WAD to *RR*

letter about designing

Type

WAD to RR
a letter about designing
T Y P E

This text is a slightly expanded version of a let=
ter 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 re=
duces 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 to-
gether make spots is a thing that will surprise you—
but one or two tries on these points give you the in-
formation you need. I am beginning to get the drift of
it and to foresee from the large drawings what will hap-
pen 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 ex-
perimental 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 construct-
ed 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 "shad-
owgraph" projector to the pattern drawing size in pen-
cil outline. From these enlargements I again cut sten-
cils, 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
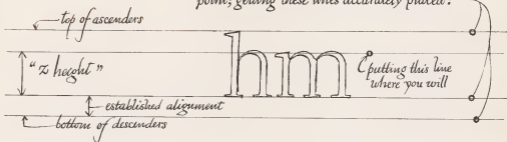
Falcon stencils:

ן ו ר כ c

n m nihil diminuendum

letters built up from the above elements
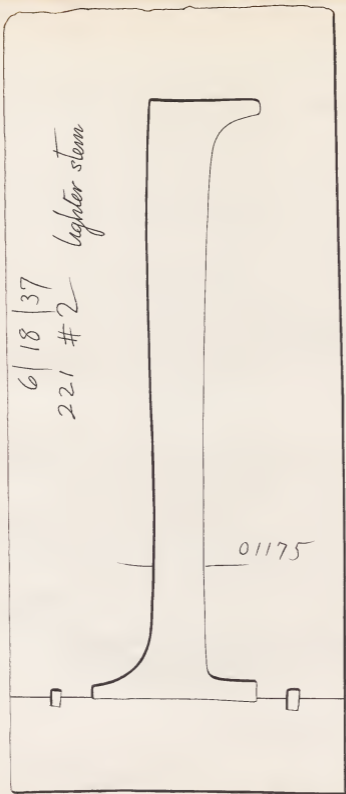
cardboard
templet
for making
pencil-
outline
pattern
drawings

6/18/37
2 2 1 #2 lighter stem

0 1 1 7 5

these, à la French curves. You allow for the "set-off of the
pencil-point in cutting the templets. I used the tem=
plet 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:

top of ascenders

"x height"

hm

putting this line
where you will

established alignment

bottom of descenders

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 pat=
terns 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 what
ever 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 draw= ing size—ruling off the horizontal bounding lines accurately, and then drawing the letters quite freely at first, in the "positive" position—passing the out= line 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 "posi= tive" that is good enough to mark down on the other side of the paper as a precise "negative" in thin pencil line—6II. 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 hap= pens in the next step—the reduction to the brass-pattern size (the patterns that guide the engraving-tool in cut= ting 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 ex= actly 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 oc= cur 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 prop= er 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 satisfac= tory 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

> body <

e

^ side-bearings
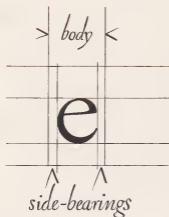
hoc dignissimum ac utile problema dissoluatur nemo
hactenus sufficienter tradidisse uidetur tametsi atque
Eraecorum *quamplurimi* no aspernandiphilosophi ut
atque mathematici ut illud explicaret problema quod
cubiduplicatio dicitur uariis ac subtilius admodum no
innuentis easdem lineas proportionales 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 eiuscemodi uel
lineis proportionalibus *uiam aliquam* ut illud obtinuerit
utpote qui regulamentorum quorundam adminiculo ten
tando 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 potissimuh 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 minum uidetur consistere terminis inueniatur
Euius praetehea diuine *proportionis* beneficio ut quin
que regularium corporum ab Euclide conciliata est sic

abcdefghijklmnopqrstuvwxyz
ab defghij lmnopqrstu

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" in=
terval for a given weight and height of stem, vary=
ing as these dimensions vary. To find out and establish
these right intervals of emptiness between occupied re=
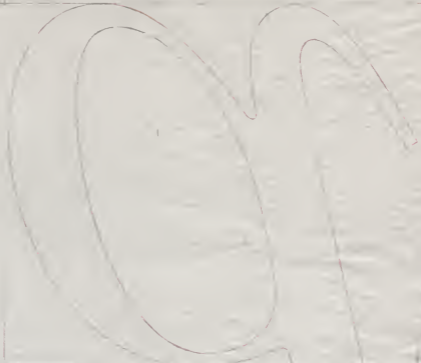gions is one of the prime jobs of design–"voids & masses."

WAD

OPPOSITE

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

OK

Roman p   italic p

H 2 brought down to roman height

C.ud. and Ital.
E + letters
MAD
6 20 37

Roman   ✓✓

slug line

This is the third publication by the
Department of Printing and Graphic Arts
in the Harvard College Library
Cambridge

HCL