Science News a Century Ago

Launch of S.S. *John Randolph*

On July 9, 1834, the *John Randolph*, the first iron steam vessel in the United States, was launched on the Savannah River. She had been built by John Laird at Birkenhead and sent to the United States in sections. She was 110 ft. long, 22 ft. beam, and drew about 2¾ ft. Her tonnage by the builders' old measurement rules was about 250 tons. Her engines, of 60 horse-power, had been made by Fawcett, Preston and Co., of Liverpool. The first iron vessel had been built so long before as 1787, but iron shipbuilding made slow progress. There were many objections raised against the use of iron, but practical experience proved most of them to be ill-founded. In the end, iron ships proved lighter and faster than wooden ships, cargoes could be stored more easily and kept in better condition in them, they were more easily repaired, and when fitted with watertight bulkheads were far safer. The pioneers of iron shipbuilding in Great Britain included John Grantham, Sir William Fairbairn and David Napier, but none did more important work in this direction than John Laird.

Death of Capt. David Thompson

"We have just received the intelligence," said the *Athenæum* on July 12, 1834, "of the decease at Mauritius of the well-known computer and author of the Lunar and Horary Tables and inventor of the Longitude Scale, in consequence of severe injuries received during the hurricane which recently devastated that colony.

"The work which brought Captain Thompson's name into notice among men of science, is his solution of the problem, of clearing the apparent distance of the moon from other celestial bodies, from the effects of parallax and refraction—one of the most useful in nautical astronomy; and he received from the late celebrated Baron de Zach, high commendation for his skill and success in this investigation, and from the late Board of Longitude, a tardy acknowledgement of the high merit of his Tables. . . ."

David Douglas, 1798–1834

On July 12, 1834, David Douglas, the Scottish botanical collector who discovered 'Douglas spruce', was killed in the Sandwich Islands. On an excursion he inadvertently fell into a pitfall set for wild cattle and was gored to death by a bull. Born at Scone in Perthshire, the son of a stone-mason, he became a gardener, and while employed at the Botanical Gardens, Glasgow, attracted the attention of J. W. Hooker, then professor of botany, and accompanied him on some of his expeditions. He was recommended to Sabine, the secretary of the Royal Horticultural Society, and sent to the United States, where he procured many fine plants. Sent out again in 1824, during the next three years he went as far as north California and the River Columbia, and then made his way to Hudson's Bay, whence he returned with Sir John Franklin. It was during this expedition that he discovered the spruce which bears his name. His third and last expedition began in 1829. After spending a part of the years 1832–34 on the Fraser River, he sailed for the Sandwich Islands. It is said he introduced into Great Britain fifty-three new woods and one hundred and forty-five new herbaceous plants of a hardy nature. He was a fellow of the Linnean, Geological and Zoological Societies and after his death the botanists of Europe erected a monument to him at Scone. A monument to him was also erected in the cemetery at Honolulu by J. L. Brenchley (1816–73), the traveller.

Societies and Academies

LONDON

Royal Society, June 28. W. L. BRAGG: The structure of alloys (Bakerian Lecture). An alloy phase has two characteristics. The first is the pattern of sites occupied by atoms irrespective of their nature. Each phase of an alloy system has a different pattern of sites, and therefore a change from one phase to another involves their complete re-arrangement. The second characteristic is the distribution of the atoms amongst these sites. This distribution may vary continuously without change of phase, from being random at high temperatures to being partially regular at low temperatures. The alloy is a system of dynamical equilibrium. Although interchange of atomic position at room temperature is infrequent, the alloy has received its character at some previous point in its history when the temperature was just sufficiently high for interchange to be important. Maxima and minima in physical properties at certain relative proportions, such as Fe_3Al and $AuCu_3$, are statistical effects, and do not imply the existence of corresponding compounds.

Royal Meteorological Society, June 20. SIR NAPIER SHAW: The natural history of weather. The paper describes an arrangement of the meteorological data for a station with special reference to the encouragement of the study of Nature. I. S. ASTAPOWITSCH: Air waves caused by the fall of the meteorite on June 30, 1908, in Central Siberia. The results of the barograph records obtained by the author at the time of his research expeditions of 1930 and 1932 are given. The time of fall of the meteorite and the force of the explosion were determined by examination of various independent sources. The air wave must have been recorded by microbarograms in Japan, China, India and perhaps America. F. J. W. WHIPPLE: Phenomena related to the great Siberian meteor. This paper is supplementary to one published by the author in 1930. Additional evidence with regard to the illumination of the sky during the nights following the arrival of the meteor is summarised. In view of the fact that recorded observations of this phenomenon are confined to the north of Europe, the meteor probably had a tail which was to be captured by the earth's atmosphere. The air waves produced by the meteor were recorded at Batavia and at Washington as well as at several places in Europe. S. E. ASHMORE: The splashing of rain. The connexion between the rate of rainfall and the splashing produced by it from a horizontal surface has been studied experimentally for a large number of surfaces which may be used as the surroundings for rain-gauges. The splashing from ice and water has also been investigated. W. R. BALDWIN-WISEMAN: The cartographic study of drought. This paper presents a method of setting out rainfall statistics for drought periods. In order to illustrate this method the famous drought in Queensland during 1902 has been investigated. Maps are