FERDINAND DE LESSEPS.

Vicomte Ferdinand de Lesseps, now in his eighty-third year, is the very personification of energy and perseverance, and will figure in history as one of the world's boldest engineers. When, in 1831, he was sent as consul-general to Alexandria, he found the idea of a canal across the Isthmus of Suez a fertile topic of discussion, and, becoming deeply interested in the subject, he proposed to Mehemet Said, with whom he was on intimate terms, a plan for executing the project; but it was not till 1854 that his enterprise received the official sanction of that potentate. The opposition that he received from England, the obstacles placed in his way by the Sultan and the Porte, and the success that finally crowned all his efforts, when the Empress Eugenie opened the canal in November, 1869, are well known matters of history. Having accomplished this great work, M. De Lesseps determined to retire for a time on his well earned laurels, and a few days after the inauguration of the Suez Canal he married a young Creole lady, Mlle. Helene Autard de Bragard, by whom he has had nine children.

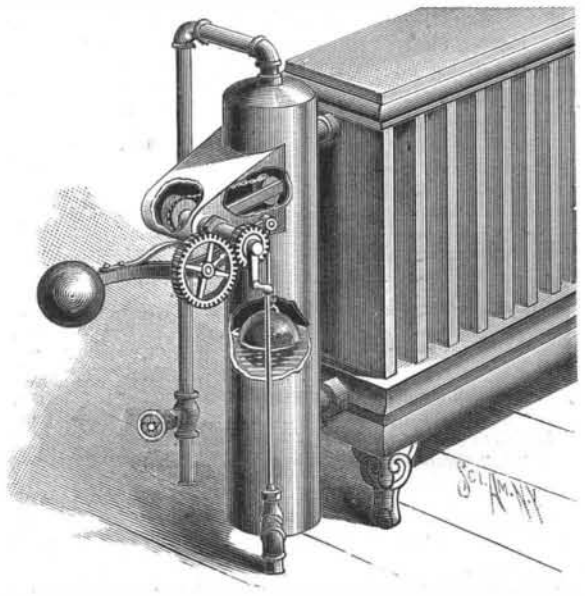
Honors now began to fall thick and fast upon him. He received the grand cross of the Legion of Honor from Napoleon III., who had always befriended him. England now tried to make amends by according him an enthusiastic welcome on his visit in 1870, when he received the grand commandership of the Star of India and the freedom of the City of London. In 1878, the long discussed question of the Panama Canal came to the front, the committee of investigation handed over its concession to M. De Lesseps, the International Scientific Congress proclaimed that the project could and ought to be carried out, and, in December, M. De Lesseps and his wife and children (the latter then three in number) started for the isthmus to inspect the route for himself. He returned, after some months' absence, thoroughly impressed with the practicability of the scheme. At first, it was found difficult to procure funds, and the scheme was abandoned for a time; but, finally, a company was formed, and the French engineers left Paris on the 3d of January, 1881, to proceed to the work, which was begun February 24 of the same year.

The enterprise has since been carried on under many vicissitudes, due to the geology of the country and lack of funds. The latest project is to abandon the dead canal for a time and to construct a temporary lock canal.

M De Lesseps has been twice married. Our engraving shows the old hero and his young wife and their children. For the engraving we are indebted to the *Illustrated London News.*

A REGULATOR FOR STEAM RADIATORS.

An improved device for controlling and regulating the heat given off by a steam radiator is illustrated



BRITTS' RADIATOR REGULATOR.

herewith, and has been patented by Mr. Peter W. Britts, of Gunnison, Col. The radiator is connected at its top and bottom with the upper and lower ends of a tank placed near, thus establishing a steam and water connection whereby the water level is kept the same in both, the tank being connected at the top with the steam supply pipe, and having at the bottom a water outlet pipe in which is a gate valve. The valve rod in the outlet pipe is pivotally connected with a weighted lever fastened on a sleeve turning in bearings on a hollow branch arm extending from one side of the upper end of the tank, a shaft passing through the sleeve carrying on its outer end a pinion meshing into a gear wheel turning on a stud secured on the weighted lever. A spring pawl on the lever arm engages the teeth of the gear wheel, to prevent a return movement of the pinion and its shaft, and the latter has on its outer end a crank arm, while on its inner end, inside of the branch from the tank, is a drum on which winds one end of a chain or rope passing over a pulley held on the free end of an arm secured to the sleeve. This arm, the sleeve, and the weighted lever thus form one piece, so that when the arm swings downward the weighted lever swings upward, and *vice versa.* The pulley projects into the tank, and the rope or chain passing over it carries at its lower end a weighted float, which rises and falls with the water level in the tank and in the radiator. The float can be raised or lowered and adjusted at any desired height by means of the crank arm and pawl, a pointer on the gear wheel indicating the height of the float in the tank. The weight of the suspended float holds the weighted lever arm normally in position, so that the valve in the outlet pipe remains closed, as the water of condensation accumulates in the radiator and the tank, until the water raises the float, when the weighted lever arm swings downward, and the rod pivotally connected therewith opens the valve in the outlet pipe. The float moves downward with the falling water, and again exerts its pressure to close the valve when sufficient water has escaped. By adjusting the position of the float the height of the water may be varied as desired, thus increasing or diminishing the steam space and regulating the heat given off by the radiator.

Hot Weather in India.

On the 10th of May, North Sind and West Rajputana were the hottest parts of the Indian region, the maxima of temperature generally exceeding 110 deg. On the 12th idem the maxima at Jhansi and Deesa were 112·5 deg. On the 13th the highest maxima reported were 114 deg. at Deesa, and 113·5 deg. at Jhansi. On the 14th the temperature had again risen; the highest maximum was 114·7 deg. at Jacobabad. *Indian Engineering* says, "On the 15th the maximum at Jacobabad was 116·6 deg., at Hyderabad—Deccan—it was 113·2 deg. On the 16th a maximum of 116·6 deg. was reported from Jacobabad, of 115·9 deg. at Sirsa, of 115·4 at Deesa, and 114·8 deg. at Ludhiana."

ABOUT 400 barrels of crude petroleum are being turned out daily by the twenty-two wells of the Pacific Coast Oil Company in the Pico district, near Newhall, Cal. The wells of the company are now sunk to a depth of from 1,600 to 1,800 feet. The oil is of the best quality obtained on the coast, and the demand for it is very great. Some of the new manufactories at San Francisco burn oil instead of coal.

M. DE LESSEPS, PROJECTOR OF THE PANAMA CANAL, AND HIS FAMILY.