

VINTAGE BLOWTORCHES

An Identification & Rarity Guide

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Foreword

This volume contains a comprehensive illustrated listing of American and Canadian manufacturers, brand labels and models of blowtorches and related tools.

Twenty years ago, when blowtorches were just beginning to interest some tool collectors, there was no informational literature available at all. Collectors simply visited the flea markets, garage sales, and antique shops not quite knowing what they were finding, and whether the items were rare or common. In the 1990's, collectors' groups were formed in the USA and Europe, and since then, information has steadily been accumulated and made available from time to time through newsletters. In Europe in 1998, some of the data and illustrations were bound in book form to aid in torch identification. In the USA, in 2001, the illustrated book "*Collectible Blowtorches*" authored by Dick Sarpolus was published. The present book is the first to illustrate the vast majority of blowtorches and related items produced or sold in the USA and Canada.

The authors welcome comments and corrections, and as additional information is received, they fully expect that it will appear from time to time in "*The Torch*", the newsletter of the Blow Torch Collectors Association (BTCA). If or when it seems to be appropriate, the authors look forward to preparing a supplement or an updated edition of this book.

Introduction and Scope

While the primary emphasis here is on liquid fueled blowtorches, this book includes closely related heating devices such as plumber's furnaces and firepots, soldering iron heaters, self-heated soldering irons and branders, pyrography burners, and cauterizing devices. The common element is that they used liquid fuels such as gasoline, kerosene or alcohol.

Most of the major torch manufacturers in the US not only produced a wide variety of torches under their name, but also manufactured torches for other companies or distributors. We identify the latter category of torches as brand labeled, and you will encounter that term throughout this book. Good examples of this are Sears & Montgomery Wards, since neither manufactured blowtorches, yet both carried many models and sold thousands under their brand labeled names.

A word about what is not included. Devices employing a variety of more recently adopted fuels such as propane, butane, and acetylene are not included, and neither are those using natural or house gas or solid fuels such as charcoal or solidified alcohol. This book specifically excludes self-heated sad irons. That being said, there are a few illustrations of devices which closely resemble blowtorches, and which are described in order to point out the distinctions. Given that some manufacturers made very large industrial torches, the coverage of the book is limited to devices with fuel containers having a capacity of no greater than five gallons.

Wherever possible, line illustrations from trade literature, such as catalogs and articles from old journals, and from patent drawings, form the basis for the illustrated listing, which constitutes the greater part of this book. Where no such illustrations were available, photographs of actual torches have been used, taken either from past issues of "*The Torch*," or from known owners of specific torch makes and models; photographs of rare blowtorches supplement some of the line drawings. Where no illustrations or photographs were available, the authors discuss the evidence that the manufacturer existed, for example as being listed as the assignee to a patent.

This is not a book about blowtorch collecting. Dick Sarpolus' book, "*Collectible Blowtorches*", contains many wonderful color photographs of collectible torches, provides an excellent introduction to collecting, and it includes chapters on such topics as how blowtorches operate, the cleaning, restoring, and repairing of torches, how to find them, and their value.

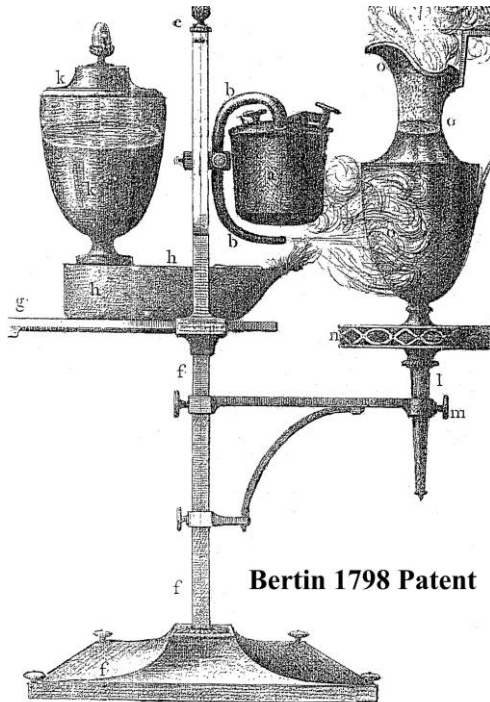
Blowtorch collectors are invited to join BTCA, the Blow Torch Collectors Association, which commenced publication of "*The Torch*" in 1995, in the USA. Similar groups exist elsewhere. In the United Kingdom, there is the Blowlamp Society, started in 1992, which publishes "Blowlamp News". In France, the Club des Amateurs d'Outils Anciens à Flamme, which serves collectors in France, Belgium and other countries, publishes the newsletter "La Nouvelle Gazette". See page 8 for contact information.

A Short History of Blowtorches.

Few collectors realize that in one form or another, blowtorches have been around for about two hundred years. (Actually, mouth or bellows activated blowpipes go back at least a couple of thousand years!) Many collectors have accumulated torches that are at least a hundred years old and may not even realize it, so it is worthwhile to summarize the history.

Beginnings 1799 - 1850

The man credited with creating the very first self-acting blowtorch was a Frenchman, Théodore Pierre Bertin, who registered his invention during the period of the French Revolution in 1798.



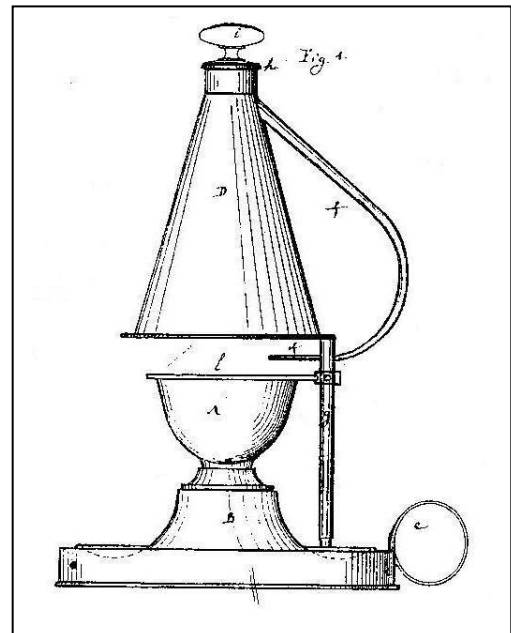
Bertin 1798 Patent

Bertin placed a sealed container of liquid above the flame from a lamp, and used the pressure generated by expansion of vapor in the upper container to create a blast via a pipe with a fine jet pointed though the flame below. Blowtorches based on Bertin's principle would continue in use for more than a hundred years.

The French term for the early blowtorch was "éolipyle", a word that is still used today by French collectors of blowtorches. A dictionary definition is: "a device based on the effect of forces produced by a jet of gas, from the Latin *Aeoli pylae*, literally "Aeolus" doorway." Aeolus was the Greek god of the winds.

For much of the earliest history, we rely on patents from France, the USA and from other countries.

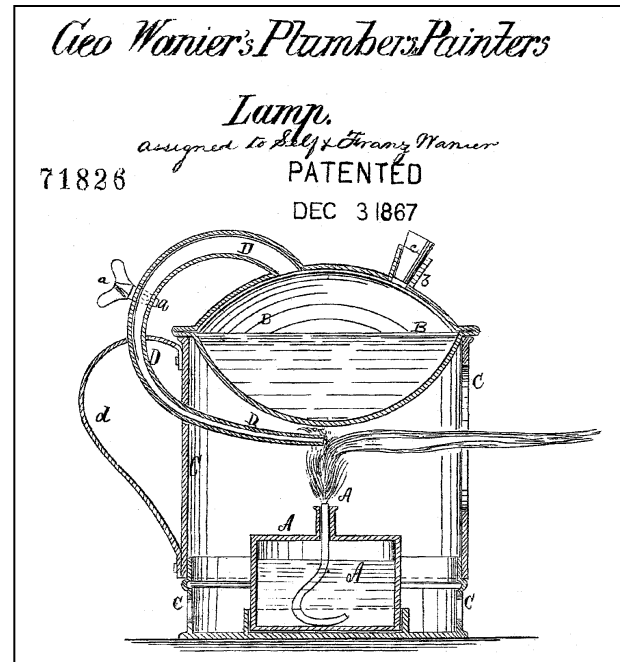
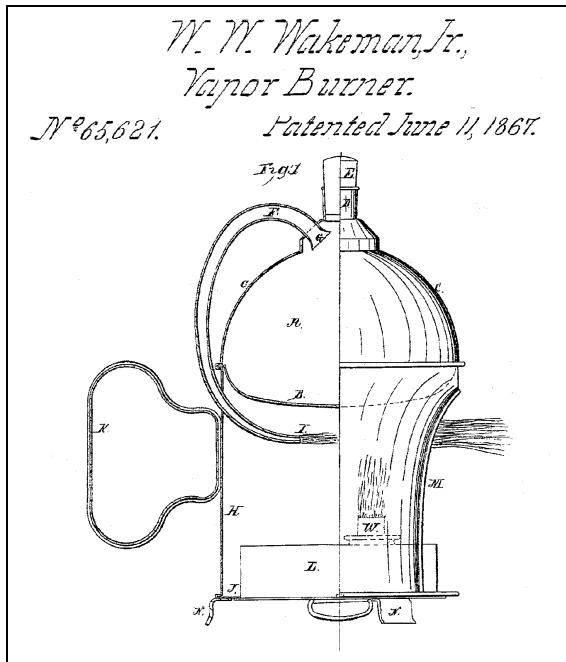
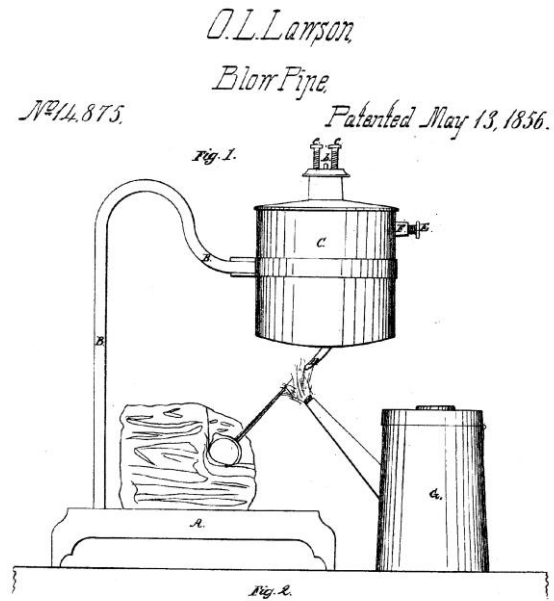
Another Frenchman, Maurice Antoine Dunand, improved upon Bertin's "éolipyle" with an 1844 patent in which the components of the earlier invention were combined in a self-contained apparatus that could be picked up and carried around by hand.



America 1850 - 1867

In the years before and after the American Civil War, American inventors improved upon the French ideas. Oliver L. Lawson's patent, dated May 13, 1856, referred to other similar and earlier blowpipes. Although the inventor did not identify these earlier innovations, the principles of operation were clearly European in origin. Lawson used a jet of steam to blow the flame and he regulated the flame by adjusting the flow of steam with a thumbscrew. He also added a safety valve.

The first American inventions of hand-held self-contained blowtorches are described in the patents awarded in 1867 to W.W. Wakeman Jr., and to George Wanier. The devices they made are quite similar, using an external pipe from the upper reservoir to the flame jet. Shown below are the Wakeman and Wanier patent illustrations.



1866 - 1880

The authors ascribe the title, "Father of the American Blow Torch" to John Summerfield Hull, who worked in Cincinnati, OH and later in Baltimore, MD. His inventions from 1866 through 1878 demonstrate a progression of principles, which combine to make a single, hand-held, tool with all the features, including a mechanical pump, which we attribute to a self-contained blowtorch. The American blowtorch, as it existed at the end of the nineteenth century, is a direct successor to Hull's inventions.

1880 - 1890

In the decade of the 1880's, the American blowtorch assumed a shape that would not change radically during the next seventy-five years. European collectors refer to American blowtorches as "bell shaped". The flared base of the fuel tank is seen in torches from Pope (1882), Doane & Wellington (1883), M.L. Hull's paint burner (1887) and Dangler (1888). A close-to-vertical handle, often housing a pump, was another distinctive feature of American torches, as was the nearly horizontal burner.

One noteworthy innovation was the Butler patent of 1889, which introduced an external pipe connection from the base of the pump-in-handle to the top of the fuel tank. Several companies manufactured "Globe" torches based on Butler's idea.

1890 - 1900

The three companies, which were to dominate the blowtorch business from the beginning of the twentieth century until the 1960's became active in the manufacture of torches in the 1890's.

Three brothers named Lambert started the Clayton & Lambert Co. in Ypsilanti, MI in 1882. In 1887, John N. Clayton, who had invented a burner for a plumbers' furnace, joined the brothers. By the 1890's Clayton's burner was applied to a paint-burning blowtorch to be followed by many more blowtorch and furnace products.

Otto Bernz founded his company in Newark, NJ to manufacture tools and supplies for plumbers. By the turn of the century, Bernz had added blowtorches and furnaces and built up a successful business selling both product lines under the Bernz name, and as a contract manufacturer for some of the large department and mail order stores.

The Turner Brass Works originally made harness and saddle fittings, as well as components for bicycles. By the 1890's, Turner was making blowtorches, and its merger with another Chicago torch maker, the White Mfg. Co., led to Turner becoming the largest of all the blowtorch makers.

1900 - 1920

Between 1900 and 1920, more companies established themselves as blowtorch suppliers. Some of the bigger names were Ashton Mfg., Detroit Torch & Mfg., George Diener Co., and Shapleigh Hardware. The Hauck Mfg. Co. created a very distinctive line of larger and industrial torches.

Several European companies marketed torches in the USA starting in the late 1890's. By the early 1900's, Primus, Sievert, Optimus, and Barthel all had their own offices in the USA.

1920 - 1970

During the 1920's and 1930's, companies such as Unique Mfg., Brookins and Downey Mfg. entered the business with very distinctive offerings.

The blowtorch business remained strong through the Second World War, but changes in technology were ahead. The final demise, by 1970, of gasoline and kerosene torches came with the introduction of propane blowtorches in the 1950's, coupled with the advent of plastic water pipes.

Furnaces, from 1877

The development of plumbers' firepots, furnaces and soldering iron heaters roughly paralleled the introduction of blowtorches. Plumbers and roofers were dependent upon charcoal-fired firepots until the late 1870's when firepots, using gravity-fed hydrocarbon fuels, were first marketed. The adoption of the use of liquid fuels was slowed by controversies regarding safety. By the late 1870's, several companies offered gravity-fed products, including Burgess (1877), M.L. Hull (1878) and Dangler (1882). Firepots and furnaces using pressurized fuel tanks followed in the mid to late 1880's. One of the distinguishing features between models was the choice between a mechanical pump and a rubber squeeze bulb for air pressure.

By the turn of the century, the major blowtorch suppliers also offered a line of firepots and furnaces, and one company, J. Burgess & Sons of Columbus, Ohio, specialized in distinctive soldering iron heaters.

Self-heated soldering irons (SHSI) and branding irons, from 1890

Starting around 1890, more than one hundred US patents were issued for self-heated soldering irons and branders, however, very few companies appear to have commercialized them. Atlas Brass Works was selling the Emil Block patented SHSI in 1910. Lyon & Conklin introduced the "Marvell" SHSI in 1912, and by 1916, Otto Bernz was offering its No. 75 SHSI. Bernz was the only one of the three major blowtorch companies to offer a SHSI. Everhot Mfg. was formed in 1922 from two prior companies that owned the rights to a 1920 patent. Everhot was to become, by far, the best known of the companies selling self-heated soldering irons and branders.

Alcohol torches, from 1895

An early use of small alcohol blowtorches was in dental and other laboratories, as well as by jewelers. In 1895, the Taylor tubular torch was invented, from which the "Victor" torch evolved, and in 1899, the Roberts patent was issued for an alcohol torch. Four companies, McGill Co., Zeidler Co., Ransom & Randolph and the Crescent Co., commercialized the "Baby" design, invented in 1903. In 1908, Francis B. Carleton patented the "Imp" torch, which would be sold under the Scovill, Lenk, and Bernz names, in addition to Carleton's own company. In 1921, Carleton patented the "Spartan" torch, which was to be made by several manufacturers.

In the 1920's, small alcohol torches were in great demand by amateur radio builders. Across America, as radio stations went on the air, starting in about 1920, a majority of receiving sets were built at home from kits or plans, in many cases by boys. In rural America, in towns that did not yet have electric power distribution, the sets could work from batteries, but electric soldering irons would not work. The advertising material for some of the early alcohol torches was specifically directed at homebuilders of radio sets.

The Lenk Manufacturing Co. got its start in 1920, manufacturing the "Imp" and "Spartan" torches patented by Carleton in 1908. Lenk would later undertake its own innovations and designs.

In 1926, Lester Lasher received the first of several patents for alcohol blowtorches. His inventions led to the "Jim Dandy" line of blowtorches, which were most successfully commercialized by Modern Metal Products.

In 1930, the first of two patents was issued to the Hanau Engineering Co. for a dental laboratory torch with an internal squeeze pump design. Hanau torches embodying these patents are still produced today, more than seventy years later.

The use of alcohol-fueled blowtorches finally gave way to various sized butane torches.

Additional Reading

The Club des Amateurs d'Outils Anciens à Flamme (see address below) has published six books about soldering lamps and irons, focusing mostly on European countries:

No. 1, France (2001), No. 2, Sweden (2001), No. 3, Germany (2001), No. 4, Austria, Belgium, Spain, Italy, and Switzerland (2001), No. 5, France (2004), and No. 6, Worldwide (2004).

The late Philippe Touillet published two books in France:

"Catalog No. 1, *"American Blowlamps Since 1856"* (1998), and "Catalog No. 2, *"A Background to British Blow Lamps"* (1999).

BTCA member Dick Sarpolus authored *"Collectible Blowtorches"* published by Schiffer in 2001.

Three of the collectors' organizations publish newsletters:

"The Torch", is published three times a year by the Blow Torch Collectors Association (BTCA), 6908 April Wind Avenue, Las Vegas, NV 89131.

"Blowlamp News", is published quarterly in the UK by the Blowlamp Society, 47 Lockington Crescent, Suffolk, IP14 1DA, ENGLAND.

"La Nouvelle Gazette", which serves collectors in France, Belgium, and other countries, is published by the Club des Amateurs d'Outils Anciens à Flamme, 60 Rue de Corcelles, 58180 MARZY, FRANCE.

Acknowledgements

The authors must acknowledge the generosity of the many BTCA members who have shared information and photographs of torches from their collections. This book would not have been possible without the accumulation of copies of old catalogs and periodicals. The authors are grateful also for the participation of overseas members of BTCA and of members of the European collectors' groups.

Without the understanding and patient support of their wives, Janet Carr, Pat Smith, and Stephanie Stubbs, the authors could never have completed what turned out to be a very time consuming project.

His two co-authors, Ron Carr and Graham Stubbs, particularly wish to acknowledge the contribution of their colleague Charles Smith who used his research experience and access to library archives to surface from old trade journals information about many of the oldest manufacturers and their products. Finally, the authors must express their gratitude to Janet Carr who tirelessly proof read the many drafts of this book.

Listing of Manufacturers and Branded Suppliers

The listing of manufacturers and brand labeled suppliers is organized alphabetically, by manufacturer and/or brand name. In some instances the listed company may only have been a distributor. The listing contains more than 320 manufacturer's names. In addition to US makers and models, known Canadian manufacturers are identified.

For each manufacturer or brand labeled supplier, every model, known to the authors, of blowtorches, furnaces and the like is listed, with illustrations wherever possible. In some cases, important patents are also illustrated. Where feasible, the illustrations are arranged in numerical order by model number. For the larger manufacturers, some details of the company's history are provided. The book identifies more than twelve hundred blowtorches, self-heated soldering irons, branders, etc. Approximately two hundred and fifty furnaces, firepots, soldering heaters, etc. are also listed and most are illustrated. Many of the products were assigned unique trade names by the manufacturers as well as, or as an alternative to model numbers,

A cross-referenced index lists alphabetically the manufacturers and brand labeled suppliers. Products of each supplier are listed first by trade name, if used, and then by model number. Trade names are also included in the index, and cross-referenced to suppliers. Integrated into the index is a guide to the rarity of individual models, with a five-point scale ranging from the most common examples to those considered by the authors to be the rarest.

Manufacturers frequently changed the details of design and construction of their products, without changing the model number. In some instances, more than one variation is shown in the listing. When a collector's torch does not exactly match an illustration in the listing, it is worth examining other products made by the same company before or after the date on the illustration to get a sense of how design details may have been changed with time.

The images obtained from the original old documents vary considerably in quality. In a few cases illustrations may be difficult to read, but are provided as better than no information at all.

The authors' files for some manufacturers are quite extensive, and readers are encouraged to submit questions to the authors c/o the publisher. The authors also look forward to hearing from readers with corrections and suggested improvements or additions to this book.

Dates included in the captions to illustrations indicate when the catalog or periodical was published. In many cases, actual manufacture may have occurred prior to the date shown.

List of Abbreviations

The following abbreviations are utilized throughout the book and refer to materials sourced from old trade journals.

AA	<i>"American Artisan Hardware and Reporter"</i>
MWPSF	<i>"Metal Worker, Plumber and Steam Fitter"</i>
PTJ	<i>"Plumber's Trade Journal"</i>
SHE	<i>"Sanitary and Heating Engineering"</i>
SMW	<i>"Sheet Metal Worker"</i>
TIA	<i>"The Iron Age"</i>
TMW	<i>"The Metal Worker"</i>

These additional abbreviations are used throughout this book:

BTCA	Blow Torch Collectors Association
SHSI	Self-Heated Soldering Iron