

Science News a Century Ago

Patent Laws of the United States

THE act of Congress establishing the United States Patent Office under a commissioner was passed on July 4, 1836, and from that time American patents have been numbered serially. The issue of patents was provided for in the first article of the Constitution, where Congress was given power "To promote the progress of science and useful arts by securing for limited times to authors and inventors the exclusive rights to their respective writings and discoveries", and the first act of Congress specifying how patents were to be issued was passed on April 10, 1790. The act of July 4, 1836, was the outcome of a Select Committee of Congress appointed "to take into consideration the State and Condition of the Patent Office and the laws relating to the issuing of Patents for New and Useful Inventions and Discoveries". In the report of this Committee, it was stated that the average number of patents issued annually from 1790 until 1800 was but 26; from 1800 until 1810 the average was 71; from 1810 until 1820 it was 200 and for the ten years previous to 1836 it had been 535. The whole number of patents issued under the laws of the United States up to March 31, 1836, was 9,731. This was more than double the number which had been issued in France or England during the same period.

The Entomological Society

At a meeting of the Entomological Society held on July 4, 1836, the Rev. F. W. Hope, president, being in the chair, Count Gotthelf Fischer de Waldheim, of Moscow, was elected an ordinary foreign member of the Society. The secretary made some observations upon an extensive series of specimens, represented by anglers as their artificial flies, collected by Mr. Ronalds for his work entitled "The Fly-fisher's Entomology". The president also made some observations upon the system adopted in North America whereby two crops of silk are produced in a season, as described by Mr. Kenrick in his work lately published upon that subject in the United States. (*Athenæum*.)

The Rev. Frederick William Hope (1797-1862) who was elected president of the Entomological Society in 1835 and 1846 was a graduate of Christ Church, Oxford. He presented his collection of insects and prints to the University and was the founder of the professorship of zoology.

Lyell and Mantell

WRITING on July 6, 1836, from Kinnordy, Kirriemuir, N.B., to Mantell at Brighton, Lyell said: "Here I am rusticated in a very beautiful country, not too hot, but with weather much like a fine English spring. I am now and then devoting some stray hours to my 'Elements', like Buckland's 'Bridgewater' long promised—but not yet reviewed, thank heavens. I have received a very pleasant letter from Alexander Burnes, who has returned to Cutch and re-examined the delta of the Indus. He reports that the submerged tract which sank in 1819 is *in statu quo*. He has sent me off some Cutch secondary fossils, ammonites, belemnites, etc. His letter came in nine weeks per steamer from Cutch! A letter from Dr. Silliman informs me that my 'Principles' are being printed in Philadelphia, and nearly ready. John Murray was in hopes he had reduced the price so as to prevent this happening."

Darwin at St. Helena

SAILING from Mauritius on May 9, 1836, H.M.S. *Beagle* called at the Cape of Good Hope and on July 8 arrived at St. Helena. "The next day," Darwin wrote in his Journal, "I obtained lodgings within a stone's throw of Napoleon's tomb: it was a capital central situation, whence I could make excursions in every direction. During the four days I stayed here, I wandered over the island from morning to night, and examined its geological history. My lodgings were situated at a height of about 2000 feet. . . . Near the coast the rough lava is bare; in the central and higher parts, feldspathic rocks by their decomposition have produced a clayey soil which, where not covered by vegetation, is stained in broad bands of many bright colours. . . . Beneath the upper and central green circle, the wild valleys are desolate and untenanted. Here, to the geologist, there are scenes of high interest, showing successive changes and complicated disturbances. According to my views, St. Helena has existed as an island from a very remote epoch; some obscure proofs, however, of the elevation of the land are still extant. I believe that the central and highest peaks form part of the rim of a great crater, the southern half of which has been entirely removed by the waves of the sea: there is, moreover, an external wall of black basaltic rocks, like the coast mountains of Mauritius, which are older than the central volcanic streams."

Trans-Atlantic Steam Navigation

IN July 1836 the books of subscription were opened of the British and American Steam Navigation Company, the first of the pioneer companies to construct a steam vessel for regular work on the North Atlantic. The company had been formed through the exertions of the American lawyer and business man Junius Smith (1780-1853). In 1832-33 he had crossed from England to the United States and back again by sailing packets. His outward journey had taken 54 days, his return journey 32 days, and it was these passages which led to his determination to promote steam navigation across the Atlantic. At first he met with no encouragement, but finally with the aid of Macgregor Laird (1808-61), the African explorer, he was able to float a company. When sufficient money was forthcoming, a contract for the *British Queen* was made with Messrs. Curling and Young, of Limehouse, and Smith wrote to his New York correspondents: "I have the pleasure to inform you that the Directors of the 'British and American Steam Navigation Company' have contracted for the building of the largest and intended to be the most splendid steamship ever built expressly for the New York and London trade. She will measure one thousand seven hundred tons, two hundred feet keel, forty feet beam, three decks and everything in proportion. She will carry two engines of two hundred and twenty-five horse-power each, seventy-six inch cylinder, and nine feet stroke. The expense of this steam frigate is estimated at £60,000."

The *British Queen* was the first steam vessel constructed expressly for the Atlantic trade; but she did not make her first passage until July 1839, by which time the *Sirius*, *Great Western*, *Royal William* and *Liverpool* had all made passages to the United States and back.