# *The National Kerosene Oil Burner.*

Is the cheapest;
Is the simplest;
Is the safest;
Is the cleanest;
Is the neatest;
Is the hottest;
Is the most effective;
Is the most economical;
Is the most reliable;
Is the most powerful;
Is the easiest to attach;
Is the easiest to light;
Is the easiest to operate;
Is the easiest to clean;
Is the quickest steamer;
Is free from oder;
Is free from soot;
Is free from smoke;
Is free from smudge;
Is free from carbonization;
Is easily turned on;
Is easily turned off;
Is easily turned up;
Is easily turned down;
Is endorsed by leading experts in steam automobile construction;
Is recommended by all our customers;
Requires less piping;
Has fewer parts;
Has no joints in the fire;
Gives perfect combustion;
Gives more steam;
Makes steam faster;
Never soots the boiler tubes;
Never lights back;
Never blows out;
Cuts your fuel bill in two;
Brings that "safe feeling" that you never have with gasolene;
And "doesn't cost a cent," for the saving in fuel will pay the cost;

*Why not "Get Out of Danger To-day."*

# THE NATIONAL KEROSENE BURNER FOR AUTOMOBILES

"The Burner that Doesn't Cost a Cent"
The Saving in Fuel pays the cost

## "Get Out of Danger Today"

## The MELROSE AUTOMOBILE CO

Automobile Makers

Burners Installed, Pumping Systems Connected, Etc.

153a West Emerson Street, (opposite station), Melrose, Mass.

Send your Automobile to us

WE WILL **"MAKE IT GO."**

## Why not "Get Out of Danger Today"


**Just as sure as death and taxes is the trouble that is bound to come if you use gasolene long enough. We have installed probably 300 burners in carriages brought to us for the purpose,—and nearly every one had been "scorched." No car is safe with gasolene for fuel. To put it off is only to postpone the evil day. Why not "Get Out of Danger Today?"**

# "Get Out of Danger Today"

## SUBSTITUTE KEROSENE FOR GASOLENE IN

## "The Burner that Doesn't Cost a Cent"

THE SAVING IN FUEL PAYS THE COST. SEE TESTIMONIALS

We appeal to the man who likes the steam throttle. Such men are becoming more numerous every day, because there is no other experience quite so pleasurable and satisfying as that which comes from controlling one's car with the hand on a lively throttle. We appeal to him on three grounds, safety, economy and power.

### SAFETY

Every man who runs a steam carriage dislikes the gasolene fire. Even if he has had no trouble with gasolene he daily expects it. In our National Kerosene Burner we present a means for burning a safe oil in a safe way, and for getting greater heat than can be obtained from gasolene, and at smaller cost. As many automobile owners have learned from experience in using gasolene the danger from fire is always present even with the most careful precaution.

One may have used gasolene for a long time and had no accident, but he should not by this means be lulled into a feeling of security, for the security is false and the danger is there just

the same. Death and taxes are about the only sure things on this earth, but there is a third, which is the trouble that is bound to come sooner or later from burning gasolene. The clippings which are published on another page, showing everyday accidents with gasolene, are merely representative of what happens regularly day after day; and anyone who would like to try the experiment of clipping out such notices from the newspapers would find no difficulty in filling a good sized scrapbook with such items in a very short time.

## ECONOMY

Gasolene is much more expensive, gallon for gallon, than kerosene, besides being harder to obtain when away from large towns and cities. On the contrary, kerosene can be obtained everywhere, even in the most remote parts of the country, and at almost any farmhouse a quart at least may be obtained, which will carry a steam carriage a long way with our burner.

The consumption of oil when using kerosene is also much smaller than when using gasolene. One of our customers reports that on his first trip with our burner he used only 7 1-2 gallons of kerosene, while on exactly the same trip the year previous, with the same carriage, but with a gasolene burner, he consumed 16 gallons of gasolene. The cost of 16 gallons of gasolene at 18c. is $2.88; the cost of 7 1-2 gallons of kerosene at 12c. is 90c., a difference of $1.98 on the trip, which was between 90 and 100 miles. All our customers agree in reporting a great saving in fuel; in fact, we consider it perfectly safe to guarantee to cut the fuel bill in two on any carriage, and particularly is this true at the present time, when gasolene is daily becoming more scarce, and consequently higher in price.

## POWER

The National Kerosene Burner supplies more heat than any gasolene burner, and will raise 300 pounds of steam quicker than any other burner, whether gasolene or kerosene.

This is largely due to the fact that we obtain in this burner perfect combustion; that is to say, there is no unconsumed kerosene or vapor, every atom of the oil being consumed and made to yield up its heat in producing steam. This also means that there is practically no odor or soot; the stack, boiler tubes and asbestos linings will remain as clean as when first put in.

## YOU SACRIFICE NOTHING

In changing from gasolene to kerosene by putting on the National Kerosene Burner, no extensive change is necessary in



any modern carriage. There is therefore no sacrifice to be made by our customers, who, on the contrary, have everything to gain, as we guarantee our burner to do everything we claim for it. The burner "doesn't cost a cent," as the saving in fuel alone in one season of ordinary running will pay for it. Aside from the gain in dollars and cents the great feeling of relief from further danger from gasolene is something that can not be measured, but is a condition that most assuredly is enjoyed by the driver.

## APPEARANCE

In general appearance our burner is similar to all automobile burners in that the main vaporizing coil lies across the burner, and discharges the gas into a mixing tube, and the oil is fed to the burner under pressure. The pilot light or generator, however, is not located outside the burner, but is placed inside the casing, so that there are no unsightly projections underneath the carriage outside the burner. The burner is closed at the bottom, and there is no opportunity for back firing. The flame, gases, etc., can find no exit except through the boiler and stack.

## SIMPLICITY

It is simpler than any other burner, containing fewer parts; it is more durable than any other burner, because there are fewer joints, and the castings are all strong and substantial. There are no joints in the fire, all joints being made outside the casing.

## PIPING

No piping to the boiler is required, and there are no auxiliary vaporizing attachments needed. One pipe from the pressure tank to the main burner, and one from the small pilot-light tank to the pilot-light is all the piping necessary.

## NO CARBONIZING

There is no choking or clogging from deposit of carbon. In fact, our process prevents carbon deposit. We can show vaporizers taken from our burners that have been run 13 consecutive weeks, 9 hours a day, which do not show a particle of carbonization.

## IDEAL PILOT LIGHT

The pilot light is ideal in many of its features. It is entirely enclosed, and will run 24 hours without any attention whatever, and maintain 300 lbs. of steam, more or less, as desired, without fluctuation. This cannot be said of gasolene. The vaporizer for pilot light is extremely simple, easily removed and replaced. It never carbonizes, and is easily cleared from dirt.

## ECONOMY OF FUEL

In order to save fuel, and also to get a lower and more even pressure for the pilot light, we run it on a small tank, holding 2 to 3 quarts, which is enough to run the pilot 24 to 36 hours. Once pumping this tank is enough for 12 hours. Any gasolene torch or generator requires much more attention than our pilot light needs.

## VAPORIZERS

Our vaporizers, while made of best materials obtainable for the purpose, are not expensive to replace if damaged or broken by accidents, etc.

## CLEANING

The gas tips are easily cleaned of any dirt, etc., that may get to them through imperfectly strained oil. We insert several gauze filters, however, in the piping system, to prevent this trouble.

Full directions accompany each burner.

## INITIAL LIGHTING

It will be noticed that our price list includes an alcohol lighter for starting the burner. This is a most valuable device. It is simply necessary to light the small alcohol lamp with a match. In the upper part of the lighter is a small vessel holding about an ounce of alcohol. The heat from the alcohol lamp vaporizes this alcohol, and the alcohol vapor is then mixed with air in the mixing tube and conducted to the pilot light mixing chamber where it is lighted, and in three minutes the pilot light and main vaporizers will be red-hot, so that not only may the pilot light be started on the kerosene, but the main fire may be turned on at once. The initial lighter is then removed, and the burner is operated entirely with kerosene.

Those who already have gasolene blow torches, and who prefer to light up by this means, will not need the alcohol initial lighting device, and in that case we supply the burner $5.00 below the list. In lighting up with the torch an opening is provided through which the mixing tube of the torch is inserted so that the flame is thrown upon the pilot light vaporizer. When this is thoroughly heated the kerosene is allowed to enter the vaporizer, where it vaporizes and is then lit by means of the torch, and the torch withdrawn.

After the pilot light has been running a few minutes the main burner is turned on gradually, a little at a time, until the oil in the main vaporizer is well heated and vaporization established in the whole coil. It will then burn with intense blue-flame heat—but watch your steam gauge, for steam will come up faster than



with gasolene. Pressure is kept on the main fire at 125 lbs., by means of the usual fuel-pump, pressure tank and automatic diaphragm shut-off. Those pumps which contain in themselves the automatic shut-off require less piping than where a separate diaphragm valve is used.

After the steam is up and the carriage is in operation the fire can be turned up and down, shut off, and turned on, the same as any gasolene burner; but it will raise steam quicker and keep it coming faster than gasolene.

## PROTECTED OUTSIDE FITTINGS

In many carriages the burners are so situated that the projecting parts of the vaporizers are exposed to heavy drafts of cold air. While this does not work any particular disadvantage while the carriage is being actively operated, yet if the burner has been shut off for some time the outside parts get cold and the kerosene gas is apt to condense in the cold portions and some unvaporized oil is apt to be thrown into the mixing tube. This is a feature which is possessed by all burners whether ours or others, and we have therefore devised a protection or housing for the exposed portion of the vaporizers, which keeps them hot all the time by protecting them from the air. In our price list the square burner 14 1-2x17 1-2 is made with these fittings. They will be applied to any other size if requested when ordering at an additional cost of $5.00.

## AUXILIARY PUMPING OUTFIT, Etc.

Almost all modern steam cars are provided with pump and pressure outfits, which require very little, if any, change for our burner. We recommend our system arranged about as follows, namely: The pilot light is fed from a tank containing about a gallon of kerosene. This amount of kerosene should not fill the tank more than two-thirds full, leaving the remainder of the space for air pressure, which is pumped up by hand to 30 lbs. This tank of course should be provided with a pressure gauge, and is connected to the pilot light by brass tubing fitted with a valve, which can be operated either from the seat or any convenient point. The kerosene for the main fire should be led from the general supply tank to a fuel pump, which is operated by the engine and pumps into a small pressure tank that will hold about three pints of kerosene. This pressure tank should not be allowed to fill more than two-thirds full, half-full would be better still. When the pressure in this tank reaches 125 lbs., an automatic valve lifts and allows the excess of oil to return to the supply tank. Eighty or ninety lbs. is sufficient on

the double part burner. The pressure tank of course should be fitted with a gauge and should be piped to the main vaporizers of the burner, with an automatic valve and a hand valve between the tank and the burner in the usual way. When cars are fitted with *supply* tanks under pressure, using a steam pump carrying a pressure of 80 or 90 lbs., no change is necessary for our double part burner, except the extra tank for pilot, as the pilot runs on pressure of 30 lbs. or less.

If the engine is already fitted with a fuel pump and an automatic regulator, of course the automatic pump is not required. The automatic pump, in addition to being operated by the engine, is so arranged as to be used as a hand fuel pump, which is of course an advantage that is not possessed in systems where the fuel pump is attached permanently to the engine, and which require a separate hand fuel pump.

## FOR DOCTORS' USE

Hitherto one of the stock objections urged against steam automobiles by doctors has been that it took too long to get up steam; that an explosive car is all ready to go upon turning a crank. This has indeed been a drawback, but is a drawback no longer for a doctor who uses a National Kerosene Burner, because steam can be gotten up in the morning and the car left on the pilot light which will keep up the steam all day—and all night too, for that matter,— with no more attention than one would give a stove or a furnace; and the car will be ready to start at any time without even the turning of a crank (and we might add parenthetically that that crank when turned doesn't *always* start the engine in an explosive car.) This makes any steamer as convenient as an electric, so far as readiness to start is concerned. The use of a kerosene burner also, as Dr. Howard points out on page 9 makes it safe to use a heated stable; one would hesitate to keep an open coal fire in a stable with gasolene.

## NOTE

THE INITIAL LIGHTER, described on page 4, will also light any Burner, whether kerosene or gasolene. It supplies vapor or gas to the pilot-light mixing-chamber until the pilot light vaporizer is hot enough to produce its own gas; it also heats the main vaporizers as well, so that the main fire may be started about as soon as the pilot.

SPECIAL BURNERS. If our Price List, on page 7, does not show a Burner of proper size for your car, write us for special quotations. See our address on front page of cover.



# TESTIMONIALS

### 5000 MILES TEST.

Mr. L. Guy Dennett, Boston, Mass., writes: I have run my Stanley carriage equipped with your Kerosene Burner over 5000 miles and feel that I have given it a thorough test and, having previously run the same machine a like number of miles with a gasoline burner the comparison is perfectly fair.

My last trip was made a few weeks ago from Boston to Canada and return, and a few figures will illustrate the superiority of your burner over gasoline.

The distance traveled was 840 miles. Kerosene consumed 70 gals.; averaging 12 miles per gal. Cost of kerosene at 13 cents per gallon, $9.10;

It would not have been possible to get over 8 miles per gal. out of gasoline under the same conditions (in fact I met a man with a Stanley in the White Mts. who was only getting 6 miles) and as gasoline cannot be obtained in the country under 18 cents per gallon the saving figures out nearly 50 per cent. in favor of kerosene, to say nothing of being able to procure it anywhere on the road.

The feeling of perfect safety is worth more than anything else. In giving the above figures the price of kerosene, 13 cents, is what I paid for it on the road. It costs but 10 cents at home.

It gives me great pleasure to heartily endorse your Burner and to recommend it to all my friends. It is the ideal burner and all that you claim it to be.

I would be pleased to have you refer to me at any time as my experience may be of some use to others.

Perhaps I should add that my machine is heavier than the ordinary Stanley, as it has a canopy top, basket, etc., and that I average on Massachusetts roads more than twelve miles per gallon, probably nearer fourteen.

### 9000 MILES TEST.

Dr. A. G. Howard, West Roxbury, Mass., writes: Soon after purchasing your kerosene burner for my Stanley car last May, you asked me how I liked it. You will remember that my answer was "Very well so far, but I will let you know after I have used it a season." Well, I have run the car over 9000 miles, through all kinds of weather and over all kinds of roads. Have had the machine fired up from early morning until late at night, every day, rain or shine, with the exception of about two months, during which time we have had too much snow for comfortable riding, and a few days when small repairs were made on the machine.

I used my old Stanley car with splendid results, using a gasolene burner and covering about 7000 miles in 1903, but was always desirous of getting rid of the gasolene. Now as to results. Your kerosene burner has always given me enough steam for every hill and trip, excepting a few times when my pumps were not working properly. The pilot light bothered me some at first, but later on it never bothered me if I give it reasonable care. However, your new pilot overcomes the little troubles incident to careless handling of the old pilot. I can get up 400 pounds of steam about as quickly, and on the road can keep up steam as easily as with a gasolene burner. In fact, my automatic shut-off is working most of the time. Then the element of safety appeals to me very strongly, and the problem of heating an auto house in winter is as simple as heating any other room, when you take away the gasolene. I have had this car in use this winter, running in an out of my stable where I keep a coal fire night and day. I get more miles per gallon out of kerosene than out of gasolene, and of course get it anywhere on the road and fill my tank with the fire lighted, with perfect safety.

If I had a dozen cars I would have your kerosene burner on every one of them. You have certainly hit it right on the burner question.

## FORGET THAT I HAVE A BURNER.

Mr. Walter C. Lewis, of Walter C. Lewis & Co., Boston, writes: After having used your kerosene burner the second season I like it even better than I did the first, which is saying a great deal.

Every day that I use it I appreciate it more and see new reasons for preferring it. It gives perfect results, and I have such confidence in it that when running I forget that I have a burner. This is the highest compliment that I can pay.

I repeat what I said to you last year, that if I had to go back to gasolene as a fuel I should give up my steam carriage; the gasolene burner is a serious objection and a grave element of danger, as I learned from two very unpleasant experiences before I knew of your burner.

Aside from the elements of safety, the fact that kerosene can be obtained anywhere is a great convenience, and the further fact that it takes about half as many gallons of kerosene as of gasolene to go a stated distance is another item worthy of consideration; especially when we remember that kerosene costs one-third less than gasolene per gallon.

If the owners of steam carriages could know your burner as I know it, most gasolene burners would be found in the scrap heap.

## GENERATED ALL THE STEAM I COULD USE.

Mr. F. P. Speare, Educational Director B. Y. M. C. A., Boston, Mass, writes: It gives me pleasure to send to you a wholly unsolicited testimonial regarding the excellent satisfaction given by your kerosene burner in marine practice. I placed one of your burners and a 15 h. p. boiler in a cabin launch at the beginning of last season. I was wholly unacquainted with its principle of manipulation and at the start experienced some difficulty in getting good results. This was wholly owing to my ignorance and through no fault with the burner. After this experience I received instructions in the care and operation of the burner from one of your firm and would state that thereafter the burner gave perfect satisfaction in every respect, proved thoroughly reliable, never back-fired, smoked or went out. The pilot light and vaporizer worked perfectly, and the burner generated all the steam I could use.

One of the most interesting features was the economy in fuel. The burner is in a 25-foot cabin launch with seven feet beam and very heavily constructed. With a 10 h. p. compound engine and your burner I was able to drive this boat better than nine miles an hour when she was pushed and eight miles at a cruising gait, and on an absolute test I found that the burner would require but a gallon and one-half an hour when driven. These figures may seem incredible, but they are correct.

In closing allow me to state, that in my opinion your burner for marine practice brings the steam engine fully on a par with the gasoline so far as neatness and ease of handling is concerned, and for a cruising and racing boat makes an ideal power producer.

Several friends who have your burner on their automobiles are equally enthusiastic over the satisfaction given in automobile practice. I congratulate you on the excellent features which your burner contains, and I wish you unbounded prosperity.

## HIGHLY PLEASED.

The Auto Repair Co., of Pittsburg, Pa., write:—We have driven our demonstrating Prescott car equipped with your oil burner over 400 miles and are highly pleased; also we have equipped Dr. Heron's Prescott with one, and it is doing very nicely.

## THE "DANGER" COMES IN THE SPEED LIMIT.

Mr. Thos. K. Hastings, 118 Nassau St., New York, writes:—I used your burner for the first time yesterday. Your advertisement "Get out of danger" is all right as to the explosion part, but all wrong in my case because it made steam so fast that I got into trouble with the police. I had just been a mile or so when a gasoline runabout challenged me with the result that the police interfered. When I succeeded in getting away from that village I got up with a Winton touring car, and just as I hauled alongside the owner said so that I could hear it, "His steam will give out in a minute," but even with everything open including his muffler he



could not pass my carriage. I expect shortly to send you some photographs.

The following is a personal letter written by Mr. Hastings to Senator Morgan.

My dear Senator:—In response to your question "How is Kerosene," I will say, first, it is a "Life Saver." I will give you this explanation first. On Sunday, with Mrs. Hastings, I started for a run in the country. We had hardly gone two miles when I felt a shock, heard a sizzle and smelt "raw oil." Immediately my whole carriage was wet inside with oil which was sprayed through a seam in the fuel tank. My main fire was burning full, the pilot also red-hot and a puddle of oil under the car. I shut off my fuel and escaped a fate too horrible to think of had it been gasoline. There are few of us autoists who have not gotten a circular with a big "caption," "Get out of Danger Today," and without a doubt I would have been "Higher up" had I not been fortunate enough not to have cast same in the "Waste Basket." Kerosene is hot when it is placed under the boiler in the proper manner and safe always. Everybody shouts, "It carbonizes and stops the pipes." This scared me at first as it still does others. I spent enough money writing for circulars and carfares to various manufacturers to see demonstrations to buy a gasoline car, and when I found the burner which looked the nearest right I made three unexpected trips to have them demonstrate they would always work. Every time their "Stanley" car was under the pilot and without any "fixing" except to turn on the main fire, away we'd go. And this was why I selected the "Melrose" Burner. After nearly a year I would not go back to a gasoline fire if the Standard Oil Company were giving souvenirs to take the stuff away.

## "NO MORE GASOLENE FOR MINE."

Mr. J .F. Dubois of Lynn, Mass., says:—I saw the National Oil Burner at the Symphony Hall show, and had one put on my "Mobile" soon afterwards. I have run it something like 500 miles, and am perfectly satisfied with it.

It makes steam faster than the gasoline burner, gives perfect combustion and is easily regulated. I put the burner on myself. I would not exchange it for any burner I know of, and on no account would I go back to gasoline. My carriage has been changed over to carry four passengers, and I can maintain about 275 pounds of steam all the time with my 14-inch boiler. I appreciate also to the greatest extent the feeling of safety in using kerosene instead of gasoline.

Later Mr. Dubois writes us:—Have lately added a super-heater to my carriage and yesterday made a trip of eighty-eight miles to New Hampshire and used just five and one-half gallons of kerosene. Carried three adults and three children (two eight years and one over six years of age). This *figures Sixteen Miles per Gallon* which is good enough when you take into consideration the load. Thought this would interest you, as your kerosene burner was under the boiler.

And still later Mr. Dubois writes:—After the second year's use of your burner on my steam carriage, I assure you that *it is perfectly satisfactory.* It has proved itself all that you represented or that I expected.

I have written you before in regard to its efficiency, and can safely say its record has held good for the past year.

I made no mistake in selecting your burner.

## FUEL COSTS HALF AS MUCH. CAN RUN TWICE AS FAST.

Mr. F. M. Jenkins, Optician, New Bedford, Mass., writes:—I have given your burner a thorough test, and have nothing but words of praise for it. It gives me no trouble whatever. It costs me just about half as much to run my carriage with it as it did with the gasolene burner, and I can go twice as fast. I am now commencing my second season with the burner.

### THE NATIONAL SAVES THE MACHINE.

Mr. G. W. Bonnette, Montpelier, Vt., writes:—I have waited until I could thoroughly test your burner before making any report. I have a Rochester Steam carriage, on which I had used two different burners before I got yours, and could not run it more than one-half mile without waiting for steam, and I thought my wagon was no good. I tried to sell it, and could not, so I purchased your burner. Now I can make all the steam I want, and ride as fast as I dare to. The wind has no effect on the fire at all. I ran my carriage 22 miles on hilly roads against a strong head wind and used a little less than 2 gallons of kerosene. My machine weighs 1032 lbs. empty, and I know there is no other burner in the market that could run my carriage this way.

### WORTH TWENTY TIMES ITS COST.

Mr. W. H. Gilman, of Boston, writes:—I have had one of your kerosene burners on my Grout Steam carriage for the last few months, and would not exchange it for my old gasolene burner for twenty times its cost. There is absolutely no odor distinguishable, and the cost of operation is almost two-thirds less than in burning gasolene.

### FROM AUSTRALIA.

Mr. C. Colbath, of Collingwood, Australia, writes:—Your kerosene burner is working A 1. It has never gone out on the road but once, when I think it was my fault. If your new pilot light plate can be put into my old burner without much trouble please send me one, as it is certainly a valuable improvement and works finely. I am pleased with it.

### THE BEST OF SATISFACTION.

Mr. C. C. Williamson, Supt. of the Bellevue Public Schools, at Bellevue, Pa., writes:—Last June I bought a Prescott Steam Automobile, which was equipped with your National Kerosene Burner. This burner has given me the best of satisfaction.

### ANOTHER PLEASED CUSTOMER.

Mr. Wilfred E. Ricker, G. K. R. & S., Maine Grand Lodge, Knights of Pythias, Portland, Me., writes:—Against the advice of many of my friends who were using gasolene burners I had my Stanley carriage equipped with one of the National Kerosene Burners about the first of June, and I am pleased to say that I have liked it very much ever since I first lighted it. I enjoy the feeling of safety to the limit. I have not had occasion to even clean the tips until this week.

### MAKING GOOD EVERY DAY.

Dr. E. H. Lyon, Prop. of Lyons Dentifrice Tooth Powder, New York, writes:—After a fine spin the other day down through the crowded thoroughfare in my Stanley B X with your burner I felt more strongly than ever in favor of steam made with kerosene oil, notwithstanding the fact that I have several gasolene explosion cars also in service.

Later he writes:—Your kerosene burner on my Stanley runabout is "making good every day"; and still later, "I have greater faith than ever that the automobile of the future will be the steam car using kerosene for fuel.

### WOULD GIVE UP STEAM CARRIAGE RATHER THAN RETURN TO GASOLENE.

Mr. F. L. Tuck, Bangor, Me., writes:—I can recommend the National Kerosene Burner every time, based on my experience with your 18-inch size, which I used the past season on my own carriage. I think I would give up my steam carriage entirely rather than go back to gasolene.

### 8142 MILES WITH KEROSENE.

Mr. Ashler Lowe, of Lynn, Mass., writes:—I have just finished the second season with your National Kerosene Burner, and would say I have ridden 8142 miles with very little or no trouble. I have just purchased a new car and want a price on your two-part burner, which I wish to put in at once. On an average I get 16 1-2 to 17 miles per gallon of kerosene.



### WORKS FINELY. HILLY COUNTRY.

Mr. F. L. Osgood, Bangor, Me., writes:—I am using a steam (Stanley) carriage with kerosene burner which I judge by the cut in the Automobile Trade Journal is one of your burners. I want a spare coil for the main burner; would you please quote me price for same and also send me description of the burner. I will say that the burner works finely. This is a very hilly country down here but I keep steam up hill and down at from 350 to 400 pounds.

### SAVED COST IN ONE SEASON.

Mr. F. M. Pillsbury, Ticket Agent, Lynn, Mass., writes:—I wish to add a testimonial to the hundreds you already have. My first season I used gasolene for fuel, the second kerosene, and the third kerosene and under no circumstances would I change to gasolene again. The first season with kerosene I saved the cost of my burner, to say nothing of absolute safety. I can very easily cover 5 to 7 miles more on a gallon of kerosene than with gasolene. I have recently placed your new pilot light on the burner and have never seen its equal; it holds the steam where you leave it and I have tried it for over 4 hours at one time. The burner speaks for itself and once used always will be.

### WIND NEVER BOTHERS IT.

Mr. Nelson L. Huff, Hopedale, Mass., writes:—I have been using one of your 14-inch oil burners the past two months on a Mobile Runabout, and it works tip-top.

One gallon of oil will run it 13 miles, and cost $0.10. One gallon of gasoline would run 10 miles and cost $0.14. I can make steam faster as the wind never bothers the oil burner.

With the gasoline I could make 12 miles per hour; with the oil burner I can make 15 miles per hour. When the carriage is stopped the pilot light will keep up steam very nicely. I would not change back to gasoline under any consideration whatever.

### ENTIRELY SATISFIED.

Mr. Arthur E. Mason, of Joy, Langdon & Co., Boston, writes:—I have given the burner, which you put on my Stanley Surrey in July, a very thorough trial, and am entirely satisfied with the result.

I have had equally satisfactory results on long and short trips. A considerable part of the time I have run my carriage over very rough and hilly country roads and have found it very convenient to be able to secure fuel at any cross-roads store.

It has also proven to be much more economical than gasoline, to the use of which as a fuel I would not be willing to go back.

### TWO YEARS' USE.

Mr. J. J. Dewey, president of the A. G. Dewey Co., woolen manufacturers, Quechee, Vt., writes:—Your 1905 pilot is certainly perfect. One very noticeable feature about your Burner is the absence of smell. I expect my new surrey will be ready for another one of your burners in two or three weeks.

Mr. Dewey, who has run our burner two seasons, says that "If people would be willing to put up with one-half the trouble in learning to use kerosene oil in their steam cars that they are willing to in using gasolene they never would use gasolene again.

Later Mr. Dewey writes:—I took my car from the makers last Saturday, and had my old kerosene burner shipped to you, which please hold as it is until next spring, when I may want it repaired. I think I told you that the maker claimed a 17 1-2 in. boiler with a gasolene burner would make all the steam I could use on my car, and to prove it there was no other way but to let them try it, so I run it home Sunday with a gasolene burner, and my experience with it so far has raised my estimation of the kerosene burner about 50 per cent. They tried three burners on my car to get one that did not whistle and the third one whistled so much that they wanted to try again, but I could not wait for it, as I had planned to go Sunday. Their pilot light went out more times on the ride that day than your pilot light has all summer. I shall try the gasolene burner awhile, but if it does not work any better than it has so far I shall go back to kerosene.

## PLENTY OF STEAM.

Mr. William Homes, Chocorua, N. H., writes:—"An honest confession is good for the soul," and, if in the future all works as well with my carriage as did things in general yesterday, I am perfectly satisfied. Certainly my trial of the burner with the new tip was an unqualified success. In all my running on steep hills or level ground I had plenty of steam. You have been very fair in assisting me over my difficulties.

## PERFECTLY SATISFIED.

Mr. C. H. Noone, of W R. Noone & Co., writes:—Your burner was recommended to me by a friend, and I have had one put on my Stanley machine and am perfectly satisfied with it in every way. It does everything your circular claims "to a letter." I would not part with the burner for a thousand dollars if I couldn't get another just like it. I much prefer kerosene to gasolene.

## 11,000 MILES.

Mr. J. Frazer Bard, Wayne, Pa., writes:—Please forward to me by Adams Express, at once, two main vaporizer tubes for 14-inch burner. The main tube in one of my 14-inch burners burnt through this A. M. after eleven thousand miles use. I don't think it would have burnt through even this soon if the boiler hadn't been burnt a couple of times and the water flooding down on the hot tubes cracks the scale off and, of course, thins the tube each time. Please ship these at once and oblige.

## CAN NOT BE IMPROVED.

Mr. E. E. Whitcomb, Keene, N. H., writes:—I haven't had time before to tell you how much I like the initial lighter. I am very much pleased with it and the pilot burns now with a strong blue flame that I can leave for hours and find it still burning. With the improvements you have made this year the burner could not be improved, and I am more than pleased with it, and shall recommend it very highly to all to whom I have a chance, and I have enquiries concerning it all the time from all over the country. A man was in yesterday, asking me about it, who had just had a dangerous gasolene fire and a narrow escape. The burner goes finely. The steam keeps up splendidly. We use about five gallons of kerosene where we formerly used ten of gasolene.

## "MORE MILES LESS COST."

Mr. Frederick O. White, mason and builder, 8 Harvard St., Cambridgeport, Mass., writes:—Having used your burner some time now, I thought perhaps you would like to know how I have succeeded. After having all the trouble that goes with a gasoline burner, I did not expect but what I would continue to have some with yours which, I am happy to say, is not the case. I now get in my carriage when going out for a ride, and I stay in; no getting out on account of back-firing and leaky joints getting on fire. I could not be induced to go back to gasoline again. I get more speed and more miles of travel at less cost than I ever did with gasoline burners, and I have had them all. If I can be of any service to you in explaining the value of your burner over gasoline, I shall be only too glad to do so, and should be pleased to show anyone my carriage and how well it works.

## KEEPS UP MORE STEAM.

Dr. H. Burbridge, of Woodstock, Vt., writes:—The vaporizer tip received and immediately put in place. Well, now, I want to tell you that everything is as "slick as grease," and I want to thank you for your courtesy in answering me at such length to help me. With your burner I can keep up more steam over the same roads than I ever could with my gasoline burner, and the small amount of oil it consumes, compared with gasoline, is very noticeable.



## "WORTH THE PRICE OF THE WHOLE CARRIAGE."

Mr. W. A. Hitchcock, Treasurer American Stave and Cooperage Co., writes: — The oil burner installed by you in my Stanley carriage some time ago is working well and has given good satisfaction. I made a trip to New Hampshire with the carriage and gasolene burner, and burnt about eighteen gallons of gasolene; I made the same trip with your burner and same carriage and burnt about ten gallons of oil. I would not go back to gasolene if I had to give up the carriage, and consider the burner worth the price of the whole carriage, provided I could not obtain another one.

Note the cut in Mr. Hitchcock's fuel bill:

| | |
|---|---|
| 18 gallons of gasolene at 18 cents would cost | $3.24 |
| 10 gallons of kerosene at 13 cents cost | 1.30 |
| Mr. Hitchcock saved 59 per cent., or | $1.94 |

## FAR AHEAD OF GASOLENE IN MAKING STEAM.

Mr. C. E. Bailey, of Bailey & Rice, Lumber Dealers, Boston, Mass., writes: It is now about four months since I had your kerosene burner put on my carriage, and will say that it has given me entire satisfaction. I like it very much better than the previous gasolene burner that I had on. I recommend your burner as being far ahead of the gasolene burners, in making steam, as I could not with my previous gasolene burner keep up steam. With yours I have no trouble in doing so, and I also consider it a great deal safer.

## "GETTING ALL THE STEAM I WANT."

Dr. F. A. Brown, Pembroke Bldg., Manchester, N. H., writes:—After having used your 14-inch kerosene burner in my carriage for about three weeks I feel that I have something to say in regard to this burner.

I am getting all the steam I want, and only using 100 lbs. air pressure, and have reduced the vaporizing tip to about one-half the size it was when I received the burner.

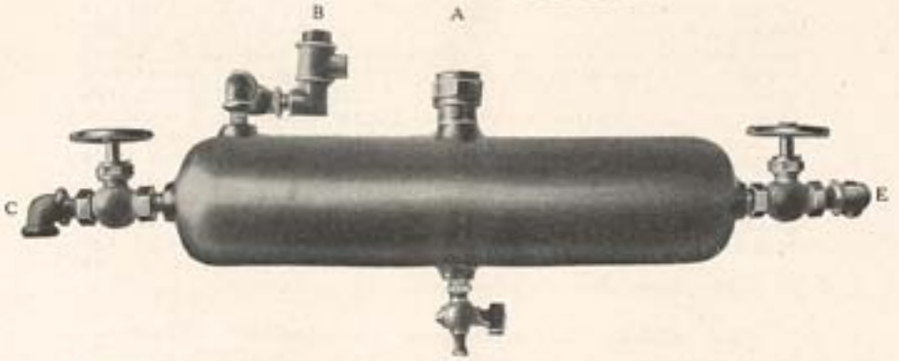
Would say that I am using a good deal less kerosene than I did gasolene, and would not go back to using gasolene for anything, as I have now a feeling of safety in knowing that I am not in danger of gasolene. My carriage weighs 1100 lbs., and I use an engine of the Mason Regulator Co.'s make, and have not wanted for steam or power since your burner was attached.

Have only to add that I heartily recommend this burner to the owners of steam carriages.

## "A STEAMER THAT STEAMED."

Mr. George G. Babcock, of Portland, Me., writes:—The auto burner goes very well now. I have been talking it up to several autoists and think I may be able to put on one or two this fall after our riding is over. I made a long trip a week ago in company with two other motorists, each of them running a Grout steamer. Their machines are lighter and easier running than mine; and all carried the same load, as all three had our wives with us, but when it came to hills and deep sand, where it took steam and lots of it, the other two drivers saw ahead of them a steamer that steamed. We would strike a hard proposition for a hill, their steam would drop clear down, while mine would be up to the limit; in fact, going up one hill about half a mile long and a foot and a half deep (sand) my diaphragm stuck and did not shut off my oil—I had got about three-quarters the way up and my safety valve lifted at 320, while one of the others had to stop to get up steam before he could make the hill. You can easily guess what he thought about kerosene burners.

# JUST OIL ENOUGH




## THE NATIONAL AUTOMATIC CYLINDER OILER

This device is another one which solves an old problem of steam engine operators, that of oiling the cylinders freely without wasting the oil. With all other oilers there is apt to be a famine somewhere, either no oil going into the cylinder or no oil left in the reservoir. This oiler is operated by a side outlet from the boiler feed line, water being forced in by the pump, drop by drop, through a valve very slightly opened, the water going into the reservoir at the bottom, and forcing an equal amount of oil out at the top. By means of a valve at the opposite end of the reservoir connecting with boiler pressure the engine may be quickly drenched with oil at any time by hand. This oiler has no working parts except a check valve, consequently there is nothing to get out of order. It has been thoroughly tried out for several seasons' practical use on the road; it is a most desirable and reliable automatic oiler for steam carriage use.

### DIRECTIONS FOR CYLINDER OILER.

Connect "B" to steam chest by any convenient length of tubing. Connect needle point valve at C with the pipe leading from water pump on engine to boiler. Connect needle point valve at "E" with pipe leading from steam guage to boiler, or any other pipe leading from bottom of boiler.

When engine is not in motion, and steam is up, oil may be fed to steam chest by opening valve at E. This allows water to enter oiler at E and forces out oil at B into steam chest. The valve should be opened only a second or two, as the whole boiler is operating against the oiler with no back pressure from engine. When engine is in operation the valve at C should be very slightly opened—just off its seat; this will allow water to enter and force out oil at B drop by drop. E should be kept shut. This oiler once full should be sufficient for 100 miles at least, and if running with very fine adjustment on valve will do much better.

*TO FILL.* Allow water to drain from "D," of course opening A for vent. Fill at A. As the water will flow out first, shut off drip valve as soon as oil appears at drip cock. Steam should never be allowed to enter oiler, only *non-circulating* water.

***Price $12.50***

# *The Burner that "Doesn't Cost a Cent"*

(The saving in fuel pays the cost.)

"Eighty-eight miles on 5 1-2 gallons."
"Seventy-five miles on 4 gallons."
"Ninety-one miles on 3 1-2 gallons."
"Eighty miles on 3 gallons."
"Seventy miles on 2 1-2 gallons.
"Saved 6 1-2 gallons in ninety miles."
"Saved 59 per cent. on fuel bill."
"145 miles with a 1900 pound carriage on 10 gallons."
"Spent only 45 cents for fuel where I usually paid $2.50 for gasolene."
"Four passengers and a 2400-pound carriage 7 miles on one gallon."
"We are using 5 gallons kerosene against 10 of gasolene."
"All you claim for it."
"It works tip top."
"Firing up very easily and quickly done."
"More than I expected."
"Wouldn't take $1000 for mine."
"Slick as grease."
"Get all the steam I want."
"Makes steam faster than gasolene."
"I can keep up more steam."
"Say! you ought to see us climb hills!"
"800 miles running proves it 'all right.'"
"Worth the price of the whole carriage."
"Far ahead of gasolene."
"Never soots the boiler tubes."
"Can't even soil your handkerchief in the stack."
Nearly every one of our customers has sent us two or more new patrons.
"840 miles on 70 gallons kerosene."
"It is the ideal burner."
"Automatic shut-off is working most of the time."
"If I had a dozen cars, would have it on all."
"You have certainly hit it right."
"Gives perfect results."
"I made no mistake in selecting your burner."
"Can go twice as fast."
"I can ride as fast as I dare to."
"I enjoy the feeling of safety to the limit."
"Making good every day."
"An unqualified success."
"Safety valve lifted at 320 going up hill."
"The feeling of safety is great."

***Why not "Get Out of Danger To-day."***