



Gift of

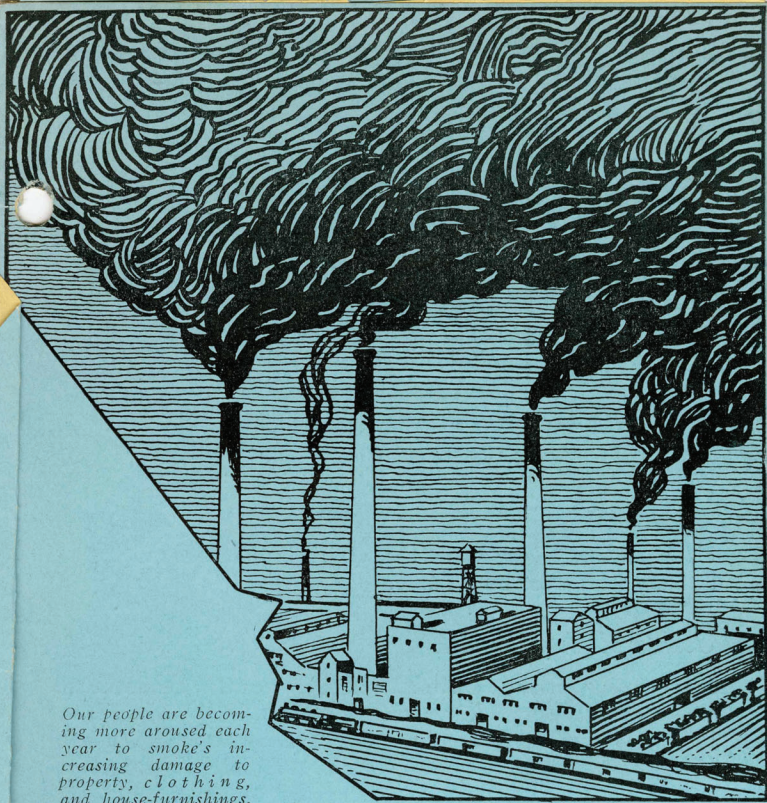
The WIDTSOE FAMILY

Has Science Solved the Smoke Nuisance Problem?

Why has our once beautiful home town become the dirtiest city in America? Is it ignorance or is it influence? It is a fact that for years research engineers have told us, and it has been repeatedly proven, that Salt Lake City can be free from smoke. Why, then, is smoke being permitted to fasten upon our people the degradation of unclean, unsightly surroundings, endanger our health, and prevent that greater expansion and development which is our natural right as a community? Is it ignorance, or is it influence?

What has Science to Offer?

During the past fifteen years, government research, as well as studies made at our own University of Utah, have shown that our coal is the source of a wonderful smokeless fuel.



Our people are becoming more aroused each year to smoke's increasing damage to property, clothing, and house-furnishings.

Recently, at the University's School of Mines and Engineering, Dean R. B. Ketchum and Professor E. H. Beckstrand made it possible for Mr. L. C. Karrick, former government engineer in charge of fuels research, to direct two graduate engineering students, Geo. W. Carter, and S. Clark Jacobsen, in two years of work with the production and burning characteristics of smokeless fuel produced from our coals. A small coal processing plant was built and a cook stove, heating stove, and grate, typical of those used in Salt Lake homes, were set up in the laboratory and tested for burning smokeless fuel. The studies show that Utah coal produces an ideal smokeless fuel fitted admirably for burning in ordinary house firing equipment. Research is being carried on still further at the present time by three undergraduate students of engineering.

An Entering Wedge

Much as women have sought government aid to construct a plant large enough to produce coal products in marketable quantities, their efforts have been unavailing. Why? Is it ignorance or is some selfish influence resisting the natural march of progress.

Gas Enough to Supply Coalville from Small Plant

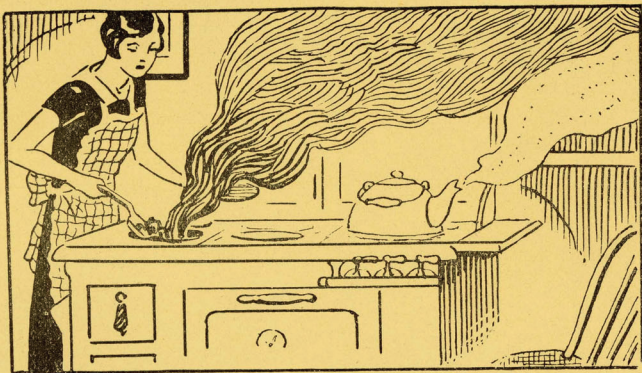
Despite the discouragements met by women in attempting to force the use of smokeless fuel, Dean Ketchum and Professor Beckstrand have found means to construct in the School of Mines and Engineering fuels laboratory a coal processing plant capable of producing a ton of smokeless fuel per day. INCONCEIVABLE AS IT MAY SEEM, THIS SMALL PLANT WILL EXTRACT FROM THE COAL ENOUGH ARTIFICIAL GAS TO SUPPLY THE HEATING GAS NEEDS OF A COMMUNITY THE SIZE OF COALVILLE, UTAH!

Wealth from Dirt

Utah's coals have the richest content of oil and gas in the world, yet these very oils and gases, vast potential wealth though they are, are responsible for the disgusting smoke pall which casts its blight over us each winter. It is an accomplished fact that by a certain processing this now destructive oil and gas can be removed and conserved and converted into valuable, salable coal by-products. And, marvel of marvels, a wonderful, smokeless fuel remains,

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Upon women falls the task of scrubbing, cleaning, and otherwise attempting to remove the blight of dirt.

clean to handle, easy to light, which burns with an exceptionally hot, clear blue flame.

Utah's Mighty Wealth

Here we are, living in Utah, a state possessing tremendous potential wealth. Under our very feet lie two hundred billion tons of coal, and locked within these coals are one hundred fifty billion barrels of oil, besides untold stores of gas. Why are we not making use of this oil and gas? Why continue to buy poorer products elsewhere? Women sense the increasing poverty of the state and couple with that poverty our inability to make use of materials at hand.

Women Ponder over Condition

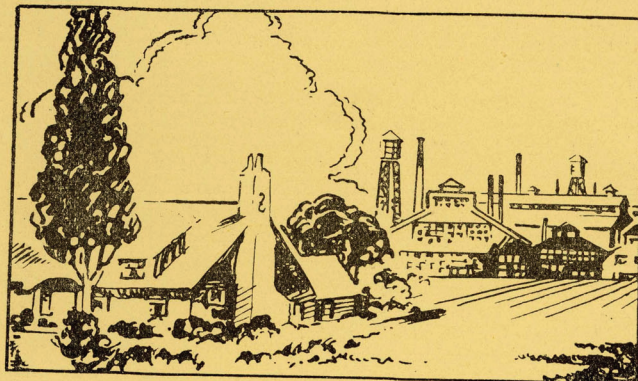
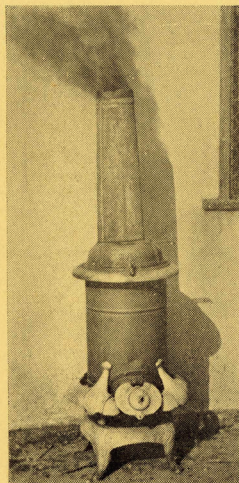
Because upon women falls the task of attempting to remove the blight of dirt and smoke, they sense smoke's damage to

property, clothing, house-furnishings, houses, public buildings. They are not surprised to learn that in Salt Lake City the actual loss is annually ~~one~~ million, six hundred thousand dollars. Our clothes wear out faster than they should, our household furnishings depreciate rapidly, and it costs staggering sums to maintain a semblance of cleanness and order.

Conditions Need not Continue

But women must not look upon

Ordinary coal, as now used, results in a loss of valuable by-products, and makes our homes and buildings dirty. This stove burning ordinary coal during experiments at University of Utah.



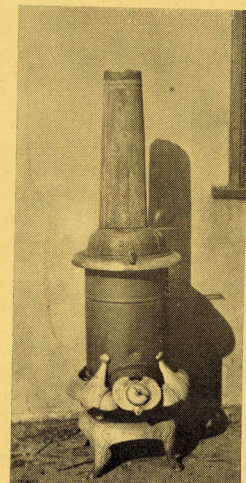
With smokeless fuel we have clean air, lots of sunshine, good health, and conserve valuable coal by-products.

this enormous loss as irreparable. For is not the remedy at hand, effective, inexpensive? Have we lost our pioneer forebear's ability to adapt a means to an end? Women sense the loss of property as appalling, but the menace to the health of our people, to the happiness and comfort of the home, is of even more grave concern. What saving grace can women invoke to secure emancipation from the drudgery of hopeless, unending, unavailing slavish labor, suffered in our frantic effort to make our homes clean? It cannot be denied that the cry of the house-wife for relief must be heard and every resource of statesmanship, and good government brought to bear to force the adoption of smokeless fuel, now offered to us by science as entirely practical and economical.

Unselfishness and Determination can solve Problem

Business sagacity, foresight, financial acumen, just plain horse sense, prompts the use of a small part of the enormous sums that annually literally go up in smoke, to build plants in Utah's various valuable coal fields, to provide an abundance of smokeless fuel and fill the land with the cleanest cities in the world. Yes, with smokeless fuel we will have clean air, lots of sunshine, good health, and coal by-

Studies show that Utah coal produces an ideal smokeless fuel fitted admirably for burning in ordinary house firing equipment, and gives more heat per unit. This stove burning smokeless fuel as developed at the University of Utah.



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REPORT OF RESEARCHES AT THE UNIVERSITY OF UTAH BY THE ENGINEERS, MESSRS. CARTER AND JACOBSEN

Our purpose is to bring before you one specific problem demanding your consideration. This problem is your problem. It involves conditions and situations, the solution of which is vital to the health and future social and economic well-being of every inhabitant of our State. This problem is the elimination of the smoke in Salt Lake and Utah.

Comprehensive studies made by recognized authorities have disclosed the following facts:

1. The presence of smoke in the air we breathe is either the cause or the agent of common cold, sinus infection, catarrh, pneumonia, and even cancer and tuberculosis.
2. A prolonged smoke fog will kill more people in two or three days than automobiles can do in as many months.
3. In the United States, smoke causes a \$500,000,000 annual property damage of which \$140,000,000 represents the cost of spoiled merchandise and of building cleaning.
4. Today, coal is burned so that \$200,000,000 worth of potential heat within the coal is annually sent up the chimney into the atmosphere as smoke and soot.

Competent engineers have analyzed the smoke problem of Salt Lake City as follows:

1. For the amount of coal consumed, Salt Lake City has more soot fall per square mile per annum than London, Leeds, Glasgow, Hamburg, and even Pittsburgh.
2. Salt Lake City is bounded by high mountains which keep the smoke from being swept away by the winds.
3. By an intensive campaign in the residential section, it may be that as much as 60 per cent of the smoke can be eliminated through the use of natural gas, stokers, and oil burning equipment. But this is not enough. The remaining 40 per cent will still comprise a distinct nuisance.
4. Salt Lake City, along with every community, large or small, should have a solid, smokeless fuel which will efficiently burn in ordinary coal burning stoves, room heaters, and fire-places. Such a fuel must be sold at prices within the range of every pocket book so that it can be enjoyed by all.

Studies made by the United States Bureau of Mines have conclusively shown that such a smokeless fuel can be made from Utah's vast deposit of coal. A report of Dean R. B. Ketchum of the University of Utah School of Mines and Engineering shows that such a development is economically sound.

Mr. L. C. Karrick, engineer-in-charge of these U. S. Bureau of Mines investigations, has not only proven that a suitable smokeless fuel can be produced from Utah's coals, but also exceptionally high grade gasoline, Diesel oil, road oil, and a cooking and heating gas of greater heating value than our present imported natural gas.

Studies made by the undersigned and others during recent years at the University of Utah in continuation of Mr. Karrick's work have again demonstrated the feasibility of this scientific and practical way of eliminating the smoke from our city forever!

We, therefore, feel that you, as citizens, should become thoroughly familiar and convinced of the importance of these studies in bringing needed relief from the many ill effects of our smoke laden atmosphere, as well as from the exploitation of our natural resources (coal) and also unemployment.

We urge you, also, to take the time necessary to study the data in the files at the University of Utah, to inspect the operation of a commercialized-plant now located at the University, and to take home a sample of the new fuel for a trial and do your part in supporting home manufacture of this needed smokeless fuel.

GEO. W. CARTER
S. CLARK JACOBSEN

products to sell our western neighbors. Our population will increase, those who have left us in disgust because of our dirty town will gladly return, and in the wake of increased population, manufacturing plants will spring up, using our cheap power, our real estate will not lack buyers.

10,000 Salt Lake Homes Must Have Smokeless Fuel

It is a widely recognized fact that the use of stokers would reduce the smoke nuisance. However, according to a report by the city engineer of Salt Lake City, there are approximately 10,000 Salt Lake homes in which both heating and cooking facilities are supplied by one appliance. It is manifestly impossible to attach stokers to the small heating and cooking stoves used in these homes, not only because of the cost, but also because stokers are not made for such stoves. The city engineer reports that it is these 10,000 homes which create 40% of the smoke. Therefore there is no solution to the problem possible in the case of these homes except a smokeless fuel.

Railway Locomotives Source of Smoke

Who has not, at some time, wondered why railway locomotives around Salt Lake seem to belch forth more and blacker smoke than in other parts of the country. Some have noticed that in California, for instance, locomotives are smokeless. This is because these engines burn oil instead of coal. As pointed out above the production of the new scientific smokeless coal by the process developed at the University of Utah, unlocks from the raw coal large amounts of oil and gas. Why could our locomotives not use this oil instead of coal, thereby further reducing the smoke in the atmosphere? Women reflect that with the money wasted in an effort to keep their homes and surroundings clean many of the comforts and even luxuries of life, now denied them, might be purchased. The railroads would be among the first to benefit directly from cleaner conditions, in that considerably more traveling would be done.

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WHY THIS APPEAL TO YOU?

The Smokeless Fuel Federation of Utah has been organized to: (1) focus the attention of the people of Salt Lake City and Utah upon the smoke problem, (2) assist in developing and making commercially practical through co-operation with scientific researches a smokeless fuel which will rid our city and state of the curse of smoke, (3) to promote a wider use of coal by unlocking valuable by-products such as oil, gas and coal-tar substances from this most extensive of our natural resources. Few people dream of the vast potential wealth which, ironically enough, makes our cities and homes dirty by being allowed to go up our chimneys and be worse than wasted in the form of soot. A visit to the School of Mines and Engineering of the University of Utah will open your eyes to the possibilities of smokeless fuel. Our organization is entirely unselfish and philanthropic. You can help by telling your neighbors of our aims and by writing to our Executive Secretary signifying your willingness to use Utah smokeless fuel at a tentative price of \$7.50 per ton for delivery, on or before Nov. 1st.

ALICE MERRILL HORNE,
Executive Secretary,
868 2nd Ave.

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