## Fitinuamental łIriuriples

 of the
## Tharmian ©iphtrs



Etates suac 18.
$1570^{5}$

AND APPLICATION TO BOOKS OF THE SIXTEENTH AND SEVENTEENTH CENTURIES

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GEORGE FABYAN

## Foreword

In certain volumes published in the 16th and 17th centuries, the use and commixture, without any apparent reason, of two forms of type, both in the roman and the italic letters, has long been a matter of comment and discussion among lovers of books and book lore, and although various theories have been advanced by researchers and students of Elizabethan literature, none of them have seemed to answer the question.

Twenty years ago, Elizabeth Wells Gallup, an instructor in English, was reading an original of Sir Francis Bacon's De Augmentis Scientiarum and the chapter on Ciphers appealed strongly to her reason. Of the books of the Elizabethan period, none are of greater importance than the 1623 Shakespeare Folio, which contains a vast number of examples of the use of two forms of type. She asked herself whether there might not be concealed within this work a cipher such as Bacon described.

Bacon explains in the above mentioned chapter how a secret or interior note may be infolded within an apparently simple open or exterior message by the use of two forms of type very similar in appearance but still showing to the closely observant or experienced eye distinct characteristics, by means of which these two forms may be distinguished. Bacon calls attention to the mathematical fact that the transposition of only two different objects (blocks, letters, etc.) will yield thirty-two dissimilar combinations, of which only twenty-four would be necessary to represent all the letters of our alphabet ( I and $\mathrm{J}, \mathrm{U}$ and V , being used interchangeably in the 16th century). By referring to the code given by Bacon it will readily be seen that a row of fifteen blocks in which the 1 st, 4 th, 8 th, 9 th, 10 th, and 13 th were black, the rest white, would spell out the word "the". If black and white blocks are replaced by capital and small letters respectively, the name

## BilIterAL CipHer

still contains the hidden word "the". But now suppose the differences between the two forms (called for convenience the $a$ and the $b$ forms) are not so apparent as in the above examples; suppose that in this name "Bi-literal Cipher," letters of two only very slightly different, but still distinguishable, forms were used, it is clear that the word "the" could still be infolded within it. Hence by the appropriate use of type of two forms, a sentence, a paragraph, a page or an entire book, might be made to infold a hidden message of an import wholly different from the apparent language of the printed page. Nor is this reading between the lines, but it is discovering in the lines something not apparent at a cursory glance. Neither is it necessary in order to achieve this that the original language of the printed page be framed, altered, or modified for the purpose in any manner whatsoever. It is only necessary that after the obvious or open language of the manuscript is written, some distinguishing mark should be placed, for the direction of the printer, under each letter which is to be set up from the $b$ form. All the other letters would naturally be set up from the $a$ form.

## PProof

To decipher such material then, it would be necessary first to be able to recognize the $a$ and the $b$ forms in the type used, and secondly, to know the code which had been employed.

Having mastered the examples given by Lord Bacon in both the editions of $D e$ Augmentis Scientiarum or "The Advancement of Learning," Mrs. Gallup determined to apply the principles of Bacon's Bi-literal Cipher to the 1623 Shakespeare Folio. Opening the Folio at random she turned the leaves to select the page of the most characteristic italic type she could find, and chose the page containing the Prologue to "Troilus and Cressida", in which even a casual inspection will disclose the presence of two forms of type for certain letters. (Note such outstanding examples as the capital $I$ 's, the capital $N$ 's, the capital $T$ 's, and the small $w$ 's.) Having noticed the undoubted presence of two forms of type, Mrs. Gallup's first step in endeavoring to determine whether this page does or does not contain the Bi-literal Cipher, was to study the differences between these two forms; her next step was to decide which was to be termed the $a$ form and which the $b$ form. The fact that in Bacon's code the $a$ 's predominate greatly over the $b$ 's, suggested to Mrs. Gallup that the $a$ form might probably be that occurring most frequently on the printed page, if the code given by Bacon had actually been used. Examining each letter under a magnifying glass, she tentatively assigned each one as an $a$ or a $b$ form, marking it accordingly. Having completed the marking in this manner, she applied Bacon's own code but without any intelligible result. She noticed, however, near the bothom of the page, that the groups of $a$ and $b$ resulted in giving by application of the Code a collection of letters as follows:

## ELIZXBEXH

(X:-Mrs. Gallup does not remember the two letters where $X$ is used in the above word.)

She realized that this combination of letters was probably intended to spell out the word "Elizabeth." She changed carefully the markings of the groups which formed the letters here designated by $X$, making, as she did so, sketches of the characteristics and differences of the letters she so changed in producing the word "Elizabeth." Then with this additional information, Mrs. Gallup carefully marked each letter of the Prologue anew-to find to her own amazement, when she had finished, the astounding message which the student will himself have the pleasure of deciphering in a succeeding lesson. After the Prologue, she studied and deciphered other passages concealed in the apparently meaningless type forms. Later she applied the methods to a number of 16 th and 17 th century works, with negative results in certain cases, but positive results in others.

Such, then, is the history of the discovery of the use of a cryptic or secret writing in certain of the aforementioned volumes, which for three hundred years escaped detection-The Bi-literal Cipher of Sir Francis Bacon.

The advantages to be gained from the study of the Bi-literal Cipher are many and various:-it calls into play both literary knowledge and technical and mechanical skill; it trains the eye to close observance; it trains the hands in printing, which is
now almost a lost art; it requires and teaches not only accuracy, but the absolute necessity for accuracy, which is very desirable in any walk of life-in a word, the study of the Cipher may, when pursued earnestly and accurately, achieve that most-to-be-desired end of all education, a thoroughly trained mind. As for its historic value, that is inestimable, as the search after Truth is the greatest of all pursuits. In addition, its practical values are numerous: it may be utilized in kindergarten teaching in blocks, beads, weaving, or colors; in the entertainment and education of children, old people, or invalids, it may be an easy and most pleasant factor; and in the instruction of the blind, the use of the cipher embossed and placed vertically would require the learning of but two differences or characters in place of twenty-six; and finally, let it not be forgotten that the Cipher permits of transmission of thought, regardless of censorship or the curiosity of others.

The mastering of the principles of the Bi-literal Cipher is really a simple matter. Young people of fourteen years and upwards, it is found, note readily differences in type. One young student in the Riverbank Laboratories marked 940 letters in three hours with only eight errors. But the application of these principles to the Elizabethan volumes which contain the Bi-literal Cipher is a more difficult matter; first, because in order to escape suspicion and detection at a premature time, and secondly, because of the unavoidable variation due to the imperfect methods of printing in use at that time, the two forms of type are not so clearly distinguishable as in the examples given by Bacon himself. However, the earnest student will in time overcome these obstacles, and by concentrated application learn to decipher even the most difficult passages and works. After all possible mechanical assistance has been provided, the requisites on the part of the student are only earnest purpose, good eyes, and a good mind.

## General Instructions for the Study of the Baconian Bi-literal Cipher.

It is earnestly recommended that the student secure and read a copy of the New Atlantis. This will serve to give him some comprehensive idea of the great brain of Sir Francis Bacon. It is, of course, to be desired that the student familiarize himself with all of Bacon's works, but as a beginning we recommend the New Atlantis. It is contained in a pocket edition of Bacon's Works, George Newnes, London, 1902.

For the study of the ciphers it is necessary that the eye be trained to distinguish minute differences, which requires time, but it is time well spent.

The possession and use of a reading glass is indispensable for this purpose.
All of our facsimile photographs may be compared with the original first folio at any of our large libraries.

It is manifest that original editions, good facsimiles, or photographs of originals, are required for the working of the Bi-literal Cipher, as the two forms of type do not exist in the modern editions.
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Read carefully Bacon's own description of the Bi-literal Cipher found in Plates 1 and 2 - Spedding's translation of "De Augmentis".

Then for the lesson proper begin by studying the alphabets at the bottom of Plate 3 . which show the two forms or "fronts" used - called, for convenience, the a form and the $b$ form

> Note:- The word alphabets in this work will refer to all
> "Alphabets in two forms" (for explanation of this phrase see p. 446 Plate 2 and the bottom of Plate 3 ). "Alphabets in two letters" (p. 445 , Plate l) are called Cipher Codes to distinguish them from alphabets in two forms.

To discover and master the difference between the $\underline{a}$ form and the b form, is the first and most important step in learning to decipher.

Try to observe and memorize the characteristics of each letter in both the $\underline{a}$ and $\underline{b}$ form, so that you will not be deceived, by faulty printing and badly made fonts, into considering differences which are not distinguishing differences. In these alphabets you will see at a glance, that the a form (modern) is as a rule heavier and broader than the borm (old style). Close study will develop less noticeable, but more vital distinctions.

$$
\text { EXAMPLE ---small } \underline{r}
$$

a form

## b form

Heavier in the stem than in the $\underline{b}$ form,
Left kern is long and slender.
Right kern is heavy, pointing downward.

It is more narrow than in the a form.
Left kern is closer to the stem.
Right kern points outward and joins the stem in a truer curve than in the a form.

## P Proof

2......Lesson I.

When you have made clear to yourself the fundamental differences between the a form and the $\underline{b}$ form, take Student Sheet $A$, and place a mark under each letter, to indicate whether it belongs to the a form or the form, using a horizontal line for the a form, and a vertical line for the $b$ form, thus:-

> | Donot | gotil | IIcom | e |
| :---: | :---: | :---: | :---: |
| aabab | $-1-1-$ | -1 |  |
| ababa babba |  |  |  |

Note:- A reading glass is essential to accurate work.
The conscientious student will find it very good practice to write out descriptions of the differences between the two forms of letters.

For the use of instructors and for the purpose of demonstrating to those who desire to make only a casual investigation, we enclose the Gale Bi-formed Alphabet-Glassifer to be used by placing the slot over each line of the work as the form of the letters is to be determined. It is our recommendation that the earnest student do not use this, as it is much better practice to train the eye to carry the characteristics of the letters from the alphabets to the selection being deciphered, and vice versa.

[^0]
# Of the Advancement of Learning. (London, 1605.) 

## CYPHARS

For Cyphars; they are commonly in Letters or Alphabets, but may bee in Wordes. The kindes of Cyphars, (befides the Simple Cypilars with Changes, and intermixtures of N viles, and. Nonsignificants) are many, according to the Nature or Rule of the infoulding: Wheele. Cyphars, Kay-Cyphars, Dovbles, \&c. But the vertues of them, whereby they are to be preferred, are three; that they be not laborious to write and reade; that they bee impoisible to difcypher; and in fome cales, that they bee without fufpition. The higheft Degree whereof, is to write Ommia Per Omnia; which is vndoubtedly polsible, with a proportion Quintuple at moft, of the writing infoulding, to the writing infoulded, and no other reftrainte whatfoeuer. This Arte of Cypberinge, hath for Relatiue, an Art of Dicyppheringe; by fuppofition vnprofitable; but, as things are, of great vee. For luppole that Cypbars were well mannaged, there bee Multitudes of them which exclude the Dicypberer. But in regarde of the rawneffe and vnskilfulneffe of the handes, through which they paffe, the greateft Matters, are many times carryed in the weakeft Cyphars.

## P Proof


 containing the Spartan despatch within it.

In all duty or rather piety tovards you 7 satisfy cuery body crafelt myself. Myself $I$ never satisfy. For so great are tbe services whirb you have rendered me, that seeing you did not rest in your endeurours on my behalf till tbe thing was done, I feel as if life bad lost all its sweetness, because I cannot do as much in this cause of yours. The
cccasions are these: Ammonius the King's ambassador opcnly besieges us with money: the business is carried on through the same creditors who seere employed in it when you were here, fo.

The doctrine of Ciphers carries along with it another doctrine, which is its relative. This is the doctrine of deciphering, or of detecting ciphers, though one be quite ignorant of the alphabet used or the private understanding between the parties: the other likewise is, to the secrets of princes. By shilful precaution indeed it may be made useless; though as things are it is of very great use. For if good and safe ciphers were intro-



 greatest matters are commonly trusted to weak and futile

It may be suspected perhaps that in this enumeration and census, as I may call it, of arts, my object is to swell the ranks of the sciences thus drawn up on parade, that the numbers of




 think) superficial; but out of a large mass of matter I pick out with a fine point the kernels and marrows of them. Of this
 arts. For whereas most of those who desire to be thought multiscient are given to parade the terms and externals of arts,
thereby making themselves the admiration of those who do not




> Lo. 'ed only - to be
> n. ned to the

Riveruank Laboratories
plate no. 3

## LORD BACON'S OWN EXAMPLE OF BI-LITERAL CIPHER Spedding's Editions 1857

Manere te solo doncc senero.

Ego omni officio ac potius pietate ergute cateris satisfatio ornibles: Mihi ipse nunquam satisfacio. Tanta est enim maynitudo tucrurz eryu me moritorum, ut quoniam tu, misi perficta re, de me non conquiss:i; ego, quia non idem in tua culast effitio, ritam mibi esse accris: futi". In causa bec sunt : Ammonius regis legatus aperte picunia mis oppugnat : res agitur per eosdem creditores per quos cum tu a.:icras a!fetortur: regis causa si qui sunt qui velint, qui pauci sunt, onges aid l:mpeium rem deferri volunt : senatus religionis calumnian, toun rily: we sed malevolentia, et illius regiae lurgitionis invidia comprobat, se.
Do not go till I come.

In all duty or rather piety toscards yoa $\mathcal{F}$ satisfy itcry bods ixitpt myself. Myself I never satisfy. For so great are the serciocs uhick you have rendered me, that secing you did not rest in your endiurcurs on my behalf till the thing was done, I feel as if lifi lad lcst all its sweetness, because I cannot do as much in this cause of yours. The nccasions are these: Ammonius tbe King's ambassador opinly besieges as with money : the business is carried on through the same creditors who were employed in it when you were here, \&c.

| ALPHABETS |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $a$ | $b$ | $\boldsymbol{a}$ | $b$ | $a$ | $b$ | $a$ | $b$ | $a$ | $b$ | $a$ | $b$ |  |
| A | A | $a$ | $a$ | 13 | $\boldsymbol{B}$ | $b$ | $b$ | C | C | $c$ | 6 |  |
| D | D | d | $d$ | $\boldsymbol{E}$ | $E$ | $e$ | $e$ | $\boldsymbol{F}$ | $F$ | $f$ | $f$ |  |
| $\boldsymbol{G}$ | G | $g$ | $g$ | $\boldsymbol{H}$ | H | $\boldsymbol{h}$ | $b$ | $\boldsymbol{I}$ | 7 | $i$ | $i$ |  |
| $K$ | $K$ | $\boldsymbol{k}$ | $k$ | $\boldsymbol{L}$ | $L$ | $l$ | $l$ | M | M | $n$ | $m$ |  |
| N | $\boldsymbol{N}$ | $\boldsymbol{n}$ | n | $\boldsymbol{O}$ | $\bigcirc$ | 0 | 0 | $\boldsymbol{P}$ | $\boldsymbol{P}$ | $p$ | $p$ |  |
| Q | Q |  | $q$ | $\boldsymbol{R}$ | $R$ | $\boldsymbol{r}$ | $r$ | $\boldsymbol{S}$ | $\boldsymbol{S}$ | 8 | $s$ |  |
| T | $\mathcal{T}$ | $t$ | $t$ | $\boldsymbol{U}$ | $U$ | $\boldsymbol{u}$ | $u$ | $v$ | $v$ |  |  |  |
| IV | $W$ | $\boldsymbol{w}$ | $w$ | $\underset{X}{X}$ | $\boldsymbol{X}$ | $x$ | $x$ | $\boldsymbol{Y}$ | $\boldsymbol{r}$ | $y$ | $y$ |  |
|  |  |  |  | $\boldsymbol{Z}$ | 2 | $z$ | 2 |  |  |  |  |  |

? Proof

| STUDENT SHEET |
| :---: | :---: |
| LORD BACON'S OWN EXAMPLE OF |
| BI-LITERAL CIPHER |
| Spedding's Editions 1857 |

The Wats' edition, from which Lesson 2 is taken, dates back to 1640, and is not so accurate in printing as the more modern Spedding edition. However, as this is Bacon's "own example", we think it is desirable that the student should master it.

This plate (4) contains six wrong font letters, - that is, letters which have been transposed, either by accident or design, from a form to borm or from b form to a form. You have already had examples of the wrong font letter in the first lesson.

There are also, in this lesson, a number of hybrid letters. Hybrid letters, as the name implies, will be found to contain characteristios of both a form and b form letters and must be examined carefully in every case to determine mhether the characteristics of the $\underline{a}$ form or the $\underline{b}$ form predominate. Take for example, the "a" in mapnitudo (third line):- It has the following characteristics:

## a form

1 -- Narrow at the top
2 -- Straight in the stem
b form
1-- The angle of the foot
2 -- The curve of the back
3 -- The width of the base

Therefore, we consider that the letter belongs to the $\underline{b}$ form, because it has a preponderance of the $\underline{b}$ form characteristics. In rare cases, however, this rule does not apply and the hybrid must be determined entirely by the context. On this plate, almost all the $\underline{a}^{\prime} s$ are hybrid, as are many of the $\underline{i}^{\prime} s, \underline{m}^{\prime} s, \underline{n}$ 's, and $\underline{u}^{\prime} \mathrm{s}$.

The reason for this is hard to find. It must not be forgotten that ciphers P Proof
are made to hide things, not to make them plain or easy to decipher. They are constructed to be misleading, mysterious, and are purposely made difficult except to those possessing the key. Seekers after knowledge through them must not abandon the hunt upon encountering the first difficulty, improbability, inaccuracy, or stumbling block set for their confusion.

Note:- It will be well to study carefully the alphabets and Classifier, noting the outstanding characteristic of one or the other form as a whole. For instance, in the Wats' example, the $\underline{b}$ form letters as a group are characterized by possessing long curved kerns; but attention is called to the transposition of the capital $E^{\prime} s,-$ probably by design. Note also the dot in the letter 0 .

Please be careful of the photographs and do not mark or mar them in any way. When the student sheet has been correctly marked and this lesson completed, the plate must be returned to the Riverbank Laboratories in the addressed envelope provided for the purpose. Then the next lesson with its photographs will be sent you. If for any reason the student cares to retain any of the photographs, an additional charge of $25 \notin$ each will be made, and this amount should be included in that sent for the next lesson.


LORD BACON'S ORIGLNAL EXARPLE OF HIS BI-LITERAL CIPHER
Taken from Gilbert Wats" Edition "Advancement of Leaming" 1640

Egoomni officio, ac poziùspriefatzergate. cazteris satisfacio ommibus: Slifii ipssinun= guàmsatisfacio. Tanta steriinmagni= \$udo tuorum erga me meritorum, vtguoni= ambu, nisijpsrfectâre demenon conguiess= zi; ego, guianon idem in zuà causâefficio,
 sa hare sunt: Ammonius Regis égatus ajerse pecinian nos ogruginat. Resa agitut pereosden credubores, per guos, cimitut ade = raf, ngebatur. Regis causa, siguisunts, guibelint, guijauncisuntsomntes adCoombe= ium rem deferri volunt. Senatus Qete gionis calumniam, non religione, sed $P_{n a}=$ Cudentia, ztil位次egrae argitionis muidia comprobat. sic.

Slaners to polo donec betcero:

An Example of a Bi-formed Alphabet.
sa. b.a.b. a.b. a.b.a b.a.b.a.b.a.b.


а. b.a.b.a. b.a.b.a.b.a.b. a. b.a.b.
 а. б. a.b.a. b.a.b.a. b.a.ba.b. a.b.a.
 \{. .а.b.a.b.ab.a. b.a.b.a. b.a.b.a b.



# student sheet <br> LESSON <br> 2 <br> plate no. $B$ 

## LORD BACON'S ORIGINAL EXAMPLE OF HIS BI-LITERAL CIPHER

Taken from Gilbert Wats' Edition<br>"Advancement of Learning" 1640

Maner etevo lodon ecven ero

Egoom nioff icioa cpoti uspie tatee rgate caete rissa tisfa cioom nibus Mihii psenu nquam satis facio Tanta esten immag nitud otuor umerg ameme ritor umvtq uonia mtuni siper fecta redem enonc onqui estie goqui anoni demin tuaca usaef ficio vitam mihie sseac erbam putem Incau sahae csunt Ammon iusRe gisLe gatus apert epecu niano soppu gnatR esagi turpe reosd emcre ditor esper quose umtua deras ageba turRe gisca usasi quisu ntqui velin tquip aucis untom nesad Pompe iumre mdefe rrivo luntS enatu sReli gioni scalu mniam nonre ligio nesed maleu olent iaeti llius Regia eLarg ition isinu idiac ompro bat\&c

[^1]That so great a mind as his could study Baon's own examples as fully as he did: and then fail to grasp the very point Bacon made, seems almost incredible. But we oan only judge from the facts before us, and what he writes in regard to it. Donnelley left, as he found it, the real qryptogram undisclosed.

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XXXII.

If thou surviree my vell contented lay, When that churl death my bones with dust shall cover And sbalt by fortune once more resurvey: These poor rude lines of thy deceased Lover: Compare them with) the bettering of the time, And though they be outstript by every pen, Reserve them for my love, not for their rbyme, Exceeted by the beight of bappier men. Ob then vouchsafe me but this loving thought: Hal ny friends Muse grown with this growing age, A dearer birth than this bis love bad brought To march in ranks of better equipage:

But since be died and Poets better prove, Theirs for their style I'll reall, his for bis lorve.

## XXXVI.

Let me confess that we tivo must be twain, Although our undivided loves are one: So sball those blots that dowith me remain, Without thy belp, by me be borne alone. In our tivo loves there is but one respect, Though in ourlives a separable spite, Which though it alter not love's sole effect, Yet dotb it steal sweet hours from love's delight. F may not evermore acknowledge thee, Lest my bewailed guilt should do thee shame, Nor thou with public kindnefs bonour me, Thlefs thou take that bonour from thy name:
But do not so; I love thee in such sort, As thou being mine, mine is thy good report.

## XXXVIII.

How can my Muse want subiect to invent, While thou dost breathe, that pour'st into myrverse Thine own sweet arciument, too excellent For everyruulgar paper to rebearse? 0 , give thyself the thanks, if aught in me. Worthy perusal st and against thy sight; For who's so dumb that cannot write to thee, When thou thyself dost give invention light p Be thou the tenth Muse, ten times nore inworth Than those old nime which rbymers invocate; And be that calls on thee, let bim bring forth Eternal numbers to outlive long date.

If my slight Muse do please these curious days; The pain be mine, but thine shall be the praise.

Yet he seems to set the greatest store by bis work.


540

## STUDENT SHEET

plate no.

## SHAKESPEARE SONNETS

## Arranged by James Phinney Baxter

XXXII
Jftho usurv ivemy welle onten tedda $y$ When thatc hurld eathm ybone swith dusts hallc overA ndsha ltbyf ortun eonce morer esurv eyThe sepoo rrude lines ofthy decea sedLo verCo mpare themw ithth ebett ering ofthe timeA ndtho ughth eybeo utstr iptby every penRe serve themf ormyl oveno tfort heirr hymeE xceed edbyt hehei ghtof happi ermen Ohthe nvouc hsafe mebut thisl oving thoug htHad myfri endsM usegr ownwi ththi sgrow ingag eAdea rerbi rthth anthi shisl oveha dbrou ghtTo march inran ksofb etter equip ageBu tsinc ehedi edand Poets bette rprov eThei rsfor their style Illre adhis forhi slove

## P Proof

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# STUDENT SHEET <br> <br> SHAKESPEARE SONNETS <br> <br> SHAKESPEARE SONNETS <br> <br> Arranged by James Phinney Baxter 

 <br> <br> Arranged by James Phinney Baxter}

LESSON 3
Plate No. $\bigcirc$

## XXXVI

Letme confe sstha twetw omust betwa inAlt hough ourun divid edlov esare oneSo shall those blots thatd owith merem ainWi thout thyhe lpbym ebebo rneal oneJn ourtw olove sther eisbu toner espec tThou ghino urliv esase parab lespi teWhi chtho ughit alter notlo vesso leeff ectYe tdoth itste alswe ethou rsfro mlove sdeli ghtJm aynot everm oreac knowl edget heeLe stmyb ewail edgui ltsho ulddo thees hameN ortho uwith publi ckind nessh onour meVnl essth outak ethat honou rfrom thyna meBut donot sollo vethe einsu chsor tAsth oubei ngmin emine isthy goodr eport

## XXXVIII

Howca nmyMu sewan tsubi ectto inven tWhil ethou dostb reath ethat pours tinto myver seThi neown sweet argum entto oexce llent Forev eryvu Igarp apert orehe arseO givet hysel fthet hanks ifaug htinm eWort hyper usals tanda gains tthys ightF orwho ssodu mbtha tcann otwri tetot heeWh entho uthys elfdo stgiv einve ntion light Betho uthet enthM usete ntime smore inwor thTha nthos eoldn inewh ichrh ymers invoc ateAn dheth atcal lsont heele thimb ringf orthE terna lnumb ersto outli velon gdate Jfmys light Mused oplea sethe secur iousd aysTh epain bemin ebutt hines hallb ethep raise Yethe seems toset thegr eates tstor ebyhi swork

## P Proof

cormight
asone
1910
 He failed to note the difforence in the bi-fore character of type, and missed the application.

Then take your interior epistle, reduced to the biliteral shape, and adapt to it letter by letter your exterior epistle in the biform character; and then write it out. Let the exterior epistle be:

Do not go till I come.
Example of adaptation.
$\mathbf{F} \quad \mathbf{L} \quad \mathbf{Y}$
aa bab ab abab a bba
Do not go till I come.
I add another large example of the same cipher-of the writing of anything by anything.

The interior epistle, for which I have selected the Spartan dispatch, formerly sent in the Scytale:

All is lost. Mindarus is killed. The soldiers want food. We can neither get hence nor stay longer here.

The exterior epistle, taken from Cicero's first letter and containing the Spartan dispatch within it:

In all duty or rather piety towards you I satisfy everybody except myself. Myself I never satisfy. For so great are the services which you have rendered me, that, seeing you did not rest in your endeavors on my behalf till the thing was done, I feel as if my you did not rest in your endeavors on my behalf till the thing was done, I feel as if my
life had lost ALL its sweetness, because I cannot do as much in this cause of yours. life had lost all its sweetness, because 1 cannot do as much in this cause of yours.
The occasions are these: Ammonius the king's ambassador openly besieges us with money, the business is carried on through the same creditors who were employed in it when you were here, etc.

I have here capitalized the words all and is, supposing them to be part of the sentence, "All is lost," but I am not sure that I am right in doing so. The sentence ends as above and leaves us in the dark. Bacon continues:

This doctrine of ciphers carries along with it another doctrine which is its relative. This. is the doctrine of deciphering, or of detecting ciphers, though one be quite ignorant of the alphabet used or the private understanding between the parties: a thing requiring both labor and ingenuity, and dedicated, as the other likewise is, to the secrets of princes: By skillful precaution indeed it may be made useless; though, as things are, it is of very great use. For if good and safe ciphers were introduced, there are very many of them which altogether elude and exclude the decipherer, and yet are sufficiently convenient and ready to read and write. But such is the rawness and unskillfulness of secretaries and clerks in the courts of kings, that the greatest matters are commonly trusted to weak and futile ciphers.

I said to myself: What is there unreasonable in the thought that this man, who dwelt with such interest upon the subject of ciphers, who had invented ciphers, even ciphers within ciphersthat this subtle and most laborious intellect might have injected a cipher narrative, an "interior epistle," into the Shakespeare Plays, in which he would assert his authorship of the same, and reclaim. for all time those "children of his brain" who had been placed, for good and sufficient reasons, under the fosterage of another?

Photograph from The Groet Cryptogran by Ignatius Donnoliy, copyrighted in 2887, publiahed by R. S. Poale a Corpany, 2888.

In Lesson III, we explained to you how Mr. Baxter in his book "The Greatest of Literary Problems" tested Mrs. Gallup's ability as a deoipherer from her transoription of his own poem infolded in the three sonnets whioh we sent to you.

But still the critics were not satisfied. They replied that undoubt. edly Mrs. Gallup was a skillful deoipherer; but the test had been made from poems whioh had not contained any oipher in the original, and so did not prove that any cipher existed in the 1623 Folio, from which all the most important statements about Baoon's life have been deoiphered.

Therefore, Mr. Baxter ohose the "I.M." poem, whioh is one of the dedioatory poems oocurring at the beginning of the 1623 Folio, for the new test he devised. By first photographing the poem and then by rearranging and transposing the letters composing it, he infolded in it a new message. The poem was then re-photographed and sent to kirs. Gallup to transcribe-a task whioh she promptly acoomplished. Mrs. Gallup, of course, had nothing to work from in her deoiphering, exoept the poem itself as it was sent her.

We send you Mra Baxter's arrangement of the poem, with the alphabets which he had made from it and electrotyped. But modern printing is not successful in this work - as you will find if you try to trunsoribe the message with the help of these alphabets alone. Therefore, we enclose our own alphabets of the "I.M." poem, whioh are reproduced by a special process, from the Newberry Library original.

By way of answer to the inevitable inquiry of the student as to whether
two forms of type were of common occurrence in books of the 16 th and 17 th Centuries, we enclose with this lesson a photographed page (Plate 8) from a work entirely unrelated to the Bi-literal Cipher. Here can be readily noted the varying forms of letters. As you are told on the photograph, these letters are taken from works dating back as far as 1577.

Please be careful of the photographs and do not mark or mar them in any way. When the Student Sheet has beer correctly marked and this lesson completed, the plates must be returned to the Riverbank Laboratories in the addressed envelope provided for the purpose. Then the next lesson with its photographs will be sent you. If for any reason the student cares to retain any of the photographs, an additional charge of $25 \not \subset$ each will be made, and this amount should be included in that sent for the next lesson.

## P Proof

$\underset{\text { comalant }}{\text { coment }}$


LESSON 4
PLATE No. 8

## 1. M. POEM

## Arranged by James Phinney Baxter

## To the memorie of M.W.Sbake-תpeare.

VVE Eivondred (Shake-fpeare) that thou wemt ${ }^{5}$ tso foone From the Worlds $=$ Stage, to the Graues-Tyring-roome. Wee thought thee dead, but this thy printed worth, Tels thy Spedlators, that thou went'ft but forth To enter with applaufe. An ACtors Art, Can dye, and lise, to a Ele a fecond part. That's but an Exit of Mortalitie; This, a Re-entrance toa Plauditt.


#### Abstract

1. Mo

Tothe memor ieofM WShak espea reWEE wondr edSha kespe areth attho uwent stsos ooneF romth eWorl dsSta getot heGra uesTy ringr oomeW eetho ughtt heede adbut thist hypri ntedw orthT elsth ySpec tator sthat thouw entst butfo rthTo enter witha pplau seAnA ctors ArtCa ndyea ndliu etoac tease condp artTh atsbu tanEx itofM ortal itieT hisaR eentr ancet oaPla udite IM


## P Proof



P Proof

## "I.M. POEM.

## VV








// // // // // //

- the alphabets. -



## 8 Froof

copyrigit
ay georae fabyan
jn


Whater $\quad$ 57. ITALIC TYPE-IITTERS.

Photographed from"Alfhabets, a Manual of Lettering for the use of
Students, with Historical and Practical Desgription," by Edwafio F. Strange. 1907

The foregoing illustration of alphabets is presented at this point for the purpose of showing the differences in forms of letters resorted to in the sixteenth century (1577).

The following statement has been deciphered from Bacon ${ }^{8} 3$
"De Augmentis" (1624) by means of the Bi-literal Cipher; By siight aiteration of the common italic letters, the alphabets of the Bi-literal Cipher, having the two forms, are readily obtainede"

P Proof

After completing Sir Francis Bacon's own examples and the two lessons consisting of the tests arranged by 1 . Baxter, you are now to be given the opportunity of applying what has been learned to the much discussed 1623 Shakespeare Folio. The I.M. poem from that Folio has been chosen, because its brevity permits of its being subjected to the different steps necessary in deoiphering any given work -- steps which are deemed advisable for the student to take, in this case, one by one. The time demanded for this preparatory work, may perhaps seem futile to the student; but let him remember that having once experienced the process in all its stages will make all that follows so much the easier and more accurate.

In determining whether or not any given piece of work contains the Bi-literal Gipher, the first step is to distinguish two different forms. Then a tentative alphabet is made by making pencil sketches of the tro forms of letters, often exaggerating the distinguishing characteristics as they appear to the eye. Then the letters of the work are marked accordingly, and the message thus deciphered. For the student, however, as an aid in beginning. we send in this particular case the "Typical letter sheets", which cite the word in which the typical or representative form of each letter is found. In these sheets, the letters which are designated as being taken from other places-such as Pro. Dig. etc, - need not concern the student. For convenience, the italic and roman letters of varying sizes have been assigned arbitrary case numbers. Thus:-
$\begin{array}{ccccc}\text { In poem: } & \text { Italic small (Lower Case) } & \text { Case } 1 \\ & \text { " capital (Upper Case) } & \text { " } & 2 \\ & \text { " digraphs } & & 1 \\ & \text { Koman small (Lower Case) } & \text { " } & 5 \\ & \text { " capitals (Upper Case) } & " & 6\end{array}$
In Title: Italic small (Lower Case) Case 3
P Proof
" capitsls (Upper Case) : 4
$\begin{array}{ccc}\text { Roman small (Lower Case) } & 7 \\ \# \text { capitals (Upper Case) } & 8\end{array}$



#### Abstract

In addition is given a sheet listing the dotted letters found in the poem. The studunt will remember that in Lesson 2 his attention ves called to the dotted letter $\underline{O}$ in Bacon's Original Example. It is found that a system of dots was used to change the marking of letters to the opposite formi.e., a b form letter containing one or three or any odd number of dots, is changed thereby to the $a$ form, and vice versa.

With the help of the sheets of classified typical letters, make your own alphabet from the "I.M*" poem. Divide a sheet of paper into two columns. one for the $a$ form and the other for the $b$ forme and drav each typical letter in its proper place as you determine to which form it belongs. When you have thus drawn the $a^{\prime} s, b^{\prime} s, c^{\prime} s$, etc, as you see them, attach a written descripo tion to each letter pointing out what seem to you its distinguishing characteristics. As:-


| a form | b form | a form | b form |
| :---: | :---: | :---: | :---: |
| Description | a | description | Description a |
| a description |  |  |  |

Your completed "alphabots" you will then return to the Riverbonk Laboratories, with the "Typical letter Sheets" after which the next lesson will be sent you.

HE 162: : M. POEM
HEWRERRY LIBRARY GRIGINAL 1623 EOITION

## To the memorie of M.W.Shake-fpeare.

VVEE wondred (Shake-Speare) that thou went'ft fofoone From the Worlds=Stage, tothe Graues-Tyring-roome,
Wee thought thee dead, but this thy printed worth,
Tels thy Spectators, that thou ment'ft but forth.
T'o enter mith applaufe. An ACtors Art ${ }_{2}$
Can dye, and liue, to actie a fecond part.
That's but an Exit of Mortalitie;
This, a Re-entrance toa Plaudite.
1 M.


## 2

```
TYPICAL LETTERS IN "I.M." POEM.
    Italic (Case 3)
```

| a form |  | b form |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Line | Word | Letter |  | Line | Word |
| Title | Shakespeare | a | P.A. | 1 R |  |
|  | Shäkespeare |  |  | Title | Sha kespeare |
| " | Shakespeare | h | P.A. | 6 R | Nicholas |
| " | Shakespeare | k |  | - |  |
| " | Shakespeare | p |  | --- |  |
| " | Shakespeare | r | P.A. | 2 L | Richard |
| " | Shake peare | $\int$ | P.A. | 8 R | $\mathrm{Jo} / \mathrm{eph}$ |

Italic (Case 4)
a Form
Line
Title 5 L

Letter
Shakespeare
William
$S$ P.A.

W Titl
b Form

| Line | Word |
| :---: | :---: |
| 1 L | Shakespeare |
| 1 | $\underline{W}$ |

Large Roman (Case 7)
a Form

| Line | Word |
| :---: | :---: |
| Title | memorie |
| " | Of |
| " | the |
| " | memorie |
| " | memorie |
| * | To |
| * | memorie |


| Letter |  | Line | Word |
| :---: | :---: | :---: | :---: |
| e |  | Title | the |
| f |  | --- |  |
| h | P.A. | Tit. 6 | these |
| i | P.A. | " 3 | Tragedies |
| III |  | Title | memorie |
| 0 | Cat. | Tit. 3 | Volume |
| $r$ | P.A. | " 3 | Tragedies |
| $t$ | P.A. | " 3 | set |

Large Roman:(Case 8)

| a Form |  |
| ---: | :--- |
| Line | Word |
| Title | M |
| Sub-Title | HISTORIES |


|  |  | b For |  |
| :---: | :---: | :---: | :---: |
|  | Letter | Line | Word |
|  | M |  | ----- |
| ? Proof | T | Title . | To |

## 3

TYPICAL LETTERS IN "I.M." POEM $\quad$ page 3
Small Roman (Case 5)


## 4

## DOTTED LETTERS

Letters which are changed to the opposite form because of the presence of one or three dots are indicated in the photographs of the alphabets by a large dot above the letter.

| Line | Word |
| :---: | :--- |
| 1 | soone |
| 2 | the (lst) |
| 2 | Worlds |
| 3 | thought |
| 3 | thee |
| 3 | printed |
| 4 | thou |
| 4 | forth |
| 5 | enter |
| 5 | applause |
| 6 | and |
| 6 | liue |
| 6 | part |
| 8 | a (lst) |
| 8 | a (2nd) |
| Title | of |

"I.M." POEM

h
W
u
e
e
$\circ$
h
e
u
n
u
p
a
a
$\circ$
a
a
a
a
b
a
a
a
a
a
b
b
b
b
a

P Proof



#### Abstract

5 "I.M." POEM

Reference numbers to letters taken from other places.


| Letter | Case | Form | From | Line | Word |
| :---: | :---: | :---: | :---: | :---: | :---: |
| - | 7 | b | Cat. | Tit. 3 | Volume |
| T | 8 | $a$ | Cat. | Sub-title | HISTORIES |
| $\mathbf{r}$ | 7 | b | P.A. | Tit. 3 | Tragedies |
| W | 4 | $a$ | P.A. | 5 L | William |
| a | 3 | b | P.A. | 1 R | Şamuel |
| $\delta$ | 3 | $b$ | P.A. | 8 R | Joheph. |
| $\hat{J}$ | 5 | $b$ | Dig. | 9 | Shake/peares |
| $\Omega$ | 1 | bb | Dig... | 14 | $\mathrm{mi} / \mathrm{t}$ - |
| S | 2 | a | Pro. | 1 | Scene |
| T | 2 | b | Pro. | 15 | Their |
| y | 1 | b | Dig. | 2 | thy (2nd) |
| C | 2 | b | Cat. | 5 | Comedy |
| c | 1. | b | Dig. | 2 | which |
| 4 | 5 | $b$ | Dig. | 4 | Stratford |
| M | 2 | a | Dig. | 4 | Moniment |
| is | 1 | bb | Dig, | 3 | is |
| P | 2 | b | Pro. | 7 | put |
| i | 7 | $b$ | P.A. | Tit. 3 | according |
| S | 4 | b | P.A. | 1 L | Shakespeare |
| r | 3 | b | P.A. | 2 L | Richard |
| E | 2 | a | Pro. | 20 | Expectation |
| S. | 6 | a | Dig. | 21 | Shakespeare |
| k | 5 | a | Dig. | 1 | SHakespeare |
| $\mathbf{r}$ | 5 | a | Dig. | 9 | Shakespeares |
| G | 2 | a | Pro. | 1 | Greece |
| m | 1 | b | Dig. | 3 | must |
| h | 3 | b | P.A. | 6 R | Nicholas |
| h | 5 | $b$ | Dig. | 9 | Shakespeares |
| e | 5 | b | Dig. | 16 | Iuliet |
| F | 2 | $a$ | Dig. | 7 | $\mathrm{Fr} e / \mathrm{h}$ |
| is | 1 | $a b$ | Dig. | 5 | This |
| ct | 1 | bb | Pro. | 20 | Expectation |
| i | 5 | a | Dig. | 16 | Iuliet |
| R | 2 | a | Pro. | 6 | Regall |
| $\sqrt{t}$ | 1 | $a b$ | Dig. | 3 | mul $\}$ |
| $\sqrt{t}$ | 1 | ba | Dig. | 3 | Stone |
| h | 7 | b | P.A. | Tit. 6 | these |
| $t$ | 7 | b | P.A. | 3 | set |
| p | 5 | b | Dig. | 1 | SHakespeare (dotted) |
|  |  | ${ }^{3} \mathrm{Pr}$ |  |  |  |

In this lesson we send you our own descriptions of the letters found in the I.M, Poem, for comparison with your sketches. The letters here have been photographed from the original 1623 Folio in the Newberry Library, and have been enlarged to three and one-third the dimensions of the original, to facilitate the study of their characteristics. For the convenience of the student and to avoid confusion, the italic and the roman letters have been grouped separately.

By careful study familiarize yourself with the drawings and with the descriptions accompanying tliem. Revise your own sketches and descriptions, making sure that you see wherein and why the lists prepared here differ from your own. When you have finally convinced yourself of the true forms of the letters, combining your own conclusions with those sent in this lesson. master them thoroughly; for the same kind and size of type is used elsewhere in the 1623 Folio. Thus you will be forearmed for future lessons. When you feel that you know the forms completely, return the plates and the next lesson will be sent to you.

Please be careful of the photographs and do not mark or mar them in any way. When this lesson has been completed, the plates must be returned to the Riverbank Laboratories in the addressed envelope provided for the purpose. Then the next lesson with its photographs will be sent you. If for any reason the student cares to retain any of the photographs, an additional oharge of $25 \not \subset$ each will be made, and this amount should be included in that sent for the next lesson.

UPPER CASE ITALIC IETEERS IN "I.M. POEMS"
A Form
The typical letter is plain with high, straight bar. A kern or a dot in the letter changes it from a to b or vice versa.

A long letter extending below the line.


## B Form

The typical letter is plaim vith a curved or slanting bar, as seen in the alphabet.

## No example.

Top and bottom lines parallal; the kern on the base line slender and slanting.

Top heavy and slants parallel to seriph of base.

The short line slants toward the base.

Kern short, straight, and blunt at the right. Third line shaded from top. Seriphs at bottom level.

No example ${ }_{3}$

Top forms a segment of a circle at the loft. Upright does not reach the top.
sroct; round curves.

No example.

The heavy, biunt letter with short connocting Iing \&s the beroorm. It is accented and therefore marked amiorm.

No axsmple
Large size type, narrow head and wide base.

No example

C

E

T
$G$
$\mathbf{y}$
$P$

R

S
$T$

W

Well-made letter in large size type ; points sharp.

## LaRcet LOWER CASE ITALIC LITHERS IN

## A Form

Slanting, somewhat wide at the base.
"HE I.M. POEM"

## a

No example.
 the base line were produced it would form a perfect o.

## B Form

If the end of the curve of the base line were produced it would not form a perfect o-

Somewhat slender; the loop is naryow at the top and pointed.
…...... ...
Slender and delicate; the queus not widely spread at base.
h
No example.

> tor
k.

No example.

No example.

No example.

No example.
? Proof



LOWER CASE ITALIC LETMRRS IN
"THE I. M. POEM"

## A Form ${ }^{*}$

Typical a form is well-made; the oval usually shows angle or shoulder and rounds gradually to the line of writing, making the letter somewhat wider at the baze than the corresponding letter in the $b$ form also the oval has the appearance of a complete o placed in such a way that a part of one side side rests on the upright and often projects sufficiently to give the stem the appearance of bending outward near the center.

Oval pointed at top and narrow at base.

Roundness commences near
top; curve at base usually wide.

Stem has no wave line, but sometimes turns slightly to the leit at top; toe upturned; loop leaves stem and rejoins it at a somewhat abtuse angle.

## A line drawn through the

 loop of this letter beginning at the left of the oval where it leaves the stem and running through the opposite point of the oval, intersects the line of the end of the curve of the base produced either above or below the line of writing.Letter slanted; straight top, or, if curved, showing a small neck at left.
a


## B Form

Somewhat narrower at base than the a form; oval pointed; upright is often either uniform or slightly heavier at top. Letter slanted.

Oval rounded at top; upright straight nearly to the base.

Roundiness commences near center of back; curve at base usually narrow.

Wave line in stem, angle between stem and top of oval acute; point of jointure below, somewhat high on stem.

A line drawn through the loop of this letter beginning at the left of the oval where it leaves the stem and tunning through the opposite point of the oval, will run parallel to the line of the end of the curve of the base produced.

Letter stands nearly erect; top curved.

A Form

The lower loop is at tached to the center of the oval; the connecting line usually heavy and angular.

The stem of this letter is not characteristic, unless perhaps slightly pointed at the base; a line drawn upward through the 100 p so as to intersect it at the middle of the upper part of the curve tends only slightly toward the : right.

In the typical letter of this class the base is usually rounded; the kerns do not correspond, that is, one will be straight and the other curved.

The typical letter of this class usually shows a slight wave line in the stem, The angle made by the kern and the otem is large.

Double letters are governed by the law of digrapha, not by that of single letters.

The second loop shorter at top and turns aligintly to the right; width of loops nearly equal at base; top kern inclined to sharpness; kern at base usually close.


## B Form

h

# hatariog gitiy - to de <br> returred to tha <br> Riverbank Laboratories <br> LOVER CASE ITALIC LETIERS IN <br> "THE I. M. POZII" 

LESSON 6

## A Form

Letter slanting; top kern inclined to sharpness; kern at base usually clear. The loop tends toward the right at the top in the same manner as that of the second 200p in the 9 form of m

There are many varieties of snall 0 , and it is difficult to assign them to their proper classes. The a form letters show the slant characteristic of that form and are best classified by comparing them with the capital letter, which is less symmetrical than the b form.

Stem of nearly uniform thickness throughout, or slightly shaded below the line of writing; loop shows only slight narrowing toward the base, but slants downard where joined to the upright.

The letter has the slant that is characteristic of the a form. The first kern is small and tends to sharpness; the second kern is rounded. There is uso ually a greater breadth at the top in the a form than in the b form.

There are long and short letters in both forms. The base in either case is nearly horizonis tal. The long s of the a form is more slanting than that of the b formo

$\mathbf{r}$


The left kern is usually distinct and strong; the two differ only slightly. The upward stroke of the letter is usually string and distinct. The letter is usually somewhat narrow at the top.

The long $s$ of the $b$ form is usually upturned at the base and the slant of the letter is not marked. The short letter has the ame characteristics.

## a Form

Stem of nearly uniform thickness, turns sligitly to the right a little above the base.

The typical letter of tinis class has the slant of the a-form; the first kern straight; the second curved, or vice versg. The comecting line between the uprights is lower than in the b-form.

First point of base sharp, second point blunt. The letter is flat topped.


Narrow at top; second stroke bends toward the iirst.


## b Form

Stem usually heavy at the top, diminishes gradually toward the base; foot free.

Letter nearly erect; the kerns correspond with each other. The connecting line joins the second upright at a higher point in the $b-$ form than in the $\mathrm{a}-$ form

Both points of base sharp; first and third stroke on the left extend in curves above the level of the body of the letter.

No example.

## DESCKIFTION OF THE DIGRAFHS IN

"THE I. M. POEX".

The unicn of a slanting $c$
that show's an angle in the base, with a $t$ that comes well down to the line of writing with the slent of the a form, gives the combination "aa".

The union of a slanting $c$ that shows an angle in the base, with a $t$ that approaches the $c$ at


The union of c well-rounded at the base with a that comes well down to the line of writing with the alant of the a form, gives the combination "ba". thickens toward the right gives the combination "ab".

The union of a short, vellrounded $i$ with an $s$ narrow in the head and angular in the base gives the combination "aa".


No example.

No example.
15
The union of a somewhat large i, the kerm and base corresponding, with an a narrow in the head givea the combination "ba".

The union of a long a having a wide curve at the top, with a $t$ having a slanting bar and somewhat wide angle between the foot and the stem gives the combination "aa".


No example.
? Proct


INITIAL IETMER
Significance determined by context - b-form


ROMAN TYPE IN TITTE
a. Form

Large and heavy. There is no kern at the top of the second upright.

A plain, simple letter, with the top and the seriph parallel, the former usually a thin line. -P.A. \& CAT.


Lower Case

The letter is wide, slender, the bar horizontal.

A well-made letter, the curve at the top somewhat vide.


1

The letter is somewhat heavy and is wide at the top of the loop.

The kern is sharp and prominent, giving the letter an unnatural appearance.

b Form

No example

Usually heavier than the a-form. The top shades somewhat heavily into the kerns, and is not parallel to the seriph at the base.

Somewhat heavier than the a-form usually; well-rounded; the bar slightly slanting.

No example

The letter is somewhat more delicate than the a -form and is wide at the base. P.A.

Well-made and regular, but somewhat heavy. -- P.A. a Cat.

| Loaned only - tux returnod to tives | LESSON |
| :---: | :---: |
| Riverhank Laboratexis | PLATE No. |

## a Form

The first curve at the top leaves the stem at a high point.

Slightly irrogular in outline.

Wide at the.top; well-made.

There are several variants but all curve upward at base and are somewhat narrow.

## A. Form

Top and Base not horizontal.

The curves of nearly equal vidth. - - Dig.

A broad, well-made lettor; the stem rounds into a free foot.

Somewhat irregular; the lower part is often narrow.

The loop has a shallov curve at the top, and is somewhat wide.

ROMAN IYPE IN POEM Upper Case
ROMAN TYFE IN TITLE


## b Form

The curves are regular; the seriphs at the base slant dows ward in a zegular succession.

The letter is tall and somge what heavy, but well-made. P.A

Narrow; not particularly vell-formed. - P.A. \& Cat.

The letter is very wide and flat at the base. . P.A.

## B Form

No example

The curves are somewhat wide; the top narrower than the base; the letter symmetrical.

The stem bends slightly to the left at the base and the foot turns sharply upward.

A well-made letter with a light bar. - Pro.

The loop leaves the stem with a clear curve; the right seriph is lov at the baseoses Dig.

P Proof

## Leaned only - tal bu

retarned to the
Nivertsen Laboratories

ROMAN TYPE IN POEM
Lower Case

## a Form

Somewhat delicate and well-made; the stem is narrow at the top and widens slightly at the base. -- Dig. \& Pro.

Broad and well-made although somewhat heavy... Dig.

Broad; the loop is somewhat flat at the top.

The top shows a line at the right turning somewhat abruptly downwards. --Pro. \& Dig.

Long form with wide top and shallow curve.

The letter has a wide top and a wide base that becomes nearly horizontal.

No example

$k$

p

$\mathbf{r}$

$s$

$t$


## b Form

Heavy; of nearly uniform thicknese throughout; the upper kem prominent.

Somewhat slender and delicate; seriphs carefully placed.

A delicate letter with the loop well rounded top and botton Where it occurs it is changed -

A tell, somewhat awkward letter, wider at top than at the base.
by a, dot to the a-forme - Dig.

The upward stroke at the right and its downward curve correspond in slope and direction as would the two sides of an isosceles triangle.

Short curve at the top and somewhat slender 'stem - - Dig.

The base of this form turns soon after leaving the stem, Dig.

P Proof


After memorizing the characteristios of the letters as you have done in Lesson 6, the plates of Lesson 7 will have added meaning. In Plates 22-27 the lines of the $I . M$. Poem have been so spaced as to permit of the typical forms being placed above eaoh letter in the poem. Plates 22, 23, 24, show the typioal letter of the same form so placed for comparison; Plates 25, 26, 27 show the opposite forms contrasted. To avoid crowding and confusion, the typical forms are placed over every third letter; hence six plates are required to complete the comparison and contrast of all the letters.

The typical letter, as we have said before, is the most representative letter of the group to which it belongs. Dots above the letters indioate that the form is changed by dots found within the letters. Unmarked letters belong to the $\underline{a}$ form, those designated by a stroke are $\underline{b}$ forms. Numbers appearing above letters signify that those particular forms are not found in the I.M. Poem itself, but elsewhere in the 1623 Folio where the same size of type is used.

Study the letters of the poem in relation both to their own and to their opposite forms. Determine in your own mind wherein and why the letters are alike or different. Close study of these sheets will fix the letters of the poem more firmly in your mind.

After careful examination and study of the six plates described above, then take Plates 28 and 29 . where all the letters of the poem have been marshalled together in alphabetical sequence. In Plate 28 , the letters are first classified according to form, the b forms being marked by a stroke, $P$ Proof
and then arranged in printed order. In Plate 29 the letters are arranged in exact printed order without reference to form, and unclassified. Again the stroke indicates the b form. Stars indicate typical letters, dots signify as before letters whose form is changed by such marks.

The dissection of the poem in this manner, with all related parts brought together in one place, will make for the serious searcher not only an interesting, but an exceedingly profitable study. Here is shown more clearly than could be done in any other manner, the variations occurring in the different letters of the same group.


#### Abstract

Please be careful of the photographs and do not mark or mar them in any way. When this lesson has been completed, the plates must be returned to the Riverbank Laboratories in the addressed envelope provided for the purpose. Then the next lesson with its photographs will be sent you. If for any reason the student oares to retain any of the photographs, an additional charge of $25 \not \subset$ each will be made, and this amount should be included in that sent for the next lesson.


## ". .M.POEM.


| To the memorie of M.W.Sbake-Jpeare. :
VV ad a fàtionfn



1. From the Worlds Stage tot the Grit Figring-rome

Wee thought thee dead, but this ty y printer worthy in in



| To enter with applause. An Actors Art, waw waw l
```
C'd`a}
| Can dye,and liue,to actea f foond part, \{WEW\
    b 'st'E E'M年首
```

| That's but an Exit of Mortalitie;
is ${ }^{\prime}{ }^{\prime} \boldsymbol{Q}^{\prime} t_{n}^{\prime \prime} t^{\prime} P^{\prime}$
|This, a Reentrance to a Plaudits. MT MEX
No1-COMPARISON WITH TYPICAL LETTER OF SAME FORM.
COPYRIGHT 1916
RIVERBANK COMPANY.

| Leaned only - to bo <br> returned to the <br> Riverbank Laboratories | LESSON |
| :--- | :--- |
| PLATE No 23 |  |

## "I.M.POEM.


 VVEE ipondred (Shake-fpeare) that thon went ft fo foone i

From the Worlds Stage, tothe Graues Tyring-roome,

Wee thougbt thee dead, but this thy printed worth,, . $-\square$

Tels thy Spectators, that thou Dent jet but forth , W, Wh?

To enter with applaufe. An ACtors Art, - , We. Wid



$$
a b a x a 0 a t
$$

That's but an Exit of Mortalitie; S. F $\quad \dot{a} \quad$ i $<\quad l$
This, a Re-entrance to a Plaudite. . \& GL M
№2-COMPARISON WITH TYPICAL LETTER OF SAME FORM.
COPYRIGHT 1916
RIVERBANK COMPANY.

## "I.M.POEM.



$$
E n h \text { e e e abipta }
$$

VVEE, wondred (Shake-fpeare) that thou went ff fofoone 1 Fmer's a $t$ b a $\quad$ a From the Worlds=Stage, tothe Graues-Tyring-roome e ab $b d$ is $\bar{y}$ à ab
Wee thought thee dead, but this thy printed worth, $\operatorname{Sa}$



To enter pith applaufe. An Actors $A r t_{,}$, WWUWI

$$
n e d u \quad \text { e en a }
$$

 $\boldsymbol{T}^{\prime}$ ín $n^{\prime}$ if $f^{\prime \prime}$
 b R
This, a Re-entrance tonTlaudite. MTM
№3-COMPARISON WITH TYPICAL LETTER OF SAME FORM.
COPYRIGHT 1916
RIVFRAANK COMPANY.

## "I.M.POEM. <br> T ${ }^{2 \prime \prime} \mathrm{e}^{{ }^{3} \mathrm{r}} \mathrm{o}^{\circ}{ }^{4} W^{s} a^{\circ} \int^{*} a$ To the memorie of M.W.Sbake-Jpeare. |

$$
\text { b dd a }{ }^{7} f \text { a } t \quad t \text { o } e^{8} f \int_{n} n
$$

VVEE wondred (Shake-fpeare) that thou went' ff fofoone I

From the Worlds Stage, to the Graues-Tyring-roome
$\boldsymbol{W} t$ un $^{\prime \prime} t^{\prime} e e^{\prime \prime \prime} b^{\prime} t{ }_{t}^{\prime \prime \prime} p{ }^{\prime} \hat{n} d r$
Wee thought thee dead, but this thy printed worth, $\quad$.

Tels thy Spectators, that thou went' fl but forth , $\quad$, 1

$$
e_{e_{l}^{\prime \prime} e^{\prime \prime} a l^{\prime}}^{\prime} \operatorname{nn}_{0}^{\prime \prime} A
$$

To enter Both applaufe: An ACtors Art, , , wall

Can dye, and line, to acted a second part. .Wi. We. 1

$$
b_{b}^{\prime} t{ }^{14} t{ }^{15} M_{t i}^{\prime \prime}
$$



This, a Reentrance tow Plaudits


No4-CONTRAST WITH TYPICAL LETTER OF OPPOSITE FORM.
$\qquad$

## "I.M.POEM.

${ }^{1} \mathrm{o}$ e $\mathrm{m}^{18}$ i
${ }^{19} S$
${ }^{20} r$

To the memorie of M. W. Sbake Jpeare.
 VVEEwondred (Shake-fpeare) that thou wentiffof foone
 From the Worlds Stage to to Griute Ty ring-romes

Wee thougbt thee dead, but this thy printed worth, $\square$ 3





Can dye, and liue, to acte a feond part
'a $b^{\prime}$ a! óoát



: No5-CONTRAST WITH TYPICAL LETTER OF OPPOSITE FORM.

## ＂ISM ．POEM．


${ }^{21} E \quad n \quad e{ }^{28} \mathrm{~h}^{29} \mathrm{e}^{29} \mathrm{e}^{29} \mathrm{e}$ a $b$ wi $\boldsymbol{t} \quad 0 \quad 0$
$\mathbf{V V} E^{20} E_{\text {wondred }}$（Shake－fpeare）that thou pent $/ f$ fofoone 1

From the Worlds＝Stage，to the Grawes－Tyring－rooma？

Wee thought thee dead，but this thy printed worth，，工


To enter with applause．An Actors Art，

$$
\text { net o el }{ }^{\prime} \text { 品 }
$$

Can dye，and lie，to acted a Second part．，W\} ~ W h a t ~ ${ }^{10} T^{\prime \prime} t^{\prime} u^{\prime} n^{33} \cdot i^{\prime}$ 牛 $r l^{\prime \prime}$ i
That＇s but an Exit of Mortalitie；，N WW NW


＂$N o 6$－CONTRAST WITH TYPICAL LETTER OF OPPOSITE FORM．

[^2]
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LESSON 7
PLATE No. 28

## "I.M.POEM.



## ＂I．M．POEM．

```
VV
    MeefhimmooortT
    ES aaceehikprftx
        SWaaeee站pf
        AAACEEFGMPRSSTTTIT而W
        \!ノ!,
```





```
            /// // //1/ %/1// // / /'
```



```
                * *
```



```
                // //\prime\prime// // / / // //
```



```
                    1 1/1/1/1/
                    ctaci, isis.f:t
LETTERS ARRANGED ALPHABETICALLY AND IN PRINTED ORDER.
```

You are now ready to begin work on the cipher of the famous 1623 Folio, and the "I.M." Poem is sent to you this time just as it appears in the original edition with the message infolded by Bacon ${ }^{\dagger} \mathrm{s}$ own hand, which was destined to remain undeciphered and unquestioned for almost three hundred years.

You have uiready studied the descriptions of the letters of this poem. You have familiarized yourself with the typical letters of both the a form and the $b$ form, You have seen all the letters of the poem compared and contrasted, arranged alphabetically and in the order in which they are printed. classified and unclassified.

Now you are to apply your knowledge gained Prom Lessons 5, 6, and 7, in marking the letters and working out the cipher message. With your previous study: you should be able to mark the letters, without any aid of alphabets: but in order. to guard against the occasional lapse of memory we enclose "The Alphabets" where the forms of all letters are arranged for concise and easy study. This lesson done earnestly is a sure foundation for the lessons to follow.

Please be careful of the photographs and do not mark or mar them in any way. When the Student Sheet has been correctly merked and this lesson completed, the plates must be returned to the Riverbank Laboratories in the addressed onve. ope proviaed for the purpose. Then the next lesson with its photographs will be sent you. If for any reason the student cares to retain any of the photographs, an additional charge of $25 \not \subset$ each will be made, and this amount should be included in that sent for the next lesson.

THE 1623 1. M. POEM
AḠWBERRY LIBRARY ORIGINAL 1623 EDITION
To the memorie of M.W.Sbake-Speare.
VVEE wondred (Shake-fpeare) that thou went'fl fofoone $^{\text {a }}$ From the Worlds=Stage, tothe Graues-Tyring-roomet
Wee thought thee dead, but this thy printed worth, Tels thy Spectators, that thow ment'ft but forth To enter with applaufe. An ACtors Art ${ }_{2}$ Can dye, and liue, to actie a fecond part. That's but an Exit of Mortalitie; This, a Re-entrance to a Plaudite.
M.

## "I.M. POEM.








aciaitisisisin

- the alphabets. -
student shlet

LESSON 8
plate non E

## I. M. POEM

## Shakespeare Folio 1623

## To the memorie of M.W.Sbake-/peare.

VVEE wondred (Shake-fpeare) that thou went' $\Omega$ fofoone

From the Worlds=Stage,to the Graues-Tyring-roome.
Wee thought thee dead, but this thy printed worth,
Tels thy Spectators, that thou went'f but forth
To enter with applaufe. An AEtors Art, Can dye, and liue, to acte a fecond part. That's but an Exit of Mortalitie; This, a Re-entrance toa Plaudite.

## I. M.

Tothe memor ieofM WShak espea reWEE wondr edSha kespe areth attho uwent stsos ooneF romth eWorl dsSta getot heGra uesTy ringr oomeW eetho ughtt heede adbut thist hypri ntedw orthT elsth ySpec tator sthat thouw entst butfo rthTo enter witha pplau seAnA ctors ArtCa ndyea ndliu etoac tease condp artTh atsbu tanEx itofM ortal itieT hisaR eentr ancet oaPla udite IM
instruction sheet 9
$\begin{array}{lllllll}\mathrm{L} & \mathrm{E} & \mathrm{S} & \mathrm{S} & \mathrm{O} & \mathrm{N} & 9\end{array}$

For this lesson we send you a oopy of the "L. Digges" Poem which appears on the same page and just before the "I.M." Poem in the original 1623 Folio.

The size of type you will find is the same as in the "I.M." Poem and as a whole the alphabets are the same. Because of the length of the "Digges" Poem, there are naturally more forms of letters present than in the "I.M." Poem. The following changes, however, occur: - the oapital $\underline{S}$ and small b forms of the "Digges" Poem are the reverse of the forms found in the
 top of the $b$ form with the base of the $a$ form and whioh must be marked as belonging to the a form.

This poem contains a message from Bacon which you will find of the greatest interest if you are able to trenspose it correctly.

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## P Proos

complight
ar geunie faryan

## TOTHE MEMORIE

## of the decceafed Authour Maiter

## W. Shakespeare.

Nor Shall Le're beleeue, or thinke thee dead
(Though mif) rantill our bankrout Stage hifot

Pafsions of Iuliet, and ber Romeo,
Or till $\}$ beare a Scene more nobbjt th
Then roben thy balf Sword parlyeyg P Wt Hater
Till thefe, till any of thy Votumerry)
Sball with more fire, more feeling be erperst.
ir Be fure, our Shake=-peare, thou canf? mutr dy
But crown'd with Lamorell, line eternally.
NHyen

# "L.DIGCES" POEM. EEHIMMODTT 




```
A EE, HKPES
```



```
AA BB FF, HH, IG, LL, MM
```



```
\[
\text { aa } b b \text { cc dd ee } f f g g g_{\mathrm{g}} b b i \operatorname{lk} \| \mathrm{mm}
\]
\[
\text { nn ooopprr spof } t t \text { uurv, wov } x x, y y,
\]
```

```
— THE ALPHABETS.—

\section*{student sheet}

\section*{LESSON 9}

PLTS No F

\section*{L. DIGGES POEM}

\section*{Shakespeare Folio 1623}

TOTHE MEMOR IEoft hedec eased Autho urMai sterW SHAKE SPEAR ESHak espea reatl ength thypi ousfe llowe sgiue Thewo rldth yWork esthy Worke sbywh ichou tliue ThyTo mbeth yname mustw henth atsto neisr entAn dTime disso luest hyStr atfor dMoni mentH erewe aliue shall viewt heest illTh isBoo keWhe nBras seand Marbl efade shall maket heelo okeFr eshto allAg eswhe nPost eriti eShal lloat hwhat snewt hinke allis prode gieTh atisn otSha kespe arese uryLi neeac hVers eHere shall reuiu erede emeth eefro mthyH erseN orFir enore ankri ngAge asNas osaid Ofhis thywi tfrau ghtBo okesh allon ceinu adeNo rshal Mere belee ueort hinke theed eadTh oughm istvn tillo urban krout Stage bespe dJmpo ssibl ewith somen ewstr ainet outdo Passi onsof Iulie tandh erRom eoOrt illJh earea Scene moren oblyt akeTh enwhe nthyh alfSw ordpa rlyin gRoma nsspa keTil lthes etill anyof thyVo lumes restS hallw ithmo refir emore feeli ngbee xpres tBesu reour Shake spear ethou canst neuer dyeBu tcrow ndwit hLawr elli ueete rnall yLDig ges
"Troilus and Cressida" is the only play in the 1623 Folio which has a prologue. It is also the only one which is net mentioned in the Catalogue (index). As the pages are unnumbered it is obvious that for some reason the play was added after the Folio was being put together. It is thought there was some delay in procuring this play from the manager who had the rights at the time to produce it, so that space was left and it was inserted later. By a miscalculation there was an extra page to fill for which the Prologue was written-a fact which means in any case that the Prologue was written after William Shakespeare's death.

Here again we find the alphabets which we have been using in the "I. K." and "Digges" Poems. There are, however, some important differences,

The forms of the capital S's are the same as in the "I.M."
The forms of the capital D's are \(^{\prime}\) the reverse of those of "I.M." and "Digges" \(\dot{\text { a }}\) The form is unchanged because it contsins two dots and an even number of dots does not ohange the form of the letter.

The forms of small " \(b\) " are the same as in "Digges", but reversed from those in the "I.M." poet.

The forms of small " \(k\) " are reversed.
The forms of capital "L" and small "1", small "h", and small "y". are reversed.

In line 15. the "a" in "six-gated" is wrong font and should be marked b form; the " \(f\) " of chaf"d, line 2, is a hybrid, whose marking is a form.

\title{
The Prologue is the last of the pages in the 1623 Folio, where this particular size and kind of type is used. You will proceed now to different type forms.
}

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\section*{The Prologus.}

1NTroy there lyes the Scene: From Iles of Greace The Trinces Orgitlous, their high blood chafd Hant to the 'Port of Athens fint their Jhippes Fraught with the minifters and inftruments Of cruell Warre: Sixiy and nine that wore
Their (roonets Regall, from tb'Athenian bay
Put forth tomard Pbrgia, and their von is made
To ramfacke Troy, within whofe ftrong emures
The rauifh'd Helen, Menelaus Queene, Witb abanton Paris Jleepes, and that's the Quarrell.
To Tenedos they come,
And the deepe-draming \(\mathcal{B}\) arke do there difgorge
Their marlike frautage : now on \(\mathcal{D}\) ardan Plaines.
The frefh and yet ronbruifed Greekes do pitch
Their braue Pauillions. Priams fix=sated (ity,
Dardan and Timbria, Helias, Chetas, Troien
And Antenonidus with ma/sie Staples.
And correßponfiue and fulfilling Bolts.
Stirre opthe Sonnes of Troy.
Now Expectationtickling skittijh Piovig
On one and otber fide, Troian and Gre
Sets allon bazard. And bither am 7 come
A Proloone arm'd, but not in confuitence
Of Authors pen, or ACtors voyse; but fisted
In like conditions, as our Argment:
To tellyou (faire Bebolders) chat our Play
Leapes ore the rvaunt and firftinnos of thofero
Beginning in the middle : forst ting therare way
To what majo be digeffed in at lify:



\section*{"THE PROLOCUE."}
\(A A B B C \stackrel{\dot{C}}{C} \mathcal{D} \dot{D}\) E \(\dot{E}\) FF GG \(\dot{H} H\) Ig LL

aa bb cc dd ee ffgg bl ii kk ll mm nn


 ACD HMPTT, aa b dd ee hh ii ll m nn oo re ss tt un

ITTee ghhloorru
EXAMPLES OF LETTERS CHANGED BY DOTS.
a a eevnopuyAC
— THE ALPHABETS.—

\section*{STUDENT SHEET}

PROLOGUE TO TROYLUS AND CRESSIDA

\section*{Shakespeare Folio 1623}

The \(\operatorname{Pr}\) ologu eINTr oythe relye stheS ceneF romIl esofG reeee Th Pr inces Orgil loust heirh ighbl oodch afdHa uetot hePor tofAt henss entth eirsh ippes Fraug htwit hthem inist ersan dinst rumen tsOfe ruell Warre Sixty andni netha twore Their Crown etsRe gallf romth Athen ianba yPutf ortht oward Phryg iaand their vowis madeT orans ackeT roywi thinw hoses trong emure sTher auish dHele nMene lausQ ueene Withw anton Paris sleep esand thats theQu arrel IToTe nedos theyc omeAn dthed eeped rawin gBark edoth eredi sgorg eThei rwarl ikefri autag enowo nDard anPla inesT hefre shand yetvn bruis edGre ekesd opitc hThei rbrau ePaui llion sPria mssix gated CityD ardan andTi mbria Helia sChet asTro ienAn dAnte nonid uswit hmass ieSta plesA ndcor respo nsiue andfu lfill ingBo ltsSt irrev ptheS onnes ofTro yNowE xpect ation tickl ingsk ittis hspir itsOn onean dothe rside Troia nandG reeke Setsa llonh azard Andhi thera mJcom eAPro logue armdb utnot incon fiden ceOfA uthor speno rActo rsvoy cebut suite dJnli kecon ditio nsaso urArg ument Totel lyouf aireB ehold ersth atour PlayL eapes oreth evaun tandf irstl ingso fthos ebroy lesBe ginni ngint hemid dlest artin gthen ceawa yTowh atmay bedig ested inaPl ayLik eorfi ndefa ultdo asyou rplea sures areNo wgood orbad tisbu thec hance of War re

\section*{? Proof \\ copraicont \\ ay gevroe fabyas \\ 1915}

The List of "Principall dctors" found in the 1623 Folio (Newberry Library) contains a set of alphabets found nowhere else. The type is larger than any that you have studied and as a whole the distinctions in form are more easily seen, espeoially in the roman type, where they are very clear.

In examining new alphabets, it is necessary to forget entirely the alphabets whioh you have learned. The same rules do not apply in different alphabets. For instance, take the small italic \(e^{\prime} s\) of the "Principall. Aotors." If the base line is produoed in the \(b\) form it will form a perfect oval. while in the \(\underline{a}\) form, it will fall within or without the upper part of the letter. In the entire page, only one \(b\) form small italic a ocurs. The remainder of the \(a^{\prime} s\) are a forms.

We have tried to make clear to you how to determine rules for the alphabets for yourself, so that you oan, with study, deoide on the distinguishing characteristios of the forms of any letters and at be deoeived by false differences. Memory vill not help you until your eye has become skillful enough to seek out true variations.

Please be oareful of the photographs and do not mark or mar them in any way. When the Student Sheet has been marked and this lesson comm pleted, the plates must be returned to the Riverbank Laboratories in the addressed envelope provided for the purpose. Then the next lesson with its photographs will be sent you. If for any reason the student cares to retain any of the photographs, an additional oharge of \(25 \%\) each will be made, and this amount should be inoluded in that aent for the next lesson.

\footnotetext{
? Proof
compriont
ar gromate fazyan
tor
}

\section*{The Workes of WVilliam Shakefpeare,} containing all his Comedies, Hiftories, and

Tragedies: Truely fet forth', according to their firft orfggnall.

\section*{The Names of the Principall Actors in all thefe Playes.}


Illiam Sbakeßeare. Ricbard Burbadge.
fobn Heminings.
A Augufine Pbillips.
William Kempt.
Thomas Poope.
George Bryan. .
Henry Condell.
William Slye.
Richard Comly.
fobn Lowine.
Samuell Croffe.
e Alexander Cooke.

Samuel Gilburne.
Robert e Armin.
William Ofter.
\(\mathcal{N}\) atban Field.
fubn Underwood.
Nicholas Tooley.
William Ecclefone.
fofeph Tayler.
Robert Benfeld.
Robert Goughe.
Ricbard Robinfon.
Iobn Shancke.
Iobn Rice.

\section*{"PRINCIPALL ACTORS:"} STUVVV

\section*{aa eef hhiikklmooprrsfs \\ ACHAft}

\section*{LESSON |] \\ plate no. H}

\section*{THE NAMES OF THE PRINCIPAL ACTORS}

\section*{Shakespeare Folio 1623}

TheWo rkeso fWill iamSh akesp earec ontai ninga llhis Comed iesHi stori esand Trage diesT ruely setfo rthac cordi ngtot heirf irstO. RJGJN ALLTh eName softh ePrin cipal lActo rsina llthe sePla yesWI lliam Shake spear eRich ardBu rbadg eJohn Hemmi ngsAu gusti nePhi llips Willi amKem ptTho masPo opeGe orgeB ryanH enryC ondel lWill iamSl yeRic hardC owlyJ ohnLo wineS amuel lCros seAle xande rCook eSamu elGil burne Rober tArmi nWill iamOs tlerN athan Field JohnV nderw oodNi chola sTool eyWil liamE celes toneJ oseph Taylo rRobe rtBen field Rober tGoug heRic hardR obins onIoh nShan ckeIo hnRic e

The "Catalogue" of the plays in the 1623 Folio (Newberry Library) contains a very important message-mone which Baoon knew would mean his death if it were discovered during his life by Queen Elizabeth. Therefore it is not strange to find that this message is hard to deoipher and that in the alphabets taken from it there are many letters in which the distinguishing characteristics of the a form and the b form are hard to determine.

The type seems at first glance to be like the medium sized type of the "I.M." poem and the "Digges" poem, but it is somewhat different, as you will see by close study of the small italic a's.

The small italic \(e^{\prime}\) 's are the same as in the "Principall Actors"; that is, in the \(b\) form if the end of the base were produced, it would make a perfect oval; while in the a form it would fall either outside or inside of the top.

The \(b\) form of the small itaice \(f^{\prime} s\) is curved at the top, while in the a form the top is straight or, if ourved, it is thin at the neck, making the line on the inside appear nearly straight.

The large italic \(\underline{I}^{\prime \prime}\) s are among the most diffioult letters to distinguish. However, if you take oare to study the letter for parallelism of the top and base, you will find that the \(b\) forms are comparatively parallel, while the a forms are not. A casual glanoe will not suffice for this test. Note, for instance, the I in "Tempest" line l, left. At first glance, the top and base at the right of the stem seem fairly parallel, but to the left of the upright they seem far from oorresponding. But look again: the inside ? Proof


\begin{abstract}
inking of the top goes upward, whereas the outside outline tends downward. Since the outside line is more truly the direction of the top as a whole, the judgment based thereon must be that the top and base are comparatively parallel-a conclusion which at first glanoe seemed absurd. Hence it is seen that the distinotion is one which can be noted, with oare and study. The I of "The", line 1, right, is a letter whose form is obscured by a slip, apparently, of the type in printing. Its form, decided by context, is \(\underline{b}\). The difficulty of this page from the 1623 Folio is only one of the problems the true deaipherer has to meet. But even though the way be hard, the pleasure of winning is very great indeed. Any questions and inquiries by way of assistance to the student, are always gladly received and carefully noted.
\end{abstract}

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\begin{tabular}{|c|c|}
\hline A C AT A of the feuerall Comedi gedies containe & \(10<\sqrt{\text { Puti to. } 38}\) , Hiltories, and Trathis Volume. \\
\hline COMEDIES. & \begin{tabular}{l} 
The Firf part of King Henry the fourth. 46 \\
The Second part of K. Henry the fourth. \\
\hline 4
\end{tabular} \\
\hline \begin{tabular}{l}
2tan ix He Tempef. \\
Folio 1. \\

\end{tabular} & \begin{tabular}{l}
The Life of King Heiny tbe Fift. \\
The Firft pait of King Henry the Sixt:
\end{tabular} \\
\hline The Merry Wiues of Windfor.
\[
38
\] & The Second part of King Hen. the Sixt, 120 \\
\hline Meafure for Meafure. \(\quad \therefore, 61\) & The Third partof Xing Henry tive Sixt 47 \\
\hline The Comedy of Errours. \(\quad \therefore \quad 85\) & The Life © Deathof Rifiardibe Fbititit \\
\hline Muchadoo about Nothing. \(\quad 101\) & The Life ofKing Henyytre Eight: 205 \\
\hline Loues Labour lost. \(\quad 122\) & TRAGEDI \\
\hline MidJommer Nights Dreame. 145 & The Tragedy of Coriolanus, \(\quad\) Fof \\
\hline The Merckint of venice.
\[
163
\] & Titus Andronicus. \\
\hline As you Like it. \({ }^{185}\) &  \\
\hline Taming of the Sbrew. & Timon of Atbens.
2人 \\
\hline \begin{tabular}{l}
All is well, that Ends well.
\[
230^{\circ}
\] \\
Tivelfe Night
\end{tabular} & The Life ard death of fulius Cxfarter tos \\
\hline 1 welfe=Night, or what you will: 255 & Thetragay of Maboth, +HET3I \\
\hline & TheTraged of Hamlen, , +t, +15 \\
\hline HISTORIE &  \\
\hline  & Zutbory and Cleqparr, , , , \\
\hline Le Life co death of R ichard the fcound-3) &  \\
\hline
\end{tabular}

\section*{"A CATALOGVE".} AACEG LOTV

\section*{用这 \\ CHT:}
aa dd eef hhii ill mminnoor ssifurt

\section*{ACDEEGHIMOORRSTV}






—THE ALPHABETS.—
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\section*{\(P\) proud}


\section*{A. CATALOGUE}

\section*{Shakespeare Folio 1623}

ACATA LOGVE ofthe seuer allCo medie sHist ories andTr agedi escon taine dinth isVol umeCO MEDIE STHeT empes tFoli oThet woGen tleme nofVe ronaT heMer ryWiu esof W indso rMeas urefo rMeas ureTh eCome dyofE rrour sMuch adooa boutN othin gLoue sLabo urlos tMids ommer Night sDrea meThe Merch antof Venic eAsyo uLike itThe Tamin gofth eShre wAlli swell thatE ndswe llTwe lfeNi ghtor whaty ouwil ITheW inter sTale HISTO RIEST heLif eandD eatho fKing JohnF olThe Life\& death ofRic hardt hesec ondTh eFirs tpart ofKin gHenr ythef ourth TheSe condp artof KHenr ythef ourth TheLi feofK ingHe nryth eFift TheFi rstpa rtofK ingHe nryth eSixt TheSe condp artof KingH enthe SixtT heThi rdpar tofKi ngHen rythe SixtT heLif e\&Dea thofR ichar dtheT hirdT heLif eofKi ngHen rythe Eight TRAGE DIEST heTra gedyo fCori olanu sFolT itusA ndron icusR omeoa ndJul ietTi monof Athen sTheL ifean ddeat hofJu liusC aesar TheTr agedy ofMac bethT heTrá gedyo fHaml etKin gLear Othel lothe Moore of Ven iceAn thony andCl eopat erCym belin eKing ofBri taine

\title{
THE CATALOGVE of the several Comedies, Histories, and Tragedies contained in the Cipher
}

\section*{COMEDIES}

Seven Wise Men of the West
Solomon the Second
The Mouse Trap
H I S T ORIES
The Life of Elizabeth
The Life of the Earl of Essex
The White Rose of Britain
The Life and Death of Edward the Third
The Life of Henry the Seventh

\section*{TRAGEDIES}

Mary Queen of Scots
Robert, the Earl of Essex (my late brother)

Robert, the Earl of Leicester (my late father)
The Life and Death of Christopher Marlowe

Anne Bullen

NOTABLE
TRANSLATIONS
The Iliad • (Homer)

The Odyssey (Homer)
The Aneid . (Virgil)
The Eclogues, and a few short poems
(Virgil)
MISCELLANEOUS
The Life of Robert Greene
Two Secret Epistles, expressly teaching a Cipher
Completion of the New Atlantis
A Pastoral of the Christ
Bacchantes, a fantasy
History, in prose commixed with verse, of England and a few Englishmen.
Story in verse of the Spanish Armada. Bacon's own story of his life, in which Marguerite de Valois figures.
A number of short poems in French, written for Marguerite, form a part of the story of Bacon's life in France.

THESE TITleS ARE FROM WORKS PUBLISHED IN THE XVIth AND XVIIth CENTURIES, DECIPHERED BY ELIZABETH WELLS GALLUP
```


[^0]:    Please be careful of the photographic plates, and do not mark or mar them in any way. When the Student Sheet has been correctly marked, and this lesson completed, the plates must be returned to the Riverbank Laboratories, in the addressed envelope provided for the purpose. Then the next lesson with its photographic plates will be sent you. If for any reason the student cares to retain any of the photographic plates, an additional charge of $25 \not \subset$ each will be made, and this amount should be included in that sent for the next lesson.
    ? Proof comomer

[^1]:    In "The Greatest of Literary Problems," published by Houghton Miffin, 1915, James Phinney Baxter, the author, desoribes a test in deciphering whioh he submitted, at the request of a critic, to lirs. Gallup. ifr. Baxter made an alphabet by seleoting and photographing typical letters of medium sized italics used in the second edition of the Shakespeare Folic, 1632.

    Then, in sonnets XXXII, XXXVI, XNiVIII, which contain no cipher in the original, he infolded a poem of his own by applying carefully Bacon's own directions for the use of the Bi-literal Cipher and added a line of prose for the signature. Mrs. Gallup returned the sonnets by the next mail, with the poem correotly transcribed. . In Lesson III, we send you the same task.

    Exoept for the fact that the slant of the letters is not always perfect, you will find the fonts of this alphabet easier to distinguish than in the more faulty originals. They do not contain the variants always to be found in old printing.

    The b form small e is charaoterized by a dot whioh occurs at the point where the loop joins the stem. There is also an imperfeotion on the inside of the oval of the small o at the right. Other regularly-occurring oharacteristio of the letters will be noticed by the student in the alphabets, which will make the task of deciphering indeed a simple one.

    Inoluded with this lessos is sent for the purpose of study a page photographed from "The Great Cryptogram" of Ignatius Donnelley, showing where Mr. Donnelley failed in the appliaation of the Bi-literal Cipher.

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