

SCIENCE SIFTINGS

By "VOLT."

The Use of Gas in War.

"The Use of Gas in War" formed the subject of a lecture delivered by Lieut.-Colonel Cumming in Wellington. There were (said Lieut.-Colonel Cumming) three forms of gas attack. There was the cylinder attack, the cylinders containing about 56lb of liquefied gas. The cylinders were stored in the fire trench in pairs. The gas was released through rubber tubes, and as it was heavier than air it travelled along the ground. A very small portion of gas was sufficient to put a man out of action. The wind must be blowing towards the enemy trenches if the gas was to prove effective, and the velocity of the wind must also be taken into account. Wind blowing at the rate of three miles an hour was not sufficient, but from seven miles to ten miles was very favorable. Gas had been known to be effective at 9000 yards, and under very favorable conditions at 26,000 yards—about 15 miles. The most favorable ground was that which sloped upwards towards the enemy. The first intimation or warning that one got that gas was being released was the noise made by the gas, which could also be seen. There were three kinds of gas used. Chlorine gas affected the lungs, another affected the heart, and these two were generally released together; the third gas affected the eyes. The second gas, when released by itself, did not affect a man for an hour after he had inhaled it. The "tear" gas was generally distributed in "tear shells." The other two gases were also sent across in shells, particularly chlorine gas. In addition to gas, frequent use was made of smoke, and as the two looked alike they were often sandwiched, and it was difficult to distinguish the one from the other.

Visible at Seventy-five Miles.

The tallest lighthouse on the coasts of the United States is at Cape Hatteras, 200ft high. The brightest light is on the Navesink Highlands, at the southern entrance to New York Harbor. Its candle-power is about 25,000,000; it is visible 22 miles away, and it has been seen from a distance of 70 miles at sea under unusual conditions of the atmosphere. The highest light is at Cape Mendocino, Cal., 422ft above sea-level. The first lighthouse on the American continent was built in 1715-16 at the entrance to Boston Harbor.

Where It Is Cold.

On the hottest day in summer a flying man may be in the Arctic regions in ten minutes by mounting to a height of 10,000ft, just as the climber may pass through all the shades of temperature by climbing Kilima-Njaro, that giant peak which rises above the snow-line from the Equator. He commences with the tropical jungle and ends amid eternal snow. The fact is that the temperature is invariably low at 10,000ft and over, whether at the tropics or the poles, and it is quite likely to be lowest at the Equator. Airman will know the intense cold of those upper regions, and they need the rig-out of a Shackleton if they would mount to 20,000ft above the earth's surface. In fact, there is little variation of temperature in these upper reaches of the atmosphere. It is much the same in summer as winter, except for the difference which a high wind makes. Even in the depth of a hot summer the airman will encounter 40 degrees of frost at 10,000ft, and at twice that altitude a hundred degrees of frost—the temperature of the South Pole—is not unusual.

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FEAST OF SAINT ALPHONSUS

CELEBRATION AT MOUNT ST. GERARD, WELLINGTON.

The solemnities of the Feast of Saint Alphonsus, the founder of the Redemptorist Order, were observed on Sunday, July 5, at Mount St. Gerard's, Hawker street, when, notwithstanding the inclemency of the weather, the church was full to overflowing. Pontifical High Mass, commencing at 10 o'clock, was celebrated by his Lordship Dr. Brodie, Bishop of Christchurch. The choir gave a delightful yet solemn rendering of the music of the Mass. His Lordship Dr. Verdon, Bishop of Dunedin, presided in the sanctuary. The Very Rev. Father Roche, C.S.S.R., was assistant priest, Rev. Father O'Sullivan, C.S.S.R., deacon, Rev. Father Byrne, C.S.S.R., subdeacon, and Rev. Father Mageean, C.S.S.R., master of ceremonies. At the Gospel, his Lordship Bishop Brodie, taking as his text Matthew xxviii, 19, preached a most eloquent and brilliant discourse on the saint, portraying Saint Alphonsus as the ideal layman, while he was a lawyer in the world, and also as the ideal priest. His Lordship took occasion to refer to the necessity of a lay apostleship in the Church, wherein laymen might devote themselves wholeheartedly to her interests. "Never," he continued, "did the Church stand more in need of such than at the present day. Before this war, which has laid waste the fairest plains of Europe, people considered certain fortresses, such as Liege impregnable. The Catholic Church, it is true, can never be conquered, for she has the promises of Christ as her shield and protection, yet, at the same time, she expects the assistance and co-operation of all." His Lordship, after paying a graceful tribute to the zeal and self-sacrifice of the Redemptorist Order, dwelt upon some happy recollections of early associations with the Order in Australia. He concluded by saying that Saint Alphonsus should be our inspiration and delight, our example, and guide.

After the Communion of the Mass, Very Rev. Father Roche, C.S.S.R., thanked the Bishops, in the name of the congregation, and in the name of the community of St. Gerard's, for favoring them with their presence on the occasion.

The community were privileged to entertain his Grace Archbishop O'Shea, their Lordships Dr. Verdon and Dr. Brodie, Right Rev. Mgr. Mahoney, V.G. (Auckland), and Very Rev. Dean Holley, S.M., to luncheon at Mount St. Gerard's. In the evening the church was again filled to overflowing, when Rev. Father Mangan, C.S.S.R., preached an eloquent panegyric on the saint, dwelling in a particular manner on the wonderful activity of his life as displayed in his zeal for the glory of God, the honor of the Blessed Virgin, and the salvation of souls. Pontifical Benediction was afterwards given by Bishop Brodie, Bishop Verdon presiding in the sanctuary. The altar was beautifully adorned for the occasion, while the choir rendered a special selection of appropriate music, which united dignity with expression, and charm with excellence.

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