...use a pencil first and then re-draw with a stylus. There is also the pen lettering guide: made by Messrs. West, who manufacture WFO pens and guides. They produce some stencil lettering guides, but a far wider range of guides for their special ink-pens. The latter type have thick edges along the top and bottom of the guide, for keeping the middle away from the freshly inked paper when in use, but if these edges are cut off the guide can be placed flat on a stencil surface and used with a stylus.

In using a lettering guide, the major rule to observe is that which is one of the most important in any cutting by stylus...don't continue on already-cut line at a sharp angle, or the stencil will tend to tear at the junction. Press the guide very firmly against the stencil, and always take two looks at what you've completed - it's awfully easy to mis-spell by omission!

## SHADING PLATES & SUCHLIKE

The methods of stencil-cutting discussed previously have relied on pressing something, a typewriter type or a stylus, on to a stencil and removing the wax. But there is a second method; pressing the stencil on to a sharp object. The use of this is, naturally, confined to shading illustrations, and the "shading plate" is a plastic plate with a raised pattern which is placed under the stencil and cuts into the wax when pressure is applied.



There are many different patterns to be obtained in shading plates, both singly and in combination. Different patterns of dots have the most utility, but there are patterns of lines, ornaments, borders, etc. which are often useful; it is, for instance, far easier to cut the outline of bricks in a picture of a brick wall with a plate than a stylus. Shading plates are generally available in two sizes, approx. 3" x 3" and approx. 7" x 3", made of coloured or transparent plastic; the latter is the newer type and is very useful when in conjunction with a microscope.

It is best not to attempt to shade an area of more than 4 sq. inches in "solid" shading

as it is extremely difficult to ensure even and regular pressure over any larger area.

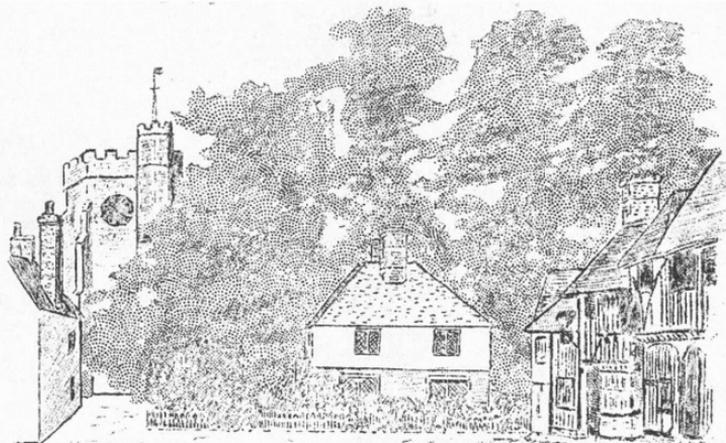
When the shading plate is put under the stencil, the top of the stencil must be rubbed with a 'burnisher' for the plate to cut. Burnishers are sold by accessory manufacturers, but it is quite usual to construct one's own...the handle of a tooth-brush, the bowl of a spoon, a stick of glass with the end melted to a blob...anything smooth, hard and shiny in this line. Except where obviously impossible, pressure should be applied with a rotary motion. Carbon paper should be inserted between the plate and the stencil to show the places cut, unless you use a transparent plate and a microscope.

There are naturally plenty of substitutes for professional shading plates. Various grades of sand- and glass-paper give pleasingly formless shading; metal files are another good source, although nail-files and gramophone records are too smooth for effective cutting. Almost any raised and hard pattern will do...I've used coins, and have seen an impression taken off a book-binding!

Shading plates can also be used in conjunction with lettering-guides, as the heading of this section shows.

Shading plates are also known as 'tint plates', although the former is more commonly used. Prices are in the 5/- range.

The following illustration from my better-half Joy's THIS SCETCHED ISLE, is a good example of the use to which a shading plate can be put by a lazy stencil cutter (me):



## INTERLINEATIONS ETC.

It is an interesting psychological fact that solidly typed duplicated papers are harder to read than ordinary printed pages, and every effort should be made to break up the monotonous appearance by means of illustrations, fancy headings, etc. The title of a piece need not be just across the top few inches of the page...it can run down the side, or be split, with the name of the author along the bottom. In this connection, some genius in s-f fandom invented the "interlineation" some years ago. It started as a distinguishing mark between articles...it may have been in a fanzine that had only typewritten headings...and as a 'faller', and consisted of a phrase with all the words run together placed between lines thus: 58 SOUTHGATE LN 58 Later the words were separated, and the last phase has been to use the interlineation in the middle of articles and stories, usually in the form of a 'quote.'

A variation on this has been the invention by Walt Willis of 'sidelines', in **HYPHEN**. The interlineation runs down the right hand margin of each page, and not only adds a certain piquancy (especially when it refers to something in the normal text of the page) but also helps to even out the end of the lines.

The uneven right-hand edge is one of the major characteristics of the usual duplicated fanzine, usually occasioned because (as in the present case), the stencil cutter has no time to make the lengthy preparations attendant on 'justifying'..getting an even edge.

Justifying can be carried out by deliberately choosing words to make lines of the right length...if you don't care about your style... or leaving a gap between the penultimate word and the last, the latter ending at a specified position...a handy but ugly method... or by 'dummying'. In this, the whole text is typed out, and must be adhered to in the final copy, and allowance is made for illustrations etc. Supposing one wants to justify:

"No", Howard Wilson said. All we know is that the incidence of mutation is low, indicating a recessive gene. Since it's consistent, it must be the same gene. We hope it's connected to.."

One types it, rigidly adhering to a system of so many spaces after a full-stop (usually 3), so many after a comma, for an indent, etc., and fills up to a certain specified length of line (decided by your average length of word or by the width of the paper) with symbols //// or 'x's. It is a good idea to draw a line down the edge of the page as a guide. Then go over this copy, marking with a coloured pencil where spaces must be put in or missed out..if a space is closed up, insert a '0'. Your copy will look like this:

"No",<sup>1</sup> Howard<sup>2</sup> Wilson<sup>2</sup> said. All we<sup>1</sup>//// know is that the incidence of mutation is low,<sup>2</sup> indicating<sup>1</sup> a recessive gene.// Since it's consistent,<sup>2</sup> it must be the// same gene. We hope it's connected to

Then cut the stencil, paying attention to the markings:

"No", Howard Wilson said. All we know is that the incidence of mutation is low, indicating a recessive gene. Since it's consistent, it must be the same gene. We hope it's connected to

The bearing of the article in the fanzine is now an article in the fanzine.



