

CHARLES E GORTON ..



# CATALOGUE

## ACETYLENE GAS GENERATORS

AND

APPLIANCES

MANUFACTURED BY

## The Abner Acetylene Gas Co.

32-34-36 La Salle Street CHICAGO, U. S. A.

MANUFACTURERS OF

Abner Giant Generators Abner Junior Generators Abner Generators Abner Kid Generators Abner Purifiers and Appliances

DISTRIBUTORS OF

ACETYLENE GAS FIXTURES, BURNERS PURIFYING MATERIAL

CALCIUM CARBIDE, CARBOLITE GAS PIPE TOOLS AND SUPPLIES







#### WHY THIS CATALOGUE?

To impress you with the importance of Acetylene Lighting, and demonstrate our faith in the business by placing before the public the most complete line of Acetylene Generators ever offered.

To establish faith in the minds of everyone interested by offering only such goods as we can guarantee to give satisfaction, and to build up a lighting business.

Our departure from the "old type" generators is radical.

We have no "blue sky" to offer or "tin can" generators to sell. Our goods are exactly as represented, and our guarantee backed by the capital of the Company.

Awaiting your commands, we are, Yours very truly,

THE ABNER ACETYLENE GAS CO. (INCORPORATED.)







#### **RULES**

1. In ordering goods be careful to give size and style Generator, Fixtures, Burners or Carbide wanted.

2. State distinctly how the goods ordered are to be shipped and if any, pre-ference for a certain route.

3. All claims concerning shipments must be made inside ten days after receipt of same.

4. When referring to Generator always refer to serial number of same on brass plate.

5. Our terms are strictly cash with order.





#### ACETYLENE GAS.

What is it? This is generally the first question propounded upon mention of this subject.

Acetylene gas is a very powerful illuminant, superior to gasoline or other naphtha gas, vapor gas, coal gas and incandescent electric light. It gives a brilliant white light whose rays more nearly approach those of the sun in color than any other artificial light. For this reason it is, though most brilliant, the most restful and healthy light for the eyes.

Acetylene gas is made by bringing a substance called cal<sup>2</sup> cium carbide (a chemical combination of lime and carbon) into contact with water, whereupon the carbide and some water become decomposed and forms acetylene gas. A residue is left after the gas is generated which consists principally of slaked lime, containing phosphate and free ammonia which makes an excellent fertilizer.

Acetylene gas is the best illuminant known and is rapidly displacing all other artificial light. It is so rich that to produce light sufficient for a room of average size the consumption does not exceed one-half to three-quarters of a cubic foot per hour. Owing to this small consumption the amount of oxygen taken from the air to produce perfect combustion is so very small in comparison with other gas, oil or vapor illuminants that it is not appreciable, and thus leaves a healthy atmosphere in the room. Nor does this light produce great heat. A person may comfortably hold his hand directly over the flame at a height of 6 to 8 inches above it. For this reason it is preferable to all other gaseous illuminants. This feature is particularly appreciable on hot summer evenings.

The use of acetylene gas is not coupled with any odor such as is usual with kerosene and gasoline light, but leaves the air in the room perfectly fresh and agreeable. The gas itself when not burning has a very strong disagreeable odor, making any leakage easily perceptible. This is a great advantage as will appear hereafter.

#### COMPARATIVE SAFETY OF ACETYLENE GAS.

So much untruth has been told regarding the dangerous properties of acetylene gas that the public mind requires to be set at rest in regard to the matter. The following quotations from Bulletin No. 57, of the Department of Agriculture, Commonwealth of Pennsylvania, by George Gilbert Pond, Ph. D., are cited to show actual results of scientific research on this subject. On page 23, in a paragraph entitled "Physiological Effect of Acetylene," Dr. Pond states: "Reliable investigators, Berthelot, Rosemann, Grehant and others, whose conclusions are not to be questioned, have, independently of each other, carried on researches \* \* 100king to the establishment of accurate information on this point, and have shown, that while it is slightly poisonous, it is less so than coal gas and vastly less poisonous than water gas." \* \*



"In one of Grehant's experiments upon dogs, a mixture of twenty per cent. of acetylene with air inhaled for thirty-five minutes did not seem to trouble the animal. A dog breathing a similar mixture of illuminating gas containing only one per cent. carbon monoxyde, quickly showed convulsive movements and died after ten minutes."

To fully appreciate the meaning of the above quotations, take the following example: We will presume that an acetylene gas cock is accidently left open at night in a very small bed room, 8 ft. long, 8 ft. wide and 8 ft. high. Such a room would contain 512 cubic feet; making liberal allowance for space occupied by furniture, we will presume that the room contains only 400 cubic ft. of air space. To produce a mixture of twenty per cent. of acetylene with the air contained would require 80 cubic ft. of acetylene. As a single acetylene burner will permit 'the flow of only 1/2 or 3/4 of a cubic ft. of gas per hour at the most, it would require more than 100 hours to produce such a mixture, hence, the occupant of the room must be a very sound sleeper to remain long enough to feel any deleterous effect by reason of his carelessness. And should anyone be guilty of such carelessness the entire house would so shortly be filled with the disagreeable odor of acetylene that any occupant waking in the night would be sure to detect it and readily find the source, so that no danger from this source need be feared at any time.

Another great bugbear has been the supposed explosibility of acetylene. In regard to this Dr Pond says that in order to explode acetylene as ordinarily used, it is necessary to mix it with air to a sufficient extent to produce a combustible mixture, for no gas in its pure state unmixed with air will burn. A mixture of three per cent. of acetylene with air will explode when ignited with a spark, and the explosion will increase in violence as the percentage of acetylene increases up to seven and onehalf. Beyond that point its explosiveness decreases and a mixture of more than 82 per cent. acetylene with air will not explode at all.

Three per cent. is very small and yet when mathematically calculated it would require a very long time to produce such a mixture. Presuming again that a cock is left open in a room, containing only 400 cubic ft. of air space. To produce a three per cent. mixture would require 12 cubic ft. of acetylene. At the maximum rate of  $\frac{3}{4}$  cubic ft. per hour it would take 16 hours, to attain this mixture and it could only then be attained provided every crack through which fresh air might enter, be tightly closed. This is an impossible condition. Besides this the average acetylene burner will permit a flow of only  $\frac{1}{2}$  cubic ft. per hour, and in very small rooms  $\frac{1}{4}$  ft. burners are generally used.

The fire statistics of the New York Journal of Commerce and Commercial Bulletin, carefully compiled for 1899, show for the United States and Canada, a total of \$186,778,200.

The losses known to have been caused from electric wires not being in proper condition, in regard to insulators and connections, amount to over \$23,000,000. Losses from coal or city gas amount to over \$9,000,000. Losses from gasoline, gas apparatus and gasoline lamps, amount to over \$7,500,000. Losses from kerosene oil, used as a luminant, over \$3,000,000. Although there were over 20,000 Acetylene gas machines of nearly 100 different makes in use duirng 1899, not a fire amounting to \$1,000 is reported to have been caused by the use of Acetylene gas.

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Many lives were lost by the wires and fires from electricity; also from coal or city gas; also from gasolene gas, but not a life was lost from Acetylene.

#### CLASSES OF ACETYLENE GAS GENERATORS.

Acetylene gas generators are divided into three general classes.

- 1. The drip type.
- 2. The flood or cup type.
- 3. The plunger or drop type.

#### THE "DRIP" TYPE.

In this type of generators a small quantity of water is sprinkled over a large quantity of carbide at intervals. This manner of generation has been generally abandoned for the reason that the gas is very hot when generated and therefore carries a large percentage of certain impurities. The presence of these impurities is most readily noticeable by the rapid clogging of burners, and the filling of the pipes with a tarry substance and water. The heat liberated by this method of generation remains in the generating chamber and is often so great that the center of the carbide mass becomes red hot. This type of generator is apt to be dangerous, as, if there remains in the generating chamber a certain quantity of air an explosion may follow owing to the high temperature. The residue resulting from the generation instead of being a bluish white, is burned to a deep yellow and is blue and green in parts.

In this method of generation the quantity of gas generated at the desired intervals cannot be controlled and results in the loss of a large percentage through the safety valve which every generator must have. Such lost gas is expensive and a source of discomfort owing to the odor.

#### THE "FLOOD" OR "CUP" TYPE.

In this type the carbide is contained in cells or cups each containing a given amount of carbide. These cups or cells are consecutively flooded by allowing a body of water to rise over the top of the cup or cell and continually flow into same until every particle of gas has been liberated from the carbide. The cells or cups in this type are sometimes stationary and flooded by the rising of water in the surrounding space until it overflows into same, or the water remains stationary and the cups or cells are dropped into the water. In either case the result is the same.

This method is an improvement upon the first type in that it insures a cooler gas and the liberation of all gas contained in the carbide, and, except for the great amount of labor required in drawing off the residue, cleaning, drying and reloading the cells or cups and replacing the water, they are equal to the best generators which are conceded by the best authorities to be

#### THE "PLUNGER" OR "DROP" TYPE.

In this type the carbide is contained in a hopper placed above a large body of water contained in a closed vessel and termed a "generating chamber." Certain mechanism is employed to transfer a small quantity of carbide from this hopper to the water at intervals thereby instantly generating a given quantity

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#### THE WORK OF CLEANING

A small acetylene gas generator of the last described type is not a laborious task, but to clean and refill with water a large genererator of any type by hand is very disagreeable and requires an amount of labor not in accord with 20th century progress. For instance, to clean and refill large generators would require drawing of residuum and replacing with fresh water, quantities as follows:

FOR	100	LGT.	GENERATOR	50	Ŧθ	. 100	CALS.	RESIDUUM	AND	REPLACE	WITH	50 TO	100 (	DALS.	WATER
4.4	500	2.0	<i>64</i>	250	8.0	600	be .	# P	1.0	10	44	259 "	500	4.4	
8.0	1000	21		500	6 e	1000	8.4	4	1	**	44	500 "	1080	· **	a 4
- *	5000	1 m - 1	- 18	2500	8.9	5000	#P	- 14	6.6	3.5	3.6	2500 **	£000		8-9
These figures taken from Insurance requirements on old type generators.															
	Other sizes proportionately.														

To reduce the amount of labor to a minimum and insure Cool and Perfect Generation we have designed an entirely

#### **NEW TYPE OF GENERATOR**

In this new type are combined all the advantages of the third type of generators and may be considered of that class in as much as the gas is generated by dropping a measured quantity of carbide into a large body of water at intervals, which are determined by the consumption of gas.

But we have added to this generator improved devices whereby It Cleans Itself.

This new and most complete type is known as the

#### **ABNER GIANT ACETYLENE GAS GENERATOR**

This Generator is the only Entirely Automatic Generator on the market which requires only to be charged with carbide and does everything else automatically. It discharges its residue automatically; it takes in water automatically; feeds carbide into the water automatically, and, in fact, does everything automatically except to charge the carbide magazine with carbide. It does away with 90 per cent. of labor required for the care of every other type of acetylene gas generator.

It is the only generator manufactured which has a measured or controlled displacement of residuum and fresh supply of water at the point of generation when in operation. Hence it is **the only positive cool generating** apparatus ever offered the public and stands in

#### A CLASS OF ITS OWN.

This generator is shown in sections in the cut on the oppoite page and operates as follows:

The carbide is contained in the Carbide Hopper and flows rom the bottom of same into a dumping device. The latter is operated by the Dumping Mechanism and at intervals throws a given amount of carbide into the water in the Generating Chamber. This generates a given quantity of gas which flows through a pipe into a water sealed chamber below a Purifier and Pressure Regulator and then into the latter. Then it passes through a body of chemical or other purifying material and into the Gas Bolder which rises as the gas enter.

ber. This generates a given quantity of gas which flows through a pipe into a water sealed chamber below a Purifier and Pressure Regulator and then into the latter. Then it passes through a body of chemical or other purifying material and into the Gas Holder which rises as the gas enters. From the Gas Holder the gas passes into the service pipes. The residue left by the generation of the gas drops to the bottom of the Generating Chamber and flows downwardly to the residuum Discharge Valve which opens every time that gas is generated and discharges a certain amount of water and residuum and then automatically closes. The water thus discharged is replaced automatically by means of a Water Supply which is controlled by a float valve and maintains a certain water level throughout the apparatus.

The Dumping Mechanism is operated by the rise and fall of the Gas Holder. The latter falls or sinks rapidly if the number of lights burning is large, and sinks slowly if the number of lights burning is small, thus causing the gas always to be generated in accordance with the rapidity of its consumption. When all the lights are turned out the entire apparatus comes to a standstill, but as soon as a single light is used it will begin to operate.

One of our patrons says:

"Now that I have seen and operated the Abner Giant I am actually astounded at its exceeding simplicity. It is a pleasure to watch it and no trouble to operate it. A child could take care of it, and the only possible result of the grossest carelessness is that the generator stops operating."

One of the greatest claims that we make for the Abner Giant is its simplicity. At first glance the average person pronounces it "complicated" but upon slight acquaintance this view is changed to wonder at its simplicity and completeness. There is not a single valve or delicate part to the whole apparatus, every part being strong and durable so that with ordinary care it will last twenty years.

"Acetylene Gas" says another of our patrons, "is undoubtedly the best illuminant I have ever seen or used, and not a small part of the pleasure derived from using it consists in watching the operations of the Abner Giant. It is a wonderful machine and fascinates everybody who sees it in operation. It does its work so faithfully and noiselessly, and with such surprising regularity that it may be compared with a clock."

"The care of an Abner Giant" says another user of one of our generators "is a snap." I have not devoted half an hour a week to it and yet I am never without gas for a moment. Only cnee did my gas suddenly burn low and upon investigation I found that I had let it run out of carbide. It was the work of only five minutes to recharge it and I again had light."

Dr. Pond in his work on Acetylene before referred to states that the following qualities should be possessed by a generator:

(1) It must allow no possibility of the existence of an **explosive mixture in any of its parts at any time.** It is not enough to argue that a mixture, even if it exists, can not be exploded unless kindled. It is necessary to demand that a dangerous mixture can at no time be formed even if the machine is tampered with by an ignorant person. The perfect

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machine must be so constructed that it shall be impossible at < any time under any circumstances to blow it up. It must be "fool-proof."

(2) It must ensure cool generation. Since this is a relative term, all machines being heated somewhat during the generation of gas, this amounts to saying that a machine must heat but little. A pound of carbide decomposed by water develops the same amount of heat under all circumstances, but that heat can be allowed to increase locally to a high point, or it can be equalized by water so that no part of the material becomes heated enough to do damage.

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(3) It must be well constructed. A good generator does not need, perhaps, to be "built like a watch," but it should be solid, substantial, of good material. No light weight, half price metal, likely to rust through and cause leakage and resultant gas mixtures, should be tolerated. It should be built like a plough, or like a steam engine, of the best material adapted to the purpose. It should be built for service, to last and not simply to sell. There are "tin can" generators enough on the market, and now and then one may receive the endorsement of sensible people, or even perhaps of the Underwriters, but they are to be avoided as unsafe and unreliable. See that your generator is as well made as your farm implements.

(4) It must be simple. The more complicated the machine the sooner it will get out of order. Before purchasing, see a drawing of the machine you plan to purchase, and be shy of the man who can not give you a blue print. Understand your generator. Know what is inside of it and beware of a plant, however attractive its exterior, whose interior is filled with pipes and tubes, valves and diaphragms, whose functions you do not perfectly understand. If a complicated mechanism is employed to perform what seems to you a simple duty, rely upon your own common sence and look further till you find a perfectly simple but strong mechanism to perform the work of automatically making your gas. There are plenty of them and you can afford to meet the price of the machine which is least likely to call for repair next season.

(5) It should create no considerable pressure in any of its parts. Low and uniform pressure at the jet is no guarantee of low and uniform pressure in all parts of the machine. It is important to be sure of this point. More than three or four pounds pressure at any point may be a source of danger; more than a few ounces is wholly unnecessary.

(6) It should be capable of being cleaned and recharged, and receiving all other necessary attention, without loss of gas, first for economy's sake, but more particularly to avoid filling the house with a disagreeable odor. There is no need of any perceptible odor about the machine, or in the house and the better machines successfully guard against this nuisance.

(7) It should require little attention. All machines have to be emptied and recharged periodically; but the more this process is simplified and the more quickly it can be accomplished the better.

(8) It should be provided with a suitable indicator to designate how low the charge is in order that the refilling may be done in good season. A generator which can by any reasonable possibility leave the household, without warning, plunged into darkness, is not to be tolerated.

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(9) It should completely use up the carbide, gene aximum smount of gas.

(10) It should have a purifier.

As to selection of type of generator, there are good generators of all the types, and under local conditions it may not be always an easy matter to select the type. It may possibly be sometimes rather a question of getting the best available machine, regardless of the type. But if the fittest survives, the opinion of the writer is that "carbide into water" machines will be the generators of the future. The famous Moissan, French savant and chemist, wrote as long ago as December, 1896, as follows:

"The ideal apparatus, which I think does not yet exist, consists in a gas holder containing an excess of water into which a fragment of carbide of known weight falls automatically at the desired moment. The weight of this carbide should be such that it will fill the gas holder with gas without producing an excess. Moreover this carbide should not fall till the moment when the gas holder is nearly empty." (Study our Generator carefully).

And Professor Lewes, English chemist and illuminating gas authority, wrote early in 1898:

"The generators of the third class (type III) are undoubtedly the best, as, with the water kept in excess, it is impossible for the temperature to rise above the boiling point of water, and under all conditions, this class of generators yields the purest gas, as the acetylene, having to bubble through the lime water, formed in the generator, is washed free from most of its impurities." Also, still referring to generators of type III, "With a properly arranged tank the temperature never exceeds the air temperature by more than a few degrees. Under these conditions, the absence of polymerization and the washing of the nascent and finely divided bubbles of gas by the lime water, in the generator, yields acetylene of a degree of purity unapproached in any other form of apparatus."

In following the development of generators in this country up to the end of 1899, the writer sees no reason to be swerved from the opinion which the above authorities would promote. If anything is to be learned from the experience of France and England, as well as of Germany, whose people lead us in applied, no less than in theoretical chemistry, it must be agreed that the "carbide into water" principle is the only scientifically satisfactory one.

We are at all times prepared to demonstrate that our generators possess every desirable quality above enumerated, and that, in fact, we go beyond these, as our generators have certain qualities which are peculiar to them only and which add to the safety, economy and convenience to a degree never dreamt of before.

In support of our claims to superiority in every particular we beg to call attention to the works of the greatest authorities of the world upon the subject of acetylene, such as: Professors Pond, Lewes, Moissan, etc.

The perusal of the works above enumerated and a thorough knowledge of the subject on the part of prospective users of acetylene gas will be most convincing as to the merits of our generators.



## The Abner Giant Generator

Permitted by the National Board of Fire Insurance Underwriters



#### **UNLIMITED CAPACITY**

For Village. Town and City Lighting.

Homes, Churches, Stores, Factories, Lodge Halls, Opera Houses, Public Buildings, Etc.

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Construction. The Abner Giant Generator is made throughout of

heavy galvanized iron with riveted and soldered joints, brass castings and brass rod connections, and consists of a carbide hopper-feed chamber having a top inlet with screw top, with carbide measure and dumping device; generating chamber with residuum discharge device; purifying and expansive chamber; gas-holder chamber with water seal and purifier or drier. The water supply being furnished through a small water tank with a float valve regulator.

Though constructed in the smallest dimensions ever devised it possesses the greatest generating capacity ever produced, and can be placed in a small room of a building or basement, where the temperature is always above freezing.

Operation. The absence of any intricate mechanism and its simple, positive automatic action leaves but little advice to be given as to operating the "Abner Giant Generator." There is no action of the machine when gas is not being consumed. No dismantling of the parts is required. The residuum being flushed out at short intervals with each generation of gas, according to the volume of gas used, permits of no attention in cleaning; can be operated safely any place, by any person of average intelligence.

To keep a fresh water supply and carbide in chamber or hopper is all the attention required; a 10,000 light generator operating with the same degree of safety and surety as a 10 light generator.

Purification. To free the gas from chemical impurities, such as phosphorated and sulphurated hydrogen, that are not extracted in water purification and that would attack the metal bodies, pipes, etc., as well as cause heating and carbonizing at the burners' tips we introduce a purifying chamber, allowing the use of a chemical compound or filtering purifier, giving a chemically and mechanically pure gas, free from any remote danger of self ignition, and that will not clog the burners.

#### DESCRIPTIVE

Carbide Supply. Charging the Abner Giant consists in simply pouring a quantity of carbide in the chamber when it is required. No perceptible amount of gas is allowed to escape the carbide feed.

The carbide is fed from the chamber by gravity to a double bottomed shovel which is swung gradually by means of a solidly connected shaft to a dumping position with each descent of the gasometer, and returns at once to its resting position for refilling. The shovel is of simple construction, free from friction, and certain in action. The action of

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· DESCRIPTIVE SECTION ~



PLAN OF GENERATOR AS ASSEMBLED.

the double constructed shovel is such that where the contents of the lower compartment is dropped into the water, the bottom plate of the upper part cuts off the flow of carbide at the chamber orifice, at no time allowing any communication of gas or moisture to the carbide in the carbide chamber.

Water Supply. The unique feature of au. tomatically displacing the amount of residuum formed in such dropping of carbide and replacing a volume of fresh water equal to the amount of discharge is a merit, peculiar to. and possessed only by the Abner Giant Generator, and a step in advance of most critics and judges of Acetylene Generators.

For this purpose the Abner Giant is provided with a water supply tank, of small dimensions, the water level of which is maintained by connecting with any water service, city supply or tank supply, and is regulated and controlled by an ordinary float valve passing to the inside of the water chamber through a Ushaped pipe providing a water seal.

The immediate result of the operation is the re-cooling of the water heated by generation giving an ever-present excess of fresh water with the lowest

possible rise of temperature not exceeding 40 per cent. over the normal temperature of the water, overheating being absolutely impossible.

Generation. In accord with the highest au-thorities on generation of . Acetylene Gas, The Abner Giant fills all requisites in allowing an exactly measured quantity of carbide to fall into an excess of water at proper intervals.

In dropping into water the chemical decomposition of the carbide and water takes place, the carbon of the carbide combining with the hydrogen of the water to Acetylene Gas, while the oxygen of the water combines with the lime of the carbide to. oxide of lime. The water being at low tempera-ture does not permit the assimilating with the gas, of any impurities from generation, and by retaining the carbide in the water until entirely decomposed the greatest amount of pure gas is obtained from the carbide. The residuum (hydroxide of lime) formed, is white and free from gas in this form of generation.

Residuum Discharge. The oxide of lime having a great affinity for water combines with the same to ' hydroxide of lime which owing to its greater specific gravity sinks to the bottom of the generator, where it accumulates until the increased initial pressure caused by the next generation, raises a float opening a common plunger valve from the inside and the residuum is forced out. The residuum discharging from the base of the generating chamber being degasified before its elimination allows all absorbed gas to remain in the water body, giving a residuum discharge free from gas and of commercial value.

Pure Cool Gas. Acetylene Gas when generated as described is led into a second wash and water seal at the base of the regulator, then into the purifying and drying chamber, which purifies and drys the gas and at the same time acts as a pressure regulator for the gasameter] then passes into the gas-holder.

### Safety, Economy and Healthfulness. of the contents, or

As there is positively no overheating of the parts of this

generator all opportunity to hinder or obstruct its free self operation is eliminated. The natural water level providing positive water seals, no gas is allowed to escape, to ignite, or cause an unpleasant odor. Every atom of gas possible to be obtained is taken from the carbide, giving full value of the carbide, and leaving a white residuum practically odorless, which with the exceptional cleanliness of the apparatus, exceptional purity of the gas and consequantly pure, steady, white, sight preserving light, a lows the claim of the invincible "Abner Giant" Acetylene Gas Generator.

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Claims Beyond Dispute for the

## "ABNER GIANT" G E N E R A T O R S

Simplicity & Economy & No Heat Better Gas & Whiter Light Removes Residuum Automatically, Supplies and Maintains Its Own Water Level, Is Past the Experimental Stage, Capacity Unlimited.

Price List "Abner Giant" Generators.

Size	Capac Car Ho	<b>Dimensions</b> Width Length			l <b>S ()</b> gth	Ver Ileij	<b>A11</b> 3. ht	' Shiy We Cri	ping ight ited	Net Prices	
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50	50	Lbs.	31	0//	41	6″	61	6″	300	Lbs.	225.00
75	75	66	31	6''	4/	10″	6'	8//	380	<u> </u>	· 275.00
100	100	66	14'	0//	5'	3//	6/	9//	460	66	350.00
150	150	66	41	$2^{\prime\prime}$	51	8//	71	4//	525	66.1	425.00
200	200	66	ŧ'	4″	61	4//	71	9//	680	66	500.00
250	250	6.6	±′	6″	61	8″	81	0//	725	66	550.00
300	300	6.6	41	8″	7/	0″	81	2//	825	66	600.00
350	350	66-	11	L0″	7!	4//	81	4//	900	6.6	700.00
400	400	6.6	51	6″	81	2/1	91	0//	950	6.6	775.00
500	500	66	61	0//	8/:	10//	91	4//	1000	66	825.00
750	750	6.6	71	0″	10'	0″	11/	6//	1500	66	900.00
1000	1000	66	81	0//	13/	0//	12'	3/	2500	66	1,250.00
2000	2000	6.6	91	0//	15/	0//	13/	3//	3000	66	2.250.00

\$1,000.00 for each additional one thousand lights. Estimates made on town lighting.

Made in 50 Light Size to 20,000 Lights and over.

#### MANUFACTURED ONLY BY

## The ABNER ACETYLENE GAS CO.

36 La Salle Street, Chicago, Ill.

## A Few Recent Installations of the Abner Giant System.

Bismarck Summer Garden, - Chicago, Ill. 1,000 Light Plant, 2-500 Light Generators.

School Sisters of Notre Dame, - Longwood, Ill. 1,000 Light Plant, 2-500 Light Generators.

Manual Training School, Roman Catholic Society of the Divine Word, - Shermerville, Ill. One 1,000 Light Plant.

Town Plant, - - - - Quarryville, Pa. One 1,000 Light Plant.

St. Boniface Church, - - - Chicago, Ill. One 350 Light Plant.

F. W. Morgan (Morgan & Wright), Morgan Farm, Beloit, Wis. One 200 Light Plant.

Muehrke's Hotel, - - - Fax Lake, Ill. One 150 Light Plant.

J. H. Harris Machine Works, Arlington Heights, Ill. One 100 Light Plant.

Mrs. H. M. King (King's Ranch), Alice, Texas. One 100 Light Plant.

Mrs. H. M. King, - - Corpus Christi, Texas. One 75 Light Plant.

Dr. A. E. Spohn, - - Corpus Christi, Texas. One 100 Light Plant.

St. Luke Society, - - - Chicago, Ill. One 100 Light Plant.

City Opera House, - - - Stoughton, Wis. One 75 Light Plant.

Utica State Hospital, - - - Utica, N. Y. One 50 Light Plant.

Rev. D. Le Hane, - - - Natick, R. I. One 50 Light Plant.

Flora Mer'c Co., - - - Flora, Miss. One 50 Light Plant.

G. F. Mayers, - - - Stephens City, Va. One 50 Light Plant.

Elon College, - - - Elon College, N. C. One 40 Light Plant.



#### DIRECTIONS FOR SETTING UP AND OPERATING

THE ABNER GIANT GENERATOR





- A Carbide Hopper.
- **B** Generator.
- C Discharge Well.
- D. Float.
- E Water Supply Tank.
- F Supply Pipe to Generator.
- G Discharge Valve.
- H Discharge Pipe.
- Gas Pipe to Purifier.
- J Purifier.
- K Purifying Material.
- L Pipe to Scrubber.
  - Water Seals and Scrub Chamber.

- N Service Pipe.
- O Gas Holder.
- P Gas Bell.
- **Q** Gas from Scrubber,
- R Guide for Gas Bell.
- S Carbide Dumper.
- T Chains and Pulleys or Dumping Device.
- U Seal for Carbide.
- V. Water Supply to Generator.
- W Pipe Maintaining Water Level.
- X Blow Off Pipe.

1. Place Generator on substantial level base about 8 inches high. (Concrete or Cement Preferable.)

2. Connect Water Tank (E) with water system, if none in building a Galvanized Iron Tank or Rain Water Barrel will do, and should be set on level with top of tank and convenient for filling.

3. Fill Water Chamber through lip (at letter M) until it reaches the line marked water line, and keep filled.

4. Connect Service Pipe (at letter N) to gas mains or where Meter usually is set.

5. Connect Blow Off (X) to outside of building. Care should be exercised not to diminish the size of pipe and if machine is placed in basement pipe should be carried 12 feet above the ground and have a return bend at end. (These are Insurance Regulations and must be observed.)

6. A shut off should be placed in pipe or water supply and be near water tank (having float ball) to allow adjusting or repairs to generator.

7. Connect pipe to Cesspool or Sewer (letter ( H) using no more elbows than necessary.

8. Remove small bell of Purifier (letter J) and place cheese cloth or clean cotton waste at bottom, then place about 8 inches Purifying Material and cloth on top. (If purifying material changes to a green color it will absorb no more impurities and should be removed.)

9. Open Shut Off and let water run into the Apparatus until it stops. (The supply tank will fill all tanks automatically.)

10. To start generator remove cap of Hopper (letter A) and fill same with carbide (1/4 inch no dust.) This size is best adapted and will give good results.

11. Loosen screw on Gas Bell and slowly turn dumping device towards the front and when Gas Bell raises secure the bolts and successive charges will dump by downward movement of bell.

#### **GENERAL DIRECTIONS.**

Before connecting Service Pipe to mains, same should be tested with air pump, before fixtures are placed in position. Machine should not be recharged at night and no artificial light should be brought within 10 fest of any machine. If lights go out fix, or recharge Apparatus, by daylight. The amount of carbide used can be ascertained after a few days' operation, or can be measured at any time by removing cap of hopper and inserting a round strip of wood; showing how much carbide is in hopper, or by rapping on the hopper the sound will indicate amount of carbide in same. Generator must be placed where the temperature does not go below freezing.

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MANUFACTURED BY

The Abner Acetylene Gas Co. 34-36 La Salle St., CHICAGO, U. S. A.

Write for our Catalog of Large Generators, Fixtures, Etc., Etc.

VILLAGE, TOWN AND CITY LIGHTING A SPECIALTY ESTIMATES FURNISHED

Our Generators are guaranteed for one year and will last a life-time

## The Abner Junior Generator Is of most

substantial construction and simple operation being designed especially for dwelling, store and other buildings where 10 to 50 lights are required.

It operates on the most modern carbide hopper feed principle and is classed as a carbide feed or drop type generator.

The carbide is held in a magazine above the generating chamber and is fed into the water in small measured quantities by our justly celebrated "double-shovel" dumping device. This dumping device is operated on a solid shaft by the rising and lowering of the gasholder. It is positive in action, will not clog or "balk," and cannot operate when the gas is not being consumed.

The volume of water carried in the generating chamber is large compared with the small amount of carbide dropped by each operation thus insuring cool generation when the generator is operating at full rated capacity (and will even allow of 50%"over load" and retain a temperature of not over  $100F^{\circ}$ .)

By maintaing a low temperature the quality of the gas produced is of the best and every atom of acetylene gas is taken from the carbide, leaving a thoroughly disintegrated white residuum.

The residuum is drawn off through a waste cock at the lowest point of the generating chamber. It is easily cleaned and recharged.

The Abner Junior Acetylene Gas Generator is endorsed by the National Board of Fire Underwriters and is a safe and economic lighting system.

**Purifier.** Our Abner Purifier or Drier and Gas Regulator can be attached to any size Abner Junior Generator at small cost. It adds to the quality of the gas and prevents clogging of burner.

#### Price List Abner Junior Generators.

		CAR	BIDE		DI	M	E	15	SIC	N	s.	WE	IGHT.	NI	ET
SIZE.		CHA	ROE.	WIGTH.				HEIGHT				(CRA	TED.)	PRICES	
10	lights	10	lbs.	3	ft.	0	in.	4	ft.	9	in.	145	lbs.	65	00
15	÷6 ·	15	66	3	66	4	66	5	66	0	66	165	66	80	00
20	66	20	66	3	66	8	66	5	66	3	66	180	66	100	00
30	66	30	66	4	"	0	66	5	66	6	66	225	66	130	00
40	66	40	66	4	66	4	· ·	5	66	9	66	265	66	160	00
50	66	50	66	4	66	8	66	6	66	0	46	300	66	200	00

#### Abner Chemical Purifiers.

10 to 20 lights, - - \$3 00 30 " 40 " - - 3 50 Purifying compound (chemical,) per lb. .50

#### POWER OF ACETYLENE LIGHT

Burner of	1/4	foot	will	light	a	room	8 x 8
*6	1/2	66	6.	66		46	10x10
**	3/4	66	66	66		66	15x15
··	1	66	"			66	20x20



DIRECTIONS FOR SETTING UP AND OPERATING

## THE ABNER JUNIOR GENERATOR



- A 'Capfor Carbide Hopper.
- B Carbide Hopper.
- C Lip for Filling Generator
- D Generator.
- E Hand Hole.
- F Over Balancing Device.
- G Dumping Device.
- H Blow Off Pipe.

- Service Pipe.
- J Drier.
- K Gas Bell.
- L Filling Lip.
- M Gas Holder.
- N Filling Lip for Trap.
- O Residuum Gate.

Place Generator on substantial level base
 high enough to allow Bucket to clear gate.

2. Remove Cap on Carbide Hopper (letter A) and fill generator at [letter C] until water reaches to wire at opening.

3. Fill gas holder [M] through Lip [L] until water reaches to bottom of hole, leaving stop cock at [I] open.

4. Fill bottom of Gas Holder [N] until water flows out of small lip.

5. Connect Purifier to Service Pipe in such a position that movable bell will not strike in its upward movement. Fill inside cylinder of same with clean cotton waste or "Purataline" or cotton, but care must be taken not to pack too tight.

6. Fill Purifier with water at lip until it reaches to bottom of hole, replace cover and fasten hasp over staple with small padlock.

7. Connect service pipe to mains, also Blow Off pipe to outside of building extending upward about 12 feet from ground, using a return bend at end to prevent water entering at opening.

8. Fill Hopper with carbide 1/4 inch, no dust, using funnel furnished. Any larger pieces must be broken so they will pass through strainer; using larger pieces may cause shovel to clog.

9. Work shovel backward until same is filled. Dump a few shovels by hand until bell rises sufficient to fasten lug on bell in slot on dumping device and all other work will be performed by the machine.

10. Put weight on overbalance as shown in [F] and must be placed on stem according to size of plant, cut is 40 light and weight should be placed farther down on a 10 to 15 light.

11. Residuum should be withdrawn each time Machine is recharged to give good results, as fresh water will furnish purer gas.

#### **GENERAL DIRECTIONS.**

Before connecting Service Pipe to mains, same should be tested with air pump, before fixtures are placed in position. Machine should not be recharged at night and no artificial light should be brought within 10 feet of any machine. [These are Insurance restrictions, and must be observed.] Becharge Apparatus by daylight. The amount of carbide used can be ascertained after a few days' operation, or can be measured at any time by removing cap of Hopper and inserting a round strip of wood, showing how much carbide is in hopper, or by rapping on the hopper the sound will indicate amount of carbide in same. Generator must be **placed where the temperature does not go below** freezing.

## THE ABNER ACETYLENE GAS GENERATORS

Have large Carbide holders.

- Require the least attention of any system manufactured — (For proof of this statement see opposite page.)
- Produce every atom of Acetylene gas the carbide contains; positive action; will not clog.

**ARE** permitted by the National Board of Fire Underwriters.

#### SAFE RELIABLE DURABLE

GUARANTEED for ONE TO TWO YEARS, and with ordinary care will last a life time.

## Abner Acetylene Gas Co.

#### MANUFACTURERS OF

- ABNER GIANT Acetylene Gas Generators
- ABNER Acetylene Gas Generators.
- ABNER JUNIOR Acetylene Gas Generators
- ABNER' KID Acetylene Gas Generators
- We accept all challenges and give the public proof of the most practical and most convenient Generator to universally adopt for Acetylene Lighting.

OTHER MANUFACTURERS.	No. Equal Carbide Number Consecutive Hours-25 Candle-Power List to Capacity Capacity	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	
ABNER JUNIOR GENERATORS.	Size Carbide Number of Consecutive Hours-25 Candle-Power List Generator Capacity Lights-34 ft. Burners Prices	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	



#### From the days of the tallow candle to the Present time.

## The Acetylene-Gas Journal, Chicago, has this to say of the safety of Acetylene light:

"Acetylene-Gas Journal, the ably edited monthly organ of those who favor the use of acetylene gas as an illuminant, expresses its gratification at noting that, notwithstanding the present wide and rapidly-growing use of this new gas, not one case of fire from the same was reported in 'Fire and Water' during the month in which its papers were consulted. The same is true of the reports taken from Buffalo papers for the same period. Such a fact needs no comments. But truly this may be said: The safety of acetylene, as compared with every other known illuminant, is becoming more and more apparent with the recurring months.

"The editor of Acetylene-Gas Journal states that he is an observer of the weekly fire reports published in 'Fire and Water,' a leading journal published in the interests of the fire departments of America, which reports every fire of which it learns. These reports he carefully studies, with a view to discovering what part acetylene plays in the fires of this country. His remarks as quoted above, point their own moral."

Thus the truth is gradually dawning upon the fire-fighting people as it earlier did upon the fireinsuring people to the effect that, in acetylene, the safest of all popular illuminants has appeared. Henceforth, as in the past, we will with great interest watch the successive reports of "Fire and Water," feeling certain that these will continue to afford most convincing proofs of our main argument for the safety of acetylene.

It is refreshing indeed, to lean on the fire chief's own organ for arguments to establish acetylene's non-hazardous character.

#### ORDINARY AIR VITIATION

Professor Lewes and other investigators have shown that bulk for bulk common illuminating gas, also kerosene gas, affect the air of a room very differently from acetylene gas. The former for each cubic foot burned, not only robs the atmosphere of five times as much life-sustaining oxygen as does a cubic foot of acetylene, but in addition it gives out between four aud five times as much poisonous carbonic acid as does the latter. The effect, therefore, of burning a like bulk of the two gases is that coal gas in ordinary use vitiates the air fully nine times more than does acetylene.

## POWER OF ACETYLENE LIGHT

Burner o	f 1/8	foot	will	light	a room	8x8
6.6	1/4	6.6	6.6	3.6	6.6	IOXIO
6.6	1/2	6.6	6 6	6.6	6.6	15x15
	I	6.6	6.6	6.6	6.6	20X20

Photometric tests show that it has five times the power of an incandescent light, twelve times the power of city gas. One half foot burner Acetylene gives more light than six three foot burners using city gas.

One pound Carbide will generate between four and five cubic feet Acetylene Gas, and the actual cost, figuring carbide at 5c a pound, per hour for each half foot light will be  $\frac{1}{2}c$  each.

Compared with kerosene a half foot burner has exactly the same candle power of intensity (but a great deal better quality) than that of the Largest Rochester Lamp, which consumes one gallon of 15c kerosene oil in about  $8\frac{1}{2}$  hours, for one inferior light costing  $1\frac{3}{4}$ c per hour.

Cost compared at "100 hours' actual test."

16	Candle	Power	incandescen	t	 			.4	1.00
16	6.6	6 6	city gas	79		ж.,	ç.	i i i	.85
ιб	5.6	6.6	acetylene						-35

Compare and see if it is not the cheapest and safest light that can be used.

Try one of the Abner Acetylene Generators and be convinced and substantiate our claims.

If your building is piped for any gas the same fixtures can be used, with the exception of the burners. Detach the meter and attach the generator.





The Abner Acetylene Gas Co.'s Town Lighting System



A 2,000-LIGHT ABNER GIANT GENERATOR

showing, installation in two-story generating room, carbide hopper extending to second floor, for convenience of charging —with 2,000 lbs. of carbide.

THE ABNER ACETYLENE GAS CO. 32-34-36 LA SALLE STREET CHICAGO, U. S. A. ACADEMY OF OUR LADY. CONDUCTED BY SCHOOL SISTERS OF NOTRE DAME. 95TH AND THEOOP STREETS, CHICAGO, ILL. LIGHTED BY 1000 LIGHT ABNER GIANT GENERATOR



THE ABNER ACETYLENE GAS CO. 34-36 La Salle Street, Chicago, U. S. A.

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1000 LIGHT PLANT (Two 500 LIGHT TANDEM,

ABNER GIANT GENERATOR

LIGHTING SIX BUILDINGS-SCHOOL SISTERS OF NOTRE DAME CHICAGO, ILL.



MANUFACTURED BY THE ABNER ACETYLENE GAS CO. 34-36 La Salle Street, Chicago, U. S. A. Chicago, Nov. 23, 1900.

The Abner Acetylene Co.,

Chicago, Illinois.

Dear Sirs:---

The one thousand (1000) light "Abner Giant" Acetylene Gas Plant placed in our buildings by your company has proven very satisfactory, as far as our experience shows, in points of Efficiency and Simplicity in operation, when compared with the old style plant we had in use previous to installing your system.

We find your claims for a Self Cleaning generator fully confirmed and the quality of light excellent, for which reasons we cheerfully recommend your generators to those interested in the healthful light afforded by the use of Acetylene Gas.

Yours very truly,

SCHOOL SISTERS OF NOTRE DAME, M. F. Seraphica, Supt.

Spring Park, St. Louis Co., Mo. The Abner Acetylene Gas Co., Chicago, Ill.

Gentlemen:--

The Abner Acetylene Generator I bought from you over a year and a half ago has given me extreme satisfaction and was death to the lamps we formerly used. Our home has been lighted during this time by gas supplied by your generator which has never given us one minute of trouble and I recommend same by all means to any prospective buyer of acetylene Generators. It beats any light I have ever seen.

> Yours truly, F. W. Suck.

Stoughton, Wis., May 18, '01 Abner Acetylene Gas Co.,

36 La Salle St., Chicago. Generator accepted, everything satisfactory, will remit when voucher comes.

W. C. DALLMEYER.

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#### ST. JOSEPH'S RECTORY

#### NATICK, R. I.

Feb. 15, 1901.

Dear Mr. Lamson:-

The Abner Giant Generator for Acetylene gas that you put in for me has given me entire satisfaction. Here is what it has done. It has given me seven lights, and a beautiful light too, in my study and in other rooms for one week from 5:30 P. M. to 11 P. M., week in, week out, for sixty cents a week. Electric lights which I had in use, cost more than double that sum, and were far less satisfactory. It requires about fifteen minutes' attention once a week at most.

· Respectfully, D. LEHANE, Pastor of St. Joseph's Church



SUBURBAN RESIDENCE-HENRY GIESSEL, CHICAGO

LIGHTED BY ACETYLENE GAS-ONE 20-LIGHT ABNER JUNIOR GENERATOR.

MANUFACTURED BY THE ABNER ACETYLENE GAS CO. 34-36 LA SALLE STREET CHICAGO

#### Stephens City, Virginia, March 11th, 1901.

#### Gentlemen:-

It affords me great pleasure to report to you my experience with Acetylene Gas.

Several days ago we placed the Abner Giant in position and it has been doing its work like "a thing of life." Its automatic action is simply perfect, affording a light

Its automatic action is simply perfect, affording a light before which electricity pales. My arrangements I think will bear the inspection of any expert you might send and affords one of the best advertisements for your machines. The churches of our town are already taking steps for lighting, and I am hoping to send you several orders ere long.

I accept the agency for the sale of your machines, and am fully prepared to guarantee payment for any orders I may send. Please refer all enquirers from this section to me and oblige, Yours truly,

G. F. MAYERS.



MRS. CARVER'S RESIDENCE, Tottenville, Staten Island, N. Y. Lighted with Acetylene Gas by the ABNER SYSTEM

MANUFACTURED BY THE ABNER ACETYLENE GAS CO. 82-84-86 LA SALLE STREET CHICAGO, ILL.

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The Abner Acetylene Gas Co., Chicago.



#### J. H. HARRIS,

MANUFACTURER OF

SEWING MACHINE STANDS, GREY IRON CASTINGS, ETC. Arlington Heights, Ill.

June 13, 1901.

J. H. HARRIS' FOUNDRY AND MACHINE WORKS Ablington Heights, Ill. Lighted with Acetylene Gas, Using One 100 Light ABNER GIANT GENERATOR



A BUSY CORNER IN J. H. HARRIS' MACHINE WORKS Arlington Heights, Ill. Using Acetylene Light — From One 100 Light ABNER GIANT GENERATOR

> MANUFACTURED BY + THE ABNER ACETYLENE GAS 00. 34-36 La Salle Street . Chicago Ill,

Abner Acetylene Gas Co., Chicago, Ill.

Gentlemen:---

from no.

Your esteemed favor of the 12th inst. at hand. In reply to your inquiry about The Abner Acetylene Gas Generator for lighting will say that it has turned out very satisfactory. Would not be without it and would say in reply, that we have not the slightest objection to your publishing a testimonial

Yours truly, J. H. HARRIS.



A COSY CORNER IN R. WOODFORD'S SUMMER RESIDENCE

GLENCOE, ILL.

. Illuminated by One 15 Light ABNER JUNIOR ACETYLENE GENERATOR

MANUFACTURED BY THE ABNER ACETYLENE GAS CO. 34-36 La Salle Street Chicago, Ill.

#### Chicago, Feb. 4th, 1901.

The Abner Acetylene Gas Co., Chicago,

Gentlemen:---

In answer to your inquiry as to the expense of lighting my house with the Acetylene machine you furnished last May would say that the machine furnished gas for seventeen burners from June 10th till Nov. 1st, 1900, by using one hundred and ten lbs. (110 lbs.) of carbide which cost me 41/2 cts. per. lb.

Yours truly,

PHILIP R. WOODFORD. Of Wells & Nelleger Co.

Chicago, December 20, 1900.

Abner Acetylene Gas Co., 36 La Salle St., City,

Dear Sirs:-

Dictated

Glencoe, Ill.

The Acetvlene Gas Plant which you installed at Bismarck Garden, at the beginning of last season, has proved to be very satisfactory. The light is very soft and steady and in illuminating power greatly exceeds the incandescent electric light which we heretofore used. In point of economy it was entirely satisfactory.

The operation of the plant, which consists of a battery of two "Abner Giant Generators," each of 500 lights capacity, is exceedingly simple and we have experienced no trouble in its operation Owing to the fact that the two generators are so arranged that when one is exhausted the other automatically begins operation, there is no need of the presence of a man at the plant.

We are very much pleased with the results and will be glad at any time to recommend your generators which we find an excellent investment. Very truly yours,

Bismarck Garden, EMIL EITEL, Treas.

Laredo, Texas, Jan. 28th, 1901.

Abner Acetylene Gas Co., Chicago. Gentlemen:---

Enclosed please find Exch. for \$195.00 which will balance our acct. in full.

Your machine works satisfactorily.

Yours truly,

ADOLPH DEUTZ.

#### East Douglas, Mass., May 13, 1901. The Abner Acetylene Gas Co., Chicago, Ill.

I have a 30 light Generator in my store. It is giving me a beautiful light and surpasses anything I have ever seen as an illuminant. I intend to pipe to my house and barn soon. I am now running 15 lights every evening and cost per month is less than \$4.00. Am very much pleased with your system (The Abner Junior) and can heartily recommend it to all who desire the best light for W. E. JONES.

Dealer in Hardware, Farming Tools and Machinery.

#### Providence R. I., April 6, 1001.

Abner Acetylene Gas Co., Chicago.

Am delighted with my lighting system through the Abner Junior Generator. It works perfectly and gives me a most beautiful light. I consider it far superior as an illuminant to electricity with which I had my store equipped sometime ago. Acetylene I thoroughly believe has a bright future and will be the light of the 20th century. One who wants more light can find it here.

> Yours very truly, ' HENRY B. SCOTT,

**Registered** Pharmacist.

Whitinsville, Mass., May 6, 1901. The Abner Acetylene Gas Co., Chicago, Ill.

In regard to the light furnished by Mr. Lamson's Abner Generator would say we are very much pleased with it and would have no other light under any consideration. The cost is small as compared with electricity and as an all around light we consider it the finest to be had, you can refer to us

Very truly yours,

HABRIMAN & FOSTER, Registered Pharmacists.



#### ADOLPH DEUTZ, Plumber and Tinner Laredo, Texas,

March 2nd, 1901.

Abner Acetylene Gas Co., Chicago.

Gentlemen:-

Please ship to Mrs. H. M. King, Corpus Christi, Texas, one (75) seventy-five light Giant Generator, also ship to Dr. Spohn, Corpus Christi, one (100) one hundred light Giant Generator, an early shipment will oblige, Yours truly,

Adolph DEUTZ, Per Morgan.

References, either Milmo Nat. Bank or Laredo Nat. Bank.



SUMMER RESIDENCE of P. R. WOODFORD (Of Wells & Nelleger Co., Chicago) at

GLENCO, ILL.



ST. BONIFACE CHURCH AND SCHOOL BUILDING CHICAGO LIGHTED WITH A 350 LIGHT

ABNER GIANT GENERATOR



#### COLLEGE OF DIVINE WORD

#### STATE OF NEW YORK - UTICA STATE HOSPITAL TREASURER'S OFFICE

Utica, May 18th, 1901.

Abner Acetylene Gas Co., 32-36 La Salle St., Chicago, Ill.

Gentlemen:-

Yours respectfully, HABBY S. PATTER, Trees.



CITY HALL AND OPERA HOUSE . STOUGHTON, WIS. LIGHTED WITH A 75 LIGHT ABNER GIANT ACETYLENE GENERATOR



SHERMEBVILLE (COOK Co.), ILL. GROUNDS AND BUILDING LIGHTED WITH 1000-LIGHT ABNER GIANT GENERATOR





No..0266. Drake's Adjust-able Acetylene Burner, No. 1.

One side can be turned off and the other turned down for a hall or night light, or for other purposes where a small light is required temporarily, the little needle valve at the same time, removing any obstruction from the rear of the gas orifice. Not designed to regulate all sized flames, but is made in  $\frac{1}{2}$ ,  $\frac{3}{4}$  and 1 foot sizes when the needle valve is 'with-drawn. Can be turned into alignment.

Per dozen ...... \$7.00

No. 0269. Drake's Burner, No. 2.

#### 1/4, 1/2, 3/4, 1 ft.

For general purposes it has no equal, is made in five interchangeable parts, and one of which can be duplicated, and will fit any other part of either style. It can also be turned into align-ment. Both styles are made of the best grades of brass. All threads cut 56 to the inch, and guaranteed not to leak. White finish in "nickel."

Per dozen.....: \$5.00

#### **CLEAN YOUR BURNERS**

And thus secure the greatest efficiency and durability. To secure the best results, acetylene burners must be kept clean.

The "Columbia" Burner Cleaner does the work.

No. 0325. Columbia.

Per dozen	· · · · · · · · · · · · · · · · · · ·	\$2.50
Each		.30

## ACETYLENE GAS BURNERS.



No. 0255. Popular Improved Hahn. Each..... \$0.40 Per dozen..... 4.00 1/4, 1/2, 3/4, 1 ft.

Flame.



Sunlight. 1/4, 1/2, 3/4, 1 ft. Each.....\$0.30



Victor. 1/4, 1/2, 3/4, 1 ft. Each .....\$0.40



NO. 0267. Williamson. Per gross \$10.00 1/4, 1/2, 3/4, 1 ft. 
 No. 0268.
 No. 0254.

 Candle.
 Bray.

 Per gross \$14.00
 Per gross \$15.00

 Resembles
 2 3 4 5

 Candle Flame.
 0, 0, 0, 0

## Acetylene Gas Cook Stoves.



Have you thought how handy a small stove is when you wish to fill a hot-water bottle, make a cup of tea, use the chafing dish or heat water in the bath room ?

Our New Atlas Acetylene Stove is splendid. A quick intense heat, always ready, and perfectly clean. Absolutely no smoke, smell or snapback. All nickel plated. The only satisfactory stove for acetylene gas. Uses 2 ft. per hour at regular lighting pressure. The price is \$4.25.



(PATENTED)

## The Graf Acetylene Range

A perfect Gem-made in all sizes.

This cut illustrates a very desirable Range, is made with two, three and four burners on top, oven of good size, and and will do more perfect baking and cooking than any Range or Stove using any kind of fuel. 'It is sold with our full guarantee.

Burner on top.	Size of top.	Height of Range.	Size of Oven.	Crated Weight	Price.	
2	25x18	26 in.	18x14	75 lbs.	\$18.00	
3	27x20	26 in.	18x14	80 kbs.	21.00	
4	27x20	26 in.	18x14	85 lbs.	24.00	





## **Carbide Boxes**

Made of heavy Galvanized Iron with slanting top, hinged and with hasp and staple made in sizes to hold 1, 2, 3, 5, 6, 8 cans carbide. To place on porch or outside of buildings.

### **GAS FIXTURES**

Our space being limited we have omitted same in this catalogue, but will send separate catalogue of same on request.

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