

PROFESSORS AT NEBRASKA UNI BOOST FUEL OIL

Engineering Teachers Cite Specific Cases Where Oil as A Substitute for Coal Is Successful.

Oil as a substitute for coal is one of the subjects upon which Professor J. W. Haney of the engineering college at the State university is expert. This is his second year at the university. He holds the degrees of Bachelor of Science in Mechanical Engineering and Master of Arts from the University of Missouri. His special research work was done in the transmission of steam heat through steam boiler tubes. After finishing school, he was the chief engineer for a commercial power plant company in Kansas City. He then returned to the university as an instructor and later spent two years in Pennsylvania State college.

Apropos of using oil for fuel in the present emergency, Professor Haney says:

"The first thing is to secure a suitable oil burner. There are several on the market. The purpose of the burner is to atomize the oil. The principle is the same as with the atomizer with which you sprinkle perfume. To get the properties of the oil it must be broken up into small particles, otherwise it is likely to burn as would kerosene in an open-topped can. That would make a hot, smoky and uncontrollable fire. I have in mind a plant in Kansas City with a chain grate stoker which is mounted on a small track running in the boiler setting. When the price of coal is high and that of fuel oil low the stoker is backed out from under the boiler, the opening bricked up, oil burners are put in at the top and oil is used as fuel in place of coal. Removing the brick makes it possible to return to coal. This is done two or three times a year."

"Right in Lincoln there are several burners which may be used in heating dwelling houses. The grate is removed from the heating boiler of the furnace, the burner put in and started, and oil is used instead of coal."

Advantages of System.

"The advantages of this system are that you do not have any coal to shovel, there are no ashes to carry out and it is easier to regulate the fire. The main disadvantages are the increased cost of fuel oil over that of coal and the necessity of a suitable storage for oil. There is a city ordinance that you must buy the tanks. Some tests made for the purpose have shown that oil heating costs 15 to 20 per cent over heating with coal."

"But the advantages above named make the balance at this time rise in favor of oil heating. The latter is much easier to manage. You merely turn a valve to regulate the flow of oil and the heat. This regulating valve stem can extend up through the floor so it can be regulated without going below. It can also be regulated with a thermostat so as to open and close automatically, depending on the temperature of the room."

"With that type of furnace you use what is called fuel oil, or distillate, due to the fact that this oil is easier burned than common crude oil, which must be atomized with compressed air or high pressure steam."

"The burner for changing the furnace to an oil consumer will cost about \$35 or \$40. Then there is to be added the storage tank and piping and the expense of connecting it up."

"Small burners also are made to go into ordinary stoves. When the house is heated with ordinary stoves the small burner can be placed in the stove and the house heated with oil instead of coal."

"But what I fear, is that the supply of oil will be inadequate. A number of concerns in Lincoln have used oil burners."

Oil Refuse Briquettes.

Prof. A. E. Bunting of the same college has used a manufactured fuel with practical results, but this is no longer in the market it offers no solution for the present shortage. This is sold in the form of briquettes. It is the refuse left in the retorts in the refining of gasoline and kerosene. This forms a deposit on the inside of the retort averaging six to eight inches in thickness. After it has deposited sufficiently the retort is opened, the deposit is broken out and raked into iron cars while it is still white hot.

The cars are then submerged in water to cool. The material has the appearance of coke. Being made from the crude oil, there is practically no ash.

Professor Bunting has made several patterns for oil burners, but has not followed up the making and use of them. He urges as a more practical measure, the development of the waterpower in Nebraska for the generation of electricity and says that it would tend to compensate for the fuel supply. Power plants could be erected wherever the fall of the water justified and heat and light could be generated at comparatively small cost. The power could be conveyed for many miles to places not on the stream. The professor wonders if even the sluggish and apparently almost level flow of the Platte could not be utilized by the sharp wits of man to avoid the stagnation that follows insufficient fuel supplies.

As a practical measure Professor Bunting suggests that in the future every house built in Nebraska have two or three fireplaces where wood can be burned.

The professor believes it entirely possible that at some not distant day men will have learned to take electricity from the air and harness it for their needs.

As a wise measure at the present time in Nebraska he believes that in case the necessity arises all public buildings, schools and churches be turned into dormitories. He thinks that coal would thus be conserved and used far more economically than now when people are housed separately.

Bee Want Ads Produce Results.

TOBACCO PROVES GREATEST ASSET TO UNCLE SAM

Of Six Billion Revenue Receipts of Last Fiscal Year Nicotine Yields \$206,003,000.

Washington, Dec. 5.—Estimates of \$6,000,000,000 as the yield of the present revenue law for the first 12 months of its operation will be closely approached if not fully realized, Internal Revenue Commissioner Roper said in his annual report.

Payments of the first two installments, March 15 and June 15, brought into the treasury a total of \$2,600,783,000. Mr. Roper said, while reports already in hand of the third installment payable September 15, fully support the bureau's estimate. Commissioner Roper said the tobacco industry had developed into one of the greatest sources of federal revenue, the total receipts from this source alone for the fiscal year ending June 30, 1919, being \$206,003,000, an increase of \$48,800,000 over those of the preceding year.

More Cigaretts Smoked.

An enormous increase in the number of cigarettes manufactured was shown by the reports, the total for the last fiscal year being approximately eight times larger than in 1910. In that year 8,500,000,000 cigarettes and 8,000,000 cigars were manufactured, while in the last fiscal year the manufacture of cigarettes had increased to 45,500,000,000, while the number of cigars remained practically stationary.

Discussing constitutional prohibition, Mr. Roper said that probably 50,000,000 gallons of spirituous liquors would remain in bonded warehouses when the constitutional amendment becomes effective January 16.

During the year ended June 30, approximately 99,000,000 gallons of distilled liquor were produced from materials other than fruits, this figure representing a decrease of nearly 75,000,000 gallons from the previous year's production.

Prohibition a Problem.

The effect of wartime prohibition has presented a problem which is causing revenue officials "serious embarrassment," Mr. Roper said. Holders of heavy stocks of liquor in bond were forced, under provisions of the last revenue act, to pay an additional tax September 15. The law closing the saloons for the period of the war has left those interests with their products and without means of obtaining money to make the payments, he said.

"Under the law the discretion of the bureau is limited to extending the time for payment of these taxes seven months," Mr. Roper explained. "Serious embarrassment has resulted as to the course of action which should be taken in these cases to protect the interests of the government without imposing undue financial hardships on the taxpayers which presumably were not intended by congress."

The report revealed a menace in illegitimate traffic in drugs between this country and Canada and Mexico. Mr. Roper urged that some temporary arrangement be established which would put a stop to this smuggling.

Expenditures of the bureau during the last fiscal year, Mr. Roper said, were \$20,573,771, an increase of \$12,003,214 over the previous fiscal year. On this basis, he said, it had cost the government 0.543 per cent to administer the revenue laws and collect the second greatest tax bill the nation ever has laid.

PARCELS WRAPPED

Regardless of where purchased, we are glad to wrap parcels for shipment by parcel post or express at the ACCOMMODATION DESK in our Basement. This service is without charge, of course.

—BRANDEIS STORES—BASEMENT—



BRANDEIS STORES FOR MEN

"SATISFACTION or money back"; we can't put it any plainer. You decide the satisfaction by test of wear; we decide by what you say whether or not you're satisfied. We refund money cheerfully.

Take Your Pick from Thousands of Luxurious

OVERCOATS

A Super Value Overcoat Event

IN inaugurating this SUPER-VALUE OVERCOAT EVENT we are presenting the greatest opportunity of the year to secure one of the best quality overcoats at a price that defies competition. Included are Kerseys, Vicunas, Scotch Fluffs, Knitted Textures, Shetlands, Fleeces, Irish Friezes, Blizzard Cloths and Leather Auto Coats.

American weaves; the choicest products of the textile world. Fur colored Overcoats, big warm ulsters, overcoats with the new wind shield collars, ulsterettes, double-breasted raglan models, dress overcoats. Chesterfields, sport models; knee length or ankle length types.

They're priced to save some money for you; the buying was done a long way ahead of the selling. We can offer you unusual values in

Thousands of High Grade Overcoats

In Two Big Lots--

Lot 1 **\$45** AND Lot 2 **\$65**

Men's and Young Men's Suits of Highest Quality made by Hart Schaffner & Marx

These clothes satisfy the keen, alert desire of young men to look stylishly dressed. All the points that young men want; the shoulders, sleeves, waistline, lapels; the new things that make the young man satisfied with the way he looks to others, are incorporated in the new models.

You may have your own personal ideas about what you'd like to see in your clothes; we believe you'll find it here in these special Hart Schaffner & Marx suits for young men, made for us exclusively. Suits in new colors, new weaves, new values. Especially strong at **\$50**

and at \$35, \$40, \$45, \$60, \$70, \$85

—BRANDEIS STORES—SECOND FLOOR—MEN'S STORE—

Soldiers May Have to Use Balloon to Get Gifts From Xmas Tree

The largest Christmas tree ever used in the state to hang presents on will be given the soldiers at the balloon school of Fort Omaha if the efforts of Instructor A. L. Stevens prove successful.

If the right tree is secured a balloon will be required to reach the highest branches to hold presents, and another will be necessary to secure the gifts from the top of the tree. A mammoth skating pond will be constructed around the base of the tree.

The idea of using a balloon for hanging and removing gifts from the tree was conceived by Mrs. Jacob W. S. Wuest, wife of Lieut. Col. J. W. S. Wuest, commandant at the fort. Mr. Stevens left yesterday on his search for a tree high enough for a balloon to hover about the topmost branches.

School Head to Arrange Special Course of Study

Superintendent Beveridge of the city schools will hold a meeting with the principals of the schools in the city hall today to arrange a special course of study for use when the schools open again in order to "catch up."

"We will try to arrange a schedule of minimum essentials in the various studies," he said.

Sure Relief



Dress Special

About 100 Silk and Serge Dresses, one or two of a kind, taken from our regular stock—\$21.75 and \$29.75 values, special at \$14.75.

Another lot of 100 Silk and Tricotines—\$35.00 and \$45.00 values—special at \$24.75. This is a dressing opportunity. Do not miss it.

Julius Orkin 1508-10 DOUGLAS.

Men's High Boots

Regular Values to \$15.00

at **\$10.00**

Men! Don't suffer with cold feet, but come in Saturday and see the wonderful values that we are offering in High Boots to keep your feet warm!

An all Army, Dark Tan, Calf Lace Boot, 24 inches high, made over the Munson army last, closed tongue, two full soles, hand-welted and McKay sewed. Just the shoe you want for cold and wet weather. All sizes from 6 to 12.

Christmas Slippers for Men

Cozy, Comfy House Slippers; in felt and in tan and black leather; Everetts, Operas and Romeo styles; Moccasin Slippers and a full line of soft, warm Felt Slippers.

—BRANDEIS STORES—MEN'S STORE—EAST—

What Would He Like Better Than a Splendid Fur Cap

We feature them specially at \$10

Genuine Alaska Seal Caps, Detroit style, at about today's wholesale price; heavy satin lining; very special, at 10.00. Better grades at 16.00 and up to 35.00.

Men's Russian Squirrel Fur Caps. Serviceable and warm; special, at 6.00 and 7.00. Men's Winter Caps of all wool overcoatings—heavy and warm—at 2.00 and up to \$4. Men's Good Warm Caps in Brighton and Golf styles. Special at—1.00 and 1.50.



Stetson Hats--Moderately Priced

It makes no difference what style, shape or color you want—we have it. Unsurpassed values. Shades of black, brown and grey.

Priced at \$6, \$7, \$8 and up to \$15.

Velour Hats Hats at \$2.00

A splendid assortment of these popular hats at—\$6, \$7.50 and \$10. Consisting of odd lots and samples; soft and stiff hats; specially priced.

—BRANDEIS STORES—MAIN FLOOR ARCADE—

Here's a Few Christmas Things He'd Like to Have

—From the Men's Furnishing Section



Any of these are the choicest of Christmas Gifts—the very kind that he'll expect when he opens the Christmas things December 25, and now is the best time to buy them, when stocks are complete and assortment diversified. Shop early in the week and early in the day.

A Fine Christmas Display of Silk Shirts at \$8.50 to \$18.00

There's nothing more suitable for a man's Christmas gift than a fine Silk Shirt! We have an elegant assortment.

Almost daily we are receiving Silk Shirts from the best shirt makers—shirts that were bought almost a year ago—enabling us to offer them to you at nearly the cost of the raw materials today. You will find Eagle Silk Crepe, Jersey Silk, Silk Broadcloth and Imported Japanese Silk—in exclusive patterns—plain colors, Jacquard and stripe effects. Our stock has never been so complete nor our assortment so large as at present!

Specials in Silk Hosiery Pr. 79c

120 Dozen Pure Thread Silk Hose.

This line is made by one of the best manufacturers of Silk Hose. We have them in all shades and all sizes from 9 1/2 to 11 1/2. They are regularly priced at 1.00 a pair, but in this sale you can have them at 79c.

Silk Neckwear 85c to \$5

Silk Neckwear of quality, in the best of Domestic and Imported Silks. The making is excellent—and the patterns will please the fancy of any man. Many of the ties are hand-made, insuring double the wear. Silk Knitted Ties come at 1.00 to 5.00; in plain and fancy weaves; plain colors, stripes and heather mixtures.

Street and Dress Gloves

Unlined, wool lined and silk lined; in the best of makes; Mocha, Cape and Suede leather. Webber and Keller Sweater Coats, 7.50 to 15.00. They're all wool and worsted sweaters in coat style, with large shawl collar in rope stitch weaves; also slip-overs in plain and fancy trimmed collar and cuffs. 2.79 to 7.50.

Men's Union Suits \$2.50 and \$2.95

These union suits, which are specially priced for this sale, are made of fine combed cotton yarns and wool mixtures in grey, ecru and white; all sizes.

—BRANDEIS—MEN'S STORE—MAIN FLOOR—

Luggage Makes a Practical Christmas Gift

Here's an Exceptional line of Traveling Bags and Suit Cases

We have a wonderfully complete stock, and are featuring many novelties in unsurpassed values. Innumerable styles are on display, including bags and suit cases from America's best makers.

Leather Bags, at \$10 and up to \$75. Leather Suit Cases at \$8 and up to \$65. Wardrobe Trunks, from the best makers, at \$28 and up to \$105.



—BRANDEIS STORES—MAIN FLOOR ARCADE—