

director and he was succeeded in turn by Thomas Henderson, Sir Thomas Maclear and Edward J. Stone, who in 1879 was followed by Sir David Gill. Gill was born at Aberdeen a century ago next June. Under Gill, who held the post of "Her Majesty's Astronomer" until 1906, the Observatory was completely transformed and it took a leading part in many of the principal projects of the day, including the great Astrographic Chart of the Heavens. Gill was also deeply interested in the measurement of an arc of meridian from the Cape northward through the entire African Continent. His retirement led to little lessening in his activities, and in 1913 he completed his "History and Description of the Cape Observatory". He died on January 24, 1914. Two other astronomers who laboured in the southern hemisphere in Gill's time were Henry Alfred Lenehan (1843-1908), the Government Astronomer of New South Wales and in 1905 president of the Royal Society of that colony, and John Macon Thome (1843-1908), who assisted and then succeeded Gould at the Argentine National Observatory at Cordoba.

Another eminent man of science holding, like Gill, a high official position and born in 1843 was Sir William Chandler Roberts-Austen (1843-1902), the successor of Thomas Graham at the Mint and the successor of Dr. Percy as professor of metallurgy at the Royal School of Mines, London. While assayer at the Mint, he was responsible for the standard fineness of about £190,000,000 of gold, silver and copper coin. He was the first secretary of the Physical Society, president of the Iron and Steel Institute and a Chevalier of the Legion of Honour. Some of his most valuable work was done for the Alloys Research Committee of the Institution of Mechanical Engineers.

To the foregoing may be added the names of Sir John Isaac Thornycroft, F.R.S. (1843-1928), the famous naval constructor and marine engineer; Ralph Hart Tweddell (1843-95), a pioneer of hydraulic tools for shipbuilding, bridge-building, etc.; George Frederick Deacon (1843-1909), a great water engineer who carried through the Vyrnwy Valley project in Montgomeryshire for the water supply of Liverpool; James Campbell Brown (1843-1910), for forty-three years associated with Liverpool as public analyst and as lecturer and professor of chemistry in the University; and finally the name of the eminent Belgian metallurgist, engineer and industrialist, Adolphe Greiner (1843-1915), director of the great Cockerill Works at Seraing, Bessemer medallist and president of the Iron and Steel Institute, who saw his medal and other valuables stolen during the "foul flood" which inundated Belgium a generation ago.

It will not have escaped notice that most of the men included in these notes were workers in the physical sciences. Readers who are more interested in the biological sciences can no doubt recall other workers of renown. One such distinguished man was the famous naturalist, Sir Joseph Banks, who, for forty-one years, was president of the Royal Society. Reference books differ as to the day and year of his birth, but Weld in his "History of the Royal Society" says he was born in Argyle Street, London, "on the 2nd of February, 1743 O.S.". Of the birth of the famous German bacteriologist, Robert Koch, who isolated the bacillus of tuberculosis, there is no such question. He was born at Klausthal in the Harz on December 11, 1843, and died in 1910; an obituary of him appeared in NATURE of June 2, 1910 (p. 402).

NEWS and VIEWS

Wooden Aircraft for War Purposes

It has been announced that a wooden construction aircraft, the Curtis C.76 known as the Caravan, has just been completed in the United States, being the first of its kind, in that country, to be designed especially for war transport purposes. It is a high-wing monoplane, powered with two 1,200 h.p. engines. It carries two pilots and a radio operator, and has a large cabin space suitable for the carriage of troops, guns, or other military equipment. The body is built specially low when standing on the ground, and the doors are arranged to facilitate the quick transfer of the contents. Outlets specially suitable for paratroops are also provided. An interesting feature of this development is that it represents, with several British contemporaries the most notable of which is the Mosquito day bomber, a return from metal to wooden construction that has taken place since the outbreak of war.

The immediate pre-war policy of the Air Forces of most countries was to use metal construction (1) because it allowed a rapid expansion of output along mass-production lines, (2) because of its relative immunity from fire due to enemy bombing of large concentrations in store. War experience has almost completely reversed these. In the case of (1), the need for constant progress in design makes real mass production prohibitively wasteful in labour and materials allotted to production machinery, tools,

etc. It also neglects a large reservoir of wood-working labour and machinery that has not so great a use in any other sphere of war production. With (2), the large concentration of war material close behind the static lines preparatory to an attack is no longer needed, partly because warfare has proved to be more fluid; also the speed at which it has been proved that aircraft can be concentrated at any given point allows it to be dispersed in store over a wider area. Another field for wooden aircraft is that of pure transport, distinct from fighting or bombing. The rapid carriage of troops or material to points where needed for fighting operations can proceed far enough away from the enemy to be reasonably safe from interference on a large scale, and the high speeds of the aircraft allow it to take evasive action to avoid isolated attack from occasional enemy machines. Thus a machine designed to a transport specification rather than a war one becomes the ideal, and in this case wood construction has many advantages.

Short-Wave Broadcasting : Transmission

SIR NOEL ASHRIDGE, controller of the Engineering Division of the B.B.C., gave an account of "Short-Wave Broadcasting : Ten Years Technical Progress", in the Overseas Service of the Corporation on December 17. Sir Noel said that it is about eleven years since the B.B.C., in spite of inconclusive reports on the existing service, decided that an attempt