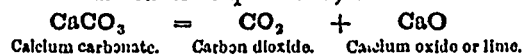


(2) All carbonates evolve carbon dioxide, CO_2 , when heated to redness, except the alkaline carbonates, such as potassium carbonate and sodium carbonate.

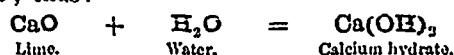
(3) All carbonates effervesce on the addition of any strong acid; the escaping carbon dioxide is without smell.

(4) All bicarbonates are decomposed with heat.

Calcium hydrate.—If calcium carbonate is heated to redness it loses a molecule of carbon dioxide, and there is left a molecule of calcium oxide or quicklime; thus:—



This change is identical with that which takes place in a lime-kiln when lime is made by burning limestone. When water is added to lime it combines with a definite amount of it, 56 parts by weight of lime with 18 parts by weight of water forming *calcium hydrate*, a white powder familiarly called slaked lime; thus:—



Lime-water.—If this calcium hydrate is mixed with about 700 times its volume of water it dissolves, forming a clear solution which is familiarly called lime-water. This lime-water is an alkali, turning red litmus blue. It quickly absorbs carbon dioxide from the air, and is used in medicine, and in the laboratory to detect the presence of carbon dioxide and carbonic acid.

(To be continued.)

READING AS A PART OF ELOCUTION.

THOMAS SWIFT.

"Some people," said a late inspector of high schools "accuse me of being mad on the subject of mathematics; in the interest of our schools I wish some one would go mad on the subject of reading." Although I have no intention or desire to carry out Dr. McLellan's wish in this matter, yet these words are significant enough, coming from one whose occupation afforded him ample room for judging. And my experience as a teacher in the public and high schools, as well as in county and provincial model schools, has forced me to the conclusion that the above quoted words were not uncalled for. It is, however, true that of late more attention has been paid to this very important subject, though much yet remains to be done.

It is a remarkable fact that this subject, the first to be taken up in our public schools and prosecuted day after day for a number of years, is the one in which our pupils are, as a rule, the least proficient. In all other subjects they are able to reach a high degree of proficiency; in reading they do not seem to be able to rise above a standard which can only be considered mediocre. There must be a reason for this condition of things, and though I shall not take upon myself to say what actually is the cause, I will undertake to hazard an opinion. It is this. The fault lies, for the most part, not with the pupils but with the teachers. I say for the most part, for certain difficulties present themselves which even the best teacher will find hard to surmount. These are due to home influences. Reading is an art, and as an art has to be acquired by diligent study and practice, and the acquirement of this art is not gained in a day or in a short course of spasmodic and desultory training, as experience too truly shows. In the public schools it has not met with that attention and systematic treatment which its importance demands, whilst in the high schools and collegiate institutes until the last two or three years it was almost entirely neglected or ignored, for what were deemed, though erroneously, more important subjects. Consequently, candidates for teachers' certificates came, and still come, to the county model schools and the normal schools with little or no acquirement of this art beyond fair intelligence and fluency which they have obtained they scarce-

ly know how, through the labor of years. At these institutions they are met with a variety of work and study deemed necessary for their equipment as teachers, and rightly too, and the consequence is that under even the most skilful teachers of reading, the time and attention that can be devoted to this pursuit is all too little. And thus lightly equipped in this respect they are drafted off into our schools to become in their turn the teachers and trainers of the rising generation. Again I shall not take upon myself to say how this condition of things can be improved, but I may take the liberty to offer a suggestion. First, then, more stress might be laid on the subject at the various teachers' examinations, and a higher standard exacted. It should no longer be looked upon, or at all events passed over, as of little moment.

Secondly, a more extended course in this branch at the normal schools.

Thirdly, a special recognition by the Education Department of excellence in this art, or if not in this art alone, in a certain group of subjects of which it is one. There are certain acquirements which are looked upon rather as accomplishments than as essentials of a public school teacher. Such are music, drawing, and penmanship, and I may put in this class, also the art of reading in that degree of perfection in which a teacher should possess it.

The consideration of the methods employed in teaching beginners does not fall within the province of this paper. It will not be out of my way, however, to call your attention to the fact that the reading reform now in progress has begun at the right point, namely, at the beginning. In the normal and model schools no subject, I believe, receives more care and attention than the method of teaching the first reading lessons. This is as it should be, and the work done—and done in such a thoroughly sound and efficient manner—in the lower classes, will advance most materially the higher grade of reading which should be taught in the advanced classes of the public schools as well as in all the departments of the high schools and collegiate institutes.

I now come to the consideration of the standard in reading which we should aim at in our teaching.

If reading is to be worthy of the name it must involve the principles of elocution, but to what extent I shall leave to your own judgment. I shall merely lay my views on this question before you, not indeed in the expectation of their being accepted by you, because they may be wrong, but simply because they seem to me to be right.

In a few words, the reading which we should aim at should have three qualities:—

It should be *intelligent*.
It should be *intelligible*.
It should be *expressive*.

And the amount of elocution which should be introduced into our teaching should be sufficient to bring about reading possessing these three qualities.

The question here naturally presents itself, what system of elocution suitable to our classes shall we adopt? There are systems and systems. Most systems consist of a bundle of rules, so complex in character and so terrifying in number, that even the anxious, enthusiastic student feel inclined to close the book with a bang, and give the matter up in sheer despair. Such systems, it seems to me, cannot be too strongly condemned. We do not speak by rule, why should we read by rule? Why, the very rules themselves are obtained from natural sources and common usage. And if we have nature and usage to draw upon, why perplex and distract the mind by rules?

Let us for a moment examine the information a pupil occasionally receives by learning a rule.

ILLUSTRATIONS.

Rule I.—"Questions end with the rising inflection":

Was John *there*?
What time is it? *What time is it?*
Was John *there*?

Rule II.—"Negative sentences have a rising inflection in the part denied":

It is not *my fault*.
It is not *my fault*.
It is not *my fault*.

In short, then, however valuable such system may be in the eyes of the authors of them, they can be of but little assistance to the