

The recovery of gasoline from natural gas has now become a large industry, which contributes materially to the supply of motor fuels. Experiments in the conversion of natural gas to gasoline were made as early as 1903, but experiment did not give way to commercial production until about 1910. The growth of the industry since that year has been remarkable. In 1911 there were in operation 176 plants, which produced about 7,400,000 gallons of raw gasoline from natural gas. In 1917, only six years later, there were 886 plants, which produced nearly 218,000,000 gallons. Prior to 1916 most of the gasoline recovered from natural gas was derived from casing-head gas obtained from oil wells, by methods involving compression and condensation, but from year to year an increasingly large proportion of the annual output of natural-gas gasoline has been recovered by the absorption process, which has now been applied not only to "wet" gas from oil wells but also to so-called "dry" gas, which occurs independent of oil and constitutes the main supply of natural gas. Dry gas can not be profitably converted into gasoline by compression.

LEATHER FROM AQUATIC ANIMALS

THE Bureau of Fisheries reports that excellent progress in the tanning of fish leather is to be recorded, and a number of the difficulties that have retarded the development of the industry have been overcome by tanners in this field.

One company which is tanning fish-skins has established a station in North Carolina and another in Florida for the capture of sharks and porpoises, and is meeting with success in its fishery for sharks. It is understood that the number of stations will be increased as rapidly as possible. Another company which has recently acquired a site for a tannery in Washington plans to tan the hides of sharks, beluga, hair seals, etc.

Samples of leather recently submitted show marked improvement in appearance over earlier samples. The leather is soft and pliable and appears to have ample strength for many uses. Arrangements have been per-

fectured for the Bureau of Standards to make tests of later products as to durability, porosity, tensile strength, pliability, water absorption, wearing qualities, etc.

The nets which the Bureau developed for the capture of sharks are proving successful and are being adopted for the fishery. At the fishery stations the liver oil is extracted and the flesh is converted into fertilizer, so that none of the material is wasted.

The supplies of walrus leather, which is cut into wheels and used for polishing fine metal surfaces or for removing marks and scratches on bright metal objects, have heretofore been imported. Last year the bureau furnished several interested persons with pieces of walrus hides for tanning and has recently received a sample of leather made therefrom for which tests are being arranged to determine its suitability for such purposes.

VACATION NATURE STUDY

BELIEVING that a better knowledge of wild life will bring about better conservation of it, and that when people are on their summer vacations they are most responsive to education on wild life resources, the California Fish and Game Commission backed by the California Nature Study League instituted this past summer a series of lectures and nature study field trips designed to stimulate interest in the proper conservation of natural resources. Six different resorts in the Tahoe region were selected for the work, and here illustrated lectures on the game birds, song birds, mammals and fish, given by Dr. Harold C. Bryant, of the University of California, furnished evening entertainment and early morning trips afield gave visitors an introduction to mountain wild life.

The motto of the field classes was: "Learn to read a roadside as one reads a book." Special excursions for children gave surprising results owing to the rapidity with which they absorbed information about the living things encountered.

Compact nature study libraries were placed at the resorts by the California Nature Study League and an exhibit of colored pictures and other illustrated material was on display.

Thus visitors were further able to increase their fund of information regarding wild life by a study of pictures giving full colors, by specimens and by books giving detailed facts.

This experiment in making conservationists out of "vacationists" proved so successful that another year will doubtless see the work expanded and the opportunity to study under a nature guide offered to thousands of those on their holidays in all parts of the state.

A COMPENDIUM OF CHEMICAL AND PHYSICAL CONSTANTS¹

SCIENCE played so important a rôle in the war that one of the war's outcomes has been a national stock-taking by each of the principal countries engaged in the struggle of its condition, both as regards the scientific knowledge and resources already in its possession and the means it has for increasing this knowledge. England, Japan and America have all established departments or councils of national scientific research, either supported by government, as in the case of England and Japan, or by private funds, as in the case of our own National Research Council.

Out of this stock-taking has come the realization that certain scientific knowledge and the means of access to it have been largely in the hands of the Germans, and that other countries have been obliged to rely on German publications in order to make any use of it at all. A notable instance of this is afforded by the situation as regards the chemical and physical constants so indispensable for precise work in all chemistry and physics and in the application of these sciences to industry.

The National Research Council, therefore, with the cooperation of the American Chemical Society and the American Physical Society has planned to compile and issue a critical American compendium of chemical and physical constants which shall be up to date and correct, which, by the way, the German publications were not. And yet these badly organized and inaccurate German compendia

¹ Press bulletin issued by the National Research Council.

were the only ones available to the American experts during the war in connection with their all-important scientific work on the pressing problems of war technique.

This will be a tremendous task and will involve the expenditure of at least \$100,000 which must be obtained from private sources. The committee representing the National Research Council and the American Chemical and Physical Societies will have to scour all the university and research laboratories of the country for the needed facts. In addition the committee will attempt to find out from the business and industrial concerns of the country whose work is based on applied chemistry and physics a list of all the constants required in their work, and then will undertake to have these determined by scientific investigators and included in the compendium. A successful outcome of this large undertaking will be of inestimable value to the scientific and material strength of the nation.

SCIENTIFIC NOTES AND NEWS

At the October meeting of the executive board of the National Research Council Professor Vernon Kellogg, of Stanford University, was elected executive secretary of the council. He will hold this position in addition to that of chairman of the council's division of educational relations which he assumed last July. Professor Kellogg's work with Mr. Hoover's relief organizations and the Food Administration, which extended from May, 1915, to the present, is now practically at an end, although he remains one of the directors of the American Relief Administration European Children's Fund, which is the one still active organization under Mr. Hoover's direction.

At its meeting held on October 8, the Rumford Committee of the American Academy of Arts and Sciences voted the following appropriations: To Professor Frances G. Wick, of Vassar College, in aid of her researches on the phosphorescence of hexagonite and of fluorite at ordinary and low temperatures, \$300; to Professor Robert W. Wood, of the Johns Hop-