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Contents.

(Illustrated articles are marked with an asterisk.)

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For the Week Ending August 19, 1893.

Price 10 cents. For sale by all newsdealers.

Table listing contents of the supplement including I. AERONAUTICS, II. ASTRONOMY, III. BOTANY, IV. CHEMISTRY, V. CIVIL ENGINEERING, VI. COLUMBIAN EXPOSITION, VII. EDUCATION, VIII. ENTOMOLOGY, IX. GEOGRAPHY AND EXPLORATIONS, X. GEOLOGY, XI. MECHANICAL ENGINEERING, XII. METEOROLOGY, XIII. MINING ENGINEERING, XIV. MISCELLANEOUS, XV. NATURAL HISTORY, XVI. NAVAL ENGINEERING, XVII. PHOTOGRAPHY, XVIII. TECHNOLOGY.

RAISING VESSELS BY MEANS OF AIR SACKS.

The Glenola, a two-masted schooner, which was sunk about six months ago in Great South Bay, N. Y., has been successfully raised by means of air sacks.

WATER POWER TRANSFORMED INTO LIGHT.

Among the notable industrial enterprises recently inaugurated in Mexico is the electric lighting of the city of Guadalajara. The plant utilizes the famous Juanacatlan waterfalls, which are situated about 18 miles from Guadalajara.

The installation of the San Antonio Light and Power Company, of Pomona, California, possesses many features of interest. The current is carried twenty-eight miles under the enormous pressure of 10,000 volts.

AERIAL NAVIGATION.

During recent sessions of the World's Congress Auxiliary at Chicago, a special branch of the department of engineering known as the aerial navigation conference afforded the occasion for a most interesting presentation of facts and comparison of views of the most experienced experimenters and the best equipped scientists who have given this subject their attention.

At the outset it was manifest that there was a general indorsement of Mr. Chanute's views, that, difficult as was the problem of aerial navigation, there was still enough of promise in it to lead men, through patient and intelligent inquiry and research, to hope for ultimate good results.

One of the most interesting papers presented at the first session was that by Prof. Langley, secretary of the Smithsonian Institution, Washington, D. C. (read by Prof. George E. Curtis of the same institute), under the title of "The Internal Work of Moving Air."

is worthy of note to find that in two other papers presented at the second session the same kind of studies were recorded and similar conclusions presented by observers in Europe and Africa, one being on "Gliding Flight," by J. Bretonniere, engineer and observer, Constantine, Algeria, and the other on "Theory of Soaring Flight," by Chevalier de Louvrie, engineer, of Combebigu, France.

In regard to the construction and propulsion of the future air ship, Dr. R. H. Thurston, director of Sibley College, Ithaca, N. Y., read a most interesting paper on "Materials of Aeronautic Engineering," in which he gave facts regarding the strength of metals, some of which were new even to the scientific men in his hearing.

The subject of kite flying was taken up, and the paper on "Experiments with Hexagon and Tailless Kites," by W. A. Eddy, experimenter, of Bayonne, N. J., illustrated by drawings on the blackboard, was a most interesting one.

Papers on ballooning were read by Mr. C. E. Myers, aeronautical engineer, of Frankfort, N. Y. These were "Manufacturing Hydrogen Gas Balloons," "Natural Gas Balloon Ascensions," "Maneuvering of Balloons," and "Balloon Meteorology."

A paper on "Flotation vs. Aviation," by Prof. De Volson Wood, of Stevens Institute, Hoboken, N. J., in which the professor advocated a departure from the bird method in flying machines, provoked some discussion, in which the bird method was ably advocated.

Gen. W. Hutchinson, of the British army, Silverdale, England, submitted a published paper on "Design of Navigable Balloons." This was an old idea of Gen. Hutchinson's, and related to the employment of balloons in warfare.

One of the most interesting of the papers read at the conference was by Prof. Mark W. Harrington, but it had reference rather to the work of the government weather bureau than to the navigation of the air, and advocated the establishment of special balloon and kite stations for observational purposes.

Prof. A. F. Zahm, secretary of the conference, whose subject was "The Stability of Aeroplanes," presented descriptions of a variety of models with which he has experimented with a view to securing automatic equilibrium and steadiness of flying machines in all circumstances of wind and calm.

Sweet Pickled Watermelon Rinds.

A writer in Harper's Bazar gives the following directions:

Peel the rinds with a sharp knife that will take off the green skin evenly. Trim off also every trace of the pink flesh of the fruit, because it is too juicy to make a firm, crisp pickle. Then cut the strips of rind into small pieces, two to three inches long, and placing them in a large earthen dish, sprinkle them lightly and evenly with salt.

Take good cider vinegar for the basis of the pickle. Allow a pound of sugar to a pint of vinegar, and add also half an ounce of stick cinnamon broken into inch pieces, and a half teaspoonful each of wholecloves and blades of mace.