

WAD TO RR
a letter about designing
T Y P E



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This text is a slightly expanded version of a letter written on July 21 1937 to a friend who wanted to know how one went about designing a typeface.

DEAR RR:

The way I work at present is to draw an alphabet 10 times 12 point size, with a pen or brush, the letters carefully finished. I start with the lower-case, and let its characters settle the style of the capitals. Ten times twelve point is a convenient size to work; and I have a diminishing glass that reduces the letters to something like 12 point size when I put the drawing on the floor and squint at it through the glass held belt high. This gives a rough idea of what the reduction does to curves and things.

Having got a start on what I want by this means I turn the drawing over to G. and he puts a few of the characters through—possibly lower-case h and p. He makes his large pattern drawings (64 times 12 point) cuts, casts and proves the trial characters; and sends me his large drawings, my 10 times drawings, & proofs on smooth and rough paper.

By looking at all these for two or three days I get an idea of how to go forward—or, if the result is a dud, how to start over again. From the large pattern-sheets I can see just how details behave when they get down to size, and can change the weights of serifs, thin lines,

db

10 times 12 point

etc., etc., accordingly. Curves do all kinds of queer things when reduced; and the way lines running together make spots is a thing that will surprise you—but one or two tries on these points give you the information you need. I am beginning to get the drift of it and to foresee from the large drawings what will happen in the type. I can modify in the large outline drawings, but so far I can't originate in that medium.

In making the Falcon I tried another scheme for arriving at the characteristics of the first-run experimental letters. I cut stencils in celluloid—a long and a short stem, the n arch, and a loop—twice the size of 12 point—pretty small!—and constructed letters from these elements by stencilling. When I had achieved a line of these little 24 point characters that looked good Griffith ran them up with his "shadograph" projector to the pattern drawing size in pencil outline. From these enlargements I again cut stencils, or, more properly, templets, in cardboard, for stems, the n arch, and the b loop, in the 64 times size—and made my hard-pencil outline patterns through

Falcon stencils:

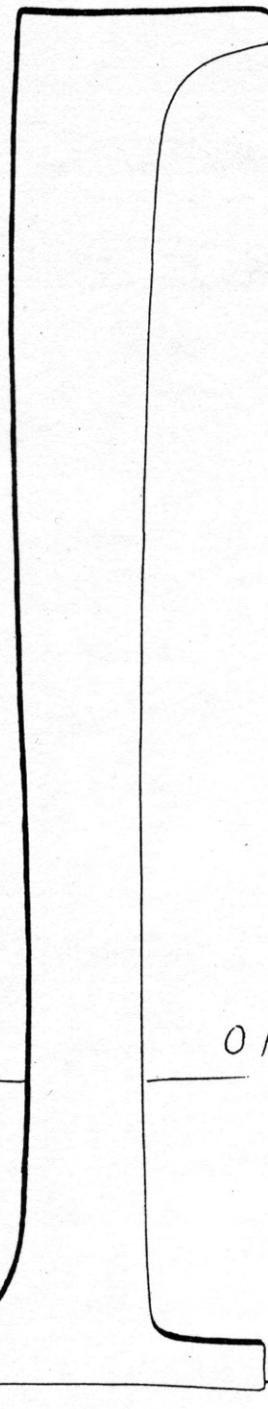
l i t o c

n n₁ nihil diminuendum

Letters built up from the above elements

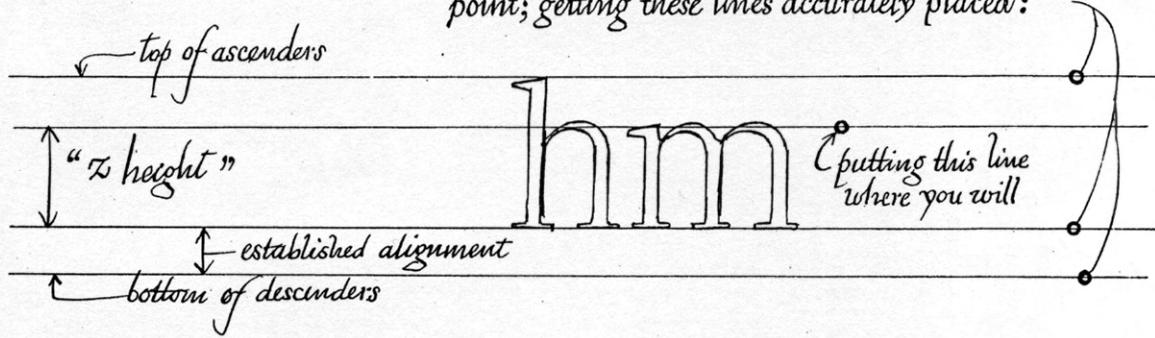
cardboard
templet
for making
pencil-
outline
pattern
drawings

6 | 18 | 37
221 #2 lighter stem



these, à la French curves. You allow for the "set-off" of the pencil-point in cutting the templets. I used the templet method in order to keep as close as I could to the "action" of the 24 point originals.

I'd say: make an alphabet, carefully finished, 10×12 point; getting these lines accurately placed:



Then have Griff. cut and cast two letters—the ones that will tell you the most. I like n, and p, d, or b, a straight one and a looped one. Maybe hp would be best. Then, with the "actual size" proofs from the type, your 10 times drawings, and G's large-size patterns in outline, you can see what you are doing; you can thicken or thin your stems or modify curves for another trial if needed, or go ahead with the rest of the letters on the original scheme. I adopted "ten times" because it was easy to work with a 0.01 inch scale—but of course you could work any size you liked so long as it was some exact multiple of 12 point or whatever size you are shooting for.

When G and I have settled dimensions, etc., to

our liking, I go ahead with the alphabet on thin bond-paper in pencil outline, in the working drawing size—ruling off the horizontal bounding lines accurately, and then drawing the letters quite freely at first, in the “positive” position—passing the outline back and forth from one side of the paper to the other, erasing the previous outline as soon as I have established its child on the other side—modifying toward “the idea” at each change—until I get a “positive” that is good enough to mark down on the other side of the paper as a precise “negative” in thin pencil line—6H. The patterns are all negative: back side to. This negative is the guide for the foundry staff's French curves and straight-edges. My drawing is free-hand (except in such cases as the Falcon templets.) I haven't any complaint to make about the staff's French curves—they do a surprisingly faithful job. Just what happens in the next step—the reduction to the brass-pattern size (the patterns that guide the engraving-tool in cutting the ultimate 12 point punch) I don't know. I haven't compared working-drawing with brass yet; not easy to do. But so far as I can observe from the final proof they keep the original touch here too.

Up to this point the affair has been pretty much under your control. You have made your individual letter-shapes good according to your lights, and have got them through to metal type. . . . Will they behave decently

when they are combined into words? You can't tell yet. All you can do about this question, in your drawing stage, is to lean hard on the hunches you have picked up as to what letters do to each other when they are fitted together.

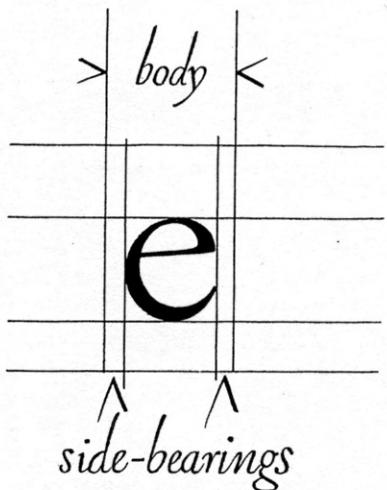
FITTING is the process of working out the exactly right amount of space to go between letters.

Each type-letter, wherever it goes, carries along with it two fixed blank spaces, one on each side. And, of course, each one of the 26 is likely to be placed alongside any one of the other 25 with their fixed blank spaces. So the odds against you in the fitting game would seem to be 2704 to 1. (Would it be that, or 2500 to 1?)

But it isn't quite so bad—the letter-shapes occur in groups of similars: when you have solved for *n* alongside of *n* you are close to a workout for *h i j l m* and for the stem sides of *b d k p q*—a proper fitting for *o* gives you a line on the round shapes, etc., etc. *a, c, e*, on their open sides, and *f g r t* are hard to fit. . . .

Griffith steps in here, with his experience, and takes a first crack: establishes the "side-bearings" and sets up a trial page. If the result is not satisfactory you go on from there by experiment. Usually he makes it in one.

There isn't any fitting formula worked out yet. G. says there can't be any: that it is a job for the eye



hoc dignissimum ac utile problema dissoluatur nemo hactenus sufficienter tradidisse uidetur tametsi atque Eraecorum *quamplurimi* no aspernandiphilosophi ut atque mathematici ut illud explicaret problema quod cubiduplicatio dicitur uariis ac subtilibus admodum no innuentis easdem lineas proportionales tentarint Ralla exprimere *Euemadmodum* ex Eutocio Escalonita Rulus et Erchimedis interprete et Reorgio Ealla Elacentino qui singulorum exposuerunt adinuentiones colligere est haud difficile est Rullus siquidem eorundem Eraecorum authorum offendetur qui in disquirendis eiuscmodi uel lineis proportionalibus *uiam aliquam* certam obtinuerit utpote qui regulamentorum quorundam adminiculo tentando uel potius hinc inde palpitando totiesque potius conceptas iterando descriptiones proprias traditiones adinuentionum suspectas inexplicabilesque reddiderint Eos *igitur praessatas* lineas rectas inter datas extremas continue proportionales ne mathematica simulatque ut suscepti negotij uioletur integritas uia hacteuns nemine tentata ex fidissimis Reometricorum *elementorum* Eos rudimentis multifariam ac prima fronte conabimur qua reddere notas idque potissimum illius diuinae qua data linea recta sic diuiditur ut in illa medium et extrema continuae proportionis que in tribus ad minus uidetur consistere terminis inueniatur *Euius praetere* diuinae proportionis beneficio ut quinque regularium corporum ab Euclide conciliata est harmonia sic et nos bonam partem eorum quee in ipsis desiderabantur Rathematica adminiculo qua data linea recta a sic diuiditur ut in illa medium et extrema continuae proportionis que in tribus ad minus uidetur consistere terminis inueniatur *Euius praeterea* diuine proportionis beneficio ut quinque regularium corporum ab Euclide conciliata est sic

abcdefghijklmnoprstuvwxyz
ab defghij lmnopqrstuvwxyz

trial page — some italic characters lacking

alone. I have a hunch that a "coarse" formula could be worked out; because there is certainly a "right" interval for a given weight and height of stem, varying as these dimensions vary. To find out and establish these right intervals of emptiness between occupied regions is one of the prime jobs of design—"voids & masses."

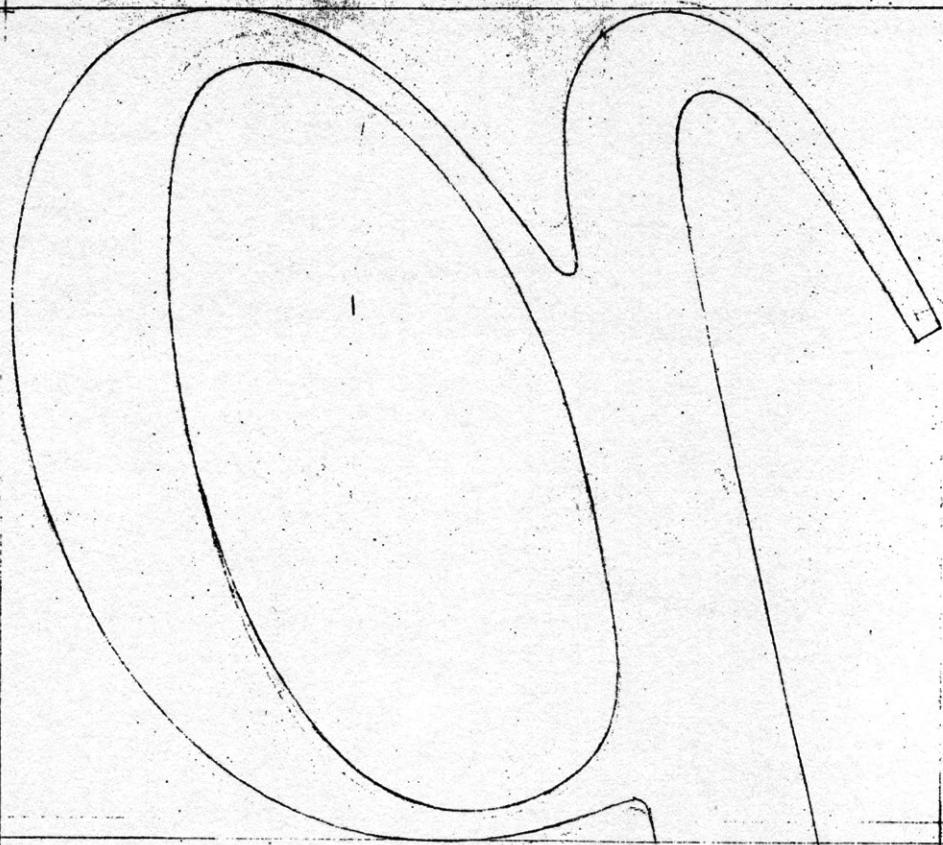
WAD

OPPOSITE

facsimile of pencil working-drawing on thin paper.
This is the form in which the design is finally turned
over to CHG

Roman p Italic

Roman Side-bearing not known



Roman R Italic

#2 brought down to roman height

Caledonia Ital.

test letters

| | | | |
|-----|---|----|----|
| N | G | 20 | 37 |
| out | 2 | ok | |

YAD

out 2 ok

Roman

slug line

and for gr?

change 8/16/87
odd serif

looks unfinished
re-paged 8/12/87