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Contents.

(Illustrated articles are marked with an asterisk.)

Table listing various articles such as 'Agricultural inventions, recent', 'Aluminum, a new process for', 'American Association meeting', etc., with corresponding page numbers.

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For the Week Ending September 2, 1893.

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Detailed table of contents for the Scientific American Supplement No. 922, listing articles like 'ASTRONOMY—The End of Our World', 'BOYAN—The Great Fish Tree', 'CIVIL ENGINEERING—Moving of a Shed at Rouen', etc., with page numbers.

PATENT OFFICE EXAMINERS WANTED.

Strange to say, there appears to be a greater demand for qualified persons to serve as Patent Office examiners than there are applicants. This probably is because the position demands considerable scientific knowledge, only to be acquired by thorough study, and ability to make intelligent use of such knowledge in the performance of official duties.

THE AMERICAN ASSOCIATION AT MADISON, WIS.

BY H. C. HOVET.

The recent meeting of the American Association for the Advancement of Science, in the charming capital of Wisconsin, serves to bring to the memory of the older members the familiar name of the late Dr. Increase A. Lapham, who doubtless did more than any other one man in this State to stimulate the scientific zeal of his fellow citizens.

THE ORIGIN OF MOUNTAIN RANGES.

One of the most interesting and attractive persons in attendance this year, was the retiring president of the A.A.A.S., the veteran geologist, Professor Joseph Le Conte, of California. The subject of his annual address was "The Present Status of Science as to the Origin of Mountain Ranges."

Many theories have been offered in explanation of these phenomena. Bare facts are not science. Facts must be grouped and systematized. But as this work goes on, it is liable to grow daring and speculative, until it is necessary to demand a careful discrimination between what may be styled formal and causal theories. It is agreed that mountains were originated by a process of horizontal mashing and vertical uplifting of the earth's crust.

but did not really think it necessary. He considered and refuted objections; and he finally returned to the contraction theory, not as demonstrated beyond a doubt, but as furnishing the best working hypothesis yet offered.

MAMMALIAN PALEONTOLOGY.

An elaborate and important address was given by Prof. H. F. Osborne, of New York, on recent progress in the study of ancient forms of mammalian life. A new era was opened twenty years ago by Kowalevski's memoirs on the hoofed mammals.

Paleontology is no longer a science apart, as it was formally regarded. It must keep abreast with geology, historical geography, paleobotany, osteology, and embryology. All structures should be studied with reference to their homologies.

General faunal succession of Mesozoic and Cenozoic time is marked by the sudden appearance and disappearance of certain series and the rise and fall of great groups. One of the most decided reforms in classification is in the use of the family division. It used to be the idea that families must be grouped as if in circles.

Several papers will now be reported that had a bearing on the age of the globe and the length of time it has been inhabited; and the excited and animated discussion of these topics may be regarded as the most marked feature of this meeting of the A. A. S.

GEOLOGICAL TIME.

In treating of geological time, as indicated by the sedimentary rocks of North America, Professor C. D. Walcott, of Washington, D. C., conceded, at the outset, that it is uncertain and is in conflict with the teachings of some other sciences.

The attempt in Professor Walcott's paper was to throw light on the problem from ascertained facts as to the evolution of our continent, which was outlined in the Archean period and has not materially changed since. Its areas were more clearly outlined in Algonkian time, since which the changes have all been above the level of the deep seas.