

LETTERING
IN MARBLE

*"I always take off my hat when I
meet a memorial engraver, be-
cause theirs is the only work that
endures."*

—Oliver Wendell Holmes

Lettering in Marble

A few plates and a few words
of explanation—all bearing on
the subject of lettering as it
applies to the memorial trade

Issued by the
VERMONT MARBLE COMPANY
PROCTOR, VERMONT

SENATVS POPVLVSQVE ROMANVS
IMPCAESARI DIVI NERVAE F NERVAE
TRAIANO AVG GERM DACICOPONTIF
MAXIMOTRIB POT XVII IMP VICOSVIPP

Plate 1

Part of Marble Inscription, Trajan Column, Rome, A.D. 113. A fine example of
the Roman letter of the classic period

SISTE VIDES MAGNUM QVAE SERVANT MARMORA VATEM ·
INCENIO CVIVS NON SATIS ORBIS ERAT ·
QVAE NATVRA POLVS QVAE MOS FERAT OMNIA NOVIT ·
KAROLVS AETATIS GLORIA MAGNA SVAE ·
AVSONIAE ZGRAIAE CRINES NVNC SOLVITE MVSAE ·
OCCIDIT HEV VESTRI FAMA DECVS QVE CHORI ·

Plate 2

Inscription on Monument to Carlo Marsuppini, Santa Croce, Florence, A.D. 1456.
Typical Renaissance letters as they appear in the marble panel

Foreword

THE purpose of this booklet is to provide examples of the established styles of lettering and to suggest arrangements of inscriptions suitable for present-day memorials.

These pages stand first of all as a brief digest of the more exhaustive works of recognized authorities. Much of the data relative to marble, the material and its treatment, is based upon our long experience in the solution of problems common to both the large organization and the individual craftsman.

The historical models for letters of stone were produced by thorough and versatile craftsmen whose work has endured because of its fidelity to the sound traditions of the craft. While there are in our modern cemeteries many memorials which would be a credit to any age, they are frequently surrounded by crudely finished stones upon which the identifying record is inscribed in large and characterless letters.

Let us bring to our records in stone a nice regard for those letters which have stood the test of time. Inscriptions derived from approved historical examples will impart distinction to the most unassuming of memorials. The only really permanent tribute is the one in which the touch of the artist persists long after the personal interest has faded.

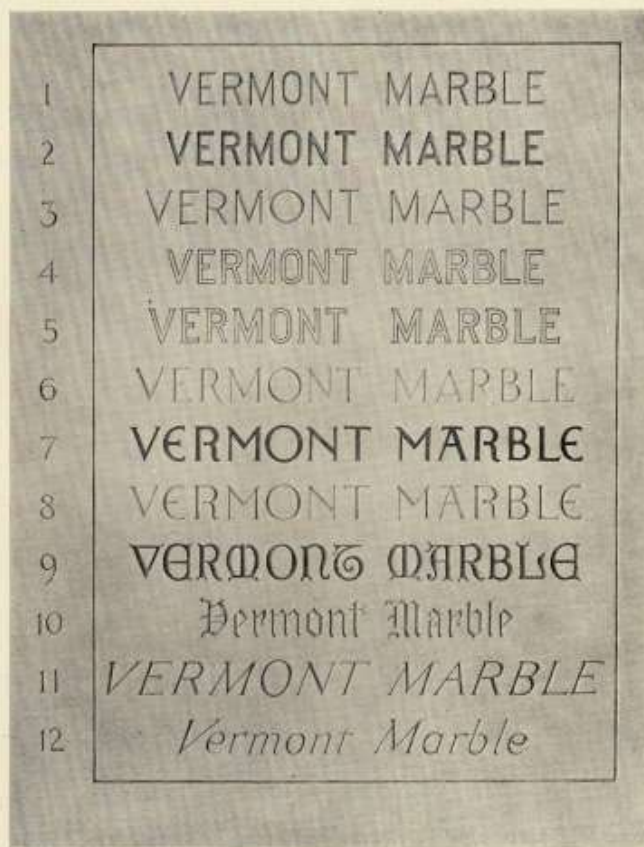


Plate 3

These plates represent an effort on the part of our shops to show how the different letters should be cut in marble. The tablets were made especially for this book, and each line is uniform in size with the standard inscription letter. Work of this kind must necessarily lose something in reproduction, yet even so it is believed that the engraved faces can be made to serve as a basis for comparison.



Plate 4

The pages that follow include all that need be said relative to the styles of lettering displayed on these plates. In referring to the symbols outlined on Plate 4, it is probably unnecessary to explain that "XP" is a Greek contraction of the word Christ; that "I. H. S." is a similar contraction of the word Jesus, and that the monogram at the right features the Greek letters "alpha" and "omega"—the beginning and the end.



Figure 1

bered longer than any other feature of the sale.

Unfortunately, the average dealer looks upon the inscription as purely incidental to the sale of a memorial. In shops where a monumental draftsman is regularly employed, fully half of his time is spent in the preparation of these full-size inscriptions. And he seldom shows much enthusiasm over this work; he is more likely to regard it as more or less of a drudgery. This attitude is largely due to the constant repetition of the size and style of letter, regardless of the size of the stone on which it is to be inscribed. Attention is called to Figures 4, 9, 14, 16 and the script letters of Plates 17 and 18, where a variety may be found, both in the style of the letter arrangement and of treatment in cutting.

The apprentice of yesterday becomes the dealer of today, and he generally carries into his business the rule-of-thumb methods which existed in the shop where he learnt his trade. The stereotyped formula for inscriptions (an inch-and-a-half letter for names and a slightly smaller letter for the dates), regardless of the size or shape of the surface to be inscribed, is one of the results of faulty training in the case of apprentices.

It is unfortunate that in our industry, which exists primarily to produce durable records, more thought has not been given to the rules of architectural lettering and to the styles which have stood the test of time. Many of the stones now standing in our cemeteries bear striking evidence of our faulty methods.

THE selection of the style of letter and the arrangement of the inscription are details in the sale of a memorial which are usually left to the judgment of the dealer. There is good reason, therefore, why the trade should make a careful study of the subject of lettering.

It should always be borne in mind that a large percentage of the monuments are purchased by women, and that every word of the inscriptions on these stones is full of meaning to the purchaser. The time and effort which go into the preparation of a full-size drawing, showing the arrangement of the inscription to the best advantage, will be appreciated and remem-

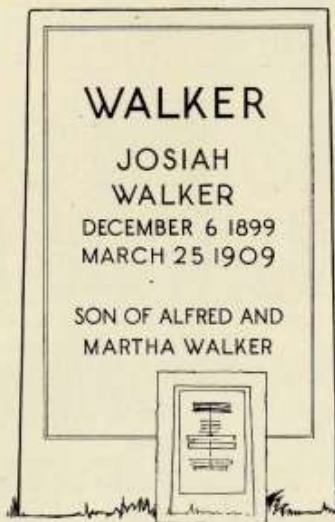


Figure 2



Figure 3

It will be found that the spacing of the individual letters presents problems requiring as much judgment as the actual drafting of the letters. This applies especially to the Roman letter where the weight of the bars makes the spacing much more difficult.

Construction of Letters

A system for the construction of letters has been indicated on a number of the plates. The widths of the letters are established in these systems by the use of either the 45 degree or 60 degree angle. They have been indicated chiefly as an aid in memorizing the proportions of the letters, and it must be borne in mind that there is no fixed rule to be used under all conditions. It is frequently necessary to vary the thickness of the same letters in different parts of the inscriptions. Experience and good judgment are the only guides for such modifications.

In preparing a rough layout for an inscription the position of the letters should be established lightly and as far as possible by free hand. Figure 1 and Figure 11 illustrate the method of procedure. In Figure 1 a rapid method for constructing a commercial Gothic letter is indicated. The number of guide lines to be used will depend upon the style of letter selected. In Plates 7 and 8 (Roman letters) a system of seven guide lines has been employed, but in some of the more decorative letters fewer guide lines are necessary.

In Figure 1 may be found a diagram showing the names of the different parts of letters. In letters having bars of two weights, the heavy bar is called the stem. When the free ends of these stems are expanded, the ends are called serifs. These serifs become heads when added weight is given to them, as in square, sunk or raised letters.

Spacing



Figure 4

The inscribed area in this case is about two-thirds the area of the stone, which is good proportion. Another safe rule on plain stones is to place the inscription where it will balance slightly above the center of the inscribed face. There appears to be little danger of getting inscription letters too small. This is especially true of family names, which are usually out of scale, either with the rest of the inscription or with the stone.

Treatment of Letters

Letters may be incised or raised. Lead may be beaten into incised letters, or letters of bronze may be attached to the surface. Detailed accounts of processes involved in the use of lead or color on marble will be found on page 17. An example of leaded letters will be found in Line 7, Plate 3.

It will be seen that the incised letter is usually preferable to any of the raised letters, as the greater weight required to strengthen the latter causes a loss of refinement.

Color as a factor in inscriptions has not received the attention it merits. The effect that color has upon the weight of letters is well illustrated by Figure 7. Several conclusions may be drawn from this black-and-white drawing.

Although all these letters are of the same weight, it will be seen that the black ground makes the bar of the white letter to appear

Size of Letters

The size of the letters is determined by both the length of the inscription and the size of the stone. In the diagram of a typical inscription given in Figure 2 the inscription is centered upon the face of the stone.



Figure 5

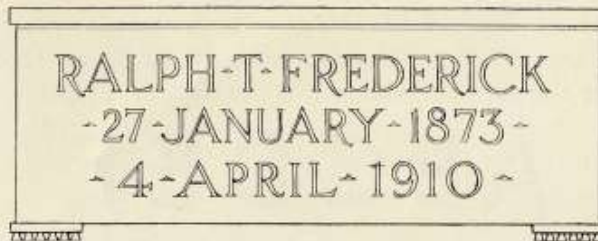


Figure 6

effect when cut. This is especially noticeable in the incised Roman letters of the usual "V" sinkage, where the outline is felt rather than seen through the play of light and shade which determines the appearance of the letter. A stone facing the north will receive a more even distribution of light, but the letters will have less contrast in light and shade because of this fact. The deeper the sinkage the darker the shadows. This is especially desirable for light weight letters.

Commercial Gothic Letters

The first letter to be considered as an established style is what we have identified as the Commercial Gothic (Lines 1, 2, 4, 13, on Plates 3 and 4). This is a letter of no artistic pretense, but is entitled to consideration chiefly because of its universal use on work where price is the one consideration. It has the merit of legibility, which is a virtue not possessed by many of the extremely decorative letters.

This letter came into existence during the early part of the nineteenth century. It is frequently called Gothic, a term which is obviously a misnomer, for there is no suggestion in its design of Gothic or any other decorative period.

Aside from its lack of character the chief objection to the use of the Commercial Gothic letter lies in the extreme weight of the bars. As usually cut, these bars accent the mechanical structure of the letter. This applies with equal force to the incised, square-raised and round-raised patterns. In round letters of this type, provision is seldom made for overcoming the optical illusion which makes them appear diminutive. Raising this letter and increasing its size only tends to emphasize its crudeness.

A modification of the Commercial Gothic is indicated in Figures 2 and 5. Here the mechanical structure is less in evidence and the wide, rounded letters give an element of character which is lacking in the original.

more slender and that to all intents it becomes a lighter letter. This in a lesser degree is the effect which comes from tracing or incising letters on dark polished surfaces.

Drawn Letter vs. Cut Letter

In full-size details of inscriptions the emphasis is on the outline of the letter, regardless of the few letters which are shaded to conform with the cutting. This accounts for the pronounced difference between the letter as drawn and its



Figure 7



RENAISSANCE LETTERS

Figure 8

upon the stone. In time these guide lines were incorporated in the free ends of the letters, creating in turn the serif which preserves the uniformity in the height of the letters.

The Roman alphabet in Plates 7 and 8 does not follow the classic

The faults of the Commercial Gothic letter may best be realized by comparing it with the inscription of the Trajan Column (Plate 1). For it is from Rome's architectural achievements and the subsequent creations of the Renaissance (see Plate 2) that the present-day world gets its lettering standards for comparison.

Roman Letters

The Roman letter stands as the crowning achievement in the alphabet's development. It is recognized as the classic letter (Plate 1).

The general characteristic of the Roman letter is the variety of form displayed in its various characters. The construction of the letter, as considered here, is divided into three groups (Figure 10), consisting of rectangular, diagonal and circular letters. The width of the letters has been established by a line of 45 degrees. The two weights of bars used in Roman letters are probably due to an attempt to imitate letters made with the reed pen. The vertical strokes of the pen were down strokes, using the full width of the pen. This is true—with the exception of the letter "Z"—of the diagonal strokes made downward from left to right. In preparing these letters for cutting, guide lines were scratched

JOSIAH WALKER
DECEMBER·6·1899
MARCH·25·1909

SON OF
ALFRED AND MARTHA
WALKER

Figure 9

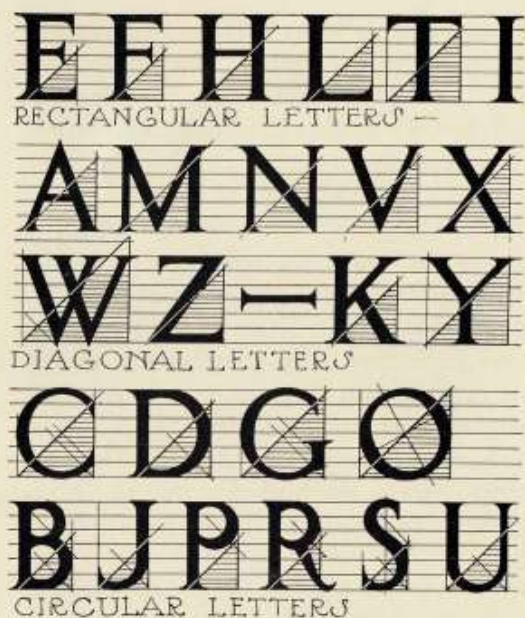


Figure 10

ters agree in certain fundamental points. And the system indicated on Plates 7 and 8 will be found to be a quick and satisfactory method for constructing the Roman letter. Attention is called to the fact that the seven guide lines used on these plates divide the letter into six equal parts, and that the width of these parts does not agree with the weight of the stem (the heavy bar). The reason for this is that one-seventh of the total height of the letter has been found to be a good working proportion for the stems of the line, and two-thirds of this weight may be allotted to the light bars. Many of the Renaissance letters were of much lighter weight, in many cases the stem being from one-sixth to one-tenth of the height of the letter. These letters were invariably deeply incised on marble, and their extreme depth and light weight of bar produced a letter of great refinement. The conditions under which present-day work is produced will not allow such painstaking effort, and it is practically impossible to secure letterers capable of producing such uniformly good work. A heavier letter has, therefore, been selected for our plates, because it can be cut to better advantage. The use of seven guide lines establishes the center of the

models in every detail. The bars rest on the central guide line and not on the exact center of the letter as was the practice of the classic period. This is a Renaissance feature. By raising the cross bar, the letters acquire stability and balance.

In the course of time the Roman alphabet was subjected to many changes, reflecting in some degree the artistic attainment of the various agencies through which it passed. The period extending from the fall of the Roman Empire to the Middle Ages was one of readjustments in the religious world, and there was little interest in the classic models until the impetus of the Gothic movement had spent itself. This lengthy period was followed by the four centuries which constitute the Renaissance. During this creative period the classic models were revived and some of the finest of our Roman letter inscriptions were produced (Plate 2).

Renaissance Letter

The Renaissance letter of Figure 8 differs chiefly from the classical Roman letter in that it is of lighter weight and of greater refinement generally in form and arrangement.

All acceptable models of the Roman letter designed for stone cutters agree in certain fundamental points. And the system indicated on Plates 7 and 8 will be found to be a quick and satisfactory method for constructing the Roman letter. Attention is called to the fact that the seven guide lines used on these plates divide the letter into six equal parts, and that the width of these parts does not agree with the weight of the stem (the heavy bar). The reason for this is that one-seventh of the total height of the letter has been found to be a good working proportion for the stems of the line, and two-thirds of this weight may be allotted to the light bars. Many of the Renaissance letters were of much lighter weight, in many cases the stem being from one-sixth to one-tenth of the height of the letter. These letters were invariably deeply incised on marble, and their extreme depth and light weight of bar produced a letter of great refinement. The conditions under which present-day work is produced will not allow such painstaking effort, and it is practically impossible to secure letterers capable of producing such uniformly good work. A heavier letter has, therefore, been selected for our plates, because it can be cut to better advantage. The use of seven guide lines establishes the center of the

letter on which the cross bar rests, and these lines have the additional advantage, when used with the 45 degree lines, of establishing the widths of the letters. These guide lines should always be kept as light as possible, otherwise they will interfere in judging the proper spacing of the letters. Once a knowledge of the essential features of the Roman letter has been acquired, methods of construction may be disregarded. Proficiency in laying out these letters will come with practice. Attention is again called to Figure 10, where this alphabet has been divided into three groups and the relative widths are clearly indicated.

Modern English Capitals

This alphabet (Plates 9 and 10) was taken from inscriptions on English wall tablets—a type of memorial which does not receive the attention it merits in this country. This letter combines much of the best in both the Roman and Gothic letters. It has enough of the Gothic feeling to make it very decorative on plain tablets, as illustrated by the inscription outlined in Figure 9. The use of this letter is also very agreeable on stones which are of Gothic design, as many object to the combination of the classic and Gothic styles. The slight modifications which give these modern English letters their Gothic cast make a very harmonious arrangement on Gothic work where an element of legibility is greatly desired. For those who object to the cold text-book quality in certain Roman inscriptions, and seek greater freedom of treatment without sacrifice of dignity, these modified letters are an acceptable substitute for the purely classical type.

Gothic Letter

Letters of stone may be roughly divided into three groups: the classic letter, the letter of Gothic spirit, and the nondescript or commercial letter.

The term "Gothic," as originally applied to architecture, was a term used by the Italian architects of the Renaissance for the work produced between the fall of the Roman Empire and the revival of the classic forms. The Gothic letters of this period show a wide

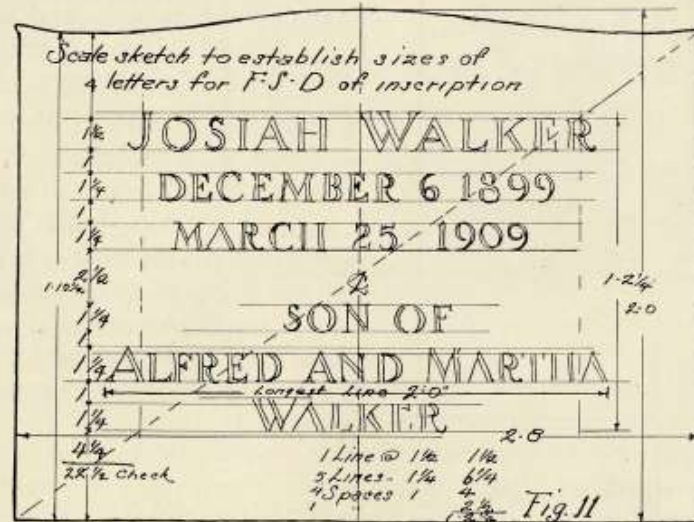


Figure 11

variety of design. The earlier forms naturally bore a closer resemblance to the Roman parent letter. This distinction is noticeable in the Gothic letters used in our plates. The strong resemblance of the Lombardic letter (Plates 11 and 12) to the Roman letter distinguishes it from the Black-Face letter, which is more familiarly known as the Gothic letter. The legibility of the Lombardic letter, and the fact that it composes equally well in capital letters or in a combination of capital and lower case letters, makes it a very desirable letter for memorial inscriptions.

The Black-Face letter (Plates 13 and 14) was generally called the Old English letter. It is a very decorative letter, but the examples of its use, as usually found in our cemeteries, are far from satisfactory. A name composed entirely of Black-Face capital letters can be read only by the few who are familiar with Gothic letters. The square-

raised polished letters of this character are generally cut very much larger than they should be, and their decorative qualities are lost in their heaviness. Since the Gothic spirit is so largely associated with church architecture, this style should lend itself readily to the requirements of cemetery memorials. Attention is called to the treatment of both the Lombardic and Black-Face letters in Plates 3 and 4. Numbers 21 and 22 are especially effective examples of the use of Gothic letters. (Additional Gothic examples are shown in Figures 4 and 16.)

Italics

Aside from the uniform slope the Italic letter differs very little from the Roman letter of the classic period. All Italic letters are essentially the same in design, differing only in the degree of the slope or in that the lower case letters may be either linked together or left open. The Roman and the Italic letter compose very well together, as in Figure 14.

Script Letter

The Script and Italic letters are very closely associated, owing to the fact that the former is usually sloped. The Script is very decorative and of very much freer de-

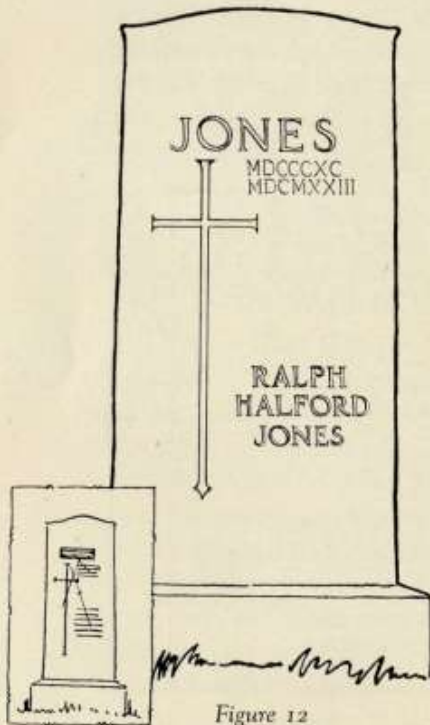


Figure 12



Figure 13

sign than the Italic. Its use is suggested for headstones where a distinctly decorative feeling is sought. This applies especially to the type of headstone known as the Colonial or Georgian. For the larger and more formal work the Script letter is less satisfactory.

Colonial Headstones

The Colonial headstone of the eighteenth century, as designed by the architects of that period, or by competent modern designers, is one of the most graceful of our memorial types. The older stones were generally the product of stone cutters of uncertain training, but, regardless of their crudeness in carving and eccentricity of spelling, these stones have a charm which is frequently lacking in many of the more carefully studied memorials.

The better models of Colonial headstones are usually designed with a pedimented top. This may be plain or it may be enriched with classic mouldings. Some attractive effects may be obtained at a moderate price with this style of memorial by omitting the mouldings. The Colonial features may be preserved simply by the outline and the use of either the Roman, Script or Italic letter. For decorative effects the Script letter is recommended.

Marble is the ideal material for this type of memorial. The headstone shown in Figure 13 is an interesting example of Colonial marble work which has been standing for over a hundred years in one of our Vermont cemeteries.

Customers should be made to understand that such stones owe much of their charm to their antiquity and to the associations which have come with age. They have acquired value with the passage of time.

Artificial means—such as irregularities of spelling, inserted letters and obsolete characters—have sometimes been employed to counterfeit the atmosphere of the older Colonial stones. Such premeditated efforts are seldom very convincing. Far better is it to let the stone grow old gracefully and acquire honest merit of its own.

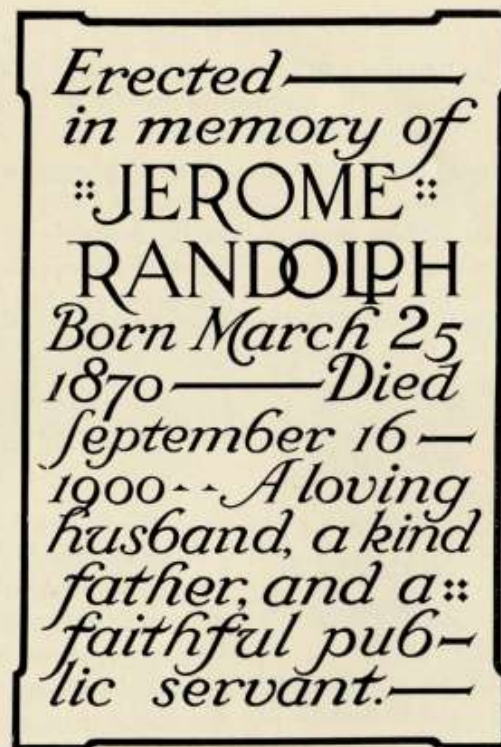


Figure 14

Incidental Problems

In making a price on a memorial it is always well to have complete understanding as to how much lettering is included. The inscription may be so long as to eat up all the profit.

It is important also, in ordering stock from distant quarries, to explain what style of letter is to be used. If raised letters are wanted, special provision must be made for the additional stock which they require. Failure to send instructions is likely to cause delay.

In certain cases it may be desirable to modify the usual symmetrical arrangement. Figure 12 illustrates the method of securing a balance of the opposing forces. In this as in all other forms of composition considerable practice is necessary in order to assure success.

Indeed, practice and study are always required if one is to become proficient in the art of lettering. Yet in no other field is the labor more certain to be rewarded. It means more than simply being an authority on lettering, although that in itself is no mean achievement. Above all else a knowledge of lettering is an actual business asset.

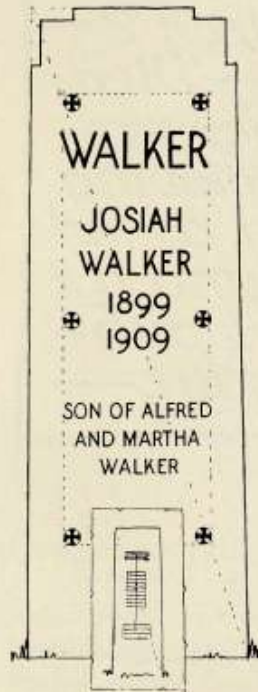


Figure 15

Equipment for the Draftsman

A substantial board of white pine, kiln dried and free from knots, should be provided. A table 2-6 by 5-0 is about the smallest size that can be used to advantage. It is useless to attempt to prepare full-size details with a make-shift equipment.

A supply of detail paper should be procured—paper which will stand erasure. The experienced draftsman will proceed to the tracing from a mere skeleton which does little but determine the length of his line. Or he may simply check his letter widths on a narrow strip of paper, which gives him the lengths of his lines and—when folded—their center line. The beginner will find that a vague and poorly drawn layout leads to difficulties. Tracing paper should be on hand.

It is well to have two or more sizes of T squares. A long-bladed square is cumbersome in laying out a small marker inscription. T squares with celluloid edges are preferable. The head of the T square is used only against the left edge of the drawing board. Do not try to make vertical lines with the T square, for they will not be vertical.

There are two standard triangles, the 45 degree angle and the 60 degree angle. These should be of celluloid.

Assuming that drawing instruments, curves, scales, tacks, ink, pencils, etc., have been acquired, this list of tools and supplies is fairly complete.

Gilded Letters

Clean out letters carefully with a small brush and apply a coat of either white or orange shellac. When the shellac is dry put on one or more coats of gold enamel.

Black Letters

Apply shellac as in the case of gilding, then use one coat of black made by mixing lamp black and exterior spar varnish. In mixing this color, fill little cup with varnish and place small quantity of black on a palette or piece of glass. Dip brush in varnish and work in black as it is needed. If all of it is mixed at one time, it will be likely to leave the letters streaked and blotchy. To remove surplus shellac, black or gilt, use the soft side of cuttlebone.

Gold Leaf Letters

Shellac is first applied and then a coat of exterior spar varnish for a sizing. It is well to add a touch of yellow ochre to the varnish as that makes a better foundation for the gold. The gold leaf should be put on before the varnish is thoroughly dry, otherwise it will not stick to the marble. Go over a few letters with the varnish—by that time the first one will be ready for the gold. Cut pages of gold-leaf book into strips of the required width, having first moistened the back of the pages with turpentine to keep the leaf in place, and lay them, paper side up, over the letters. Then use small brush or sponge rubber—some workmen use simply the tip of the finger—to press the gold down into place.

Leaded Letters

Select a width of lead which will be large enough to fill the letters and cut to the required lengths. Drill small holes into sides of the "V" sunk letters and pound the strips of lead into them with wooden mallet. Then trim lead even with the surface of marble. A small sheet of brass with a saw-tooth edge will remove the surplus lead without scratching the finished marble.



Figure 16

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

INCISED

COMMERCIAL

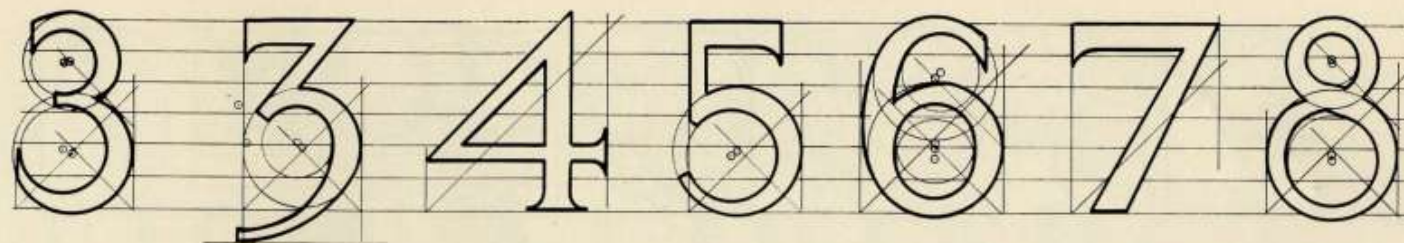
GOTHIC

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



INCISED

ROMAN

LETTERS



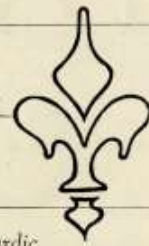
A·MODERN·ENG-
LISH·ALPHABET·
FROM·INSCRIPT-
-IONS·ON·WALL-
TABLETS & OTH-
-ER·MEMORIALS

A B C D E F G

H I J K L M N


O P Q R S T

V W X Y Z



LOMBARDIC =

= LETTERING

The Gothic Letter
-ter Is Restrict
-ed To No One 
Authoritative Form

A B C D E F

G H I K L M

N O P Q R S

T U V W X Y

Z a b e d e f g h

i j k l m n o p q r

s t u v w x y z 2 3

Old English

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 —

*abcdefghijklmnopqrstu
vwxyz. &
Italic Letter*

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

Plate 17

Script

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

Script



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