

Scientific Method

Quotation from *SCIENCE, RELIGION AND REALITY*. By Arthur S. Eddington. New York. Macmillan. Dr. Eddington is professor of astronomy at Cambridge University, England.

The learned physicist and the man in the street were standing together on the threshold about to enter a room.

The man in the street moved forward without trouble, planted his foot on a solid unyielding plank at rest before him, and entered.

The physicist was faced with an intricate problem. To make any movement he must shove against the atmosphere, which presses with a force of fourteen pounds on every square inch of his body. He must land on a plank travelling at twenty miles a second round the sun—a fraction of a second earlier or later the plank would be miles away from the chosen spot. He must do this whilst hanging from a round planet head outward into space, and with a wind of ether blowing at no one knows how many miles a second through every interstice of his body. He reflects too that the plank is not what it appears to be—a continuous support for his weight. The plank is mostly emptiness; very sparsely scattered in that emptiness are myriads of electric charges dashing about at great speeds but occupying at any moment less than a billionth part of the volume which the plank seems to fill continuously. It is like stepping on a swarm of flies. Will he not slip through? No, if he makes the venture, he falls for an instant till an electron hits him and gives a boost up again; he falls again, and is knocked upwards by another electron; and so on. The net result is that he neither slips through the swarm nor is bombarded up to the ceiling, but is kept about steady in this shuttlecock fashion. Or rather, it is not certain but highly probable that he remains steady; and if, unfortunately, he should sink through the floor or hit the ceiling, the occurrence would not be a violation of the laws of nature but a rare coincidence.

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The Weather Bureau is furnishing special weather reports at 17 places for the benefit of fliers along commercial airways.

The pilchard, a very oily fish which abounds off the coast of British Columbia, is being used as a source of oil for paint, soap, medicine and margarine.

Ants As Architects

Quotation from *THE NATURAL HISTORY OF ANTS*. By Rene Antoine Ferchault de Reaumur, translated with an Introduction and Notes by William Morton Wheeler, New York: Alfred A. Knopf.

Ants of all species are more to be admired for the ardor with which they toil than for the artistry of their constructions. The architecture of every formicary is extremely simple and crude. After reading the descriptions made by the ancients of the interior of the several kinds of habitations, one might be prepared to find them divided up like some of our large buildings. They distinguish among them several apartments set aside for different purposes. According to these authors, the first and most spacious is the lodging of the ant population; the second is, so to speak, the apartment of the women, the gynnæceum, where the females abide with their small families. They have placed the granaries at the portals of this noble apartment. Finally, some have placed the cemetery immediately next to the granaries. The only truth in all this diversity, in which nearly everything about the granaries and the cemetery is to be rejected, is that usually most of the ants are found nearer the top of the formicary than are the young insects which constitute their ardent hopes and which are not yet ants. And we should be forming a wrong idea to imagine large squares like those of our cities, or anything like halls, immense in comparison with the whole edifice, for the general assemblage of the ants. If, in order to form a juster conception, we compare the formicaries with cities proportional to the stature and number of the citizens, it would be with cities composed only of arcaded streets; or if we be content to compare the formicaries with a single edifice built for the accommodation of a great number of tenants, they may be said to be composed throughout of intersecting stairways, while the most roomy spaces of each formicary are very small and comparable with the landings of the stairways. It is therefore in the streets, which are really covered over, and on the stairways and their landings, that the ants abide, now higher and now lower, according to the conditions of the atmosphere.

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Macaws were favorite pets of Indians in the southwest.

Metal alloys can be made that resist temperatures as high as 2550 degrees Fahrenheit.

First Glances at New Books

ELEMENTS OF ASTRONOMY, by Edward A. Fath, New York. McGraw-Hill Book Company. \$3.00.

At last teachers of astronomy have a text-book suitable for elementary classes that includes the most important of recent discoveries and theories such as Hubble's determination of the distances of some of the spiral nebulae and Eddington's ideas of the source of radiation of the stars. The clear descriptions and lack of mathematics which make it so excellent a text also commend it to the general reader.

WHAT PRICE PROGRESS? The stake of the investor in the discoveries of science. By Hugh Farrell. New York. G. P. Putnam's Sons. \$2.50.

Practical and interesting talks to business men on the value of research to industry. Full of concrete and up-to-date examples from American manufactures, plainly and pertinently put.

MODERN SCIENCE AND PEOPLE'S HEALTH. Edited by Benjamin C. Gruenberg. New York. W. W. Norton & Co. \$2.50.

Chapters by Prof. Stockard of Cornell Medical College, Prof. Taylor of Princeton, Prof. Eddy of Columbia, Dr. White of St. Elizabeth's Hospital, Prof. Winslow of Yale, Dr. Emerson of Columbia, exposing medical fakes, explaining heredity, describing hormones, giving laws of nutrition, telling how the brain works, discussing the prevention of sickness and pointing the possibilities of public health work.

THE SMALL FRUITS OF NEW YORK, by U. P. Hedrick, Albany. New York State Agricultural Experiment Station. \$7.50.

A quarto volume of over 600 pages, with scores of sumptuous colored plates, describing and figuring all named varieties of small fruits of a great horticultural area. It is remarkable that such a monumental work could have been produced at so low a price.

OUR MOBILE EARTH. By Reginald A. Daly, New York. Charles Scribner's Sons. 1926. \$5.00.

An up-to-date and popularly written discussion of earthquakes, volcanoes and such manifestations of the earth's unsettled character, and their causes.

During the first three months of this year, furs came into the United States from 55 countries.