

Anniversaries of Science

November 8, 1895.—Discovery of Röntgen rays.

"I was working with a Crookes' tube covered by a shield of black cardboard. A piece of barium platino-cyanide paper lay on the bench there. I had been passing a current through the tube, and I noticed a peculiar black line across the paper."

"What of that?"

"The effect was one which could only be produced in ordinary parlance, by the passage of light. No light could come from the tube because the shield which covered it was impervious to any light known, even that of the electric arc."

"And what did you think?"

"I did not think; I investigated. I assumed that the effect must have come from the tube, since its character indicated it could have come from nowhere else. I tested it. In a few minutes there was no doubt about it. Rays were coming from the tube, which had a luminescent effect upon the paper. I tried it successfully at greater and greater distances, even at two meters. It seemed at first a new kind of light. It was clearly something new, something unrecorded."

—Interview with Professor Röntgen by H. J. W. Dam in *McClure's Magazine*, vol. vi, p. 413.

November 14, 1932.—The next shower of Leonid meteors will appear. Although some meteors of this group are seen each year about this date, the great "star showers" occur only once in 33 1/3 years.

The famous star shower, due to the Leonid meteors, in 1833 was described as follows by an eye-witness in South Carolina. "I was suddenly awakened by the most distressing cries that ever fell on my ears. Shrieks of horror and cries for mercy I could hear from most of the negroes of the three plantations, amounting in all to about six or eight hundred. At this moment I heard a voice beseeching me to rise, and saying, 'O my God, the world is on fire.' I then opened the door, and it is difficult to say which excited me the most—the awfulness of the scene, or the distressed cries of the negroes. . . . The scene was truly awful; for never did rain fall much thicker than the meteors fell toward the earth; east, west, north, and south, it was the same."

—From Langley: *The New Astronomy*.

November 17, 1869.—The Suez Canal was opened for traffic amid a series of splendid fetes given by the Khedive of Egypt. All nations of the earth were represented.

Both British and French commercial interests in Egypt increased, especially after the completion of the Suez Canal in 1869 by a French company. In 1875, needing money, the Khedive sold his shares of the Suez Canal Company to the British, who since then have watched every move in that part of the world. Would America, or France, or Italy not take the same interest in a disorderly country bordering its most vital waterway?

—Bowman: *The New World*.

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ASTRONOMY

Solar Changes Visible

Changes on the sun, previously perceptible only in photographs, may now be watched visually with a new instrument called the spectrohelioscope, invented by Dr. George Ellery Hale, honorary director of the Mt. Wilson Observatory. This device is a modification of the spectroheliograph, which he invented a number of years ago for photographing the sun as a whole or individual features of it in the light of a single color or wavelength. The visual device is advantageous, however, because actual changes can be watched as they take place, even though they are invisible when the sun is viewed through the telescope in the ordinary way.

Using this instrument, Dr. Hale has been able to watch the behavior of the whirls of hydrogen around sun spots, for since these glowing gases give off light of characteristic colors, the spectrohelioscope may be set to observe one particular element, just as a radio set may be tuned in on one particular station to the exclusion of others. A very unusual phenomenon that he observed recently was the engulfment of one of the prominences, or huge flames that shoot out from the sun, by one of these spot whirls.

Dr. Hale is hopeful that the spectrohelioscope may be so simplified that its cost will be low enough to have a large number of them in all parts of the world, in both professional and amateur observatories. In this way it will be possible to keep a practically continual watch on the sun.

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TECHNOLOGY

Government Tests Watches

Watches may stay in order longer as a result of tests being undertaken at the U. S. Bureau of Standards. Timepieces that have been repaired by applicants for a watchmaker's certificate as a part of their examination are being checked up in the government laboratories.

The Bureau of Standards is cooperating with the Horological Institute to raise the level of watch repairing throughout the country and makes tests when private laboratory facilities are not available.

Only eight out of 96 test watches recently examined failed to come up to specifications which speaks well for the general standard of watchmakers' work, say the government experts in charge of the tests.

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Memory Rime

The Great Groups of Plants

Who walks by ocean, lake or stream
Notes how the matted *Algae* teem,
Who feeds on mushrooms or on yeast
Doth draw on *Fungi* for his feast,
He who in mossy banks delights
Shall couch himself on *Bryophytes*,
Who after ferny dells doth spy—
Pteridophytes shall glad his eye;
Sweet flowers, tall grain, and mighty
trees—
Spermatophytes embrace all these.

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MEDICINE

Proteins Cure Paralysis

The growing medical practice of treating paralysis with a counter-attack of malaria or rat-bite fever may be superseded by a much simpler process of injection with protein substances.

The latter, according to a report to the American Medical Association by Drs. M. M. Kunde, George W. Hall, and F. J. Gerty of Chicago, presents the advantage of not introducing a disease-producing organism into the system of the patient and is much more conveniently managed.

Malaria treatment requires the presence of a malarial patient as a source of infection, and such persons, thanks to present day health campaigns, are not always to be found in many communities. In spite of the very beneficial results, however, that have been achieved by judicious administering of both this disease and rat-bite fever to paralytics, neither treatment is absolutely under control, a difficulty that may be offset by the new method, the Chicago doctors claim.

High temperature seems to be the agent that does the trick in straightening out the paralysis and this can be induced by protein injections more conveniently and without serious risk to the patient, it is said. The fever can be produced at will and regulated approximately by the size of the dose, the physicians declare.

"The improvements in the clinical symptoms of the patients treated at the present time are sufficiently encouraging," states Dr. Kunde, "to warrant our making this preliminary report with the hope that it may be given proper consideration by others who are interested in the treatment of general paralysis."

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