mention should be made of Mr. P. A. Jenson, of Salallua, whose kind hospitality and genial manner have endeared him to all who know him. As stated above we hold school four days a week, leaving us Fridays and Saturdays to travel and distribute tracts.

Last Thursday Elder Warnick and myself started for Saleaula, a distance of twenty-five miles. We traveled about seven miles distributing tracts, and explaining the Gospel to the people, and, night being near, we accepted an invitation to stop all night, as that was the last place in twelve miles. The rain came down in torrents all night, but by six o'clock next morning, during a lull in the storm, we were on our journey, but had not proceeded far when it began again to rain, and we were soon drenched. Arriving at Lealatele we were surprised to see the usually dry river a roaring torrent. Bridges are almost unknown in the country; therefore a person either has to wade or get some one to carry him across the stream. A couple of natives kindly volunteered to help us across this stream, and after swimming with our sacks, they returned for us, and by swimming we succeeded in reaching the shore all right with shoes and clothes on. We then proceeded on our journey, and arrived at Saleaula all right, where we found the Elders well, and enjoying the spirit of their mission. After changing our wet clothes and satisfying the inner man, we forgot the wet road and remembered only the pleasant experiences of missionary life. It is almost a forgone conclusion that we will get wet while on a journey at this season of the year. The few months that I have passed in the missionary field have been the happiest of my life, and I would encourage the young men of Zion to prepare themselves to preach the Gospel in the world, for it is truly a great and glorious privilege to become ambassadors of Christ.

A. D. HENDRICKS.

SCIENTIFIC MISCELLANY.

Plague bacilli. it appears from the elaborate report of the German government commission to Bombay, in most cases enter the system through small wouhds or scratches, and the disease is mostly confined to dwellers in poor and unsanitary localities. The bacilli are very quickly killed by ordinary antiseptics and heating. Serum inoculations gave little protection in the Bombay epidemic, but Haffkine's method proved very successful. This consists in inoculation with the products of bacilli culture. To a virulent growth of plague bacilli was added carbolic acid solution or essence of mustard, destroying the microbes, but leaving products having remarkable protective power. An even better vaccine resulted from heating the plague cultures to 150 degrees F. for an hour.

Acetylene gas has proven to be violently explosive under a pressure of somewhat less than two atmospheres, but reasonably free from liability to explode, unless mixed with air or oxygen, at less than an atmosphere and a half. The British home office has decided to consider it safe under a pressure of twenty inches of water above that of the atmosphere—or about an atmosphere and a twentieth—while regarding it as subject to the act regulating explosives if greater pressure is used. The French authorities have fixed the danger line at an atmosphere and a half and the German authorities at an atmosphere and a tenth, and restrict the keeping or making of the gas at higher pressure.

Nervous folk may be relieved to learn that Dr. Falb's prediction of a collission of the earth with Tempel's comet on Nov. 13, 1899, resulted from an error. Dr. F. Bidschof, of the Vienna observatory, calculates that the nearest approach of the comet in 1899 will be 11,000,000 miles.

The total foreign patents issued from earliest times to 1870 are estimated by the U. S. patent commissioner at 238,-103; since 1870 to the close of 1896, at 819,120. The United States patents for the same periods numbered 120,573 and 463,752 respectively.

The termits mounds of Australia are quite as wonderful examples of insect architecture as the more familiar nests of the African white ants. Mr. W. Saville-Kent describes three distinct types of the large mounds. The largest ant nests known are doubtless the buttressed columnar "termitaria" occurring in the northern territory of South Australia, some forty miles inland from Port Darwin, these often exceeding eighteen feet in height, and being also remarkable for an almost equal diameter from top to bottom. Mounds nearly as large, towering above the head of a horseback rider, are to be seen in York Peninsula, North Queenslandthis form tapering slightly to one or sometimes several sharp points. In the Kimberly district of West Australia a lobulated mound is very common, this type often exceeding fourteen feet and being usually conical or hemispherical in general form, but always having a lobulated appearance, as of being built from hodloads of half-solidified mortar that in succession had partly overflowed each underlying layer. A vertical half of one of these mounds, about eight feet high, having been destroyed, the ants commenced rebuilding at a rate that would restore the structure in three to four years. The most singular—though not among the largest—of all the Australian ant structures are the meridian mounds, which are elonggated, resembling huge slabs of sandstone stood on edge, and always point exactly north and south. The most striking examples, seldom more than six or eight feet high, occur in the Laura valley, North Queensland. Here the mounds are built in several series of pinnacles, one above another, giving a highly ornate appearance, as of some grand cathedral in miniature. The reason for thie uniform orientation is a mystery, one possible explanation being that it offers the least exposure to the heat of the mid-day sun.

Improved methods of signalling will be an important feature of polar explorations. The apparatus of Mr. E. S. Bruce, as described at the London Imperial Institute, includes a small captive balloon, lighted inside by incandescent lamps, and this is to be fixed to the ship or taken away by an exploring party, in either case serving as a beacon that under favorable circumstances could be seen eighty miles or more. Such balloons can be inflated with compressed hydrogen carried in steel cylinders.

The magnetization limit of iron has been found by Mr. Henry Wilde, F. R. S., to be 422 pounds per square inch, with no gain in the power of magnets by the double-pole or horse-shoe form.

While valuable scientific facts have been brought to light by untaught men, such discoveries have seldom been a direct result of ignorance. A patient who had just left an Algerian hospital, however, has been cured of sciatica of many years' standing through his blundering idea that "spirit of salt" (hydrochloric acid) was a saline preparation of greater strength than the salt solution the doctors had been administering hypodermically with little relief. Reasoning that the strong preparation should have greater effect, he painted his skin with it, with the most astonishing success. On learning of the experiment, the physicians at the hospital adopted the remedy, and Dr. C. Gennatas, of Montpelier has prepared a thesis based on a dozen cases of sciatica, all of which have been completely relieved through this means. The application is simple. Three or four coats of strong hydrochloric acid are brushed over the painful parts of the nerve, and the limb is covered with a cotton-wool dressing. The heat and smarting are severe but quite bearable. The application can be repeated in 24 or 48 hours, but not again for several days, lest sloughs should appear. The twelve patients were reported cured in three to five sittings, extending over a week to 25 days. No serious inconvenience or sloughing is produced by the strong acid carefully used, the watery blisters sometimes formed disappearing in two or three days.

An artificial black marble is being made at Catania, Italy, and is said to much cheaperthan genuine marble,from which it is not easily distinguished. It is made by impregnating white sandstone with a 'mixture of equal parts of volcanic asphalt and coal-tar pitch. The sandstone blocks—cut into the desired shapes—are supported on gratings in a large square iron tank, into which the molten mixture is admitted from an adjoining boiler, the liquid being kept boiling in the tank for 36 hours. After cooling, the stones are polished like other marble. It is claimed that the new material will resist acids, atmospheric action, heat and cold, and does not favor the development of germs.

A new electric propeller for pleasure boats sails ahead of the boat but is rigidly connected to it, the accumulator cells and switch-gear being on the boat itself. The vibration is less than in ordinary stern-propelled launches, but there is probably much less of efficiency.

JANUARY WEATHER FORECAST.

The following data, covering a period of 22 years, have been compiled from the weather bureau records at Salt Lake City, Utah:

Month of Jaunary for 22 years:

Mean or normal temperature, 28 degrees. The warmest month was that of 1887, with an average of 33 degrees. The coldest month was that of 1889, with an average of 21 degrees. The highest was 54 degrees on January 24 and 25, 1879. The lowest temperature was —20 degrees on January 20, 1883. Average date on which first "killing" frost occurred in autumn Octoer 12th. Average date on which last "killing" frost occurred in spring April 5th.

Average for the month, 1.45 inches. Average number of days with .01 of an inch or more, 11. The greatest monthly precipitation was 3.07 inches in 1890. The least monthly precipitation was 0.29 inches in 1880. The greatest amount of precipitation recorded in any 24 consecutive hours was 0.62 inches on January 4, 1888. The greatest amount of snowfall recorded in any 24 consecutive hours (record extending to winter of 1884-5) was 6 inches on January 14, 1890.

Average number of clear days, 9; partly cloudy days, 11; cloudy days, 11.

The prevailing winds have been from the southeast. The highest velocity of the wind was 48 miles from the southeast on January 26, 1879, and January 5, 1895.

Station: Salt Lake City, Utah.
Date of issue: December, 30, 1897.

J. H. SMITH, Weather Bureau.

Frank Sweeney, aged 28, was drowned in the big plunge at Gregson's springs, near Butte, Mont., Saturday. He had been to the springs with a party of friends and after dancing for several hours ate a hearty dinner and immediately went into the water. He sank and was not missed for a while. His parents live in Bellevue, Ia., where the body will be taken.