necessity for systematic inquiry into its processes became obvious in this country. The publication of Dr. F Kick's supplement to his treatise "Die Mehlfabrication," which tabulated the improvements in machinery for preparing and grinding cereals introduced up to the year 1883, placed at the disposal of the translator a manual complete in its investigations into the nature of grain from the miller's technical standpoint, and into the best means of reducing it to flour. It is true that the book does not concern itself with the construction of the mill building nor with the motive power to be employed; but, from this point onward, the leading principles which should guide the milling engineer are carefully and accurately related, and their application justified when necessary by mathematical demonstration; the *rationale* at the same time being within the comprehension of the practical miller. Of this method the chapters on "balancing millstones" (p. 113), and on "disintegrators" (supplement, p. 25), afford admirable examples. The various operations of grain preparation, grinding, and of bolting, sifting, and dressing the meal, with descriptions and plates of the best known machines employed, are fully detailed, whilst the controversy between the advocates of "high" milling and "low" milling is discreetly adjusted by the author in the incidental remark that "which of these methods is to be used can only be settled by the local demand, if, as is generally the case, the mill works for the home market."

It is, however, to those portions of the work which relate to roller-mills that the reader at the present time will probably turn in the first instance. He will find here, not only information as to the various kinds in use and as to the manner in which they have been found to perform their work, but an intelligible account of the operations involved in the reduction of cereals by rollers, and good reason shown why the time honoured millstones have become almost entirely discarded in the manufacture of wheaten flour.

The book is very fully illustrated by woodcuts throughout the text, and by some thirty supplementary sheets of diagrams; whilst a preliminary chapter contributed by Dr. August Vogel, of Vienna, on the histology of farinaceous grains, adds completeness to the work.

We congratulate the translator on his introducing to the English reader a volume of the utmost value to millers and engineers, and of great interest to many other persons more or less concerned with this important industry.

Elements of Chemistry: a Text-book for Beginners. By Ira Remsen. (London: Macmillan and Co., 1887.)

OPINIONS no doubt differ much as to what is simple enough for a beginner. A good deal depends on the age of the beginner. We hold, in opposition to the author in his preface, that the present production is not well adapted for very young pupils.

There is a good deal of promise in the book which might be better fulfilled, and there is an attempt to cover far too large a field, with the result—not intended by the author—that it reads more like a book on general chemical information than an elementary introduction to chemistry.

Metals and non-metals are dealt with under "family" groups, and most of their common, and many uncommon, compounds described, generally with formulæ, and this in cases and with equations which cannot be termed simple; for instance, technical processes like soda-making, or bleaching powder, or potassium chlorate, or nitro-benzene, &c. Otherwise the order and arrangement of matter and the questions attached to each section are most excellent, and the book would be most useful even for general reading, exercise, and information on the chemistry of common things to the great mass of partially informed, ordinarily well educated, people of any age. To the senior boys of public schools, who have already had a little instruction in science, this book would be really useful, as taking them in a different manner over ground already partially covered, widening their general knowledge, and cultivating the main thing, "*thinking.*"

A Primary Geometry, with Simple and Practical Examples in Plane and Projection Drawing, and suited to all Beginners. By S. E. Warren, C.E. (New York: Wiley and Sons; London: Trübner, 1887.)

THIS work bears as motto, "Geometry should be begun as early and as simply in behalf of industrial life as arithmetic is in behalf of business life"; and its object is, accordingly, to contribute to a general earlier beginning of the study of geometry. "The truths of *form*, as needed in *drawing*, have been made prominent, while not neglecting elementary ones of *measure*."

The text treats of straight lines, triangles, regular figures, areas, lines and planes in space, the elementary bodies, and projections of elementary solids, the subject being considered in a common-sense fashion without much use of purely geometrical proofs. Having perused a very large portion of his book without detecting any flaw, we consider the author competent for the task he has undertaken, but we do not take kindly to such presentments of geometry. We believe, however, the book to be well adapted to junior pupils as an introduction to the study, and also to artisans and others who are likely to be able to grasp the illustrations given better than they would purely geometrical proofs for which their antecedents have not prepared them.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts. No notice is taken of anonymous communications.*

[*The Editor urgently requests correspondents to keep their letters as short as possible. The pressure on his space is so great that it is impossible otherwise to insure the appearance even of communications containing interesting and novel facts.*

The Duke of Argyll's Charges against Men of Science.

I REGRET to find that the Duke of Argyll has once more evaded the point at issue. The question is one not of *formulas* but of *facts*. If the statements upon which his Grace bases the severe strictures of his "Great Lesson" were *true*, I for one should take no exception to any "metaphorical or rhetorical expression" by which he chose to enforce his lesson.

Three months have elapsed since the Duke's attention was directed to the discussions which during the last seven years have taken place upon the subject of Mr. Murray's theory of coral reefs—and especially to that one in which the Director-General of our Geological Survey, and the most eminent of American geologists, Prof. J. D. Dana, bore the leading parts; the Duke has been referred to the scientific journals in which this and the other discussions have been carried on; and the fact has been pointed out to him that all the principal text-books of geology, foreign as well as British, which have been published since the theory was announced, have given it a prominent position in their pages. In the face of these facts, is the Duke of Argyll still prepared to maintain that, with respect to the theory in question, there has been "a grudging silence as far as public discussion is concerned"; that there has been "a silence of any effective criticism"; and that "no serious reply has ever been attempted"? If his Grace admits that he was mistaken in making these assertions, is he prepared to withdraw them and also the comments which he has based upon them?

Instead of doing anything of the kind up to the present, the Duke of Argyll has fathered two stories about the wrong-doings of geologists—both of which stories have as little foundation in fact as his statements in "the Great Lesson."

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