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PREFACE

IN the allied arts of ticket-, poster- and sign-writing and painting there has long been a keen interest among amateurs, and also among the members of a number of artistic trades or professions, anxious to acquire a remunerative side line. This handbook is mainly the work of an experienced sign- and ticket-writer and general decorator, and will be found a reliable and easily followed guide.

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TICKET-WRITING AND SIGN-PAINTING

CHAPTER I

The Ticket-writer's Tools and Materials

TICKET-WRITING is an essentially useful art that has developed with the rise of advertising, and has long been a favourite with the home, or spare-time, worker. It is undoubtedly an art that may be learnt—as distinct from those, if there are any, that must be “born in” the individual. Any observing person who will give the necessary time to study and practice can in time gain proficiency as a ticket-writer, but it need hardly be said that anyone of artistic perception is likely to get better results than he who is handicapped by a lack of that quality.

Ticket-writing as a spare-time occupation may be made to pay, and pay well if the worker takes the trouble to get known in his neighbourhood and studiously keeps in touch with the tradesmen and others likely to need his services. It is to be feared that only the exceptional man can make a good living from ticket-writing alone, working as a master-man, as the bulk of the present-day ticket-writing is done at cheap rates by big firms, who organise themselves

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and lay down special plant for the work, rendering serious competition on the part of the small man rather difficult. Still, a great deal of work falls to the lot of an able and businesslike ticket-writer who makes a point of knowing his neighbourhood and everybody in it who is in a position—even occasionally—to give him commissions. If he, as generally is the case, adds poster-work and, perhaps, sign-writing to his accomplishments his chances of success are naturally greater.

In these days, when advertising is more than ever necessary, there would appear to be a greater field than before for distinctive tickets and posters of an attractive and business-pulling kind. Where large quantities with identical wording are required, the ticket-writer must give place to the printer, unless he has at command the requisite printing plant; but where the announcements are different, requiring constant change, the ticket-writer will come into his own. The class of work is only bounded by the skill of the operative, consistent, of course, with price; but leaving all artistic ability out of the question, the first essential is good lettering.

The pricing of ticket-work is a difficulty with many, and it is a matter for regret that no definite instruction on the point can be offered. Reliable prices cannot be given, as so much depends on the quality and the amount of labour involved. The most satisfactory way is to calculate how long jobs will take, and price them according to what is considered a fair rate per

hour, add cost of materials, and finally a percentage of profit.

Tools, etc.—The tools and materials required are not very expensive. For practice in letter formation, the following will be required: A drawing board about 20 in. wide by 30 in. long (a smaller one can be made to serve), a 30-in. T-square, several set-squares, a roll of 22-in. white good-quality lining paper, drawing-pins, rubber, and lead pencils. Some may prefer a blackboard and chalk; but paper and pencil are better.

For actual work, a good firm bench or table (squares and drawing board have been mentioned), several pine, pearwood, or mahogany straightedges, 24 in. to 30 in. long, $1\frac{3}{4}$ in. wide, by $\frac{1}{2}$ in. thick, bevelled as shown in Fig. 1; a bevelled steel straight-edge, 30 in. long; a shoemaker's knife; a mount-cutter's knife; an oilstone; and two pieces of $\frac{1}{4}$ -in. plate glass, one 12 in. by 16 in., and the other 24 in. by 30 in. The brushes and pens are mentioned later.

The glass need not be of the first quality; the larger one being used for cutting card will quickly become marked with the knife, while the other will be roughened so as to make it into ground glass. To do this, get a tin of Wellington knife polish and a small piece of marble or plate glass 2 in. square, glued to a piece of wood of the same size, but 1 in. thick, so as to give room for the fingers to grip. Lay the glass flat, wet with water, at the same time sprinkling some of the knife powder on to the glass, and with the small glass block rub in a circular motion, repeating

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the process, with occasional wetting and renewals of powder, until the surface of the glass is uniformly roughened, presenting a white semi-opaque appearance. On this dry colours will get a grip, and may be ground smooth much more readily than would be the case with the polished plate-glass surface.

A palette knife with 6-in. blade, a pair of compass dividers, and a second pair made so that a pen may be attached at one end as occasion demands; half a dozen glass jars with airtight-fitting caps in which to keep dry colours; a number of small wide-mouthed ink bottles, preferably with a cap, so that when not in use dust may be excluded.

Materials.—These include some genuine gum arabic, the clearer the lumps the better; dry zinc oxide; flake white, or, best of all, Cremnitz white; ultramarine blue; vermilionette; Brunswick green. All of these pigments may be had from firms of repute ready-ground in water, and in the case of white this system is recommended. It would require to be kept well smoothed down, then covered with water. When required for use pour off the water, and grind on the glass slab with strong liquid gum to the consistency required. Cover the remainder with water for future use. If the quantity of work warranted it, the other pigments might well be bought ready-ground, for they will be found to be much better ground than could be done by hand. Moreover, by careful management a sufficiency of gum binder may be added without risk of the ink becoming too thin. Any distemper colour or

pigment ground in water may be used in its pure state by adding sufficient gum binder, or, if tints are required, by adding sufficient zinc oxide or flake white.



FIG. 4



FIG. 3

FIG. 2

Figs. 2 to 4.—Sable Brushes in Quill.



FIG. 5



FIG. 6



FIG. 7

Figs. 5 to 7.—Sable Brushes in Nickel or Tin.



FIG. 8

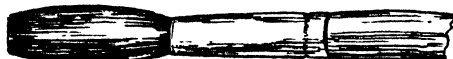


FIG. 9

Figs. 8 and 9.—Taurus Brushes in Tin.

Fig. 10.—Sword Striper for Running Lines.



Fig. 11.—Large Camel-hair Brush in Swan Quill.

Fig. 1.—Section through Straightedge.

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Brushes.—With regard to brushes, only a few need be bought at one time, the stock being added to when experience has taught the operative which of them are best adapted to his methods: sable writers, either brown or red, the most suitable sizes being “crow” (Fig. 2), “duck” (Fig. 3), “small goose” and “goose” (Fig. 4). These are known by the size of the quill, and may be had up to “large swan”; but the sizes given will be sufficient for present demands. Red sables of good quality for water in nickel ferrules (Figs. 5 to 7) are handy tools, and if purchased, the most useful sizes would possibly be Nos. 4, 6, and 8. In addition, two large taurus pencils (Figs. 8 and 9) may be bought, being useful for filling-in purposes. “Taurus” refers to quality, the hair being that of the ox. For running lines, camel-hair sword stripers (Fig. 10), costing 6d. each, are good, once the knack of handling them is obtained. Camel-hair writers, camel-hair swan pencils (Fig. 11), are all good; but a set of sables will possibly be the best for present use.

All the brushes illustrated by Figs. 2 to 11 are shown about two-thirds the actual size.

Pens.—The pens used vary according to the habit of the writer, J, N, and G points being generally suitable for outlining. Macniven’s Flying Dutchman is a useful nib, and carries a fair quantity of ink. For some lettering, Brandauer’s stub pens are excellent, examples of which will be illustrated later. Whichever pens are selected, it will be advisable to have

handles bulging where gripped by the hand, as they are then less likely to give a cramped sensation.

Cardboard.—Cardboard specially prepared for ticket-writing may be had in white and colours, glossy and matt, from J. English and Co., Radsworth Street, London, E.C., but will generally require trimming. This is usually sold in Royal size, the thickness for ordinary work being ten sheet, going up to sixteen sheet, according to the size and importance of the ticket.

Ticket Inks.—Ticket ink is cheapest bought ready for use, and may be obtained from Brodie and Middleton, 79, Long Acre, London, W.C., Palmer and Co., Old Street, London, E.C., and other firms, in small quantities or by the gallon, both japan and waterproof. Thus it would seem false economy to attempt to make the black ink, though when it comes to colours, which are only wanted in small quantities, they are best mixed by the worker. Ticket inks of good quality may be obtained from H. Stephens, Aldersgate Street, London, E.C. The same firm's ebony stain is also good for ticket-writing.

The ordinary japan glossy ink is merely a suitable black pigment mixed in a solution of gum arabic, the high gloss being obtained by reducing the pigment to a minimum. Doubtless the incorporation of a small quantity of aniline blue and black to the gum before the carbon black is added assists in securing a better black than would be otherwise obtained. The waterproof ink is of a different character possessing a

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binder that will not yield to water as would the gum ; this binder is composed of shellac and borax, the two together imparting gloss and hardness. The tone of the black, which may be of a rusty brown or a good dense black, depends on the pigments used. If ordinary vegetable, the tone will need rectifying by the addition of blue, a little ultramarine answering fairly well.

To make the gum solution, take 4 oz. of bright lump gum arabic and place in a glass jam-jar. Pour on 1 pt. of cold water, and stand the jar aside for several days until the gum is dissolved. Then strain through fine muslin. The addition of a touch of soluble blue, if necessary, will counteract the yellowish tinge of the gum.

To make black japan ink, take finest lampblack or gas-black, place some on the glass slab, and damp it through with alcohol. Add a little of the liquid gum., and, using the palette knife, grind the pigment smooth ; then place in a wide-mouthed bottle for use. For pen work, thin some of the black to nearly the consistency of ordinary ink ; that used for filling in will be thicker. Some may prefer to grind the black in a saucer, this being done by grinding smooth with a fair-size cork. Carbon blacks are of a greasy nature, and the damping with alcohol counteracts this fault, besides making a smoother ink. Any dry pigment to be mixed with gum will work the better for being treated with alcohol, which, being of a penetrating nature, effectually loosens the particles.

When insufficient gum is used there is likelihood of the ink running or smudging when the show-cards are exposed to a damp atmosphere. Red, especially, requires plenty of binder. Bichromate of potash dissolved in as little water as possible and added to solutions of gelatine or gum into which the necessary pigment has been ground will, after the card has been exposed to the sunlight for a few hours, render the ink waterproof. Very little of the bichromate would be required, and should be added to only as much ink as will be used at one time, as after evaporation the remaining ink is useless.

To make waterproof ink, put a quart of water in an iron saucepan, add 2 oz. of lump borax, place over the fire, and bring the water to the boil. Now add gradually 4 oz. of genuine orange shellac, stirring constantly until dissolved. Take sufficient gas or lamp-black, from 3 oz. to 4 oz., saturate with some of the liquid, and grind to a paste; add and stir until dissolved. Leave the ink to cool, then strain through muslin and bottle for use. In case the shellac is not pure, the liquid may be allowed to cool, and any wax on the surface skimmed off; heat again, then add the black as advised.

The same liquid or medium may be used to make coloured inks, when vermilionette, brunswick green, or other suitable pigment is selected. Possibly with these the damping with alcohol advised for black would be an advantage. Aniline dyes soluble in water might also be selected, but would yield transparent inks.

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For outdoor posters waterproof ink may be used, though if the posters are large, printer's ink may be preferred. This should have some japanner's gold-size or terebene drier added, and be diluted with turpentine or benzine. It is well first to test the ink on an odd piece of paper, for if too much turpentine is used the ink will leave a greasy edge round the letters. A good deal will depend on whether the paper used is sized or not.

A substitute for printer's ink may be made from dry pigment mixed stiff in japanner's gold-size, and thinned with turpentine if a dead effect is desired. For glossy lettering substitute oak varnish for the japanner's, add a little terebene drier, and thin with turpentine.

CHAPTER II

Letter Formation

TICKET-WRITING is generally done quickly, but not necessarily slovenly. Even what may be called slapdash work could not be executed with any degree of certainty, or with passable effect, unless the different alphabets were first well learned, and the manipulation of the brush and pen properly acquired.

To begin with, at least three or four alphabets, both capitals and small, should be thoroughly mastered, first with lead-pencil, next with the brush, and then with the pen. Next in importance comes correct spacing, for with clumsy spacing the best shaped letters will be unsatisfactory. The lay-out or arrangement of tickets and posters always indicates the ability of the ticket-writer.

Colour, though not called for so much as in sign work, is also important, and should reflect good taste by its quietness, and also, when occasion demands, by harmonious striking arrangement. As a rule, however, letter display and the management of white space are the chief essentials.

At first, letters should not be drawn very small, certainly not less than 3 in. high, so that their shapes and proportions may be the better appreciated. Therefore begin by drawing the alphabet in outline first

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3 in., then 2 in., and then 1 in. high. In addition practise such shapes as circles, small and large, parallel, vertical, and horizontal lines.

It will be found that in the plain or other orthodox alphabets certain letters when of correct shape take up a stipulated amount of space. This should be learned by reference to Fig. 12. By degrees, the letters when setting out a ticket need only be sketched, and, as skill is gained, mere dots indicating the widths of each letter will be all that is necessary. The method of working with very little preliminary setting out will be appreciated later when the writer starts to use certain kinds of cardboard on which pencil marks are none too easily removed.

Egyptian or Block Alphabet.—The alphabet to be learned first, and perhaps the most frequently used, is Egyptian or block (see Figs. 12 and 13). This, as will be seen, is free from such embellishment as serifs or feet. (Serifs, or ceriphs, are the cross lines or projections at the ends of the limbs of the letters.) Owing to its severity, correct drawing is necessary, its very plainness accentuating bad shapes that are produced by broken curves or ragged lines.

Reference to this alphabet (Figs. 12 and 13) will help the worker to realise the advantage of practising preliminary curves and parallel lines in the same way as pothooks and hangers, reminiscent of school days, since letters are composed practically of these elements.

In practising the alphabet given, strike top and bottom lines, and, for the present, a centre line also.

A B C D E
F G H I J K
M N O P
Q R S T W
U V X Y Z
& ? !

**Fig. 12.—Plain Block or
Egyptian Letters.**

This centre line will provide a guide for the middle stroke or bar of the letters, and is very useful, especially for large work. Take the case of the letter **E**, for instance (see Fig. 14). The effect is far from pleasing when the middle stroke comes perceptibly below the centre of the letter, except when deliberately done, as with the grotesque alphabet. A little above the centre may, however, be an advantage rather than otherwise.

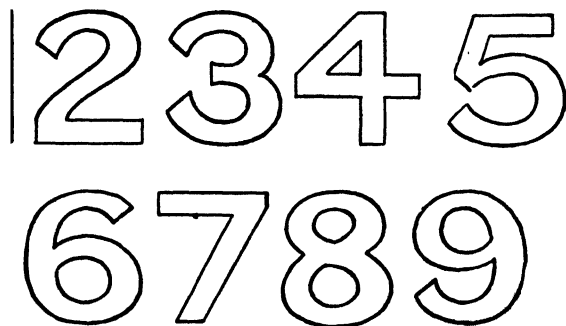


Fig. 13.—Plain Block or Egyptian Numerals.

Width of Letters.—The proportions of letters, relation of width to height, and strength of strokes require consideration. For ticket work, letters are better kept on the thin side, as heavy, clumsy lettering in the body of a ticket looks out of character.

It will be found that an oblong shape is better than a square. A square letter is rarely used, although round letters sometimes could be bounded by a square. A good proportion is height 4 in. and width 3 in., which for smaller letters reads, height 1 in. and width

$\frac{3}{4}$ in. Narrower than this the letter may be called condensed (see Fig. 15). The proportions are not unseemly, but any narrower is not advised except in exceptional circumstances, as where a long name has to be squeezed into a small space.

When the width of the plain block letter—that is, one without serifs or feet—exceeds the height it is

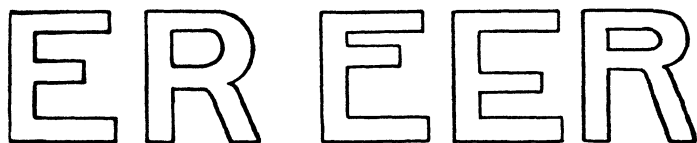


Fig. 14.—Grotesque Block Letters.

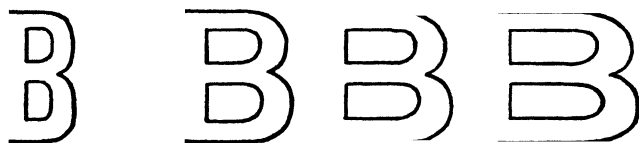


Fig. 15

Fig. 16

Fig. 15.—Condensed or Elongated Letter. Fig. 16.—Expanded or Extended Letters.

called an extended or expanded letter (Fig. 16). Rarely used, there are still instances where such a letter becomes very effective.

Nearly every letter of the plain alphabet may be enclosed in the same space, the only exceptions being **A** and **V**, which require a slightly greater width, **M** one-quarter to one-third wider, and in the case of **W** one-half wider. Round letters as **O** and **S** may have in some instances an almost imperceptible increase in

width, otherwise they are apt to look narrower than the ordinary square letters as **N** and **U**.

Letter **H** may be made a little narrower with advantage, while the bar of letter **L** should be shortened. Reasons for the latter will be given later under the head of "spacing."

The letter **J**, especially when beginning a word, should be of the width of the ordinary letters, otherwise it looks small and insignificant. Ampersand (the first character in the last line of Fig. 12), when of the same height as the surrounding letters, takes up a space equal to that required by the letter **O**. It is generally used smaller with advantage; but, whatever its size, it should still be bounded by a circle or oval, according to the proportions of the letters coming before and after.

The numerals (Fig. 13) are constructed on the same plan, even figure 7 requiring the same width as figure 8 to give true significance. Nothing looks much worse on a ticket, especially as price is the most important announcement, than a figure which may be taken either for 1 or 7. Write the numeral 4 as shown, and not as may be seen with the usual school arithmetic sign (4), or the ticket will give the impression of being the work of an amateur.

Thickness of Stroke.—Coming next to the thickness or strength of the various strokes, it will be found advisable to have some rough-and-ready method of arrangement. For the normal-shaped letter the width of the horizontal bars may be one-sixth the height of

the letter. In the case of the letter **E**, therefore, the space between the horizontal strokes would be one and a half times the width of the stroke. The upright may be a trifle thicker. Proportions even more suitable for the best ticket work will result in a lighter-looking letter, in which the width of the strokes will be only one-eighth of the height, leaving a space of two and a half times their width between the strokes of the letter **E**.

To test the advantage of having the horizontals slightly thinner than the vertical strokes, it will be advisable to form a letter on this plan and the same letter with each stroke the same thickness, and compare the result.

Drawing the Letters.—Having drawn the guide lines on a piece of white lining paper, and, if desired, divided the space into oblongs for each letter, begin to sketch the alphabet given. It may be found advisable perhaps to have a piece of cardboard with the width of the letters ticked on it; but, whichever is preferred, use deliberate methods in making the letters. Draw the lines in one stroke, and if the first is not correct, repeat the entire stroke. Do not niggle, that is, make a line bit by bit. Proceed in the same way with curves or circles, which should be done in one or, at most, two strokes. Adopting this method with a hard pencil point will make matters easier when the time comes for using a brush or a pen.

Formation of Serif Letters.—When alphabets differing from the Egyptian are drawn, it will be found

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with few exceptions that they conform to the rules of width and proportion given for the plain type. This is well to remember, otherwise confusion may arise in setting out, and a variety of widths given to letters which, correctly drawn, would be uniform in size. Whatever liberties may be taken later, it is well in the first instance to adhere to the orthodox shapes.

Taking a style of lettering, *serlio*, much in vogue at the present time, the student may be inclined to indulge in a variety of widths haphazard in the belief that he has precedent for this action in the type mentioned. There is, of course, a reason for the variation of widths in *serlio*, as will be explained in a later chapter.

Clearness is gained not so much by a good-proportioned letter as by the whole of the letters being well proportioned, for which reason plain Egyptian lettering is often the most satisfactory, few liberties being taken with it. Generally speaking, there is scarcely a type which may not be arranged on the widths given for the plain alphabet, not that measurements are necessary, rather that the principles underlying the formation of Egyptian be remembered and observed whatever type is used.

Useful as the plain letter undoubtedly is, occasions arise when emphasis or variety is desired on a ticket. This may be gained by variation in the size of the plain type, by the introduction of colour, but often most satisfactorily by using a decorative alphabet for the most important line or word. The type selected

may be script; more often it is a serif letter. The serifs may be only slightly indicated; they may be bold yet severe, or they may result in foliations on the lines of examples to be met with in old illuminated manuscripts.

Whatever serif is affixed to the letters, additional space must be allowed between the letters, since the serif is simply an addition to the width of the plain alphabet. Thus the letter that could previously be enclosed in an upright oblong will now require a square.

Serifs are generally equal in size, or arranged to appear equal, otherwise the letter will have the appearance of falling; but they may be slightly heavier at the base of letters, thereby giving a suggestion of strength and rigidity. Not only should the serifs be practically equal in width, but it is necessary that they be equal in depth, haphazard sizes detracting from rather than adding to the appearance of a letter.

For practice, the guide lines as shown dotted in Fig. 17 may well be used, being discarded once the eye is accustomed to detect slight variations in widths. Fig. 18 will give some idea of the effect of carelessness where serifs are concerned.

In the accompanying examples a few of the commoner styles of serifs are indicated, and it will be seen that in nearly every instance they are really an addition to the width of the square letter. Serif letters, therefore, should not, as a rule, be introduced where the space at command is limited, unless recourse is had

to the style shown in Fig. 19; here the serif is suggested rather than actual, the result being a letter possessing the legibility of the Egyptian without its severity.

A very bold letter more useful for signs than tickets is shown by Fig. 20. This type is distinct at a great height owing to the sharpness of its lines, and is included here as an example to show the basis of serif formation. Fig. 21 goes by various names. The sign-writer calls it heavy Roman, and, in fact, it may be said to be based on the ordinary Roman type. It is a letter almost as bold as the preceding one, and requires careful drawing, or as a decorative type it is not successful. The ticket-writer should endeavour to keep this letter on the light or thin side, when it will be found very useful. On signwork the letter is often altogether spoilt by the individual writer's interpretation, an example being given in Fig. 22, while Fig. 23 indicates the same alphabet drawn much lighter, in which form it is clear and attractive.

A bold type of letter is shown by Fig. 24, and by reason of the elimination of sharp edges is fairly easy to write, while, used in conjunction with a plain type, a very useful ticket may be produced.

There are other kinds of serifs, but these may be left for consideration until dealing with the Roman alphabet, as they apparently spring more naturally from that type.

When using serif types, the round letters, as O, may with advantage be a trifle wider, otherwise, not

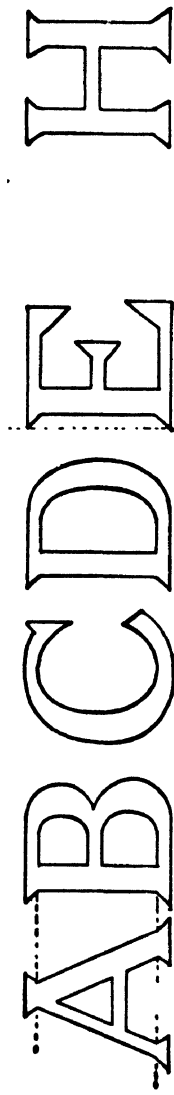


Fig. 17.—Guide Lines for Formation of Serifs.

Fig. 18.—Uneven Serifs.

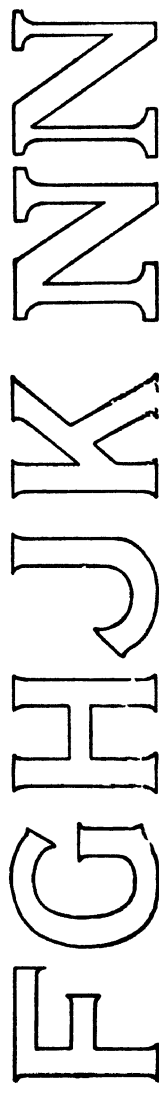


Fig. 19.—Example of Serif Suggestion.

Fig 21.—Heavy Roman Letters with Square Serifs Rounded.

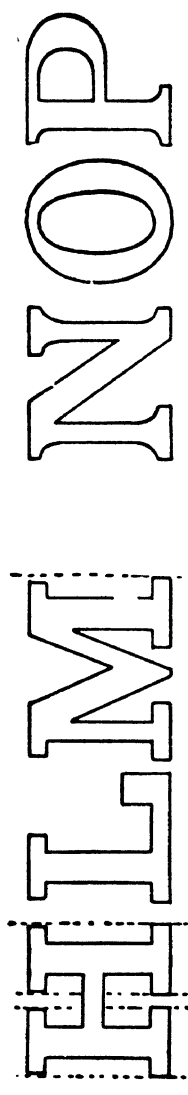


Fig. 20.—Letters with Square Serifs.

Fig. 22.—Clumsy Serif Treatment.

having feet, they are apt to look smaller than the remaining letters; but in this matter the eye will eventually be the safest guide. No doubt this difficulty led up to the use of the sloping or drunken letter O, and, further, to the small o with a dash beneath (see Fig. 25), examples best left alone.

There is no reason why round letters, however large, should not be drawn correctly and without any suggestion of falling: if the eye is not sufficient, recourse may be had to a few guide lines until the requisite skill is acquired. Supposing the height of the remaining letters is greater than the width, the letter may be sketched on the guide lines shown in Fig. 26. This has the double advantage of simplification and of ensuring that the letter is upright. If the space required by the other letters is a square, letter O will be a complete circle, a form not generally used.

Letter S presents the chief difficulty whatever type is selected, yet here again a few lines will be advantageous and prevent any possibility of a sloping letter. It may be formed as shown in Figs. 27 and 28, whether in an oblong or a square, or even in a circle, as in Fig. 29.

Not so noticeable in small tickets as on large posters, the terminations of the letters are important, and should be as shown in either Fig. 27 or Fig. 28. In Fig. 30 an example of careless terminals is given, and while it might pass unnoticed on small work, the habit would undoubtedly detract from the finish of a large ticket or poster.

RSTUVWX

Fig. 24

YZR

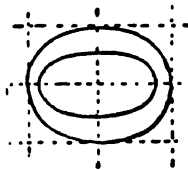
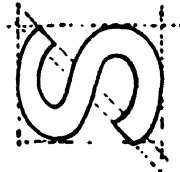
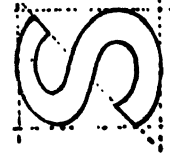


Fig. 24.—Useful Lettering with Rounded Serifs.

Fig. 26.—Guide Lines to Ensure Uprightness.

O O

Fig. 25.—Examples of Falling Letters; to be avoided.



Figs. 27 and 28.—Letter S Formed in Rectangle.



Fig. 30.—Letter Shape Spoilt by Terminals.



Fig. 29.—Letter S Formed in Circle.

CHAPTER III

Letter Spacing

It is not intended to discuss in this early chapter the question of the relation of white space to written matter, which falls naturally under the head of display, but to give a few general hints on spacing the different combinations of letters. Thus "spacing," as used in this chapter, may be said to mean the arrangement of letters and words, so that no word shall appear disjointed and no two words appear as one—that is, the production generally of a sense of order and compactness.

The printer seems, as a general rule, to leave a space equalling the width of a normal letter between the various words; but the ticket-writer may vary the distance according to the requirements of the work. Very crude ideas seem to be prevalent on the subject of spacing, judging from examples to be met with from time to time.

Where the letters in a word are placed rather loosely, the space between the words must be correspondingly increased; while, if the body of the words is packed, the space between the words may be less. Generally speaking, space between words should not be less than half the width of a normal letter, while it may with advantage be nearer the width of a letter.

Consideration must be given also to the letter which terminates a word, and that with which the following word starts. For, if the final letter is **L** and the opening letter **A**, a far greater space will result than if the letters concerned are **S** and **L**. This means that the eye must, after all, be the final arbitrator, the distances between the words being made to appear equal—in the first instance by drawing them closer together, and in the second by placing them farther apart.

Spacing between letters calls for the greatest care, and while this cannot exactly be done by rule, there are considerations which, if remembered, will prevent glaring errors and ensure a passable result.

Spacing does not consist in leaving an equal width between the letters, but in leaving what *appears* to be an equal width. Assuming that every letter were constructed in an oblong of the same size, and these oblongs were placed close to one another, the result would still be unsatisfactory. It would be less so in some cases than in others where the letters naturally adapted themselves to each other's contour. Thus it will be seen that correct spacing is largely a matter of judicious adjustment until the eye is satisfied. What appear to be difficult combinations of letters should be selected and experimented with until the eye becomes so used to judging spaces that success is a matter of course.

Fig. 31 is an example of a word in which each letter is supposed to be on an oblong and an equal

measurement left between the oblongs, the result being far from satisfactory. Fig. 32 shows the same word so arranged as to give the suggestion of equal space; in this, letter T is brought considerably nearer A, letter B nearer A, distance between B and L is increased, that between L and E lessened, while at the same time the limb of letter L is shortened, and finally letter S is moved a trifle nearer letter E. Letter L, whether coming at the beginning, in the body, or at the end of a word, may with advantage be made narrower than the remaining letters, and the amount of shortening it will bear depends on its position in a word.

Serif letters will, as previously suggested, require more open spacing, and in setting out may be treated as sans serif (Egyptian or block), only placed farther apart. This will naturally leave the necessary room and prevent confusion. If this is not considered, when it comes to actual lettering it will be found in some instances that one letter will touch another, and though for effect this may sometimes be permissible, it should not be adopted as a rule (see Fig. 33).

Greater space will be required where letters are to be outlined or shaded (also see Fig. 33), for though an outline may come on the body of the letter, in which case there is no increase in width, it more frequently comes outside or half on and half off the letter. The disadvantage of drawing the line on the letter is that the centre is made to look thin and insignificant, an evil accentuated when the colours used are in strong contrast.

Letters shown in Fig. 34 are spaced as in previous examples, care, however, being necessary to preserve their verticality. The natural tendency, especially towards the end of a long line or word, is to get the

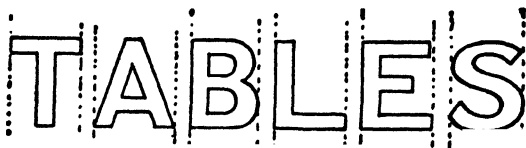


Fig. 31.—Equal Distances Between Letters.



Fig. 32.—Equal Spaces Between Letters.



Fig. 33.—Wider Spacing Neecessitated by Shadow or Serifs.

result shown in Fig. 35. This may be guarded against by drawing a perpendicular line here and there as a rough-and-ready guide, a method that is well worth consideration. Otherwise, as the letters slope, the height naturally increases, producing at once two evils,

SOLDIER **DUPLICATE** **SOLDIER**

Fig. 35.—
Clumsy Example of
Letters Arranged on
the Sweep.

Fig. 34.—Spacing Letters
Arranged on the Sweep.

SOLDIER

Fig. 37.—Letters Arranged
on the Slant.

APARTMENTS

Fig. 38.—Ensuring Equal Spaces at
Ends of Word.

Fig. 36.—Letters Uniform
Height in Curve.

LANE

Fig. 40

LANE

Fig. 41

Figs. 40 and 41.—Letters Badly an
Correctly Spaced Respectively.

SOPWITHS

Fig. 39.—Uniform Angle for Sloping Letters.

letters drunk and out of true proportion. These defects are more frequent when letters are arranged in a curve or sweep as shown in Fig. 36. The form itself may be useful for sign work, but should not be affected on tickets. There is nothing whatever to be said in condemnation if the letters are placed upright (Fig. 37).

Where a word takes up practically the whole length of a ticket or poster, as in Fig. 38, pains should

The word "ALES" is rendered in a tall, condensed, outlined font. The letters are closely spaced, with the 'A' and 'L' being particularly narrow and the 'S' being wide and curved to fill the space.

Fig. 42.—A Self-spacing Word.

The word "ALES" is rendered in a bold, serif font with a wide letter spacing. Each letter has a thick black outline and a drop shadow effect, making it stand out prominently.

Fig. 43.—Wider Setting Necessitated by Shadow.

be taken to get it to appear central, otherwise the eye, especially if the poster is large, at once marks the deficiency. Even if the space is measured the error may still occur, unless the letters happen to be of uniform shape. To some extent the space may be balanced by introducing a flourish to the initial letter, or, where possible, increasing its size. The point, however, is that the space may be correctly estimated by measuring as shown by the dotted lines.

Where letters are written on the slant, as in Fig. 39,

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it is important that the slope be uniform throughout, while in the matter of spacing, the rule adopted for upright lettering obtains. Generally speaking, however, the letters may be placed rather closer together.

The word "Lane" in Fig. 40 is an example of an awkward combination of letters to space, showing how they may appear if simply written haphazard. The example is in no way exaggerated, as frequently tickets with good-shaped letters fail in the matter of spacing. Fig. 41 suggests a revised method of spacing.

"Ales" (Fig. 42) is an illustration of a word in which the letters require scarcely any rearrangement, the spaces being nearly equal. Fig. 43 illustrates the necessity of wider spacing, where a shade is to be added, to prevent what would otherwise be unsightly crowding.

CHAPTER IV

Using the Brush in Ticket-writing

IN all lettering a free and easy method of working is desirable. This may not come at once, being to a great extent the result of practice, and the confidence that practice begets. A cramped manner of working may be said to result from being fussy at the start in the matter of outlines, for it is inconceivable that the novice will letter with the same certainty, cleanness, and sharpness as the man who has spent years at the business. Practise as much as possible, but do not spoil the future by attempting to market the preliminary efforts.

The worker will have cultivated the direct fearless method of setting out with the lead pencil; it is necessary now to put that method into practice with the brush. There will be many failures, since the brush, being pliable, requiring a certain manipulation that can be far better learned than described, will be an altogether different tool from the hard pencil-point.

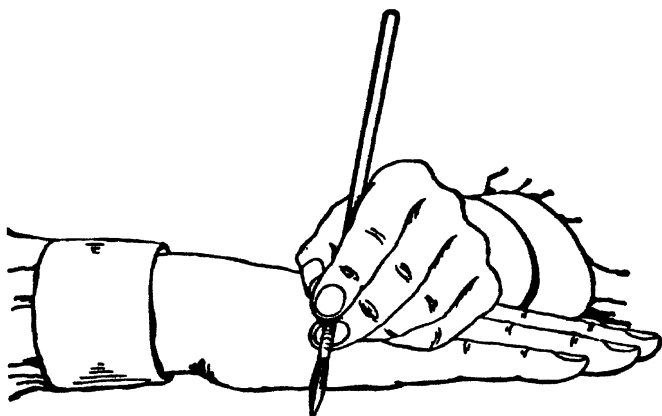
In ticket-writing, the letters, except very small ones, are outlined, whether done with a pen or brush. By this method their thickness can be gauged to a nicety, and the work can be done quickly, and, if desired, by a junior.

In outlining, only the point, and not the heel, of

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the brush is used, which means that the pressure on the brush must be equal. Great freedom of the first joint of the thumb and of the first and second fingers should be cultivated. The brush, therefore, requires to be held in such a way that, while the hand shall be free, only the point comes in contact with the card. To do this, some kind of rest, at least to begin with, is necessary. This may be a piece of cork $\frac{1}{4}$ in. thick, 4 in. long, and 3 in. wide, which should be covered with paper pasted on and so arranged that one particular side is always kept uppermost. This would simply be placed under the hand to prevent the cardboard getting greasy, while the slight elevation would also be an advantage. Possibly the method shown in Fig. 44 would give the greater steadiness. The position shown is one in which the spectator is directly in front of the operative. In this instance a sheet of clean paper must be laid beneath the hand, as otherwise the card will become greasy and refuse to take the ink. Adopt the position shown in Fig. 45 when confidence is gained.

For these preliminary attempts a few sheets of ordinary cardboard should be obtained and a small bottle of waterproof ticket ink, or a 6d. bottle of Stephens' ticketing ink. This last is expensive for general work, but as it is a splendid article, and the quantity required is not great, the ease with which it flows will make up for the slight additional cost; besides, it may be diluted with water for practice. Do not get the glossy japan ink at this juncture, as this



**Fig. 44.—Method of Steadying the Hand
when Using the Brush.**



**Fig. 45.—How to Hold the Brush when Cork
or Other Rest is Dispensed with.**

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will be found difficult to manage. Instead of the cardboard, any fairly stiff paper may be used, provided the surface is good. Cardboard should not be pinned down to a board, but paper may have to be fixed.

Lay the card flat on a bench or table, pour some of the ink into a small wide-mouthed bottle or jar, and, if the ink is ordinary ticket waterproof, do not neglect to stir it well before pouring from the bottle. Always have a few small odd pieces of cardboard handy to serve as palettes. Dip the sable brush, which should be of the size called "small goose," costing about 11d., into the ink, and well work the ink into the brush by drawing it backwards and forwards on the card palette. Do this until the ink saturates the hairs, and, with a full brush, commence to work.

The condition of the brush is important, as if it is of good quality the hairs will cling together and give a fine, pliable point, the hairs springing to their original position after each stroke. The point must be preserved if good work is to be done. Never leave a brush standing in the ink, or it will be found that the hairs at the point have turned backwards. Wash the brush every time after use, squeezing out the surplus ink or water with the fingers and smoothing the hairs from the quill to a point.

Sable pencils used in ink must not be put into oil colour and then back again into ink, nor should those used in oil be transferred to water. One more hint: do not stir ink or colour with the brush, but use a small piece of wood or other material for the purpose.

A B C D E F G H I J

K L M N O P Q R

S U W &

Fig. 46.—
Plain Block Alphabet; the
Letters Show the Correct
Brush Strokes.

When doing fair-size letters, a different brush is used for filling in, though just now the worker's attention should be given solely to brush manipulation. If desired to fill in the letters, allow the outlines to dry, then, with the card lying flat, blob or flow the ink on fairly freely, which will stop of itself when it comes to the dry line. Once filled in, the card should be left flat, and not touched again until dry.

Having got the cardboard in position, begin by making vertical lines at equal distances of about $\frac{1}{8}$ in., about $1\frac{1}{2}$ in. to 2 in. long, that is, to the extent of the movement of the fingers without actually moving the position of the hand. These are what may be called finger exercises. Proceed now with parallel horizontal lines, then oblique lines slanting both to right and left, afterwards attempt the formation of circles and curves generally.

An analysis of the alphabet will suggest the usefulness of the foregoing exercise, as the letters are really combinations of these elements.

Coming next to the alphabet (Figs. 46 and 47), this may for the first few times be indicated with lead pencil; afterwards it may be sufficient to indicate the square or oblong shapes which the letters fill. In using the brush, the letters may be made on the principle shown. Without claiming that this is the best method, the principle suggested is that, as far as possible, all strokes in a letter running in the same direction may be done first, as the hairs of a sable brush having assumed a particular position, the strokes

a b c d e f g h i j k l
m n o p q r s t u v
w x y z & g y

Fig. 47.—Block "Lower-case" (Small Letter) Alphabet, Showing Correct Brush Strokes.

are more likely to be equal and expeditious than if the direction is often changed. The method assists also in gaining speed, there being less frequent moving of the position of the hand.

The strokes in letter A (Fig. 46) may be done in the manner shown. If the curves in letter B can be done in one sweep of the brush, so much the better; but a compromise may be made by joining the bottom one at the dotted line. With practice, the curves of letter C will eventually be done in one sweep; increasing the number of strokes is, however, permissible. Theoretically, letter O should be done in one stroke, though joining, as indicated at the dotted lines, will come much easier. The second example is an attempt at single-stroke method. Letter S is shown in two methods, the first being easier, the second leading to quicker production. The thickening indicates that in this instance the first sweep was not satisfactory.

The small letters (Fig. 47) should be practised, at the same time being used equally with the capitals. The method of brush manipulation will be evident.

Another Alphabet.—Fig. 48 indicates the brush strokes of a useful type of slightly ornamental letter for some purposes. It may be made lighter than shown with advantage. The thick parts show where a stroke was repeated, or at least re-touched, a practice which is better avoided. The alphabet from which Fig. 48 was reproduced for printing was outlined entirely with a "small goose" red sable writer in quill, the size of the letters being nearly three times that

shown. A similar brush in tin will answer equally well. For the size shown in Fig. 48 a red sable "duck" writer would be large enough.



Fig. 48.—Practice Letters, Showing Brush Strokes.

CHAPTER V

Roundhand, Italic, and Script Letters

Roundhand Lettering.—These types of lettering will be found very useful for ticket and poster work, and when small may be written or outlined with a worn J nib. Large roundhand letters, that is, considerably bigger than ordinary penmanship, are best done with the brush. A small fine-pointed red sable, No. 5 or No. 6, in tin will be found very suitable, or a small goose-quill size.

Great freedom of movement is necessary in the case of large letters in order to preserve unbroken curves, and this will be gained easiest by utilising the first joint of the little finger and the ball of the hand near the wrist to form a pivot, otherwise keeping the hand steady. This means that there is practically no movement of the fingers, and consequently the larger the letters the more useful will the brush become.

Roundhand introduced on tickets or posters may with advantage be more ornamental than ordinary penmanship to lend it distinction. The letters should be outlined, the thick parts being filled in afterwards, and not, as is the case in sign-writing, forming the letter in one stroke by varying the pressure on the brush.

ROUNDHAND, ITALIC, AND SCRIPT 41

Attention to the slope is the next consideration, which, to be satisfactory, must be uniform throughout; at all events, if there is any variation it should be so slight as not to be readily noticeable. The angle may be 60° , and, when marking out is resorted to, the set-square will be found very handy. Generally the eye is the final arbitrator, and so long as the slope is not overdone, the 60° may be taken as an approximate guide.

Italic Alphabet.—The small italic alphabet (Fig. 49) is very useful, though frequently abused. For this the same size brush as in the previous instance will be suitable, and with practice the letters can be easily written. A piece of clean paper under the hand to avoid greasing the card is all that is necessary, freedom coming as confidence is gained. The proportions of the round part to the upright, or, more correctly, the slant stroke, as in letters *b* and *p*, are about normal, though cases will arise where it will be advisable to shorten the stroke of the tall letters owing to the space at disposal being limited; for otherwise, if several lines of italics follow one another, it is surprising how much space they take up, and there is also the likelihood of producing a loose, slovenly appearance. Italics will bear a considerable amount of clipping before they become deformed.

For practising with a brush the example shown by Fig. 49, dilute some of the ink, but not to such an extent as will take away its density, and draw the letters not less than six times the size shown in Fig.

49. By so doing greater freedom will be gained, together with a better appreciation of the shapes of the various letters. In the illustration, they are not filled in, for the simple reason that the strokes and their order may be seen. The idea or aim in view when lettering should be to draw each letter with the fewest possible strokes, and though this may not be shown in each example, the alternative taken is that which is likely to come easiest to the learner. Practice will suggest that order best suited to each worker's capabilities and methods. It may be said at once that the strokes of a letter can be taken in any order and good shapes result; the definite method, however, leads to surer and consequently quicker production.

A brush has been mentioned, yet it will still be advisable for the time being to draw each fresh example first with the lead pencil, then, holding the lead pencil in the same manner as a brush, practise the brush strokes, leaving a faint outline of each letter on the card, then finally with brush and ink repeat the strokes.

This italic alphabet (Fig. 49) calls for very little explanation. Letter "y" is shown in two forms, either of which may be employed. The letters "v" and "w" are also sometimes altered after the style indicated in script; the present shape, however, seems more in character with the type.

The capitals (Fig. 50) are equally serviceable, especially as, as will be realised later, many fancy types may with very little trouble be constructed on them.

a b c d e f g h i j k l m n o p q
r s t u v w x y z A B C D

FIG 49

E F G H I J K L M N O P Q R S
T U V W X Y Z & 2 3 4 5 6
7 8 9 0 £

FIG. 50

FIG. 51

Fig. 49.—Small Italic Alphabet, indicating Brush Strokes.
Fig. 50.—Italic Capitals. Fig. 51.—Italic Numerals.

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Here again uniform slant is imperative, as otherwise the letters lose their true proportions. Further, when introduced on a ticket, they require to be spaced closer than the same type upright, or the result is a loose and scattered appearance. The order of the brush strokes is indicated at A and B, a deliberate method being desirable, as retouching invariably thickens and spoils the thin strokes.

The lettering is worth consistent practice owing to its light appearance and the frequency with which it can be employed. The letters will bear being condensed, or they may, with advantage, be made wider than illustrated. The strokes, however, should not be heavy, nor the serifs greatly extended. There is, of course, reason, and sometimes necessity, for large serifs on letters of this sort on large elevated signs; but with tickets always close to the eye neatness is an essential. Experiment on several letters, increasing the strength of the thick strokes and extending the serifs, and compare the results with the light type of letter necessary for ticket work, when it will readily be seen how easily this lettering may lose its graceful character.

The numerals (Fig. 51) call for very little comment; the "3," however, may be used as shown or as indicated by dotted lines.

Script Alphabet.—Script (Figs. 52 and 53) lends itself to various interpretations, in some of which the heaviest parts are at the top instead of at the bottom of the letters as here shown. The present form is

**Figs. 52 and 53.—Script Capitals
and Small Letters.**



FIG. 53

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perhaps the most general, while a number of variations may be based on it.

The features of script when compared with round-hand are its greater boldness and easier construction. This simplicity often leads to carelessness, evident in unequal angles, and an interchange of the heavy and light strokes. Script accommodates itself to cramped space better than roundhand, as the tail of the tall letters need not be so high in proportion to the small ones.

It is well to remember that script, being a distinct style, the thin strokes are only thin by comparison, and should not in any case be so attenuated as in roundhand. Frequently the place that script might be expected to take on a ticket is filled by an autograph letter, and when this is so, both script and roundhand are better discarded for one of the more usual styles of lettering.

Capitals are sometimes used indiscriminately, even so far as at the beginning of every word, a practice which, to say the least, is not commended. Greater emphasis may, however, be gained by using them occasionally.

When the letters are a fair size, script may be outlined with a brush and afterwards filled in; but if not more than four times the size shown, some may prefer to outline them with a pen. Others, again, would be inclined to do them complete with a full-charged brush.

CHAPTER VI

Shaded Letters

EMPHASIS on a ticket or poster may be gained in various ways: by suitable contrast in the size and style of the lettering, by colour harmony, and further by the introduction of shading.

Shaded letters are not used so much in this work as in sign-writing. What is generally called shading is really a painted representation of the edge or thickness of a solid letter (see Figs. 54 and 55), and consequently may be indicated on the left- or right-hand side according to fancy. Sign-writers sometimes reproduce the edge in blended colours to represent the play of light and shade, or possibly to suggest it, while on the opposite side a cast shadow is added, making altogether for some positions a most effective letter. Blended shading in colour is not generally applicable to ticket-writing.

A shade that gradually dies away into the background suggested in letter I in the word BUILDER (see Fig. 56), and readily produced by the air brush (for which see a later chapter), is, however, very effective. Shading on the face of a letter with the same instrument gives a rounded and solid effect.

When introducing shade or thickness, the points to remember are to avoid a clumsy effect, to keep the

sides thinner than the underneath strokes, and to ensure equal sloping angles. Instances are met with where the shade is a defect rather than an improvement, owing to the clumsy manner in which it has been done. This is generally most noticeable on round letters as O and S, the workers not being sure where the shade begins or where it ends, and very often indicating it on both sides of a letter.

A simple method of gaining a knowledge of the principle of shading is to draw each letter in outline, and, treating it as a transparency, indicate with dotted lines or with ink of a different colour the hidden parts of the letter. Fig. 54 shows this method, the benefit of which will be found with letters S, R, B, and the sign ampersand; modification and addition will be necessary with several letters, as A. This is recommended solely for the purpose of mastering the principle, for in actual shading the only guide necessary is a bottom line to ensure equal depths, and many experienced writers would dispense even with that.

What is known as a "dropped" shade is shown in Fig. 57, while in Fig. 58 is illustrated a ground shade separated from the letters.

In arranging the depth of a shade, the space at command is taken into consideration. It may also be indicated by a few lines on the initial letter, though a useful method is to take the width of the stroke of an upright letter for the depth. Thus if the upright stroke of letter P is $\frac{1}{4}$ in. wide, the depth of the shade may be the same.

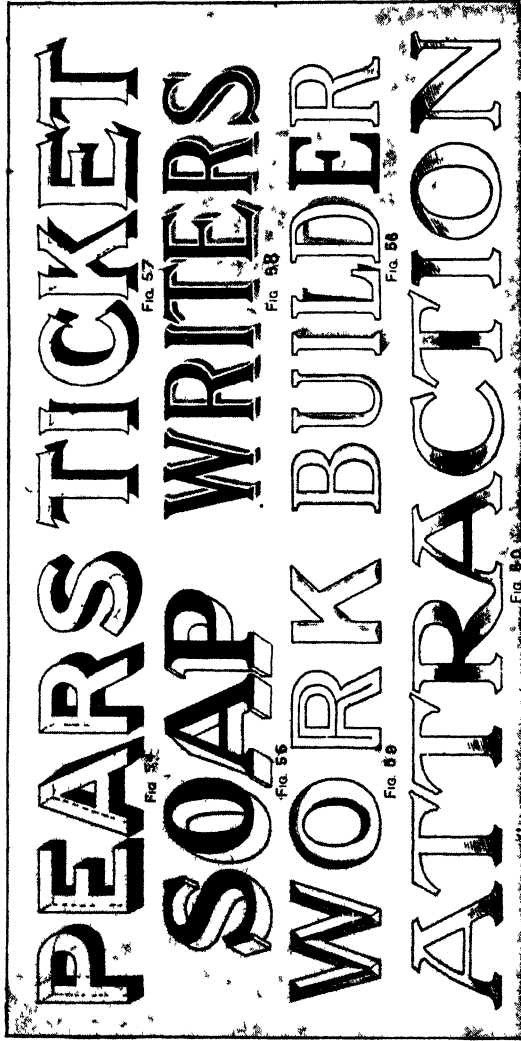


Fig. 54.—Method of Determining Shade. Fig. 55.—Shade on Left-hand Side of Letters Fig. 56.—
Effect of Different Treatments on Face Values of Same-size Letters. Fig. 57.—Dropped Shade.
Fig. 58.—Ground Shade away from Letters. Fig. 59.—Shading on Face of Letters: (a) Incised;
(b) Sunk; (c) for Effect; (d) Rounded. Fig. 60.—Blended Face Letters.

The shade is usually darker than the face of the letter, though, as in ticket-writing, shading is only added for effect, there are exceptions to the rule. A black or other dark-coloured letter on white card may be shaded with thin Indian ink, sepia, and other transparent pigments, or with a tint made by adding white to some of the pure colour. A white or tinted letter on a grey card may be shaded with brown, sepia, or black. A white letter on glossy chocolate, green, or other dark colour may have a gold-bronze shade, in which case it is best kept slightly away from the letter as shown in Fig. 58, otherwise the shape appears distorted owing to the white and the gold being of almost equal intensity. Shade may also be introduced as a tint of colour forming what is called a ground shade. A black letter on a pale blue card having a shade of a deeper, duller blue tint kept slightly away from the letter is a case in point.

Prominence may be given to a word by treating it after the manner shown in Fig. 61 (p. 53); but this should not be overdone. Further shading may be introduced on the face of the letters forming a blended effect from dark to light (see Fig. 60). Thus a white letter on a deep grey or other coloured card may have the principal word blended with a wash of ultramarine or prussian blue slightly dulled with a little raw umber, or brightened by crimson lake. The blending may be from the bottom upwards, from the top downwards, or starting from the centre diminishing both ways. It must be done quickly without re-touching, or there

may be a risk of moving the under-coat. In every instance the letter will be improved by adding a fine bronze outline.

Shading is used to indicate a sunk letter (see Fig. 59), a middle-green letter on white card being sunk with black or a deep green. An improvement is effected by adding an outline, in this instance a gold bronze or a greenish grey being suitable.

Whether an outline is advantageous from the standpoint of clearness or effect depends entirely on the position and the colour of the outline. A letter written normal width or strength, having an outline of a colour approaching the background colour painted on it, would be better with the outline omitted, as it would detract from the strength of the letter. Such an outline being by its very colour subservient, should be an addition to the normal letter. Examples of this sort may frequently be seen on sign work, though not often on tickets. Take the following combination: Cream tint background, black letter outlined gold. The gold outline, especially on glass, being done first, is written as for an ordinary strength letter; consequently, when the black follows, it is in the form of a skeleton letter. Finally, when the sign is in position there are certain lights in which the background and the gold outline being nearly equal in value, only the black is prominent, presenting a weak and insignificant letter. In cases of this sort, the line should be thin, and in addition to the normal letter, in which case the gold will give a sparkling effect without detracting

from the boldness of the sign. Outlining, especially on small lettering, the kind used for tickets, should always be fine, being easier to do and there being no fear of distorting the shape of the letters.

On a pale blue card a black letter will look well with a silver or aluminium outline, preferably the aluminium, as the silver may turn black; but the outline must be in addition to the letter.

Referring to the illustrations here given, it will be observed that a useful angle for shading is 60° , not that this is imperative. The shade is eased in letters A, R, and S in the word PEARS (Fig. 54) for reasons which will be evident if these letters are drawn in outline on a large scale, and then the shade added also in outline. The same remarks apply to the word SOAP (Fig. 55) which is shaded on the opposite side.

An easy way of setting out shade for experimental purposes is to arrange the depth for the bottom of the letters next the widths for the sides, then with the 60° set-square draw angles from all parts of the letters. Where these angles cut the vertical lines will determine the limits of the shade. Of course, even then, some adjustment will be necessary with the round letters.

In the word TICKET (Fig. 57) the shadow is to all intents and purposes the word repeated, being brought a trifle lower and to the right. This style of shading, known as dropped, is very suitable.

In the word WORK (Fig. 59) W suggests an incised letter, O a sunk letter; the centre lines on R are

simply for effect, while letter K suggests a solid appearance.

Various styles of shading are indicated in the word BUILDER (Fig. 56), while a comparison of letters E and R gives some idea of the face value of two letters



Fig. 61.—Bold Lettering for Occasional Use.



Fig. 62.—Lettering Suitable for Sale Poster Heading.

of the same thickness, one being solid, the other in outline.

Any word treated as BARGAINS (Fig. 62) should have the letters boldly outlined or shaded as shown. A little shadow may with advantage be suggested where the letters overlap.

CHAPTER VII

Square-point Brush and Pen Work on Tickets

Brushes.—If a square- or chisel-pointed brush is used, a variety of alphabets differing in few essentials may be written, their size depending on the width of the brush. These brushes may sometimes be bought, although, more often, the writer may prefer to cut them to his fancy, when great care is necessary or they will be spoiled. For certain types of letter no



Fig. 63.—Square-pointed Nib.

fine-pointed brush can compare with them for ease and certainty of execution.

Pens.—For fairly large letters, whether on posters or tickets, the use of the brush will probably be preferred, while for smaller letters the stub or square-pointed pen is the most suitable. Fig. 63 illustrates one make of these pens by Brandauer and Co., of Birmingham, the sizes ranging from No. 1 to No. 6. A fair amount of practice is required before the pen can be used with certainty, but, as will be realised, the feature of the stub pen is the uniformity of the strokes produced. When asking for the pens shown by Fig.

A B C D E F G H I J K L M

N O P Q R S T U V W X

Y Z & 1 2 3 4 5 6 8

Fig. 64.—
Stub-pen Alphabet ;
Capitals and Numerals.

63, inquire for "Round-writing Pens." They may be had in 6d. assorted boxes, which, to begin with, are recommended; afterwards a box of the size most suited to the work in hand may be bought.

Previous to use, it is well to soften the nib slightly by holding in a small flame for a few seconds, then immediately plunge in water and next into the ink. A lighted match will give enough heat as a rule. Have a good stout handle, so as not to cramp the fingers, and when working lay the hand on the card in the same way as when doing ordinary back-hand penmanship. This means that the handle of the pen should point away to the right of the right shoulder.

Begin by practising the letters on paper, using a broad lead pencil cut square at the point. Some carpenters' pencils should be very suitable, as broad and fine lines may be made by simple variation of the angle in which the pencil is held. The strokes should be made in the order indicated by the numbers in the first and second lines of Fig. 64, both when practising with the lead pencil and later with the brush. It should be noted that much pressure is unnecessary.

Sample Alphabets.—Figs. 64 to 67 give some indication of the styles of lettering that the pens will produce, while in addition upright letters of the Roman alphabet (Figs. 68 and 69) may be made, provided a fine-pointed pen is used to finish the serifs.

Old English, Church text, and alphabets of that type may be done partly if not entirely with these nibs. Practice will soon show the possibilities as well

a b c d e f g h i j k l m n o p q r s

FIG. 65

t u v w x y z

FIG. 65.—Stub-pen Alphabet ; Small Letters.

a b c d e f g

FIG. 66.—Stub-pen Alphabet ; Small Letters, Italio.

h i j k l m n o p q r s t u v w x y z

FIG. 66

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as the limitations of the square-pointed pen as an aid to lettering.

No doubt, after a few attempts, these text alphabets, especially the sloping variety, will come fairly easy; but they should not be used indiscriminately for that reason. They are extremely useful for descriptions of an article in the centre of a card, being all the better for a fairly lavish use of clear space on each side.

In this connection it ought to be unnecessary to add that the small letters should be used exclusively, except at the beginning of a sentence or phrase, and possibly to give prominence to a special word. Capitals should not be used for an entire word, and if sufficient boldness cannot be obtained by the use of a capital for the initial letter and small type for the remainder of the word, another type should be selected.

Generally, when using a stub pen, the ink carried being limited, it may be well to cultivate the habit of dipping after each stroke, shaking off the surplus ink on to a piece of odd card each time previous to putting the pen to the paper, otherwise some unsightly blobs will result. Avoid as far as possible repeating or re-touching a stroke, or the thickness will be varied.

Figs. 64 to 66 illustrate the method of working, the few letters where the strokes are numbered serving as a guide for the remainder. These letters will generally be written without previous setting out; therefore, it is advisable either first to do that stroke which determines the width of a letter, or that which arranges

A B C D E F G H I J K

L M N O P Q R S T U V

W X Y Z. 1 2 3 4 5 6 7 8

Fig. 67.—Stub-pen Italic Capitals and Numerals.

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the space between the letters. In other words, the first method supposes that a horizontal stroke is the initial one, while the second suggests a preference for the vertical, where such a stroke forms part of the letter. No hard and fast rule obtains, each worker adopting a system best suited to his style.

No attempt has been made at spacing the letters in the examples appended, the letters being simply indicated. When text styles are utilised they will, however, require closer spacing than such letters as Egyptian or Roman, otherwise the effect is far from pleasing.

Fig. 68 illustrates another pen-type done freehand, and if the usual round terminals of letters a, c, f, r and s are altered, the alphabet may be completed with the square-pointed pen. With the capitals (Fig. 69) a difficulty arises with the fine strokes of the letters A, K, L, M, N, T, U, V, W, X, Y, and Z, and they are best put in with a fine-pointed pen after the wide strokes are done. The spacing may be generally quite easily arranged, as the wide strokes determine the widths of the various letters. The serifs on several of the letters are undoubtedly done more neatly with a fine point, but leaving these few details out of the question, the square point is exceptionally useful for letters of this sort where the pen will make a sufficiently stout stroke in one operation.

ABCDEF GHIJKL
MMNOPQRSTU
VWXYZ & 38

Fig. 69.—Capital
Upright Pen
Letters.

Fig. 69

abcdefghijkl
mnopqrstuvxyz

Fig. 68.—Small
Upright Pen
Letters.

Fig. 68

CHAPTER VIII

Borders and Pointers for Tickets

Borders.—The simplest kind of border on a ticket consists of a single fine line drawn with a pen. On grey or other dark-coloured card the line may be in white, bronze, or a self tint of the prevailing card colour. On white card any dark colour, tint, or metallic bronze may be used, as most colours and lustres harmonise with white.

A double-line border, both lines being of equal strength, or the outer one twice the thickness of the inner, is useful on occasion, though with the introduction of the air-brush shaded borders are more in request.

Lines on a ticket may be drawn in several ways. The card may be secured on a drawing-board, though pins must not be used, as obviously they would deface the card. An easy method would be to have a thin slip of wood screwed along the top edge and down one side of a drawing-board, so that the card could be laid close up square to this guard or stop. With a T-square and a bow-pen the cards could be readily lined, the only indication necessary being dots at each corner showing where the lines met. Another method is to use the sword striper, though for very fine lines a small goose sable may be employed. Tilt the card



FIG. 70

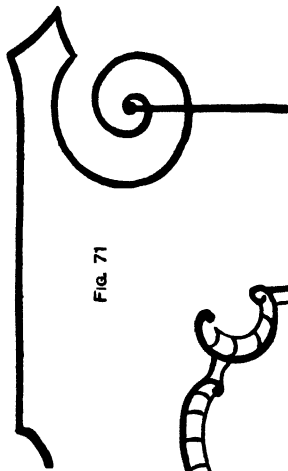


FIG. 71

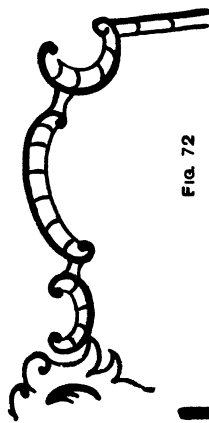


FIG. 72



FIG. 73



FIG. 74

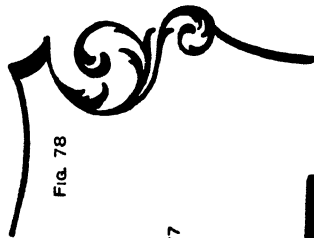


FIG. 78

Figs. 70 to 79.—
Corner and Border
Ornaments.

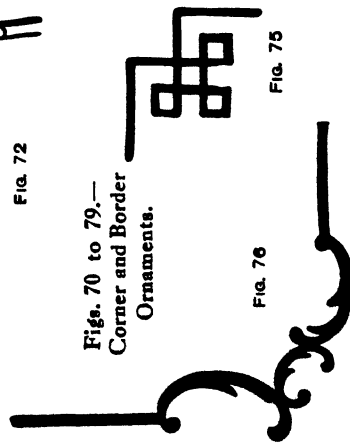


FIG. 75



FIG. 76

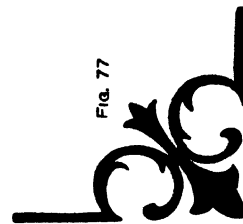


FIG. 77

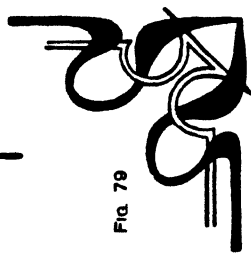


FIG. 79

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slightly by lifting the edge nearest the operator with the left hand, and in running the border line allow the little finger of the right hand to slide along the edge of the card, to form both a steadying influence and a gauge for the margin width.

Further, the bevelled straightedge and an ordinary pen may be used, the bevelled edge being underneath, so that any ink coming in contact with the wood does not smear the cardboard. It will be seen, therefore, that there is a fair choice of methods, and the one which appears in a particular case the simplest may be adopted.

Where a thin and a thick line are required, three lines may be run with the bow-pen, and when dry the broad line made by filling in the space left for it.

There are instances where the bow-pen or an ordinary pen in conjunction with a T-square or an ordinary bevelled straightedge may be used for outlining letters, thus ensuring that the strokes are equal in width and the letters upright. This would be adopted perhaps with large letters, as, generally speaking, the process being mechanical, would in the case of small work detract from speed in working.

Where a number of cards having identical wording are required, the lettering may be set out on a piece of white paper cut to the size of the card. In transferring the design, a sheet of thin paper having the underneath side rubbed over with vine charcoal may be placed under the sketch, the letters and lines being traced with a hard lead pencil or bone point.

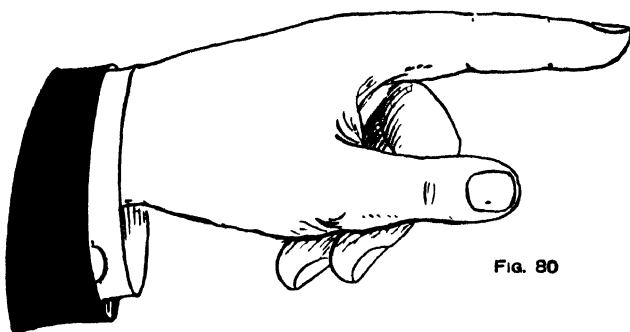


FIG. 80

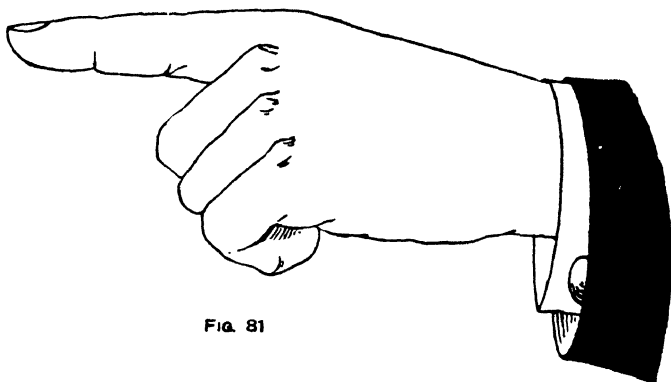


FIG. 81

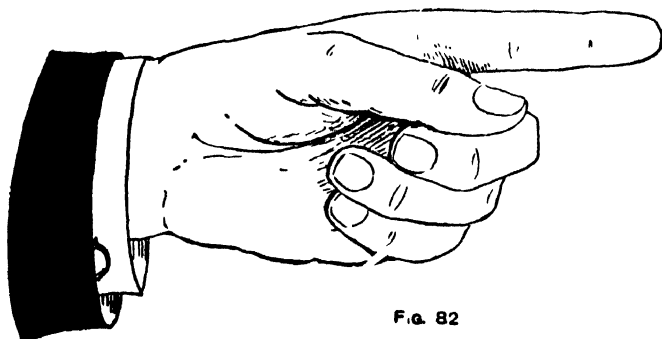


FIG. 82

Figs. 80 to 82.—Three Left-hand Pointers.

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On work of this character, the lettering and spacing being correct, pen and straightedge may be employed, only the straight lines being done, and then the card placed aside until the ink is dry. Afterwards the round letters may be outlined with a suitable pen, and finally filled in.

The above method may be used, though there is another system which will be dealt with under the head of stencils. The chief drawback to the present method may be summed up in the ultra-careful setting out required, and to the possibility of acquiring a cramped mechanical manner.

For many tickets, borders may be done direct with the brush, and where the four corners are to be of identical pattern the design should first be set out on a piece of tracing paper, and transferred to each corner by laying underneath the charcoal paper previously mentioned, going over the design with the hard point. The advantage of charcoal in this connection lies in the fact that any lines not inked in may be easily removed by simple dusting with an old silk handkerchief.

Several simple corners are indicated by Figs. 70 to 79. There is, of course, no reason why the four corners should always be identical in design so long as the balance is equal. This is seen in borders based on rococo ornament (Figs. 72 and 76). Freehand brush designs are excellent for corners; in any case, the first may be done freehand, then when dry traced and transferred to the remaining corners. In designs apart

Fig. 83.—Left-hand Pointer.



Fig. 84.—Right-hand Pointer.

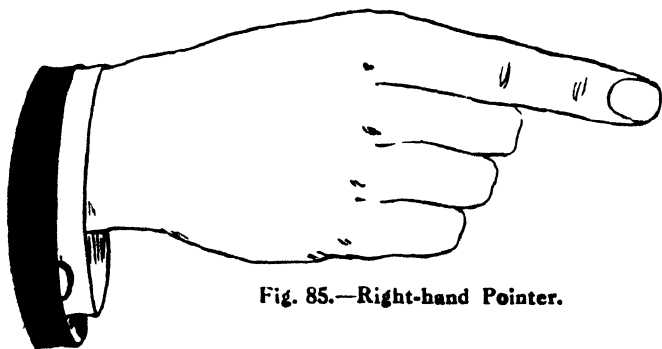
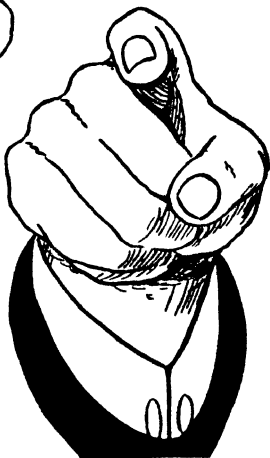


Fig. 85.—Right-hand Pointer.

from rococo it will perhaps be advisable to have the two top corners of the same pattern and the bottom corners alike.

The ticket-writer must be his own judge as to whether the use of a border is advisable or not, as, after all, the lettering, and not the border, is of the greatest importance. Unless the border is of the simple-line variety, it seems preferable to keep it quieter in tone than the lettering. Thus, if the letters are a middle green on white, the border may with advantage be a broken tint of the same colour; by these means the announcement is likely to have its true significance. Two tints or colours may be introduced (see Fig. 79), in which case the fine lining may be done with a pen.

Pointers.—On ticket and poster work there are a number of figures constantly required, and of these the hand or pointer is certainly not the least important. To draw and paint the hand in all positions requires a fair amount of skill and patience; but that is no excuse for the weird interpretations sometimes indulged. The aim in view is to get a passably correct appearance in whatever position the hand is indicated.

Examples of pointers are presented by Figs. 80 to 86. It is perhaps unnecessary to remark that a hand pointing to the left may, by being simply turned over, be used for a pointer to the right. Therefore, if a few examples are drawn, then transferred to transparent paper, they may be used indefinitely. Fig. 82, by altering the position, can be made to point in almost

any direction, and is therefore useful for general work. Possibly Fig. 80 will be found easier when the hand is to be reproduced in colour, less modelling being necessary. Figs. 81 and 85 are still simpler; but unless the reader is ambidextrous it cannot be said that he has an ever-ready model before him, as in the previous examples. Fig. 83, a useful index, is practi-

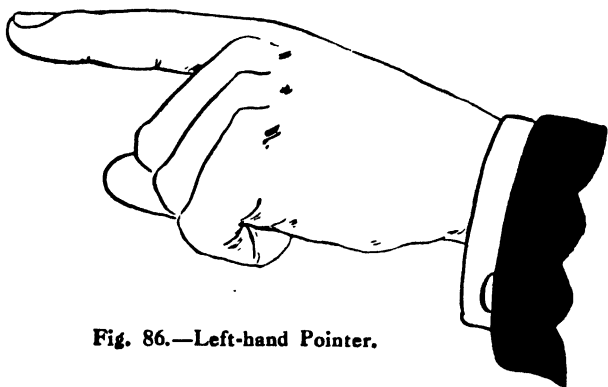


Fig. 86.—Left-hand Pointer.

cally Fig. 82 repeated. Fig. 84 is more difficult to execute, is frequently required, and not one of the other examples can properly take its place. The effect would be much better if the hand were painted in colours, with due regard to light and shade. Fig. 86 resembles Fig. 81, except that in this instance the thumb is extended.

To give prominence to the hand outline, the sleeve in each instance is indicated in black, though in actual work, colour and a little modelling might be introduced.

These pointers may on occasions be used in outline or silhouette. The first, however, is weak, and the last does not compare favourably with light and shade.

Painted in natural colours, tube water pigments are advisable. On occasion, venetian red alone would answer, and certainly venetian, yellow ochre, vermilion, neutral tint, and vandyke brown would be sufficient. Other pigments may be preferred, each worker having a particular fancy.

If a large quantity of tickets with pointers are required, it would be cheaper perhaps to get these produced in colours on stout paper cut to shape, and simply glue them to the cardboard.

CHAPTER IX

Classic Alphabets

THERE is a possibility of cultivating a slovenly method of lettering, sacrificing everything in an effort to attain great speed. This, in the case of sign-writers, has led to the use of hollow-side and italic letterings in positions where neither is in the least degree suitable. They are introduced simply because they are more easily written than letters whose form is governed by well-established laws. On cheap work of a temporary character the less severe types are legitimately employed, and where a startling effect is necessary, a grotesque letter is often the most desirable.

Large firms to-day seem inclined to adopt a distinct and individual type of letter in their business, using it on advertisements, vans, signs, as well as on showcards and window tickets. Firms with an artistic reputation, furnishers, and decorators incline to pure classic type or letters built on classic lines. Doubtless it is the refinement in line and form about these letters which accounts for their high favour.

Such a type is Serlio (Fig. 87), an alphabet of the Italian Renaissance, that is sixteenth century, and equally applicable to work in the twentieth century. Beautiful proportions, variety of line, adaptability to the contour of other letters, may be said to constitute

its chief characteristics. It differs materially from Egyptian or block. In Egyptian there is an attempt to make, with few exceptions, each letter fill a certain amount of space, this being in harmony with form, and the result a bold type of letter suitable for all general purposes.

Modern Roman is calculated to take up the same amount of space as Egyptian exclusive of the serifs, and not only do the majority of the letters take up a square, but they are so constructed that, generally speaking, there is a uniform squareness about the whole alphabet. Serlio on analysis appears to be based on the proportions of the ideal human figure and of the classic column.

Reverting to the proportions of the ordinary Egyptian letter, it will be found that vertical or down strokes are generally one-sixth the height, while for classic one-eighth will be more in keeping; horizontal strokes in Egyptian are generally only a trifle thinner than the upright, while in Serlio the thin horizontal strokes are one-third of the thick strokes, that is, one twenty-fourth of the height.

Without entering into a detailed description of this alphabet, there are a few leading principles which if remembered will ensure the proper amount of space for each letter. With this knowledge, setting out, which previously may have been guesswork, may be reduced to rule. The entire square is taken up by letters A, D, G, K, O, Q, V, X, Y, Z. Now, assuming that the horizontal strokes are one-third the thick-

A B C D E F G H I J
K L M N O P Q R
S T U V W X Y Z
B O D E G O S

Fig. 87.—Classic or Serlio Alphabet.

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ness of the uprights, the square (Fig. 88) may be divided into twenty-four parts instead of eight as shown. Therefore the letters just previously mentioned take up twenty-four parts. The next largest letters, C, E, L, T, take twenty parts, and the following group, B, P, R, S, F, take fifteen parts. In addition to the full twenty-four parts, letters M and N take four parts, and letter W a further twelve, that is, thirty-six parts in all.

For large posters, an easy way of setting out is to mark these different proportions on a strip of card, using it as a guide. This is especially desirable in the case of large letters, where error in proportion would be conspicuous.

The main difference between this **type** of letter and grotesque, using the term to describe fanciful types, is the rigid adherence of the former to rule, whereas in the latter the middle bar of letters A and E may be almost level with the bottom serifs or removed close to the top, as may be desirable. In classic, the middle bar *must* come practically central, that is, so as to appear central; and experiment will prove that neglect of this rule takes away the character of the letter.

A simple method of determining the space occupied by letter B is shown in Fig. 89. The circle close up to the vertical stroke must not be half the height, or the letter will be out of proportion. The dotted line shows, for all practical purposes, how far the bottom part of the B should project. This can be determined

by striking circles if desired. Letter C is practically the circle with a segment cut off. For large letters the easiest way to mark out is indicated in Fig. 90, wiping out the parts not required. Letter D, as seen in Fig. 91, takes up the full square, while the circular part

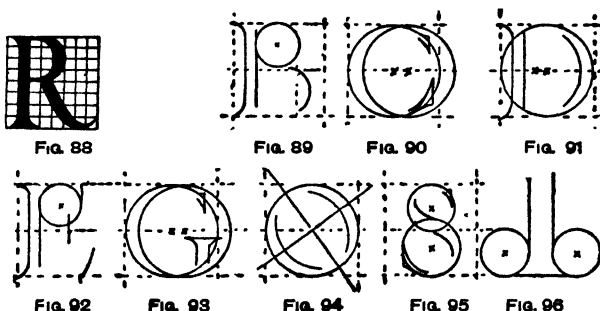


Fig. 88.—Determining Proportions by means of Squares. Fig. 89.—Proportions of Letter B. Fig. 90.—Easy Method of Forming Letter C. Fig. 91.—Constructing Letter D. Fig. 92.—Determining Position and Limits of Strokes. Fig. 93.—Showing Lines of Construction. Fig. 94.—Lines Governing Formation of Letter O. Fig. 95.—Determining Width of Letter S and Figures 2, 3, 5, 6, 8, 9. Fig. 96.—Showing How Equal Serifs may be Formed.

may be struck as indicated, grading the thickness freehand.

Letter E (Fig. 92) may have the width of the upper part determined by striking a circle close up to the width of the vertical stroke as shown. The dotted line indicates where the bottom serif begins. Letter G (Fig. 93) is formed on the same principle as

C, the serif on the vertical stroke filling the entire square. Letter I is generally used as J in the actual type; but J as shown will be required for present-day poster work. Letter L takes up the same room as the bottom of letter E; a useful rule to remember.

The two following letters, M and N, constitute something of an optical delusion, for it will be found that the spaces occupied are almost identical. Letter O (Fig. 94) may be struck from four centres; but the inner part is best done freehand. Actual thickness may be determined as indicated; but the lines themselves should be done freehand, so that there may be always a scarcely perceptible difference in the curve.

Letter R (see Fig. 88) needs no explanation, while S (Fig. 95) is easily constructed on the lines shown. This is useful also as showing the way in which figures 2, 3, 6, 8, and 9 may be made, as well as deciding the amount of space they will occupy. In the original classic alphabet V takes the place of U; but the letter as shown is advisable to prevent confusion. Fig. 96 is enlarged, showing how the serifs are formed, while an analysis of this alphabet will show that it can be drawn mostly with mathematical instruments.

The classic forms of lettering or modifications of these forms are generally better written thin and spaced fairly open, matters which may be easily decided by experiment. These types look well written in white on any dark card, a rough greenish-grey being possibly the most effective. Leave plenty of margin,

and, speaking generally, avoid border or other ornament. If occasion demands, the letters may be finely outlined; but shade or thickness is out of character, serving only to distort good shapes. If there is any inkling to add shade, select another type of letter in the first instance.

This alphabet is useful as a starting point for those who wish to try their hand at devising other types. A light fanciful letter especially useful for ticket work can be made on the lines of letter S, making all ordinary width letters of narrow proportions. This gives a type that will bear fairly close spacing without deterioration. A further type may be made taking the width of letter L for a guide. The serifs, too, lend themselves to quite a number of variations, to say nothing of the difference in appearance which may be obtained by alteration in stroke thickness. The narrowing of letters L and T is worth noting, as it suggests a way of overcoming the excessive space left when these letters are of the full normal width.

This type of letter should always be written straight, as curves or sweeps will distort the shape. Very few types adapt themselves to curves, the most suitable perhaps being what is called hollow-side or bent; the next, ordinary block. By reference to the alphabet given (see Fig. 87) it will be seen that only the bottom horizontal strokes of several of the letters as B, E, L are curved. The worker may be inclined to round every inner angle with the idea of improving

the shape; but such a course will effectively destroy the variety and severity of the letter. A very good type of letter may be made by rounding these angles; but in the present instance the addition is wrong as well as superfluous.

Should the small letters of alphabets of this character be required, they may be constructed from old style; that is, ordinary letterpress printing. In addition, delightful renderings and modifications are to be seen, as in the case of the lettering used on W. H. Smith's bookstalls, and while not advisable to make an exact copy, it shows the lines on which the classic letters may be adapted to form decorative styles.

In writing these classic capitals opinions may vary as to whether the brush or the pen is most serviceable. The brush, being more pliable, seems to be better fitted for making the large flowing curves found in this alphabet; certainly for large lettering this is the case, but for small work the reader should use whichever is the better adapted to his method.

CHAPTER X

Air-brushed Tickets

THE simple expedient of varying the tone or strength of the ground is one of the most effective means of getting interest in a poster or window ticket. This may be in several colours or in several strengths of one colour only, going from dark to light, beginning anywhere in the ticket that applies to the work in hand.

Where a shield, using the word in the sense of a guard, is used, a white margin may be protected, thus giving a further effect.

Results of this sort may be obtained by means of a spray atomiser (similar to a lady's scent spray), as used to fix charcoal drawings, by means of a good full stencil brush, or for coarser spatter effects by using a tooth-brush and a fine comb or a piece of perforated zinc. In the last instance, the brush being charged with ink is drawn across the comb and drawn towards the operator, and has the result of splashing the unprotected part of the card.

All these are only makeshift methods, the air-brush (a hand paint- or colour-sprayer) producing the work in a much more expeditious and artistic manner. The air-brush, the best-known type of which is the **aerograph**, may be had in various sizes, the smallest being

operated with a foot-pump. The foot-pump is very well for occasional use; but where the brush is being constantly employed the large hand-pump or other source of compressed air is desirable. For large blended grounds the pistol-pattern aerograph (Fig. 97) may be preferred, though for all freehand shading and blending the small "A"-pattern hand-piece (Fig. 98) is suitable. The Aerograph Company, Holborn Viaduct, London, E.C., supply various patterns, particulars of which would no doubt be sent on application.

By cutting shapes, using for the purpose stout manila or cartridge paper or a piece of thin card, a large assortment of simple shield shapes may be produced. If the cut-out piece is used as a guard, a blended margin results, while where the remaining piece of card is utilised a blended centre is produced.

Any colour card may, of course, be employed, provided a suitable stain is used for shading, and thus by this easy method alone a large variety of effects may be produced.

What is called cloud shading may be done without a stencil, the spray being carefully graduated from very deep grey. Any other dark colour is equally useful, the writing that follows being in white, often with a black shade. This may be used in an infinity of cases on ordinary plain white card, or on plain card afterwards mounted on Japanese or other veneer board to give a dark contrasting border. This effect on gloss white card with rounded corners is most satisfactory;

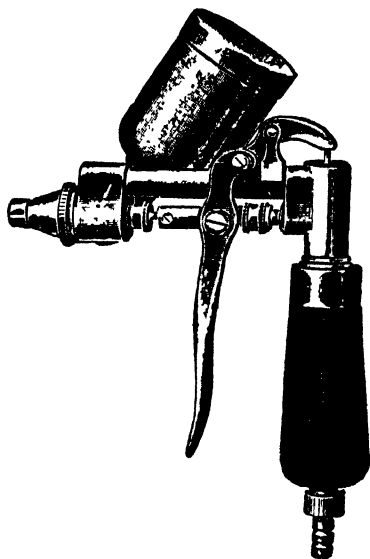


Fig. 97.—Pistol-pattern Aerograph.

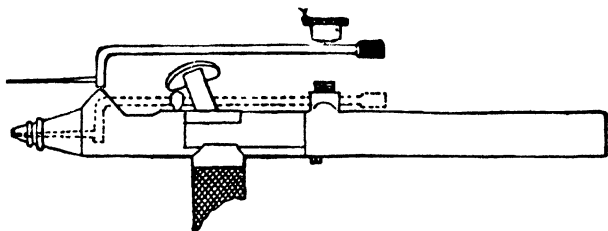


Fig. 98.—“ A ”-pattern hand-piece ; “ Airostyle ” showing needle withdrawn for cleaning purposes.

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but it depends on neat lettering and the use of ample clear margin for its success. In cards of this sort the top would be written in white on the cloud, the remainder being in black or other dark colours.

Ribbons may be produced by means of stencils in conjunction with the air-brush. They may be done with one stencil, though better effects are produced by the use of two or, better still, of three. In the last instance the ground would be shaded dark grey, next the back fold of the ribbon is green, and finally the front fold in orange or other suitable bright colour.

Reference to Fig. 99 will indicate the method of cutting the second stencil when the curls of the ribbon are to be shaded in only one colour.

Careful stencil cutting is imperative to ensure correct register so as to form a complete pattern. One system is first to draw the ribbon, and make a tracing on the stencil paper. Cut out the parts required and stencil them on to a piece of card, also on to another piece of stencil paper. Connect up the links of the ribbon, either freehand or by using the original tracing. Cut out the parts required for the second stencil, and then spray the colour on to the original card and to a further piece of stencil paper. Finally, cut out the parts of the third stencil. There are other methods of getting correct register; but it will be realised that a proper set of stencils may be used indefinitely, and thus ample pains should be taken in the first instance. When the stencils are found to be perfect, lay the three on top of one another, and make some distinctive

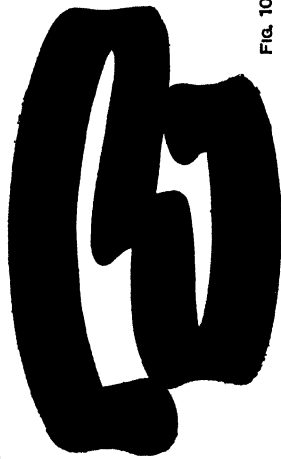


FIG. 100

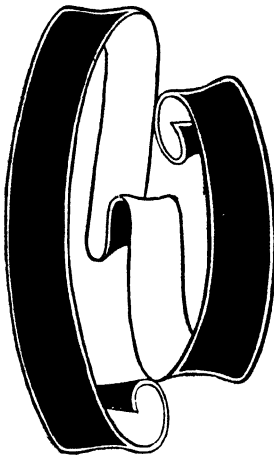


FIG. 102

Fig. 99.—Completed Air-brushed Ribbon. Fig. 100.—Guard for Air-brushing Ribbon Background. Figs. 101 and 102.—Stencils for Back and Front Folds of Ribbon.

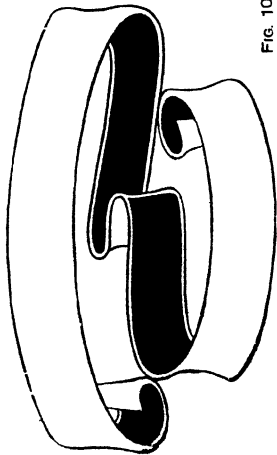


FIG. 101

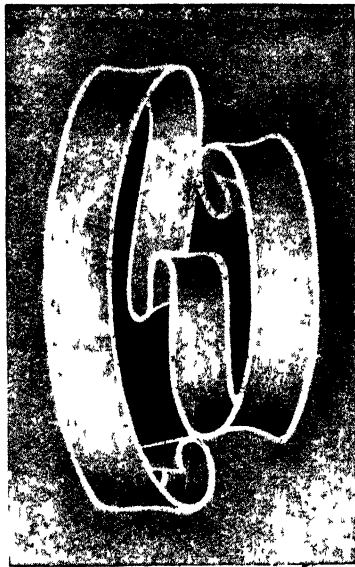


FIG. 99

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mark in order that the stencils may at once be placed in their proper positions.

The three stencils may be in the order shown, Fig. 100 being used to spray the graded background, Fig. 101 for the back folds, and Fig. 102 for the light shading on the front of the ribbon. In Fig. 100 the solid black represents the paper left; in Figs. 101 and 102 it would be the part cut out.

Another method may be followed, this requiring only two stencils. Use Fig. 100 for the grey background, and Figs. 101 and 102 made into one for orange or other suitable colour. In this instance the folds of the ribbon are in only one colour.

Shield shapes (Fig. 103) may be done in two ways. Where the card is cut to shape before being dealt with, only one stencil is necessary to suggest the curls of the paper. On a plain rectangular shape two stencils will be necessary, one for the graded background, and another for the surface shading. Fig. 104 shows the second stencil, the solid black and the hatched part showing the paper left in the stencil.

Occasionally, stencils on the principle of Elizabethan pierced work and also back-to-back rococo scrolls will be found serviceable. Fig. 105 suggests rococo method, while the whole of the centre may, of course, be in an even tint.

Fig. 106 is obtained by simply covering the angles thus rotation with a piece of card or a set-square while adjacent parts are being aerographed. Fig. 107 three on produced on card cut to shape, a smaller piece

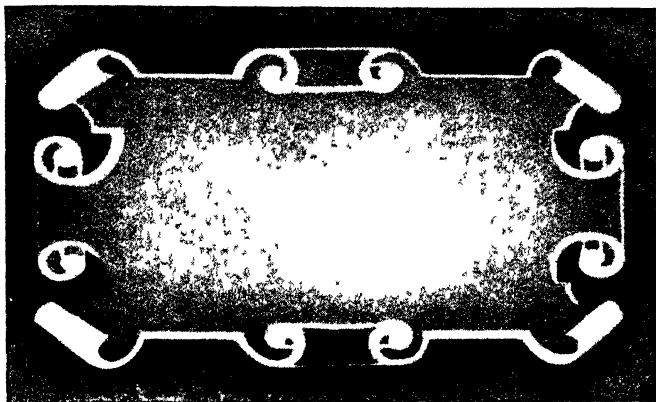


Fig. 103.—Completed Shield Pattern in Aerograph Work.

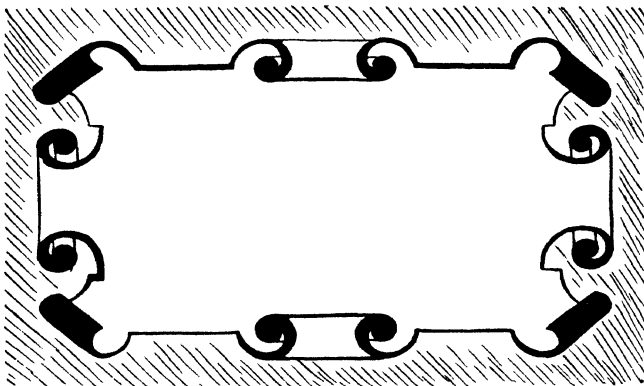


Fig. 104.—Showing Construction of Second Stencil for Shield Shapes.

of the same pattern protecting the centre. The margin or bevelled edge may be got by using stencils; but where only a few cards are required, the angles may be produced in rotation by the aid of a square. Fig. 108 suggests a further example on the same lines. This shading is suitable on any oak or dark board, the centre being a light glued-on card.

The illustrations given in this chapter suggest a



Fig. 106.—Shaded Margin.

Fig. 105.—Rococo Border
Stencil.

few elementary effects produced with the air-brush; but a fair amount of practice will be necessary before the machine's full possibilities are realised. The spray may be graded from a scarcely perceptible stain to coarse spatter work, by varying the air pressure and the position of the hand-piece. It would be well to experiment on odd pieces of paper or card, since actual use will teach more than written description.

Stain in a wide range of colours may be had from

the aerograph makers, and from many other firms. Whatever the reader may do when he becomes experienced, it is advisable at first to use ready-made stain, which is not only satisfactory, but also goes a long way, and is less likely to clog the mouthpiece

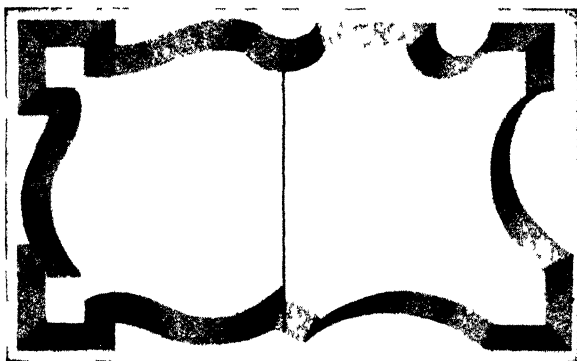


Fig. 107.—Shaded Margin.

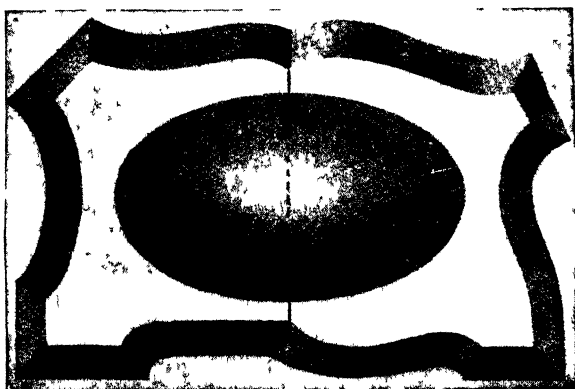


Fig. 108.—Shaded Margin.

CHAPTER XI

Sign-Writing

THERE is perhaps no business conducted with so little in the shape of plant as that of sign-writing. This arises from the fact that a great deal of the work is done for builders, decorators and others who are fairly well provided for in this respect. The large sign firms naturally have suitable ladders and other scaffolding, though there is little difficulty in hiring in London and other large towns.

The operative sign-writer is concerned more about tools than scaffolding, even though he may on occasion make poor shifts—for example, writing a fascia off a ladder.

It is surprising what fine work was turned out by writers of the old school, often with meagre and dirty outfits; not that their example in this respect is worthy of imitation. A filthy writer's box is scarcely a desirable advertisement in these days of strenuous competition.

Equipment. — A workshop devoted to sign-writing should have good front light, and, if possible and in addition, top light. It should contain: A good firm bench away from the window so that the operative may get all round. A separate smaller bench with a white marble slab, or, failing that, a piece of $\frac{1}{4}$ -in.

plate-glass, upper side ground with emery powder and the under side painted white. A number of shelves near the bench for paints and liquids. A set of half a dozen drawers will be found invaluable for keeping sketches, gilders' tools, gold-leaf and cotton wool. A couple of 6-ft. easels and half a dozen pieces of deal about 7 ft. long, 6 in. wide by 1 in. thick, with peg holes bored 6 in. apart. These will be used for leaning against the wall, being temporarily secured at top by driving a nail partly home through the top hole, thus forming a kind of easel for writing long sign-boards. A few boxes of 1½-in. deal, 24 in. by 18 in. by 12 in., without lids, will be useful as seats or as sign supports of various heights. A number of pieces of bamboo cane 3 ft. long; T-squares, 18 in., 36 in. and 42 in.; several light laths of varying lengths, and bevelled straightedges 2 ft., 3 ft. and 6 ft. long. A couple of drawing boards, one 3 ft. by 2 ft. and the other 6 ft. by 3 ft., should be had for making sketches, their edges being kept sharp and square. The squares and straightedges should have holes at one end and be hung up on the wall when not in use. One side of the shop could with advantage be matchlined and, instead of being perfectly upright, made to project 1 in. at the ceiling. On this shop blinds, calico and other flimsy signs could be temporarily fixed during writing. By having the top slightly projecting, paint dropping from the writing brush would be more likely to miss the material than if the wall were perfectly upright.

Where the amount of work warrants the initial expense, an aerograph with hand-lever pump and tank combined is worth consideration. This also suggests the use of stencils, which could be of stout cartridge paper or metal foil. ●

Writing brushes or pencils should preferably be of red sable from a duck quill to small swan, larger brushes being of ox or taurus hair and set in tin. Flat brushes in tin, called blenders, may also be of ox hair. Lines are frequently required in sign work, and both the coach-painter's liner and the decorator's bevelled lining fitch are useful. In addition, good round hog-hair fitches in tin are frequently necessary for writing on rough surfaces and for filling in large letters. A writer's box is useful, and it will often be an advantage to have one specially made, slightly larger and stouter, so that it may be sat on or even stood on without damage.

Fig. 109 shows a useful box. The sizes suggested are length 15 in., depth 6 in., and height 12 in. The top drawer would do for carrying brushes, both loose and in a pencil case, and would take a three-joint mahl stick and dividers. The row of boxes below should be reserved for dry pigments, as white, black, ultramarine, purple-brown, vermilion, brunswick green, middle chrome, and yellow ochre. The boxes should be of tin, having slide or clip-on lids, and a ring to form a handle soldered on the front. Thinners, such as turpentine, linseed oil, gold-size, and varnish would go in the four cans, which should have screw caps to exclude dust

and air. One of the two drawers should be reserved solely for gilding materials, as gold-leaf, both transferred and untransferred, cotton wool, etc. The other might well be kept for a sponge, leather, and cloth. The bottom spaces are for dippers and pots, both filled and empty, while the compartment at each end could be used for carrying small pots of mixed colour or any

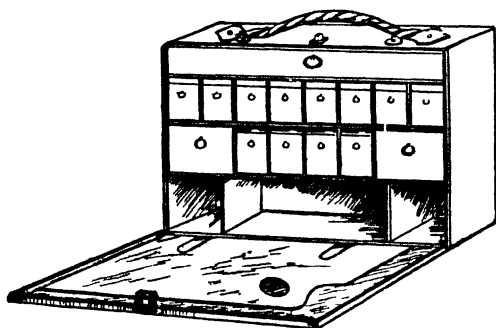


Fig. 109.—Sign-writer's Box.

special mixture. One or more palette boards could be secured in the lid by means of clips. The handle of the box should be of leather or other pliable material, as the ordinary wire handle cuts the hand. For fastening, a small brass padlock is better than the usual pin. The box may be of stout block tin and finished with japan. A better box would be of $\frac{1}{4}$ -in. to $\frac{3}{8}$ -in. mahogany or Venesta board, painted or polished, the fittings being of tin. A strong box is desirable, as it will serve as a seat when no other is at hand.

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Paints.—The cleanest lettering is that on the best class coach work, and is generally done with the colours, gold-size and varnish supplied by the coach firm. The colours used are obtained ready ground and properly bound, and it is possible to follow closely on the writer with the varnish brush without risk of the colour moving. While it is possible to get from the best colour firms almost any pigment ground in oil, turps, varnish, or gold-size, in large or small quantities, there is no excuse, even outside coach-writing, for filthy work or for lettering done with inferior paint purchased from an oil-shop. In coach work there must be no nibs of unground pigment, no ridges in the gilding, no joints in the shade to show up after varnishing, and these defects are avoided by careful mixing and selection of the materials used.

The paints required for lettering being comparatively few and the quantity small, it seems false economy to have other than the best. Even so, a poor pigment well ground will give more satisfaction than a good pigment improperly ground. It is next to impossible for a sign-writer to mix paints properly on the pavement or on his palette, though a piece of thin plate-glass, face ground and bedded into the lid of the box, might be useful.

A selection of pigments for general work would include white-lead ground stiff in oil, kept in an earthenware utensil, the lead covered with water, and air excluded. White-lead ground in turpentine kept in a lever-lid tin, the turp poured off each time pigment

is used and afterwards poured back again. In addition, dry white-lead should always be in stock.

Zinc oxide in oil and kept covered with oil. Other useful white pigments are zinose, silox and dixonis white.

Dry vegetable black is serviceable for general work, but the quality should be good, and free from grit. This can readily be mixed with any vehicle from oil to varnish. Drop black in turps and ivory black in varnish will also be useful. Black in oil requires a fair proportion of drier and in turps plenty of binder.

Ultramarine is perhaps the most useful blue pigment, and, except that a large decorator's tube in oil may be kept for tinting and blending, the dry pigment will answer all purposes. Used alone, ultramarine is practically black and should be lightened by the addition of a little zinc oxide or other zinc-base white, this assisting in bringing out the true colour. On a pinch, white-lead may be used, though for chemical reasons zinc oxide is preferred.

Blue of the Prussian or Antwerp variety, ground in oil, is used for tinting and blending. Tints of blue inclining to green are obtainable with these pigments when ordinary ultramarine is unsuitable.

Vermilion is almost prohibitive on account of its cost, but where used is best bought dry and mixed in varnish and turpentine. Good quality vermilionettes or fast reds from firms of repute now take the place of vermillion, and once a satisfactory red for a particular purpose has been found, experimenting

should be avoided. For lettering, the red may be bought dry, but where red grounds are desired, the pigment is best had ready ground in varnish oil or turps. In every case a final coat of varnish is necessary. Venetian red, if from a good colour firm, is an agreeable colour, permanent, and gives good effects on stone, vellum or fawn grounds.

Indian red, in different shades, may be similarly used, the pigment being bought ground stiff in oil.

Maroon, where the colour is fast, provides a rich, satisfying background, and should be applied over a ground coat of Indian, Pompeian or Venetian red.

Large tubes of crimson lake and alizarine scarlet in oil are useful for thin or glaze coats over other reds.

Brunswick and chrome green, pale to deep, are fairly serviceable, but after a time the yellow and the blue are inclined to separate, and it would appear better policy to buy guaranteed permanent greens from any one of the good colour manufacturers.

Emerald green is useful for many purposes, but one of the emerald tint greens will answer equally well.

The chromes from pale lemon to deep orange are useful, working well in any of the required mediums and covering well. Wherever possible, they should be protected by a coat of varnish. Mander's yellow with an earth base is a good yellow absolutely permanent both for ground and lettering.

The vehicles used with these pigments include raw and boiled linseed oil, turpentine and turps substitute, two copal varnishes, one of them pale in colour,

ordinary japan gold-size, quick japanner's size, black japan, and two grades of writing gold-size, one $\frac{1}{2}$ to 1 hour, the other 4 to 6 hours. A pint each of these at a time is ample, keeping the cans tightly corked when not in use. A good quality terebene drier should complete the outfit.

For a glossy black letter mix dry vegetable black stiff in japan gold-size and thin down for use with boiled linseed oil, adding a very little turpentine and a few spots of terebene if the weather is cold or damp. Black bought ground in oil may be prepared by the addition of gold-size and terebene. Often a little varnish is advantageous. For a dead black letter, grind dry black stiff in gold-size and dilute with turps; for an egg-shell gloss grind in varnish and thin with turpentine. Whenever black is bought ground in turps add a binder in the shape of gold-size or varnish. Greens, Indian reds, and purple brown may be used in the same way as black.

White letters seldom cover in one coat. To overcome this drawback, the sign-writer makes the paint sharp and quick-drying, laying it on as thickly as possible; afterwards the white is thinned down and the bare parts second-coated. This answers fairly well for temporary work, but where permanence is required the second coat should be glossy, having an excess of oil or varnish in its composition.

White-lead is generally favoured on account of its good working qualities, but zinc oxide, Orr's silox, and Dixon's white should also be used.

For glossy lettering ultramarine blue may be mixed stiff in either boiled linseed oil or oak varnish, but not in gold-size, or the work may appear shaded. Very little turpentine is required or the lettering will dry showing dull streaks. The blue will cover better if a little base zinc white is added.

Vermilionettes and bright reds generally should be ground up stiff in oak varnish and thinned down with turpentine. The lettering will dry dead, egg-shell or glossy according to the quantity of varnish incorporated. Gold-size and boiled oil are not advised. For large lettering on a varnished ground the letters are best written to dry flat and then gone over with varnish both ground and lettering. Attempting to get a glossy red letter in one operation results in applying the pigment too thin consistent with permanence, and the colour fades.

Mander's sunligat red, of a deep crimson shade, is a good-bodied red fast to light if properly varnished.

The sign-writer is frequently required to match lettering printed on paper and other material. Where tints are required this is comparatively easy, but there are some colours which cannot be matched by simple admixture. It is as easy to apply a glaze of colour as to second-coat the letter, and frequently the glaze will solve the difficulty. Mixtures of ultramarine blue and crimson lake are expensive if applied to produce a solid letter, and the result is disappointing; vermilion and crimson lake is also expensive if more satisfactory. Beautiful colours of varying strengths of magenta, un-

obtainable by usual mixing, may be produced by first writing the letter in solid light to medium blue made from ultramarine and zinc oxide, and, when quite dry, going over the letters again with a thin glaze of crimson lake in varnish. Brilliant reds may be obtained by writing first in pure vermillionette, or vermillionette and white, Venetian red and white, and glazing with either alizarine scarlet, carmine, or crimson lake. Deeper tones may be obtained by glazing over Indian red, Tuscan red, or Venetian red with crimson lake or brown madder lake. In fact any colour poor in quality may be improved by the application of a suitable coat of glaze.

Some Typical Styles. — The introduction of machinery and the factory system into the sign business has, to some extent, hustled the sign-writer from his former strong position, but there does not appear to be any reason why painted letters should not be as freely used as the solid letters of glass, wood, or metal. In some respects, the written letter, properly protected, has advantages over the solid one.

Burnished gold lettering inside a window, with a black outline or shade, and further protected, shade as well as gold, with a coat of varnish slightly exceeding the edges will withstand condensed moisture; the effect is greatly improved by suggesting a convex or incised letter. This may be done in two ways. After correct setting out, preferably in black paint outside the window, give the inside of the window where the writing comes a wash over with weak whiting and

water, using a sponge for the purpose, and allow to dry. Now with clear, quick-drying copal varnish coat the parts suggesting where the light falls, as in Fig. 110. When dry, wash off superfluous whiting, and gild with isinglass size in the usual way. The black outline would come last. The other method is first to paint the black outline in vegetable black ground in equal parts oak varnish and jannet's gold-size, then put in the varnish shading, and finally gild.

An imitation bevelled letter (Fig. 111) if more trouble is equally bold and pleasing. This seems more in keeping on a fascia. Here the use of a good full-toned burnt sienna is desirable for blending, previous to gilding on glass and after gilding on wood. In the latter case it is not a bad plan first to go over the gilding with a wash of clean gelatine size. There is then no fear of injuring the gold while blending the sienna, and the size can be washed off after the paint is dry. Burnt sienna too bright in tone may be remedied by adding a little raw umber. Tube oil colours should be used for this work.

Large letters to be fixed high up should be given a suggestion of roundness either by simple stippling or by using an aerograph. On a deep blue ground, white letters with warm grey face shading and a bold black outline stand right out from the ground. There is little to be said against the ordinary block shaded letter, which, in deference to the critics, is not meant to deceive; but since this has been so frequently used



Fig. 110.—Imitation Gold Incised Letters.

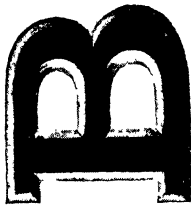


Fig. 111.—Imitation Gold Bevelled Letter.



Fig. 112.—Sunk Centre Letter.



Figs. 113 and 114.—Block Shading by Suggestion.

Fig. 115.—Large Elevated Letter with Hatched Shading.

a change is desirable. Thus a bold outline close to the letter, a fine outline away from the letter, a fine line down the centre of the letter, all are in good taste. Fig. 112 suggests another agreeable treatment. Some styles of lettering are best neither outlined nor shaded, roundhand being a case in point.

Angular copper or brass letters on natural oak, though frequently seen, can hardly lay claim to being either bold or striking. Further, they require constant cleaning, and in the ordeal collect dust and polishing paste to their disadvantage.

On light oak any of the following treatments is worth consideration: Outline the letters in black; when dry coat the centres in a medium oak stain, either matsine, or a stain made from burnt and raw umber and yellow ochre in equal parts mixed in varnish and turps. In some cases the ochre may be omitted. Write the letters in the oak stain, when dry outline in gold or aluminium bronze mixed in japper's gold-size. Write the letters in mahogany stain—mahogany lake in varnish—and outline them in pale blue or quiet grey. Paint the letters in white and then add pale blue centres.

Write the letters in Brunswick black or white hard spirit varnish; then give the board a wash over with Stephens' dark or medium oak water-stain, and when dry remove the black with turpentine and cotton wool or the spirit varnish with methylated spirit. Finally, coat with varnish or polish. This may be done on bare wood or on that already varnished or

MANTLES *Cecilia* COSTUMES

Fig. 117.—Contrast in Fascia Lettering.

37 **Brownie** 37

Fig. 116.—Value of Small Alphabet in Fascia.

polished. The bare wood should, however, be prepared with a coat of clear gelatine or animal size or a coat of pale knotting thinned slightly with methylated spirit. Wood letters, especially the half-round variety, seem out of place on a fascia, especially when fixed with clips or on a couple of iron bars. They are never so effective and satisfactory as when fixed standing a foot or so away from a building. In most cases, on a fascia, a letter giving the effect of solidity by simple face shading and outlined in a quiet colour will be more satisfactory beside being considerably cheaper.

Gilded wood letters affixed to stone fascias also seem wasted, a gold written letter outlined in black being more suitable. The suction of the stone could be stopped somewhat by a coat of clear animal size or of petrifying liquid, and further by first writing the letters in patent knotting.

On glass fascias and signs sheet opal glass is often used at the back of black, blue and red grounds, the idea being to get a real white letter. This seems to be a case where zinc oxide or any of the good zinc-base paints might be given a chance. The final coat could still be of white-lead. A further advantage of the all-over coat of paint in preference to the opal glass would be added life to the sign. Ultramarine blue quickly perishes on glass owing to its affinity to moisture, while the lead or zinc white would resist moisture.

Quick gold-size is a good servant but a bad master; moreover, the term stands for a variety of mixtures of

uncertain origin. For gilding purposes, only a well-known and well-tried brand is worthy of consideration; one, though quick drying, will properly secure the gold while a poor quality has no power of adhesion.

There is no outside gilding, from the standpoint of brightness and durability, comparable with that done on oil gold-size, which holds its tack for many hours and properly secures the gold-leaf. This is largely used on brewers' boards, and should be on all very large gold lettering. An alternate method is to reduce oil gold-size with japan-size, which will hold its tack from four to eight hours.

Quick gold-size, excellent on a french-polished surface, is out of place on a gloss enamel, and if oil-size is not used one of the graded writing sizes as used by coach-builders should be selected.

On outside shop blinds which roll up japan-size is too brittle; in time the gilding wears away; and oil-size should certainly be preferred.

It has been said that ultramarine blue grounds, especially on glass, perish for the want of a strong zinc or lead paint backing. Red grounds of the vermillionette variety perish or fade from a variety of reasons: the cheap and nasty material used, insufficient varnish protection, and the uneven application of the paint. On glass, moreover, a good final lead backing is necessary.

Grained backgrounds on glass and wood, provided the grain is kept subdued and the colour rich and full, are pleasing to the eye. Mander's " Matsine " stains

and Harland's "Scumblette" stains, in many woods, patronised by most house decorators, are worth consideration and a greater use by the sign-writer, as not only the tone of expensive woods but novel effects may be obtained by brushing the stain over suitable grounds in the case of wood or under the grounds in the case of glass.

On an ivory-white ground, zebra matsine gives a beautiful grey ground suitable for white lettering alone, outlined in black, or with straw colour centres. Walnut and old oak on a leather colour ground make good grounds for white lettering, white with pale blue, or violet tint centres.

The green and blue matsine, green on a medium strength tint of sage or suffield green, blue matsine on a ground of light blue or straw colour, provide grounds excellent for white or gold lettering especially if outlined in black.

Though a decorator may prefer to keep a shop front in quiet tones of colour, in normal times an illuminated projecting sign is an attractive advertisement when the shop is closed. It is difficult, by ordinary cutting or writing with a sable brush, to get an even tone of transparent blue or red, even if the letters are first outlined in black, owing to the joints or ridges of colour in working, and it is here that an aerograph would be useful. If the glass is first coated all over with glue paper, that is thin blotting paper coated twice on one side with hot glue to which a little glycerine is added, the letters may be temporarily pro-

tected while the ground colour is blown or sprayed on. In use, simply damp the paper by going over the glue-size with a moist sponge and press flat on the glass. When dry, set out the lettering with a lead pencil and cut round the outline with a sharp penknife. Strip off the paper representing the ground, wipe the glass clean, and spray the ground with a glaze of alizarine scarlet—a tube in oil thinned down with varnish 4 parts, oil 1 part, turps $\frac{1}{2}$ part, terebene $\frac{1}{2}$ part, of ultramarine blue, or one of Mander's "Flamboyant" enamels. When the glaze is dry, damp the paper with cold water and strip off. The whole glass, first thoroughly cleaned, may now be sprayed over with zinc oxide in oil and pale copal varnish, or the paint brushed on and lightly stippled.

The relation between lettering and border is worth consideration. After all it is the announcement and not the border that is important; when, therefore, except in the case of gold, the border is of the same strength as the lettering, the result is not completely satisfactory. For instance, a chequer border should be in analogous and not contrasting colour to the ground.

Contrast in styles of lettering is essential. Roundhand and script on the same fascia are not advisable, though roundhand and plain block or serif letters go well together (see Fig. 117).

Serif letters and plain block with decided difference in the size are also satisfactory used in conjunction, especially if an outline is added to the serif, the most important part of the lettering. Clear space seems to

be an eyesore to the generality of sign-writers, who have not yet learned its value. Numerous are the flourishes and ornamentations better left out. Clear space—the result of reasoned calculation—gives value to the actual writing (see Fig. 118). There is much to be learned from the printer in this respect. Flourishes and ornamentation of any kind should, as in the case of borders, be in tones of the ground in order to keep correct position.

An easy way of getting variety into a ground is to coat the panel in deep pink or vermillion, the outer part in Indian red, and when dry give a coat of alizarine scarlet or crimson lake glaze over the entire board or fascia; a gold or white line may be added more clearly to define the division. The glaze could be applied in a mottled fashion and be coarsely stippled. Gold lettering on this ground would be suitable outlined or shaded black. If preferred, the usual even glaze would also be effective.

On some backgrounds block shading may be produced largely by suggestion; thus on a white or any light-tinted ground the sides may be linked up with a fine line (see Figs. 113 and 114). Large lettering high up is often more effective if the blocking instead of being blended is produced by simple lines each diminishing in strength as it reaches the light part (see Fig. 115).

It is a mystery why blocked shading is nearly always out/ined. The line has the effect of flattening the letter instead of throwing it forward.

Small (not capital) lettering is worthy of a more extended use among sign-writers, even in a prominent announcement. Used in conjunction with plain block



Fig. 118.—Showing Value of Clear Space, Quiet Border and Small Alphabet.

lettering, the latter for the subservient part of a sign, the effect is novel, clear and satisfactory (see Figs 116 and 118).

Backgrounds, even of a temporary nature, could well receive greater attention. Gloss is but seldom really necessary, and this fact being realised the best class water-paints would be more often used. The final coat could be a lead or zinc oil-paint made so as to dry out evenly. On paper, one coat of water-paint should cover sufficiently for all temporary work.

Paper signs requiring white letters on a red ground will be more effective, provided a well-sized paper is used, if the letters are left plain and the ground cut in with a glaze of alizarine scarlet in varnish and oil than if a solid vermilionette is used. The first will be clear and level, the second full of joins and shades. The quantity of alizarine pigment used would be so small that objections on the head of cost will not hold.

The various coloured crinkled canvas wall paper, grass cloth paper, silk fibre paper, pasted on to composition board, with lettering in any good water-paint, would make excellent interior signs and tickets, especially for those trades connected with the decorating and furnishing business. Further, "Fabricona" and grass cloth, though more expensive and difficult to handle, are also open to a variety of uses where signs are concerned.

CHAPTER XII

Colour Contrasts in Sign-writing

A FIRM of advertising agents once made a number of experiments with lettering and backgrounds in different colours to determine which combination imparted the greatest degree of legibility, and they published their conclusions in the daily Press. The results from these tests were not altogether in accord with preconceived notions. Thus, black on white was found to be less distinct at a given distance than black on yellow.

There is, of course, a reason for this—the law of simultaneous contrast. With black on white the contrast is simply one of strength; with black on yellow there is, in addition, a contrast of tone. The effect of the yellow, which possibly covered the greater area, would be to intensify the black by casting upon it a purple tinge—the complementary of the yellow—while the black would make the yellow appear lighter, more luminous.

The effect to be at its best depends upon the full characteristic yellow tone being carefully preserved. For instance, if the yellow were inclined to deep orange the effect would not be so strong or so satisfactory as with what may be called warm yellow chrome; and if, on the other hand, a lemon yellow is

preferred for the letters, the result would be a distinctly harsh greenish tone. Normal yellow chrome would appear to be the ideal pigment for a strong yellow ground.

What concerns the sign-writer more is the published disparity between the effect of black on yellow and yellow on black as evinced by these tests. On the score of legibility, no doubt most sign-writers would declare for yellow on black, though there is scarcely one but would not prefer to place the dark letter on the light ground and thus obviate the second coating which is inseparable from yellow lettering on black. It is quite possible that yellow and black are visible at the greatest distance when the area of the yellow exceeds that of the black.

Excellent as yellow grounds are for advertising purposes, as posters and enamelled signs, it is seldom that the combination is suitable for shop fronts. Besides that, long-distance legibility is not necessary where people are constantly passing and re-passing, on foot or on top of a bus, within a few feet of the advertisement. Thus, the advertiser's purpose may be equally well served on shop fronts by using quieter colour combinations.

The house painter frequently favours buff of a distinctly pudding-basin colour for shop or house fronts, but the mass of harsh colour is never satisfactory until Father Time has passed his grimy hand over it. Imagination staggers at the contemplation of a shop front in brazen yellow.

The tests referred to show further that in nearly every case legibility was greater where the letter was darker than the ground, the exception being white on blue. Thus, beginning at the best combination, black on yellow, the order ran green on white, red on white, blue on white, white on blue, black on white, and so on. Combinations of two colours both warm in tone, as red on yellow, came toward the bottom of the list. This is not surprising if red (vermilion) and yellow (chrome) were used in their intensity. Modification of one or the other would be likely to yield better results.

Green on red and red on green were placed last. Thus, a complementary contrast is not the best for advertising purposes. It is doubtful, indeed, whether it would be used without the addition of a line or shade, owing to the inevitable unsteady effect where red and green are used in their intensity. A bold white or black line would add considerably to the value of the advertisement.

While the sign-writer, whose work is generally confined to fascias and shop fronts, may not favour the strong contrasts mentioned, he may get many hints from them, while subtle toning by the addition of complementaries will frequently make the combinations available for his purpose.

White on blue, for instance, is not recommended for the sign-writers if the blue is what may be called a characteristic Reckitt's blue. The effect is too crude, too suggestive of the enamelled advertisement, and will

require modification either by darkening the blue or by adding a black line or shade to the letters. The best results seem to be gained from quiet-toned, neutral blue backgrounds, depending for brightness on the letter. Black on yellow, considerably cheaper to produce, will be much bolder in appearance than black on gold. Indeed, a gold letter on black will be preferable to black on gold. It is open to question whether gold lettering gets its real value on highly polished, that is, varnished, grounds. The American smalts ground, produced by sifting coloured sand on to a tacky painted background after the gilding is done, gives the gold greater richness and the letter greater clearness; indeed, where olive green, blue or purple smalt is employed the effect is as of gold on velvet.

From the sign-writer's standpoint two colours of prime intensity should not be used together. The effect will be better, the emphasis greater, where one of them, preferably the ground, is dulled and deepened by the addition of black. Thus, instead of primary red and secondary green, the red should be scarlet and the ground a deep, dark olive green.

With red (vermilion) on ultramarine blue, the blue should be a navy rather than a royal blue if the red is to get its full significance, and in each case the effect will be vastly improved if a white, pale blue, straw colour, or gold outline is placed round the letters. By this addition the letter is distinctly separated from the ground.

It is interesting to note the colour combinations on

posters and signs generally to be met with on boardings and railway stations. Possibly it is owing to the desire for individuality and distinction that some colour combinations are comparatively poor; for it is difficult to conceive of a simple bold colour scheme that has not been anticipated by some other firm. Even so, it would seem better to vary the design and stick to bold colouring than to indulge in combinations which cause the advertisements to hide behind their rivals. The value of advancing colours is nowhere better realised than on railways, where nine times out of ten an announcement is read unconsciously. This can only be attained by a combination of bold colours and lettering, firm outlines or shades, frequently by surface shading as produced by the aerograph.

Among the colour arrangements to be met with a few have been selected for consideration and comment. For instance :

<i>Ground.</i>	<i>Letters.</i>	
Light yellow	Red	Black shade
Mustard yellow	Deep blue	Black shade
Mustard yellow	Red	Black line
Mustard yellow	Deep blue	Vermilion line
Yellow	Blue	—
Bright orange	Vermilion	—
Deep orange	Black	—
Orange	Navy blue	White shade

The best of these is yellow and blue, owing to the contrast in tone. A light yellow ground with normal

red letters is improved by the addition of black, as this introduces a contrast of tone. A shade is sometimes painted, but the black is far better in the form of an outline. If the letters were in a deep crimson instead of scarlet, the effect, for some positions, would be sufficiently strong without shade or outline. Really the black shade close up to the letters on the yellow ground is not in the best taste, as it tends to distort the letters, and if insisted on should be $\frac{1}{8}$ in. away.

Mustard ground with deep blue letters and vermilion outline would be better without the line.

Vermilion on orange gives a poor effect owing to the two colours being too closely allied in luminosity, and the result would be improved by the addition of a bold black outline.

Black letters on orange give a fairly bold effect, but do not equal black on mustard for clearness. It is doubtful whether orange and black does not suffer somewhat from a comparison, unconsciously perhaps, of black and gold.

Orange ground, navy blue letters, white shade suggests an attempt at distinctiveness, but somehow a white outline would be more effective. This is, however, far preferable to orange ground with chocolate red letters, owing to each colour being more or less warm in tone. The unsatisfactory result is partly overcome by adding a white outline.

Blue grounds vary from pale blue to deep navy blue. A vermilion letter on navy blue has been noticed. On a royal blue ground, a light tint of yellow-

green with a white outline is fair, but vastly improved by a black shade.

Sky blue or turquoise ground, white letter, vermilion line, black shade; navy blue with white letters; purplish blue, white letters, black shade, are all effective.

Red grounds range from vermilion to chocolate, the best effects being vermilion ground, white letter, black shade; vermilion ground, deep yellow letter, black line and black shade blended into the ground; chocolate ground, pale blue letters, black shade.

Orange on vermilion or even on a middle-toned red ground is rather poor, but considerably improved by a black outline or shade. The result would be even better if the ground were an indian red tone, that is inclining to purple.

On green grounds of a distinct emerald tone, white letters require outlining or shading with black. The sign-writer favours a white letter outlined and blocked in gold together with a black cast shade.

A few arrangements encountered are :

<i>Ground.</i>	<i>Letters.</i>	
Dark green	Light green	Black outline
Blue-green tint	Royal blue	Black shade
Blue green	Vermilion	—
Pale blue green	White	Black shade
Sage green	Leather brown	Red outline

On greenish-grey grounds, vermilion letters outlined black or with top and left-hand side lined white,

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give the effect of a bevel edge. Georgian grey ground, black letters, may also be outlined white or vermilion. Drab yellowish-grey, vermilion letters, may be outlined black. Stone colour ground, middle blue letters, should be outlined white. Fawn colour ground, Venetian red letters, may be with or without white outline. Dutch grey ground, use a white letter and olive green outline. Vellum ground and Venetian red letters use a black line. On deep cream ground use a neutral blue of the strength of turquoise for letters.

On black, lemon yellow letters, though clear, cannot be called artistic; a vermilion outline will, however, be an improvement. Deep warm yellow letters on black are much richer in appearance; indeed, if the tone of yellow is carefully arranged the effect is almost as rich as gold on black, and certainly bolder. The ground need not be in high gloss, and is, in fact, better without it.

Deep cream or straw colour letters outlined a deeper yellow; white letters outlined pale greenish-blue; white letters outlined vermilion; vermilion letters outlined white, are all effective on black grounds. Purplish tints from heliotrope to lavender, outlined white, make a good variation for some purposes. In addition, middle strengths of blue, green, and red may be used for lettering on black grounds, but not without the addition of a white outline.

Nearly every one of the combinations mentioned will be found to be in strong bold colours, the con-

sequent harshness being obviated by the use of outlines or shade in one or other of the neutrals—grey, white, black and gold.

Any of these schemes may be made suitable for ordinary sign-work by toning, that is dulling or modifying the background, and conserving the brightest colour for lettering.

CHAPTER XIII

Ribbon Designs for Sign-writers

A RIBBON design has a distinct value, though it often has to do duty in positions where it is unsuitable and out of character. Easy to draw, lending itself to infinite variations, it has a strong hold on the imagination of sign-writers. Used discriminately, there is no doubt it has a decorative effect and gives prominence to the accompanying lettering, but since clearness is the first essential in a good sign, ribbons should not be introduced where the space at disposal is limited.

A painted ribbon, having written on it the name of the house, generally looks well on a fanlight or on the upper part of a shop window, a method frequently adopted at the present time for shops that do not require an unblocked light to display their wares.

The examples given in this chapter (see Figs. 119 to 127), which may be added to indefinitely, are suitable for most positions, whether on glass or wood signs, yet will be found of most service for shop windows.

Generally speaking, it is much easier to paint ribbons on wood than on glass, as in the first instance the effect of each touch is readily seen, while on glass it can only be surmised. This, however, can be



Fig. 119



Fig. 122



Fig. 120



Fig. 123



Fig. 121

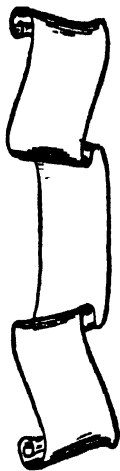


Fig. 124

Figs. 119 to 124.—Ribbons for Sign-writers.

greatly simplified if the outlines are first painted in a strong harmonious colour and allowed to dry. On this the subsequent blending may be done with ease by drawing the blender right through and wiping off the surplus colour with a piece of rag. Generally, the blending will require a second coat to give solidity.

Ribbons may be used for every form of manufactured letter, enamelled copper, opal, gilt crystal fixed on the outside, or brilliant copper concave letters fixed inside. Those on the outside may be fixed with paste white-lead and japanner's gold-size, being afterwards cleaned up with plaster-of-paris or with ordinary whiting. The method adopted for brilliant letters is different. Where these are used the whole of the painting is done first, the spaces for the letters being protected and so kept clean. The outlines of the ribbon being painted, the whole of the space is covered with thin sheet-lead, on which, using a template of each letter, the shapes are cut correctly, the surplus lead then being stripped off. Over the lead letters left on the glass the painting and blending is done, and when finished the lead letters are removed, leaving the spaces clean and sharp for the brilliant letters themselves. Firms that make a speciality of this kind of letter supply a fixing solution. Other letters may be used, and many methods may be adopted with success. Burnished gold letters, shaded or blended, white letters, gold outlined letters filled in with strong colours, or even plain painted ones, will look well.

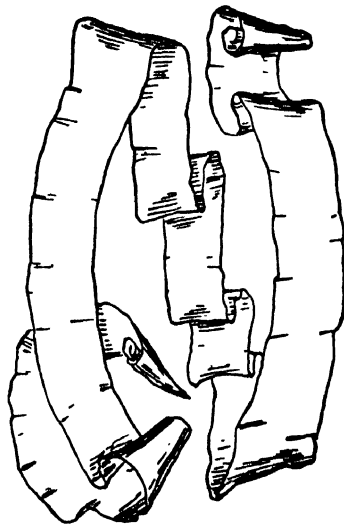


FIG. 125

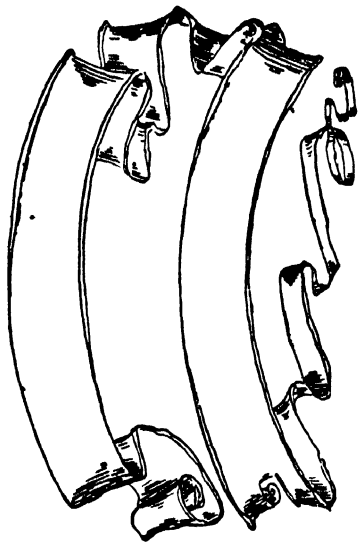


FIG. 126

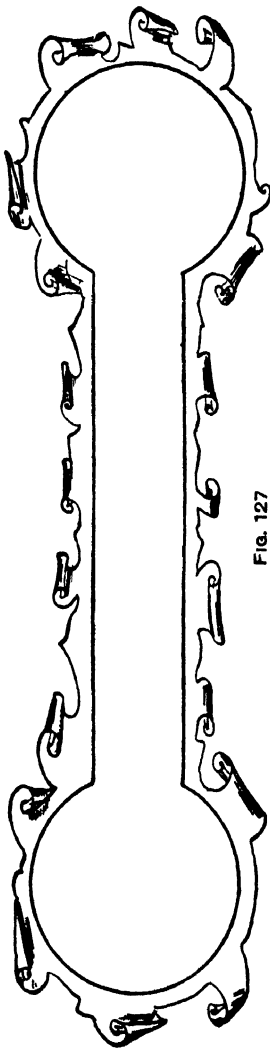


FIG. 127

Figs. 125 to 127.—Ribbons for Sign-writers.

Figs. 119 to 127 are suitable for use as indicated. Many designs may be made by means of a narrow strip of cloth or a piece of paper doubled and folded in various ways.

In painting a ribbon on glass, a correct drawing should first be made, then, if not symmetrical, back-traced so that the design may be seen from the inside of the window. Fix it temporarily outside by means of gum paper or a touch or two of Seccotine. Then trace the outline on the glass with colour made with equal parts of copal varnish and japanner's gold-size, adding a few drops of turps. When dry, any little unevenness may be remedied with a sharp penknife. If a gold outline and not a colour one is used, the gilding should be done while the sketch is in position, and it may be used afterwards to trace the outline on the gold, first rubbing it over lightly with dry whiting. The outline should be run in with black japan, or with colour made from dry white-lead and chrome mixed with half varnish and half japanner's gold-size. If the letters are to be painted, they should now be done, and when quite hard, the blending should follow over all.

In colouring ribbons it is advisable to keep the receding doubles cool in tone, reserving bright colours for the prominent ones. Thus two sets of blending colours are necessary. Should the ribbon be a complicated one, it may be found easiest to do the cool parts first, and when these are dry, the warm parts.

Blending colours should be finely ground; the tube variety will ensure this, besides working cleaner. To

hasten their drying, sugar of lead should be added to pale colours, and japanner's gold-size to dark colours such as blues and browns. Quick-drying colours may be employed if the work is to be hurried, but in each case a final protecting coat of paint made from white-lead, boiled oil, and turpentine, and toned down to the preceding colour, should be added. Finally a $\frac{1}{8}$ -in. margin line of varnish should be given, so as to counteract the action of condensed moisture, and this should be repeated as occasion may demand.

CHAPTER XIV

Raised Ornament and Letters on Signs

RAISED lettering is not used to any extent by sign-writers, possibly on account of the extra time and trouble involved; but for work desired away from the general run it is worth attention.

A wide range of effects may be obtained, especially when gold-leaf or bronze powders are employed in conjunction with transparent glazes of colour. Letters and tablets may be treated in imitation bronze or copper, while good results may be got by colours alone, the colour being intimately mixed with the raised material or subsequently applied as a paint.

In executing raised lettering it is desirable to get over the work as quickly as is compatible with good quality, and where a fair amount is contemplated one of the squeeze-on outfits on the market will be found useful. Such outfits can be obtained from the Alabastine Company, Church Street, South Lambeth, London, S.W.; the Denoline Company, 40 George Street, Edinburgh; and the Ridgeley Trimmer Company, Clerkenwell Road, London, E.C.

It is not suggested that these outfits will answer every purpose, but, in conjunction with brushes, they will, in the hands of a painstaking worker, be found very useful. A few modelling tools are also advisable.

Material suitable for the work under consideration can be obtained from the Alabastine Company in the form of a powder, or from the Denoline Company as a paste, and each firm supplies the necessary instructions on mixing and using its composition. For its application the brush is undoubtedly the simplest, though requiring more patience.

The following recipes will answer for those desiring to make their own gesso: 4 parts finest plaster-of-paris and 1 part water-starch ground fine, the two mixed with tepid water. For high relief, fine plaster-of-paris, mixed with rice-flour paste. The next is good for using with a brush: Take gilder's whiting, crush it, and mix to a stiff paste with cold water; to 2 parts whiting add 1 part liquid glue. This will make it of the consistency of thick cream; add a little boiled oil or resin varnish. Keep the mixture warm while using. A few drops of carbolic acid will prevent it turning sour.

When gesso is applied by means of sable or hog-hair brushes it will be scarcely possible to get the required relief with one application, and repeated coats will be necessary. By this method any reasonable amount of relief may be obtained, while the faces of the letters or ornament may be decorated with raised outlines or other suitable ornamentation.

The following is a method of executing a quotation in the form of a tablet suitable for hanging or fixing on the walls of a public building, a bronze tablet being too expensive. The accompanying illustrations are

purposely simple, but at the same time they will be found quite difficult enough for tablet work in raised material.

Any of the examples illustrated in this chapter may be executed on whitewood, three-ply, or Venesta, and, when finished, hung in position. Quite suitable designs could be made by cutting the board in the shape of a shield, afterwards adding a moulding a few inches from the edge. The board may be given a preliminary coat of quick-drying paint, or the gesso may be applied direct on the wood. The pattern should in all cases be set out correctly before beginning operations.

The design shown at A (Fig. 128) could be squeezed on with an Alabastine nozzle, and modelled, where necessary, with a modelling tool; but the sable brush should answer very well. Fig. 132 is an enlarged detail. B (Fig. 128) may be done by means of a stencil cut out of thick Bristol board, the gesso being scraped through the open spaces by means of a broad paper-stripping knife. This will not give so good an effect as the previous example; but where a tablet is well removed from the eye it would answer very well indeed.

C (Fig. 128) is easily accomplished with a squeeze-on outfit, ribbons needing very little practice to execute with satisfaction. A (Fig. 129) is an alternative, the laurel wreath being a trifle lighter than indicated; B is simpler, though perhaps not quite so effective. A and B (Fig. 131) depend for success on the turned or curled ends, and, if worked on a flat ground, the effect will be improved.

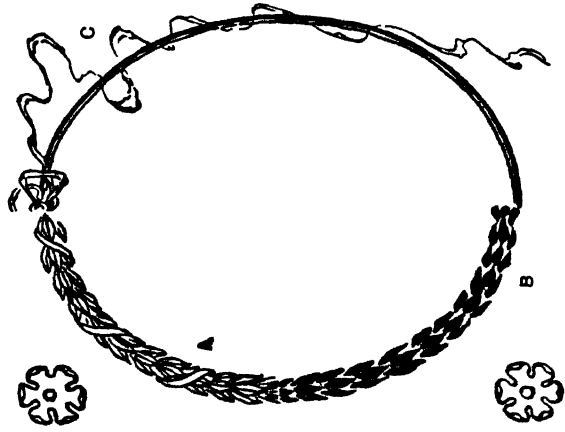


Fig. 128.—Laurel Wreath with Scalloped Border, and Ribbon and Floral Motifs.

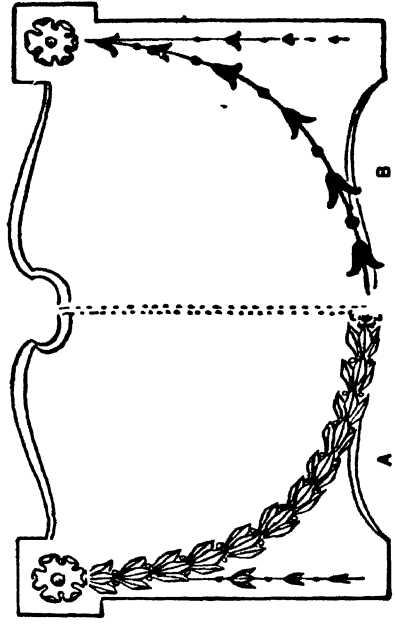


Fig. 129.—Tablets.

SERL IV

Fig. 130.—Renaissance Letter.

Modifications of the alphabet known as Roman, in reality Renaissance, types will be suitable for the lettering, capitals being used sparingly. Roman is difficult to work in gesso, but will repay for the extra trouble. The letters in Figs. 130 and 133 should be suitable for use on the shield at A (Fig. 129).

Fig. 134 indicates lettering easier to execute, as there are no severe lines. Worked flat in gesso, and, when dry, a raised outline on the letter, it will give a fine effect. Fig. 135 will be found to be fairly effective, while at the same time it is the easiest to do.

When bronze powders are to be used, the ground, if a painted one, should be worked up in sharp colours, free oil having a derogatory effect on the metal powder or leaf, whichever is used. For this reason the paint should be made with mixing varnish and turpentine or japanner's gold-size and turpentine. To treat the tablet as an imitation bronze, the gesso should be given a coat of sharp lead colour made from white-lead and black, then one or more coats of bronze green made from prussian blue, chrome yellow, and burnt sienna, which should be mixed so as to dry dead.

The whole tablet should next be gone over with japanner's gold-size, and when just tacky the faces of the letters should be rubbed over with powder bronze, using for the purpose a wad of wool. The bronze should be so used as to gradually die away into the bronze colour, and should be well polished with the wool.

All bronzes require a protecting covering if they

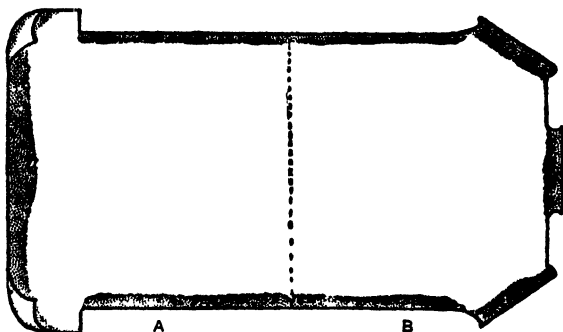


Fig. 131.—Tablets made by Squeezing Alabastine only at the Edges and Modelling it.



Fig. 132.—
Laurel Leaf
Border.

SANCMRU

Fig. 133.—Modification Suitable for
Tablets.

ROUGH

Fig. 134.—Free Style with Raised
Outline.

ROUND small type

Fig. 135.—Ordinary Squeeze-on Style for Quick Lettering.

are to keep their colour ; a good colourless spirit lacquer should be used. Lighter dry bronze-green should be immediately rubbed into the crevices of the letters and around them, to give a more natural appearance.

A copper tablet may be imitated by painting the ground copper colour mixed from white-lead, chrome yellow, Venetian red, and blue black, or other suitable combinations, and treated as in the previous instance. After the coat of colourless lacquer, a dry brown, deeper than the ground, should be worked into the crevices with a camel-hair pencil.

The copper may be made to look old if instead of ordinary bronze, antique bronze powder is used. If the ground is painted a bright copper colour it should afterwards be glazed with black japan, thinned down, if necessary, with a little turpentine. The ground should be coated all over afterwards with lacquer, and dry pigment brushed into the crevices as before.

For finishing exterior work it is advisable to use a good copal varnish instead of the lacquer, but in this instance a coat of warm gelatine size should be lightly brushed over the bronze and allowed to dry before applying the varnish. Instead of using bronze powders, Ardenbrite of the necessary shades may be used. It should be brushed entirely over the tablet, glazing those parts which are to form the ground with transparent colour. For this purpose a water-colour may be employed, wiping it off the prominent parts with a damp sponge or chamois leather, and finally coating the entire tablet with colourless lacquer.

CHAPTER XV

Preparing Signboards

THERE are many ways of making a signboard. A cheap board may be made by stretching prepared canvas or American cloth on battens, by means of strong tinned or zinc tacks inserted at intervals of $\frac{1}{2}$ in. all round the edge of the board. The board is fastened in a dovetailed moulded frame, strong enough in build to hold the flat board; the screws with which the battens are fastened being placed in a slot, so as to allow of the expansion and contraction to which boards exposed to the weather are liable.

Neither pitch pine nor any other kind of resinous wood is suitable for signboards, the resin coming through the coats of paint, especially when the work is exposed to the sun. Boards full of sap should also be rejected. Knots, or slightly resinous places, may be sealed up with knotting, but in this respect the best expedient, with work so much exposed as signboards, is to cut out bad places and joint in pieces of sound wood. A piece of the same wood as that used for the sign is best, and the grain of the piece should follow the grain of the signboard. Any white wood without the drawbacks of knots and resin will do; but mahogany is the best for signboards, though it is expensive. Whatever wood is used must be dry and well seasoned.

It is obvious that the lighter a signboard is the better, provided it is well made and strongly bound together, well protected and properly painted. There should be the least possible number of joints in the board, and care should be taken that the part of a signboard where the ends of the grain come should be well painted before it is put up. The end grain is very porous and needs protecting from moisture. In all jointing of signboards, paint is used instead of glue. Red-lead makes excellent joints for outside work.

It is necessary to have a sound foundation in the board itself, and not to trust entirely to the paint. To cover the whole surface, calico, or, in the case of a large board, which is intended to be seen at a distance, coarse canvas may be used. These materials help to hold the different parts together, as well as to form a surface. Calico, brown holland, American cloth, and canvas are alike valuable for this purpose. The canvas, before being applied to the board, may be soaked in tanning liquor, composed of one-third tannic acid and two-thirds rice water. This toughens the canvas, and partly fills it. The canvas may be attached on its entire surface by means of red-lead and japanner's gold-size, but either canvas or American cloth is frequently applied with bootmaker's paste, and sometimes with a mixture of distemper and glue to which is added some alum. American cloth only requires two coats of colour, when it is ready for the writing.

In applying the canvas, cover the board with a

coating of the adhesive mixture, and well rub down the canvas or calico on it, turning down the edges. When this is dry and hard, take a broad chisel knife, or a trowel, and fill up the texture with a light coat of filling. When the work is dry, give it a good glass-papering, then paint in the usual way, but let the first coat be thinned with half and half—that is, half turps and half oil.

A good method consists in giving the board a coat of lead to which oil and sufficient driers have been added, so as to cause it to dry in from twenty-four to thirty-six hours. It should then be puttied. The putty may be laid on with a chisel knife. The second coat of colour may be round. If the work is to be finally varnished, it will be necessary to finish with a flat coat of colour. After the coat of filling has stood thirty-six hours, and has been rubbed down, apply a thin coat of quick-drying rubbing varnish thinned with turps, wiping it level with clean linen rags. This will seal the putty; the finishing coats should be well rubbed out.

Ordinary flour paste is sometimes used for filling up the meshes of canvas. The paste is put on thick and rubbed with glasspaper when dry, after which a good coat of white-lead mixed with three-fourths raw oil and two-thirds japanner's gold-size is applied. The finishing coat is then made up of paint well fortified with varnish. The gloss is finally rubbed off with pumice-stone and water, as a glossy surface is not the best to work on when writing a signboard.

When the board is not canvas-covered, red-lead makes a good priming. The board must be brought up to a level surface without using an excessive amount of paint. The board may have two or three coats of priming, composed of equal parts of red-lead and white-lead, and be papered down when dry. It may then be painted the same as a door, finished with a coat of flatting and finally varnished.

For cheap jobs, signboards may be filled with distemper. They should then be rubbed down and dusted and oiled in the usual way, but care in this instance must be taken not to have too much distemper on the board.

Outside boards should always have two or more coats of good oil varnish.

When painted glass is framed to form a sign, felt or cloth is placed at the back of the glass to protect it from injury, and the back should be well sealed up to prevent the entrance of damp.

The back of every board should have several coats of lead colour made with red-lead and white-lead and black. The edges of the board should also be painted with this as a protection from damp, to which signboards are exposed.

CHAPTER XVI

Gilding

GILDER'S requisites include a book of gold-leaf (the best is the cheapest in the end), a knife and cushion with which to cut the leaf (Figs. 136 and 137), tips for transferring the leaf to the work (see Fig. 138), and a mop, dabber or cotton wool for consolidating the leaf. The adhesives (gold-size, etc.) used in gilding are mentioned on p. 103.

Having prepared the signboard and marked out the letters with gold-size, take a suitable sable pencil and fill them in with the size, and leave it to get nearly dry. The great point, which is somewhat difficult for the novice to determine, is when the size is ready to take the leaf. If the size is too moist and tacky, the gold will sink into it and lose its brilliancy, besides showing every joint and looking dirty in places. If the size has got hard and lost most of its tackiness, the gold will not adhere properly. The state of the atmosphere affects the drying, and as the drying qualities of different sizes vary, a sharp eye must always be kept upon the work. A very slight tackiness will cause the gold to adhere, and that is all that is required.

Supposing the size is now right, apply the leaf by the tip and cushion process. Take up the book of

gold-leaf, open the first leaf, and breathing very gently at the edge of the leaf, hold the book at the same time close down to the cushion, so that the leaf will fall upon it. Take the cutting knife, wipe it free from moisture, and cut the leaf into sizes suitable to the width of the letter. Dexterity is required in using the knife. Next take the tip, lay it lengthways upon the leaf, and gently carry it from the cushion on to the sized letter; this operation is repeated until the whole letter is gilded, when it is very lightly dabbed over with a piece of cotton wool, the mop, or the dabber, according to fancy. The remaining letters are treated in this way and the job is finished. This method of gilding is certainly the best, but it can seldom be employed in the open-air. The gold-leaf laid upon the size without pressure has much greater brilliancy than when laid on from tissue paper or from the book. When pressure must be used, it is liable to disturb the size and press the gold into it, and cause uneven work.

The easiest of all methods in gilding is with the transfer gold-leaf, as this leaf is easy to handle. Open the book at the first page, and with the left hand take out the tissue square with the metal attached, place it with the gilded side on to the letter, and with the right hand gently rub it with a piece of cotton wool, on that portion which you wish to adhere; remove the tissue and apply the remaining leaf to another portion of the letter until all the gold is used up.

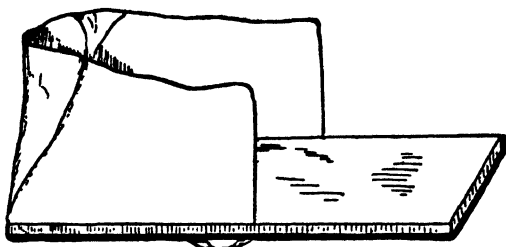


Fig. 136.—Cushion for Gold-leaf.

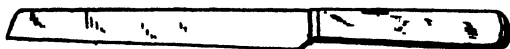


Fig. 137.—Knife for Cutting Gold-leaf.

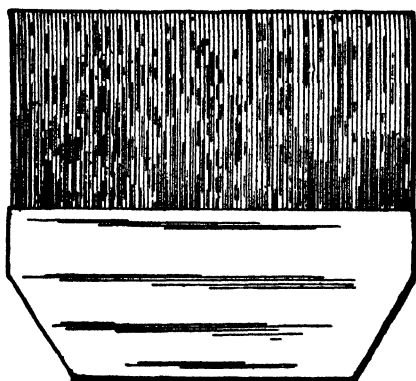


Fig. 138.—Hair Tip for Applying Gold-leaf.

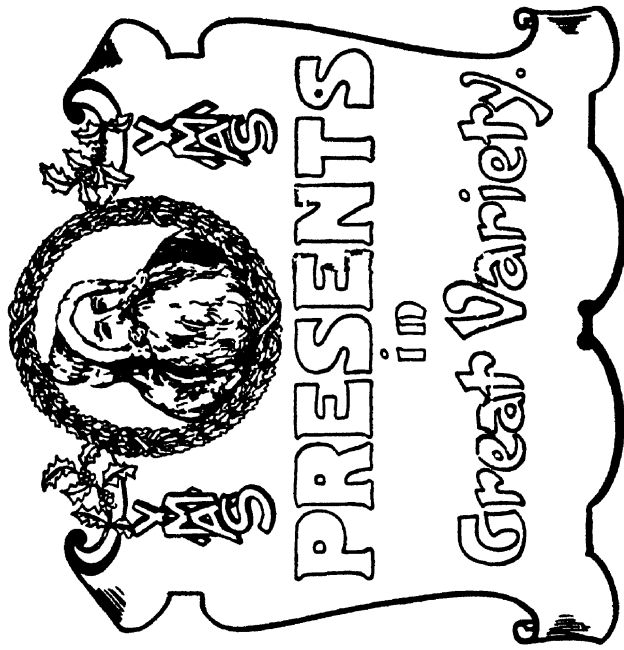
CHAPTER XVII

Seasonable Signs, Tickets, and Posters

SOME time before Christmas there is always a demand for cheap effective posters and signs advertising the season's sales. Temporary work of this character can be best made lucrative by using quick, slap-dash styles of lettering, with an occasional figure or illustration. Bright, strong colouring, so long as it is not harsh, is essential. Blended backgrounds from dark to light colours, as red to yellow, or dark blue to pale grey, will pay for the extra labour involved. The lettering on a blended background generally needs outlining with some contrasting colour to ensure due prominence.

Possibly the easiest way to paint a blended background is to resort to the stippler; thus, after the two or more colours are laid to an edge, take the stippler—a large one as used by house decorators—and stipple the whole background, beginning from the lightest part. By laying in an intermediate strength of colour the blending operation will be greatly simplified.

There appears to be no restriction as to what background shall be employed, provided that the lettering stands out strong on it, and that the completed sign is of an agreeably striking character. No doubt a wintry landscape worked in white, bluish to drabbish greys, the announcement being in bright red outlined black



Figs. 139 and 140.—Two Christmas Signs or Posters.

or purple-brown, would be as effective as anything. Such a poster can readily be worked on white paper, painted on a stippled white signboard, or completed as a transparency on either union or ground opal glass.

Calico is a good material if stretched on a skeleton frame, and is, of course, more durable than paper. It would be necessary to use waterproof ticket inks, or colours having no oil incorporated with them, but mixed with varnish, gold-size, and turps, when painting the lettering, or the oil exuding would mark the calico. Russian cloth, which can be bought white or in colours, makes an excellent surface to write on, and will last for a long time. It could be used many times by painting out the previous writing. Glazed linen and gauze have a double advantage, as with the introduction of a light at the back, they form both day and night signs. Clear, ground, opal, and flashed glass could also be used, the writing, when no longer required, being washed off with turpentine or strong soda and water. Unground opal may be used; but the glazed surface is not so easy to work on as one that is ground.

Bronze of different shades may be either dusted on to tacky japanner's gold-size, or be mixed with it, and freed for use by the addition of a little turpentine. On paper, weak gum arabic will answer; or again, clear lacquer and methylated spirit.

The rough suggestions given in this chapter may be adapted in a variety of ways on wood, paper, union, or glass.

Fig. 139 is arranged solely for colour effect, and could be painted in a number of greys, starting at the bottom with a dull purple; the part immediately under the word "Xmas" should have the highest point of light. The lettering could be in crimson or vermillion, outlined black, brown, or purple. A white or light thickness to the letters would give to them more prominence; while if the faces of the letters were darkened in parts, either by a glaze of crimson lake or by black lines graduated to nothing, the effect would be improved. The frame and bottom scroll could be in old-gold or fawn colour, outlined with burnt sienna or indian red, the lettering being in the same colour. Or the frame could be done solid in deep gold bronze, outlined and painted on where requisite with the colours previously mentioned. A different treatment for Fig. 139 would be to treat the background in any colouring suggested by a sunset, painting the lettering in colours that will ensure due prominence.

The background for Fig. 140 could be a deep blue made from ultramarine and zinc oxide toned with burnt umber, with venetian red, or with crimson lake. A greenish-blue made from prussian or antwerp blue and white-lead, adding sufficient pale brunswick or chrome green. On either ground the lettering could be a strong gold colour made from white, middle chrome, burnt sienna, or vermillion. Add a good, strong black outline. Any suggestion of shade on the surface of the letter may be put in afterwards when the yellow is dry by a glaze of burnt sienna, crimson lake,

or a mixture of both. Put in the suggested holly wreath and sprays in a green much lighter and rather duller for preference than the actual holly. In fact, this wreath may be deleted, and in its place a circle of bronze, outlined if not strong enough, substituted. To separate the green wreath, if used, from the blue background, use a brown or a bronze line. The background for the figure could be broken white blended into deep grey, working upwards; the hood crimson, using brown and black in the darkest parts, vermillion, and possibly a little orange chrome in the lightest. The order for the example may be reversed, the panel background for the figure being a deep blue, the large panel pale blue, and the lettering in strong blue outlined gold bronze.

Fig. 141 could be painted to suggest a night sky, with lettering in white and grey, or white and bronze. Stars may be indicated with touches of white or gold bronze. The frame could also be in bronze, a suggestion of roundness being conveyed by a glaze of burnt sienna and umber. White or pale blue may be substituted for the bronze.

Fig. 142 could be worked so that the ground colour formed the body of the letter. This treatment is not suggested for an entire sign, but for an unimportant word. If the ground were cream, the entire markings might be done in short, ragged touches of brown—a brown made by darkening the ground colour.

Light-colour letters on a middle-tone ground are greatly strengthened if, when outlining, the right hand



FIG. 141

XMAS BAZAAR

FIG. 142

NOVELTY

FIG. 143

CHRMS
Presents
CRMA
Great
VARIETY

CHRISO
NOVEL
SEASON
BAZAAR

FIG. 144

Figs. 141 to 144.—Some Ideas for Seasonable Signs.

and underneath parts are slightly thickened, so as to give the suggestion of shade. Fig 143 could be used sparingly on a dark ground, the face of the letters being white outlined in bronze, the thickness being also in bronze, afterwards glazed with burnt sienna and umber.

Fig. 144 gives a number of suggestions for styles that can be executed with or without outlines, blend, or shade.

Fig. 145 should be done in gesso, white, or tinted, on any dark-coloured ground, preferably a deep red, brown, or holly-green. This type of letter in Fig. 146 is adapted for gesso, and would be equally effective painted in colour.

Fig. 147 could be used for an illuminated temporary sign, clear letters on a dark ground, with opal glass at the back. The holly wreath should be outlined and filled in with suitable glazes, and the outer part B in a middle tone of the centre panel.

Fig. 148 would be more suggestive if in wash. A wintry sky should be broadly indicated, the figure and lettering being strong in colour, as it would be rendered slightly indistinct when painting over it falling flakes of snow.

Fig. 149 suggests another treatment, the wording of which can be changed at discretion. The idea—which without the aid of colour is difficult to convey—is to paint a winter landscape with the snow falling, and, making the snowflakes heavier and more fantastic in places, cause them to form the word “Suitable.”

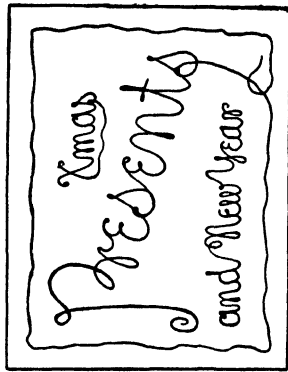


Fig. 145.—Lettering in Gesso with Bulb and Point.



Fig. 147.—Enclosed Illuminated Sign or Glass for Use on Existing Lampe.



Fig. 148.—Temporary Sign for Elevated Position.

Christmas

Fig. 146.—Lettering in Gesso with Bulb and Flat Point.

The village in the background need be only roughly indicated, so that prominence is given to the lettering in the foreground. A deal of latitude is permissible in a sign of this character, so that the word "Yuletide" could be painted as though the snow had collected on the tops of the letters. To paint them so might add to the effect. The sky could be painted a neutral grey inclining to drab, the snowflakes and the word "Suitable" thereby being brought into prominence. The fields should be painted white, broken here and there with greys of varying depths and hues. The buildings and hedgerows should be in neutral tint with a touch of the natural colours as they near the eye. The word "Yuletide" should preferably be in crimson, getting lighter as it recedes, and at the extremity inclining to grey. The thickness of the letters could be simply outlined or stained sufficiently to contrast with the white landscape. The word "Gifts" could also be in red, or any dark colour, dying away into white. This treatment would answer for either paper or gauze, but if transparent effect is sought, the material itself would largely form the background.

Fig. 150 shows a proposed treatment for a fanlight or upper part of a window; thus the whole length of a shop window to the depth of 1 ft. could be utilised. The letters should be outlined in black, and the strips of lead painted with a sable charged freely with colour, the glazes being added last. The parts required white should be given a thin coat of flake white, and stippled with a wad of cloth or a nail brush. The glaze colours,

like the black, should be mixed with japanner's gold-size and oak varnish.

Colours suitable for transparent painting are:—
 Blue: Antwerp, ultramarine, chinese, prussian.
 Green: Sap, green lake. Yellow: Gamboge, italian pink, raw sienna. Red: Burnt sienna, crimson lake, scarlet lake. Brown: Vandyke brown.

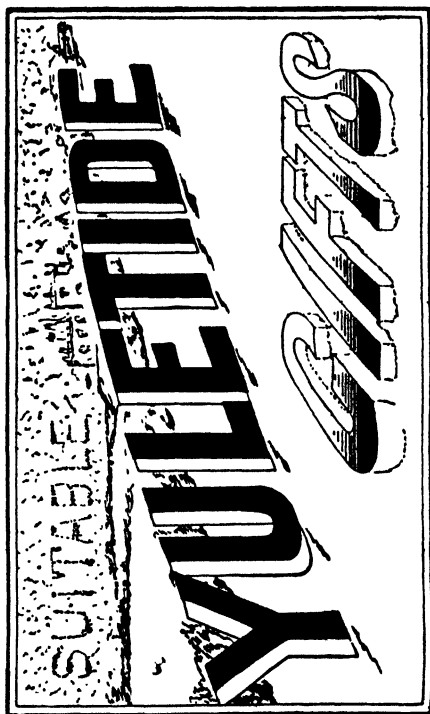


FIG. 149

Fig. 149.—A Good Yuletide Sign.

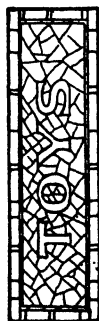


FIG. 150

Fig. 150.—Fanlight Treatment.

CHAPTER XVIII

Some Miscellaneous Matters

Writing on Glass. — Lettering and ornament may be painted on the front of glass, but are not so effective or permanent as on the back. Make a pencil drawing on thin white lining paper, then coat the back of it with paraffin to make the paper transparent, or back-trace the drawing by laying a sheet of carbon black side uppermost and going over the lines of the design with a hard point. Fix the sketch on the front of the glass for a guide, or, if convenient, remove the glass and do the work flat on a bench. The lettering colours are best bought in a dry state; being first thoroughly pulverised with a palette knife on a ground glass or marble slab, then mixed stiff in equal parts copal varnish and japanner's gold-size, and freed for working with a very little turpentine. Make all lettering solid by adding a second coat if necessary. If outlines are desired, paint these first; allow to dry and fill in afterwards, preferably the following day, or else the outline colour may lift. Floral or figure designs should be painted in ordinary oil colours, sugar of lead being added to ensure proper drying.

When the lettering is hard a coat of thin white-lead paint in oil (not dry pigment) over the panel or the entire glass, lightly stipped or dabbed with a wad of

linen cloth, will give a ground-glass effect, and this will not obstruct all the light. If only the centre of the glass is utilised, protect further by running a $\frac{1}{8}$ -in. clear varnish line round the edge of the panel when the white paint is dry. This will keep the edge intact when the glass is cleaned. For lettering, use a small goose red-sable writer; for other work use artists' brushes. When gilding is desired, whether as lettering or outline, it is done first. This branch of the subject is fully explained in the companion handbook, "Glass Writing and Fascia Work."

Brilliant Signs on Glass.—Makers of brilliant letters have a template of each letter, the use of which greatly simplifies the manufacture of fascias and tablets. The glass is covered with laminated lead, on which the letters are spaced out. This may also be done on a roll of thin lining paper, the paper laid on the lead, and lead and paper cut together. The thin sheets of lead are flattened out by rubbing from the centre with a dry cloth, the lead being on a smooth surface. The glass fascia is rubbed over with a bar of ordinary yellow soap, not too hard, on which the lead is laid and smoothed out flat, then rubbed close to the glass. Where templates are at hand, all that is necessary is to hold them in position and cut round each letter with a steel stiletto. Now strip off the surplus lead by picking it up with the stiletto and tearing it off, leaving the letters covered. Well press down the edges of the letters, then clean off the soap with a soft sponge and leather.

A coat of paint of the required colour may now be applied over the entire glass, and when it is set the lead is removed by lifting at the edges and stripping it off. If this is attempted before the paint is sufficiently set, the paint edge will be ragged, and if allowed to get dry will be difficult to remove at all. The following day give a second coat of paint, cutting close up to the edges, and finally a strong protecting coat, which should have white-lead as its base. On this the letters may be fixed with a putty made of paste white-lead 2 parts, litharge 1 part, dry black, and equal parts of japanner's gold-size and copal varnish.

For fixing, each firm has its own speciality, though seccotine or cements of that nature may be used.

Failing the use of the templates mentioned, space out the letters on paper, allowing for the hiding of the flanges by the background. Back-trace or coat the paper with paraffin, so that the letters show in reverse. Lay the paper underneath the glass and proceed as for incised work, that is, paint the background and leave the letters open. Where gilding is included as a margin and outline to the letters, it should be done first; where laminated lead is used it would be done last.

Assuming seccotine to be preferred, first make sure that the flanges of the letters are perfectly level, and if they are not coloured it is usual to paint them gloss black. Make a rim of the adhesive all round the edges of the letter. Leave for a few minutes until

partly set, then press in position. A black line made with a paint of ivory black, varnish, and japan gold-size will be an improvement and protect the seccotine. When there is a solid painted background, or an outline painted previous to fixing the letters, the white-lead mixture already given seems to be the better. A little red-lead may be added to it with advantage. The following is also serviceable: Melt together resin, 10 parts; wax, 2 parts; dry red oxide or red-lead, $1\frac{1}{2}$ part; and dry black, $\frac{1}{2}$ part. Plaster-of-paris is sometimes added.

Painting Sign on Sheet-iron. — Prepare the sheet-iron by rubbing with coarse glasspaper, and if there are any rusty places, moisten them with turpentine and rub while wet. For really permanent work, every speck of rust must be removed. Give the iron a coat of dry red-lead, ground in 2 parts of raw linseed oil and thinned with 1 part of turpentine, adding 1 teaspoonful of terebene to each pound of mixed paint. The second coat may be a dark lead colour made from paste white-lead, equal parts linseed oil and turpentine, and stained with dry vegetable black, which should be rubbed into a paste with a little oil before being added to the white. Driers as above. The third coat may be vegetable black ground up stiff in copal oak varnish and thinned with turpentine. No driers are required, and the black should dry solid with a half-gloss.

Allow a day in which the paint will sufficiently dry, then set out the letters with chalk. For white letter-

ing, use paste white-lead, driers, and turpentine, with a very little varnish to keep the paint from setting too quickly, and do not make it very thin. The letters will not appear solid in one coat, a second, either previous to or after varnishing, being necessary. Next paint the red shade, the colour being made from dry vermilion mixed very stiff in copal varnish and thinned down with turpentine. Be careful that the red is not over-diluted, or it will not appear solid, and will be more liable to fade. When dry, give a coat of pale copal or carriage varnish over the entire sign. There is always a possibility that the varnish may slightly tinge the white, and this may be counteracted somewhat by adding a little chinese blue or blue-black to the lettering paint. A white letter is ensured if the varnishing is done after the first coat, the lettering being finally second-coated when the varnish is dry.

The following methods are also equally serviceable. Where available, a ready-bound black, as prepared for coach-builders' use, is preferable to a common, dry vegetable black, being, of course, subsequently varnished. If the lead-colour ground previously mentioned is made to dry nearly flat, that is, having an excess of turpentine for diluent, two coats of black gloss Ripolin will give a fine finish. Letters finished with a zinc pigment, as zinc oxide or Xinox, will retain their colour for a longer period than if white-lead alone is used. Write first with white-lead made to dry flat, and second coat with paste zinc oxide in oil, thinned down with pale copal varnish and turpen-

tine with a small percentage of zinc drier. Xinox B, treated in the same way, or with linseed oil instead of varnish, will also produce a glossy, durable finish.

Fixing Signboard in Ground.—Fig. 151 shows a signboard 20 ft. long by 6 ft. wide, standing 6 ft. from the ground level to the underside or edge. As the board is intended to be fixed in an exposed position, it is necessary to adopt a method of fixing

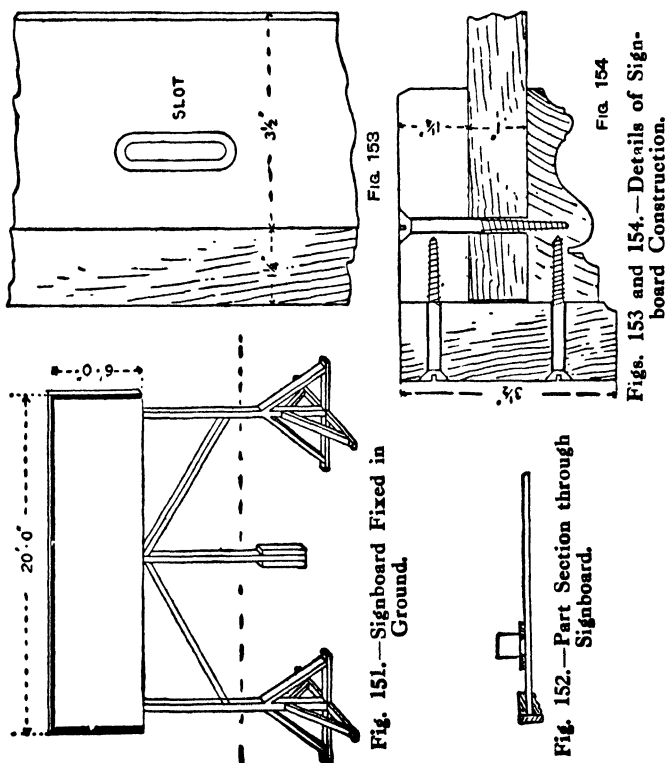


Fig. 151.—Signboard Fixed in Ground.

Fig. 152.—Part Section through Signboard.

Figs. 153 and 154.—Details of Signboard Construction.

to withstand wind pressure without raking struts. The latter may be used if found necessary and space will permit. The posts and braces are of 4-in. by 4-in. pitch pine, the timber for the feet being of 4-in. by 3-in. deal (see Fig. 151). The board should be of 1-in. American white wood, with deal ledges, capping, and moulding, the latter being fixed along the top and ends only. The moulding, etc., is omitted from the bottom edge, to allow the board to shrink or swell with ease without the defect showing. To enable the board to do this, the frame is made as shown in Fig. 153. The ledges at the back, also the board, are slotted to allow of movement in both directions. The means of securing the board to the posts are shown in Fig. 152. A piece of wood, the same width as the post, has its edges splayed and then securely screwed to the post along its edges to prevent curling. Two ledges are also prepared splayed likewise. The board is securely fixed to the posts with screws at the top. The splayed ledges are slotted as shown in Fig. 154 and screwed to the board, bringing it firmly to the posts by this means. The only screws used through the face of the board are at the extreme top. The lower portion of the post should be coated with tar and pitch, used in a hot condition. The posts at the ground level are best encased in 4-lb. sheet lead 9 in. higher than the ground and 9 in. below the ground. This will prevent them rotting, which is usual at the point.

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