

THE TORCH

NEWSLETTER OF THE BLOW TORCH COLLECTORS ASSOCIATION
Issue #56 June 2013



Atlas self-heated soldering iron patent model, see story page 4. From the collection of Mike Gratz.



Brazilian Jackwal No. 32, from the collection of Arthur Nascimento.



Zurich Oerlik No. 6, from the collection of Gerard Mueller.

NEW MEMBERS

John Burke of High Ridge, Missouri is a twenty-year collector with over three hundred pieces in his collection. John saw his first blow torch at a tailgate sale and it reminded him of the torches his dad used as a Master Plumber many years ago. He actually instructed him on how to fire one up and how to use it. John has close to two hundred soldering irons; lots of old lead solder spools, lead bars, and blocks and disks for soldering.

Kevin Clevish of Sedro-Woolley, Washington is a relatively new torch collector. "I started collecting two summers ago. A friend and I were riding our motorcycles in the country and we stopped at an estate sale for the fun of it. The estate was from a collector/hoarder of everything. It was enough to get you "junk drunk" from the magnitude off unique and not often seen things, to dozens of common things. Everything from blowtorches, to Vietnam era surplus (including smoke grenades), to three wheeled bicycles (even a pedicab/ bicycle taxi), to turn of the century bottles, to a few hundred knives. My friend told me to go home and get my car because we both saw a lot we wanted to buy, especially all the torches. When I got back he had already purchased the torches for fear someone else would snatch them up. I had never seen one before and instantly enjoyed them. I bought most of them back from my friend.. I also collect automobile related supplies which includes soldering irons and other body repair items, a 1930s three chamber Merit Oil lubster that still needs a few parts, and metal gas cans from the 1950s and 1960s."

Beverly Fletcher of Memphis, Tennessee.

George Frederick of Toccoa, Georgia started his torch collection just six months ago. "This is one of the best hobbies I have ever had...at seventy years old, it really keeps me going!" He was in the US Coast Guard and a welder on a Coast Guard cutter where he also used blow torches. George also collects old metal working equipment and vintage radios.

Arthur Nascimento Junior of Tijuca, Rio De Janeiro, Brazil is an eight-year torch collector. He received his first torch as a gift and all of his torches are restored and protected with a removable silicon oil layer. Most of his torches are functional and he uses them in lieu of propane torches. "I believe that blow torches are the best tools ever made. I do not like to use modern tools and prefer to use older style tools when available." Arthur also collects and uses hand planes, scrapers, plough planes, brace and hand drills.

Daniel Ormonde of Pleasanton, California began collecting torches just a few months ago. "My wife and I were going through a local antique store when i saw this Itati brass blow torch that was manufactured in Argentina. I purchased it for \$30.00. I cleaned it with Blue Magic and was blown away by how nice it looked. I had to see if it was still in working condition, I lit it off and it did fire up!!! I knew I had a problem since the pump plunger was starting to stand up, which indicated a bad check valve. I shut it down immediately and found fuel in the pump tube. Since it has a caged check valve, I am not sure how to fix that. The fact that it did fire up was great." Daniel also collects antique hand tools and gear-driven car jacks from the 1920s and 1930s. He also is restoring a 1964 Ford Falcon.

Mitch Wohlmut of Nineveh, Indiana is a four-year collector with most of his collection restored and displayed around the house and in his Man Cave. He received his first torch as a Christmas present from his wife. It was on sale at an antique shop, and she knew that Mitch liked brass and old stuff. Mitch's wife also purchased for him a one-year membership to BTCA....what a great wife! Mitch also collects soldering irons.

WELCOME ABOARD!

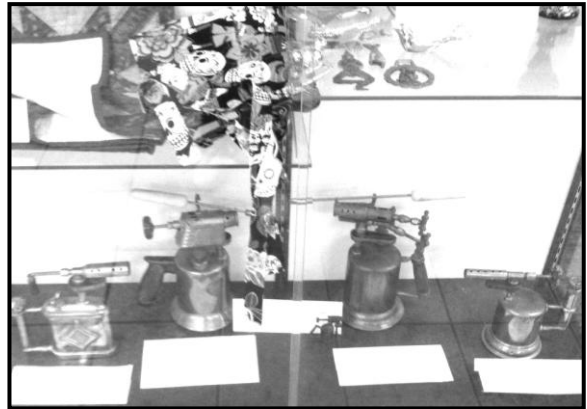




NOTES FROM ALL OVER



Ann Clark sent in a photo of a few blow torches that she has on display at the Pierce County Washington Auditors office where she works in Tacoma, Washington. →→→



One of our new members, **Arthur Nascimento** of Brazil sent in a listing of Brazilian blow torch manufacturers: JACKWAL, GASOL, PILLING, and GUALCO. Out of the four original manufacturers, JACKWAL is the only one still manufacturing in Brazil. They do not produce blow torches, but similar types of equipment....check them out at JACKWAL.COM.BR. According to Arthur, most all Brazilian blow torches before WWII were imported from Germany and Sweden.

Jean-Pierre Leymarie provided an updated website address for the French blow lamp collectors group, LAMPTEROPHILE CLUB...WWW.LAMPEASOUDER.FR, check it out!.



TED'S CORNER



BTCA member **Ted Maire** is an avid torch collector, but also an experienced restoration expert. Ted's restoration tips provide helpful suggestions to those many members that do restoration work on blow torches and other similar items. We always welcome feedback and would like to hear from members regarding these restoration tips....please let us know what you think. Have a restoration problem, contact us and let Ted provide a solution.



DISASSEMBLY

I always find it easier to disassemble torches for restoration. It enables you to detail each individual piece. I always start with removing the burner assembly from the tank. The typical way to do this seems to be to use a pliers or Vise-Grips to unscrew the feed tube from the tank.



The best way to remove the burner without creating tool marks is to use a vise as shown in the photo on the left. Put a piece of leather in the jaws of the vise to protect the burner. If you don't have a piece of leather, use an old leather work glove or something similar. Insert the burner into the vise with the torch handle on the left. Tighten down the vise jaws only enough to make it snug. Do not over tighten. Place your right hand on the bottom of the tank to keep it straight. Pull the handle of the torch toward you and it should unscrew relatively easily. A steady even pressure usually does the trick. Try not to use too much force. I find a good rule of thumb is: if you start dragging the workbench around the room, you should try some other method! If it still does not come apart, try heating the connection between the burner and the feed tube.

This should enable you to remove the burner from the feed tube and still give you ample room to clean and polish the tank. Be careful not to heat the connection between the feed tube and the tank since that would melt the solder on the tank fitting.

This same method can be used to remove frozen filler plugs in the bottom of torch tanks. The jaws of my vise are four inches wide and easily fit down into the concave bottom of torches.

STRAIGHTENING BENT SOLDERING IRON HOOKS

I have had many torches with bent soldering iron hooks and I was always at a loss as to how to straighten them. Many years ago I would attempt it with only minor success. The problem is that when you try to bend it back into shape with a hammer, you usually put stress on one specific spot and the usual result is that it cracks or breaks. I, therefore, no longer attempted to repair them. I recently came up with the idea of using a tapered steel rod.

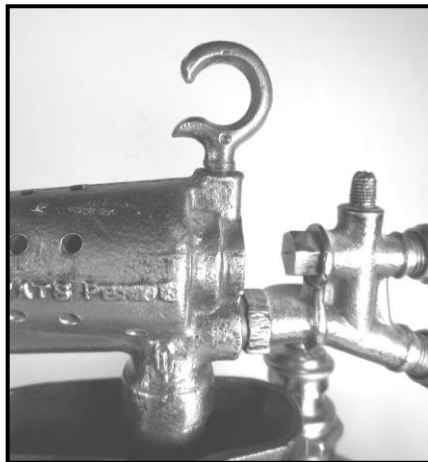


The rod would be inserted into the inner dimension of the hook and the hook would be hammered gently down the taper of the steel rod using a plastic hammer. This would apply equal pressure on the inside surface of the hook and force it back into shape. The result would be that the center of the hook would become a perfect circle with the desired diameter. Just remember to persuade it back into shape using a plastic or fiber hammer. Many light blows are much



better than a few heavy blows.

I actually purchased a jewelers tool that is used for measuring ring sizes. I looked on eBay and found exactly what I needed listed under "Ring Mandrel" for around twenty dollars. You certainly do not need to purchase such a tool; any tapered metal rod will work just as well. (Note: see the back page for the photos relating to this suggestion.)



One final tip....I recently received a torch in the mail that had a pint of gasoline inside...and it was a good candidate for the following suggestion. **Charles Smith** advised me on how to handle this situation since he has received quite a few non-empty torches. He suggested rinsing it out with alcohol. I tried his suggestion...and it works great. It also eliminates the gasoline smell.



A MAN AND HIS SCULPTURES, PART II

By **Mike Gratz**

"About one year ago I became interested in the patent list issued by BTCA. I spent many weeks reviewing numerous patents by searching on GOOGLE PATENTS. I compiled a favorite list of approximately one hundred and printed out twenty of my most favorite. I particularly liked the Atlas self-heated soldering iron, patent No. 936,816 dated October 12, 1909, and decided to make a patent model. I knew it was going to be a real challenge considering some of the intricate parts that are shown in the patent, but I decided to give it a try." (Editor's note: patent 936,816 was awarded to the Atlas Torch and Brass Co. of New York, and to our knowledge, this design was never manufactured by this company or any other company.



It is interesting to note that there were other similar named companies that did manufacture blow torches and self-heated soldering irons; the Atlas Brass Works of San Francisco, CA and the Atlas Torch Mfg. Co. of Chicago, IL, however there is no information that links any of the companies.)

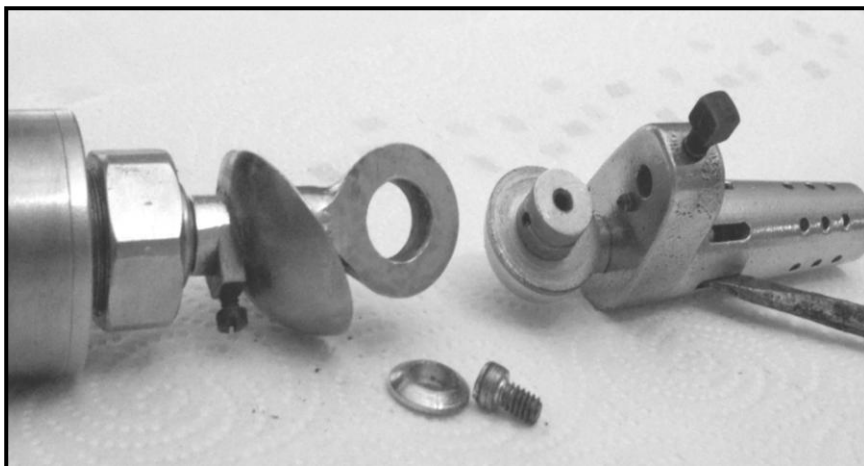
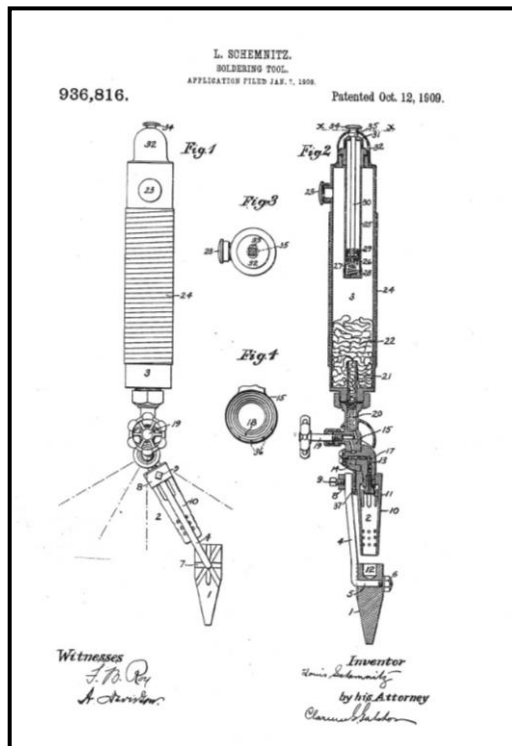
“The patent model took me three months to build and 200 hrs. The torch is eighteen inches long with a 1.5 inch diameter fuel tank. The model was built to be functional and will be fueled by propane; however, I have not had the time to fire it up. I did bench test the burner and burner block and it does fire up with propane.”

A Clayton & Lambert air pump was modified to adapt to the model. The bell-shaped air pump cover was made by pushing a piece of flat brass stock into a cylinder with a one inch diameter steel ball. A hole was drilled into the top of the cover and then trimmed to size. For the cover female threads, they were removed from a brass gate valve and soldered to the base of the cover. The male threads also came from the brass gate valve and were soldered to the inside of the fuel tank.

The fuel tank was made from an old brass sink drain pipe. The union on the front of the fuel tank is a hardware store purchased item. The fuel tank filler cap was fabricated from brass stock.

The concave drip pan was pressed out of a sheet of brass using a 1 3/8 diameter steel ball, then trimmed to size. My drip pan is somewhat different from the patent drawing since it has a collar and set screw....the original part, had it been manufactured, would have been cast in place.

The valve body was fabricated from brass stock and has a steel needle valve. The handle was fabricated from various small brass parts that were soldered together, and then painted black.



Details of the spherical swivel joint.

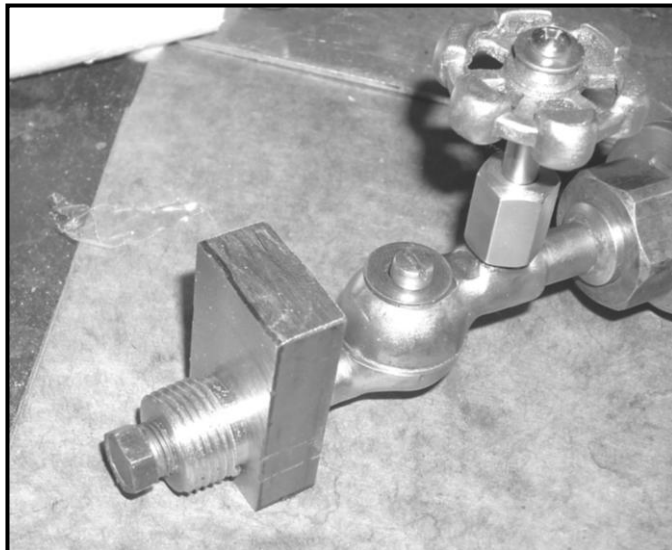
Remember, what you see in this photo was all machined or formed out of raw brass stock.

The toughest part to make was the spherical swivel joint, a real challenge even for me!

Two pieces of brass stock were soldered together, and then turned on a lathe. The two soldered pieces were unsoldered, repositioned, and re-soldered. The re-soldered piece was again turned on a lathe to shape the nipples. The final pieces were hand sculptured with a Dremel tool to complete the parts.

The burner block was machined from brass stock and has a threaded spout on to which the burner nozzle it attached. →→→ The patent version would have had the burner block and nozzle cast in one piece.

The burner nozzle was also machined from brass stock, threaded on one end and machine tapered on the other end.↓↓↓ Symmetrical holes were then drilled into the nozzle to duplicate the patent nozzle. A hole was drilled into the top of the burner block and a soldering iron rod was inserted and held in place with a detent screw.



The burner nozzle being tapered. One end has already been threaded.

The copper for the soldering iron was salvaged from a hand-held soldering iron and was machined and hand-worked to match the patent drawing.

(Editor's note: the photo on the front page of the Atlas patent model shows a brass block under the front portion of the burner assembly. The block was also made from brass stock and is in place to support the front of the model for display purposes.)

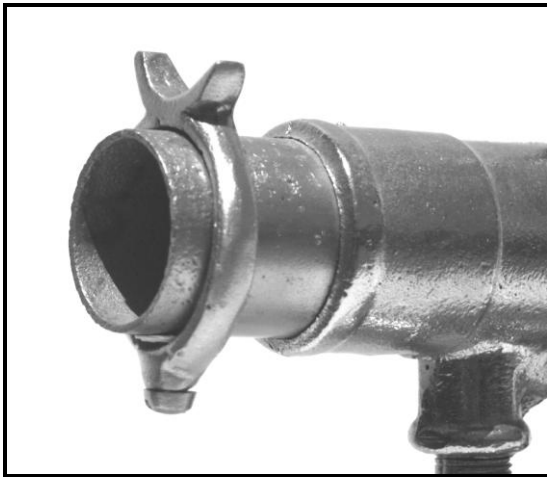


WHITE MFG. CO. SOLDERING IRON HOLDER PATENT

By Graham Stubbs

“On June 29th, 1897, John C. Dupee of Chicago, IL was awarded US patent No. 585,641. He assigned one half of the rights to his boss Ripley J. White, proprietor of the White Mfg. Co., maker of blowtorches.”

“We are all familiar with the soldering iron (SI) holders found on so many blowtorches, with an inverted hook close to the rear of the burner nozzle, and a pair of prongs close to the tip. John Dupee’s description was the first instance of this concept appearing in a patent.”

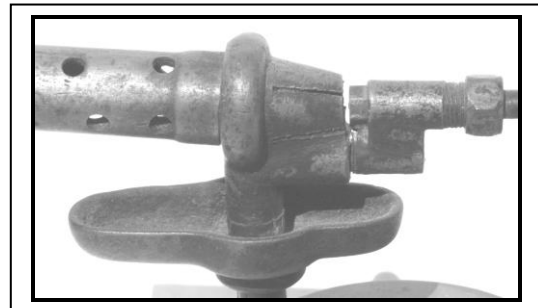


**QUICKMEAL TORCH
SOLDERING IRON FRONT SUPPORT**



**WHITE MFG. NO. 54 TORCH
BURNER WITH SOLDERING IRON HOLDER
(Photo Charles Smith)**

“Dupee’s patent also claimed the coil arrangement that can be seen inside the illustration of the fuel tank. Additionally, the patent describes, but does not claim as novel, air-inlet slits at the rear of the burner. The torch shown below has the air-inlet slits per the Dupee patent. The torch does not appear in known catalogs of White Mfg. torches. Note that the applied brass label, which carries the patent number, was apparently re-used by White on other torches to which the patent did not apply.” (See Vintage Blowtorches page 271. Note that the patent number cited there should read 585,241)

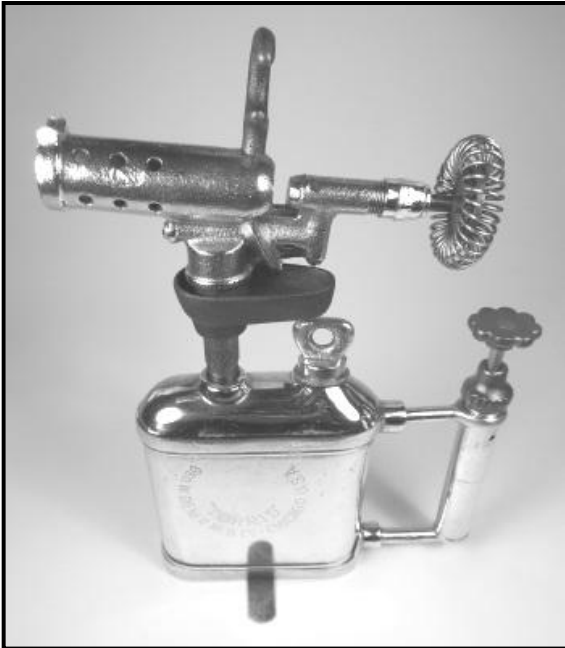


“This concept of the soldering-iron hook and support was arguably one of the most important inventions in the history of blowtorches, and makers of blowtorches worldwide adopted it.”



VARIETIES OF AIR CONTROL VALVES

By Ted Maire



"I recently purchased the Diener model No. 14 auto torch pictured to the left . The torch has an iron pump knob and pump cap. The eight lobed pump knob is stamped "TO OPEN – TO CLOSE". There are two arrows also stamped into the knob indicating that turning it clockwise closes the pump assembly and turning it counter-clockwise opens the pump assembly.

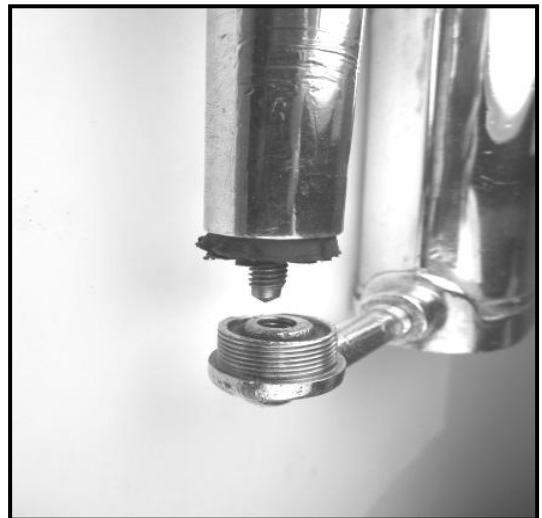
When I restore a torch, I totally disassemble it. After I disassembled the torch, I found it interesting that the "CLOSE" action sealed off the pump cylinder from the tank. The intent is to keep the pressure in the tank from bleeding back into the pump cylinder. The pump rod is pointed at the end similar to a control arm used to control fuel and flame output. The pump rod fits into a seat built into the bottom pump support and acts as a valve to seal off the pump cylinder from the tank.

I found this to be a unique system and did not recall seeing this method used on any other brand of blow torches. I

decided to take a closer look at the internal workings of the Diener as well as methods used by other manufacturers over the years."

"The picture to the right shows the pump in the "OPEN" position. The threaded and pointed bottom of the pump rod is free from the seat in the lower pump support."

"In this position, the pump can be used to pressurize the tank. There is also a secondary valve built into the lower pump support that will be described later in this article."



"The picture on the left shows the pump rod in the "CLOSED" position. It is tightened down to seal off the pump cylinder from the tank. The leather cup on the pump plunger also serves to seal the area."



"In this position, the pump can no longer be used to pressurize the tank. Due to the fact that the pump rod is threaded on the bottom, there is no possibility of the pressure inside the tank forcing the pump in an upwards direction."

"I have restored many torches over the years and have disassembled each of them. I find it interesting that there were many different methods used to keep the pressure in the tank from escaping back into the pump assembly."

"The earlier methods (around 1900) incorporated a butterfly valve on the top of the tank. On The Butler style Philadelphia Globe torch (shown on the right) the air is forced through the bottom of the pump assembly and travels up a piece of copper or brass tubing. The tubing goes from the lower pump support to a valve on the top of the tank."



"In these examples, the lower support is merely soldered to the outside of the tank. The support does not enter the tank."

"Shortly thereafter, companies such as White and Turner placed the butterfly valve on the lower pump support. The concept was the same but the process was simplified. There were significantly less parts and torches were easier to assemble. I have seen these valves placed in every conceivable location on the lower support."

"You can find early examples with the valve in the back, on the side, on the bottom, and on the stem. The one-pint Turner "Electric" torch, shown below left, has the butterfly valve placed in the rear of the lower support."



"On most torches, the external valves actually served in a secondary role to internal valves, a backup system if you will. Early internal valves weren't as reliable as later versions. External valves were used to seal off the tank after the pump was pressurized."

"The Diener No. 14 auto torch, shown on page nine, also used a ball valve in the passageway leading from the cup portion of the lower support into the tank."

"The ball was sealed in the lower support passageway by a metal sleeve pressed into the end of the lower support."

"There was no spring, the ball floated free."

"On the down stroke of the pump, air would pass around the ball and into the tank."

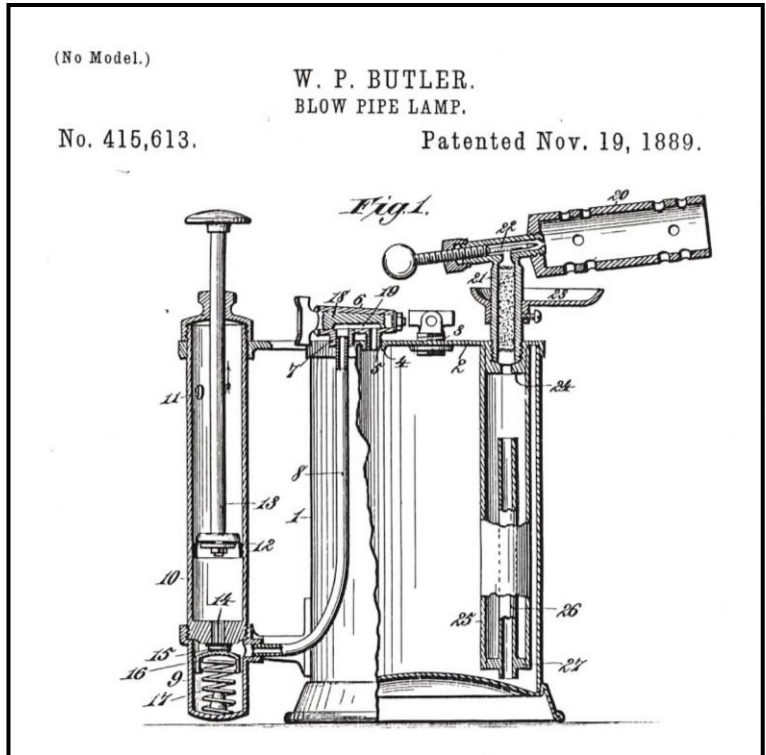
"On the upstroke the ball would seal the passageway back into the pump cylinder."

“The Butler patent No. 415,613, shown on the right, demonstrates that the butterfly shut off valve at the top of the tank is secondary to the mechanism in the base of the lower pump support. The spring loaded mechanism allows air to pass into the fuel tank on the downward stroke of the piston and then seals the lower chamber on the upward stroke.”

“Once the fuel tank was pressurized, the butterfly valve would be closed to seal off the fuel tank.”

“Blow torches of the same period that had the butterfly style shut off valve as a component of the lower support also had a secondary air valve. For the most part they were a simple ball check valve without a spring.”

“This method was the same as on the Diener No. 14, shown on page nine. This secondary mechanism could have been included on the bottom of the pump cylinder or as part of the lower support. As time went by, the air valves became much more sophisticated and the need for a secondary valve was eliminated by all manufacturers.”



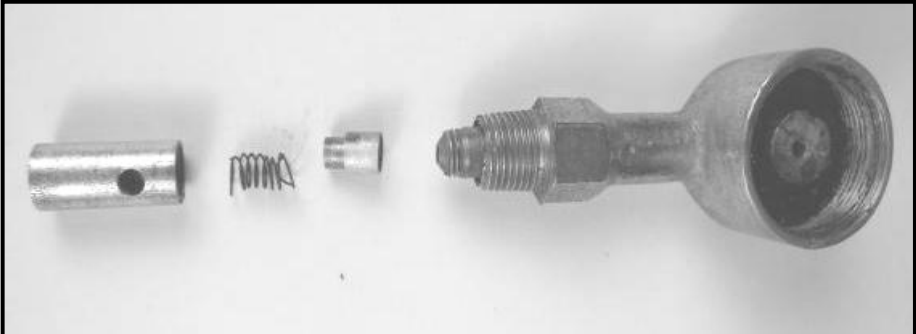
“The picture to the left represents another secondary method for sealing the pump cylinder.”

“In this case the pump knob can be screwed down into the pump cylinder cap. In doing so, the leather cup seal on the piston is pressed firmly against an elevated platform on the inside of the lower pump support that is surrounded by a leather gasket. Tightening down the pump rod seals off the inside of the pump cylinder. The threads lock the pump rod in place.”

“The process is obviously very similar to the Diener system as shown on page nine. This system was also used by Bernz and Schaefer & Beyer. I am sure it served the purpose since both companies also had a very good spring loaded check valve built into the lower support.”

In the picture, the Bernz pump assembly is on the right. The pump on the left is from a Schaefer & Beyer auto torch with a similar mechanism. So similar, in fact, that Bernz sued them for patent infringement.”

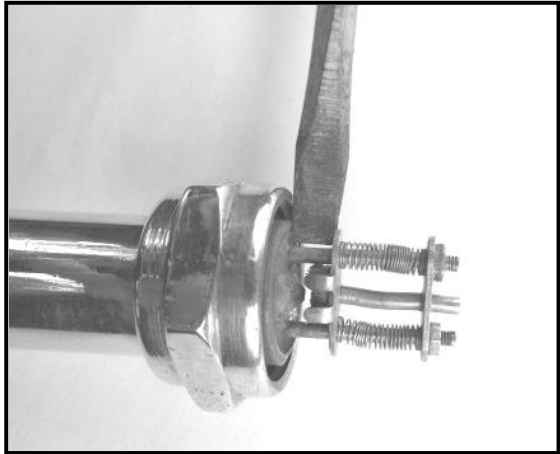
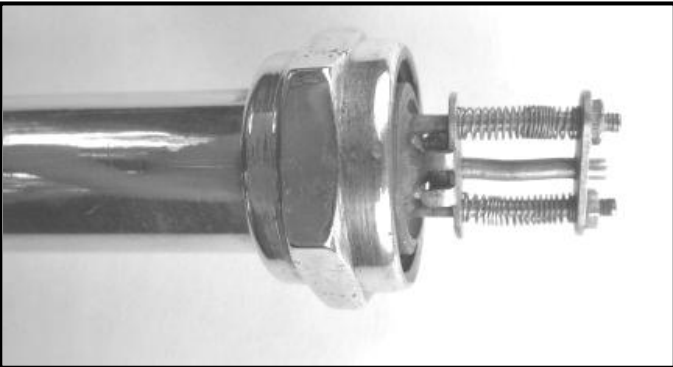
“The picture on the right shows the Bernz air control valve at the end of the lower pump support. It also shows the raised area at the bottom center of the cup portion of the lower pump support. This raised area is surrounded by a leather gasket that aids in sealing the pump cylinder when the pump rod is screwed down into the pump cap. The leather cup on the pump piston presses against the leather gasket at the bottom of the support when the pump rod is tightened down.”



“The picture on the left shows an exploded view of the Bernz lower pump assembly. The components of the air valve are the housing, piston, and spring. The piston is the shape of a cup and inside the cup is a small piece of leather. When the torch is pressurized, during the down stroke, the piston inside the valve is forced back past the two small

holes in the housing and air is released into the tank. During the upstroke the spring presses the piston inside the valve against the hole in the end of the lower support and closes it off. It is a simple but very effective mechanism. This type of valve has been used on the torches of many manufacturers without requiring a secondary system. The placement of the hole, spring, and piston varies by manufacturer.”

“The picture to the right is of the lower section of the pump cylinder on a Clayton & Lambert No. 47 auto torch. This particular style of shut off valve requires no secondary valve. In this picture the valve is closed. This is the position it would be in during the upward stroke of the pump piston. The double spring assembly presses a small piece of leather against the orifice in the bottom of the pump cylinder. This effectively closes off the bottom of the pump cylinder.”



“In the picture on the left, the same valve is shown in the open position. On the down stroke of the pump, the valve and the leather seal are forced downward and air passes into the tank via the lower pump support. The leather seal is held in place by clips on the top of the valve assembly. This method is very typical of both C&L and Ashton torches.”

“Excluding the butterfly valves, most air valves are subject to failure. Sludge and heat contribute to the breakdown of the leather parts and small passageways easily get clogged. Since most of these parts reside in the lower support, it is no wonder that it’s difficult to find a pump cylinder without tool marks.”

“I would like to thank **Graham Stubbs** for his support and guidance in the preparation of this article.” Ted



FLAT BURNERS

By Graham Stubbs

Among the more interesting of blow torches are those equipped with flat burners, intended to provide a flat fan-shaped flame. The shape of the flame would cover large areas making it very useful for many applications, including paint removal.

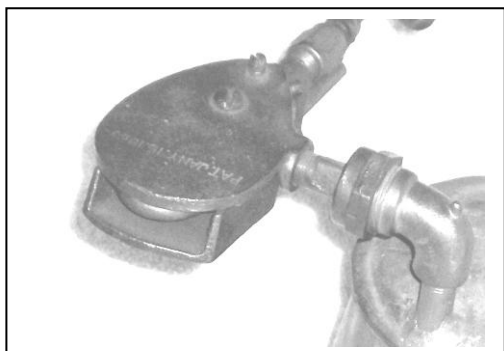
CLAYTON & LAMBERT

One of the first such torches was a by-product of an invention of a vapor burner for use in firepots. In the description in his 1899 patent, the inventor John N. Clayton of Ypsilanti, Michigan, said:

“My improved burner is intended for use by plumbers for heating soldering irons and melting lead ... a burner which will give considerable heat and which it is difficult to blow out, the burners now in use for this purpose being liable to become accidentally extinguished when used in outdoor work.”

He assigned one half of his invention to the Lambert brothers, Joshua, John, Charles, and Bert.

In order to preheat the vapor, Clayton passed the fuel through a curved tube attached to the underside of the metal plate shown in the close-up picture below. The patent date, Jan 15, 1889 is stamped on the top of the burner.



C&L No. 1 FIREPOT

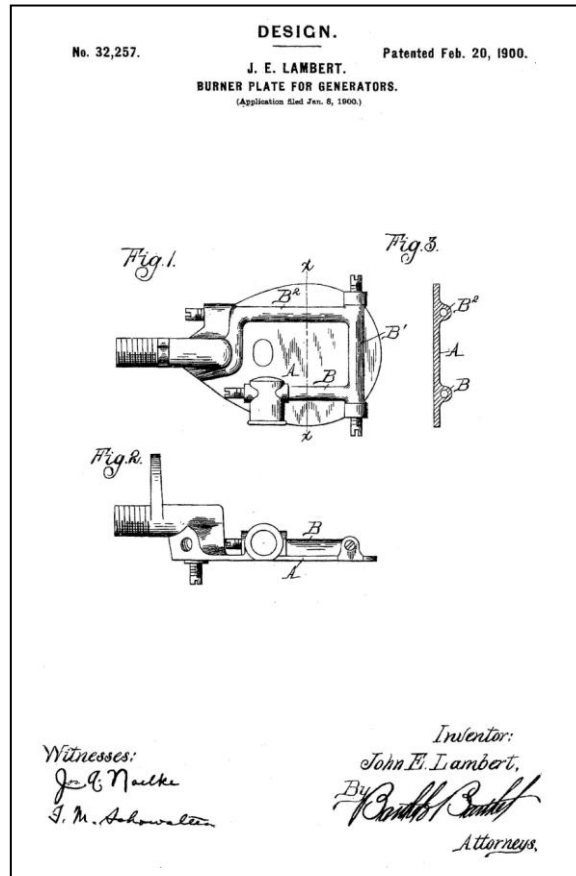
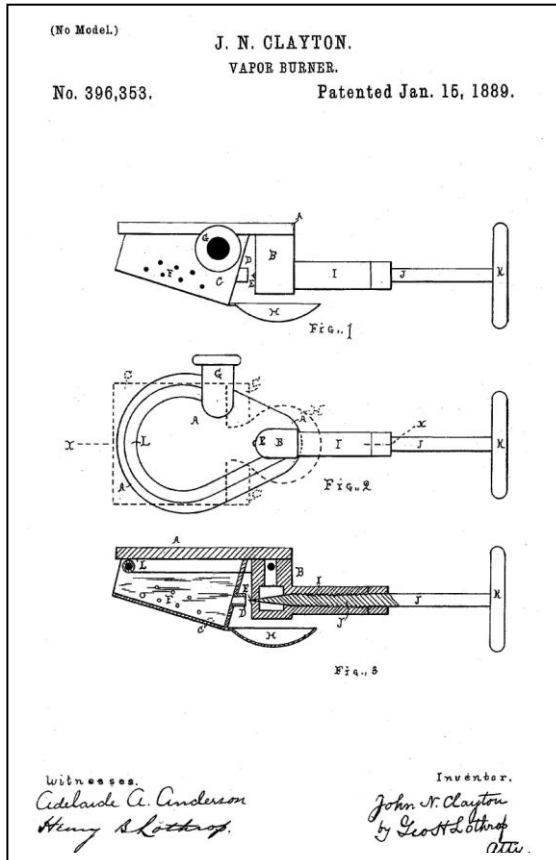
The new firepot, with the patented burner mounted on a one-gallon fuel tank, was called “The Boss” No. 1. With its hood removed, the firepot found application as a paint burner, and the company started to market the burner attached to a smaller fuel tank, calling it “The Boss” Paint Burner.

Cleaning accumulated soot from the curved tube turned out to be problematic. On February 20, 1900, John Lambert was issued a design patent for an improvement with three straight tubular sections molded into the underside of the top plate, with clean-out screws at the end of each through hole.

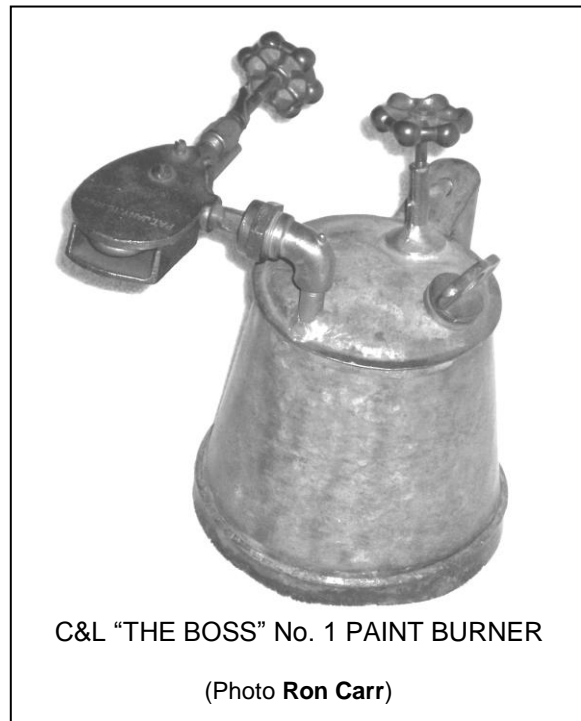
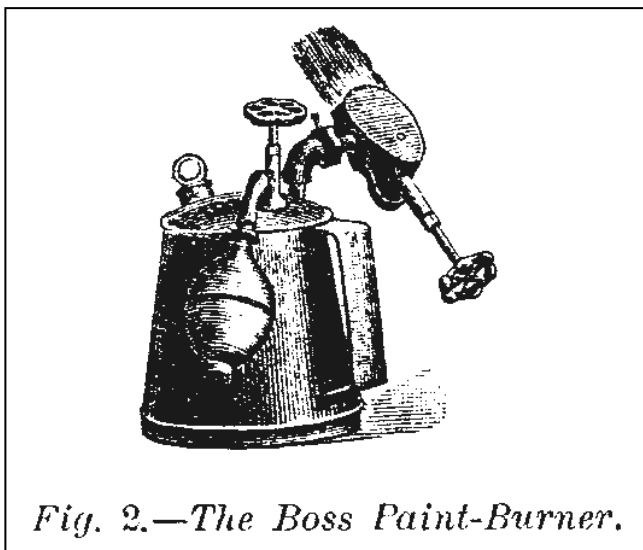
The burner from a later model C&L No. 1 firepot is marked with both patent dates.



The two Clayton & Lambert patents are shown below:



This advertisement, seen below, for "The Boss" Paint-Burner appeared in "The Metal Worker" in 1889. It used a rubber bulb as a pump; the example shown at right has a spigot for connection to a bulb.

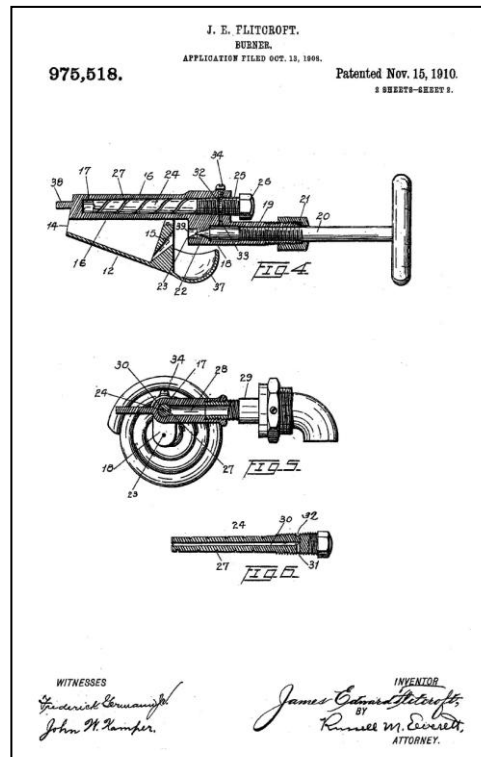
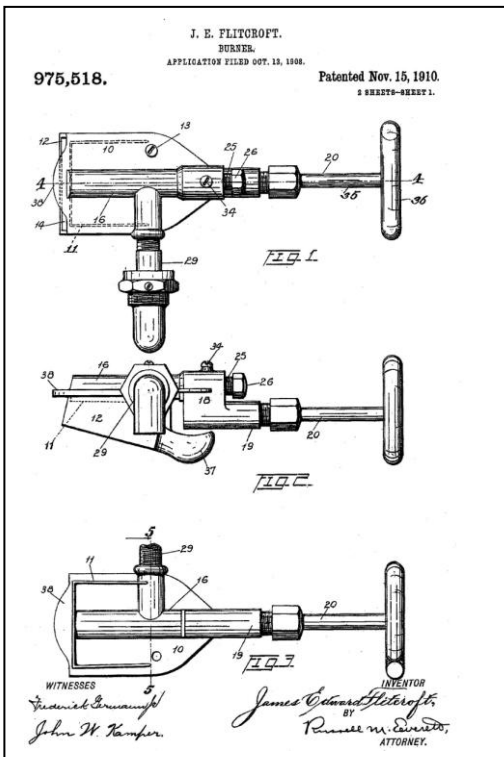
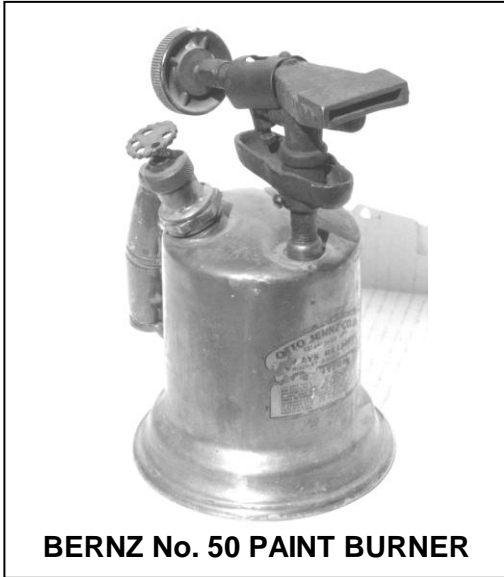


OTTO BERNZ CO.

Some early Bernz firepots were equipped with the C&L patented burner. In 1910 James Flitcroft was issued a patent for a flat burner design. His design employed a method of preheating the fuel using a spiral groove cut on a cylinder inserted into a tube and part of the casting that formed a flat plate. This design replaced the C&L burner in Bernz firepots, and was used in the Bernz version of a paint burner, the No. 27, with a swivel burner. In a 1913 advertisement, the Bernz Co. claimed:

“This style torch is fitted with our (patented) burner, which we have used so successfully on our ‘Low Down” furnaces. The broad flame makes it adaptable for covering large surfaces such as moulds and cores used in foundries, etc.”

Bernz later introduced the No. 50 paint-burner (below), with the same burner, but with no swivel.



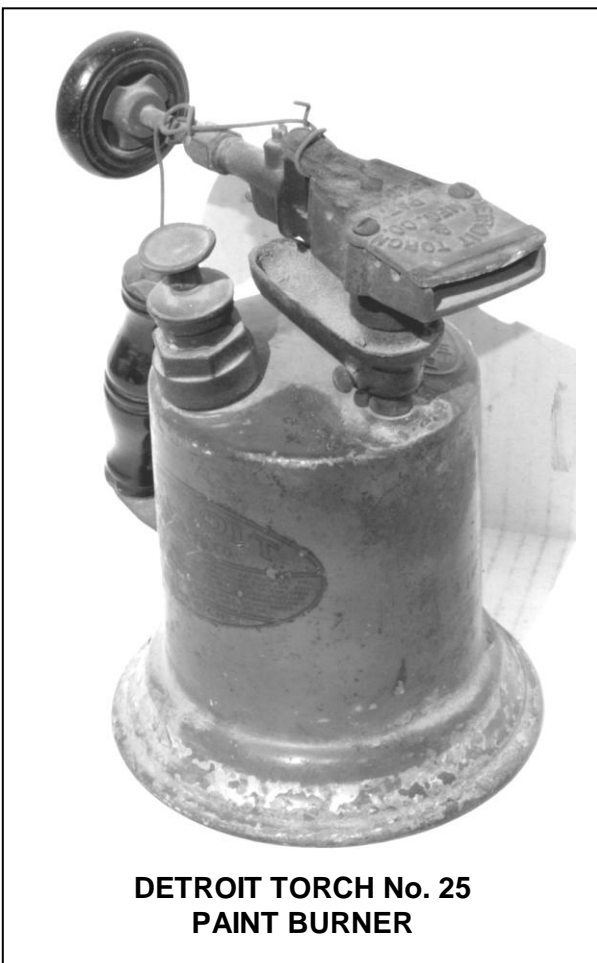
DETROIT TORCH CO.

Frederick Lindhorst's patent of 1922 set out to:

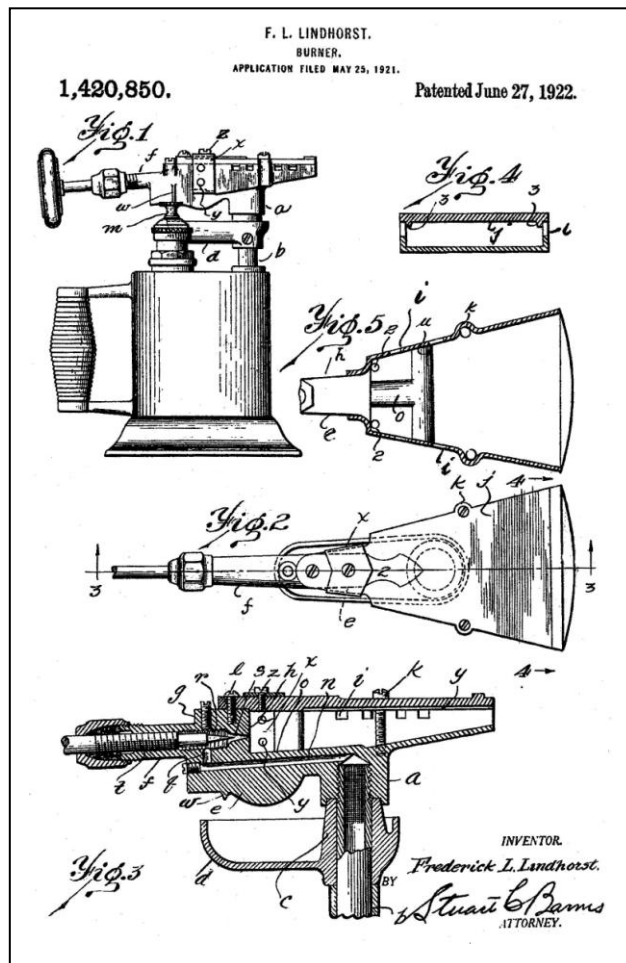
“Afford a burner arranged to give a flame which can be used where a broad thin flame is desired, such, for instance, as used in a blow torch for removing paint from a house. Burners for giving such a flame are not broadly used. These burners however have usually been heretofore made with a generating element and nozzle in the top plate and a deflector and flame-spreading element suspended under the generating plate. This burner may be supported upon a torch by a stem which screws into a nipple directly under the burner in place of supporting the burner at the side of the burner as is the case with the type of burner having the generating element in the top plate.”



Detroit torch No. 25 Paint Burner

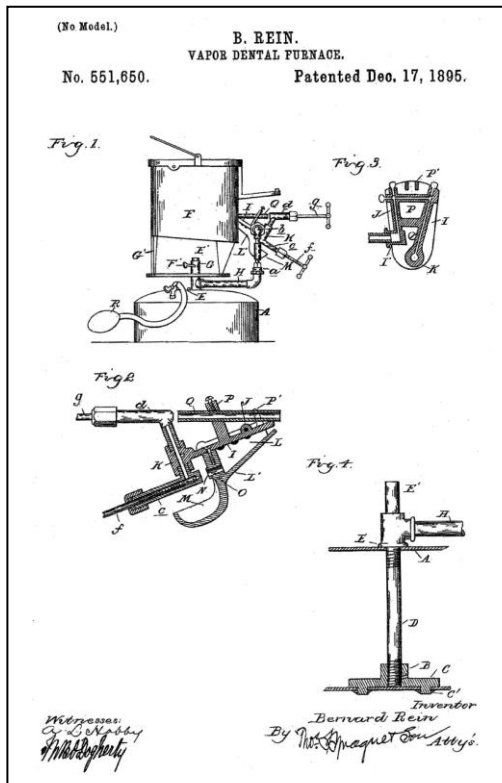


**DETROIT TORCH No. 25
PAINT BURNER**



UNION HEATER SUPPLY CO.

The products of The Union Heater Supply Co. were based on the inventions of Bernard Rein, of Detroit Michigan. The burner for this paint burner is based on US Patent No. 551,650 for a "Vapor Dental Furnace". In his 1895 patent Rein described a burner "whereby I obtain a combination of a "fan-tail" burner and a "blow-jet". He also describes the burner "being connected to the tank by means of a universal joint, so that it may enter the furnace and assume any desired angle. Rein used veins molded into the top plate to achieve pre-heating of the fuel, much as John Clayton did in his 1900 design patent.



Favorite Paint Burner

One man can remove more paint with it than 100 men can with any other burner. Can also be used as a torch.

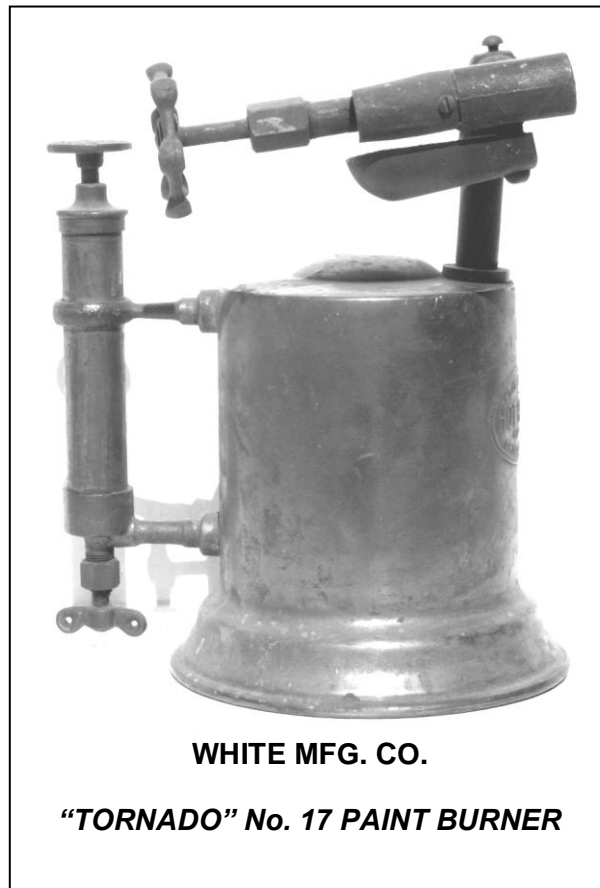
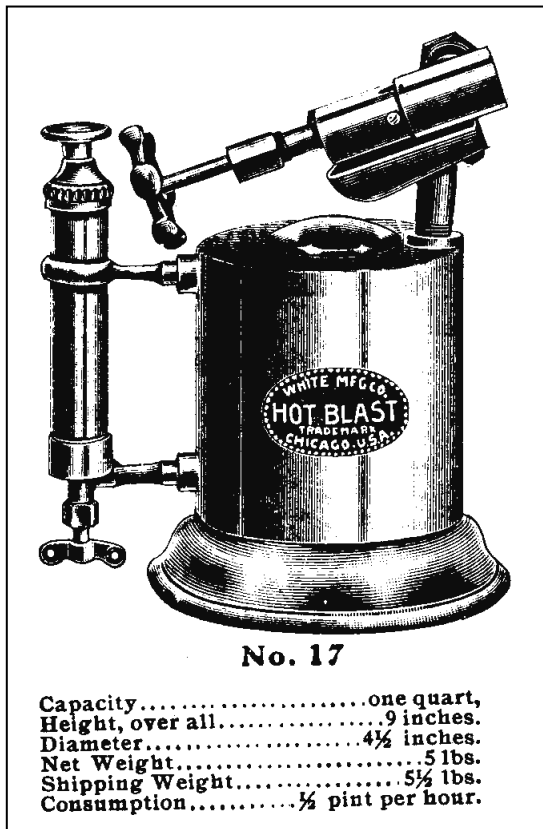
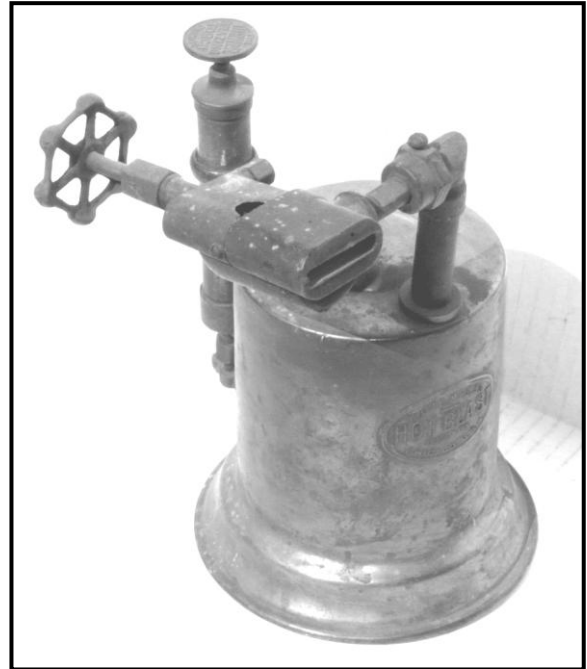
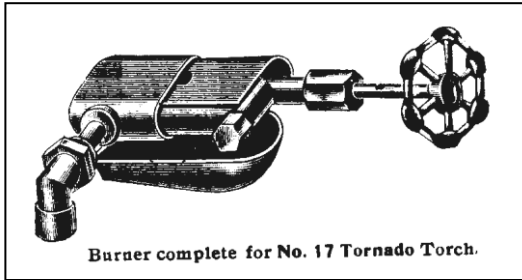
The only paint torch on the market with flexible burner.

THIS MACHINE can be used to remove putty from sash without injury to the wood or paint, and can also be used as an open forge for doing hard soldering or blazing.

UNION HEATER
"FAVORITE PAINT BURNER"
 (The Metal Worker 1895)

WHITE MFG. CO.

The design of the White Mfg. "TORNADO" No. 17 blowtorch was retained by Turner Mfg. after the 1904 acquisition. It also appeared in a Turner 1905 catalog. Like the C&L and Union Heater paint burners of the same era, it attaches the burner by means of a swivel joint. It has a single preheating tube running from front to back, cast into the side of the burner. No patent is known.



The simplest way to obtain a flattened flame is to squeeze the tip of the burner flat, as seen in these examples from the J. Russell & Co. of New York, and from the Bridgeport Brass Co. (Blowlamps with flattened burner tips were used extensively in Europe for heating ski wax.)

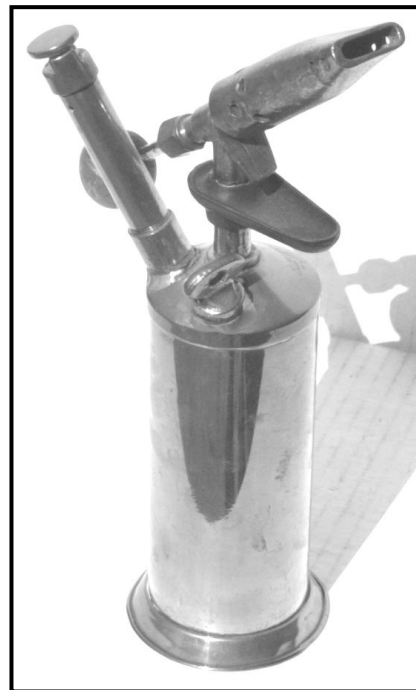
RUSSELL CO.



Little is known of the J. Russell Co. Like similar examples, this torch is stamped "ATLAS TORCH" J. RUSSELL & CO. AGT'S, NEW YORK.

The tip of the burner is flattened to create a flat flame.

The pump knob has a locking mechanism.



BRIDGEPORT BRASS CO.

The "QUEEN" torch from the Bridgeport Brass Co. of Connecticut was provided with a holder to retain an alternate burner.

This ad indicates that two burners, one round and one with a flattened tip accompanied each torch.

In the engraving a flattened burner for use in removing paint etc. is shown. A round burner also accompanied each torch that also had various uses.

Surviving examples of the flattened burner are rare.

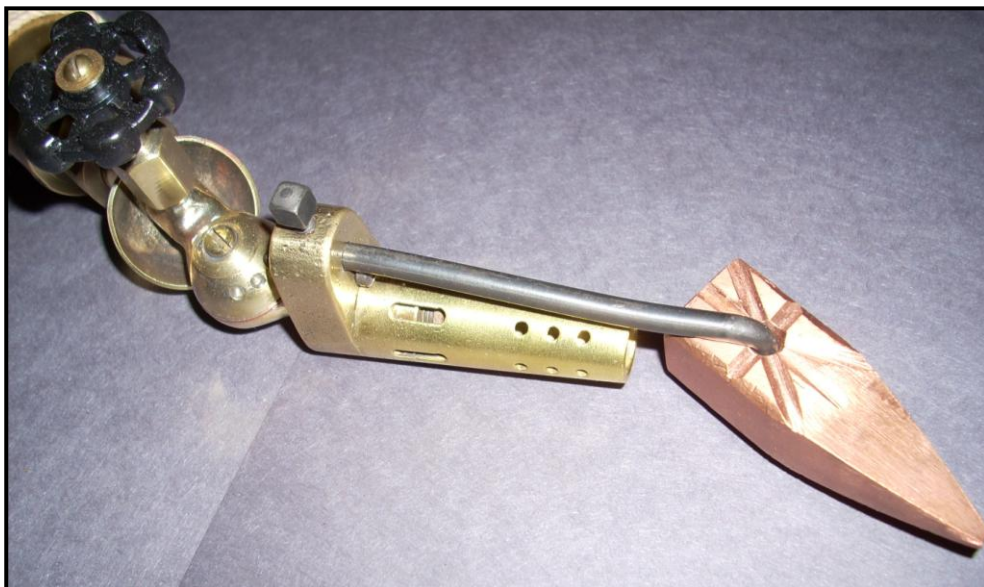
Queen Torch.

Bridgeport Brass Company, 19 Murray street, New York, have just put on the market the Queen torch, here illustrated. The body is formed of one piece of wrought brass, being 3½ inches wide at the bottom and 4¼ inches high to top of dome. The bottom, also of brass, is arched. Naphtha or gasoline can be used and with one filling a blast maintained for two hours or more at 2000 degrees of heat. The handle can be adjusted to any desired position by means of a screw and nut, over which is a holder with bayonet catch to hold the extra burner. In use a little of the fluid is poured into a brass tray under the burner tube and allowed to burn 30 seconds, when, by reversing the thumb screw under the handle, a steel needle in the tube is withdrawn so that the vaporized material or gas can ignite. The strength of the flame is controlled by this thumb screw, which also extinguishes the flame when done with. In the engraving a flattened burner for use in removing paint, &c., is shown, a round burner accompanying each torch also for various uses. The torch is recommended by the manufacturers for a great variety of work, such as tinsmithing, plumbing, gas fitting, bicycle repairing, electric subway work, railroad purposes, car building, &c., and is said to be absolutely safe and not liable to get out of order.

Queen Torch.

BTCA PATCHES

We still have available revised BTCA cloth woven patches. The new stock of patches were made a bit smaller and much thinner to provide a better fit for shirts and ball caps. The new size measures 3.25" (8.25cm) wide and 2.5" (6.35cm) tall. We are accepting orders for the new patches at a cost of \$5.00 for all US and Canadian locations and \$7.00 for all other locations. The cost includes shipping and handling. You can mail your payment to: BTCA PATCHES, 6908 April Wind Avenue, Las Vegas, NV 89131. You can also order your patches via PayPal to our account: BTCA@COX.NET, however, you will need to add \$1.00 to cover the PayPal fees. If you elect to pay via PayPal, please make a notation of "BTCA PATCH" with your payment. If you have any questions, you can always contact us at 702-449-8647, or via email at BTCA@COX.NET.



The Atlas self-heating soldering iron patent model. From the collection of Mike Gratz.

The photo shows some of the details of the spherical swivel joint, burner assembly, and copper soldering tip.

THE TORCH

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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: Blow Torch Collectors Association, 6908 April Wind Avenue, Las Vegas, NV 89131, email to: BTCA@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 BTCA at the above address.

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