

In the 35 cases of diphtheria there were 7 deaths, compared with 6 cases and 5 deaths in 1896. Only five of the cases occurred in families having sewer facilities.

In conclusion the doctor declaims against earth closets and cess pools. He also writes strongly against the method of treatment by Christian Scientists of sick people, and says it ought not to be permitted.

The work and efficiency of the crematory is commended. The cost of its maintenance for the year is given as \$4,586.08. The increase of the city's water supply should be brought about, he said, by securing control of the Big Cottonwood stream. A new city jail should be built, and lastly the vaccination of school children should be made compulsory.

GENERAL KIMBALL.

General Nathan Kimball, well known throughout Utah and the United States, died at his home in Ogden, shortly before 6 o'clock Friday evening, after a protracted illness. He served as postmaster of Ogden for several years, and was a prominent figure in politics. His affiliations nationally were always with the Republican party. In addition to being a citizen of influence and character, he was also a soldier of distinction and courage, having served his country faithfully and well upon the field of battle.

For the past three or four years the general's health was very much impaired and during the whole of that time there was a breaking up of the forces that had made him the stalwart that he was. For six weeks or more it was apparent that his mortal career was rapidly drawing to a close. Yesterday, strange to say, he felt much better and chatted pleasantly with his family and those who ministered to his wants in his final affliction. But the end came in the evening, peacefully and quietly, and the old soldier gave up the fight in a battle wherein he could not hope to win.

Nathan Kimball was born November 22, 1822, at Fredericksburg, Ind.; was married September 23, 1845 to Martha A. McPheeters at Livonia, Ind. James N. Kimball was born in April, 1849, and in April, 1850, Mrs. Kimball died. In July, 1850, he was again married, this time to Emily C. McPheeters, who died in Ogden, Nov. 25, 1902. His early life was spent in Indiana; and he spent three years at Asbury (now De Pauw) university, but was compelled to leave school because of lack of funds. In 1841, he went west to look out for himself, and settled in Independence, Mo., where he taught school and studied law. Returning to Indiana in 1843, he began the study of medicine under Dr. J. J. Smith, and married the sister of his preceptor. He continued the practice of medicine until 1846, when war was declared against Mexico, and when volunteers were called for he organized a company and went to the front, serving until the war was over. He practiced medicine in his old home until the fall of Summer and then again organized a company, over which he was commissioned captain. At the regimental organization he was commissioned colonel, and reported to McClellan at Rich Mountain, W. Va. There, under General Pegram, the Union forces defeated the rebel army. He was at the battle of Cheat Mountain, and was attacked by a portion of the rebel army under General Lee. There he defeated after a three and a half hours' fight. In January, 1862, he reported to General Lander and was assigned to the command of the First brigade of that division. At Lander's death, General Kimball assumed command of the division until relieved by General Shields. In an engagement with Stonewall

Jackson, General Shields was wounded, and General Kimball was ordered by the wounded general to take command of the entire forces. He met the army near Kernstown, and drove them from their position. He continued to hold the position, and soon General Jackson with his entire army appeared in front, and the battle opened. Three times General Kimball repulsed the attacks, and just before sundown Jackson doubled his forces, hoping to pass on to Winchester. But General Kimball advanced his entire line and charged the enemy with fury, broke his lines and after a conflict of over two hours defeated the enemy and had him in full retreat. This is understood to be the only time during the war when Stonewall Jackson met defeat. For his bravery General Kimball was commissioned brigadier general. On the night of May 29, 1862, he attacked the enemy at Fort Royal, which place was captured after a hard fight. He was in the battle of Harrison's landing, and at Antietam, and at Fredericksburg he was wounded in the thigh and groin. His wounds kept him out of the service until March, 1863, when he reported to General Grant at Vicksburg. After the surrender of Vicksburg he was sent to Arkansas to operate against General Price. He reorganized the Arkansas state government, and then reported to General Sherman, but before his departure the legislature of the state of Arkansas tendered him a vote of thanks for his labors.

In February, 1864, he was nominated for lieutenant governor of Indiana, but declined. He was in the battle of New Hope Church, Georgia, under Howard; at Jones's creek; and the battle of Kenesaw Mountain. He was in the Atlanta campaign, and after the capture of Atlanta reported to Gov. Morton, of Indiana, for special duty, which was to subdue the Knights of the Golden Circle. He finished his work in two months, and Dec. 15, 1864, led the attack on Nashville. He attacked the rebel position on the Franklin pike and captured artillery and many prisoners. For this he was brevetted Major General. He was mustered out September 25, 1865.

In 1866 he was elected state treasurer of Indiana, and again in 1868; in 1872 he was an elector on the Grant ticket; and the same year was elected to the legislature. In 1873 he was appointed surveyor general of Utah by General Grant, and served one term. He lived at Salt Lake several years, and was appointed postmaster at Ogden in 1877 by President Hayes; and in 1889 was again appointed to the same position by President Harrison. His term expired in 1894, and since that time General Kimball has been taking no active part in business or politics. He has always been prominent in G. A. R. circles. In 1871 he was commander of the state organization of Indiana, and became commander of the Utah department in 1888.

SCIENTIFIC MISCELLANY.

Some curious experiments have been reported by Mr. Howard Swan, a London linguist and electrician. These have shown that a certain slow-moving phosphorescence, which under suitable conditions appears in the dark within the eyeball or nerves of the eye, is sensitive to sound, and is thrown by it into various movements which are evidently subject to definite laws. If the sound is a word, the phosphorescent film tends to form a geometric pattern.

The old view that the quality of sugar beets depends on the number of developed leaves and the length of life of the plant has been confirmed, according to Friedrich Strohmer in a paper to the London Chemical society. Sugar is

produced in the leaves, passing through the leaf stems to the roots. The production of sugar depends on the amount of light, and the form and position of the leaves are of importance. Yellow light causes the greatest development of roots, blue or chemical rays the largest percentage of sugar. Field experiments have proven that sugar production begins at an early stage in the leaves, but is greatest from the beginning of August to the middle of September.

The scheme of Mr. John Milne of scattering earth-tremor observatories over the globe is being carried out. Recording apparatus is to be established at Toronto, Harvard, Philadelphia, Victoria, B. C. two stations in New Zealand, Batavia, Madras, Calcutta, Bombay, Mauritius, Cape Colony, Argentina, San Fernando, Kew, and probably other places.

From observations last year in seven states, reported by Prof. F. H. Bigelow, it appears that stations on the southern end of the Appalachian mountains, in central Georgia or Alabama, have better prospects of favorable weather for viewing the total solar eclipse of May 28, 1900, than other places on the eclipse track.

The question of atmospheres upon the planets and satellites of the solar system has been investigated theoretically by Dr. Johnstone Stoney, of the Royal Dublin Society, who has reached some most interesting results. He has proven mathematically that the outward motion of the molecules of any of the gases under the highest lunar temperatures would be sufficient to overcome gravitation on the moon, which must therefore be left entirely destitute of an atmosphere. The attraction of the earth is insufficient to imprison free hydrogen, and helium, though supplied in small quantities by hot springs, etc., for a like reason has failed to accumulate in our atmosphere. The calculations show further that water vapor cannot be retained by mercury, while even nitrogen and oxygen would probably escape into space, leaving none of the atmospheric constituents of our world except possibly argon and carbon dioxide. The most striking conclusions—in view of recent speculations—concern Mars, which is found to be incapable of retaining water, and whose atmosphere must consist mainly of nitrogen, argon and carbon dioxide, the polar snows being frozen carbonic acid and vegetation and canals as known to us being impossible. Jupiter, from its mass and rate of rotation, can prevent the escape of every gas known to chemists. Saturn, Uranus and Neptune can imprison any gases more firmly than the earth, but may detain helium. Venus, most resembling the earth, has an atmosphere heavily laden with water vapor.

The novel steam generator of Mr. J. H. Knight, an English engineer, consists of a coil of steel tubing heated in a suitable furnace. Irregular steam production and liability to obstruction by deposits from the water the usual objections to boilers of this kind, but it is claimed that these difficulties are overcome by the use of steel balls which move freely in the tube for a short distance. This checks the flow of water in the lower coils, causing the steam to come off quietly, while the constant movement clears away all scale.

A farming community of sanitary habits, at Saint-Ouen, a suburb of Paris, consists of 98 families of 511 members, and is remarkable from the fact that no case of consumption among them has been known within