

liquefied at the temperature of boiling air, that the boiling point of liquid fluorine is 187 degrees below zero centigrade, that it does not solidify at 210 degrees below, and that its density is 1.14. It is soluble in liquid oxygen and liquid air. At the lowest temperature reached, it had no action on dry oxygen, water or mercury, but combined violently with hydrogen and oil of turpentine. A remarkable explosive substance produced with moist oxygen seems to be a hydrate of fluorine.

A lady inventor's lifeboat, which has been approved by the British admiralty, carries three long cylinders, into which a million cubic feet of air can be compressed. This air will drive the boat 15 miles an hour for six hours.

A curiosity of the Stockholm exhibition is a pine tree section four feet in diameter, from 60 or 70 miles north of the Arctic Circle.

After long experiment Mr. H. N. Warren, principal of the Liverpool Research Laboratory, has announced a new electrical generator, which promises a liberal and inexpensive supply of current for many purposes, and seems to be the nearest approach to a perpetual motion apparatus yet attained in practice. The positive element is composed of plates of porous compressed graphite, one-quarter of each plate being made active by immersion in platonic oxalate and subsequent ignition in an atmosphere of hydrogen. This operation gives a very finely divided platinum surface. To construct the cell, several of these prepared carbon plates are attached to a circular lead beam, which surrounds a porous diaphragm containing as a negative element a rod of amalgamated zinc, the carbons being arranged with their platinized portion projecting above the solution of strongly acidified ferric sulphate. On completing the circuit a powerful current is set free, which continues until the oxidation of the zinc reduces the ferric sulphate to the state of ferrous sulphate. The zinc is then withdrawn when the active platinum surface condenses atmospheric oxygen, which reoxidizes the ferrous salt, and thus renews the action when required. Four ounces of ferric salt in a generator seven by five inches in size gives a very steady current of two volts and eight amperes for twenty-four hours.

Many medical men now contend that the artificial production of fever is a powerful means of combating acute infectious diseases. In support of the view, two Canadian physicians report a high temperature having been first induced by injury to ganglionic cells at the base of the brain, when the animals were inoculated with the minimum fatal dose of hog cholera and diphtheria. The animal with the artificial fever lived longer than others, some even surviving the infection.

It is predicted that a novel motor-carriage now being built by two French inventors—Capt. Draulette and M. Catols—will be one of the greatest automobile curiosities of 1897. It comprises two wheels five feet in diameter, mounted on a common axle, with the body between. The motor-electric, petroleum or steam—revolves at a high speed round a vertical axle, and by its gyroscopical action tends to keep the seat horizontal and the rider upright.

A curious device for propelling boats automatically against the waves is the fin motor of H. Linden of Naples, which has given to the little wooden boats of a Berlin maker the name of "autonauts." The motor imitates the tail-fins of dolphins, etc. Each fin consists of a steel bar, from which flat blades, tapering in thickness, project backward like the teeth of a comb; and each end of the boat is fitted with one of these fins, placed horizontally so as to rest on the surface of the water at right angles to the keel. The waves

bend the steel blades, which, reacting, press the water backward and thus move the boat forward against the waves. The fins have been successfully tried on boats up to eighteen feet in length, a boat fourteen feet long having been found to require a total active fin surface of ten square feet, and a speed of about three miles an hour has been obtained in a sea stirred up by a strong wind. The one use thus far found for the "autonauts" is that of distributing oil to calm the water to windward of fishing smacks. The little boats are readily steered by changing the position of the fins, and are made to move backward by reversing both fins so that they point forward, or made stationary by pointing the fins toward each other.

Much has been written about the usefulness of music in the treatment of disease. That it has a certain effect is undoubted, and a recent suggestion is that a pleasant-toned music box would probably prove as effective as sleeping potions with a large class of nervously deranged patients. The use of music in the nightmare, or "night terrors," of children has been a subject of experiment. Cases peculiarly obstinate to all other treatment were at once benefited and after a time apparently cured by having pleasing airs played on an instrument during the approach and first hour or two of slumber.

The gradual cooling of France is proven by its vegetation. The Italian poplar, common in early French etchings, is now seldom seen in the country, while the lemon has disappeared from Languedoc and the orange from Roussillon, and the northern limit of many plant species has shifted far to the southward.

The world's useful fibers number 1,018, according to a catalogue by the department of agriculture, about thirty being used in the United States.

IN THE EUROPEAN MISSION.

[Millennial Star, Nov. 11, 1897.]

Arrivals—The following named Elders from Zion arrived in Liverpool on November 10, 1897, per American line steamer Waealand: For the British Mission—Richard H. Hamblin; Edwin Theodore Wood, Syracuse; John Jepson, Alpine, Arizona; Franklin Whitehouse, Lakeview; Lorenzo J. Brown Jr., Nutrioso, Arizona; Arthur Ellingford, Idaho Falls, Idaho; Harold Paul Jennings, Salt Lake City. For the Scandinavian Mission—David Blomquist, La Belle, Idaho; John Johnson Jr., Prospect, Idaho; George D. Hanson, Providence. For the Swiss and German Mission—Thomas W. Vickers, Nephi; Frank W. Fuhri-man, Wm. R. Zollinger, Providence. With the company of missionaries were Dr. L. W. Snow of Salt Lake and Christian Zippert of Providence, the former on his way to Germany on business, and the latter is on a visit to Switzerland.

Releases and Appointments—On account of the illness of his wife, Christopher Wilcock has been honorably released from laboring as a traveling Elder in the Liverpool conference to return home November 11, 1897.

Wilford Robinson has been honorably released from laboring as a traveling Elder in the Liverpool conference to return home November 11, 1897. On account of the death of his partner in business Elder Robinson has been released to attend to matters that require his presence at home.

Abraham M. Wilde has been honorably released from presiding over the Manchester conference to return home November 20, 1897.

James M. Cook has been honorably released from laboring as a traveling Elder in the Manchester conference to return home November 20, 1897.

Charles E. Rose has been released from the Newcastle conference and appointed to labor as a traveling Elder in the Liverpool conference.

Raymond McCune has been released from the Nottingham conference and appointed to labor as a traveling Elder in the London conference.

Elder John G. Wheeler, who came here about two months ago, chiefly for the purpose of getting genealogies, and doing missionary labor among his relatives, returns home on November 11, 1897.

Richard H. Hamblin and Arthur Ellingford have been appointed to labor as traveling Elders in the London conference.

John Jepson and Lorenzo J. Brown Jr. have been appointed to labor as traveling Elders in the Newcastle conference.

Edwin Theodore Wood has been appointed to labor as a traveling Elder in the Cheltenham conference.

Franklin Whitehouse has been appointed to labor as a traveling Elder in the Birmingham conference.

Harold P. Jennings has been appointed to labor as a traveling Elder in the Nottingham conference.

ELDER BUSHMAN'S DEATH.

Colonia Juarez, Mex. Nov. 12, 1897. I enclose extracts from a letter just received from my son, Nephel Martineau, of Monticello, Wayne county, Ky., relative to the last illness and death of Elder Bushman, as it may be of interest to his personal friends should you deem it worthy of publication. JAMES H. MARTINEAU.

"Fawbush, Nov. 3, 1897.

"Dear Father, Mother and All—We have been called upon to part with one of our number, Elder Bushman, who passed peacefully away Sunday, Oct. 31, 1897, at 6:45 a. m. of typhoid fever. He had been in the field nearly a year and was hale and hearty until suddenly taken away. He was sick twenty-three days and gradually got worse from day to day. I was in Albany, some forty miles away, traveling among the Elders, when we received a telegram that he was dangerously ill. Leaving Albany for his bedside at 10:30 a. m. on foot, we pressed on, passing many houses, and all at once felt to go up to a certain house and there find a dinner, which we did, and were asked to partake. We again pressed forward, turning aside at times to have prayer, determined not to stop until we reached our sick brother. At sunset we came to the Cumberland river with no money to pay the ferryman, to whom we told our condition, and asked him to ferry us over and go with us to the owner of the boat which he did. The owner of the boat said it was all right, and gave us a good warm supper. We then passed out into our lonely road through the timber.

"It was now dark, and after a little time we had prayers, asking the Lord to guide us to the house, some sixteen miles away, through an unknown road and country. We lost our way in the darkness, and felt impressed not to go any farther in that direction, and soon regained our true course. About 1 o'clock we called at a house to inquire our way, and were given a good lunch and a warm fire, the night being chilly; and the man of the house kindly volunteered to guide us to Elder Bushman's bedside. Arriving there we found Elder David Jones feeling poorly and Elder Bushman very low with fever; he had been sick three weeks. We administered to him and then lay down to rest, being very tired, and having done for him all we could. But he spent a very bad night, having a cold sweat and constantly sinking. I was watching with him and at 5 o'clock I awoke Elder Martin and we administered to