greet you again. That is what will happen if you won't take me. Mother said to Archelaus, 'It quite upsets him to be left behind.' It was good of you to send me presents . . . on the 12th, the day you sailed. Send me a lyre, I implore you. If you don't I won't eat, I won't drink ; there now."

I wonder if he got the lyre. CLIFTON HARBY LEVY.

THE GOESCHEN SERIES OF POPULAR CLASSICS, AND LITER-ARY AND SCIENTIFIC TEXT-BOOKS.

There was undoubtedly a strong admixture of ethics and philanthropy in the economical reflexions that stirred the heart of Herr G. J. Göschen, the well-known Leipsic publisher, when he conceived the project of publishing his cheap series of *Literary Classics* and *Literary and Scientific Manuals*. But whatever the motive, the World-Spirit moved to good purpose in him. The series is marvellously cheap, costing but 80 pfennigs apiece (20 cents) for volumes some of which run to 300 pages, and all of which are bound in flexible linen covers. It embraces the most varied subjects—histories of literatures, grammars of the most important languages, annotated editions of the German classics of all periods, dictionaries, histories of art, and manuals of all the sciences. The books are not reprints, but independent works by competent authorities—with illustrations, figures, etc.,—and all of pocket-size. The plenitude of material is such that we can mention in this review the mathematical text-books only. A few of the literary manuals will be noticed later. "*Wir können es nicht mit einem Trichter eingiessen,*" as the medieval professor of philosophy petulantly said to his students at the end of a four-years' course on Aristotle.

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The miniature mathematical library of the Göschen series consists of some ten volumes, which are shortly to be increased by several more. The mathematical editor under whose direction these works have been written is Prof. Hermann Schubert, of Hamburg, well known to the readers of *The Open Court* and *The Monist*. Professor Schubert is himself the author of three of the books of the series—all of them models of conciseness, yet exceedingly rich in contents for their size, and of very high didactic value. They are (1) his *Arithmetic and Algebra ,* (2) his *Collection of Examples in Arithmetic and Algebra ;* and (3) his *Tables of Four-Place Logarithms.* The value of his first book lies in its systematic and logical development of the principles ; it embraces nearly all of what is called with us higher arithmetic (excluding the commercial parts), and elementary algebra ; it would form an excellent skeleton-course in the hands of elementary instructors. The *Examples* are a companion-book to the *Arithmetic and Algebra.* The *Four-place Logarithms* are unique in several respects : they are printed in two colors red and black ; both for the natural numbers and for trigonometric functions, anti-tables are given, dispensing with interpolation, and making it as easy to find the anti-logarithms as the logarithms ; tables of physical and mathematical constants have also been added. This book could be used in great part by students quite ignorant of German.

The next volume in order is that of Dr. Benedikt Sporer, on *Niedere Analysis*, and is devoted to such subjects as continued fractions, indeterminate analysis, the theory of combinations and probabilities, series, interpolation, and the elementary theory of equations. The volume has 173 pages, and contains much material

that cannot be found in the common run of text-books on "advanced algebra." It serves as a sort of introduction to the succeeding volumes on *Higher Analysis*.

The first of these is the *Differential Calculus* of Dr. Friedrich Junker (192 pp., 63 figures). This volume contains a brief introductory chapter to the Calculus, which is a sort of *résumé* of the relevant developments of the preceding volumes; a second chapter on differences, differentials, and derivatives of the first order; a third on derivatives and differentials of higher orders; a fourth on the determination of the limiting values of singular forms; a fifth on the convergence and divergence of series; a sixth on the development of functions by exponential series; a seventh on the maxima and minima of functions; an eighth on the applications of analysis to geometry; and a final brief chapter on the application of the differential calculus to mechanics. The treatment, while traditional, is enlivened by many practical and modern points of view.

A volume complementary to the preceding works on analysis is a valuable and extremely convenient *Collection of Mathematical Formulæ* by Prof. O. Th. Bürklen (pp. 129, figures 18). This little book, which is in its second edition, gives in a compact form the most important and the most useful of the formulæ of arithmetic, algebra, and algebraical analysis, including finite and infinite series and the theory of equations, the most important propositions of plain and solid geometry, plain and spherical trigonometry, geodesy, analytical geometry, and the differential and integral calculus. There is a brief bibliography of the best hand-books of the various subjects here summarised, and a table of useful numerical values.

The geometrical part of the series is made up of some four volumes, the first being the *Plane Geometry* of Dr. G. Mahler, professor of mathematics in the Gymnasium of Ulm. The figures of the book, which is now in its second edition, are printed in two colors, black and red, the construction-lines being in red. The treatment is almost entirely modern, and not marred by a vicious straining for artificial rigor. The principle of symmetry has been made use of; the useful arithmetical applications of the principles of geometry have not been neglected; historical matter has been inserted here and there, and a brief but good collection of exercises given. Not the most unimportant feature of the book is the third chapter, on the systematic treatment of geometrical problems. The best modern text-books of geometry do not leave the pupil in the dark when solving geometrical problems, but put in his hands rational methods of attack that give to his labors rather the character of research than that of erratic and haphazard groping.

The volume on *Plane Analytical Geometry* is by Dr. Max Simon, of Strasburg contains 203 pages, and has 45 cuts. For actual amount of useful matter, this little book surpasses many treatises on analytical geometry having twice or three times its bulk. The same author has supplied the treatise on the *Analytical Geometry of Space* (200 pp., 28 cuts).

The volume on *Projective Geometry* is by Dr. Karl Doehlemann, of Munich, (162 pp., 57 figures, some of which are in two colors). Dr. Doehlemann has given a brief bibliography of the subject, and supplied an index. His booklet is particularly to be noted, as the study of projective geometry is rarely cultivated outside of technical and professional schools.

We have finally to mention the excellent little manual of Kurt Geisler, on *Mathematical Geography* (pp. 183). The matter contained in this little volume would form an excellent supplement to the subjects ordinarily treated in American text-books on physical geography, and properly forms an integrant branch of this

last subject. It encroaches on the domains of astronomy and physics, and had better be studied in connexion with the text-books of these sciences.

Both the publishers and authors are to be highly complimented on the general character of the series, and it can only be wished that its circulation will ultimately justify them in their undertaking. It is so cheap that almost any one can afford to purchase all the books in his department, and, so far as we have examined them, they will be found in every case to be modern productions, incorporating the best knowledge of the age.[1]   T. J. McC.

NOTES.

The readers of *The Open Court* will remember the correspondence published some time ago from the Rev. Peter Rijnhart, Christian missionary among the robber tribes near the border of Tibet. A dispatch, which has recently gone the rounds of the daily papers, announced his assassination and the flight of Mrs. Rijnhart to more civilised parts of China. The Rev. Chas. T. Paul, pastor of the Church of Christ, Toronto, Canada, an intimate friend of Mr. Rijnhart, writes, in reply to an inquiry, as follows:

"Up to the present I do not feel at all compelled to believe that he was killed. The dispatches say he left his wife to visit a camp at an hour's distance, but never returned. His wife then fled to Ta-chien-lu, being pursued by brigands, and believing of course that her husband had been murdered.

"I have received a telegram and two letters from Mrs. Rijnhart's sister, Dr. Jennie Carson, of Chatham, Ont., in which I am informed that no such news of any kind has come to Mrs. Rijnhart's home. I think, too, that some message would have come to me if things were as bad as stated in the dispatches.

"Strange to say, this morning's mail brings me a letter from Fort Wayne Ind., stating that Mrs. Rijnhart's friends in that city have heard direct from her. She writes from Ta-chien-lu, China, under date of December 1. She believes her husband dead and is now on her way to America. I am making up a purse of money to bring her from Shanghai to Canada. My Fort Wayne correspondent adds:

"'Mr. Rijnhart may be alive; he may have been taken prisoner and escaped in another direction, and we may hear from him again when he reaches some civilised place; we cannot believe he is dead.'

"My last news from Mr. Rijnhart was dated in May, 1898. He was just then leaving on a long journey to the interior. He expected to cross the Kuenlun Mountains and make his way gradually toward the capital. He had ample supplies for a year and a considerable company of men. Among other purposes of the journey was that of doing medical mission work and distributing New Testaments *en route*.

"Mr. Rijnhart is good as gold, simple in faith, and heroic in deed."

[1] Intending purchasers should address the G. J. Göschen'sche Verlagshandlung, Leipsic, Germany, or some local foreign book-seller.