

The Davistown Museum
The Ancient Dominions of Maine: An Archaeology of Tools
The Industrial Revolution (1865f.): Classic Period of American Machinists' Tools
Hegemony of the New England Toolmakers

The period between 1840 and 1865 was a time of rapid industrial change that culminated in the Civil War. By the end of the Civil War the world of the toolmaker and the tool user had changed radically and would never be the same. An important event in the evolution of the Industrial Revolution was the direct process production of steel by the Bessemer method, soon supplanted by the more flexible modern Siemens open hearth method, which allowed quality control production of countless alloy steel variations. By 1870, both of these new steel-making techniques began dominating American steel production. There was a vast increase in the variety of tools in the tool kits of the machinists and woodworkers who worked after the Civil War. The mass production of steel permitted the continued rapid growth of both railroads (iron rails soon become steel rails) and the factory system that supplanted and gradually made obsolete the small workshops of the mill towns of rural America, including Liberty and Montville. The final display area of the "Archaeology of Tools" is devoted to illustrating some of the tools typical of the new tool kits that began supplanting the implements produced by the blacksmiths and small forges in the earlier maritime culture of Maine and New England. The transitional and patented planes and the classic machinists tools in the Museum exhibits are important historical artifacts illustrating cultural change as well as esthetically interesting sculpture objects.

Despite the full onslaught of the Industrial Revolution, shipbuilding continued in Maine, especially in the larger ports of Penobscot Bay, Waldoboro, Damariscotta, and Bath. A golden age of exquisitely designed and constructed schooners and downeasters supported a flourishing industry of Maine edge tool and agricultural equipment manufacturers, but the most important developments in manufacturing technology, including edge tool and hand plane production occurred in southern New England, where the classic period of American toolmaking overlapped with Maine's lingering maritime culture.

The sojourn of America's first machinists in Maine, Darling, Bailey, and Schwartz, was brief. The florescence of the classic period of machinist tool manufacturing was in southern New England. The maritime culture of Maine was in decline. The final sections of the exhibition of the Davistown Museum's "Archaeology of Tools" illustrates the rapid emergence of new types of meticulously designed and constructed tools.

Martin Donnelly, in his introduction to the classic period of American Machinist Tools, provides this summary of machine tool production in the early years of the Industrial Revolution; a final footnote to the hegemony of New England's maritime culture.

The Classic Period of American machinist tools... [is] that period of time from shortly before the American Civil War to the beginning of the First World War when, in response to tremendous economic growth and technological advancement, there was an incredibly rapid increase in the number of manufacturers and marketers of machinist tools. A great number of companies and individuals, producing all manner of products, grew and prospered, marketing elaborately conceived and artistically machined hand tools for those skilled workers who manned the engines of industry. As the end of this Classic Period approached, the vicissitudes of the emerging economy, which brought periodic recessions or 'panics', together with the need to compete on a national, rather than regional, scale, had served to eliminate nearly all of those many companies.

Certain industry leaders, particularly the L.S. Starrett Company of Athol, Mass., and the Brown Sharpe Mfg. Company of Providence, R.I., were the principal survivors, in many cases (particularly that of Starrett) buying out the other companies as the businesses of those companies foundered. As this Classic Period came to an end, standardization of design and minimization of embellishment became the rule, largely as a result of the demands of mass production. In many cases, tools included in the Starrett product line at the end of this period continue to be produced in essentially the same form today

During the Classic Period, however, as new companies competed for a share of the business in a dynamic market, a tremendous number of well-made precision tools, many of them protected by patents and decorated with artistic knurling, were marketed by a competing group of firms and a substantial number of individual entrepreneurs. Many of these tools and their makers failed to survive in an increasingly competitive environment, and, as companies reduced the number of products offered in the face of inadequate business success, certain elaborately embellished and mechanically ingenious tools of a very high quality... were cut from the product lines.

The many tools in the museum collection dating after 1865 illustrate the vigorous growth and evolution of the classic period of American toolmaking, documented in volume 8 of the Davistown Museum "Hand Tools in History" series.

Principal Machinist Tool Manufacturers of the Classic Period: <http://www.davistownmuseum.org/TDMV/toolMfg.htm>

Hammers

9416LTC1 **Toolmaker's hammer and magnifying glass** DA TT
(Pub)

Tool steel, glass, rubber, 7" long, 2 7/16" long, 3/4" diameter face, signed THE L.S. STARRETT CO. ATHOL, MASS. U.S.A. No. 815.

Machinists' Tools

7316LTC1 **Analog micrometer** DA TT
(Pub)

Tool steel, 3 1/2" long, 2 1/8" wide, 5/8" thick, signed A.J. Wilkinson & Co. Boston, Mass. U.S.A. Pat. Jan. 30, 1883 July 3 1883.

101014T1 **Caulking iron** DA TT
(Pub)

Steel, 4 7/8" edge, 7 1/8" long, unsigned.

52712LTC3 **Combination adjustable plumb and level** DA TT
(Pub)

Grey cast iron, steel, nickel plating, japanned finish, 12" long, 2 1/4" x 13/16", signed "STANLEY No 36 PAT'D.8-486-23.96".
Courtesy of Liberty Tool Co.

041505T38 **Die** DTM MH

Steel, 2 5/16" by 2 5/16" top, 2 3/4" high, signed "G. S. PAGET" "CO." "-BOSTON-" and "WOOD.".

The die stamps: "ALBEMARLE" "GOLF CLUB" "INCORPORATED 1800" and has a thistle mark. There is no Paget listed in DATM (Nelson 1999). This die was formerly owned by C. D. Evans Co. of Allston, MA, a button maker from Boston. Our curator grew up just down the street from the Albemarle golf course in Newtonville, MA.

http://www.davistownmuseum.org/pics/041505T38_p2.jpg

http://www.davistownmuseum.org/pics/041505T38_p1.jpg

33112T1 **Die stock** DTM TT

Cast steel, 7 3/4" long, 2 1/2" wide, signed "Wiley and Russell, MFG, CO." "Greenfield, MASS." "PAT. Aug 5, 1884" and "7/16, 1/32, 14".

The working dates for this company are from 1872 - 1912. Then they became part of the Greenfield Tap and Die Corp. This patent was assigned to them by Albert J. Smart of Greenfield. It may be viewed at:

http://www.google.com/patents?id=LWZAAAAEBAJ&pg=PA2&dq=Aug+5,+1884+die+stock&hl=en&sa=X&ei=g6SZT7PxCMeZ0QWz_oDmBQ&ved=0CDIQ6AEwAA#v=onepage&q=Aug%205%2C%201884%20die%20stock&f=false

<http://www.davistownmuseum.org/bioRussel.html>

82513T1 **Draftsmans' protractor** DA TT
(Pub)

Stainless steel, 10 5/8" long, 6 1/8" wide, 6 1/8" high, signed "Brown & Sharpe Mfg. Co. Providence, R.I. U.S.A. Pat. Dec. 2, 1890" "BS TRADEMARK".

<http://www.davistownmuseum.org/bioBrownSharpe.htm>

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Machinists' Tools

	Status	Location
<p>30202T7 Machinists' jack</p> <p>Steel, 4 7/8" long, extends to 8", unsigned. Probably this tool was made in a home shop.</p>	DTM	MH
<p>101715LTC2 Machinist's level</p> <p>Cast iron, steel, glass, 6" long, 7/8" tall, 5/8" wide, signed C.F. Richardson Athol, Mass..</p>	DA	TT (Pub)
<p>101715LTC3 Machinist's pocket hex level</p> <p>Steel, glass, 3 7/8" long, 1/4" wide, signed C.F. RICHARDSON ATHOL, MASS..</p>	DA	TT (Pub)
<p>81713T14 Machinists' precision angle square</p> <p>Tool steel, 2 1/4" x 1 7/8" x 3/8", signed "TAFT PEIRCE WOONSOCKET RI" "N-100094-G". This square can be adjusted from 90 degrees minutely by two small-thread screws against the blade. DATM (Nelson 1999) indicates this company's working dates were from 1915 to 1925.</p>	DTM	TT
<p>81813T2 Machinists' square set</p> <p>Tool steel, five squares with blades at 2", 3", 4", 6", and 8", signed "Greble Turner & Co. Hamilton, O. & Orange, Mass. U.S.A.". These squares were made by F.L. Turner & Company and are pictured in a 1902 ad for said company. They may also be related to Howell Tool Company, who also made machinists' try squares out of Orange, Massachusetts.</p>	DA	TT (Pub)
<p>5915T1 Speed dial indicator</p> <p>Steel, nickel, 5 1/8" long, 1 7/8" tall, 5/8" thick, signed "THE L.S. STARRETT CO. ATHOL, MASS. U.S.A.". http://www.davistownmuseum.org/bioStarrett.htm</p>	DTM	TT
<p>102415LTC2 Surface gauge</p> <p>steel, 4 1/4" long, 2 1/8" wide, 4" tall, 8" probe, signed W.D. McGOWAN.</p>	DA	TT (Pub)
<p>11115T1 Tap and die</p> <p>Tool steel, 3 5/16" long, 11/16" wide, sockets 3/8" tap, signed "S.W. CARD MANSFIELD, MASS." "TOSAMPLE 48". This is a particularly small example, probably for a gunsmith or horologist. http://www.davistownmuseum.org/bioCard.htm</p>	LPC	MH
<p>112716LTC1 Tap handle</p> <p>Tool steel, 10 5/8" long, 5/8" wide, 5/16" capacity,, signed LITTLE GIANT; WELLS BROS & Co GREENFIELD MASS.</p>	DA	TT (Pub)
<p>30202T13 Tapping stock</p> <p>Steel, 5 1/2" long, signed "Card US No 0". This diminutive tool is a product of one of New England's most important late classic period manufacturers of taps, dies, and related tools. DATM (Nelson 1999) lists S. W. Card Mfg. Co., which was located in Mansfield, MA, as operating between 1874 - 1908 before being bought out by the Union Twist Drill Co. of Athol. The factory building in Mansfield still stands. http://www.davistownmuseum.org/pics/30202t13.jpg http://www.davistownmuseum.org/bioCard.htm</p>	DTM	MH
<p>11301T10 Tapping stock</p> <p>Cast steel, 4 1/2" long, signed "S. W. Card Mansfield Mass". http://www.davistownmuseum.org/bioCard.htm</p>	DTM	MH
<p>41915T4 Threading tap</p> <p>Steel, 2 1/2" long, 7/16" diameter, signed "18".</p>	DTM	TT
<p>41915T3 Threading tap</p> <p>Steel, 4" long, 5/8" diameter, signed "10".</p>	DTM	TT
<p>82413T1 Try square</p> <p>Tool steel, 5 1/2" blade, 3 3/4" handle, 9/16" thick handle, signed "D.B.&S. Prov. R.I.". The mark stands for Darling, Brown & Sharpe, predecessor to Brown & Sharpe.</p>	DA	TT (Pub)

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Machinists' Tools

Status Location

62202T7 **V block**

DTM MH

Steel and brass, 1 1/2" long, 1" wide, unsigned.

This is a fine example of the work of a tool and die maker who needed a tiny V block for work on miniatures. It was made by a machinist for a specific use.

<http://www.davistownmuseum.org/pics/62202t6.jpg>

6316LTC1 **Vernier protractor**

DA TT
(Pub)

Tool steel, 14 3/16" long, 5 5/16" wide, 1/16" thick, signed Kern & Co. Swiss.

3114T1 **Wheel angle and radii dresser**

LPC MH

Tool steel, 9" tall, 7 1/2" wide, 5" deep, signed "J.&S. TOOL CO LIVINGSTON N.J. PAT. No. 2,366,628".

This complex, heavy duty machinists' tool comes in a latching leather box. Instructions and the box indicate that it is a Radii & angle dresser.

41915T6 **Wire gauge**

DTM TT

Steel, 3 3/16" diameter, 1/8" thick, signed "W. URBAN & CO. CAMDEN, N.J. U.S.A. A.S.&W. CO. STD. OR W.&M> STEEL WIRE GAGE".

Measuring Tools

Up until the 1850s, many foundries producing machinery for the burgeoning Industrial Revolution manufactured their own hand tools, otherwise hand tools were made by specialized, usually local, blacksmiths and toolmakers. Up to this time, the art of measurement was not very precise; it wasn't until 1856 that JR Brown invented the first micrometer. Most of the early machinery built for the water mills of southern New England were worked by hand and eye, with hand filing and primitive measurements the primary techniques available. After 1860, small companies like the J Stevens joined JR Brown, later Darling, Brown & Sharpe and other flourishing machine shops to begin the mass production of precision hand tools that were so necessary for the accurate construction of the complex factory machinery of the Industrial Revolution. In this context, in Davistown Plantation, time stopped.

10910T2 **Adjustable calipers**

DTM MH

Tempered alloy steel, 5" long, 2 3/4" wide, signed "PAT.FEB. 14, 1888" "STEVENS A. & T. CO. **** FALLS, MA" and "F.A. SKELTON" (owner's mark), c. 1888.

The unreadable portion of the signature should be "Chicopee Falls". Donated by the Swenson family.

<http://www.davistownmuseum.org/pics/10910t2web2.jpg>

<http://www.davistownmuseum.org/pics/10910t2web1.jpg>

10910T3 **Adjustable calipers**

DTM MH

Tempered alloy steel, 3 1/8" long, 2" wide, signed "PAT'D. FEB 14, 1888" "J. STEVENS A. & T. Co. CHICOPEE FALLS, MASS", c. 1888.

Donated by the Swenson family.

<http://www.davistownmuseum.org/pics/10910t3web1.jpg>

<http://www.davistownmuseum.org/pics/10910t3web2.jpg>

21201T11 **Adjustable calipers**

DTM MH

Tempered alloy steel, 6 1/8" long, signed "J. Steven A & T Co. Chicopee Falls Mass".

This signature is one of three variations listed in DATM (Nelson 1999, 757) for this prolific maker of bits, calipers, dividers, levels, machinist tools, and guns, 1864 - 1903. In 1903 they were bought out by L.S. Starrett.

TJS1301 **Adjustable calipers (3)**

DTM MH

Tempered alloy steel, 3 1/4" long, signed "US 48610568" on wrench.

<http://www.davistownmuseum.org/pics/tjs1301.jpg>

101701T16 **Adjustable die stock**

DTM MH

Drop-forged steel, 13 5/8" long, signed "J. M. King & Co. Waterford NY No 42".

DATM (Nelson 1999) lists this company in Waterford from 1887 - 1910. They made dies, pliers, and taps; these tools are encountered frequently.

51100T14A **Adjustable die stocks (2)**

DTM MH

Drop-forged steel, 10 7/8" and 14 3/8" long, signed "J. M. King & Co. Waterford, NY".

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

42602T6	Adjustable dividers	DTM	MH
<p>Tempered alloy steel, 8" long, signed "J Stevens A & T Co Chicopee Falls Mass USA". Formerly the J Stevens & Company, they changed their name to Stevens Arms & Tool Co. in 1886. Always a prolific maker of guns, their hand tools are sought after examples of the classic period of American machinists' tools.</p>			
81101T18A	Adjustable dividers	DTM	MH
<p>Tempered alloy steel, brass, 5 3/4" long, signed "Peck Stow & Wilcox" and "6". Peck, Stow & Wilcox Co. began operations in Southington, CT, in 1870 (to 1950). For details on their predecessors and history, see DATM (Nelson 1999, 610). This is an excellent example of the quality of a major producer of tools during the florescence of the classic period of American machinists' tools.</p> <p>http://www.davistownmuseum.org/bioPeck.html</p>			
83102T9	Adjustable dividers	DTM	MH
<p>Tempered alloy steel, 7" long, signed " L W POND" and "WORCESTER MASS PAT'd Sept'26 1867". Lucius W Pond made calipers, dividers, and machinists' tools from 1859 - 1884. This caliper is a very uncommon tool. It was patented by Edward Wright and also later made by the Wright Machine Co. of Worcester. Pond's primary products were large machine tools, primarily planers (Nelson 1999, 627).</p>			
2713LTC4	Angle divider	DA	TT (Pub)
<p>Grey cast iron, steel, nickel finish, 5" blade, 7 1/4" handle, 7/8" wide, signed "30" "PAT'D - OCT - 27 - 1903".</p>			
22211T19	Architects' scale	DTM	TT
<p>Boxwood, 12 3/4" long, 7/8" wide, signed "U.S. ST'D". The mark "U.S. ST'D" refers to United States standard measurements and may indicate this was foreign-made. Part of the Robert Sullivan Collection donation.</p>			
22211T23	Architects' scale	DTM	TT
<p>Boxwood, 6" long, 1" wide, 1/4" thick, signed "KEUFFEL" "& BESSER CO." "N.Y." in a circle, "1419" and a winged griffin trademark. This rule has a metric scale and is one meter long. The Keuffel & Esser Co. was located in New York City from 1867 to 1962 (Nelson 1999, 447). Part of the Robert Sullivan Collection donation.</p>			
102100T4	Bevel	DTM	MH
<p>Tempered alloy steel, 3 1/8" long, unsigned.</p>			
30202T6	Bevel square	DTM	MH
<p>Steel, 6 1/2" blade, 7" blade guide with 2" adjustable nut, signed "Alworth Bevel Square Rule ___ as made by Stark W ___ ss USA PATENTED Aug 7, 1888". DATM (Nelson 1999) lists a Stark Tool Co. in Waltham, Mass, operating between 1862 - 1902. They were issued a patent for a spring chuck jewelers' lathe and their lathes turn up occasionally in the Boston area. Neither Cope (1993) nor DATM list an Alworth. This particular design for a bevel square and this maker's mark have not been seen before by the curator.</p> <p>http://www.davistownmuseum.org/pics/30202t6.jpg</p>			
52512T2	Caliper gauge set	DTM	MH
<p>Drop-forged steel, 2 1/4" long, 1 1/8" to 1 3/8" wide, signed "P.&W. CO St'd"; the four gauges are marked 3/16, 1/4, 1/8, and 5/16.</p>			
032203T9	Calipers	DTM	MH
<p>Tempered alloy steel, brass, 3" long, signed "J. STEVENS A & T, CO." "FEALDEN", c. 1886. This is an exquisite example of the fine work of J. Stevens Co.</p> <p>http://www.davistownmuseum.org/pics/032203t9_p2.jpg</p>			
TJR3001	Calipers	DTM	MH
<p>Drop-forged iron or steel, 10 1/2" long, unsigned.</p>			
090508T4A	Calipers	DTM	MH
<p>Steel, 5 1/2" long, signed "GEO. PLUMPTON" with an X trademark.</p>			
102800M3	Calipers	DTM	MHC-K
<p>Steel, 11 3/4" long, signed by owner "W.F. Blake".</p> <p>http://www.davistownmuseum.org/bioKnoxEngine.htm</p>			

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Measuring Tools

Status Location

121805T26	Calipers	DTM	MH
<p>Steel, 4 7/8" long, signed "E R Wharton". No E. R. Wharton is listed in DATM (Nelson 1999). http://www.davistownmuseum.org/pics/121805t26_p2.jpg</p>			
102800M6	Calipers	DTM	MHC-K
<p>Steel, 6" outside, signed by owner "W.F. Blake". http://www.davistownmuseum.org/bioKnoxEngine.htm</p>			
102800M2	Calipers	DTM	MH
<p>Steel, 13 1/2" long, unsigned.</p>			
102800M4	Calipers	DTM	MHC-K
<p>Steel, 9 1/4" long, signed by owner "W.F. Blake". http://www.davistownmuseum.org/bioKnoxEngine.htm</p>			
102100T2	Calipers	DTM	MH
<p>Steel, 6" long, signed "Boker". DATM (Nelson 1999) lists an H. Boker & Co., but does not list it as using only Boker as the mark. The working dates are 1837-1969. It was the US affiliate of a German company and imported most of its tools until purchasing the Valley Forge Cutlery Co. in 1899. http://www.davistownmuseum.org/pics/51100t6.jpg</p>			
102800M5	Calipers	DTM	MHC-K
<p>Steel, 6" inside, signed by owner "W.F. Blake". http://www.davistownmuseum.org/bioKnoxEngine.htm</p>			
102100T3	Calipers	DTM	MH
<p>Steel, brass, 3" long, unsigned.</p>			
111001T4	Calipers	DTM	MH
<p>Steel, 4 7/8" long, signed "L. W. Pond Worcester Mass PAT. Sept 24, 1867". DATM (Nelson 1999) lists this maker as Lucius W. of the Pond Machine Co., who made larger machine tools, primarily planes. This is an exceedingly rare signature on a caliper.</p>			
102800M8	Calipers	DTM	MHC-K
<p>Steel, 5" long, signed by owner "W.F. Blake". http://www.davistownmuseum.org/bioKnoxEngine.htm</p>			
102800M7	Calipers	DTM	MHC-K
<p>Steel, 6" long, signed by owner "W.F. Blake". http://www.davistownmuseum.org/bioKnoxEngine.htm</p>			
111900T14	Center finder	DTM	MH
<p>Tempered alloy steel, 6 5/8" long with a 6" pivoting arm, signed "The L S Starrett Co Athol Mass USA". DATM (Nelson 1999, 751) contains historical information on L. S. Starrett Co. http://www.davistownmuseum.org/bioStarrett.htm</p>			
41212T3	Center gauge	DTM	TT
<p>Tool steel, 2 1/4" long, 3/4" wide, signed "Darling, Brown & Sharpe Providence, R.I." and "P.H. MAY" owner's mark. This machinists' tool bears a rare, early mark. Courtesy of Liberty Tool Co. http://www.davistownmuseum.org/bioBrownSharpe.htm</p>			
42912LTC17	Center gauge	DA	TT (Pub)
<p>Tempered alloy steel, 2 1/4" long, 3/4" wide, signed "THE L.S. STARRETT CO. ATHOL, MASS. U.S.A. NO. C391" "DOUBLE DEPTH OF AMER. NAT. THREAD" "ANGLES 60 TEMPERED MADE IN U.S.A". Courtesy of Liberty Tool Co.</p>			

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Measuring Tools

Status Location

92212LTC1 **Combination square**

DA TT
(Pub)

Cast iron, drop-forged steel, 12" long, 1" wide rule, 5" x 3 1/8" x 13/16" head, signed "GOODELL-PRATT CO. GREENFIELD MASS TEMPERED MADE IN U.S.A." on rule.

This is O.R. Chaplin's 1880 patent combination square. The rule itself is not original and one head is missing.

22512LTC4 **Combination square with center head and reversible protractor head**

DA TT
(Pub)

Drop-forged tempered alloy steel, glass, satin and japanned finish, 18" long, signed "BROWN & SHARPE PROVIDENCE R.I. TEMPERED NO. 4" and on center head "PATENT 2085481".

Courtesy of Liberty Tool Co.

<http://www.davistownmuseum.org/bioBrownSharpe.htm>

32912T1 **Combination square with square head**

DTM TT-44

Drop-forged steel rule, cast iron head, 10 1/4" long, signed "DAVIS THE HARDWARE MAN BOSTON".

Davis the Hardware Man is mentioned as a vendor operating on the corner of Portland and Sudbury streets in Boston in the April, 1905 issue of Hardware Dealers' Magazine. This rule is graduated in 64ths of an inch. Courtesy of Liberty Tool Co.

091608T2 **Compass**

DTM MH

Steel, 10 1/2" long including the two adjustable 2" long extensions, signed "SULLIVAN'S PAT" "MAR 9, 1880".

The angle of the legs can be changed by two locking mechanisms at the ends. The markings on this tool are particularly crisp and clear; the tool is in fine condition. We haven't seen this model of calipers before; this is an uncommonly encountered tool as evidenced by the fact that it is listed in DATM (Nelson 1999) without location, dates of operation, or the first name of Sullivan. DATM also notes obviously incorrect dates of 1980 as well as 1890 on previously reported specimens. Further information on the identity of Sullivan would be greatly appreciated.

32708T46 **Compass**

DTM MH

Tempered alloy steel, 7 1/2" long, 8" wide, signed "THE L S STARRETT Co" and "ATHOL MASS U.S.A.".

Laroy S. Starrett Co.'s working dates were from 1880 to the present day.

<http://www.davistownmuseum.org/pics/32708t46-1.jpg>

<http://www.davistownmuseum.org/bioStarrett.htm>

TCP1005 **Compass**

DTM MH

Steel, 5 1/2" long, signed "THEWLIS & CO" and "BOOTH BROTHERS DUBLIN".

DATM (Nelson 1999, 782) lists Thewlis & Co. as a maker of a small machinists' square, Boston, 1885. This compass has an 18th century English pattern with a later style manufacturer's signature.

22311T2 **Compass**

DTM TT

Drop-forged tempered alloy steel, 7 1/2" long, signed in a circle "W. SCHOLLHORN NEW HAVEN, CT." and "PAT. APPLD. FOR" "3" on one leg and owner mark "G.A.O." on other leg.

Part of the Robert Sullivan Collection donation.

22512LTC9 **Depth gauge micrometer**

DA TT
(Pub)

Drop-forged tempered alloy steel, 4" long, 4" wide, 1/2" high, signed "Starrett" "No. 445".

This was found in a case with 3 of the original 6 attachments and tuning wrench. Courtesy of Liberty Tool Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

111900T12 **Dividers**

DTM MH

Tempered alloy steel, 3 13/16" long, signed "Starrett Athol Mass".

DATM (Nelson 1999, 751) contains historical information on L. S. Starrett Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

032203T8 **Dividers**

DTM MH

Tempered alloy steel, brass, 9 3/4" long, signed "J STEVENS A & T CO. Chicopee Falls Mass USA".

J. Stevens began making calipers and dividers in 1864. They changed their name to J. Stevens Arms & Tool Co. in 1886. These high quality American-made dividers are typical of American-made tools appearing in tool kits at this time.

http://www.davistownmuseum.org/pics/032203t8_p2.jpg

31811T11 **Dividers**

DTM TT

Drop-forged tempered alloy steel, 9" long, 5/16" wide, signed "OLDENBURG" and the James Swan trademark..

<http://www.davistownmuseum.org/bioSwan.html>

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

62112LTC1 Firm joint hermaphrodite calipers

DA TT
(Pub)

Tool steel, 6 1/4" long, signed "THE L.L.S. STARRETT CO. ATHOL, MASS. U.S.A. No. 248".
Courtesy of Liberty Tool Co.

22211T9 Folding rule

DTM TT

Silver plated plastic composite, 12" long (extended), 3" long (folded), 5/16" wide, 1/8" thick, unsigned.
The body is a plastic composite made to mimic ivory. The metal is brass plated. Part of the Robert Sullivan Collection donation.

22211T22 Folding rule

DTM TT

Boxwood, 39.37" long, 5/8" wide, 3/32" thick, unsigned.
This rule has a metric scale and is one meter long. Part of the Robert Sullivan Collection donation.

22211T16 Folding rule

DTM TT

Boxwood and brass, 24" long (extended), 6" long (folded), 1/2" wide, 1/8" thick, signed "STANLEY No 62" "STANLEY RULE" "& LEVEL CO." "NEW BRITAIN, CONN." "USA" "WARRENTED" "BOXWOOD".
This is a Stanley No. 62 rule. Part of the Robert Sullivan Collection donation.

<http://www.davistownmuseum.org/bioStanley.html>

22211T12 Folding rule

DTM TT

Boxwood and brass, 24" long (extended), 6" long (folded), 5/8" wide, 1/8" thick, signed "STANLEY" "NEW BRITAIN" "CONN. U.S.A." and "No 7" on both sides.

This is a Stanley No. 7 rule. Part of the Robert Sullivan Collection donation.

<http://www.davistownmuseum.org/bioStanley.html>

22211T11 Folding rule

DTM TT

Boxwood and brass, 12" long (extended), 3" long (folded), 5/16" wide, 1/8" thick, signed "No 70" on both sides.

This is a Stanley No. 70 rule. Part of the Robert Sullivan Collection donation.

<http://www.davistownmuseum.org/bioStanley.html>

22211T10 Folding rule

DTM TT

Boxwood and brass, 12" long (extended), 3" long (folded), 5/16" wide, 1/8" thick, signed "No 65" on both sides.

This is a Stanley No. 65 rule. Part of the Robert Sullivan Collection donation.

<http://www.davistownmuseum.org/bioStanley.html>

31908T35 Framing square

DTM MH

Steel, 24" long, 14" wide, signed "S. HAYES" "PATENT" "WARRANTED" and "STEEL".

There is no S. Hayes in DATM (Nelson, 1999).

082015T1 Gauge

LPC MH

Steel, 4 3/4" long, 2" tall, signed "MADE EXPRESSLY FOR JOS. W. HARDING & CO., 32-34 CENTRAL SQUARE, LYNN, MASS.". Additional marks: "HARVEY W. PEACE -Saw Manufacturer - BROOKLY, NY. Finest and Fastest Cutting Saws in the World, FULL WARRANTED"

<http://www.davistownmuseum.org/bioHoe.html>

83102T5 Gauge guide

DTM MH

Paper mounted on board, unsigned.

This gauge guide is printed on two sides and lists the following standards: USG (United States Standard Gauge), TDG (Twist Drill & Steel Wire Gauge), SWG (Stubs Wire Gauge), B&S (Brown & Sharpe or American Standard Wire Gauge), BWG (Birmingham or Stubs Iron Wire Gauge), NWG (National or Roebbling or Washburn & Moen Gauge) and MWG (Music Wire Gauge).

30101T1 Gear tooth vernier caliper

LPC MHC

Tempered alloy steel in leather box, 4 1/15" long, 4 1/4" high, signed "Brown & Sharpe Mfg. Co. Providence RI USA 20.2DP".

This tool is representative of the florescence of the New England toolmaker and is made by L. S. Starrett's principal 20th century competitor. The English measure caliper is an uncommon Brown & Sharpe product.

<http://www.davistownmuseum.org/pics/30101t1.jpg>

<http://www.davistownmuseum.org/bioBrownSharpe.htm>

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

71912LTC1 **Go nogo inspection gauges**

DA TT
(Pub)

Drop-forged steel, japanned finish, signed "BROWN & SHARPE MFG. CO. PROVIDENCE, R.I. U.S.A.".

The set includes a 1 11/16" long, 0.6865" wide tool; a 1 1/4", 0.874" wide tool; a 3 5/8" long, 1.499" wide tool; a 4" long, 1.749" wide tool; a 4" long, 1.750" wide tool; and a 4 1/2" long, 3.000" wide tool. The Brown & Sharpe catalogs show these tools as being available made-to-order in a variety of precise sizes. Courtesy of Liberty Tool Company.

<http://www.davistownmuseum.org/bioBrownSharpe.htm>

62914T6 **Graduated caliper rule**

LPC MH

Tool steel, 6 3/16" long, 15/16" wide, signed "Fleming Machine Co. Worcester, Mass. U.S.A. Fleming No 1334".

Fleming Machine Co. was incorporated in 1922 by George W. Fleming, John G. Perman, and F. Julius Quist and was bought out by Black & Decker in 1929. (American Machinist Volume 56, 1922)

72002T4 **Height gauge**

LPC MH-I

Steel, 10" high, 6" scale, signed "L S Starrett Co. Athol Mass USA" "Athol Mass" "Made in USA" "No 354", 1900.

This is a fine boxed example of a late classic period machinist tool formerly owned by the Raytheon Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

30911T4 **Hermaphrodite dividers**

DTM TT

Drop-forged tempered alloy steel, 6" long, signed "W. C. HOWATT" a hand-stamped owner's mark.

102501T1 **Inclinometer level**

LPC MH

Drop-forged iron and steel, brass, 6" long, 14/16" wide, 2 1/2" high, 2" diameter meter, signed "DAVIS LEVEL & TOOL Co" and "PAT.SEP 17, 1867" with owner's signature "J.F. McCABE".

This tool is also referred to as a mantle clock level. DATM (Nelson 1999, 214) has historical information on this company.

http://www.davistownmuseum.org/pics/102501t1_p3.jpg

<http://www.davistownmuseum.org/bioDavis.htm>

62202T8 **Inside calipers**

DTM MH

Drop-forged steel, 3 7/8" long, signed "Murphy".

No Murphy is listed by DATM (Nelson 1999) as a maker of calipers. Who was Murphy? Where and when did he make calipers? The style of the calipers is mid- to late 19th century.

<http://www.davistownmuseum.org/pics/62202t6.jpg>

41302T11 **Inside calipers**

DTM MH

Tempered alloy steel, 3 1/2" long, 1 3/8" wide when closed, signed "J. Stevens A & T Co. Chicopee Falls Mass PAT March 9 1886".

These are finely made beveled spring calipers. Joshua Stevens, one of the principal tool manufacturers of the classic period, worked in Chicopee, MA, from 1864 to 1903. Numerous patents are listed. They changed their name to Stevens Arms & Tool Co. in 1886. This company had a close association with the Davis Level & Tool Co. of Springfield, MA (1875 - 1892) with respect to the R. Hathaway patented square (4 Dec. 1866). (Nelson 1999, 757, 214).

111900T6 **Inside calipers**

DTM MH

Tempered alloy steel, 2 3/4" long, signed "B.S. Mfg Co Prov. R.I. USA".

Inside calipers are used to measure the diameter of a cylindrical hole. They have rounded tips that are bent away from each other.

<http://www.davistownmuseum.org/bioBrownSharpe.htm>

111900T5 **Inside calipers**

DTM MH

Tempered alloy steel, 5" long, signed "STARRETT ATHOL MASS USA".

DATM (Nelson 1999, 751) contains historical information on L. S. Starrett Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

22712LTC1 **Inside micrometer calipers**

DA TT
(Pub)

Drop-forged tempered alloy steel, 4 3/4" long, 1 1/4" wide, 4 3/4" high, signed "THE L.S. STARRETT CO. ATHOL, MASS. U.S.A.".

This is the No. 124 set. Courtesy of Liberty Tool Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

TJG1001 **Lathe tool holder**

DTM MH

Drop-forged iron with steel cutter, 6" long with 2" long 1/4" cutter, signed "MACHINISTS TOOL CO PROV. R.I. PATENTED MAY 26, 1868".

This machine-made tool is characteristic of the arrival of the era of mass-produced hand tools.

<http://www.davistownmuseum.org/bioMachinistool.html>

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

- 92911T4 **Level** DTM MH
Mahogany with brass ends, 30 1/4" long, 3 1/8" wide, 1 1/4" high, signed "STANLEY RULE & LEVEL CO" "NEW BRITAIN, CONN USA" "PAT FEB 18.90".
There are two spirit bubbles with adjustments and an adjusting screw.
<http://www.davistownmuseum.org/bioStanley.htm>
- 71903T9 **Level** DTM MH
Drop-forged iron, brass, 9" long, signed "L. S. Starrett & Co Athol Mass Pat Applied For".
This appears to be the first model of this particular size level.
<http://www.davistownmuseum.org/bioStarrett.htm>
- 72002T2 **Level** DTM MH
Wood (cherry?), 12" long, 1" wide, signed "E. T. BURROWES CO." "PORTLAND, ME." on brass plate, 1910 (?).
This is a mundane late example of an everyday household tool made by one of Maine's most prolific toolmakers.
http://www.davistownmuseum.org/pics/72002t2_p1.jpg
<http://www.davistownmuseum.org/publications/volume10.html>
- 120907T2 **Level** DTM TT
Drop-forged iron and steel, brass, 24" long, 2 3/4" wide, signed "DAVIS LEVEL & TOOL Co" and "PAT SEP 17, 1867".
It has an intricately worked body and an adjustable dial with 90 degrees of movement. Davis' patent 68961 may be viewed here:
<http://www.google.com/patents?id=do4AAAAEBAJ&printsec=frontcover&dq=68961&hl=en&sa=X&ei=s-nZT97ZO4fFswbP0tn6Bw&ved=0CDcQ6AEwAA>
http://www.davistownmuseum.org/pics/120907t2_p2.jpg
<http://www.davistownmuseum.org/bioDavis.htm>
- 92911T3 **Level** DTM MH
Rosewood and brass, 30" long, 3 3/8" wide, 1 3/8" high, signed "J. W. HARMON 65 HAVERHILL ST" in a circle with "BOSTON MASS." inside the circle.
It has two spirit bubbles. DATM (Nelson 1999, 355) indicates that John W. Harmon made levels and rules from 1860 to 1907. He had two patents.
- 13102T1 **Level** DTM MH
Wood (rosewood), brass, 8" long, 1" wide, signed "STRATTON BROTHERS GREENFIELD MASS" and "PATENTED JULY 16 1872 OCT 4 1887" and "No 10" on the end.
Edwin and Charles Stratton's patents may be viewed here:
<http://www.google.com/patents?id=L3BBAAAAEBAJ&pg=PA2&dq=JULY+16++1872+level&hl=en&sa=X&ei=IOrZT4-3HsPetAakoeCLCA&ved=0CDoQ6AEwAQ#v=onepage&q=JULY%2016%20%201872%20level&f=false>
<http://www.davistownmuseum.org/pics/13102t1-3.jpg>
<http://www.davistownmuseum.org/bioStratton.html>
- 92911T5 **Level** DTM MH
Rosewood with brass, 28" long, 3 3/8" wide, 1 5/16" high, signed "MILLIKEN & STACKPOLE" "BOSTON, MASS".
There are two spirit bubbles.
- 52408T4 **Level** DTM MH-O
Wood, glass, brass, 2 9/16" long, 1 1/2" wide, 3" high, unsigned.
This is a small circular level. It was made by Leon Robbins of Bath, ME.
<http://www.davistownmuseum.org/bioLeon.html>
- 92911T6 **Level** DTM MH
Rosewood and brass, 24" long, 3 1/2" wide, 1 1/2" high, signed "H. M. POOL" "EASTON, MASS" and with an eagle and USA style shield.
Horace Minot Pool of Easton, MA was born July 9, 1803. He made levels and other scientific instruments from 1838 until his death on Nov. 1, 1878. He also worked with his brother, John, signing tools "J. & H. M. POOL" and later with other brothers, Nahum and Harrison, as "Horace Minot Pool & Bros". (DATM 1999).
- 22311T1 **Level** DTM TT
Drop-forged tempered alloy steel, 12 1/4" long, 2 3/4" wide, 1 1/2" deep, signed "THE L.S.STARRETT Co" "ATHOL, MASS. U.S.A." with a border.
Part of the Robert Sullivan Collection donation.
<http://www.davistownmuseum.org/bioStarrett.html>

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

92911T7	Level	DTM	MH
Rosewood and brass, 32" long, 3 1/2" wide, 1 1/2" high, signed "MCFERNALD" owner stamp on the brass ends. One spirit bubble.			
92911T8	Level	DTM	MH
Rosewood and brass, 26 1/4" long, 3" wide, 1 1/4" high, signed "STRATTON BROTHERS" "GREENFIELD, MASS" "PATENTED July 16, 1872" and with an eagle mark. Edwin A. and Charles M. Stratton began their level business in 1869 (DATM 1999). http://www.davistownmuseum.org/bioStratton.html			
041712T1	Level	DTM	TT
Tempered alloy steel, glass, 12" long, 3/4" wide, 1 7/8" high, signed "THE L.S.S. Co. ATHOL MASS U.S.A.". This machinists' level dates from 1940 - 1950. http://www.davistownmuseum.org/bioStarrett.htm			
71412LTC1	Level with adjustable inclinometer	DA	TT (Pub)
Cast steel, japanned finish, glass vials, 10" long, 15/16" wide, 2 1/4" high, signed "THE L.S.S. CO., ATHOL, MASS. U.S.A.". This is the Starrett No. 133. Courtesy of Liberty Tool Company. http://www.davistownmuseum.org/bioStarrett.htm			
41203T1	Line level	LPC	MH
Cast iron and brass, 3 1/2" long, signed "MANUFACTURED BY L.L. DAVIS SPRINGFIELD MASS" and "37 1/2". Leonard L. Davis made levels and planes in Springfield, MA, 1867-1875, before changing the name of his company to Davis Level & Tool Co. (1875 - 92). This is an excellent example of one of the most sought after pocket or line levels by one of the most distinguished manufacturers of the classic period of American machinists' tools. http://www.davistownmuseum.org/pics/41203t1_p2.jpg http://www.davistownmuseum.org/bioDavis.htm			
5616T4	Machinists' rule	DTM	TT
Tool steel, 4" long, 5/8" wide, 1/32" thick, signed "SAYWER TOOL MFG CO ASHBURNHAM MASS TEMPERED NO 4". http://www.davistownmuseum.org/bioSawyer.html			
32708T62	Marking gauge	DTM	MH
Brass, rosewood, and metal plate, 7" long, unsigned. http://www.davistownmuseum.org/pics/32708t62-1.jpg			
31808SLP23	Marking gauge	DTM	TT
Mahogany with brass inlay, 9" long, signed "PAT. AUG. 5, 1873". http://www.davistownmuseum.org/pics/31808slp23-3.jpg http://www.davistownmuseum.org/pics/31808slp23-1.jpg			
41801T10	Marking gauge	DTM	MH
Steel, 2 11/16" long, unsigned. This tiny machinists' gauge is highly unusual in its diminutive size. Probably it was owner-made.			
31808SLP7	Miter square	DTM	TT
Steel, brass, wood, signed with obscured mark "____YN" and "____NE" and "CFW" on the handle. http://www.davistownmuseum.org/pics/31808slp7-1.jpg http://www.davistownmuseum.org/pics/31808slp7-2.jpg			
31808SLP27	Mortising gauge	DTM	TT
Wood and brass, 8" long, 7" long gauge, unsigned. http://www.davistownmuseum.org/pics/31808slp27-1.jpg http://www.davistownmuseum.org/pics/31808slp27-2.jpg			
TJS1302	Multiple angle drill gauge	DTM	MH
Drop-forged steel, 2 1/4" long, 1 1/2" wide, signed "COFFIN & LEIGHTON SYRACUSE NY". DATM (Nelson 1999, 177) lists Coffin & Leighton as located in Syracuse, NY from 1885 - 1901. Herbert Leighton patented a combination vernier, bevel, and square 17 Jan. 1893 and a machinists' rule 25 Aug 1885 by both he and John Coffin. In 1902 they sold their business to the Goodell Pratt Co.			

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

32802T1	Outside calipers	DTM	MH
<p>Steel, 4" long, signed "Pat. Jan 4 1887" with obscured maker's mark. The maker's mark would probably be: Davis Level & Tool Co. Springfield, Mass. It might be patent 355,430 http://www.google.com/patents?id=w1BmAAAAEBAJ&pg=PA2&dq=jan+4+1887+caliper&hl=en&sa=X&ei=Fb90T6PtOOrU0QX1kcnyAQ&ved=0CD0Q6AEwAw#v=onepage&q=jan%204%201887%20caliper&f=false http://www.davistownmuseum.org/pics/32802t10.jpg http://www.davistownmuseum.org/bioDavis.htm</p>			
111900T4	Outside calipers	DTM	MH
<p>Tempered alloy steel, 5" long, signed "L S S Co. ATHOL MASS USA" with an owner's signature "M. E. Weed". DATM (Nelson 1999, 751) contains historical information on L. S. Starrett Co. http://www.davistownmuseum.org/bioStarrett.htm</p>			
92911T2	Outside calipers	DTM	MH
<p>Drop-forged tempered alloy steel, 24" long, signed "H BRINTON & CO".</p>			
41801T1	Outside calipers	DTM	MH
<p>Steel, 4 1/2" long, signed "Athol Machine Co. Athol Mass. U.S.A." Originally formed by Laroy Starrett in 1868, he sold Athol in 1878. It became a competitor to L.S. Starrett Co. and he purchased it back in 1905. In "about 1882 they [Athol] either bought or founded the Standard Tool Co. as an integral division making machinist tools." DATM (Nelson 1999, 40). http://www.davistownmuseum.org/bioStarrett.htm</p>			
111900T8	Outside calipers	DTM	MH
<p>Tempered alloy steel, 2 3/4" long, signed "B.S. Mfg Co Prov. R.I. USA". http://www.davistownmuseum.org/bioBrownSharpe.htm</p>			
041505T35	Outside calipers	DTM	MH
<p>Steel, 8 5/8" closed, signed "H. A. ELLIS" and "J. P." There is no H. A. Ellis in DATM (Nelson 1999). Possibly these are signed by the owner. http://www.davistownmuseum.org/pics/041505t35.jpg</p>			
32802T10	Outside calipers	DTM	MH
<p>Steel, 6" long, signed "W. E. TRUFANT Whitman Mass PAT Apr 18 03". This unusual caliper includes a small 4" scale welded to the casing. It is an extremely rare late classic period machinists' tool. The patent is 726,287 of April 28, 1903, assigned to Walter E. Trufant by Frank A. Hatch of Hanson, MA. Http://www.google.com/patents?id=0X9aAAAAEBAJ&pg=PA2&dq=trufant+apr++caliper&hl=en&sa=X&ei=vMF0T_ngNoyt8QPR00xD&sqi=2&ved=0CDIQ6AEwAA#v=onepage&q=trufant%20apr%20%20caliper&f=false http://www.davistownmuseum.org/pics/32802t10.jpg</p>			
111001T40	Parallels	DTM	MH
<p>Steel, 2 1/2" long, unsigned. This is a precision tool set from the classic period (or later) of the Industrial Revolution.</p>			
30911T1	Parting tool	DTM	TT
<p>Tool steel, brass ferrule, and wood handle, 13" long, 6" blade, signed "J. M. McPHAIL" "1889". A parting tool is used to cut grooves in a spindle while it is turning. It gets its name from the tool's ability to remove finished "parts".</p>			
102800T7	Pencil compass	DTM	MH
<p>Drop-forged steel, 6 5/8" long, signed "WT. ATHERHEAD PATENT. REISSUED FEB 18 187?". Patent 5,290 issued to O. E. Weatherhead in 1873 for an improvement in dividers may be viewed here: http://www.google.com/patents?id=rNweAAAAEBAJ&pg=PA1&dq=weatherhead+dividers&hl=en&sa=X&ei=RPHZT4jJJsratAbYovDCA&ved=0CDUQ6AEwAA#v=onepage&q=weatherhead%20dividers&f=false http://www.davistownmuseum.org/pics/51100t6.jpg</p>			
32912T6	Pencil compass	DTM	TT-44
<p>Tempered alloy steel, 8 1/4" long, signed "S COPELAND PAT. MAY 24, 1887". The first letter of the maker's mark is very faint, but the patent date identifies this tool as the product of Copeland & Chamberlain, working out of Worcester, Massachusetts, from circa 1872 to 1901. The company name was changed to Copeland Hardware Mfg. Co. In 1901 (Nelson 1999, 190). Salem Copeland's patent may be viewed here: http://www.google.com/patents?id=8dE_AAAAEBAJ&printsec=frontcover&dq=363600&hl=en&sa=X&ei=PBC1T5nVG4GIGAghqX0DQ&ved=0CD0Q6AEwAg. Courtesy of Liberty Tool Co.</p>			

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

11115T2	Protractor face	DTM	MH
<p>Tool steel, 3 1/4" x 1 7/8" x 1/32" thick, signed "P KENNELLY PAT OCT 2-83". This is Patrick Kennelly's patent, later made by L.S. Starrett.</p>			
102904T21	Radius gauge	DTM	MH
<p>Steel, 10 1/2" wide, 6" diameter swivel, 7 1/2" high gauge on 5 1/2" x 3" raised platform, signed "VINCOTOOL CO." "DETROIT MICH." "PAT. JUNE 5-1934" "PAT. NO. 1961242" "Set diamond from this face" on gauge post. This is an interesting and rare sculpture object from the post-classic period of the Industrial Revolution. It is one of the most modern tools in the museum's collection.</p> <p>http://www.davistownmuseum.org/pics/102904t21_p1.jpg</p>			
111900T1	Rule	DTM	MH
<p>Tempered alloy steel, 12" long, signed "L.S. STARRETT ATHOL MASS USA TEMPERED No 4". DATM (Nelson 1999, 751) contains historical information on L. S. Starrett Co.</p> <p>http://www.davistownmuseum.org/bioStarrett.htm</p>			
041505T31	Rule	DTM	MH
<p>Steel, 6", signed "Fleming" in script and "U. S. A." and "Fleming Machine Co." "Worcester, Mass" and "No. 1334". Black & Decker purchased Fleming Machine Co. of Worcester in 1929 (http://www.fundinguniverse.com/company-histories/The-Black-and-Decker-Corporation-Company-History.html).</p> <p>http://www.davistownmuseum.org/pics/041505t31_p1.jpg http://www.davistownmuseum.org/pics/041505t31_p2.jpg</p>			
111001T5	Rule	DTM	MH
<p>Steel, 12" long, signed "Tool Co" with a star and also marked "Spring Steel". The star is the touchmark of the Star Tool Co. DATM (Nelson 1999) lists Star Tool Co. in Middletown, CT, 1867-1883 with another location in Providence, Rhode Island (1870-71). It manufactured bevels, levels, marking gauges, and squares. Spring steel was produced from cementation (blister) steel.</p>			
41801T13	Rule	DTM	MH
<p>Tool steel, 2 15/16" long, signed "HOPE & Co. PROV. R.I." on one side and "SPRING STEEL" on the other. DATM (Nelson 1999) lists Hope & Co. as making engraving machines in 1868. No mention is made of making any other tools. This is a rare find from the early years of the Industrial Revolution.</p> <p>http://www.davistownmuseum.org/bioHope.html</p>			
102100T18	Rule	DTM	MH
<p>Steel, 6" long, signed "J. R. BROWN & SHARPE PROVIDENCE R. I. U,S, STD". This signature precedes the later B S Mfg. Co. (Brown and Sharpe).</p> <p>http://www.davistownmuseum.org/bioBrownSharpe.htm</p>			
102800M11	Rule	DTM	MHC-K
<p>Steel, signed "DB&S" and by owners "W.F. Blake" and "W. Cross".</p> <p>http://www.davistownmuseum.org/bioKnoxEngine.htm</p>			
52603T3	Ruler	DTM	MH
<p>Tempered alloy steel, 4" long, signed "UNION CALIPER. Co" "Orange Mass" "Tempered No. 4". DATM (Nelson 1999) lists this company's working dates as 1908-1916, manufacturing machinist's tools.</p>			
30311T10	Scale	DTM	TT
<p>Tool steel, 10 1/2" long, 11/16" wide, 1/8" high, signed "Brown & Sharpe Mfg Co" "Providence, R.I. U.S.A." and with their trademark LBS.</p> <p>http://www.davistownmuseum.org/bioBrownSharpe.htm</p>			
3912LTC2	Scale set	DA	TT (Pub)
<p>Stainless steel blades, tempered alloy steel handle, 4" long handle, 1" long and 3/4" long blades, unsigned. This handle and set of small ruler blades is used for making precise measurements in a confined space. Courtesy of Liberty Tool Co.</p>			

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

22512LTC1 Set of 3 calipers (inside, outside, and dividers)

DA TT
(Pub)

Drop-forged tempered alloy steel, 9" long (all three), signed "THE L.S. STARRETT CO. ATHOL, MASS. U.S.A.". This set includes inside and outside diameter measurement calipers and one set of dividers. Courtesy of Liberty Tool Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

5412LTC6 Shrinkage rule

DA TT
(Pub)

Boxwood and brass, 24 1/4" long unfolded, 1 15/16" wide, signed "STANLEY RULE & LEVEL Co NEW BRITAIN CONN." "No 31.". Courtesy of Liberty Tool Co.

<http://www.davistownmuseum.org/bioStanley.htm>

41915T5 Size gauges

DTM TT

Steel, 6 3/8" x 1 9/16" wide, 3/16" thick and 5 3/4" x 1 5/16", 1/4" thick, signed "Joubert" "MADE IN FRANCE" "GESSWEIN".

31808SLP18 Sliding T bevel

DTM TT

Steel blade, brass trim, and lacquered rosewood handle, 10" long, 6 5/8" long handle, signed "STANLEY" "RULE & LEVEL Co" "NEW BRITAIN. CONN" "U.S.A." and "PAT. 9-6-04".

<http://www.davistownmuseum.org/pics/31808slp18-1.jpg>

<http://www.davistownmuseum.org/bioStanley.htm>

31808SLP19 Sliding T bevel

DTM TT

Steel blade, brass trim, and rosewood handle, 6" long, 4 1/2" long handle, signed "MADE IN U.S.A.".

<http://www.davistownmuseum.org/pics/31808slp19-1.jpg>

<http://www.davistownmuseum.org/pics/31808slp19-2.jpg>

22512LTC7 Small hole gage gauges

DA TT
(Pub)

Drop-forged tempered alloy steel, vinyl pouch, 2" long, signed "Starrett NO. S830F SMALL HOLE GAGES" "THE L.S. STARRETT CO. ATHOL, MASS. U.S.A.".

This is a set of 5 small hole gauges in a red vinyl pouch that measure from 0.125" to 0.500". Courtesy of Liberty Tool Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

052611T1 Speed indicator

DTM TT

Drop-forged nickel plated steel, 5" long, signed "L. S. STARRETT CO." "ATHOL MASS".

Speed indicators are used for measuring the turning speed of machinery such as lathes.

<http://www.davistownmuseum.org/bioStarrett.htm>

22311T21 Spirit level

DTM TT

____ NEED MEDIUM _____, 30" long, 3 1/2" wide, 1 1/4" thick, signed "MANUFACTURED BY L. L. DAVIS" "SPRINGFIELD, MASS." "PAT. MARCH 17, 1867".

Part of the Robert Sullivan Collection donation.

<http://www.davistownmuseum.org/bioDavis.htm>

52603T35 Spring calipers

DTM MH

Steel, 5 3/16" long, 4" wide, signed "SAWYER".

This might be Sawyer Tool Co. of Athol, Fitchburg, and Ashburnham, Massachusetts, working dates 1894-1915.

<http://www.davistownmuseum.org/bioSawyer.html>

111412T6 Spring dividers

DTM MH

Alloy steel, 4" long, signed "S. T. Co." "ATHOL, MASS." on one leg and "THE BOSS" on the other leg.

The Standard Tool Company used "BOSS" as a brand. They were located in Athol, MA from 1880 to 1905 (Nelson 1999, 748).

111412T5 Spring outside dividers

DTM MH

Tempered alloy steel, 3" long, signed "THE L. S. S. Co." "ATHOL, MASS." "PAT JUN. 2: 85".

Charles P. Fay's patent 319,215 can be viewed here:

<http://www.datamp.org/patents/search/advance.php?pn=319215&id=12736&set=6>

<http://www.davistownmuseum.org/bioStarrett.htm>

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

63001T12	Square	DTM	MH
<p>Steel, 2 5/8" long, 2 1/8" blade, signed "The LSS Co Athol Mass No 20". This is a classic example of Starrett's finest product. DATM (Nelson 1999, 751) contains historical information on L. S. Starrett Co. http://www.davistownmuseum.org/bioStarrett.htm</p>			
TJR2203	Square	DTM	MH
<p>Malleable iron or steel, 12" x 8", signed with an obscured signature.</p>			
11301T3	Square	DTM	MH
<p>Steel, 15 5/8" long, 1 7/8" wide with a 7 1/2" arm extended to 8 1/4" wide at blade joint, signed "J B Jopson". No J. B. Jopson is listed in DATM (Nelson 1999). Could this be an owner's mark?</p>			
31611T4	Square	DTM	TT
<p>Drop-forged tempered alloy steel, 12" long by 7" long, 1/8" wide, signed "'SAFFORD". The blades are tapered. The longer one is stamped with numbers.</p>			
72812T1	Square	DTM	MH
<p>Cast steel, 12" long, 8" wide, signed "WARRANTED STEEL No 2".</p>			
JTS1001	Square	DTM	MH
<p>Drop-forged steel, 3" by 1 1/2", signed with the touchmark "JHM".</p>			
42912LTC6	Stair gauges	DA	TT (Pub)
<p>Drop-forged steel, 1 1/4" long, 1 3/4" wide, signed "THE L.S.S. CO. ATHOL, MASS. U.S.A. No. 111". Courtesy of Liberty Tool Co.</p>			
101610T1	Surface gauge	DTM	MH
<p>Steel, 3 5/8" long, 3 1/4" wide, 11 3/8" long gauge rod, signed "W. Anderson" owner's mark, c. 1910. Donated by the Swenson family.</p>			
21201T12	Surface gauge	DTM	MH
<p>Steel, 1 1/2" long, 1 9/16" wide, 1 3/8" high, signed "V Oby". Veikko Arne Oby (b. Worcester, MA 1916, d. 2/25, 2000), of Finnish descent, worked in Whitinsville, MA, and the Watertown Arsenal. This satin steel surface gauge, though not signed by its manufacturer, is similar to L.S. Starrett Toolmaker's surface gauge model 56A with 4" spindles. A contemporary L.S. Starrett catalog indicates this tool "is used in layout work for scribing lines on vertical or horizontal surfaces. A groove in the base adapts it for use on cylindrical as well as flat surfaces." This exquisite tool is a late example of the florescence of the classic period of American machinists' tools and is indicative of a proud machinists' careful use of a finely crafted Starrett tool or his meticulous reproduction of the same tool -- a possibility since Starrett surface gauges are rarely unsigned. Every hand tool has its own inscrutable history of manufacture and use. http://www.davistownmuseum.org/pics/21201t12.jpg http://www.davistownmuseum.org/bioOby.htm</p>			
111900T3	Surface gauge	DTM	MH
<p>Steel, 2 1/8" x 1 7/16" base, 4 3/8" arm, unsigned. This is an essential component of the tool kit of the tool and die maker, constructor of the machines that then made other tools.</p>			
41203T4	Surface gauge	LPC	MH
<p>Steel, 4 1/8" long arm with a 1 7/16" wide by 2 3/8" long bar, signed "J. Stevens A & T Co" "Chicopee Falls Mass USA". This is a classic example of the exquisite workmanship of the classic period of American machinist tools. http://www.davistownmuseum.org/pics/41203t4_p3.jpg</p>			
111006T3	Swivel gauge	DTM	MH
<p>Cast steel and leather box, 7 1/4" long with an 8" long box, signed "BOULET'S FINE TOOL WORKS, INC." "SEBAGO LAKE MAINE" "PAT.OCT.2.1900" "PAT.SEPT.10.1901" and "PAT.FEB.23 04". http://www.davistownmuseum.org/pics/111006T3_p1.jpg http://www.davistownmuseum.org/pics/111006T3_p3.jpg</p>			

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

102503T1 Swivel gauge

DTM MH

Steel, 7 3/8" long, with an 8" long velvet and leather case, signed "Boulet's Fine Tool Works Sebago Lakes Maine" "PAT OCT 2 1900 SEPT 10 1901 FEB 25 04".

It also has an owner's mark in script "T. Keech". It is accompanied by three small attachments whose purpose is not clear.

<http://www.davistownmuseum.org/pics/102503t1a.jpg>

<http://www.davistownmuseum.org/publications/volume10.html>

041505T33 T square

DTM MH

Steel and brass, 7 1/2" long, 3 1/2" wide, signed "C. EGGE".

Maker C. Egge was a Boston toolmaker and inventor of die engineering equipment, c. 1880s. He is not listed in DATM (Nelson 1999). This tool was purchased in Worcester, MA, by Liberty Tool Co. in March, 2005, from a descendent of one of his customers for die engineering equipment (C. D. Evan Co, Allston, MA) who fondly recalled the man who made this one-of-a-kind tool.

<http://www.davistownmuseum.org/pics/041505t33.jpg>

101701T7 Tap drill gauge

DTM MH

Steel, 4 1/2" long, signed "Made by STERLING ELLIOTT NEWTON, MASS, USA", 1890 - 1910.

No such company is listed in DATM (Nelson 1999) but it does list "Elliott" as the maker of a tap drill gauge with a date of 1895 and no other information. The curator was born in Newton, MA, and after 30+ years in the tool business, has never seen this marking before. It is a very rare signature. The sizes 2 - 24 appear hand-stamped, they are slightly off center.

41302T5 Tapered gauge

DTM TT

Tempered alloy steel, 6 1/8" long, 7/16" wide, signed "N. 270 The L. S. Starrett Co. Athol, Mass USA".

It is calibrated in millimeters and in hundredths of an inch. The maximum thickness this gauge measures is 0.150 inches. DATM (Nelson 1999, 751) contains historical information on L. S. Starrett Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

914108T2 Thickness gauge

DTM MH

Steel, 6 1/2" long, 6" long blades, signed "EINAR HANSON" "-TOOLS-" "WORCHESTER. MASS" and owner's mark "F. W. PAGE".

Folded inside are 8 blades marked: 2, 3, 4, 6, 8, 10, 12, and 18. Einar B. Hanson was superintendent of the factory established by his brother, H. L. Hanson (b. 1881) who rented a room and some machinery at No. 54 Hermon street, Worcester, MA, where he began the manufacture of piano hardware. He expanded and moved to No. 25 Union street. Mr. Hanson was the originator of many taps and dies (Nutt, Charles. History of Worcester and its people, Vol. 3).

41801T15 Tool and die-makers' jig

DTM MH

Steel, unsigned.

Was this owner made? It was acquired along with the marking gauge (41801T10).

101701T15 Tool and die-makers' square

DTM MH

Steel, 1 1/2" long, signed "Sawyer Tool Mfg Co Fitchburg Mass USA Hand", between 1894 - 1912.

This exquisite tool was made before this company moved to Ashburnham, MA in 1912. They later became the Almond Mfg. Co. in 1915 (Nelson 1999, 692). This tool illustrates the beauty and durability of hardened case steel.

<http://www.davistownmuseum.org/bioSawyer.html>

8512T1 Toolmakers' buttons

DTM TT

Tool steel, 2 3/8" long, 3/4" wide, 1 1/16" high, signed "STARRETT ATHOL, MASS. U.S.A. NO 494" "PAT. JAN. 11 1921".

<http://www.davistownmuseum.org/bioStarrett.htm>

111900T13 Toolmakers' buttons

DTM MH

Steel, 2 5/16" long, signed "Starrett Athol Mass USA No 494.B".

DATM (Nelson 1999, 751) contains historical information on L. S. Starrett Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

TJG1003 Toolmakers' buttons

DTM MH

Steel, 4 1/2" long, signed "STARRETT ATHOL MASS NO. 494-D".

The buttons are "used for precision location of holes in a work piece. The hole is roughly located by normal layout methods, drilled and tapped, and the button installed and snugged down. The button is then shifted to its precise location by measuring from other reference points with the precision required. This procedure is usually done on a surface plate. It is then set up in the machine, usually a lathe or boring machine, indicated, and final hole is bored. Frequently several holes would be bored in one piece, hence the need for several buttons." (<http://bbs.homeshopmachinist.net/showthread.php?t=9261>)

<http://www.davistownmuseum.org/bioStarrett.htm>

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

22512LTC12 Toolmakers' universal surface gauge

DA TT
(Pub)

Drop-forged tempered alloy steel, 4" long, 4" wide, 1/2" high, signed "THE L.S. STARRETT CO. ATHOL, MASS. U.S.A." "STARRETT No. 56A With 4 inch Spindle TOOLMAKERS' UNIVERSAL SURFACE GAGE 1".

Also signed "ONLY THE L.S. STARRETT CO. Athol, Mass. U.S.A." It is designed so a variety of dial and probe attachments may be used to determine exact heights and distances on three dimensional objects. Courtesy of Liberty Tool Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

22311T14 Try square

DTM TT

Steel scale, brass, rosewood handle, 6" long, 4" wide, signed "WINCHESTER" "TRADE MARK" "MADE IN U.S.A." and "9715". Part of the Robert Sullivan Collection donation.

<http://www.davistownmuseum.org/bioWinchester.html>

121112T4 Try square

DTM TT

Tempered alloy steel, brass, wood, 6" long, 3 1/2" long and 1 1/2" wide handle, signed "Disston & Morr's" "Philada Warrented".

This square includes a brass sidebar and blade attachment. DATM (Nelson 1999, 227) lists Disston & Morr's as working from 1867 to 1900 as a subdivision of Henry Disston and Sons. Joab Morr's died around 1886.

<http://www.davistownmuseum.org/bioDisston.htm>

3312T14 Try square

DTM TT

Drop-forged tempered alloy steel, brass, rosewood, 4 1/2" long, 3" wide, signed "PATENTED JUNE 20 '09" with a scratched in owner's mark "JOS".

This type of try square was used by a cabinetmaker. Courtesy of Liberty Tool Co.

6316T2 Vernier caliper and rule set

DA TT
(Pub)

Tool steel, wood box, 26 3/4" long, 6 1/2" wide, 1 1/2" thick, signed "MORSE TWIST DRILL & MACHINE CO. NEW BEDFORD, MASS." "BROWN & SHARPE PROVIDENCE RI USA TEMPERED NO. 4".

This boxed set contains a vernier gauge by Morse and a steel ruler by Brown & Sharpe. This set was used in the Morse Twist Drill factory to measure bits.

<http://www.davistownmuseum.org/bioMorseTwist.html>

22512LTC5 Wiggler center finder set

DA TT
(Pub)

Drop-forged tempered alloy steel, vinyl pouch, 2 1/2" long pieces, signed "THE L.S. STARRETT CO. ATHOL, MASS. U.S.A. NO 828".

This set includes the handle and four attachments for finding centers in a red vinyl pouch. Courtesy of Liberty Tool Co.

<http://www.davistownmuseum.org/bioStarrett.htm>

5412LTC7 Wing calipers

DA TT
(Pub)

Forged steel, 5" long, signed "BEMIS & CALL".

Courtesy of Liberty Tool Co.

81602T16 Wing dividers

DTM MH

Drop-forged steel, 14 1/4" long, signed "P. PETERS. NATICK MASS.".

The letters of the name are difficult to read. DATM (Nelson 1999) lists Patrick F. Peter (or Peters) in Natick as having a Jan. 22, 1878 patent for a cobblers' last hammer.

http://www.davistownmuseum.org/pics/81602T16_p2.jpg

http://www.davistownmuseum.org/pics/81602T16_p3.jpg

31908T29 Wing dividers

DTM MH

Steel, 7 1/2" long, signed "C DELSTEN & SON" and "C & S".

111412T4 Winged dividers

DTM MH

Iron and cast steel, 9" long, signed "HARRINGTON" "WESTON" "MASS" "CAST-STEEL" and with owner's marks "F R. KEGLER" and "W. H. SOUTHWARD".

DATM (Nelson 1999) lists sixteen different toolmakers named Harrington working in Southridge, MA, Philadelphia, and other locations, but none in Weston. None of them are listed as manufacturers of measuring tools.

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Measuring Tools

Status Location

22411T23 **Winged outside calipers**

DTM TT

Tempered alloy steel, 9" long, 4 1/2" wide when closed, signed "J. M. PARKHURST".
This appears to be an owner's mark and not a maker's mark.

22411T28 **Wire gauge**

DTM TT

Drop-forged tempered alloy steel, 5 1/4" long, 1 5/8" wide, signed "E. W. SIMMONS".
It appears to be hand-stamped. DATM (Nelson 1999) does not list an E. W. Simmons or a Simmons that made wire gauges.

22412LTC1 **Wire gauge**

DA TT
(Pub)

Drop-forged tempered alloy steel, 3 3/16" diameter, signed "J.R. BROWN & SHARPE PROVIDENCE R.I. STANDARD WIRE GAUGE".

This is a circular wire gauge used for determining thickness. It is graduated from 0 to 36. Courtesy of Liberty Tool Company.

<http://www.davistownmuseum.org/bioBrownSharpe.htm>

10910T4 **Wire gauge**

DTM MH

Steel, 4" long, 1" wide, signed "B. & S. STANDARD WIRE GAUGE" "THE BLODGETT MF'G CO. ROCHESTER, N.Y.", c. 1900.
The Blodgett Manufacturing Company was located in Rochester, NY from 1896 to 1905. Donated by the Swenson family.

<http://www.davistownmuseum.org/pics/10910t4web1.jpg>

032203T7 **Wire gauge**

DTM MH

Steel, 3 1/2" diameter, signed "J. R. BROWN & SHARPE" "PROVIDENCE R.I." "STANDARD WIRE GAUGE" with bird trademark and "BS TRADE MARK".

The Directory of American Toolmakers (Nelson 1999) lists J. R. Brown, a predecessor of Brown & Sharpe, as working from 1853 - 1866, but continuing to use this mark after that date on some tools. This is a typical tool in the increasingly complex tool kit of a c. 1880 shipyard worker.

http://www.davistownmuseum.org/pics/032203T7_p3.jpg

<http://www.davistownmuseum.org/bioBrownSharpe.htm>

10910T5 **Wire gauge**

DTM MH

Steel, 5 1/4" long, 1 5/8" wide, signed "TWIST DRILL & STEEL WIRE GAUGE" "Morse Twist Drill & Mch. Co. New Bedford Mass.", c.1890.

Donated by the Swenson family.

<http://www.davistownmuseum.org/pics/10910t5web2.jpg>

<http://www.davistownmuseum.org/bioMorseTwist.html>

TJS2201 **Wire gauge**

DTM MH

Steel, 4 5/8" long, signed "STALL & ATHERTON BROCKTON, MASS".

Perhaps this mark is Snell & Atherton who made leather tools in Brockton, MA?

72002T8 **Wire gauge**

DTM MH-I

Tempered alloy steel, signed "Lacene Mfg Co. Manchester NH".

Was this wire gauge made after 1900? If not a wire gauge, what is it?

Miscellaneous Tools

102800M **Machinists' tool box**

DTM MH-K

Wood, brass and steel, 22 3/4" long, 12 1/2" wide, 10 3/4" high, signed by owner "W.F. Blake".

A piece of Maine history, this tool box was formerly owned by Ken Milliken, Lincolnville, ME. Blake was once one of the chief machinists for the Knox Engine Co.

<http://www.davistownmuseum.org/bioKnoxEngine.htm>

101115T2 **Metal thread tap set**

DTM TT

Steel, 2 1/4" to 6" long, 1/2" to 3/4" diameter, unsigned.

These 10 metal thread taps were from a shipsmith (possibly used for threading metal cladding).

111900T10 **Pocket screwdriver**

DTM MH

Steel and rosewood, 4 1/4" long, signed "L S Starrett Co Athol Mass USA".

<http://www.davistownmuseum.org/bioStarrett.htm>

Davistown Museum Inventory of Tools - Industrial Revolution - Machinists

Miscellaneous Tools

Status Location

61215T1 **Tapered thread taps**

DTM TT

Steel, 5 1/8" and 4 1/2" long, 1/2" and 3/4" diameter, signed 10.

These two typical thread taps appear to have been made by the same manufacturer and bear the same mark.

3912LTC1 **Tinsmiths' compound levered shears**

DA TT
(Pub)

Drop-forged tempered alloy steel, 14 1/4" long, 4 3/8" wide, signed "8896" "PAT. OCT. 12 NOV. 30 1909".

These shears were produced by Detroit Shear Company. The November 30 patent belongs to J.R. Searight and covers the levered design. Courtesy of Liberty Tool Co.

Woodworking: Other Tools

122114T1 **Tapered thread tap**

DTM TT

Steel, 6 1/2" long, 1" to 5/8" diameter, unsigned.