

A quadruplet of inventions / [Thomas Northmore].

Contributors

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A
Quadruplet of Inventions,

CONSISTING OF A
DESCRIPTION of a NOCTURNAL or DIURNAL
TELEGRAPH;

A PROPOSAL for
AN UNIVERSAL CHARACTER;

AN
EASY and PRACTICAL CONTRIVANCE for
Preventing BOATS from SINKING;

AND
A SCHEME

FOR FACILITATING
THE PROGRESS OF SCIENCE,

Exemplified in the Osteological Part of Anatomy.

—❖—
THE SECOND EDITION.

By THOMAS NORTHMORE, Esq. M. A. F. S. A.

EXETER:

PRINTED BY TREWMAN AND SON, FOR MURRAY AND
HIGHLEY, FLEET-STREET, LONDON.

1799

*In tenui labor, at tenuis non gloria ; si quem
Numina læva finunt.*

*En toute espèce de projet, il y a deux choses à con-
sidérer ; premièrement, la bonté absolue du projet ; en
second lieu, la facilité de l'exécution.*

ROUSSEAU.

CLEVE, Jan. 14, 1799.



(vi)

DEDICATION *to the* FIRST EDITION.

TO MY FRIEND

WILLIAM BURDON, Esq.

Fellow of Emanuel College, Cambridge.

“ Parturiunt montes ; nascetur ridiculus mus .

“ IN your translation of Plutarch’s
“ Treatise on the Distinction between
“ a Friend and a Flatterer, you signi-
“ fied your intention of publishing the
“ original with notes ; and now, for-
“ sooth ! you present us with nothing
“ but two stale inventions, and an
“ Eutopian prodigy. §” Have patience,

A 2

my

§ The scheme for preventing boats from sinking, is
now first added to this edition.

my excellent Northumbrian, all in good time; *existing circumstances* are materially changed, and man, you know, is a creature of circumstances, “ a recipient of perceptions.” I now therefore beg your acceptance of these trifles, they may serve to relax your mind from severer studies; I wish, in relaxing your mind, they may in the least contribute towards a restoration of your health.

Two of the following inventions, viz. the *Telegraph* and *Universal Character*, have, as you know, already appeared in publick, during the course of the years 1794, and 1795, in the *Repertory of Arts and Manufactures*. To the latter of them I have added nothing new; to the former only an abridged translation of a passage in Polybius. Indeed from the resemblance
of

of the French Telegraph to that of Polybius, as far as relates to the end in view, I am almost inclined to believe that the author of the former was led to turn his thoughts to the subject, from an acquaintance with the latter, more particularly as Rollin in his Ancient History has given a copious account of it. Be that as it may, I am firmly persuaded that if a man of sense were attentively to peruse the various inventions of the Ancients, with the view of selecting such of them as appeared to him of importance, and were to present them to the publick in a modern dress, he would produce a work of considerable utility. It is really astonishing how many useful inventions now lie dormant, amid the old Greek Scholia,

How many a flower is born to blush unseen,
And waste its sweetness on the desert air.

Permit me to conclude this letter with an example of a contrivance much in use among the Spartans. It was called the Scytale, and may be thus described from Plutarch and Suidas. When the magistrates of Sparta wished to convey any intelligence of importance to the General of their armies, they used to wrap a long narrow slip of parchment round a staff in so regular a manner as to leave no interstice. Upon this they wrote their orders. The parchment was then unwound, and sent to the General, who, having another staff of *exactly the same* dimensions, applied it in the same manner, and thus those characters which were before without shape or connection became perfectly legible.

V. V.


THO. NORTHMORE.

CLEVE, Jan. 25, 1796.

DESCRIPTION

OF A NOCTURNAL OR DIURNAL

TELEGRAPH.



THAT the French Telegraph is an invention justly intitled to the praise of ingenuity and simplicity, is certain; yet it appears to me to labour under a defect that takes much from its utility; I mean that it is not calculated to convey intelligence by night. It was this defect that first induced me to turn my thoughts to the subject; whether successfully or no, the reader may determine.

But before I proceed, I beg leave to observe that the Telegraph, new as it appears, is new only in name; the invention is of very ancient date; for Polybius, who flourished near 2000 years ago, gives

an accurate account of a nocturnal one, invented by Cleoxenus, or Democlitus, and improved by himself, of which the following is an abridgement.

He begins by observing, that as opportunity is of great consequence in all human affairs, so is it especially in war, and of all the various inventions that have contributed to its attainment, none has been of such service as that of signals by fire. But this contrivance is in some measure rendered useless by reason of its too great simplicity; every circumstance must be agreed upon before-hand; if therefore, out of the infinite variety of human concerns, any event should happen unprovided for, such a method would be of no avail. To remedy this defect, continues Polybius, let the whole alphabet be distributed into five columns, each of which, except the last, will contain five letters. These columns are then to be fixed upon five tablets of wood; and the parties who are to give and receive

ceive the intelligence are to agree upon the signal of preparation, which we will suppose to be the elevation of two torches. This signal being answered, the torches are then lowered. The person who gives the intelligence is now to elevate such a number of torches on the *left* hand, as shall correspond to the number of the column or tablet in which the first letter of the intelligence is to be found; for instance, if it be in the first column, he will lift up only one torch; if in the second, two; and so on. The same thing is then to be done on the *right* hand, to signify the particular letter of the column.

To illustrate the above by a familiar example, suppose the intelligence conveyed to be, that the French fleet of thirty sail of the line were off Maker: the sentence must first be abridged thus, *French, thirty sail, off Maker*. The letter F being the first in the second tablet, two torches must be elevated on the left, and one on the right. The letter R being the
third

third in the fourth tablet, there must be four torches raised on the left, and three on the right, and so on. In order to distinguish the right from the left, a geometrical instrument containing two tubes was made use of.*

It is not my intention to enter further into detail; suffice it to say, that from this account of Polybius I received a hint, which furnished the ground-work of what I am now going to present to the reader.

* See Polyb. Hist. lib. x. p. 261—6. Edit. Ernest. The English reader may consult Rollin's Ancient History, book xvii. sect. vi. Cf. Polyæni Strategem. vi. 26; 2.

A. N. S. T. R. A. L. I. A. N. T. E. L. E. G. R. A. P. H.

A	B	C	D	E
0	0	0	0	0
000	000	000	000	000

F	G	H	I	K
0	0	0	0	0
000	000	000	000	000

L	M	N	O	P
0	0	0	0	0
000	000	000	000	000

Q	R	S	T	V
0	0	0	0	0
000	000	000	000	000

U	W	X	Y	Z
0	0	0	0	0
000	000	000	000	000

A Nocturnal or Diurnal TELEGRAPH.

A	B	C	D	E
o ooo	o o oo	o oo o	o ooo	ooo o
F	G	H	I	K
o oo o	oo o o	ooo o	oo oo	o o oo
L	M	N	O	P
oo oo	o o o o	oo o o	o oo o	o o o o
Q	R	S	T	V
o oo o	o oo o	o o o o	o oo o	o o o o
U	W	X	Y	Z
o o o o	o o o o	o o o o	o oo o	o oo o

For a NOCTURNAL TELEGRAPH, let there be four large concave reflecting lamps, each containing the greatest quantity of light possible; let them be placed on the top of an observatory, parallel to the horizon, and lying on the same plane. Let each of these lamps be capable, by means of a winch, either of elevation or depression to a certain degree. By elevating or depressing one or two of them a great variety of arrangements will be produced, as the annexed scheme will explain, taking care that each lamp be restored to its place after every arrangement. In the first and last observatory there need only be a set of *single* lamps, but in the others each must be *double*, so as to face both the preceding and subsequent observatory; and every observatory should be furnished with two telescopes. The proper diameter of the lamps, and their distance from each other, cannot be ascertained but by experience,

perience, and will vary according to the distance of the observatory.

I have fixed on *four* lamps, as being the number that appears best to unite simplicity and perspicuity.

To convert this machine into a *Diurnal* Telegraph, nothing more is necessary than to insert, in the place of the lamps, gilt balls, or any other conspicuous bodies.

It is evident that the *principle* upon which this machine depends, is, the number of changes, or variety of positions, which can be produced from a given number of moveable objects; and I make this remark because it appears to me, that nothing can tend so much to the improvement of human inventions, as a clear, and concise statement of the *principle* upon which they depend. It should be their constant appendage, as the moral is to a fable; for men in general are too indolent to exert their
powers

powers of mind, unless a *general view* of the subject is presented to them.

The new French Aerostatic Telegraph is framed upon the principle of the one above described.



Proposal for an Universal Character.

PART I.

WHEN I first committed to paper my thoughts upon the following subject, I had not even the most distant suspicion that any thing similar to them had ever before appeared in public. I afterwards found, and, in my second letter to the Repertory of Arts and Manufactures, dated June 1795, mentioned an extract from the Journal litteraire, anno 1720, which seemed to bear some resemblance to what I had proposed; but of this the reader shall judge presently. I will previously beg permission to state the progress of my own ideas upon the subject.

I originally called this invention a Pagraph, or *a mode of writing by which the various nations of the earth may communicate their*

their sentiments to each other. This appellation appeared to me the most suitable, being at that time little aware of the facility with which the character might be spoken, and consequently become, as far as regards the common concerns of life, an universal *language*. The want of such a medium has long been a subject of lamentation among men of letters; hence the various plans that have been proposed by Bishop Wilkins, Leibnitz, and others, which, if I may be allowed an opinion, have failed of success chiefly by reason of their being too complex and difficult of attainment. That mine will be more successful I do not promise myself; I can only say that I have studied simplicity.

The original thought that occurred to me, and which is the ground-work of the whole super-structure, is the following; “That if the *same numerical figure* be made to represent the *same word* in all languages, an universal medium is immediately obtained.” This I mentioned

tioned to a few friends, who agreed with me in the practicability of it, and saw only one objection, viz. that which originated from the diversity of idioms. But this objection surely cannot be thought of much weight, when we consider that every school-boy has daily to encounter it in construing his Terence. If a foreigner write to me, he of course will study plainness of language, and I must be dull indeed, let his idiom vary ever so much from my own, if I cannot make out common sense when I have every word before my eyes.* Such was my original thought, but it was soon perceived

* One of the very candid reviewers of this little work has started another objection, viz. the difficulty of retaining this character in the memory. But to this objection I answer with much deference, that in my opinion, as far as regards the first part of the character, there would be but little occasion for any exertion of memory; the small pocket numerical dictionary should be the constant companion both of the writer and the reader; and though I allow the objection to be of great weight in relation to the second part, yet a numerical arrangement might *perhaps* be so contrived, according with the radicals of words, as very considerably to abridge the necessity of constant reference to the dictionary.

ceived capable of improvement; for instead of using a figure for *every* word, it will be necessary to apply one only to every *useful* word; and we all know how few words are absolutely necessary to the communication of our thoughts. These too may be much abbreviated by the adoption of certain *uniform fixed* signs, to express the various cases, numbers, genders, degrees of comparison, of nouns; tenses, and moods of verbs, &c. Words of negation, diminution, excess, &c. may also be expressed by prefixed signs. A few examples will more fully explain my meaning.

Suppose a numerical dictionary, adapted to a variety of languages, already in use. Let what follows be an extract from it.

The number 8 represents the word *I*.

10 - - *day*

13 - - *am, art, is, are, i. e. the*

present tense indicative mood of
the verb, *to be*

The number 16 represents the word *place*

17 - - *corrupt*

19 - - *this, that*

23 - - *who, which*

26 - - *make*

27 - - *wisdom*

29 - - *nothing*

30 - - *natural*

32 - - *beautiful*

35 - - *slave*

37 - - *man*

39 - - *near*

40 - - *virtue*

45 - - *liberty*

48 - - *take away*

50 - - *worth, value*

53 - - *his, hers, their*

59 - - *amiable*

61 - - *half*

70 - - *than*

71 - - *without*

75 - - *brute.*

We will now suppose that in the preface to the above dictionary the nature
and

and power of the prefixed signs are explained with clearness and brevity. Take an example.

The number 48 represents the indicative mood present tense of the verb - - *take away*

.48 perfect tense *took away*

:48 perfect participle - } *taken away*

48: present participle - } *taking away*

48. future - - *will take away*

48 potential mood

37 nominative & accusative case of the noun - } *a man*

37 genitive - - *of a man*

37 dative - - *to a man*

37 feminine - *a woman*

+37 plural - - *men*

59 positive - - *amiable*

59 comparative *more amiable*

59 superlative *most amiable*
 — 59 negation - *unamiable*.

How many signs may be necessary I will not take upon me to determine, it being my opinion, expressed in my second letter to the Repertory, that the best method of bringing any matter of this sort to perfection, is to lay it before a company of literary men. I shall now present the reader with a few sentences written in this character, and explained in the above extract.

29, 13, 3[^]2, 70, 27; 29, 59, 70, 40.
Cicero.

There would be no difficulty in comprehending the above specimen, though it were written in the language of the Chinese.

*“ Nothing is more beautiful than wisdom,
 “ nothing more amiable than virtue.”*

71, +37, +8, .13, +75. *Otway.*
“ Without women we should be brutes.”

30, 16, 40, 13, 39, 45. *Montesquieu.*

“*The natural place of Virtue is near to Liberty.*”

10, 23, 26, +37, +35, 48, 61, 53, 50.

Homer.

This sentence is left for the reader to find out. It may be worth while to observe that those languages which do not express the pronoun before the verb, as the Greek and Roman, may apply it, in a smaller character, simply to denominate the *person*; thus, instead of +8, .13, in the second instance, *we should be*; it might be written +8 .13, which will signify that the verb is in the *first* person, and will still have the same meaning.

The specimen here presented to you, Reader, is merely a rough sketch of my design, and I purposely leave it imperfect that others may have an opportunity of suggesting their improvements. I shall therefore conclude this *first* part of the Universal Character by observing that, in my opinion, five or six thousand *select*

words, properly arranged in a small numerical dictionary, would answer all the ends proposed. I am led to adopt this opinion, because not only synonymous words might be omitted, but also derivative adverbs, &c. which might be expressed by means of the prefixed signs.



Propofal

Proposal for an Universal Character.

PART II.

I NOW come to that part of the Universal Character which relates to its being *spoken*, and the facility with which this may apparently be performed is extraordinary.

First then, the ten numerals should be accurately distinguished by ten simple names: these I would recommend to be monosyllables, easy of pronunciation in *all* languages, and, if possible, they should be so contrived as to run without difficulty into one another. For the present I will call them by the common English terms, though I have no doubt that imaginary appellations ought to be preferred.

Secondly, I would pronounce each numeral by its component parts, after the manner of accomptants. Ex. gr. Let
the

the number 5943 represent the word *Horse*; I would not say, *five thousand nine hundred and forty three*, but more simply, thus, *five, nine, four, three*, and so through a whole sentence, making the proper stop between each of the words.

Thirdly, in the same manner to each of the *prefixed signs* a distinct appellation must be appropriated, to be pronounced immediately after the numeral to which it is an appendage. For instance; let the monosyllable *plu* be the appellation or sign of the plural number; *five, nine, four, three, plu*, would become *horses*. But this method may be much abridged in the following manner. For supposing the signs to amount in number to forty; then instead of appropriating a distinct appellation to every sign, I would substitute for them the first forty numerals, and say, as in Algebra, that a term is in the power of such a number, which may be expressed by the word *under*, or some other more simple denomination. Ex. gr.

Let

Let 5943 represent the word *horse*, and let 4 be the sign of the plural number; I would write the word thus, $\frac{+}{5943}$, and pronounce it *five, nine, four, three*, in the power of, or *under, four*. By these means eleven or twelve sounds would be all that were required, and time and use would much abbreviate the pronunciation.

Thus, Reader, have I briefly laid before you the progress of my ideas upon this interesting subject, upon which I have thought it unnecessary to enlarge for reasons already stated; but I cannot in justice conclude without observing that, some little time after the publication of my first letter in the *Repertory of Arts and Manufactures*, on reading the *Encyclopædia Britannica*, article *Character*, vol. iv. p. 337, I met with an extract from the *Journal Litteraire*, anno 1720, the author of which had proposed the Arabic, or numerical figures, for *Universal Characters*. “The combination
tion

“ tion of these nine (he observes) are
 “ sufficient to express distinctly an incre-
 “ dible quantity of numbers, much more
 “ than we shall need terms to signify our
 “ actions, goods, evils, duties, passions,
 “ &c.” From which and what follows,
 it appears to me (who have no opportunity of seeing the original) that the author meant, in the same extensive sense as Wilkins and Leibnitz, that his characters should, in an unlimited degree, and without any intermediate assistance, represent *things*; and consequently the difficulty of attaining them, notwithstanding the universality of the character itself, is not much, if at all, diminished. With respect to the pronunciation of his character, he seems totally to lay it aside.

I shall now conclude with the same observation that I have made elsewhere, that I have thought it right to mention this circumstance, as, if my readers shall so determine, I am very willing to forego the claim of originality, provided I can

contribute

contribute in the least either to their amusement, or to their advantage.

P. S. The Universal Characters, hitherto attempted, have been framed upon the basis of substituting new words *in lieu* of those already in use; whereas this character rests upon the principle of *adding* a new general medium to each particular one: The principle of the former adopts *signs for things*; that of the latter, *signs for words*; and consequently establishes, as it were, *two* intermediate steps between ideas and things.



*An easy and practical Contrivance for
preventing Boats from sinking.*

OF all inventions, those which have for their object the preservation of the lives of men, are most deservedly entitled, if not to the approbation, at least to the attention of the publick. It is upon this ground that I shall venture to lay before them a scheme, which, besides that it has for its object so desirable a good, appears to me to be easy of execution, and unattended with any great expence.

It is well known that a boat, which has no ballast, will not sink, though it be filled with water. The ballast is the chief, or only cause of its sinking. If
then.

then the ballast can by any means be removed, and the boat be otherways rendered considerably more buoyant, at the moment when the waves break into her, the lives of men may be saved. For this purpose let the ballast consist of sand-bags of a determinate weight, say 14lbs. each, and to each bag let there be attached, by means of a hook, 3lbs. of cork, or any other light substance, either solid, or hollow, which may be sufficient, or more than sufficient, to keep it afloat. Now if, in addition to the above, we adopt also the proposal of Mr. Lukin,* viz. that of filling various parts of the boat, such as, under the seats, thwarts, &c. with the same light materials; it is manifest, that as soon as a wave breaks into the boat, the cork will suspend the ballast, and that which is concealed in the other parts, will increase considerably the buoyancy of the vessel. In the mean
time

* See the Repertory of Arts and Manufactures, No. 13.

time the ballast may be detached from its float, and flung overboard.

It may be objected to this contrivance, that it will not prevent a boat, which has a sail, from being overfet. But to this objection I reply; first, that in a very heavy sea, or when the danger is imminent, the sail will probably be lowered; and secondly, that at all events the boat will not sink, and every one may have a chance of seizing one of the floats. But perhaps the objection may be entirely overruled by stating, that as a boat can only overfet by the ballast falling to leeward, so if the ballast be fixed down in its place, by means of a hook or otherways, (in which case the floats may be removed to any more eligible situation) the whole vessel, with its mast and sail, will become a lever, of which its side is the fulcrum, and as soon as it fills with water, will be restored to an upright position.

Proposal

*Proposal for facilitating the Progress of
Science, exemplified in the Osteological Part
of Anatomy.*

A modern Author in his Eutopian System of Government established at Markar, has enacted among other laws, “ that
“ all sciences be freed from abstruse terms,
“ which are now the clog to education.”
Upon this he makes the following observation in a note subjoined. “ What is
“ the reason that sciences are so difficult
“ of attainment? One of the reasons is,
“ because they are enveloped in a mass
“ of unintelligible names. If in lieu of
“ the Greek, Latin, and fanciful appellations with which Astronomy, Anatomy,
C “ tomy,

“ tomy, Botany, Chemistry,* &c. are at
 “ present surrounded, (and which con-
 “ stitute, as it were, a monopoly of those
 “ sciences to the Grecian and Roman)
 “ they were illustrated by plain English
 “ terms that *convey meaning*, to how much
 “ greater perfection would those sciences
 “ speedily arrive? And again, p. 132-3,
 “ The Greeks and Romans, from whom
 “ most of our knowledge is derived, very
 “ naturally and wisely gave appellations
 “ in their own tongue to their various
 “ improvements and discoveries. The
 “ greatest part of these appellations Eu-
 “ ropean nations religiously adhere to,
 “ so that the modern student is under the
 “ necessity

* This is to be understood as relating to the old
 chemical nomenclature; and what is said of Greek, and
 Latin, must be taken with some grains of allowance.—
 Where a new scientific nomenclature is to be framed,
 to adopt certain expressions, particularly those of greatest
 import, from the dead languages, may very fairly be
 allowed to the universality of science. At the same time
 it must not be forgotten, that education should be rendered
 as easy as possible, and this cannot be done better,
 than by adhering to our native tongue. If it may after-
 ward become necessary to latinize a vocabulary, where
 is the difficulty?

“necessity of cultivating the Greek and
 “Roman languages previous to his ac-
 “quisition of this or that science. Nor
 “is this all. Several of the original ap-
 “pellations being proved by subsequent
 “discoveries to be absurd and fanciful,
 “the student has to wade through addi-
 “tional difficulties to understand whence
 “they originated.”—The author has not
 given the publick any specimen of what
 he alludes to, but has left that for his
 friend to do. I would not however have
 the reader hastily suppose by what I am
 now writing, that I am an enemy to all
 terms of art. No! I readily subscribe
 to the observation of Judge Blackstone,*
 that “terms of art there will unavoidably
 “be in all sciences.” All I insist upon
 is, a simplification of those terms, and
 that, as we have so copious a language,
 and one so “well adapted to compound
 “expressions,” there is no occasion (at

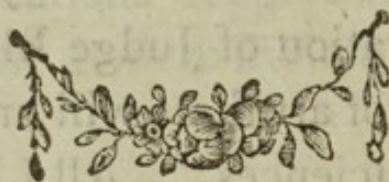
C 2

least

* Commentaries. Book iii. ch. 17.

least so frequently) to recur to foreign tongues.

The specimen which I have chosen is taken from that part of Anatomy which relates to the bones of the human frame, and I have arranged the new and old Vocabulary opposite each other that the Reader may be better able to judge whether my scheme is likely to answer the end proposed.



NEW VOCABULARY.

OLD VOCABULARY.

Forehead bone	<i>Os frontis</i>
Side head bones, <i>right</i> <i>and left, and so in all</i> <i>other cases of two simi-</i> <i>lar corresponding bones</i>	<i>Offa parietalia</i>
Hind head bone	<i>Os occipitis</i>
Temple bones	<i>Offa temporum</i>
Central head bone	<i>Os sphenoides</i>
Upper olfactory nerve bone, or	<i>Os ethmoides</i>
Upper internal nasal bone	
Cheek bones	<i>Offa malarum</i>
Upper jaw bones	<i>Offa maxillæ superioris</i>
External nasal bones	<i>Offa nasi</i>
Nasal division bone	<i>Vomer</i>
Eye corner bone	<i>Os unguis</i>
Palate bones	<i>Offa palati</i>
Lower olfactory nerve bones, or	<i>Offa spongiosa inferiora</i>
Lower internal nasal bones	
Lower jaw bone	<i>Os maxillæ inferioris</i>
Teeth	<i>Dentes</i>
Front teeth	<i>Incisores ;</i>

NEW VOCABULARY. OLD VOCABULARY.

NEW VOCABULARY.	OLD VOCABULARY.
Dog teeth, or pointed teeth, commonly called eye teeth	} <i>Canini</i> ;
Grinders	
Wise teeth, or late grinders	} <i>Dentes sapientiæ</i>
Tongue bone	
Appendages, right and left	} <i>Cornua parva seu appendices</i>
Ear bones	
Outward, or long drum bone	} <i>Malleus</i>
Middle drum bone	
Little drum bone	<i>Incus</i>
Inner drum, or stirrup bone	<i>Os orbiculare</i>
Spine bones	<i>Stapes</i>
1st, 2d, 3d, &c. to 24th	<i>Spina</i>
	<i>Vertebræ</i>
	<i>7 cervicales</i>
	<i>12 dorfi</i>
	<i>5 lumborum</i>
Great, or lower spine bone	} <i>Os sacrum</i>
Little, or lowest spine bones	
	<i>Os coccygis</i>

NEW VOCABULARY.

OLD VOCABULARY.

Breast bones	<i>Sternum</i>
Upper	
Middle	
Extreme	<i>Cartilago ensiformis</i>
Ribs	<i>Costæ</i>
1st, 2d, 3d, &c.	<i>Tum veræ, tum falsæ</i>
Hip bones	<i>Ossa innominata</i>
Superior	<i>Ossa ilium</i>
Inferior	<i>Ossa ischii</i>
Anterior	<i>Ossa pubis</i>
Shoulder blade	<i>Scapula</i>
Collar bone	<i>Clavicula</i>
Upper arm bone	<i>Os humeri</i>
Long lower-arm bone	<i>Os ulnæ</i>
Short lower-arm bone	<i>Radius</i>
Wrist bones	<i>Ossa carpi</i>
First or arm row	
1st	<i>Os scaphoïdes</i>
2d	<i>Os lunare</i>
3d	<i>Os cuneiforme</i>
4th	<i>Os pisiforme</i>
Second, or hand row	
1st	<i>Trapezium</i>
2d	<i>Os trapezoides</i>
3d	<i>Os magnum</i>
4th	<i>Os unciforme</i>

NEW VOCABULARY.

OLD VOCABULARY.

Hand bones	<i>Offa Metacarpii</i>
1st	<i>1m. seu indicis</i>
2d	<i>2m.</i>
3d	<i>3m.</i>
4th	<i>4m.</i>
Finger bones	
First of 1st, or fore-finger	<i>Os primæ phalangis indicis</i>
Middle of ditto	<i>Secundæ phalangis</i>
Extreme of ditto	<i>Tertiæ phalangis</i>
So of the long, or middle finger	<i>Digiti medii</i>
The third, or ring finger	<i>Digiti annularis</i>
The little finger, called by a French author auriculaire	<i>Digiti minimi</i>
Thumb bones	
First	<i>Os primæ phal. : pollicis</i>
Middle	<i>Secundæ</i>
Extreme	<i>Tertiæ</i>
Thigh bone	<i>Os femoris</i>
Knee pan	<i>Patella</i>
Great leg bone	<i>Os tibiæ</i>
Little leg bone	<i>Fibula</i>
Upper foot bones	<i>Tarsus, excepto offe calcis</i>
First	<i>Astragalus</i>
Middle	<i>Os naviculare</i>
Anterior	

NEW VOCABULARY. OLD VOCABULARY.

1ft, or internal	<i>Os cuneiforme internum</i>
2d	<i>Os cuneiforme medium</i>
3d	<i>Os cuneiforme externum</i>
4th, or external	<i>Os cuboïdes</i>
Heel bone	<i>Os calcis</i>
Lower foot bones	<i>Offa metatarsi</i>
1ft	<i>1m. seu pollicis pedis</i>
2d	<i>2m.</i>
3d	<i>3m.</i>
4th	<i>4m.</i>
5th	<i>5m.</i>
Great, or first toe bones	<i>Offa pollicis pedis</i>
1ft	<i>Os primæ phalangis</i>
2d	<i>Os secundæ phalangis</i>
Toe bones	
1ft of 2d toe	<i>Os primæ phalangis secundæ digiti pedis</i>
Middle of ditto	<i>Os secundæ phalangis</i>
Extreme of ditto	<i>Os terciæ phalangis</i>
And so of the 3d, 4th, and 5th, or little toe	
Supernumerary bones, } adding the name of } the adjacent bone. }	<i>Offa triquetra</i> <i>Sesamöidea</i> <i>Et ejusmodi.</i>

How whimsical were the appellations
 anciently given to the bones of the hu-
 man

man frame, and now preserved with religious reverence by posterity, the English reader may judge from a few specimens. One of the fossæ of the os Sphenoides, or wedge-like bone, (which I have denominated from its situation, *central head bone*) has been called Sella Turcica, because it was supposed to resemble a *Turkish saddle*; but of the propriety of this appellation I should conceive that few students in anatomy are able to judge. The Ossa unguis are so called, on account of a supposed similitude to a finger nail; but the other name given to them, viz. Lachrymalia, is certainly preferable. OS Hyoides, from its being thought like the Greek letter υ. OS Coccygis, the bone of the cuckow, because it was imagined to resemble the beak of that bird. Clavicula is said to be so called from its similitude to the key in use among the Ancients. Radius, the spoke of a wheel. Scaphoides, boat-like. Pisiforme, pea-like, OS tibiæ, from

from its resemblance to the ancient pipe, &c. &c.

Where names are given so unlike the things named, it is no wonder that the progress of science is slow. Such whimsical denominations serve only, as Blackstone says, "to breed a confusion of ideas, and a kind of distraction in the memory."

The advantage then expected to be derived from the foregoing scheme is briefly this; that students, particularly the junior class, finding the access to science more plain and easy, will be encouraged to proceed; consequently Science, having a greater number of followers, will be more likely to be brought nearer to perfection. The numbers of young men who forsake the paths of knowledge, intimidated by the difficulties in their road, are greater than generally imagined. Cambridge, Oxford, the Temple, and Lincoln's Inn, annually bear

bear ample testimony to what I have advanced.

The present improved state of the science of Chemistry affords still more convincing proof of the truth of this doctrine. “The word, as the accurate and indefatigable Lavoisier observed, produces the idea, and the idea is a picture of the fact.” When every other science shall have its impediments removed by the same means, it will advance towards perfection with equal rapidity.*

Thus, Reader, have I presented to you my favourite scheme for facilitating the progress of knowledge, not indeed with
an

* The above proposal being once the subject of conversation where I was in company, it was observed by a gentleman of known talents then present, “that such a scheme would make the science too easy, it would encourage quacks.” To this objection I confidently reply, that so far from encouraging quacks, it is from the apparent obscurity of science alone, that quacks are abundant. If every man were enabled in some degree to judge of the abilities, and to detect the false pretensions of another, where would quackery find a resting place?

an accuracy according to my wishes, but according to my abilities, and will now, for a short time at least, take my leave of you, with the request of the Moralist ;

— *Si quid novisti rectius istis,
Candidus imperti.*



an accuracy according to my wishes, but
according to my abilities, and will now
for a short time at least, take my leave of
you, with the request of the Morning,

— Si quid novisti rectius istis

Candidus impertit.

