Test-types for the determination of the acuteness of vision

TEST-TYPES.

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FOR THE

DETERMINATION OF THE ACUTENESS OF VISION.

BY

H. SNELLEN, M. D.

SURGEON TO THE NETHERLANDS OPHTHALMIC HOSPITAL AT UTRECHT.

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TEST-TYPES,

FOR THE

DETERMINATION OF THE ACUTENESS OF VISION.

ÉCHELLE TYPOGRAPHIQUE,

POUR MESURER L'ACUITÉ DE LA VISION.

SCALA TIPOGRAFICA,

PER MISURARE L'ACUTEZZA DELLA VISTA.

PROBEBUCHSTABEN,

ZUR BESTIMMUNG DER SEHSCHAERFE.

LETTERPROEVEN,

TOT BEPALING DER GEZICHTSSCHERPTE

$$v = \frac{d}{D}$$

The formula for the acuteness of vision (v) is expressed by the utmost distance at which the types are recognized (d), divided by the distance at which they are seen at our standard angle of five minutes (D).

Le degré de l'acuité de la vision (v) s'exprime par le rapport de la distance à laquelle la lettre est distinguée (d), comparée à la distance à laquelle la lettre se montre sous un angle de cinq minutes (D).

Il grado d'acutezza della vista (v) viene indicato dalla relazione della distanza alla quale il carattere è veduto distinto (d), colla distanza alla quale esso si mostra sotto un angolo di cinque minuti (D).

Die Sehschärfe (visus, v) wird ausgedrückt durch das Verhältniss der grössten Distanz in der die Buchstaben noch deutlich erkannt werden (d), zu der Distanz in welcher sich die Buchstaben unter einem Winkel von 5′ zeigen (D).

De gezichtsscherpte (visus, v) wordt uitgedrukt door de verhouding van de distantie waarop de letter wordt herkend (d), tot de distantie waarop de letter zich onder een hoek van vijf minuten vertoont (D).

1. The smallest angle, at which objects of known size and known form can be distinguished, determines the degree of the acuteness of vision.

The size of the image formed on the retina depends on this angle, and the distinguishing power increases with the growth of this image. The increase however is not in direct proportion: a double sized image does not enlarge the distinctive power in a double ratio, in as much as the percipient elements are not equally distributed over every part of the retina, but decrease in number from the centre of the yellow spot to the periphery. On this account the measuring of the acuteness of vision by the inverse ratio to the smallest visual angle does not afford us an absolute but only a relative value.

2. To determine the smallest visual angle we measure the utmost distance, at which objects of definite size can be recognized.

This angle, if small, can be considered as in inverse proportion to the distance, at which the object is seen. If larger angles were concerned, then the size of the object, differing materially from that of the arc, would have to be valued as the double tangent of half the angle.

3. A visual angle and corresponding distance being taken as unit of measure, the proportion between such distance and that at which the object is actually seen, expresses the acuteness of vision

4. We take as unit for comparison the recognition of letters, seen at an angle of 5 minutes.

We have adopted as proper objects square letters, the limbs of which have a diameter equal to one fifth of the letters' height. Such letters are clearly distinguished by a normal eye at an angle of 5 minutes. As the limbs and subdivisions of the letter just measure $^1/_5$ of their height, they present themselves at an angle of 1 minute; for instance, our letter C shows an opening, as compared with the O, of 1 minute visual angle.

In testing accuracy of vision, we accept perfect recognition and not uncertain perception of the letters.

5. The numbers placed above each type express in Parisian feet the distance, at which the letters are seen at our standard angle of 5 minutes.

6. The dimensions of our letters, as well as those of the interstices by which they are separated, accurately measured off upon the lithographic stone, are as follows:

N°.	I	= 0,209	Par. lines.		N°.	XII	=	2,513	Par. lines.
„	II	= 0,419	„	„	„	XV	=	3,141	„ „
„	III	= 0,628	„	„	„	XX	=	4,189	„ „
„	IV	= 0,838	„	„	„	XXX	=	6,283	„ „
„	V	= 1,047	„	„	„	XL	=	8,377	„ „
„	VI	= 1,257	„	„	„	L	=	10,472	„ „
„	VII	= 1,466	„	„	„	LIV	=	11,309	„ „
„	VIII	= 1,675	„	„	„	LXX	=	14,660	„ „
„	IX	= 1,885	„	„	„	C	=	20,943	„ „
„	X	= 2,094	„	„	„	CC	=	41,886	„ „
„	XI	= 2,304	„	„	„	CCLXX	=	56,546	„ „

7. THE UTMOST DISTANCE AT WHICH THE TYPES ARE RECOGNIZED (d), DIVIDED BY THE DISTANCE AT WHICH THEY APPEAR AT AN ANGLE OF 5 MINUTES (D), GIVES THE FORMULA FOR THE ACUTENESS OF VISION *) (v) :

$$v = \frac{d}{D}$$

If d and D be found equal, & No. XX be thus recognized at a distance of 20 feet, then $v = \frac{20}{20} = 1$; in other words, there is normal acuteness of vision. If, on the contrary, d be less than D, and if No. XX be only visible within 10 feet, or No. X within 2 feet, or No. VI within 1 foot, these three cases are thus respectively expressed:

*) Synonyma: „Acuteness of vision, acuité de la vision, acutezza della vista, acies visus (v), gezichtsscherpte, Sehschärfe (s)."

$$v = \frac{10}{20} = {}^1/_2$$
$$v = \frac{2}{10} = {}^1/_5$$
$$v = \frac{1}{6}.$$

But d may sometimes be greater than D, and No. XX be visible at a greater distance than 20 feet; in such case the acuteness of vision is greater than the normal average.

8. The normal acuteness of vision decreases with age. This is caused, partly, by decreased transparency of the media of the eye, which lessens the perfection of the retinal image; partly, by decreased perceptive and conductive power of the nervous structures.

The acuteness of vision at different ages was recently investigated *) in 281 cases, the eyes having been previously ascertained to be of normal refraction and free from disease, and the ages varying from 7 to 83 years. The results of these experiments showed that the average acuteness of vision may be considered to be

for the	age	of	10	years	=	22,5	: 20
„	„	„	20	„	=	22,5	: 20
„	„	„	30	„	=	22	: 20
„	„	„	40	„	=	20,5	: 20
„	„	„	50	„	=	18	: 20
„	„	„	60	„	=	14,5	: 20
„	„	„	70	„	=	13	: 20
„	„	„	80	„	=	11	: 20.

9. The value of v should be found equal in testing with the different types, each at its corresponding distance. If such is not the case, and v appears to diminish considerably within or beyond a certain distance, it may be inferred that the refraction is in fault, or that the eye is not adjusted for such distance.

In case of diminished acuteness of vision, v must still — within the limits of adjustment — be equal for different numbers of type each at its own distance: if therefore e. g. at 20 feet v is proved to be $= \frac{20}{200}$, then at 10 feet v cannot differ considerably from $\frac{10}{100}$. In case any other value for v were stated, it would imply carelessness, exaggeration, dissembling, or simulation.

10. Acuteness of vision being found considerably greater for near than for distant objects, myopia must be assumed to exist. The farthest point of clear sight (the farthest distance at which v is at a maximum) expresses approximatively the degree of the myopia. A person e. g. seeing clearly only within a distance of about 18 inches may have a myopia of $^1/_{18}$, and consequently require glasses of — 18 to make his vision of distant objects equal to that of near ones.

*) J. Vroesom de Haan Jr., Onderzoekingen naar den invloed van den leeftijd op de gezichtsscherpte. Utrecht, 1862.

Myopic persons generally state the farthest point of clear sight as rather too near, in consequence of the convergence of the visual axes preventing the total relaxation of accommodation. Only in case of paralysis of the accommodation the farthest point of clear sight in myopia of e. g. $^1/_{18}$ reaches 18 inches.

11. If the distinctness of distant objects increases with positive glasses, hypermetropia *) is proved to be present, and the strongest glass with which V still improves, or at least remains unaltered, determines the degree of manifest hypermetropia.

Hypermetropic persons cannot thoroughly relax their accommodation, when looking at distant objects, and their manifest hypermetropia is but a part of the total. The difference between manifest and total hypermetropia depends on the amount of accommodation, which decreases regularly as age increases.

12. Should the horizontal and vertical strokes not be discerned with equal clearness, the focus of the eye is not the same for the horizontal and vertical meridians. The cylindrical glass which equalizes such difference shows the degree of astigmatism †).

The extremes of difference in refraction, in cases of astigmatism, are found in meridian planes which are perpendicular to each other. The direction of these planes however usually deviates more or less from the horizontal and vertical.

Difference in sharpness of horizontal and vertical lines produces an apparent alteration in the form of the letters. This distortion constitutes a rather important indication of the existence of astigmatism.

By determining the refractive power of the eye for the different radiated lines, in one plane, carried vertically through the visual line, the degree of astigmatism and the direction of the principal meridians can readily be ascertained.

We indicate the direction of the principal meridians and of the axes of the required cylindrical glasses by stating what angle they make with the perpendicular, conventionally indicating with + the declination to the right, and with — the declination to the left.

13. Positive lenses magnify, negative lenses diminish the size of the retinal image.

This magnifying and diminishing effect increases with the power of the lenses and especially with the distance at which they are applied from the eye.

Myopic persons, armed with appropriate negative lenses, necessarily show a diminition of V; on the contrary hypermetropic persons, armed with appropriate positive lenses, show a relative increase of V. The last result is equally obtained by telescopes; the apparent increase of V implies the magnifying power of such instruments.

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*) F. C. Donders, On the Anomalies of Accommodation and Refraction of the Eye; translated by Dr. W. D. Moore. The New Sydenham Society, London, 1864.

†) Ibid.

14. The size of the pupil is not without its influence upon the value of v. If the light be insufficient, v increases in proportion to the dilatation of the pupil; contraction of the pupil on the contrary improves the amount of v, where the retinal image is confused (from imperfect adjustment of the eye, or from irregular refraction of the media).

The pupil diminishes in size in accommodating for near objects, and increases with adjustment for distant objects: this may occasion some trifling difference in the amount of v assigned for the several distances.

15. The amount of v is dependent on the intensity of light. Insufficient intensity, but also too great intensity of light, lessens v.

The most favourable amount of light is variable, and depends especially upon the degree of light to which the eye has been exposed immediately before.

Independently of the strength of light, v is influenced moreover by the contrast *) between the white and black of the letters.

The contrast as well as the illumination of the letters is therefore required to be of constant value during our experiments.

16. Coloured letters or white letters with coloured illumination supply the means of ascertaining the acuteness of vision for each colour. In limited light all colours are not equally well perceived by every eye. If the refractive media of the eye have a certain colour, that colour is seen better than its complementary colour; in colour-blindness relatively more light is required to make those colours clearly visible, in regard to which sensibility is feeble.

Prolonged contemplation of one colour produces temporary colour-blindness.

17. The recognition of our isolated letters is a better test of v than reading a line of words in the corresponding types. For, in reading, some familiar words may be regarded as equivalent to letters of a larger size; while the individual letters of unfamiliar words may be less distinguishable, from their close apposition as usually printed.

In reading-tests, fluency is chiefly to be regarded; a limited or interrupted field of vision makes reading less fluent.

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*) Herman Aubert, Physiologie der Netzhaut. Breslau, 1864.

18. Square figures, constructed in the proportion of one to five, may be considered equal to our test-types.

For people who cannot read, there are added to the test-types square figures, the form of which can be promptly described.

19. Round dots of a certain diameter cannot be placed on an equal footing with parallel lines of the same diameter. The dots require a larger visual angle.

Viewed by a sharp-sighted eye at the smallest visual angle, parallel stripes seem to lose their regular form and to assume a beaded or a wavy appearance *). This is connected with the anatomical disposition of the retinal elements.

For the same reason discs placed close together and viewed at the smallest angle of vision often appear very different in size.

For comparative experiments we have added to our test-types a set of dots white on black and black on white, in which the diameter of each dot and also the smallest intermediate interstices appear, at 54 Parisian feet distance at an angle of one minute.

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*) H. Helmholtz, Handbuch der physiologischen Optik, S. 217. v. Hensen, Ueber das Sehen an der Fovea centralis. Virchow's Arch. XXXIX, S. 475.

1½.

The Gallic tribes fell off, and sued for peace. Even the Batavians became weary of the hopeless contest, while fortune, after much capricious hovering, settled at last upon the Roman side. Had Civilis been successful, he would have been deified; but his misfortunes, at last, made him odious in spite of his heroism. But the Batavian was not a man to be crushed, nor had he lived so long in the Roman service to be outmatched in politics by the barbarous Germans. He was not to be sacrificed as a peace-offering to revengeful Rome. Watching from beyond the Rhine the progress of defection and the decay of national

2.

enthusiasm, he determined to be beforehand with those who were now his enemies. He accepted the offer of negotiation from Cerialis. The Roman general was eager to grant a full pardon, and to re-enlist so brave a soldier in the service of the empire. A colloquy was agreed upon. The bridge across the Nabalia was broken asunder in the middle, and Cerialis and Civilis met upon the severed sides. The placid stream by which Roman enterprise had connected the waters of the Rhine with the lake of Flevo, flowed between the imperial

2½.

commander and the rebel chieftain. — Here the story abruptly terminates. The remainder of the Roman's narrative is lost, and upon that broken bridge the form of the Batavian hero disappears for ever. His name fades from history: not a syllable is known of his subsequent career; everything is buried in the profound oblivion which now steals over the scene where he was the most imposing actor. The contest of Civilis with Rome contains a

3.

remarkable foreshadowing of the future conflict with Spain, through which the Batavian republic, fifteen centuries later, was to be founded. The characters, the events, the amphibious battles, desperate sieges, slippery alliances, the traits of generosity, audacity, and cruelty, the generous confidence, the broken faith, seem so closely to repeat themselves, that History appears to present the

3½.

selfsame drama played over and over again, with but a change of actors and of costume. There is more than a fanciful resemblance between Civilis and William the Silent, two heroes of ancient German stock, who had learned the arts of war and peace in the service of a foreign and haugthy world-empire. Determination,

4½.

concentration of purpose, constancy in calamity, elasticity almost preternatural, self-denial, consummate craft in political combinations, personal fortitude, and passionate patriotism, were the heroic elements in both. The ambition of each was subordinate to the

5½.

cause wich he served. Both refused the crown, although each, perhaps, contemplated, in the sequel, a Batavian realm of wich he would have been the inevitable chief. Both offered the throne to a Gallic prince,

6½.

for Classicus was but the prototype of Anjou, as Brinno of Brederode, and neither was destined, in this world, to see his sacrifices crowned with success.

8½.

The characteristics of the two great races of the land portrayed themselves in the Roman and the Spanish struggle with much

12.

the same colors: twice a Batavian republic took its rank among the leading powers of the earht; the

MOTLEY.

II.

CLAUDIUS CIVILIS WAS A BATAVIAN OF NOBLE RACE, WHO HAD SERVED TWENTY-FIVE YEARS IN THE ROMAN ARMIES. HE WAS A SOLDIER OF FORTUNE, AND HAD FOUGHT WHEREVER THE ROMAN EAGLES FLEW; AFTER A QUARTER OF A CENTURY'S SERVICE HE WAS SENT IN CHAINS TO ROME, AND HIS BROTHER EXECUTED, BOTH FALSELY CHARGED WITH CONSPIRACY; SUCH WERE THE TRIUMPHS ADJUGED TO BATAVIAN

II$\frac{1}{11}$.

AUXILIARIES. HE ESCAPED WITH LIVE, AND WAS DISPOSED TO CONSECRATE WHAT REMAINED OF IT TO A NOBLER CAUSE. CIVILIS WAS NO BARBARIAN. LIKE THE GERMAN HERO ARMINIUS, HE HAD RECEIVED A ROMAN EDUCATION, AND HAD LEARNED THE DEGRADED CONDITION OF ROME. HE KNEW THE INFAMOUS VICES OF HER RULERS; HE RETAINED

III.

AN UNCONQUERABLE LOVE FOR LIBERTY AND FOR HIS OWN RACE. DESIRE TO AVENGE HIS OWN WRONGS WAS MINGLED WITH LOFTIER MOTIVES IN HIS BREAST. HE KNEW THAT THE SCEPTRE WAS IN THE GIFT OF THE BATAVIAN SOLDIERY. IT SEEMED A TIME TO STRIKE A BLOW FOR FREEDOM. THE DETAILS

III$\frac{1}{11}$.

OF THE REVOLT HAVE BEEN CAREFULLY PRESERVED BY TACITUS, AND FORM ONE OF HIS GRANDEST AND MOST ELABORATE PICTURES. THE SPECTACLE OF A BRAVE NATION, INSPIRED BY THE SOUL OF ONE GREAT

IV$\frac{1}{11}$.

MAN AND RISING AGAINST AN OVERWHELMING DESPOTISM, WILL ALWAYS SPEAK TO THE HEART, FROM GENERATION TO GENERATION. THE BATTLES, THE SIEGES, THE DEFEATS,

VI.

THE INDOMITABLE SPIRIT OF CIVILIS, STILL FLAMING MOST BRIGHTLY WHEN THE CLOUDS WERE DARKEST AROUND HIM, HAVE BEEN DESCRIBED BY THE

MOTLEY.

1½.

J'ai connu des gens élevés sur le seuil de la boutique de leur père; ils avaient retenu de ce genre de vie certaine connaissance pratique des hommes, certain penchant musard, le goût des rues, quelque trivialité d'idées, la morale et les préjugés du quartier. On en a fait des avocats, des ministres, et, dans chacune de ces vocations, ils ont apporté de ce seuil de boutique bien des éléments bons ou mauvais, toujours ineffaçables. D'autres, en ce temps-là, je veux dire vers quinze ans, avaient leur petite chambre sur une cour silencieuse, sur des toits déserts. Ils y sont devenus méditatifs peu au fait des affaires de la

2.

rue, assez riches d'observations privées sur un petit nombre de voisins. Il y ont acquis une connaissance de l'homme moins générale, mais plus intime. Combien de fois aussi, privés de tout spectacle, ils ont vécu avec eux seuls; pendant que l'autre, sur son seuil, toujours récréé par la vue de quelque objet nouveau, n'avait ni le temps ni l'envie de faire connaissance avec lui-même. Avocat ou ministre, pensez-vous que celui de la petite chambre n'aura pas une manière autre que celui du seuil? Et ce qu'on voit passer son logis, et les gens

2½.

qui circulent autour, et les bruits qui s'y entendent, et les objets tristes ou riants qui s'y rencontrent, et le voisinage, et les cas fortuits? Oh! que l'éducation est une chose difficile! Tandis qu'à lumineuse intention, sur le conseil d'un ami ou d'un livre, vous dirigez l'esprit et le coeur de votre fils vers le côté qui vous agrée, les choses, les bruits, les voisins, les cas fortuits conspirent contre vous, ou vous secondent, sans que vous puissiez

3.

détruire ces influences ni vous passer de leur concours. Plus tard, il est vrai, après vingt, vingt-cinq ans, le logement fait peu. Il est triste ou gai, confortable ou délabré, mais c'est une école où les enseignements ont cessé. A cet âge, l'homme fournit sa carrière; il a atteint ce nuage d'avenir qui, tout à l'heure encore, lui paraissait si lointain; son âme n'est plus rêveuse et docile: les objets s'y mirent,

3½.

mais ils n'y laissent plus d'empreinte. Pour moi j'habitais un quartier solitaire. C'est derrière le temple de Saint-Pierre, près de la prison de l'Evêché. Par-dessus le feuillage d'un acacia, je voyais les ogives du temple, le bas de la grosse tour, un soupirail de la prison, et au delà, par une trouée, le lac et ses rives. Quels beaux

4½.

enseignements, si j'avais su en profiter! Combien la destinée m'avait favorisé entre les garçons de mon âge! Si j'ai mal profité, je tire gloire néanmoins d'être issu de cette école, plus noble que celle du seuil de boutique, plus riche que celle de la chambre solitaire, et d'où

5½.

devait sortir un poète, pour peu que ma nature s'y fût prêtée. Au fait, tout est pour le mieux; car je me doute qu'à aucune époque les poètes n'ont été heureux. En savez-vous un, parmi les plus favorisés, qui ait jamais pu

6½.

étancher sa soif de gloire et d'hommages; en connaissez-vous un, parmi les plus grands, et surtout parmi ceux-là, qui ait jamais pu être satisfait de ses oeuvres,

y reconnaitre les célestes tableaux que lui révélait son génie? Vie de leurres, de déceptions, de dégoûts! Et encore, ceci n'en

est que la surface; je m'imagine qu'elle recouvre des troubles plus grands, des dégoûts plus amer

1½.

Essere costretto da sventura ad abandonnare la patria è sempre doloroso, ma abandonarla incatenato, condotto in climi orrendi, destinato a languire per anni irà sgherri è cosa sì straziante che non v'ha termini per accennarla! Prima di varcare le Alpi, vieppiù mi si facea cara d'ora in ora la mia nazione, stante la pietà che dappertutto ci dimostravano quelli che incontravamo. In ogni città, in ogni villaggio, per ogni sparso casolare, la notizia della nostra condanna essendo già pubblica da qualche settimana eravamo aspettati. In parecchi luoghi, i commissarii e le guardie stentavano a dissipare la folla

2.

che ne circondava. Era mirabile il benevolo sentimento che veniva palesato a nostro riguardo. In Udine ci accadde una commovente sorpresa. Giunti alla locanda, il commissario fece chiudere la porta del cortile e respingere il popolo. Ci assegnò una stanza, e disse ai camerieri che portassero da cena e l'occorrente per dormire. Ecco un instante appresso entrare tre uomini, con materassi sulle spalle. Qual' è la nostra meraviglia, accorgendoci che solo uno di loro è al servizio della locanda, e che gli altri sono due nostri conoscenti! Fingemmo

2½.

d'aiutarli a por giù i materassi, e toccammo loro furtivamente la mano. Le lagrime sgorgavano dal cuore ad essi ed a noi. Oh quanto ci fu penoso di non poterle versare tra le braccia gli uni degli altri. I commissarii non s'avvidero di quella pietosa scena, ma dubitai che una delle guardi e penetrasse il mistero, nell' atto che il buon Dario mi stringeva la mano. Quella guardia era un Veneto. Mirò in volto Dario e me; impallidì, sembrò tentennare,

3

se dovesse alzar la voce, ma tacque, e pose gli occhi altrove, dissimulando. Se non indovinò che quelli erano amici nostri, pensò almeno che fossero camerieri di nostra conoscenza. Il matino partivamo d'Udine, ed albeggiava appena: quell' affettuoso Dario era già nella strada, tutto mantellato; ci salutò ancora, e ci seguì lungo tempo. Vedemmo anche una carozza venirci dietro per due o tre miglia. In essa

3½.

qualcheduno facea sventolare un fazzoletto. Alfine retrocesse. Chi sarà stato? Lo supponemmo. — Un giorno, verso sera (ogni volta che ci penso mi si rinnovano i palpiti che allora mi ci destarono), le sentinelle, per felice caso, furono meno attente, ed intesi spiegarsi e proseguirsi, con voce alquanto sommessa ma

SILVIO PELLICO.

1½.

Es war ein klarer, fröstelnder Herbsttag, als ein junger Mensch von studentischem Aussehn durch die Allee des Düsseldorfer Hofgartens langsam wanderte, manchmal, wie aus kindischer Lust, das raschelnde Laub, das den Boden bedeckte, mit den Füssen aufwarf, manchmal aber auch wehmüthig hinaufblickte nach den dürren Bäumen, woran nur noch wenige Goldblätter hingen. In früheren Tagen hatte der junge Mensch mit ganz andern Gedanken an eben dieselben Bäume hinaufgesehen, und er war damals ein Knabe und suchte Vogelnester oder Sommerkäfer, die ihm gar sehr ergötzten, wenn sie lustig dahinsummten, sich der

2.

hübschen Welt erfreuten, und zufrieden waren mit einem saftig grünen Blättchen, mit einem Tröpfchen Thau; mit einem warmen Sonnenstrahl, und mit dem süssen Kräuterduft. Damals war des Knaben Herz eben so vergnügt wie die flatternden Thierchen. Jetzt aber war sein Herz älter geworden, die kleinen Sonnenstrahlen waren darin erloschen, alle Blumen waren darin abgestorben, sogar der schöne Traum der Liebe war darin verblichen, im armen Herzen war Nichts als Muth und Gram, und damit ich das Schermzlichste sage — es war mein Herz.

2½.

Denselben Tag war ich zur alten Vaterstadt zurückgekehrt. Ich hatte die lieben Gräber besucht. Von allen lebenden Freunden und Verwandten hatte ich nur einen Ohm und eine Muhme wiedergefunden. Fand ich auch sonst noch bekannte Gestalten auf der Strasse, so kannte mich doch Niemand mehr, und die Stadt selbst sah mich an mit fremden Augen, viele Häuser waren unterdessen neu angestrichen worden, aus den Fenstern guckten fremde Gesichter,

3.

um die alten Schornsteine flatterten abgelebte Spatzen. Alles sah so todt und doch so frisch aus, wie Salat, der auf einem Kirchhofe wächst. Nur der alte Kurfürst erkannte mich, er stand noch auf den alten Platz, aber er schien magerer geworden zu sein. Eben weil er immer mitten auf dem Markte stand, hatte er alle Misère der Zeit mit angesehen, und von solchem Anblick wird man nicht fett. Ich war

3½.

wie im Traume, und dachte an das Märchen von den verzauberten Städten, und ich eilte zum Thore hinaus, damit ich nicht zu früh erwachte. Im Hofgarten vermisste ich manchen Baum, und mancher war verkrüppelt, und die vier grossen Pappeln, die mir sonst wie grüne Riesen erschienen, waren klein geworden. Ich war nicht

4½.

müde, aber ich bekam doch Lust mich noch einmal auf die hölzerne Bank zu setzen, in die ich einst den Namen meines Mädchens eingeschnitten. Ich konnte ihn kaum wiederfinden, es waren so viele neue Namen darüber hingeschnitzelt. Während ich aber, auf der

5½.

alten Bank des Hofgartens sitzend, in die Vergangenheit zurückträumte, hörte ich hinter mir verworrene Menschenstimmen, welche das Schicksal der armen Franzosen beklagten, die, im russischen Kriege als Gefangene

6½.

nach Siberiën geschleppt, dort mehre lange Jahre, obgleich schon Frieden war, zurückgehalten worden und jetzt erst heimkehrten. Als ich nun aufsah, erblickte ich

8½.

wirklich diese Waisenkinder des Ruhmes; durch die Risse ihrer zerlumpten Uniformen lauschte das nackte Elend; obgleich

12.

verstümmelt, ermattet, meistens hinkend, blieben sie doch noch in einer Art militairischen Schrittes.

HEINE.

4½.

pressen, in Engeland zoo gewoon, is daarom onder ons nimmer noodzakelijk geweest; en om onze vloten van manschappen te voorzien heeft men hier nooit tot harde middelen zijne toevlugt genomen. Daarenboven verschaft het groote getal van menschen, die zich vrij-

5½.

willig tot de zeevaart begeven, nog dit voorregt, dat men veel meer kansen heeft om mannen van eenen ongemeenen geest en moed aan te kweeken, die ook gemeenlijk beter dan te lande naar hunne verdiensten

6½.

beloond worden. Een ieder weet dat onze doorluchtigste zeehelden doorgaans gering of zeer middelmatig van geboorte geweest zijn. Men zal, hoop ik, deze algemeene

8½.

aanmerkingen, indien men die anders goedkeurt, hier niet kwalijk geplaatst vinden, dewijl ze tot voorbereiding verstrekken,

12.

om minder verzet te staan over dien schielijken aanwas van het vermogen onzer vereenigde Ne-

VII.

F H K O S U Y A C E G L 7

VI.

N P R T V Z B D F H K O 6

V.

S U Y A C E G L N P R T 5

IV.

V Z B D F H K O S U Y A 4

III.

C E G L N P R T V Z B D 3

II.

F H K O S U Y A C E G L 2

I.

N P R T V Z B D F H K O 1

XV.

N P R T V Z B D F H K O 15

XII.

S U Y A C E G L N P R T 12

X.

V Z B D F H K O S U Y A 10

VIII.

C E G L N P R T V Z B D 8

XXX.

F H K O S 3

XX.

U Y A C E G L 2

L.

P R T 5

XL.

V Z B D 4

1½.

J'ai connu des gens élevés sur le seuil de la boutique de leur père; ils avaient retenu de ce genre de vie certaine connaissance pratique des hommes, certain penchant mussard, le goût des rues, quelque trivialité d'idées, la morale et les préjugés du quartier. On en a fait des avocats, des ministres, et, dans chacune de ces vocations, ils ont apporté de ce seuil de boutique bien des éléments bons ou mauvais, toujours ineffaçables. D'autres, en ce temps-là, je veux dire vers quinze ans, avaient leur petite chambre sur une cour silencieuse, sur des toits déserts. Ils y sont devenus méditatifs, peu au fait des affaires de la

2.

rue, assez riches d'observations privées sur un petit nombre de voisins. Ils y ont acquis une connaissance de l'homme moins générale, mais plus intime. Combien de fois aussi, privés de tout spectacle, ils ont vécu avec eux seuls; pendant que l'autre, sur son seuil, toujours récréé par la vue de quelque objet nouveau, n'avait ni le temps ni l'envie de faire connaissance avec lui-même. Avocat ou ministre, pensez-vous que celui de la petite chambre n'aura pas une manière autre que celui du seuil? Et ce qu'on voit passer de son logis, et les gens

2½.

qui circulent autour, et les bruits qui s'y entendent, et les objets tristes ou riants qui s'y rencontrent, et le voisinage, et les cas fortuits? Oh! que l'éducation est une chose difficile! Tandis qu'à lumineuse intention, sur le conseil d'un ami ou d'un livre, vous dirigez l'esprit et le coeur de votre fils vers le côté qui vous agrée, les choses, les bruits, les voisins, les cas fortuits conspirent contre vous, ou vous secondent, sans que vous puissiez

3.

détruire ces influences ni vous passer de leur concours. Plus tard, il est vrai, après vingt, vingt-cinq ans, le logement fait peu. Il est triste ou gai, confortable ou délabré, mais c'est une école où les enseignements ont cessé. A cet âge, l'homme fournit sa carrière; il a atteint ce nuage d'avenir qui, tout à l'heure encore, lui paraissait si lointain; son âme n'est plus rêveuse et docile: les objets s'y mirent,

3½.

mais ils n'y laissent plus d'empreinte. Pour moi, j'habitais un quartier solitaire. C'est derrière le temple de Saint-Pierre, près de la prison de l'Évêché. Par-dessus le feuillage d'un acacia, je voyais les ogives du temple, le bas de la grosse tour, un soupirail de la prison, et au delà, par une trouée, le lac et ses rives. Quels beaux

4½.

enseignements, si j'avais su en profiter! Combien la destinée m'avait favorisé entre les garçons de mon âge! Si j'ai mal profité, je tire gloire néanmoins d'être issu de cette école, plus noble que celle du seuil de boutique, plus riche que celle de la chambre solitaire, et d'où

5½.

devait sortir un poëte, pour peu que ma nature s'y fût prêtée. Au fait, tout est pour le mieux; car je me doute qu'à aucune époque les poëtes n'ont été heureux. En savez-vous un, parmi les plus favorisés, qui ait jamais pu

6½.

étancher sa soif de gloire et d'hommages; en connaissez-vous un, parmi les plus grands, et surtout parmi ceux-là, qui ait jamais pu être satisfait de ses oeuvres,

8½.

y reconnaitre les célestes tableaux que lui revelait son genie? Vie de leurres, de déceptions, de dégoûts! Et encore, ceci n'en

12.

est que la surface; je m'imagine qu'elle recouvre des troubles plus grands, des dégoûts plus amer

II.

IL Y A DES MOMENTS DANS LA VIE OÙ UNE HEUREUSE RÉUNION DE CIRCONSTANCES SEMBLE FIXER SUR NOUS LE BONHEUR. LE CALME DES PASSIONS, L'ABSENCE D'INQUIÉTUDE NOUS PRÉDISPOSENT À JOUIR; ET, SI AU CONTENTEMENT D'ESPRIT VIENT S'UNIR UNE SITUATION MATÉRIELLEMENT DOUCE, EMBELLIE PAR D'AGRÉABLES SENSATIONS, LES HEURES COULENT ALORS DÉLICIEUSEMENT, ET LE SENTIMENT DE

II$\frac{1}{11}$

L'EXISTENCE SE PARE DE SES PLUS RIANTES COULEURS. C'EST PRÉCISÉMENT LE CAS OÙ SE TROUVAIENT LES TROIS PERSONNAGES QUE J'AVAIS SOUS LES YEUX. RIEN AU MONDE DANS LEUR PHYSIONOMIE QUI TRAHÎT LE MOINDRE SOUCI, LE PLUS PETIT TROUBLE, LE PLUS FAIBLE REMORDS; AU CONTRAIRE, ON DEVINAIT, AU LÉGER

III.

RENGORGEMET DE LEUR COU, CE LÉGITIME ORGUEIL QUI PROCÈDE DU CONTENTEMENT D'ESPRIT: LA GRAVITÉ DE LEUR DÉMARCHE ANNONÇAIT LE CALME DE LEUR COEUR, LA MORALITÉ DE LEURS PENSÉES; ET, DANS CE MEMENT MÊME OU, CÉDANT AUX MOLLES INFLUENCES D'UN DOUX SOLEIL, ILS VENAIENT DE

III$\frac{1}{11}$

S'ENDORMIR, ENCORE SEMBLAIT-IL QUE DE CE SOMMEIL S'EXHALAT UN SUAVE PARFUM D'INNOCENCE ET DE PAIX. POUR MOI (L'HOMME EST SUJET AUX MAUVAISES PENSÉES), DANS CE MOMENT JE MANIAIS UNE PIERRE. A LA FIN,

IV$\frac{1}{11}$

FORTEMENT SOLLICITÉ PAR UN MALIN DESIR JE LA LANÇAI DANS LA MARE, TOUT A CÔTÉ... AUSSITÔT LES TROIS TÊTES SORTIRENT EN SURSAUT DE DESSOUS L'AILE. C'ÉTAIENT TROIS

VI.

CANARDS, J'OUBLIAIS DE LE DIRE. ILS FAISAIENT LÀ LEUR SIESTE, TANDIS QU'ASSIS AU BORD DE LA FLAQUE JE SONGEAIS, PRESQUE AUSSI HEUREUX

VII½.

QUE MES PAISIBLES COMPAGNONS. AUX CHAMPS, L'HEURE DE MIDI EST CELLE DU SILENCE, DU REPOS, DE LA RÊVERIE. PENDANT QUE

X.

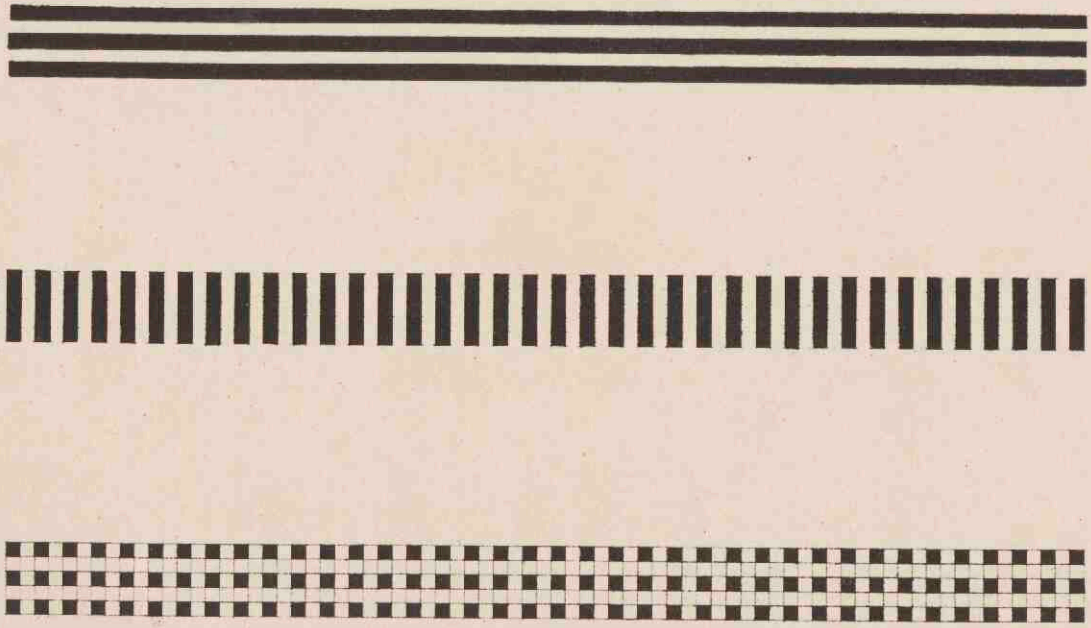
LE SOLEIL DARDE À PLOMB SA LUMIÈRE SUR LA PLAINE, HOMMES ET ANIMAUX SUS-

XII.

PENDENT LEUR LABEUR; LE VENT SE TAIT, L'HERBE SE PENCHE; L'INSECTE

R. Töpffer.

XX.



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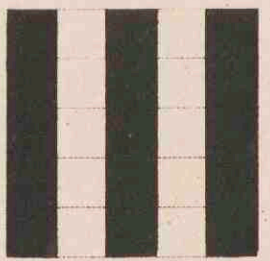

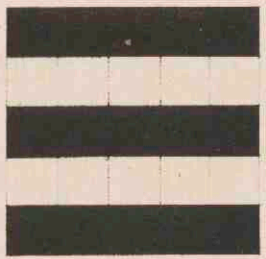

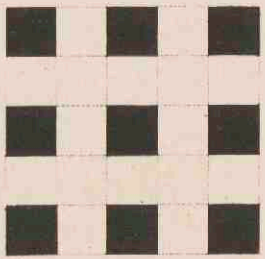

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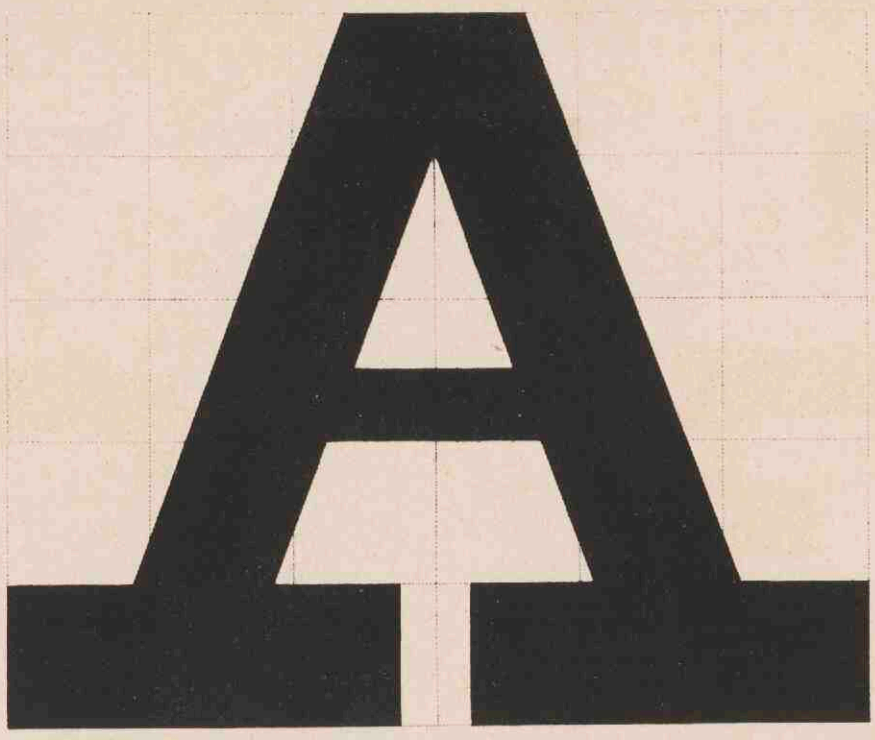

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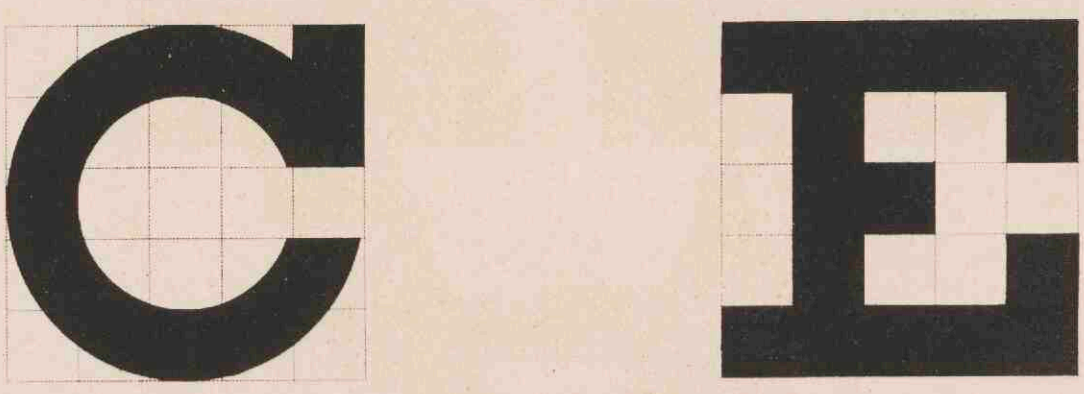

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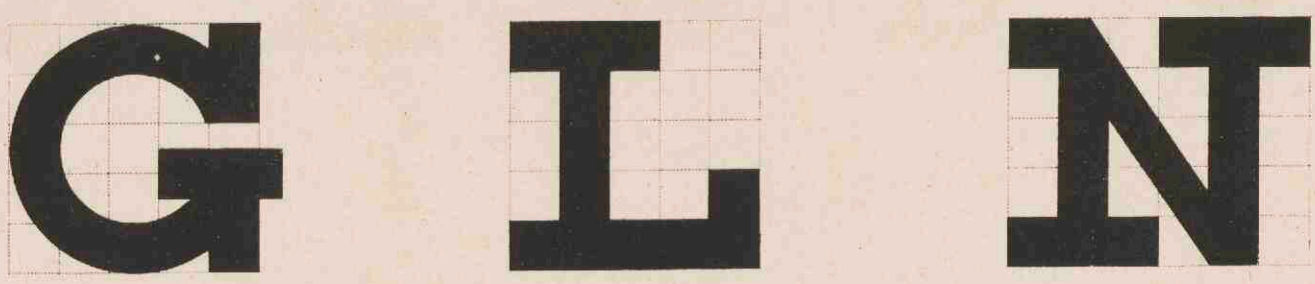

L.

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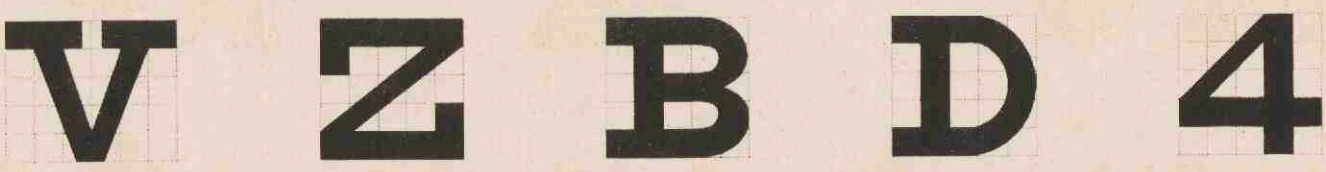


XXX.

XX.

D = 50.

B

D = 30.

D E

D = 20.

T B R

D = 15.

E E B D

D = 10.

E T L F N

D = 6 6.

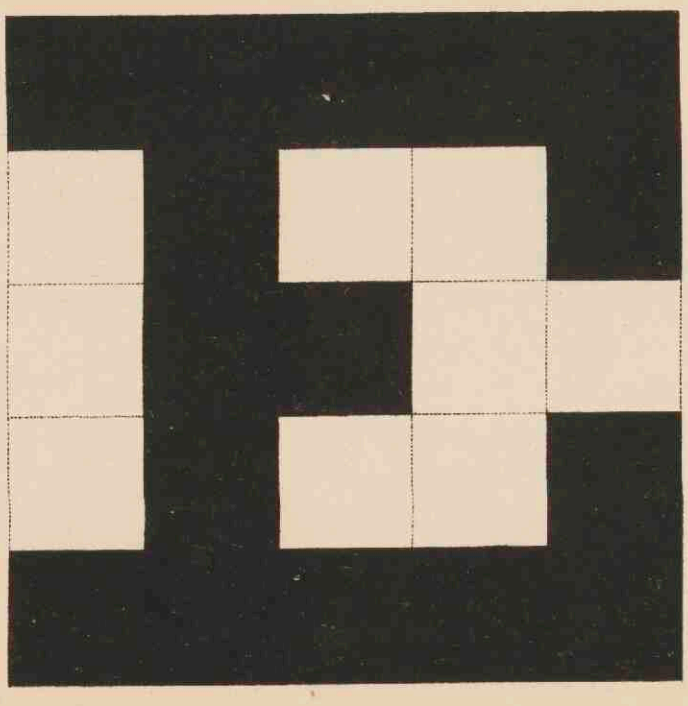
P Z E D B G

D = 5.

O L T Z B D N

D=50.

D = 60.



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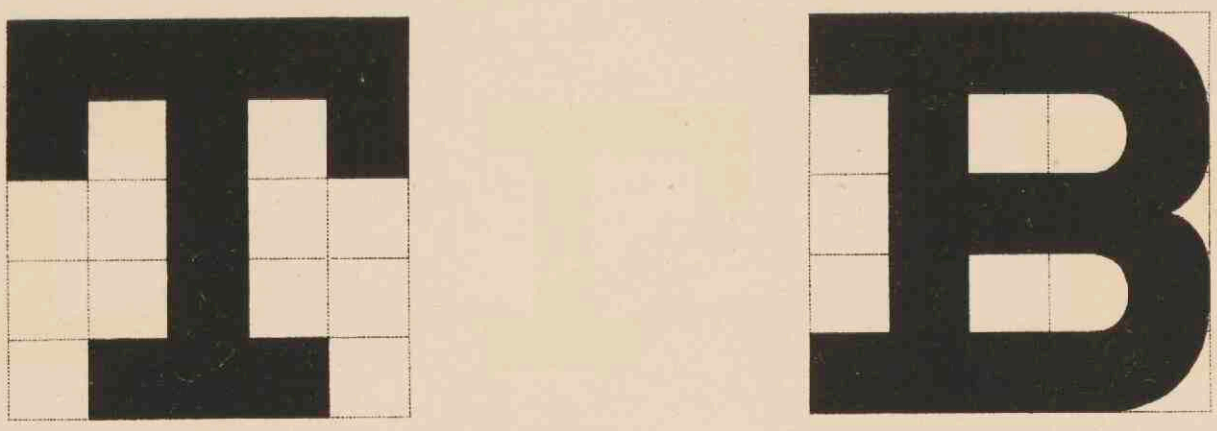

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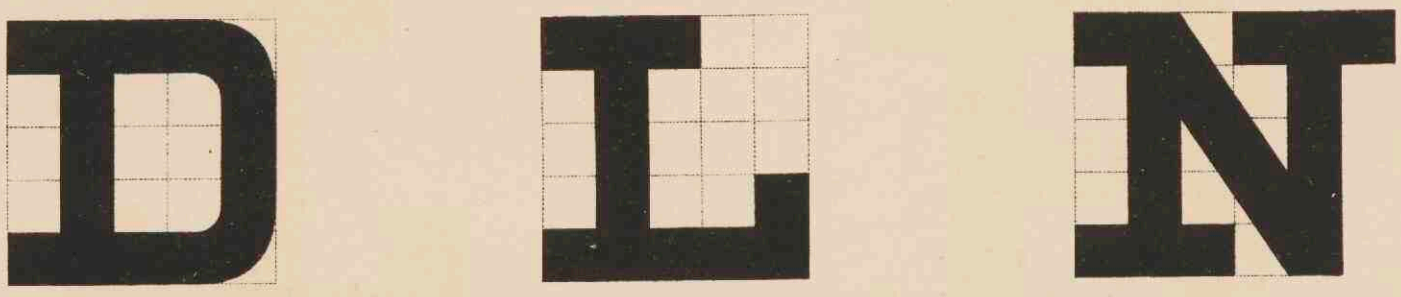

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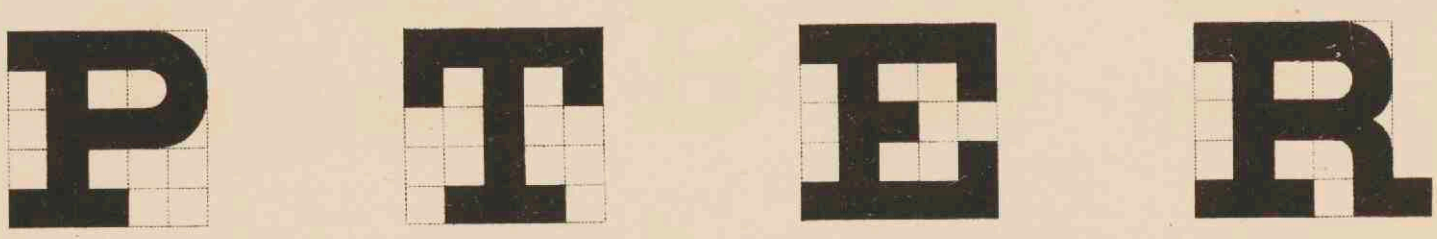

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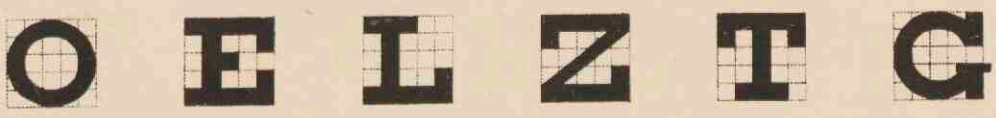

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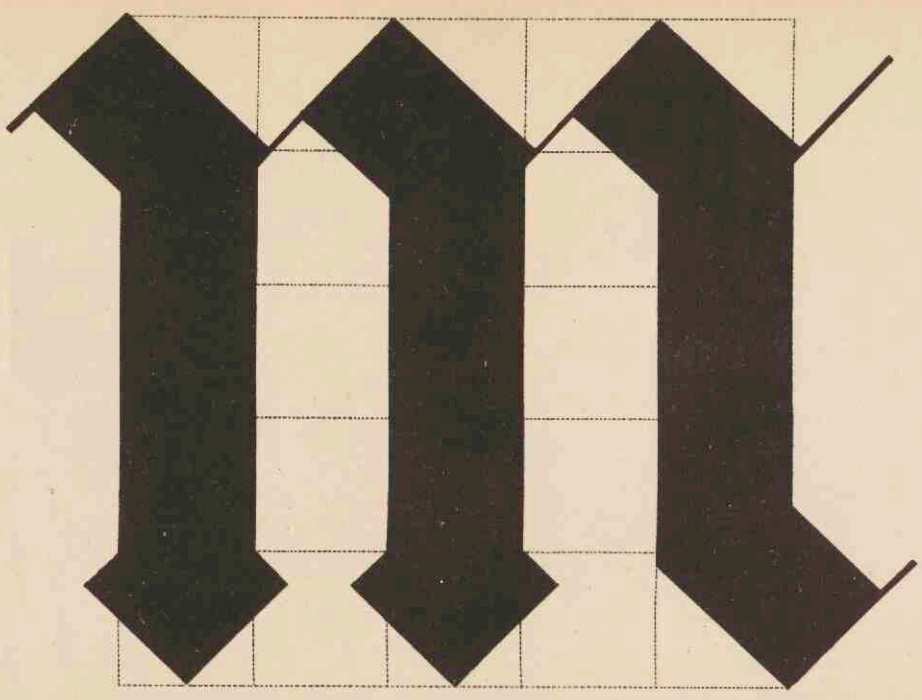
D=60.



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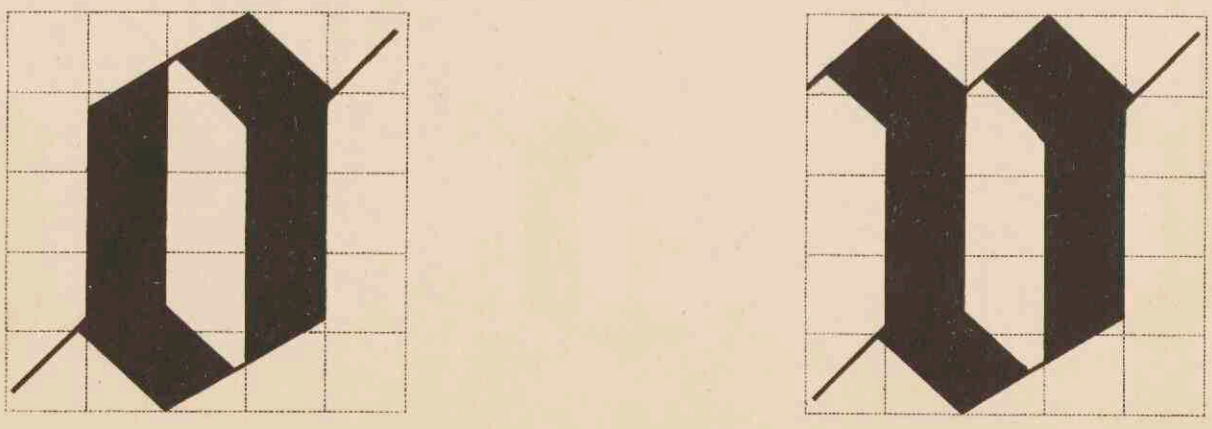

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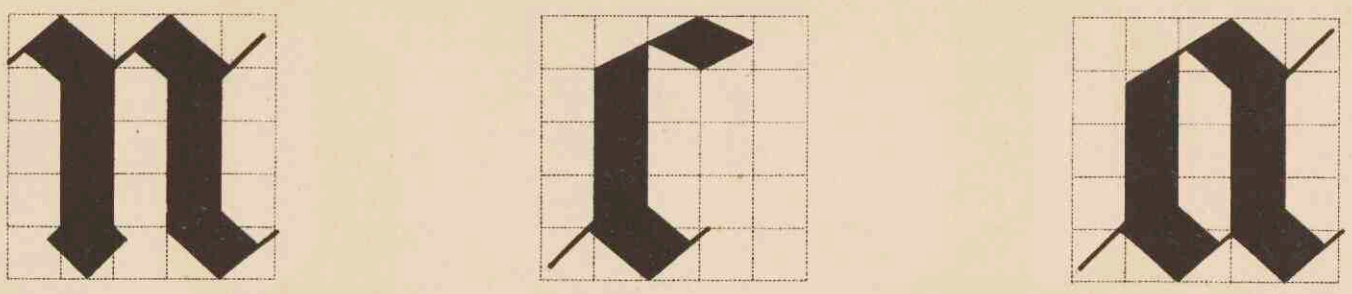

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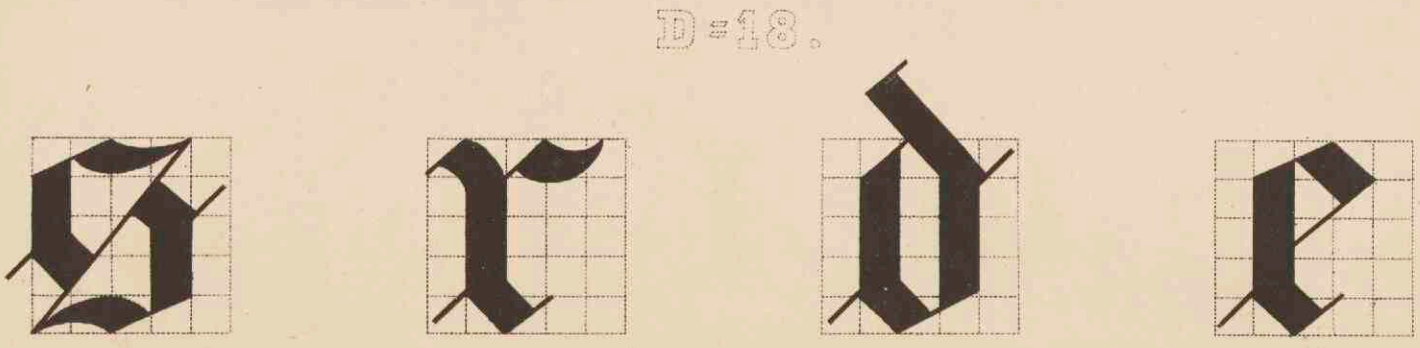

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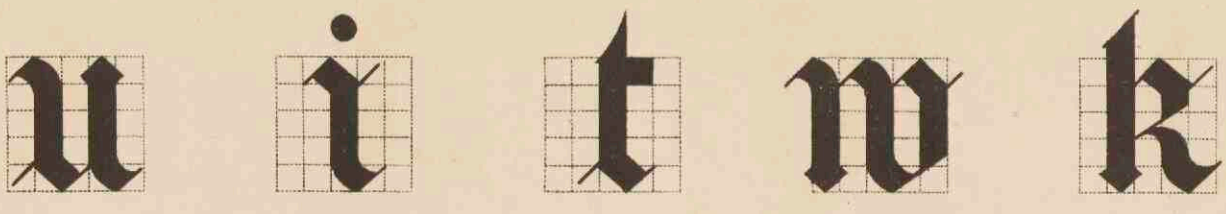

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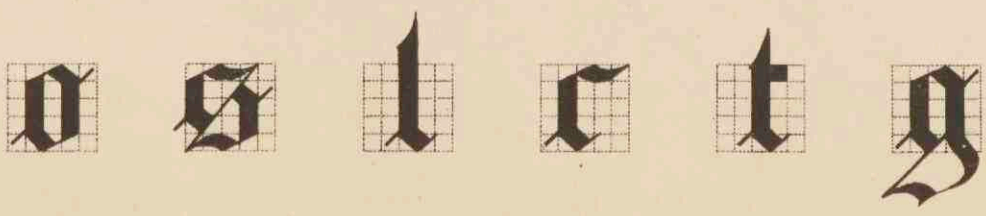

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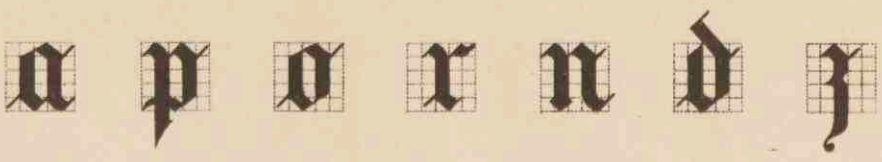

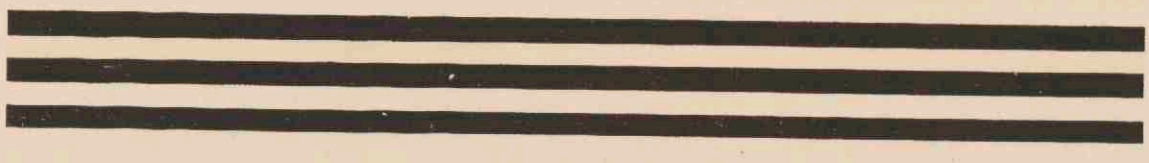

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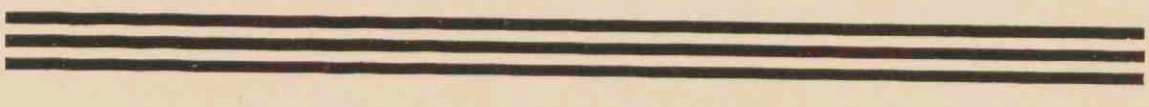

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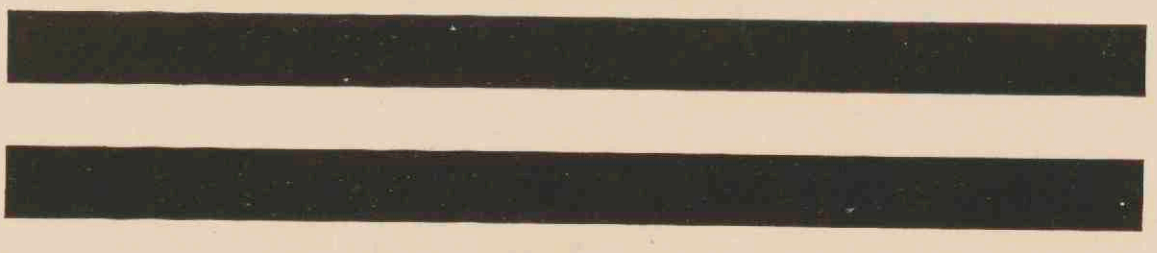

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D=60.

D=50.

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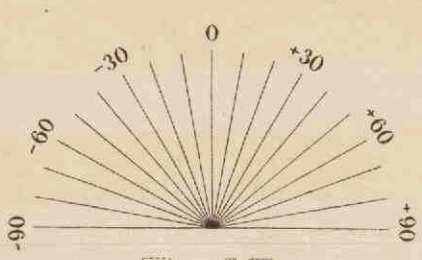

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D=6.

D=5.

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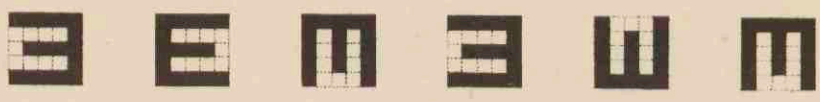

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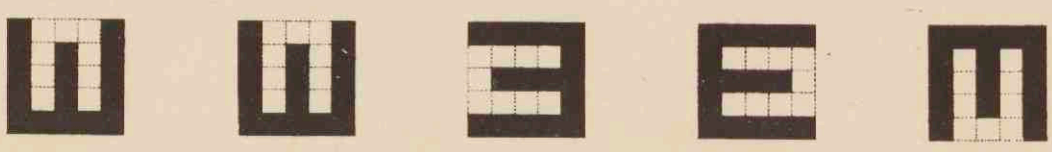

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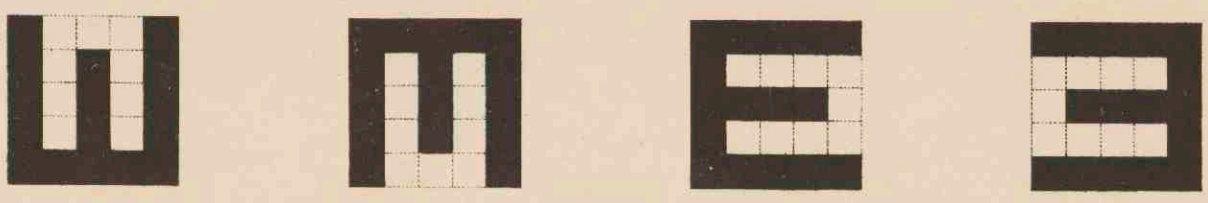

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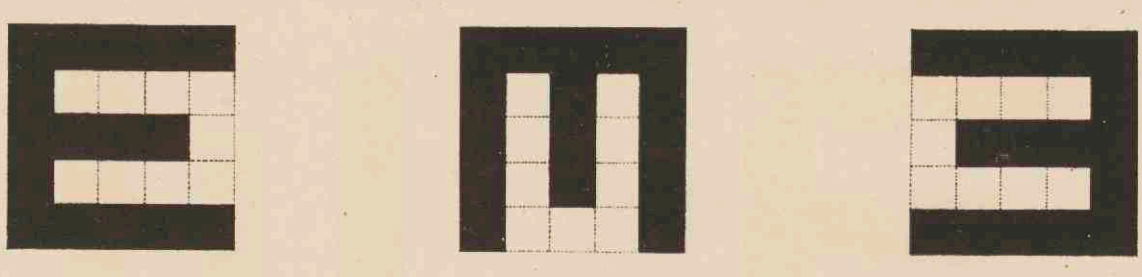

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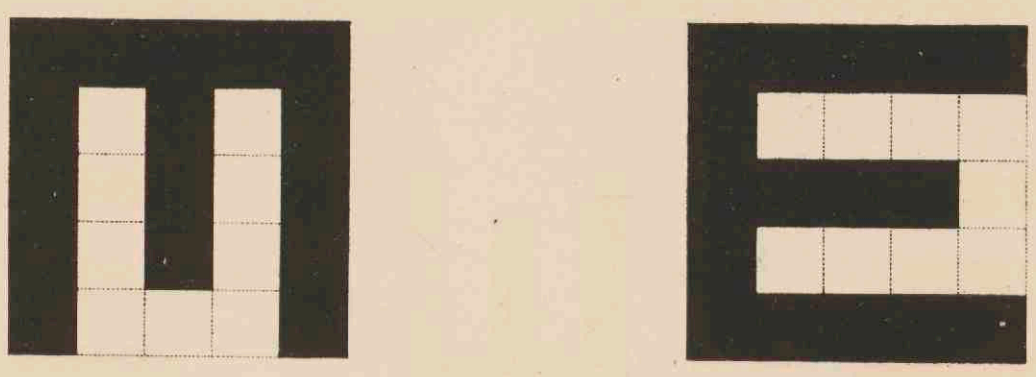

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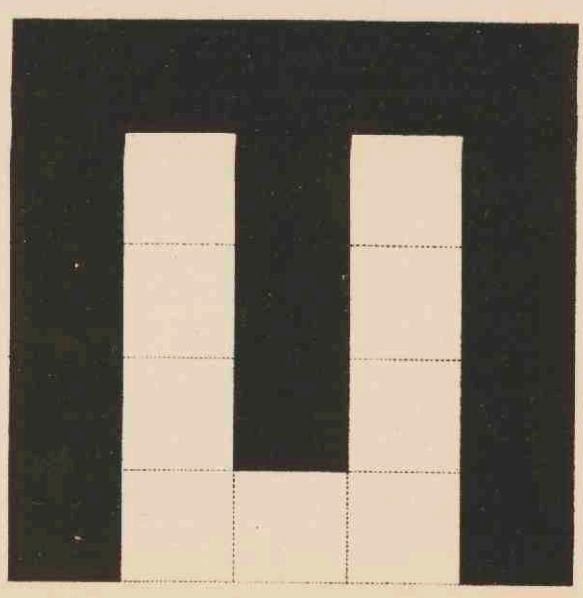

D=50.

D=50.

cc.

A

c.

C E

LXX.

G L N

L.

P R T 5

XL.

V Z B D 4

XXX.

F H K O S 3

XX.

U Y A C E G L 2