INDUSTRIAL SURVEY OF COLUMBIA POWER PROJECT ANALYZED

Prof. O. F. Stafford of State University and D. A. Lyon of Federal Bureau Report.

SOME LINES PROFITABLE

Other Lines of Manufacture Not Peasible, It Is Declared, Because of Contributing Factors.

University of Oregon, Eugene, Or. May 6 .- It is not now practicable to for electro-chemical or electro-metallurgical manufacturers, excepting in the cases of certain commodities intended for local or Oriental consumption, and excepting also the manufacture of synthetic nitrogen compounds from atmospheric nitrogen. The further possibility also exists that in the course of time waterpowers may be utilized largely in making available the western deposits of phosphate rock for use in agriculture.

These are the conclusions in a report made by O. F. Stafford, professor of chemistry at the University of Oregon, upon the feasibility of establishing electro-chemical industries at The Dalles. The report entire is to be published shortly as a departmental bulletin, and is based upon investigations made jointly by Professor Stafford and by Dorsey A. Lyon, metallurgist, Uniled States bureau of mines.

Possible Commodities Enumerated. The commodities set aside conditionally as possible of production are: Lye and bleaching powder, cyanamid, chlorates, calcium carbide, synthetic atmospheric nitrogen compounds, phosphates from phosphate rock, and fer-

The purpose of investigation upon which the report is based was to discover what industry could absorb large enough blocks of cheap power to offset the higher cost of raw material and labor due to the western location

the possibility of securing the necessary raw materials for electro-chemical industries in the west, and under this heading makes a minute analysis of western sources of carbon, limestone, salt, silica, potassium chloride, phosphate rock, fron ore, chromite, bauxite, for the manufacture of aluand zinc, estimating in all cases as nearly as possible, under the circumstances, the cost of these materials delivered at The Dalles. In connection with these raw materials, there is thentaken up a discussion of the entire costs of manufacture attending the carrying along of these industries at The Dalles, and finally also the marketing conditions to be encountered as these products are sold.

Power Costs Summarized. Briefly summarized, some of the figures advanced in the report are as fol-

Power is estimated a scosting \$9 per borsepower year, this first figure bepower. It is pointed out also that, alto be low, as compared with the cost of power from other sources in America, there must be taken into account the fact that power costs after all are of finishing any electro-chemical prod- energy. uct, and that, as a consequence, the water powers in the east may easily stand as competitors with western power for these purposes, in spite of their higher cost because of nearness to market and the greater availability of raw materials, labor, capital, etc. these advantages more than compensating in most instances the greater

Carbon, as raw material, would cost at The Dalles about \$8 per ton, with figure eventually might be reduced to the eastern market. The manufacture a minimum of \$6 per ton. In arriving at this conclusion, Professor Stafford has considered the costs of ob-taining coke from domestic and Alaskan sources, as well as from Canada, and also has taken into account the possibility of obtaining charcoal as a by-product from wood now wasted in logging and milling operations. The verage price of carbon at Niagara Falls is normally less than \$4 per ton. Lime at The Dalles is estimated to cost a minimum of \$6 per ton, it being understood, of course, in this case also that the demand for this substance would be steady and large. Probable sources of lime in the order of their availability are: Puget sound, Baker county and Wallowa county. Lime of excellent quality is said to be delivred to the Niagara Falls industries at

\$4.50 per ton. nothwithstanding abundant western deposits, would cost at least \$6 per ton at The Dalles, the source seing solar sea salt obtained from San Francisco bay. The current price of salt at Niagara Falls is about \$3 per ton. The possibility of obtaining salt from Summer and Abert lakes, in Central Oregon, is considered, the conclusion being, however, that it will not be possible to make use of these sources of salt until such time as the industrial situation in the west shall be able to consume locally the enormous amounts of soda which must be produced along with salt from the waters of these lakes.

Silica Is Abundant,

Silica in crude form is abundant throughout the Pacific northwest, and some very pure deposits occur between Puget sound and Alaska, easily accessible for water transportation. An ex cellent deposit of this material also exists near Spokane, which might be delivered at The Dalles for \$2.50 a ton Potash, of which Germany has long produced the world's supply, might laer be obtained in the United States from leucite, alunite, western saline deposits and Pacific ocean kelps.

The great demand for some form of phosphate as a constituent of commerical fertilizer, the abundance of phosphate rock in the west, and the fact that super-phosphate as manufactured at present, by the use of sulphuric acid, is a "heavy" chemical, which cannot be shipped long distances o advantage, point out that western waterpower may play an important part in converting our phosphate rock deposits into available forms. Phosphate rock from southeastern Idaho would cost about \$6.50 per ton, as comared with \$4.50 per ton for similar super-phosphate plants of the Atlantic

Bauxite, for the manufacture of aluminum, it is estimated would cost \$14
per ton at The Dalles, the cost at the
mines in Arkansas normally being
at Tuesday. Interment was in Rivat Tuesday. Interment was in Rivat Tuesday.

YOUNGSTERS ENJOY RIDE



Inmates of Baby Home find motoring on warm afternoons exhilarating sport.

These are stirring days in the auto- | bundled in, and then whisked over Termobile business and to stop the entire williger Boulevard and later up Kings working organization for an afternoon Heights. s quite a sacrifice.

Maybe, that is why about 40 happy M. B. Lett, Mrs. A. M. McBratnie, Miss youngsters from the Baby home chor- H. M. Lewis, Mrs. M. J. Atwood, Mrs. tled in high glee as they were taken A. T. Thayer, Mrs. S. P. Kingdon, Mrs. out the see the sights and why almost A. Gottsche, Miss Gretson, Mrs. F. E. as many of the old folks from the Chaney, W. D. Meade, C. N. Proud and Mann home were so spirited and interested in everything that was going, when two local automobile firms put while Mr. Menzies thought of the their working organizations at the dis- Mann home, A. E. Manley thought of posal of these two places.

someone who might enjoy a ride and This was on one of the warm afteroons of the week when everyone was the city out Professor Stafford first considers busiest. C. M. Menzies stopped long Then followed a wild time for some enough to think that possibly everyone and a pleasant map for others. The was not enjoying the glorious spring automobiles were very interesting days that have arrived. He men- things. tioned it to the boys and every man It was keen sport to ride through there volunteered to put his car at the the refreshing breeze and the nurse at disposal of the Mann home. Six ma- the home said the babies never slept chines were sent to the home out on quite so hard as they did after their the Sandy road and the old folks were afternoon's excitement.

> cost \$5 per ton. Chromite for the product, and, for this reason, cheaper manufacture of ferrochrome would western power might give the western manufacturer an advantage over

C Hensen.

Manufactures Declared Unprofitable. the eastern one As to the industries themselves, the forthcoming report indicates that, all things considered, the manufacture of dustries are limited practically to the aluminum, pigiron, ferrosilicon, car- demands of the local and Oriental marborundum, graphite, and a few other kets, this would not be true of the minor products, could not be manufac- manufacture of nitrogen compounds tured profitably in the west.

cost \$18 per ton.

limit of the Pacific coast consumption, culture and the arts, as well as for These two commodities are manufactured simultaneously, about 12 parts the western factory could readily be horsepower year, this first figure be-ing the one given by the engineers in charge of the investigation at The charge of the investigation at The thought to be not greater than 5000 either from Chile, where the supply is though this figure for power appears | tens per annum, so that the industry would be limited to the production of something like this amount of bleaching powder, with its accompanying 2000 tons of lye. This industry could the present moment, with power at the usually a minor fraction of total cost absorb but 1000 horsepower years of

Calcium carbide would be manufactured in the west at somewhat higher erst than in the east, and, moreover, the local consumption is so small that it is a question whether a western factory might be able to operate upon a large enough scale to show a profit. Potassium or sodium chlorate as basic constituents of chlorate blasting powders, might be manufactured advantageously in the west, certainly up to the limit of western consumption, the possibility that in a large way the and barely possible for snipment into of chlorates demands an unusually

> WOMAN'S DEATH IS MOURNED BY MANY

large amount of power per ton of



Mrs. Mary V. Fitzpatrick.

The death of Mrs. Mary V. Fitzpatrick last Sunday at the residence of her daughter, Mrs. E. G. Leihy, 355 East Eighth street north, is mourned East Eighth street north, is mourned Is Epilepsy born in New York City 62 years ago and with her parents moved to Eau Claire, Wisconsin, when five years of age. She was first vice president of the Wisconsin Women's Relief Corps In 1905 Mrs. Fitzpatrick moved to Portland. At the time of her death she was first vice president of the Oregon Congress of Mothers. She is survived by her husband, Hugh Fitzpatrick, and two daughters, Mrs Leihy of this city and Mrs. A. G. Hall

tribute is paid: "Her life was a successful one in that her great abilities and energies were given in the service of others wherever she went. She worked toward the biggest things of life, and spoke ill of none. She helped others to

of Spokane, Wash.

help themselves.'

hostess to the following guests: Mrs. :

It was a strange coincidence that

called up and invited the youngest of

While all of the above mentioned infrom the air by the use of electrical Soda lye and bleaching powder could energy. In this field the demand for infactured in the west up to the the product is so great, both in agri military purposes, that any output of approaching exhaustion, or from the coal gas and coke industries, the latter not promising anything like a sufficient supply for future needs. At proposed figures of \$9 per horsepower year it is estimated that the cost of manufacture of nitrogen compounds would almost exactly equal the normal west coast price of Chile saltpetre, so that no large margin exists to attract manufacturers into the field. How-ever, with the depiction of the Chilian supplies, it will be necessary to make use of synthesized nitrogen compounds more and more, and, under these conditions, their manufacture at western waterpower sites will be commercially possible. It is believed that by the time a large waterpower development, such as that proposed at The Dalles. could actually be installed conditions would fully warrant the construction of factories for the manufacture of atmospheric nitrogen compounds.

The matter of utilizing waterpower in the phosphate industry is in a somewhat more experimental stage than is the case with the nitrate industry, but all indications point toward the possibility of this industry reaching a satisfactory commercial development within a short time. When this hap-pens, the manufacture of concentrated forms of phosphate materials for the fertilized trade will be distinctly an additional possibility.

Has a Proprietary Right to Use Heels

Court Bules That Company Not Too Blame for Kick Administered to Employe and Reverses Judgment.

Frankfort, Ky., May 6 .- The kicking propensity of a mule is a matter of common knowledge, Also a mule would be untrue to himself and false to every tradition of his breed if he

Therefore, when a mule kicked J. M. Pratt, driver of a mine car for the Consolidated Coal company, when Pratt struck him with a whip and at the same time stopped to pick up a chain at the mule's hind feet, the mule was not to blame, ruled the court of ap-

The court reversed a judgment \$500 against the company granted by a lower court. The company's defense was that an employe, "cannot court danger by inviting and provoking a mule to kick him, and then recover of the master for consequent

Conquered?

New Jersey Physician Said to Have

Many Cures to His Credit.

Red Bank, N. J., May 6 .- Advices rom every direction fully confirm previous reports that the remarkable treatnent for epilepsy being administered by the consulting physician of the Kline Laboratories of this city is achieving wonderful results. Old and stubborn cases have been greatly benefited and many patients claim to have been entirely cured.

Persons suffering from epilepsy should write at once to Kline Laboraories, 126 Broad street, Red Bank, N.

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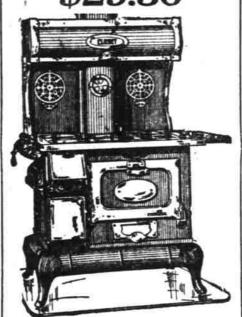
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six inches in diameter, eight-foot
extension, 48 inches wide.......\$10.00
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inches diameter, flush four-inch rim, extension six feet\$22.50 \$25.00 Oak China Closet, Gadsbys' price. \$12.50 \$40.00 Bookcase, waxed or fumed oak..\$20.00 \$25.00 Bookcase, waxed or fumed oak..\$12.50 Cheval Dressers, mahogany mirror, 30x45 inches, Gadsbys' price. \$25.00 \$27.00 Princess Dresser, waxed oak, mirror 18x40, Gadsbys' price....... \$22,00 Princess Dresser, birdseye maple, ... \$11.00 mirror 18x20 Gadsbys' price.... \$12.00 Oak Extension Tables, six-foot extension, square top 8 6.50

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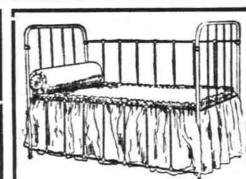


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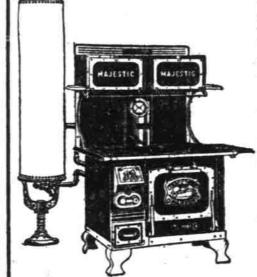
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this entire page to poist out its many superior qualities. I you are interested, write us for pamphlet, "Range Comparison."

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