much more stable than the ferrous, for it does not give off the gas on heating nor in a vacuum.

The experiments of Weinland and Lauenstein have shown that in the alkali iodates an atom of oxygen can be replaced by two atoms of fluorin. Further researches on these fluorin salts have been carried out by Weinland and Alfa and are described in the *Zeitschrift für anorganische Chemie*. Quite a series of fluophosphates, fluo-sulfates, fluo-selenates, fluotellurates and fluo-dithionates have been formed. In all of these the fluorin does not directly replace the oxygen, but the P=O, S=O, etc., groups appear to be converted into $P<^{OH}_{F}$, $S<^{OH}_{F}$, etc. Most of these compounds crystallize well and their crystallographic characteristics are described by H. Zirngiebl.

In the *Zeitschrift für angewandte Chemie* the subject of a substitute for gasoline and benzine for many technical purposes is discussed by A. Ganswindt. The great danger from fire and explosion, ignition being caused even by the electric spark, is well known. The use of various chlorinated hydrocarbons is suggested, as carbon tetra-chlorid, which is, indeed, already used to some extent in this country. It is also possible that some of the chlorination products of acetylene may prove of real value along this line.

J. L. H.

RETURN OF THE WELLMANN EXPEDITION.

Reuter's Agency announces that the steamship *Capella* arrived at Tromsö on August 18th from Franz Josef Land. The vessel brought with her Mr. Wellmann's expedition, with which she fell in at Cape Tegetheff. It is reported that the expedition reached the 82d parallel of north latitude. The party bring with them the following remarkable story: In the autumn of 1898 an outpost called Fort McKinley was established in latitude 81, and a house was built of rocks and roofed over with walrus hides. During the voyage of the *Fram* two Norwegians named Paul Bjoervig and Bernt Bentzen remained there. The main party wintered in a canvas-covered hut at Cape Tegethoff, in latitude 80. In the middle of February, before the rise of the sun and in the depth of winter, Mr. Wellmann, with three Norwegians and 45 dogs, started north, this being the earliest sledge journey on record in such a high altitude. On reaching Fort McKinley they found the two men who had been with Nansen. Bentzen had died, and Bjoervig, in accordance with a promise he had made, kept his companion's body in the house, sleeping beside it through two months of Arctic darkness.

Pushing northward through rough ice, with severe storms and, for ten days, a continuous temperature of 40 to 50 degrees below zero, the party discovered men in lands north of the Freeden Islands, where Nansen landed in 1895. In the middle of March, when all hands were confident of reaching latitude 87 or 88, if not the pole itself, Mr. Wellmann, while leading the party, fell into a snow-covered crevasse, seriously injuring his leg, and the party, was therefore, compelled to retreat. Two days later they were roused at midnight by an earthquake, and in a few moments many dogs were crushed and sledges destroyed. The men narrowly escaped with their lives, saving their precious sleeping bags and some dogs and provisions. Mr. Wellmann's condition became alarming on account of inflammation, but his companions dragged him on a sledge, making forced marches for nearly 200 miles to the headquarters of the expedition, where they arrived early in April. Mr. Wellmann was still unable to walk, and he is probably permanently crippled. In subsequent sledge journeys the expedition explored unknown regions, and important scientific work was done by Dr. Hofna, Lieutenant Baldwin, and Mr. Hanlan. The expedition killed 103 walruses and eight bears. No trace of the Andrée expedition was found. The *Capella* picked up the expedition on July 27th and sailed homeward on August 10th. On the 6th inst. the *Stella Polare*, with the party of explorers headed by the Duke of the Abruzzi on board, was sighted in Broejenz Sound, 80° 20′ north latitude. All were well on board.

SCIENTIFIC NOTES AND NEWS.

We are able to publish as a frontispiece to this issue a portrait of Dr. Edward Orton, President of the American Association for the Advancement of Science, through the courtesy of