

For the Torch of Reason.

False Pretences.

BY CHARLES KENT TENNEY.

Not many years ago, by comparison with the years through which it has passed, the earth, according to true Christian doctrine, was flat, and around it revolved the sun and stars, and over all was a huge cover, the sky lights of which were sometimes opened to let the rain fall through. To question this Christian arrangement of nature was death by most cruel torture. Yet we are informed that to Christianity alone is due modern learning and civilization.

There is no known scientific fact which the Christian church has so strenuously resisted as the rotundity of the earth, and that it revolves upon its axis and around the sun; no tortures too cruel or horrible for the exponents of such theories. The thumb screw, the rack, and the fire were its opposing arguments. To doubt was cruel death. Such were the methods of those who are said to have been the fathers of our present civilization.

Before Christianity there had existed a very respectable civilization. By the dark methods of Christianity this early civilization had almost ceased to exist in so-called Christian countries. To maintain its power, and to prevent men from thinking in any line other than promulgated by its corrupt and venal head, it, for nearly fourteen hundred years made the acquiring of knowledge and education a crime, with punishment which would have brought tears to the eyes of the lowest savage. By its remorseless persecutions it strangled all former traces of civilization during this time, and left our ancestors in abject ignorance, wretchedness and poverty. Yet almost any Christian will tell us that the Christian church is the mother of present civilization.

All scientific investigation in its beginning, in astronomy, geology and all other sciences requiring such investigation, has been uniformly strenuously resisted by this would be civilizer. Alchemy, the mother of chemistry, was permitted only because the church thought it saw the possibility of making artificial gold. The early physician, to whom modern civilization owes so much, was frowned upon, and the practice of his profession forbidden. In case of sickness, only the use of shrines, or saints' bones, were permitted, and the price for such use regulated by the so-called civilizer. The debt of gratitude due from modern physicians and surgeons to this great civilizer can surely never be paid.

There were, however, other forces at work which the church, with its ever watchful eye, had not reckoned upon. Through the misfortunes of

war, and perhaps political intrigue, Genoa, which had long held the commercial supremacy of the Mediterranean, was rapidly being outstripped by its rival Venice. "With ruin before it, and unwilling to yield its Eastern commerce," says Prof. Draper, "it was thought necessary to look elsewhere for trade." There were many of its citizens who were well acquainted with the globular form of the earth. Why not reach the East Indies from the west? By the church this suggestion was received with little favor. It gave no encouragement, because such schemes were unsuited to its former arguments. It was disliked because of its irreligious nature. This globular form had been condemned by the holy fathers. By the Patristic geography the earth is a flat surface, bounded by the waters of the seas, on the yielding surface of which rests the crystalline dome of the skies. These doctrines were supported by passages from the holy scriptures. This geography had been the authority of the church for more than eight hundred years, and of course settled the matter. Something must, however, be done for Genoa, and Columbus took up the idea. He knew the earth was globular in form. Receiving no encouragement or substantial aid at home, he sought the support of Ferdinand and Isabella, who, seeing great possibilities for their kingdom from such a route, gave him their support, and he made the voyage. Even then the church would not renounce its theory of the flatness of the earth, and it was not until Magellan had actually circumnavigated the earth, and returned to the port from which he sailed, that it reluctantly let go. The influences of the church in the discoveries of Columbus and Magellan, like many other things, are only apparent to Christians. The discovery of America, aided by the remains of civilization so faithfully preserved and guarded by the Mohammedan Arabs of Spain, was the beginning of our present civilization. America was discovered by the demands of commerce at Genoa; not by the church, but against its most strenuous opposition. The Moorish civilization of Spain, from whom we derive many of our most useful inventions, and some of our most important knowledge of the past, was not preserved by the church, but that most enlightened people were actually exterminated by it, through the instrumentality of Ferdinand and Isabella, who had so materially aided Columbus.

Since the days of the Christian church, has there ever been any advance in human liberty, has there ever been any advance in human knowledge, has there ever been any advance in Science, or has there ever been any advance in the ways which make men's burdens lighter,

and which bring peace and contentment to the great mass of struggling and toiling humanity, which has not been, in its inception, and for long years after, bitterly fought and resisted by the churches? Yet, when the goal is reached, after these long, weary years of ceaseless strife, after these many centuries of darkness, ignorance and woe, after all the battlements have been taken, and the battlefields strewn with unnumbered dead, after all this has been accomplished by Free-thought and Science, we are serenely told that modern civilization is entirely due to Christianity. Such colossal cheek "surely passeth understanding."

Madison, Wisconsin.

For the Torch of Reason.

What Is Science?

BY CHARLES CLARK MILLARD.

In controversial writings, it is frequently asserted that Science teaches whatever it is that the writer wishes his readers to believe, and thus the most unscientific speculations and the wildest imaginings are supposed, by many uncritical readers, to be vouched for by that vague, undefined thing called Science; and when such speculations and imaginings become associated and classed with scientific facts, their truth seems assured. But a clear understanding of what is and what is not Science will eliminate this source of error.

Science is "classified knowledge." But since we only know things by classifying them, it follows that all knowledge is classified knowledge, although the term is commonly restricted to that part of human knowledge which is arranged systematically and published in books. But, using the word in its widest sense, Science includes only what is known. True, Science has its fictions and theories, but these are not put forth as facts, they are only the means used to discover facts, or the unfinished product of the worker in Science, which may yet be altered, mended or rejected altogether.

Science is based upon the experiences common to all normally constituted human beings, and the propositions—axioms—which are self-evident to human reason; and the highest, or most far-reaching conclusions cannot be more certain than these basic experiences and axioms. On this humble and sure foundation rests all truth; and other foundation can no man lay. Every scientist must begin with simple truisms, which even the uneducated can comprehend; and increase his knowledge by extending his experience, observing phenomena, and reasoning from the known to the unknown. Of course, in doing this he borrows and uses the know-

ledge others have acquired and made a part of Science.

The facts of Science may be divided into primary and secondary facts, according to the means by which they are acquired, the second class always being connected by a chain of reasoning with the first, and depending upon the primary facts and the chain of reasoning for its certainty. At each link of the chain an error in logic is possible; and therefore the longer the chain the less certain is the ultimate conclusion, and vice versa. If the reasoning is logical and it leads back step by step to primary facts, then the ultimate conclusion is true and a part of Science.

But the reasoning may proceed from assumed fact. Many assumptions have been put forward as primary or secondary facts of science, but comparatively few have been able to hold a place within her sacred domain. Her pathway down through the ages is strewn with rejected and ejected assumptions which were not able to stand the test of truth. If a proposition is assumed as true and an argument based thereon, and there is no fault in the logic, the conclusion arrived at is true if the assumption is a fact, and false if the assumption is false; and in such a case nothing is gained by the argument.

Christian historians deal largely in this kind of argument. They assume that an intelligent being governs the world for the best interests of mankind; and using this as a major premise, it is easy to prove that in every act of the historic drama, every crisis in human affairs, and in every great contest between nations, right has triumphed, and that no other result would have been of so much benefit to the human race. And as all minor acts helped to bring about the final result, all was for the best because it was the "will of God".

The fatal defect in this argument is, that the major premise is not a primary fact, and as it cannot be established by testimony nor by argument, it is not a secondary fact. It cannot be established by reasoning, because the conclusion covers all the experiences of mankind, and these same experiences must be used to prove the major premise; the conclusion depends on the premise, the premise must be supported by the conclusion and there is no escape from the "vicious circle". This explains the fact that all arguments for the existence of a god are unsatisfactory; and also the further fact that every religion depends upon faith or belief in a god or gods.

A "Religion of Science" and a science of religion are equally impossible except as products of the imagination. All material things—entities—with their properties and relations may be included in science, and nothing more. Every