on the manner of the discovery of these truths. The mistake is too often made, that which is the parent of most of the succeeding blunders, is hurrying on too impatiently at the beginning. The full importance of the precise wording of the definitions, and of an exact and clear idea of them, is not understood. Now, I consider that this should be laid down as an inflexible rule: that a pupil should not touch a proposition until every definition, postulate and axiom is known by its number known, in letter and known in spirit. When this is done, he should be told:—Now you are about entering upon another part of your course. It is as different from what you have already gone through as light is from darkness. You have taken these definitions, axioms and postulates as they were presented to you. Think them over—each one of them—carefully. If there is the least iota to which you cannot give your unreserved and intelligent assent, you cannot proceed one step further. If there is anything not quite clear, have it cleared up. Euclid, up to this point, is a stern tyrant. If you cannot accede to these conditions, he will have none of you. Do you make this unreserved submission? Are you willing to proceed? If so, then enter the temple of Geometry. Now, bound by your solemn assent, you are initiated. Euclid is no longer a Dictator, but an equal. You must rise to the dignity of this equality. You must no longer take anything for granted because he says it. He will not thank you for it now. Nay, he rather spurns the craven spirit who should do so. He wants no confidence in *him*. He says, "be a sceptic." Believe nothing unless it is proven; no matter how simple; no matter how like the truth. Admit nothing but what you are compelled to admit. The pages of definitions, postulates and axioms to which you have assented as the groundwork of your reasonings, is the Law-book to settle all disputes, the Bible to silence all doubts. They contain the ultimate, highest and only rules and reasons for your proceedure and opinions. No operations can be admitted except those postulated. Therefore, if a line is to be drawn, you must refer to the postulate as an indisputable authority before it is done. If an assertion is made, it must be proven, either by a reference to a previously established theorem, to a definition, axiom, hypothesis or construction. You must prove all things, if not by reference, by demonstration; then hold fast all you have proven. Our school books are more or less defective in the matter of references. The pupil, however, should supply all omissions of this kind, at least in the First Book. I would insist on this, as there is nothing like it to compel the young student to comprehend the true nature of mathematical reasoning.

These hints which I have thrown out as to the manner of treating the elements of Mathematics, may be summed up in a