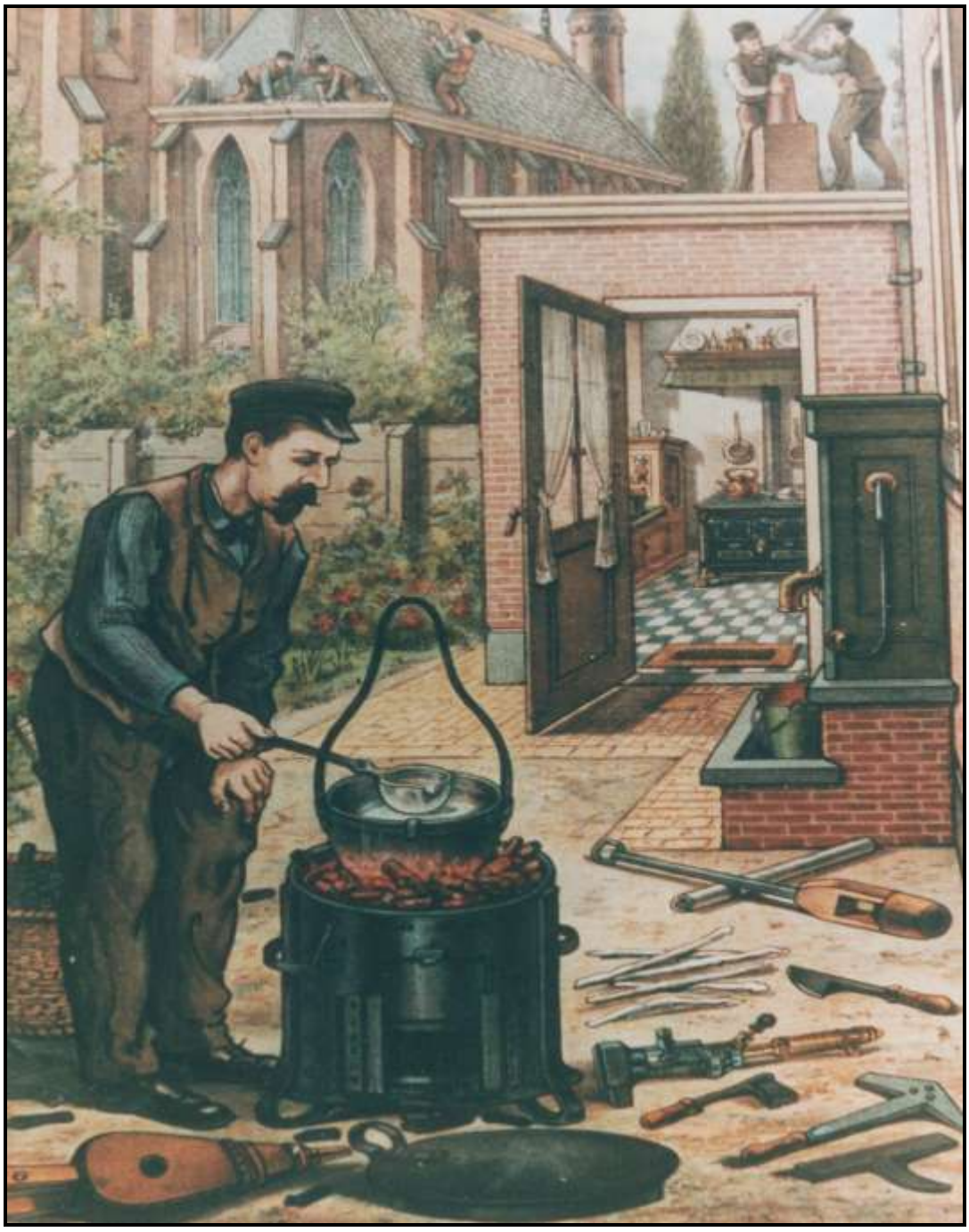
THE TORCH

NEWSLETTER OF THE BLOW TORCH COLLECTORS ASSOCIATION
Issue #40 March 2008



The above poster is from the collection of Michel Duval.

NEW MEMBERS

Jeff Battye of Kin Kin, Queensland, Australia started his torch collection last year and already has nearly 50 torches amassed to date. Many are polished and are prominently displayed in his bar room. "*Blow torches have fascinated me from my early childhood. I remember my father having a couple of torches in his garage. I have been on the look out for antique stuff to put into my bar room I am building (I am also a home brewer). Last year I purchased an old blow torch, cleaned it, polished it, and then wondered about its past. The more I discovered, the more interested I became. Now I find myself looking for blow torches wherever I go! I love the fact that I can collect something that is reasonably inexpensive, restores easily, and can be displayed in a limited space."*

R. C. Dodge III of Opelika, Alabama is new to torch collecting and just started his collection. Ray is an avid collector of railroad kerosene lanterns, railroad locks and keys, bus/trolley fare boxes, coin changers, conductor ticket punches, G scale model trains, some vintage tools….and the list goes on and on. It appears that Ray may not have much room left with all of his collections! "*Feel free to stop by anytime if any member is in the Opelika area. I'm always open for fellow collectors and the coffee pot is on standby."*

Michael Gratz of Hobe Sound, Florida is a long-time torch collector and has been collecting torches since 1968. He has well over 100 pieces all displayed in bookcases. *"I climbed up onto some shelves at Zatinski's junkyard in Pomona, California in 1968 and found three blow torches. One was a Clayton & Lambert no. 47 auto torch. I cleaned it up….and I was hooked forever."* Michael also collects carbide lamps, cigarette lighters, and steam whistles.

Robert Johnson of Canyon, Texas began his torch collection early last year and has accumulated a modest number to date. *"I got started collecting torches because of a tractor. I purchased a Lanz Bulldog tractor that uses a blow torch to heat a hot bulb for starting."* Robert also collects antique engines and tractors.

Chris Mello of Northwood, New Hampshire began collecting blow torches in early 2007 and a few of his twenty five pieces are polished. He displays a few in his office. *"A friend at work showed me a home video of his restored vintage kerosene cook stove in a night time action shot. The roaring flame got to me and I was off into the flammable liquid device collecting bug! I have initially only fired up alcohol torches and jewelers' lamps, but I am now preparing a Turner gasoline torch for takeoff!" "I am a rabid vintage tool collector and have never met an old tool I didn't like. The torches are just an extension of this. I have many soldering coppers and one old Miller Falls soldering kit. Also, along the line of flammable liquid devices, I have a collection of approximately 30 hand warmers."*

Peter Piper of Vittoria Heights, Bunbury, West Australia started his torch collection six months ago and all twenty are polished. Peter regularly displays them at the Brooks Heritage Park in Bunbury, the Hand Tool Preservation Association, and the Tools and Trades History Society. He also collects as well as makes wood planes and other tools that have a brass component…he likes brass! *"I try to collect a soldering iron with every torch I purchase as I think it completes the package."*

Roger Willgerodt of Colts Neck, New Jersey is relatively new to torch collecting. On a much larger scale, Roger collects antique Maytag washing machines!

WELCOME ABOARD NEW MEMBERS!

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An original Clayton & Lambert wood shipping box for a No. 19 pint-size torch & a no. 19 torch shown on the right.
From the collection of Ron Carr

NOTES FROM ALL OVER

We heard from **Chuck** and **JoAnn Tobin** regarding a misplaced photo that was found during an after-Christmas cleaning. From the photo, it appears to be a Turner Brass Works no. 40D torch with a swivel head and pressure gauge. We hope they did not misplace this somewhat rare torch!

The Tobin's Turner Brass Works no. 40D blow torch

Dave Schulte dusted off his bucket of "Magic Fluid" that's been sitting around since late 2002 and used it to clean up a Kant-Rust oiler. Apparently age has little or no affect on the cleaning quality of this magic mixture.

You can find the Magic Fluid recipe on page 4 of issue no. 22. There are also follow up articles on page 8 of issue no. 23 and page 4 of issue no. 24 that will provide some success stories from BTCA members using the cleaning formula.

So you think collecting blow torches is a bit strange….what about collecting jars of mustard? **Larry Fields** sent in an article from AARP, The Magazine, March/April 2008 issue, page 54 that discusses collectors, and highlights a mustard collector, Barry Levenson. Barry not only has collected over 5,000 different containers of mustard, but displays them in a little storefront museum he created on Main Street in Mount Horeb, Wisconsin. So when people tell you that you collect a strange commodity….tell them about Mr. Mustard. Larry also sent in a series of Judge Parker comic strips from early April 2007. There's a sequence of frames showing what appears to be a European style torch being lit and used as a weapon. Any members follow Judge Parker?

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11th Annual BTCA Meeting

Plans are underway for the 11th Annual BTCA meeting to be held in Maryland…that's right east-coast members…in Maryland! We're moving the meeting location from the traditional west coast to the east coast.

Wendel Fritz has graciously offered the use of his farm and nursery for the September event. He's located approximately 20 miles northeast of Baltimore and 4 miles from the town of Belair, MD. The date is Saturday, September 13th. According to Wendel, he has plenty of room at his facility and can accommodate a large number of members and torch displays. There will be plenty of large display tables, so plan on bringing plenty of display items. There are a fair number of motels not far from his farm, and he will also accommodate campers for all of you RVers.

Some of you have already heard from Wendel since he sent out about thirty letters to BTCA members in close proximity to Maryland. The response to his letters was good, so we feel confident that the meeting is a go. You'll hear more about it in the June newsletter along with all the details. We hope to see many new faces at this second only east coast event!

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US Patents

Graham Stubbs uncovered a new patent service provided by GOOGLE, one of the many search engine companies on the Internet. You can now easily search for US patents using a variety of search elements and print out as many patents as you like….FOR FREE!

As part of Google's mission to organize the world's information and make it universally accessible and useful, they are constantly working to expand the diversity of content they make available to their users. With Google Patent Search, you can now search the full text of the U.S. patent corpus and find patents that interest you. Google Patent Search covers the entire collection of patents made available by the USPTO—from patents issued in the 1790s through those issued in the middle of 2006. To date, the USPTO has issued approximately 7 million patents.

We have been using the GOOGLE patent service and have found a large number of blow torch related patents previously unknown. If you're interested and have a desire to search for a patent…simply go to www.google.com/patents and you will immediately be prompted to enter your search criteria. You can also do an advanced search by clicking on "ADVANCED PATENT SEARCH". The advanced search allows you to enter inventor names, single or multiple words or phrases, titles, assignees, plus a number of other selections. Without a doubt….GOOGLE Patent Search has to be the easiest, and certainly the least expensive method of obtaining a US patent. Check it out.

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MISSING A NEWSLETTER?

We received back from the US Post Office a December 2007, issue #39, newsletter. It was not delivered to the intended recipient because the address label was torn off. We also know, based on the postage, that it was intended for a US member. If you did not receive your December 2007 newsletter, please, let us know and we'll mail a replacement out immediately.

LENK TORCH & PAINT SCRAPPER

Charles Smith has added a Lenk torch and paint scrapper combination piece to his ever-growing collection.

Lenk Torch/Paint Scrapper, circa 1935
From the collection of Charles Smith

We date it to circa 1935 or later when Lenk was producing that particular style of blow torch. The scrapper appears to be a manufactured item that was cast from aluminum. The aluminum piece is very well designed and would withstand a lot of abuse during the paint scrapping process. The scrapper blade is stainless steel and is adjustable in two positions. We're not sure if the scrapper is a Lenk product or some after-market supplier produced it for Lenk and/or other similar sized torches. The bolt and wing nut would allow some variation on the size of torch the scrapper could be applied to.

Do you have a similar paint scrapper on any torch? Drop us a line if you do.

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LITTER TORCH CO.

Wendel Fritz and **Charles Smith** uncovered an illumination torch that was manufactured by the Litter Torch Co. of New York, NY. The Litter torch is similar to a Clayton & Lambert no. 24 that can be seen in the *Vintage Blowtorches* book on page 121.

US patent no. 1,180,162 was issued to Frank Litter of Brooklyn, NY on April 18, 1916. His invention relates to pocket torches, the principle object of the invention being to provide a simply constructed, cheap, and durable device which may be conveniently carried in the pocket and is especially suitable for obtaining light in small or inaccessible places.

Litter Torch Co. Illumination Torch
The inset information is stamped into the cap.
From the collection of Charles Smith

Wendel describes the torch as being made entirely of brass, and is approximately 8 inches tall with the cap on and 3 inches in diameter. Charles provided photos of his Litter torch that seems to confirm Wendel's description. Stamped into the top of the cap is: LITTER TORCH CO., PATENTED, NY. We would like to hear if other members have Litter illumination torches.

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VINTAGE BLOWTORCHES SUPPLEMENT

When we put the "stake in the ground" for completion of the *VINTAGE BLOWTORCHES* book, we realized that in the near future we would have to consider doing a supplement to the book. Even during the final editing and printing process, we were receiving new information, but decided to go ahead with what we had already completed. To date, we've add a few new manufacturers and many new torch models, and we believe that there are many more out there….so we need your help.

Here's your second chance to get your photo and name credited in the supplement…all you have to do is send us a photo of any torch that's not listed in the *VINTAGE BLOWTORCHES* book. We've already heard from **Michel Duval**…he's reviewed his extensive torch collection and sent in sixteen new entries for the supplement! **Wendel Fritz** sent in information on his Alex Rowland blow torch and included the trade name BLASTO that we will be adding to the index cross reference material.

Please be as specific as possible with the information and provide details on size and material composition. Remember to use a plain white background for the photo, get as close as possible, and be sure that the photo(s) you've taken are in focus. You can email your information and photos to RONLV@COX.NET, or mail them to the BTCA address.

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Alex Rowland "BLASTO" Blow Torch
From the collection of Wendel Fritz

Blowtorches as Detectors for Leaks of Halide Refrigerants

When the colorless, odorless synthetically-produced gas Freon was adopted in the 1930s as a safe alternative for use in refrigeration and air conditioning equipment, a method was required for detecting possible leaks. It was found that a change in color of a blowtorch flame in the presence of minute quantities of the refrigerant was a reliable indicator. Several companies introduced products for this rapidly growing industry. Freon is one of a group of gaseous compounds, which may include chlorine and/or fluorine and which are known as halides, hence the common term “halide detector” was used for these special adaptations of blowtorches.

Bacharach Inc., a company that provides instrumentation for the air-conditioning industry, and training in its use, in discussing detectors for refrigerant leaks, says this in relation to the torch method:

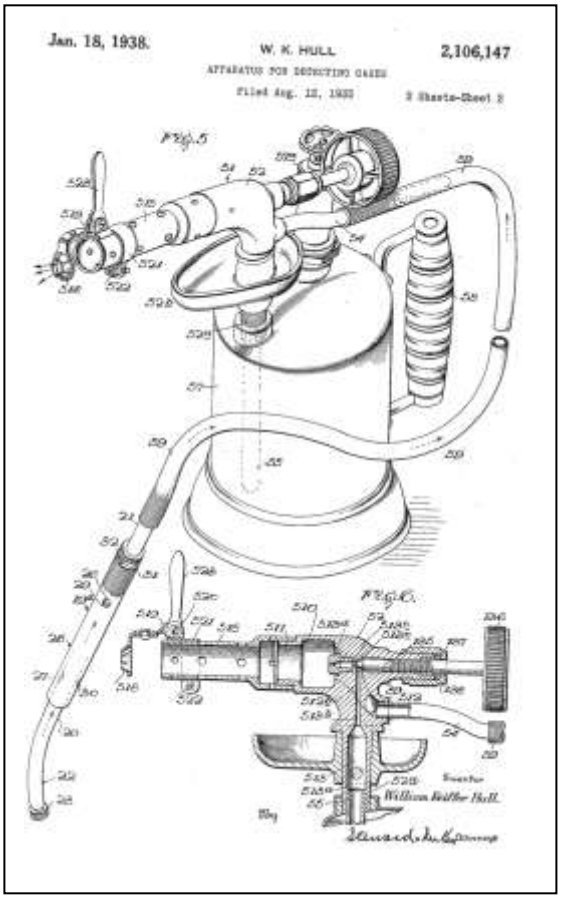
"Halide Torch: A halide torch is an inexpensive leak detector that is fast and reliable, but can only be used to detect chlorinated refrigerants. It can be used to detect leaks as small as ½ ounce per year. This torch works on the principle that air is drawn over a copper element heated by a hydrocarbon fuel. If halogenated refrigerant vapors are present, the color of the flame changes from blue to a bluish green. The halide torch detector is not as sensitive as modern electronic leak detectors, is somewhat awkward, and could be dangerous because of the open flame."

US patents awarded to three companies provide insight into how these halide detector torches work.

Hull Manufacturing Co. of Hagerstown Maryland

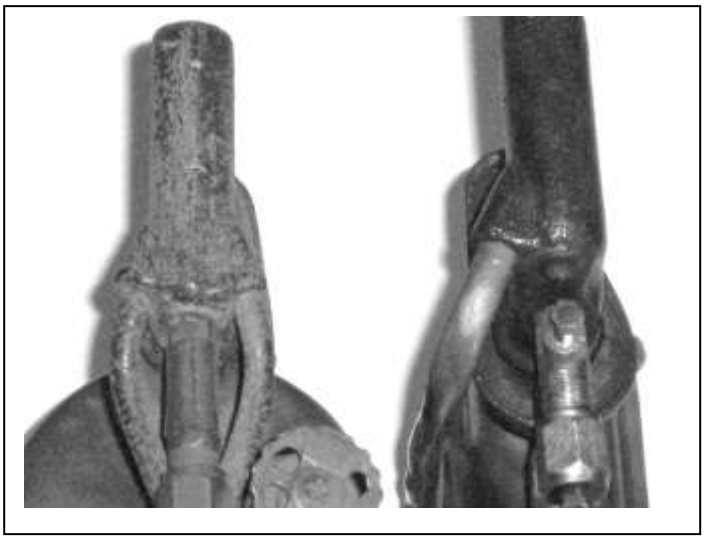
US patent no. 2,106,147 was awarded in 1938 to William Keiffer Hull and was assigned to the Hull Mfg. Co. in Hagerstown, MD. Based on the appearance of the pump knob, the illustration in the patent appears to show an adaptation of a Bernz torch. The nozzle is specified as being made from gray cast iron, *"free from any substance which would color the flame."* A separate copper element, attached to the nozzle, is heated to red hot, and any trace of halide gas interacting with the heated copper produces the distinctive flame.

The patent reads *"Broadly stated, the general object of the invention is to provide improved apparatus for detecting the presence of gases of the character indicated by means of characteristic light emitted by suitable reactive material, when heated, in the presence of the gas to be detected."* Elsewhere, the patent discusses the use of copper for the *"reactive element" and the change in the color of the flame to be expected in the presence of halides, going from normally blue to a greenish blue.”*


Jan. 18, 1938. W. K. HULL 2,106,147

Several BTCA members have reported Otto Bernz blowtorches with a metal label attached to the handle with the words HULL MANUFACTURING CO., HAGERSTOWN MD. The appearance of these torches is similar to the illustration in the Hull patent, with the exception that instead of a circular copper element mounted external to the nozzle, there is a copper slug attached to a screw mounted through the bottom of the burner. Other than the patent information and the surviving halide detector torches, nothing more has yet been discovered about the Hull Mfg. Co.

A variation of the burner on the Hull torches is shown below with two injector tubes rather than the one illustrated in the patent.



It is interesting to speculate that there might be a relationship between this Hull and John S. Hull, the “father of the American blowtorch”, who moved to Maryland from Ohio in the late eighteen hundreds.

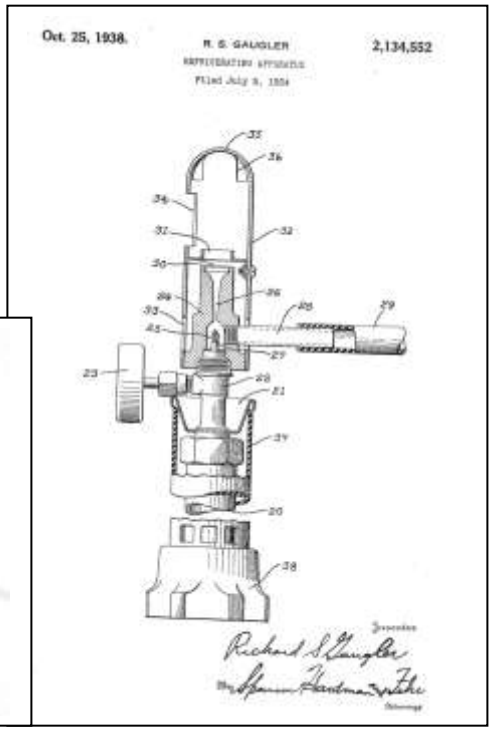
Frigidaire Division of General Motors Company

In the same year, 1918, that the Hull patent was issued, US patent no. 2,134,552 was awarded to a Richard Gaugler and assigned to General Motors, the parent company of Frigidaire. This patent illustrates the Frigidaire refrigerant detector which was adapted from a Bakelite Justrite torch. It includes a ring-shaped copper element which is attached to the inside of the burner with a small bolt. A spare element was shipped with each torch.

The patent reads *"Supported directly above the screen 30 and the burner is a ring-shaped copper element which will react with free halogens in the flame to emit the characteristic color to indicate the presence of halogens in the flame."*

Frigidaire Refrigerant Detector Adapted From a Justrite Torch

Ring-Shaped Copper Element



Richard Gaugler Patent

Turner Brass Works

The 1939 catalog of the Turner Brass Works illustrates two versions of halide detectors, the H-1 based on a one-pint torch, and the H-15 based on a small alcohol torch. A Turner H-1 refrigerant detector in the **Graham Stubb's** collection has a copper rivet projecting into the inside of the burner tube near the exit. The burner itself appears to be made from yellow brass. There is no mechanical purpose for this rivet, and it is believed it to be the "reactive copper element" discussed in the patents.

Turner Halide Detector Torch

Copper Rivet Halide Detector

TURNER
Halide Refrigerant Gas Leak Detectors

DEVELOPED, PERFECTED AND GUARANTEED BY THE MANUFACTURERS OF TURNER BLOTORCHES . . . . . MAKERS OF QUALITY TOOLS SINCE 1871!

Positively detects leaks of all chlorinated hydrocarbon refrigerants including methyl chloride (Arctic), ethyl chloride, trichlorethylene, methylene chloride (Carrene), dichlorodifluoromethane (F-12 or Freon), trichloromonofluoromethane (F-11), and dichlorotetrafluoroethane (F-114). Thousands in use by country's largest manufacturers and installers of electric refrigerators and refrigerator units.

A REAL NECESSITY

The rapidly expanding market for electric refrigerating units of all classes has created a real necessity for an efficient, reliable and yet simple device for testing refrigerant gas leaks. TURNER Halide Detectors meet every requirement in this field and are regarded as indispensable service tools by some of the country's largest manufacturers and installers of electric refrigerators and refrigerator units.

Basically TURNER Halide Detectors are alcohol burning blotorches having specially designed burner bushings which synchronize the air supply thru a flexible rubber exploring tube. If the open end of the tube is held close to a leaky joint the gas is syphoned and on striking the burner the color of the flame is changed from blue to green. They are positive in effect and give rapid detection as the tube traces the pipe line being tested. Leaks equivalent to a loss of approximately one pound of refrigerant gas in 7½ years have been detected easily under special tests.

No. H-1

NO. H-1 TURNER HALIDE DETECTOR
(Illustrated Above)

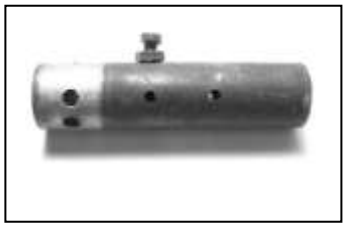
The TURNER Halide Detector may also be used as an efficient blotorch for general service work, such as soldering, heating coils to expel gases, and similar purposes. It is sturdily and compactly built and fits well into mechanics kits. The dual purpose needle valve cleans the orifice or gas opening each time it is closed and thus prevents clogging and the cool composition valve handle has a deeply corrugated edge which gives a firm grip. All metal parts, except the burner, have a highly polished nickel finish. Capacity one pint. Shipping weight 4 pounds. List price No. H-1 ..... $7.50

NO. H-15 TURNER HALIDE DETECTOR

This effective Detector has been developed for those who use a detector occasionally but do not wish to buy the larger and more expensive Turner H-1 which was perfected especially for refrigeration manufacturers and service men. Specifications: ½ pint nickel plated brass tank, alcohol fuel, shipping weight 1¼ pounds. List price No. H-15 ..... $3.50

No. H-15

Charles Smith has Turner H-1 halide detectors that employ two other variations of the "reactive copper element." One uses a copper screw inserted radially through the side of the burner nozzle, and the other provides a layer of copper tubing placed concentrically within the burner.

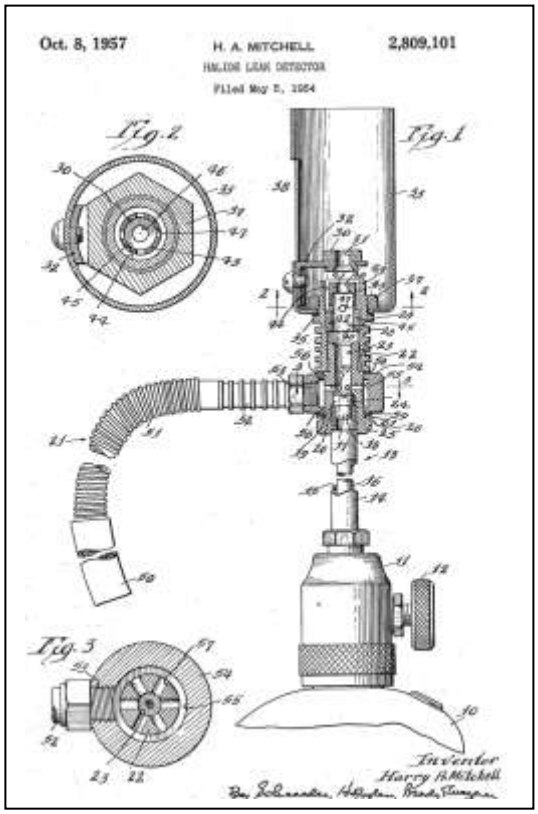


Inserted Copper Screw

Inserted Copper Tubing

In 1957, US patent no. 2,809,101 was awarded to a Harry Mitchell of Sycamore, IL and assigned to the Turner Brass Works. This patent illustrates the same principle as in the earlier patents, but applied to a propane torch. Once again, a heated copper element interacts with the traces of refrigerant gases to produce a distinctively colored flame.

The patent reads: *"The gas flame impinges on a heated reaction material, such as copper, causing a characteristic change in the color of the flame if halides are present."*



Otto Bernz Co.

NO. 98 REFRIGERANT LEAK DETECTOR
(With Alcohol as Fuel)

A NECESSITY FOR REFRIGERATOR MECHANICS, ELECTRICIANS AND UTILITY COMPANIES

THE NO. 98 REFRIGERANT GAS LEAK DETECTOR was developed to detect even the slightest of leaks in connection with halide gases used with electric refrigerators. Many of these gases are relatively odorless, tasteless, and colorless. The No. 98 detector which is in use by the largest refrigerating companies has a specially designed, special composition burner to which is attached a suction tube. When the end of the suction tube is held near a leaky joint, the induction of the leaking gas changes the color of the blue flame to a brilliant green.

Alcohol is used as a fuel, and the article is also efficient as a regular blow torch. Furnished with extra heavy drawn seamless cartridge brass tank, and can also be supplied with flat tank when specified. Pump is patented Bernz "Never-Leak" type with screw-down feature. "Keep Kool" valve wheel of best grade bakelite. Detector is given a highly polished and lacquer finish.

FOR ALCOHOL
No. 98—1 Pint
Wt. 3¾ Lbs.

The Otto Bernz Co. offered its own version of a halide detector in its 1936 catalog. The catalog entry indicates that it was available with an ordinary one-pint round fuel tank, and optionally with a flat auto-style tank.

BTCA member **Charles Smith** has a Bernz flat tank halide-detector torch with a burner similar to that found on the Hull products.

Lenk Manufacturing Co.

In its 1940 and 1941 catalogs, Lenk offered halide detectors based on the company's model 105 series of alcohol torches. Examples of these halide detectors in BTCA member collections do not appear to have any separate "copper element" for interaction with traces of halide gases. It is assumed that the copper content of the burner nozzle sufficed as the halide reactant.

Lenk HALIDE DETECTOR

for Detecting Refrigerant Gas Leaks

COMBINATION BLOTORCH and LEAK DETECTOR

NO. 205A LENK HALIDE DETECTOR

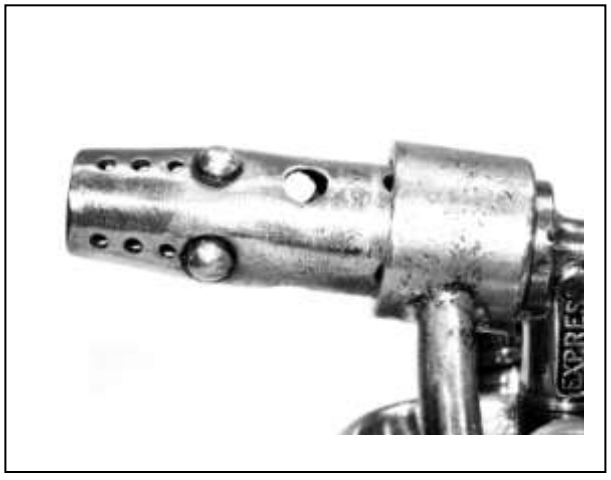
The most positive method of locating leaks of commonly used refrigerants such as Sulphur, Methyl, Carrene, F-12, Freon or Ethyl Chloride.

To detect a leak, the open end of the rubber tube when in close proximity to a leaky joint, syphons the gas through to the burner and the color of the flame immediately changes from blue to green. The slightest leak is positively detected.

The Lenk Halide Dectector is also an effective Hi-Heat Alcohol Blotorch. Generates quickly. Tanks are of heavy gauge seamless drawn brass, with funnel shaped bottom for easy filling. Sturdy construction.

LG Express, France

This halide detector from France is based on an Express No. 44 torch and is adapted in somewhat the same way as the Bernz and Turner torches. Inserted radially into the burner nozzle are three red copper rivets, presumably acting as the copper elements described in the American patents.



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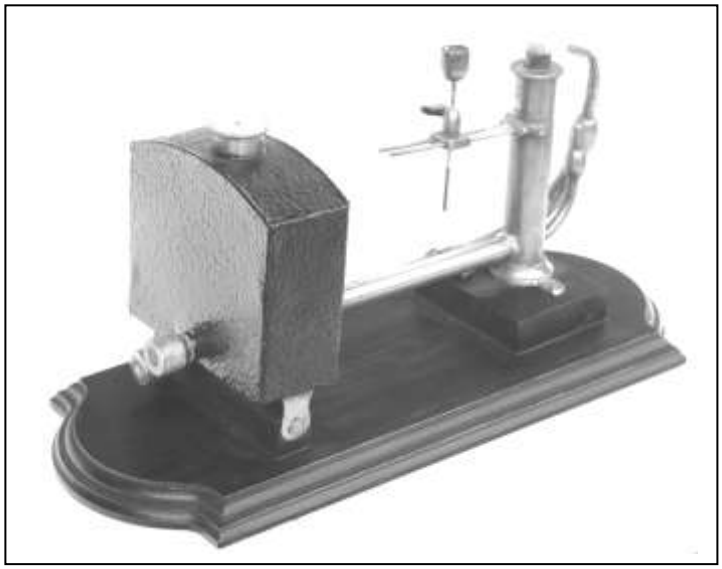
ASSAYERS BLOWPIPES

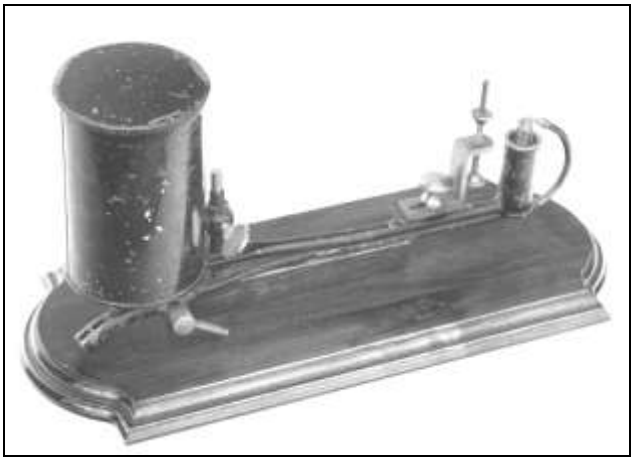
By **Graham Stubbs**

The blowpipe that is commonly associated with soldering as used by jewelers, was frequently used in chemical analysis, and in particular for assaying, the process of determining the specific metallic content of an ore, alloy, or other substance, especially one containing precious metals. The two torches shown below made provision for a container of fuel of alcohol or a light oil, a burner lamp with a wick, and a nozzle for directing a blast of air through the lamp's flame to produce a much hotter jet of flame. Both torches would have used a separate source for the blast of air.

In both cases they were in bad shape as found, and I restored them (a rare occurrence in my collection) and mounted each on a display board.



This piece of apparatus was originally mounted on a rough wooden board. Liquid fuel from the rectangular tank would flow through the large horizontal brass tube to the wick in the vertical lamp. An air blast was directed through a smaller diameter tube running through the center of the fuel pipe, and up and around through a nozzle pointed towards a flame from the wick. A sample for analysis was placed in the small cup, which can be positioned in relation to the flame jet. (A second air pipe at the rear feeds another vertical jet, the purpose of which is unclear.)



The second torch was intended to be mounted on a vertical metal rod, such as a retort stand as used in a chemical laboratory. The cylindrical fuel tank is filled with an ingenious second cylinder which itself is filled upside down and has a shutoff valve in the end hidden from view. This fuel container is turned over and inserted into the outer tank; and when it contacts the bottom of the outer cylinder, the valve opens allowing liquid fuel to flow through a horizontal pipe to the vertical lamp, which has three small wicks. A second horizontal pipe, with a shutoff valve, carries an air blast to the nozzle. A mineral sample is mounted in a clamp, which can be adjusted vertically.

Although they both look very different to blowtorches, with which we are mostly familiar, both pieces of apparatus work on much the same principle. Both of them nicely reveal the ingenuity of their unidentified nineteenth century inventors.

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CLASSIFIED ADS

For Sale…Lee Miller has a deal for you! He is selling approximately 1500 torches and is open to any and all offers. You'll need to contact him for details and photos…see your membership list for contact information.

Wanted….Robert Johnson is looking for a vertical starting torch for a 9000 series Lanz Bulldog tractor and/or a burner assembly for a G. Barthel Model Lanz 33. He's interested in any vertical torch that is available. Robert can be contacted at ROBJOHN@MIDPLAINS.COOP, or at 19221 Tradewind Street, Canyon, TX 79015, or 806-488-2259.

Wanted….Ross Logan is looking for any parts that go to a Barthel Fullmenge 880 blowtorch soldering iron. He can be contacted at cooktvl@bigpond.net.au, or P.O.Box 11, Cooktown, Queensland, Australia 4895…Work phone no. 0740695446, Home phone no. 0740635302.

THE TORCH

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

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Contributing Editor	**Graham Stubbs**
Contributing Editor	**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: Blow Torch Collectors Association, 6908 April Wind Avenue, Las Vegas, NV 89131-0119, email to: RONLV@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.