

PREFACE.

This book is published as a Companion to the Common-Sense Arithmetical Calculator, an invention in the form of a Calculator of new design (a full description of which is given—with illustrations—in the introductory part of the book).

The merits of the Calculator are manifold : (1) As an adjunct in the *primary department* of a Public School it forms an invaluable aid in *teaching in a rational way the first lessons* in Arithmetic ; (2) It makes good use of Number-Forms (*"Picture-Numbers"*) in representing Numbers, that simple, but admirable means of developing in the minds of children an appreciation of NUMBER ; (3) By giving a *clear perception* of Numbers, it develops the observing and reasoning faculties, cultivates the memory, and sharpens the intellect ; (4) It presents Number on a sound *psychological basis*, and thus lays the foundation of a good Mathematical Education by giving the child a proper conception of Number ; the *arbitrary signs*, by which numbers are known, are made *intelligent* to children, *by a comparison with real objects*.

Believing that the Calculator will prove of practical value in the school-room, and a boon to teachers, and especially so to those engaged in rural schools, I have been induced to place both the Calculator and the accompanying book of explanation in the hands of the publishers.

I am indebted to Dr. McLellan, Principal of the Ontario School of Pedagogy, and to Wm. Scott, Esq., M.A., Vice-Principal of the Toronto Normal School, for many suggestions during the progress of the book.

The book is designed for Teachers using the Calculator, and is not intended as a book to be placed in the hands of the pupils.

W. NELSON CUTHBERT.

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