To his Dear Freeman
with kind regards
John A. Austin
SOUNDS AND THEIR RELATIONS

A complete manual of Universal Alphabets

ILLUSTRATED BY MEANS OF

VISIBLE SPEECH:

Pronunciation of English, in various shades, and of

other languages and dialects.

By Alex. Meesville Bell, F.E.S., &c.

SALERA MAGG.

J. P. RENNAKER, PUBLISHER

1851.

PHYSIOLOGICAL APACES OF THE SYMBOLS

[Diagram with symbols and anatomical representations]
DEDICATION

TO

ALEXANDER JOHN ELLIS, ESQ., F.R.S.


Dear Sir:

You were among the earliest to put the system of "Visible Speech"—then unpublished—to a series of practical tests; and your name—that of the highest authority on phonetics—in endorsement of the claims of the System, at once sufficed to bring it into notice. In expression of my grateful recollection of your kindness, and impartiality of judgement, I desire to dedicate to you this new exposition of Visible Speech, and manual of "Sounds and their Relations."

With much respect,

I am, Dear Sir,

Yours very truly,

THE AUTHOR.
PREFACE.

THE Inaugural Edition of "Visible Speech" was not intended, or adapted, for the popular introduction of the System, but for the use of the comparatively limited class of Students of Philology.

Visible Speech has now been brought into such wide practical applications—not only in this field of scholarship, but in the work of foreign Missions; in the treatment of Impediments and Defects of Speech; in teaching Articulation to the Deaf; in facilitating the acquisition of Foreign Languages; in the teaching of Elocution; and in the training of Common School Teachers—that a simpler and more practical Manual of the System was urgently called for. "SOUNDS AND THEIR RELATIONS," which could not be exemplified by means of ordinary letters, are here exhibited in the symbols of Visible Speech. This Work thus serves the double purpose of teaching the varieties and relations of all Linguistic Sounds, and, at the same time, presenting
the entire details of the system of Visible Speech, with simplicity and clearness. A largely extended sphere of utility will, it is hoped, be opened for the system by the publication of this popular manual, and by this application of the symbols to the exhibition of familiar and other "SOUNDS AND THEIR RELATIONS."

CONTENTS.

| Introduction | 1 |
| Section First—Explanation of the Visible Speech Symbols and Classification of Elementary Sounds | 5 |
| High and Low Lines | 5 |
| Straight Lines and Curves | 6 |
| Right and Left Lines | 7 |
| Upward and Downward Curves | 8 |
| Divided Lines | 9 |
| Closed Curves | 9 |
| Vocalized Consonants | 9 |
| Primary and Wide Vowels | 10 |
| Nasal Elements | 11 |
| Throat Consonants | 12 |
| Modifiers | 12 |
| Glides | 13 |
| Clicks, etc. | 14 |
| Section Second.—Phoneticizing Part First—Consonants | 19 |
| Lip Consonants | 19 |
| Back | 22 |
| Top | 25 |
| Point | 28 |
CONTENTS

Part Second — Vowels.
Front Vowels ........................................ 35
Back .................................................. 37
Mixed ................................................ 41
Round ............................................... 45

Section Third — Recapitulative Tables, etc. .... 59
Table of Consonants ................................. 59
Table of Vowels .................................... 60
Table of Glides .................................... 61
Table of Modifiers, etc. .......................... 61
Tables of English Elementary Sounds ......... 62
Exercises .......................................... 65

Section Fourth — English as Spoken, etc. ....... 69

I. Vocabulary Style.
Means of Acquiring Distinction ................. 72

II. Colloquial Style.
Means of Acquiring Distinction ................. 76
Extract from Nicholas Nickleby ............... 79
Illustration of Lowland Scotch ................. 85
“ of French ....................................... 87
“ of German ..................................... 88

Section Fifth — Supplementary Review, etc. ... 91
Essentials of Articulation ....................... 91
Application of Visible Speech to the teaching of Articulation to the Deaf .... 100

SOUNDS AND THEIR RELATIONS
INTRODUCTION.

All attempts to show the phonetic elements even of a single language by means of ordinary letters require the use of key-words, diacritic signs and arbitrary distinctions to a very inconvenient extent; and after all has been done that can be done, the result is imperfect, complex, and difficult of application; while the extension of the scheme to other languages is impracticable.

By means of the system of Visible Speech, all possible phonetic elements, and all the organic, mechanical and other relations of sounds, are expressed by symbols which have an absolute and uniform value in every context, so that speech of any variety is made legible in fac simile by readers in all countries. Those to whom the language is vernacular, and foreigners who have never heard the spoken tongue, must pronounce its Visible Speech transcript exactly alike.

The principles of Visible Speech are sufficiently simple for popular apprehension and application; and this work is designed to familiarize them to English-speaking readers. The entire system is here presented. Linguistic sounds of every variety — native, foreign, dialectic, etc.— are defined and exemplified; and “English as Spoken”— as well as the vocabulary pronunciation indefinitely indicated in dictionaries — is fully illustrated. This cosmopolitan scheme of speech-symbols cannot be
INTRODUCTION.

better propagated than by its application to exhibit the pure phonetics of the language of the two foremost nations in the world—Great Britain and America.

The explanation of Visible Speech symbols contained in the next section should be carefully perused, to enable the reader to profit by the unique property of the letters, in facilitating the acquisition of foreign sounds. The correlation of symbols to sounds will be found to be so close and obvious, that when the elements of any one language are learned, the pronunciation of any other language, will, through its Visible Speech letters alone, be mastered with ease and certainty.

The organic basis of the symbols is exhibited in the Frontispiece.

SECTION FIRST.

EXPLANATION OF THE VISIBLE SPEECH SYMBOLS AND CLASSIFICATION OF ELEMENTARY SOUNDS.
Sounds and their Relations.

SECTION FIRST.

EXPLANATION OF THE VISIBLE SPEECH SYMBOLS AND CLASSIFICATION OF ELEMENTARY SOUNDS.

High and Low Lines.

Among ordinary letters, some are of uniform height, as:

\[ a c e m n o r s u v w x \]

and others extend above or below the general line, as:

\[ b d h k l t f \; g j p q y \]

This diversity is pleasing to the eye, but it expresses no principle. In Visible Speech letters, while the eye is gratified with the same variety, the differences are made to express important distinctions. Thus:

All characters which extend above or below the general body of the letters are VOWELS. For example:

\[ \text{universal alphabet of visible speech} \]
Here, every eye distinguishes at once the vowels from the consonants, and also perceives at a glance the number of syllables in each word, as every vowel forms a syllable.

Further, the ascent or descent of the vowel lines expresses a corresponding difference in the organic formation of the sounds. High lines denote sounds modified by a high position of the tongue; low and intermediate lines denote sounds modified by relatively lower positions of the tongue. Thus the reader sees that the vowels are all high in the words visible speech; and that the first vowel is low, and the other vowels are intermediate, in the word alphabet.

*Straight Lines and Curves.*

In connection with the preceding explanation of high and low lines, the reader will now note the principle that all vowel symbols consist of straight lines, and that all consonant symbols consist of curves.

The physiological bases of this principle of symbolization are:

I. The linear form which the aperture of the glottis assumes in vocalization; for which reason a straight line is the sign of voice.

II. The lines of curvature of the tongue and the lips in forming the different consonant elements (the face being turned to the right); on which account a curve, according to the direction in which it is drawn, is the sign of all the organs of articulation. Thus:

- Back (of tongue), Top (of tongue), Point (of tongue), Lip.
- Right and Left Signs.

Among ordinary letters, some have their distinctive parts on the right side, and some on the left, as:

- b e f h k p r, etc.; a d j q y, etc.;

but the difference conveys no meaning. In Visible Speech letters, right and left have a distinct organic signification. All curves turned to the right represent consonants modified by the lips, as:

- (Lip) C J D D D

All curves turned to the left represent consonants formed by the back of the tongue, as:

- (Back) C C C C C

On the same principle "mixed" letters—combining one of the curves as primary with its opposite as secondary—show that the phonetic effect of the primary curve is modified by that of its opposite. Thus:

- (Back-mixed) C (Lip-mixed) D

In vowel letters, distinctive signs on the right side
of the straight line denote sounds modified by the front of the tongue, as:

(Forward) ⅠⅠⅠⅠⅠ ⅠⅠⅠⅠⅠ

Distinctive signs on the left side of the straight line denote sounds modified by the back of the tongue, as:

(Backward) ⅠⅠⅠⅠⅠ ⅠⅠⅠⅠ

On the same principle, vowel letters which combine right and left signs denote elements that are modified simultaneously by both the back and the front of the tongue, as:

(Mixed) ⅠⅠⅠⅠⅠ ⅠⅠⅠⅠ

Upward and Downward Curves.

In accordance with the principle of symbolization explained at page 7, all upward curves represent consonants which are formed by the arched middle or top of the tongue, as:

(Top) Ⅰ Ⅰ

All downward curves (the ends of which are turned upwards) represent consonants which are formed by the raised point of the tongue, as:

(Point) Ⅰ Ⅰ

"Mixed" curves denote elements in which the effect of the primary curve is modified by that of its opposite, as:

(Top-mixed) ⅠⅠ Ⅰ Ⅰ

(Point-mixed) Ⅰ Ⅰ

EXPLANATION OF VISIBLE SPEECH SYMBOLS.

Divided Lines.

DIVIDED, or indented, curves denote consonants which have lateral or interstitial apertures for the emission of the breath, as:

(Divided) ⅠⅠⅠⅠⅠ

The corresponding primary (or centre aperture) consonants are:

(Primary) ⅠⅠⅠⅠ

Divided, or barred, vowel lines denote sounds which have a double modification, being "rounded" by the lips as well as moulded by the tongue. Thus:

(Labialised or "Round" Vowels) ⅠⅠⅠⅠⅠ ⅠⅠⅠⅠ ⅠⅠ

Closed Curves.

All open curves (Ⅰ Ⅰ Ⅰ Ⅰ etc.) denote consonants in forming which the breath (modified by the symbolized organs) is freely emitted. Closed curves denote that the breath is stopped and shut in by the symbolized organs. Thus:

(She) ⅠⅠⅠⅠⅠ ⅠⅠⅠ ⅠⅠⅠ ⅠⅠ

Vocalised Consonants.

The difference between non-vocal and vocal consonants is uniformly expressed by a straight line
— the sign of voice — drawn within the consonant curve to denote the addition of vocality. Thus:

(Non-Vocal) ɒ ɜ ʌ ʊ ɐ ɑ ɔ ɒ ː ɪ ɛ ɐ ʊ ɐ ɒ
p b f t s h ɹ ʃ ʒ ʃ k

(Vocal) ɒ ɜ ʌ ʊ ɐ ɑ ɔ ɒ ː ɪ ɛ ɐ ʊ ɐ ɒ
b v d r ɹ ʃ ʒ ʃ k

The mutual relations of all these elements are thus clearly embodied in the forms of the letters.

*Primary and Wide Vowels.*

A **solid** point on a vowel line denotes a “primary” vowel; an open hook on a vowel line denotes a “wide” vowel. Thus:

(Primary) ɪ ɨ ɪ ə ɪ ɛ ɜ ɒ ʌ ɒ
(Wide) ɪ ɨ ɪ ə ɪ ɛ ɜ ɒ ʌ ɒ

Primary and wide vowels have nearly the same formation, but the “wide” vowels have an additional expansion of the soft palate, enlarging the back cavity of the mouth. The phonetic resemblances and characteristic differences will be perceived in pronouncing the following pairs of words:

(Primary) ɪ ɨ ɪ ə ɪ ɛ ɜ ɒ ʌ ɒ
 sel and as all pool
(Wide) ɪ ɨ ɪ ə ɪ ɛ ɜ ɒ ʌ ɒ
  ill and ask on pull.

*Explanation of Visible Speech Symbols.*

**Nasal Elements.**

All nasal elements are distinguished by a waving line (ʃ or ʒ). In consonants the sign of nasality is incorporated with the letter, as:

![Symbols]

These three letters will be observed to consist merely of the nasal sign added to the letters

![Symbols]

Hence the relation between ɡ and ʊ, ɑ and ʌ, and b and m, is exactly represented in the symbols.

Non-vocal forms of the nasal consonants are represented on the same principle, the voice-line being merely omitted. Thus:

![Symbols]

For nasalized vowels the sign of nasality is written separately, as in:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Pronunciation</th>
</tr>
</thead>
<tbody>
<tr>
<td>ʊ or ʒ (nasalized b or k)</td>
<td>in (French)</td>
</tr>
<tr>
<td>ɪ (nasalized “e mute”)</td>
<td>as “</td>
</tr>
<tr>
<td>ɹ, ʃ, ʒ, ʒ̃</td>
<td>as, on</td>
</tr>
</tbody>
</table>

In printing languages in which nasalized vowels are common — such as French, Portuguese, etc. — the sign of nasality might, for convenience, be incorporated with the vowel symbols.
SOUNDS AND THEIR RELATIONS.

Throat Consonants.

Besides the consonants formed by the tongue and the lips, a few have their seat farther back——in the throat. These are:

O "Aspirate;" a simple and nearly silent aspiration. or r.
θ "Throat;" a rough aspiration—the throat contracted = whisper.
η "Throat-voice;" the former, vocalised = hoarseness.
χ "Catch;" a stoppage of the breath by closing the throat = cough.

Modifiers.

The normal alphabet of Visible Speech includes fifty-two consonants and thirty-six vowels; but these numbers are susceptible of indefinite increase by means of modifying signs to denote slight differences in the formation of the elements. Thus:

ā “Inner;” element formed farther back than the normal position.
ē “Outer;” forward
ā “Closer;” more closely
a “Opener;” openly

These modifiers are rarely needed in the writing of languages, but they give a desirable power of minute accuracy, when it may be necessary. One common peculiarity of English utterance requires the use of the “outer” modifier; this is the formation farther forward than normally, of k and g in the words kind, guard, etc. The ordinary representation of this effect (keek-tud, or kyind), is an exaggeration.

EXPLANATION OF VISIBLE SPEECH SYMBOLS.

There is no ce or ye in the sound, but merely an anterior formation of the k or g. Thus:

\[\text{kind} \quad \text{guard}\]

Glides.

The elements of speech include, besides vowels and consonants, a class of intermediate transitional sounds denominated “glides.” In the syllables day, air, dit, box, now, know, etc., glides are heard as the second elements of diphthongs.

The principal glides are indefinite sounds of y, w, and r, as heard in the above words; but almost every vocal consonant may have its own approximating glide. A simple “voice-glide,” without consonant approximation (\(\text{i}\))——a non-syllabic effect of the vowel \(\text{i}\)——is very common in some dialects; as also the same element rounded (\(\text{I}\)); and a simple breath-glide (\(\text{r}\))——a transitional breathing——is a characteristic of Irish utterance. The “breath-glide” differs from the aspirate \(\text{h}\), in being an emission from a consonant position, and not directly from the throat.

Glide symbols are formed by combining a voice-line with the appropriate consonant curve. Thus:

\[\text{v glide} \quad \text{r glide} \quad \text{w glide}\]
CLICKS, ETC.

The symbol < ("suction") denotes that the preceding element is formed with ingoing air. Thus:

D<
sniffing.  <

The symbol • ("stop") denotes that the breath is held in while the organs retain the position for the preceding element. Thus:

O1•
•

The symbol s ("suction stopped") denotes an effort of suction, but without inhalation. Thus:

D:

The symbol v ("emission stopped") denotes an effort of expiration, but without emission from the throat. Thus:

D•

The symbol 1 denotes lateral openings (or a single lateral opening), after a shut position. Thus:

O1 1 finished by removing the sides instead of the point of the tongue.
O1 1 finished by removing one side of the tongue.
O1 1 driver's click to a horse.

The symbol 1 denotes vibration. Thus:

1 Throat vibration — epiglottal trill.
C1 Back vibration — uvular trill.
U1 Point vibration — lingual trill.
1 Lip vibration.

EXPLANATION OF VISIBLE SPEECH SYMBOLS.

The symbol ' denotes hiatus, as in separating the two words in the compound bed-time.
The symbol ' denotes abruptness.
The symbol 1 denotes the holding of a sound, or of an organic position. Thus:

(long vowels) 1 1

(loud consonants) O1 1 1 1 1

The symbol e ("to back") denotes that the tongue is inverted to the back of the mouth. Thus:

O•

The symbol s ("to lip") denotes that the tongue is protruded to the lips. Thus:

O•

The symbol • blowing an object from the point of the tongue.

The symbol 1 ("plus") denotes that the elements between which it is placed are pronounced simultaneously. Thus:

O O / pronounced with the lips contracted.
O O / modulated gutturally.

A symbol for "whistle" (©) and "vocalized whistle" (©) complete the scheme of organic modifiers.

The symbol ' ("stress") denotes an accented syllable; and the same sign inverted ('), denotes an emphatic word. The stress symbols are placed on
SOUNDS AND THEIR RELATIONS.

the left side, or before, the syllable or word to which they refer.

In Visible Speech, in printing of English, the rule is adopted that accent is always on the first syllable, unless otherwise expressed. Thus:

 CONTRAST (noun) CONTRAST (verb)

SECTION SECOND.

PHONETICIZING.
SECTION SECOND.

PHONETICIZING.

THE various vowel and consonant symbols de-
fine positions of the tongue, lips, etc., and an
outward effort of breath, or of voice, is implied,
to phoneticize the symbols.

The following illustrations include all the elements
in the Visible Speech universal alphabet.

PART FIRST.—CONSONANTS.

1. Lip Consonants.

The symbol ʘ (“lip”) implies that the breath is
compressed by passing between the approximated
lips. The phonetic effect is that of

ʘ .................. blowing to cool.

Maintain the same position and sound the voice,
and the effect will be that of “lip-voice.”

ʘ .................. ɯ (German).
SOUNDS AND THEIR RELATIONS.

Maintain the same position and draw back the tongue, so as to form a cavity between it and the teeth, and the effect will be that of "lip-divided."

\[ \text{Maintain the same position and sound the voice, and the effect will be that of "lip-mixed voice."} \]

Adjust the labial aperture so that the breath is obstructed at the centre while it escapes at the sides, and the effect will be that of "lip-divided."

\[ \text{The normal mode of forming "lip-divided" is by placing the lower lip on the edges of the upper teeth; but the phonetic effect is almost the same if the centre of the lower lip is applied to the upper lip instead of to the teeth. This peculiarity would be represented by the sign } > \text{ ("to lip") after the } 3. \]

The effect of "lip-divided" is also producible by placing the lower teeth on the upper lip. The modifier \( {\text{"outer"}} \) after 3 would indicate this unpainful formation.

Maintain the (normal) position for 3 and sound the voice, and the effect will be that of "lip-divided voice."

PHONETICIZING.

Maintain the "lip-divided" position and draw back the tongue, (as for 2) and

\[ 3 \text{ is modified into } 3 \]

\[ 3 \text{ " " } 3 \text{ (gutturized variety of } f \text{ and } v \) \]

Allow the lips to close entirely, and the effect will be that of "lip-shut."

\[ \text{The sign } > \text{ after a final } 0 \text{ shows that the lips separate after closure, to give the consonant an audible completion. Thus:} \]

\[ D> \text{ final } f. \]

While the lips are closed endeavour to sound the voice—only a momentary murmur can be made—and the effect will be that of "lip-shut-voice."

\[ 3f \text{ final, } \]

Close the lips as before and allow the breath to escape through the nose, and the effect will be that of "lip (shut) nasal."

\[ D \text{ non-vocal } m. \]

Maintain the same position and sound the voice through the nose, and the effect will be that of "lip (shut) nasal-voice."

\[ B \text{ nasal.} \]
2. Back Consonants.

Approximate the back of the tongue to the soft palate, so as to squeeze the breath in the narrow guttural passage, and the effect of the “back” consonant will be heard:

C ... gh (German nach, and Scotch loch).

The normal position of the tongue for C is at the middle of the soft palate; but the tongue may be depressed to the edge, or elevated towards the top, of the velum. These varieties are indicated by modifiers. Thus:

C: ...........“inner,” or low formation.
C: ....................normal.
C: ...........“outer,” or high formation.

Retain the position for C and sound the voice, and the effect will be that of the “back-voice” consonant.

C: ..........................“gh in sou’gh (Scotch);
or of the “back-mixed voice”

C: ..........................labialized burr.

In forming the “back-divided” elements, the high back of the tongue intercepts the breath by pressing on the top of the soft palate, while emission takes place over the sides of the root of the tongue. The non-vocal form is:

C: ..........................hiss of water-fowl.

The vocalized form is:

C: ..........................l in loch (Gaelic).

The “back-divided” position is difficult to unaccustomed organs; but the modification of a common l by guttural compression (the mixing of ω and C) is much easier, and in phonetic effect is almost the same. Thus:

ω + C: ...............nearly equal to E.

The “back-divided” consonants labialized are C, E. These do not occur as linguistic sounds.

Put the back of the tongue in close contact with
the soft palate, so as to stop the breath, and the 
effect is that of the “back-shut” consonant:

\[ \mathbb{G} \] \text{......} \mathbb{G} \text{ in go.}

\[ \mathbb{G} \] \text{......} \text{final } \mathbb{G}.

Maintain this shut position and endeavor to 
sound the voice (only a momentary murmur will 
result) and the effect is that of the “back-shut 
voice” consonant:

\[ \mathbb{G} \] \text{......} \mathbb{G} \text{ in go.}

\[ \mathbb{G} \] \text{......} \text{final } \mathbb{G}.

These “back-shut” elements have the same 
varieties of “inner” and “outer” formation as the 
primary back consonants. Thus:

\[ \mathbb{G} \] \text{...... “inner” or low. \( \mathbb{G} \) \text{...... “inner” or low.}

\[ \mathbb{G} \] \text{...... “normal.” \( \mathbb{G} \) \text{...... “normal.”}

\[ \mathbb{G} \] \text{...... “outer” or high. \( \mathbb{G} \) \text{...... “outer” or high.}

Maintain the “back-shut” position and allow the 
breath to escape through the nostrils, and the 
effect is that of “back (shut) nasal.”

\[ \mathbb{G} \] \text{...... non-vocal } \mathbb{G}.

Maintain the same position and sound the voice 
through the nose, and the effect is that of “back 
(shut) nasal voice.”

\[ \mathbb{G} \] \text{...... } \mathbb{G}.

Differences of high or low formation of \( \mathbb{G} \) make 
scarcey any appreciable difference in phonetic ef-
fect. The \( \mathbb{G} \) in \text{glo} (sing) is naturally high, to 
assimilate with the high vowel \( \mathbb{I} \); and the \( \mathbb{G} \) in 
\text{glo} (song) is naturally low, to assimilate with the 
low vowel \( \mathbb{J} \). Differences dependent on such assim-
illations do not require to be written.

The normal position of \( \mathbb{G} \) and \( \mathbb{G} \) before \( \mathbb{J} \) or \( \mathbb{I} \) 
would be mid or low; but an Anglican peculiarity 
results from the use of high consonants before low 
vowels, as in \text{glo} \text{ (kind), glo (guard), glo (girl), etc.}

3. Top Consonants.

The symbol \( \mathbb{G} \) implies that the tongue is arched, 
the point depressed, and the top approximated to 
the roof of the mouth, while the breath is com-
pressed between the tongue and the palate. The 
effect is that of the “top” consonant:

\[ \mathbb{G} \] \text{...... “ck in ich (German).}

\[ \mathbb{G} \] \text{...... “k in bue.}

Maintain the same position and sound the voice, 
and the result is the “top-voice” consonant.

\[ \mathbb{G} \] \text{...... “y in ye, yet, you, etc.}

“Inner” and “outer” varieties are formed by 
placing the top of the tongue backward towards
the commencement of the soft palate (\( \sigma \), \( \sigma \)); or forward towards the upper gum (\( \sigma \), \( \sigma \)).

While sounding \( \sigma \) allow the fore part of the tongue to rise a little, so as to direct the breath forwards, and the effect will be that of the “top-mixed” consonant.

\[ \sigma \]

\( \sigma \) (French).

Maintain the same position and sound the voice and the result will be the “top-mixed-voice” consonant.

\[ \sigma \]

\( \sigma \) in azure, pleasure, etc.

\( j \) (French).

“Inner” and “outer” positions affect the quality of these elements by approximating \( \sigma \) to \( \sigma \), (\( \sigma \)). or to \( \sigma \). (\( \sigma \)).

Apply the top and front of the tongue to the roof of the mouth and the front wall of the palatal arch,—while the point is depressed behind the lower teeth,—and squeeze the breath over the high sides of the tongue, and the effect will be that of the “top-divided” consonant:

\[ \sigma \]

defective form of s.

Maintain the same position and sound the voice and the result will be the “top-divided-voice” consonant.

\[ \sigma \]

\( g \) in gli (Italian).

\( f \) in colleen (Irish).

Apply the fore part of the tongue (between the middle and the point) to the rim of the palatal arch, and force the breath over the level sides of the tongue, and the hissing effect will be that of the “top-mixed-divided” consonant:

\[ \sigma \]

\( h \) (Welsh).

Maintain the same position and sound the voice and the result will be the buzzing sound of the “top-mixed-divided-voice” consonant:

\[ \sigma \]

\( dh \) (Zulu).

Apply the arched top of the tongue to the roof of the mouth so as completely to stop the breath, and the effect will be that of the “top-shut” consonant:

\[ \sigma \]

“cerebral” \( f \) (Sanskrit).

\( f \) thick \( f \).

Maintain the same position and endeavor to sound the voice (only a momentary murmur can
28. SOUNDS AND THEIR RELATIONS.

be made) and the result will be the “top-shut-
voice” consonant:

\[ \text{"cerebral" } d \text{ (Sanskrit).} \]

\[ \text{\textit{f} in \textit{Magyar} (Hungarian).} \]

\[ \text{"thick } d. \]

The audible removal of the tongue in pro-
nouncing a final \& or \& is indicated by \& after the consonant.

Apply the top of the tongue to the roof of the
mouth as for \&, and pass the breath through the
nostrils, and the effect will be that of the “top
(shut) nasal” consonant.

\[ \text{\"thick \& (non-vocal).} \]

Maintain the same position and sound the voice
and the result will be the “top (shut) nasal-
voice” consonant.

\[ \text{\textit{gw} in \textit{Boulogne} (French).} \]

\[ \text{"thick } n. \]

4. Point Consonants.

RAISE the point of the tongue towards the rim
of the palatal arch and allow the breath to pass

over the tip only, and the effect will be that of
the “point” consonant.

\[ \text{\&...............non-vocal } r. \]

\[ \text{\& in \textit{theatre} (French).} \]

Maintain the same position and sound the voice,
and the result will be the “point-voice” conso-
nant.

\[ \text{\&................. } r \text{ in \textit{ray, read, ride}, etc.} \]

The passage of the breath over the end of the
tongue produces more or less of a flutter of the
organ. When this amounts to a trill, the sign
of vibration is added. Thus:

\[ \text{\&.................trilled } r. \]

The phonetic quality of \& is greatly affected by
“inner” and “outer” positions of the tongue.
These are:

\[ \text{\&.................tip within the palatal arch.} \]

\[ \& (normal) tip pointed to rim of \" \]

\[ \&.................tip flattened towards upper gum. \]

Even the deformity of protruding the tongue to
the upper lip in forming \& (\&r) is sometimes
met with.

The sound of \& or \& is often substituted for
that of \&; and more frequently the “mixed” sound
\&+\& is heard instead of \&. But the latter should
be purely lingual, and without any modification
from the lips.
While sounding $\omega$ allow the front of the tongue behind the tip to become slightly convex, throwing the breath directly forward between the broadened point and the upper gum, and the effect will be that of the "point-mixed" consonant.

Maintain the same position and sound the voice, and the result will be the "point-mixed-voice" consonant.$\omega$

No elements are more affected than these by slight changes of organic adjustment. The principal varieties are:
- $\omega$, close position, almost stopping the issue of breath.
- $\omega$, open position, allowing too much breath to escape.

$\omega$, "inner" position, causing the sound to be approximated to $\Omega$. $\omega$, "outer" position, bringing the tip of the tongue too near the teeth.

Place the point of the tongue in contact with the rim of the palatal arch, leaving free passage for the breath, without friction, over the sides of the tongue, and the effect will be that of the "point-divided" consonant:

$\omega$ non-vocal $l$.

Maintain the same position and sound the voice, and the result will be the "point-divided-voice" consonant.$\omega$

The lateral apertures for $\omega$ are so large, that the voice has almost the purity of a vowel; whence this element has been called a "semi-vowel. The nasals $\delta$ (m) $\omega$ (n) and $\xi$ (ng) equally deserve that name, as the voice, in forming them, is unaffected by friction in the nostrils; but $r$, which is always fricative or vibratory before a vowel, has been wrongly included in the same category. The English custom of softening final $r$ into a "glide" may have misled grammarians into the classifying of consonant $r$ with $l$, as a "semi-vowel."

The "inner" and "outer" varieties of $\omega$ are:

$\omega$, the point of the tongue within the palatal arch.

$\omega$, the point of the tongue on the teeth.

Apply the edges of the tongue, all round, to the teeth, leaving only interstitial apertures for the breath over the sides of the tip, and the effect
SOUNDS AND THEIR RELATIONS.

will be that of the "point-mixed-divided" consonant.

\[ \text{th in thin.} \]

Maintain the same position and sound the voice and the result will be the "point-mixed-divided-voice."

\[ \text{(th) th in then.} \]

[In the Inaugural edition of Visible Speech the symbols Ω ο ω Ω were associated with the sounds now assigned to Ω ο ω Ω, and vice versa. Experience has shown that the present arrangement is preferable.]

Apply the edges and point of the tongue to the rim of the palatal arch, so as entirely to stop the breath, and the effect will be that of the "point-shut" consonant.

\[ \text{t} \]

Maintain the same position and endeavour to sound the voice (only a momentary murmur can be produced) and the result will be the "point-shut-voice" consonant.

\[ \text{d} \]

The audible removal of the tongue from the palate to complete these elements when final is indicated by > after the Ω or Ω.

PHONETIZING.

Apply the tongue to the rim of the palate, as for Ω, and pass the breath through the nostrils and the effect is that of the "point (shut) nasal" consonant.

\[ \text{m (non-vocal).} \]

Maintain the same position and sound the voice, and the result is the "point (shut) nasal-voice" consonant:

\[ \text{m} \]

"Inner" and "outer" varieties of Ω ο Ω Ω are formed by applying the tongue to the front wall of the palatal arch (Ο., etc.); or to the teeth (Ο., etc.).
PART SECOND.—VOWELS.

All persons can pronounce separately the "long" or "name-sounds" of the common vowel letters, A, E, I, O, U;

but few persons can, with the same definiteness, sound independently the so-called "short" vowels: \( \text{@, \varepsilon, \iota, \omicron, \omicron \varepsilon} \).

This power should be acquired in reference to all vowels. It will be found the readiest means of cultivating the ear and organs of speech, for the recognition and reproduction of foreign sounds.

Local habit associates certain peculiarities of "quantity" or "quality" with familiar elements; but these characteristics should be lost sight of in the attempt to individualize the vowels of the Visible Speech scale. "Long" O and A, for example, are diphthongal in English usage; but the reader must learn to detach the radical vowel from its "glide" termination, and to pronounce the former by itself. This is often difficult at first, but facility of analysis will result from practice.

PHONETICIZING.

The difference between vowel sounds separately pronounced, will sometimes appear so slight that the ear may be perplexed to discriminate them; but in the compounds of speech the minutest shades of elementary variety create unmistakable distinctions.

Each of the vowels in the following series should be made the subject of exercise, until it can be pronounced "long" or "short" in quantity, and unchanged in quality.

1. Front Vowels.

"High-Front" I. The position of the tongue for this vowel is the same as that for the "top" consonant \( \text{\&} \). The phonetic difference between I and \( \text{\&} \) is, that, for the vowel, the voice is unaffected by friction in the oral aperture; while, for the consonant, the vocal sound is modified by friction or buzzing in the oral aperture.

This vowel is always long in English accented syllables. It is the alphabetic, or name-sound of the letter E.

\( \backslash e \).................. (long) ee in feel.

\( \backslash i \).................. (short) i in fille. (French)

"High-Front-Wide" I. The position of the tongue for this sound is almost the same as that for I. The phonetic difference arises chiefly from the
addition of "wide" formation (explained at p. 10) which has the effect of dulling the quality of primary vowels.

This vowel is always short in English. It is the regular sound of "short i."

I. (long) i in ill (American).
I. (short) i in ill.

"Mid-Front" I. In forming this vowel, the aperture between the tongue and the palate is farther back than for i, and the cavity in front of the tongue is, in consequence, enlarged.

In English accented syllables this vowel is always followed by the y-glide (♀), forming the diphong iy, as in day, name, late, aid, etc. The diphongal iy is never pronounced before r. iy is the alphabetic name-sound of the letter A.

I. (long) a in day (Scotch).
I. (short) e in est (French).

"Mid-Front-Wide" I. The dulling effect of "wide" formation is very manifest in this, as compared with the primary element. This sound is used instead of the preceding, before r (r-glise), as in care, air, ear, etc.; but many speakers pronounce the broader iy in these cases. iy is also heard instead of iy, in the unaccented syllables ed.
deavour to pronounce this sound of oo, without using the lips, and the "High-Back" vowel will be heard. In this way, an unfamiliar and unknown elementary sound will be at once, and with uniformity, obtained from every mouth.

There is, however, a possibility of imitating "round" quality without using the lips (as practised by ventriloquists) and it will be well, therefore, in order to prevent involuntary inner rounding, to disarticulate oo, etc., by spreading the lips with the fingers, during early experiments.

3. ........... (long) oo in laugh (Gaelic).
1.......................... (short).

"High-Back-Wide" 1. Endeavour to pronounce the sound of oo in good, without using the lips, and the "High-Back-Wide" vowel will be the result. The sound will be observed to resemble u in up; and Cockney speakers always pronounce this "wide" sound for "short U" (instead of u) even in accented syllables. Unaccented a — as in the terminations -tion, -tious, -tious etc. — usually takes "High-Back-Wide" quality.

Pronounce the terminations -tion, -tious, etc., in contrast with similar syllables under accent, and the resemblance and slight difference will be appreciated. Thus:

passion shun; valour lurks;
Unaccented a as in abode, sofa, etc., takes this sound in careful utterance; but the less definite sound ə (see "Mid-Mixed-Wide") is more usually heard in these cases.

It.................... (long) a in path.
I.................... (short) a in pathetic.

"Low-Back" ə. This deep hollow sound does not occur in English. It is the regular sound of "short U" in Scotch, as in up, come, etc. The "round" or labialized form of this vowel (ฎ) is the common English sound of aw in law, a in all, etc. Endeavour to pronounce the word aw, without using the lips, and the "Low-Back" vowel will be the result.

This sound is difficult to unaccustomed organs, but by the above analytic experiment it will be obtained at once from any English speaker.

Pronounce the following contrasts:

<Object> (Cockney).
Qə ə (normal English).
Qə ə (Scotch).

I.................... (long) ə in ugh (Scotch).
I.................... (short) ə in up (Scotch).

"Low-Back-Wide" ə. This sound—the broadest of all vowels—is heard chiefly before r and silent ə in English, as in arm, arms etc. It occurs also in father, and only a few other words.

---

The "round" form of this vowel is the sound of ə in on, order, etc. Endeavour to pronounce the latter vowel, without using the lips, and the "Low-Back-Wide" vowel will be the result.

I.................... (long) ah.
I.................... (short) man (Scotch).

---


The term "Mixed" means that the qualities of "Back" and "Front" vowels are combined in the intermediate or "Mixed" varieties. Thus: endeavour to modify the "Mid-Front" (ą) by simultaneously sounding the "Mid-Back" (ə), and the result will be the "Mid-Mixed" vowel—the sound of "e mute" (French) as in de, le, que, etc. Thus:

J: {[ə]}

The "Mid-Mixed-Wide" vowel is the central or neutral point in the vowel scale, being the sound that is naturally produced when the organs are perfectly at rest. The ordinary English pronunciation of the Article "a" exemplifies this neutral sound.

---

"High-Mixed" ə. This vowel is never heard in English, but is characteristically American, being the regular sound of e and i in her, sir etc. By "mixing" the "High-Front" (ά) with the "High-
Back” (delabialized ow), the “High-Mixed” sound will be produced.

The process of “mixing” is not so easy at first, as that of “rounding” or “unrounding;” but after a little practice, the effort to blend the two vowels will be successful in evolving the appropriate “mixed” quality. Thus:

\[ \text{i} \rightarrow \text{I} \]

\[ \text{I} \rightarrow \text{I} \] (long) i in sir (American).

\[ \text{I} \rightarrow \text{I} \] (short).

“High-Mixed-Wide” I. This vowel will be produced by “mixing” the “High-Front-Wide” (i) with the “High-Back-Wide” (delabialized ow in good). The sound is very common in English unaccented syllables, although it has never been recognized by orthoepists. The High and Mid-Front vowels (unaccented) all tend to this sound in careless utterance; as in return, limit, saint Paul’s, captain, there is, etc. If a score of persons were asked to pronounce the Article “the” by itself,—or to sing it—they would probably illustrate half the gamut of High and Mid vowels; yet nineteen of the twenty would pronounce the word with hardly a shade of difference as an unaccented particle in a phrase, as:

\[ \text{I} \rightarrow \text{I} \] the one, the man, the thing.

This habitual pronunciation of unaccented “the” illustrates the “High-Mixed-Wide” vowel.

The plural termination -es,—as in laces, leases, ashes, etc.—has the same sound, but -es as part of a verb does not exhibit this tendency, being generally pronounced with “Mid-Front-Wide” vowel. Thus:

(nouns) ounes ounes ounes

places, wishes, watches.

(verbs) ounes ounes ounes

The word “pretty”—marked “pritty” in pronouncing dictionaries—is more usually heard with the “High-Mixed-Wide” vowel. Thus:

\[ \text{I} \rightarrow \text{I} \] pretty.

The tendency of all unaccented vowels is from strong to weak, (i.e., from “primary” to “wide”) and from definite to neutral (i.e., from “Front” or “Back” to “Mixed”); also from lower to higher. Under the influence of these tendencies, the “High-Mixed-Wide” is one of the commonest vowels in speech.

\[ \text{I} \rightarrow \text{I} \] (long).

\[ \text{I} \rightarrow \text{I} \] (short) the.

“Mid-Mixed” I. This is not an English sound, but it is very common in the dialects of Ireland, being given to almost all unaccented vowels indiscriminately, as in genuine, reply, ordinary, average, wickedness, cattle, elephant, etc.
SOUNDS AND THEIR RELATIONS.

This is also one of the most common elements in French, being the vowel heard in the particles
de, le, ne, sa, se, te, etc.

1. (long) interverbal drawl.
1. (short) "e mute" (French).

"Mid-Mixed-Wide" 1. This sound has been already described as the central vowel of the scale, neutral in sound between "Back" and "Front," and between "High" and "Low." It is heard in unaccented syllables instead of the "Low-Front-Wide" vowel, as in:

The land of Greenland.
The alderman's man.
They had had it.

The terminations -al, -ance, -ant, -able, etc. make this sound of very frequent occurrence. It is usually heard also instead of the "Low-Mixed-Wide" vowel in unaccented er, yr, etc.; as in:

paper, meagre, martyr, perceive.

1. (long).
1. (short) a (article).

PHONETIZING.

"Low-Mixed" 1. This sound does not occur in English, except in dialects, as in Somersetshire "str;" (str) and in the Cockney hawker's call:

only a penny, a penny a piece.

This vowel will be produced by "mixing" the sound of i in ill with that of a in up (Scotch). It is but slightly different in phonetic effect from the "Low-Front-Round" vowel (au French, or a German).

1. (long) i in sir (Somerseet).
1. (short) e in penny (Cockney).

"Low-Mixed-Wide" 1. This is the regular English sound of er, ir, yr, etc. when final or before a consonant. The true quality of the vowel will be obtained by "mixing" the sounds of a as in ak and an. Thus j=I=I.

1. (long) e in err.
1. (short) e in perform.

4. Round Vowels.

The term "Round" refers to the effect produced on a lingual vowel by contracting the aperture of the lips. Something is often due to a "rounding" within the throat also; for the labial quality can, with practice, be fairly imitated without using the
lips. Ventriloquists form their a and oo in this manner.

The possibility of an inner "rounding" is to be borne in mind in making the experiments on "surrounding," as directed under the head of "High-Back" "Low-Back" etc.

All Round-vowel letters have divided, or barred, stems (.), to denote the double modification of the sounds.

Every lingual vowel may be rounded; but the "Back"-vowels furnish the only English elements of this class. Some of the "Mixed" series occur as unaccented sounds.

The "Front-Round" vowels are common in French and German.

The degree of labial contraction corresponds with the aperture of the lingual vowel as modified by the high, mid, or low position of the tongue. Thus "high" vowels are rounded by a close position of the lips; "mid" vowels by an intermediate position; and "low" vowels by a broad labial aperture; as in:

\[
\begin{array}{l}
\text{close} & \text{middle} & \text{broad} \\
\text{oo} & \text{oh} & \text{aw} \\
\end{array}
\]


"High-Back-Round" \(\ddot{\text{i}}\). This is the sound of "long Oo" in English, as in ooze, pool etc. U in German, (as in fuch), and ow in French, (as in toujours), have the same sound.

Note that the "name sound" of the letter U is a compound of Y and oo, -poo. At the beginning of a word or syllable, the y-sound is definitely consonantal, as in \text{unison}; but otherwise the y is frequently softened into a "glide," as in \text{tune}.

When writers use the article an before "long U" they are misled by the vowel letter. The initial sound is a consonant, and a should be written, as in a unit, a usage, a universe, etc. We might as well write an yoke, an year, as an union.

\[\ddot{\text{i}}\] (long) oo in food.

\[\ddot{\text{i}}\] (short) oo in food (Scotch).

"High-Back-Wide-Round" \(\ddot{\text{i}}\). This is the sound of "short Oo" in English, as in foot, good, put, etc. Oo before glide r, as in poor, sure, etc. has the same quality. In such words as poorer, fury, etc. a "voice glide" is interpolated between the vowel and the consonant r. This Anglican peculiarity occurs wherever consonant r follows a long vowel; as in:

\[
\begin{array}{l}
\text{nearest} & \text{vary} & \text{glory} & \text{fury} & \text{moorish} \\
\ddot{\text{i}} & \ddot{\text{i}} & \ddot{\text{i}} & \ddot{\text{i}} & \ddot{\text{i}} \\
\end{array}
\]

(long).

\[\ddot{\text{i}}\] (short) oo in foot.

"Mid-Back-Round" \(\dot{\text{u}}\). This is the sound of "long O" in Scotch; as in go, old, etc. In Eng-
lish accented syllables this vowel is always diphthongal, by the addition of the “w-glide.” Thus:

\[
\begin{align*}
\varepsilon & \quad \text{O,} \quad \text{Oh.} \quad \text{ow,} \quad \text{ohd.} \quad \text{owd.}
\end{align*}
\]

In America this vowel is generally used without the final glide.

\[
\begin{align*}
\varepsilon & \quad \text{(long) o in mo (Scotch).} \\
\varepsilon & \quad \text{(short) o in note (Scotch).}
\end{align*}
\]

“Mid-Back-Wide-Round” \( \varepsilon \). This sound is used before \( r \) in English instead of the preceding diphthongal \( \varepsilon \); as in:

\[
\begin{align*}
\varepsilon & \quad \text{our,} \quad \text{our,} \quad \text{perr,} \quad \text{door.}
\end{align*}
\]

Unaccented \( O \), as in \( eloquence, \) \( political \), etc., takes the same quality in careful utterance; but the less definite \( \varepsilon \) is the common colloquial sound of unaccented \( o \).

Distinguish between the following words:

**Dissyllables:**

\[
\begin{align*}
\varepsilon & \quad \text{mower,} \quad \text{mower.}
\end{align*}
\]

**Monosyllables:**

\[
\begin{align*}
\varepsilon & \quad \text{more,} \quad \text{more.}
\end{align*}
\]

In America this “wird” \( \varepsilon \) is not used, but the

words \( o e d \) and \( ore \) are pronounced with the same vowel.

\[
\begin{align*}
\varepsilon & \quad \text{(long) o in ore.} \\
\varepsilon & \quad \text{(short) o in opinion.}
\end{align*}
\]

“Low-Back-Round” \( \varepsilon \). This is the deep broad sound of \( a \) in \( all, \) \( aw \) in \( law \), etc.

\[
\begin{align*}
\varepsilon & \quad \text{(long) a in all.} \\
\varepsilon & \quad \text{(short) a in what.}
\end{align*}
\]

“Low-Back-Wide-Round” \( \varepsilon \). This is the regular sound of “short \( O \)” in English, as in \( on, \) \( off, \) \( or \), etc. The same sound is usually heard in \( was, \) \( wash, \) \( want, \) \( what, \) etc.; but many speakers give the stronger quality of the preceding vowel in these words.

\[
\begin{align*}
\varepsilon & \quad \text{(long) o in on (American).} \\
\varepsilon & \quad \text{(short) o in on.}
\end{align*}
\]

2. **Front-Round Vowels.**

**PHONETICIZING.**

This series of vowels is altogether wanting in English, although very common in other languages, as in French, German, Greek, etc. Early English was, however, familiar with some of the Front-Round vowels. In Mr. A. J. Ellis’s reproduction of Shakespearean pronunciation, the letter \( u \) in
"attribute" (noun) is sounded like the German ü. Thus: JÜSCHIG.

The "Mid-Front-Round" vowel is one of the most prominent sounds in lowland Scotch, as in gude (good), soon, moon, etc., pronounced:

GÜD ÜN ÖN etc.

"High-Front-Round" ü. This sound will be produced by pronouncing ë through the labial aperture of oo. The result will be the regular sound of ü in German.

ë .................. (long) ü in über (German).
ë .................. (short) ü in glück (German).

"High-Front-Wide-Round" ü. This sound will be produced by similarly contracting the lips while the vowel ë is pronounced. It is the sound of u in French, as in nur, du, etc.

ë .................. (long).
ë .................. (short) u in une (French).

"Mid-Front-Round" ü. This sound will be produced by contracting the lips as for ë while the vowel ü is pronounced. It is the sound of û in French, as in du, böt, etc. This is the Scotch vowel referred to above.

ë .................. (long) û in böt (French).
ë .................. (short) u in gude (Scotch).

"Mid-Front-Wide-Round" ü. This variety is not definitely associated with any orthography, but it is frequently heard from individual speakers of French and German. An exact analysis of the pronunciation of these languages—corresponding with what is here done for English—would no doubt reveal established discriminations in practice between shades of "Front-Round" vowel quality which are now confounded under representative forms.

ë .................. (long).
ë .................. (short).

"Low-Front" ü. This sound will be produced by rounding the lips as for aw while the vowel ë (as in ell) is pronounced. This is the sound of eu in French, and of ë in German.

ë ............. (long) eu inœur (French).
ë ............. (short) ë in schöne (German).

"Low-Front-Wide-Round" ü. This sound will be produced by adjusting the lips as for ë (in ow) while the vowel û (in un) is pronounced. This vowel occurs as a Cockney substitution for the
diphthongal sound of ou, ow, (ə) as in out, now, etc. Thus:

\[ \text{round, about, town.} \]


The “Mixed-Round” vowels never occur as accented sounds in English, but they are very commonly used in place of the more definite “Back-Round” vowels in unaccented syllables.

“High-Mixed-Round” ũ. This sound is obtained by “mixing” ü (ü Ger.) and ū (oo); or by sounding oo and at the same time raising the front of the tongue. The latter will be the easier mode for English learners. The result is a vowel commonly used instead of oo in the North of Ireland. It has also been identified as the sound of u in Swedish.

\[ \text{long ũ in too (North Irish).} \]
\[ \text{short ũ in look (North Irish).} \]

“High-Mixed-Wide-Round” ū. This sound is colloquially heard in English instead of ou in unaccented syllables, as in awful, fixture, nature, fortune, etc.: pronounced:

\[ \text{awful, befitting, fortune, etc.} \]

PHONETIZING.

This vowel will be separately produced by sounding oo (as in good) and at the same time slightly raising the front of the tongue.

\[ \text{long ū in awful (Colloq.).} \]

“Mid-Mixed-Round” ū. This sound will be produced by mixing ə (ə) and ū (oo Fr.); or by sounding ū and at the same time slightly advancing the tongue. The vowel is heard in dialects, as in come (Yorkshire), Dublin (Irish), and in homme (French).

\[ \text{long ū in Dublin (Irish).} \]
\[ \text{short ū in homme (French).} \]
\[ \text{o in come (Yorkshire).} \]

“Mid-Mixed-Wide-Round” ū. This sound will result from “mixing” the qualities of ə (ə in ore) and ū (labialized a in air); or it will be produced by pronouncing o (in ore) and at the same time slightly advancing the tongue. The vowel, while destitute of any marked quality, is sufficiently suggestive of o to satisfy the ordinary ear in unaccented syllables, as in eloquence, philosophy, opinion, etc. Careful speakers, however, give the more definite ū in such cases.
This vowel occurs as an accented sound in dialects; as in \( \text{O}i\omega \), \text{whole} (American).

\[ \begin{align*}
\text{\( \text{O}i\omega \)} & \text{ (long).} \\
\text{\( \text{O}i\omega \)} & \text{ (short) in \text{whole} (American).}
\end{align*} \]

"Low-Mixed-Round" \( \text{\( \text{I} \)} \). This sound will be produced by "mixing" the sounds of \( \text{\( \text{I} \)} \) (\( \text{ayw} \) and \( \text{\( \text{I} \)} \) (\( \text{eu} \), French), or by pronouncing \( \text{aw} \) and at the same time slightly advancing the tongue. It is heard in Irish, in

\[ \text{O}i\omega \quad \text{\( \text{I} \)}\omega \quad \text{\( \text{O} \)i\omega} \quad \text{etc.} \]

and as the initial part of the diphthong "long I," in \( \text{I}, \text{my}, \text{find}, \text{mild}, \text{etc.} \). Thus:

\[ \begin{align*}
\text{\( \text{O} \)i\omega \}\text{\( \text{i} \)}\omega \text{\( \text{O} \)i\omega} \text{\( \text{I} \)}\omega \text{\( \text{O} \)i\omega} \\
\text{It's not to my mind. (Irish.)}
\end{align*} \]

\[ \begin{align*}
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{(long).}
\end{align*} \]

\[ \begin{align*}
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{(short) \( \text{I} \) in \( \text{stir} \) (Irish).}
\end{align*} \]

"Low-Mixed-Wide-Round" \( \text{\( \text{I} \)} \). This sound will result from "mixing" \( \text{\( \text{I} \)} \) (\( \text{e in on} \)) with \( \text{\( \text{I} \)} \) (labialized \( \text{a in an} \)); or by pronouncing \( \text{\( \text{I} \)} \) (\( \text{in on} \)) and at the same time slightly advancing the tongue. The vowel is colloquially heard instead of "short O" in unaccented syllables, as in \( \text{occasion, consist, compel}, \text{etc.} \). It is the regular sound of "short O" in Irish, as in \( \text{not, lord, gone}, \text{etc.} \) A in \( \text{ask} \) (Cockney), and \( \text{a} \) in \( \text{Chicago} \) (American), illustrate the same vowel.

\[ \begin{align*}
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega
\end{align*} \]

\[ \begin{align*}
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega \\
\text{\( \text{I} \)}\omega \text{\( \text{I} \)}\omega
\end{align*} \]
SECTION THIRD.

RECAPITULATIVE TABLES, &c.

Table of Consonants.

The fifty-two consonants of the Universal Alphabet are collected in the following Table for convenience of reference.

<table>
<thead>
<tr>
<th>Primary</th>
<th>Mixed</th>
<th>Divide</th>
<th>Mixed</th>
<th>Stem</th>
<th>Nasal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throat</td>
<td>ø</td>
<td></td>
<td>ø</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Back</td>
<td>c</td>
<td></td>
<td>e</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Top</td>
<td>o</td>
<td></td>
<td>o</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Point</td>
<td>u</td>
<td></td>
<td>u</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lip</td>
<td>ɔ</td>
<td></td>
<td>ɔ</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Vocalized.

| Throat  | ø      |        | ø     |      |       |
| Back    | e      |        | e     |      |       |
| Top     | o      |        | o     |      |       |
| Point   | ɔ      |        | ɔ     |      |       |
| Lip     | ɔ      |        | ɔ     |      |       |
Table of Vowels.

The Vowels of the Universal Alphabet are collected in the following Table for reference and exercise. Other possible shades of vowel sound may be expressed, for experimental purposes, by means of the modifiers ʃ ʅ ʢ ʠ; but the thirty-six normal vowels will be found amply sufficient for all linguistic uses.

<table>
<thead>
<tr>
<th>PRIMARY</th>
<th>WIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>I</td>
</tr>
<tr>
<td>Mid</td>
<td>I</td>
</tr>
<tr>
<td>Low</td>
<td>I</td>
</tr>
<tr>
<td>ROUND</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>I</td>
</tr>
<tr>
<td>Mid</td>
<td>I</td>
</tr>
<tr>
<td>Low</td>
<td>I</td>
</tr>
</tbody>
</table>

Table of Glides.

The phonetic value of the Glides is illustrated by key words in the following Table.

| Breath | ʃ | ʃe (Irish) |
| Voice | ʃ | ʃe; vary: ʃe; weary |
| Round | ʃ | ʃo now (Cockney) |
| Throat | ʃ | ʃe (varieties of)
| Back | ʃ | ʃo smooth Bar.) |
| Back Round | ʃ | ʃo our |
| Top | ʃ | ʃe; ʃe; ʃe day |
| Top Round | ʃ | ʃe new (North Irish) |
| Point | ʃ | ʃe; ʃ or ʃe our |
| Point Round | ʃ | ʃe our (Common) |
| Lip | ʃ | ʃe (French) |
| Lip & Back | ʃ | ʃo new; ʃe know; no |

Table of Modifiers, Etc.

| Inner | Inverted | Hiatus |
| Outer | Protruded | Abrupt |
| Close | Stop | Holder |
| Open | Suction | Accent |
| Trill | Emission | Emphasis |
| Nasal | Suction stopped | Whistle |
| Side open | Emission | Voiced do. |
TABLES OF ENGLISH ELEMENTARY SOUNDS.

I. Consonants.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>k</td>
<td>t</td>
<td>d</td>
<td>p</td>
</tr>
<tr>
<td>g</td>
<td>d</td>
<td>b</td>
<td>h</td>
</tr>
<tr>
<td>ng</td>
<td>n</td>
<td>m</td>
<td>m</td>
</tr>
<tr>
<td>h</td>
<td>t</td>
<td>h in hue</td>
<td>t</td>
</tr>
<tr>
<td>y</td>
<td></td>
<td>f</td>
<td></td>
</tr>
<tr>
<td>w</td>
<td></td>
<td>l</td>
<td></td>
</tr>
<tr>
<td>sh</td>
<td>s</td>
<td>wh</td>
<td></td>
</tr>
<tr>
<td>zh</td>
<td>z</td>
<td></td>
<td>v</td>
</tr>
<tr>
<td>th</td>
<td>f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>th</td>
<td>f</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

O aspirate h. 

I holder.

COMBINATIONS.

| ΩΩ...ch (= tsh) | ΩΩ...x (= ks) | ΩΩ...qu (= kw) |
| ΩΩ...j, g (= dzh) | ΩΩ...x (= gz) | ΩΩ...a (= yoo) |

II. Vowels.

<table>
<thead>
<tr>
<th>Buck-bound</th>
<th>Buck</th>
<th>Minut.</th>
<th>Front.</th>
</tr>
</thead>
<tbody>
<tr>
<td>e</td>
<td>.e</td>
<td>.i</td>
<td>.ee in eel</td>
</tr>
<tr>
<td>o</td>
<td>.o</td>
<td>.a</td>
<td>.a in ale</td>
</tr>
<tr>
<td>e</td>
<td>.e</td>
<td>.i</td>
<td>.i in ill</td>
</tr>
<tr>
<td>i</td>
<td>.i</td>
<td>.a</td>
<td>.a in an</td>
</tr>
<tr>
<td>a</td>
<td>.a</td>
<td>.e</td>
<td>.e in arm</td>
</tr>
<tr>
<td>ə</td>
<td>ə</td>
<td>.i</td>
<td>.i in an</td>
</tr>
<tr>
<td>Ω</td>
<td>Ω</td>
<td>.a</td>
<td>.a in an</td>
</tr>
</tbody>
</table>

GLIDES.

l,...r-glide | x,...y-glide | Ω,...w-glide | 1,...voice-glide

COMBINATIONS OR DIPTHONGS.

| l           | l     | l     | 1   |
| x           | x     | x     | 1   |
| Ω           | Ω     | Ω     | 1   |
| n           | Ω     | Ω     | 1   |
| i           | i     | i     | 1   |
| Ω           | Ω     | Ω     | 1   |
| Ω           | Ω     | Ω     | 1   |

Exercise.

The following examples of elementary sounds used as independent utterances will afford good exercise in phoneticizing the rudimental symbols.

D gentle sneer. 
Di clearing nostrils.
G " " Gl " "

©<br>sniffing.<br>©<br>smelling.<br>©<br>bliss.<br>©<br>hushing.<br>©<br>hurring.<br>©<br>cooling.<br>©<br>sipping.<br>©<br>puff.<br>©<br>smoker's puff.<br>©<br>laugh.<br>©<br>vibration of lips.<br>©<br>surfing.<br>©<br>dissatisfaction.<br>©<br>assent.<br>©<br>surprise.<br>©<br>impatience.<br>©<br>vexation.<br>©<br>pain.<br>©<br>sigh.<br>©<br>acute pain.<br>©<br>disgust.<br>©<br>easy respiration.<br>©<br>uneasy.<br>©<br>panting.

©<br>chuckle.<br>©<br>©<br> ©<br>snicker.<br>©<br>©<br> ©<br>contempt.<br>©<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "<br> ©<br> "

* The shot position is maintained and the nasal valve opened, but without emission of breath.
† The shot position is maintained, and the nasal valve narrowly opened so as to squeeze the breath.
‡ The lips retain the position © while the tongue is drawn backward for ©.
SECTION FOURTH.

ENGLISH AS SPOKEN, AND

MISCELLANEOUS ILLUSTRATIONS.
SECTION FOURTH.

ENGLISH AS SPOKEN.

The most cursory perusal of the preceding scheme for the analysis and representation of sounds will, at least, have communicated to the reader a knowledge of many elementary distinctions and relations, of which ordinary letters could have conveyed no idea. Students of Phonetics will recognize the completeness of the system and the simplicity of the symbols; and they will appreciate the practical assistance to be derived from letters of absolute phonetic value, and of self-interpreting correlation to sounds. Nothing less than a thorough study of the Universal Alphabet, and its hearty adoption, may be expected from this class of readers.

Among the following illustrations will be found specimens of English pronunciation: first, in vocabulary style; and, second, in colloquial style; besides passages in dialects and in French and German.

No better proof could be furnished of the lin-
guistic importance of Visible Speech than its power of representing the nice shades of sound which the ear distinguishes in English unaccented syllables.

The common Roman alphabet is too imperfect for phonetic purposes. Spelling reformers meet with insurmountable opposition in their efforts to phoneticize orthography. The primary source of the difficulty lies in the insufficiency of the alphabet. For many of our consonant sounds we have no letters, and for all our vowel sounds we have but five letters. The consequence is that individual letters have to be associated with a variety of sounds, and that combinations of letters have to be used for simple sounds. The letters of a word thus form an ideographic picture, and the change of a letter, or the omission, or addition, of a letter, alters the familiar outline, and the word—however phonetically improved—looks strange, uncouth, or comical. There can be no satisfactory spelling reform without an amendment of the alphabet.

Let this system of Visible Speech be adopted as an interpreter of common letters, and the two modes—the ideographic and the phonetic—may be used together. Children would be taught to read from the phonetic characters in fewer days than Roman letters require months; and,—this power once acquired,—the historico-pictorial representation of words by Roman letters, would be introduced without confusion; and would then be learned with facility and pleasure. Good spelling would become the rule, not the exception, among children—for the memory for spelling lies altogether in the eye:—and the double process of learning to read phonetically and romantically, and to spell well, would not occupy half the time now required to make bad readers and worse spellers.

The illustrations in preceding sections will have familiarized the eye with the forms of Visible Speech letters, so that interlinear transliteration might now be dispensed with; but, as the object is to make the reader expert in the use of the symbols in as short a time as possible, the ordinary letters are interlined throughout the subsequent Exercises.

Phonetic syllabication is shown in the Visible Speech portion of the next illustration. Let the reader try to divide the romantically printed words in the same way, and he will prove experimentally that common orthography cannot be used phonetically.
I. Vocabulary Style.

MEANS OF ACQUIRING DISTINCTION.—Sydney Smith.

It is natural in every man to wish for distinction; and the praise of those who can confer honor by their actions, is, in spite of all false philosophy, sweet to every human heart; but, as eminence can be obtained by few, patience of obscurity is the lot of many. We owe not more to our own happiness than to the quiet of the world at large. Give a loose, if you are young and ambitious, to that spirit, which throbs within you; measure yourself with your equals, and learn from frequent competition the place which nature has allotted to you; make of it no mean business, but strive hard; strengthen your soul to the search of truth, and follow that spectacle of excellence which beckons you on, beyond the walls of the world, to someplace where there is room for you. To be the best among many things better than man has yet done. It may be you shall burst out into light and glory at the last; but if frequent failure convince you of that mediocrity of nature which is incompatible with great actions, submit wisely and cheerfully to your lot; let no mean spirit of revenge tempt you to throw off your loyalty to your country, and to prefer a vicious obedience to obscurity crowded with pity and scorn. To be the best among many things better than man has yet done, virtue. If you can throw new light upon moral truth, you shall be, if not (as some may think) the Senate of mankind, yet firm the happiness of mankind, this fame guides you. If you are best; in the true ends of your nature; but, in the name of heaven, as you tremble at retributive justice;
SOUNDS AND THEIR RELATIONS.

Visible Speech confers this new power on phoneticians.

It is to be observed that the unaccented sounds shown in the following examples of "English as Spoken" are not vulgarisms of the uneducated, but variations which legitimately and almost necessarily result from the mere remission of accent.

In order to make the influence of accent clearly manifest, the words in the next illustration are spaced in accessional groups, corresponding to the divisions actually made in utterance.

The non-vocal forms of the consonants m, n, ng, l—which orthoepists have failed to recognise as elements of speech—are introduced where they colloquially occur; namely, before non-vocal consonants in the same syllable; as in lamp, tempt, nymph, hint, since, inch, sink, strength, felt, else, self, etc.

The consonants r, l, w, y, are subject—but less uniformly—to a similar loss of vocality when they occur after non-vocal consonants in the same syllable; as in play, true, quite, cure, etc.

In deliberate and emphatic speech—and also in singing—the vocality of the consonants is fully preserved in all the above cases: it is only lost, to a greater or less extent, in ordinary non-oratorical delivery.

The sound of r, which at the end of a word is merely a glide, becomes a consonant when accent-

II. Colloquial Style.

In good pronunciation, every syllable has a definite sound, but the influence of accent upon utterance is such that unaccented syllables cannot have precisely the quality which the same syllables would receive under accent. The aim of a good speaker will undoubtedly be to approximate his unaccented to his accented sounds as nearly as possible, but he cannot make them identical without adopting a monosyllabic style which is foreign to the genius of English pronunciation.

It has not hitherto been possible to exhibit or to define the unaccentual shadings of sound which are heard even from the best orators and readers.
nally joined to a word beginning with a vowel; as for ever, prefer it, etc.

These points will be found illustrated in the following Examples of the Colloquial style. The passage already given to illustrate the Vocabulary Style is repeated, in order the better to exhibit the differences by comparison.

__MEANS OF ACQUIRING DISTINCTION.—Sydney Smith._

It is natural — in every man — to wish for distinction; and — the prize — of those who can confer honor by their praise — is — in spite of all false philosophy, — sweet — to every human heart; — and, in the same measure, to every soul that is in it. True, — as eminence — can be only the lot of a few, patience of obscurity — is a duty — which we owe — not more to our own happiness — than to the quiet of the world at large. — Give a blow, — if you are young and ambitious; — to that spirit — which thorns within you;...

__ENGLISH AS SPOKEN._

— measure yourself — with your equals, — and learn — from frequent competition — the place — which nature has allotted to you; — make of it no mean battle, — but strive hard; — strengthen your soul — to the search of truth, — and follow that spectre of excellence — which beckons you on, — beyond the walls of the world, — to something better — than man has yet done. — It may be — you shall burst out — into light and glory — at the last — but — if frequent failure — convince you — of that mean mediocrity of nature — which is incom- patible with great actions — submit — wisely and cheerfully — to your lot; — let no mean spirit of revenge — tempt you — to throw off your loyalty to your Country, — and to prefer a vicious celebrity — to ob- durate virtue — crowned with piety and virtue. — If you
ENGLISH AS SPOKEN.

EXTRACT FROM "NICHOLAS NICKLEBY."—Dickens.

John Browdie no sooner saw Nicholas advancing than he exclaimed. "Look at Nicholas. He seems to have come straight from the wars."

Nicholas sat in his horse by the footpath and waited until such time as he should come up. Looking, meanwhile, very sternly at Browdie, Nicholas said, "You are at liberty to do as you please between the horse's ears, at Nicholas as he came on at his leisure.

"Serve you, young gentleman," said John.

"What?" said Nicholas.

"What?" said Nicholas.

"What?" said Nicholas.

"Well; we ha' met at last," observed John, making no further allusion to the subject of Nicholas's name—upon the basis—of anarchy and irreligion.

"Yes," said Nicholas hesitating. "Come!" he said frankly after a moment's pause. "We parted on no very good terms the last time we met; it was my fault, I believe; but I had no intention of offending you, and no

* [Note] presentation of Mr. Edward Pickup, Bradford, Oct.]
SOUNDS AND THEIR RELATIONS.

ENGLISH AS SPOKEN.

It was one of the peculiarities of Mr. Brownlie's manner, and of his utterance, that he was very fond of introducing words that he was not well acquainted with. He would say: "Will you shake hands?"

"Shake hands!" cried the good-natured Yorkshireman: "Ah, I have!" replied Nicholas, "by that man Squeers, I have! I have! I have!"

"What! cried John Brownlie with such an exultation, that the horse quite shied at it. "Beaten the schoolmaster! Who ever heard o' the folks o' that sort? Give us thee good fellows, schoolmen! Give us thee good fellows!"

I looked the best.

"Ah, friend, say," said Nicholas, "I have, I have, I have, I have!"

"The fact is," said Nicholas, not very well knowing how to make the arrow, "I have been ill treated."

"No!" interposed John Brownlie in a tone of compassion;
When his mirth had subsided, he inquired what Nicholas knew of the coaches that went to London, and how much the coaches charged to carry passengers.

"No, I do not," said Nicholas; "but it is of no great consequence to me, for I intend walking.

"Gang awa to London about," cried John in amazement.

"Every step of the way," replied Nicholas. I should be many steps further on by this time, and so goodbye!"

"Nay, noo," replied the honest countryman, reining in his impatient horse. "Can't still, tell 'ee. How much cash hast ye goton?"

"Not much," said Nicholas, coloring. "But I can make so you see. you will there's a way, you know."
Illustration of Lowland Scotch.

The Scottish dialects are extremely rich in sounds. They contain nearly all the vowel and consonant elements heard in French and German, as well as in English. The dialects of the North and West of Scotland, the Border Counties, the Lothians, etc., have well-marked separate characteristics; but the differences are in many cases more of intonation than of articulation. The following illustration presents the native dialect of Midlothian as it may still be heard from old people—especially in country districts—but which is fast disappearing from the Capital and from the vernacular of the young.

---

Extract from "COTTER'S SATURDAY NIGHT."—Burns.

November chill blows loud w'ry angry sigh;
The short'ning winter-day is near a close;
The miry beasts retreating free the plough;
The black'ning trains o' crows to their repose;
The toil-worn cotter free his labour gone.
This night his weekly moli is at an end.

* (Preservative of A. M. B.)
Illustration of French.

The following passage exhibits the chief elements and characteristics of French pronunciation.

The peculiarity of English final /r/ (in being fully pronounced only when joined to a following word beginning with a vowel) [see p. 75] is a general feature of French utterance. Any final consonant, otherwise silent, is pronounced when phraseologically united to a word beginning with a vowel; as in sauvait, mats, gardait, restait, vent, cuter, etc.

In the syllabics al, je, le, ne, etc., the vowel is frequently elided, but in careful pronunciation a non-syllabic glide is heard; corresponding to that in the English word er(z)er.

These points are illustrated in the following lines.

**EXTRACT FROM MOLIERES WORKS.**—Vol. I p. 64.

**Molière,** on the force comique des situations, on sapprent par la force comique des situations, par la force de son style, par mille détails plaisants, par la dévouement et le souci de la représentation, a la devise de la comédie, que l'on corrig de l'acce, et l'on dit qu'on rigue qu'en riant. On riait dans la salle; mais on gardait —

*[Pronunciation of A. M. B]*
SOUNDS AND THEIR RELATIONS.

Illustration of German.

DIE KINDHEIT.—Max Müller.*

[Text in German]

SECTION FIFTH.

SUPPLEMENTARY REVIEW,

ETC.

* [Presentation of German Grammar, Ladies' College, Brantford, Ont.]
SECTION FIFTH.

SUPPLEMENTARY REVIEW
OF THE
ESSENTIALS OF ARTICULATION.

The various workings of the mouth exhibited by
different speakers, and the violent efforts of tongue,
jaw, and head displayed in cases of stammering, show
that no clear idea is generally entertained as to the
efficiency or otherwise, of certain organic actions in
the production of speech. When one person pushes
out the lips where another keeps them quiescent;
when one closes the jaws where another widely
opens them; when one thrusts out the tongue where
another keeps it invisible, there can be, manifest-
ly, but little positive knowledge of the essentials of
articulation.

The mouth, so far as speech is concerned, is
properly to be considered as a mere tube, or funnel,
for the delivery of vocal sounds. The sounds
themselves are formed in the throat, and the prop-
pulsive power is exerted from the diaphragm at
the base of the lungs. The cavity of the mouth-
tube is susceptible of a great variety of minute modifications which affect the quality of the issuing sounds, but the mouth as a whole, however modified in its channel, is almost passive to the flow of speech.

Let the stammerer carefully note this principle. When fully apprehended it will give complete control over his wayward organism. It is, in fact, the one principle on which success depends in the removal of impediments of speech.

The mouth serves other purposes than those of moulding sounds. Its massive lever—the jaw—with the attached cutting edges, and grinding surfaces—the teeth—belong to the masticating and not the speaking apparatus. We eat with the mouth—we speak through it. The action of the jaw in mastication is from open to close positions; in speaking, its motion must be—simply to keep it out of the way—from close to open.

Mistaken ideas as to what are, and what are not, organs of speech are not confined to stammerers and merely instinctive speakers. Even students of Phonetics seem to participate in error on this point. Thus, some have added to the Visible Speech Symbols signs for parts of the mouth—such as the teeth—which are not separately represented in the original scheme. The physiological function of the teeth has been referred to: the statement must now be added that the teeth are not essential to the articulation of any element. The so-called “dents” really result from a definite adjustment of the plastic parts of the mouth, and can be satisfactorily produced by one “without a tooth in his head.” When a sound is said to be modified by the “back,” the “top,” or the “point” of the tongue, the palate against which the tongue necessarily acts is implied without notation. The fixed parts of the mouth, which the speaker has no power of moving, are thus unrepresented by special symbols. The teeth are fixed to the jaws, and the only articulative action of the movable jaw is to keep itself out of the way of the issuing sounds. Only the modifications of the lips, and the soft organs within the mouth, require to be symbolized in order to the reproduction of a sound from the writing. The symmetry of the system of Visible Speech is needlessly disturbed by the introduction of arbitrary signs. This would be a minor consideration were such signs of practical importance; but the fact is that the sound has yet to be uttered which cannot be expressed by the ordinary symbols of Visible Speech so as to be reproduced from the writing by any competent reader of the system.

The essential organs of speech are the diaphragm and lungs—the larynx—the pharynx and soft palate—the tongue—and the lips. The proper management of these requires skill, and their misman-
agreement involves discomfort, inefficiency, and often more serious consequences.

The healthful inflation of the lungs should expand them in all directions, but principally downwards; and the expansion of their base should perceptibly flatten the diaphragm. The walls of the chest—the ribs—should contract but little, even in strong expiration, but the diaphragm should press the lungs upwards to give impulse to the breath in speech. The lungs should be frequently and noiselessly replenished, and they should never be pressed to exhaustion before replenishment.

The larynx—the organ of voice—should be free to rise or fall without affecting, or being affected by, the “pillar-muscles” of the neck. For this purpose the neck must be firm, and the chin held horizontal. These conditions are important in cases of weak voice, and most important to stammerers, to check the rolling and upward motion of the head which accompanies their efforts to speak.

The pharynx is the expandable cavity above the windpipe and at the back of the mouth, into which—behind the soft palate—the nasal passages open. Any obstruction of the breath within the mouth, —as in forming p, b, t, d, etc.—should expand the pharynx, so that when the obstruction is removed a degree of percussiveness should be perceptible from the point of obstruction. The same effect, in a less degree, is heard from good speakers, in pronouncing s, f, l, and other continuous consonants. The soft palate should completely cover the inner end of the nostrils, except in forming nasal sounds. The firmness of the neck before referred to is necessary to give effective play to the muscles of the pharynx.

The most important agents in the moulding of articulate sounds are the tongue and the lips. The configurations of the mouth-channel resulting from the positions of these organs can only be understood in connection with the Visible Speech symbols. A brief supplementary review of the leading consonant formations will assist the student in mastering the relations between sounds and symbols.

The normal positions on the palate for oppositions of the “back,” “top,” or “point” of the tongue are those which are directly opposite to the same parts of the tongue while the latter lies at rest. Thus:

- **Back normal position**—centre of soft palate.
- **Top**—centre of palatal arch.
- **Point**—upper gum.

The signs for posterior formation (1) and for anterior formation (1) have then the following values:

- **Back posterior**—edge of soft palate.
- **Anterior**—junction of soft and hard palates.
SOUNDS AND THEIR RELATIONS.

Top

posterior — between centre of palatal arch and junction of hard and soft palates.

anterior — between centre of palatal arch and front wall of palate.

Point

posterior — front wall of palate.

anterior — teeth, or edge of gum.

The above are the positions for consonants both of centre-aperture (C U i) and of shut formation (O O O O, etc.).

The normal positions for the "mixed" consonants are the following:

Top-mixed (Q) — Top position combined with elevation of the edges of the tongue to the side gums.

Point-mixed (Q) — Point position combined with convexity of the forepart of the tongue towards the front wall of the palate.

The positions for consonants of "divided" formation are the following:

Back-divided (E) — Back position combined with division of the breath by contact of the middle of the tongue with the palate.

Top-divided (R) — Top-shut position combined with emission of the breath between the high sides of the tongue and the back gums.

Point-divided (Q) — Point-shut position, combined with emission over the whole of the free sides of the tongue.

Top-mixed-divided (7) — Top-mixed position combined with contact of the point of the tongue on the upper gum, and emission between the sides of the tongue and the teeth or gum.

SUPPLEMENTARY REVIEW.

Point-mixed-divided (Q) — Point-mixed position combined with contact of the tip of the tongue on the teeth, or on the edge of the gum, and emission at the sides of the tip.

The preceding descriptions all refer to tongue-consonants. To complete the review, the following descriptions of lip-consonants are added;

Lip (E) — Contact of the sides of the lips, with centre emission.

Lip-shut (E) — Complete contact of lips.

Lip-divided (E) — Central contact with side emission.

A lip-divided formation may be made either by contact of one lip on the opposite teeth, or of one on the other lip. The easiest and most usual formation is selected for the normal one; namely, contact of the edge of the lower lip on the upper teeth, or, in the absence of teeth, on the upper gum. Contact of teeth (or gum) on the inner surface, instead of the edge, of the lip may be noted by the sign of posterior formation (3); and the ungaingly position of upper lip on lower teeth may be indicated, when necessary, by the sign of anterior formation (3). Divided contact of lip on lip may be written by the diacritic "to lip (•), thus, 3."
be included in this review; but for completeness they are added.

Lip-mixed (G) — Lip position combined with a loose formation of the Back position.

Back-mixed (G) — Back position combined with a loose formation of the Lip position.

The mouth-channel is about the same for both these elements, but the fricative — or articulative — effect is heard only from the lips in the one case and from the back of the tongue in the other.

Lip-mixed-divided (G) — The Lip-divided position combined with a loose formation of the Back position.

Back-mixed-divided (G) — The Back-divided position combined with a loose formation of the Lip position.

These elements do not occur in ordinary speech; they are simply available for use in the favourite and crucial tests to which Visible Speech has been often subjected — the expression of peculiarities of utterance.

All the descriptions in this Section apply equally to the vocalized forms of the several consonants illustrated.

The only drawback to a detailed investigation of such elements is that the student is apt to make too much of the consonants, relatively to the beautiful vowel material of speech. In many cases the consonants owe all their audibility to the vowels which they begin or end; and yet while thus phonetically subordinate, consonants are found to be the more stable elements in words that have passed from language to language, or from age to age.

A good speaker will give to every element in a syllable its appropriate effect, of sound or motion, recognizing that both classes of elements, whether principal or subordinate, are mutually related, and equally Essentials of Articulation.
APPLICATION OF VISIBLE SPEECH
TO THE TEACHING OF ARTICULATION
TO THE DEAF.

The minute of "Sounds and their Relations" do not require to be taught to the deaf, in the initiatory stages of instruction. The unmodified sign of "voice" ( Algeria ) may for a time be used to represent any vowel. Thus papa, mamma, may be taught from the writing D, D, B, B. When a few consonants have been learned, the "Round-voice" sign, unmodified, ( Algeria ) may be introduced, and such words as no, go, etc., may be taught from the writing S, S, etc. As power over the organs of speech increases, the pupil may be made acquainted with a few distinctive vowel symbols, such as ɒ, ah; ʌ, o; ʊ, u; etc., but minor discriminations should be deferred until facility is gained in the use of a small number of elements. Only one new sound should be taught at a time. Thus, suppose the pupil to know the consonants

ɒ (ɒ), ɒ (ɒ), ɒ (ɒ), ɒ (ɒ), ɒ (ɒ), ɒ (ɒ),

and the symbol ʃ (ah) is to be introduced: the latter should be practised in connection with each of the known consonants. Thus:

ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ,

When any sound thus produced happens to be, approximately, that of a word, a new interest will be given to the lesson by illustrating the meaning of the word. Thus:

ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ,

Each vowel will, in this way, furnish a number of words to enliven the lesson. For example I will yield:

ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ,

Sufficiently near to the sounds of the indicated words will be such compounds also as:

ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ, ɒʃ,

The attempt to join two elements with syllabic closeness will be unsuccessful at first; but, in the quickest utterance, apparent juncture is merely sequence; and the slowest sequence will suffice until practice gives facility.

The first point to be aimed at is the power of
controlling the organs of speech. Accuracy may be left to be acquired by slow degrees. Intelligibility may be attained with comparative ease.

The use of Visible Speech symbols makes initia-
tory progress a matter of certainty with all pupils;
and with every new element that is added, subse-
quently difficulties grow less and less. The ultimate
effects that may be attained will depend on the
teacher's skill and patience, as well as on the apti-
tude of the pupil. But the result of careful effort
will undoubtedly be that, with a greater or less
amount of accuracy, sufficient intelligibility will be
obtained in the speech even of the congenitally
deaf.

THE END.
A. MELVILLE BELL'S WORKS.

The Principles of Elocution. A new and revised Edition of this standard work has recently been issued. The work contains a summary of the Principles of Vocal Physiology, with a full development of the principles of Expressive Delivery; an original analysis of the Tones of Speech, and the Laws of Emphasis; the mechanical and expressive principles of Gesture. 8vo. Illustrated by upwards of Two Hundred passages marked for Exercise. 12mo., cloth...$1.50

“...The work could have been written only by a master of the subject and a man of literary scholarship, as a resume and thorough analysis of the art of expression; it is without equal and without parallel.” — The Educational Record.

The Emphasized Liturgy. The Morning, Evening, Communion and Burial Services, and the Collects, marked for emphasis and enunciation. With an Introductory Essay on the Theory of Emphasis, the Expressiveness of Tones, and the Intellectual and Mechanical Principles of Public Reading. 12mo., cloth...$1.00

Visible Speech Exercise Chart...$1.00

Visible Speech Object Cards. Per set...$1.00

Monroe's Vocal Gymnastic Charts. Embodying the Daily Physical Drill of the Boston University School of Oratory; also containing exercises upon all the sounds of the English Language, arranged for Class Drill in Articulation, with diagrams illustrating Bell's Visible Speech. These Charts will comprise 24 numbers, 2x30 inches in size, printed and bound in the same manner as Monroe's Primary Reading Charts. Price per set...$2.00

**Any of the above-named publications can be obtained from the publishers of this volume.**