

ties of the child's mind would remain undeveloped under instruction they could not have succeeded better. They are performing their duty with about the same intelligence as a parent who, taking his child out for exercise, picks him up in his arms and carries him the whole way. The young teacher, I trust, will seek a more enlightened and natural way of presenting this subject to his class. As little children have no conception of number, apart from objects familiar to them, it is evident that our first operations in Arithmetic should be with concrete numbers. In the introductory course of Arithmetic which we recommend, the numerical ball frame will be found a very serviceable apparatus,—not one of those little frail articles so common in our schools, but one with a substantial frame, four feet high and three feet wide, with strong wires two or three inches apart, and balls at least an inch and a half in diameter. In this preliminary drill the following hints should be observed: The teaching should be entirely oral; applicate numbers alone should be used; no rules or definitions should be given. The course will include simple operations in the four fundamental rules in the tables of Money, Weights and Measures, and in Fractions. Our first lessons would obviously be to teach our pupils to count objects up to one hundred, not further, and to write their signs, but nothing should be said about the theory of the numerical system. Each of the numbers from one to nine inclusive will require a separate lesson, but after this the pupils will be able to master a group of numbers, as from ten to nineteen, from twenty to twenty-nine, &c., at a single exercise.

ILLUSTRATION.—Let us say that the lesson is on the number seven. The teacher, with the ball frame in his hand, moves the first ball on the

wire, the class counting "one," then the second ball, the class counting "two," and so on till seven is reached, which number the teacher repeats, the class repeating after him; then count backwards to one, and forward to seven again, going over this process as often as necessary. To make the exercise more interesting the pupils in turn might be asked to count seven marbles, seven buttons, to make seven marks on the board, to hold up seven fingers, &c. The lesson, which should not be continued more than ten minutes, would be concluded by showing what the symbol for seven is, and carefully teaching the proper way of making it. When the pupils are able to count readily any number of objects between one and one hundred, and to write the figures representing them, the next step should be the addition of small numbers. In teaching this rule the following series of exercises are recommended: 1st. Keep the receiving number constant, and vary the added number; 2nd. Keep the added number constant and vary the receiving number; 3rd. Take any number such as nine, and ask for the numbers which when added will make nine; 4th. The adding of more than two numbers.

ILLUSTRATION.—The lesson, say, is adding small numbers to "three." The teacher slides three balls to the extremity of the first wire, and brings up one, asking how many are one and three? "four;" then returning the one ball, brings up two, asking how many are two and three? "five;" then returning the two balls, he brings up four, asking how many are four and three? "seven," &c. Now put the frame aside and go over the same recitation, using other objects. In our schools, even with large children, the habit, when working examples in addition, of counting on the fingers or ticking on the slate is too frequent—