

GRAND RALLY CENTRAL OREGON

SUB-DISTRICT EPWORTH LEAGUE

SUNDAY, APRIL 21st, 1912

M. E. CHURCH

SOON EXHAUST SUPPLY OF NITROGEN

Available Source at Present is
Manufacturing Process
Successful

University of Oregon, Eugene, April 13—In the last meeting of the Chemistry Club at the University of Oregon, the interesting subject of methods of obtaining nitrogen in the ground was discussed by the professor. The main talk of the evening was given by Professor Chamberlain, head of the Chemistry Department of the University. He addressed Professor spoke of the procurement of nitrogen from the air. In part it was as follows:

Commercial manures are obtained by-products in the house industries and the fertilizer industries. The available are totally inadequate as a supply for the increasing needs of farmers. Other sources exist in deposits of guano and sodium nitrate. The guano is practically exhausted at present time, while the sodium nitrate is concentrated in a single locality in the rainless area in Chili. Source of supply is now dependent upon crop rotation, and it is estimated that it will be exhausted in the next generation or two.

Even the world will depend upon crop rotation for its supply of food, or some new supply of nitrogen material which plants use directly. An interesting thing about nitrogen is that in the air, there is 34,000 tons of nitrogen. In the free atmosphere, this nitrogen is used by plants. It can be put into chemical

N. J. SINNOTT OF THE DALLES, OREGON

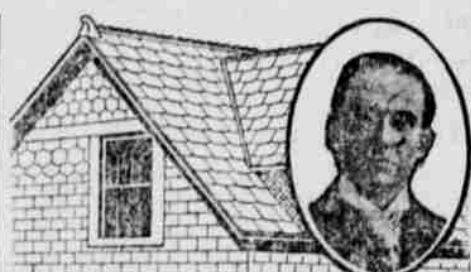


Progressive Republican
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FOR CONGRESS

combination, and it is precisely this which the bacteria upon the roots of the clover plant can do. By the use of powerful electric arcs it has been found possible to cause the nitrogen of the air to combine with another gas in the air, called oxygen, and this combination can readily be adapted to use as a direct fertilizer. The process has been developed to the point where it can be carried out on the commercial scale, producing artificial competition with the natural product from Chili. Upwards of four million horse-power of electrical energy are now in use and under development for the production of nitrogen compounds from the air, so that it may be seen that this industry has with a single bound come into the position of being one of the largest in the world."

The discussion at the Chemistry Club was illustrated by the demonstration furnace, in which the current under a pressure of 8,000 volts, was driven across



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the air-space between the electrodes, producing at once a considerable quantity of nitrogen oxides.

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