WILLIAM G. MIGA
111 Middlesex Street
Winchester, Massachusetts

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Chas. L. K. Wagner's

BLUE PRINT TEXT BOOK OF SIGN and SHOW CARD LETTERING

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Author of six volumes of poetry; a frequent contributor to technical magazines and metropolitan newspapers.

Mr. Wagner's landscapes and portraits in oil evidence the wide range of his artistic achievements.

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THIS BOOK IS

RESPECTFULLY DEDICATED

TO THE MEMORY OF

C. H. BUCK

OF BOSTON, MASSACHUSETTS

WHO FOR YEARS ENCOURAGED AND HELPED
AMBITIOUS YOUNG MEN ALONG THE LINES
HEREIN TREATED, AND TO WHOM THE
AUTHOR IS GREATLY INDEBTED FOR HIS EARLY
TRAINING IN THE SIGN ARTS

CHARLES L. H. WAGNER

Ode to Our Ancient Craft

BY CHARLES L. H. WAGNER

BROTHERS in ancient crafts, our heritage
Is rich in art and all its best ideals;
We boast of kinship with the world's renowned,
And trace our ancestry five thousand years,
Aye, more than that, for in antiquity
Remote from modern times and modern ways,
Our predecessors in Cathay's old streets
Were wont to mark the wares then sold in marts
And paint their dragons to attract the crowd.
Did not the early Pharaohs view with pride
The chiseled forms by forebears of our kind?
Have we forgot Belshazzar's lurid feast,
When mystic hands emblazoned mystic words
Illumined with a flash of holy light?

YEA, Constantine and Caesar followed paths
Marked out for them by craftsmen, skilled with reeds,
The classic types of which we moderns boast.
Greeks made with cunning hand and carved with ease;
The mediaeval monks and writers' guilds
Preserved our art when lights of progress blurred
Until the Renaissance of golden age
When Tagliente and old Dürer wrought
To bring perfection to the letter craft.
Immortal Shakespeare must have owed some fame
To him whose pot and brush proclaimed his plays,
And pictured inns in days of good Queen Bess
Gave proof of talent worthy to endure
And shield its own from Envy's cruel darts.

YE bear the torch which ages past have lit,
Yours is the light that guides the doubter's feet;
Men look to you to lead and show the way,
Will ye be false to all that's been bequeathed?
Have ye that holy zeal which braves the world
And dares to stand a bulwark for your rights?
Have ye no shame when men decry your trade
And by disparagement besmirch your toil?
Has vision fled or retrospective pride?
Is Yesterday's achievement all for naught?
Fools mourn today and fear tomorrow's goads.
Ye who have faith shall see the borning sun
Bless with a rainbow kiss our ancient craft.
Yea, Time shall bring due honor to our name.

INTRODUCTION

Many books which have been published on the art of sign and show card lettering presuppose that those consulting them have had some experience along these lines, and in some cases the authors fail to adapt their pages to the needs and requirements of the student. The aim of this book is to develop the beginner into a finished workman, and the method presented is one of logical sequence. The evolution of letter forms is an interesting subject, and, with basic alphabets properly presented, it can readily be understood. There has been no attempt on the part of the author to be too technical, and the art of free-hand work has been featured rather than the method of mechanical instrument instruction.

As this is primarily a book of letters, such as are used by practical sign and show card writers, few illustrations of signs are included. There are many books featuring such sign pictures, and, feeling that this field is already well covered, also influenced by the fact that styles in signs change as do styles in other things, the author has deemed such pictures of little value to the student, although possibly exaggerating the importance of a book to the casual observer. For this reason, the author feels that, after mastering the elements of the sign arts, as set forth in these pages, the study of actual, modern, up-to-date signs, to be found in every city and hamlet, will be of far greater value to the student than any number of sign illustrations which might have been included. It is the purpose of the author so to treat his subject that the book may be as helpful in the years to come as at the present time.

All the alphabets treated herein are those adapted to the various kinds of work done by sign writers in general. By an analysis of the numerous styles of letters under various names, used by both printers and painters, they will be found to be nothing more or less than modifications (some exceedingly slight) of those in this book. Teachers of lettering can readily see the advantage of having a foundation in lettering styles on which to build. The mistake of most books on this subject is in too great variety and variations in sign alphabets, with no thought of sequence, thereby confusing the beginner.

In order to undertake this work successfully, an adequate knowledge of the proper materials and tools is essential. An understanding of equipment is vitally necessary, and the use of proper brushes and colors simplifies and makes possible all types of work.

While the methods of sign painting differ somewhat from the art of show card writing, and these two branches of this important

field of advertising are sometimes held to be distinct and separate, the main features or fundamentals of both are the same, and there is no reason why a person proficient in one should not become master of both. This obviously is a decided advantage to the worker in a small shop, whether his own or otherwise. The materials and tools used in one type of work can readily be used in the other, and it is the purpose of this book, in so far as its limitations will permit, to teach both these branches in a comprehensive manner, leaving the student free to determine his choice or preference as to the type or types of work he might desire to follow.

Such information as is presented along the lines of painting is practical and sufficient for the conduct of the average craftsman's shop. While it is impossible in any book to take up this business in all its ramifications, sufficient data and instructions are given herein to enable the student who carefully follows the suggestions and ideas set forth to become proficient in the art of lettering and also in the spacing and arrangement of ordinary signs. There are many things to learn, and although the limit of development is never reached, by careful study of the Blue Print Text Book, accompanied by consistent application, a working knowledge of the sign arts may readily be acquired.

This is a day of advertising. The advertising specialist is the greatest factor in the development of modern business, and without him business of all kinds would be greatly curtailed. There are many forms of advertising, each important in its own place. Chief among them is what is known as the "direct appeal" type, such as the window card and the outside bulletin or sign board, the latter being the more permanent in nature.

In the sign arts we have not only the opportunity of attracting business through the medium of copy, but we have also the artistic appeal, which is a great factor in producing desired results, that is, the selling of goods. There is a demand in all lines of merchandising for men and women who are capable of designing and executing this kind of advertising. In the country store, as well as in the city emporium, men are needed to do this work, and for those qualified by training and experience there is usually an opportunity for increased compensation and steady employment.

Large department stores employ men who do nothing but paint or write window cards. There are many men working in stores as clerks and salesmen who, if they devoted their spare time to this study, would be of far greater value to their employers, as spare time could be utilized in doing work for which their concern would otherwise have employed a regular sign painter. This is doubly applicable to the small merchant or business man whose demands are insufficient in quantity to warrant the employment of either a clerk or sign painter, but who could very often use with profit and satisfaction attractive show cards executed by himself.

The author has had wide experience, and (if such a statement be permissible) no small degree of success, in teaching the art of lettering, both by oral and correspondence systems, using the prints contained herein, and it is with the desire of helping students to achieve their goal, that is, to become finished workmen, that this book is presented to the public.

C. L. H. W.

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CHAPTER 1

Sign and show card writing necessitates the use of certain essential articles, namely, brushes, colors, etc., which are chosen for their adaptability to the needs of the work. After becoming familiar with these requisites, and somewhat advanced in the work, an augmented outfit can readily be obtained from any reliable paint store. Before undertaking the study of lettering, spacing and arrangement, one should become thoroughly acquainted with the use and care of the more simple materials.

Brushes

There are many kinds of brushes used by sign and show card writers, but it is not necessary to possess all of them to become truly proficient. A simple outfit of a few carefully chosen brushes is just as efficacious for ordinary work as a large assortment of different kinds. The main thing is to know what to use for the various types of work to be done.

Sable Pencils

These brushes are greatly favored by the average craftsman for their durability and general excellence. In the vernacular of the trade, they are called red sable "riggers," and they possess a quality of stiffness which is most desirable for certain types of work.

In speaking of "pencils," reference is made to small brushes, not to the common lead pencil.

Camel Hair Pencils

"Camel hair" pencils or brushes are made of brown hair, the better grades being Russian squirrel, and in comparison with the red sable brushes are very soft and silky in texture. The best kind of camel hair brushes are imported and are known as "French letterers."

Camel hair brushes for lettering should ***never*** be put in either ***lead paint*** or ***water colors,*** as to do so would injure the brush and render it worthless for the best work.

There are other types of brushes, such as ox hair, black sable and bear's hair, which are often used in sign work, but for your initial work the red sable and camel hair are sufficient. By comparing the red sable and camel hair brushes, you will notice the difference is for a purpose. The sable brushes are used for heavy colors, such as white lead in oil or japan, and also for colors ground in or mixed with water, known as "body water colors" or "poster paints."

While sable brushes can be used in varnish or oil paints, they are best adapted to water-color work and lead pigments.

Care of Brushes

A good brush is one that has life and resiliency in its make-up, and when these qualities obtain, the brush should be taken care of, and not be permitted to become worthless through lack of care.

It is vitally important that all brushes be thoroughly cleaned after using, as the life of each is dependent upon its care. Brushes used in water color, such as the sables, should be rinsed thoroughly in water, and laid away with the hairs spread out flat. ***Never leave brushes standing*** in paint or cleaning fluids, as the chisel edge or point is apt to be ruined by curling. Brushes with tips slightly curled can sometimes be straightened by dipping in oil and holding against a moderately hot metal surface.

Brushes used in oil, japan or varnish colors should be thoroughly rinsed in turpentine, and laid away with the hairs flattened, or, after cleaning out paint, dip them in some non-drying oil, such as "lard oil" or neat's foot, which will tend to keep them soft and pliable until their next usage. Be sure to ***clean out*** this oil ***thoroughly*** in turpentine before dipping the brush in your paint, as these non-drying oils, while they do prevent the brushes from hardening, also prevent the paint that is

used from drying, and therefore every particle of oil should be ***thoroughly cleaned out*** before lettering with them. This is an important thing to remember.

The different sizes of lettering pencils are designated by numbers, such as 1, 2, 3, 4, etc., the small numbers being the small sizes. Some brush makers designate their pencils by multiples of two, thus a number 8 brush would be marked 16. These figures would be understood by any dealer handling same. There are various lengths to the hairs of different types of brushes, but for all practical lettering a brush with the hair approximately one inch in length would be suitable. Some good workmen prefer longer brushes, and some prefer shorter, but for the average work the writer has found the inch length to be preferable.

There are some brushes known to the trade as "one-stroke" or "flat-stroke," which are short-haired and flat in appearance. While these serve a purpose for quick, unfinished work, one cannot achieve very good results with them, so far as beauty and excellence of lettering are concerned.

On Plate 1 will be found sketches of the brushes used by most sign painters.

Colors

If we should devote an entire book to the study of paint pigments, colors, etc., we could not even begin to cover the entire ground. This in itself is a subject which is practically inexhaustible, therefore it would be futile at this time to give more than a brief and concise statement regarding the colors which you will learn to use.

Paint supply houses produce and sell small jars of paint in different colors which are called "show card colors." These are pigments ground in water; that is, water is a solvent of the dry color. Water of itself would not bind the particles of the paint together, and therefore the addition of some adhesive is necessary.

In these particular colors, gum arabic or mucilage is used, and possibly a drop or two of glycerine. The latter substance is to prevent the paint from drying too quickly. These are called "body water colors" because they are usually opaque when applied, and ordinarily dry with a flat, lusterless finish. In using these water colors (as has been indicated previously), the ***sable*** brushes ***only*** should be employed. ***This is important.*** While such colors are ground by the paint house to the right consistency, it is well to know how to mix them yourself, if circumstances demand.

Dry Colors used in Show Card Paints

The black commonly used is called "drop black" and comes in dry, powdered form, as do all colors, so that if you have occasion to buy it, you will refer to it as "dry drop black."

The red is known as "dry vermilion," and you can get light or dark shades of either English or American manufacture. The English is of a little finer quality, although the American will answer for ordinary purposes.

The blue most favored is "ultramarine," which is a deep blue. If a lighter blue is desired, "cobalt" would be suitable.

The yellow is known as "chrome yellow," and the green also comes under the name of "chrome green."

The white used in water-color work is called "French zinc." American white zinc, while not usually as fine a white as the French, is often used for such mixture.

All these colors can be bought dry, and can be ground on a slab of marble or a sheet of plate glass with a spatula or palette knife. The proportion of water and mucilage should be about four parts water to one part mucilage. If insufficient binder is put in the color, the pigment will "chalk" off when dry, so be sure that there is enough before using.

All of these paints are of either American or foreign manufacture. In most cases the foreign article is preferred because of certain qualities, such as permanency and fineness, which are not always possessed by the American-made color.

There are many shades of paints which can also be obtained dry, producing beautiful tints and color harmonies.

It is preferable for the beginner to buy the paint already mixed for these purposes, but after becoming familiar with the various conditions and requirements, one should have a knowledge and understanding of water-color mixing commensurate for his needs.

Modern paint dealers carry complete stocks of poster paints in sizes from one ounce up to quarts and gallons.

Japan and Oil Colors

Sign and show card writers use considerable paint called "coach" color, or paint ground in japan. The solvent for the dry pigment is a quick drying oil which is known by the name of "japan drier." This paint comes in a paste form and is thinned with spirits of turpentine. When used, it requires a binder, such as varnish, to make it adhere to the material painted.

Colors are also mixed in raw linseed oil, and they come both in tubes or in cans, as do the japan colors. Oil colors are for use in exposed or outdoor places, and they should ***not*** be used on cardboard or paper, as the oil has a tendency to spread and spoil the work.

Asphaltum is a tar product sometimes called "black varnish," formerly used as a binder for the japan black for card signs. It is a transparent brown paint, but when mixed with either drop black or lampblack in japan, it becomes intensified and makes a glossy black. Show card writers now prefer poster paint to asphaltum mixtures.

Lampblack and dropblack are two different products produced by calcination, drop black being an intense black, and the lampblack rather gray in comparison. Lampblack is a more opaque pigment than drop black.

For preliminary work we would suggest that you use ***only water colors*** with ***sable brushes,*** and later take up the work with the varnish and oil paints. It is immaterial, in the initial study of letter formation, as to just what medium is used, so long as the desired ***results*** are obtained.

Show Cards

For show card purposes, a knowledge of card stocks is essential. These can be purchased in various sizes and weights or thicknesses. The weight of a card is called "ply," ranging from 2 ply (thin) to 14 and 16 ply boards, which are quite heavy. Eight and 10 ply stocks are best adapted to commercial needs.

Sizes

The regulation sizes are —

Full sheet	22 x 28 inches
Half sheet	14 x 22 inches
Quarter sheet	11 x 14 inches
Eighth sheet	7 x 11 inches
Double full sheet	28 x 44 inches

Sizes under 7 x 11 inches are called "tickets" by the trade. Full sheet cards can be obtained in different colors and weights.

Finish

There is also a variety of finishes. By "finish" is meant the coating or glaze, certain types of work requiring special finishes. For most purposes the coated boards are desirable and the best weight for show cards is 10 or 8 ply.

It is advisable to have cardboard coated on both sides, although one-sided stock is often used. That which is coated on both sides does not warp as easily, being less susceptible to the moisture and dampness of the atmosphere. Uncoated boards are best adapted for all water colors, although water colors can be used on coated stock without difficulty. Japan paints work best on coated card.

In the use of colors on card signs, an understanding of artistic combinations is desirable, for inharmonious colors tend to cheapen work and lessen the commercial value of a sign.

There are many other materials that are used in sign work, such as cloth, sheet iron, glass, and wood, but these will be considered later, each requiring special treatment and explanation.

Use of Brushes

The first requisite of sign writing is an understanding of brush handling. It is necessary to know ***how*** to use brushes.

Position

Plate 2 shows one method of holding the brush. (See position indicated by Fig. 1.)

PLATE 1

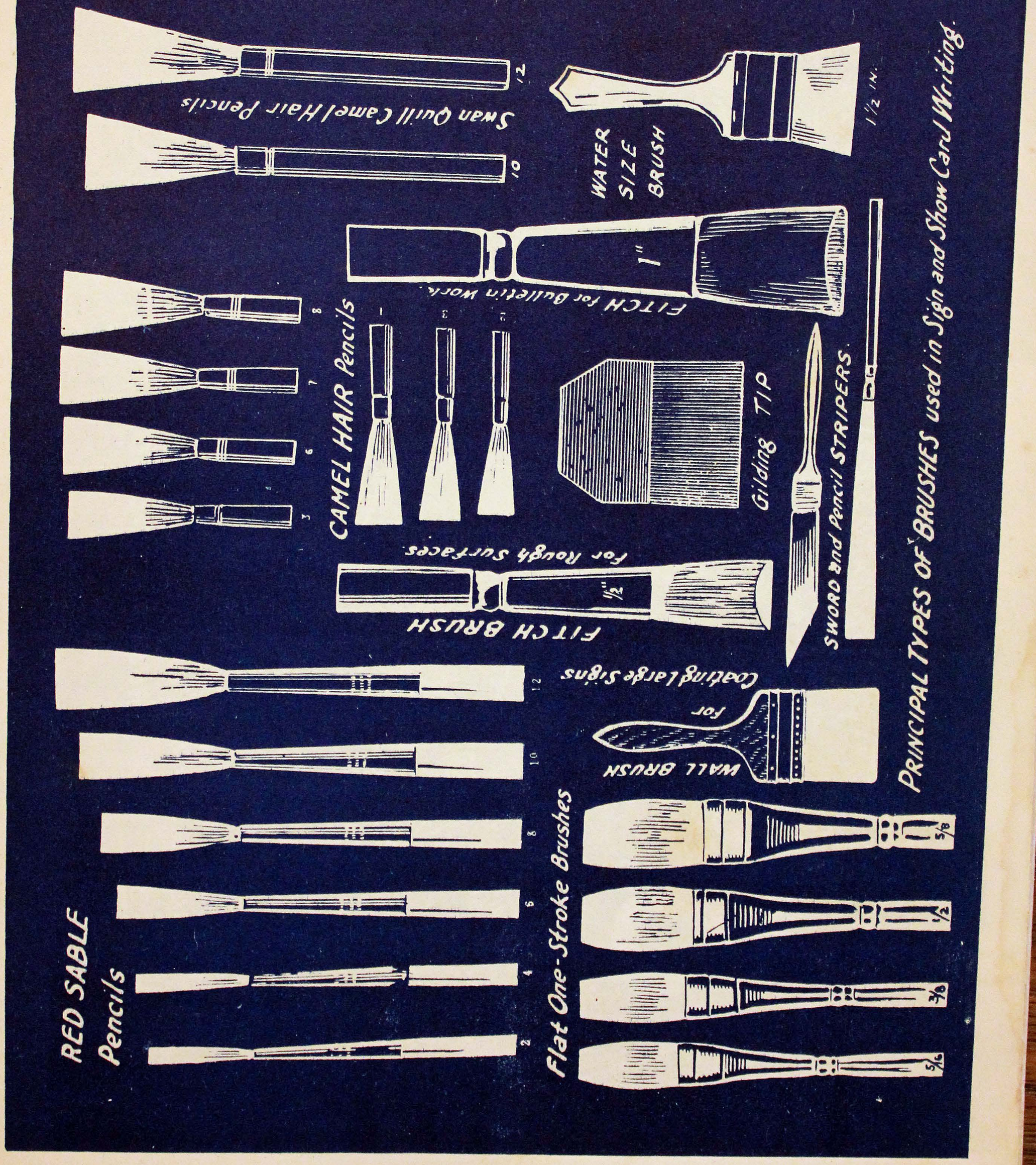

PRINCIPAL TYPES OF BRUSHES used in Sign and Show Card Writing.
1½ IN.
SWORD PUR
Pencil STRIPERS.
Gilding TIP
WATER SIZE BRUSH
1"
FITCH for Bulletin work.
CAMEL HAIR Pencils
1
2
3
FITCH BRUSH
½"
For Rough Surfaces
WALL BRUSH
For
Coating large Signs
Flat One-Stroke Brushes
5/8
⅜
5/16
½
RED SABLE
Pencils
Swan Quill Camel Hair Pencils
12
10
8
6
5
4
3
2

fig. 1

For CARD SIGNS or WORK on BENCHES
REST THE BALL OF THE RIGHT HAND ON LEFT FIST

For WORK on EASELS, WALLS, LARGE WOOD
GLASS or CLOTH SIGNS, or on WINDOWS
THE MAHL-STICK CAN BE USED.

fig. 2

Method of STRIPING USING STRAIGHT EDGE.

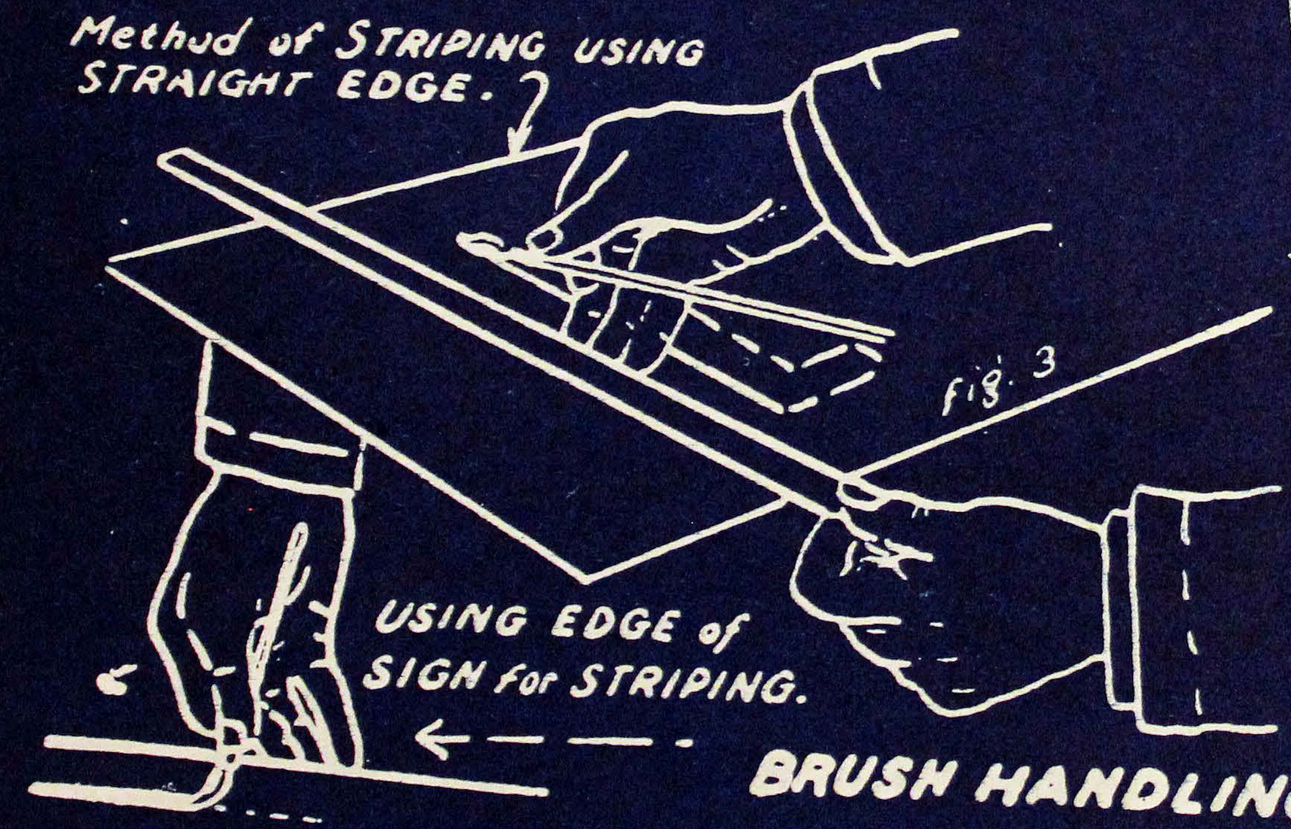


fig. 3

USING EDGE of SIGN for STRIPING.

BRUSH HANDLING.

PLATE 2

ONE HAND
OPTIONAL METHOD of BRUSH MANIPULATION FOR SHOW CARD WRITING AND SMALL LETTERING.

FIG. 1

FIG. 1
HOLD LETTERING PENCIL IN A NEARLY VERTICAL POSITION BETWEEN FIRST FINGER AND THUMB.

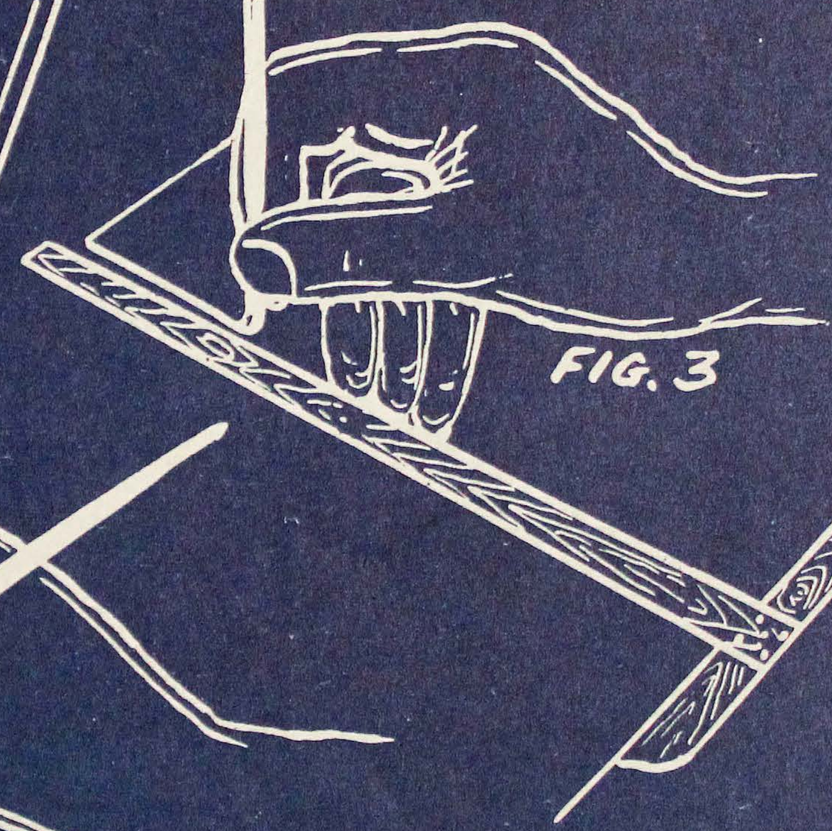


FIG. 3

FIG. 2

FOR ITALIC, SCRIPT OR TEXT ALPHABETS HOLD BRUSH AT A 45° ANGLE.

FIG. 2

Italic

note:
For making Curved Strokes roll brush between Finger and Thumb

FIG. 3
FOR RULING BORDER LINES WITH STRAIGHT EDGE.

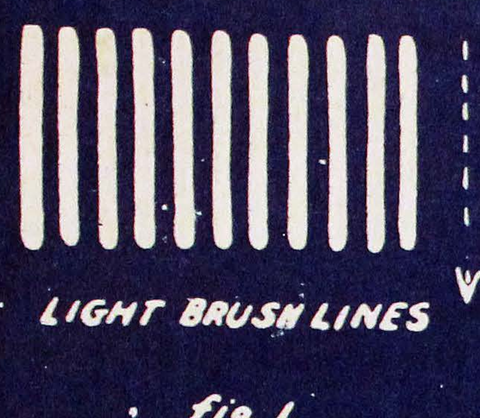


fig. 1

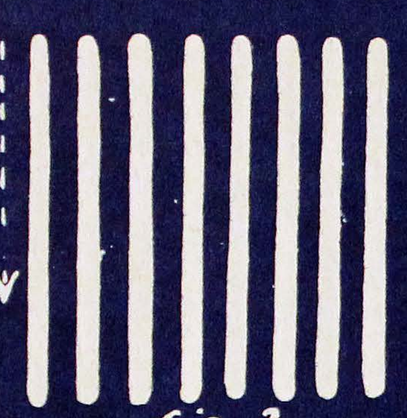


fig. 2

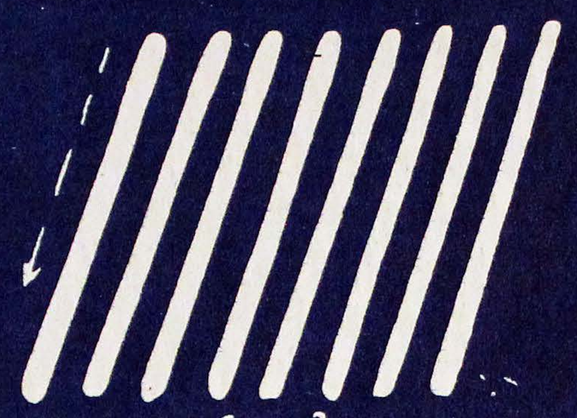


fig. 3

fig. 4

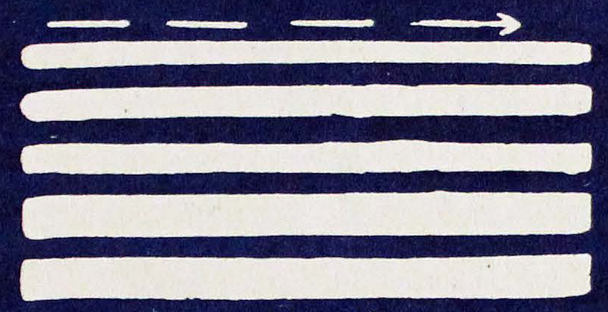


fig. 5

fig. 6

fig. 7

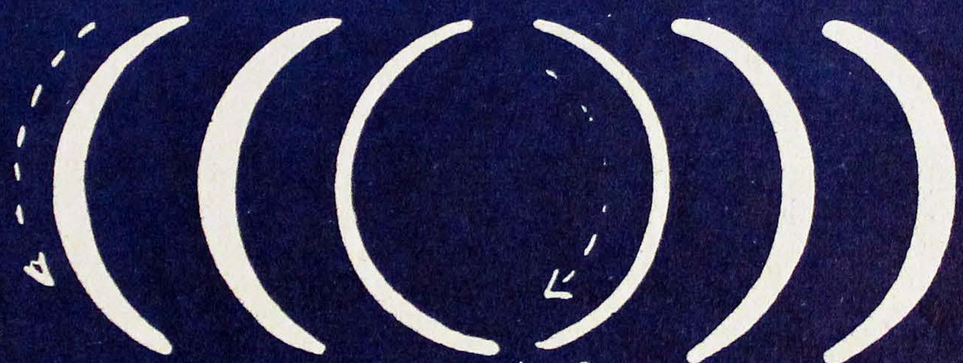


fig. 8

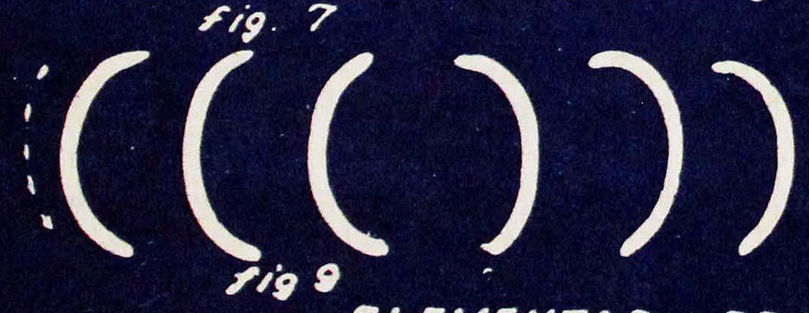


fig 9

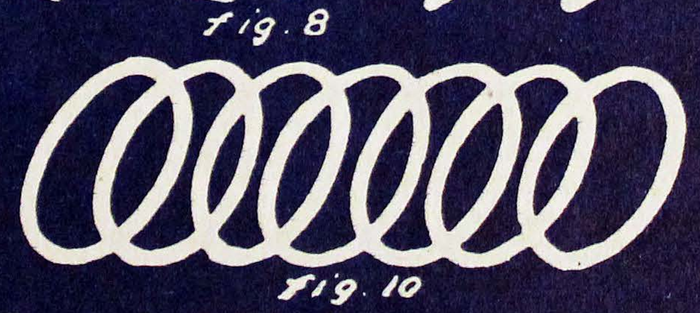
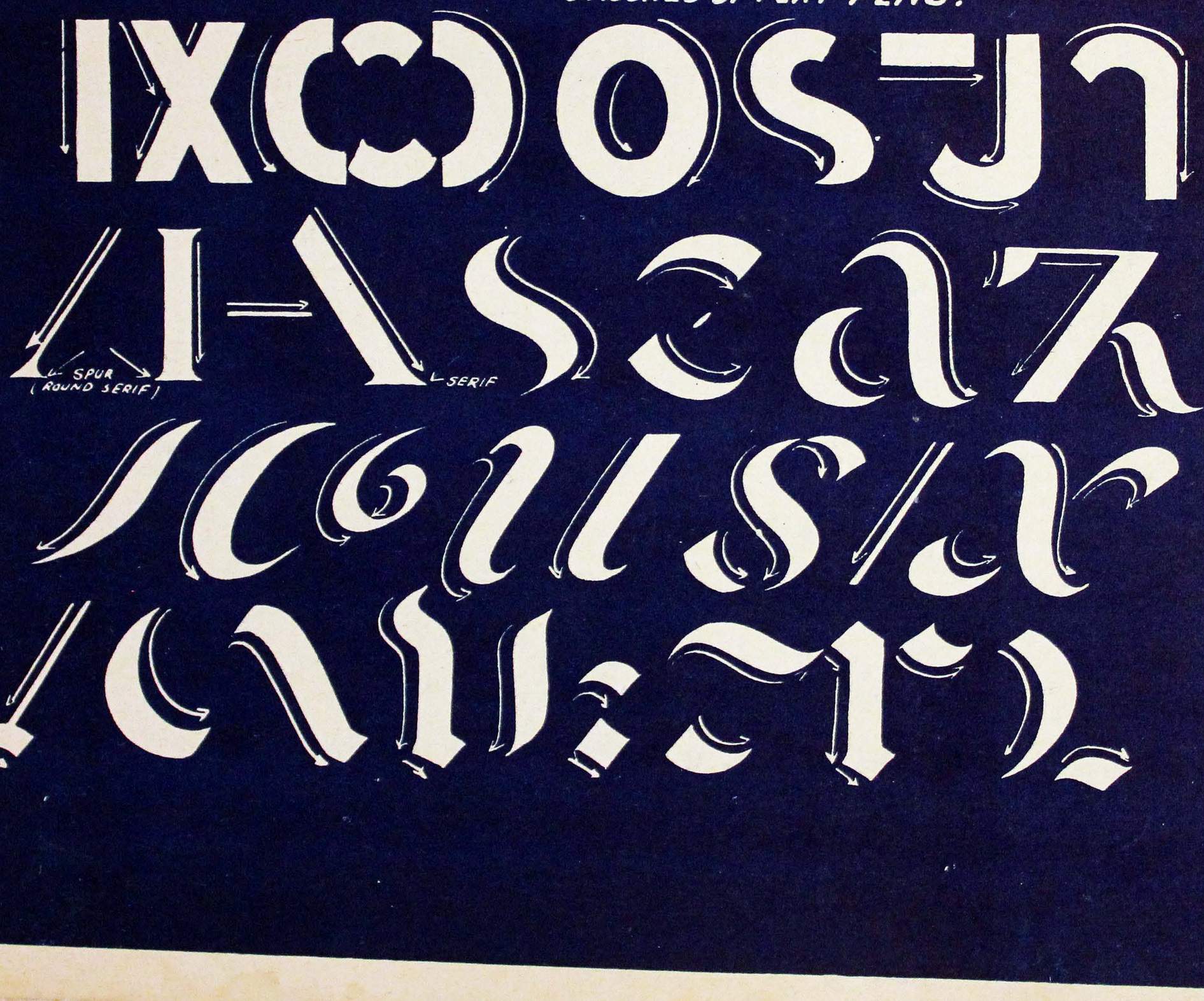


fig. 10

ELEMENTARY PRACTICE STROKES.

FOR THE PERPENDICULAR AND OBLIQUE LINES USE ONLY FINGER MOVEMENTS. NOTICE SLANT of OBLIQUE LINES. (17 DEGREES as INDICATED ON THE PROTRACTOR SECTION. THIS IS THE NORMAL SLANT on ITALIC LETTERING. IN MAKING THE CURVED STROKES USE THE BALL OF THE RIGHT HAND AS A PIVOT. FOR LONG LINES MOVE LEFT HAND INCONJUNCTION WITH FINGERS OF THE RIGHT

COMPARATIVE ELEMENTARY STROKES of the
EGYPTIAN, ROMAN, SCRIPT, ITALIC and TEXT
FOR CHISEL EDGE LETTERING BRUSHES or FLAT PENS.



EGYPTIAN-
UNIFORM
WEIGHT.

ROMAN
THICK AND
THIN
ACCENTED STROKE
HEAVY.
UNACCENTED.
LIGHT.

ITALIC AND
SCRIPT
Down Strokes
Accented.
HAIR LINES on
Up strokes and
Horizontals.

OLD ENGLISH
and TEXT
ACCENTED AND
UNACCENTED THE
SAME AS THE
ROMAN.

This is the two-handed method of sign writing, used by the very finest and best workmen in the country.

Fig. 1. The ball of the right hand should rest on top of the left fist, the left hand being closed, but not too tightly, and the ball of the right hand used as a pivot. The brush should be held by the handle in the right hand, as a pen is held, so that the hair of the brush may just reach the card or sign.

Some present-day show card writers, however, prefer the method shown in Fig. 1 on Plate 3. This uses one hand only, and the brush is manipulated very similarly to a pen or pencil, but is held almost perpendicularly between the first finger and thumb. It should be grasped lightly in this position, and the ferule should be allowed to roll or turn in making curved strokes.

This method requires a deal of practice in order to become thoroughly proficient in it, but it is quite practical on certain types of work, viz., horizontal strokes and small letters.

Fig. 1, Plate 3, shows the position of the brush on perpendicular lettering; Fig. 2, the position for Italic lettering; Fig. 3, the method of bordering a show card with a straight edge.

On card or paper work a bench slightly inclined at an angle of about 20° would be preferable to a flat one.

In using "mahlsticks", as on Plate 2, note the position of the hands, the stick acting as a rest for the right hand.

In striping or lining, the straight edge and brush are held as indicated. The striping requires considerable practice in order for one to become really competent. This can be developed at odd times, and you will soon acquire facility and speed in so doing.

Brush Practice

For preliminary practice work we would advise the use of any show card color; thin to a good working consistency, then take a small sable brush and practice the perpendicular strokes on Plate 4 by moving the first and second fingers and thumb up and down, holding the brush lightly between them.

In using the two-hand method, do not lay the left hand down on the bench flat, but keep the fist upright, so that the ball of the hand rests lightly upon it. ***This is important.***

Figs. 1 and 2, Plate 4. Practice the perpendicular strokes first in the finger movement. You can increase the length of the stroke by moving the left hand backward and forward, without moving the left arm. After you have practiced the perpendicular lines, try the oblique lines (see Fig. 3), and notice the protractor angle of approximately 17°. This will obtain on both right and left angles.

Then make the horizontal strokes in Figs. 4 and 5. It is not practicable to make very long horizontal strokes by the finger movements, for if they are extreme lengths they are much more easily ruled by the method as indicated in Fig. 3 on Plate 2. After you have done this, the exercises on Figs. 6, 8, 9 and 10 can be undertaken by turning the brush lightly between the fingers with a circular motion of the hand.

It is advisable to draw light top and bottom lines as guide lines on this work. When you have mastered the use of the smaller brushes, take the larger ones and do the same with them.

Plate 5 gives the elementary stroke formation of accentuated types, in comparison with the uniform thickness stroke. This can best be made with the flat or chisel edge brushes, or with the flat types of lettering pens. After becoming accustomed to them, all the one-stroke alphabets containing these elements can be made very quickly.

In conjunction with the work on Plate 4, these strokes should be practiced. In making them, first wipe the brush flat on a palette or sheet of paper to insure a clean stroke. The paint must be of the right consistency, and it should not spread or work heavily.

Remember — sable brushes used in show card colors must be cleaned in water before putting away. Do not put these in oil.

It is unnecessary to purchase cardboard for your practice work. White or Manila paper of good quality will answer the purpose.

CHAPTER II

Lettering Instruction

On the assumption that the student has become familiar with the handling of the lettering brushes, the various alphabets used by craftsmen in this work will be considered. There are many different styles in letter making, and the signist uses a large variety of types in making signs and posters. Those treated in this book are basic and fundamental, and it is advisable to know each particular alphabet thoroughly before attempting to use it. Of course, there is not an arbitrary way of making every letter, for, even in the most rigid and plain types, like the Egyptian, certain letters can be changed slightly without altering the style fundamentals. The tail of the letter ***R,*** for instance, can be straight or curved, and still be in keeping with the style requirements.

We do not believe that a man can become a finished workman by simply marking out lettering on a system of squares and circles, although such mechanical helps are sometimes permissible. The way to learn to letter correctly is to get in one's mind the general shape and contour of each individual letter, and the right relationship between the letters and words.

The alphabets treated herein are in a logical sequence, not always obtaining in other books of lettering, and each one, while distinct, has certain general characteristics.

The nomenclature of these alphabets is that used by sign writers generally, and differs somewhat from that in use by the printing trade. It is advisable to learn the names of the letter styles in order that they may be classified when necessary.

Plain Egytian, Upper Case

The first type that the student should master is known as the plain Egyptian.

In order to have a thorough understanding of this type one must appreciate its value. It has boldness and legibility for its chief characteristics. One need never fear that a sign with Egyptian letters cannot be read distinctly.

This form of letter is frequently misnamed by the uninitiated as a "block" letter. Correctly speaking, the block letter has blocks on the terminations, and therefore this type should not be confused in any way with the style known as "block."

By "upper case" we refer to the capital letters. This holds true in every style.

The origin of the term upper case is from the old-fashioned printers' stand or type case, which held the capital and small letters of the various fonts, the capital letters being put in the top boxes of the inclined case, and the small letters being placed in the lower boxes. Undoubtedly the reader is familiar with the appearance of the type case used by printers, and will readily understand the significance of the terms "upper" and "lower" case.

Principle of Style

The plain Egyptian alphabet is of ancient origin, and is constructed on certain definite, though not arbitrary forms. The fundamental basis of this style is ***uniformity*** in the width of stroke, the horizontal bars having the same proportion or strength as the perpendicular bars, and the curved strokes being also of corresponding weight.

The word "plain" is used to define the absolute severity of the letter, the same being minus ornamentation. While there is no definite basis on which to determine the width of the stroke or the width of the letter, certain simple suggestions could be followed to advantage.

A letter may be wide or narrow, heavy or light in stroke, and still be an Egyptian letter, provided the chief characteristic of ***uniform weight*** is carried out.

Proportions

As to the proportion of weight to height or breadth, that is largely for the student to

determine, and correct proportions eventually come with proficiency in the work. As will be noted on Plate 6, we have indicated in the upper left-hand corner a good working proportion for the width of stroke to the size of letter, viz., approximately one-fifth of the height of the letter. This, like many other features in lettering, is not absolute, and even if the letter is made lighter or heavier, the general proportions will be consistent with the style.

The proportion of width of the letter to the height is best determined by the space in which the letters are to be assembled. For ordinary purposes, a good working proportion would be approximately two-thirds the height for the width. The letters may be elongated, or they may be condensed, according to the requirements of space, but for general purposes, a rectangle of these proportions could be used as a unit on which to build this type.

Some of the letters, like the ***M*** and the ***W***, will take up more room than those of the unit type, as the ***O, C, E*** and ***F***. No general rule can be given that will be adequate for all occasions and demands, but after becoming familiar with the making of these letters, the student will soon visualize the correct proportions and make them automatically.

Guide Lines

Before beginning the work, take the paper or material to be lettered, and sketch roughly the general proportions of each letter, not necessarily marking them out accurately, but simply indicating how and where they are to be placed. Rule light guide lines (in lead pencil) on top and bottom, which will give the exact size of all the letters. Notice those on the plate sketch. These guide lines may later be removed with art gum.

Outlining Letters

The letters on Plate 6 are made by the outline method, the letter being outlined with a small brush, and then filled in with a larger one. This is a common method of making signs, particularly on certain types of show card work. After becoming somewhat experienced, the one-stroke or flat-brush method can best be utilized, although the outline work always gives sharper and cleaner looking letters.

Individual Letter Instruction

Let us now take up the letters separately in order to thoroughly understand them.

We will consider the construction of the letter ***A,*** beginning the alphabet. This letter can be a little wider on the base line than the regulation two-thirds, or whatever proportion is utilized for making the type. The important thing to remember in making the ***A*** is to have it ***perpendicular,*** so that if a line were drawn through the center of the letter, the space from the line to the farther corner on each side would be ***absolutely*** the same; otherwise, the letter would be "broken-backed." The horizontal bar in the middle of the letter, it will be noted, is just a trifle below the center, and the width of the top of the letter is only the width of the regular stroke.

After this letter is outlined, use a brush of larger size to fill it in, beginning at the top and drawing the brush toward you, and, on the horizontal bar, beginning at the left and drawing it to the right.

Now, taking the letter ***B,*** note that the top part of it is slightly above the center; that is, the space between the middle stroke and the top horizontal stroke is a trifle smaller than that on the bottom. This is so made because of what is called an optical illusion, for if the middle stroke of the letter were absolutely in the center, it would have the appearance of being top-heavy. This obtains in a great many of the letters. It is something that must be understood in order to do the work correctly. Outline the ***B*** as indicated, making the curves full round, and then filling in, as was done with the ***A.***

The letter ***C*** is made, as will be noted, on a perfectly elliptical formation, having the terminations cut on an angle of approximately 45° from the center, so that the top termination will correspond with the lower. It will also

be observed that the top and bottom of the letter extend a trifle above and below the guide lines. This applies to other letters of similar construction, and is for the purpose of optical effect. Round letters, if made exactly touching top and bottom lines, would look at a short distance as though they were smaller than the other letters. This defect is remedied by extending them a trifle above and below the line.

The letter *D* is constructed on the basis of half an ellipse and a perpendicular stroke, being joined together by horizontals. This also should be full round, and can be outlined and filled in like the others.

Observe that the middle stroke on the *E* and *F* is slightly above the center. This is in keeping with the suggestions made on the letter *B*. The optical center of letters and layouts is always a trifle above the real center. Such information is given in detail on the plate in order to impress it upon the student's mind.

On Plate 7 the letters are not outlined. This does not mean that they should not be, but for the purpose of teaching, it is unnecessary to do so. We would suggest continuing to outline the letters until such time as you feel absolutely competent to make same by the one-stroke method.

Notice the *G*. The crossbar is a trifle above the center, like that on the *H*.

The lower part of the *J* is like the base of the *O* or *C*, the terminating angle being the same as on the *C*, only reversed.

The *K* is made with the lower diagonal stroke a little longer and extending beyond the rectangular formation.

The *L* is exceedingly simple, and requires no explanation.

The letter *M* is wider than the other letters. This is easily understood by observing the two diagonal strokes intersecting in the center. If this letter were made the same width as the others, it would look exceedingly condensed and out of proportion and harmony with the rest. Increase its width by approximately the weight of stroke.

The letter *N* is of simple construction, the diagonal bar joining the two perpendicular bars.

The *O* should be a perfect ellipse or circle, according to the width of the letter.

The *P* and *R* are similar in construction. Do not get the middle stroke up too high; in fact, these two letters are the exception to the general rule of making the center stroke of letters above the real center.

The *Q* is made like the *O*, with the addition of an oblique bar.

The *S* seems to be the most difficult for students to master. It should not be after its construction is understood. The top part of the letter should be a trifle smaller than the lower part. The angles of termination are similar to those on the *C*, and must correspond in order to have the letter look well. The compound curve should be full round and graceful.

The letters on Plate 8 require no great explanation, apart from the *V* and *W*. The *U*, in early forms of letter making, was fashioned like the *V*, and the *W* is nothing more or less than two of these joined together. Each half of the letter should be of the same proportion. Do not make the *W* unbalanced. Notice the light pencil lines in the center of the *V* and *W*, indicating this.

The *X* is crossed a trifle above the center, so that the upper part is smaller than the lower.

The oblique bar on the letter *Z* does not come to a point, the terminations taking the width of the letter stroke.

The character *&* can be made in several ways, but this particular one for this type is the easiest and quickest to make.

This completes the upper case plain Egyptian, and before taking up the analysis of the numerals and lower case in this type it might be advisable to give some further information regarding those already made.

Use of Upper and Lower Case Letters

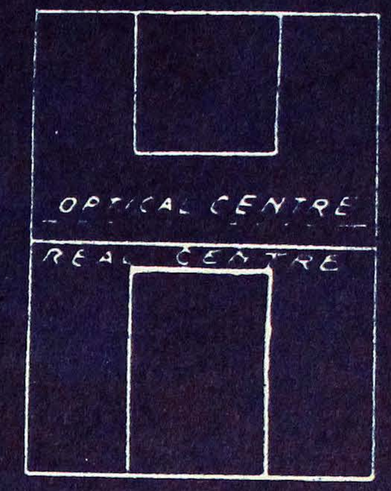
Upper case letters of all styles, with the exception of Script, Gothic, Old English, or Text letters, can be used exclusively on a sign, but upper and lower case letters should not

UPPER CASE PLAIN EGYPTIAN

Plate 6

GHIJK
LMNO
PQRS

UPPER CASE PLAIN EGYPTIAN



THE OPTICAL CENTRE OF LETTERS AND LAYOUTS IS ALWAYS ABOVE THE TRUE CENTRE NOTICE THE MIDDLE STROKE ON B·E·F G H, ALSO TOP LOOP ON S The SAME THING APPLIES ON TOP OF K and X. IN THIS STYLE THE MIDDLE BAR ON THE R and P IS BELOW THE CENTRE THE M IS APPROX 1/4 WIDER THAN NORMAL

Plate 7

TUVW
XYZ&
“”;!-?/

UPPER CASE PLAIN EGYPTIAN

THE V-W-X-Y MUST BE PERFECTLY BALANCED. THIS IS VERY IMPORTANT!

—·—

ANGLES ON TOP AND BOTTOM OF Z SHOULD BE THE SAME.

—·—

THE TOP LOOP. ON CHARACTER & IS THE SMALLER

—·—

WHEN MAKING THE QUOTATION MARKS BE SURE THAT THE 66 COMES FIRST. EXAMPLE; MARY JONES. “THE RADIO QUEEN”

They should be same weight as letter stroke.

be used indiscriminately. When upper and lower case letters are used together, the upper case letters are for the beginning of a word or sentence, following the rules for capital letter usage in ordinary writing.

Lower case letters are of later date than the capitals. They attained their modern form only when printing from movable type was invented, and the early printers and letter-crafters utilized the upper case almost wholly in their work.

The student is advised to make the upper case Egyptian alphabet in various sizes in order to derive the practice necessary for facility. Letters from two to six inches in height would fill most requirements.

CHAPTER III

Numerals and Lower Case Egyptian

Plate 9 in this chapter deals with the numerals. There are no such distinctions as ***upper*** and ***lower case*** figures. Numbers of this type were introduced during the Middle Ages, and were of Arabic origin. They are called "Arabic" numerals. Before numbers of this type were used, Latin or Roman letters were employed for figures. Even today our public buildings are dated in Roman numerals, X denoting ten and C one hundred, etc. For practical purposes, however, they are antiquated and out of place. (See plate on modern architectural lettering, Chapter 20, for Roman numerals.)

Those on Plate 9 are in keeping with the Egyptian style, and are similar in construction to the upper case letters. Notice the angular terminations on the 2, 3, 4, 5, 6, 7 and 9. The weight of the stroke can be adjusted to suit the requirements, but it must be uniform throughout.

Observe carefully the notations on the plate before undertaking the making of these figures.

Character Signs

The characters representing the $ and the ¢ mark should be made not more than half as large as the figures, and the weight of stroke proportionately light. The $ sign is an ***S*** with two perpendicular bars running through it, the distance between outside edges of these two bars being about the weight or thickness of the curved stroke. The ¢ mark is made like a ***c*** with a line running through the center extending a little more from the bottom than from the top.

Try to get "swing" and grace into these figures in making them. Poorly proportioned numerals would spoil what might be otherwise a fine sign.

Lower Case Egyptian

Now let us take up the lower case Egyptian letters. The statement in the preceding chapter, relative to the introduction of these letters, will be remembered. As has been stated, they are of later date than the upper case, but they are much more extensively used today than the latter. The same general proportions used in the making of the upper case should also be observed in the lower case letters.

The unit letter would be the ***o,*** which would fill a rectangle, having the width approximately two-thirds the height, and the weight of stroke, for a good working proportion, would be one-fifth the height of the letter. This is indicated on Plate 10. The relation of the height of the lower case to the upper case would be two-thirds (note music staff sketch on plate).

Lower case letters can be elongated or condensed without changing the character of the style. As was done in the study of the upper case, we will consider the individual letters separately.

Beginning with the letter ***a,*** note the direction of the stroke. The curved part, joining the perpendicular, is like the top of the letter ***o,*** and the compound curve joining same makes an ***s*** reversed.

The ***b*** is also like the ***o*** with a perpendicular stroke reaching to the height of the upper case, and the ***d*** is the reverse of the ***b,*** although the perpendicular stroke does not reach quite as high.

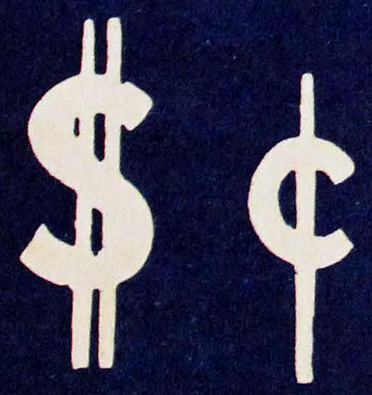
The ***c*** is formed exactly as in the upper case.

The ***e*** is made similar to the ***c*** with a horizontal bar connecting the left curve.

The letter ***f*** is similar in shape to the ***t,*** with this difference — it as a hook on the top and not on the bottom. It is not difficult to make after a little experience.

The lower case ***g*** seems to be the bugaboo of beginners, although when analyzed it will be found quite simple, the top of the letter being like an ***o*** with an ***s*** attached to it, the bottom part of the ***s*** joining the main part with

12345
6789



While these are the correct figures for the Egyptian Type, the Roman are more extensively used in Sign Writing, and are sometimes used in conjunction with Egyptian Letters.

PLAIN EGYPTIAN FIGURES

NOTE THE COMPOUND CURVE ON THE FIGURE 2

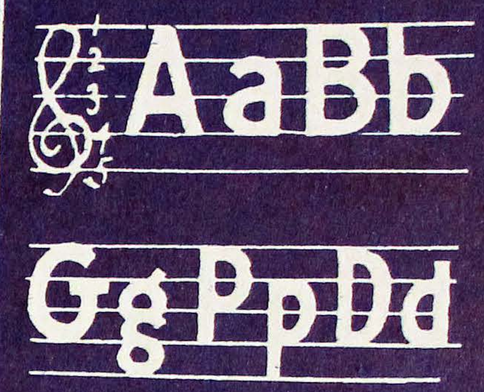
THE TOP PART OF 3-5-6-8 IS SMALLER THAN BOTTOM

9 IS THE REVERSE

THE ANGLE OF TERMINATIONS ON 2-3-4-5-6-9 IS 45° ALL SHOULD CORRESPOND.

/ and / MARKS SHOULD NOT BE MADE MORE THAN ½ SIZE OF FIGURES.

LOWER CASE PLAIN EGYPTIAN



THE RELATION OF THE LOWER CASE HEIGHT TO THE UPPER CASE CAN BE SEEN BY PLACING THEM ON A MUSIC STAFF. THIS IS THE SAME IN ALL STYLES EXCEPT THE SPENCERIAN SCRIPT.

A Good Proportion for the Width of Stroke Would be Approx. 1/5 of Height. (See figure at left.)

Do not make the intersection on g heavier than rest of letter Note X

mnopqr

stuvwx

yz &

LOWER CASE EGYPTIAN

REMEMBER THAT ALL THE ANGULAR TERMINATIONS ARE SLANTED APPROX 45° FROM CENTRE

—i—

THE LOWER CASE t is crossed ON THE LINE, NOT ABOVE.

—·—

P-Q-Y LIKE G and J EXTEND 1/3 BELOW BASE LINE OF THE OTHER LETTERS.

—·—

TOP AND BOTTOM ANGLES ON C-S SHOULD CORRESPOND.

a uniform stroke, ***not*** a double stroke, width. The ***g*** and the ***j*** and all letters extending below the base line would come below about one-third of the height of the upper case dimensions. It might take some little practice to get the correct formation of this letter, but do not get discouraged, for when once mastered, it will not be difficult.

The ***h*** is simple when understood and requires no especial study.

Notice the dots on the ***i*** and ***j***. These ***always*** obtain in the ***lower*** case, but ***never*** in the upper case. This is a somewhat common error, and you must be careful never to dot the upper case ***I***.

The ***k*** is similar to the upper case, with this exception — the oblique bar running from the upper right to the lower left does not extend to the top, but is on the line with the other lower case letters. The lower oblique stroke extends beyond the space of the upper, just as it did in the capital letter. If it were directly on the line it would have the appearance of being unbalanced.

The lower case ***l*** is simple, — a perpendicular stroke similar to the upper case ***I***.

The ***m*** and ***n*** are similarly made, but the ***m*** is wider, because of the extra perpendicular stroke.

The ***o*** is exactly the same as in the upper case, and forms a perfect ellipse.

The ***p*** and ***q*** are the same as ***b*** and ***d*** inverted. Turn the plate upside down and notice the similarity. They should be full round and carefully made.

The ***r*** is a perpendicular stroke with the top curve of an ellipse. The angle termination is about 45°.

The ***s*** is a duplicate of the upper case, excepting its height.

The ***t*** does not extend quite as high as letters like the ***l*** or ***h***, and the hook on the bottom is not very wide. The extension of the horizontal bar on each side of the letter should not exceed the width of the stroke. The ***t*** is always crossed ***on*** the line, ***not above*** it. This is a very important thing to remember. There is only one type style wherein the cross on the ***t*** is above the line, and that is the script, or handwriting form. Whenever a ***t*** is seen crossed above the top line of the lower case, you may rest assured the artist is not familiar with all the fine points of lettering.

The ***u*** is made the same as the lower case ***n*** inverted, as will be noted by comparing with the ***n*** above.

The ***v, w, x*** and ***z*** are duplicates of the upper case letters made on the lower case lines, and ought not to require any further elucidation. The character & on this sheet is made slightly different from the one made on Plate 8, and is used quite frequently in place of that form.

All the angular terminations, such as on the ***a, c, e, f, g, j, r, s*** and ***t,*** are made on the basis of 45°, and on letters like the ***c*** and ***s*** the tops and bottoms should correspond.

Legibility

With the completion of this lower case alphabet, one should have the basic knowledge of sign lettering, and as you progress in the work it will be noted that the principles underlying the making of this type occur in all of the other styles, with the exception of the weight of stroke. One cannot do better, in making an average commercial sign or show card, than to use the plain Egyptian letter, for it has never been excelled for legibility. Many sign writers believe it to be more difficult than most other forms of lettering.

As was stated relative to the upper case, the corners should be sharp and clean, and the brush work carefully done. Do not get discouraged if perfect results are not achieved at the outset, for it takes time to develop that indefinable something which distinguishes the work of the professional from that of the amateur.

CHAPTER IV

Specimen Copy

The last chapter covered the entire plain Egyptian lower case alphabet. On the plates accompanying this chapter we have a practical application of both the upper and lower case letters of this type.

While it is not intended in this particular lesson to cover all phases of layouts and arrangements, in so far as they apply to these two specimens, we will endeavor to do so.

In studying Plate 12 for a few minutes, it will be observed, first, that it is made on a proportionate scale, and second, that it has several sizes of lettering. The size of the finished copy would be 22 x 28 inches, this plate being drawn on a scale one-quarter inch to the inch. It will be remembered in Chapter I, in the sizes of cardboard, that this was rated as a "full sheet," and this size is also used as a standard real estate board sign. Notice the margin all around the lettering, and the border line — one inch in from the edge.

Margin

It is absolutely necessary, in order to do finished work, to leave a margin all around a sign, and the margin should correspond on the top and bottom and sides, in order to have the work look uniform and well.

The general size of the letters has been indicated, and the space between the lines can easily be figured out. Notice, also, the prominent lines of the copy.

Analysis of Copy

In the first place, the important feature of this type of sign is in its direct statement of fact, indicating its purpose, viz., that of selling, the "For Sale" being the primary or principal thing in the whole copy. On the assumption that the sign is put on a house or lot, the line referring to the real estate is of minor importance, and may be subordinated, as it is on the copy. The secondary line on the sign is the name, so that if the sign were made with nothing but the "For Sale" and the name on it, it would still be efficacious in the matter of appealing to prospective purchasers.

The statement of size, as indicated by the number of feet of land, while it has a definite purpose and selling value, is not vitally important; therefore it could be made smaller than the other lines of copy.

The "apply to" is superfluous, and were it left off altogether, the sign would just as easily be understood; hence the extremely small letter and space given to that line.

Letter Spacing

Note the general effect of the arrangement and layout. Where there are round letters, such as the **O** and **C,** they can be brought in little closer connection with the other letters, and where two perpendicular strokes come together, such as the **M** and **I** in Smith, the space between should be accentuated. Notice that this is all in ***upper case*** lettering, and while it is important to have good lettering, it is much more important to have the general effect of a sign right.

Arrangement

Almost every one has seen poorly lettered yet well spaced signs which looked finished, and also signs beautifully lettered, yet poorly spaced, which looked otherwise. This indicates the value of good spacing and proper arrangement.

Before undertaking to paint this copy, observe the other one on Plate 13, which is in upper and lower case letters. The letter **S** in this copy appears five times, which was not unintentional. Because of the difficulties encountered in making the **S,** the copy was so written.

The capital letters are larger than the small letters, the proportion of the lower case being two-thirds the height of the upper case, as indicated in the last chapter.

Observe that there is a wide margin all around this sign. This is typical of quick, department store card signs, and is quite effective from that standpoint of advertising.

In making the real estate sign, it would be advisable to use straight black paint without the addition of any color, but in the copy on Plate 13 one could use color for effect.

The words "today only" and "shirts" could be made in red or blue, or some attractive color, while the other and less important lettering could be done in black. On some types of copy of this kind the word "sale" would be emphasized, but because of the use of the upper and lower case we have not done so.

With an understanding of the upper and lower case Egyptian letters the student has a good working alphabet, and the basis of each of the other types.

While it is important to be able to letter correctly, it is equally important, and rather more so, to be able to correctly ***space*** the sign.

Try to get these two specimen copies properly executed; have the letters clean and neat, and the brush work so that it will look finished and professional. Do not think that because a copy is of temporary nature it should not be done well. No matter how unimportant the sign may seem to be, it may be the forerunner of other and possibly more remunerative work.

There is a little jingle illustrative of this which could easily be quoted to advantage, and we would suggest that you memorize either the words or the thought expressed.

"The sign that sells goods sells no goods till it's read,
The sign poorly painted, when painted, is dead,
But the sign that's attractive, well painted and clean,
Is the sign that sells goods wherever 'tis seen."

The attractive, well-painted sign is usually the sign that sells goods, and the sign that is carelessly constructed is not of much value to its possessor.

Before undertaking the lettering on these two plates, re-read the paragraphs concerning paint in Chapter I, which deals with the use of camel hair lettering pencils and with the japan and varnish colors.

Use of Japan Paint

Presumably the student has been working with water color and sable pencils, but he can now safely begin to use the camel hair brushes, and the varnish or japan paint. As a matter of fact, the work will be found easier to do than heretofore with the sable brushes and the water-color paints.

On card work, lettering with these colors will stand moisture; water color does not. Because of the softness of the camel hair, your brushes will lend themselves much better to the movements of the fingers, and the letters will be cleaner and sharper.

Mixing

Procure a small can of mixing varnish, and also a tube of lampblack ground in japan. Take a little of the varnish, not a great deal, and put it into a small can, and add to it about a quarter of the tube of japan black. Thin this to a working consistency with turpentine. Do not get the paint too thin, or it will run, and if it is too thick it will work heavy and streaky. Consequently, in order to do good work the paint ***must be correctly mixed.*** This applies to all color. Quick drying japan gold sizing can be substituted for varnish. Drop black can be used in place of lampblack, but it does not have the same covering capacity.

Binders

One soon becomes familiar with the degree of consistency necessary. It might be preferred to work with the japan black wholly, without the addition of varnish. If so, thin only with turpentine, but this paint does not wear long without the addition of a binder, such as gold size or varnish, and we would not advise it.

The japan black, or any japan color, if no binder is used, will dry absolutely flat, and it is sometimes used on quick work where time is limited. Varnish is used as a binder for the japan colors, such as red, green, blue, etc.

Any color desired can be utilized in lettering, as was stated in the first chapter, provided the nature and mixing of the paint are understood.

Remember, when working with these brushes and this paint, clean out thoroughly in turpentine all brushes used, and lay them on a bench to dry in a flat position; or dip them in lard oil or neat's foot oil after they are thoroughly cleansed. This keeps them soft and pliable. Also remember to wash all of the oil out of them with turpentine before commencing work again. This reiteration of the paragraph in Chapter I relating to brush care is to emphasize its importance.

28

Border Line 1" in

5½"

2½"

1½"

3"

22"

FOR SALE

HOUSE AND LOT

15,243 FEET OF LAND

APPLY TO

SMITH & CO.

USE STICK CHARCOAL FOR LAYOUTS ON WOOD AND METAL SIGNS WITH WHITE OR LIGHT BACKGROUNDS. ON BLACK OR DARK GROUNDS USE CHALK.

ALL Upper Case Plain Egyptian.

SPECIMEN COPY

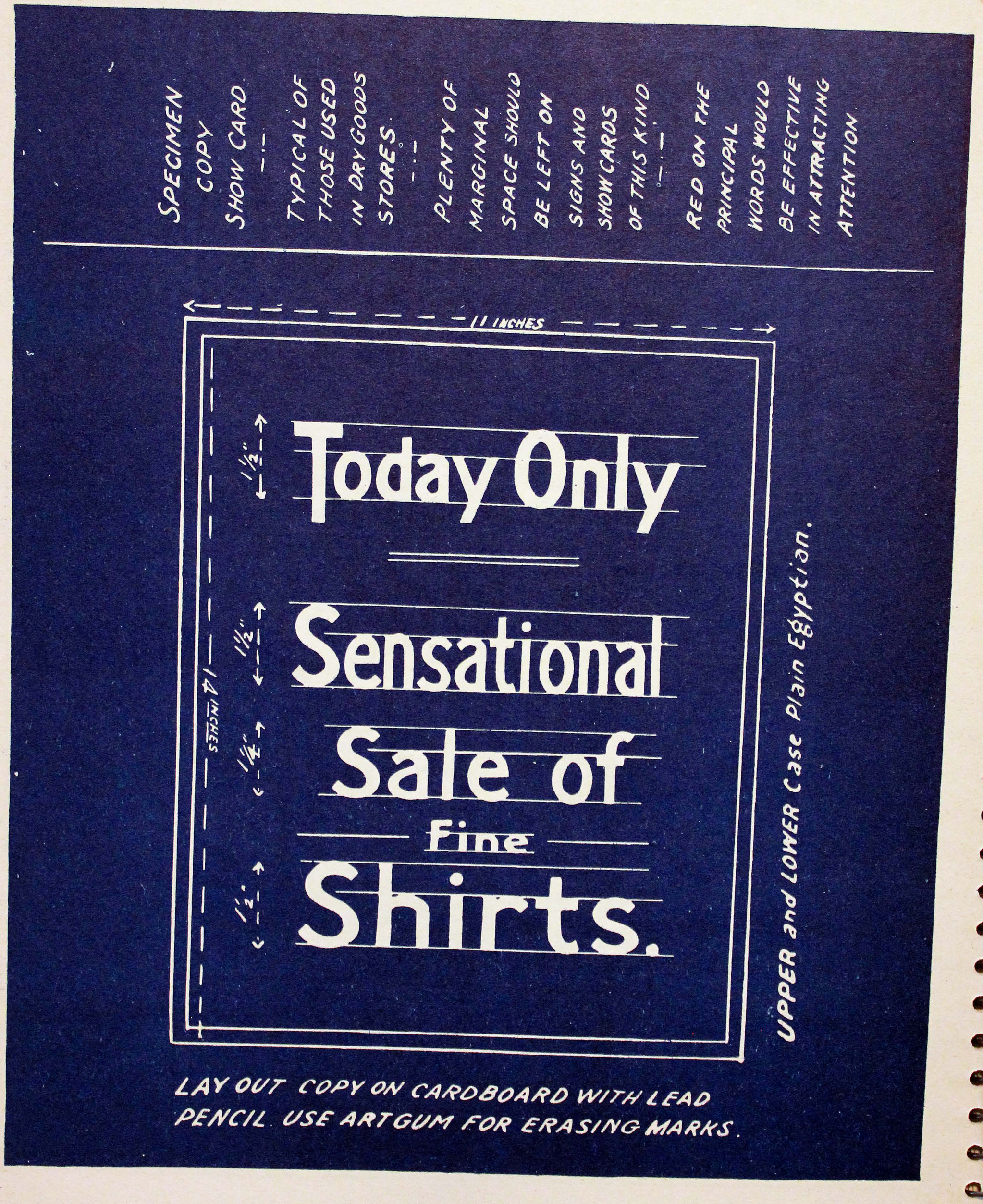
REAL ESTATE SIGN DRAWN TO SCALE OF 1/4 IN. TO INCH. SIZE COMPLETE 22"X28" THE STANDARD FULL SHEET CARD USED BY THE TRADE.

STUDY THE PLACING OF THE LETTERS. KEEP MARGIN UNIFORM.

BOLD, HEAVY LETTERS ARE BEST ADAPTED FOR THIS WORK

PLATE 12

PLATE 13


SPECIMEN COPY SHOW CARD.
TYPICAL OF THOSE USED IN DRY GOODS STORES.
PLENTY OF MARGINAL SPACE SHOULD BE LEFT ON SIGNS AND SHOW CARDS OF THIS KIND.
RED ON THE PRINCIPAL WORDS WOULD BE EFFECTIVE IN ATTRACTING ATTENTION.
11 INCHES
1½"
Today Only
Sensational
Sale of
Fine
Shirts.
14 INCHES
UPPER and LOWER Case Plain Egyptian.
LAY OUT COPY ON CARDBOARD WITH LEAD PENCIL. USE ARTGUM FOR ERASING MARKS.

CHAPTER V

Thick and Thin Egyptian, Upper Case

In this chapter the thick and thin Egyptian letters are treated. The student should be familiar with the plain Egyptian by this time, and with the principle of uniformity of weight. There is only a slight difference in reality between the thick and thin and the plain type, the main distinction being the ***two*** weights of stroke instead of ***one.*** Each weight, when once established, must be arbitrarily followed throughout. On this principle are founded all the various styles of letters, such as Roman, French thick and thin, Old English, etc.

With an understanding of the plain Egyptian and the thick and thin type, all styles will be easy to make.

After mastering the fundamentals of the plain and the thick and thin letters there is no excuse for making errors in any style, the location of the heavy and light parts being the essential requisites of the work. Even experienced sign writers, however, sometimes accidentally reverse the position of the heavy and light bars in these letters, especially in ***A, V*** and ***W.***

To the casual observer it might seem as though there were no systematic or definite rule in making these thick and thin lines. There is, however, and it is not difficult to remember the general direction of the light and heavy strokes when the origin of the thick and thin letters is understood.

Origin of Styles

The beginning of this style formation is accorded to the sculptors of primitive civilizations, who carved their nation's history with flat chisels in stone or clay; and also to the early Latin scribes, who had flat pens cut from reeds, which were held almost upright and at right angles to the surface to be lettered, so that the down stroke of each letter made the widest type of line possible. The up strokes and the horizontals were made with the thin edge of the pen, hence the two widths of stroke on each letter. The modern forms were all derived from these primitive methods. By understanding how the early letterers worked, this arrangement can be easily comprehended.

On the round letters, the accents would naturally be made at the sides of the circle or ellipse, and the weight of these accents would be the same as on the perpendicular strokes.

Location of Accented Strokes on Oblique Bars

The easiest way to remember the location of the heavy strokes on the oblique bars is to call to mind that the accented or heavy strokes run from the ***upper left*** to the ***lower right,*** with the exception of the letter **Z,** where the accent is necessarily the opposite.

When thoroughly familiar with this principle, many signs, made by supposedly capable and efficient workmen, will undoubtedly be noticed wherein the light and heavy strokes have been misplaced, and one should profit by such mistakes on the part of others.

Proportion

Relative to the proportionate width of stroke in the thick and thin Egyptian, there is no definite rule to follow; the thick parts may be made quite heavy, and the thin strokes exceedingly thin, or the reverse. There is always, however, a best working proportion, and we would suggest that for the heavy part of the letter a stroke about twice as heavy as the thin one would be preferable.

After becoming proficient in this work, the correct proportions can easily be discerned by the eye. In the practice work, as given on Plates 14 and 15, the general proportions of the letters are vary similar to the plain Egyptian; that is, approximately two-thirds the height for the width.

Individual Letter Instruction

By studying the letter *A* one will see that the heavy bar is on the right, and also that the top of the letter maintains the width of the heavy stroke, no wider or narrower. This is true of the other letters of similar character, such as the *M, N, V, W, X* and *Y*. On the *N* the top of the letter takes the heavy width, and the base of the letter takes the narrow width on the diagonal stroke. The same thing obtains in the *V* and *W*, the top of the letter taking the heavy width, and the bottom of the letter taking the light width of the stroke. The correct formation of the thick and thin *U* would necessitate making the right vertical stroke light weight, but by reason of balance effect it is generally made as on Plate 15.

These letters are quite frequently incorrectly made, because of lack of understanding on the part of the student. Do not get the *A* unbalanced or "broken-backed."

In the letters *B* and *C*, also the *D*, the accented curved strokes could be increased a trifle in weight to improve the general appearance of the work. This is because of the fact that sometimes the curved stroke letters lose their full strength when being read from a distance.

The horizontal strokes, as has been stated, are always of the light weight. Notice the *E* and *F*, also the horizontals on the *B* and *D*, and the top and bottom curves on the *C*. The crossbars on the *G* and *H* are above the center.

The heavy oblique bar running from the upper left to the lower right of the *K* extends beyond the imaginary line forming the boundaries of the letter rectangle.

The main characteristics of the *N* have been explained, and the other letters require very little explanation if the general rules of this style are carried out.

Observe the character *&*, the compound curve running from the upper left to the lower right. This could be made straight, but it is much more artistic when made on this plan. Keep corners sharp and clean.

Draw top and bottom guide lines, as was done in making the upper case plain Egyptian.

Lower Case Thick and Thin Egyptian

As in the plain Egyptian, the proportion of the lower case to the upper case letters, in respect to height, would be the same. With the exception of some of the letters, like the *d, h* and *k*, the height of the letter is two-thirds that of the upper case.

The general weight of the lower case thick and thin could be a trifle lighter than the upper case, because of the fact that the letters are smaller. The character of these lower case letters is not changed in any way from those of the one-thickness type, and with a working knowledge of the plain Egyptian, these will be fully as easy to make.

It is important to have all the curves full round, and to have the angular terminations the same as in the upper case.

It is unnecessary to explain each individual letter, because by studying the plates one can very easily learn how to make them.

The periods and commas always take the heavy width, and not the light. Amateurs have a tendency to reverse this rule.

Notice particularly the numerals on Plate 17. The similarity between these and the plain Egyptian is marked, the only difference being the two weights of stroke.

The ***horizontal*** curved stroke on the *2* is made ***heavy***, which is an exception to the general rule in the thick and thin type.

The horizontal bar on the *4* is sometimes made heavy, although it does not look as well as the one with the light stroke; also, the horizontal top of the *5* is made heavy, while that of the *7* is light.

Note that the top part of the *3, 5, 6* and *8* is smaller than the bottom part, while on the *9* this is reversed.

As in the lower case plain Egyptian, the letters which extend below the line are made with the extension about one-third the height of the upper case dimensions.

With the completion of this upper and lower case thick and thin Egyptian alphabet, the student has at his command two complete styles, and ought to be able to utilize his knowledge to good effect.

NOPQR STUVW XYZ&

Thick and Thin Egyptian (Plain)

THE TOP PART OF THE S AND X IS SMALLER THAN THE BOTTOM.

P-R AS IN THE PLAIN EGYPTIAN, THE MIDDLE BAR IS BELOW THE CENTRE

THE BOTTOM OF THE N-V W TAKES THE LIGHT WIDTH.

KEEP ALL CORNERS CLEAN AND SHARP.

NOTE THE COMPOUND CURVE ON &

ABCD
EFGH
IJKLM

Thick and Thin Egyptian (Plain)

THE WEIGHT OF THE THICK AND THIN BARS MUST BE MAINTAINED ON THE SAME LINE OR WORD.

ON OBLIQUE BARS (A-K-M-N-W-X) THE HEAVY STROKE RUNS FROM THE UPPER LEFT TO THE LOWER RIGHT. THE ONLY EXCEPTION TO THIS RULE IS THE **Z**

THE TOPS OF A-M-N-V-W TAKE THE HEAVY WEIGHT. NOTE THIS ESPECIALLY. IT IS OFTEN MIS-MADE BY AMATEURS.

abcde
fghijk
lmnop

Lower Case Thick and thin Egyptian.

THE TOP PART OF THE d DOES NOT TOUCH THE LINE AS DOES THE b-h-k etc

THE HEAVY OBLIQUE BAR ON k EXTENDS BEYOND THE LIGHT

DOTS ON i-j TAKE THE HEAVY WEIGHT

g-j-p-q-y EXTEND 1/3 BELOW BASE LINE

MAKE ALL CURVES FULL

qrstuv

wxyz.:;¢

12345678$

LOWER CASE THICK and THIN EGYPTIAN and NUMBERS

THE t DOES NOT EXTEND TO THE FULL UPPER CASE HEIGHT. THE CROSS BAR IS ON THE LINE, NOT ABOVE IT.

TAKE NOTE OF THE CONSTRUCTION OF NUMERALS. TOP PART OF 2-3-5-6-8 IS SMALLER THAN LOWER. 4 and 9 IS THE REVERSE.

CURVE ON 2 IS COMPOUND, →2 NOT→2

With progress in lettering, the student should try to familiarize himself with every detail of the work by practicing each style and letter until it is permanently fixed in the mind. Such mastery will be of tremendous advantage in making signs and posters, as it will not be necessary to refer to charts or plates for information.

Arranging Copy

With Chapter IV were two examples of copy and layout carefully drawn for the student to follow. On each the plain Egyptian type was used. It should be possible at this time, after completing the alphabet work, to make a sign or signs, using the thick and thin type that has been studied, without having at hand a print or drawing to copy, and one should learn to lay out and arrange copy. In practice work any copy can be utilized. Remember — in all copy for signs or show cards there are certain lines or words which are of paramount importance, and others which should be subordinated.

No matter how well one learns to letter, it is equally essential to observe spacing rules and harmonious arrangement of copy. Try to visualize the appearance of the sign to be lettered. There are hundreds of different ways in which copy can be arranged, and it is entirely up to the artist to see that the arrangement chosen is in every way in keeping with the copy.

A milliner's sign should not be of the same style and character as a bootblack's, nor would a delicate, refined type be appropriate for a butcher's window. Certain copies call for special types and arrangement.

Large, clumsy letters, covering almost the entire sign area, might be suitable for a real estate sign, but would not be in keeping with a jewelry store advertisement. One should always bear this fact in mind, and try to interpret, through lettering and arrangement, the class of business or article being advertised. This also applies to the choice of colors.

In laying out copy, draw light pencil lines for top and bottom of letters, then sketch in roughly outlines of same. With ordinary lettering ability it is not necessary to be accurate in such work. The main thing is to observe the rules given on margin and spacing, in Chapter IV.

Spacing between Words

Between words, the space of one letter is sufficient, although that is usually dependent upon the amount of copy. Sometimes words have to be crowded, more or less, in order to get the entire copy within a specified area. In such cases make the first letter of the sentence or words larger than the balance, approximately the width of the letter stroke above the top line. This tends to overcome the effect of crowding, but it is much better not to resort to this method unless compelled to by excess copy requirements.

Relative to this, it might be advisable to state that because a letter is large it is not necessarily legible. Small letters, properly spaced, are much more readable than large ones crowded together. This truth can be demonstrated by observation and experiment.

It is a fair presumption that by the time a student has progressed to the stage of specimen copy work in this treatise he has a pretty good knowledge of brush handling, but it would not be amiss to suggest the following rules and helps:

Do not try to make a small brush do the work of a large one. It is easier to take the larger sizes of either sable or camel hair pencils and work them down to a small size on a palette than to spread a small one to a large-size stroke. Use plenty of paint and lay it on in even strokes. Have all terminations clean and sharp for best effects.

Additional layout information will be found in Chapter VII.

CHAPTER VI

In this chapter will be found four plates covering not only the French thick and thin letter, but also the principle by which the majority of the changes in styles are made. This is known as the serif, or spur. By its use, the character of the plain type, such as we have been working on, becomes entirely changed, and the general effect of the letters is vastly different from those where the serif is not employed.

Serifs or Spurs

On Plate 18, the first in this chapter, let us consider the various forms of serifs. We have on Figs. 1 and 2 the angular form, one short and one long. On Figs. 3 and 4 we have the round serif, one short and the other long. On Figs. 5, 6 and 7 we have modifications of the rounded type.

The serif first came into being through the use of the chisel on sculptured lettering, the horizontal cut extending a trifle beyond the width of the letter stroke. Its employment in modern lettering is for the purpose of beautification, though it does not add materially to the legibility.

Please note carefully the information on the plate relative to observing rigidly the style of serif that is employed. If the letter serif is short, as in Figs. 1 and 3, be sure to carry that formation all through the work or line wherein that style is used. The same thing obtains with the long serif. The round serifs on Fig. 7 are used on what is called "old style." It is an easy form to make, providing the terminations are not made too heavy and blunt. It can also be made on the one-thickness letter, as can the various other kinds of serifs.

The angular extended form is rather old fashioned and laborious, and does not lend itself well to the natural swing of the brush, while the curved or rounded serif is exceedingly easy to make by turning the brush lightly in the fingers when making the terminations of the letters. Short serifs are much more effective and beautiful than long ones.

Practice, in addition to the French letters in this chapter, various letters with these forms of serifs. See how well you can do them, and remember that these serifs are exceedingly important in all lettering.

French Thick and Thin, Upper and Lower Case

Let us take up the study of the French thick and thin type, as indicated on Plates 19, 20 and 21. Observe the fact that this letter is slightly more condensed than the normal thick and thin type which was studied in Chapter V. It is also much lighter faced, and it has a very neat appearance, due entirely to the comparative lightness of the strokes.

This is a thick and thin type, as the name indicates, and the light and heavy strokes which were used in the letters previously studied are employed. The location of the light bars and the heavy bars is the same as in other thick and thin types, and ***must not be misplaced.***

The title or name of the style now being considered is undoubtedly given because of the influence of certain national characteristics which seem to dominate the form. Lightness of construction, neatness and general smartness are its dominating features. That alphabets have relations to people and nations is proven by the various names bestowed on them, and also by their treatment in the several lands of their origin or adoption. Generally it is easy to recognize the work of a German, French or American letterer, no matter how clever he may be.

French artists of the modern school have a *penchant* for bizarre drawings, but in lettering they are more conservative than are their German contemporaries. The American sign writers have found in some of the alphabets

ANGULAR SERIFS

ROUNDED

FIG. 1

FIG. 2

FIG. 3

FIG. 4

(SHORT) (LONG) (SHORT) (LONG)

FIG. 5

FIG. 6

FIG. 7

FULL ROUND

SERIFS or SPURS USED ON VARIOUS STYLES.

IF ONE FORM OF SERIF IS USED ON A LETTER IT MUST BE RIGIDLY ADHERED TO ON ALL LETTERS OF WORD OR LINE OF COPY.

-.-

THE EXTREME ANGULAR STYLE IS SELDOM USED AND DOES NOT LEND ITSELF TO ONE-STROKE BRUSH WORK.

-.-

FIG. 3 SHOWS COMMONEST FORM

AaBbCcDd EeFfGgHh IiJjKkLl

FRENCH THICK and THIN (Upper and Lower Case)

THE TOP OF THE A SHOULD BE BROUGHT ABOVE TOP GUIDE LINE.

SERIFS ON C-G-J-S ARE MADE PERPENDICULAR. note

A VARIATION OF THIS IS SLANTED note

THESE TWO FORMS MUST NOT BE USED TOGETHER.

THIS STYLE IS POPULAR WITH SIGN-WRITERS

Mm Nn Oo
Pp Qq Rr Ss
Tt Uu Vv Ww

FRENCH THICK and THIN (Upper and Lower Case)

THE N-V-W EXTEND BELOW THE BASE LINE IF THESE LETTERS WERE MADE TO TOUCH LINE. THEY WOULD APPEAR SMALLER THAN OTHER LETTERS FROM A SHORT DISTANCE AWAY THIS IS AN OPTICAL DEFECT AND MUST BE ALLOWED FOR IN LETTERING

— —

NEATNESS IS THE ESSENTIAL REQUISITE OF THIS STYLE KEEP CORNERS SHARP

XxYyZz
123456
35 789 69

FRENCH THICK and THIN (Numerals)

A VARIATION IN THE FIGURES 3-5-6-9 CAN BE MADE BY BRINGING TERMINATIONS ABOVE AND BELOW TOP AND BOTTOM LINES.

DELICATE TREATMENT GIVES THIS STYLE AN ADVANTAGE OVER HEAVY, BOLD TYPES FOR HIGH GRADE COMMERCIAL USES. ON OFFICE DOORS IT HAS NO EQUAL.

called "French" an ideal method of expressing the spirit of high-grade commercial advertising. The plates accompanying this chapter give an adaptation of many alphabets bearing this name.

Apart from the condensed appearance and light weight of the letters, certain characteristics will be noticed peculiar to this type, — viz., sharp terminations on angular letters, such as the *A, N, V, W* and *Z,* and also the perpendicular serifs on such letters as the *C* and *G.*

Read the information on the plates and note that the terminations or serifs can be made slanted as well as perpendicular. It is a pleasing variation of the type, although for ordinary purposes the serif as made on the plates is quite satisfactory. The "French" is a very popular style with sign writers because it lends itself admirably to neatness and legibility, — two very necessary requisites for finished work. It is adapted for office doors, small glass signs and all high-grade commercial work.

The essential thing to remember is absolute neatness of brush work. Corners ***must be sharp and clean,*** as the letter, if slovenly made, shows its defects much more quickly than the plain types.

Numerals

On Plate 21 the numerals of this type are set forth. A modification, such as is indicated on the small figures, can be used, although that is optional with the student. It is immaterial how the figures are made, so long as the principle of the style is observed.

The ***proportion*** of width to the height of this letter is about ***one-half.*** In the other types which we studied, the rectangular formation was on the basis of two-thirds. This letter could be made wider, but in so doing it loses some of its artistic qualities.

Architectural Thick and Thin

Another modification of this type is known as the "architectural" style, often used on public buildings and on work where absolute neatness and delicate treatment are required. Strictly speaking, the architectural is a form of "classical Roman" lettering, referred to in Chapter XX, Plate 61.

After completing the alphabet the letters may be assembled into words and arranged in some form of copy for a sign, which will give the practice and experience that are necessary for good work. It will be observed that the alphabet plates include both the upper and lower case letters instead of treating them separately, as was done on other style plates. It is immaterial whether these letters be made separately or together, as on the plates, so long as one learns the difference between the upper and lower case formations.

Use whatever color desired in making them, provided it be strong enough to be easily read. Tints are not desirable for lettering. Strong body colors only should be used.

Brevity

In getting up copy for yourself or for possible customers, concentrate and epitomize. Do not use unnecessary words or lines. The chief value of a sign or poster is brevity. In connection with that thought, this little bit of verse will help you to remember it.

> If you would paint a sign or write one,
> Or get a scholar to indite one,
> Don't think because 'tis understood
> By men of sense 'tis therefore good,
> But let your words so well be planned
> That blockheads can't misunderstand.

Paint Usage

Remember — as has been stated, for color work on cardboard water colors are best. On paper, use colors ground in japan, with a little binder to hold them, — viz., quick varnish. On outdoor signs, oil or varnish colors should be used. These suggestions are in the nature of review, but are worth repeating.

CHAPTER VII

In a previous chapter some instruction was given on signs and layouts. We will now go into greater detail in this phase of sign and show card writing.

Artists in these lines are fortunate, indeed, that composition for them is not confined to certain mechanical proportions and letter widths such as occur in typesetting. No matter how artistic the printer may be, he is always hampered by limitations of machine-cast letters, while the hand-letterer can adjust his work to fit any space and use his sense of balance and proportion without restraint.

Despite this fact, one should not disparage the printers' trade, for there are many beautiful printing creations by master craftsmen which have overcome to a large degree the defects of arbitrary type requirements, but for sheer beauty of work and originality, hand-lettering, rightly placed, can have no superior.

One of the fascinations of our craft is the opportunity it presents for expressing one's individuality. Show card writers and signists unconsciously develop styles and arrangements which reflect their personalities and in a measure reveal characteristics peculiar to them.

As with handwriting, when one is familiar with another's efforts, they are easily recognized without the author's signature.

Sometimes the finest lettering lacks what the profession calls "swing" or "punch." Poor lettering occasionally looks well when arranged in conformity with the laws of balance. When lettering is correct and the copy properly balanced, then, and then only, is the desired "swing" obtained. We would advise all beginners to study faithfully advertising, both painted and printed, from a critical standpoint. If parts of the copy studied are dominant and other parts subordinated, note the reason for the discrimination. Observe differences in type faces and styles, as these often indicate the class or standing of goods or business advertised.

Spacing and Arrangement

The problem of spacing is of such subtle nature that rules sometimes are detrimental to finest results. The artistic sense of the letterer occasionally leads him to violate accepted principles. There are certain alphabets and individual letters which permit liberties in handling that others do not, and, to any one using such, they offer unlimited possibilities for original effects.

The optical effect of many letter forms also influences spacing to a degree. Long or short serifs, swash lines and lengthened strokes on a few letters interfere or help in the general spacing scheme, according to their use.

To counteract optical illusions in spacing, variations in proportion of letter construction must be recognized. The beginner is sometimes at a loss when confronted with this problem, but practice and study will help him to attain the proper effect.

Nomenclature of Signs and Show Cards

Let us consider for a little while Plate 22. Note Fig. 1, which is typical of the layout used on office doors or on small wooden signs such as are commonly called tablets. While speaking of this, it might be well at this time to call attention to the trade nomenclature of signs. (See Plate 72, Chapter 20.)

A long wooden sign such as is erected over windows is commonly called a "belt sign;" a sign that is used on a space between windows is called a "tablet;" a sign with a curved face, put on the corner of a building, is called a "drum sign;" while a sign that is put underneath a window on the sill is referred to as a "sill sign."

On show cards, the name "landscape" is given to a sign that is lettered with the long way of the card used for the top; with the

short way of the card running across the top and the long way perpendicular, the name "portrait" is given. While these are common terms, many sign writers who are not trained in shops are not familiar with them, and, to the uninitiated, a sign is a sign and nothing else. It makes little difference, however, for the purpose of study, what form of sign is being lettered, whether it be a tablet, a belt or any other. The principles of layout and arrangement are applicable to all.

One of the most common types of work in the sign business is the lettering of office doors and glass signs, and it requires some little experience to do the work correctly.

After treating general spacing in this chapter, we shall take up briefly the matter of painting for office doors and glass sign work.

There are many ways of laying out or arranging a given copy on a sign. Scroll formations, ribbons, angles, circles and straight lines may be used to get the desired effect appropriate for the needs of the work. It would be impossible for any book or course to cover in detail the very many forms that could be used.

By studying the thousands of signs and show cards in any vicinity, a great variety is observed, all expressing the individuality of the artist in the various styles of layout.

It is an interesting experiment to take a copy and lay it out in different ways. It is surprising to see how the same copy can be arranged so differently, and yet not lose its advertising or artistic value.

One of the most common and yet most pleasing forms of layout is that which is made on an arc. While this is a trifle stiff in its treatment in comparison with the ribbon or compound scroll, it has a certain amount of artistic quality which differentiates it from the straight line layout.

Study the office door specimen copy with the name Smith & Jones drawn in a partial circle.

In Fig. 2 you will notice that every letter radiates from the center, so that the **S** on one side of the arc is the same size and on the same degree, but opposite angle, as the **S** on the other side, and the other letters are uniform in this respect.

If each individual letter on an arc were made vertical, the letters on each end would be much taller than that of the center. Suppose you try making a line of lettering like this, and note the result. It is an arbitrary rule in lettering on an arc to radiate each letter from the exact center, and in order to get this effect one should take compasses or (if you letter a large surface and have no large compasses) a piece of string. Using the center of your surface to draw from, you will be able to get the exact angle of each letter by running a ruler to the center and drawing a guide line for your letter.

Most finished sign writers do not need to do this, depending upon their eye to gauge the exact angle; but unless each letter radiates correctly, the effect of the work is absolutely spoiled. Try this as part of your practice work and note the result.

On Plate 23, carrying out the idea of arrangement and layout, see Figs. 1 and 2, these being the same copy arranged well and arranged poorly.

This is typical of straight-line work, and there are no curves or scroll lines to relieve the monotony of the layout. In such arrangement one should strive to depend largely on general effect of the work rather than on originality and freedom of design. It is vitally necessary to have plenty of marginal space and by comparing the two layouts you will see that of Fig. 1 is seemingly blocked in the center, and that of Fig. 2 seems to sprawl all over the card or sign.

Balance is the keynote of all good layouts. Without perfect balance one's work is amateurish and crude. With perfect balance poor lettering sometimes looks well. Such knowledge, when acquired, will make it possible for any person to do good work, and we cannot stress this point too much.

There is on some signs what is termed the "mechanical" layout; also, on some, the "artistic" layout. (See Figs. 5 and 6 on Plate 23.) The mechanical layout is necessary for

certain work. The artistic layout tends to bring out one's work and to make it a little more beautiful. The mechanical arrangement is usually stiff and heavy, but is inclined to be more legible. Both types have value in their place, and one can easily distinguish the needs of advertisers in this respect.

Notice the suggestion regarding the optical center and the real center on this plate.

Optical Centers

We have spoken of optical effect, particularly in the matter of increasing the height of round letters.

On card signs it is advisable to observe the rule of making the optical center a trifle above the real center of the space to be lettered, although it does not need to be very pronounced. The most effective arrangement gives more marginal space on the bottom than on top and sides of the card.

Illustrations, if one is sufficiently artistic to paint them, will often relieve the monotony of lettering. If one is not artistic to this extent, cut-outs of illustrations could be used, and the lettering placed in conformity with their general shape and space demands.

Letter Spacing

Next to the arrangement of a sign, ***spacing*** of the letters is most important. (Notice Figs. 3 and 4, also Fig. 7, Plate 22.)

Certain letters must be treated from a different basis than others. In printing, the printer is limited to definite mechanical confines for his type letters; that is, each letter is cast or molded on a definite space proportion, and when the letters are put together, the defects of this mechanical proportion can readily be observed. When a printer sets up an ***A, L*** and ***W*** the rectangle or square forming the type face cannot be in any way changed; but in sign writing the artist can shorten and overlap the letters so that he can either increase or diminish the space as the occasion requires. (Notice Figs. 3 and 4 again.)

In Fig. 3 the ***L*** is shortened to decrease the wide space between the top of the ***A*** and the top of the ***L,*** and the ***W*** overlaps the imaginary rectangular formation of the ***A.*** This could not be done in type, but in hand work these things are possible and it improves the spacing immensely to do so.

Also notice in Fig. 7 the ***L, T*** and ***O.*** The ***T*** overlaps the ***L,*** and the ***L*** overlaps the space belonging to the ***T.*** Notice, also, the distance between the ***M*** and the ***I*** and the ***I*** and the ***L,*** and observe that the ***O*** and the ***T*** come close together.

The following rule must be observed absolutely, viz., ***where two perpendicular bars come together, the space between should be increased.*** When two curved letters come together, such as in the ***O*** and ***C,*** they should be made so that they almost touch.

These things can be explained only by an understanding of what we have already termed "optical illusions," for as lettering is read at a distance, it is necessary to make these various allowances in order to have the work appear accurate, and it is in this respect that mechanical rules, when followed absolutely, are found to be inadequate. A thing to be really right must be seen right, and if each individual letter fills a definite mechanical space and is arranged on a definite mechanical basis without the artistic understanding, it is really not correct. The art of spacing is more than half of lettering. The student should study this even more than the making of the letters.

Italic Lettering

Notice the letter angles on Fig. 5, Plate 22. In Italic (slanted) lettering, the angle of stroke must be uniform. On Plate 4 was given the drawing of a protractor section, with a slant of 17°. This is the customary angle for Italic type, and unless it is observed on all Italic lettering, the work does not look well. In making the Italic form of any of the styles, letters like the ***A, V, W*** and ***X*** are the most difficult, because they do not seem to fit in well with the style. Draw the ***A*** in a rectangular form; that is, draw a rectangle around the letter, and have the rectangular lines at an angle of 17°, and it will be found to correspond. There might be some difficulty in fitting in the ***A, V, W*** and ***X*** in Italic lines, but

FIG 1

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SMITH & JONES

LAW OFFICES

G. Smith Architect

OC MILTON

GOOD SPACING (Fig 7)

FIG. 2

SMITH & JONES

LAWYERS FIG 3

GOOD SPACING

LAWYERS FIG 4

POOR SPACING

DOCTOR B. FIG 5

CORRECT ANGLES

DOCTOR B. FIG 6

INCORRECT ANGLES

SPECIMEN OF FICE DOOR LETTERING - SPACING - Arc and Italic Angles
(French Thick & Thin)

ALL LETTERING ON AN ARC MUST LINE WITH CENTRE Fig 2

WHERE THE L IS FOLLOWED BY THE A. SHORTEN HORIZONTAL BAR ON L WHEN W-A-V COME TOGETH-ER ALLOW BARS TO LAP OVER THE REGULAR SPACE ALLOWANCE

WHERE TWO PERPENDICULAR BARS COME TOGETHER ACCENTUATE THE SPACE BETWEEN

PLATE. 22

Good Arrangement.

Books

FOR

VACATION READING

FICTION, POETRY, HISTORY, TRAVEL, GEOGRAPHY, Etc.

Old Corner Book Store.

Fig. 1

ITALIC

A

FIG. 7

OPTICAL CENTRE

REAL CENTRE

X

FIG. 8

Fig. 2

Poor Arrangement

BOOKS

for

VACATION READING

FICTION, POETRY, HISTORY, TRAVEL, GEOGRAPHY, ETC.

Old Corner Book Store.

PERFECT BALANCE

IMPERFECT BALANCE

Fig. 3

Fig. 4

MECHANICAL LAYOUT

Fig. 5

SIGNS

ARTISTIC LAYOUT.

Fig. 6

ART Show Cards.

SIGN LAYOUTS AND BALANCE.

REMEMBER -

In laying out Signs, poor spacing will spoil the effect of the finest lettering.

All work must have plenty of margin space to be most effective.

Perfect Balance is necessary on all layouts.

Illustrations and scrolls if not over done, relieve the monotony of lettering.

after once learning how, they will be comparatively easy.

In doing the work in this chapter, copy Fig. 1 on a sheet proportionate to the drawing, making it possibly four or five times as high and wide as that on the plate; also copy Fig. 1 on Plate 23, increasing the size, and make a sign with Italic lettering.

Lettering on Office Doors

Relative to lettering on glass signs, similar to office doors, we would state, first, that most doors are of ground glass; that is, one side of the glass has been ground by the sand-blast method, making it translucent and not transparent.

In sketching in lettering of this kind use a lead pencil on the back of the glass, and lay out backwards. That will be good experience. After the glass is lettered the pencil marks can be removed with cloth dampened in water. If preferred, mark out the lettering with a grease pencil on the face. If on clear glass, tailor's chalk or white crayon will be all right to use.

Mixing Paint

After laying out the copy on the glass, mix the paint with lampblack ground in japan and a little quick varnish. Lampblack is more opaque than drop black or coach black, and covers much better. Some sign writers use lampblack ground in oil, with the addition of japan to dry it quickly, but because glass has a hard surface, and the paint must dry on the surface and cannot strike in, as it does on wood, this is not the best paint to use. The quick-drying varnish is much preferable as a binder for lampblack.

Brushes

Camel hair brushes are the best for such signs; in fact, on all work of this character camel hair brushes are preferable.

No matter what branch one develops or elects to do in the sign business, it is well to be acquainted with the various methods, for one never knows when the opportunity will come to do a certain kind of work, and without such knowledge of methods one is handicapped, to say the least.

CHAPTER VIII

Without disparaging any particular course or treatise on sign and show card writing, the author would take issue with certain statements which have appeared in at least one if not more published courses on lettering, viz., that the sign and show card writer need not know more than one or two styles in order to be a successful workman. While this may be true with regards to making a legible sign, to thoroughly understand one's work, a complete knowledge of style fundamentals is necessary, although sign lettering nomenclature might not be. Sign letter nomenclature is peculiar; for instance, some people refer to the plain Egyptian letter as a "block" letter, which is incorrect. This term applies only to the type treated in this chapter.

Printer's type faces have a great many different names which have no relation to the primary forms of letter making, and should not be confused with those used in sign writing.

That students may really become familiar with the necessary types of sign and show card letters, this course has been designed, each style graduating into another, and the sequence logical and reasonable. The rules that govern in the alphabet treated herein (space requirements and terminations) are also the same as in the construction of the Roman letters following.

Full Block Upper and Lower Case

The foundation of the plain Egyptian letter which was studied in Chapters II and III, that is, uniformity of thickness, is observed in this particular type.

The only difference between this and the plain Egyptian type is in the matter of the block terminations and in the relation of the width to the height. These letters are of uniform weight, and the unit letter (which is the ***O***) fills the confines of a square. That does not mean, however, that a letter of the full-block type cannot be condensed, for it often is, but it does mean that the block formation is much better suited to a wide letter than is the narrow width. This is because of the projecting blocks which extend from the terminations.

The blocks may extend any distance according to the requirements of space, or they may be shortened, if desired. On a letter of the style shown on Plate 24, the blocks can be extended about the thickness of the stroke, and if so, the effect of the letter will be good. The question of the location of these blocks is exceedingly important, and in order to definitely determine this matter it would be well to study the letters individually.

In making a study of the ***A*** from the lettering done by most workmen, we find that on the uniform thickness letter (such as is on Plate 24) there is no block on the top of the ***A,*** but in some of the thick and thin types of the full block we find there is a block on the top of the ***A.*** As a matter of fact, this minor point is best determined by the needs of the artist, and if his letter would look better with the block on the top of the ***A,*** there is no valid reason why the block should not appear. Most letter authorities do not use it, neither do they use a block on the horizontal center bar on the ***E*** and ***F,*** although that is done sometimes by the "old-timers."

The letter ***H*** is a perfect example of the full-block principle, as it has a block on all terminations. The ***M*** and the ***N*** have one-half block formations on the angular strokes, and there are no blocks on the base of the ***V*** and the ***W.***

The full-block numerals on Plate 26 are not very extensively used, although to be absolutely in keeping with the style, one should use the full-block figure on a sign that is lettered with full-block letters.

Just a word regarding the advantages of this type. Were it not for the fact that occa-

sionally some such form of construction as this style is necessary, we would not include it in this book. It is the logical forerunner of the "New York Roman" which is so extensively used in the sign business, and in order to bring to your understanding the relation of this type to the Roman we have included it.

On a short-lined copy, or a large sign area with very little lettering, the full-block letter can be employed with good effect.

When a condensed letter is made with block terminations it is not legible from a distance, the blocks seemingly run into each other, and the general effect is displeasing to the eye; but when blocks are used on an extended letter with plenty of marginal space and room between the letters, the effect is fairly pleasing.

Then, again, full-block letters are admirably adapted to the art of shading and color decoration, which we will treat later in the book. The blocks lend themselves to the elements of shade and shadow work, and when the shading is correctly done the effect is wonderful. This type is used very often on wagons and automobile trucks, because of its adaptability in the matter of color effects.

The full block is not a letter that can be made very rapidly, and because of this fact we do not advocate its use on work requiring speed. Show card writers, or men who make a specialty of card work, seldom use it for this reason. Sign writers, and specialists in truck lettering, very often employ it, but in any event, no matter whether it is used often or not, one should be familiar with the general construction.

Study the prints before beginning the alphabet work. Remember, a weight once established must be maintained. In addition to the alphabet, make one or two examples of a sign using the full-block letter in order to become familiar with spacing. One or two words would be sufficient, such as REAL ESTATE or JOHN SMITH, LAWYER.

Practice these full-block letters in several sizes and widths, but we would suggest that for practice work the letter style whose unit is built on the square (as is this on the plates) be used.

Lower Case Full-Block Type and Upper Case Thick and Thin Block

Assuming an adequate knowledge of the lower case construction, there is no need to discuss the general characteristics of the lower case type. The rules in the other styles treated herein for the relation of the height of the lower case to the upper case, etc., are the same in this style.

The location of the blocks on this type is of paramount importance, and apart from this there is little to be considered. Of course that does not mean that one should not try to do good brush work, or that the terminations should not be sharp and clean, but simply that the basis of the style is the full-block termination.

The lower case full block is not used extensively because of the difficulties encountered in making. It is not as legible as the plain Egyptian, neither is it as artistic as the New York Roman, although the style ought to be understood thoroughly to become truly efficient.

Without further word on the subject, study the plates herewith, and also take note of the suggestions in the marginal space.

Continuing the study of this alphabet, observe Plate 29, dealing with the full-block thick and thin upper case. You will remember in Chapter V we studied the thick and thin formation in lettering.

You will also remember that the principle of the letter was the two weights of stroke, the down stroke or perpendicular being heavy, and the horizontal stroke being light. This is just as important in the making of the thick and thin block as it was in the first thick and thin type which was studied.

Look at the letters on the plate and observe that all the blocks that appear on the ***horizontal*** terminations take the ***light weight,*** and also, that all the blocks which appear on the ***perpendicular*** termination take the ***heavy weight.***

The general characteristics of the thick and thin full block are the same as in the one-thickness full block, and this type is the next logical step from the latter to the making of the New York Roman alphabet.

All styles of lettering dovetail into each other, and the full-block thick and thin type is an illustration of this rule.

This letter has an advantage in legibility over the one-thickness full block, and consequently has more popularity with the sign fraternity. We might treat each individually, but that is unnecessary in the present state of progress, because the student should be able by this time to analyze all of the letters and to copy correctly the various styles.

The chief thing now to be considered, next to the making of the type, is the arrangement of same, and, with this end in view, after becoming familiar with the making of the letters, the student should endeavor to arrange them in some form of copy. This will be good practice.

Thick and Thin Full-Block Lower Case

Continuing the work undertaken in this chapter, we complete the thick and thin full-block style, making the lower case, as is drawn on Plate 30, also the thick and thin full-block numerals.

The same definite rules must be followed relative to the two widths as obtained in the upper case, the horizontal blocks taking the light width, and the perpendicular blocks the heavy, each letter having the same formation (except the width of strokes) as the one-thickness full block, which was treated in the last chapter.

It is unnecessary to explain each letter individually, as application and study will soon give you knowledge of the various details.

Note the name ***St. Louis*** on the bottom of the plate. This will give some idea of how the thick and thin type looks when assembled into words.

By way of variety, one should use colors as well as black in lettering. Brilliant reds, dark blue or green make good contrast on white grounds, and add to the attractiveness of the work. The appearance of colored letters can be improved by outlining, either in a deeper tone of the same color, or by using black. Outlined letters tend to enhance the beauty of a sign, and add materially to the value of the work from a monetary standpoint. Customers are more willing to pay a good price for work that shows painstaking labor and originality than they are for mere black and white creations. This subject is augmented in Chapter XVI.

Just a reminder here. After using colors ground in japan, oil or water, be sure to clean out the brushes thoroughly.

ABCD
EFGH
IJKL
FULL BLOCK (Round) Uniform Weight
Upper Case.
DRAW LIGHT HORIZONTAL GUIDE LINES TO INSURE UNIFORM WIDTH OF STROKE.
NOTE: A-H-K ARE WIDER THAN OTHER LETTERS.
KEEP WEIGHT UNIFORM.
ALL CURVES ARE FULL ROUND.
BLOCKS PROJECT APPROX WIDTH OF LETTER STROKE
SHARP CORNERS

Plate 24

MNOP
QRST
UVWX

FULL BLOCK (Round) Upper Case.

THE M-V-W-X-ARE WIDER THAN NORMAL.

-.-

DO NOT MAKE V-W-X "BROKEN-BACKED"

NOT → W

BUT → W

-.-

THE O AND Q ARE EXACT CIRCLES AND CAN BE DRAWN WITH A COMPASS

-.-

OBSERVE ALL RULES GIVEN IN SPACING WHEN LAYING OUT COPY IN THIS STYLE.

YZ&-
12345
6789?

FULL BLOCK (Round) Upper Case and Numerals.

PUNCTUATION MARKS IN THIS STYLE ARE THE SAME AS THOSE USED IN PLAIN EGYPTIAN EXCEPT THE CHARACTER ? THEY ARE

PERIOD .

COMMA ,

QUOTATION “”

AMPLE SPACE IS NECESSARY FOR THIS STYLE WHEN CONDENSED IT LOSES IN LEGIBILITY

ONCE ESTABLISHED WEIGHT OF STROKE MUST BE MAINTAINED

abcde fghijk lmnopq

FULL BLOCK (Round) Lower Case.

NOTE THE LOCATION OF HALF BLOCKS ON b·d·h·i j·l

Lower Case Letters of this style are seldom used by Sign Men because of the time it takes to make them. If used, do not condense

EXTEND THE BLOCKS APPROXIMATELY WIDTH OF LETTER STROKE

rstuv
wxyz
New York

FULL BLOCK (Round) Lower Case.

THERE ARE NO BLOCKS ON THE BASE OF V-W

MAKE THE W-X-Y WIDER THAN NORMAL AS IN THE UPPER CASE.

NOTE THE SPECIMEN LINE FOR SPACING AND GENERAL EFFECT OF THIS STYLE. BE SURE TO OBSERVE ALL SPACING RULES.

KEEP THE CORNERS SHARP, NO SERIFS

ABCDEF GHIJKL MNOPQR STUVW XYZ&:;

FULL BLOCK (Round) THICK and THIN (Upper Case)

PROPORTIONS IN THIS STYLE ARE THE SAME AS IN THE ONE-THICKNESS FULL-BLOCK IT CAN BE MADE WIDER THAN NORMAL WITHOUT INJURY TO APPEARANCE REMEMBER TO KEEP THE TWO WEIGHTS THE SAME ON ALL LETTERS OF THE SAME HEIGHT PUNCTUATION MARKS TAKE THE HEAVY WEIGHT

This is an artistic type for any work where ample room for lettering is a feature

PLATE 30

abcdefghi
jklmnopqr
stuvwxyz
1234567890

specimen copy

St. Louis

FULL BLOCK (Round) Thick and Thin (Lower Case and Numerals)

ALL OF THE HORIZONTAL BLOCKS TAKE THE NARROW WIDTH AND ALL PERPENDICULAR THE WIDE.

SPECIMEN COPY GIVES AN IDEA OF EFFECT OF THIS LOWER CASE WHEN USED ON A SIGN.

THE THICK AND THIN FULL BLOCK IS ADAPTED FOR LETTERING ON WALLS, LARGE BELT SIGNS, AUTO TRUCKS, etc. DO NOT CROWD.

CHAPTER IX

Half Block, Upper and Lower Case

In contradistinction to the round full-block type, the half-block letter, as shown on Plate 31, both in the one thickness and thick and thin, is very often used. It is a letter that is much favored by wagon and automobile letterers, and also is used extensively on electric cars and steam trains, largely because of the fact that it is legible from a distance, and its square, set characteristics make it more of a mechanical, mathematical type, which is easier for some letterers to grasp than the principals of the round letters.

This form is very often made by blocking out a definite space; that is, dividing a given space into squares, using a certain number of squares for the width and also for the height, and cutting the squares across diagonally, making the oblique lines on the letter. This is a very good method if you have unlimited time.

In free-hand lettering, such as is requisite on signs and show cards, one must necessarily learn to depend more largely upon the eye than upon the mechanical instrument.

The same general proportions existing in the plain Egyptian type, which was studied in Chapters II and III, are used in the making of this half block, the only difference between this and the plain Egyptian being the straight lines instead of the curved strokes; consequently it was unnecessary to complete the alphabet of the half block on the plate, and the only letters included were those wherein the round strokes were changed; for instance, letters ***A, E*** and ***F*** are exactly the same as in the ***plain Egyptian,*** therefore it would be futile to treat them in this chapter. You can make them, however, as you have already done, and in that way get the value and knowledge of spacing and arrangement.

Notice on the bottom of Plate 31 the three thick and thin half-block examples. These are in keeping with the general characteristics of the one-thickness half block, the only difference being the two weights instead of the individual weight, and the same proportions which exist in the thick and thin type, which we studied in Chapter V, can be carried out. Remember, in making this type, that the angles are cut approximately 45°, although they can be varied slightly without altering the general aspects of the letter. It is important, of course, to have the angles uniform, or as near uniform as can be made without taking mechanical means to determine that factor.

The lower case contains more examples of the angular form than the upper case, as you will see by looking at the plate. This is because of the fact that there are more rounded letters in the lower case plain Egyptian than in the upper.

As does the full block, this style lends itself admirably to the placing of shades or shadows, and it is very often made, simply because of that fact.

It is also used in what is termed "cut-in" work, that is, painting only the background and leaving the letter. Of course any style could be cut in, but this particular one lends itself admirably to the brush movements in this work.

One should attempt cutting in a sign, using the half block for that purpose. In order to do this intelligently, lay out copy roughly, and then, instead of lettering by the usual method, paint in your background and leave the letter, drawing your top and bottom lines. Then outline letters and fill in around them.

Most sign painters outline this work first, and fill in with a larger brush afterward; in fact, that is the only way in which a piece of cutting-in could be well done. This is a method which is used to make large wood or cloth signs, either in white or colored letters, or with letters made in gold leaf, where a dark background is desired.

On large wooden signs, or on small ones, for that matter (size being immaterial where the cutting-in process is employed), the background, after being filled in, is usually covered with sand, or, as the trade terms it, "smalt." This is nothing more or less than ordinary beach sand of fine quality, colored.

Smalt can be purchased in various colors, such as black, blue, maroon and green. Several grades of colors are made, and a combination black, called "blue black," is sometimes used, although "velvet black" is usually preferred by sign writers.

Just a word as to the method of applying this smalt. When the sign is complete as regards lettering, the background wholly filled in, leaving the letter standing out from the same, and the paint still wet, the smalt should be applied by the aid of a small sieve of comparatively fine screening, which permits the sand to flow in sufficient quantity to cover every particle of the background paint, and also prevents lumps or dirt, which might be present, from adhering to the surface of the sign.

It is vitally important that every particle of the background be covered, and when this is done the surplus sand can be shaken off by turning the sign on end, and the background paint will contain sufficient grains of sand to make a smooth, uniform and very artistic surface. Surplus smalt can be used for future work if caught on drop cloth or clean papers.

As to the paint that is used for cutting in, we would say that the first thing to consider is the matter of the adhesive quality; namely, that which will hold the sand to the surface. Boiled linseed oil is used by most journeymen sign writers, but if "raw oil" is used, the addition of considerable japan drier is necessary. This is mixed with dry lampblack and the paint is strained through cheesecloth.

The writer prefers to use ***boiled*** linseed oil, which he finds is much preferable to the raw oil for cutting-in color, in that it does not spread on the letter in drying and make a rough uneven edge when the same is applied.

When gold-leaf lettering is "cut in" with oil black, to be sanded, it sometimes happens that the oil will spread from the paint pigment, and project over the gold one-sixteenth of an inch or more. When the background is smalted, the sand adheres to this oily edge, giving the letter a ragged appearance. There are two causes for this trouble, — one, already stated, an excess of raw oil in the paint; the other, a fine layer of dust, either dirt, chalk or pounce layout powders, on the face of the gold letter. Therefore, before commencing to cut in your work where leaf is used, ***always*** wipe off the letters with clean absorbent cotton, and if your paint is right no difficulty will be experienced.

Some practical painters use in their paint a little white lead in addition to the lampblack. This is a good thing to do, as it gives body and strength to the color, although for indoor signs it is not necessary. The lead increases the wearing qualities, and that is a factor to be considered on outside work.

If you wish to attempt smalt cut-in jobs, purchase through your local paint dealer the color of sand desired. Smalt is sold by the pound, and it does not take a great quantity to cover an ordinary sign.

Preparing Wood Signs

It might be wise at this time to give a short treatise on preparing a wooden sign up to the point of smalting or finishing. Assuming that a wooden sign is ready, in the matter of carpentry, to be used for lettering, the first and most important thing to do is to ***prime*** the wood with an oil-paint mixture.

"Paste white lead," broken up in raw linseed oil with the addition of a little japan drier, is used for this purpose. A ***priming coat*** should always be mixed with ***raw oil,*** and the wood painted thoroughly with this mixture. A little turpentine tends to neutralize the oil, and helps in the absorption of the same in the pores of the wood. The drier has a tendency to harden the paint, and when this priming coat is dry (which takes about twenty-four hours), the surface should be lightly sandpapered before the second coat of paint is applied.

If the board has any knots or places where pitch tends to come to the surface, they should be shellacked, using orange or white shellac, thinned by the addition of denatured alcohol. This forms a film which prevents the pitch coming to the surface at any future period.

While the oil is the life of the paint, the lead is used to give body.

On some kinds of signs where the background is to be a dark color, the priming coat can be made darker by the addition of a little lampblack. The second and third coats of lead should be semi-flat or absolutely flat; that is, with little or no oil or turpentine, and with the addition of a small quantity of japan drier.

Before applying a flat or second coat one should putty up the cracks, crevices and nail holes with what is known as "white lead putty." This is a hard-drying putty, and is made with equal parts of white lead in oil, and dry white lead, or whiting, with the addition of a little quick-drying varnish. Mix this thoroughly to the consistency of putty, and apply to the cracks and crevices, and allow to harden before sandpapering, using a painter's putty knife for this purpose. After the sign is prepared thoroughly, the lettering and background work can be undertaken, but it is vitally important to have the sign well prepared.

It would be advisable to have a carpenter build your signs until you are more experienced in the trade. (Additional information on wood signs will be found in Chapter XIV.)

Brushes suitable for coating signs can be secured from any paint dealer. A flat "wall" brush three or four inches wide, or an ordinary round "pound" brush would answer. Such brushes are made from long bristles and vary in quality. It pays in the long run to purchase only the best for this work.

Before cutting in the lettering, see that the background paint is thoroughly dry. Use chalk or charcoal in laying out, then mark with light lead pencil lines accurately. Rub off the chalk or charcoal marks, as they prevent the lettering brush from drawing a clean, sharp stroke, and cause the sand to adhere unevenly on the edge of letters.

"Crawling" of paint is caused by too much oil in background color, and can be prevented by washing the surface of the sign with a clean rag dampened with benzine or turpentine. If, however, the sign has been painted with flat or semi-flat color, you will not be troubled thereby.

Sprayed Synthetic and Lacquer Finishes

Synthetic finishes for signs are being used in many shops, in a measure displacing the use of white lead and linseed oil described in this chapter. Not only are they being applied on ground work, but they are supplanting paint mixtures heretofore employed for lettering.

One of the results of the World War I was the development of these lacquer paints by the United States government, which required a quick-drying yet serviceable paint-covering on aeroplanes. This was found in a nitrocellulose product which had the advantage of quickness in drying, toughness, and durability, and also the qualities of withstanding acid, alkali, dampness, etc., and not being easily scratched. It was found to be so successful that the painting industry adopted it for many purposes, particularly for automobile and furniture surfaces.

The common method of application of lacquer and synthetic paints is by the use of a spray gun, but this necessitates gas masks for the operators and also special ventilating apparatus in the shop.

Varnish manufacturers have perfected a lacquer which can be applied with a brush, sold under various trade names, but referred to as "brush lacquers." These are made in a great variety of colors, and a greater range of colors can be obtained by mixture. Such a mixture is more easily made than that of color varnishes, as all lacquers are made on a common nitro-cellulose base.

Lacquers dry very quickly, with a soft, velvety luster. For all work where a lacquer finish can be used, there results a tremendous

saving of time. It is possible to finish completely a wood or metal sign in one day by its use. Usually, two coats of lacquer are adequate on ordinary sign work, but, because of its quick-drying nature, more can be applied without much additional time.

On new wood, a special Pyroxylin primer can be used, which dries in fifteen minutes to a half hour. After its use, one or two coats of color lacquer are applied, and the sign is ready to letter.

Special thinners or reducers must be employed in thinning lacquers, and these are to be obtained from the manufacturers or dealers in such goods.

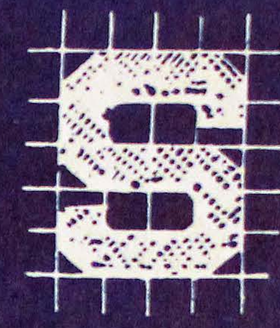
Lacquers are highly inflammable and must not be used near an open flame.

Recent developments in plastics and synthetic materials, as applied to the sign industry, have in a measure made obsolete many old and tried products, such as gum varnishes and standard paint mixtures. However, until these innovations have justified their use by time and wearing qualities, it might be well to investigate their values before displacing old and proven methods. One should never condemn a product because it is new, and conversely, should not pioneer when quality or permanence of work is at stake.

BCDGJOPQ
RSU& 235
6890;abcd
efghjmnopq
rs tu BCO

HALF BLOCK (One Thickness)

HALF BLOCK (Thick and Thin)



THIS IS A VERY MECHANICAL TYPE AND CAN BE MADE BY THE ABOVE METHOD.

Note
THESE ARE THE ROUNDED LETTERS OF THE PLAIN EGYPTION MADE WITH STRAIGHT LINES AND ANGLES OF APPROX. 45° BALANCE OF THE ALPHABET IS THE SAME AS THE EGYPTIAN.
THIS LETTER PRINCIPAL CAN BE USED ON THE FULL BLOCK

CHAPTER X

In referring to the "Roman" letter the adaptation by sign writers of the classic types is implied. The lower case, or "minuscule," letters did not exist in the days of Constantine and Petrarch, but came into being and attained their definite forms after the invention of the art of printing. The Italian printers were the first to employ them, and the various forms of both upper and lower case were called "Roman" from the city of their origin.

Sign and show card writers are not hampered by the limitations which curtail the freedom of the printer in using Roman letters, and the composition and spacing of the variations of this style can be much more artistically done by them.

Roman types are all based on the thick and thin weights of stroke, and there is a square formation that is characteristic of most of them.

The historical setting of the style is well worth studying by all letterers, and sign writers in particular should be interested in the classic examples done by their prototypes of the early days of civilization and also the Renaissance period following the Dark Ages.

New York Roman

This type is one of the most difficult of all letters, and at the same time one of the most beautiful. There is no more artistic letter or style than that shown on these plates, provided, of course, that the letters are ***well proportioned, evenly balanced*** and made "according to Hoyle."

Among sign makers the term "New York" Roman is used to differentiate between this and various other modifications. There are other names given to Roman letters such as the "Boston" Roman, "antique" and "western" styles.

Sign nomenclature is almost as varied as is that of the printers, and while the terms given these various styles have a meaning to the man in the trade, they are of little importance apart from that fact. The distinguishing difference between the various Romans is in the width of the strokes and in the terminations.

In a previous chapter we studied the making of the full-block letter, and it will be remembered it was stated in the copy that the New York Roman letter was nothing more or less than an evolution of the full-block type. By studying these plates, this becomes obvious.

The only material difference between the New York Roman and round thick and thin full block is in the rounded terminations. The difference between the so-called "New York" Roman and the "Boston" or antique styles is in the weight of the horizontal or unaccented strokes, these strokes being in the latter styles a hair line or slightly heavier than a hair line, while in the New York Roman the horizontal stroke is comparatively heavy.

The unit letter of this type would be the ***O,*** which would be made an absolute circle, filling the confines of a square; hence the square would be taken as a definite basis on which to construct certain of the letters like the ***E*** and ***F.***

Many of the letters, such as the ***H, M, W*** and ***X,*** require more space horizontally than perpendicularly, and it is a very difficult task to make any arbitrary rule which would cover the making of all the Roman letters. This is wholly a matter of practice, and the eye of the artist is the determining factor in spacing this type.

The New York Roman letter does not look well when it is condensed, particularly when the horizontal strokes are fairly heavy.

There are in printers' type books certain styles called "condensed" Roman, wherein the horizontal strokes are made with a hair line, and these do not look so much out of place, but in order to get the best effect from the straight New York Roman type one

should give plenty of space to the individual letter and not attempt to condense it.

One thing is necessary, however, and that is, as was explained in the making of the thick and thin letter, the thickness or weight ***once established must be maintained.***

This letter is used commonly upon large display signs because it fills up the space and is very satisfactory from a commercial standpoint. It is quite legible, and has been much preferred by sign writers because of its artistic qualities.

The rounded serifs extend from the stem of the letter approximately one-half of the width of the upright stroke, and on the horizontal lines they take the horizontal width.

On perpendicular terminations, such as that on the ***C, E, F, G*** and ***L*** and others of like character, the letter is cut at an angle of approximately 45° and the angle rounded. Note the ***E*** and ***F.***

You will observe that the location of the rounded blocks on this type is the same as on the full-block type. There is no block on top of the ***A,*** neither is there any on the lower right side of the ***N,*** nor on the base of the ***V*** and ***W.*** The ***A, N, V*** and ***W*** extend a trifle above or below the line, as the case may be.

The New York Roman figures or numerals are greatly admired and very often used. It would be well to thoroughly master not only the making of the letters but also of the figures. When made correctly, they are exceedingly graceful; incorrectly made, they show their defects very quickly.

It would be advisable in making these letters to outline them with a fine brush, and fill in subsequently. This will insure sharpness and clean-cut corners.

This style is much favored by sign writers on outside display signs such as are commonly known as "belt" signs. Because of its adaptability for this purpose it is most frequently made in gold leaf on sanded wood backgrounds.

Lower Case New York Roman

By studying Plate 35 herewith, you will see the similarity between the lower case New York Roman and that of the thick and thin full block, to which we referred in our last chapter. As was done with the other lower case styles, the height of the lower case to the upper case is approximately two-thirds, and the general proportion of width and stroke is in keeping with that of the thick and thin full block.

Taking the letters individually, we find that the ***a, c, e, f, g, j, r*** and ***s*** have a ball formation which should be made as heavy as the weight of the accented stroke. The terminating blocks on letters such as the ***b, d,*** and ***h*** take the horizontal width, and the ***v, w, x*** and ***z*** are made exactly the same as in the upper case. One can easily acquire a facility in making this type by studying the chart and applying his knowledge to signs.

The variation indicated in the lower right-hand corner applies to the top terminations, as on ***b, d, h, k,*** etc., and is a pleasing change from the straight New York Roman formation. However, if this variation is used on a word or line it should be adhered to throughout, and the two formations should not be interspersed.

Notice the specimen examples of the heavy and light forms of the Roman and the lower case work.

Here, also, is the print of the antique or light-face Roman which may be copied and applied to the work. (Plate 36.)

This is a very popular style of lettering, and has all the elements of beauty and grace of the New York Roman without the heavy, set look.

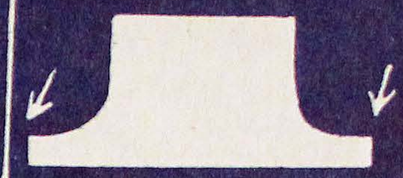
The unaccented strokes are made with hair lines, and in making these you should use a small outlining brush (No. 2 camel hair), filling in the heavy strokes with larger pencils.

This form can be condensed without destroying its legibility. There is a limit to condensation and elongation, however, and we would advise in both cases not over one-third of the normal width variation either way.

There is no need of individual letter elucidation, as the formation and proportions are sufficiently clear on the plate, and with con-

ABCD
EFGH
IJKL

'NEW YORK' ROMAN (Upper Case)



THE TERMINATIONS ON THE N.Y. ROMAN ARE MADE WITH ROUNDED BLOCKS. EACH WEIGHT, ONCE ESTABLISHED MUST BE HELD ON ALL LETTERS OF THE SAME WORD OR LINE NOTICE THE TOP OF THE A - ABOVE THE LINE.

THIS IS ONE OF THE MOST ATTRACTIVE ALPHABETS THAT CAN BE USED ON SIGNS

PLATE 32

MNOP QRST UVWX

NEW YORK ROMAN (upper case)

THE V AND W EXTEND BELOW THE BASELINE

THIS STYLE LENDS ITSELF TO ELONGATION

E

FOR LARGE BELT SIGNS AND FOR WOOD LETTERS THE N.Y. ROMAN IS WITHOUT A PEER IN ALPHABETS. N.Y. ROMAN RAISED LETTERS, CARVED AND GILDED ARE POPULAR WITH THE TRADE.

YZ&$¢ 12345 67890

"NEW YORK" ROMAN (Upper Case and Numerals)

A SLIGHT MODIFICATION OF THIS STYLE CAN BE MADE BY CHANGING THE TERMINATIONS ON C-E-F-G-J-L-S AND Z AS SHOWN BELOW.

E

THE NUMERALS OF THE N.Y. ROMAN CAN BE USED IN CONJUNCTION WITH MOST STYLES. THEY SHOULD BE DRAWN GRACEFULLY.

abcdefgh
ijklmnop
qrstuvw
xyz|t1n

(Variation)

"NEW YORK" ROMAN (Lower case)

THE K-M-V-W-X-Y ARE WIDER THAN NORMAL.

NOTE THE BALL TERMINATION ON a-c-e-f-g-r-s AND y.

THE VARIATION MAKES A PLEASING ALTERNATIVE STYLE WHICH IS QUITE ATTRACTIVE. (Use the same proportions as obtain in regular form.

ABCDEFG
HIJKLMNO
PQRSTUV
WXYZabcdef
ghijklmnopqrstu
vwxyz 123456789

Light-Face Roman (Antique) Upper and Lower Case.

UNLIKE THE NEW YORK ROMAN, THIS ALPHABET CAN BE CONDENSED WITHOUT LOSING LEGIBILITY. ON SIGNS REQUIRING DELICATE TREATMENT. IT IS COMMONLY EMPLOYED. DOCTORS, MILLINERS, BANKS, Etc REQUEST ITS USE

EXAMPLE OF CONDENSATION

REST

SPECIMEN SIGN SKETCHES - New York Roman

DRUGS

HEAVY FACED

SODA

LIGHT FACED

Confectionery

LOWER CASE

LEAVE PLENTY OF MARGIN AND SPACE BETWEEN LETTERS.

BE SURE TO CENTRE ALL LINES OF COPY.

FOR BELT SIGNS TO BE ERECTED ON BUILDINGS AND OF A PERMANENT NATURE. THE N.Y. ROMAN IS UNEXCELLED.

FLAT or RAISED GOLD LETTERS IN THIS STYLE ARE ALWAYS ACCEPTABLE TO MERCHANTS.

sistent study one would soon learn to make this style.

The specimen sign sketches on Plate 37 give a comprehensive idea of the appearance of these letter forms. They can be copied and enlarged for practice work, and others of like nature should be attempted. Continuous effort to master this type will bring ultimate success.

CHAPTER XI

Sign Construction, Gilding and Materials Used

Continuing along the line of Chapter IX, wherein instruction was given in preparing a wooden sign, it might be well to take up the matter of ***gold leaf*** and its application to signs at this time.

Gold leaf is a commodity that has been in use for thousands of years. Long before the Christian era, early pagan nations utilized it for the purposes of decoration. The same methods of beating leaf are in vogue today as were used by them.

Gold is exceedingly malleable, and when beaten to the degree of tenuity requisite for sign purposes, it would take from 180,000 to 200,000 sheets to make an inch in thickness. It is so thin that, when held to the light or applied to glass, it is transparent, and is green by transmitted light, but appears as yellow gold by reflected light. It is applied on signs by "gold size," or sizing which is nothing more or less than a paint prepared with some adhesive which holds the leaf to the surface of the sign.

Gold leaf is exceedingly durable, will never tarnish, and often outlasts the material on which it is used, irrespective of its extreme fineness.

The permanency of gold is due to the fact that it is inert chemically, there being but two acids capable of holding gold in solution. The oxygen in the air and moisture, which cause deterioration of other substances, do not affect gold, and it is safe to say that even a thin leaf of gold will last indefinitely. The abrasive action of heavy particles of dust in the air is the only thing that would remove it from a sign letter, and that process is so lengthy that other parts of the sign would be worn out before it would occur.

Gilding Sizes

The sizing used on wooden signs is made in several ways according to the requirements. If a "slow size" is desired, the same is mixed with "fat-oil." Before explaining what fat-oil is, it might be well to say the sign writers use "slow size" and "quick size," which are mixed in accordance with the time limitations on work, or because of the type of work to be done.

A slow size is one which does not set quickly, and takes a long time to get the proper "tack." By tack is meant that degree of adhesiveness which enables the sizing to hold the gold without rubbing up when burnished. It must be exactly right, for if it be too wet the leaf will be blotchy when burnished, and if too hard the leaf will not adhere. The knowledge as to when the letter is right for gilding comes only by practice. Slow size gives an excellent gild but is rather heavy for brush work. Use benzine to thin if it is too thick; do not use turpentine, as it affects the drying qualities of the sizing.

A quick size is used when work must be done in a hurry, or where the same is to be varnished after gilding.

In order to make a slow sizing one must use, as has been stated, fat-oil, or linseed oil which has been allowed to stand and become fatty. This fat is drawn off from the top of the oil and mixed with yellow paint, with the addition of some japan drier to quicken the process of drying.

Quick size is made by using quick-drying varnish, with the addition, also, of yellow paint ground in japan.

Both of these sizings can be purchased, ready mixed, from any good paint supply house, and we would recommend so doing when attempting to do gilding, instead of mixing the paint yourself, particularly the ***slow drying*** kind. After laying the leaf on letters which have been sized in, assuming that they are gilded when the "tack" is right, the surplus gold is rubbed off with absorbent

cotton, thereby giving the gold a burnished effect.

It is important to know how to lay gold leaf, and unless one becomes very familiar with the handling of gold books, a great deal of waste is bound to occur.

The proper method of gilding from the book is to rest it on the palm of the left hand, lifting the sheets of paper one at a time with the fingers of the right hand and laying the leaf gently on the sizing, being careful not to bring the paper in contact with the size. It might be difficult to master this art at the outset, but by careful application and considerable practice some facility will be acquired in doing this work. Be sure and keep the fingers and hands from touching the sizing, as spots blemish the brilliancy of the gold.

Gold leaf comes in packs with leaves 3⅜ inches square. A "pack" contains 20 books. There are 25 leaves in a book.

Surface gilding, such as is done with slow or quick sizing, embraces all kinds of wooden signs, japanned tin, sheet iron, silk, satin, etc. Only a small quantity of cotton is necessary for burnishing. The surplus or waste gold, if desired, could be collected by use of an oiled rag, and saved for future refining.

Size that is gilded too soon does not have much of a burnish, and, if a ***good*** job of gilding is desired, a size which would set over night would be much preferable to a quicker drying one.

When attempting to do gold leaf work, mark out the lettering on the sign roughly in pencil or chalk. If on wood coated with lead paint, give the letters a very thin coat of shellac (either orange or white) before putting on the sizing. This insures a hard surface on which to gild, and helps to bring out the burnish on the gold. Be sure to have the sizing put on evenly. This is important. Wipe out every paint accumulation with a fairly dry brush. Do not have any "fat" edges on the letters, because, when the letters are gilded, they rub up and spoil the burnish on your leaf. A stiff-haired brush, such as a sable or ox hair, is best for this work.

After the gold leaf is laid on, the surplus gold is rubbed off with ***clean*** cotton.

Gold leaf comes in both loose-leaf form and in leaf that adheres to tissue paper. The latter is called "transfer" gold, and is used for outside work where loose gold leaf is not practicable. Lemon gold is a lighter shade of leaf, made by beating silver into the deep gold, used mostly on glass work.

Ribbon gold is gold leaf put on rolls of tissue paper, and is used for striping purposes. It is a great timesaver in gilding.

For the first attempts on surface gilding we would suggest that the transfer leaf would be best, as the waste would not be quite as much and the work easier. Gold leaf costs money, and there is always more or less waste in handling. A good transfer leaf can be made by cutting wax paper the size of the book page and pressing lightly over the gold sheet. The gold will adhere sufficiently well to be handled easily on outside work.

There is so much to be said about the art of gilding that one could write a complete book before exhausting the subject, but irrespective of whether or not one aspires to be a sign writer, he should know something about the method, and this brief treatise ought to be sufficient to give him a start. Gilding on glass is entirely different, and will be briefly treated later.

For silver lettering on wood or metal surfaces, aluminum leaf is commonly employed. Silver leaf tarnishes very quickly, and is adapted for glass signs only where the leaf is entirely covered by paint or varnish.

An imitation gold called "Dutch metal" is used often on decorative work, but unless lacquered it will turn black upon exposure to the atmosphere. It is not practical for sign work.

Bronze powders are often used in gold and aluminum, and are applied on the same kind of size as is prepared for gold leaf, but gold bronze powder tarnishes very quickly, so that it is not practical for outdoor work. Aluminum bronze, like aluminum leaf, is exceedingly durable. When aluminum is used, either

in bronze or leaf, a white sizing is preferable. This is made by the addition of white pigment, instead of yellow, in the adhesive.

Paint manufacturers have produced an aluminum paint with a lustre finish that is excellent for brush lettering, thus obviating the old "dust-on" powder method.

There is a variety of materials which are used in the sign business, and, while you may not have immediate occasion to handle same, the chances are that some time the opportunity to do so will present itself. To be brief, we will quote a few materials of which signs are frequently made, and although this list could be augmented, it should be sufficient.

The most common surface in sign making, next to ordinary cardboard, is termed "sign oilcloth" or "enamel cloth." This is a muslin that has been treated by sizing and coating with paint pigments, and comes in rolls 52 inches in width. It is called "sign writers' enamel cloth," and is of the same manufacture as table oilcloth, with the exception of having a dull finish instead of a glossy one. While this can be purchased in all large cities, it is sometimes difficult to get in smaller places, and quite frequently one is compelled to use the table oilcloth for sign purposes because of this fact. Enamel cloth can be purchased in yellow and black and other colors as well as white.

Table oilcloth is not altogether suitable, but if it is necessary to use it, it should be thoroughly washed with either benzine or turpentine before attempting to letter on it.

Varnish paints or oil colors should be used on enamel cloth, though colors mixed in oil do not work easily on table oilcloth, as they have a tendency to "crawl." Varnish color, or color in japan mixed with a little quick-drying varnish, is preferable.

Enamel cloth signs are usually put on wooden frames made of scantling, or some similar material. The frames are made roughly, and the cloth is covered over the face and tacked to the back.

When such cloth signs are properly made they are very durable outdoors, and will last from three to five years, according to location.

There is also a material called "sign muslin" which is a cheap muslin, sized and coated with some inferior paint. It is used largely for temporary purposes. This material will take not only japan and varnish color, but also water color without difficulty, but it is not advisable to use it for any sign to be exposed to the weather. It comes in different widths. This cloth is frequently employed on theatrical work, which is usually of temporary nature. It can be used for cheap transparencies and for beaches or fairs where time is not a factor.

Cloth such as cotton, canvas or heavy drilling is used for outdoor work, but while these are quite durable they are difficult to work on. An exceedingly stiff brush, such as ox hair or fitch, must be used for lettering on them, and the paint material used must be mixed with dry color and quick varnish, thinned with benzine, otherwise the paint would run or spread. Political campaign signs or outside banners are usually made on this kind of cloth.

Sometimes canvas is painted for outdoor signs, and when properly prepared it is as durable as wood. If canvas is to be coated with lead paint, it should be first "glue sized;" that is, coated with ordinary chipped glue, dissolved in hot water and applied thin. When this is dried thoroughly it forms a stiff surface for the paint. Use a large, flat brush to apply glue size, and give surface two coats before painting. It is advisable to stretch such cloth on a frame before sizing.

Sheet Iron Signs

Galvanized iron is the material that is most extensively employed, although some sign writers use black iron instead of the galvanized. The galvanized coating tends to protect the iron itself from rusting, and is much more durable than the black iron. It is also more expensive.

Before painting galvanized iron one should wash the surface with vinegar or a solution of chloride of copper, sal ammoniac and hydrochloric acid dissolved in water. A very small quantity of these chemicals is necessary. If the vinegar or the chemicals are allowed to

remain for a short time they will form a white coating which should be brushed or washed off before painting. Old galvanized iron which has been exposed to the weather for a few months does not require a wash as above.

A first coat of red lead would be the best priming material. Subsequent coats could be painted with flat white lead, as was explained in a previous chapter. There are some so-called "iron primers" on the market which are supposed to do away with the necessity of washing galvanized iron, and almost any paint dealer could supply them. Chemically treated sheets of galvanized steel, which obviate the necessity of treating with acid before painting, are available to the sign trade.

Very little oil is necessary in paint that is to be used on sheet-iron signs. Flat or semi-flat paint is preferable, as oil cannot strike in and must dry on the surface, thereby forming a film which does not dry hard and will peel off easily. Varnish makes the best binder in the paint used on iron or tin.

Black iron does not need to be treated the same as galvanized iron, and should be coated with red lead for a first coat and white lead for subsequent coats. A great many sign painters do not use red lead, but black iron rusts so quickly that unless it is properly covered it will not last long for outdoor work.

Japanned tin is a very thin tin which has been dipped in some japanning color and baked. This is often used for small tin signs, but it is not very permanent when exposed to the elements. Dealers sell it to the trade in sheets 20 x 28 inches and smaller.

Glass Signs

Glass is produced and sold in different thicknesses; viz., "single," "double" and "plate." Single-thick glass is not suitable for sign making, as it is much too thin. It is used principally for picture frames. Double-thick and plate are employed generally for all lettering purposes. Both double and plate vary in thickness. There are several varieties of glass that the signist employs; "clear" or transparent, "ground" or translucent, and "opal" or "milk" are common, while "pressed" and "chipped" glass are occasionally lettered.

Ground glass has one side roughened by blasting with sand, and transmits light but is not transparent. Its translucent qualities make it admirably adapted for doors and small signs for night showing. When lettered in black on the smooth side the effect is very pleasing.

Transparent shading or clear glass effects on borders can be produced by using pale varnish on the ground side.

Opal glass is an important product and is preferred for "box" electric signs. It comes with glazed surfaces on either one or both sides. For work to be exposed to weather, that ground on one side is best. In such cases lettering should be done on the rough face. For indoor work the polished surface can be lettered either in black or gold (using quick size), with a black outline.

Lettering on clear glass is done in many ways. Gold and silver leaf, bronze powders of various kinds and paints of all colors are utilized; also raised enamel and glass letters, metal, paper, etc., are affixed to it. All kinds of backgrounds look well on clear glass. A good imitation of frosted or ground glass is produced by "stippling," which is referred to in Chapter XVII.

Plate glass is often beveled, and holes are drilled for hanging. Dealers will furnish glass, beveled and drilled, for additional cost.

The knowledge of glass gilding is of paramount importance to every letterer. Gold and silver leaf are principally applied, although the latter is used less frequently than gold. This is due to the fact that it is harder to apply and is less attractive. The silver leaf is more difficult to handle because of the fact that it is far heavier than gold and requires a stronger solution; also, by reason of its thickness, it dries more slowly, and a good burnish is not easily obtained.

Leaf is applied on glass by "water size;" that is, a sizing made from gelatine, dissolved in boiling water. Gelatine comes in various forms, viz., shredded, sheets, etc. Most sign writers prefer the capsules which are used for

holding small quantities of medicines. These capsules are usually gelatine in its pure state, and only a few are necessary. If the sizing is too strong, the gilding will be streaked and spotted.

Dissolve three or four empty capsules in a pint of boiling water for gold work. For silver leaf, add two more. Use a camel hair "tip" for laying the leaf, and brush the same lightly over your hair (if you have any) on the back of your head. This tends to generate magnetism sufficient to hold the leaf firmly on the tip until it comes in contact with the water size. A two-inch, double-thick tip is preferable for ordinary gilding.

One should use a large camel hair brush (approximately one and one-half inches wide) for flowing the water size on the glass; it should be applied freely, and while wet the leaf should be laid. These brushes are set in glue and wire-bound, consequently water does not affect them. Camel hair, being exceedingly soft, does not scratch the gold when water size is flowed over the leaf in the patching process referred to later.

Keep the glass thoroughly wet as you gild, for if it dries the gold will not adhere. The leaf should be laid as smoothly as possible, and the layout marks of the copy should be well covered.

Lettering on glass can be marked out with a grease pencil or chalk on the face of the sign, and under certain lighting conditions these marks can be seen through the leaf. The best method, however, for doing glass work is by pattern and pounce, described in detail in Chapter XIV.

Care should be taken that the tip does not come in contact with the water, for if it does the gold will adhere to it so that it cannot be used. If by accident the tip should become wet or damp, dry it before attempting to use same.

Before gilding make sure that the glass is ***absolutely clean*** and all grease and finger spots removed.

Cut the leaf the necessary size with your finger nail while the leaf is flat on the book, and pick up with the tip one piece at a time. Most gilders keep a piece of cardboard underneath the book covers in order to stiffen same, enabling them to cut the leaves easily. After gold leaf is dry, burnish it with clean absorbent cotton, the waste gold being rubbed off and that which the size holds remaining on the glass.

If it is necessary to patch breaks, the process of gilding may be repeated, covering up the holes and breaks with leaf.

After the leaf is thoroughly dry again you can proceed to form the lettering according to your layout. This is what is called in the trade "backing up."

Backing-up color is made by mixing quick ***rubbing varnish*** with ***lampblack in japan*** thinned with a few drops of turpentine. Some workmen prefer to use japan yellow instead of black, for if there are any breaks in the gold the yellow will not be so conspicuous as black.

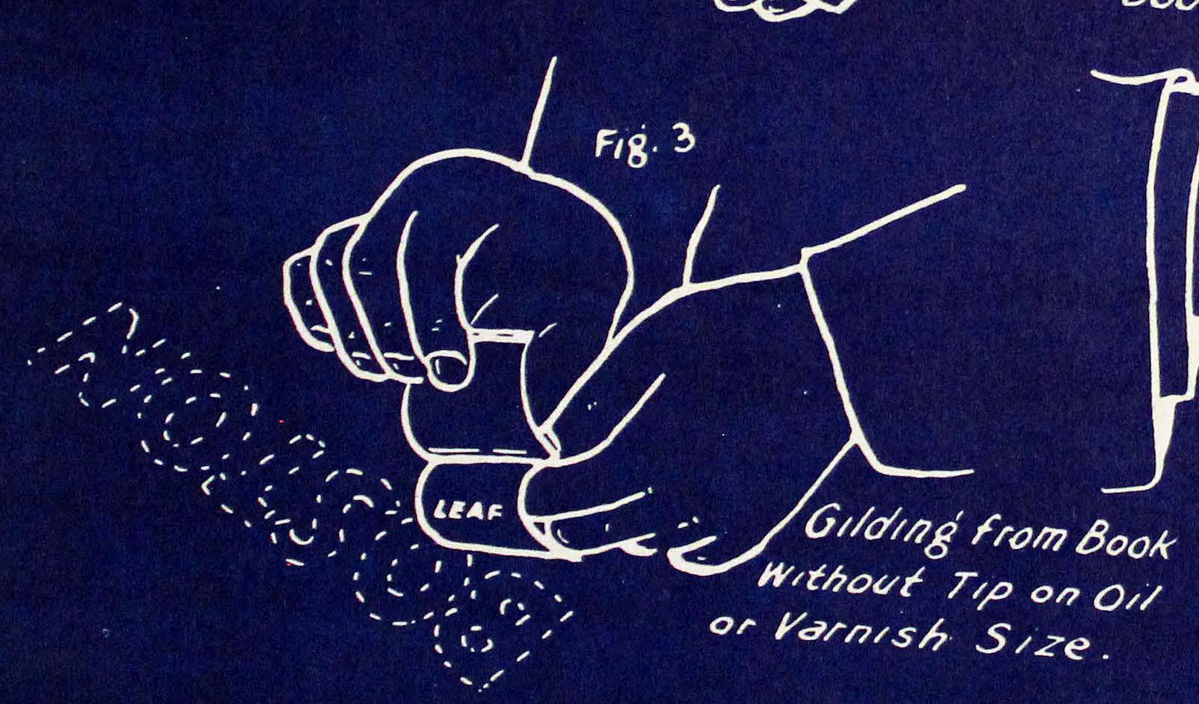
This color ought to dry within a few hours, and when thoroughly dry wash off the surplus gold with a piece of cotton dampened with water, all of which ***must*** be removed before any shading or ornamentation is done.

After work is complete, a coat of outside "spar" varnish should be applied to the lettering, and should extend over the edges from one-eighth to one-quarter inch.

If silver leaf is to be applied, the same method is used, with the exception that a badger hair tip is used instead of a camel hair. These tips can be purchased at any paint supply house. Bronzes can be used on either the outside or inside of glass windows. If put on the outside, they are applied with a sizing of quick varnish and suitable pigment. If gold is used, yellow; if aluminum, white. The bronze powder is dusted on the size, when it is the right "tack," with a piece of plush or velvet. After the letter is bronzed it is cleaned off and outlined with black or color. If bronze is put on the inside of glass the letter is first outlined with black, and the center is filled with ***clear*** quick-drying varnish, and the powder applied when the varnish has a satisfactory tack.

GILDING

Method of Cutting Leaf for Gilding on Glass.



Gilding from Book Without Tip on Oil or Varnish Size.

Method of Lifting Gold from book with Tip.

On Glass Gilding a piece of cardboard should be held in back of Book to stiffen it

Fig 1

Hold Book in LEFT Hand. Fold paper leaves back and cut leaf with finger nail, using folded leaf as guide

Fig 2

Brush Tip over hair and lay gently on leaf to pick up.

Keep Tip Dry

Fig 3

Turn book leaf back and gild direct on size from the book

Do not break the gold leaves

WILLIAM G. MIGA
111 Middlesex Street
Winchester, Massachusetts

We referred to laying of gold leaf on glass by a water-size process, the same being put on with a gilder's tip. That type of work is known as "burnished" gold, and is typical of most commercial glass sign work.

Matt Gold

As has undoubtedly been noticed on many store windows and glass signs, there are different effects in gilding; that is, instead of a brilliant burnish that obtains on most lettering a dull or old-gold effect is used. This is called "matt" gold, and is done by putting the varnish in the center of the letter, and gilding with the leaf over the varnish when same is dry.

Sometimes this varnish center is "stippled," which gives a rough effect to the matt. This stipple is produced by using a stiff, dry brush on the surface of the varnish before it is dry. Dammar, or quick, pale varnish, is best for such work.

A slightly different matt effect is obtained by using "lemon" leaf instead of the deep gold. Lemon leaf is much lighter in tone or shade of color, and is produced by an alloy of silver in the gold.

Very beautiful effects can be secured by such treatment of glass lettering, and the varieties of work are infinite.

Lettering on clear glass can be outlined first in black, the outline forming the shape of the letter and the center of the letter filled in with gold. Use same paint mixture as in backing up.

Burnished gold outlines with matt center can be made by leaving an outline of clear glass around the letter when the varnish is used. For any surface where a dull matt effect is desired, the addition of a minute quantity of white paint such as zinc in the varnish would help.

Varnish or etched outlines on gold lettering are made by adding a little white zinc to the varnish and outlining the letter with this mixture. When this is dry, the letter is gilded the same as for burnished gold work, and backed up. Color outlines and shades are of great value in enhancing the beauty of glass lettering, and the addition of shell pearl adds greatly at times to the beauty of this kind of lettering.

It would take a long time to become really expert in this grade of work, but there is no reason why one could not, with proper application, acquire facility in doing it.

It might be advisable at this time to speak of the various types of varnishes for glass work.

Varnish for Glass Signs

There are many kinds and many qualities. Some are very durable and others are not. Slow-drying varnishes as a rule are of much more permanency in wear.

For ordinary lettering, varnish used as a binder is preferable when it is of the quick-drying type. No. 1 "furniture" or "quick-rubbing" are the types usually used. For finishing requirements, "overnight spar" or some good outside "coach" varnish is best adapted. Additional varnish information is given in Chapter XIV.

A fine treatise on glass work is Strong's "Gilding on Glass, Wood or Metal." Students will find its detailed instruction helpful.

CHAPTER XII

In previous chapters full block, half block, New York Roman and other styles have been explained, but we have not as yet attempted to do anything along the line of the "fancy" types. They are not altogether essential to the real requirements of the sign business, but there are times when a highly ornamented letter or style is desired and the occasion warrants its use.

When this situation exists, it is well to be able to make a fancy style without reference to books or prints, and it is a comparatively easy matter to originate new forms if fundamentals are understood.

Tuscan Types

The name "Tuscan" is used to designate a particular form of fancy letter which can be made not only in uniform thickness but also in the thick and thin. There are many modifications of this type, and it is not necessary to adhere to the examples given on the accompanying plates. The main thing is to get the general character of the letter in such a way that the formation of fancy types will be in keeping with the requirements of style principles. This is a composite alphabet embodying elements of all styles.

The first example given is that of the full-block Tuscan of uniform thickness. Many letter makers put blocks on the rounded letters and on the right side of the ***E*** and ***F***. These could be eliminated and still carry out the style principle.

In the second example of the thick and thin, the rounded terminations are in the same location as the blocks on the thick and thin block type.

The third example is that of the Tuscan Roman, observing some of the principles of the Roman letter in the making.

The fourth and fifth examples are extreme Tuscan, and are used only where highly ornamented letters are desired. The specimen copy of this type will give an idea how these letters look when assembled.

Observe that the lower case has not been included in this type. It is unnecessary to treat the lower case in detail, because of the fact that it is so seldom used in the Tuscan form. Ordinarily, when signs of this character are made, the letters are all in the upper case.

In order to show to good effect, these letters should have plenty of room and marginal space. Practice the alphabet made in the different forms of the Tuscan, as indicated on the plates and incidentally copy the specimen sketches. Short copies, such as "Autos," "Tires," "Ice-Cream," "Soda," etc., make good practice work, as they lend themselves to such serif embellishment.

Script Lettering

The most important form of script is "Spencerian." This is made with fine hair lines and heavy accented down strokes. The important thing to remember is the direction of the slant, which must be uniform. The angle ordinarily used is approximately 30°, and when once established should be rigidly maintained.

Lower case script differs from the lower case in the other types which we have studied to this extent: it is not the same height in its relation to the upper case letters. The best proportion for the lower case script lettering would be ***one third*** of the upper case, whereas the other types we studied were on the basis of ***two-thirds.***

Script lettering should be graceful and free, and while passable examples of the work "get by" on signs, with a better understanding of the letter excellent work could be done.

"Spencerian" is used very largely in the sign business for milliners, florists, etc.

We have also printed two modifications of this alphabet, the first being "one-stroke," script which is adapted for a wide pen or for flat-brush work, and a style that is exceedingly

popular with sign and show card writers.

As will be observed, the accented strokes are the heavy ones, and by taking a wide pen or flat brush and experimenting with it on these accented strokes, it will be seen how quickly and readily these styles lend themselves to such use.

This style of script can be quickly made, and is very legible and artistic. In the hands of the skillful, such forms of lettering can be adapted to many arrangements and layouts with good effect.

Subordinate lines of copy are often made with a quick brush script, which adds greatly to their appearance and incidentally to the salability of a sign.

There is a similarity between this type and the lower case Italic Roman, and sometimes the two are seemingly confused, although you will notice the difference, particularly on such letters as the *A* and *G*, by comparison. The important requisite of such lettering as this is to have the ink or paint absolutely the right consistency, and also to have the pens or brushes in good working order. Good work cannot be done with inferior color, old and scraggly brushes or poor pens. The best tools are needed for success.

The heavy brush script, such as is drawn on the succeeding plate, is made with the sole purpose and desire of creating a script that will be legible and yet different, maintaining the fundamental principles of script lettering, yet having all the advantages of quick brush work.

The main thing to consider is the elimination of sharp definite terminations, and with a knowledge of this style the work can be made very effective. You will probably notice, or have already noticed, the style in use on billboards and large sign posters.

On the specimen script plate are the light-faced and heavy-faced types drawn out. The word "Restaurant" is in the Spencerian, and "Metropolitan" in the show card or heavy script, while "Cigars" is in an exceedingly heavy "half script."

Each has its place, and with a proper use of the various scripts beautiful work can be done on windows, wood signs or show cards. Indeed, the public appreciates these styles more than it does the plain forms of lettering, and is usually quite willing to pay extra for their execution.

Pens

A very necessary adjunct to an equipment for sign and show card writing is a proper and suitable pen for each purpose or need. There are some kinds of copy which, because of the extraordinary amount of lettering, are not easily adapted to brush work, and because of time limitations require some method of lettering which can be done more rapidly.

A good pen for small work requiring the making of script, half script, or Italic Roman is the "Soennecken," or "round" writing pen. This was originally a German invention but it has been often copied and sold under the name of "Text-writer."

Take note of the way in which this pen is made. The point or end is cut on an angle, differing from stub pens used for ordinary purposes. There is a small ink chamber for holding the ink. Script and Old English letters can be made with them very quickly and easily. Sometimes these pens when new are stiff and tend to "sputter." They require breaking in, or working in, to get the best results. In order to facilitate this breaking-in process, hold the pen point in the flame of a match for a few seconds and the heat will soften it and make it work satisfactorily.

There are many new varieties of ball and square pointed pens now on the market which have been developed for the show card writer and engrosser, and are suited to almost every lettering requirement.

All have their good and bad qualities. The "Automatic" shading pen, the "Barch-Payzant" and the "Ball-bearing" have many good features to recommend them. The last named, because of ink-retaining features and different sizes, is well adapted to card work. The author has used all of the pens mentioned, and has been pleased with the results. Of course, the "old-timers" will say, "you can't beat a brush,"

but in some things the pen is the only logical tool to employ.

To be a well-rounded man in the profession one should be able to lay down the brush and do equally good work with a pen. Quite frequently there is not time to prepare the paint or color for brush work, or it is not advisable to do so when only one or two card signs or tickets are needed, but with a pen close at hand and a bottle of suitable ink the work can be quickly executed.

Next to the suitability of pens, ink for such lettering is important. "Show card" colors can be thinned to work with pens, but they are difficult at best for the amateur to handle. There are inks on the market prepared especially for pen workers.

Higgins' inks, both waterproof and ordinary, can be employed to good advantage on some lines of work, but it is a trifle expensive to letter cheap cards with, and sometimes cracks or chips on heavily coated card stock. For uncoated surfaces or paper it is unexcelled. However, one can secure from dealers a number of inks produced for the lettering fraternity, and by experience and elimination the proper kind for each job will be found.

BLOCK - Uniform Weight.

ABCDEFG

THICK AND THIN

HIJKLM

ROMAN

NOPQRS

FANCY

TUVWX

EXTREME

YZ FS

TUSCAN (upper case)

OBSERVE THE SAME RULES FOR PROPORTIONS AS OBTAIN IN FULL BLOCK AND ROMAN. EXTREMES IN THIS STYLE ARE NOT EASILY READ. TUSCAN FORMS REQUIRE AMPLE SPACE IN ORDER TO GET THE BEST EFFECT. ON SHORT WORDS OR COPY THEY LOOK WELL, SUCH AS TIRES - SODA, ICE CREAM, ETC.

FURS

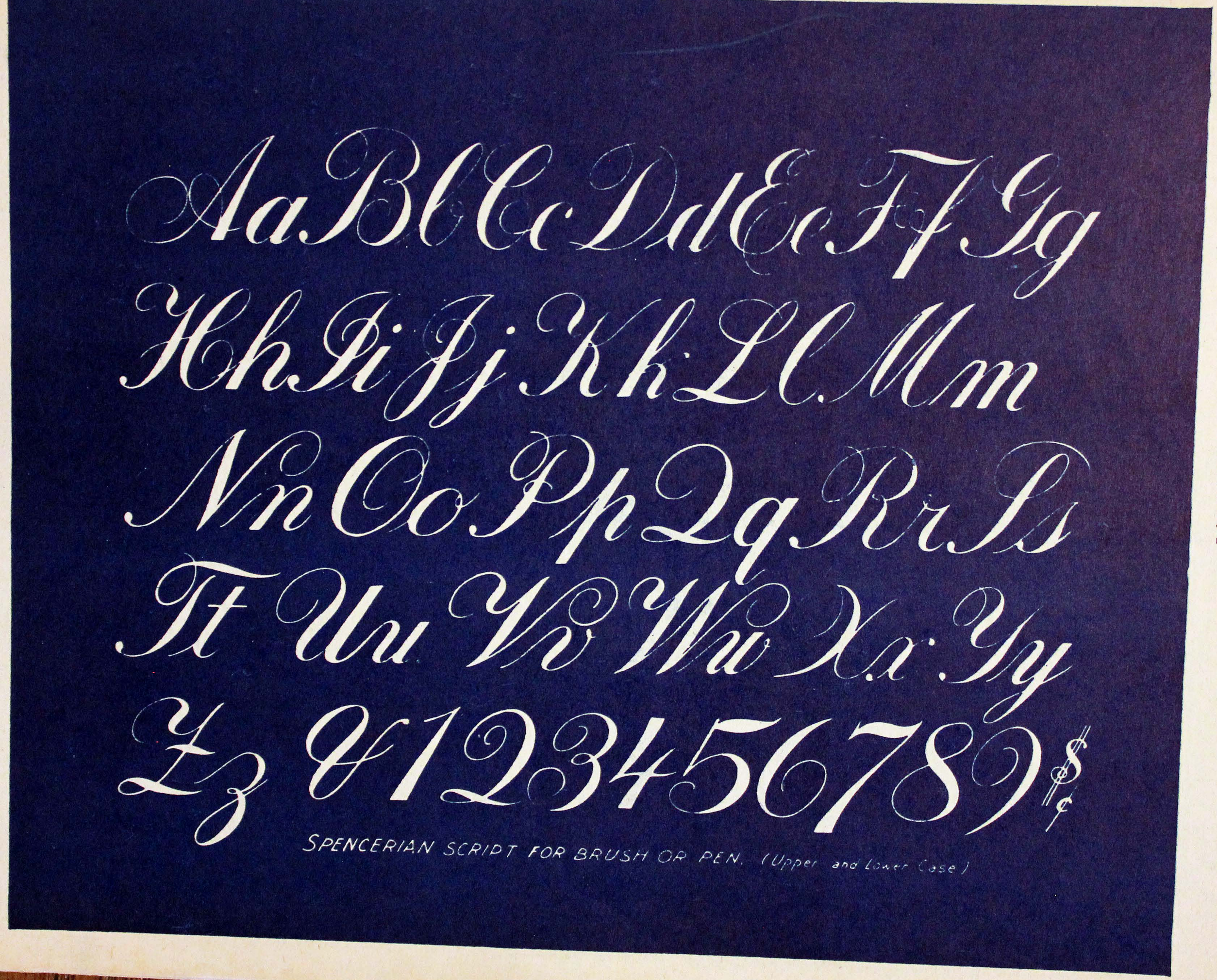
DOLLS

HATS

SPECIMEN TUSCAN TYPE SKETCHES

TUSCAN TYPES ARE TERMED "SPACE KILLERS" AS THEY CAN BE USED TO FILL SIGN SPACE AND STILL LOOK WELL PROPORTIONED. WHEN SHADED IN COLORS THEY ARE EXCEEDINGLY ATTRACTIVE. SPLIT AND BLENDED SHADES SHOW TO BEST ADVANTAGE ON THEM.

MAKE SERIFS CLEAN AND SHARP.



SPENCERIAN SCRIPT FOR BRUSH OR PEN. (Upper and Lower Case)

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 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 9 ¢

"One-Stroke" Script for Wide Pen or Flat Brush Work

THIS STYLE OF SCRIPT AND ITS VARIATIONS IS ADAPTED FOR QUICK ONE-STROKE PEN OR BRUSH WORK ON SHOWCARDS AND THE LOWER CASE LENDS ITSELF ADMIRABLY TO COPIES THAT CONTAIN MUCH LETTERING.

THE SLANT MUST BE KEPT UNIFORM

FOR BRUSH WORK, FLATTEN PENCIL ON A PALETTE to CHISEL EDGE

THE CHIEF CHARACTERISTIC OF THIS STYLE IS THE HEAVY TOP AND BOTTOM

—.—

A POPULAR ALPHABET WITH SIGN WRITERS BECAUSE IT HAS NO SHARP TERMINATIONS AND IT LOOKS WELL ON WORK DEMANDING BOLD, HEAVY FACED LETTERS

—.—

OUTSIDE BULLETINS AND POSTERS ARE FREQUENTLY LETTERED IN SUCH SCRIPT.

Old Style Script.

Fig. 1 Restaurant

Show Card Script.

Fig. 2 Metropolitan

"Half-Script"

Fig. 3 Cigars

SPECIMEN SCRIPT WORK.

FIG. 1 IS AN EXAMPLE OF THE OLD STYLE "SPENCERIAN" SCRIPT MADE WITH HAIRLINES AND LIGHT ACCENT STROKE. FIG. 2 IS AN EXAMPLE OF HEAVY SHOW-CARD SCRIPT WHICH COMBINES ART AND STRENGTH. FIG. 3 IS THE "HALF SCRIPT" ACROSS BETWEEN LOWER CASE ITALIC ROMAN AND SCRIPT. NOTE: THE LETTERS ARE NOT CONNECTED.

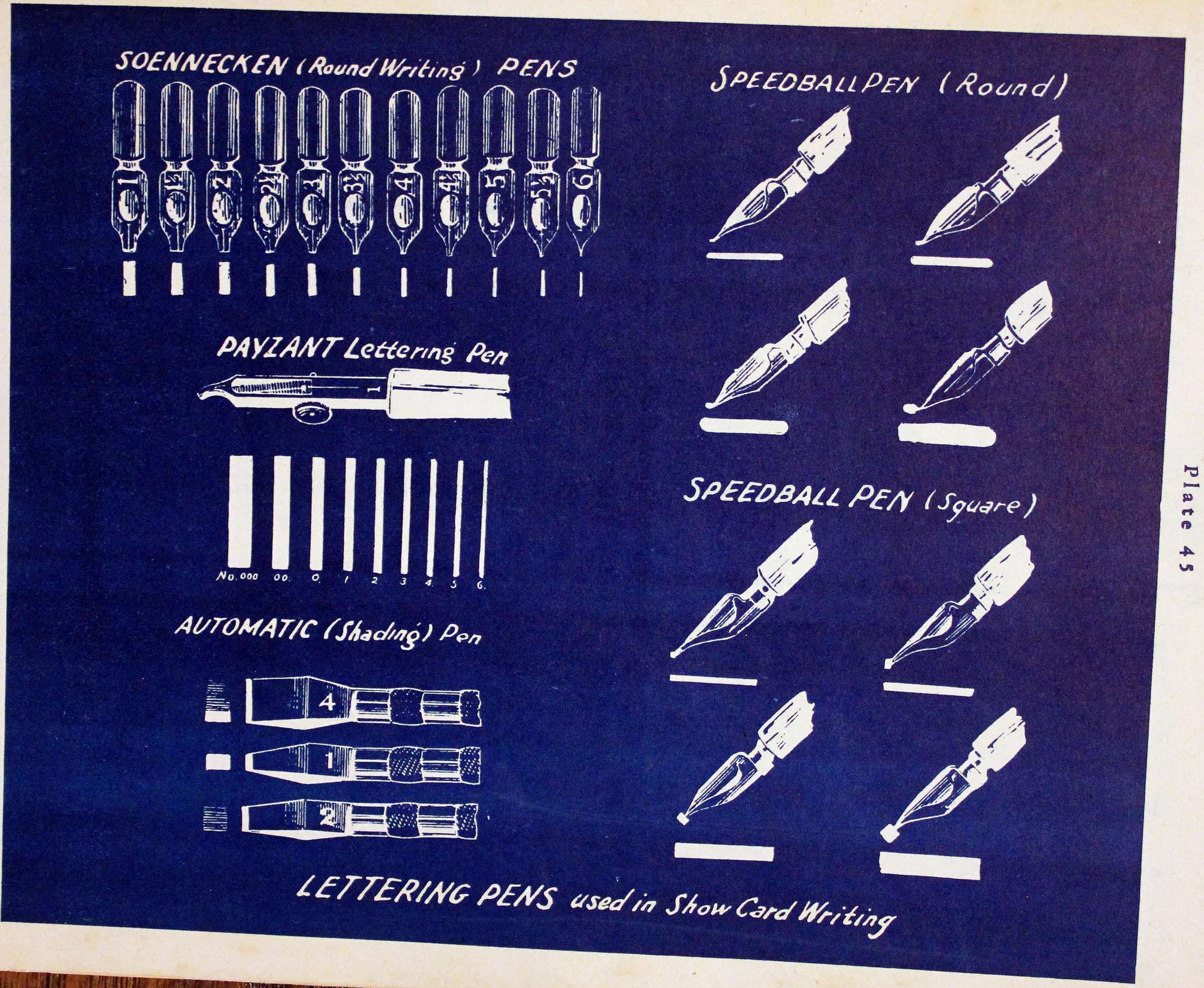

SOENNECKEN (Round Writing) PENS
1 1½ 2 2½ 3 4 5 5½ 6
PAYZANT Lettering Pen
No. 000 00 0 1 2 3 4 5 6
AUTOMATIC (Shading) Pen
4
1
2
SPEEDBALL PEN (Round)
SPEEDBALL PEN (Square)
LETTERING PENS used in Show Card Writing

Plate 45

CHAPTER XIII

Single-Stroke Lettering

In this chapter will be taken up the single-stroke form of lettering. This does not mean that the letters are made with one stroke of the brush, nor does it mean that the types are not true to all style requirements.

In the making of the single-stroke letters one should be careful to observe the general rules given in previous chapters for the various forms of letters which are adapted to the one-stroke work.

There are a number of strokes to each letter, but as a rule each stroke is in itself complete without any sharpening of the corners before finishing work.

On the first example of the uniform stroke letter you will notice that there are three brush strokes indicated. The same thing applies on the other letters — all strokes are complete in themselves.

You will see on the accompanying plates various weights of single-stroke work requiring the use of different-sized brushes and different forms of brush work.

Before dealing further with this style, we might consider the practicability of such lettering. Often a sign writer is called upon to paint a sign or card while the individual for whom it is made is waiting, or possibly there is an article on display demanding some kind of advertisement, and time is too valuable to make a finished piece of work.

Then, again, on a great deal of show card work, there are subordinate lines which do not call for finished lettering, and in such instances a ***single-stroke*** letter satisfies all requirements, as the imperfections of the unfinished corners do not show to any extent. When the letters are perfectly formed, imperfections such as blunt corners are not very apparent from a distance, and the advantage of their use is obvious.

You have with this chapter several varieties of one-stroke work, the dominating one being that of uniform thickness. This is a type which can be made with brush or pen, referred to in our last chapter.

The "full-block" one-stroke is quite frequently used, and lends itself to one-stroke work, as does the "Tuscan" full block.

The "chisel-edge" brush work made in one stroke is usually in the Roman or half-script types, and you will notice a specimen of same on the lower line of the two plates. When you become familiar with the making of these letters you will be able to dash off a sign very quickly having the appearance and effect of a finished piece of work, and with grace and style the dominant factors.

There is no need of analyzing the individual letters, but we might emphasize or reiterate this rule given in past chapters, that if one form or style is used, that form or style should be adhered to absolutely. One should never confuse the various styles, whether they are in finished work or in single-stroke lettering; that is to say, full-round letters should not be made in the same word or line with half-round letters, and block letters should not be used in conjunction with plain and unadorned types.

It was unnecessary to complete the alphabets dealing with the single-stroke styles, for with a general knowledge of lettering one needs only the elementary lines to enable him to make the full alphabets. Practice the complete upper and lower case forms of each, and assemble them into words if you wish to become truly proficient; also, develop speed in your work by doing one copy over and over again, timing yourself on each, keeping in mind not only the time but the general effect and appearance of the work. Haste does make waste, but the elimination of unnecessary strokes in some forms of sign work is absolutely essential from the standpoint of time and money limitations.

Learn, also, to use the correct brushes for each piece of work. You cannot make light-

faced letters with large pencils, nor can you make good heavy letters with small-sized brushes.

The manipulation of the brush is more important in single-stroke lettering than in finished letter construction. The tip must be kept in proper shape and width, and the strokes must not waver or appear ragged. Good, firm lines, well drawn and not doctored, constitute the secret of success.

Italic or slanted letters are much easier to paint by the one-stroke method than the perpendicular. They respond to the natural muscular movements of the hand and are similar to ordinary handwriting in this respect. From the standpoint of legibility, however, they are not as readable as the perpendicular forms, and they should be used judiciously.

Properly made numerals are as essential to finished effect as lettering. They add considerably to the appearance of a card, and often in department store signs constitute the principal feature of the advertising. Consequently, in one-stroke forms they should be clean and legible. When a large number of price tickets are made, the figures should be uniform and of the same style.

It sounds like a platitude to say that practice makes perfect, but to excel in the one-stroke styles one must devote considerable time to the work. Incidentally, this is the most lucrative of all show card methods.

PLAIN ONE-STROKE FULL ROUND Heavy and light.

Aa Bb Cc Dd Ee Ff

HALF-ROUND Heavy and Light.

Gg Hh Ii Jj Kk Ll Mm

Italic (Plain)

Italic (Block)

Nn Oo Pp Qq Rr

Fancy Heavy and Light.

Ss Tt Uu Vv Ww

ONE-STROKE BRUSH LETTERS

"ONE-STROKE" MEANS THAT LETTERS ARE MADE WITH SINGLE BRUSH LINE, EITHER HEAVY OR LIGHT ACCORDING TO THE SIZE OF BRUSH USED. IT WAS NOT NECESSARY TO MAKE COMPLETE ALPHABETS OF THE DIFFERENT FORMS, AS THE PRINCIPLES OF EACH ARE EMBODIED IN THOSE SHOWN ON THIS PRINT.

UNIFORM BRUSH PRESSURE IS ESSENTIAL FOR BEST RESULTS.

Chisel Edge Brush one-stroke.

Xx Yy Zz $ ¢

Roman one-stroke

plain Egyptian

Italic

1234 56 789

Specimen Plain Egyptian

REAL ESTATE

Specimen Roman

Mortgages ~ Insurance

One-Stroke Letters and Figures.

THESE STYLES ARE ADAPTED TO RAPID WORK AND EXTRA COPY. THE EFFECT OF THE JOB IS THE MOST IMPORTANT FACTOR, NOT INDIVIDUAL PERFECTION IN THE LETTERS. GOOD AND SUITABLE BRUSHES ARE NECESSARY FOR BEST RESULTS. ONE-STROKE ROMAN REQUIRES FLAT CHISEL-EDGE BRUSHES OR BROAD PENS.

CHAPTER XIV

By way of variety this chapter will be devoted wholly to materials and formulas instead of alphabet construction. All substances that can be advantageously employed in letter-craft should be understood, and it is with the desire of treating the subject of painting mechanics that the following matter is given.

Preparing Wood Signs

In addition to letter making you have been given some instruction as to the variety of signs that one should understand, and we will continue that instruction at this time.

One of the things necessary to know in the sign business is the preparing of a wooden sign before painting. Many sign writers have a carpenter make their boards for them and do all kinds of carpentering which is connected with the sign business. This is well and good if there is a man available who is capable, but, in the event of being compelled to make a sign, one should know the method of procedure.

In the first place, the wood should be carefully selected, being as free from knots as possible. Next, if it be a wide sign, the joint of the boards should be well glued with hot glue, and clamped strongly together with wood clamps and allowed to dry. After this is done the sign should be cleated on the back or all around, in order to obviate any tendency to warp.

Some signs are made with a molding around the edge which improves their appearance. Cleats should be screwed to the back of the sign with 1¼ inch screws, and with the screw holes countersunk.

Soft pine or ***white wood*** are the two woods best adapted for sign work. Hard pine or spruce should ***never*** be used because of the quantity of pitch in their composition, which is drawn to the surface by the sun, and causes paint to blister.

Knots should be covered with a thin coating of shellac before painting, as was explained in a previous chapter. Small board signs, such as real estate boards, are made with what is known as "breadboard" ends; that is, cleats nailed to the end of the board or boards instead of on the back. These breadboard ends prevent the sign from warping, and do not project from the sign as do the cleats put on the back, and on small work this type of a board is much preferable.

If one has occasion to repaint an old sign, it is advisable to know how to go about it, as the treatment would be somewhat different from painting a new one.

If the background is of sand or smalt, the same should be scraped off thoroughly with a putty knife, or burned off with a gasoline torch (provided one is familiar with that method), which is a rather dangerous procedure on account of the liability of fire.

Another way of cleaning off old paint from sign surfaces is to use paint remover. This is a composition of potash and chemicals which softens old paint and makes it easily removed. One should be careful to clean off all remover with benzine before applying fresh paint; otherwise, paint will scale.

After an old sign is cleaned thoroughly, paint the same as on new wood, although little oil is needed for the first coat.

Ordinarily, painted signs in good condition do not need to have the paint removed before refinishing. Simply sandpaper and repaint with flat or semi-flat lead (one coat would be sufficient), and apply colors, smalt or varnish according to the customer's demands.

Liquids used in Sign Painting

There are a number of liquids used in sign painting, principally oils.

These are obtained from the three kingdoms: animal, vegetable and mineral. There are two kinds,— ***fixed*** and ***volatile.*** Fixed oils are either of the greasy or drying type. They are not soluble in water, but dissolve in

turpentine. Some, like lard oil, solidify at low temperatures. They absorb oxygen with more or less rapidity. The "drying" fixed oils absorb large quantities of oxygen, and if spread in a thin layer or coat become hard and form a resinous surface. "Linseed," "poppy" and "walnut" oil are of this kind.

Sign writers seldom employ anything but linseed oil in their work. The others are used in pictorial painting by artists. Linseed oil is called the "life" of the paint. It is of a deep yellow or brownish yellow color, and is obtained by pressure extraction from seeds of the flax plant. For outdoor use it is without a peer among mixing oils.

Boiling increases the drying properties of raw oil, and is sold under the name of "boiled" oil. It is preferred by most sign men for general work, as it possesses good wearing qualities and makes possible quicker deliveries. Much of the boiled oil sold today is not boiled. To raw oil is added japan drier, a chemical product obtained from different sources, and this masquerades under the name of "commercial" boiled oil.

It might be wise to speak of "japans" or "driers" as this time. As was stated, they are produced by different formulas,—protoxide of lead, peroxide of manganese, sulphate of zinc and other mineral reductions.

They are active agents in drying the various oils in paints. Most of them are a deep brown color, but for white or pale tints a white japan is prepared. The strength of japan varies with its manufacture, and it should be used sparingly as a rule. Too much japan can, and often does, cause paint trouble.

Volatile oils differ in all their properties from fixed oils. Turpentine is a type of volatile oil and is most used. When added to a fixed oil paint it dilutes it, and a coat of the mixture leaves, on drying, a thinner coat than would otherwise be, in consequence of the evaporation of the volatile oil. Benzine is a highly volatile oil of mineral origin, and is used sometimes for cheap outdoor wall painting.

Alcohol (denatured) is employed for cutting or thinning shellac, cleaning off old lettering, and various other purposes in the trade.

Varnishes (Quick and Slow Drying)

Varnish is a resin dissolved in a suitable medium, such as oil, turpentine or alcohol. This forms a transparent fluid, which, when applied, glazes and protects the surface from destructive agents present in the atmosphere. The qualities of a good varnish are durability, transparency and hardness. These qualities, of course, depend on the nature of resin employed, and somewhat, though in a less degree, upon the solvent. To obtain a good varnish one should buy according to the reputation of its maker. Reputable manufacturers stand back of their goods, and a cheap varnish is always the most expensive in the end. Quality should be the motto of all varnish users.

Quick-drying varnishes are for all work not requiring the same degree of permanency as outside signs. They are preferred for "binders" in japan paints, and sign men sometimes make their quick size with them by adding color. Rubbing or furniture varnish makes the best binder.

Slow-drying varnishes are best for outdoor work or that subject to dampness and extremes in temperature. Never use any varnish in cold or damp places, as these conditions cause checking, crawling and other annoyances. For good results the temperature of a varnish room should be at least 60°F.

Most varnishes are yellow in color, but for white or tinted sign backgrounds a very pale transparent resin varnish called "Dammar" is sold. It is not, however, a good drying varnish.

Synthetic varnishes and those made with tung oil have, in a large measure, displaced many of the standard gum varnishes.

White and orange shellac are resins dissolved in alcohol. They dry quickly with a hard surface, but scratch easily. They are not suitable for varnish purposes, bnt are employed in building backgrounds for finish coats.

Sign Essentials

Some essentials are very apt to be overlooked in a book pertaining to the subject, and among these is the ***paint strainer.***

The author has heard it said that a shop is judged by its paint strainers. Slovenly workmen neglect to mix their color properly, and thereby cause themselves and their associates no end of trouble. Every practical workman knows this. Paint that has been allowed to stand usually becomes coated over with a skin of some kind, and this skin works into the paint and interferes with the free use of the brush. A paint strainer is a necessity to obviate any difficulty in this line. Some shops use a fine metal screen strainer, but unless it is thoroughly cleaned out after each straining the mesh becomes clogged, and the strainer is spoiled if allowed to dry. Ordinary cheesecloth, which is easily procurable and cheap, when cut into small pieces makes admirable paint strainers for oil, japan or water color, and when used, the pieces can be thrown away.

Pounce Patterns

If one has a quantity of work of the same copy, or desires to letter a window where the work has to be done on the back of the glass, the easiest method is to make a "pounce pattern;" that is, drawing out the letters exactly as required on paper, then going over the pencil lines with a tracing or ***perforating wheel*** such as is used by dressmakers, perforating fine holes whereby the pattern or drawing can be transferred through the application of some dry color, by the aid of a "pounce" bag or piece of cotton cloth containing the pounce material. Special small wheels are made for sign patterns enabling the artist to perforate curves and round letters.

A good pounce for glass work can be made by using magnesia, which comes in small blocks or packages, and, when pulverized, is used in the pounce bag. This is a dry, light substance, and is admirably adapted for this purpose. If you cannot readily obtain this, use ordinary talcum or face powder, which is easily applied and does not mix with the paint.

On work requiring a dark pounce, pulverized charcoal is very good. Some sign writers use dry-colored pigments such as red, blue and yellow for different pounces, but as they might be of aniline foundation, the colors are apt to come off with difficulty from the background surfaces, and it is not wise (unless you are thoroughly familiar with paint pigments) to use them.

By gently pouncing the perforated letters or lines of your sign surface with the pounce bag, you will find upon taking up the paper an exact replica of the drawing, and, with that done, it is easy to paint signs in quantity, each being exactly the same. This method is used for work on glass.

Snap Lines

Chalk or "snap" lines can be made by using some good quality string that will not stretch too freely, and rubbing either charcoal or carpenter's chalk over it, then snapping the lines on your backgrounds. An ordinary fish line is a good type of twine for such purposes. These snap lines are used mostly on very large surfaces in laying out copy.

Ruled Lines

Ruling lines, borders, etc., can be done in a number of ways. On card signs the edge of the card can be used as a gauge, holding the pen or brush between the fingers, as was indicated in Plate 2. They can also be made by using a good straight edge or yard stick, but one must be careful to use a uniform pressure on the lines that are made in this way.

Nothing so mars the appearance of a sign as lines that are uneven and imperfectly made. Pen lines, because of the rigidness of the tool, are easier to make than brush lines, as the resiliency of the brush hairs makes it difficult to handle same in striping.

Striping Brushes

Both sign and automobile painters use a special style of brush for striping. The hairs are long and carry considerable color. They come in a number of sizes, and the principal types are the sword, dagger and pencil brushes. Some are made for double lines,

and one needs considerable experience with them to be able to make clean lines. These are shown on Plate 1.

Use of Ellipse-o-graph

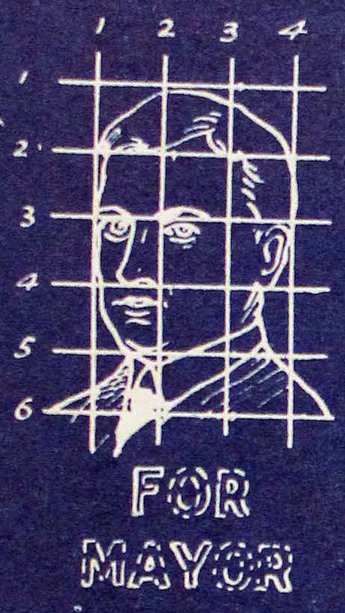
Almost any one can make a circle with compasses or a piece of string, but many sign writers, when called on to produce an ellipse, are handicapped by not knowing the best method. A very simple way is shown on Plate 48.

A mechanical instrument, called the "Ellipse-o-graph," is now very largely used by artists and sign men, by which is produced a perfect ellipse of desired size and proportion.

Enlargement Method

On this same plate is shown a scaling plan for the enlargement of pictures or trade marks. This will be readily understood by one familiar with drawing. So long as the respective squares on copy or enlargement are proportional, there can be no distortion. Some art instructors teach illustrating by this method, and it is a very valuable one for sign work.

PLATE 48

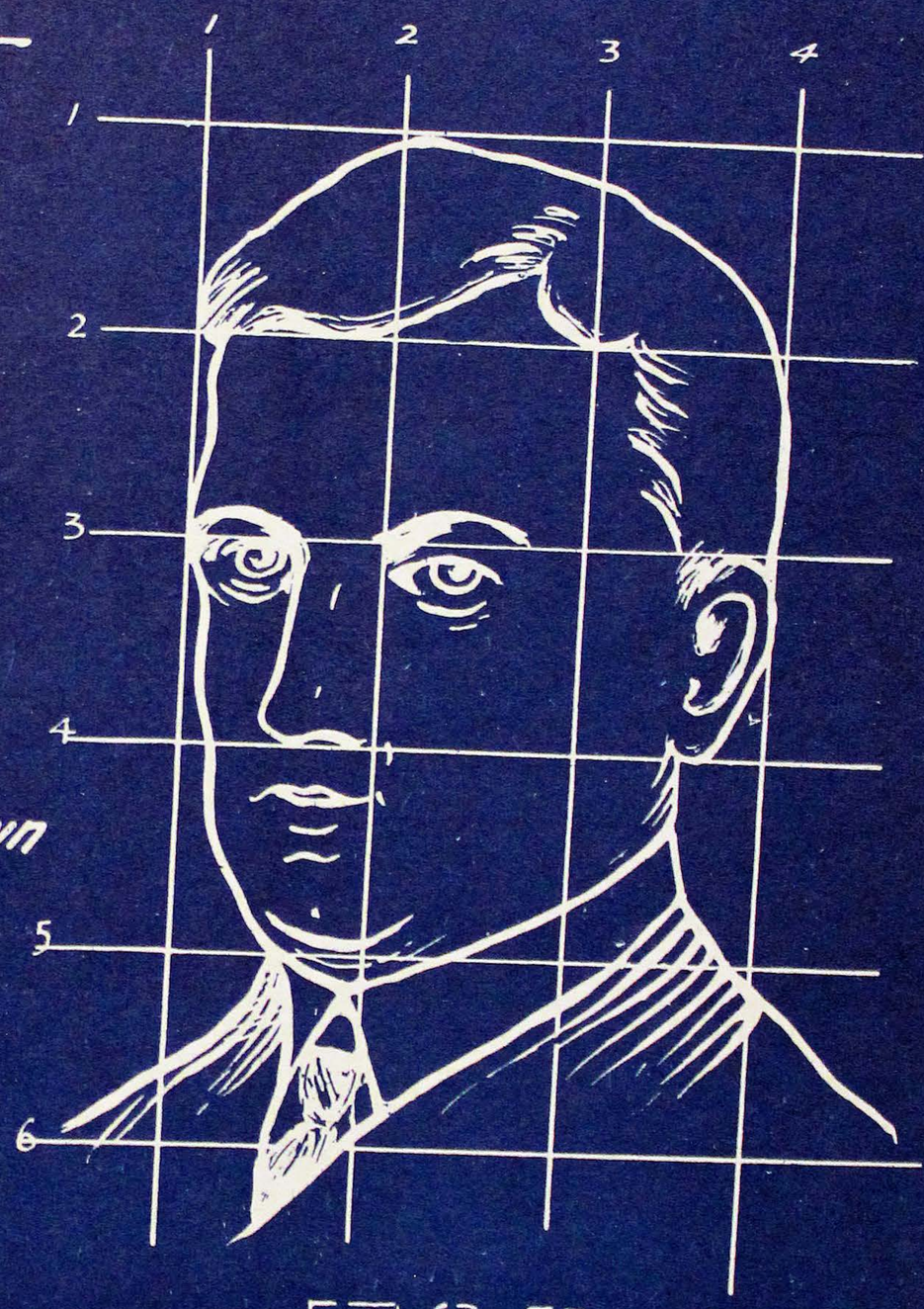


FOR MAYOR

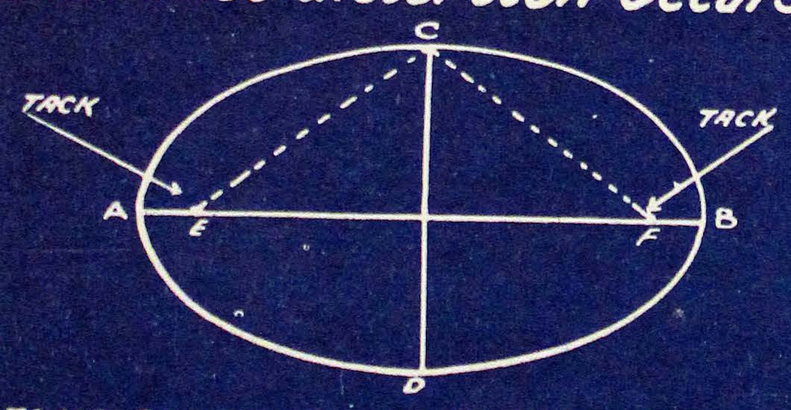
ENLARGING by SCALE and MAKING AN ELLIPSE.

METHOD USED BY THE TRADE FOR ENLARGING PICTURES, TRADE MARKS, DESIGNS, Etc., on WALLS, BULLETINS and SIGNS OF ALL KINDS.

Scale must be accurately drawn otherwise distortion occurs.



FOR MAYOR



TO MAKE AN ELLIPSE DRAW PERPENDICULAR and HORIZONTAL LINES THE SIZE OF ELLIPSE DESIRED. (A to B - C to D)
MARK ON A RULE THE DISTANCE FROM A to CENTRE. HOLD ONE END OF THIS ON POINT C AND WHERE THE OTHER TOUCHES THE HORIZONTAL LINE INSERT A TACK. (E) REPEAT ON RIGHT SIDE, (C to F) ALSO INSERT A TACK ON POINT C. THEN FASTEN A PIECE OF TWINE TAUTLY AROUND TACKS. REMOVE TACK AT POINT C AND DRAW ELLIPSE BY FORCING PENCIL POINT AGAINST THE TWINE TACKS AT E and F DETERMINE LENGTH AND AT C THE WIDTH

CHAPTER XV

Old English Lettering

Among the many forms of letter making there are few that equal in beauty "Old English," "Gothic" or "black-letter" text. This style is based on the principle of the accented letter with light and heavy strokes, and is a relic of mediæval types of letter-craft. There are certain definite principles on which this style is constructed, and if you will look on the first plate accompanying this chapter you will notice two distinct and separate forms.

The most common form of Old English is that of the angular construction known as the "North" style, the other, or rounded, form being called the "South" style.

These two names originated from the fact that two lettering artists, Dürer and Tagliente, analyzed and put together the original forms, although they had been in use previous to their time for many years.

Durer belonged in Nuremberg, Germany, and Tagliente was a native of Venice. These men analyzed the style about the same time (Tagliente in 1524 and Dürer in 1525).

By study of both these forms you will see that one is built entirely of straight lines, and the other is built with curves and straight lines. The principle of each formation is primarily the same. The "South" has artistic beauty, but it is difficult to make correctly. In contradistinction to it, the "North" is easier to make, although not so artistic.

There are very many ways to make Old English capitals or upper case. It seems that no two artists agree in every respect as to how Old English capitals should be made; hence we have in various books of letters different alphabets, each purporting to be Old English, and yet varying considerably. As a matter of fact, there are no authoritative forms in Gothic styles, and most variants can be accepted so long as they carry out the spirit of the style.

We have endeavored to give as near a copy of typical Old English lettering as is possible, although there are several letters which might be changed materially without in any way injuring their legibility. Consequently, we do not present this upper case alphabet as the only Old English form which might be used, but simply as one which is adapted to sign work, and is of the elementary strokes and accents of mediæval types.

It is essential that this one fact be remembered in doing Old English lettering: ***never*** under any circumstances, use all capital letters in a line or word. It is absolutely incorrect, and when so made is contrary to all rules of letter making. Use capitals ***only*** as ***initials,*** either at the beginning of a line or with proper names. Under ***no*** circumstances should you use all capital letters.

The width of accented strokes once established must be rigidly maintained. Old English letters can be light or heavy, according to the requirements, although the heavier the stroke (within reason) the better effect the lettering will have.

Angles of termination must also be uniform, and this is best obtained through laying out the work on a definite basis, such as is indicated in the four lightly ruled lines on the plate.

Letters should be arranged according to the copy and the width of space to be filled. A good rule to observe would be to use approximately the width of the heavy stroke for the space between letters, and the distance between words should be approximately the width of one letter.

Referring to the numerals used in conjunction with Old English, we would say that there are no Old English numbers that are germane to this style. Those on the plate are simply made in keeping with the style formation, but notation by numbers did not really exist until

the invention of printing from movable blocks, previous to which numbering was done by the use of the Roman letters. Consequently, we have no definite forms handed down to us from those times. Numerals with Old English lettering could be made in the other types, and with a much better effect, although you could use those that are indicated herein.

Many forms of Old English are embellished by fine hair-line curves and flourishes, and this is permissible, so long as legibility is not destroyed.

Old English lettering is adapted for religious or church purposes. It is not suitable for ordinary commercial needs.

Modified text alphabets (Plate 51) are frequently used in place of Old English. These have elementary strokes similar to the old style alphabets, and can be made rapidly with one-stroke brushes or flat pens.

It is difficult to give any detailed analysis of the various Gothic styles, but one can easily understand that they were originally made by the position of the reed or pen held in the hands of early letter-crafters. The accented down strokes are heavy and the up strokes light, in accordance with all thick and thin styles. The first essential of good work in this style is uniformity in weight of stroke and space between letters.

No style of lettering permits as much liberty in treatment as Old English. Flourishes and scrolls on individual letters are and can be successfully employed, but should not be overdone. On some of the early examples of such lettering it is difficult to read the text because of the fact that letters are so elaborate that the eye is confused at first sight by the number of fine decorative lines around them.

The student will find it to his advantage to study the numerous examples of Gothic lettering in the public libraries and museums in his vicinity. Church text and German text are closely related to the Old English, but they are not familiar to the general public. In connection with this, it might be advisable to restate the fact that the term "Gothic" applies largely to the spirit of the style which relates it to Gothic architecture.

Definite or authoritative forms have never been attained, although, as has been stated, Durer and Tagliente attempted to standardize them. The different variations of these text alphabets were undoubtedly the result of lack of opportunity of intercourse and exchange of ideas between the early letter-crafters, due to poor traveling facilities. Thus we have the "Spanish," "German," "Italian," "English" and modern interpretations and distinctions, and one needs to be an authority on the subject to be able to classify them all.

"Black-letter" types are Gothic forms in which the amount of black in the word or line lettered overbalances the white space between strokes; that is, the accented strokes are heavier than the width between strokes. German text is a good example of "black letter."

ANGULAR STYLE Called "North"

CURVED STYLE CALLED "SOUTH"

north * south

Analyzed by Durer (Nuremberg; A.D. 1525) (Analyzed by Tagliente, Venice, A.D. 1524)

ABCDEFGHI JKLMNOPQ RSTUVWXYZ

OLD ENGLISH TEXT (upper Case)

ALL ANGLES OR CURVES ON TERMINATIONS MUST CORRESPOND ANGLES SHOULD BE APPROX. 45°

Proportions of Letters should be alike on all. A width of stroke once established must be rigidly maintained.

USE CAPITALS AS INITIALS ONLY!

FLOURISHES MAY BE ADDED IF THE LEGIBILITY IS NOT DESTROYED.

abcdefghijkl
mnopqrstuvw
xyz:1234567890
Work is Pleasure

OLD ENGLISH TEXT (Lower Case)

KEEP SPACE BETWEEN LETTERS THE SAME.

RULE LIGHT GUIDE LINES AS ON LINE 1.

OUTLINE WORK WITH PEN OR FINE BRUSH AND FILL IN ACCENTED STROKE.

Never use the Upper Case for copy alone It is not legible when combined into words. Corners must be sharp

ABCDEFGHIJK
LMNOPQRSTU
VWXYZ &.” $ ¢ -
1234567890

abcdefghijklmnop
qrstuvwxyz

Signs and Show Cards

TEXT ALPHABET FOR ONE-STROKE WORK

THIS IS A MONGREL TYPE WITH ELEMENTARY STROKES OF BOTH OLD ENGLISH TEXT AND VERTICAL SCRIPT. IT IS ADAPTED TO ALL KINDS QUICK ONE-STROKE WORK ON CARD OR CLOTH SIGNS AND GIVES EFFECTIVE RESULTS. FOR RAPID LETTERING IT IS WITHOUT A PEER. BRUSHES OR PENS BEST FITTED TO MAKE IT ARE CHISEL SHAPED.

THERE ARE MANY VARIATIONS OF THIS STYLE UNDER DIFFERENT NAMES.

CHAPTER XVI

Sign Decoration

As yet there has been nothing given in this book on sign ornamentation or letter decoration. This is a vital and necessary adjunct to this line of work.

By decoration we add to the beauty and attractiveness of signs, although legibility sometimes suffers thereby. Decoration should never be carried to the point whereby ***legibility*** is imperiled, as this is the keynote of all sign advertising.

Shading

That part of decoration which we will treat first is known as "shading," and is exceedingly important. When the rules governing the same are thoroughly understood, the work can be well done and the value of the sign enhanced, but when not understood the effect of a good job of lettering can be spoiled.

Shading is used to make lettering on panels appear raised, projected or in relief, and there are a variety of forms such as are indicated on the plates accompanying this book.

In order to thoroughly appreciate and understand what shading is, one should visualize a light and shadow, and assume that the letter to be shaded is the same as an object casting a shadow.

An object cannot cast a shadow from a fixed light except in one direction; that is, a shadow could not be thrown on top and on the bottom of the object at the same time. Neither should a letter be shaded on two opposite sides.

The direction of the light determines the direction of the shadow, and the length of the shadow is regulated by the distance from the light. This can easily be understood by holding an object near an electric light and moving it in different directions. Notice how the shadow varies in shape and length by such method.

With an understanding that the shade can be on only one side of the letter, and in the same direction on all letters, shading ought to be easy for the student.

The different types we have indicated are examples of how shading might be done without altering the law of shadow work.

It is advisable, in shading lettering, to rule a light pencil or guide line parallel to the bottom of the letters, in order that all the shades may be of the same depth. This will help greatly in doing the work. All angles of terminations should be uniform at approximately 45°.

Letters can be shaded on either left or right side. Left shading is, however, the most common.

Relief Shade

The first shade which we treat is known as the "off" or "relief" shade. This can be made at either right or left of the letter, but, when one form is once used, that form must be maintained throughout your work. Ordinarily, this is made on the left, as it is much easier in the manipulation of the brush. As will be observed, the shade or shadow is a short distance away from the letter, and the effect is to make the letter appear projected from the surface. This relief shade has an appearance of being a light shadow, and is in most common use because of the speed with which it can be made. In order to get the best results it should be kept away from the letter, presumably an eighth to a quarter of an inch from a two-inch letter, or in that proportion for other sizes.

Drop Shade

The drop shade in Figs. 6, 7 and 8, Plate 52, is more of a real shadow, and gives a complete shadow effect. This can be brought close to the letter or away from it by increasing or diminishing the space between the shadow and the letter. It is a more difficult shade to make than the first type.

Cast Shade

On Figs. 9 and 10 a cast shadow gives the letter an appearance of standing upright from the surface, with the light which throws the shadow in the front and to the right. This type of shadow is much used by sign writers, because of its especial beauty and ease in making.

Block Shade

A block shade, such as is indicated in Figs. 12 and 13, gives the letter the appearance of being carved or blocked, and when treated in various shades of color it is one of the most beautiful forms that can be designed. This treatment is called "splitting," and these effects are most generally employed on wagons and auto trucks, which no doubt have been observed.

Blended Shade

The blended shade, as suggested in Fig. 11, is much favored on glass work, because of the opportunities of blending the colors on the glass, and when properly made is the most beautiful of all types.

High Lighting

High lighting is a light line of color on the upper edge of a letter, on opposite side from which the shading is done, which is not affected by the shade, and is a suggestion of light reflection on the top of the object. Such high lights look well on gold and silver lettering, and should be delicately made. The "convex" face letter on Fig. 14 is not practical as a rule on sign work, although sometimes made on glass signs.

On a white ground nothing but tints should be used as shades. A most common error is the shading of a letter with a color as intense as the letter itself. The effect is jarring, crude and most unpleasing; hence a black letter on a white ground should not be shaded with red, neither should a red letter be shaded in black, as both are of nearly equal intensity.

A red letter on a white ground looks infinitely better when shaded with light gray or light green, as does also a black letter.

Color harmony plays an important part in such work, and one should have a knowledge of color in order to thoroughly understand shading, but by remembering to use only light tints or colors on dark letters there will be no difficulty with the artistic side of the work.

On colored grounds a safe rule to follow is to shade slightly darker than the ground itself; for instance, a light brown background with a black letter would look best with a shade just a degree darker than the background, thereby making a shadow effect without in any sense being obtrusive.

A dark red ground with a white letter could be shaded with black, as the black would be slightly darker than the background, and would not in any way be confusing. This holds true on all colors, and if there is any doubt as to what color should be used for a shading tone, remember that a color a little darker than the background itself will answer in most cases.

Flamboyant colorings never look well, and it takes a master in the color art to bring crude color combinations into harmony, although that can be done by neutralizing the colors by tints and tones of those used. Red and yellow do not go together, and such use has a tendency to spoil the effect of good lettering and to negative layout values.

Split shades on light backgrounds should be made with the strongest color close to the letter, and the shades graduated.

Experiment in the various types of shades, using only light tints for this work. Arrange your lettering (any copy will be suitable) as on a sign, making no special allowances for the shading. Shading is incidental at best, and should not interfere with the lettering. After this is done, shade it in relief as in Figs. 1 and 2, and after mastering this, experiment with the other forms.

Next to lettering and arrangement, the choice of colors in sign work is most important. With a knowledge of color harmony, there is no limit to the beautiful effects which can be obtained. Color combinations can make or mar work, and unless the same are

understood, one's sign reputation is apt to be jeopardized.

Where color is used for letters or ornaments it is well to remember that on dark grounds white or light tints are preferable, and on white grounds black or dark colors should be used.

Most colors can be bought ready mixed, in any well-stocked paint store. In olden times the sign painter or artist had to prepare or mix everything that he used in this connection, but modern methods have made the life of the signist comparatively easy, and now one needs to know only the color or shade desired, and then buy the same, ground and prepared for immediate use. At best, however, purchasing colors is expensive, and it is well to understand something of the mixing of colors such as are used in everyday commercial work. Paint manufacturers have better facilities for grinding paint than any individual can possess, and because of this fact, colors purchased from them are apt to be more thoroughly ground and usually work better than those mixed by one without such facilities. The purpose for which a color is to be used determines the manner of mixing.

If it be desired to try color mixing, buy the dry color from the dealer, but insist upon "CP," or "chemically pure," colors.

We would suggest that for sign work requiring japan or oil colors it is better to buy the colors in tubes or in cans, but in using water colors one can save considerable money and get fairly good results by mixing his own.

White paints can be made from either a zinc or a lead foundation. For water-color work, or for any work requiring an extremely white letter, zinc is preferable. It is much whiter than white lead, and also lighter to handle in the brush. Lead is exceedingly heavy, and is not a pure white. In using zinc, the French is preferable to the American manufacture.

Black varies in tone, and drop black is more intense than is the lampblack, and is also preferable for water color when properly ground. Lampblack has more body and is best adapted for glass work.

Green, yellow and blue come in a variety of tones, and also have varying properties of permanency.

Ultramarine blue is the most commonly used by sign writers. It is a rich deep blue, but has no lasting qualities.

Cobalt blue is a much lighter shade, and Prussian blue is almost black, and is used largely as a toner on various types of color work.

There are also a variety of reds which might be used, the most common being vermilion. These come light and dark, and the English vermilion is preferable by far to the American.

Vermilions are made on different bases, some being mineral and some vegetable, as are most colors. The mineral base colors are difficult at times to mix, and are usually much heavier.

Beautiful shades of red, such as carmine, can be obtained, although they are more or less expensive.

All these colors, as has been said, come in dry form, and to mix them for water-color work put a small portion on glass or marble, and grind very carefully with a palette knife in water, adding a little mucilage. Make sure that all grit is out of your color, and that it will work smoothly under the brush.

If you wish to mix varnish or oil color, grind the dry pigment the same way, only using the oil, varnish or japan as solvents; but it is much better to buy these colors ground. Some dry colors can be dissolved in these solvents without grinding. Simply mix and strain them.

Here is a brief list of colors produced by mixing:

White and black produce a gray. The addition of yellow or blue will tone this gray and give it "life."

Light blue is made by mixing blue and white, and the shade is regulated by the quantity of each.

Vermilion and white will produce a lustrous pink, and white, red and yellow will produce a buff tint.

White and yellow make a cream shade.

Blue and yellow make a vivid green.

Carmine and blue produce a fairly good purple.

Yellow and black make sage green.

Black and red produce brown. The addition of a little yellow in this last mixture gives a fairly good russet effect.

These are mostly body colors; that is, colors which would be solid under certain lighting conditions, with a possible exception of carmine. This, and such colors as sienna, umber and those known as "lakes," are transparent colors without any body, and are used mostly for toning.

In order really to become acquainted with these color combinations, take a small quantity of each, placing them in separate piles, and with palette knife mix each with a suitable solvent, and by the addition of white, or lighter colors, a variety of shades can be produced.

To paint pictures, considerable more instruction in color work would be essential, but for sign purposes and for show card work it is not so necessary, though desirable.

The main thing to know is the color results obtained by mixing colors used in your work. and this list is sufficient for that purpose. Below is a list of color combinations that look well together, which will be of aid either in shading or lettering, as the case may be.

White Background

With ***black*** letters, use light gray, light green or buff shading.

With ***red*** letters, use light gray or light green shading.

The red letter could be toned by a "cut-in" or an inner shade of dark red or carmine, which makes a very beautiful effect. An outline of black helps to bring out the letter.

With ***blue*** letters, use light blue or light gray shading, and the letter could be toned with black.

Red Background

A ***white*** letter is the only thing that is really suitable. This could be shaded with a red darker than the ground. Do not use any vivid contrast, such as a bright green or yellow, on such a background.

Dark Blue Background

White or ***gold*** letters are most suitable. Gold looks well as a rule with almost every color except yellow, which is too near the tone of the gold. A black shade looks well on this color, and a high light on a letter of light yellow adds materially to the beauty and effect.

Dark Green Background

A very fine contrast is made with a ***white*** letter, the same treatment being given as on the blue.

Black Background

Any light tint or pure white letter can be safely used, and there are a variety of ways in which the same can be effectively treated as to color. Outlining in color helps.

These few simple hints will undoubtedly help in color work. Remember, pleasing effects can be obtained only by study and experience, and garishness on signs and show cards is just as undesirable as in other lines.

It will be useful to know, in regard to this, something about color classification.

All such classification of spectrum colors is absolute, in so far as it relates to the science of optics and light. In using pigments, which vary, any classification must take into account various properties and degrees of purity in coloring material used. Controversies regarding color classification may be ignored, for, as regards sign writing, little is to be gained thereby. There are three classifications, however, on which all agree, viz., primary, secondary and tertiary.

The ***primary*** colors are red, yellow and blue.

Secondary colors are those produced by mixing two primaries. Thus, red and yellow produce orange; yellow and blue make green; red and blue produce purple or violet. Orange, green and purple, then, are the secondary colors.

Tertiary colors are produced by mixing two secondary colors. Orange and green make citrine; green and purple or violet produce olive; and purple and orange make a russet.

The color specialist, in order to differentiate between shades and tones, has a scale wherein the various colors are shown in relation to their intensity. In this scale blue is nearest black, and yellow nearest white. Red is midway. All colors can be neutralized or changed in intensity or prominence by lightening or darkening.

"Tone" is the degree of intensity of a color. If white is added the tone is made lighter; if black, it is darkened. Light tones, strictly speaking, are ***tints,*** and dark tones are ***shades.***

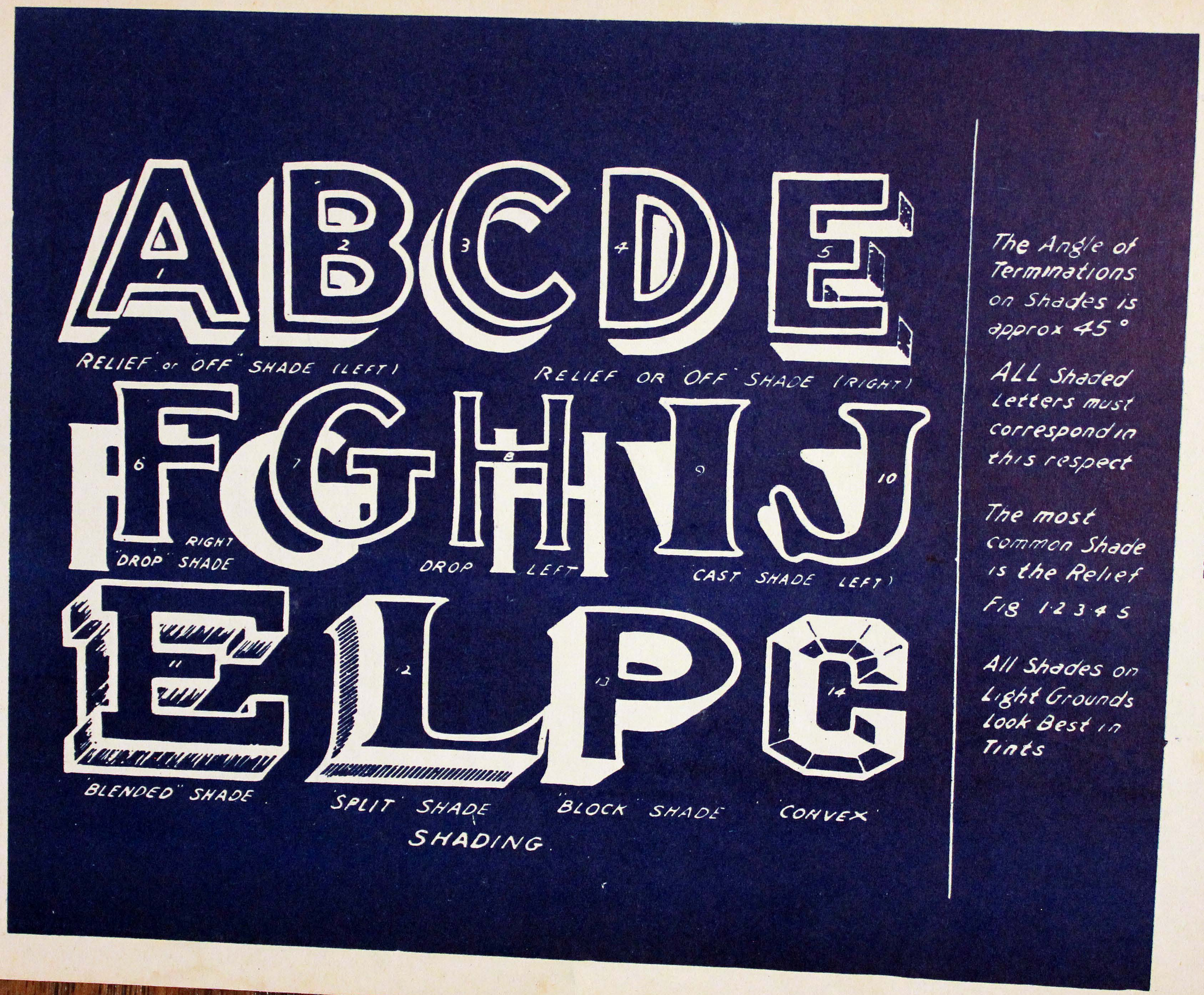

ABCDE
1
2
3
4
5
RELIEF or "OFF" SHADE (LEFT)
RELIEF OR "OFF" SHADE (RIGHT)
FGHIJ
6
7
8
9
10
RIGHT DROP SHADE
DROP LEFT
CAST SHADE LEFT
ELPG
11
12
13
14
BLENDED SHADE
SPLIT SHADE
BLOCK SHADE
CONVEX
SHADING
The Angle of Terminations on Shades is approx 45°
ALL Shaded Letters must correspond in this respect
The most common Shade is the Relief Fig 1 2 3 4 5
All Shades on Light Grounds Look Best in Tints

FIG 1

LONDON, ENG.

FIG 2

PARIS, France

FIG 3

ROME, ITALY

FIG 4

MADRID, SPAIN

SPECIMEN PRINT OF SHADING SHOWING EFFECT OF PRINCIPAL FORMS (See Marginal Notes)

FIG 1
RELIEF SHADE
MOST COMMON TYPE
Keep Angles Uniform

FIG 2
CAST SHADE.
Can be made either
on right or left

FIG. 3
BLOCK SHADE.
Can be solid color
or split (Light and Dark)
on either side, also.

FIG. 4
DROP SHADE.
USE TINTS to Give
Shadow Effect
Duplicate Letter for Shade.

Warm colors contain a predominance of yellow, and cold colors, a predominance of blue. Orange is a warm color, and bluish green, a cold. These suggest to the mind the effect of heat and cold, respectively.

Complementary colors are those which, when found in the spectrum, theoretically produce white. In pigments, this does not obtain. The secondary color is the complementary of the primary which does not appear in its own composition; thus ***green*** is the complementary of ***red;*** there is no ***red*** in the color ***green,*** it being composed of ***yellow*** and ***blue. Orange*** is the complementary of ***blue; violet,*** of ***yellow,*** etc.

Contrast is the resulting effect when two or more dissimilar colors are brought together. Some colors show best on black; some on gray; and nearly all look well on white.

Color harmony exists when the combined effect is pleasing to the eye, and should be carefully studied.

Certain colors placed on white ground appear darker than normal. When placed on black they appear abnormally brilliant.

Gold and silver letters on a light ground should be outlinel in black to make a greater contrast.

If it be desired to study further the intricacies of color, get any of the many good books on this subject from a public library.

Color cards, which give all shades and tints, can be secured free from paint dealers. Modern paint chemistry has greatly simplified the problems of the sign artist.

CHAPTER XVII

Hands

Signs are often seen with imperfectly drawn hands or pointers. There is no reason why a sign writer canot make a good index. This does not mean that it must be absolutely true to nature, but it should at least be in accordance with the requirements of anatomy.

Figs. 3 and 4, Plate 54, are typical of the human hand when drawn naturally, while Figs. 1 and 2 are the same type conventionalized. The latter is comparatively easy to make, while the others are more or less difficult.

A very pleasing effect can be secured by making these hands in flesh tints and outlining them with some dark color. If one is in a hurry, and has not time for drawing and finishing a hand, the arrows answer for pointers, but they do not look as well, neither are they as conspicuous.

Many sign painters have "cut-outs" of hands cut from cardboard of various sizes, which they use to facilitate their work. These can easily be made after drawing a hand in the right proportion, by simply cutting out the card or paper on which it is drawn, and then penciling around it.

In the previous chapters the work has been almost wholly confined to the making of letters and their arrangement. Apart from the making of the index, there has been little or no artistic work attempted, except in so far as lettering is of itself artistic. This is as it should be, as one should be familiar with letter forms and arrangement before attempting the design and scroll ornamentation in sign writing.

Ornamentation

Ornamentation of signs is not a fundamental in advertising. It is used primarily to relieve the monotony of the work, and incidentally, to enhance its value. Legibility is a keynote of all sign advertising, and without it all work is a failure. If ornamentation interferes with legibility, it is better by far that it be not used.

It would be futile to attempt to go into detail on such a broad subject as this. There are books dealing with ornamentation which are replete with information, and if one cared to follow this subject, such would be necessary. As regards the sign business, the elementary strokes and principles of scrolling are really all that is essential, and these are the ones we have endeavored to interpret in the plate examples.

Simple corner pieces, such as are indicated in Fig. 1, Plate 55, having the combination of straight and curved lines, are very attractive when put in color. Such color should in most cases be subordinate to the color tones of the letters. On a white ground they would most generally be in tint, although they might look well if done in a solid or heavy tone.

This holds true with the majority of corner pieces which can be used; in fact, there is no limit to the number of forms for such decoration. Fig. 6 is typical of the single-line type, and one can originate designs of corner pieces to good effect.

The matter of scrolling is very important in sign and show card writing. Some show card artists, and many sign writers, are exceedingly clever in this respect; but in order to understand how to be successful in this branch of the sign art, one should know the principles of the several types.

The first and most common form is the "Rococo" scroll, the elementary strokes of which are of opposite curves. Examples of the Rococo are given in Figs. 2, 7 and 13. These are either light or heavy lines, and can be made quickly by free-hand strokes, or can be designed by carefully drawn-out methods. For most quick work, such as on show cards, free-hand work is adequate.

There are a number of forms which embody in their composition units, such as flowers and leaves, and when carefully made make very pleasing decoration.

Such ornamentation as indicated in the posterized flower (Fig. 16) is more of the designed type of work which is germane to illustrative advertising, and is not so commonly used in sign work. However, there are times when such a piece of design work adds materially to the value of lettering, and, if the occasion warrants, would be well worth reproducing.

Ribbons are a very ancient and yet pleasing method of bringing out prominent lines and names on signs. They were in vogue hundreds of years ago and are still applicable to the requirements of sign work.

Initial letters in color, with scroll borders or ornamentation, are particularly handsome. There are many varieties of initial capitals and ribbon designs. We have given simple examples of each, but to one who is really interested in making them there are other forms of more or less value that can be employed.

Art Nouveau

In contradistinction to the Rococo, the art nouveau, or "new art," is one which permits the use of straight lines as well as curves. We have here, in Figs. 11 and 12, examples of this art.

There seems to be no definite basis on which this scroll is made, although there are light and heavy strokes in its composition. The main thing to remember in making an art nouveau scroll is to have the broad swing movement, allowing for freedom of brush work, which is most desired.

Such scrolling is usually used for panels, and when an art nouveau is placed on a card or sign, and properly done, it has a tendency to set off the lettering. Unless it is made in tint, however, it is very apt to be too heavy for the lettering and to outweigh in value all the copy, which of course is not desirable.

We would suggest, in the practice of the art nouveau type, confining yourself to simple, elementary strokes, without attempting to make the scroll too intricate.

Copy either of the two examples on Plate 55, and trace or "throw over" the same design that is used on one side of your card or sign to the opposite, so that you will have a complete art nouveau border. This is a common practice with most designers.

The flaming torch design, as indicated in Fig. 10, is only a suggestion for a decorative piece in the corner of a sign. This when well treated in color is very beautiful.

"Hanging crane" scroll effects, as shown in Fig. 17, are very simple, and are of the Rococo composition. These are used to make iron holders for signs, and some of them are very decorative.

Monogram Work

Monogram work is suggested in Fig. 15, and is capable of so much in way of artistic treatment that many courses and books give considerable space to the subject, but we do not feel that it has sufficient importance or bearing on the sign business to go into detail regarding it. The important thing to remember, in making monograms, is, no matter how artistic or decorative the letters may be, if legibility is sacrificed the object of the monogram is defeated.

Such ornaments as shown in Fig. 14 are used to fill space and give a pleasing appearance. They should not outweigh the lettering in value. Some of the books on sign and show card writing published in this country have excellent examples of ornamental designs which will be of help to the student.

Air-Brush Work

Without question, some of the most beautiful show cards in use today have been made with the air spray or brush. This produces the effect of a raised or embossed letter, which is exceedingly attractive, and, in some cases, a help to legibility. An air brush, strictly speaking, is not a brush at all. It is a metal tube with a needle attachment through which color is forced by use of compressed air or carbonic gas.

Originally, it was designed for retouching of photographs, but because of its adaptability to sign usage, it has become a necessary adjunct to every well-equipped shop. This in-

strument is very delicate in construction. It requires considerable attention, if it is to be kept in workable shape, because when once out of order it is difficult to restore. It has to be kept clean and free from all dirt or dust, otherwise the work done by it is crude and spatter-like. Usually, instructions come with such an outfit from the maker, and to the purchaser of an air brush the dealer would undoubtedly give information relative to its proper handling free of charge.

Prices for air brushes vary according to the style and size.

The simplest outfit consists of a compressed-air tank, with a foot-power pump, although its use is more difficult than that arrangement whereby the air is compressed by means of an electric motor and tank, or by the use of carbonic gas, such as is used to aerate soda water. A tank of this gas can be purchased from any concern which furnishes drug and confectionary stores with gas for their soda fountains, and is known as a "tube."

The flow of gas or air is regulated by a gauge, which regulates the pressure up to a certain number of pounds per square inch. This is controlled by a small, movable lever and spring on top of the air brush, and, with experience, remarkably fine work can be done, but it takes experience to achieve good results.

Special colors, used in air-brush work, can be obtained from dealers. They must be very thin, in order to be forced through the brush without clogging, and should be strained carefully before using. Upon completion of work with the air brush, it should be cleaned each time by blowing denatured alcohol or water through it.

Beautiful panel effects can be produced with the air brush by cut-out patterns, and, in the hands of an expert, marvelous results are obtained. These patterns are made by cutting out the design from cardboard or paper. When this is sprayed by the brush, and the pattern lifted from the card, an exact reproduction of the design will be found on the background.

When attempting to do this work, be sure not to overdo the color scheme. One-color work is preferable, and with neat lettering, good air brushing is always attractive.

Electric Signs

Although many sign and show card writers never have occasion to make electric signs, there are occasions when an understanding of them would be valuable. While we might go deeply into this subject, a few remarks concerning them will probably suffice.

There are a number of forms of electric signs; the ***luminous tube, box type*** with interior bulb lighting, the ***studded type,*** with large or small bulbs, ***flood-lighted,*** and ***flasher*** operated, also signs made with luminous raised glass letters, or translucent plastic letters. Many of these are protected by patents, and are manufactured only by controlling interests.

The greatest development in illuminated advertising that has ever been made is the ***neon*** light, or luminous gas tube sign. The discovery in 1895, by a Swedish chemist, of the process of producing a temperature so low that air can be liquefied, made this possible.

Subsequently, an English scientist by the name of Sir William Ramsay discovered the presence of three heretofore unknown gases by the evaporation of liquid air. While allowing the lighter gases to be dissipated, there remained a heavier gas which was called ***neon*** from the Greek word signifying ***new.*** Because of the cost of separation, it was at first only of experimental value, but in 1910 another scientist, a Frenchman by the name of Georges Claude, invented a process whereby it was possible to produce the gas at a lower cost, making it a commercial possibility.

By compression and filling translucent glass tubes with this new gas, and agitating its electrons by a small electric current, a luminous orange light was produced which had the advantage of superior penetrating qualities without generating a great deal of heat.

Sign makers were quick to seize upon the advantages of this manner of lighting for luminous signs, the first of which appeared in Paris, France, in the year 1921. Since

that time there has been developed the use of other similar gases such as ***krypton, xenon, argon,*** and ***helium,*** and mixtures which produce brilliant blue, green, and other colors having almost spectrum purity.

In addition, tubing of colored glass is used to obtain color effects that make the neon light strikingly effective.

An outgrowth of the neon light which has revolutionized the art of lighting is the fluorescent lamp. Fluorescent lighting is utilized not only in general lighting schemes, but also as a means of illumination for many signs and displays.

These luminous effects are produced by the application of fluorescent powders to the inside of the tube.

If the sign student wishes to go into the neon manufacturing field, it would be well to study the subject from books specifically dealing with lighting and its technalities.

The box sign is usually made entirely of metal with glass faces, the lettering being done on the glass, with the electric lights inside. These metal boxes are manufactured by metal workers, and fulfill all requirements of the city and state laws relative to electric construction.

The number of lights in each box is determined by the size of sign and the quantity of light desired. Usually the background of the sign faces is opaque, with the letters translucent; that is, showing light through.

When a sign of this character is made, it is painted the same as a wood or a glass sign, with the letters "stippled," to produce the translucent effect. A stippled letter is obtained by painting with white lead or zinc mixed in oil, and, after painting, the surface is gently pounced by a little absorbent cotton in a small cloth bag. The pouncing eradicates all brush marks, and gives a smooth surface which is similar to that of frosted glass.

Imitation stained glass backgrounds can be made by using various colors ground in oil and stippling. Some sign makers prefer slow-drying colored enamels for this work, as well as enamel for white stippling. To do good work on translucent effects the glass must be clean and the paint free from skins or lumps. On large surfaces it is advisable to use a pounce with a piece of card over the absorbent cotton inside of the cloth to keep it flat. This helps to make a more uniform surface.

The lettering on box signs is usually outlined either in gold or in color, and backgrounds can be made in any color desired. White opal glass can also be used, and obviates the need of stippling.

By "studded light" is meant that type of sign wherein the lettering, after painting, is illuminated by the use of electric lamps placed in the center, at a distance of approximately three or four inches between each light, according to the size of the letters and size of the lamp that is used.

Sometimes these studded lamps are made with metallic raised letters, and at other times the letters are simply painted on the background, and the lights arranged in conformity with their shape. The wiring on this kind of sign work is all done, as a rule, on the back of the sign. These are exceedingly expensive to make and to operate. Strictly speaking, such signs would be within the province of the electrician rather than that of the sign writer, and one should understand all about electricity before attempting to make them.

The "flood light" is a sign that is painted the same as any ordinary sign would be painted, with a light or lights projected over the face by reflectors, whereby the face of the sign is illuminated without the light itself being especially visible. This is a very common form of sign ligthing, and is more economical than any other method.

By "flasher" is meant that mechanical arrangement whereby lights are flashed on and off, and designs and figures reproduced by the mechanical arrangement of small metal contacts used in electrical construction, making the light go on and off according to the plan of the designer.

Some of the big electric signs in our large cities have large motors and flashers of tremendous power and intricate mechanism, and

the results obtained through their use are truly marvelous. The electrical displays on some of the roofs of buildings in New York, Boston, Chicago and other large cities are most spectacular, and many of the signs are studded with thousands of lights.

The cost of maintenance of these signs is enormous, but large advertising concerns evidently believe in their efficacy, and consequently use them for display.

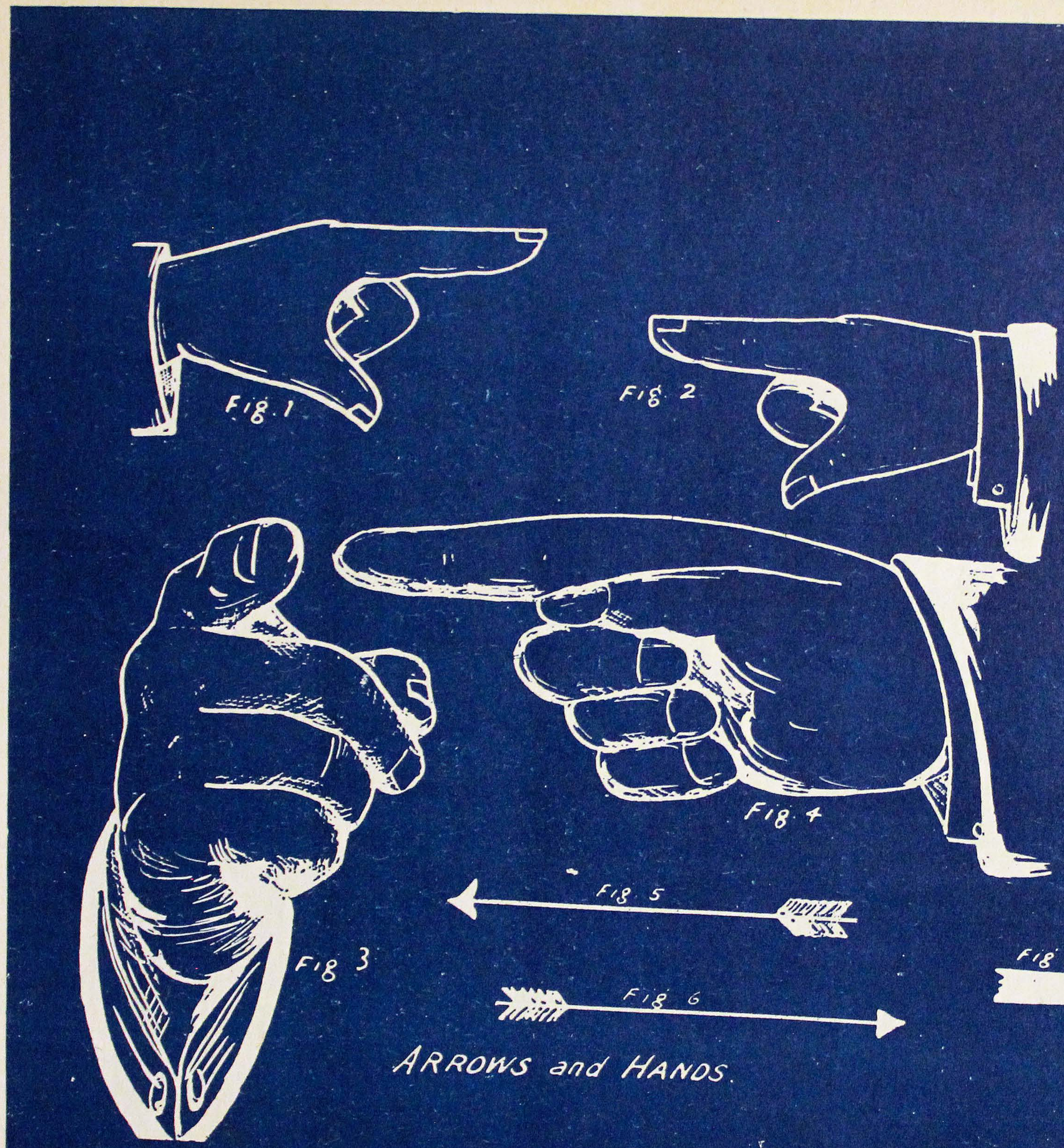
Small electric box signs, with one or two lights, are very easily made by sign painters, and flashers which are built into the lamp, causing the light to go on and off, can be purchased for very little cost. There are business houses that manufacture metal boxes all wired and ready for the sign writer to insert his glass and complete. As the law relative to electric installations are quite strict in most communities, it is undoubtedly expedient for the amateur, and even the professional, to avail himself of the opportunity of purchasing these boxes.

Vitreous or Porcelain Enameled Signs

One of the most recent processes utilized for the making of signs is the ***glass fused steel*** background, which is practically indestructible. This is replacing in many cases wood and metal heretofore used for belts and tablets, and is fast finding favor as a permanent sign for gasolene stations and national advertisers who contract for quantity production. Such signs are easily kept clean, and obviate frequent repaintings due to wear caused by the elements.

For backgrounds on neon electric signs and for automobile trucks, where hard wear is experienced, they are particularly appropriate, and it behooves any sign or show card writer to inquire into the possibilities of these vitreous signs as a selling feature.

While in a measure displacing hand methods, designs and lettering must be created by the sign maker or lettering artist, but the mechanical part of the work is done largely through the use of paper cut stencils. Prices for such work can be readily obtained from its manufacturers.



ARROWS and HANDS.

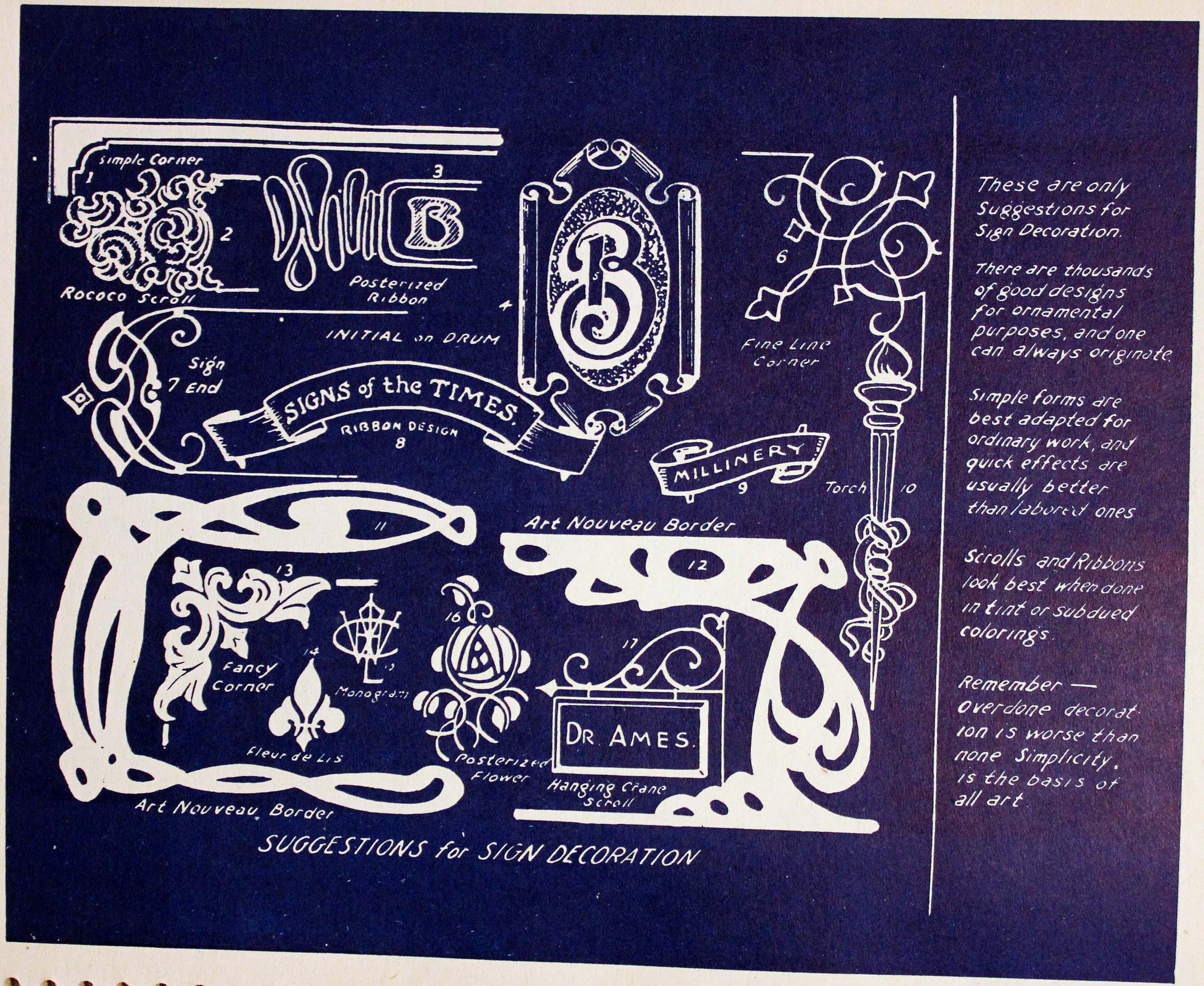
In making hands, try to keep the proportions true to life

A conventionalized index such as Fig 2 will answer for most sign requirements

Arrows can be made any length

Hands painted in flesh color are exceedingly attractive.

PLATE 54



SUGGESTIONS for SIGN DECORATION

These are only Suggestions for Sign Decoration.

There are thousands of good designs for ornamental purposes, and one can always originate.

Simple forms are best adapted for ordinary work, and quick effects are usually better than laborted ones

Scrolls and Ribbons look best when done in tint or subdued colorings.

Remember — overdone decoration is worse than none Simplicity, is the basis of all art.

CHAPTER XVIII

This chapter deals with useful information on general subjects relating to the sign arts.

Brass Signs

While it is desirable to know how to make a sign in brass, it is not always expedient or advantageous to do so. Special equipment is necessary, and most sign makers prefer to send their brass signs to a man whose specialty is along this line. However, if one cares to undertake them, the first thing to do is to secure brass of suitable weight. This is called "gauge." Some brass is soft and some hard, and the metal dealer will advise as to what is best adapted for one's needs. The average sign is engraved on 15-gauge brass.

Hand Cutting and Acid Work

For engraved lettering work there are two methods, viz., the old-fashioned routing or cutting out with a chisel, and the more modern one of acid etching.

A pattern or design of the copy to be lettered must first be drawn on paper and transferred to the sheet brass. If cut by hand it should be pencilled in, but if acid is to be used a pounced pattern will answer.

Hand cutting requires proper chisels, and the letter is first routed in outline and then the center is chipped out to a depth of about one-half the thickness of the brass. After this is finished the plate should be buffed to a high polish, and the letters filled with a stiff paste, black or color, using dry pigment, oil or varnish as a binder. There are patent fillers and driers on the market which are preferred by sign makers, and any supply house can furnish them.

If signs are to be cut by acid, the work ***must*** be done in some open space, such as a roof or yard, because of the danger of gassing by fumes.

The method of cutting is as follows: Cut in the face of the sign with a mixture of asphaltum, beeswax and resin, and when this is completed bank the edges of the sign with putty made with asphaltum and beeswax. Use a solution of nitric acid and water (one part nitric to three parts water) and allow it to stand until brass is cut to right depth, — approximately fifteen hours. When this is attained pour off acid and wash sign in water, remove banking with benzine, and proceed to fill letters, using a flexible palette knife.

Some brass makers bake their fillings, but this takes special ovens and fillers.

Wall Signs and Bulletins

In the sign trade, there is a distinction made between certain branches of the industry, and a man who devotes himself to outdoor advertising work is known as a "bulletin" painter, whereas one who does ordinary lettering is called a "commercial" man.

Wall work is no different from other types of sign painting, except in size of letters and surfaces painted. Walls are coated with lead and painted in oil color, but instead of lettering pencils the workman uses long-handled "fitch" tools and large, wide brushes.

Most walls are drawn to a scale, like an architect's blue print, and reproduced from that on the wall or bulletin to be painted. The easiest scale to work from is one inch to the foot. On high buildings and signs, painters' "falls" are employed. The term "falls" is used to designate the swinging stage, ropes and pulleys necessary for painting at high elevations.

Patent Letters

There are a number of patent letters on the market, principally for window use. Gold and silver glass letters are very handsome and durable. The leaf is fired on the inside of the glass.

White enamel letters are made of porcelain, baked over thin sheet copper, and are very much in vogue among a certain class of merchants. All such letters are sold by the upright

inch. They are affixed to the glass by a putty or cement made with dry white lead, paste lead, and quick-drying varnish. When applying them, remember to cover the ***edge*** of the letter all around, but not the ***entire*** back. They are held on by suction, and if there is a break in the cement, or if it covers the entire area, no suction is created.

Bronzes, Flitters, Metallics

Bronzes differ from flitters and metallics in so far as they are metals, ground very fine like powder, while the flitters and metallics are lustrous flakes of brilliant metal. All come in gold, silver, copper, purple, green, red and other tones, and are used largely for decorative work on signs and cards. They are affixed to backgrounds by some adhesive, usually varnish, glue or mucilage.

Mother of Pearl

Sheet pearl is exceedingly handsome when used in conjunction with lettering and backgrounds. The Japanese pearl is preferable for most work, as it comes thinner than the domestic. It is applied on glass with clear varnish, and backed up with tin-foil, using varnish also to hold the foil. On cards, ordinary glue will hold it.

Cutting and Drilling Glass Signs

While it is not necessary for the average sign writer to cut and drill glass for signs, it is well for him to know how to do it should the occasion arise when it had to be done in a hurry. Glass cutters of diamond or carbonized steel can be purchased, the latter being very inexpensive and quite satisfactory to one who knows how to use them. Always dip the point or wheel of the cutter in turpentine before attempting to cut glass. This reduces friction heat and prevents breakage. An ordinary breast-drill with a broken, three-sided file for a drill can be used for making holes. The drill must be kept wet with turpentine, and the pressure should be uniform. It does not pay for an amateur to drill his own glass, as the liability of breakage is too great. Any concern selling glass will drill holes for a small amount of money.

Bleeding Paints

Often, in repainting old signs, certain colors have a tendency to come through and tint the lead used in coating. This is called "bleeding," and is caused by the paint pigment previously used being of aniline composition. No matter how many coats of white are given the effect is the same. The only way to obviate the difficulty is to cover the entire surface with a coat of shellac (not too heavy) and then repaint. The shellac forms a thin skin which prevents the aniline color from coming to the surface.

Raised Letters

Raised wood letters are as a rule sawed and carved by concerns that specialize in wood turning. Sign makers occasionally manufacture their own, but for the small producer it is easier and better to buy the stock type. When furnished in the raw wood they require the same treatment as any wood sign, viz., priming and subsequent flat coats before sizing and gilding. The majority of workmen affix them to the sign background before gilding. Some, however, finish letters and affix them with 1¼ inch screws through the back of sign. If this method is used, keep absorbent cotton between hands and gold when putting letters on. Do not touch the gilded surface with fingers. It takes two persons to properly do a job of this kind, one in front to hold letters, and the other in back to screw them on. The sign must be in an upright position. See Plate 56 relating to raised letters.

Cast Bronze Letters

Cast bronze letters are much in vogue for the high-grade industries. Banks, libraries, financial houses, etc., are replacing other kinds of signs by tablets and cast letters. They are practically indestructible, and when highly polished or plated they are rich, durable and attractive.

Special equipment is requisite to make these metal signs, but some shops are so equipped, and sell to the trade their products. It is certainly interesting to learn of the very many ramifications of our industry.

"NEW YORK" ROMAN (carved) "PLAIN" EGYPTIAN and SPURRED

E E E E E E

CONDENSED NORMAL ELONGATED NORMAL ELONGATED NORMAL

"HALF-ROUND" "HALF-BLOCK" "HALF-BLOCK" "FULL-BLOCK" "ROMAN"

S S R R R R

(BEVELED) (CARVED) (BEVELED) (ROUND) (SQUARE) (FANCY)

SPECIMEN COPY

HOTEL

CORNER BRACKET SCROLL.

SIGN CENTRE SCROLL

CARVED CORNER PIECE.

RAISED WOOD LETTERS and CARVED SCROLLS.

TO FASTEN WOOD LETTERS, EITHER BRAD OR SCREW TO SIGN GROUND AS INDICATED BY SKETCH BELOW. IF BRADS ARE USED SET THEM BELOW LETTER SURFACE AND FILL HOLES WITH LEAD PUTTY.

IF SCREWS ARE USED, DRILL HOLES FOR SAME IN SIGN AND COUNTER-SINK THEM.

MOST SIGN MAKERS USE THE WIRE NAIL METHOD AS THERE IS LESS DANGER OF BREAKAGE.

CHAPTER XIX

Silk Screen Stencil Process

Reproductive methods in the sign and show card business have long been in use, beginning with what was known as the oil paper or brass (single or twin) tie-stencils. Because of its limitations this method has been almost entirely superseded by the tieless stencil made on silk, organdy, or fine mesh wire screening.

Paints or printing ink are forced through such stencils and deposited on printing surfaces with the resultant facsimile of original designs. In the parlance of the trade, all these methods are referred to as the "silk screen process," because silk of different meshes is most commonly employed.

This method has revolutionized reproductive work, and is employed not only on signs, but for such diverse objects as furniture, toys, lettering on machinery, bags, automobiles and trucks, lamp shades, greeting cards and games, and even on milk and cosmetic bottles and household containers. In fact, there seems to be no limit to its potentialities. At this writing, screen process printing is practically in its infancy.

The method is simple when understood, as it consists primarily in forcing paint or ink through the fine meshes of a screen by using a rubber "squeegee" attached to a wooden handle.

Different methods of making the screen are employed by the process printers, and each and every method has certain advantages. Stated briefly, they range from the earliest known form of painting or cutting in designs directly on the silk with shellac or lacquer, or sizing the screens with a solution of glue or water-solvent substance, then painting the design on the glue with some form of shellac or screen filler, and washing out the design when the blocking-in color is hard dry.

Another method is cutting the design out of paper, and adhering the paper to the silk with some adhesive paint.

The most favored methods, however, in use by the sign trade are the specially prepared films which are laminated on a sheet of translucent paper, allowing the cutting of the designs or lettering without cutting through the backing sheet, and also the photo stencil, which has been developed to a high degree of perfection.

The film-cut stencil is applied to the silk or organdy by two methods; one being the application of adhering liquid, and the other by the use of a moderately warm flatiron. When properly adhered and dried, the backing paper is removed.

The photo stencils are produced in practically the same manner as negatives are made by photographers, wherein the silk is sensitized, and the design is photographed and developed the same as any negative in photography.

Photo stencils permit the screening of minute detailed work not possible by any other method of screen printing.

The equipment for the actual printing can be simple or elaborate, and consists of certain necessary paraphernalia such as a table and wooden frame on which the silk is stretched, different sizes of squeegees, suitable screen process paint, film or tushe for making stencils, cardboard or paper on which to print, with liquids such as kerosene, alcohol, or lacquer thinner for removing old stencils and cleaning screens after work is completed.

Some screen operators have complete photographic equipment, with dark room for making photo stencils, but we would not advise the amateur to attempt this method, for there are a number of concerns who will furnish complete screens by the photographic method at a small cost.

Of course it is important to have a supply of stencil silk or organdy on hand. Organdy is less durable than silk, especially on long runs. Silk comes in different widths, and is

quite expensive. It is numbered from one to twenty-five, according to the mesh count.

Although we have spoken only of silk and organdy, in many lines they have been superseded by such well known substitutes as rayon and nylon, and some such material may supplant the use of silk in this industry.

The most suitable meshes for ordinary show cards are numbers twelve to sixteen. The finer the detail to be printed, the finer the quality of silk required. Wire cloth screens are best adapted for the photo stencil method, and possess great durability.

The cutting of film stencils is usually done by the use of small film-cutting knives, which can be had at any of the art supply stores handling such products. It is well to keep a small oil stone convenient for sharpening them. A celluloid triangle, a steel rule, and a T square are also essential. Another necessary piece of equipment is a rack in which printed cards and papers can be placed for drying.

After screens are properly prepared, they must be registered very carefully before printing. Special tables for process work are sold, as are also paints prepared especially for silk screen work. Practically all of these are very finely ground and highly cencentrated colors which dry rapidly with uniform flat or gloss finishes. Also on the market, are paint extenders which tend to conserve the use of paint.

Mixing varnish for the purpose of thinning or retarding the paints is a requirement, and special reducers are manufactured to act as thinners for screen fillers and paints.

There are so many different methods and materials in the screen process work that it requires considerable study to become proficient in this interesting phase of the sign industry. There are many good books treating this subject which can be procured at any public library or in art supply stores.

See Plate No. 71 for illustrations of silk screen requirements.

Shop Equipment

Although many who have perused the pages of this book may never undertake to fit up a shop or studio for sign or show card writing, there may be some who will be interested in knowing just what would be considered necessary in the way of essential equipment. While the following list may be incomplete in some details, it will be found adequate for the average need, and will be of help to one who contemplates engaging in this business. The list could be augmented considerably, but not necessarily.

Permanent and Non-Expendable Materials

Bench for card and small signs (see Plate 57).
"T" square.
Yardsticks.
Two-foot rule.
Steel tape measure.
Wood compasses (12 inch).
Easels (2 or more).
Horses (2 or more).

Stepladder (6 foot)
Ladder (12 foot)
Falls for wall work
} Necessity for sign painters, but not for show card writers.

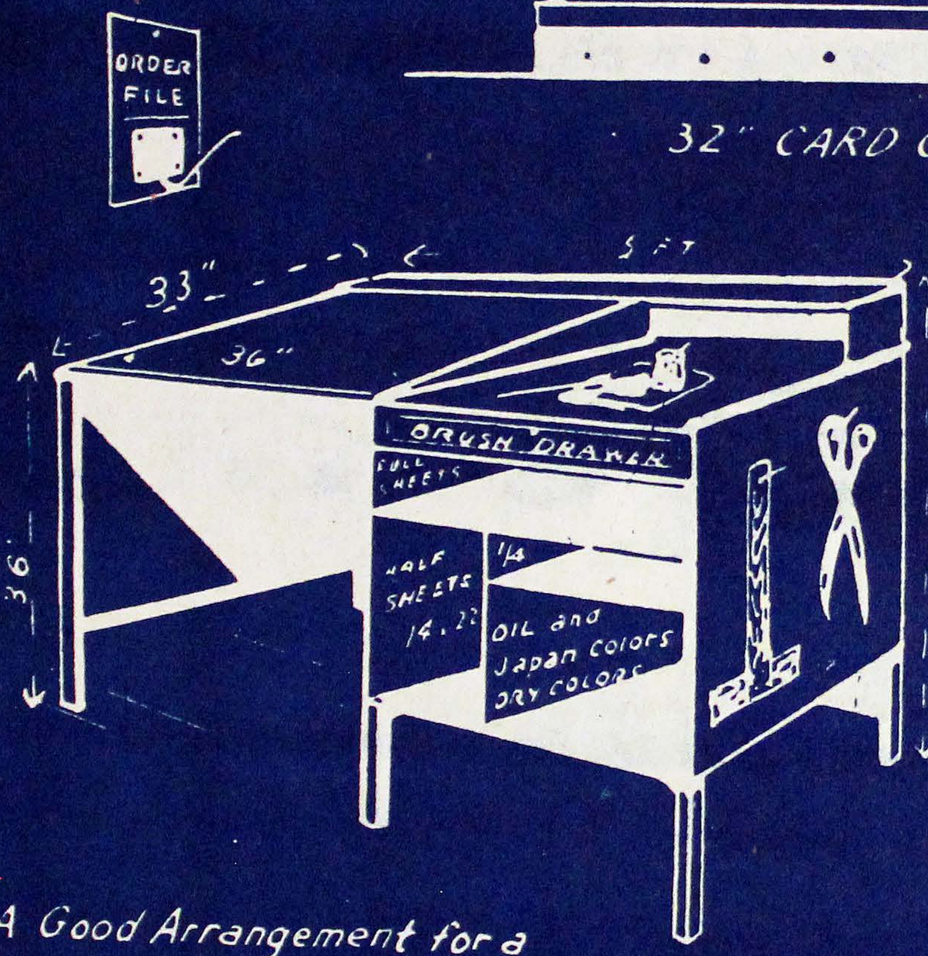
Card cutter.
Scissors.
Snips (for sheet iron).
Eyelet punch.
Grommet fastener.
Paint stands.
Paint cabinet and color mixing bench.
Drop cloths.
Tools (hammers, saws, planes, chisels, screwdrivers, drills).
Glass cutters.
Safety razor blade holders.
Perforating wheel.
Putty knife.
Mahlstick.
Snap line.
Water size heater.
Air-brush outfit.
Sign kit.
"Cut-awl" machine or jig-saw.

Expendable Materials

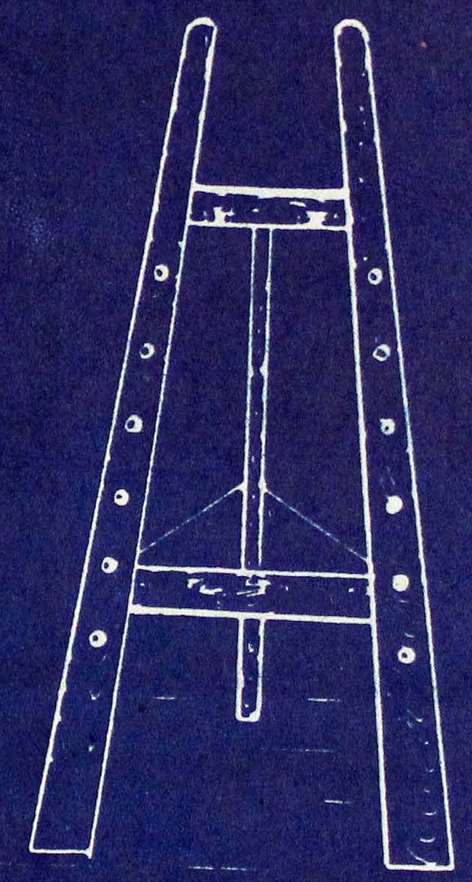
Water colors.
Dry Colors.
Oil colors.
Japan colors.
Screen process paints and fillers.
Oil (boiled and raw).
Turpentine.
Shellac.
Japan.
Varnishes (quick and slow).

SOME NECESSARY SHOP EQUIPMENT

32" CARD CUTTER



A Good Arrangement for a
SHOW CARD BENCH.



SIGN WRITERS EASEL

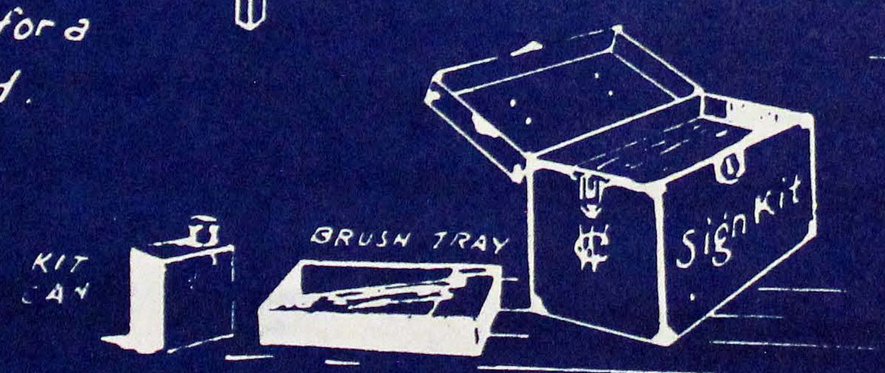


Plate 57

Gold sizes (quick and slow).
Card stock (assorted colors and finishes).
White paper (roll 3 feet wide).
Enamel cloth.
Sign cloth.
Silk bolting or organdy.
Suitable brushes (all needed kinds).
Chalk and charcoal.
Grease pencils.
Lead pencils.
Smalt (black, blue).
Gold and silver leaf.
Gelatin capsules.
Brass grommets.
Eyelets.
Ground pumice stone (fine, for cleaning and rubbing down surfaces).
Sandpaper.
Glue.
Mucilage.
Pens (suitable for card work).
Air-brush inks.
Lumber.
Nails.
Screws.
Tacks.
Dogs for sign hanging.
Paint strainer.

Office Equipment

Of course one ought to have some office equipment, but that can best be determined by the needs and growth of business, and it would be futile to attempt to give advice on such things in a treatise of this kind.

Just a bit of advice regarding it, however: do not buy at the outset everything you think you want. Buy equipment as the need presents itself. One thing a sign writer should never be without — a good dictionary. Do not forget this important requisite.

Sign Hanging

Although the average man engaged in the sign industry relies upon a bonded sign hanger to place or affix signs on buildings, it sometimes becomes necessary for the sign painter to hang his own signs, particularly in the smaller localities, where bonded sign hangers cannot be obtained. In view of this fact, a few remarks relative to the hanging of signs may be of value.

There are certain things necessary for sign hanging, and the most essential are strong hemp ropes at least three-quarters of an inch in thickness, and drills suitable for either brick or stone surfaces. These drills are usually made from cold chisels, and can be pointed or flat, according to the type of work which is done.

Of course, screwdrivers and braces and bits are fundamentals, as are also the stock hardware, such as dogs, screw eyes, nails and screws. For the benefit of the uninitiated, we would say that the term "dogs" is given to small iron hooks, made by any blacksmith, the ends of which are flattened to a chisel shape. These dogs are driven into holes which have been drilled into brick or stone and plugged with wood. Awning hooks are sometimes used for this purpose, and can be purchased at hardware stores. Then, again, strap iron is commonly used for projecting signs, as are chains of various weights and sizes.

Copper wire is a very necessary adjunct to sign hanging. Iron wire should never be used because of its susceptibility to rust. On completion of the job, all hanging irons or materials ought to be painted with a good weather-resisting paint.

The reason sign hangers are bonded in the large cities is because of the fact that there is always liability of danger in such work, particularly if a sign is insecurely fastened, and the possibility of injury to pedestrians is great. We would advise any one attempting to hang a sign to make sure that every detail connected with it is taken care of. By all means, take no chances with such work.

CHAPTER XX

Supplementary Alphabets

The ***supplementary*** alphabets which appear with this chapter are slight modifications of the fundamental types given in the main part of this book.

The ***post old style*** or ***brush letter*** (Plate 58) is made with a round ball termination, both in the thick and thin and in the one-thickness weights.

In order to make this correctly one should be sure that there are no sharp corners. The letter form is clearly defined, and the proportions are similar to other types, but the character of the style is changed by the rounded serif.

Another form of this alphabet is made with ragged, uneven brush strokes, and while the effect is more or less crude, it is favored by some artists who aspire to imitate the antique in lettering.

The ***Italic Roman*** (Plate 59) is a very light-faced Roman letter drawn at an angle of approximately 20°. It is exceedingly clean in its appearance, and is quite a favorite among the craftsmen. After once getting the swing of the style, it is quickly and easily made, and lends itself to high-grade commercial advertising. It is closely allied to the half script in appearance.

The ***spurred thick and thin Egyptian*** (Plate 60) is very similar to the plain, but with the addition of serifs which are short and rounded. For a quick, knock-about type for everyday work, this style is admirable. The corners must be sharp and the serifs must be on all terminations.

The ***modern architectural*** (Plate 61) and the ***eccentric show card*** (Plate 62) are two styles which are adapted for high-grade work, the architectural being used for building inscriptions and stone carving. The eccentric show card is typical of lettering done on moving picture slides and high-class commercial show cards.

It is not necessary to follow the plate absolutely in order to get the effect of the eccentric, but there is a limit, of course, to eccentricity in lettering, and it should never be carried to the point where legibility is imperiled.

Included with the architectural are the ***Roman numerals,*** showing notation by letter up to one million.

The ***heavy-faced Western*** (Plate 63) is a style which is not very common, but for some purposes it is without a peer. The heavy strokes are approximately about one-third heavier than normal, and where bold, original letter forms are desired it fits in remarkably well.

Such alphabets as the ***motion picture title*** (Plate 64), ***"mongrel"*** or ***French-Roman*** (Plate 65), and ***German poster*** (Plate 67) are more or less popular, and make a pleasing change from the stiff, formal styles.

An alphabet of great beauty, and one in use for diploma and resolution lettering, is the ***engrossing text*** or ***script*** (Plate 66). It is well adapted to flat pen or brush work.

The ***"Modern Silhouette"*** and ***half-round Egyptian*** are presented as modifications of standard letter types, suited for theatrical or bizarre effects. The Oriental type is suggestive of Chinese influence.

Sign Prices and Estimating

The author has endeavored to give you in this book a comprehensive idea of the sign and show card business without making it too technical and difficult. Beginning with the plain Egyptian alphabet he has treated respectively, the upper and lower case Egyptian, French thick and thin, full block, half block, Roman, script and Old English letters, besides modifications such as the Tuscan and thick and thin block letters. He has also discussed sign nomenclature, serifs, treatment of arcs and general spacing. There has been some information given in cutting-in and

smalt work, treatment of wooden signs and raised gold letters, sheet iron, glass and other kinds of signs.

In addition to these, the art of shading and laying of gold leaf have been briefly treated.

With this knowledge as a background, there is no reason why the student should not perfect himself in all the various ramifications of the sign business. It is not possible for any book, no matter how graphically illustrated or carefully thought out and minutely treated, to exhaust the subject.

One can always learn something new, and no man ever attains that degree of perfection or excellence whereby he could consider himself absolutely finished as a workman.

To be an accomplished sign writer one should have a knowledge of a variety of subjects, and there is no line of work which calls for such an extended knowledge as sign writing. To a sign enthusiast the work is always opening up new possibilities and opportunities, and if you really enjoy the work, irrespective of innate ability, you are bound to succeed.

No matter what line of endeavor you are following, or where you are located, the knowledge gained in this book will stand in good stead at some time in your career. Do not be afraid to attempt anything in the trade, as most things when attempted prove to be less difficult than they seem.

With an understanding of sign methods and ability to do lettering, one ought to command commensurate financial return, and we would advise you never to do work for a less price than the work is really worth, or for less than it could be done in any experienced sign shop which has an "overhead" in addition to labor cost.

It would be well for you to know prices, although it is a most difficult thing to determine definitely the value of sign work. One man's work might be worth considerably more than another's, and yet done in the same time and the same amount of stock used; that is to say, a good letterer's work ought to command and does command, a better price than a poor workman's, and you can readily see why there is a discrepancy in prices charged by different men for the same job.

Despite the fact that there have been in times past trade price lists originated and used in the sign trade, they have been mostly unsatisfactory because no two jobs are ever done under exactly the same conditions. It behooves you as a workman to charge for your labor all that the same is worth, and make your prices sufficiently large so that you will not in any way injure the profession by underbidding the shops or workmen who have to make a living for themselves and those dependent upon them.

On General Sign Work

A good rule to follow in basing estimates is to figure time at so much per hour, plus the cost of stock and general overhead, which includes rent, light, heat, telephone and clerical assistance and profit percentage on whole cost based on conditions obtaining in your locality; for example, if labor costs are $1.25 per hour in your community, figure time (number of hours at that rate), overhead (estimated), stock costs (definite), and percentage profit of whole (25 per cent, 33 per cent, or whatever is fair). Here is an example of the method used by most concerns: Sign, 20 x 2 feet, wood, gold (flat letters):

Cost of lumber and building at 30 cents per square foot	$12 00
Paint, smalt, at 5 cents per square foot	2 00
Gold leaf (5 books) at 75 cents	3 75
Hanging (sign hanger's estimate)	6 00
Labor, 8 hours, at $1.25	10 00
Overhead (estimated)	3 00
	$36 75
Percentage profit, 33⅓	12 25
Total	$49 00

By following some such method you reduce to a minimum the possibility of loss in estimating. Of course this does not take into account the liability of loss in poor collection systems, but it does insure against the mistakes of haphazard estimating on jobs. Some men, by years of training and experience, can figure a job by just glancing at it, but it is not safe

for the average man in the trade to do so. Know your costs and you will not go wrong.

Regarding small signs, such as cards, glass, tin, etc., it is customary to give prices on the job, charging by the size and amount of lettering to be painted. One quickly learns by experience the correct amounts, although they vary tremendously according to conditions.

Gold and silver lettering on glass is estimated on the lineal foot basis or by the upright inch. Office door work in most cities is charged for by the letter. Show card prices are determined by the amount of copy, colors, design and the size of the card. (These sizes are given in Chapter I.)

There are trade journals which carry price lists that are up to date, besides other interesting sign features, and the author would suggest that every one who is engaged in any phase of the work treated in the "Blue Print Textbook" should subscribe for them.

Drums, Banners and Swing Signs

On Plate 75 will be found a few sketches of banners, drums and swing signs, and on Plate 72 is given a general idea of signs referred to under the head of ***Nomenclature*** in Chapter VII. These two plates give helpful ideas to those who estimate on such work, and also to sign purchasers.

Swinging signs are made in a variety of shapes, and are largely the product of the skill of a carpenter and blacksmith. They should be built to fit their intended location, and ought to possess both beauty and utility.

Drum signs, whether of brass or galvanized iron, should be fitted carefully to corners or posts, as the case may be.

A pleasing picture of a sidewalk sign is given on Plate 75, but this type is impracticable in large cities, where ordinances against all sidewalk signs prevail.

Silk or satin banners are made in such variety and are so familiar that it is needless to describe them in detail. Material of best quality only should be used.

When lettered in gold leaf, the inscription should first be laid in several coats of shellac, and then sized and finished the same as any ordinary gold work. Cloth and net banners can be purchased from awning makers. These are secured with ropes which are sewed into the banner.

Plate 72 pictures a building equipped with signs properly placed and bearing the trade names.

Solicitors for commercial work will find that sketches, drawn to scale, incorporating the ideas of a prospective customer, will quite frequently prove of selling value.

It is a matter of common knowledge in the trade that many substantial orders have been secured through the instrumentality of such drawings, and the time consumed in making the same is usually amply compensated for.

Plates 73 and 74 deal with seasonable show card suggestions and trade marks of present and former usage. Sign writers are often called upon to originate or reproduce trade marks and their design offers an opportunity for creative ideas.

As a parting word to students — ***never*** get discouraged over failures in your lettering efforts. Development comes only by everlastingly keeping at it. Let your mind ever be open for new ideas. Remember, no man has a monopoly of knowledge in this or any other line. Get ***all*** the good books that you can on this subject, and, even if they differ in minor details, do not discount any without proving for yourself the truth.

Just one thing more — ***never*** disparage the other fellow in your line, and if you know some things that he does not, be generous with your knowledge. He might surprise you by reciprocating.

ABCDEFGHI
JKLMNOPQ
RSTUVWXYZ
123456789 &
abcdefghijklmnopq
rstuvwxyz Plymouth
SPECIMEN CONDENSED 1/4
POST OLD STYLE (No Sharp Corners)

ABCDEFGHIJKLM
NOPQRSTUVWXYZ
123456789
abcdefghijklmnopqrstu
vwxyz & San Francisco

ITALIC ROMAN (CONDENSED)

ABCDEFGHI
JKLMNOPQ
RSTUVWXYZ
abcdefghijklmn
opqrstuvwxyz&

SPURRED THICK AND THIN EGYPTIAN, Upper and Lower Case.

MODERN ARCHITECTURAL

ABCDEFGHI JKLMNOPQ RSTUVWXYZ

ROMAN NUMERALS

I II III IV V VI VII VIII IX X XI XII XIII XIV XV XVI XVII
XVIII XIX XX XXX XL L LX LXX LXXX XC C
D CM M MD $\overline{M}$ SPECIMEN ERECTED A.D. MCMXXIII

Aa Bb Cc Dd Ee Ff
Gg Hh Ii Jj Kk Ll Mm
Nn Oo Pp Qq Rr Ss Tt
Uu Vv Ww Xx Yy Zz &
MODERN ECCENTRIC SHOWCARD STYLE

PLATE 62

ABCDEFGHIJ
KLMNOPQRS
TUVWXYZ &$¢
abcdefghijklm
nopqrstuvwxyz

"WESTERN" THICK AND THIN.

PLATE 63

AaBbCcDdEeFf
GgHhIíJjKkLlMm
NnOoPpQqRrSs
TtUuVvWwXxYyZz
MOTION PICTURE TITLE ONE-STROKE (Pen or Brush)

ABCDEFG
HIJKLMN
OPQRSTU
VWXYZ &

"MONGREL" (FRENCH-ROMAN) SHOW CARD

ABCDEFGHIJ
JKLMNOP
QRSTUVW
XYZabcdefghij
klmnopqrstuvwxyz
Engrossing Text.

PLATE 66

"GERMAN-POSTER" EGYPTIAN (Heavy)

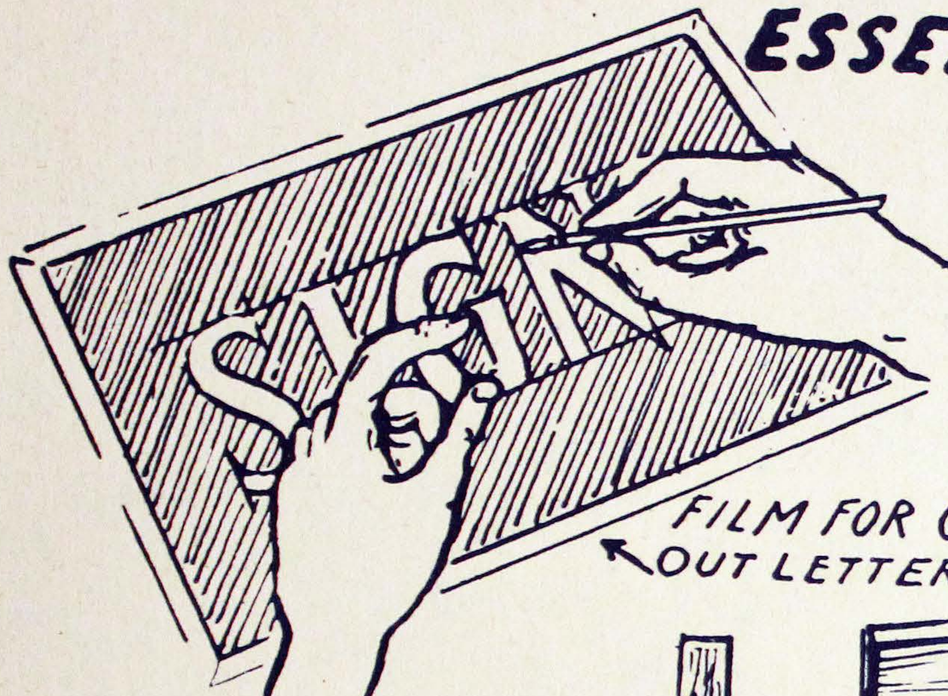
ABCDEFGHI
JKLMNOPQ
RSTUVWXY
Z& abcdefgh
ijklmnopqrst
uvwxyz 1234567
890
Wagner's Silhouette
ULTRA-ECCENTRIC · MODERNISTIC

ABCDEFGHIJKL
MNOPQRSTUVW
XYZ& abcdefg
hijklmnopqrstu
vwxyz 123456789

Modern variation of Half Round Egyptian. Note incorrect interspersion of lower case with upper: V V

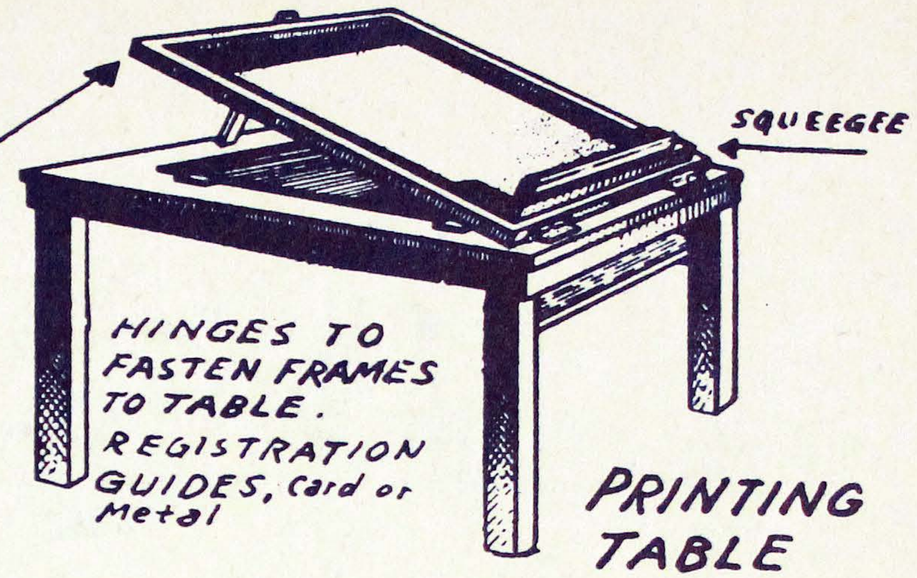
ORIENTAL Upper Case

SOME SCREEN PROCESS ESSENTIALS



WOOD FRAME for Stretching Silk or organdie

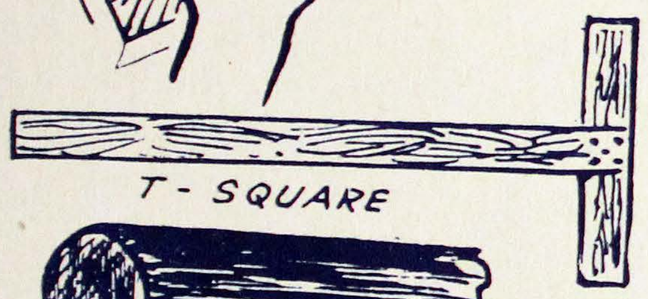
FILM FOR CUTTING OUT LETTERS OR DESIGNS



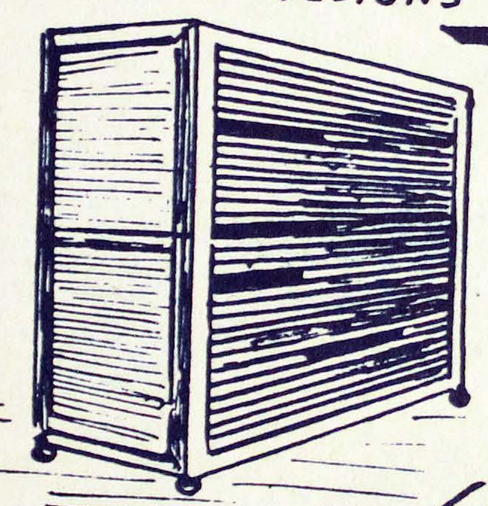
PRINTING TABLE

FILM STENCIL KNIFE

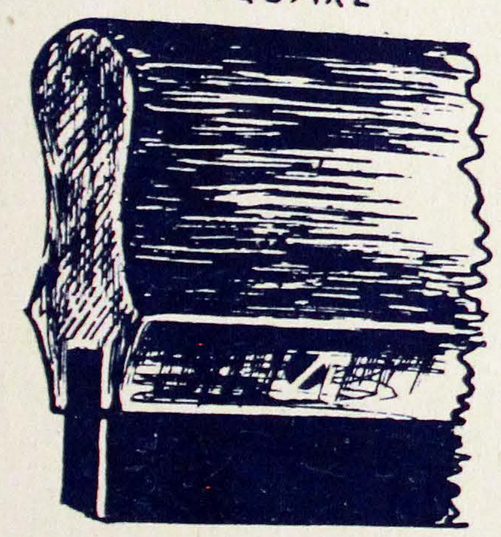
PAPER STENCIL KNIFE



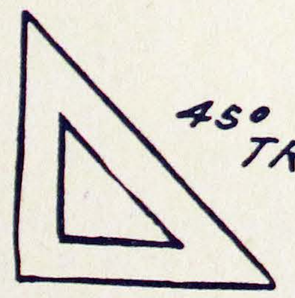
T - SQUARE



RACKING ARRANGEMENT

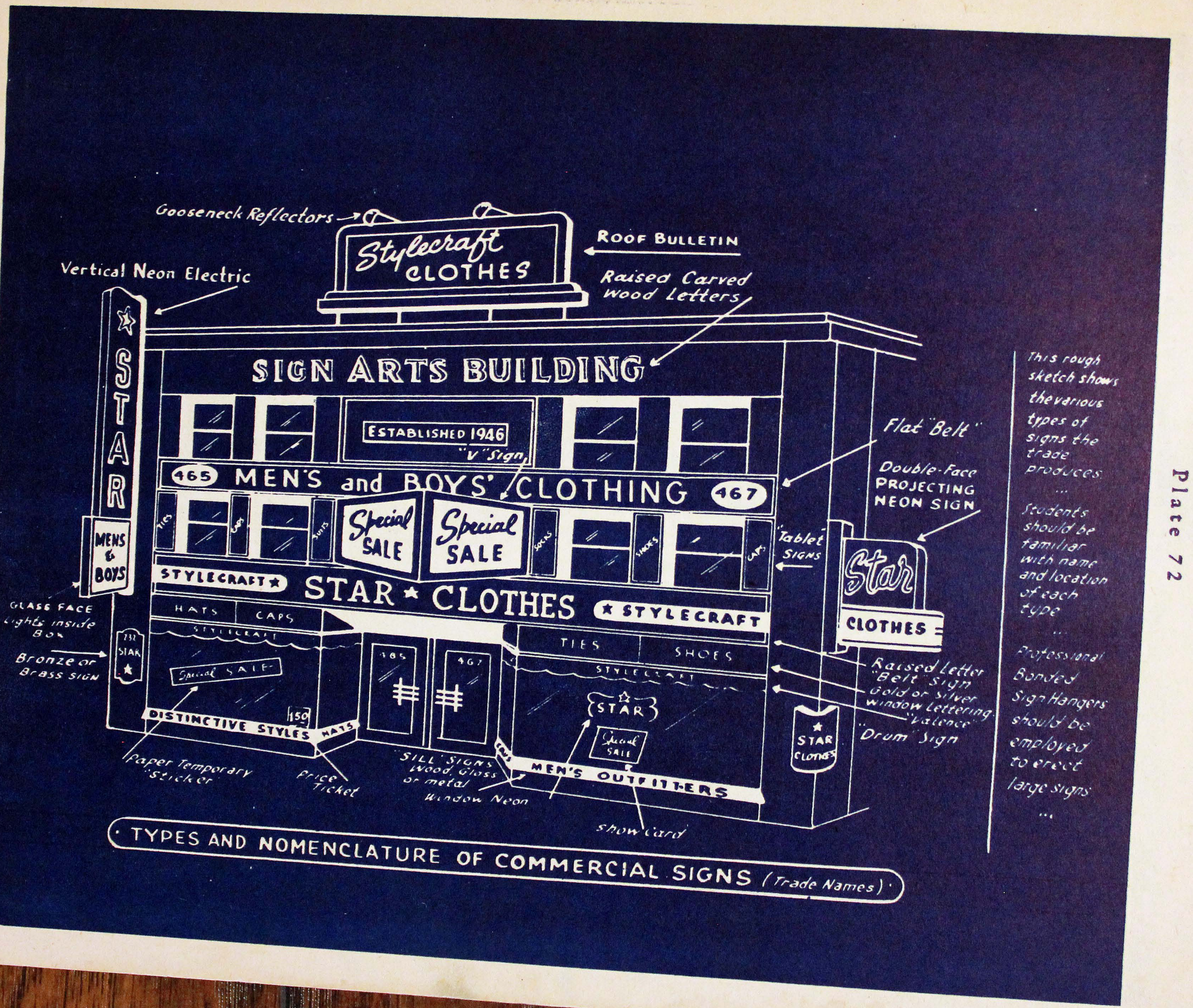


Rubber Squeegee



45° TRIANGLE

PRINTING OPERATION — to print, the sign man scoops paint up from lower part of screen on squeegee blade and applies on design.



This rough sketch shows the various types of signs the trade produces.

...

Students should be familiar with name and location of each type

...

Professional Bonded Sign Hangers should be employed to erect large signs

...

Plate 72

1

A SUGGESTION for a WINTER CARD

Black Card with White lettering is most effective for this kind of advertising The reverse is also good

Bold heavy types are usually used on Sale signs

Sketches if employed, should be indicative of the Winter Season

Leave plenty margin around copy

2

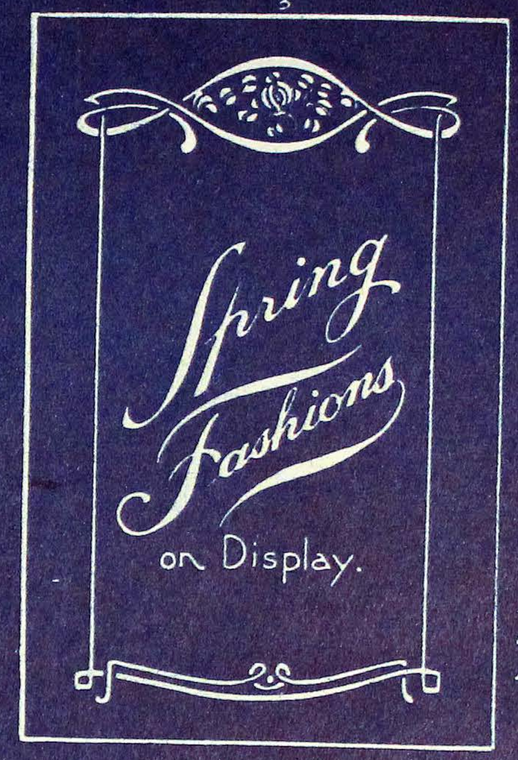
A SUGGESTION for an EASTER CARD

Purple is an Easter color and backgrounds or lettering in purple or violet tones always suggest the season

Old English or Text letters seem to best interpret the religious significance of Easter

Easter and Calla Lillies are appropriate.

3

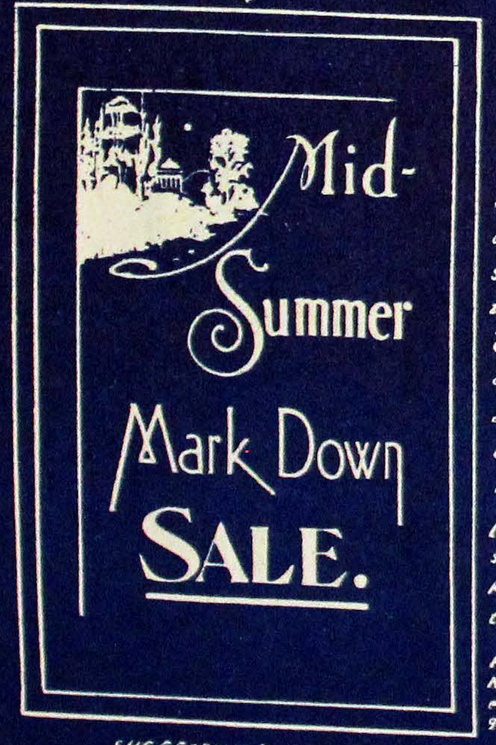


A SPRING CARD SUGGESTION

Any light tint if harmoniously treated could be used for Spring cards Green shades are suggestive of the season White grounds are always appropriate

Flowers and scrolls enhance the beauty of such work but they must not be overdone

4



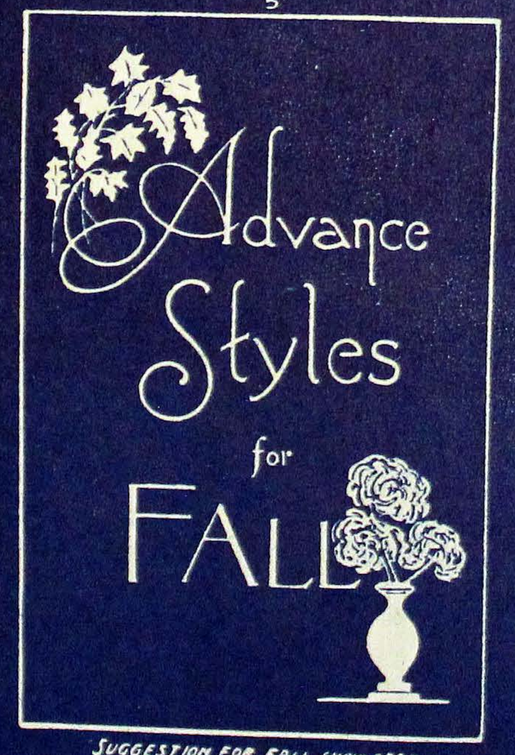
SUGGESTION for SUMMER

White Card for Summer Displays admits color treatment on illustrations suitable for the warm season Cool shades are always attractive if color harmony is observed

lettering should be in keeping with the layout

Remember - Neatness is essential for good work.

5



SUGGESTION FOR FALL SHOW CARD

For FALL Show Cards Brown Stock or Brown Tones on White Stock would be appropriate.

Delicate Types of Lettering give a distinctive appearance to such copy as this

Decorations should be in keeping with the spirit of the Season

6

SUGGESTION for CHRISTMAS CARD.

Red and Green are Christmas colors

White lettering on backgrounds of these colors is attractive Frosting or Silver Flitters if judiciously used adds to the effectiveness of cards For decorative features, Holly, Candles and pictures of "The Boy" Santa Claus are fine

PLATE 73

NASH

STUTZ

CHEVROLET

PHILCO
DIAMOND GRID
BATTERIES

MARMON

GE

FLINT

CHANDLER SIX

CLEVELAND SIX

CHAMPION

THADE MARK
"HIS MASTER'S VOICE"

Buick

Wagner School

A Few Well Known Trade Marks Seen on Signs

When trade marks are to be reproduced, they should be copied with absolute fidelity to the original copy, both in color and design.

DRUMS, BANNERS AND SWING SIGNS.

PLATE 75

QUESTIONS FOR TEACHERS' USE

CHAPTER 1

What types of brushes are used in sign arts?
What are the two generally preferred?
Describe them and give principal usage.
How should brushes used in water colors be cleaned?
How should brushes used in oil, japan or varnish paint be cleaned?
How are sizes of lettering pencils designated?
What is a one-stroke brush?
What are show card colors?
How are they mixed?
What kinds of brushes are used with them?
What are dry colors?
Give the names of the six dry colors most commonly used in show card paint.
What proportion of binder and water should be used in such paint?
What happens when insufficient binder is used?
What is japan paint?
How is it used?
What are oil colors and for what are they used?
What is asphaltum?
What is the difference between drop black and lampblack?
What is "ply" in cardboard?
What are the regulation sizes in cardboard, and how are they designated?
What is meant by finish?
What finish is best adapted for water-color work?
What is the best slope for a show card bench?

CHAPTER II

What is a plain Egyptian letter?
What is meant by upper and lower case?
Why is this type designated as "plain"?
What is the best proportion for the width of stroke?
What is the proportion of width to height of a normal letter?
What is meant by a "broken-backed" A?
What is the optical center of a letter?
Why are round letters made to extend above and below the line?
Why is the upper part of the B and similar letters smaller than the lower part?
What is the rule for use of the upper and lower case letters?

CHAPTER III

What is the origin of the numerals of the plain Egyptian?
How do Roman numerals differ from them?
What is the relative size of the characters in relation to the numerals?
What is the proportion of the lower case to the upper case?
Make diagram of music staff illustrating this.

CHAPTER IV

What is meant by margin?
Why should it be used?
How should copy be analyzed?

When two perpendicular strokes come together, what rule is observed?
What is good spacing?
What kinds of brushes are preferable for use in japan paint?
How is japan black mixed for ordinary usage?
What other binder can be substituted?
How is such paint thinned?
If japan paint is used without a binder, how does it dry?
What is the binder used in japan, red, blue, green or other colors?
What kind of oil is used to keep brushes soft and in good condition?
How is the oil removed from brushes before using again?
Why is this necessary?

CHAPTER V

Wherein does the thick and thin Egyptian differ from the plain Egyptian?
What is the arbitrary principle of thick and thin types?
What is the origin of this form?
In which way does the accented stroke on the oblique bars run?
What is the one exception to this?
What are the general proportions?
What is the relation of the height of the lower case letter to that of the upper case?
Which weight do the commas and periods take in this type?
How should sign and show card copy be laid out?
What space is used between words?
How can copy which must be crowded be made with best effect?
Which is the more legible, large letters crowded, or small letters properly spaced?
When should a large brush be used in preference to a small one?

CHAPTER VI

What is meant by serifs?
What is their history?
Why are they employed on lettering?
Give the names designated on Plate 18.
Which type is the most effective and beautiful?
What are the characteristics of the French thick and thin alphabet?
How are national characteristics revealed in lettering?
What is the general proportion of the width in relation to the height of this type?
What is the chief requisite in preparing copy?

CHAPTER VII

How are optical illusions in spacing counteracted?
What is meant by nomenclature of signs and show cards?
What is a belt sign? A tablet? A drum? A sill sign?
What is meant by "landscape" and "panel" with reference to show cards?
How is lettering arranged on an arc?
What is the reason for such an arrangement?
What is meant by balance?
How do mechanical and artistic layouts differ?
What is the most effective marginal arrangement on show cards?
In what way does hand lettering differ from printing with regard to arrangement of letters?
In what combinations of letters is the space between increased or decreased for optical effect?
What is the principle of Italic lettering?
What is the customary degree of slant in this style?
How should office door lettering be laid out?
What paint mixture is best adapted for this work?
What type of brush is most suitable for glass lettering?

CHAPTER VIII

What is a full-block letter?
How does it differ from the plain Egyptian?
What is the rule regarding the length of block?
Name a letter which is a perfect example of the full-block principle.
What are the advantages of the full-block type?
Why is it adapted to the art of shading?
Is it suitable for show card work?
What is the proportionate width of a normal letter in this type in relation to its height?
Wherein does the thick and thin differ from the one-thickness full block?
What is the rule governing the width of the blocks?
What advantage has the thick and thin full block over the one thickness?
How can the appearance of colored letters be improved?

CHAPTER IX

In what way does the half block differ from the full block?
Name the letters of the upper case which are the same as the plain Egyptian.
For what kind of work is this style best adapted?
What is this method called?
What is the usual procedure after cutting in on large wooden signs?
What is smalt?
Describe method of applying.
What kind of oil is used for smalting color?
What is the cause of cutting-in color spreading on gold leaf?
What is the advantage of putting white lead in cutting-in color?
How is a wood sign prepared for lettering?
What is a priming coat and how is it mixed?
What are japan driers?
How are knots treated on wooden signs?
Give the reason for such treatment.
What is the function of oil in paint?
How is white lead putty mixed?
What types of brushes are most suitable for coating large sign surfaces?
How is paint prevented from crawling?

CHAPTER X

What is meant by a Roman letter?
Upon what principle are all such types based?
What style of Roman is most used by sign writers?
What is the distinguishing difference between the various forms of Roman type?
How does the New York Roman differ from the round thick and thin full block?
What are the general proportions of this style?
Does this type look well if condensed?
On what is it commonly used?
On what type of signs is it mostly used?
What is the limit to condensation or elongation in the light-faced Roman?

CHAPTER XI

Give a description of gold leaf.
To what is the permanency of gold due?
How is gold leaf applied?
How is sizing made?
What is the difference between the two varieties of sizing?
What is meant by "tack"?

What happens if sizing is too wet?
What happens if it is too hard?
Which size gives the best gild?
When is quick size used?
How is fat-oil made?
How is quick size made?
What is used to burnish surface gilding?
What is a "pack" of gold?
Why is shellac used under gold size?
How is the sizing applied?
What brush is best adapted for sizing?
What is the difference between loose and transfer gold?
What is lemon leaf?
What kind of leaf is used for silver lettering?
Why is silver leaf not used outdoors?
What is Dutch metal?
What kind of sizing is used for aluminum bronze or leaf?
What is enamel cloth?
What kinds of paints are usually used on enamel cloth?
What is sign muslin?
For what is it used?
What other kinds of cloth are used in sign work?
What kinds of brushes are used to letter canvas or drilling?
How is canvas prepared to be painted with lead paint?
What is the difference between galvanized iron and black iron?
How is galvanized iron treated before being painted?
What type of paint is preferable for use on sheet iron?
What is japanned tin?
Give the different weights or thicknesses of glass.
Name the types of glass used on signs.
Describe those treated in this chapter.
What is meant by "stippling"?
What is the difference in the application of gold and silver leaf on glass?
How is leaf applied to glass?
Give formula for making sizing for gold and silver.
What is a "tip"?
What is "backing up"?
How is backing up color mixed?
What kind of a tip is used for silver leaf?
How are bronze powders applied on the outside and inside of glass?
What is the difference between burnished and matt gold?
How is a matt effect obtained?
What kinds of varnishes are the most durable?
What are the best kinds for binding purposes?

CHAPTER XII

What is meant by the term "Tuscan"?
Give examples of the different forms shown in this book.
For what sign usage is the Tuscan best adapted?
What is Spencerian script?
What is the approximate angle of stroke?
What is the relation in height of the lower case to the upper case script?
What is meant by show card and brush script?
What types of pens are most used for show card work?
Describe them.

CHAPTER XIII

What is meant by single-stroke lettering?
When and in what way is it employed to best advantage?
Give the nomenclature of the specimen types on plates.
Why are Italic one-stroke letters easier to paint than the perpendicular?

CHAPTER XIV

How are wood signs made?
Why are they cleated?
What is the best wood for sign work?
What is a "breadboard" end?
How is a sanded sign cleaned and refinished for lettering?
Name the liquids used in sign painting.
What is the best oil for paint and from what is it obtained?
What does boiling do to raw oil?
From what are japan driers made?
What kind of japan is used in white and light tints?
What is a volatile oil?
From what is varnish derived?
What are its various properties?
Why should not varnish be used in cold or damp places?
Why should paint that has been allowed to stand be strained?
What is a pounce pattern?
What is a good pounce for glass work?
What kinds of brushes are used for striping?
Describe method of drawing an ellipse.
How are pictures and trade marks enlarged on signs?

CHAPTER XV

What is a Gothic letter?
Give the names of the two forms.
How only should capitals be used in Old English lettering?
What is the general rule for making the lower case with reference to spacing?
What is a black-letter type?

CHAPTER XVI

Describe the methods of shading.
Give examples of the different types.
Of what value is this branch of the art?
What is high lighting?
What shades are best adapted for white backgrounds?
What is a good rule to follow in shading on colored backgrounds?
For mixing paints from dry colors, what is the best type to purchase?
What is the best pigment for pure white letters?
What is the most intense black pigment?
Give the names of other dry colors in general use.
Give a brief list of colors produced by mixing.
What combinations can be used for a white background with best effect?
What combinations with a red background? With blue? With dark green? With black?
Give the classification of colors.
What is meant by "tone"?
What is meant by "warm" and "cold" colors?
What are complementary colors?
When does color harmony exist?
How should gold and silver letters on light backgrounds be treated?

CHAPTER XVII

What is the principle of the Rococo scroll?
What is the principle of the art nouveau?
What is air-brush work?
What kind of a tool is an air brush?
Of what does an air-brush outfit consist?
How should air-brush colors be mixed?
Name the types of electric signs in common use?
What is meant by studded light?
What is a flood light?
What is meant by flasher?
What was the origin of the neon sign?

CHAPTER XVIII

What is meant by "gauge" in brass?
What are the two methods of making brass signs?
Describe them.
What is meant by wall work?
How are large walls painted?
What is the best working scale for walls?
Name and describe patent letters.
How are they applied to glass?
How is the cement for such work mixed?
What are bronzes, flitters and metallics?
What is mother of pearl?
How is it applied to glass?
What grade is preferable for most work?
What kinds of cutters are used for glass?
In what liquid are they dipped before using, and for what reason?
How can holes be drilled in glass signs?
What is meant by "bleeding paints"?
How is this difficulty obviated?
How are raised wooden letters affixed to signs?
For what purposes are cast bronze letters generally used?

CHAPTER XIX

What is meant by the silk screen process?
What is the method employed?
What is the best stencil silk to use for show card purposes?
What are the best paints for this work?
How can stencils be cleaned after using?
Describe method of sign hanging, and tools and materials used therein.

CHAPTER XX

Describe the supplementary alphabets:

(*a*) Post old style.
(*b*) Italic Roman.
(*c*) Spurred thick and thin.
(*d*) Eccentric show card.
(*e*) Western.
(*f*) French Roman.
(*g*) Engrossing text.

Write the Roman numerals up to one million.
What is the best rule on which to base estimates for signs?
How is gold and silver lettering on glass usually estimated?