FRIDAY, JUNE 1, 1883.

TOO MUCH RED TAPE.

THE relief of the party now at the international polar station at Lady Franklin Bay is attracting the attention of those interested in arctic matters. In this connection, Dr. C. H. Merriam has written a pungent but timely letter, printed in the *New York tribune* of May 5. The expedition of 1882 was prevented by ice from reaching a latitude where any effective aid might have been rendered, — a fact which made the alleged drunkenness and incompetency of the person in charge of the relief party of little practical consequence, except to his associates in the service. That they were not disturbed by it is evident from the fact that his despatch on similar service this summer has only been averted by remonstrances similar to and including Dr. Merriam's. Fortunately for the credit of the country and for Lieut. Greely's party, the plans have been changed, and it is probable that a person rendered competent for the position by experience and intelligence will be put in charge, and possibly accompanied by one or two qualified arctic experts in an advisory capacity.

It is well known, that, within the limits of the United States, the possession of a naval or military commission and a congressional appropriation fully qualify the holder for any scientific, technical, or moral undertaking. Some, however, have been audacious enough to doubt whether this law holds good in any foreign jurisdiction, and whether the floes of Baffin's Bay are sufficiently under its influence to recoil more readily before brass than before horn buttons. One thing is certain, the service concerned will be held to a rigid responsibility by geographers and the public; and if military prepossessions result in the rejection of any practicable (if unmilitary) means of succor, physical or mental, the condemnation of any ensuing failure or disaster will fall where by common sense and military rules alike it belongs.

It is well known to those acquainted with the subject, that good arctic navigators, masters, and seamen, good ships for encountering the ice, and every article necessary for equipping a properly fitted expedition, can, by paying for it, be got at St. Johns from the sealing-fleet and its equippers; that the bad ice-navigation of 1882, from all indications, is likely to be duplicated this season; that, to be more than a contemptible pretence, the relief-party must be composed, rank and file, of men who know their business, and have the grit to do it; that the advice and unbought assistance of all arctic investigators within reach may be had freely by the responsible head of the Signal-service.

Knowing this, and believing that officer willing and ready to do the best and most reasonable thing in the premises, we await final action in the confident belief that past mistakes are not to be repeated, and that the results of cutting red tape will be creditable alike to the service and to the country.

THE ALPHABET AND SPELLING-REFORM.

THE letters of the alphabet are so variously sounded in different countries that they could not be internationally employed, with phonetic consistency, without altering the whole orthography of the different languages. French and English, for example, could not, by any adaptation of Roman letters, be made phonetically intelligible equally to French and English readers. Try to write such phrases as '*la langue française*,' 'the English tongue,' so as to show the actual pronunciation of the words, and the utter hopelessness of the task will be apparent.

The letters *n* and *g* have three distinct sounds — different from their alphabetic sounds — in the three words in which they occur in the above illustrations. In the word '*langue*,' the *n* is used merely as a sign that the preceding vowel is nasal, and the *g* has the second of its two regular 'soft' and 'hard' sounds. In the word 'English,' the *n* has a separate sound, which is not that normally associated with the letter, and the *g* has the same sound as in '*langue*.' In the word 'tongue,' neither the *n* nor the *g* is separately pronounced; but the combination has a distinctive sound, which is not represented by any letter in the alphabet. This sound of the combined letters *ng* is the same as that of the *n* alone in the word 'English.' In 'hanger' and 'anger,' 'longer'

(one who longs) and 'longer' (comparative of long), 'singer' and 'linger,' etc., the same diversity in the use of these letters will be observed.

The sounds of the vowel letters in the above illustrations are equally diversified. The letter *a* in '*la*,' '*langue*,' and '*-çaise*,' has three sounds, the second of which does not exactly correspond to any English sound. The letter *e* in the words 'the' and 'English,' has two sounds, neither of which is normally associated with the letter as an alphabetic element, and the second of which does not correspond to any French sound. The letter *o* in 'tongue' has a sound which does not occur in French, and which is different from either of the regular 'long' or 'short' sounds of *o* in English. In addition to these diversities in the sounds of single letters, the above six words illustrate another anomaly in the use of combinations of letters to denote simple elementary sounds, — as *th* in 'the,' *sh* in 'English,' and *ng* in 'tongue.'

On account of the impossibility of reconciling the varied associations of sounds and letters in different languages, spelling-reformers are obliged to limit their efforts to a single language, and to disregard all hope of arriving at international uniformity. This latter could only be attained by means of such an alphabet as that of Visible speech, which obviates international difficulties by furnishing a *physiological* key to the sounds of all letters. But an important immediate use might be made of a few of the Visible-speech symbols, to supplement the Roman alphabet by furnishing letters for sounds that are at present unrepresented. Many of the anomalies of orthography would be removed in this way, and with a minimum of interference with established usage. It is well known that we have six consonant sounds, which, for want of separate letters, are written by digraphs, or by various combinations of letters. These are, —

sh — in *fish* [*ce* in *ocean*, *ci* in *vicious*, *ti* in *notion*, etc.].
zh[1] — [*s* in *pleasure*, *vision*; *z* in *azure*; *ge* in *edge*, *rouge*.]
th — in *thin*.
dh[1] — in *then*.
wh — in *when*.
ng — in *sing* [*n* in *ink*, *anger*, etc.].

Even objectors to spelling-reform would probably admit the desirability of adding letters to the alphabet for all acknowledged simple sounds. In the present paper, consonants alone are dealt with. Arbitrary letters have been often proposed, but they have not met with acceptance. The Visible-speech letters — being physiological pictures of the organic formation of their sounds, and in no sense arbitrary — might, with great advantage, be adopted in these cases.[1]

New characters being wanted to supply the consonant deficiencies in our system of letters, there is no need to seek for forms in old or foreign alphabets, or to devise a set of arbitrary characters, when Visible speech offers for our use its physiological letters ready to fill every gap in our own or other alphabets. The following are the symbols which, in this system, denote the six unrepresented consonant sounds in English. The physiological meanings of the symbols need not be here explained; but the reader can judge of the simplicity of the forms, and of their adaptability for intermixture with ordinary letters, by the annexed illustrations.

	V.-s. symbols.	Script forms.
sh	Ω	
zh	Ƨ	
th	ʊ	
dh	ʊ	
wh	ɔ	
ng	ɕ	

ILLUSTRATIONS.

fish,	sheep,	catch,	ocean,	caution,	vicious,
fiΩ,	Ωeep,	catΩ,	oΩan,	cauΩon,	viΩous,
edge,	rouge,	azure,	measure,	vision,	usual,
edƧ,	rouƧ,	aƧure,	meaƧure,	viƧon,	uƧual,
thin,	truth,	three,	author,	ethnic,	athwart,
ʊin,	truʊ,	ʊree,	auʊor,	eʊnic,	aʊwart,
then,	this,	breathe,	either,	gather,	within,
ʊen,	ʊis,	breaʊ,	eiʊer,	gaʊer,	wiʊin,
why,	what,	when,	whether,	awhile,	nowhere,
ɔy,	ɔat,	ɔen,	ɔeʊer,	aɔile,	noɔere,
sing,	ink,	uncle,	angry,	sanctify.	
siɕ,	iɕk,	uɕcle,	aɕgry,	saɕctify.	

The advantage of adopting the required supplementary letters from a scientific and universal alphabet is, that the same additions, as well as others from the same source, may

[1] This orthography of the intended sound nowhere occurs in practice; but Roman letters admit of no better way of writing the element.

[1] Those who are not acquainted with Visible speech, as a source from which letters may be drawn as wanted, may be referred to the judgment pronounced on the system by the most eminent authority on phonetics, Alexander John Ellis, F.R.S., who writes to the Reader (Aug. 5, 1865), "Until Mr. Melville Bell unfolded to me his careful, elaborate, yet simple and complete system, I had no knowledge of alphabetics as a science. . . . Alphabetics as a science, so far as I have been able to ascertain, — and I have looked for it far and wide, — did not exist."

be used, as required, in connection with any other language employing the Roman alphabet. For example: the sign of nasality in Visible speech is ʃ; and this character might very conveniently replace the *n* and *m* used in French, as in '*bon*,' '*temps*,' '*enfin*,' etc. The peculiar sounds of *ch*, *g*, and *w*, in German, as in '*nach*,' '*ich*,' '*auge*,' '*wie*,' etc., have very simple representatives in the physiological alphabet, which might, with great benefit, be adopted in the Romanic writing of German. The following illustrations exemplify these suggested improvements in French and German phonetic writing: —

boʃ, teʃ, eʃfiʃ, naC, iↃ, auϵe, ɔie.
bon, temps, enfin, nach, ich, auge, wie.

The alphabet that expresses the speech of America, England, France, Italy, and Spain, is a wonderfully imperfect instrument; but it is more imperfect in relation to the sounds for which it is used in America and England than in the other countries. Common sense revolts at the unnecessary difficulties imposed on the young by those who have got over the difficulties for themselves; for it must be acknowledged that the efforts of spelling-reformers have been resisted on no better ground than that of conservatism of error and defect, because established. Orthography has been considerably modified for local uses in Spain, and, to a more limited extent, in France. To the English-speaking races remains the task of effecting greater modifications to remove not only local, but international difficulties. For this purpose the alphabet itself must be reformed. This paper shows how such a reform could most hopefully be commenced. But why not have two alphabets? The new letters, being purely phonetic, would be a key to old letters, not only in English, but universally; and then the venerated orthography of our literature might remain undisturbed.

ALEX. MELVILLE BELL.

A STUDY OF THE HUMAN TEMPORAL BONE. — II.[1]

THE *labyrinth* is a complex receptacle of the internal ear, embedded within the petrosa, with its long axis parallel with this, and occupying a position intermediate to the tympanum and the internal auditory meatus. Its cavity is enclosed with compact walls for the most part not distinctly differentiated from the rest of the petrosa. It consists of three portions, named the vestibule, the semicircular canals, and the cochlea.

[1] Continued from No. 14.

The *vestibule* is an irregularly ovoidal cavity situated between the tympanum and the internal auditory meatus, communicating with the cochlea forward and inward, and the semicircular canals backward and outward. In its outer wall is the oval window, opening into the tympanum, but closed in the complete condition by the base of the stirrup. At the fore-part of its inner wall is a circular concavity, the *hemispherical fossa*,[1] at the bottom of which is a little group of minute foramina named the *middle cribriform macula*. The fossa is defined by an acute margin, which expands at the roof of the vestibule in a low *pyramidal eminence*. This is perforated by a group of minute foramina, the *superior cribriform macula*. On the roof of the vestibule, outwardly and behind the fossa indicated, is another less defined, named the *hemielliptical fossa*.[2] At the lower part of this is the aperture of the fine venous canal,[3] which communicates with the cleft on the posterior surface of the petrosa. Below the oval window is the *cochlear fossa*,[4] which, in the prepared bone, communicates freely with the cochlea, but, in the recent state, opens only at its fore-part into the vestibular passage of the same. Externally, above and behind the hemielliptical fossa, the semicircular canals communicate with the vestibule.

The *semicircular canals* are three horseshoe-shaped tubes, traversing the compact substance of the petrosa outwardly from the vestibule, with which they communicate by five apertures. They are compressed, cylindrical, and each has one end expanded in a pyriform dilatation named the *ampulla*. The *posterior canal*[5] is longest, is directed vertically outward, and extends lowest; the *superior canal* is directed vertically fore and aft, extends highest, and produces the conspicuous prominence on the front surface of the petrosa; and the *external canal*[6] is shortest, and is directed horizontally outward on a level with the ends of the superior canal, and the middle of the posterior canal. The ampullae of the superior and external canals occupy their fore-ends, are contiguous, and open into the vestibule above the oval window. The ampulla of the posterior canal occupies its lower end, and opens into the lower back part of the vestibule. The hind-end of the superior canal, and the upper end of the posterior canal, conjoin in a common canal, which opens into the upper back part of the vestibule; and the hind-

[1] Fossa hemispherica, recessus sphaericus.
[2] Fossa hemielliptica, recessus ellipticus.
[3] Aqueduct of the vestibule.
[4] Recessus cochlearis.
[5] Internal or inferior.
[6] Median, horizontal, least.