Conclusive Evidence—
For the man that pays the fuel bills
This booklet was scanned from a copy of the original, which was missing the center leaf of four pages.

The original booklet was 36 pages in length, including the blank inside covers and the blank back cover.
To the man that pays the FUEL BILLS

For many years I engaged in the contracting business, and, being a steamfitter by trade and an expert in my line, I personally supervised the installation of all heating apparatus in my buildings.

My work of course brought me in close personal contact with the manufacturers of various heating devices, all of which I tried out and carefully tested to find the best. I have installed and used a number of the various heating systems during the past fifteen years, and have found but one fault with all of them, namely, the fact that such a high percentage of the heating units from any fuel goes up the chimney in the form of smoke. I became greatly interested in this subject of smoke and made tests extending over a period of several years, which finally convinced me that from 40 to 50 per cent of all fuel consumed is thus wasted.

In other words, out of every $100 spent for fuel, from $40 to $50 goes to pay for nothing but SMOKE; while only $50 to $60 actually pays for the heat produced. This was a condition which I believed could be remedied, and which I very promptly set out to do.

I found by experiment that the smoke from the average furnace or boiler contained a high percentage of pure unburned carbon—in fact, this carbon constitutes the greatest bulk of all smoke. Carbon is highly combustible under proper conditions, and capable of producing intense heat. My problem therefore, was to find a method of BURNING UP THE SURPLUS CARBON AND GASES instead of allowing it to go up the chimney and fall all over the neighborhood, polluting the atmosphere and endangering health.

My mechanical experience enabled me to construct various models through the use of which I hoped to achieve my end. I realized I had a big job on my hands, and expected to meet some disappointments. But the success which finally crowned my efforts was only what I expected, and I have today solved the problem of eliminating smoke, and utilizing all the heating value in fuel, which heretofore has been wasted.

L. K. FLANAGAN
Inventor of the Flanagan Smoke Consumer and Fuel Saver.
I did this by spraying 2 parts of oxygen to 1 part carbon at ignition heat over the fire by my device, thus forcing complete combustion of all the carbon and gases contained in the fuel. The value of my device was immediately demonstrated, but before placing it upon the market I tried it out for a number of years in steam heating plants in homes, and commercial boilers in big manufacturing plants, making the most exhaustive tests in order to satisfy myself that my device was perfect before offering it to the public. During this period of experimentation I spent nearly $5,000 in perfecting the Flanagan Smoke Consumer and Fuel Saver, and the final result of these costly experiments is now offered to the public for their good. I have gone so far in proving the efficiency of my device that I now feel warranted in selling it with an ironclad guarantee that it will positively reduce your fuel consumption from 10 to 15 per cent, besides giving you more heat, using less fuel, and eliminating smoke.

You are interested in saving money. If you would cut a good sized slice out of your monthly coal bill, it will pay you to read every word contained in this booklet most carefully, then get in touch with me or one of my representatives, so that we can demonstrate and prove to you what the FLANAGAN SMOKE CONSUMER AND FUEL SAVER WILL DO FOR YOU.

L. K. Flanagan

513 Ridge Arcade

L. K. FLANAGAN SMOKE CONSUMER

AND

FUEL SAVER COMPANY

1524 Grand Avenue

Kansas City, Mo.
Showing the Flanagan Smoke Consumer in actual use—

The only perfected invention for burning the carbon and gases from coal or oil. Purely mechanical in construction and action, it is simple, strong, and cannot get out of order. By utilizing live steam and air under pressure, it supplies hydrogen and oxygen in a mixture which it sprays just over the top of the fire, covering the entire grate and producing a much hotter fire by BURNING 80% OF ALL CARBON AND GASES WHICH WOULD OTHERWISE GO TO WASTE IN SMOKE. This actually saves from 10% to 15% of the fuel, while eliminating smoke, reducing soot, and preventing the accumulation of soot in tubes.

The Flanagan Smoke Consumer is perfectly adapted to steam heating or power plants, as well as furnaces or other heating apparatus in homes. Where steam is used I can furnish steam where city water is installed in dwelling, with small steam attachment I install with smoke consumer and fuel saver on hot water or hot air furnace. It will not cause a forced draft, and by holding the heat units in the fire box and under the boiler, maintains heat longer and effects a tremendous saving in fuel.
The FLANAGAN Smoke Consumer and Fuel Saver

We have long since passed the experimental stage, and perfected our device, which has been thoroughly tested in various manufacturing concerns, both large and small.

In the following pages we show pictorially the almost marvelous results attained by the use of our Smoke Consumer and Fuel Saver, together with letters from users, which constitute convincing proof that our device is all that we claim for it, and more.

The Flanagan Smoke Consumer and Fuel Saver takes up practically no room, is easy to install, and requires practically no attention when in operation. Made of the best materials, there is nothing to wear out, and once installed it is there to stay—always on the job to cut your fuel cost while giving increased heating efficiency.

Investigate the Flanagan Smoke Con- and Fuel Saver—

It will work for you as it is working for others. Its cost is low, and the saving it will effect in your fuel bill constitutes an item you cannot afford to overlook.
SHOWING FLANAGAN SMOKE CONSUMER INSTALLED

INSTRUCTIONS

Place in arch over and as close to feed doors as possible, see that spray strikes bridge wall 4 in. below top of bridge wall at whatever angle required, depending on height of bridge wall, to cover the entire grate surface. Use less fuel, well spread, which gives more heat units to same amount of fuel.

F S C
BEFORE FLANAGAN SMOKE CONSUMER WAS INSTALLED

BEFORE

THE SMOKE NUISANCE for many years presented a most serious problem to the A. J. Stephens Rubber Company. Despite a very tall stack, despite every effort to do away with it, the smoke continued to belch out in great black clouds which befogged the air for blocks around their plant, and was the cause of many complaints from other firms in the neighborhood.

The above photograph shows the smoke as it appeared without the use of the Flanagan Smoke Consumer and Fuel Saver. This picture was taken after the Consumer was installed, but before it had been turned on.

F.S.C
AFTER FLANAGAN SMOKE CONSUMER WAS INSTALLED

![AFTER FLANAGAN SMOKE CONSUMER WAS INSTALLED](Image)

**AFTER**

The above photograph was taken *just two minutes later*, after turning on the Consumer. There is absolutely no smoke coming from the stack, and there has been none from the day the Consumer was put into operation. Except when the fireman is shoveling in coal they will lose little carbon that is flashed *through spray*. Instead of rolling out to settle all over the neighborhood and befoul the atmosphere, the smoke is BURNED UP, thus keeping the air pure and clean, and requiring from 10 to 15 per cent less fuel.

Read the letter on the next page and see what these users have to say about Flanagan's Smoke Consumer and Fuel Saver.
Mr. L. K. Flannagan,
2722 Olive St.,
Kansas City, Mo.

Dear Sirs:

The Smoke Consumer and Fuel Saver that you installed in our boilers, we are pleased to advise, are giving satisfactory service.

We estimate that we are saving from 12% to 15% in fuel, although we have not been able to make an accurate test. Our ash appears considerably less and we are particularly impressed with the absence of smoke from our stack.

Yours very truly,

C.P.W. Receiver.

LARGEST ACCESSORY PLANT IN THE WORLD
December 5th, 1922.

The Flanagan Smoke Consumer & Fuel Saver Co.,
1524 Grand Avenue,
Kansas City, Missouri.

Gentlemen:-

We wish to congratulate you on the successful operation of the Flanagan Smoke Consumer installed at our plant in North Kansas City in the month of September.

We have been more than pleased with its operation inasmuch as it entirely consumes the smoke, and as soon as our season is completed we will be pleased to give you exact figures on the saving in fuel.

We are recommending your Smoke Consumer to the affiliated Rex Companies and any other prospects referred to us.

Wishing you the best of success, we are

Yours truly,

THE REX COMPANY

By [Signature]
Manager & Second Vice-Pres.
THE REX COMPANY, whose plant is located in North Kansas City, Mo., is another firm that had tried in every known way to eliminate the smoke nuisance, and finally did eliminate it with Flanagan's Smoke Consumer and Fuel Saver, after everything else had failed.

The above picture was taken with the Consumer installed but not turned on, while the second picture shows the appearance of their stack ten minutes later.

← READ THE LETTER ←

FSC
The smoke ceased *instantly* when the Consumer was turned on, but we waited ten minutes in order to give it a chance to show up again if it was going to—but it didn't. There has been no smoke visible from this stack since the Smoke Consumer was installed.

These illustrations, as well as all others in this book, are made direct from original photographs WITHOUT ANY RETOUCHING, and show conditions exactly as they prevailed both with and without the consumer in operation.

The foregoing letter from the Rex Company shows what complete satisfaction our device is giving to its users.
Flanagan Smoke Consumer Co.,
Kansas City, Missouri.

Gentlemen:

I am more than pleased with the work of the smoke consumer you installed on Hospital Steam Plant located at 22nd and Holmes Street, Kansas City, Missouri. I am satisfied it will cause a 10 to 15 percent saving on fuel, as well as eliminate the smoke and do all you claim for the burner, and I take great pleasure in recommending your Smoke Consumer and Fuel Sager to any steam user.

This device enables us to burn a cheaper grade of coal, like mine run, or slack, or soft coal, giving nearly complete combustion; a great help to clean the atmosphere of smoke, the great menace to health.

I can heartily recommend the Flanagan Smoke Consumer as the best mechanical device on the market, known to me today. It could have been called a Carburator as it supplies the amount of oxygen required in spray covering the entire grate back to bridge-wall.

JO. W. MARSH
Chairman of Health Board,
Kansas City, Missouri.

SEE THE PICTURES
Flanagan Smoke Consumer and Fuel Saver Co.,
Kansas City, Missouri.

Gentlemen:

This will inform you as to your Smoke Consumer and Fuel
Saver, installed at the City Hospital, 22nd and Holmes Street,
Kansas City, Missouri.

I am satisfied there are several ways of saving fuel with
your Device:

First, by burning the smoke and gases.
Second, by burning cheaper coal.
Third, by less soot on the flues.

I am unable to answer your question as to the exact saving
we are making on fuel as we have not had a Combustion Engineer's
report on same, but I have had the opportunity of watching this
device from the start, and I am convinced that we are making a
saving of from 10 to 15 percent on fuel.

We are thoroughly pleased with the saving we are making and
take pleasure in recommending it to all steam users.

Yours truly,

[Signature]
Chief Engineer, City Hospital.
THE HOSPITAL AND PUBLIC HEALTH

With medical authorities all agreed that the smoke nuisance constitutes a most serious menace to the health of a community, it seems unbelievable that those in charge of a hospital would permit their smoke to pollute the surrounding atmosphere and endanger the lives of men, women and children.

Yet the authorities were not in any sense to blame for the evil—they did everything in their power to minimize the smoke from their stack, believing that it was impossible to do away with it altogether.

But when we got on the job and demonstrated to the General Hospital of Kansas City, Missouri, that they could absolutely eliminate all of their smoke, and showed them how to do it with the Flanagan Smoke Consumer and Fuel Saver, they welcomed the opportunity to go a step further by preventing disease in addition to their regular business of curing it.

FSC
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Continuing with page #21 . . .
May 5, 1922.

Mr. L. K. Flanagan,
2722 Olive Street,
Kansas City, Mo.

Dear Sir:

I feel it my duty to inform you that I am well pleased and much surprised at the results of the "Smoke Consumer and Fuel Saver." I have made the tests with and without Consumer in operation and can say truthfully it saves from 10 to 15 per cent fuel as you claim and in my opinion with full loads, the saving will be considerably more. The smoke is almost entirely eliminated and combustion nearly complete.

Yours very truly,

H. A. Taylor

ENGINEER,
BLISS SYRUP REFINING COMPANY.
The Flannigan Smoke Consumer Co.,
1524 Grand Avenue,
Kansas City, Missouri.

Attention Mr. Flannigan.

Gentlemen:

In reply to your inquiry as to the performance of the smoke consumer which you installed for us about eight months ago, wish to say that it is still operating in a very satisfactory manner, and our good friends and neighbors still continue to ask whether our factory has shut down on account of not seeing any smoke coming out of our chimney.

You have indeed converted a confirmed sceptic on smoke consumers, in the writer.

Wishing you the greatest possible success in the distribution of this indispensable appliance, beg to remain,

Very cordially yours,

Bliss Syrup Refining Company

GPW:RP

President & General Manager.
Mr. J. C. White,
3223 Washington St.,
Kansas City, Mo.

Dear Sir:—

In reply to your letter of Nov. 18th, I would say that our engineer at Midway Elevator, Mr. Flavin, says he is very well pleased with the performance of the Flanagan Smoke Consumer which you recently installed at that plant. It certainly eliminates most of the smoke, and we have reason to believe that it saves somewhat on the fuel. You have doubtless had the report of the University of Minnesota test, which we understand was quite favorable. Our engineer thinks that it is a very good device for hand fired boilers.

Yours very truly,

W. J. Russell

ONE OF THE BEST KNOWN MEN IN THE GRAIN BUSINESS is Mr. W. J. Russell, writer of the above letter.

The word of such men should be convincing evidence of the value of any proposition or device, for they do not say things unless they mean them, and know them to be facts; neither do they praise anything until it has been thoroughly tried and proven worthy of their approval.

Mr. Russell’s firm, through the use of the Flanagan Smoke Consumer, is doing its part to eliminate the terrible menace of smoke, and thousands of others are rapidly falling into line. Join with us today in our fight against this great danger that threatens us—IT’S SO EASY TO WHIP IT IF WE ALL FIGHT!
BEFORE FLANAGAN SMOKE CONSUMER WAS INSTALLED

HERE IS A LETTER from Chas. F. Shoop, one of the ablest mechanical engineers in the United States. Mr. Shoop reserved his judgment of the Flanagan Smoke Consumer and Fuel Saver until he had ample opportunity to demonstrate its efficacy to his entire satisfaction.

He knows whereof he speaks—and his endorsement should prove a deciding argument in favor of our device.

You cannot afford to ignore the opinions of such men, neither can you afford not to follow their advice. This letter was not written to us, but to one of our prospective customers who had gone to Mr. Shoop for expert advice before installing the Consumer. Read what Mr. Shoop said to him:

November 14th,
1922.

The E. C. White Sales Co.,
Minneapolis, Minnesota.

Gentlemen:

I report as follows on the Flanagan steam air device for the prevention of smoke which you installed under our hand-fired Bros. Co. power boiler at the lighting plant of the University of Minnesota.

The installation is practically all in the furnace, no outside or accessory apparatus is needed aside from a steam connection to the steam jet pipe. No obstruction confronts the fireman as he fires or cleans the grates, as the entire device is anchored in the side walls above the fire doors.

No modification of furnace is necessary in order to install your smoke prevention device and no complicated accessories are placed under the control of the fireman. The simple control of steam and air valves are the only adjustments.

The installation here bears out the fact that steam jets are efficacious in the maintaining of practically smokeless combustion. Your device when properly installed in the average normal designed hand-fired furnace should eliminate smoky combustion.

It is believed that the steam air introduction above the fire will have somewhat of a cooling effect on the arch.

Respectfully yours,

Chas. F. Shoop

Mechanical Engineer
THE SMOKÉ INSPECTOR

Although frequently misunderstood by many, the Smoke Inspector has just cause to feel that his work is one of the most honorable, as well as one of the most important to the welfare of any community.

Those who sometimes are inclined to take exception to his recommendations, and who assume that he is a “busybody” who has come to disturb their operations and make things disagreeable—are wrong, dead wrong. And if these thoughtless ones will stop for a moment and consider, they will realize that the man they are berating is one of their very best friends—a true guardian of their lives and health.

Pure air, and plenty of it, is essential to life—without it we should all die within a few minutes. It is the Smoke Inspector, with his expert technical knowledge, who stands between us and disease—who in many cases saves us from the effects of our own folly, by insisting that we comply with his recommendations.

The conservation of fuel, one of our greatest national resources, is largely in his hands. But his greatest work lies in the preservation of our greatest asset—our HEALTH. Don’t rant at him, and refuse to comply with his requirements—CO-OPERATE with him, for the good of yourself and others.

The Smoke Inspector, more than any other public official, is the guardian angel who stands on watch over the city, constantly striving to tear away the curtain of blackness, disease and death which constantly threatens us, and to permit God’s own sunlight to shine into the souls of men, and give us pure, clean air to breathe. All power to the Smoke Inspector—heed him!
COAL SMOKE AND HEALTH

Harold A. Caparn in Civic Comment.

News comes that the Missouri Botanic Garden at St. Louis has arranged to build greenhouses for the shelter and protection of our native coniferous evergreens, spruces and hemlocks. What! Pines and spruces that grow wild as far north as Alaska, under glass? Protection from what? From coal smoke!

These hardy North men that stay out of doors all winter in temperatures of 40 degrees below, only to burst into greater vigor than ever in spring, sicken and die when their pores are clogged with coal dust.

What interest has this for civic comment? Is not this purely a matter for plant growing people! It is the most striking object lesson yet, that air in which plants will not grow is, nevertheless, considered good enough for human beings. Good and bad, old and young, rich and poor, we submit to the breathing of an atmosphere that asphyxiates a tree.

It isn’t that anybody believes that coal smoke is good to inhale, year in and year out. It isn’t that everybody doesn’t know that smoke and dust laden air is bad for us. It isn’t that every city housewife doesn’t know that her work is doubled, trebled or quadrupled, as the case may be, by this abominable nuisance. It isn’t that smoke can not be consumed or mitigated or removed in one way or another. It is that our communities are too indifferent, lazy and unorganized to insist on a clean and decent atmosphere. If we took one-hundredth part the pains to get clean air for our lungs that we take to get clean linen for our external adornment, we should abolish the smoke nuisance within six weeks.

Clean up America! And begin the cleaning process at the very beginning, with the air, without which we should all perish in a minute or two.
TO CONTROL CITY'S SMOKE

Bullock Orders Regulation As a Health Measure

Check of All Plants Producing Nuisance Will Be Made by Inspectors—Seek Correction First Through Education.

Dr. E. H. Bullock, health director, announced yesterday that the health department will undertake to control the smoke nuisance here, which has long been deprecated, basing his action on the fact that it is a health menace. Dr. Bullock will seek to regulate smoke clouds, which deluge the city, through the sanitary division of the health department, and will endeavor to obtain the mayor's aid if initial efforts fail.

Inspectors of the sanitary division were instructed yesterday, at the order of the health director, to note all stacks giving out an offensive smoke and to take steps to correct that fault by advising a new stoking method. In the majority of cases, proper stoking will remedy conditions, according to the health director.

"The smoke nuisance is detrimental to health," Dr. Bullock remarked yesterday. "The unburned carbon that saturates the air is injurious. It is nothing but unconsumed or wasted coal. It may be that conservation of coal soon will become a matter bearing directly on the physical welfare of the people."

The health director declared there was an unnecessary amount of smoke in the neighborhood of the Union Station.

—The Kansas City Star.
BEFORE FLANAGAN SMOKE CONSUMER WAS INSTALLED

WHAT SMOKE DOES TO YOU

Diminishes your vitality and that of your children.
Costs you about $100 a year, in cleaning and laundry bills.
Shuts out sunshine by causing fogs; and subjects you to throat and lung troubles.
Damages you to an amount equal to the taxes you pay on personal and real property.
Increases the chance of accidents by creating fogs.

WHAT SMOKE COSTS IN DOLLARS

Costs every man, woman and child in the United States $17 a year.
Costs greater American cities $500,000,000 a year.
Costs Chicago, alone, $50,000,000 a year.

Its gases reduce the life of metal structure work, in a smoky as compared with smokeless city, as follows: Copper, from limitless life to between 20 and 10 years; galvanized sheet iron, from 14 to 6 years; tin sheet iron, from 28 to 15 years.

MR. MANUFACTURER

If your chimney smokes blackly for three minutes an hour, you are losing, coal experts say, one per cent of the fuel burned during that time.

Here's what that means: If your boilers consume two tons of coal an hour, and your chimney emits smoke for nine minutes an hour, you are wasting approximately three tons of coal a week.
We make this statement, that a furnace could be so smothered and have such low temperature that there would be considerable waste there. Of course, you would not be able to make much steam under these conditions and there is a greater waste due to improper combustion in the furnace. It may or may not indicate those other losses which are known as C. O. losses; C. O. means that carbon burns to C. O. and that in so doing it has only equal parts of oxygen and hydrogen and therefore produces only 4500 B. T. U.s which if it burns two parts oxygen to one part carbon, it produces 14,500 B. T. U.s. It is therefore evident that when former conditions prevail you are getting only about 30% of the heat value of the fuel.

It is hard for one to appreciate the anxiety of a good engineer with a good reputation at stake, placed in the engineer's position of being held responsible for the economical production of steam power service, and at the same time is also held responsible by the law for allowing the plant's chimney to smoke—the great feeling of joy and ecstasy when he has fully realized that the FLANAGAN SMOKE CONSUMER AND FUEL SAVER will burn 80% carbon and gases, eliminate smoke, save 10 to 15% of the cost of fuel with efficiency in the production of steam.

Practically every authority on combustion claims that two parts oxygen to one part carbon at 1200 degrees heat causes complete combustion; by spraying the oxygen over the entire grate back to the bridge wall, from the front of the furnace in arch just over the feed doors, complete combustion is obtained. The FLANAGAN SMOKE CONSUMER AND FUEL SAVER does this and more—saves cleaning flues as one-eighth inch of soot on the flues retards the heat equal to one-half inch of asbestos applied on the flues.

LESS FUEL—MORE HEAT—LESS SOOT.
BEFORE FLANAGAN SMOKE CONSUMER WAS INSTALLED

This does not tell the whole story of saving, by any means, for in plants having superior boiler room control, similar high class steam using devices, will return two or three times as much electric current for a given steam consumption.

All this is made possible by taking advantage of installing the Flanagan Smoke Consumer and Fuel Saver in your steam boiler or heating plant.

Nature has given us some of the most desirable fuels in the world. It seems a pity that they must be used for purposes less than their greatest usefulness. Our great nations are seriously worried over their fuel problems, and they are using fuels of a grade far below the standard. In this country we are beginning to take our fuel problems more seriously and to really desire efficient use.

By installing Flanagan Smoke Consumer and Fuel Saver on commercial or heating plant, they will burn eighty per cent of the carbon and gases from coal or oil and save ten to fifteen per cent on cost of fuel, giving nearly complete combustion and eliminating smoke.

FSC
AFTER FLANAGAN SMOKE CONSUMER WAS INSTALLED

It is the latest invention in a Smoke Consumer, is patented by L. K. Flanagan, 2722 Olive Street, Kansas City, Missouri, and is a Kansas City Product.

After eleven years experimenting he has perfected a device which when installed or connected to a commercial or steam heating plant will burn 80% of the carbon and save 10 to 15% of the fuel, eliminating the smoke nuisance with all its attendant evils and saving the cost of cleaning flues.

Get It Done Now

Save on fuel bills.
Save the damage done by the smoke nuisance.
Save the paint on your buildings.
Save the black soot from porches and verandas.
Save fires from burning soot falling on shingles.
Save lung cells from being filled with black smoke.
Save your city from being a dirty, smoky city.
Save the wasted fuel by 40 to 50%. Fuel units are now going up chimneys at a loss of $600,000 a year, for Kansas City alone!

All this can be accomplished by installing.

FLANAGAN SMOKE CONSUMER

GUARANTEE

The Flanagan Smoke Consumer and Fuel Saver is guaranteed to burn 80% of carbon and gases from coal or oil, saving 10 to 15 1/4 on cost of fuel when installed and operated as instructed.

FSC
L. K. Flanagan Smoke Consumer
and
Fuel Saver Company

1524 Grand Ave., Kansas City, Mo.

5-3 Ridge Arcade
Request For Full Information

L. K. Flanagan Smoke Consumer
and Fuel Saver Company
1524 Grand Avenue,
Kansas City, Mo.

Gentlemen:

............... are interested in saving fuel and eliminating smoke. Please have your proposition fully explained to ............

I understand this places us under no obligation.

Firm Name........................................................................................................

Name..................................................................................................................

Address..............................................................................................................

Town...................................................................................................................

State...................................................................................................................

Business............................................................................................................
Grandfather also invented an oil lamp but a man found the invention man