The Seaman's Friend; Containing a Treatise on Practical Seamanship, with Plates; A Dictionary of Sea Terms; Customs and Usages of the Merchant Service; Laws Relating to the Practical Duties of Masters and Mariners. By R. H. DANA, JR. *Author of "Two Years Before the Mast." Little and Brown: Boston. Carey and Hart: Philadelphia.*

The publishers of this neat little volume have very prudently stereotyped it; anticipating an extensive and continuous demand. In truth, the work belongs to the class of the obviously needful, and its circulation and appreciation are matters of certainty. Ever since men "went down to the sea in ships," there has been a difficulty in procuring exact, compact, and universally intelligible information on the very topics which Mr. Dana now discusses. The necessary knowledge was to be gleaned, imperfectly and superficially, from amid a mass of technical jargon, diffused over a world of questionable authority. Books on Seamanship are extant, to be sure — works of the highest scientific merit and ability — and the writings of Captain Basil Hall give, incidentally, a vast fund of intelligence on naval subjects; but the true *desideratum* was a work which could only be written by an individual placed exactly in the circumstances which surrounded Mr. Dana. It is well known that he is a man of talent and well educated; that ill-health induced him to try a sea-voyage in the capacity of common sailor; and that thus he has been enabled to combine the advantages of theoretical and practical science. His "Two Years Before the Mast" was, very deservedly, one of the most popular books ever published, and proved immensely profitable — at least to his booksellers. It gave, in a rich strain of philosophical observation, all the racy *spirit*, as the present volume conveys all the exact *letter* of the sea.

There is only one improvement which we could wish to suggest. An appendix, we think, should be added; embracing, first, in as popular, that is to say, in as untechnical a form as possible, the philosophy of latitude and longitude — the general principles of which may be rendered intelligible to almost any understanding — and, secondly, the formulae employed in the application of these principles to navigation, with concise rules for the use of the sextant and chronometer, and for solar, lunar, and stellar observations.

The Miser, or the Convicts of Lisnamona. By WILLIAM CARLETON, *Author of "Traits and Stories of the Irish Peasantry." Two Volumes. Carey and Hart: Philadelphia.*

This story originally appeared in the "Dublin University Magazine," under the title of "Fardorougha, or The Miser," It was much copied and admired, and has all the *Irish* merit for which its author is so famous.

Fragments From German Prose Writers. Translated by SARAH AUSTIN. *With Biographical Sketches of the Authors. D. Appleton and Company. New York.*

This is a book about which little can be said, except in the way of general and pointed commendation. Its title fully explains its character; although the fair authoress is at the trouble of enlarging upon the nature of the fragmentary contents. These *scraps* embody specimens of every variety of the prose literature of Germany — convey, *in petto*, its whole soul. The lives of the authors are invaluable. The volume is, in point of mechanical appearance, one of the most beautiful ever issued, even by the Appletons.

Confession; Or the Blind Heart. A Domestic Story. By the Author of "The Kinsmen," "The Yemassee," "Guy Rivers," etc. Two Volumes. Lea and Blanchard: Philadelphia.

In general, Mr. Simms should be considered as one giving *indication*, rather than *proof* of high genius. He puts us in mind of a volcano, from the very darkness issuing from whose crater we judge of the fire that is weltering below. So far, with slight exceptions, he has buried his fine talent in his themes. He should never have written "The Partisan," nor "The Yemassee," nor his late book (whose title we just now forget) about the first discovery of the Pacific. His genius does not lie in the outward so much as in the inner world. "Martin Faber" did him honor; and so do the present volumes, although liable to objection in some important respects. We welcome him home to his own proper field of exertion — the field of Godwin and Brown — the field of his own rich intellect and glowing *heart*. Upon reading the first few pages of "Confession," the stirring words of Scott arose to our lips — "My foot is on my native heath, and my name is McGregor."

It is our design to speak in full of the volumes before us; but we have left ourselves no space for the task, and must defer it, perforce, until the new year.

Cecil; Or The Adventures of a Coxcomb. A Novel. Two Volumes. Lea and Blanchard: Philadelphia.

This work is an obvious but very spirited and excellent imitation of the Pelhams and Vivian Greys. It abounds, even more than either of these works, in point, pungency and vivacity, but falls below them in true wit, and in other higher qualities. Altogether, it is richly entertaining, and will meet with success. The theme is a good one well managed.

SECRET WRITING.

The annexed letter from a gentleman whose abilities we very highly respect, was received, unfortunately, at too late a period to appear in our November number:

DEAR SIR:

I should perhaps apologise for again intruding a subject upon which you have so ably commented, and which may be supposed by this time to have been almost exhausted; but as I have been greatly interested in the articles upon "cryptography," which have appeared in your Magazine, I think that you will excuse the present intrusion of a few remarks. With secret writing I have been practically conversant for several years, and I have found, both in correspondence and in the preservation of private memoranda, the frequent benefit of its peculiar virtues. I have thus a record of thoughts, feelings and occurrences, — a history of my *mental* existence, to which I may turn, and in imagination, retrace former pleasures, and again live through bygone scenes, — secure in the conviction that the magic scroll has a tale for *my* eye alone. Who has not longed for such a confidante?

Cryptography is, indeed, not only a topic of mere curiosity, but is of general interest, as furnishing an excellent exercise for mental discipline, and of high *practical* importance on various occasions; — to the statesman and the general — to the scholar and the traveller, — and, may I not add "last though not least," to the *lover*? What can be so delightful amid the trials of absent lovers, as a secret intercourse between them of their hopes and fears, — safe from the prying eyes of some old aunt, or it may be, of a perverse and *cruel* guardian? — a *billet doux* that will not betray its mission, even if intercepted, and that can "tell no tales" if lost, or, (which *sometimes* occurs,) if *stolen* from its violated depository.

In the solution of the various ciphers which have been submitted to your examination, you have exhibited a power of analytical and synthetical reasoning I have never seen equalled; and the astonishing skill you have displayed, — particularly in deciphering the cryptograph of Dr. Charles J. Frailey, will, I think, crown you the king of "secret-readers." But notwithstanding this, I think your opinion that

the construction of a *real cryptograph* is impossible, not sufficiently supported. Those examples which you have published have indeed not been of that character, as you have fully proved. They have, moreover, not been sufficiently accurate, for where the key was a phrase, (and consequently the same character was employed for several letters,) different words would be formed with the same ciphers. The sense could then only be ascertained from the context, and this would amount to a probability — generally of a high degree, I admit — but still not to a positive certainty. Nay, a case might readily be imagined, where the most important word of the communication, and one on which the sense of the whole depended, should have so equivocal a nature, that the person for whose benefit it was intended, would be unable, even with the aid of his key, to discover which of two very different interpretations should be the correct one. If necessary, this can easily be shown; thus, for example, suppose a lady should receive from her affianced, a letter written in ciphers, containing this sentence, "4 5663 967 268 26 3633," and that *a* and *n* were represented by the figure 2, — *e*, *m*, and *r* by 3, — *i* by 4, — *l* by 5, — *o*, *s*, and *v* by 6, — *u* by 7, — *w* by 8, — and *y* by 9; a moment's inspection will show that the sentence might either be "I love you now as ever," or "I love you now *no more*." How "positively shocking," "to say the least of it;" and yet several of the ciphers that you have published, have required a greater number of letters to be represented by one character, than any to be found in the example before us. It is evident, then, that this is not a very desirable system, as it would scarcely be more useful than a lock without its key, or with one that did not fit its wards.

I think, however, that there are various methods by which a hieroglyphic might be formed, whose meaning would be perfectly "hidden;" and I shall give one or two examples of what I consider such. A method which I have adopted for my own private use, is one which I am satisfied is of this nature, as it cannot possibly be solved without the assistance of its key, and that key, by which *alone* it can be unlocked, exists only in my mind; at the same time it is so simple, that with the practice in it which I have had, I now read it, and write it, with as much facility as I can the English character. As I prefer not giving it here, I shall be compelled to have recourse to some other plan that is more complicated. By a CRYPTOGRAPH, I understand — a communication which, though *clearly* ascertained by means of its proper key, cannot possibly be without it. To most persons, who have not thought much upon the subject, an article written in simple cipher, (by which I mean with each letter uniformly represented by a single distinct character,) would appear to be an impenetrable mystery; and they would doubtless imagine that the more complicated the method of constructing such a cipher, the more *insoluble* — to use a chemical expression — would be the puzzle, since so much less would be the chance of discovering its key. This very natural conclusion is, however, erroneous, as it is founded on the supposition that possession must first be obtained of the key, in order to unravel the difficulty, — which is not the case. The process of reasoning employed in resolving "secret writing" has not the slightest relation to the form or description of the characters used, but refers simply to their succession, and to a comparison of words in which the same letters occur. By these means any cipher of this nature can be unriddled, as experience has fully shown. A very successful method of avoiding detection, would be to apply the simple cipher to words written backwards and continuously. This, I conceive, might be called a perfect cryptograph, since from the want of spaces, and consequently the impossibility of comparing words, it would utterly perplex the person attempting to discover its hidden import, and yet with the help of the key, each letter being known, the words could easily be separated and inverted. I give a short specimen of this style, and would feel much gratified with your opinion of the possibility of reading it.

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Should this not be considered *perfect*, (though I suspect it would puzzle even the ingenious editor to detect its meaning,) I shall give another method below, which I can show *must* be, and if I am successful I think you will do me the justice to admit that "human ingenuity" has contrived "a cipher which human ingenuity cannot resolve." I wish to be distinctly understood; the secret communication above, and the one following, are not intended to show that you have promised more than you can perform. I do not take up the gauntlet. Your challenge, I am happy to testify, has been more than amply redeemed. It is merely with an incidental remark of yours, that I am at present engaged, and my object is to show that however correct it may be generally, — it is not so universally.

Agreeably to a part of my foregoing definition, *that* cannot be a proper cryptograph, in which a single character is made to represent more than one letter. Let us for a moment see what would be the result if this was reversed, — that is, if more than one cipher were used for a single letter. In case each letter were represented by two different characters, (used alternately or at random,) it is evident that while the certainty of reading such a composition correctly, by help of the key, would not be at all diminished, the difficulty of its solution without that help, would be vastly increased. This then is an approach to the formation of a secret cipher. If, now, the number of the characters were extended to three or four for each letter, it might be pronounced with tolerable certainty that such a writing would be "secret." Or, to take an extreme case, a communication might be made, in which no two characters would be alike! Here all reasoning would be entirely baffled, as there would evidently be no objects of *comparison;* and even if half a dozen words were known, they would furnish no clue to the rest. Here, then, is a complete *non plus* to investigation, and we have arrived at a perfect cryptograph. For, since any given cipher would stand for but one letter in the key, there could be but a single and definite solution; and thus both conditions of my definition are fully satisfied. In the following specimen of this method, I have employed the Roman-capital, small letter, and small capital, with their several inversions, giving me the command of 130 characters, or an average of five to each letter. This is to "make assurance doubly sure," for I am satisfied that were an average of three characters used for each letter, such a writing would be emphatically secret. If you will be so kind as to give my cipher a place in your interesting Magazine, I will immediately forward you its key. Hoping that you will not be displeased with my tedious letter,

I am most respectfully yours.

W. B. TYLER.

To EDGAR A. POE, Esq.

DR ⅂iɟ OGXEW PɈɥFyʎ NꟼUH ⅃IA VQSMGϽ xDTbjs SNB CSVLNKSYϽ ſCP TΛol HTZGUƆƆ LIIꟻK ſſ RP NϽDL ΛMO hjFXIꓘſR! gXHʎMEϽ Ta QJƎTBXPeE yGMdUꟼ ΛB SLAΛϽ UVZ TCϽDYRƆ DHB ΛFKXDGſ ZƆNSMƎ⅃⅃ ꟻR ꓘ OW OJNI ZϽh Mſɢ WƆVIɛGXHB ∀ɯL NWUAFKSO iyBſDV bƎƎſs- gⅎPLT SPZl CEWNSW bGERTh aNjmʌ sϽV∀hy∀Ͻ ∀akIX- DIX MS ſCꓖ JƎK oFϽA∀T NQOTY ꓘCr OW QJTBGP SEB QNBLϽu Lpн NſnJʌ atSƎ DIKY MΛO cEpIɯX∀ʎ SʌJZ eIf KMꓘ XYKSSG HTIt∀W ꟼꟼP qT⅂Ɔ DƎYj RVV UϽJCdme nk VFHΛ lDah XWKTIAX Ye ʌſI adFqW XϽƆOWKUXMƎWS ϚS B AGOIX uuey rPC GIOQꟼg NBLEmMꝶ nk LcoDR SʌIBdTSl NZꝶ dgTjɥ ʎQUGſ RZnK CƖƏ ʌL ꓤIX JDMNV- JUJQx GDHʎƎBRI bzNL LBTdh FW eETOYdꓘ ⅃IA VIRϽMFTV VΛƎHQTP QHB NNGſ WƆ WJƎTM⅄JIſ ſDΛ qphI KYSXIƆW ƆS VɯL LQIgmXVR WƆ NJUiKʎ dW AGGb MſG ARNMϽQQ CMr IRZ XJHOEl ꓘSXWIB CFƆ ſƆ ʏʞ ſjeo IDBTSTP IRZ VnkVDϽ ƆLXh qdJW QCſPdƎ lndƎA K VQTΛ ʁ gƎRdEƆ UTE ʌIʎI KJ emy iM GDd.

[The difficulty attending the cipher by key-phrase, viz: that the same characters may convey various meanings — is a difficulty upon which we commented in our first article upon this topic, and more lately at greater length in a private letter to our friend F. W. Thomas. The key-phrase cryptograph is, in fact, altogether inadmissible. The labor requisite for its elucidation, *even with the key*, would, alone, render it so. Lord Bacon very properly defines three *essentials* in secret correspondence. It is required, first, that the cipher be such as to elude suspicion of being a cipher; secondly, that its alphabet be so simple of formation as to demand but little time in the construction of an epistle; thirdly, that it shall be absolutely insoluble without the key — we may add, fourthly, that, with the key, it be promptly and *certainly* decipherable.

Admitting, now, that the ingenious cryptograph proposed by our correspondent be absolutely what he supposes it, impenetrable, it would still, we think, be inadmissible on the first point above stated, and more so on the second. But of its impenetrability we are by no means sure, notwithstanding what, at a cursory glance, appears to be the *demonstration* of the writer. In the key-phrase cipher an arbitrary character is sometimes made to represent five, six, seven, or even more letters. Our correspondent proposes merely to reverse the operation:— and this simple statement of the case will do more towards convincing him of his error than an elaborate argument, for which we would neither have time, nor our readers patience. In a key-phrase cryptograph, equally as in his own, each discovery is *independent*, not

necessarily affording any clue to farther discovery. Neither is the idea of our friend, although highly ingenious, philosophical, and unquestionably original with him, (since he so assures us,) original *in itself*. It is one of the many systems tried by Dr. Wallis and found wanting. Perhaps no good cipher was *ever* invented which its originator did not conceive insoluble; yet, so far, no impenetrable cryptograph has been discovered. Our correspondent will be the less startled at this, our assertion, when he bears in mind that he who has been termed the "wisest of mankind" — we mean Lord Verulam — was as confident of the absolute insolubility of his own mode as our present cryptographist is of his. What he said upon the subject in his *De Augmentis* was, at the day of its publication, considered unanswerable. Yet his cipher has been repeatedly unriddled. We may say, in addition, that the nearest approach to perfection in this matter, is the *chiffre quarré* of the French Academy. This consists of a table somewhat in the form of our ordinary multiplication tables, from which the secret to be conveyed is so written that no letter is ever represented twice by the same character. Out of a thousand individuals nine hundred and ninety-nine would at once pronounce this mode inscrutable. It is yet susceptible, under peculiar circumstances, of prompt and certain solution.

Mr. T. will have still less confidence in his hastily adopted opinions on this topic when we assure him, from personal experience, that what he says in regard to writing backwards and continuously without intervals between the words — is all wrong. -So far from "utterly perplexing the decipherer," it gives him no difficulty, legitimately so called — merely taxing to some extent his patience. We refer him to the files of "Alexander's Weekly Messenger" for 1839 — where he will see that we read numerous ciphers of the class described, even when very ingenious *additional* difficulties were interposed. We say, in brief, that we should have little trouble in reading the one now proposed.

"Here," says our friend, referring to another point, "all reasoning would be entirely baffled, as there would evidently be no objects of *comparison*." This sentence assures us that he is laboring under much error in his conception of cipher-solutions. *Comparison* is a vast *aid* unquestionably; but not an absolute *essential* in the elucidation of these mysteries.

We need not say, however, that this subject is an excessively wide one. Our friend will forgive us for not entering into details which would lead us — God knows whither. The ratiocination actually passing through the mind in the solution of even a simple cryptograph, if detailed step by step, would fill a large volume. Our time is much occupied; and notwithstanding the limits originally placed to our cartel, we have found ourselves overwhelmed with communications on this subject; and must close it, perforce — deeply interesting as we find it. To this resolution we had arrived last month; but the calm and truly ingenious reasoning of our correspondent has induced us to say these few words more. We print his cipher — with no promise to attempt its solution ourselves — much as we feel inclined to make the promise — and to keep it. Some of our hundred thousand readers will, no doubt, take up the gauntlet thrown down; and our pages shall be open for any communication on the subject, which shall not tax our own abilities or time.

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In speaking of our hundred thousand readers (and we can scarcely suppose the number to be less), we are reminded that of this vast number, one and only one has succeeded in solving the cryptograph of Dr. Frailey. The honor of the solution, is however, due to Mr. RICHARD BOLTON, of Pontotoc, Mississippi. His letter did not reach us until three weeks after the completion of our November number, in which we should, otherwise, have acknowledged it.

THE CLOSING YEAR.

PERHAPS the editors of no magazine, either in America or Europe, ever sat down, at the close of a year, to contemplate the progress of their work with more satisfaction than we do now. Our success has been unexampled, almost incredible. We may assert without fear of contradiction that no periodical ever witnessed the same increase during so short a period. We began the year almost unknown; certainly far behind our cotemporaries in numbers; we close it with a list of twenty-five thousand subscribers, and the assurance on every hand that our popularity has as yet seen only its dawning. But if such is the orient, what will our noonday be? Nor, if we may for once play the egotist, is this success wholly undeserved. Everything that talent, taste, capital, or energy could do for "Graham's Magazine" has been done, and that too without stint. The best typography, the choicest engravers, the finest writers, the most finished artists, and the utmost punctuality in our business department, have lent their aid to forward our enterprise; and what neither could have done singly, all combined have effected. Nothing has been spared. The splendor of our embellishments has never been equalled: the variety and richness of our literary matter are not to be surpassed. We not only present a choicer list of contributors than any other magazine in the country, but we rejoice in more than one writer whom we alone have been able to tempt from their retreats, and who cannot be induced to contribute to any cotemporary. We have secured the exclusive services of SARTAIN, and have made a permanent engagement with SADD. Our Fashion Plates have become the standards in that department, and the line engravings we have furnished have been universally cited as superior to those of the richest Annuals. In literary rank we are assigned the first place of our class, and our criticisms on books are deferred to as the best in the country. We may speak thus boldly, because, although we may be only Snug the Joiner, yet whenever we roar as now, it is in the character of the lion. Reviewing, therefore, our past success, and taking it — and why not? — as an earnest for the future, we can afford, we opine, to sip our cup of choice Mocha at ease, and if not to "shoulder our crutch," at least to "tell how fields were won."

We shall begin the new year determined to surpass even what we have done. As we have introduced a new era into magazine history we shall not pause until the revolution is complete. We shall not follow the namby-pamby style of periodical literature, but aim at a loftier and more extended flight. For this purpose we shall increase the amount of our reading matter, although, at the same time, our embellishments shall even be superior in beauty to what they are at present. We have made arrangements by which the graceful pens of two lady-editors will be added to our strength. Our editorial list will then be as follows:

GEO. R. GRAHAM, Mrs. E. C. EMBURY,
CHAS. J. PETERSON, Mrs. A. S. STEPHENS,
EDGAR A. POE.

Our Prospectus will show the number of American writers, in addition to the editors, enlisted in the work. With such a *corps* we may make any promises.

To ensure a supply of the best original engravings we have, in addition to Messrs. Sartain and Sadd, procured the aid of Meesrs. Rawdon, Wright, Hatch and Smillie, and Mr. Dick, — all well known for the elegance of their work. Our chief illustrations shall, however, be as heretofore, mezzotinto engravings, — they being decidedly the most effective, elegant, rare, and desirable. This field we shall enjoy without even an attempt at serious competition, it being impossible for any other like magazine to bring out the same or equal talent in this way.

And now, as the play is over and we have spoken the epilogue, we will draw the curtain with a single wish: "a happy new year, and many of them, to our subscribers."