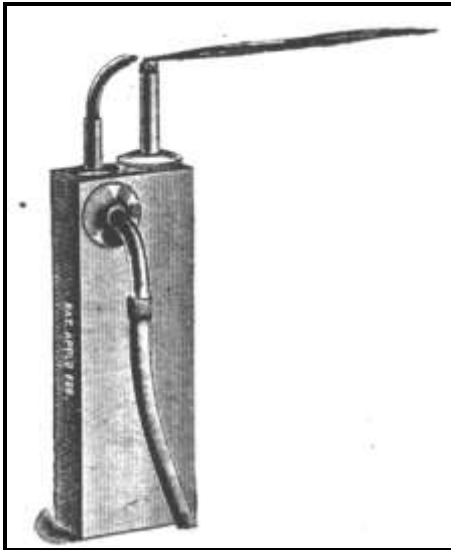


THE TORCH

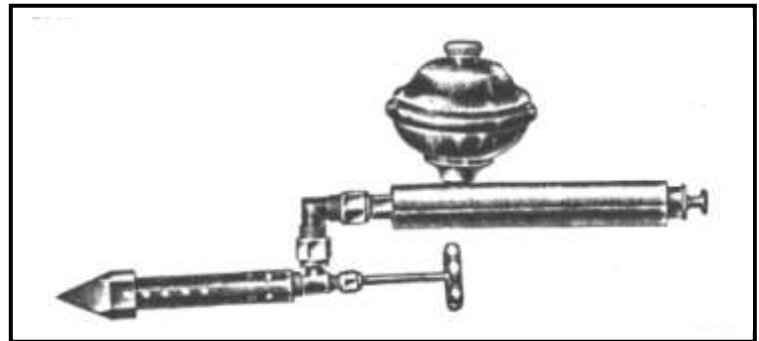
NEWSLETTER OF THE BLOW TORCH COLLECTORS ASSOCIATION

Issue #32

June 2005



If you have room in your pocket for a Walter's Vest Pocket Torch, then see page 3.

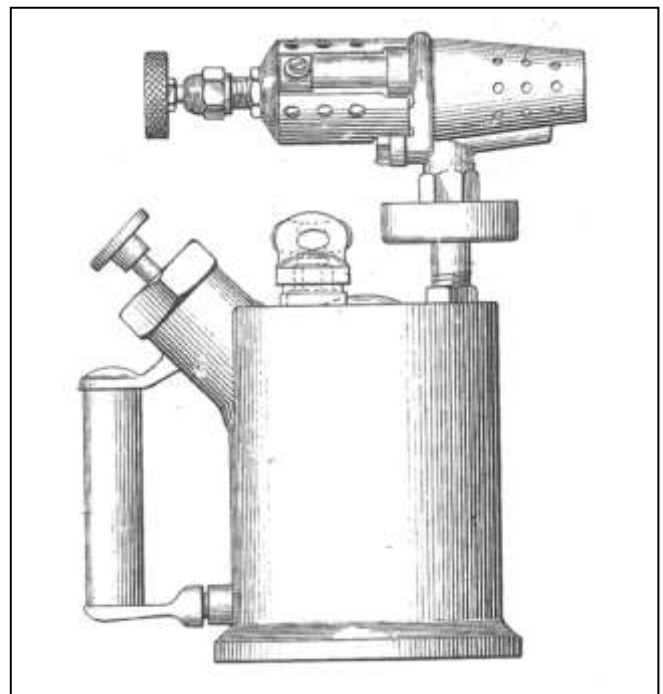


Voseller & Sebring Self Heating Soldering Iron, circa 1909, see page 8.



The 8th Annual BTCA convention is scheduled for Saturday, September 24, 2005 in Las Vegas, NV.

If you are planning on attending and haven't received your attendance package yet see page 11.



Do you think this is a P. Wall Mfg. Co. blow torch? Think again, and then check out page 7 for the real story.

NEW MEMBERS

Lee Heintzelman, Dixon, Illinois, has been a collector since 1991 with 335 accumulated pieces. Over 200 torches have been cleaned and hand polished, and are displayed in his finished basement as well as in his office at the Illinois Dept. of Transportation. Like many of us...Lee got started after seeing different types of polished torches. It's not unusual for people to see Lee's torch collection and then bring in a torch they want him to add to his collection saying it was their dad's or grandfather's. Lee said it's happened 18 times...and not one duplicate.

Max Rhodes, Hemington, England, has been a blow lamp collector since 1986 with over 400 lamps amassed to date.

Paul Whiddett, Kent, England, is a 5-year collector with over 700 torches. Most of his collection is restored and many are displayed in his home. Paul can attribute his start in torch collecting to **Andy Feast**. At one time Paul worked at Andy's forge business, and Andy would bring torches in to work for cleaning. The forging business came in handy for making replacement parts for blow torches.

WELCOME ABOARD NEW MEMBERS!



NOTES FROM ALL OVER

The Baum & Bender article in issue #31 prompted **John Tingle** to write in about his early version of a Baum & Bender. His one-quart torch appears to have a different configuration for the fuel feed tube.

Martin French emailed in to thank us for the article on his two headed blow torch featured in the last issue. According to Martin it's been a bit hot down under...with some areas hitting 48 degrees Celsius...that's 118.4 degrees Fahrenheit!

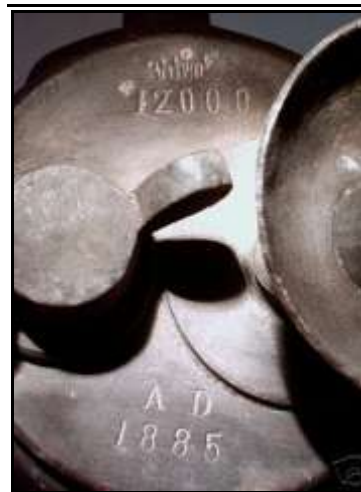
Mel Olson responded to our inquiry on owners of Baum & Bender torches since he has one in his collection. He also sent in a photo of an 8 pound soldering iron...a real giant!

Charles Smith sent in photos of his recently acquired Vulcan torch. What's so unusual about Charles' Vulcan is that it's the only one we've seen to date with the Bridgeport Brass Co. stamped into the torch. Because of this torch, we believe that Bridgeport Brass Co. was the manufacturer; however, most of the Vulcan torches were distributed through the Otto Bernz Co.



Information stamped on a Vulcan blow torch manufactured by the Bridgeport Brass Co.

Those of you fortunate enough to attend the 8th Annual BTCA Convention in Las Vegas will have an opportunity to view a German Vulcan version that predates the Bridgeport Brass Co. Vulcan torch. At press time, Charles was bidding on eBay for the torch, and knowing Charles...he'll be the successful bidder! Based on the eBay photos, and the German patent date of 1885, it's somewhat obvious that the Bridgeport Co. "borrowed" some of the design features and incorporated significant changes that allowed them to receive a US patent.

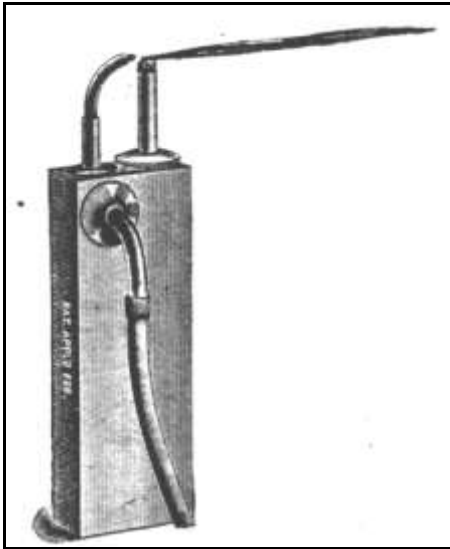


German version of a Vulcan torch Patent date of 1885



WALTER'S VEST POCKET TORCH

The Benjamin Allen & Co. was a Chicago area jeweler's supply distributor in the early 1900's, and in their 1902/1903 catalog they featured a Walter's Vest Pocket Torch. **Charles Smith** was able to secure a copy of the catalog from a cooperative eBay bidder, and in the catalog were a few unknown torches...including the Walter's torch.

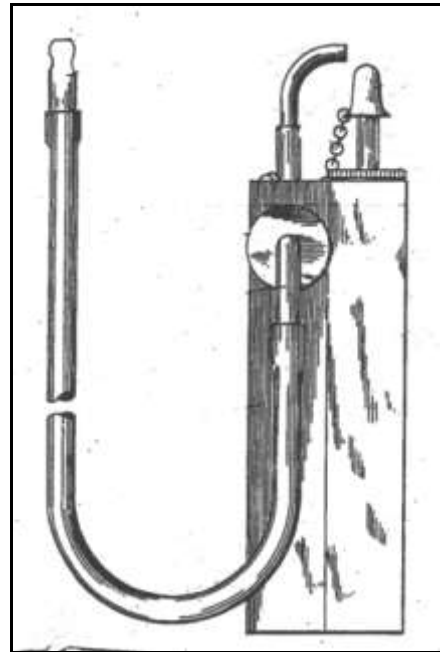


Walter's Vest Pocket Torch
Manufactured by the Benton & Walter Co.
Chicago, Illinois
Circa 1902-1903

The torch is listed as "Patent Applied For", and was designed for interior use only. Shortly after the catalog was distributed, the inventor Frank J. Walter was issued US patent No. 732,805 on July 7, 1903.

The Benton & Walter Mfg. Co. of Chicago, Illinois produced the vest pocket tool that is almost identical to the patent illustration...an unusual occurrence since a vast majority of final products were significantly different from their patent illustrations.

There was no indication of its dimensions, but considering that it is featured as a vest pocket torch, one can assume that it was relatively small. It was designed with two interior brass compartments that were both loosely packed with candle wicking. When filled with gasoline or benzene and ignited, could produce an intensely hot flame.



Patent
Illustration of
Walter's Vest
Pocket Torch

Patent No.
732,805

July 17, 1903

The air tube was routed into one of the compartments that was filled with cotton and fuel. When the operator blew into the tube, the air would pick up fuel vapor that would add to the existing flame. The torch could also be used for illumination, although from the size of the device, it's doubtful that it shed much light.

If any members have a torch that looks like a Walter's....please contact Ron Carr.



John Summerfield Hull

Father of the American Blow Torch

By Graham Stubbs

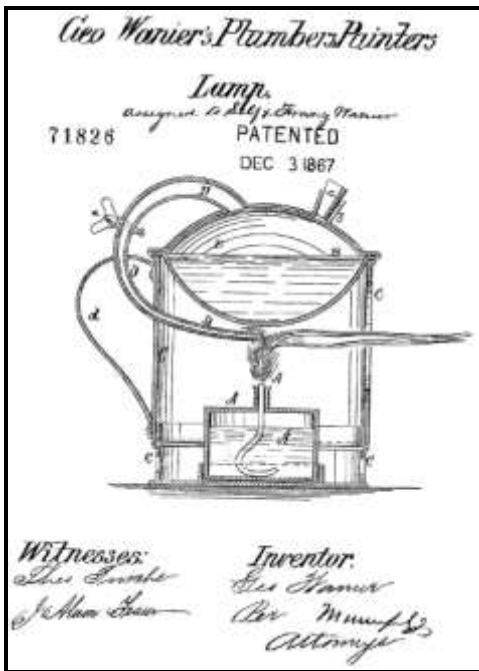
John S. Hull can reasonably be stated to be the father of the American blow torch. His inventions from 1866 through 1878 demonstrate a progression of principles, which combine to make a single, hand-held tool with all the features, which we attribute to a self-contained blow torch. The American blow torch, as it existed at the end of the nineteenth century, is a direct successor to Hull's inventions.

The Earlier Art

From its invention in France by Pierre Bertin in **1798**, and through much of the 19th century, the two piece torch, with an alcohol fuel tank atop an

alcohol lamp, was very commonly used as a paint burner and for plumbing.

George Wanier's US patent No. 71,826 of **1866** shows just one example of this form of torch. Wanier claimed detail improvements to a form, which had been in use for decades. The lower burner heated the liquid in the upper tank, forcing vapor through a burner orifice. The emerging vapor burned to create a flame.

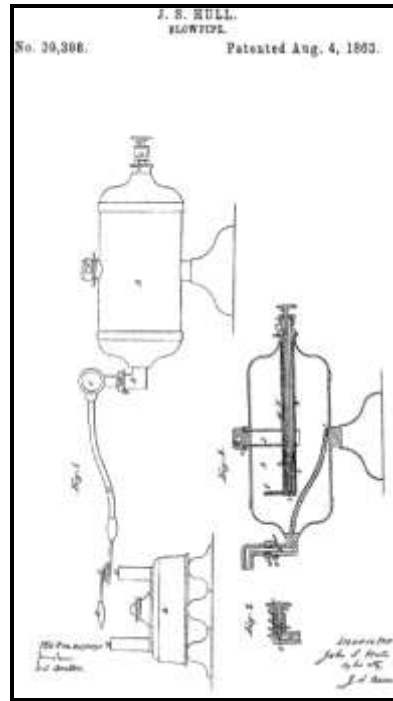


George Wanier's 1866 patent

John Hull's Inventions

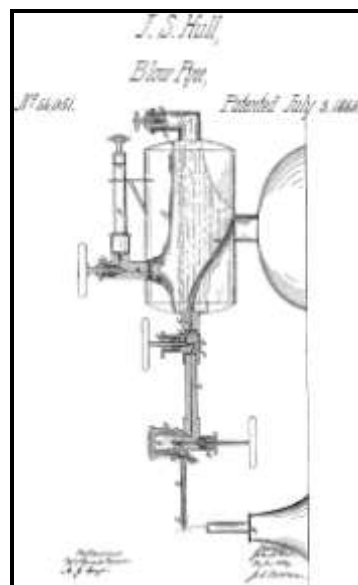
In **1863**, three years before Wanier's patent, John S. Hull was awarded US patent No. 39,398 for an Improvement in Blow Pipes. Hull's invention was still a two-piece torch, but the pressure for the fuel tank derived from a pump that was located inside the tank. There was still a separate burner to ignite the vaporized fuel, and to preheat the burner orifice to aid vaporization.

In the patent text, Hull claimed a torch in which atmospheric pressure was obtained by pumping rather than by heating of the fuel tank. His invention included a stopcock for regulating the flow of fuel to the burner jet.



1863 patent issued to John Hull

In **1866**, Hull was awarded US patent No. 56,051 for a Blow Pipe, which was an improvement over the previous Hull patent. The pump was external, but directly attached to the fuel tank, making it easier to adjust or repair. A cut-off valve was placed between the pump and the fuel tank and was located at right angles to the pump.



1866 patent issued to John Hull

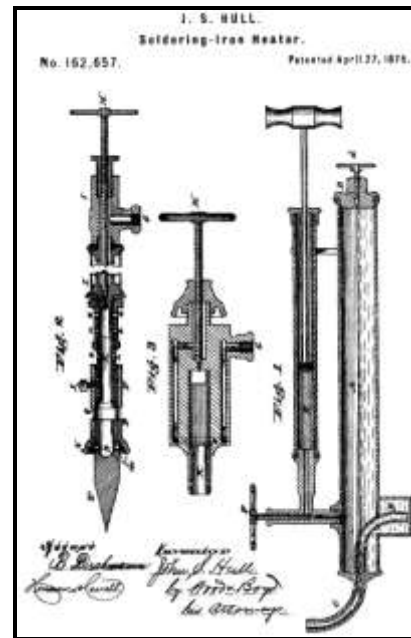
These features are familiar to us in many older blow torches. A needle-regulating valve was placed in the fuel line to the burner jet.

He also included an inline means for generating gas from the liquid hydrocarbon fuel. This torch still used a separate burner for igniting the vapor from the burner jet.

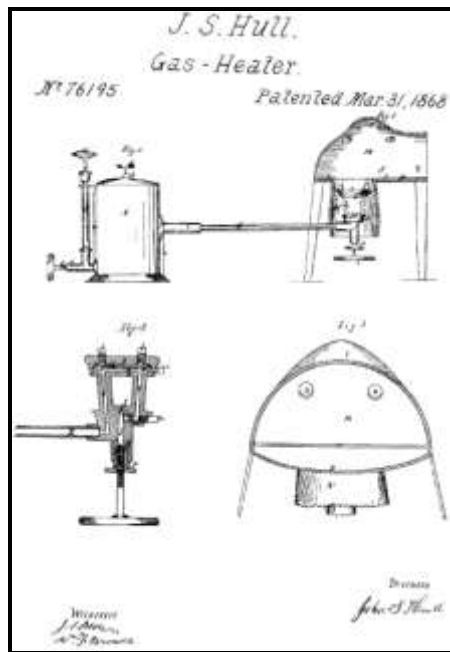
In **1868**, Hull received a patent for a Tinner's Fire Pot, which was used for heating soldering irons. The fuel tank was turned upright as an improvement over his 1866 invention. With this design feature, the fuel tank very closely resembled the tanks used in blow torches of the late 1800's and early 1900's.

The fuel, under pressure, was fed to a burner located under a heating chamber in which soldering irons would be placed. The burner had a flame spreader to heat the chamber into which the soldering irons were placed.

By **1875** John S. Hull had patented a self-contained soldering iron. His patent incorporated the improvements of the earlier patents, and combined everything into a single hand-held soldering tool, but without delivering an external flame.

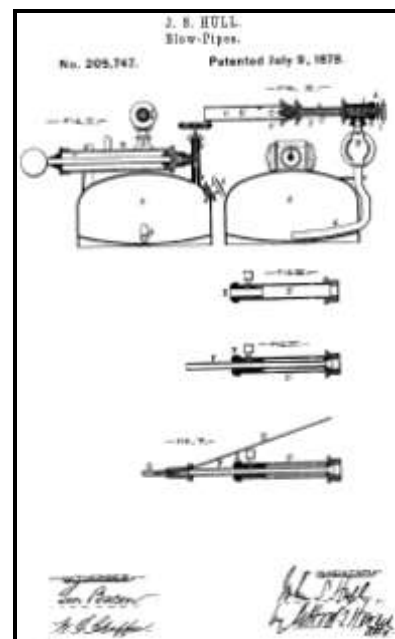


1875 patent issued to John Hull



1868 patent issued to John Hull

John Hull put everything together in a single handheld blow torch with his invention of **1878**. This patent, in which the pump happens to be horizontal, adds a combustion tube to the features of the earlier patents.



1878 patent issued to John Hull

Other features included a needle valve, with asbestos packing to prevent leaks, which was used to regulate or shut off flow of fuel to the flame.

While the application of the Tinner's Fire Pot was the heating of soldering irons, with the exception of a combustion tube to direct a flame, all the essential individual features of a blow torch are now present.

As Hull states in his patent, *“The invention consists, first, in combining in a single portable apparatus, a reservoir for the combustible fluid; an air-pump or air compressing device, connected to said reservoir by means of a pipe; a suitable burner having a pipe connecting it with the interior of the reservoir aforesaid, and provided with a regulating valve; and a combustion-tube, surrounding the nozzle of the burner, as hereinafter described.”*

The introduction dates for features of John Hull patents are:

Feature	Patent year
Integral pump	1863
Cut off valve	1866
Needle valve flame regulator	1868
Burner combined with gas generator	1868
Single handheld soldering tool	1875
Combustion tube	1878
Handheld blow torch	1878

Prior Patent Art

For the period 1845 through July 1878, BTCA has jointly collected 109 patents related to blow torches. Of these patents, 7 were awarded to John Hull. The breakdown of the remaining 102 patents is as follows:

Solid fuel	29
Pressure from heated fuel tank (e.g. two tank)	18
External gas or other fuel	17
Gravity fed liquid fuel	13
Mouth type blow pipe	10
Lamp only	4
Soldering iron only	3
Bulb used for pressure	2
Complex structure	2
Other misc.	4

The significance is that out of all of these 102 patents, only two come anywhere close to actually resembling John Hull’s patents by utilizing an integral pump to pressurize a fuel tank.

US patent No. 53,763 was awarded to Alexandre Schpakofsky and Nicolas Stange of St. Petersburg Russia. It uses a completely separate pump to apply pressure to the fuel tank, and it has a shroud surrounding the burner, which directs the flame. The illustration of this patent looks superficially somewhat like a blow torch.

Patent No. 162,727 was awarded to Henry Wellington in April 1875. The application for Henry’s torch is for lighting lamps, such as street lamps. The Wellington patent incorporates a number of the elements found in a blow torch, with the exception of a needle valve for controlling the flame.

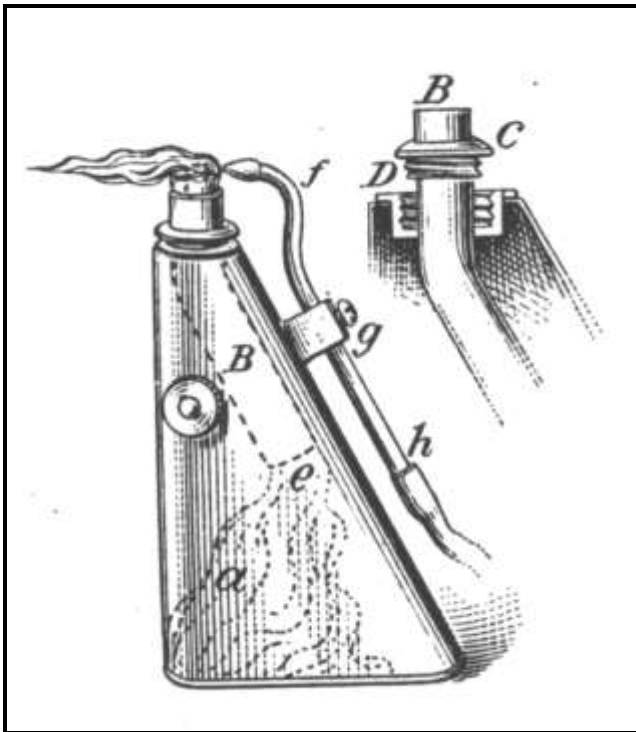
It is interesting that Wellington in 1883 patented the well know Wellington blow torch, using a burner similar to that in his 1875 patent. It is a very interesting coincidence that Wellington’s 1875 patent issued on the very same day, April 27, 1875, as John Hull’s Self Heating Soldering Iron patent No. 162,657.

With the exception of these two patents, there are NO other patents, which remotely resemble Hull’s succession of patents based on using an integral pump. Considering all of this information, I am convinced that John Summerfield Hull can truly be considered the **“Father of the American Blow Torch”!**



From time to time we’ve seen various types of homemade blow torches, some made from Coleman type lamps, others are just modifications to existing blow torches, and on a few occasions a torch that looks homemade, but with such a professional look, we’re always not quite sure.

After seeing an article on making your own alcohol torch, we now realize that handy machinists may have easily used such instructions and plans to construct homemade torches. The short article, dating to late 1904, was sent in by **Charles Smith**.



Homemade Alcohol Blow Torch

The illustration shows the completed alcohol torch with directions, and while somewhat abbreviated, the details would provide sufficient information for a skilled craftsperson to make such a torch. From the directions, every part of the torch would be fabricated, and other than the cotton wick material, everything else originated from brass sheet or tube stock. We would be pleased to send the construction details to anyone interested in fabricating the torch...let us know by contacting Ron Carr. The only promise is that you have to provide photographs of your completed work.



THE ARCHAMBAULT CO.

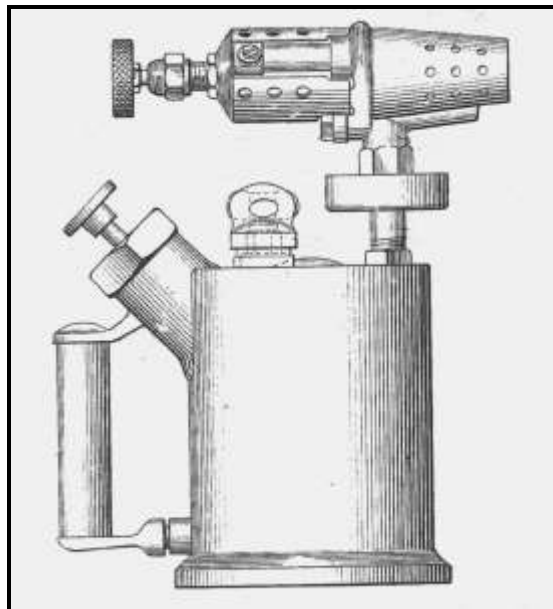
Graham Stubbs uncovered a 1905 letter from The Archambault Co. to a customer, the Ossipee Valley Telephone Co. in Limerick, Maine. Arthur J. Archambault is listed as the President of the company and at the time it was located in New York, NY. The letterhead features a firepot, but also indicates that the company produced blow torches...even though there is no blow torch illustration.

It appears that all of their products were kerosene fueled, and they catered to plumbers, tanners, and cable splicers.



The Archambault Company
Firepot
Circa 1905

A quick check of our patent list revealed that Arthur Archambault, while residing in Chicago, Illinois, was issued four US patents from 1914 to 1918. It's interesting to note that of the four patents, three relate to firepots and one is for a kerosene fueled blow torch. There's no reference to the Archambault Co. on any of the patents, and since we have seen no advertising information on the company, there's no way to determine if Arthur's company was moved from New York to Chicago, or if the company even existed during the 1914-1918 period.



The Archambault Company
Kerosene Blow Torch
Patented March 26, 1918

You'll quickly notice, from the patent illustration, that the Archambault kerosene blow torch looks very similar to a P. Wall style blow torch. The angled air pump and handle configuration are very much alike, however the Archambault torch does not have the coiled spring retainer system as found on a P. Wall torch.

You could very well own an Archambault torch and not even know it! Please review your collection to see if you have what you thought was a P. Wall torch, but looks more like the Archambault patent illustration. Please contact us if you have one of these rare torches.

(Note: When we last updated the patent listing, we inadvertently listed all of Arthur Archambault patents under the P. Wall Mfg. Co. Based on this new information, we'll now list Arthur's patents under the Archambault Co.)



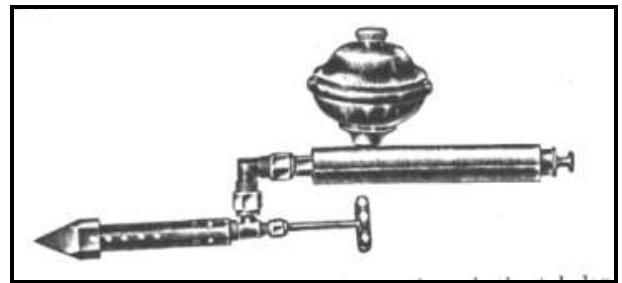
Another unknown blow torch manufacturer has surfaced thanks to the efforts of **Charles Smith**, the Voseller & Sebring Company of New York City. A January 1909 article from *THE METAL WORKER* revealed a new design for a Self-Heating Soldering Iron fueled by gasoline.

To date, Charles has uncovered only two references to the company and their unusual designed torch; a January article with a brief description and no illustration, and a follow-up February article with an accompanying illustration. Considering the torch configuration, it's not surprising that there were not additional articles or advertisements.

The torch included an air pump that also served as one of the handholds, and a gasoline fuel bowl was connected to the top of the air pump.

There was a universal swivel joint that connected the air pump to the burner assembly, and a valve handle that not only controlled the flame size but was also the second handhold. The article also mentioned that there was a small cup supplied that was used to start up the torch.... sort of a portable drip cup. With the drip cup, the torch could be up to temperature within three minutes.

The torch was 19 inches long and weighed almost four pounds when fueled. When the soldering tip was installed, the torch could be used as a soldering iron, or when removed it operated like a traditional blow torch.



Voseller & Sebring Self Heating Soldering Iron
Circa 1909

When examining the illustration, it appears that the entire torch would become very hot shortly after ignition. There's not much surface area on the torch to dissipate the heat, and it's assumed that it would become uncomfortable, very quickly, if not dangerous. Even if the torch did not get uncomfortably hot during operation, it would still be difficult to use for soldering since the operator had to use both hands to hold the torch, but not be able to apply solder...unless the operator had three hands!

We believe that this torch would fetch a sizable bid if it ever appeared on eBay since we assume that very few were ever manufactured.



BLOW PIPE SOLDERING.... WITH A CANDLE!

A 1904 article in *THE METAL WORKER* describes how to solder using a common candle blow pipe. The following text describes the process and includes the technique for keeping up

constant air pressure on the blow pipe...while breathing. Those members that attended the 6th and 7th Annual BTCA Convention will fondly remember **Graham Stubbs'** demonstration of the use of a blow pipe. The following information is from that article:

The common blow pipe is a simple little tool that is used in connection with an alcohol torch for soldering the finest and most delicate pieces of jewelry, and constitutes the sole method of soldering used by Britannia metal workers and jewelers, and the fact that such a varied assortment of articles are soldered by the blow pipe process leads one to surmise that it can be used to advantage on coarser work. (Editors note: Britannia metal is a silver-white alloy of tin, antimony, and copper that is similar to pewter.)

Though it is a familiar tool to gas fitters, many plumbers are ignorant of its use, and it is hard work to find one who ever saw a blow pipe used on lead work. It is an easy matter to become proficient in its use, and the trick of keeping up a steady blast, and breathing regularly at the same time, is soon learned, and, when once acquired, will stay with you always. This trick consists of making a bellows of your cheeks and using your tongue as a valve to close the entrance to the throat, leaving the passage from the nostrils to the lungs clear for breathing purposes. The only things necessary to purchase for practice are a common bent blow pipe, which can be had for about 15 cents, and a common candle.

To operate: The candle should be lighted, and when it burns well and freely, the tip of the blow pipe should be brought close to the flame and slightly above the wick. Then blow lightly through the blow pipe, and a pointed clear blue flame from 1 to 2 inches long, which will burn paper or char wood at a distance of 6 or 8 inches from the flame, will be the result. The flame is hottest and best when it shows a perfect cone-shaped blaze, and is obtained by a very moderate blast. The variation of the blaze can be noted by commencing to

blow very lightly and increasing the pressure gradually.

The flame will then show all stages from a smoky flame to a long blaze that cannot be concentrated on any small surface. The little sharp tip is where the hydrogen burns, and is the hottest part of the flame, being the part that is used for soldering.

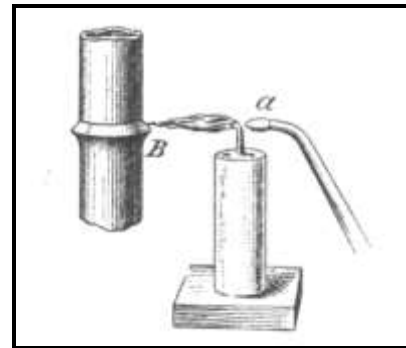


Illustration showing blow pipe position, flame size, and location.

Now, having noted these peculiarities, and knowing the perfect flame by sight, we will proceed to acquire the steady blast. The blow pipe should be held between the lips, which will form a tight packing around it, and must not come in contact with the teeth. The cheeks are then inflated, which will have a tendency to throw the tongue back to the throat and prevent the air in the mouth from blowing out through the nose. Now, by contracting the cheeks, and throwing the tongue slowly forward, the air will be forced through the blow pipe. This action is assisted when exhaling air by the pressure of the lungs, but when inhaling air the muscular contraction of the cheeks is depended upon entirely for the blast.

The ability to keep up a steady blast is merely a trick, or knack, and is learned with a few hours' practice. When learned, the length of time that the blast can be kept up depends solely upon the strength of the muscles of the cheeks of the operator. If these did not tire, the blast could be kept up for an indefinite time. Having learned to keep up the steady blast and get a perfect flame, the beginner will want to practice soldering.

We actually attempted to solder using a blow pipe and common candle as described. We utilized a short piece of surgical tubing and inserted a common straw into one end as the blow pipe. (We could not find one of those mentioned 15 cent blow pipes...so we had to improvise.) After we ignited the candle, we arranged two twisted copper wires adjacent to the flame that were held in place with a small vice. Some flux was applied to the twisted wire pair to facilitate the soldering process. When the candle was burning bright, we began blowing into the surgical tubing, and adjusted the position of the straw end to achieve a sharp blue flame. After we melted the end of one straw, we quickly learned to keep the straw away from the flame, while also remembering not to breathe in from the straw!

After 15 or 20 seconds we applied a very thin solder, and the heat from the candle was sufficient to easily melt the solder...and it produced a very good solder joint. It's easy to see, with a hotter flame from an alcohol or gasoline torch and a proper blow pipe, how a user could solder just about anything.



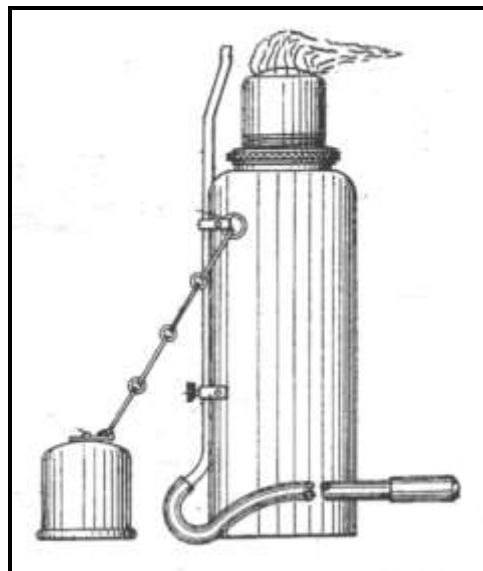
SOLDERALL... REVISITED

We printed a short article on the Solderall Company in issue #15, dated December 1999, and since then we've uncovered new information. SOLDERALL is not the name of the company, but is actually the trademark name of a blow torch manufactured by the LS Brach Co. of Newark, NJ.

The LS Brach Company was issued two patents, 1,398,676 dated November 29, 1921 and 1,469,795 dated October 9, 1923.

The 1921 patent is for a small round alcohol torch (see illustration) that included a built in blow pipe with hose and mouth piece. A screw on cap was provided with a small chain to prevent its loss.

The 1923 patent described another alcohol torch that we believe was never produced.



LS Brach Company Alcohol Torch
Patented November 29, 1921

The SOLDERALL torch shown in the 1999 newsletter indicates that the word SOLDERALL is a trademark, and just below are the words: Patent Pending. We've yet to uncover the patent associated with this torch.



SOLDERALL torch as
shown in the 1999
newsletter article.

We would like to hear from any collector that has a SOLDERALL torch so we can confirm what we assume about the LS Brach Co. We're most interested in any information that may be listed on your torch....so please contact us with any information.

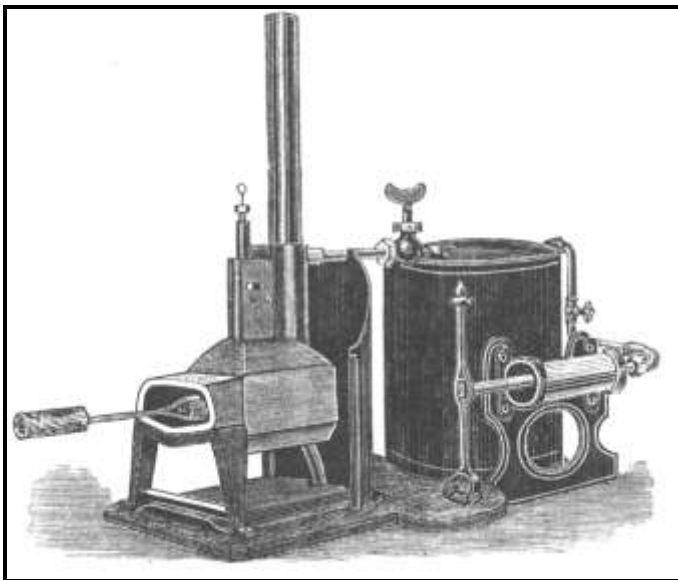


SCHULTZ & JONES FIRE POTS

Very early in 1879 the Schultz & Jones Company of Baltimore, Maryland introduced to the market a very advanced fire pot for its time...not to mention the elaborate design.

In the late 1800's, air pumps were just being introduced into blow torch related products, and the Schultz & Jones' ECONOMY Fire Pot included a very elaborately designed air pump.

During the infant years of fire pots, blow torches, and soldering irons there were new and innovated features that were frequently introduced. As the designs advanced, manufacturers were quick to incorporate them...assuming there were no patent infringements. We see no patent references in the March 15, 1879 article that **Charles Smith** sent in from *THE METAL WORKER*, so other manufacturers were free to adopt a similar design.



Schultz & Jones Fire Pot, circa 1879
Note elaborate air pump on right side of fuel tank

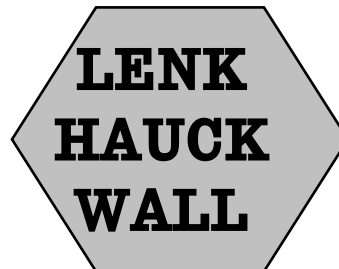
From the illustration, one can easily see the elaborate air pump with its decorative support bracket located on the right side of the fuel tank. In addition to the air pump, the fuel tank was also a unique design that was fabricated from heavy leaded iron, strongly riveted, and included wrought iron connecting pipes. It was tested to a pressure of 100 pounds, and to make it even more secure it was enclosed by another tank filled with water that covered the inner fuel tank on all sides to the depth of one inch! Talk about an over design!

There is no mention of dimensions or weight, but the fire pot was actually a portable unit that could easily be moved about in shops or buildings. The company also offered a

stationary version with a much larger fuel tank buried underground with connecting pipes.

One has to appreciate the ornate designs that were produced during that period in history, and marvel at the technology that was being introduced.

◆ ◆ ◆ ◆



A HUGE THANK YOU goes out to **Graham Stubbs** for all of his work in compiling the three indexes that are included in this mailing. One can tell from the content that it took Graham quite a bit of time to amass the information and put it into a meaningful document.

With these new indexes, we now have detailed catalog information for most of the major US blow torch manufacturers. Please contact Ron Carr or Graham Stubbs if you have any additions.

◆ ◆ ◆ ◆

8th ANNUAL BTCA CONVENTION

We're on schedule for the 8th Annual BTCA Convention in Las Vegas, Nevada on Saturday, September 24, 2005. The event will again be held at the Santa Fe Station Casino in the North West part of Las Vegas.

Details of the event were mailed out to all members in early June. If you did not receive your attendance package and wish to attend, please contact Ron Carr as soon as possible.

This year's event will include additional displays, demonstrations, and a few guest speakers. In addition, **Ron & Janet Carr** are hosting a BBQ on the evening of September 23rd. All attendees are invited and warmly welcomed!

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UK Blowlamp Collectors

By Graham Stubbs

In late April, early May 2005, I was able to visit blowlamp-collecting friends in the United Kingdom. This year my trip was too early to take in the Blowlamp Society's annual meeting, so Ray Hyland, editor of the "Blowlamp News", arranged for me to meet several of the group's members at the home of Keith Hawkins, who had plenty of space to set up displays.

In addition to Keith and Ray, three other members, Ken Longden, Tom Bartlett, and Max Rhodes brought together in excess of 1,000 torches. Here are the five blowlamp collectors and just a few of their interesting torches.



From L to R, Ken Longden, Keith Hawkins, Ray Hyland, Tom Bartlett, and Max Rhodes



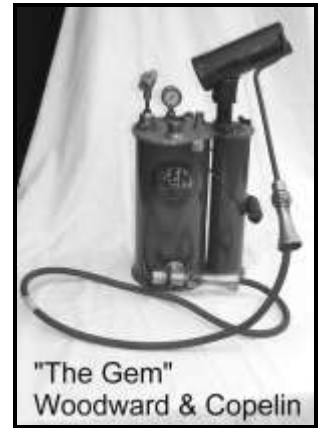
Primus 951 Paint Burner



Baverstock Searing Iron



Two Nozzle Torch
Primus 611



"The Gem"
Woodward & Copelin

THE TORCH

Official publication of the Blow Torch Collectors Association and is published three times per year, March, June and December

Editor
Contributing Editor
Contributing Editor

Ronald M. Carr
Graham Stubbs
Dr. Charles Smith

THE PURPOSE of BTCA is to preserve the history of blow torches and related equipment, to encourage the identification, classification, and exhibiting of such equipment, also to promote the study and better understanding of operation, purpose, and application.

Membership in BTCA is open to any person sharing its interests and purposes. For membership information, write to: Ron Carr, 6908 April Wind Avenue, Las Vegas, NV 89131-0119, email to: RMCarr1@cox.net, or by phone: (702) 395-3114.

THE TORCH encourages contributions from anyone interested in our purpose. Articles can be submitted in any format and should include supportive literature whenever possible. All submittals should be sent to Ron Carr at the above address.

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