

and ejected forcibly a considerable mass of air from the open end of the trachea. Careful investigation showed that there was no communication between the trachea and oesophagus; Prof. Fraenkel referred the power of speech to the existence of a fold of mucous membrane at the end of the widened pharyngeal cavity, at about the level of the former larynx, which was thrown into vibration during speech. It had not been possible to ascertain whence the patient obtained the air requisite to keep the fold in vibration; possibly the air which had been swallowed sufficed for this purpose. Dr. Krigar Menzel had, in conjunction with Dr. Raps, studied the motion of plucked strings by the method previously employed for stroked strings. The string is stretched across the long axis of a narrow brightly illuminated slit, and thereby casts a small punctiform shadow on a screen. When the string swings, a curve is traced on the moving screen, which admits of being fixed by photography. The speaker developed the theory of strings vibrating as above, and deduced formulæ which corresponded to the curves obtained. Dr. Wien spoke on the upper limits of wave length for radiant heat as based upon certain properties of Hertz's waves and the second law of thermodynamics.

**Physiological Society, June 23.**—Prof. du Bois Reymond, President, in the chair.—Prof. Koenig exhibited the two patients with extirpated larynx as described in the preceding report of the Physical Society.—Dr. Benda gave an account of his microscopical investigations on the development and function of the mammary gland. He had studied the development on five- and eight-month-old calves, and the functions on cows and bitches during lactation, and arrived at the conclusions that the mammary gland must be regarded as a tubular gland, and that there is no evidence of a new formation of cells during its activity. The idea that the secretion of milk depends on a breaking-down of the gland cells cannot apparently be supported by the results of microscopic investigation.

July 7.—Prof. Holowinsky, of Warsaw, spoke on a microphone he had constructed, by means of which it is possible to render audible rhythmic movements of long period, such as the cardiac impulse, the radial and carotid pulse, &c. The action of the instrument was demonstrated on several persons.—Dr. Baginsky had studied the relation of the nerves to the sensory end-organs in the case of the glossopharyngeal and olfactory nerves, by section of the nerves and subsequent investigation of the behaviour of the terminal sensory cells in each case. In the case of the tongue he found these cells unaltered after degeneration of their nerve; whereas in the case of the olfactory cells, both they and the whole mucous membrane degenerated after removal of the olfactory bulb. He, however, attributed the result in the latter case to injury of the ethmoid artery.

July 21.—Dr. Lilienfeld made a further communication on the clotting of blood arrived at by an examination of fibrine and of fibrinogen which he regarded as a nucleo-albumin. He came to the conclusion that some substance is present in normal blood which leads to clotting in presence of minimal amounts of calcium chloride. Dr. Paul Strassmann had studied the mechanism of the closing of the ductus Botalli in man, dogs, and cats, and found it dependent upon the anatomical arrangements of the entrance into the aortic arch, supporting his views by a series of preparations. Dr. Jacobs had investigated the action of extracts of a series of animal tissues on the number of the white corpuscles. He found that extracts of liver, kidney, pancreas, and thyroid had no effect on their number, while, on the other hand, extracts of spleen, thymus, and the marrow of bones, after producing a short fall, led to an increased production of leucocytes which continued for many hours, and was marked both in the peripheral as well as in the central blood-vessels and in the heart.

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PAMPHLETS.—The Yucca Moth and Yucca Pollination: C. V. Riley (Washington).—Parasitism in Insects: C. V. Riley (Washington).—Intorno all' Assorbimento della Luce nel Platino Diverse Temperature: G. B. Rizzo (Torino).—Wurde Bernstein von Hinterindien nach dem Westen Exportirt: A. E. Meyer (Dresden).—Some Ancient Relics in Japan: R. Hitchcock (Washington).—The Ancient Burial Mounds of Japan: R. Hitchcock (Washington).—Shinto, or the Mythology of the Japanese: R. Hitchcock (Washington).—The Ox Bot in the United States: C. V. Riley (Washington).—U.S. Department of Agriculture, Report of the Entomologist for 1892 (Washington).—Department of Agriculture, Victoria, Report on a Poisonous Species of Homeria: D. McAlpine (Melbourne).—Zi-Ka-Wei Observatory, the "Bokhara" Typhoon, October, 1892: Rev. S. Chevalier (Shanghai).—Guide to Ben Nevis (Edinburgh, Menzies). Description of some Fossil Plants from the Great Falls, Coal Field of Montana: W. M. Fontaine (Washington).—On the Occurrence of the Spiny Boxfish on the Coast of California: C. H. Eigenmann (Washington).—Report on the Actiniae Collected by the U.S. Fish-Commission Steamer *Albatross*, during the winter 1887-88: J. P. McMurich (Washington).—Massachusetts Institute of Technology, Boston, a brief Account of its Foundation, Character, and Equipment (Boston).—National Association for the Promotion of Technical Education, Sixth Annual Report, 1892-93.—Cholera Prospects and Prevention: R. Thorne Thorne (Allman).—L'Anthropologie aux Etats-Unis: Dr. P. Topinard (Paris, Masson).—Revised Report on the Copepoda of Liverpool Bay: J. C. Thompson (Liverpool).—On the Evolution of the Art of Working in Stone, J. D. McGuire (Washington).—Guide to Sowerby's Models of British Fungi in the Department of Botany, British Museum (Natural History), W. G. Smith (London).—Mauertuis, E. du Bois-Reymond (Leipzig, Veit.).

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**CONTENTS.**

	PAGE
Water and Ice as Agents of Earth Sculpture . . . . .	385
Water Bacteria. By Mrs. Percy Frankland . . . . .	386
Popular Meteorology . . . . .	387
Our Book Shelf:—	
"The New Technical Educator: an Encyclopædia of Technical Education."—N. J. L. . . . .	388
Reynman: "Wetterbüchlein. Von wahrer Erkenntnis des Wetters" . . . . .	389
Letters to the Editor:—	
Prenatal Influences on Character.—Dr. Alfred R. Wallace, F.R.S. . . . .	389
Habits of South African Animals.—Dr. Alfred R. Wallace, F.R.S. . . . .	390
Astronomical Photography.—Right Hon. Lord Rayleigh, F.R.S. . . . .	391
The Discussion on Quaternions.—Sir Robert S. Ball, F.R.S. . . . .	391
A Curious Optical Phenomenon.—Dr. A. Wille . . . . .	391
Supposed Suicide of a Rattlesnake.—W. H. Wood . . . . .	391
Numerous Insects Washed up by the Sea.—Oswald H. Latter . . . . .	392
The Fungus Gardens of Certain South American Ants. By John C. Willis . . . . .	392
A Few Remarks on Insect Prevalence during the Summer of 1893. By Eleanor A. Ormerod . . . . .	394
The Great Heat of August 8 to 18 . . . . .	395
A Sensitive Spherometer. By Dr. A. A. Common, F.R.S. . . . .	396
Jean Daniel Colladon. By Dr. Ed. Sarasin . . . . .	396
Notes . . . . .	397
Our Astronomical Column:—	
The Cordoba Durchmusterung . . . . .	401
The Rordame-Quénnisset Comet . . . . .	401
A Simple Equatorial Mounting . . . . .	401
A Remarkable Source of Error . . . . .	401
The Apex of the Sun's Way . . . . .	401
The Origin of New Stars . . . . .	402
The Minute Structure of Plant Hybrids. By F. E. W. . . . .	402
Compulsory Laws of Error in Drawing. By Arthur L. Haddon . . . . .	402
The Department of Science and Art . . . . .	403
European Laboratories of Marine Biology . . . . .	404
University and Educational Intelligence . . . . .	406
Scientific Serials . . . . .	406
Societies and Academies . . . . .	406
Books, Pamphlets, and Serials Received . . . . .	408