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A REFUTATION

OF THE

MON. IGNATIUS

GREAT CRYPTOGRAM.



NO CIPHER IN
SHAKESPEARE

BY THE

REV. A. NICHOLSON, LL.D.

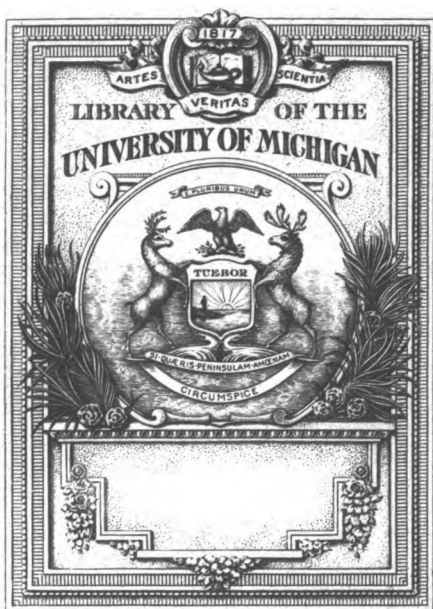
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NO CIPHER IN SHAKESPEARE:

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REFUTATION

OF THE HON.

IGNATIUS DONNELLY'S

"GREAT CRYPTOGRAM,"

BY THE REV.

^{Aldwell}
A. NICHOLSON, LL.D.,

INCUMBENT OF S. ALBAN'S, LEAMINGTON.

LONDON :

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26, PATERNOSTER SQUARE.

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TO
THE SPEAKER,
THE RIGHT HONOURABLE
ARTHUR WELLESLEY PEEL,
MEMBER FOR
WARWICK AND LEAMINGTON,
ETC., ETC., ETC.,
THESE PAGES
ARE, BY HIS PERMISSION,
INSCRIBED;
AS A SMALL TRIBUTE TO
THOSE STATESMANLIKE ABILITIES
WHEREWITH HE SUSTAINS THE DIGNITY
OF THE CHAIR OF THE HOUSE OF COMMONS,
WITH A DISTINCTION
WORTHY OF THE ILLUSTRIOUS NAME
HE BEARS.

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CHAPTER I.

INTRODUCTORY.

MR. IGNATIUS DONNELLY has not been refuted. No doubt, his conclusions have been weighed against general considerations and external evidences. The specific proofs, however, adduced for his conclusions by the American writer, either have not been examined at all on their own merits, or have been inadequately criticised, or have been merely ridiculed by persons who have never been at the pains to study them.

The thesis of his work is stated on the title page, thus: "The Great Cryptogram: Francis Bacon's Cipher in the so-called Shakespeare Plays." The following statement is made in the "Introduction," (p. vi.)

"As to the actuality of the Cipher, there can be but one conclusion. A long continuous narrative, running through many pages, detailing historical events in a perfectly symmetrical, rhetorical, grammatical manner, and always growing out of the same numbers, employed in the same way, and counting from the same, or similar, starting points, cannot be otherwise than a pre-arranged arithmetical cipher.

"Let those who would deny this proposition produce a single page of a connected story, eliminated, by an arithmetical rule, from any other work; in fact, let them find five words that will cohere by accident in due order in any publication, where they were not first placed with intent and aforethought. I have never yet been able to find even three such. Regularity does not grow out of chaos. There can be no intellectual order without pre-existing intellectual purpose. The fruits of mind can only be found where mind is, or has been."

Mr. Donnelly's First Volume is occupied with literary matter and arguments, proving, as he thinks, independently, the Baconian authorship of the Plays. But, he maintains, that "the Cipher will be able to stand alone." My purpose, therefore, in these pages, is to examine the Cipher.

CHAPTER II.

THE REASON FOR THE CRYPTOGRAM ASSIGNED BY MR. DONNELLY.

The author naturally feels called upon to give reasons for the existence of a Cipher in the Plays. Lord Bacon, he says, had motives for concealing his connection with these works, motives personal, social, and political. "The last years of his life were years of dishonour. . . . For a man thus living under a cloud to have said, 'in my youth I wrote plays for the stage; I wrote them for money; I used Shakspeare as a mask; I divided with him the money taken in at the gate of the play-houses from the scum and refuse of London,' would only have invited upon his head greater ignominy and disgrace. He had a wife, he had relatives, a proud and aristocratic breed. He sought to be the Aristotle of a new philosophy. Such an avowal would have smirched the *Novum Organum* and the *Advancement of Learning*; it would have blotted and blurred the bright and dancing light of that torch, which he had kindled for posterity. He would have had to explain his, no doubt, countless denials made years before, that he had had anything to do with the Plays.

"And why should he acknowledge them? He left his fame and good name to his 'own countrymen after some time be past;' he believed the Cipher, which he had so laboriously inserted in the Plays, would be found out. He would obtain all the glory for his name in that distant future. . . . He would be married anew to his immortal works," (vol. I. p. 258.)

It is fair to Mr. Donnelly to quote his *raison d'être* for the Cipher.

CHAPTER III.

LORD BACON'S CIPHER IN HIS AUTHENTIC WORKS.

When any mention is made of a Cipher by Lord Bacon, we think at once of the conditions of a Cipher and the actual specimen, given in the *De Augmentis Scientiarum*, Lib. vi., Cap. i.

Having noticed several kinds of Ciphers, Bacon says: "There are three properties required in Ciphers; that they be handy (*expeditæ*), not too laborious to write; that they be reliable, and in no way be open to deciphering; finally, let me add, that they be, if possible, clear of suspicion." Further, he says, "to prevent all suspicion, I shall here give an invention of my own, which I devised when a youth at Paris, and which seems to me worth preserving. It has the highest perfection of a Cipher, namely, that of signifying *anything by everything*, provided only the matter wrapt up be five times less than the matter within which it is folded. No other condition or restriction is required."

The principle is as follows:—

The basis is the uniting of a Bi-literal alphabet with a Bi-formal, in quintuples.

Let each letter of the common alphabet be represented by A and B repeated in five places with transposition. By transposition, the two letters, in quintuples, will yield groups, differently arranged, more than enough for the twenty-four letters of the common alphabet. To each letter of the alphabet appropriate one of these arrangements.

Thus—

THE BI-LITERAL ALPHABET,

consisting only of A and B changed through five places, to repre-

sent all the letters of the common alphabet :—

QUINTUPLE.

A = a a a a a	I = a b a a a	R = b a a a a
B = a a a a b	K = a b a a b	S = b a a a b
C = a a a b a	L = a b a b a	T = b a a b a
D = a a a b b	M = a b a b b	V = b a a b b
E = a a b a a	N = a b b a a	W = b a b a a
F = a a b a b	O = a b b a b	X = b a b a b
G = a a b b a	P = a b b b a	Y = b a b b a
H = a a b b b	Q = a b b b b	Z = b a b b b

United with this is a

BI-FORMAL ALPHABET,

consisting of Roman and Italic letters—in which every Roman letter represents A, and every Italic represents B, throughout the whole common alphabet.

Thus—

A Roman = a
A Italic = b
B Roman = a
B Italic = b, and so on to Z.
* * * * *
Z Roman = a
Z Italic = b

Next, select any indifferent sentence, as the outside matter in which the secret matter is to be wrapped up. This sentence must be five times as large as the secret. For instance take for the *epistola exterior*,

Manere te volo donec venero.

The purpose being to transmit as the inner message, or *epistola interior*, the word FUGE, (fly), we write in Italics any letters which are to stand for *b*, and leave in Roman any letters which are to stand for *a*.

Finally, collecting all the results in groups of five, we refer to the first, or the Bi-literal, alphabet for the letter of the common alphabet which answers to each quintuple.

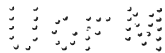
Thus—

Manere te volo donec venero.

$$\begin{array}{cccc}
 \left. \begin{array}{l} m = a \\ a = a \\ n = b \\ e = 'a \\ r = b \end{array} \right\} = \mathbf{F} &
 \left. \begin{array}{l} e = b \\ t = a \\ e = a \\ v = b \\ o = b \end{array} \right\} = \mathbf{U} &
 \left. \begin{array}{l} l = a \\ = a \\ a = b \\ o = b \\ n = a \end{array} \right\} = \mathbf{G} &
 \left. \begin{array}{l} e = a \\ c = a \\ v = b \\ e = a \\ n = a \\ e \\ r \\ o \end{array} \right\} = \mathbf{E}
 \end{array}$$

We now understand the essential conditions which Lord Bacon requires for a Cipher. The symbols are arbitrary as to selection; the rules are arbitrary; but, once arranged, the symbols and rules are fixed in use. Arbitrary arrangement is essential to secrecy, but certainty and uniformity in use is indispensable to intelligible communication. Once the arrangements are made, arbitrariness is at an end. A set of signs, without regularity in use, and without certainty in translation, is not a Cipher. The symbols are chaotic without the *regula*.

The distinctive character which Mr. Donnelly claims for his Cipher is regularity. Upon this essential condition he rests his argument, in the words I have quoted above. We shall see whether he has made good the condition.



CHAPTER IV.

MR. DONNELLY'S CRYPTOGRAM EXPLAINED—THE MODIFIERS.

The Folio edition of 1623 is chosen as the repository of the "Great Cryptogram."

The Cipher, which Mr. Donnelly finds in the Plays, is not an alphabetical symbolism such as Lord Bacon exemplifies in his works, but is arithmetical. Archbishop Laud † used a numerical Cipher in his correspondence with Lord Wentworth. It matters not what the signs may be, *provided the condition of regularity and certainty be secured.*

The writer of the Great Cryptogram, in giving an account of it, is by no means as clear as he might be. This is due in part to his style, in part to his terminology. In respect to the latter, he constantly uses scientific terms in a non-scientific sense. "Arithmetical progression," ‡ for instance, is one of his terms: but there is no such operation in his book, unless a gradual process of subtraction, on an inclined plane, be arithmetical progression. Again, when a number is described as a "product,"* he frequently means, that the number is merely derived from, or formed out of, another by a series of subtractions. The statement concerning "multipliers" in reference to root-numbers (on page 583) is wholly unscientific, and has the effect, as I shall point out afterwards, of a design to mislead the reader.

But apart from this, Mr. Donnelly's writing, perhaps from hurry, is of the extemporaneous, slipshod style, which is not favourable to precise explanation of figures. When he sets himself, indeed, to elucidate anything with special pains, things become more confused than usual.

† Works, Oxon., Parker, vol. vii.

‡ Great Cryptogram, p. 670.

* See, for instance, p. 647.



Thus there is the double disadvantage of promiscuous terminology and looseness of style.

The author lays down the principles of the Cipher in that section of his work entitled, "*The Heart of the Mystery*," p. 579. He states, that the central point, on which the Cipher turns, is, the dividing line between the two plays, the First Part of Henry IV., and the Second Part of Henry IV.; and the essentials of the rule are found on the last page of the former play, and the first page of the latter play.

From these two pages the entire Cipher-story in the two plays "radiates and extends right and left to the beginning of the First Part and the last word of the Second Part."

The pages of the Folio are divided into columns.

Each column is either solid, or sub-divided.

The land-marks, by which sub-divisions are made, are the stage-directions, or the ends of Acts, or of Scenes.

The words spoken by the *dramatis personæ* alone are counted.

In counting the words there are variations in the number, according as we treat, for instance, bracketed and hyphenated words in counting the column or the sub-division.

From the two pages indicated above, 73, 74, the following numbers are derived: viz.—

Page 73, column 1.

Words in first sub-division	27
Words in second subdivision	63
Words in third sub-division	79
Words in the column	169
Words from 27th word to bottom of column	142
Words from 27th word to end of second sub-division	63
Words from 28th word to end of column	141
Words from 28th word to end of second sub-division	62
Words from top of column to end of second sub-division	90
Words from top of column to beginning of third sub-division	91
Words from beginning of third sub-division to end of column	79
Words from beginning of third sub-division, plus one hyphen	80

Page 73, column 2, gives the following numbers :—

Words in first sub-division	28
Words in second sub-division	209
Words in second sub-division, plus bracket words.. .. .	212
Words in column	237
Words in column, plus words in brackets	240
Words from end of first sub-division to end of column	209
Words from beginning of second sub-division to end of column.. .. .	208
Words from beginning of second sub-division, <i>plus</i> bracket words	211

Page 74, column 1, gives these figures :—

Total words in column	284
Total words in column, plus words in brackets	294
Total words in column, plus hyphenated words	291
Total words in column, plus hyphenated and bracket words	301
Total words in column, plus all hyphenated and bracket words in column	302

Page 74, column 2, gives the following :—

Number of words in first sub-division	50
Number of words in second sub-division	168
Number of words in third sub-division	30
Number of words from top of column to beginning of second sub-division	51
Number of words from beginning of second sub-division to end of same	167
Number of words from beginning of column to end of second sub-division	218
Number of words from beginning of column to beginning of third sub-division	219
Number of words from beginning of column to end of column	248
Number of words from beginning of third sub-division to end of column	29
Number of words from end of second sub-division to end of column	30
Number of words from end of first sub-division to end of column	198
Number of words from end of column to beginning of second sub-division	197

But, in consequence of there being in this column (second and third sub-divisions,) 22 words in brackets and 2 hyphenated words, we have in it, i.e., in

Page 74, column 2, these additional numbers : viz.—

Number of words in second sub-division	168
Number of words in second sub-division, <i>plus</i> 21 bracket words	189
Number of words in second sub-division, <i>plus</i> 1 hyphenated word	169
Number of words in second sub-division, <i>plus</i> 22 bracket and hyphenated words	190
Number of words in third sub-division	30

Number of words in third sub-division, <i>plus 1</i> bracket word	31
Number of words in third sub-division, <i>plus 2</i> bracket and hyphenated words.. .. .	32

The numbers 168 and 30 are repeated amongst the above, as the normal figures from which some variations come.

The figures, thus set forth, are called "Modifiers," because they are, in the operations of the Cryptogram, applied to what is called a "Root-number," in order to modify, or reduce it to a remainder figure, to suit some word in a particular column wanted for the making of the story.

The list is considerable, but it is far from exhausting the stock of modifiers: on the contrary, these increase and multiply as the Cipher proceeds. In examining the working of the problems, we find a constant introduction of new modifiers generated from the sub-divisions of other pages and columns, and these Mr. Donnelly uses as freely for amputations of the root as those drawn from the "Heart of the Mystery." I note down some, but not by any means all, of these, starting from his page 673.

Number derived from first sub-division of page 75, column 1	193
Number derived from second sub-division, 75.1	254
Number derived from second sub-division, 75.1, <i>aliter</i>	253
Number derived from second sub-division, 76.1	49
Number derived from second sub-division, 76.2	145
Number derived from the same, 76.2, <i>aliter</i>	146
Number derived from the same, 76.2, <i>aliter</i>	148
Number derived from the same, 76.2, <i>aliter</i>	149
Number derived <i>aliter</i> from second sub-division, 76.1	50
Number derived from first sub-division of 79.1	31
Number derived from the same, <i>aliter</i> 79.1, (5 b)	36
Number derived from first sub-division of 78.1	161
Number derived from the same 78.1, <i>aliter</i>	162
Number derived from the same 78.1, <i>aliter</i>	163
Number derived from third sub-division of 79.1	143
Number derived from beginning of third sub-division to bottom of column 79.1	200
Number derived from third sub-division of 79.1, <i>aliter</i>	199
Number derived from second sub-division of 79.2	65
Number derived from second sub-division of 80.1	57
Number derived from the same, <i>aliter</i>	58

Those numbers I have marked *aliter* indicate variations from the normal count, which Mr. Donnelly adopts when convenient, on the ground of brackets, hyphens, or other principles of counting.

I have not exhausted the store of modifiers, by means of which the root-number may be transformed into any figure which is desired, while the semblance of a root-number is retained.

CHAPTER V.

THE CRYPTOGRAM EXPLAINED. THE ROOTS.

We come now to the Keys or the "Root-numbers."

The first step towards their formation involves a set of numbers called the "multipliers." Mr. Donnelly says, "The multipliers which produce the root-numbers are found in the first column of page 74. They are

10, the number of bracket words ;

7, the number of hyphenated words ;

11, the number of bracket words, plus the one hyphenated word *post-horse* included in the bracket ; and

18, the total of bracketed and hyphenated words in the column.

We have here, then, the *machinery* of Bacon's Great Cipher" (p. 583).

He says further (*ibid.*), "The root-numbers out of which the story grows are as follows :

505, 506, 513, 516, 523."

He states further, that these "are the product of multiplying certain figures in the first column of page 74 by certain other figures." The term "product" here is misleading. The "certain figures" are those mentioned above, as the "multipliers." But these, with one exception, are not factors of the root-numbers. Therefore, the "certain other figures" can not be corresponding factors of the root-numbers. Consequently, when Mr. Donnelly states, that the root-numbers "are the *product* of multiplying certain figures in the first column of page 74 by certain other figures"—this is not a fact. There may be no more in this than a careless and unscientific use of terms. But such confusion, affecting the foundation of the whole Cryptogram, in a book of figures, with claims to be considered scientific, symmetrical and accurate—is inexcusable.

The root-numbers, then, are not the "product" of the "multipliers." The author reserves, as a mystery, the manner in which he obtained them. He says, "The explanation of the way in which they are obtained, I reserve for the present, intending in the future to work out the remainder of the narrative in these two Plays, which I here leave unfinished. It may of course be possible that some keen mind may be able to discover how those numbers are obtained and anticipate me in the work. I have to take the risk of that. My publishers concur with me in the belief that the Copy-right laws of the United States will not give me any exclusive right to the publication of that part of the Cipher narrative in the plays which is not worked out by myself. I shall, therefore, have worked for years for the benefit of others, unless in this way I am able to protect myself. 'The labourer is worthy of his hire,' and if such a discovery as this could have been anticipated by the framers of our Copy-right laws, they would certainly have provided for it. For if a man is entitled to gather all the benefits which flow from a new application of electricity, as in the telegraph or the telephone, to the amount of millions of dollars, certainly there should be some protection for one who by years of diligent labor has lighted a new light in literature and opened a new gate in history." (pp. 583, 4.)

The "Heart of the Mystery," the author discloses, but the *Heart of the Heart* he declines to reveal. In a later chapter we shall probably penetrate the secret, and in so doing, we shall, I think, do no great harm to Mr. Donnelly, as the janitor of a new history.

Meantime, how far, or in what sense, the multipliers have to do with the forming of the root-numbers, is a secondary consideration. In examining the operations of the Cipher, our concern is merely with the *root-numbers* themselves, however come by, 505, 506, 513, 516, 523, and with those other figures used to affect them, which are called the *modifiers*.

We propose, next, to test the value of the "Great Cryptogram."

CHAPTER VI.

THE CRYPTOGRAM REFUTED. THE ROOT A FICTION.

The Root-number, Mr. Donnelly calls the "Key." He says, "the key here turned, for the first time, in the secret wards of the Cipher, will yet unlock a vast history." *Introduction*, p. vi. Now, we are given five keys, and when we come to apply them, we find that not one of the five will enter the lock. We are justified, therefore, in concluding, that the keys are false, and were never made by the man who made the lock.

The root-numbers, directly applied to the columns of the Plays, produce nothing and lead to nothing.

A key, however, not made for the lock, may be altered to the likeness of a fit. It may be *filed*. A key, of a size approximating the aperture, may be altered at the forge, and so modified at least as to enter the lock. The person, who holds the key in his hand, may inform us, that he now finds, after many laborious experiments of filing and modifying, that the machinery of the lock answers to the wards of the key.

This is the case of the Cryptogram. The key-numbers are of no use, and do not answer, unless they are filed down by repeated experiments. The root-numbers will not answer, without a series of modifying trials and experimental reductions.

If we are to believe in a multiplied machinery of roots and modifications, it should be at least required, that the modifiers be few, the rule for their selection and application clear and certain, and that the figure, remaining after the operation, bear some fixed analogy to, or be in some way fairly identifiable with, the original key. On the contrary, if we have some scores of modifiers, and may choose any we please, for experimental filings of

the key, until a figure is produced which has no fixed relation in any way to the key, this is merely to substitute one number for another. Identity may be lost either by sudden metamorphosis, or by a gradual series of transformations. Sir John Cutler had a pair of black worsted stockings, which his maid darned so often with silk, that they became a pair of silk stockings at last. †

† Pope: Mart. Scrib. chap. vii.

CHAPTER VII.

THE CRYPTOGRAM REFUTED. NO FIXED RULE FOR SELECTION OF MODIFIERS.

Mr. Donnelly's book abounds in rudiments, and fails in rules.

In the multitude of Modifiers there is no rule for the selection of any.

Amid a multitude of modifiers there might be still a certain rule to confine, within certain limits, the selection of fixed modifiers for particular classes of cases. The Cryptographer, however, at will selects any from his quiver-ful. The only rule is—experiment upon the root-number with any figures of the heap, until the root-number is converted into any figure required. The key is to be filed, and we are only to stop filing when we can force it into the lock.

Take the following instances :

(Page 786). The root 523 is to be modified to 230 for the word "The," (p. 78.1.)*

$$523-218 (74.2)=305-32(74.2)=273-50 \\ (74.2)=223-5b=218-146 (76.2)=72+163 (78.1.)=235-5b \text{ col.} \\ = 230.$$

Here, the modifiers are taken up and down from three different and widely separated pages and columns.

Page 766. The root 523 is thus transformed into 38. ("of"):

$$523-218 (74.2.) = 305-50 (74.2.) = 255-32 (79.1.) \\ = 223-146 (76.2.) = 77-30 (74.2.) = 47-9 \text{ b h col.} = 38.$$

The modifiers are here taken in the same irregular way. Page 743. The root 505 is to be filed down to 169 ("stick");—

* *i.e.*, page 78, column 1.

$$505-167 (74.2.) = 338-30 (74.2.) = 308-49 (76.1.) = 259-90 (73.1.) = 169.$$

The modifiers are here taken without rule from any pages and columns, where a convenient figure can be found.

Mr. Donnelly says (p. 585), "Instead of the Cipher story in these Plays being, as some have supposed, a mere hop-skip-and-jump collocation of words, it will be found to be as purely arithmetical and as precisely regular as either of the examples given above." (The examples given by him were imaginary cases.)

The author may be unconscious of the character of his performances, but certainly "*hop-skip-and-jump*" is a correct description. The instances, I have given, are fair specimens of the whole.

CHAPTER VIII.

THE CRYPTOGRAM REFUTED. NO FIXED RULE FOR SELECTION OF PAGE OR COLUMN.

When the Root-number is filed and converted, there is no rule for fixing the convert to any particular page, or column.

The principle, again, to use Mr. Donnelly's phrase, is hop-skip-and-jump. Having reduced the root to the figure wanted, any column will suit as well as another. Or, rather, choose a word on any column you please, and you can reduce any root to match it.

As for the processes of the Cryptogram being "purely arithmetical"—no doubt, they are so; the "cooking" of a bankrupt's accounts is also "purely arithmetical." I do not deny that Mr. Donnelly's hop-skip-and-jump is "purely arithmetical," but when he says it is "precisely regular," this is too much for ordinary credulity.

The following are instances.

Page 733. Mr. Donnelly asks us to believe, that *Jack* and *Spur* stand for "Shakspeare."

$$505-167 = 338-50 = 288-49 (76.1.) = 239-79 (73.1.) \\ = 160. \quad 588-160 = 428 + 1 = 429. \quad 429 (72.2.) \text{ Jack.}$$

There is no rule but hop-skip-and-jump for fixing the converted root to *Jack* on page 72. col. 2.

But this done, Mr. Donnelly capriciously goes off at another bound of five columns to find *Spur* for *Jack*.

$$505-167 = 338-30 = 308-193 = 115-11 \text{ col.} = 114. \\ 114. (75.1.) \text{ Spur.}$$

Another instance, page 849. "Language most choice."

$$505-167 = 338-50 = 288-49 = 239. \quad 284-239 = 45 + \\ 1 = 46. \quad 46. (74.1.) \text{ Language.}$$

$$505-167 = 338-30 = 308-163 = 145-31 = 114-57 \\ (80.1.) = 57 \quad 523-57 = 466+1 = 467 \quad 467 (80.2.) \text{ Most.}$$

$$505-167 = 338-50 = 288-50 = 238. \quad 468-238 = 230+1 = 231+15 \text{ b and h col.} = 246. \quad 246 \text{ (78.1.) } \textit{Choice.}$$

These three words are taken from three separate columns without any rule, or regularity. Between the first and second, (from 74. col. 1 to 80. col. 2. inclusive) there is actually a bound of thirteen columns.

Page 777. The words, "Sir to amiss loose see look upon it as a bold plot" are said to mean, "Sir Thomas Lucy &c."

This is the deciphering :

$$523-218 = 305-31 = 274-50 = 224-7 \text{ b col.} = 217 \quad 217. \text{ (77.1.) } \textit{Sir.}$$

$$523-218 = 305-31 = 274-50 = 224-30 = 194-145 = 49 \quad 49. \text{ (76.1.) } \textit{To.}$$

$$523-218 = 305-31 = 274-30 = 244-5b \text{ (31.)} = 239-50 \text{ (76.1.)} = 189 \quad 189. \text{ (76.2.) } \textit{Amis.}$$

The three portions of "Sir To-amiss," we have to seek on three different columns, without the shadow of a reason, why the words should be looked for on these columns, or on any other in particular.

Page 718, 719 : We have, "seas ill said that more low or shak'st spur never writ, &c." Mr. Donnelly gets out of these words, "Cecil said that Marlowe or Shakspeare, &c." He then adds—"I will ask the sceptical reader to examine the foregoing three remarkable combinations of words, seas-ill (Cecil), more-low (Marlowe) and shak'st-spur (Shakspeare). . . . Are there four other columns, on three other consecutive pages in the world, where six such significant words can be discovered? And, if there are, is it possible to combine them as in the foregoing, not only by the same root number, but by the same modification of the same root-number? If you can indeed do this in a text where no Cipher has been placed, then the age of miracles is not yet passed."

The only miracle, required in the case, is a little ingenuity in the use of hop-skip-and-jump without rules. The figures are—

$$516-167 = 349-22 \text{ b and h} = 327 \quad 498-327 = 171 +1 = 172+10 \text{ b and h} = 182 \quad 182. \text{ (76.1.) } \textit{Seas}$$

$$516-167 = 349-22 \text{ b and h} = 327 \quad 447-327 = 120 \\ + 1 = 121$$

$$516-167 = 349-22 \text{ b and h} = 327-30 = 297-50 \\ (76. 1.) = 247 \quad 121 (75.1.) \textit{ ill}$$

247. (76.2.) *said.*

$$516-167 = 349-22 \text{ b and h} = 327-284 = 43 \\ 447-43 = 404 + 1 = 405 + 3 \text{ b} = 408$$

408. (75.1.) *that*

$$516-167 = 349-22 \text{ b and h} = 327-254 = 73-15 \text{ b} \\ \text{and h} = 58$$

$$448-58 = 390 + 1 = 391$$

391 (76.1.) *More.*

$$516-167 = 349-22 \text{ b and h} = 327-50 = 277-50 (74.2.) \\ = 227-1 \text{ h} = 226$$

226 (74.1.) *low*

$$516-167 = 349-22 \text{ b and h} = 327-254 = 73-50 (76.1.) \\ = 23-1 \text{ h} = 22$$

22. (76.1.) *or*

$$516-167 = 349-22 \text{ b and h} = 327-30 = 297-254 = 43 \\ -15 \text{ b and h} = 28$$

28 (75.2.) *Shak'st*

$$516-167 = 349-22 \text{ b and h} = 327-248 = 79 \\ 193-79 = 114 + 1 = 115 + \text{b and h} = 121$$

(121) (75.1.) *Spur*

Thus much of the passage will serve as a specimen of the Cryptogram. *Shak'st* and *Spur* are used to stand for "Shakspeare;" there is an interval of some 375 words between the two syllables that compose this pun; there is no more reason for choosing 75. 2. for the first word, or for bounding backward to 75. 1. for the second, than there is for choosing any pages or columns of the sixties or eighties in the same Play. The two parts of the contrivance of *Seas* (on p. 76. col. 1.) and *ill* (p. 75. 1.) for "Cecil," are separated by an interval of more than one thousand words from each other; and there is no more reason why either of these pages or columns should be chosen for the word-number than any other page or column.

More and *low* are offered to the reader for "Marlowe."—By an easy process the figure 516 is changed into 391, and without any rule for the selection of the column, the 391st word on page 76, col. 1, is taken. For the second syllable, the figure 516 is readily filed down to 226, but to match it we are forced to make a bound backwards of upwards of seventeen hundred words, to page 74, col. 1, for no other reason than convenience.

I have given a sufficient number of examples to show that when Mr. Donnelly converts his root, he has no rule for selecting his column. He tells us, indeed, that, if his results can be found where no Cipher has been placed, "then, the age of miracles is not yet past." He need not take so extreme a view, if, in the construction of future Cipher-stories which he promises us, he will follow this simple rule—first catch your word, then cook the root to match it.

CHAPTER IX.

THE CRYPTOGRAM REFUTED. NO FIXED RULE FOR COUNTING
THE TEXT.

Another matter which gives elasticity and uncertainty to the pretended Cipher, and *per se* destroys it, is, that in a Cipher which is said to depend upon the minutest accuracy in counting words, *there is no uniform principle of counting the text.*

For the purposes of the Cipher, our Cryptographer points out three classes of words in the Text, viz. ordinary words, bracketed † words, and hyphenated words. In the common way of counting, the bracketed words are omitted, and each hyphenated word is counted as one ordinary word. When hyphenated words are noted as being counted ($+h$), the members connected by hyphen, separately enter the count as two, or more, ordinary words; i.e., the hyphenated word having been already rated as *one* in the common count, an addition has now to be made for the part (or parts) not previously counted. The bracketed words are counted only when specially noted ($+b$).

It appears, then, that Mr. Donnelly gives himself the advantage of counting the words in any one of four different ways to suit his experiments, viz.—

1. Omitting both *b* and *h*.
2. Adding both *b* and *h*.
3. Adding *b* only.
4. Adding *h* only.

The consequence of this convenient arrangement, based on the accidents of printing, is, that after the occurrence of bracketed and hyphenated words in a column, any word, that follows throughout the rest of the column, may have, in Mr. Donnelly's arithmetic, any one of four different numerical values; and any one of the four may be chosen as the number of the

† i.e. in parenthesis.

word, according to the convenience, or necessity, of the operator.

Thus, in the first sub-division of page 75, col. 1, there are	
Words in the sub-division, by ordinary count ..	193
Words in the sub-division, plus 10 b and 5 h words	208
Words in the sub-division, plus 10 b	203
Words in the sub-division, plus 5 h	198

The last word, for instance, in the sub-division, *news*, may be reckoned, as it suits the Cipher-maker; either the 193rd, or 198th, or 203rd, or 208th, in the column.

Throughout his book, Mr. Donnelly takes advantage of this four-fold variation of his reckoning, whenever he finds it convenient.

The effect of uncertainty as to the count, would be fatal to any real Cipher; but for the purposes of the Cryptogram it is essentially convenient, inasmuch as it gives Mr. Donnelly *four* more chances for one, towards fitting his key to any column he pleases.

But, Mr. Donnelly is not content with four different ways of counting the words in the column. He adds a *fifth*, which is to him of extraordinary advantage in innumerable cases. He says, (p. 568), "I first discovered a curious fact, that while the tenth word from the top of a column was, of course, the tenth word, you could not obtain the tenth word from the bottom of a column by deducting ten from the total of words on that column. If the reader will turn to the *fac-simile*, given herewith, on page 75, he will see that there are 447 words on the first column. If now he deducts ten from 447, the result is 437, to wit, the word *doing*; but this is really not the tenth word from the bottom, for if he starts to count each word (skipping the two words in brackets), he will find that the tenth word is *me*, the next subsequent word to *doing*. . . . The reader will therefore find, in accordance with this rule, that whenever I count *up* a column in these pages, I deduct the number from the total of the column, and add one, thus :

$$\begin{array}{r} 447 \\ 10 \\ \hline \end{array}$$

$$437 + 1 = 438. "$$

It is a fact, we may reply, but not curious. In order to simplify a matter, which after all is not complex, say, in short numbers, that the column, or sub-division, consists of twenty words. Now, every child knows, that the 10th word from the top is the 10th word from the top, and the 10th from the bottom is the 10th from the bottom; and that the 10th from the bottom is the 11th from the top, and the 10th from the top is the 11th from the bottom. What then? Let us suppose, Mr. Donnelly's root-number, after all modifications, happens in a given case to yield 10; but the 10th word on the column will not make sense for the story. The 11th word is the word he wants. The process now is, to tilt the column; and, topsy-turvy, the 11th word becomes the 10th. The same result is obtained by adding one to the remainder left after deducting the modified root-number from the top reckoning. But this is merely to falsify the count from the top. In other words, a new mode of calculating, whenever required, is introduced by confounding together two counts of the same series. *The topsy-turvy principle, therefore, is a fifth way of counting the column.*

Thus, Mr. Donnelly has five ways of counting the words of the text, and any word, wanted for his story, may answer to any one of five different numbers, according to his convenience.

CHAPTER X.

THE CRYPTOGRAM REFUTED. NO FIXED METHOD OF WORKING THE MACHINERY.

To the causes of uncertainty, incompatible with a Cipher, already described, must now be added another—the operation itself is not uniform. The multitude of roots and modifiers, and the variations of word-counting, may be manipulated by the Cryptographer in two different ways.

I. The first way is, the experimental filing of the root or key-figure, by one modifier after another, until this figure is reduced, as it must be inevitably, to the number of any word on any column, suitable to the purpose of story-making. There are many columns, and all are open to selection. If a startling and suitable word appear in any column, it may be readily secured for service. It is simply required, to ascertain the number of the word chosen, with the alternatives of several numbers for the word just as we find it convenient to count the column; and then to dock the root by a series of modifiers, until the modified root-number and the column word-number are made to agree.

Let us say, for instance, the word "*transformation*" is wanted for the story. This is the 167th word on page 81, col. 2. The root-number under operation, we will take to be 523; and the little problem is, to reduce this figure to 167. Mr. Donnelly (page 792) proceeds thus:

$$523-218=305-32=273-50=223-5b=218-50=168-1b=167$$

All pages and columns are now open to selection, and of course the 167th word on p. 81, col. 2, *transformation*, is taken. One example, in so obvious a matter, is enough. The following operation will enable any one to obtain similar results, and construct Cryptogram stories.—Find the difference between the given root and the number of the word in the column chosen; take any modifiers, whose sum together is equal to this difference; subtract the modifiers, or their sum, from the root; the last remainder is the number of the word required.

Thus, in the example from Mr. Donnelly, above :

$$523 - 167 = 356$$

$$356 = (218 + 32 + 50 + 5 + 50 + 1)$$

$$523 - 356 = 167$$

II. There is another, an indirect process, which multiplies favourable chances.

The process is this—Take the column-count (*c*) of the words in the selected column, or sub-division, and from this subtract the number of the word: subtract the difference (*d*), thus ascertained, from the root-number (*r*). The remainder-figure (*m*) represents the sum of the modifiers; select modifiers, from the tables, equal to the sum, and subtract them from the whole root-number (*r*). The remnant of the root, now left, being deducted from the column-count, gives the word-number desired.

Take an example—Mr. Donnelly requires the name “Marlowe” for the Cipher story, and he finds on different pages and columns the words *more* and *low*, which he means to put together to serve for *Marlowe*; vide vol. II. p. 766. He uses the root-number 523.—First, we ascertain the word-number of *More*: it is the 391st. on page 76. col. 1. We may then proceed simply thus, by

$$c - w = d$$

The column or sub-division count (*c*) 449 + 1 = 450

Subtract the word-number (*w*) 391

The difference (*d*) 59

$$r - d = m$$

The root (*r*) 523

Subtract the difference (*d*) 59

The remainder 464

This represents the sum of the modifiers required to reduce the root to the difference (*d*)

The modifiers in this case may be $218 + 50 + 50 + 146 = 464$.

$$r - m = d$$

The root (r)	..	..	..	..	..	523
Subtract the sum of modifiers	..	..	..	..	..	464

Remainder, the original difference (d)	..	59
--	----	----

$$c - d = w$$

The column or sub-division, count (c)	..	450
Subtract the root-remainder ($r - m = d$)	..	59

The word-number required (w)	..	391. <i>More</i>
----------------------------------	----	------------------

In the next case, *low*, we proceed, having ascertained the word-number to be 226 on page 74, col. 1. (col. count 285.)

$$c - w = d = 284 + 1 = 285 - 226 = 59$$

$$r - d = m = 523 - 59 = 464$$

$$r - m = d = 523 - 464 = 59$$

$$c - d = w = 285 - 59 = 226$$

The + 1, in the column-count, is an expedient of Mr. Donnelly's already noticed, which has to be allowed for in checking some of his figures.

In some of the calculations, the last remainder is not deducted from, but added to the column-count, when it happens to be more convenient. Of course, this alternative adds another to the numerous chances of story-making. For example, page 785: $523 - 218 = 305 - 193 = 112$ $162 + 112 = 274$ (*Present*) cf. page 788:

$$523 - 218 = 305 - 31 = 274 - 193 = 81 - 50 = 31$$

$$458 + 31 = 489 \text{ (he)}$$

page 780

$$523 - 218 = 305 - 31 = 274 - 248 = 26$$

$$193 + 26 = 219 \text{ (a)}$$

Mr. Donnelly's invention has no claims to be called a Cipher. The roots, the modifiers, and the column numbers can be used to construct any story, in the hands of an operator who possesses a moderate degree of ingenuity and patience.

CHAPTER XI.

THE CRYPTOGRAM REFUTED. IT YIELDS ANY SOLUTIONS AT WILL.

In illustration of my last remark, I now proceed on Mr. Donnelly's principles to decipher some important statements. To be perfectly fair to the Cryptographer, I use his own keys, countings, and modifiers; and it will not be necessary to avail myself of some of the extra chances which he frequently employs in his straits and difficulties. The first statement refers to the Grant of a Coat of Arms to the Shakespeare family from the Herald's Office in 1599. The account given hitherto of this matter, Mr. Donnelly denounces as "wholesale lying" (Vol. I. p. 53.) The reader will find the MS. document of the Herald's Office quoted in a letter from Mr. J. Liddiard in the *Standard* of May 7th last. The following is an extract from the Grant in the names of the Garter and Clarencieux Kings of Arms—

"Wherefore being solicited, and by credible report informed, that John Shakespere, now of Stratford-upon-Avon, in the county of Warwick, gentleman, whose great grandfather, for his faithful and approved service to the late most prudent prince, King Henry VII., of famous memory, was advanced and rewarded with lands and tenements, given to him in those parts of Warwickshire, where they have continued by some descents in good reputation and credit; we the said Garter and Clarencieux have assigned, granted and confirmed, and by these presents exemplified unto the said John Shakespere, and to his posterity, that the shield and coats of arms, viz:—In a field of gold upon a bend sables a spear of the first, the point upward, headed argent; and, for his crest or cognisance, a falcon, or, with his wings displayed, standing on a wreath of his colour, supporting a spear, armed headed or steeled silver, fixed upon an helmet with mantles and tassels, as more plainly may appear depicted in this margin."

We proceed to show that the Cryptogram can tell any story wanted. At our bidding, it will flatly contradict

Mr. Donnelly, and yield the sentence " *I, William, son to John Shakespeare, got the honour of a Herald's Coat of Arms, on a painted field, for the ancient services of mine house to King Henry, in King Richard's time in Warwickshire.*"

I may premise that in his deciphering, Mr. Donnelly takes the words *Jack* and *Spur* to represent Shakspere. He tells us, that the name is derived from Jack-pere, i.e., *Jacques-pierre*. I have used the word *peere* for the second syllable : in no age of English pronunciation could that syllable have sounded like "spur." Whenever I employ the latter substitute, I do so on the authority of the Cryptogram.

Take Root 506 :—

	<i>Page and- Column.</i>	
506—30=476—80=396—50=346 420—346=74	67.1.	<i>I</i>
506—30=476—79=397 420—397=23	67.1.	} <i>Will</i> <i>i</i> <i>am,</i>
506—30=476—63=413 494—413=81	67.1.	
506—30=476—63=413—1h=412 494—412=82	67.1.	
506—30=476—212=264.. .. 494—264=230	67.1.	<i>son</i>
506—30=476—212=264— 1 h = 263 494—263=231	67.1.	<i>to</i>
506—30=476—63=413—79=334 —284=50—17 b and h =33 494—33=461	67.1.	<i>John</i>
506—30=476—62=414—50=364 396—364=32	67.2.	} <i>Jack</i> <i>peere,</i>
506—30=476—218=258—28=230 230	69.1.	
506—30=476—62=414—240=174 —80=94 94	67.1.	<i>got</i>
506—30=476—62=414—1 h=413 —284=129 129	67.1.	<i>the</i>
506—30=476—284=192— 2 b and h=190—50=140 396—140=256	67.2.	<i>Honour</i>
506—30=476—248—228.. .. 494—228=266	67.1.	<i>of</i>
506—30=476—198=278—90=188 —79=109 494—109=385	67.1.	<i>a</i>
506—30=476—198=278—90=188 —80=108 494—108=386	67.1.	<i>Herald's</i>
506—30=476—198=278—90=188 —1 h =187—80=107 .. 494—107=387	67.1.	<i>coat</i>

Cip.
be us.
possesse

$506-30=476-1h=475-34i=134$
 $-28=106 \dots \dots \dots 120-106=14 \text{ 69.1. } of$
 $506=30=476-168=308-2i \text{ b} =$
 $287-212=75 \dots \dots \dots 120-75=45 \text{ 69.1. } arms,$
 $506-30=476-283=193 \dots \dots \dots 494-193=301 \text{ 67.1. } on$
 $506-30=476-212=264-5i \dots \dots \dots$
 $=213 \dots \dots \dots 494-213=281 \text{ 67.1. } a$
 $506-30=476-212=264-2 \text{ b and}$
 $h=262-50=212 \dots \dots \dots 420-212=208$
 $+1=209 \text{ 67.1. } painted$
 $506-30=476-168=308-2i \text{ b} =$
 $287-27=260 \dots \dots \dots 396-260=136 \text{ 67.2. } field;$
 $506-30=476-248=228-2 \text{ b and}$
 $h=226-80=146 \dots \dots \dots 494-146=348 \text{ 67.1. } for$
 $506-30=476-284=192-50=142$
 $494-142=352 \text{ 67.1. } the$
 $506-30=476-211=265-27=238$
 $494-238=256 \text{ 67.1. } ancient$
 $506-30=476-168=308-2 \text{ b and}$
 $h=306 \dots \dots \dots 494-306=188 \text{ 67.1. } services$
 $506-30=476-284=192-28=164$
 $396-164=232 \text{ 67.2. } of$
 $506-30=476-1h=475-9i=384$
 $-28=356 \dots \dots \dots 396-356=40 \text{ 67.2. } mine$
 $506-30=476-1h=475-169=$
 $306 \dots \dots \dots 420-306=114 \text{ 67.1. } house$
 $506-30=476-167=309-208=$
 $101 \dots \dots \dots 494-101=393 \text{ 67.1. } to$
 $506-30=476-167=309-1h=$
 $308-284=24-10 \text{ b} =14 \text{ 494-14=480 67.1. } King$
 $506-30=476-284=192-18 \text{ b and}$
 $h=174-28=146-1h=145$
 $-80=65 \dots \dots \dots 494-65=429 \text{ 67.1. } Hal,$
 $506-30=476-248=228-211=$
 $17 \dots \dots \dots 403-17=386 \text{ 69.1. } in$
 $506-30=476-301=175-167=8 \text{ 8 69.1. } King$
 $506-30=476-248=228-212$
 $=16 \dots \dots \dots 403-16=387 \text{ 69.1. } Richard's$

$506-30=476-248=228-1h=227$
 $-212=15 \dots \dots \dots .403-15=388 \text{ 69.1. } \textit{time}$
 $506-30=476-341=135-80=55 \text{ 494-55=439 67.1. } \textit{in}$
 $506-30=476-341=135-80=55$
 $-1h=54 \dots \dots \dots .494-54=440 \text{ 67.1. } \textit{War-}$
wickshire.

The above statement is collected, not in Mr. Donnelly's "hop-skip-and-jump" way, but almost exclusively from a single page. If the Cryptogram be a true witness, the loyalty of the Warwickshire poet to the house of Tudor, so conspicuous in the Plays, was hereditary.

The next statement will testify the authorship of Shakespeare, and also his engagement as an Actor at the theatre, called the *Curtain*.

I take the Root 523.

$523-145=378-3 \text{ b } =375-50=$
 $325 \dots \dots \dots .457-325=132 \text{ 76.2. } \textit{Master}$
 $523-145=378-3 \text{ b } =375-31=$
 $344 \dots \dots \dots .457-344=113 \text{ 76.2. } \textit{Will}$
 $523-145=378-27=351-209=$
 $142-30=112 \dots \dots \dots .457-112=345 \text{ 76.2. } \textit{i}$
 $523-145=378-218=160-50=$
 $110-31=79 \dots \dots \dots .457-79=378 \text{ 76.2. } \textit{am}$
 $523-145=378-169=209-50=159$
 $588-159=429 \dots \dots \dots 429 \text{ 72.2. } \textit{Jack}$
 $523-145=378-248=130-51=79$
 $193-79=114 \dots \dots \dots 114 \text{ 75.1. } \textit{Spur}$
 $523-145=378-90=288-51=237$
 $457-237=220 \dots \dots \dots 220 \text{ 76.2. } \textit{writ}$
 $523-145=378-167=211-79=132$
 $448-132=316 \dots \dots \dots 316 \text{ 76.1. } \textit{this}$
 $523-145=378-193=185-5h=180$
 $-30=150 \text{ 284-150=134 } \dots \dots \dots 134 \text{ 74.1. } \textit{Play}$
 $523-145=378-80=298-51=247$
 $457-247=210 \dots \dots \dots 210 \text{ 76.2. } \textit{and}$

523—145—378—28=350—90=260	
—29=231 457—231=226 ..	226 76.2. was
523—145=378—3b=375—62=313	
—31=282—5b=277 448—	
277=171	171 76.1. engaged
523—145=378—218=160—31=129	
30=99	99 76.2. at
523—145=378—3b=375—167=208	
—32=176 457—176=281 ..	281 76.2. the
523—145=378—167=211—50=161	
447—161=286	286 75.1. Curtain

The deciphered sentence is, "*Master William Shakespeare writ this Play, and was engaged at the Curtain.*" Let me here adopt the language of Mr. Donnelly on page 719 of his book in reference to these remarkable combinations of words. "Remember they are all derived from the same root-number, and the same modification of the same root-number [523—145=378], and that they are all found in four columns! [nay, in the above instance, almost every word is found within two columns!] Are there four other columns, on three other consecutive pages in the world, where six such significant words can be discovered? And, if there are, is it possible to combine them, as in the foregoing instances, not only by the same root-number but, by the same modification of the same root-number? If you can indeed do this in a text, where no Cipher has been placed, then the age of miracles is not yet past."

We will now take another of the Cryptogram roots, and examine its testimony: namely,

516.

516—167=349—22 b and h=327—	
49 (76.1.)=278—146=132 ..	132 76.2. Master
516—167=349—22 b and h=327—	
163=164—50=114—1h=113	113 76.2. Will
516—167=349—22 b and h=327—	
30=297—50=247—145=102	102 76.2. I
516—167=349—22 b and h=327—	
49=278—248=30—2h=28 ..	28 76.2. am

516—167=349—22 b and h=327— 30=297—254=43—15 b and h=28	28 75.2. <i>Shak'st</i>
516—167=349—22 b and h=327— 219 (74.2.)=108—22 b and h =86 193—86=107+1=108 +6 b and h=114	114 75.1. <i>spurre</i> †
516—167=349—22 b and h=327— 50=277—7 b and h=270—50 =220	220 76.2. <i>writ</i> *
516—167=349—22 b and h=327—145 =182—80=102—32=70	70 75.1. <i>the</i> §
516—167=349—22 b and h=327— 193=134	134 74.1. <i>Play</i> §
516—167=349—22 b and h=327— 30=297—248=49—22 b =27 284—27=257+1=258+3 h =261	261 74.1. <i>and</i> §
516—167=349—22 b and h=327— 50=277 447—277=170+1=171	171 75.1 <i>was</i> §
516—167=349—22 b and h =327— 50=277	277 76.1. <i>engaged</i> §
516—167=349—22 b and h =327— 284=43	43 74.2. <i>at</i> §
516—167=349—22 b and h =327— 198=129—79=50	50 73.2. <i>the</i> §
516—167=349—22 b and h =327—80 =247—50=197—30—167 447—167=280+6 h=286 ..	286 75.1 <i>Curtain</i> .

“*Master William Shakespeare writ the Play and was engaged at the Curtain.*” In the fifteen cases deciphered in the formation of this sentence, I have not only taken Mr Donnelly's root-number, but his specially selected modifiers

† For the two solutions, *Shak'st* and *Spurre*, I am indebted to Mr Donnelly, p. 726. * This is Mr. Donnelly's, p. 719, with the exception that he forgot to subtract the last 50. § *Ibid.* p. 725 : 723 : 724.

yielding the formula ($516-167=349-22$ b and $h=327$), and also in eight out of the fifteen cases, I have followed his own solutions. The Cryptographer (page 749) tells us, that he desires "to show how *the same words are brought out* from different starting points *by different root-numbers* [Mr. Donnelly's italics]; a result which would only be possible through the most careful double and triple pre-arrangement, and adjustment of the root-numbers to the number of words in the text, and the number of bracketed and hyphenated words in the columns, creating thereby a marvellous parallelism, which, it seems to me, utterly excludes the thought that the results obtained have occurred by chance."

But, in the sentence which I have deciphered, we have something still more marvellous, namely, the inter-corroboration of two root-numbers, independently evolving by entirely different calculations a perfectly identical result.

Let us examine the testimony of another root-number,

505.

$505-30=475-2b$ & $h=473-145=328-$			
$3b=325$			
$457-325=132$	132	76.2.	<i>Master</i>
$505-30=475-80=395-51=344$			
$457-344=113$	113	76.2.	<i>Will</i>
$505-30=475-80=395-50=345$			
$475-345=112$	112	76.2.	<i>I</i>
$505-30=475-254=221-146=$			
$75-3b=72$			
$608-72=536$	536	76.2.	<i>am</i>
$505-30=475-193=282-254=$			
28	28	75.2.	<i>Shak'st</i>
$505-30=475-193=282-28=254$			
$-145=109-49=60$..	60	75.1.	<i>Spur</i>
$505-30=475-167=308-22b$ & h			
$=286-49=237$			
$457-237=220$	220	76.2.	<i>writ</i>
$505-30=475-193=282-5h=277$			
$-145=132$			
$448-132=316$	316	76.1.	<i>this</i>

$505-30=475-248=227-27=200$		
$-50=150$		
$284-150=134$	.. ..	134 74.1. <i>blay,</i>
$505-30=475-50=425-146=279$		
$-3b=276-28=248$		
$508-248=260$	.. ..	260 75.2. <i>and</i>
$505-30=475-141=334-49=285$		
$448-285=163$	.. ..	163 76.1. <i>was</i>
$505-30=475-198=277$		
$448-277=171$	.. ..	171 76.1. <i>engaged</i>
$505-30=475-2\ b\ and\ h = 473-$		
$162\ (78.1.) = 311-51=260$		
$447-260=187$	.. ..	187 75.1. <i>at</i>
$505-30=475-168=307-49=258$		
$-90=168-145=23$		
$448-23=425$	.. ..	425 76.1. <i>the</i>
$505-30=475-146=329-168=161$		
$447-161=286$	.. ..	286 75.1. <i>Curtain.</i>

Again, at the call of another independent root, with uniform modification by the same figure, thus giving the formula $505-30=475$, the same sentence has been deciphered, "*Master William Shakespeare writ this Play, and was engaged at the Curtain.*" Marvels multiply as we proceed.

Let us next consider the evidence of the root

513.

$513-167=346-21\ b=325$		
$457-325=132$	.. ..	132 76.2. <i>Master</i>
$513-167=346-22\ b\ and\ h=324-$		
$80=244-213$	.. ..	213 76.2. <i>Will</i>
$513-167=346-22\ b\ and\ h=324-$		
$79=245-30=215$		
$457-215=242$	.. ..	242 76.2. <i>I</i>
$513-167=346-22\ b\ and\ h=324-$		
$218=106-27=79$		
$457-79=378$	.. ..	378 76.2. <i>am</i>

513—167=346—21b=325—80=245		
—31=214—5b=209—50=		
159		
588—159=429	429 72.2.	<i>Jack</i> }
513—167=346—22 b and h=324—		
218=106—27=79		
193—79=114	114 75.1.	<i>Spur</i> }
513—167=346—80=266—29=237		
457—237=220	220 76.2.	<i>writ</i>
513—167=346—22 b and h=324—		
145=179—3b=176		
457—176=281	281 76.2.	<i>the</i>
513—167=346—22 b and h=324		
457—324=133+1=134 ..	134 74.1.	<i>play</i>
513—167=346—22 b and h=324—		
90=234—145=89—3 b=86		
457—86=371	371 76.2.	<i>and</i>
513—167=346—22 b and h=324—		
212—112		
603—112=491	491 76.2.	<i>was</i>
513—167=346—50=296		
448—296=152+19 b and h=		
171	171 76.1.	<i>engaged</i>
513—167=346—22 b and h=324—		
63=261		
457—261=196	196 76.2.	<i>at</i>
513—167=346—141=205—30=175		
—6 b=169		
457—169=288	288 76.2.	<i>the</i>
513—167=346—22 b and h=324—		
80=244—32=212—50=162		
447—162=285+1=286 ..	286 75.1	<i>Curtain.</i>

For the fourth time at the call of an independent root, with an uniformity of modification giving the formula 513—167=346, the identical statement has come out, "*Master William Shakespeare writ the Play and was engaged at the Curtain.*"

The fifth or remaining root-number,

506,

Mr. Donnelly tells us, "has a treatment peculiar to itself,

and apart from the others" vol. II. p. 671. No doubt, he knows the reason of this peculiarity of 506, as he has discovered the genesis of all the roots, which he keeps still a mystery. I proceed, nevertheless, to examine this singular root.

506—30=476—2b & h=474—145			
=329—3b=326			
457—326=131+1=132 ..	132	76.2.	<i>Master</i>
506—30=476—80=396—51=345			
457—345=112+1=113 ..	113	76.2.	<i>Will</i>
506—30=476—80=396—50=346			
457—346=111+1=112 ..	112	76.2.	<i>I</i>
506—30=476—254=222—146=			
76—3b=73			
608—73=535+1=536 ..	536	76.2.	<i>am</i>
506—30=476—1h=475—193=			
282—254=28	28	75.2.	<i>Shak'st</i>
506—30=476—1h=475—193=			
282—28=254—145=109			
—49=60	60	75.1.	<i>Spur</i>
506—30=476—1h=475—167=			
308—22b & h=286—49=			
237			
457—237=220	220	76.2.	<i>writ</i>
506—30=476—1h=475—193=			
282—5h=277—145=132			
448—132=316	316	76.1.	<i>this</i>
506—30=476—1h=475—248=			
227—27=200—50=150			
284—150=134	134	74.1.	<i>Play</i>
506—30=476—1h=475—50=			
—425—146=279—3b=276			
—28=248			
508—248=260	260	75.2.	<i>and</i>
506—30=476—1h=475—141=334			
—49=285			
448—285=163	163	76.1.	<i>was</i>
506—30=476—1h=475—198=277			
448—277=171	171	76.1.	<i>engaged</i>

$$\begin{array}{r}
 506-30=476-1h=475-163=312 \\
 -51=261 \\
 447-261=186+1=187 \quad \dots \quad 187 \ 75.1. \quad \textit{at} \\
 506-30=476-1h=475-167=308 \\
 -50=258-90=168-145=23 \\
 448-23=425 \quad \dots \quad 425 \ 76.2. \quad \textit{the} \\
 505-30=476-1h=475-146=329 \\
 -168=161 \\
 447-161=286 \quad \dots \quad 286 \ 75.1. \quad \textit{Curtain.}
 \end{array}$$

“Master William Shakespeare writ this Play, and was engaged at the Curtain.”

This is the fifth time the Great Cryptogram has testified to this fact. We have now seen that the five roots, each with its uniform modifications, each with its regular derivative (505, 506, 513, 516, 523, with 475, 476, 346, 327, and 378, respectively), all unite in one identical statement. There is nothing parallel to this in the whole of Mr. Donnelly's book. On his principles, I am warranted, from this overwhelming five-fold evidence, in drawing the conclusion, that if this can be found in a text where no Cipher has been inserted by the hand of Shakespeare himself to protect his authorship—“then, the age of miracles is not yet past.”

I am quite content, the reader should draw another conclusion—that the age of delusions is not yet over. The Cipher tells any story under the manipulation of the operator. In point of fact, it is no Cipher at all. Mr. Donnelly is an enthusiast, but the Cryptogram is a delusion.

CHAPTER XII.

THE CRYPTOGRAM REFUTED—IT YIELDS ANY SOLUTION AT WILL.

Mr. Donnelly lays much stress upon, what he calls, the occasional interplay, or interlocking, of the root-numbers in his calculations. That is to say, he sometimes employs two root-numbers, each of which in its turn, or more or less frequently, is made to contribute the word wanted for the story. The inference we are expected to draw is,—the certainty of the account thus supported by the coincident testimony of two independent witnesses.

The matter, I think, may be much more simply explained. For the present, however, I take the interlocking argument from Mr. Donnelly, for what it is worth. I proceed to give an example of the interlocking, not merely of two, but of all his roots, 505, 506, 513, 516, 523; in which, on the conditions of the Cryptogram, I shall evolve a statement once more in direct contradiction to Mr. Donnelly's stories and his whole theory.

<i>Root.</i>	<i>Text-count.</i>	<i>Word- number.</i>	<i>Page- and Col.</i>	<i>Text Solution.</i>
516—284=232—169=63—				
51=12.. ..	447—12=435	435	75.1.	<i>Will</i>
505—50=455—219=236—				
193=43—15b&h(193)				
=28			28	75.2. <i>Shak'st</i>
516—50=466—167=299—				
22b&h=277—193=84				
—15b&h=69—9b&h				
=60			60	75.1. <i>spurre,</i>
505—283=222—198=24—3b=21			21.	75.1. <i>Gentle- man*</i>

*“Gentleman”—so the poet is described in the inscription of his eldest daughter's tomb in Stratford Church, viz:

E
HEERE LYETH Y BODY OF SVSANNA
E
WIFE TO JOHN HALL GENT: Y DAUGH-
TER OF WILLIAM SHAKESPEARE, GENT:
E th O.
SHEE DECEASED Y II OF JVLV, A
1649, AGED, 66.

523—284=239—10b=229			
—30=199	447—199=248	248	75.1. <i>Son</i>
505—51=454—212=242 ..	447—242=205	205	75.1. <i>of</i>
523—283=240—50=190 ..	193—190=3+		
	1=4	4	75.1. <i>John,</i>
513—284=229—50=179			
—50=129	193—129=64+		
	1=65+1h=66	66	75.1. <i>gave</i>
523—284=239—10b=229			
—29=200		200	75.1. <i>a</i>
523—29=494—254=240 ..	447—240=207	207	75.1. <i>tragic</i>
506—218=288—49=239 ..	447—239=208	208	75.1. <i>volume</i>
505—50=455—284=171 ..	193—171=22		
	+1=23+3b=		
	26	26	75.1. <i>to</i>
516—284=232—29=203 ..		203	75.2. <i>the</i>
523—218=305—31=274			
—254=20—4h(254)			
=16	508—16=492		
	+1=493	493	75.2. <i>Stage,</i>
523—29=494—146=348—			
27=321	508—321=187	187	75.2. <i>which</i>
516—284=232—32=200 ..	508—200=308	308	75.2. <i>hath</i>
513—284=229—30=199 ..	508—199=309	309	75.2. <i>won</i>
513—283=230—62=168—			
79=89	447—89=358	358	75.1. <i>praise</i>
513—283=230—50=180 ..		180	75.2. <i>from</i>
523—30=493—2 b and h=			
491—51=440—145=			
295—3b=292	508—292=216	216	75.2. <i>greatest</i>
505—219=286—32=254 ..	508—254=254	254	75.2. <i>Noble</i>
506—50=456—208=248 ..	508—248=260	260	75.2. <i>and</i>
505—168=337	508—337=171	171	75.2. <i>dullest</i>
505—168=337—1 h=336 ..	508—336=172	172	75.2. <i>Peasant,</i>
513—50=463—90=373 ..	508—373=135	135	75.2. <i>rendering</i>
513—50=463—145=318 ..	508—318=190	190	75.2. <i>him</i>
523—30=493—80=413 ..	508—413=95	95	75.2. <i>remem- bered</i>

$516-50=466-90=376 \dots 508-376=132 \ 132 \ 75.2. \quad in$
 $506-218=288-30=258-$
 $2 \ b \ and \ h=256-51=$
 $205 \ \dots \dots \dots 508-205=303 \ 303 \ 75.2. \quad all$
 $506-284=221-141=80-$
 $29=51 \dots \dots \dots 508-51=457 \ 457 \ 75.2. \quad time.$

The foregoing statement, testifying to the authorship of the Tragedies by William Shakespeare, to the author's reputation in his own times, and his personal anticipation of the immortal glory of his works—is legitimately derived from the interplay and interlocking of all the five roots. It will be noticed also, that the statement is evolved cryptographically from a single page, and not from several pages in the hop-skip-and-jump fashion of Mr. Donnelly.

How is this phenomenon to be accounted for?—I commend it to Mr. Donnelly's reflections on "the age of miracles."

CHAPTER XIII.

THE CRYPTOGRAM REFUTED BY THE SCIENTIFIC LAW OF COMBINATIONS.

Mr. Donnelly says, that his discovery is “an arithmetically adjusted Cipher.” We will now apply to it the arithmetical law of *combinations*, in order to ascertain how many chances in his favour he has of getting any story he chooses out of the Plays.

The working machinery of the Cryptogram consists mainly of the following—modifiers, roots, text-counts, and methods of operation.

Modifiers—these, at the lowest computation, are 56. They may be reduced to 24 groups, and, as 7 overlap others, for simplicity we will allow a further reduction of 7. We will also say nothing of the double and even triple use of the modifiers 30 and 50 in the same calculation, which helps the Cryptogram out of many of its difficulties.

This being premised, we have 56 numbers, which may all be taken singly, and also $(24-7=)$ 17 groups, containing on an average more than two numbers each; which may be taken, either two at a time, or three at a time, or four at a time. We have, therefore, the following results:—

The 56 modifiers may be taken *singly* in . . . 56 ways
 The 17 groups may be taken *two together*

in $\frac{17 \cdot 16}{1 \cdot 2}$ ways: the number must be multiplied by 2×2 , since there are 2 numbers, both available, in each modifier: thus $\frac{17 \cdot 16}{1 \cdot 2} 2 \times 2$	}	. . . 544 ways
--	---	----------------

The 17 groups may be taken *three* }
 at a time in $\frac{17 \cdot 16 \cdot 15}{1 \cdot 2 \cdot 3}$ ways ; and }
 this must be multiplied by $2 \times 2 \times 2$: } 5440 ways
 this gives

The 17 groups may be taken *four* }
 at a time in $\frac{17 \cdot 16 \cdot 15 \cdot 14}{1 \cdot 2 \cdot 3 \cdot 4}$ ways, }
 and this must be multiplied by 2×2 } 38,080 ways
 $2 \times 2 \times 2$: which gives

Total combinations 44,120 ways

Root-numbers : these are 5. There-
 fore, root-numbers may be modified in
 $5 \times 44,120$ ways = 220,600 ways

The *alternative method* of operation,
 both upon the totals and sub-divisions
 of pages, gives at least two additional
 chances for any chance in the first
 method of simple reduction of the
 root: that is $3 \times 220,600$ = 661,800 ways

Finally, there are 5 *ways of counting*
the Text : $5 \times 661,800$ = 3,309,000 ways

The chances, therefore, are $56 + 544 + 5,440 + 38,080 =$
 $44,120 \times 5 = 220,600 \times 3 = 661,800 \times 5 = 3,309,000$.

With so many tickets in the lottery, any word desired can
 be drawn from the column. With so many millions of chances
 in his favour, Mr. Donnelly may weave at will unlimited romances,
 out of the thousands of words in these Plays.

CHAPTER XIV.

MR. DONNELLY'S GREAT RESERVED SECRET NUMBER,
DISCOVERED.

Mr. Donnelly is not bound to tell us more than he pleases. He has given what he describes as the Heart of the Mystery; but he says, that, for certain reasons, which affect his personal interests as a scientific discoverer, he still keeps a great secret, namely the *master-key* of the Cryptogram. The 'Heart of the Heart of the Mystery' he reserves as a mystery still.

In order to form a full judgment of his Cipher, we must seek to penetrate the secret.

We gather the following ideas bearing upon this point, scattered over the loose and desultory chapters of this book.

In the first place, by the term "Root-number," he does not always signify the same thing.

He tells us, that the root-numbers from which he obtains these Cipher narratives, 505, 506, 513, 516, 523, are not primary roots of the Cryptogram.

He is also in the habit of calling any figure a "root-number," which, being generated by the process of modification from a larger figure, now forms a new constant starting point for a series, or group, of calculations. Thus (on pages 680, 681,) we have 221, 222, 239, 240, called root-numbers. Again, in reference to 325 and 307, the author says, these are the same root-numbers, which we saw running together in the previous examples; and the primary root-numbers, 523 and 505, are the same which we have seen alternating together through columns of examples." Vol. ii., p. 713. A root-number so called, then, may be secondary to another, a larger one, which latter also may have its own primary, a larger root-number still. Mr. Donnelly is, as usual, unsteady in the use of his terms. In this case, he has caused confusion by giving the same term to three different things, or classes. We have here three varieties of numbers, say, primordial, intermediate, and subordinate. The numbers

505, 506, 513, 516, 523, belong to the intermediate class; they are formative of others, but are formed from a primordial.

The numbers designated "multipliers" are factors of primordial root-numbers. It was stated (p. 583), "The multipliers which produce the root-numbers are found in the first column of page 74. They are 10, the number of bracket words; 7, the number of hyphenated words; 11, the number of bracket words, *plus* the one hyphenated word *post-horse* included in the bracket; and 18, the total of bracketed and hyphenated words in the column." To this enumeration, Mr. Donnelly ought to have added a number, of which he makes important use, namely 12, the number of Italic words in the column.

Mr. Donnelly omits to say, *what* root-numbers are the product of the "multipliers." But, lower down on the page, he states of the root-numbers 505, 506, 513, 516, 523, "they are the product of multiplying certain figures in the first column of page 74, by certain other figures." He then adds, that he reserves for the present the explanation of the way in which these numbers, 505, &c., are obtained. But, no reserve on the point would be possible, if these numbers were related to the "multipliers" as product to factor; for in that case, the products divided by the factors would give us the multiplicands, which are those "certain other figures" still concealed by Mr. Donnelly. We perceive, then, that the term "product" here is improperly used and essentially misleading.

Turning to another page, further on, (647), we find the following statement, "I have stated that there are five root-numbers for this point of the narrative. These are 505, 506, 513, 516, 523. *These are all modifications of one number.*"

The italics are Mr. Donnelly's.

Again, on a subsequent page (670) he writes,—"The Cipher grows out of a series of root-numbers. Before we reach that part of the story, which is told by the root-numbers 505, 513, 516 and 523, there is a long narrative which leads up to it, and which is told by another series of numbers, which grow in due and regular order out of the primal root-number, which is the parent of 505, 513, 516 and 523." On a still later page, the

numbers 505 and its sisters are again described as "modifications," and larger roots are spoken of, as the product of multipliers and multiplicands, from which such "modifications" are formed. (pp. 864, 865.)

The conclusion, therefore, is that 505, 506, 513, 516, 523, are not products, but are formed by modification from one and the same primordial parent root, which is itself an arithmetical product.

The reader will remember here, that we have amongst the "multipliers," one factor of the primordial parent root. We have now to ascertain the "multiplicand" factor, which gives the *primordial* (so, for convenience, it may be called) as the product. In order to do this we must observe how the multipliers are applied for the production of other parent roots in the book; that is to say, upon what multiplicand factors are they at any time found operating for the purposes of the Cryptogram.

Now in Chapter V. we find large primordial parent roots produced, by taking one factor from the group of "multipliers" and operating with it upon a *page-number* as the other factor, or multiplicand. Thus,

$$74 \times 10 = 740,$$

$$74 \times 12 = 888,$$

$$76 \times 11 = 836,$$

$$75 \times 12 = 900.$$

We infer from this that the multiplicand, we are in search of, is the *number of a page*. It will be remembered, Mr. Donnelly has said (p. 577). "The central point on which the Cipher turns is the dividing line between the two plays, the first part of Henry IV. and the second part of Henry IV.; and the essentials of the rule are found on the last page of the former play, and the first page of the latter play." We are thus limited, (to find the essentials of the rule,) to pages 73, 74. For this purpose, we must not go beyond these two pages.

Nothing can be more essential to the rule, than the other factor, the multiplicand, which is to produce the master-key of the whole Cryptogram. Consequently we must find this factor within the limits of pages 73 and 74. Any product raised by a factor outside the limits of these two pages violates

the essential conditions of his Cryptogram, as these are defined by Mr. Donnelly.

In his Lecture at Westminster on the 17th of April, under the auspices of the Baconian Society, Mr. Donnelly said of his Cipher, "It was the product of multiplying the first page of the Second Part of Henry IV. by something found on that page (74), modified by sub-divisions, and page 73, the last page of the First Part of Henry IV.; so that, to work out the Cipher, they had to get the interlocking of these two pages."†

We arrive at the conclusion that the secret factor is 74. The multiplier chosen is 11. The product is, therefore,

814,

the primordial root, or fountain head of the whole Cryptogram. This figure is to be affected by modifiers exclusively taken from the two pages 73, 74; which constitutes Mr. Donnelly's condition of the necessary "interlocking of these two pages"—thus :

$$814-168=646-90=556-51=505$$

$$814-168=646-90=556-50=506$$

$$814-168=646-90=556-32=524-1h=523$$

$$814-168=646-80=566-32=534-21b=513$$

$$814-168=646-80=566-50=516$$

The details of these calculations, down to a single hyphen, may be verified from Mr. Donnelly's tables of modifiers given in one of my former chapters. The 1h and 21b belong to 168 (74.2.)

The numbers 740 and 836 might be equally useful: but the latter does not satisfy the condition required by Mr. Donnelly, that the principal root shall be a product of 74. He uses that figure (836) for another purpose, and describes its production thus, from the factor 76: "If we multiply the last page in the scene, page 76, by 11, the number of bracket words on the first column of page 74 . . . the result is $76 \times 11 = 836$." (Vol. II., 571.) This number, therefore, is out of the question, unless Mr. Donnelly violates his own conditions, which form the foundation of the

† Report in the *Standard*.

Cryptogram. Otherwise, this number might be used to form the working roots: thus—

$$836-284=552-17b \text{ \& } h=535-30=505$$

$$836-284=552-17b \text{ \& } h=535-29=506$$

$$836-284=552-10b \quad =542-29=513$$

$$836-284=552-7h \quad =545-29=516$$

$$836-284=552 \quad \quad \quad -29=523$$

If, indeed, we are not to adhere rigidly to the condition of multiplying page 74 by one of the multipliers, there is no reason why we should not take any page-number equally with 76 and use it as the other factor. For instance, all the working root-numbers may be formed by multiplying page-number 79 by the "multipliers" of p. 74. and then modifying the products.

Finally, we may reach the same results by another way, which, had it occurred to Mr. Donnelly, would no doubt have increased his conviction of the certainty and subtlety of the Cryptogram; I freely give it to the author for his next edition. It is this:—It will be noticed, that the first page of the First Part of Henry IV. is numbered in the Folio, 46, and that the number of the next page is 50. Mr. Donnelly considers, that this is not a printer's error, but is the act of design to arrange the pagination for effecting the insertion of the elements of the Cipher on a particular page, namely, page 74. Now, the so called multipliers, from p. 74, as Mr. Donnelly gives them, are 7, 10, 11, 18. But the sum of these figures =46, the actual number of the first page. The primordia root is $46 \times 11=506$; from this all the rest are formed thus:

$$506=46 \times 11=506.$$

$$506+7h=513,$$

$$506+10b=516,$$

$$506+17b \text{ and } h=523,$$

$$506-(1h)=505.†$$

The only value of such detail is to show that Mr. Donnelly's Cipher is altogether worthless. He claims to be in possession

†If preferred, this formula may be, $523-18b \text{ and } h=505$; $513-8h=505$ or $516-11=505$.

of one exclusive Master-number, by means of which he has "lighted a new light in literature and opened a new gate in history." No such exclusive number on the conditions of his Cryptogram exists. The working roots are non-essential. They show no design. They have no fixed legitimate parentage. They can be deduced in various ways, from several different primary numbers, and these originating numbers themselves, on the principles of the Cryptogram, can be variously produced from the accidents of the printer in the case of an antique folio. To say, that the five root-numbers come from one number thus produced, confers no greater probability upon the Cryptogram. The practical source of the five roots is simply convenience; they should be neither too great nor too small in comparison with the number of words, on an average, in the column; and their differences of sum *inter se* should be regulated by the experience of the Cryptographer in working his stories. If that were a secret, it might be worth keeping; but Mr. Donnelly's reservation was not worth his pains. He need not be alarmed about the Copy-right law. The Heart of the Heart of the Mystery is *nil*.

CHAPTER XV.

THE CRYPTOGRAM REFUTED. SUMMARY OF ARGUMENTS.

The foregoing arguments are, I think, more than enough to expose the Great Cryptogram as an utter delusion.

Such an invention could never have proceeded from Lord Bacon, or anyone else who set himself to construct a Cipher on the conditions, and for the purposes, of a Cipher.

Lord Bacon's idea of a Cipher is seen in the authentic specimen in his works. After the arbitrary adoption of symbols and rules, his Cipher ceases to be arbitrary: in the use and application of its rudiments, from that point, everything is fixed, precise, and regular; there are no optional alternatives of interpretation; to the eye of the person who is in possession of the symbolism, the reading of the Cipher is as plain and certain as the Text of the *Novum Organum*, or the Statutes at Large.

On the other hand, I have pointed out the features of the Cryptogram—

Mr. Donnelly represents his Cryptogram as the exercise of Lord Bacon's "vast ingenuity," in which the great man delighted "just as the musician takes pleasure in the sound of his own instrument; just as the athlete delights in the magnificent play of his own muscles. The putting together of stories, such as Mr. Donnelly's, and hiding them, is described as "the creation of an intellectual work, which, apart from the merits of poetry or drama, must, he knew, live for ever, when once revealed, as one of the supreme triumphs of the human mind; as one of the wonders of the world," vol. II. p. 664, 5.

With these representations we compare the "Great Cryptogram." It is certainly not "a supreme triumph of the human mind," nor "one of the wonders of the world." It is a rude contrivance by Mr. Donnelly, expounded in loose terminology, in which arithmetical language is used in a confused and popular way, calculated to produce obscurity and confusion. The

contrivance itself is so far from scientific that it is a hop-skip-and-jump farrago of fortuitous figures, without the least claim to be considered a Cipher.

A properly constructed Cipher is, for its purposes, a scientific certainty. The character of Mr. Donnelly's invention is caprice and confusion.

1.—There is no key. It is true there are five keys presented to us; but the first uncertainty is, there is no rule for the selection of any one of the five.

2.—We are told, the contrivance depends upon a certain and accurate count of the words of the text; but there is no fixed way of counting. The text may be counted in five different ways, and there is no rule to determine, which of the five is to be chosen in any case.

3.—When the five keys are applied, one after another, to the lock, we find that not one of the five will fit. The filing, or modifying, process is then applied. A crowd of numbers, with convenient differences one from another, are supplied, by which the key-number is to be treated until it is reduced to any figure wanted.

4.—There is no rule to confine any of the modifiers to any particular key-number, or root.

5.—When the key is modified and converted, there is no rule to apply, or limit the application of, the figure, modified, to any particular page or column.

6.—By means of these keys, so modified, Mr. Donnelly can get out of the text any story he pleases.

7.—By means of the same keys and modifiers, any one else can, on the same principles, get out of the text any other story *he* pleases, in flat contradiction of Mr. Donnelly's story.

8.—By the arithmetical law of combinations, Mr. Donnelly's contrivance secures to the operator an almost incalculable number of chances for picking up from the column any words required for the manufacture of stories.

9.—Finally, the reservation of a secret *master-number* by Mr. Donnelly, which has the effect of procuring consequence and *prestige* for the Cipher, as though it rested upon some

essential truth, which, to know, would be an infallible demonstration—this is mere delusion.

I do not dispute the author's sincerity, nor yet his labour, and as for his ingenuity, he has made the most of the imaginary materials he chanced upon.

But his theory carries its own refutation with it. *There is no Cipher in Shakespeare.*

CHAPTER XVI.

LORD BACON'S OPINIONS AND SENTIMENTS, INCOMPATIBLE
WITH THOSE OF THE CRYPTOGRAM.

In comparing Bacon with Shakespeare, for the purpose of identification, Mr. Donnelly in his first volume argued from parallelisms of language, style, opinion and sentiment, between the works of the philosopher and those of the dramatist. In like manner, we may now compare Mr. Donnelly's *Cipher-Bacon* narratives with the language and sentiments of the real Lord Bacon, in his authentic works.

The style of Lord Bacon, both in speaking and writing, was the admiration of his contemporaries; Dean Church remarks, "the language of the age of Elizabeth was a rich and noble one, and it reached a high point in the hands of Bacon."* Whatever stain may rest upon the fame of the Great Chancellor, the sentiments and opinions in his writings bespeak not only a mighty intellect, but a noble mind.

The style of the imaginary Cipher-man is mean and vulgar: his ideas, grovelling; his language and his stories, often repulsive. In respect to views of *persons*, where there is any opportunity of comparison, there is no likeness. The man of straw contradicts the real man.

To give an instance—take the manner in which Lord Bacon speaks of Queen Elizabeth, and that in which the phantom of the Cipher is made to speak of the Queen.

Lord Bacon, in his *Discourse on Queen Elizabeth*, speaks thus:—

"No praise of magnanimity, nor of love, nor of knowledge, can intercept her praise, that planteth and nourisheth magnanimity by her example, love by her person, and knowledge by the peace and serenity of her times. And if these rich pieces be so

*English Men of Letters. Bacon: p. 213.

fair unset, what are they set, and set in all perfection! Magnanimity no doubt consisteth in contempt of peril, in contempt of profit, and in meriting of the times wherein one liveth. For contempt of peril, see a lady that cometh to a crown, after the experience of some adverse fortune, which for the most part extenuateth the mind, and maketh it apprehensive of fears. No sooner she taketh the sceptre into her hands, than she putteth on a resolution to make the greatest, the most important, the most dangerous that can be in a state, the alteration of religion. . . . See a queen, that when a deep and secret conspiracy was plotted against her sacred person was content to put herself into the guard of the Divine Providence, and her own prudence, to have some of the conspirators in her eyes (presence), to suffer them to approach to her person, to take a petition from the hand that was conjured for her death; and *that* with such majesty of countenance, such mildness and serenity of gesture, such art and impression of words, as had been sufficient to have repress and bound the hand of a conspirator if he had not been discovered. Lastly, see a queen that when her realm was to have been invaded by an army, the preparation whereof was like the travel of an elephant, the provisions were infinite, the setting forth whereof was the terror and wonder of Europe; it was not seen that her cheer, her fashion, her ordinary manner was anything altered; not a cloud of that storm did appear in that countenance in which peace doth ever shine; but with excellent assurance and advised security she inspired her Council, animated her nobility, redoubled the courage of her people, still having this noble apprehension, not only that she would communicate her fortune with them, but, that it was she that would protect them, and not they her; which she testified by no less demonstration than her presence in camp. Therefore, that neither feareth greatness of alterations, nor the views of conspirators, nor the power of enemy, is more than heroical."

After discoursing on other points of character and action, Lord Bacon continues—"What should I speak of her excellent gift of speech, being a character of the greatness of her conceit, the height of her degree, and the sweetness of her

nature, . . . What choice of words ; what grace of utterance ! what should I wander on to speak of the excellencies of her nature, which cannot endure to be looked on with a discontented eye ; of the constancy of her favours, which maketh service as a journey by land, whereas the service of other princes is like an embarking by sea.”

He concludes thus :—

“These virtues and perfections, with so great felicity, have made her the honour of her times, the admiration of the world, the suit and aspiring of greatest Kings and princes, who yet durst never have aspired unto her, but as their minds were raised by love.

“But why do I forget, that words do extenuate and embase matters of so great weight ? Time is her best commender, which never brought forth such a prince, whose imperial virtues contend with the excellency of her person ; both virtues contend with fortune ; and both virtue and fortune contend with her fame.”

Mr. Donnelly calls Queen Elizabeth “the base old woman,” and says, that Lord Bacon naturally hated her ; but, Judge Holmes, a gentleman whom the author of the Cryptogram frequently quotes, remarks in reference to the Essex trial ; “Bacon made up his mind at once to meet the issues thus intentionally forced upon him, and he resolved to show to her (the Queen), as he says, that he ‘knew the degrees of duties’ ; that he could discharge the highest duties of the subject to the sovereign against all obligations of private friendship toward an erring friend ; wherein, says Fuller very justly, ‘he was not the worse friend for being the better subject ; and that if he must renounce either, it should be Essex rather than the Queen, who had been on the whole personally, perhaps, the better friend of the two to him.’”*

We will now compare the language and sentiments of the *Cipher-man* towards the Queen.

Mr. Donnelly, (pp. 699, 700.) remarks, “I would call the attention of the critical reader to the marvellous evidences of

*Mr. Donnelly's Vol. II. p. 626.

the artificial character of the text shown in that word *jade*. It is often used in the narrative in connection with the word *old*—‘the old jade’—to describe the Queen. It would, of course, have provoked suspicion, if the Plays had been dotted all over with the word *queen*; and hence, as Bacon had repeated cause to refer to her in his internal narrative, he had to do so in some indirect way; and one of his favourite expressions was ‘the old jade.’ . . . When we turn to the word *old*, which accompanies the word *jade* when applied to the Queen, we find the same significant adjustments; but not so numerous, for we have seen the word *jade* once applied to Shakspeare’s wife, and it is also applied in the Cipher story to a horse.”

On page 710: the Cipher-man invents an interview between the Queen and Dr. Hayward, who is supposed to be addressing her; viz:

“The sullen old jade doth listen with the ugliest frown upon her hateful brows, too enraged to speak; but rising up, and starting forward, took Hayward by his throat and choked him, &c.”

On page 858. the Cipher-man speaks of the Queen’s language, “which wounds the ears of them who listen to it; for a worse tongue is not upon the earth.”

On page 782. the Cipher-man gets into his story the words “Villain’s Queen,” on which Mr. Donnelly remarks, “Here is another cunning piece of work. The Queen is disguised in *queane*,—‘a woman, a wench.’

‘Cut me off the villain’s head; throw the Queane in the channel.’”

Finally, Mr. Donnelly represents the Cipher-man as describing the Queen as the “*old termagant*” (see pp. 861 seqq.) and harping on this word, *termagant*, in reference to the Queen, over and over again. Such are the sentiments and the language of the Cipher-man, who bottles up this vulgar nonsense for posterity in order to convince them of the immortality of his genius. These are some of the title-deeds of the Frankenstein of the Cryptogram to the fame of the philosopher and dramatist,—Bacon and Shakespeare rolled into one.

CHAPTER XVII.

THE CRYPTOGRAM FICTION, AN INSULT TO THE MEMORY OF
LORD BACON.

The Cryptogram judged on its own merits is a transparent fiction. We have, I hope, that fact clear before us. But for argument's sake, let us glance for a moment at the effect and consequences of those stories, which Mr. Donnelly professes to extract from the Plays, and asks us to believe.

The Cryptogram is a contrivance, by means of which any story can be elicited from the words on the page. The words no doubt, in most cases, are there: but, so they are in Webster's Dictionary.

The Cryptogram theory is, that Lord Bacon, the author of the Plays, had reasons for concealing his name during his own times; but that, foreseeing the immortality of these works, he wrapped up in their columns a communication addressed to posterity, in which he declares himself to be the real author, and deposes the pretender, "William Shakspeare."

In constructing a statement of this kind from the materials before him, we might have expected Mr. Donnelly to have given us something compatible with the style of Lord Bacon, or, at least, consistent with ordinary decorum of language, and with the claims of a long and intimate association, which he alleges to have subsisted, between the two persons themselves.

The relations of Lord Bacon to "William Shakspeare," according to Mr. Donnelly, were of the closest and most confidential nature, and extended over many years. According to Mr. Donnelly, Shakspeare had been of signal and essential service to Lord Bacon. To have acknowledged these dramatic works, of whose merits and future he was certain, would at the time have been inexpedient for him in the last degree, in fact, impossible in his position. Let me quote the words of the "Great Cryptogram."

“If Francis Bacon had died full of years and honours, I can conceive how from the height of pre-eminent success he might have fronted the prejudices of the age, and acknowledged these children of his brain. But the last years of his life were years of dishonour. . . . For a man thus living under a cloud to have said, ‘In my youth I wrote plays for the stage; I wrote them for money; I used Shakspeare as a mask; I divided with him the money taken in at the gate of the play-houses from the scum and refuse of London,’ would only have invited upon his head greater ignominy and disgrace. He had a wife; he had relatives, a proud and aristocratic breed. He sought to be the Aristotle of a new philosophy. Such an avowal would have smirched the *Novum Organum* and the Advancement of Learning. . . . But why should he acknowledge them? He left his fame and good name to ‘his own countrymen after some time be past’; he believed the Cipher, which he had so laboriously inserted in the Plays, would be found out. . . . He would obtain all the glory for his name in that distant future, when he would not hear the reproaches of caste; when, as pure spirit, he might look down from space, and see the winged-goodness which he had created, passing on pinions of persistent purpose, through all the world, from generation to generation.” Vol. I. p. 258.

Such was the service, upon the representation of Mr. Donnelly, which “William Shakspeare” performed for Francis Bacon. The humble actor had been his partner, associate, and mask for years; he had faithfully kept the secret, and had carried it with him to the grave.

Hereupon the man of the Cipher takes up his brief, and addresses “his own countrymen after some time be past.” He claims the authorship of the plays on two grounds; first, that his friend was a dullard; secondly, a pernicious villain and a base knave. On these lines, the Cipher-man conducts his own case. The Cryptogram stories have nothing worth notice in an argument beyond this — their prominent feature is, the heaping of the most scurrilous abuse upon “Shakspeare.” The Francis Bacon of the Cipher declares, “Shakspeare never writ a

word of them," (the plays): he is a "poor dull ill-spirited greedy creature, and but a veil for some one else." * But that is a small matter. Mr. Donnelly's Bacon calls up the memory of his dead friend and associate, and casts upon it the foulest opprobrium. He exhumes the body of his companion and insults and jeers at it. From the language of Falstaff and his brethren, and by the help of a "hop-skip-and-jump" picking up of words from any pages on which an invective may appear, it needs no great ingenuity to collect bad language. Nay even, the most innocent expressions assume another meaning from a collocation and a context not their own.—Thus, forsooth, Lord Bacon treats his friend—I am now quoting the language of the Cryptogram stories—"He is the son of a poor peasant, who yet followed the trade of glove-making, in the hole where he was born and bred, one of the peasant towns of the West."† These are some of the phrases and statements which we find—"the ragged young wretch"; in his youth he lived "in great infamy"‡; "the rascally knave, there was not a worse in the barony"§; "we talk upon the subject of his sick father—blessed hypocrite"—He does not even spare the wife and widow. The Cryptogram calls her "a jade," and declares her to be the model from which Mrs. Quickly is drawn, the disreputable wife of an infamous husband.—He says, "Will and his brother are a pair of most pernicious villains."—Finally he points at "Shaksper" as an example of the lowest passions. He was prematurely old from sin, and bore upon him the indelible marks of a life surrendered to the vilest of vices; and this living mass of corruption is said to be doomed to an early grave.

We are to imagine, according to these representations of the Cryptogram, that Lord Bacon thus addresses us in this Cipher.

"My countrymen, William Shaksper and myself were partners in a great dramatic enterprise. I found the literature,

*Vol. II. Chap. ix.

† Ibid. Chap. x. p. 729.

‡ Ibid. Chap. xiii. p. 757.

§ Ibid. Chap. xvi. p. 793.

William Shakspeare gave his name. We fairly divided the profits. He kept the secret of the authorship faithfully up to his death. The works have hitherto passed under his name. But the glory of these immortal works is mine. The time is now come to vindicate my name and fame. You have to choose between William Shakspeare of Stratford, and me. There can be but little difficulty; 'look on this picture and on this.' I am the Aristotle of the *Novum Organum*, and, in other respects, I am 'pure spirit looking down from space.' Contemplate my late partner. What was he? an unlettered dullard, and withal an infamous profligate and an entirely abandoned knave. Here are the alternatives. I appeal to my countrymen, as discerning between good and evil, the noble and the base—Choose between me and my loathsome friend."

This is Mr. Donnelly's case. He employs an arbitrary fiction to assail the name of Shakespeare with vile slanders, things of "shreds and patches," and he ascribes to Bacon himself a line of action, which, if the Cryptogram were as probable, as it is palpably absurd and false, were too infamous to be ascribed to Lord Bacon by any man of understanding.

Mr. Donnelly is honest in his hallucinations. He speaks sincerely, I doubt it not, all through his volumes, from the first moment when, as he tells us, conviction dawned upon him while reading the words, "I have found a gammon of Bacon." He is an enthusiastic admirer (and who is not?) of the Great Chancellor; but enthusiasm blinds his logic. He asks us to believe in a thing, which, were it credible, would fix the last dishonour upon Bacon's fame.

Upon that great name, there are some stains already, which his countrymen will be always fain to extenuate, or even prone to forget. When the members of the Baconian Society invited the author of the Cryptogram to expound his legend in Westminster Town Hall, they evidently had not read the book, and they did not understand that the logical effects and consequences of the fiction must be, to attach an infamy to Bacon's name. Mr. Donnelly rejoices to tell us, that the sanitation of



Stratford in the sixteenth century was not the best, and that John Shakespeare had for a time a *sterquinarium* (sic) before his door. He does not see, that, in raking together the compost of the Cryptogram, he heaps a *sterquinarium* upon the memory of Lord Bacon.

William Shakespeare and Francis Bacon are the two greatest names of our literature. Of the Elizabethan age itself, they were the bright particular stars, each illuminating his own region of the sky. Those were days of original genius. In these days in which we live, originality does not abound. But we strive after it; and some of us think we have achieved it, when, in a lucky moment, we have hit upon a crotchet, or chanced on a paradox—it may be, the rehabilitation of Pontius Pilate, or the iconoclasm of Homer. But the great identities and individualities of the past still remain for the most part with their features undefaced, as the history of their own times sculptured them, and bequeathed them to us. Above all, the grand statues of genius, the veneration of centuries, which line the corridors of time, abide on their pedestals unbroken.

William Shakespeare will never be dethroned. Men and women of the English race, whether in England or America, will continue to contemplate that memory with hereditary pride; and still, in generations to come, will make pilgrimage to the poet's birth-place, his home, and his grave by the Avon, so long as the great works, which bear his name, are the treasures of our people.

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