

These are the two forces whose constants are the absolute modules of gravitation and the velocity of light. But our whole conception of the universe, and therefore our whole experience, are opposed to there being another general relation, for such a one could only exist by establishing absolute values of our units. Now, it is not to be believed that general considerations in regard to the nature of things could ever lead us to assign a particular numerical value to the measure of any particular thing, such as our standard measure. We have, therefore, reason to believe that while we doubtless are ignorant of the precise form of the fundamental principles of nature, we at least are not mistaken as to their number.

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**Popular Astronomy.**

By Simon Newcomb, LL D., Professor U.S. Naval Observatory. (New York: Harper & Bros.)

CSP, identification: Haskell, *Index to The Nation*. See also: Burks, *Bibliography: List of Articles*, MS 1513 (draft).

Simon Newcomb (1835-1909) received his B.S. from Harvard in 1858, and assumed the position of professor of mathematics with the U.S. Navy. His first station was the Naval Observatory in Washington, D.C. He became the senior professor of mathematics in the Navy in 1877, and was appointed superintendent of the "American Ephemeris and Nautical Almanac." From 1884 until 1893 Newcomb was professor of mathematics at The Johns Hopkins University. He was not only a mathematician, but also an astronomer of international reputation, having been associated with several American observatories. While at Johns Hopkins, Newcomb was the editor of the *American Journal of Mathematics*. He was author of numerous books on astronomy and mathematics, member of the National Academy of Science (vice-president, 1883-1889), president of the American Academy for the Advancement of Science, 1877-1878, and president of the American Society for Psychical Research.

—The public naturally like to hear what a man who has recently distinguished himself has to tell them about his specialty; and astronomers will be glad to have a collection of Professor Newcomb's highly competent opinions in regard to various questions of astronomy. This book will not, however, fascinate the general reader. The style in which it is written suggests that it may have been first composed for a school text-book, and afterwards worked over for popular reading. In Part I. an attempt is made to teach the first elements of astronomy in their historical development; a very good idea, well worthy of a fuller working out. Part II. is entitled "Practical Astronomy," not certainly because it teaches anything practically, but because it supplies information concerning telescopes and the work which is done with them. Part III. describes the solar system, and Part IV. the stellar universe.