An incomplete compendium of micrometers and their makers
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What’s with all the micrometers?

One might reasonably ask why so many micrometers – and why might I want to take one or more of them home with me?

The quick answer is that most any engineer, architect, or anyone with a pretense to understanding the physical world ought to have at least a 0-1” micrometer of good quality. And, ideally, provide them for their kids, nieces, nephews, and anyone else they think ought to acquire some sort of mechanical literacy.

How can we appreciate nano without understanding .001” and .0001” and .00001” (or .01mm and .001mm) along the way?

My collection began with various types needed for accurate work in my home shop. It started with just a 0-1” micrometer back during my college years. Along the way, I started using some micrometers as hands-on examples in seminars of how companies try to differentiate themselves from the competition.

The micrometer is the iconic tool of the Industrial Revolution. Although its form has remained essentially unchanged for 150 years (try that with your MP3 player) its design and manufacturing evolution punctuate a timeline of industry from the mid 1800’s to today.

Want to see what the Great Depression and Great Recession have in common? It shows up in the history (and consolidation) of micrometer makers.

Wonder how Germany, England, Japan, Russia, and the U.S. geared up to fight World War II? And how they fared thereafter? It’s reflected there as well.

Customer $APPEALS

Some of you may know of my “$APPEALS” rubric; based on research into how we humans choose what product or service to buy. The 150 year history of the micrometer provides scores of cases of attempted, failed, and successful competitive differentiation.

This history of a this iconic tool also illuminates the manufacture of interchangeable parts; the great patent sweepstakes of the late 1800’s (when inventors rather than lawyers were driving the process); a surge in manufacturing with WWI; the subsequent decline and mergers of companies during the Great Depression; huge demand during World War II; post-WWII industrialization; the eternal optimism of entrepreneurs for more than a century; the trend toward conglomerates; and the recent crush toward globalization.

There are also modest stories of company survival. For example, how one family company (the Central Tool Co.) survived for a hundred years, despite a middling product; how many manufacturing greats entered and then failed to survive in this business; and even how Sears Roebuck & Co. went from the greatest thing in sales and distribution to poor product management, fuzzy thinking, and decline.

Customer “$APPEALS” is an acronym that covers the eight ways that people differentiate one product from another. Understanding how customers make their buying decisions – and what might be done to win more of those decisions – is a key to effective product development, manufacturing, distribution, marketing, and sales. Most any product can be used to illustrate the principles; but few products have the 150 year history of the micrometer to draw from in providing lessons.

The $ in $APPEALS reflects price differentiation. It ranges from a signal of quality and prestige (high price) to a strategy to win good-enough-for-me buyers (low price). Competition. A hundred manufacturers have entered – and many exited – the market. Some tried to compete solely on low price.

Others have aimed to produce all-in-one measuring products – with fewer tools needed. The “interchangeable anvil” micrometer is one example
that aims to retain quality, with fewer micrometers needed, but at the cost of convenience.

For decades there has been a pattern of newly industrializing countries entering our market with lower priced tools. We’ve seen this with Japan, Poland, and most recently China as examples. Years ago, 2:1 price differences were common. Today 10:1 differences are common. Indeed, vast disparities in production costs have recently pushed many quality manufacturers out of the precision hand tools business – or to have their branded tools made in China -- as they migrate to higher margin products (coordinate measuring machines and the like).

The A in $APPEALS$ stands for Availability. Many of the competitive battles in any market are based on distribution: getting customers what they want, when and where they want it. At least a score of companies have entered the micrometer business with excellent products, but failed to get widespread distribution. Still others managed to find a niche. For example, most large industrialized countries have a top two or so national suppliers. In the US this would be Starrett and Brown & Sharpe, who battled each other for more than a century.

Other suppliers found niches. For example, Scherr-Tumico sought government sales and Central Tool concentrated on automotive service markets. Others concentrate of watchmaking and jewelry trades. We also find companies making micrometers for sales through various branded channels (many different suppliers for Sears/Craftsman, Slocomb for Snap-On, Central Tool for lab suppliers like Welch and so on).

Pure distributors have also held sway; such as the Scherr component of Scherr-Tumico, Fowler, and SPI – “Swiss Precision Instruments” – which is now more likely to import cheap Chinese tools as anything either Swiss or particularly precise.

The first P in Customer $APPEALS$ is for Packaging. It refers to the visual differences between products; everything from the product itself, to its boxes, the look of the stores that sell it, and so on.

Micrometer makers have tried a variety of tweaks to differentiate their products. Some have chromed finishes and others paint. Some are elegantly designed – my Art Deco micrometer from Louis Schopper (Leipzig) is an example. Still others have fancy logos, cool cases, elaborate in-store displays, and the like.

Companies like Brown & Sharpe also experimented with modern adornments – almost the automotive tail fin equivalent of protective plastic pads and the like.

The second P in Customer $APPEALS$ is for Performance. While emotion is a key to any buying decision, the rational decision is dominated by price and performance – how well does the product do its intended job? In this case, the question is how quickly and accurately can a user make a measurement?

There have been hundreds of micrometer patents aimed at getting a competitive edge in one way or another. Performance issues might be divided into three broad categories.

The first includes the introduction of various types to make different measures. We have outside, inside, height, depth, thread, gear, tubing, groove, bore, etc. micrometers. There are easily two dozen types to measure the tiniest watch parts to hot steel coming off a rolling mill. We’ve also added new functionality in the electronic age, such as instant English/metric units conversions and automated acquisition of readings for statistical process control.

The second category includes improvements aimed at higher accuracy within a type. The principle of the micrometer is based on manufacturing a precision screw – of exact and unvarying pitch -- and mating it to a nut (actually an entire frame) of equal accuracy. Users must typically rely upon brand reputation and their own calibration labs to judge this.

Another issue in accuracy is carefully controlling the pressure generated between the anvils as the screw thread is tightened. Slight differences in torque/pressure can easily change the measurement and even damage the tool or part. For this reason, a large variety of friction thimbles, ratchets, spring pressure gages, and the like have been developed. Van Keuren even made a “light wave micrometer” that used optical fringes to judge and control pres-
A third and final performance measure is capacity. Outside micrometers commonly come in sets of six from one to six inches in capacity. Larger sizes, to two or three feet diameters, are commonly available. The largest capacity precision gage in this collection (not really a micrometer) is a Pi tape that reads up to 8’ in diameter to .001 inches.

The E in Customer $APPEALS$ is for Ease of use refers to all the other sensory inputs a customer/user will use to differentiate between products. Ease translates to easier and faster measurement; and sometimes a delight in use. Among the ways manufacturers have attempted to gain an edge:

Easier reading through better verniers, larger thimbles and graduations, mechanical digital and then electronic digital readouts. Some amazing mechanical digital micrometers have been produced over the years.

Faster use through “speeders” or sliders that allow near instant adjustment to size. Etalon also pioneered a “Micro Rapid” thread that advanced and retracted four times as fast as a conventional micrometer, with no loss of accuracy.

The elusive “feel” that quite correctly inspires a sense of confidence as a micrometer thimble spins smoothly – neither too loose nor too tight and never a hitch – down to a firm close. As just an example, some early Chinese micrometers cloned the look of makes like Etalon and Mitutoyo. But when the anvils were closed there was a sort of squishy feel – indicating lack of parallelism in the faces and backlash in the screw/nut of the cheaper units.

Ergonomic design, with dimensions to better fit the hands.

Lightweight design, especially in larger sizes. For example, the Tubular Micrometer Co. (Tumico) pioneered a hollow vacuum sealed frame, for example.

The A in Customer $APPEALS$ is for Assurances refers to customers’ fears of what might go wrong and how the manufacturer goes about allaying these fears. For micrometers, one issue is long term reliability. Will the micrometer stay in calibration?

Such features as carefully hardened and ground screws, hardened or carbide anvils, and special nut designs to take up wear can greatly extend the accurate working life. Almost all quality micrometers have some sort of adjustment to take up wear in the spindle – often a sort of split and adjustable nut. Cheap micrometers lack this. As just one example, dating back to the late 1800’s, Slocomb designed a unique two-part nut with a spring in between. These kept their micrometers in adjustment for many years – and also contributed to long life.

A company’s own network of sales, service, and support is also part of “assurances.”

The L in Customer $APPEALS$ is for Life cycle costs include all the costs a customer may incur after the original purchase. For more complex products, these may be many times the purchase cost.

One of the reasons the product architecture of micrometers has changed so little, is that it has proven durable. Early electronic micrometers, while less durable, still had at their heart a precision screw mechanism. So, the biggest unanticipated cost of micrometer use is errors in measurement. These can cause scrapped parts, field failures, and the like.

Manufacturers have provided a variety of means to help assure accuracy. Some concentrate on ease of reading by less experienced users. Others include tools and services for easier calibration and repair. Most micrometers larger than 0-1”, for example, will have come with a “standard” to check their use.

And finally, the S in Customer $APPEALS$ is for Social Sanctions (and Standards) includes all the people, opinions, experts, regulations, and the like that influence the buying decision. There are standards (ISO, DIN, JIS . . .) , for example, for micrometer accuracy. Most important, though, has been brand reputation. One of the interesting aspects of human decision-making is that we like to keep things simple. This often means that we have a fairly limited consideration set – the best known and best distributed brands get the lion’s share of the business. This often translates to a top two or so (think Coke and Pepsi, followed by Dr. Pepper) in many industries.

In some cases, brand reputation may be higher or
lower than might be warranted by actual product quality. While opinions will vary, Starrett is a company with a great reputation which makes a wide range of very good, but not stellar products. Scherr-Tumico is a company that made many equally good micrometers to Starrett, but with a fraction of the brand loyalty. The steps companies made to increase or limit their brand equity are often illustrated.

Exploring product differentiation

Anyhow, I ended up gradually acquiring examples of micrometers just to make a point about product differentiation. For example, the US or European version and its Chinese clone. Or, examples of how Starrett and Browne and Sharpe battled each other over features and patents.

I also acquired multiple examples of some classic micrometers just to give away to kids. They'd measure and compare the thickness of their hair. “Count” a stack of paper by measuring the thickness of a few, and then the thickness of a stack. And so on. Here and there these young folks went on to become architects, engineers, guitar makers, or scientists – though probably due only in the slightest to my interest in their interests.

It also became clear, the more I learned, that the precision screw thread was, perhaps, the seminal invention (apart from steel making) of the industrial age. Without it we wouldn't have machine tool feeds and threads. We wouldn't know how to make gears. The basis of precision manufacturing and interchangeable parts would be lost. Even the stepper systems behind semiconductor masks wouldn't be possible. So, there's a sort of “Connections” (remember James Burke?) story here. At some point we may look back fondly on the period from the late 1800's through the 1990's and consider the micrometer one of its key artifacts. It turns out that most anyone can carry a 100-year-old exemplar of the dawn of the Industrial Revolution (an 1880's micrometer) in their pocket. Try that with a Bessemer converter...

The micrometer is the iconic tool of the machine tool industry, machinists, and toolmakers. It appears on union pins, tie tacks, logos, and more. It's sometimes a give-away gift for valued customers (e.g. promotional micrometers) and an award for achievement (e.g. the Chrysler Master Technician Award micrometer included in this collection).

Here, as another example, is a Masonic presentation micrometer from Great Britain:

This iconic status may also explain why so many machine tool manufacturers at one point decided to enter the business of making micrometers (hey, that's cool, our very own micrometers) only to later find it was easier to make good tools than to make a profit.

Still later, it seemed like I might eventually write a Connections-like history of this (liberally illustrated with examples) sometime when I was 80 years or so old and bored. Each manufacturer has a competitive story. Hundreds of designers tried to find a way to however subtly differentiate their product. One can even construct a sort of timeline, marked with the introduction of various micrometer examples and how they mirror the economy, culture, and politics of their times.

All of which is to say that I now have a **** load of micrometers and allied precision tools, many pretty cool (at least to me), and not much time to use them myself, give them away to kids, use them as product differentiation examples, or write the book.

So, the idea is that everyone with any pretense to technical sense needs at least one or two micrometers. 100% of your donation will go to a scholar-
ship fund, with Brad Holtz, David Ullman, and others deciding who gets the nod. The prices are set reasonably. Chances are you won’t find the same type and condition of tool much cheaper elsewhere. In a few cases the tools are rare enough you may never find another one.

Everyone needs at least a 0-1” micrometer (a.k.a. “mic” or “mike”). Your curious children, neighbor kids, nieces and nephews will also benefit from the gift of a micrometer and an afternoon spent measuring everything in sight. There are some excellent micrometers here for $25 and under – buy a bunch for your First Robotics crew! There is even a “six pack” listed here.

If you’re more than slightly mechanical, you might find good use in a larger set. If you know lots of kids, you might walk away with several of the still-iconic-but-less-expensive mics.

Some of these instruments are just so cool, they belong on your desk. Get the inclinometer to tell if your colleagues are on the level. Keep a huge micrometer to size up the situation at hand. Have a height gage to show your aspirations.

You might also express your heritage or compare design cultures. There are American, Brazilian, Chinese, English, French, German, Italian, Japanese, Polish, Russian, Swedish, and Swiss mics here. Some, even, from Lichtenstein.

My hope is that those of you at COFES will have some fun with this; that most of you will end up with a great deal on one or more cool tools; that some you give one or more away to spur a younger person’s interest in technology; and that we’ll all help a high potential student deal with the sometimes-insurmountable costs of college.

**The care & feeding of your micrometer**

This covers:

- tight spindles
- disassembly of analog mics
- carefully removing labels
- spindle wear adjustment
- micrometer adjustment
- calibration
- steel versus carbide anvils
- refurbishing spindles and anvils
- micrometer locks
- storage
- what influences prices
- cosmetic defects and repairs
- micrometer stands
- which ones to buy
- notes about condition

**Restoring your mic**

Some of these tools may have been sitting for decades, with congealed oil. In other cases they have been sprayed (by me) with a light coating of Boeshield – a waxy rust inhibitor suited for precision tools. A smooth feel can often be restored by just opening and closing (gently) the micrometer a few times.

In almost all other cases it can be restored by unscrewing the thimble, washing the threads inside and out with a solvent (lighter fluid, lacquer thinner, etc.) and working a drop of pure light oil (Starrett, 3-in-1, any pure 10 weight oil) into the threads. Don’t use WD-40 -- it leaves a gummy residue.

Don’t attempt to disassemble an analog Slocomb mic or a mechanical or electrical digital mic unless you know what you’re doing. The old Slocomb mics have a cool self-adjusting nut (two halves, with aligning teeth, and a spring in between. Many of these end up with one half stuck in the back of the thimble from inexperienced folks disassembling them. This can be fixed, but only by making a tool from brass tubing. Mechanical and electronic digital mics can lose their registration if disassembled.

As a side note, you may wish to remove labels on the boxes or cleanup dirty and marked cases. Start with a citrus based cleaner such as Goo Gone or Goof Off. Let it soak in and then remove the label, dirt, or markings. The spindle wear nut (common to most better analog mics) may also have to be adjusted for free play.

**Adjusting your mic**

Before attempting to adjust a micrometer (to zero with a 1” mic or with a precise “standard” on a
larger mics), be sure the anvils and standards are completely clean. It is common for micrometers to read about .001 high, just due to residue on the anvils. A 1" mic can be cleaned by lightly screwing down on a piece of paper (with cotton rag content, not polished/smooth clay content) and gently pulling it out.

Once the anvils are clean you can check and adjust for accuracy at the low end (zero or small standard) size. Minor adjustments are commonly made (most Starrett, B&S, Mitutoyo etc.) by ever so slightly turning the barrel with the fixed indications using a tiny pin spanner wrench. Scherr-Tumico mics locate the adjustment barrel/spanner on the thimble.

Some of the micrometers here may not have their original adjustment spanners included. I've sent along a box with a hundred or so replacements. Find one that fits your mic if needed. The pin or hook end should fit the appropriate barrel or thimble. The other end may be a spanner for the spindle wear adjustment nut. These are also available at low cost from most industrial suppliers.

The screw thread on a good micrometer will be of such high quality (and so resistant to wear) that a mic that is adjusted properly at one point will be in calibration at every other point. In practice, threads wander and there is backlash and wear. Different grades of micrometer will also have rolled threads (not so accurate) and lathe cut or ground threads (potentially very accurate). Grinding also allows the use of hardened and thus more wear resistant steels.

If utmost accuracy is needed, micrometers are checked with a special series of gage blocks that test the thread at different sizes and rotations of the spindle. Checking at different rotations also checks for parallelism of the anvils. For your purposes, if you have a good mic and want .0001 accuracy, then adjust it using a standard very near the size you will be measuring.

Some older mics make the adjustment at the junction of the frame and anvil. Interchangeable anvil mics have adjusting nuts on the various spindles.

Major adjustments, which should rarely if ever be needed, are commonly made by disassembling the threaded spindle from the thimble. It's often a tapered fit, retained by a screw at the end of the thimble.

Cheap micrometers come with somewhat soft steel anvils, which may or may not be flat and parallel. Good micrometers may come with harder anvils (either tool steel or carbide) that are built and checked for flatness and parallelism. These checks are made with optical flats and parallels, placed under a monochromatic light, with the optical fringes read to check flatness and parallelism. The gage block sets noted above can also check for out-of-parallel anvils by checking at different rotation points.

Steel anvils are fine for ordinary use. Carbide anvils will last longer in frequent use and abrasive environments. However, they are also subject to chipping (which is common when large mics are used for checking work on a lathe).

Worn steel anvils on a top quality mic can be refurbished by lapping them back to calibration (this was typically done with a Van Keuren micrometer lapping kit). Chipped carbide anvils can be replaced and lapped. Either step is only worth doing for the very best micrometers. Unless you have the equipment, send it to someone like the Long Island Indicator Co.

**Micrometer locks**

Many of these mics will have a micrometer lock. These are usually pretty easy to figure out; though care in orientation may be needed if you disassemble and then attempt to reassemble your micrometer. Be aware that some Starrett and other mics with a round knurled lock have a sort of tiny cam and roller mechanism. Take care if you disassemble this not to lose the tiny roller.

**Storing your mic**

Micrometers should be put away with a gap between the anvils. First, any trapped humidity can result in corrosion. Second, you don't want to take the chance someone will turn down hard on the anvils and distort the frame. If you're concerned about
rust and long term storage, Boeshield spray can help protect your tools. It leaves a thin waxy finish that is easily wiped free with a light oil when you need to use the tool. In general, precision tools are best stored below 55% relative humidity, which provides a safety margin for condensation and is usually low enough to inhibit mold formation on cases and the like.

**What makes a micrometer more or less expensive?**

There are at least three main reasons why buyers will spend more or less.

First and foremost is the utility, accuracy, and reliability of the micrometer. Even with standard outside micrometers, new versions may range from about $10 (lower cost Chinese imports) to $350 (for example, high quality Swiss-made micrometers with great attention to detail). In addition, designs for special purposes will tend to be expensive – often as much as $400 (e.g. good V-anvil micrometer) to over $1000 (e.g. a well made bore micrometer or very large sizes). The Cary Le Locle bench micrometer in this collection was originally around $3000.

Second is the collector market, based on the rarity of the micrometer. Age and condition, the inclusion of old patent dates, and the like are factors in this. There are also collectors for small micrometers (e.g. ½” capacity); and not so many for large micrometers. Collectors have paid $2000 or more for some rare micrometers; with many in the $500 range.

Third, is a variety of special intrigues affecting price. Mauser gun collectors like Mauser micrometers. Optical collectors like Zeiss micrometers. Others will judge by country of origin, favorite brands, really cool mechanical features, and the like. Given the dozens of manufacturing companies that have entered and exited the micrometer market, some are bought because of a past connection to the company. In some cases there will be both really cool features and rarity; such as some early mechanical digital micrometers, the Polyplan 0-4” set, or the Van Keuren Light Wave Micrometer in this collection.

I’m one of the few foolish enough to be interested for all three of the above reasons; as well as the sometimes brilliant and sometimes horribly misguided attempts of companies at product differentiation over the decades.

Many perfectly functioning micrometers may come with cosmetic defects. For example, most large companies have a calibration program which requires that each precision measuring tool be marked or engraved in some way for traceability and annual calibration. In other cases there may be wear to painted surfaces, light surface rust, and the like. Many of these cosmetic defects can be repaired. Light surface rust to knurled parts can often be removed with a fine brass wire wheel. Light rust to smooth surfaces can be removed by using very fine silicon carbide sandpaper (e.g. 600-900 grit) and oil. Be sure to remove every bit of grit and don’t touch the measuring surfaces. Painted frames can be repainted. Wrinkle and hammertone finish paints (both common in micrometer frames) are also available in spray cans.

Note that in some cases, such as with very old and rare instruments in basically good condition, such restorations may affect value. In any case, rough methods such as sand blasting and heavy wire wheels should be avoided.

A variety of micrometer stands have been made over the years, to clamp micrometer frames in a somewhat upright position. These have the advantages of leaving one hand free and also reducing the thermal effects of direct handling. The Mitutoyo type of stand and its clones are probably dominant today; and a few examples will be in the group for donation. These are recommended, also, for a cool micrometer that might benefit from a stand. Get a large micrometer and stand – and hold down the fort.

**Picking a micrometer**

So, which ones should you buy? Remember, your donation is doing at least triple duty. First, the proceeds go to a engineering / technical student with both a bright future and a need for help. Second, if you give what you acquire to another aspiring stu-
dent, you (and the stories and experiences that go along with it) will get a second chance to nudge the world to a slightly better orbit. Third, in many cases these have been set at bargain prices. Newer ones are often at a fraction of new price. Older and rarer ones are often at significantly less than final auction prices for equal examples.

To me, this best micrometer to give away to an aspiring engineer or scientist is one that has a bit of a story, that retains its accuracy, that doesn't cost a fortune, and inspires some pride of ownership.

Often, I've acquired several instances of micrometers that seemed (to me) to fit the bill. If you're overwhelmed by choices, let me suggest one of these models:

- Starrett #232 0-1/2" micrometers. These tiny micrometers fit anywhere, work well for their size, and make a good gift.
- B&S #1 micrometers with fixed-friction thimbles; either US (ideally before 1980) or Swiss made. Choose a recent (last four decades) micrometer with good ergonomics and accuracy.
- B&S #15 micrometers with an 1884 patent date. These offer a bit of history in a simple and robust design that's still likely to be useful.
- B&S #233RS bench micrometers. Call me crazy, but these would look nice on your desk.
- Goodell-Pratt / Millers falls micrometers with the larger speeder and thimble mounted ratchet. Good ergonomics in a WWII era tool.
- Recent Lufkin/Pratt & Whitney micrometers with the larger thimbles.
- Mitutoyo non-rotating spindle micrometers (#106-102). Indeed, most Mitutoyo micrometers are pretty good.
- A early Slocomb micrometer in good condition.

There is a large variety of other great makers to consider – many of superior quality (and cost) -- as described in the following pages.

One of the important steps is to find a model that feels good in your hand. Some folks like the feel of a micrometer with a light frame and a smaller thimble (for example, the widely sold Starrett #436 series). Others (myself included) prefer a larger and easier to read thimble.

**Some notes about condition**

Finally, some notes about condition. These micrometers were packed up in early August, 2011 and then spirited away to a storage locker in Arizona. Hopefully, they will remain in as-packed condition (within original cases if present, plastic bags etc.) over the next few months. Seems unlikely they'll get too much humidity in Arizona. Anyhow, if a condition is listed, it's my quick, subjective take at the time of packing. You should inspect these for yourself.

Micrometers listed as near new or near mint will look new from a distance, but might have faint rubs to the paint or chrome. Excellent won't be far behind. Very good condition should function well but have more signs of use. Generally, non-original markings will be noted – and you wouldn't expect to find them on a near new or mint condition micrometer unless they're specifically noted.

Age will also be a factor – a century old micrometer won't be expected to be spotless and such things as ratchets and locks may be worn.

There aren't many poor condition mics included here (with the exception of a box of 25 examples in mostly working, but poor cosmetic condition. A few are included due to their age or rarity. Note also that a micrometer may still be quite acceptable for use, while having markings, stains, etc. that wouldn't delight a collector.

Prices are low enough in many cases that you can be the first kid on your block with some rare instances . . . and still afford a handful of interesting examples for all the other kids on the block or in your extended family.

The collection includes examples from a bit more than 120 makers and distributors, as well as examples of tools from other than micrometer makers to round out the story on precision measuring.
Almond Company

The company began in Brooklyn, NY but was moved to Ashburnham, Mass in 1912. Manufacturing of micrometers ceased in 1930, perhaps due in part to both competition and the depressed economy of the time.

Item #001
Almond Co. 0-1” micrometer marked No. 140.

Decimal equivalents on the frame. This is marked Ashburnham, Mass. Good condition

$35 donation

Item #002
Almond Co. 0-1 and 1-2” micrometers with straight knurled thimbles.

The 0-1” is .0001 reading and has a ratchet. Collectible, dating from 1912-1930. And given the name, usable as both micrometers and nut crackers.

$55 donation

Item #003
Almond Co. 0-1 and 2-3” micrometers with traditional diagonal knurled thimbles.

The 0-1” is .001 reading. Collectible, dating from 1921-1930.

$55 donation

Ames

B. C. Ames (Waltham, Mass) was founded by Bliss Charles Ames (cool name) in 1896. Early maker of dial gage heads and still a maker of dial gages.

Ames was the maker of the unique “Scru Meter” indicator and likely the entire patent-applied-for thread gage noted in its own listing.
Bailey

W.H. Bailey & Son, Ltd. (London) was incorporated in 1906. To the best of my knowledge this provider of medical supplies ceased operation around 1970.

Item #004

W.H. Bailey & Son head and neck (or medical / forensic) calipers.

These read directly in parts of an inch. This set of calipers has been thrown in just to measure outsize intelligence of those at COFES. Brad will demonstrate; having volunteered to earn his certification in phrenology.

$30 donation

BESTOOL-KANON

BESTOOL-KANON (Japan) was established as the Kanon caliper laboratory in 1938 and changed its name to Nakamura Mfg. Co in 1943. Since then it has made such products as torque wrenches, CMMs, and digital calipers. It’s a relatively small company; under 100 employees. It isn’t clear if they made their own micrometers or were supplied by another manufacturer. However, the designs are subtly different than the usual NSK and Mitutoyo examples.

Item #005

BESTOOL-KANON 0-1” micrometer with satin chromed frame, plastic thermal pads, ratchet, lock, and .0001” vernier.

Marked “PAT. PEND” on reverse side pad, but of such conventional design it’s hard to see why a patent might be granted. This example is in good working condition but has engraved QC numbers.

$15 donation
**Item #006**  
BESTOOL-KANON 0-1” micrometer with blue hammer paint frame, plastic thermal pads, ratchet, lock, and .0001” vernier.

Likely of later manufacture than the previous example; with straight line knurling of the thimble.

$20 donation

**Item #007**  
“PII” micrometer 0-1” with basically identical construction to the blue hammer paint Kanon example.

Includes the same ratchet, the same straight knurled thimble, the same lock, the same 0001” vernier and the same paint. Minor differences in the rounded opening frame and pads, which now include decimal equivalents. Almost surely from the same factory. The “PII” may be for “Phase II” – which is a US distributor (manufacturer?) founded in 1981. Phase II now sells mostly Chinese-made tools into the US; though Mexico and Venezuela are also listed among their locations. If so, this micrometer would date from a time when Japan was considered a lower cost producer; probably about 25-30 years ago. Very good condition.

$25 donation
Item #008
“SPI” micrometer 0-1” with identical thimble, ratchet, and lock construction to the PII and later BESTOOL-KANON examples.

The frame is a “modern” angular design in satin chrome with a painted plate with decimal equivalents attached. SPI stands for “Swiss Precision Industries” – once an importer and distributor of some Swiss tools and increasingly an importer of lower cost tools. This tool likely dates from a time when Japan was considered a lower cost producer; perhaps the 70’s or early 80’s. Tool is marked with a small inscription “PMW18.

Note also a Scherr-Tumico labeled micrometer otherwise identical to the SPI micrometer above.

$25 donation

Betz

Item #009
Betz head and neck calipers.

$20 donation

Boker

Item #010
Boker 0-10mm micrometer.

Nicely made with an old-style anvil adjustment. My assumption is that this is from Boker (Boeker), a German maker of hand tools. The company traces its roots back to the 17th century. Today the Boker company is best known for its knives. This looks to be a micrometer made after WWII.

$25 donation
Brownie Tool

Brownie Tool Co. (Minooka, Illinois). The small-town company is pretty much a mystery. The company went to the trouble to have the BROWNIE name forged into a variety of frame sizes. It also made a fairly complex set – with an inside mic plus 0-4” outside mics in a fitted tray. However the overall execution lacks finesse. Then, there’s the Brownie name. An attempt to be Brown & Sharpe’s kid brother? Named “Brownie” for the fudge factor in execution? This is your very own mystery to take up with the History Channel in a visit to Minooka?

One of the cautions about using a micrometer is that it shouldn’t be tightened as if it were a C-clamp. However, I’ve also seen an example of a C-clamp with what appears to be the same “Brownie” name cast (forged??) into its frame.

This may explain some of the slightly perverse design sense behind these micrometers.

**Item #011**
**Brownie 0-1” micrometer in original case.**
The History Channel artifact!
$20 donation

**Item #012**
**Brownie 0-1” micrometer**
$12 donation

**Item #013**
**Brownie 0-1” micrometer with no case.**
$10 donation
Item #014  
Brownie 0-4” outside mic set plus and inside mic set in the bottom half of a fitted case.

The largest size micrometer is a bit clever; perhaps the only interchangeable spindle micrometer ever made? Every other maker changes the anvils. This instead has two spindles. One for the 2-3” size and one for the 3-4” size. Calibration is through a screw set into the end of the thimble. Also included is an inside micrometer of somewhat clumsy design. The entire set is likely rare, though not in the sense of rarified. These do work, but are likely better suited as warnings about entrepreneurship.

$50 donation
Brown & Sharpe

Brown & Sharpe (Providence, RI) began as D. Brown & Son in 1833. After his father left the business in 1841, Joseph R. Brown operated under his own name. By 1850 he had created a linear dividing engine, the first of its kind, and began making and selling precision machinists’ rules.

Lucian Sharpe began as Brown’s apprentice and, in 1853, became a partner as the company was named J.R. Brown & Sharpe. In 1868, the company was reorganized as Brown & Sharpe Mfg. Co.

A year earlier (1867) Joseph Brown and Lucian Sharpe attended the Paris Exposition and saw a Palmer micrometer, arguably the world’s first. They developed an improved version in 1868.

An example of their improved design – an 1878 patent sheet metal gauge – is included in the collection.

A January 22, 1884 patent covered an improved method of taking up wear between the spindle and “nut” – and several micrometers in the collection include this patent date. By the mid 1880’s the Brown & Sharpe micrometer acquired a form that’s basically familiar today.

A November 6, 1894 patent indicates a B&S ratchet stop.

The December 30, 1902 patent covers a method of spindle locking using a knurled roll with a sort of cam lock surrounding the spindle. Earlier designs often used a much less convenient front-side locking nut, compressing a split collet that protruded into the open frame area. Later designs used a locking lever, with a sort of cam form built into it.

Brown & Sharpe were also keen promoters of the apprenticeship system. A number of excellent engineers and managers were developed over the years; and even after the deaths of the founders (J. R. Brown in 1876 and Lucian Sharpe in 1899). Family members participated in company management over the next many decades.

B&S was early to recognize the need for both premium and economy levels of tools and in 1915 introduced its “REX” micrometers. In today’s dollars, their polished steel micrometers with decimal equivalents stamped on the frame cost about $120, while the simpler frame design of the REX models was equivalent to about $75. The REX design with a square throat frame (compared to a semi-circular throat) had the advantage of reaching deeper to something like 1” plate.

The B&S plant grew from 6.5 acres of floor space in 1896 to nearly 32 acres in 1925. Throughout it’s many years B&S was an innovator in both machine tools and precision measuring tools. During World War II it had 11,000 employees.

As with most suppliers, World War II was a time of both increased output and material shortages. A February 1, 1943 booklet lists hundreds of product numbers as “Items Temporarily Withdrawn from the No. 34 Small Tools Catalog and the #142 General Catalog.” This included a long litany of micrometers; and all those with tungsten carbide measuring surfaces.

Henry Dexter Sharpe was Chairman in 1949, with Henry D. Sharpe, Jr. taking the position of president in 1951 and Chairman in 1996. In 1964, B&S moved its operations from Providence to North Kingston, RI.

Brown & Sharpe partnered with and then acquired the Swiss firm TESA in 1967, while keeping the TESA brand active. Many of their Swiss-made micrometers will have both B&S and TESA versions, differing only in the branding.

By 1980 there was less emphasis on machine tools and more on metrology. During much of it’s long life B&S battled Starrett as the leading US makers of precision tools.

The company unionized after WWII; and a 1981 strike decades later proved costly. Management (Dan Roach was president at this point) wanted to continue a no-layoffs policy, but with much greater flexibility.

Sixteen hundred machinists, worried about the privileges of seniority, walked off their jobs in what became the nation’s longest lasting and one of its most contentious strikes. The strike officially ended
in 1998, with B&S winning a Pyrrhic court victory. My guess, based only on having a front row seat to the UAW and Ford in the 1970s is that there was plenty of blame to go around. In any case, most of the more recent B&S micrometers in this collection were made in the 1960’s or 1970’s or in the Swiss TESA plant.

In 2001 Brown & Sharpe (and with it, TESA) were acquired by the Hexagon Metrology division of Hexagon AB. Today, the Brown & Sharpe brand is as well or better known for coordinate measuring machines as its legacy of hand measuring tools. Hexagon moved B&S operations to Connecticut in 2005; and employment in Rhode Island is down from about to 11,000 at its high to essentially zero.


**Item #015**

*Brown & Sharpe April 23, 1878 patent pocket sheet metal gauge.*

Brown & Sharpe credits itself with inventing the world’s first practical micrometer – and this is an early example. As to who developed the “first” micrometer in commercial production, the French “Palmer” micrometer of 1848 usually gets that credit. Interestingly, it was called the “Palmer screw” in Spanish, quite rightly emphasizing the role of precision screw making in its manufacture. Years earlier (1805) the mechanical genius Henry Maudslay created a single micrometer capable of reading .0001 as the arbiter of accuracy in his own shop. Still earlier, (1639) a precision screw was used by William Gascoigne for astronomical measuring purposes.

B&S started making their version, a sheet metal gauge, in 1867. Notable features include the split-frame and tightening bolt to take up wear on the screw, and the anvil adjustment to adjust and take up wear on the anvil.

$? donation
**Item #016**  
(though not so marked) Brown & Sharpe “world’s first practical micrometer.”

While this small micrometer doesn’t look like much, it cost about twice what an iPhone or iPad costs today in terms of the one or two week’s wages needed to acquire it. This example has a hole drilled in the frame by the original owner. While one explanation would be to keep it handy, another would be to show it off somewhat like a pocket watch. One might expect a bit of both. Other examples of this mic have sold for $700+, but with less wear. Indeed, I’m told the same mic but of more recent vintage (marked #1, and less valuable since that was a later version) but less wear (making it more valuable) recently sold for more than $850 at a Martin J. Donnelly auction. Despite the age, this instance looks to have retained its .001 accuracy.

$250 donation

**Item #017**  
Brown & Sharpe “Improved Micrometer Caliper” as seen in their 1887 catalog.

1878 and 1884 patent dates, with no number on the micrometer and the old style thimble. It’s marked with a fancy stamp (owner? company?) in addition to the B&S identification. This has suffered numerous dings etc. over the years, but is still working. Despite the well (and not so well) used condition, it might be fun to have.

$30 donation
**Item #018**

#1 Brown & Sharpe 0-1” micrometer with fixed-friction thimble, slant-line graduations, .0001” vernier, carbide anvils, and a lock.

Decimal equivalents on the chrome frame. Marked (on the thimble) as No. Kingston, RI origin. This one has some signs of wear, a rubbed out marking, and a bit of a shine to the chrome.

Good working condition in a hinged wood case. It includes a separate engineering data sheet from North Kingston.

$30 donation

**Item #019**

#1 Brown & Sharpe 0-1” micrometer with fixed-friction thimble, slant-line graduations, .0001” vernier, carbide anvils, and a lock.

Decimal equivalents on the chrome frame. The thimble has a narrow groove in it (a design element added to show the fixed versus friction position of the thimble) and is marked with the No. Kingston, RI origin.

Excellent condition in a hinged wood case.

$45 donation

**Item #020**

#1 Swiss-made Brown & Sharpe 0-1” micrometer with fixed-friction thimble, a lock, and .0001” vernier.

This is the same satin chrome frame design as the #599-1-32 and #599-1 below, but with a different all-steel thimble design, marked Swiss Made on the smooth portion. Same tough black plastic lever lock. Mint condition in its original cardboard box and mahogany wood case.

$65 donation
Item #021
#1 (#599-1-32) Swiss-made Brown & Sharpe 0-1” micrometer with speeder, fixed-friction thimble, a lock, and .0001” vernier.

Decimal equivalents on the satin chrome frame (along with “Swiss Made”). The speeder, friction thimble, and lever lock are a tough black plastic. Great handling mic. Mint condition in its original cardboard box.

$60 donation

Item #022
#1 (#599-1) Brown & Sharpe 0-1” micrometer with speeder, fixed-friction thimble, a lock, and .0001” vernier.

This appears essentially identical to the Swiss-made #599-1-32 above, but no country of origin is marked on the micrometer. Same decimal equivalents on the satin chrome frame. Same speeder, friction thimble, and lever lock made from a tough black plastic. Great handling mic. Near mint condition in its original cardboard box.

$55 donation

Item #023
#1 etc. Brown & Sharpe SIX PACK.

Models #1, #8, #10, #11, #11RS etc. Some with slant lines, four with .0001” verniers, three with convertible fixed/friction thimbles. These are all in good working condition, but each has some sort of cosmetic flaw. If you are sponsoring something like a First Robotics team here’s a way to make a sort of double donation (to this scholarship and to the recipients).

$40 donation for the six pack
**Item #025**  
#2 Brown & Sharpe 0-1” micrometer with satin chrome frame, decimal equivalents, fixed-friction thimble, slant lines, and .0001” vernier.
Marked Pat. No. 2,357,066 on the back. Well designed micrometer in very good condition with cracked plastic case.

$45 donation

**Item #026**  
#4 Brown & Sharpe 0-1/2” micrometer with an 1884 patent date.
This has wear and damage to the thimble's knurling. Decimal equivalents on the frame are all readable. A good representation of an early micrometer that might bring $300 in very good condition.

$30 donation

**Item #027**  
#4A Brown & Sharpe 0-1/2” micrometer with a ratchet, lock, and 1894 and 1902 patent dates.
Works great, with some tarnished spots that should clean up.

$55 donation

**Item #028**  
#4A Brown & Sharpe 0-1/2” micrometer with a ratchet, lock, and 1894 and 1902 patent dates.
This one has both anvils rounded. Similar age and condition to the example above.

$55 donation

**Item #029**  
#4A Brown & Sharpe 0-.5” micrometer with 1891 and 1902 patent dates engraved.
Still quite accurate as well as collectible.

$40 donation
**Item #030**

#4 (but not so marked) Brown & Sharpe 0-1” micrometer with fixed-friction thimble, carbide anvils, .0001” vernier, and plain dark gray wrinkle finish frame.

Brown & Sharpe retired #4 for ½” micrometers and started using it for 1” mics. This example is from around the time of catalog STM-2 (1965). B&S noted that all its micrometers had completely interchangeable parts – and for this one I changed the barrel from slant line to straight line graduations – using the slant line barrel elsewhere. B&S soon began to offer new versions of slightly cost-reduced micrometers, without the satin chrome frame and lock. Like this example, these had the same precision spindle, thimble, etc. as their top line models. Excellent condition with original cardboard box and (cracked) plastic case.

$40 donation

**Item #031**

#5RS Brown & Sharpe 0-1/2” micrometer from the B.C. (Before Chrome) days.

Ratchet, lock, and decimal equivalents in original finger jointed wood box. A 1928 dated patent number is on the frame. A tiny micrometer that looks new.

$70 donation

**Item #032**

#8 Brown & Sharpe 0-1” micrometer with 1884, 1890, and 1894 patent dates.

Ratchet, front lock, side-setting anvil, and decimal equivalents. Very good condition.

$50 donation
Item #033  
#10 Brown & Sharpe 0-1” micrometer with front lock and 1890, 1894, and 1900 patent dates on the frame.  
Ratchet and decimal equivalents on the frame. Very good condition in worn hinged leather case.  
$40 donation

Item #034  
#10S Brown & Sharpe 0-1” micrometer in stainless steel.  
Includes patent numbers 1,629,406 and 1,654,843 (around 1927) around the thimble. Includes a ratchet, lock, decimal equivalents, and a .0001” vernier. Pretty much flawless design and condition, in a hinged wood box.  
$65 donation

Item #035  
#10S Brown & Sharpe 0-1” micrometer in stainless steel.  
No patent numbers on this one, but same design as the #10S above. Near perfect in its original (Bakelite?) clamshell case.  
$65 donation
Item #036
#10 Brown & Sharpe 0-1” Digit-Mike with plastic digital thimble and black frame.

This was announced in catalog STM-6 (1972). The ingenious direct reading mechanism had been around before – as part of the TESA partnership. With this version, B&S decided to differentiate itself by going all black. It also tried to cost-reduce by changing the housing to plastic. This same micrometer head has also been seen on Moore & Wright micrometers (who undoubtably sourced it from B&S/TESA).

There’s a bad news / good news story to this. The bad news is that every example I’ve seen has micro cracking to the plastic – a design, material, and process not fully in control. The good news is that most every example is still fully functional, including all those here. This one is in good condition.

$35 donation

Item #037
#10 Brown & Sharpe 0-1” Digit-Mike with plastic digital thimble and black frame.

Another example of the micrometer announced in catalog STM-6 (1972). As the one above, it has carbide anvils, a lock and decimal equivalents on the frame. And, as above, the country of origin (Switzerland? US?) is not marked. This one has more wear and condition issues; but is still fully functional.

$25 donation

Item #038
#10 Brown & Sharpe 0-1” Digit-Mike with plastic digital thimble and black frame, 1972 plus.

Fair to good condition, with paint loss.

$30 donation
**Item #039**

#10-100 Brown & Sharpe 0-25mm Digit-Mike.

Swiss made with a satin chrome frame and the Digit-Mike mechanism housed in a plastic body. Includes a lock and thermal pads on the frame. A # marking is etched neatly on the back of the frame. This exhibits the micro cracking common to all the Digit-Mikes with plastic housings (earlier and later they were metal). By the 1987 catalog, B&S Digit Mikes returned to a metal housing, with an angular sort of satin chrome frame with molded thermal pads. This older one works well and has an overall good appearance. It comes in a TESA holster-like case that could use a bit of plastic mender.

$40 donation

**Item #040**

#10 and #20-10 Brown & Sharpe pair of Digit-Mikes.

These both have satin chrome frames, locks, and plastic housings for the direct readout. The 0-1” has decimal equivalents. The 1-2” has thermal pads (with “Swiss Made” noted on the front one) and a wood case. Very nice micrometers, despite the “historic” micro-cracking issue.

$110 for the pair

**Item #041**

#11 Brown & Sharpe “REX” 0-1” micrometer in original wood box (the box carries the #11).

Adjustment is the old style moveable anvil retained by a side screw. This has a square frame design and decimal equivalents on the thimble. Very good condition; likely from around catalog #27 (1916) to #29 (1924).

$50 donation
<table>
<thead>
<tr>
<th>Item #042</th>
<th>Item #043</th>
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<tr>
<td>Item #042</td>
<td><strong>Item #043</strong></td>
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<td><strong>Item #045</strong></td>
</tr>
<tr>
<td>#11 (but not so marked) “REX” 0-1” micrometer marked “Pat. Pending” on the frame.</td>
<td>#11 (but not so marked) B&amp;S “REX” micrometer 0-1” with a ratchet and center roll lock.</td>
<td>#11RS Brown &amp; Sharpe 0-1” micrometer with ratchet and satin chrome frame.</td>
<td>#11A Brown &amp; Sharpe 0-1” micrometer.</td>
</tr>
<tr>
<td>Decimal equivalents on the thimble or otherwise as above, but adds a ratchet. Give the patent pending, this is likely one of the very earliest REX micrometers. Good condition.</td>
<td>This is a somewhat later version, with damage to the paint and knurl. Still, a good way to have an instance of Brown &amp; Sharpe's early attempt at two-tier pricing for its micrometers.</td>
<td>Repainted frame, otherwise good user micrometer.</td>
<td>What's unusual about this one is the bright chrome thimble and frame. It may have belonged to someone at a chrome plating outfit? Ratchet and “I-beam” style frame normally seen in enamel or wrinkle finish. Hinged wood box.</td>
</tr>
<tr>
<td>$55 donation</td>
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<td>$15 donation</td>
<td>$40 donation</td>
</tr>
</tbody>
</table>
**Item #046**

#11RS? Brown & Sharpe 0-1” micrometer.

Possibly built around 1960. This has carbide anvils, a satin chrome thimble, ratchet, and (unlike most #11 examples) a center roll lock. The frame is the “I-beam” style in wrinkle black. Very nice condition, save a bit of chromed tape covering an ID marking.

$30 donation

**Item #047**

#12RS (marked #12 on the frame) Brown & Sharpe 0-1” micrometer in satin chrome with a ratchet, lock, and decimal equivalents on the frame.

This style first appears in catalog #35 (1951) and has a larger thimble, satin chrome finish, and carbide anvils. Good touch and mint condition. Includes its original case.

$50 donation

**Item #048**

#12B Brown & Sharpe 0-1” stainless steel micrometer with a ratchet, lock, and decimal equivalents on the frame.

The ratchet is broken; but a replacement is included in the box. Calibrate the mic when you make the switch. Very good condition.

$30 donation

**Item #049**

#13RS (marked 13B on the frame) Brown & Sharpe 0-1” micrometer in stainless steel.

Same features and design as the #13RS examples. Good condition, but initialed “G.E.” on the back and in a rough (Bakelite?) case. Main attraction – stainless steel with all the features (ratchet, lock, equivalents, and vernier reading).

$35 donation
**Item #050**  
#13RS (marked 13 on the frame) Brown & Sharpe 0-1” micrometer with a ratchet, lock, and .0001” vernier.

This has a 1928 patent number marked on the thimble and a Sept. 15, 1925 patent date finely marked around the ratchet. The main change is a square cutout frame. Excellent condition.

$45 donation

**Item #051**  
#13RS Brown & Sharpe 0-1” micrometer with a ratchet, lock, and .0001” vernier.

Has patent numbers from 1927 and 1928 on the thimble and decimal equivalents on the frame. Excellent condition, less “Spring” engraved on the inside of the frame. Since this is a before-chrome finish micrometer, that marking can be easily removed if you wish. Very nice mic with every feature.

$45 donation

**Item #052**  
#13RS Brown & Sharpe 0-1” micrometer with a ratchet, lock, and .0001” vernier.

Has patent numbers from 1927 and 1928 on the thimble and decimal equivalents on the frame. Good condition, no markings, in its original hinged (Bakelite?) case.

$45 donation

**Item #053**  
#13RS, #48RS, and #52RS set of Brown & Sharpe micrometers in a black fitted case.

All have the 1927-28 patent numbers engraved on their thimbles. As B&S planned for this set, the 1” and 2” sizes have decimal equivalents and a .0001” vernier. All have ratchets and locks. This is a near-antique set, in great condition, with an ease of use and accuracy that holds up to the best modern standards.

$150 donation
Item #054

#13 Brown & Sharpe 0-1” micrometer with .0001” vernier, a lock, and decimal equivalents on the satin chrome frame.

Marked “Patent Pending” on the thimble. Fairly recent vintage with the larger thimble diameter. This is after the 1920's-30's examples and before the fixed-friction thimble designs. Excellent condition in like-new wood case.

$35 donation

Item #055

#14 Brown & Sharpe 0-1/2” English Gauge micrometer with gauge equivalents on the frame.

Rounded anvil. Fair condition with wear and tarnish.

$15 donation

Item #056

#15 Brown & Sharpe 0-1” micrometer with the very old thimble style and 1878 and 1884 patent dates.

Decimal equivalents on the frame. Super old micrometer, with overall tarnish, but clear original markings and no non-original markings. Quite good for its age. Includes the old case in poor condition.

$90 donation

Item #057

#15 Brown & Sharpe 0-25mm micrometer with old style thimble and 1878 and 1884 patent dates.

Very good condition – it looks like metric micrometers didn't get much use a century ago here in the States . . .

$80 donation
Item #058
#15 Brown & Sharpe 0-1” micrometer with 1884 patent date.
Anvil screws in/out to adjust. Very good condition for its age.
$70 donation

Item #059
#15 Brown & Sharpe 0-1” micrometer with decimal equivalents on the frame and screw-in anvil adjustment.
Heavy construction and large numerals for ease of reading, including in steel mills. An old mic approaching mint condition in its original wood box.
$60 donation

Item #060
#15 Brown & Sharpe 0-1” micrometer with decimal equivalents on the frame and screw-in anvil adjustment.
Heavy construction and large numerals for ease of reading, including in steel mills. This is a second example, whose only flaw is a faint (can't read it) inscription light on the back of the frame.
$40 donation

Item #061
#17 Brown & Sharpe 0-1” micrometer with a side screw lock.
This is the heavy frame design for gauging hot metal, from the early A.C. (After Chrome) days. Some flaws in the chrome, but overall good function and appearance.
$25 donation
Item #062
#19 Brown & Sharpe 0-1” micrometer with the very old style thimble (with a single narrow knurl at the end).

Frame is marked with 1878 and 1884 patent dates plus decimal equivalents. Very old micrometer. A few small dings to the frame, but otherwise very good condition.

$70 donation

Item #063
#19RS (marked #19 on the frame) Brown & Sharpe 0-25mm micrometer in black hinged case.

Plain steel finish with a 1925 patent date on the speeder/ratchet. Adjustment is through side-mounted screw holding the frame-side anvil. Includes a B&S 1” round standard. Fair condition.

$25 donation

Item #064
#19RS (marked #19 on the frame) Brown & Sharpe 0-1” micrometer in hinged wood case.

Includes ratchet and decimal equivalents. Tarnished, though still good condition.

#25 donation

Item #065
#19 Brown & Sharpe 0-25mm micrometer.

Plain steel finish. Adjustment through side-mounted screw holding the frame-side anvil. Very good condition.

$25 donation
**Item #066**

#19 Brown & Sharpe 0-1” micrometer.

Plain steel, no ratchet. Same adjustment as the #19RS metric mic. Clear markings, no engravings, works well.

$15 donation

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**Item #067**

#20 Brown & Sharpe 0-1” micrometer with the side screw anvil adjustment and just an 1884 patent date on the frame.

Includes a ratchet, decimal equivalents on the frame, and a .0001” vernier. This model appears in my 1899 (#101), 1900 (#102) and 1907 (#109) catalogs and probably dates from that era. Some dings, but overall good condition with no extra markings. Wood box and paperwork.

$45

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**Item #068**

#22 Brown & Sharpe 0-1” micrometer with an 1894 patent (along with decimal equivalents) on the frame.

Includes a side clamp screw for the spindle. This micrometer appears in the 1899 catalog. Very good condition in wood box.

$65 donation

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**Item #069**

#31 Brown & Sharpe 0-2” micrometer.

Similar to the #45 but significantly older. Has an 1884 patent date on the back, the old single-knurled thimble and an unusual spindle lock. Excellent condition with a 1” standard and a well worn box. Valuable micrometer.

$100 donation
**Item #070**

#38 Brown and Sharpe 1-2” micrometer with 1902 patent date and decimal equivalents.

$20 donation

**Item #071**

#45 Brown & Sharpe 0-2” micrometer with 1884, 1887, 1890, 1894 (faintly), and 1900 patent dates on the frame.

Must have been very proud of their patent history when this was made. This has a missing front lock nut. The original stampings are clear, but this has a well worn look to it.

$20 donation

**Item #072**

#45 Brown & Sharpe 0-2” micrometer with 1884 and 1902 patent dates on the frame.

No non-original marks. Ratchet, locks, etc. are all in good working condition. The decimal equivalents still look sharp.

$45 donation

**Item #073**

#45 Brown & Sharpe 0-2” micrometer with 1884, 1890 and 1902 patent dates on the frame.

This is in outstanding condition for its age, still clean and bright. Includes an old case.

$70 donation
Item #074
#45 Brown & Sharpe 0-2” micrometer, probably from the 1940’s.

Includes ratchet, lock, decimal equivalents, etc. Excellent condition, with a B&S 1” standard, in wood box.

$50 donation

Item #075
#48 Brown & Sharpe 1-2” micrometer with 1902 patent date, with standard, in wood box.

$35 donation

Item #076
#48 Brown & Sharpe 1-2” micrometer, 1928 patent number, in good plush fitted case.

Has 1” round standard, a lock, and decimal equivalents. Very good condition save for initials discretely place inside the throat of the micrometer – easy to remove without changing the appearance of the micrometer. You might match this up with a #53.

$45 donation

Item #077
#48 Brown & Sharpe 1-2” micrometer.

Looks close to new. This had it all, beginning in the 1950’s: satin chrome, ratchet, lock, decimal equivalents, carbide anvils, and a .0001” vernier. In good case with 1” round B&S standard.

$45 donation

Item #078
#48 Brown & Sharpe 1-2” micrometer, near the same condition as the above.

Satin chrome, ratchet, lock, decimal equivalents, carbide anvils, and a .0001” vernier. No case.

$35 donation
**Item #079**

#52 Brown & Sharpe 2-3” micrometer with ratchet, front side lock, and side screw anvil adjustment type.

Has 1890, 1894, and 1900 patent dates on rear of frame. Good condition in original case, which includes a rarely seen B&S standard of the 2” round type. Pair it with a similar vintage 1-2” mic.

$50 donation

**Item #080**

#53 Brown & Sharpe 2-3” micrometer with ratchet, center lock, and .0001” vernier.

Very nice condition, with a standard, in plush fitted case. Pair this with a B&S #48, also in plain steel finish steel.

$40 donation

**Item #081**

#59 Brown & Sharpe 0-1” micrometer with the square REX-style frame and marked “Patent Pending” on the thimble.

Includes a center lock. The enamel on the frame is rough, but the overall feel and adjustment is still good.

$25 donation

**Item #082**

#59 Brown & Sharpe 0-1” micrometer with a lock.

This is dated after the “REX” designs, but before chrome. Good condition, except worn enamel on the frame. Hinged wood box could use a clean up.

$20 donation
Item #083
#61 Brown & Sharpe 1-2” micrometer with the square B&S trademark and a 1902 patent date on the back of the frame.
Includes a center roll lock.
$40 donation

Item #084
#62 Brown & Sharpe 1-2” micrometer with the same lock, trademark and 1902 patent date as the #61.
The difference is that this one has a .0001” vernier. Good condition.
$50 donation

Item #085
#65, #63, #61, #10 set of four Brown & Sharpe micrometers; all with a December 30, 1902 patent date engraved on the back of the frame.
Fairly uncommon to find a group of hundred year old micrometers in such relatively good condition. Each has a lock and all the larger sizes have an older style of B&S frame. The calibration adjustment is at the anvil end. The 0-1” is a #10 with a .0001” vernier, a ratchet, and decimal equivalents on the frame. The 1-2” is a #61 with a ratchet and lock. The 2-3” is a #63 with a ratchet and lock. The 3-4” is a #65 with a lock and a slightly more recent date (along with the #10) since it uses the “square logo” that first appeared around 1905. The others are likely close to the patent date. These look to still have the accuracy one might get with a modern set, with a bit of history as well.
$120 donation for set of 4
Item #086
#71 Brown & Sharpe micrometer 0-.3”

with a patent date of November 6, 1894. Fairly rare, old, and in excellent condition for its age. The large flat anvils are especially useful for measuring paper and other compressible materials.

$55 donation

Item #087
#75?? #233? Brown & Sharpe 0-1/2” bench micrometer.

The micrometer is completely unmarked, yet identical in style, details (ratchet, etc.), and dimensions to various B&S micrometers going back to the late 1890’s. The earliest version of these were attached from the bottom (like this one). Later version had a bench mic frame, beginning around 1929. What’s different from those seen in my catalogs (1892, 1899, 1900 on . . . ) is the old-style adjustment system with an adjustable anvil locked with a sideways screw. One knowledgeable source suggests this example was made between 1916 and 1920. In any case, this remains a silky smooth micrometer that would do well mounted to a new base.

$100 donation

Item #088
#102 Brown & Sharpe heavy micrometer caliper 1-2” with a heavy ratchet and lock. I-beam style frame.

Uncommon mic in good condition.

$65 donation

Item #089
#176-1 Brown & Sharpe 0-1” multi-anvil micrometer.

English made, with a friction thimble, lock, and .0001” vernier. Tiny bit of wear to a printed number, but overall excellent condition. Comes with a B&S clamshell case.

$70 donation
Item #090
#176 Brown & Sharpe 0-1” multi-anvil micrometer with extra anvils and case.

This was made by B&S at their No. Kingston plant. Note the different design of a B&S multi-anvil mic made in England. All satin chrome with fixed-friction thimble and lock. Cool micrometer in near mint condition. Last one I noticed on eBay went for $139+ without the box and extras (8/2/08).

$75 donation

Item #091
#200, #201, and #202 Brown & Sharpe 0-3”

mechanical digital micrometers with rotating cube windows. These are mechanical marvels, easy to read and very accurate. Given the high cost of manufacturing and a selling price well above electronic digital micrometers ($300 to $400 each a decade ago), these Swiss-made mics are hard to find and may be increasingly valued. Set is older style in excellent shape, except that the foam linings of the cases have been removed due to deterioration.

$290 donation

Item #092
#215 Brown and Sharpe 0-1” disk micrometer.

This is a B.C. (Before Chrome) era model with its wooden box and paperwork. Center roll lock and decimal equivalents on the frame. Very good condition.

$45 donation

Item #093
#215-like Brown and Sharpe 1-2” disk micrometer.

A good match to the 0-1” Before Chrome model above. Painted frame.

$35 donation
**Item #094**

#215 Brown and Sharpe 0-1” disk micrometer.

This is an A.C. (After Chrome) era model with the larger fixed-friction thimble, a lever lock, slant line graduations, and a .0001” vernier. Decimal equivalents on the frame.

$50 donation

**Item #095**

#219 Brown & Sharpe 0-1” blade micrometer with black wrinkle frame and original cardboard box.

Overall very good shape, with just the faintest inscription at the end of the thimble (easily covered with a bit of Mylar tape). Blade micrometers are meant reach into small features, such as snap-ring and cylinder-ring grooves. Good ones (like this) run about $200-300.

$85 donation

**Item #096**

#221-1 Brown & Sharpe 2-3” blade micrometer in near new condition with original case.

This one is made in England. This size is prized by internal combustion engine enthusiasts; anyone with pistons in the 2-3” size. It’s not just a blade micrometer, it’s of an age when most everything in England was groovy.

$110 donation

**Item #097**

#225 Brown & Sharpe 0-1/2” “English Gage” micrometer with ball anvil and ratchet.

The elegantly cut-away style frame has gage equivalents (1 to 30) stamped in its small frame. This plain steel style is seen in the B&S 1941 catalog (#34) but not its 1951 catalog (#35). Excellent condition.

$55 donation
**Item #098**  
*#229 Brown & Sharpe Swiss-made wire micrometer.*  
Measures most anything within its geometric constraints. All satin chrome. Gorgeous tool in original case.  
$60 donation

**Item #099**  
*#232 Brown & Sharpe 0-1/2” paper gauge micrometer.*  
Half inch flat anvils and 2” deep frame. Satin chrome thimble and wrinkle finish frame. Lightly marked.  
$35 donation

**Item #100**  
*#233RS Brown & Sharpe 0-.5” bench micrometer, self-contained in a fitted wood box.*  
Includes large thimble, directly reading in .0001” increments, and a ratchet. Beautiful little micrometer in excellent condition. The enclosed paperwork dates it from 1950. #1 example.  
$90 donation

**Item #101**  
*#233RS Brown & Sharpe 0-.5” bench micrometer, self-contained in a fitted wood box.*  
Includes large thimble, directly reading in .0001” increments, and a ratchet. Beautiful little micrometer in excellent condition. The enclosed paperwork dates it from 1953. #2 example.  
$90 donation
**Item #102**  
#233RS Brown & Sharpe 0-1/2” bench micrometer of 1950+ vintage.

Has a ratchet, carbide anvils, and a large satin chrome spindle that reads directly to .0001.” This has the #1712 stamped and will look better without the broken but included case. #3 example.

$45 donation

**Item #103**  
#237 Brown & Sharpe 0-1” by 3” deep throat micrometer (a.k.a. “rolling mill gauge”) with a ratchet.

Adjustment is by a set-screw retained anvil (older style). This style of frame etc. was phased out during the WWI years. Very good condition in a good case.

$70 donation

**Item #104**  
#239 Brown & Sharpe 1” by 6” deep throat micrometer with a finger hold through the frame.

Same idea as the #237 rolling mill gauge; but with a deeper frame. Very good condition.

$80 donation

**Item #105**  
#245 Brown & Sharpe 0-1/2” bench micrometer in hinged wood case.

Direct reading to .0001” on either the large thimble or dial comparator. Ugly (but restorable) finger-jointed wood case with very nice and highly accurate micrometer within. Includes a lock, measuring platform, and retractable anvil. These cost $350 four decades ago; a bit less than $2000 in today’s dollars.

$150 donation
Item #106
#245 Brown & Sharpe 0-1/2” bench micrometer in hinged wood case.

Direct reading to .0001” on either the large thimble or dial comparator. Nice finger-jointed wood case with very nice and highly accurate micrometer within. Includes a lock, measuring platform, and retractable anvil. Even better condition than the #245 above.

$170 donation

Item #107
#250 Brown & Sharpe inside micrometer .2” to 1” range.

This style first appeared in the early 1900’s. Excellent cosmetic and working condition.

$50 donation

Item #108
#252 Brown & Sharpe .5” to 1.5” inside micrometer.

An older style (polished steel) in its original black leather case. Case is marked “141” – the micrometer is in near mint condition.

$45 donation

Item #109
#263 Brown & Sharpe 1-2” inside micrometer, as seen in the Museum of Modern Art collection!

This includes a small micrometer head, two interchangeable rods, two spacers, and a small adjustment wrench – all in the original wood box. It’s also one of the handful of tools selected by MOMA curators for display.

$55 donation
**Item #110**  
#599-1-9999 Brown & Sharpe new old stock fitted mahogany wood case, itself in the original cardboard box.  
As furnished with many #1 and other 0-1” and 0-25” micrometers. Consider this if you buy a naked pride-of-ownership micrometer – a more modest approach.

$15 donation

**Item #111**  
#599-3-36 Brown & Sharpe 2-3” micrometer.
Swiss made with fixed-friction thimble. Black frame with a control number on the back; otherwise very good. This would round out a high quality 1” and 2” pair.

$30 donation

**Item #112**  
#599-10-100-1 Brown & Sharpe 0-25mm Digit-Mike.
Swiss made. New old stock direct reading micrometer in original packaging. See other Digit-Mikes listed under #10.

$95 donation

**Item #113**  
#599-40-110-1 Brown & Sharpe 75-100mm Digit-Mike.
Swiss made. Excellent condition in wood box (foam needs replacing).

$95 donation

**Item #114**  
#599-20-6 Brown & Sharpe 1-2” micrometer.
Fixed-friction thimble, slant line graduations. Very good condition in original cardboard box.

$25 donation
Item #115

#599-20-3 Brown & Sharpe 1-2” micrometer.

Fixed-friction thimble, slant line graduations, plus lock and carbide faces. Excellent condition in original cardboard box.

$30 donation

Item #116

#599-281-10-1 Brown & Sharpe/TESA 20-25mm hole micrometer (Intrimik); for measuring bore diameters to an accuracy of .005mm.

This is marked TESA (Swiss made) on the tool and B&S on its original box; probably from a time when B&S had just bought TESA. It's included here to give one example of three point internal measurements. The advantage of a 3-point hole micrometer compared to 2-point alternatives is both greater ease of measuring and the ability to detect out-of-round conditions. Indeed, many holes have lobing; and there is even a tool to drill square holes! New price on these is $549 (Long Island Indicator, etc.). This one looks to have been checked into the Bendix calibration lab in 1978, and never used. It's mint. Most shops (including mine) will have a wide range to cover various bore sizes, from makers like B&S, Fowler/Bowers, Lufkin/Etalon, and Mitutoyo.

$100 donation

Item #117

#605 (but not yet so numbered) Brown & Sharpe depth micrometer 0-2.5” with a 4” base.

This style, with the notched/adjustable rod and no model number engraved dates from the early 1900’s. Very nice condition and still accurate.

$50 donation
**Item #118**

#1011 Brown & Sharpe 0-1” satin chrome micrometer with a fixed-friction thimble, carbide anvils, decimal equivalents, and a lock.

Patent number 2,357,066 marked on the back. Very well made micrometer (Providence, RI origin) from recent decades. Slant line graduations and .0001” vernier. Well designed (better than most current versions) in excellent condition. Includes original plastic box.

$50 donation

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**Item #119**

#1011 Brown & Sharpe 0-1” satin chrome micrometer with a fixed-friction thimble, carbide anvils, decimal equivalents, and a lock.

This differs slightly from the above. Patent number 2,357,066 marked on the back; along with “Pat. Pend- ing” and the model number 1011 (which is on the front of the other example). From the B&S Providence, RI plant. Same excellent design and condition as the above example, in a previous owner’s box.

$50 donation

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**Item #120**

Brown and Sharpe 0-3” micrometer set in like-new B&S fitted plush case

(itself in the original cardboard box). Includes a near perfect all-satin B&S #1 with all the options and decimal equivalents, plus the intended matching 1-2” and 2-3” (near mint) with wrinkle frames and standards. All are North Kingston made with convertible friction/fixed thimbles, locks, carbide faces, and .0001” reading verniers. A really nice set.

$175 donation
Item #121  
New old stock Brown & Sharpe  
interchangeable anvil mic for 0-4” range. Makes a good complement to a 0-1” mic; setting the larger mic to size as needed.

$80 donation

Item #122  
Brown & Sharpe  
0-3” mechanical digital micrometers (Digit-Mikes) of a different design than the 200 series. These are easy to read and very accurate. The 2-3” size is from the last years of manufacture; after B&S figured that foam linings would deteriorate. Given the high cost of manufacturing and a selling price well above electronic digital micrometers (over $1200 for the three), these Swiss-made mics will be increasingly valued. Mics are in essentially new shape, at a fraction of new cost.

$290 donation
Item #123
Brown & Sharpe 0-6” micrometer set in B&S fitted wood case.

The micrometers were made in North Kingston, RI and include convertible friction/fixed thimbles, slant line graduations, lever locks, carbide anvils and calibration standards. Accurate with a comfortable (IMO) feel. This was my personal set. Very good condition overall. See the 6-7” micrometer below to fill out your set to a lucky and sometimes useful 7.

$385 donation

Item #124
Brown & Sharpe 6-7” micrometer; a complement to the 0-6” set.

Dingy wood case hides an excellent condition micrometer with fixed/friction thimble, carbide anvils, a lock, and calibration standard. Perfect match to the 0-6” set.

$35 with 0-6” set; otherwise $65

Item #125
B&S / Valco crimp-height micrometer in mint condition.

Totally unmarked satin chrome frame with mechanical digital mechanism (B&S “Digit-Mike”) with a lock and friction thimble all made by Brown and Sharpe. The anvils are specially shaped to measure the integrity of electrical crimp connections.

$55 donation

Item #126
B&S / York Machinery & Supply Co. (York, PA) crimp height micrometer with a body made by Brown & Sharpe’s North Kingston facility.

All satin chrome with convertible friction/fixed thimble and lock. The anvils are shaped to measure the integrity of electrical crimp connections. Essentially mint condition.

$40 donation
Item #127
B&S 50-75mm micrometer with fixed-friction thimble, carbide anvils, and a lock.

No number on the micrometer. Good condition.

$20 donation

Item #128
Swiss-made Brown & Sharpe 0-1” micrometer with fixed-friction thimble, carbide anvils, black frame, and a .0001” vernier.

No number on the micrometer. This one is distinguished by the straight line knurling on the thimble and the plastic (those have held up OK) lever for the lock. It also has a slight convexity to both anvils. Like many of the similar B&S models this is a pride-of-ownership mic. Excellent condition in hinged wood box.

$55 donation

Brown & Sons (Chicago)

Item #129
Brown & Sons 0-1” micrometer with ratchet, lock, and decimal equivalents.

Marked No. 100 on reverse side of the frame. Fairly decent build, but with a thimble whose size, numbering, and knurling look much like the “Brownie” micrometers.

$20 donation.
Cadillac Gage Company

(Detroit, MI) was a division of Ex-Cell-O Corporation by about 1956. In addition to precision gage manufacture, primarily for the auto industry, it made guns and many Vietnam-era military vehicles. Textron acquired Cadillac Gage in 1986 and merged it with their Marine division (to become Marine & Land Systems) in 1994 -- all focusing on the defense industry.

Item #130

Cadillac Pla-Chek 0-6” height gage, plus a 6” riser; made in West Germany.

The large diameter micrometer head reads directly to .0001” and steps are placed at every inch increment to touch off a test indicator. Forget Coordinate Measuring Machines (much less laser scanning) – this is what I saw being used in Ford and other auto factory QC labs back in the 70’s.

$110 donation for gage and riser
E.J. Cady & Co.

(Chicago, Illinois) was founded by Elijah Jess Cady. He became a commissioned paper broker in 1881 and started his business in 1893. By 1915 he had invented and was making paper micrometers, paper scales, and burst testers. The family-owned company (five generations) describes itself as “precision measuring and testing instruments since 1893.”

Item #131


Graduated in .001, 1/64, and point sizes. A reliable design, with older examples such as this one still in fine working condition.

$90 donation

Robert W. Carson

Inventor of the Carson Electronic Micrometer

Item #132

Carson Electronic Micrometer 0-1” (patented Nov. 17, 1942) with precise vertical measuring head and vacuum tube power box.

Paperwork for patent #2,302,104 is included. This is a nifty Buck Rogers era micrometer with .00001 sensitivity (10 millionths – around the range of the Van Keuren Light Wave micrometer). Condition or accuracy is not known. A prudent person might run it at half voltage (with a Powerstat / autotransformer) for while to reform any electrolytic capacitors hiding in the chassis. Or, open it up and take a look first. Marked “49” inside the control box; perhaps the 49th unit in a small production lot? Very good cosmetic condition.

$120 donation for the set
Cary Le Locle

(Le Locle, Switzerland) was a maker of micrometers, comparators, gauge blocks, and other precision tools; and was located amidst the vibrant Swiss watchmaking industry. Cary became part of TESA; and, along with Brown & Sharpe, it became part of Hexagon AB. Cary remains active as a TESA brand.

Item #133
Cary Le Locle  0-15mm bench micrometer with a .001mm comparator.

This is a gorgeous bit of Swiss wizardry, built to watch tolerances (including a fully jeweled movement in the comparator) and sold into the watchmaking industry. The satin chrome thimble reads directly to .01mm and has a plastic cover to avoid thermal effects. There is also a spindle lock (it sort of hard ratchets in this position), which allows either fixed comparative measurements or smooth direct rotation. A wide variety of specialized anvils are available. Four extra pairs of different types are included – themselves worth roughly the donation price. The micrometer includes a parts support and an anvil release. At the time this was likely built, it cost about as much as a VW bug. Near perfect condition in original wood case.

$500 donation

Central Die Casting

Casting (Chicago, IL) were makers of the inexpensive Handi-Mikes (a.k.a. “The Mighty Midget).

Item #134
Handi-Mike

(USA) 0-.5” with die cast frame. Inexpensive micrometer, typically sold through five-and-dime stores such as Woolworth’s.

$7 donation

Item #135
Handi-Mike (USA) 0.5” with chrome plated frame.

$12 donation
Item #136
Handy (USA) 0.5” micrometer
with die cast frame. Likely an earlier version of the Handi-Mike.

$7 donation

Central Scientific Company
– see Scherr-Tumico.

The Central Tool Company

The Central Tool Company (variously of Providence, Auburn/Cranston, RI) has a long history, beginning in 1908, trying to find niches in the highly competitive precision tools business. The company has since been in the same location since 1912 with early micrometers marked “Auburn” and later ones marked “Cranston.” Some early analog micrometers were nicely made; and their mechanical digital micrometers were a competitive high point in terms of technical sophistication. In later years their micrometers have been of moderate quality (still usable and accurate), but often built to a price point. Toward the last half of the twentieth century the company specialized in tools for trade schools (for example, lower priced “Apprentice” micrometers), the automotive market (slightly higher standard), and in making micrometers for others to distribute under their own brand names. The Central Tool Co. more recently calls itself Central Tools and has built mics branded “MG,” “National,” and “MG/National.” The MG/National Specialty Co. was located in N.Y. city. Central also built gold-tone versions for Chrysler to use as graduation gifts for its “Master Technician” automotive students. The Welch Scientific Co. sold Central-built micrometers under its own brand name. I also have Central-built mics with the logos “MAC” and an intertwined “MW.” Perhaps most to its credit is that the company recently celebrated its 100th anniversary, still as a family-owned company.

Item #137
This example is a mint condition Welch Scientific Company
micrometer built for them by Central Tool. Give it to a chemist friend.

$20 donation

Item #138
W.M. Welch Manufacturing Co. 0-25mm mic
made by the Central Tool Co.

$20 donation
**Item #139**  
**This example is a Chrysler Award micrometer.**

It’s hard to know if Master Technicians were delighted to receive a micrometer or a bit disappointed to get the equivalent of a Timex instead of a Rolex. In any case, the spindle of this one is stiff from years of congealed oil and no use. Perhaps buy it to impress your friends at Fiat, the new owners of Chrysler?

$20 donation

**Item #140**  
**This is a 0-100mm interchangeable anvil set,**

built to a higher standard (friction thimble, etc.) than many Central micrometers. It would be an affordable way to add metric capabilities.

$55 donation

**Item #141**  
**This is an older 0-4” interchangeable anvil set,**

built to a higher standard than many Central micrometers. It has analog reading to tenths and a mechanical digital readout for hundredths and thousandths. The anvils also change easily.

$55 donation

**Item #142**  
**Omega 0-1” micrometer made by the Central Tool Co.**

This is the same micrometer sold as under the MG and Sears brands as an apprentice micrometer.

$12 donation
**Item #143**

**0-1” & 1-2” set of “Apprentice” micrometers under the MG/National brand,**

designed to be sold through schools to the students of various US apprentice programs. The set has the basics, a friction/ratchet and sufficient accuracy to measure .001. The 1” size even has the added cost of a fraction/decimal table on the frame – a likely requirement for students. Good set for a mechanically inclined child. Despite the “National” name, they won’t destroy a national treasure in a few years of abuse. Accuracy adjustment is by a screw to the anvil.

$30 donation

**Item #144**

**This is a 0-25mm & 25-50mm set under the MG brand.**

It is built to a higher standard than their “Apprentice” series, including a better adjustment to zero, a lock, and an adjustment for spindle wear. Prepare someone for a metric future!

$40 donation

**Item #145**

**Set of five Central Tools (Cranston, R.I.) micrometers covering the range 0 to 5”**

These are of decent quality with locks, a ratchet thimble, and the usual goodies. The 0-1” has a chrome frame with decimal equivalents. A U.S. made set in mostly near new condition, perhaps 40-50 years old, at a bargain cost

$95 donation
Item #146
0-1” MG Tool micrometer made by Central Tool Co.

Factory inspection date of May 10, 1969. This has features that are fairly uncommon for Central, including a friction (rather than ratchet) thimble, a knurled type (rather than lever) lock, and carbide anvils. Probably the best Central mic of this era. Slightly stiff thimble – needs an oil change.

$30

Item #147
Set of 3 Central Tools micrometers.

The largest (2-3”) of the lot is branded “MW” and has seen use and wear. All have locks and a friction thimble and all are from the Cranston, RI facility. Good entry level user set.

$40 donation

Item #148
Set of four “MW” micrometers made by the Central Tool Co.


$45 donation

Item #149
The what-happens-when-engineers-are-in-charge micrometer.

Jacques patent (April 25, 1911 etc.) for the direct reading digital mechanism. 3-4” size. This is one of the earlier mechanical digital mics and a sophisticated and robust design. Near a century later, it still works just fine. However, it would not be surprising that the manufacturing cost was greater than many could afford.

$70 donation
**Item #150**

The what-happens-when-MBA’s-take-over three pack.

For an example of what product differentiation might look like, when engineers are in charge, take a look at my Central Tool Co. “Jacques patent” mechanical digital micrometer built almost 100 years ago. For an example when less technically inclined folks are in charge, check out these micrometers sold under the Central, MG, and MAC names and only the slightest product differentiation (the locks, chrome or wrinkle black frames). One wonders if MAC tools resold these mics; the quality would be just barely adequate for the brand in my opinion. It’s now a standard practice (think of Whirlpool, Kenmore, Roger, and KitchenAid plus tiny SKU differences that might price match guarantees a joke). Still, to its credit, Central Tools is still a going company. Three mics, one donation. Buy it for a budding MBA, a business professor, or send it in an unmarked envelope to your boss’s boss?

$50 donation

**Item #151**

Central Tool Co. 0-6” beam micrometer marked Pat. Pend.

(Patent Pending). Early micrometer in good condition. Has initials on the rear side (BTC), which could be removed with wet/dry paper. The idea of this design was to get the reach and versatility of calipers, with the accuracy of a micrometer. Similar beam micrometers were made in the late 1800’s and early 1900’s by Starrett (some examples in this collection), Brown & Sharpe, and others

$95 donation

**Item #152**

Central Tools .3 to 1.3” disk brake micrometer.

To measure brake rotor thickness, thickness variation, and score depths (the pointed end). Actually pretty well built for the task; though a deeper throat is now common.

$30 donation
Item #153
Central Tool Co. 0-15mm watchmaker’s micrometer.

Tiny anvils for small parts and to fit in grooves. Nicely made older micrometer, from the Auburn era.

$35 donation

Item #154
Central Tools 0-3” micrometer set in padded black case.

This is an older set (1930’s?) of good quality construction.

$60 donation

Item #155
Central Tool Co. 0-1” and 1-2” micrometers; among the earlier ones made (likely 1920’s; pre-Depression).

One unique feature of these is the knurled collar surrounding the frame and spindle. One presumes the purpose of the screw hole was to provide an oiling point?

$45 donation

Item #156
Older style Central Tool Co. 0-1” micrometer with a cool logo on the back side

(only time I’ve seen this) and paperwork referring to the 1918 patent for the friction thimble

$30 donation
**Item #157**  
**Early 1-2” Central Tool Co. micrometer.**

The frame design is very similar to early (e.g. the 1902 patent set) B&S micrometers, but with a calibration adjustment (front of the thimble) that looks like Reed. Hard to know who was

$30 donation

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**Item #158**  
**One of the earlier Central Tool Co. metric micrometers, 0-25mm.**

“Certified Accuracy!”

$25 donation

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**Item #159**  
**Satin chrome Central Tool Co. 0-1” micrometer**

with friction thimble and wood box.

$25 donation

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**Item #160**  
**Nice, older Central Tool Co. (Auburn) 1-2” mic**

with widely spaced and easily read decimal equivalents of fractions front and back. Pair it with one of the 0-1” mics. Includes a standard.

$25 donation

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**Item #161**  
**Central Tool Co. 0-1” ball end mic with satin chrome, decimal equivalents, ratchet lock, and wood box.**

The ball end anvil is designed to fit inside tubing and pipe to measure its thickness. It can also be used to measure most flat pieces.

$25 donation
**Item #162**
Central Tools, Inc. 0-1” mechanical digital micrometre made by Slocomb.

Slocomb makes a very good mechanical digital micrometer (with patents going back decades). So, here’s a very good tool, with a somewhat lesser brand (IMO) affixed. Pretty cool, with .0001 vernier, friction thimble, carbide faces, and pretty much mint condition. Donation is half of new price (years ago).

$45 donation

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**James Chesterman & Co.**

(Sheffield, England) was established in 1829. Known as a quality maker of patent measuring tapes, rules, and other precision measuring instruments. The company was still publishing an extensive catalog (124 pages) in 1954. In 1963 an amalgamation with John Rabone & Sons created Rabone Chesterman; which was subsequently bought by Stanley Tools. A book titled “The first 200 years: a short history of Rabone Chesterman Limited” was published in 1984.

**Item #163**

Chesterman 0-1” micrometer, all satin chrome with ratchet, lock, .0001 vernier, and decimal equivalents on the frame.


$45 donation

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**Chicago Brand**

is an importer of low cost chinese tools.

**Item #164**

Chicago Brand 0-1” and 0-25mm electronic digital micrometer 0-1” -- unused in original wood box.

You decide – compare with the Mitutoyo digital electronic micrometer – fair trade?

$25 donation
Davis & Thompson Co.
(Milwaukee, Wis.) was established in 1918. It is listed in American Machinist, Volume 53 (1920) as the maker of the Davis Duplex Continuous Milling Machine. This was a complex affair; with multiple spindles for end milling to length. The company is still listed as doing business in Wisconsin.

Item #165
Davis & Thompson 10-13” adjustable range micrometer with a hollow chromed frame.

This has a bright chrome frame, similar to those made by the Tubular Micrometer Co., fitted to a Brown & Sharpe #294 micrometer head, with ratchet. This is of a type made from the 1920’s to 50’s. The chrome has small flaws, but the overall appearance is pretty good.

$60 donation

Deltronic Corporation
(Santa Ana, CA) is best know as a manufacturer of thread and plug gages, along with optical comparators and video inspection systems. The company boasts “the name Deltronic has become synonymous with accurate measurement” (the emphasis theirs). The core competency, at least for the gages, is precision grinding. The plug gage here is just for kicks; though note that these are commonly made to 40 mil-lionths tolerances; and can make reasonably good mic standards.

Item #166
Deltronic “Go” (green) “No Go (red) plug gage for those who see the hole ¾ full.

If California companies can have “talking sticks” to help run their meetings, some project manager can surely use this to give a thumbs up (green!) or thumbs down (red).

$12 donation
Ferdinand Durand
(Paris). Judging from the one example of a micrometer, this appears to be an older company. The only reference to company history I’ve found is this 1920 catalog ---- and a similar 1932-dated Durand catalog: Catalogue Illustré De La Manufacture De Petit Outillage Mécanique Et D Instruments De Précision.

Item #167
Fernand Durand 150mm micrometer.

An older style micrometer with a lock and thermal pads similar to that used by Starrett around 1900. The frame appears to be carefully sawn by hand, then cleaned up on a grinder. Overall, excellent quality. Note the tiny (eagle??) logo by the fixed anvil. I’d be inclined to clean it up, make a stand, and gently clasp a Dassault CD between the anvils?

$55 donation

E.D.A.
(France)

Item #168
0-15mm micrometer sold by HR (distributor) into the watch and clockmaking industry. Very nicely made small metric micrometer.

$30 donation
Elgin National Watch Co. (Chicago, IL) was incorporated August, 1864. The opened their watchmaker’s college in 1921 and closed it in 1985. A possible connection to their “Sapphire Tipt” micrometer is that all civilian work was suspended during WWII to concentrate on military watches, chronometers, and Sapphire bearings for aiming systems.

Item #169
Elgin 0-1” micrometer with sapphire jewel tipped anvils made for them by the Tubular Micrometer Co.

Mint condition with .0001 vernier in a fitted wood case. This was undoubtedly destined for their affiliated watchmakers and watch shops. The notion of sapphire anvils is an interesting (and costly) bit of differentiation for that trade. Probably dates to the 1950’s.

$125 donation

Etalon
(Rolle, Suisse/Switzerland) was originally a brand of Pierre Roch S.A.R.L. “Etalon” is from the French étalon, meaning both a stallion and a standard in metrology – and the company’s logo shows a stallion rearing high. The first US filing for this trademark was in 1947. A 1985 trademark filing shows TESA S.a. and Pierre Roch, S.a.R.L. as joint applicants. Etalon (as well as some tools marked Roch) are now best known as a TESA brands. TESA itself is now (along with Brown & Sharpe) part of the Hexagon Metrology Group.

Item #170
Etalon 0-1” micrometer with a speeder, friction thimble, lock, and carbide anvils.

The Etalon logo nicely molded into the front pad. Top quality micrometer with signs of careful use; more a “user” than “collector” micrometer.

$40 donation
Item #171
Etalon

0-1” Microrapid micrometer. Possibly the finest “feel” of any micrometer made. It has a precisely made double pitch, double start screw that covers .100” per revolution; rather than the more customary .025” per rev. It’s much faster to use; opening and closing 4x faster (not 2x as suggested below for the metric units). Here’s what Long Island Indicator (one of the finest dealers/service companies for precision instruments) has to say:

“. . . available only in metric: 0-25mm, 25-50mm, 50-75mm, and 75-100mm. The inch versions were discontinued some time ago much to the chagrin of many a discerning machinist. The thimble on this metric micrometer has 100 graduations rather than the standard 50 graduations. Reading this scale is faster and less prone to error. Plus, you only have to turn the thimble half as much as the regular micrometer so the anvils open and close quickly. Hence, “micro-rapid.” For this tool alone it’s worth switching to metric.”

The new metric units cost over $300. Due to their scarcity, used English-measure versions often draw near-new prices. This (English measure!) example is in excellent mechanical condition with cosmetic signs of wear.

$130 donation
Item #172
Etalon

(Swiss) set of 3 micrometers 0-1, 1-2, and 2-3” All in very nice condition, with the 2-3” looking new. Etalon was/still is considered by many to be the finest manufacturer of micrometers. Some features of this mic include a slightly larger (easier to read) thimble, a smooth friction “ratchet” for repeatable pressure, a Euro style vernier scale (easier to read), and plastic pads designed to limit heat transfer and distortion to the micrometer frame. However, the main feature is the high quality of the micrometer screw itself. Etalon micrometers, under the TESA umbrella, are now of a slightly different design, incorporating a cost-reduced plastic lock and friction thimble – these “vintage” ones are arguably made to a slightly higher standard. The donation price is less than you'd pay for just one of newer versions ($199 to $339 depending on size).

$180 donation

Item #173
Set of 2 Etalon

(Swiss) micrometers 0-1” and 1-2” Etalon was/is considered by many to be the finest manufacturer of micrometers. Some features of this mic include a slightly larger (easier to read) thimble, a smooth friction “ratchet” for repeatable pressure, a Euro style vernier scale (easier to read), and plastic pads designed to limit heat transfer and distortion of the micrometer frame. However, the main feature is the high quality of the micrometer screw itself. Etalon micrometers, under the TESA umbrella, are now of a slightly different design, incorporating a cost-reduced plastic friction thimble.

$85 donation
**Item #174**
Etalon 0-1” indicating micrometer with comparator dial reading to .0001” and a push button anvil release.

The comparator as well as the vernier read to .0001”
This is an earlier version of the Etalon comparator, lacking the adjustable part support seen in later models.

$60 donation

**Item #175**
Etalon 0-1” indicating micrometer in box.

Includes a lock, a built-in part support, a .00005” comparator, an anvil release, and a original fitted box.
These cost well over $1000 new, and draw $400 or so used at auction. This one is in good cosmetic condition, but could use a cleaning (congealed oil). This type is designed for accurate repetitive measurements. Cool mic.

$250 donation

**Item #176**
Etalon 0-1” indicating micrometer.

Includes a lock, a built-in part support, a .00005” comparator, an anvil release, and a original fitted box.
These cost well over $1000 new, and draw $400 or so used at auction. This one is in average cosmetic condition and very good operating condition.

$225 donation
Federal Products Co.

was founded in 1918. Now part of the Mahr Group and is known as Mahr Federal Inc.

**Item #177**
Federal 200P 0-1” indicating micrometer in original black plastic case.

Both the vernier and comparator read to .0001”. The mic is a dull satin chrome, with a lock and anvil release. Has the original owners name (Dorian Shainin) on the back and needs a cleaning. The front looks near new and is marked “Pat. Pending.”

$50 donation

Feinmess Suhl GambH

(Suhl, Germany) was founded as Friedrich Keilpart & Co. in 1878 for the manufacture of calipers and gages. It was nationalized as Feinmesszeugfabrik Suhl in 1952. By 1970 it was taken over by the VEB Carl Zeiss Jena conglomerate. It 1992 it became part of August Steinmeyer GmbH & Co. A quality maker now known as Feinmess Suhl or FMS Suhl.

**Item #178**
Feinmesszeugfabrik group of three micrometers: 75-100mm, 125-150mm, and 175-mm in original wood boxes.

A very good design with an effective speeder and ratchet position, locks, carbide faces, thermal pads, etc. The included standards have an effective alignment mechanism for ease of use. The large thimbles make readings easier. All three are in overall good condition. The clinker in all this was that they came to me skipping 25mm sizes at a time. The unfinished project was to make a 25mm anvil extension so this would cover the entire range from 75 to 175mm. These likely date from past 1952 to 1970, but look modern.

$150 donation
Flechel & Brown
(Toledo, O.)

Item #179
Flechel & Brown 0-1” micrometer with ratchet, lock, and decimal equivalents on the frame.

Nicely made, of a standard design seen worldwide. The maker of this mic appears identical to the maker of the Fulton (steamship logo) mic noted elsewhere. Identical ratchet, thimble, lock, and lettering of the decimal equivalents to that mic. The only difference is that the Flechel & Brown has a cut-away frame design, designed to let it reach in slightly tighter places.

S30 donation

Fleming Machine Company

So, consider these micrometers as bridging between the Roaring Twenties(Machine Co.) and the Great Depression (Manufacturing Co.). I have three sets of their 0-4” interchangeable anvil micrometers; possibly “cornering the market!?” The better condition and more valuable ones have the older Fleming Machine Co. label and pre-date 1929. It appears the company didn’t survive the depression; despite selling a good quality product. Given some similarities in design, it is thought the micrometers may have been made by Reed Small Tool Works, which itself struggled to survive and was eventually sold to the Tubular Micrometer Company.

Item #180
Fleming Machine Co. 0-1” micrometer;

early 20’s? Well worn, but looks to have retained its accuracy. Send it to a friend from Worcester, Mass?

Donation $15
Item #181
Fleming Machine Co. 0-4” interchangeable anvil micrometer set #1.

This is the best condition and most complete set. It is one of the older “Machine Co.” examples, predating the 1929 name change. The 2” standard was missing and has been replaced by its Starrett equivalent.

$100 donation

Item #182
Fleming Machine Co. 0-4” interchangeable anvil micrometer set #2.

This is a very good condition set, with all its anvils, but missing the 2” standard and adjustment spanner. It is one of the older “Machine Co.” examples, predating the 1929 name change.

$70 donation

Item #183
Fleming Machine/Manufacturing Co. 0-3” interchangeable anvil micrometer set #3.

This is in a well worn wood box marked “Mfg. Co.” with a micrometer marked “Machine Co.” The frame carries a cursive script “Fleming” and also the model No. 1204. It’s missing the 3-4” anvil, the 2” standard, and its small wrench.

$35 donation

Item #184
Fleming inside micrometer with rods for the range 1.5 to 5 inches.

The box is marked Fleming Manufacturing Co. while the micrometer itself is marked Fleming Machine Co. and model no. 1225. Good condition, with a bit of history.

$35 donation
Forsberg Mfg. Co.
(Bridgeport, Conn.) was active around 1926 through the 1950's, was founded by a former employee of Crescent Tool Co., and made a variety of hand tools. This according to vintagemachinery.org.

**Item #185**
“THOR” branded 0-1” micrometer with an aluminum die cast frame (including a fake lock, cast in) and a speeder at the end.

Another entry in the low cost made-in-America sweepstakes

$15 donation

**Item #186**
“VIKING” branded 1-2” micrometer with an aluminum die cast frame (including a fake lock, cast in) and a ratchet at the end.

$15 donation / $25 for the pair of Forsberg mics

Fred V. Fowler Company
(Auburndale, Mass.) is a US distributor of precision tools. In years past, they distributed Helios (Germany), NSK (Japan) and other micrometers. The company goes back to at least 1973 (their catalog #972).

**Item #187**
Fowler 0-1” disk micrometer likely made by NSK in Japan.

Includes ratchet, lock, original wood case, and original blue painted frame. Well made, in very good condition, except for a “Machine Side” marking in the paint on the rear side (this could easily be touched up). A useful disk size; not too big, not too small.

$45 donation
Item #188
Fowler 0-1” tubing micrometer. Very good condition, but it's wood case is missing its sliding lid.

No country of origin is noted; but possibly a Polish import. While no tubing mics appear in the 1973 Fowler catalog, mics with similar thimbles and thermal pads (e.g. disc and thread mics) do. At that time, much of the stock was from Poland. Compare to the Starrett #569 micrometer for a similar type.

$25 donation

Item #189
Fowler 0-1” and 1-2” mechanical digital micrometers made for them by NSK (Nippon Seiko Kabushik Kaisha, a.k.a. Japan Micrometer Mfg. Co). The main advantage is faster and easier reading. .0001” can be read through the vernier. The 1” size is in very good working condition. The 2” size is new old stock complete in its original packaging and wooden case. The quality is comparable to Mitutoyo (excellent) and indeed the design looks as if some elements had been “borrowed.” Note that the NSK Japan factory is no longer making micrometers.

While mechanical digital micrometers have been largely replaced in industry by electronic digital micrometers, these still have a couple advantages. First, they're cool in a clunky geeky way. Second, you'll never leave a battery in them only to find years later that it has leaked and destroyed the micrometer.

$110 donation

Item #190
Fowler Digitrix II 0-1” electronic digital micrometer, made for them by NSK.

This was one of the earlier hand held electronic micrometers (for the earliest, see the Moore & Wright example). In working condition, once the battery is inserted. The blue case is in fair condition, the micrometer inside is very good.

$40 donation
**Item #191**

**Fowler apprentice machinist’s kit in blue vinyl case with fitted interior.**

Marked “Made in Germany” but includes Fowler branded quality tools from Germany (e.g. Helios), the UK (e.g. Rabone Chesterman) and the US. All in excellent condition. Helios 0-1” micrometer with friction thimble, all-satin chrome, lever lock, carbide anvils, and decimal equivalents. Helios 0-6” stainless steel dial caliper with .001” on the dial and direct reading of mm. U.S.A. 6” combination square and centerhead, plus a depth gage with both rule and pin attachments. Also, a thread gauge, scriber, dividers, center punch, and satin chrome rule.

$150 donation

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**W. Fox & Sons**

Smethwick, England. The company was formed in 1949 and last filed accounts in 1980. It’s original manufacturing facility (conveniently located on Brewery St.) is shown in a 1951 photo, just prior to its demolition. A 1962 photo shows a new facility, also on Brewery St.

**Item #192**

**W. Fox & Sons 0-.5” micrometer.**

A couple of these have surfaced for sale; often ascribed (due to the open thread and measuring wheel look) as belonging to the late 1800’s. Indeed, it does a bit like B&S and other mics of that era. In reality this is a heavy duty micrometer meant for gauging cold rolled etc. steel. The finger hold and large wheel allow one hand operation. One might guess this is circa 1950-1980, given what little is known (above) about the company. A search for the UK Registered Design 839947 (inscribed on the tool) can be made.

$40 donation
Fulton

The first precision tools I’ve seen marked “Fulton” were revolution counters (speed indicators) listed in a circa 1900 Montgomery & Co. (NY) catalog. Montgomery & Co. was established in 1876, this was catalog #21, and tools from Brown & Sharpe and Starrett tools from about 1900 appear in within. Ken Cope (his “Makers of American Tools) says that Fulton was a house brand of Montgomery & Co, itself located at 125 Fulton St, NYC.

The United Hardware & Tool Corp. (located at 74 Reade St., NY with branches in Boson and Chicago) 1925 catalog features 79 pages of Fulton branded (complete with steamship logo) tools, including the micrometer type seen below. All Fulton tools were unconditionally guaranteed by United Hardware to be free from defects.

The Fulton brand appears still later in 1930’s Sears catalogs.

Item #193
Fulton 0-1” micrometer with a ratchet, lock, and cool steamboat logo (FULTON name stamped over a steam-driven paddle wheel boat).

It is marked “No. 108 R” See the “Flechel & Brown” (Toledo, O.) for a micrometer probably made at the same factory.

$35 donation

Glastonbury Southern Gage

Item #194
Glastonbury Southern Gage (GSG) #16-1/2E surveillance master.

These are used to check micrometers from 0 to 6” sizes in ½” increments. New, they’re around $700. Excellent condition with cover and wood base. Start your own highly precise pyramid scheme.

$100 donation
Goodell-Pratt

Goodell-Pratt was formed when William Pratt bought control of Goodell Bros. in 1899. A victim of the depression, Goodell-Pratt was merged into the Millers Falls Company in 1931. William Pratt, the president of Goodell-Pratt at the time of the merger remained a member of the Millers Falls board of directors until his death in 1946. The Goodell-Pratt name remained on tools until at least part way through WWII; probably due to both the reputation of the Goodell Pratt name (Millers Falls was new to micrometers) and out of deference to board member William Pratt.

Here's the wording on a slip of paper enclosed with the WWII-era micrometers:

“To help meet the tremendous demand for Micrometers required for the Victory Program our entire production of Optical Micrometers has been concentrated on the No.112R and No. 20, one- to two- inch sizes. These Micrometers are the same as the Nos.112R and 20R described in our catalog with the following exceptions.

The lock nut and ratchet mechanism have been eliminated and the decimal equivalents are etched on the barrel instead of the frame. The savings in production costs are passed on to you while the increased production is part of our contribution to the War Effort.

The same high degree of accuracy, fine workmanship and finish for which Goodell-Pratt Precision tools have always been known are faithfully maintained.

GOODELL-PRATT COMPANY, Greenfield, Mass”

History of the company here: http://oldtoolheaven.com/related/goodell-pratt-history.htm

Item #195
Goodell-Pratt

0-1” micrometer. Rare early 1900’s style tool, distinguished by a unique spindle locking mechanism.

$35 donation

Item #196
Goodell-Pratt 0-1” micrometer with speeder, lock, all steel frame.

Decimal equivalents on the spindle. Marked with a T on the reverse side.

$25 donation
**Item #197**
Goodell-Pratt 1-2” micrometer, all steel finish, with plain frame, and the old style Goodell-Pratt spindle lock.

This might possibly be WWII production, saving the time of adding decimal equivalents. Very good condition.

Donation $25

**Item #198**
Goodell-Pratt 1-2” micrometer, all steel finish, with decimal equivalents on the frame, and the old style Goodell-Pratt spindle lock.

Apart from the decimal equivalents, identical to the micrometer above. Very good condition.

Donation $30

**Item #199**
Goodell-Pratt 0-3” interchangeable anvil micrometer, with one anvil.

This has owners’ markings (possible to polish out) and a loose lock. It would be useful, though, as a pair to the Goodell-Pratt 3-6” interchangeable anvil micrometer and its anvils (below); covering a range from 0-6 inches.

$12 donation
**Item #200**  
**Goodell-Pratt**

3-6” interchangeable anvil micrometer (comes with three different anvils to cover the 3-6” range). This is an early 1900’s style tool, distinguished by a unique spindle locking mechanism. While thoroughly usable and accurate, this is as much of a collector’s item. The company was formed when William Pratt bought control of Goodell Bros. in 1899 and was for years a maker to high quality tools. A victim of the depression, Goodell-Pratt was merged into the Millers Falls Company in 1931; though the Goodell-Pratt brand remained on tools for a decade or so after.

$85 donation

**Greenfield Tap & Die (GTD)**

was founded in 1912 and is now part of Kennametal. It did not make micrometers (though it did buy Wells Brothers, maker of a unique thread micrometer). That said, one of their gages is included to provide background for the Slocomb and Mitutoyo double spindle micrometers.

**Item #201**  
**GTD “Go/No-Go” gage.**

The anvils are adjusted to the high limit and low limit of a part; and were used for in-process gauging.

**HDT International**  
(Paramount, CA) is a supplier of Chinese-made gage blocks, micrometers, etc.

**Item #202**  
**HDT 0-1” indicating micrometer with a non-responsive comparator.**

The more pointed comparison is between this unit (about $160 new) and higher quality units (about $500 new). From the outside, this looks like an acceptable quality mic. From the inside?? Might be fun to try to repair – better entertainment than a reality show. More likely a cautionary tale.

$20 object lesson
Helios Messtechnik GmbH & co. KG

(Germany) was founded by Wilhelm Schneider in 1910 as a “factory for measuring instruments.” In 1920 Otto Kern joined the company and it was named “Schneider & Kern.” In 1973 it became a wholly subsidiary of Mayer & Cie and became known as Helios Messtechnik. It was later acquired by the Mahr Group of Goettingen, Germany in 2006. Overall a good quality maker. The friction thimble design of some of its micrometers is particularly effective.

**Item #203**
Helios 0-1” micrometer with satin chrome frame, ratchet, lock, and .0001” vernier.

Includes decimal equivalents on the thimble and a cardboard box. Excellent condition.

$30 donation

**Item #204**
Helios 0-1” micrometer with satin chrome frame, ratchet, lock, and .0001” vernier.

Includes decimal equivalents on the thimble, carbide anvils, thermal pads, and a Helios-marked fitted wood box. A step up in features from the other example. Excellent condition.

$40 donation

**Item #205**
Helios / Fowler 0-1” micrometer with satin chrome frame, friction thimble, lock, and .0001” vernier.

Complete with original brown soft case, mint condition, and a good match for the micrometer below.

$35 donation.

**Item #206**
Helios 1-2” micrometer, also marked with the Fowler (US distributor) logo.

Friction thimble, lock, carbide anvils, and .0001” vernier. All satin chrome with decimal equivalents on thermal pads affixed to the frame. Complete with original brown soft case. Mint condition.

$40 donation
Henry L. Hanson  
(Worcester, Mass); with once source indicating a 1937 trademark registration for the Ace brand. Better known as a maker of taps and dies sold through a variety of consumer-oriented hardware stores. Sears Roebuck sold a “Fulton” branded micrometer of identical design to Hanson’s mics.

**Item #207**

Ace 0-1” micrometer with aluminum die cast frame and friction/speeder.

Low cost mic sold non-professional channels.

$10 donation

**Item #208**

Ace 0-1” micrometer with a chrome plate over an aluminum die cast frame and a friction/speeder.

This one has decimal equivalents stamped into the thimble and would have been slightly costlier to make.

$12 donation

**H&Hip**

is a brand affixed to Chinese import tools; usually of fairly good manufacture.

**Item #209**

H&Hip 0-.5+” conventional micrometer

new in original packaging. A useful quality comparison to several decades of earlier small/inexpensive micrometers.

$15 Donation

**Item #210**

H&Hip 0-1/2” rapid acting (.050 per revolution) micrometer with speeder and large friction thimble that reads directly to .0005 in.

Surprisingly good micrometer for the price (another was disassembled to see). This opens and closes at twice the rate of a typical micrometer (while the Etalon MicroRapid is at four times the rate). New in box.

$45 donation
**Hilger & Watts**

**Item #210.1**

Hilger & Watts (England) clinometer

Able to read (through the tiny “telescope”) angles to about 5 second accuracy. The base can be leveled to zero by placing it on an extremely flat surface and adjusting the base knob until it reads zero when reversed exactly in place. Fairly hard to find – the only seller of one I could find wants $2100 for theirs.

$40 Donation

**Hommell Werke**

Hermann Hommel founded his workshop in 1876 and, according to one source, began making precision measuring tools in Idar-Oberstein by 1893. Along the way it made a number of incredible machines (e.g. [http://www.lathes.co.uk/hommel/](http://www.lathes.co.uk/hommel/)) and a number of micrometers. The company apparently liked a sort of mottled paint job unique to it – it appeared on machines (dating to the 1930’s) and many of its micrometers. The company was take over by Thyssen AG in 1990 and demerged in 1997 (management buy out). As of 2000 it became part of Jenoptik’s metrology business.

**Item #211**

Hommelwerke 0-1” mechanical digital micrometer with friction thimble/speeder.

An uncommon example in good working condition. Has a manufacturer’s engraving of 10705 on the reverse side of the thimble and a plaque proclaiming patents in Germany, the USA, Switzerland, France, and Italy. The wood case is embossed with the Hommell logo, but also has a Hartmetall (sintered carbide?) label.

$40 Donation

**Item #212**

Hommelwerke 0-1” mechanical digital micrometer with friction thimble/speeder.

A second example of an uncommon mic. Includes a lock and carbide anvils, with the paint in fairly good condition. A plaque on the reverse side proclaims patents in Germany, the USA, Switzerland, France, and Italy.

$40 donation
Item #213  
Hommelwerke 0-25mm micrometer.

Well made with a push button to lock the spindle, a large ratchet, and the usual mottled finish. The paint is mostly worn, the chrome and working parts are very good.

$30 donation

F. W. Horstmann Co.  
(Irvington, NJ) were makers of a patented (beginning in 1919 by Frederick W. Horstmann) indicating caliper.

Item #214  
F. W. Horstmann patent indicating caliper.

This would be set to the desired dimension, with the indicator reading .0001” divisions under and over. A forerunner of the indicating micrometer.

$45 donation

International Tool Co.  
(San Leandro, CA)

Item #215  
International Tool Co. inside micrometer set with measuring rods for 3” – 12” range.

Comes in a heavy black thermoplastic case, in good condition.

$35 donation
C. E. Johansson AB

(Eskilstuna, Sweden) was founded by Carl Edvard Johansson in 1911. Also known as CEJ. Prior to that time (1890’s) he invented and perfected the gage block (“Jo block”) system – a major breakthrough in precision measurement. The process of manufacture was a trade secret for many years. An American company (Poughkeepsie, NY) was formed around 1918 and later sold and moved to the Ford Motor Co. See also the Swedish Gage Co. entry. The Swedish company (CE Johansson AB) is now part of the metrology conglomerate, Hexagon Engineering.

Item #216
C. E. Johansson -- CEJ – 0-1” micrometer.

From the inventor of gage blocks. See, also, the entry for the Swedish Gage Co. The square frame allows deeper measurements on rectilinear parts near the full 1” size.

$25 donation

Item #217
C. E. Johansson 0-1” micrometer

#M 106 E with ratchet, lock, satin chrome, decimal equivalents, and blond (it is a Swede) wood case. Sold through Sears Roebuck of all folks, with circa 1958 paperwork.

$30 donation

Item #218
C. E. Johansson (CEJ) #117 disk micrometer with 0-20mm range.

The flat anvils extend the normal range of use to softer materials and some tight spaces. Includes friction thimble, lock, and original red/black molded case. Very good condition.

$45

Item #219
C. E. Johansson (CEJ) #103E micrometer 1-2” in original wood box.

Includes friction / speeder, lock, and decimal equivalents on the frame. Would pair nicely with a 0-1” CEJ mic.

$30 donation
Item #220  
C. E. Johansson wire micrometer #M92E with 0 - .5” capacity, .0001” vernier, friction thimble, and original wood case.

Meant for easily measuring wires, pins, etc. but will accommodate many other parts. Nicely made small micrometer in excellent condition.

$50 donation

Kalibr

(Moscow) is a large plant, founded in 1932, to make micrometers and other precision tools. The one example I have of an early micrometer looks to have largely borrowed a Starrett design. More recent examples (cold war era) have a heavy (heroic?!?) style.

Item #221  
Kalibr 0-25mm micrometer.

Perhaps from the 1930’s or 40’s when Stalin was consolidating power and establishing state industries? Of standard design; looking much like an early 1900’s Starrett design (the front lock etc.). Marked with what is likely a model number (1933r, with the r likely for the year of manufacture -- or possibly for ratchet) and a No. 21898. It is marked only with a K and a reversed N; which is KU in the Cyrillic alphabet. Nicely made; showing how the same basic design was duplicated by many manufacturers.” A different Kalibr logo is engraved on all other micrometers in this collection (which are also of much heavier construction); but the same KU logo is embossed in one wood box.

$45 donation.

Item #222  
Kalibr 0-25mm micrometer with satin chrome, lock, and ratchet.

Heavy duty! In wood box embossed with a KU (reversed N) logo.

$40 donation
Item #223
Kalibr 0-25mm black wrinkle frame micrometer with ratchet and lock.
Marked “USSR” and 1979r. Fitted plastic box. Mint condition.
$35 donation

Item #224
Kalibr 0-25mm gray painted frame micrometer with ratchet and lock.
$40 donation

Item #225
Kalibr (Russian) 0-25mm thread micrometer with 9 pairs of anvils in a fitted gray plastic case.
Includes friction “ratchet” and lock. A Cyrillic inscription on the thimble and case, but otherwise excellent. The anvils will fit many other thread mics, including a slightly loose (by maybe .01mm) fit to Mitutoyo. A very good quality Cold War era thread mic, at a fraction of replacement cost.
$95 donation

Item #226
Kalibr 0-100 mm depth micrometer, reading in .01mm, with four rods and both calibration standards.
The usual robust Russian construction, from the depths of the Cold War. Near new condition. If you don’t want to measure (which it’s fully qualified to do), affix your commissar’s rubber stamp to the bottom in a warning, address, or ?? message of your choice.
$50 donation
**Item #227**  
**Kalibr (USSR)**

A robust set of four Cold-War era Russian metric micrometers. While of heavier construction than most of their worldwide counterparts (companies like Starrett asked that customers pay extra for the heavy frames), these are nicely made with carbide anvils, a large (easy to read) thimble, locks, and a good ratchet. Keep a set in your bomb shelter, to help restart civilization as we know it?

$180 donation for the set

**Keilpart**
(Germany) is the predecessor company of Feinmess Suhl. Here's one of their micrometers and its case:

**Item #228**  
**Keilpart micrometer and case**

Unknown origin

not part of the collection

**K. K. System**
(Germany) – a maker of watchmaker’s gages.

**Item #229**  
**K.K. System 0-8mm wire micrometer.**

Overall cylinder-like form designed so it is easy to lay a wire or pin between the anvils.

$30 donation
Kukenis

– likely a highly skilled toolmaker, but possibly part of a short run.

**Item #230**

*Kukenis 0-1” thread micrometer?*

This is a beautifully made micrometer, using a mid 20th century Brown & Sharpe spindle for its thread. The knife-edge anvils were likely for measuring threads. A testament to machining skills and the notion of making one's own tools.

$55 donation

Kroeplin GmbH

(Germany) was founded by Henrich Carl Kroeplin (a master watchmaker) in 1883. The company now makes a series of quick reading gages, including the “Quicktest.” The Dyer Company (Lancaster, PA) is one of their US distributors.

**Item #231**

*Dyer/Kroeplin Schnelltaster (!) 0-1” by .0025. T*

This is a quick reading instrument with a deep (16”) throat for getting to various points inside large sheets. While used in industry, it is prized by musical instrument makers and others who need to know the thickness of wood sounding boards and the like. The wooden case bears Dyer's model #334-005.

$135 donation
Item #232
Dyer/Kroeplin deep reach (over 6” x 6”) gage with dial thickness readings 0 to .4” by .001.

This type of gage is suited to situations where a thickness must be measured over an obstruction, such as a flange. It is also used by stringed instrument makers to measure through the center hole. The long spindle is removable with just a twist to better access the measuring point. Comes in a large wood Dyer case marked Model #363-000 (US 066K) with a Kroeplin-made Quicktest indicating mechanism. Like new except for quality control number; which a quick blast of black wrinkle spray paint could deal with. Be the first kid on your block to have one of these – or better yet find a grateful guitar maker.

$120 donation

L.. is a USSR maker. The logo (three Cyrillic letters within a diamond) would sound somewhat like el ee eh when pronounced (based on my dim recollection of high school Russian).

Item #233
L.. 0-25mm indicating micrometer with push button anvil release; reading to 2 micrometers.

Precise micrometer in excellent condition. Includes original case and adjustment spanner. I don’t know the history of the maker, but the longer inscription on the comparator dial translates to “Made in the USSR.”

$120 donation
Item #234
?? Russian-made

50-75mm indicating micrometer. Similar to the above indicator micrometer, but with the anvil release repositioned. Same adjustment wrench, dial, etc. Includes a still-wrapped 50mm standard. Excellent condition, with the exception that the foam was removed from the case. Like Mitutoyo, the Russians were a victim of foam rot. Left alone, the foam gradually turns to a corrosive goo. Caught this one in time; other than the case interior it’s near new.

The graphic logotype in the center of the comparator shows two errors “measuring” a Mobius strip looking bit. The case is marked (in Cyrillic) “Micrometer Model 02202.”

$120 donation

Chas. Lowinson
(NYC) was the sole agent of a thread count micrometer manufactured by the Chronik Brothers, also of NY. Earlier versions of this were patented by A. Chronik on Oct. 20, 1908 and Sept. 20, 1910 (Pat.#970,795) and remain essentially in its original form (despite a “refresh” of the patent in 1929).

Item #235
Lowinson thread count micrometer.

You know those sheets or garments that claim 400 threads per inch? This instrument, somewhat tediously, tells the true story. This is engraved with a later patent number (#1740970) dating from Dec. 24, 1929. Near mint condition in case, with paperwork.

$70 donation
The Lufkin Rule Co.

The Lufkin Rule Co. (Cleveland, Ohio and later the Small Tools Division, Saginaw, Mich.) was founded by Edward Taylor Lufkin in 1869. Lufkin, born Feb. 1948, enlisted at the age of 16 (Mar. 1864) with the Ohio Volunteers in the Civil War.

Shortly after serving in the war, he founded the E.T. Lufkin Board and Log Rule Manufacturing Co. at age 21. About fifteen years later, between 1883-1885, investors bought out his interests and named it The Lufkin Rule Co. Around 1890 the company introduced the first flexible steel tape to the US.

The company began manufacturing micrometers and other precision hand tools beginning in 1919. My earliest Lufkin Small Tools catalog (#2) shows seven pages of similar-looking all steel micrometers with an August 1, 1922 patent date. Many later Lufkin micrometers are marked with patent numbers #1,568,296, issued January 5, 1926; #1,940,475, issued in 1933; and #2,212,910, issued in 1940. The 1926 patent is for a roller type spindle lock and the 1933 and 1940 patents both relate to means of adjustment.

The depression years were difficult for Lufkin, while business for precision tools rebounded during World War II.

Precision small tool manufacturing was discontinued by Lufkin in 1966. The business was bought in November 1966 and briefly run by the Pratt & Whitney Machine Tools Div. (Hartford, Conn.) of Colt Industries. Both Lufkin and Pratt & Whitney struggled for distribution in a market dominated by Brown & Sharpe and Starrett. Lufkin itself (measuring tapes, etc.) was bought by Cooper Industries in 1967.

The older Lufkin micrometers, with the smaller diameter thimbles, have a similar feel to the very common Starrett 436 series. Lufkin’s micrometers from later years, with the larger satin-chrome thimbles, are among my favorites and several examples have been acquired. Despite being discontinued 40 years ago, these have excellent quality and feel.

Item #236

No. 9A Lufkin height gage attachment in original cardboard box and No. 680B Lufkin inside micrometer set in original fitted wood case.

The inside micrometer set measures from 1.5 to 12” and includes a handle for ease of handling in deeper spaces. The #9A attachment converts the inside micrometer set to a height gage. Note the subtle colors from hardening and tempering this gage. Very good condition on both.

$75 donation for the pair of #9A and #680B
**Item #237**
No. 111 Lufkin “Millmens” 0-1” micrometer with original vinyl pouch, cardboard box and paperwork.

Heavy satin chrome frame with decimal equivalents on the front and 1940 patent number on back. This micrometer was designed to handle rough use in a steel mill; but looks to have had a relatively easy life.

$30 donation

**Item #238**
No. 111 Lufkin “Millmens” 0-1” micrometer with original cardboard box and paperwork.

Heavy satin chrome frame with decimal equivalents on the front and 1940 patent number on back. This micrometer was designed to handle rough use in a steel mill; but looks to be unused.

$40 donation

**Item #239**
No. 121 H Lufkin heavy steel mill micrometer with a large thumb lock, provision for a handle at the base of the frame, and large numbers for reading at a distance.

Meant for measuring even if it was hot steel coming off a line. Fine for plain cool measurements as well. This one is in used condition, with no extraneous engravings.

$40 donation

**Item #240**
No. 121 H Lufkin heavy steel mill micrometer with a large thumb lock, provision for a handle at the base of the frame, and large numbers for reading at a distance.

Meant for measuring even if it was hot steel coming off a line. Fine for plain cool measurements as well. This one is in very good condition.

$55 donation
**Item #241**  
No. 822 H Lufkin 1-2” mill micrometer.

This is an earlier version of the Millmens micrometer with the provision for a handle and large numbers; but a smaller diameter spindle and Lufkin’s regular painted frame (with ribs) at the time. Includes Lufkin’s 1940 patent number and looks to have seen a lot of use. Handle is not original.

$25 donation

**Item #242**  
No. 901A Lufkin Master Planer Gage with all its accessories in an original fitted wood case.

Carries patent #2694861. The gage can be used in any position and has a range from about 0” on the zig zag scriber to about 10” using the various adapters and the tall size up. Planer gages are used to set precise heights; originally for metal planers and shapers but now for a variety of purposes. Every major precision tool maker carried these, often in two levels of quality (this is the wider, higher quality unit that is directly comparable to Starrett #995). I picked Lufkin (among B&S, Helios, Starrett, and others) to join COFES, just for a bit of Lufkin nostalgia. Precisely made tool in excellent condition.

$100 donation

**Item #243**  
No 1610M Lufkin Rule Co. 0-13mm micrometer in all satin chrome with a ratchet and 1940 patent number on back side.

Near mint condition micrometer in a small size.

$45 donation
Item #244
No. 1621 Lufkin 0-1” all satin chrome micrometer in older style (smaller diameter thimble) with 1940 patent number on back.

Includes a knurled roll type lock and decimal equivalents. Excellent condition in original cardboard box.

$30 donation

Item #245
No. 1641 Lufkin Rule Co. 0-1” micrometer with an Aug. 1, 1922 patent date on the back.

Includes ratchet, lock, and decimal equivalents stamped into the frame. These sold for $10 in the mid 20’s – about $108 today. Nice shape.

$30 donation

Item #246
No. 1641 Lufkin Rule Co. 0-1” micrometer with an Aug. 1, 1922 patent date on the back.

Includes ratchet, lock, and decimal equivalents stamped into the frame – identical to the micrometer above, with a rougher action to the ratchet.

$25 donation

Item #247
No 1641 Lufkin 0-1” micrometer with all satin frame and newer style (larger) thimble with ratchet at end.

Includes lever lock, decimal equivalents, and a black Lufkin case. Very good condition, with Lufkin’s 1940 patent number engraved on thimble.

$35 donation
**Item #248**  
No. 1641V Lufkin 0-1” micrometer with all satin frame; similar to above but with a roller lock rather than lever lock; the addition of a .0001 vernier; and the 1940 patent number is located on the end of the thimble.

Has decimal equivalents and the large ratchet on the end of the thimble. Very good condition in original cardboard box with paperwork and spanner. Likely mid 1950's build date.

$40 donation

**Item #249**  
No. CT1641 Lufkin 0-1” micrometer.

Mint condition in original vinyl pouch and cardboard box. All satin chrome, ratchet at end of thimble, carbide tips, and decimal equivalents. Beautiful micrometer.

$45 donation

**Item #250**  
No CT1642V Lufkin 1-2” micrometer.

A series mate to the Lufkin CT1641 micrometer, but with a .0001” vernier and in average rather than mint condition. No non-original markings. Includes a black Lufkin case.

$20 donation

**Item #251**  
No. CT1641V Lufkin micrometer.

As above, with the addition of vernier markings. Slight signs of use. Nice mic.

$40 donation
**Item #252**  
No. 1661V CT 0-1” and No. 1662 1-2” Lufkin micrometers sold as a set.

These are mint condition micrometers with dull chrome finishes all over, lever locks, friction thimbles with a fixed portion at the end, and decimal equivalents stamped into the frames. The 0-1” is in its original cardboard box and has carbide anvils and a .0001” vernier. The 1-2” is in its black leatherette box and includes a Lufkin Rule Co. standard (1” diameter). Really nice pair.

$100 donation for the pair

**Item #253**  
No. 1661V 0-1” and No. 1962V 1-2” Lufkin micrometers sold as a set.

These are in near mint condition in original cardboard boxes. Both have satin chrome friction thimbles with a fixed portion at the end, lever locks, and a 1940 patent number marked on the thimble. The 0-1” is all-satin chrome with decimal equivalents. The 1-2” has a black wrinkle finish frame.

$90 donation for the pair

**Item #254**  
No. CT1661V Pratt & Whitney 0-1” micrometer with .0001 inch vernier (the “V” in the model) and carbide tipped (the “CT”).

Satin chrome with friction thimble and decimal equivalents. Identical the Lufkin #1661V micrometers of later vintage. This one has a previous owner’s markings lightly affixed. Good working condition.

$15 donation
**Item #255**
No. 1811 Lufkin Rule Co. 0-1” micrometer with satin chrome thimble and green wrinkle finish frame with stiffening ribs.

1940 patent number. Excellent condition with original box and paperwork. This looks to have been sitting in its box for most of 50-70 years; with a slightly stiff thimble from congealed oil – easily replaced.  

$30 donation

**Item #256**
Nos. 1841 (0-1”), 1822 (1-2”), and 1823 (2-3”) Lufkin Rule Co. micrometers.

These are all of the same design, with steel thimbles, roller type locks, painted frames with the older style ribs, and 1922 and 1926 patent dates stamped on the back. A set of three earlier Lufkin micrometers. In good condition for their age, and still accurate.  

$85 donation

**Item #257**
Nos. 1822 (1-2”) and 1823 (2-3”) Lufkin Rule Co. micrometers.

Similar to the above #1822 and #1823 micrometers but with a more recent satin chromed thimble and a 1940 patent number stamped on the back. Paint wear, but otherwise good condition.  

$50 donation

**Item #258**
No. 1911 Lufkin 0-1” micrometer with satin chrome thimble and dark green frame.

Has 1933 and 1940 patent numbers on the back. Good condition, with minor paint wear, in Lufkin black velvet-lined case.  

$30 donation
Item #259
No. 1911 Lufkin 0-1” micrometer with 1940 patent number noted on the larger (newer) style satin chrome thimble.
Black wrinkle frame; good condition.
$20 donation

Item #260
No. 1911C Lufkin Rule Co. 0-1” point micrometer for use as a thread comparator and reaching into grooves and other tight spaces.
Marked with 1933 and 1940 patent numbers on the back.
$25 donation

Item #261
No. 1913 (2-3”) and No. 1914 (3-4”) Lufkin Rule Co. micrometers.
Plain steel thimbles, painted frames, with 1933 and 1940 patent numbers stamped on the back. Back side raised pad on each has a tracking number, otherwise good. Possibly a good way to extend a 0-2” set.
$40 donation

Item #262
No. 1941 Lufkin Rule Co. 0-1” micrometer with older style (smaller diameter) thimble in original wood box.
Steel finish thimble, conventional ratchet, roller lock, and enameled frame. Includes 1926, 1933, and 1940 patent numbers. Very good condition.
$35 donation
Item #263
Nos. 1941 (0-1”) and 1942 (1-2”) Lufkin micrometers with steel thimbles, ratchets, and roller type locks.

Rounded style painted frames. The 0-1” has 1926, 1933, and 1940 patent numbers stamped, plus a repainted frame. The 1-2” has the same design but earlier manufacture, with 1922, 1926, and 1933 patent numbers.

$35 donation

Item #264
No. 1941 Lufkin 0-1” micrometer with large ratchet at end of satin chrome thimble.

Includes lever lock and black wrinkle frame. Includes original wood box (marked) with a near mint mic inside.

$35 donation

Item #265
Nos. 1941 (0-1”) and 1942 (1-2”) Lufkin micrometers with large satin chrome thimbles (desirable newer style) and wrinkle black frames.

Both include a large diameter ratchet at the end of the thimble and a lever lock. Very good condition.

$85 donation

Item #266
Nos. 1942 (1-2”) and 1943 (2-3”) Lufkin Rule Co. micrometers.

Steel finish thimbles with roller locks and conventional painted frames with 1933 and 1940 patent numbers stamped on the rear pad. Some signs of wear, but no markings and overall good condition. Add a 0-1” mic to complete a small set?

$45 donation
**Item #267**
No. 1961 Lufkin 0-1” micrometer in worn condition.

Similar micrometer as the Pratt & Whitney model No. 1961 below; but this one has a roller type lock and has seen significant use.

$10 donation

**Item #268**
Lufkin 0-4” interchangeable anvil micrometer set,

complete and near mint condition in a wood case. Patent number 2,212,910; which was issued in 1940. Likely of WWII or slightly later manufacture.

$75 donation

**Item #269**
No. 2630 Lufkin 0-1/2” ball anvil micrometer in all chrome with decimal equivalents and 1940 patent number on back side.

Cut-away frame allows tubing measurements. No non-original markings, but mic needs calibration and chrome is worn.

$15 donation

**LX**
is the sole marking on speed indicators made by Manufacturer’s Belt Hook Co. of Chicago, Illinois; beginning around 1920.

**Item #270**

$10 donation
Mahr
(Carl Mahr, Esslingen, Germany). Founded in 1861 and one of the world’s finest makers of precision tools. The Mahr Group is still focused on metrology, with main locations in Germany (Gottingen, Esslingen, and Jena), the Czech Republic (Probostov), the US (with Mahr/Federal in Providence, RI), and China (Souzhou). The US operations are known as Mahr Federal. Mahr also acquired SIP and Helios Messtechnik (in 2006). The company’s analog micrometers are beautifully made and they are also known for indicating micrometers using their own high precision indicators (Millimess, etc.). The merger with Federal Products in 1999 added to its presence in the US. In general, the current line of micrometers is priced at the very top range; somewhat limiting sales.

Item #271
Mahr 0-25mm micrometer with extra large (easy read) thimble, satin chrome, a ratchet, lock, and fitted wood case.

Excellent micrometer in like new condition. This is a $300+ micrometer priced new (measurementdepot.com).

$80 donation

Item #272
Mahr 0-20mm disc micrometer with satin chrome, ratchet, lock, and fitted wood case.

The large flat anvils are handy for soft materials and reaching such details as gear teeth. A very well made micrometer, with a company marking (Design Insight) and another below that. This is a $400+ micrometer (measurementdepo.com) if bought new.

$70 donation

Item #273
Mahr 0-1” indicating micrometer #40SF with a .0001” indicator, anvil release, and fitted wood case.

The indicator can probably be interpolated to 50 millionths. Older style micrometer with signs of some wear, but fully operational. The pushbutton retracts the anvil for repeat measurements. Probably a $1000 micrometer if still made. Would look and work great if paired to a micrometer stand and the bit of chipped black paint touched up.

$70 donation
Item #274
Mahr 0-1” bench micrometer with Millimess fully jeweled dial comparator and fitted wood case.

Extra large thimble. Very good cosmetic condition, and in need of calibration. Has adjustable platform and small diameter anvils for measuring small parts. Additional types of anvils are available from Mahr.

$125 donation

Item #275
Mahr 0-1” and 0-25mm thread micrometers (two fitted wooden boxes).

These are being grouped together because the thread measuring anvils can be shared between both mics (use the Mitutoyo thread anvils as a guide to US and metric equivalents – basically the larger the thread pitch the large the “point” and “V” pair). Both mics are in excellent condition and cost a bit over $500 each new ($1000 total).

$110 donation for the pair

Item #276
Mahr 0-1” indicating micrometer of exceptional accuracy.

This comes with a Supramess comparator graduated in 20 millionths of an inch, an anvil release, and a lock; all in the original black fitted wooden case. The comparator has a small knurled knob which is used to adjust the comparator to zero. This is in excellent cosmetic and operating condition – and was very costly when still manufactured. Note: should the indicator become slightly sticky through storage, it can likely be restored by pressing the anvil release a few times. It works fine at the present writing.

$160 donation.
Item #277
Mahr 2-4” indicating micrometer with Millimess .00005” fully jeweled dial comparator.

Used but fully operational. Lightly marked “SPECO #3” by the original owner. The anvil adjusts to cover 2-3” or 3-4” and can also be retracted (lever arm) for ease of measurement. A new Millimess dial comparator, alone, is about $200.

$60 donation

C & E Marshall Co.

Item #278
Watch-Craft 0-15mm bench micrometer made by C & E Marshall Co.

Nice mic with an adjustable parts platform and a friction thimble reading directly in .01mm. Calibration is through loosening the screw at the end of the thimble.

$60 donation

Louis Marx and Company

(New York City) was founded in 1919 and made die cast and other toys until 1978. The company was wildly successful, even through the Depression, up through 50’s – when it was the largest toy company in the world.

Item #279
Marx toy micrometer #1  0 - .5” Marx toy micrometer #2  0 - .5”

There’s something to be said for a culture where miniature tools – including micrometers – are kids toys. Today the toys are sought by collectors.

$12 donation each
Massachusetts Tool Co.
The company was an early (now antique) offshoot of Goodell-Pratt.

**Item #280**
Massachusetts Tool Co. (Greenfield, Mass.)
0-1” micrometer with a patent date of Feb. 20, 1884 and 0-3” interchangeable anvil micrometer,

likely dating from 1910 to the 1920’s but having the same general design as the 1884 patent.

The same design micrometers, including the same gently curved spindle and the unique locking mechanism (cool), were later sold under the Goodell-Pratt name (see the Goodell-Pratt 6” interchangeable anvil micrometer for comparison). This interchangeable anvil mic comes with only one anvil, for the 1-2” size. I’ve included a standard, and it is spot on.

$80 donation (two micrometers)

**Massi**

**Item #281**
Massi 0-20mm micrometer stamped “Gehärtet” (German for “hardened”) on the frame along with the Massi logo.

This mimics an older exposed thread style micrometer. However, that type was frequently exported in the 50’s and later as a low cost option to sell into watchmaking etc. channels. This is a bit better made than some of those; but almost surely of that genre. Looks to be reasonably accurate.

$25 donation
Mauser Werke

Yep, same as the famed German arms manufacturer, beginning around 1870. It's not entirely clear (to me) when micrometer production began. Some suggest this was just after WWI as the company dealt restrictions on arms manufacture and aimed to diversify amidst economic challenges. Others point to a period of time around (just before, during, or after) WWII. Today, Mauser tools end up being collected by both precision tool and arms enthusiasts. As far as I can tell Mauser’s precision tools business was first sold to Roch and eventually Hexagon. The Mauser micrometer designs, while beautifully executed, haven't shown up under other brand names to the best of my knowledge.

Item #282
Mauser 0-25mm micrometer

with an unusual collar fixed around the thimble. Probably the earliest of all the Mauser mics on display.

$30 donation

Item #283
Mauser 0-25mm micrometer with robust wrinkle black frame, lock, and ratchet.

Nicely made, with no particularly unique features. The Mauser logo cast in relief into the frame is a nice touch. This appears to be an earlier micrometer.

$50 donation

Item #284
Mauser 0-25mm micrometer, green enamel, with lock and ratchet.

Beautifully made. Almost surely post 1950 and perhaps even as late as 1980's.

$50 donation
**Item #285**
Mauser 0-25mm bench micrometer, fitted with a .001mm reading dial indicator.

This has the same mechanical digital mechanism as the 1-2” Mauser example, but with no need of a friction thimble. Measurement pressure is controlled by a spring mechanism in the anvil. Bench micrometers are meant for precision measurements and comparison – typically an order of magnitude finer than hand held micrometers. These has an adjustable platform to hold parts between the anvils, a retracting anvil, and an indicator. The part is measured until “0” appears. Repetitive measurements and use the plus/minus .001mm indications on the dial.

It isn’t clear what brand comparator was originally fitted to this micrometer; likely Swiss or German rather Mitutoyo. However the high precision indicator included is alone worth $200 (.001mm = .0000394”). You might also consider acquiring the other Mauser mechanical digital indicator along with this (or at least take a picture), to better prove its Mauser provenance.

$190 donation

**Item #286**
Mauser 1-2” mechanical digital micrometer.

Probably uneconomical to produce, but a fine example of German engineering. Compare the (near identical) mechanical digital thimble with the Mauser 0-25mm bench micrometer also on view. This same mechanical digital mechanism has also appeared on micrometers under the German “MZB” brand.

$70 donation

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**MG**

--see Central Tool Company
Millers Falls Co.

Miller Falls Co. (Greenfield, Mass) was a long-time supplier of tools, founded in 1868. In 1931, near the beginning of the depression, it acquired the Goodell-Pratt Co. including its lines of precision tools, and its large Greenfield, Mass plant – where Millers Falls subsequently moved its headquarters. The Goodell-Pratt name and their designs remained on many Millers Falls tools for a decade or so more. Indeed, the Millers Falls micrometers were likely made on the same Goodell-Pratt equipment and with many of the same employees for a period of time.

During WWII, shortages of material and manpower forced the suspension of some tools. However, micrometers were in demand and a slightly labor-reduced version but of equal measuring accuracy was made during this period.

Here’s an example of the model made during WWII.

Item #287
Millers Falls 0-1” micrometer in wood box with a lock and their unique speeder and ratchet.

Satin chrome, .0001 reading, and very nice condition.

$35 donation

Item #288
Millers Falls company merger pack, consisting of two essentially identical 0-1” micrometers in fitted leatherette cases.

The first example came with a Goodell-Pratt case and a Goodell-Pratt micrometer that could date from either before or a bit after the merger with Millers Falls. The second example came to me with a Millers Falls cardboard box, a Goodell-Pratt case, and a Millers Falls mic within. Apparently they had a stock of the Goodell-Pratt cases. Both mics in nice condition, with decimal equivalents on the thimble.

$60 donation

Note the lack of a lock and decimal equivalents:

Millers Falls also acquired the Union Tool Co. in 1957. For more history: http://www.oldtoolheaven.com/history/history10.htm

One Millers Falls micrometer design of ergonomic note includes a small (and thus fast) knurled speeder on the end of the thimble with a ratchet wheel just inside it. This was a convenient arrangement and makes the old mics still nice to use if they are in good condition. This design is, I think, one of those that make an ideal gift to a mechanically inclined student. It’s good enough to be useful day in and out. Given that most of these micrometers were “born” about the same time as baby boomers (e.g. 60 years ago give or take), it can also start a discussion that ranges widely.
Item #289
Millers Falls No. 701R micrometer 0-1” with speeder, lock, 0001” vernier, and black frame.
Nice mic complete with a wood case.
$30 donation

Item #290
Millers Falls No. 112R micrometer 0-1” with speeder, ratchet, lock, decimal equivalents and the original wood box.
Nice mic for an aspiring engineer willing to take care of it.
$35 donation

Item #291
Matched pair of Millers Falls No. 112R and 20R micrometers 0-1” and 1-2” with speeders, ratchets, locks, and decimal equivalents.
Great set covering the most commonly measured range.
$55 donation

Item #292
Millers Falls 20R micrometer 1-2” with decimal equivalents on the thimble.
Average condition; showing some signs of wear from use.
$20 donation.
Mitutoyo

(Tokyo) was founded by Yehan Numata in 1934. The first commercially available micrometer was produced in 1937. As with English and German makers, demand for micrometers increased along with production for WWII. Mitutoyo’s Kamata factory was burned to the ground during the war, but production of micrometers restarted in 1947 with full production in 1949. Perhaps aided by a fresh start, Mitutoyo has gone on to become one of the world’s great full-line precision instrument manufacturers. In many ways, it now out competes such century-and-a-half old stalwarts as B&S and Starrett in hand instruments.

Item #293
Mitutoyo > Poland two pack.

A typical Mitutoyo 0-1” micrometer and its Polish 0-1” counterpart, as Poland liberalized and emerged as an export manufacturer in the 80’s. Note the similar hammertone painted frame style, lock, carbide anvils, graduations, and friction thimble. Not an exact copy, but a clear emulation. Both mics are excellent for use, both with verniers and all the usual features. The nod goes to Mitutoyo for quality, but the Polish mics are still quite accurate. See also “VIS” – the same Polish micrometer with a brand name affixed.

$45 donation

Item #294
Mitutoyo #102-121 (0-1”) and #102-122 (1-2”) micrometers.

Mitutoyo quality is world class and these are higher end examples, with a carbide anvils, sturdy chrome finish, thermal pads, ratchet, lock, and .0001 vernier. The 0-1” is like new, the 1-2” has had some wear, mostly to the case and pads. Very nice set for decades of use. Current price (they are a contemporary design) for these would be about $250 for the pair.

$115 donation
Item #295
Mitutoyo #106-102 0-1” mint condition in wood case.

Mitutoyo is one of the world’s finest makers of precision tools and Japan’s leading company in this field. This particular model has several unique features. First, it has a non-rotating spindle. This has the advantage of not placing any torque on the material to be measured and also of reducing wear on the anvils. Second, it is very easy to read, with a large thimble, large graduations, every thousandth numbered, an easy to read vernier. Third, it has outstanding ergonomics (similar to the Etalon Microrapid, but without the fast feeding screw) with a right-sized speeder and an excellent friction thimble. Fourth, it has an outstanding “feel” comparable to the very best models. I’ve acquired every good condition example of this uncommon micrometer I could find; at the time thinking they would be the perfect “congratulations” for outstanding technology students. These are still available new, around $290.

$120 donation

Item #296
#106-102 0-1” micrometer

in near mint condition in wood case.

$110 donation

Item #297
#106-102 0-1” micrometer

very good condition, no case (blue bag) with slight wear to front plastic pad.

$95 donation
**Item #298**  
#106-102  0-1” micrometer  
very good condition, no case, with new thermal pads  

$95 donation

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**Item #299**  
Mitutoyo 0-1” and 1-2” micrometers; both .0001 reading with carbide anvils, ratchets and locks.  
The 0-1” is all satin chrome with a plain yellow sticker on the back; model 101-113 in original plastic case and paperwork. The 1-2” is model 103-262 with a green hammertone frame.  

$50 donation for 2 mics

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**Item #300**  
Mitutoyo 0-1” model #293-721 electronic digital micrometer in new condition with box, original paperwork, etc.  
Battery is included but not installed. Instantly choose between English and metric units, set a new zero point, hold a measure, etc. Also includes an SPC (statistical process control) output port. This connects to external readouts. Mitutoyo is generally considered to make the best electronic micrometers and calipers -- and this is a good example. Chinese clones have appeared of this mic, but their quality level is much lower (e.g. the circuit boards are sloppy in comparison) and their batteries run down much faster.  

$110 donation
Item #301
Mitutoyo 1-2” model #293-722 electronic digital micrometer in excellent condition; and a good mate to the micrometer above.

Has the box, measuring standard, etc. A battery is included but not installed. Instantly choose between English and metric units, set a new zero point, hold a measure, etc. Also includes an SPC (statistical process control) output port. This connects to external readouts. A good pair to model #293-721.

$100 donation; $195 paired with 0-1” above.

Item #302
Mitutoyo 0-1” micrometer with all satin chrome frame, carbide anvils, friction ratchet, lock, decimal equivalents, and .0001” vernier.

Nice mic in very good condition (no markings, accurate).

$35 donation

Item #303
Mitutoyo 0-1” micrometer #103-135 with green hammertone frame, friction thimble, lock, and .0001 reading vernier.

Mitutoyo is one of the few manufacturers making the same model micrometer in different factories; and this one is made in Brazil. Mic has a QC control numbers obscured. It looks pretty good and is in accurate operating condition.

$20 donation

Item #304
Mitutoyo 0-1” micrometer #103-135 with green hammertone frame, friction thimble, lock, and .0001 reading vernier.

Same design and model number as above, but made in Japan rather than Brazil. Unmarked condition with slight wear on the rear plastic pad.

$25 donation
**Item #305**  
**Mitutoyo 0-25mm mechanical digital micrometer #193-111.**  
Near new condition with no signs of wear to the pads, etc. Includes ratchet, lock, and .001mm vernier. New price on these, for a slightly cost-reduced version, is $142 (Amazon.com).

$50 donation

**Item #306**  
**Mitutoyo 25-50mm mechanical digital micrometer #193-102.**  
Near new condition with no signs of wear to the pads, etc. Includes ratchet and lock. This would be a great pair with the corresponding Mitutoyo 0-25mm mechanical digital mic (#193-111) above.

$50 donation

**Item #307**  
**Mitutoyo 25-50mm micrometer #101-116.**  
This is new old stock, with the mic still sealed in its original plastic bag. Includes an all satin chrome frame, the older style stamped steel lock (not plastic), a friction thimble, and standard. New cost about $110 (and this example is new, complete with case).

$40 donation

**Item #308**  
**Mitutoyo #143-121 with extended caliper-type anvils meant to reach into tight places.**  
Works fine for regular measurements as well. Green hammertone frame, a ratchet, and .001” reading. Mitutoyo is the only modern manufacturer (AFAIK) to make such a micrometer. Still in current production, at around $310 (Amazon discount price). This one is in very good condition, with slight signs of wear on the rear pad (where it rests).

$95 donation
**Item #309**  
*Mitutoyo #143-121 and #143-122 micrometers with extended caliper-type anvils meant to reach into grooves and tight places.*

Works fine for regular measurements as well. Green hammertone frame, a ratchet, lock, and .001” reading. Includes both 0-1” and 1-2” sizes. Mitutoyo is the only modern manufacturer (AFAIK) to make such a micrometer. Still in current production, at about $650 for the pair. These are in excellent condition.

$195 donation for the pair

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**Item #310**  
*Mitutoyo #112-177 point micrometer (sharp 15 degree points) in excellent condition with case.*

These are meant for reaching even smaller features than can be reached with blade and caliper type micrometers. Know someone whose life’s a pit? Measure the precise depths of their despair. A bit over $165 new.

$65 donation

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**Item #311**  
*Mitutoyo #112-237 point micrometer (sharp 30 degree carbide points).*

This is similar to the model #112-177, but with carbide tips and a 30o rather than 15o point. These are meant for reaching small features such as grooves and the web thickness of drills. This one is in very good shape, no extra markings, but a couple of paint dings etc. from light use. About $170 new.

$60 donation
**Item #312**  
Mitutoyo #227-101 low pressure 0-25mm micrometer.

The low anvil pressure device and readout allow accurate measurements in soft materials. Yet another unique method of controlling pressure for accuracy. This has a friction thimble. Mint condition in original case and cardboard sleeve.

$90 donation

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**Item #313**  
Mitutoyo 0-25mm double-headed micrometer #113-102 in near new condition.

This is what happens when micrometers have Siamese twins. The idea is that one spindle can be set to the high tolerance and the other to the low tolerance to create an instant “go, no-go” gage. Slocomb pioneered this and is the only other company I’ve seen to make one. Light blue hammertone frame, with carbide anvils and two locks. It will work fine for regular measurements as well. Keep it around and tell people you always want a second opinion. Still available; a bit over $200.

$90 donation

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**Item #314**  
Mitutoyo Model No. 510-101 0-25mm indicating micrometer in mint condition.

Includes a .001mm comparator, anvil release, and lock. Light blue hammertone frame finish. Eminently accurate and useful. Kinda cool. Support the MKS system of units!

$100 donation
Montgomery Ward

Item #315

Montgomery Ward Powr-Kraft inside micrometer set with a 1.5” to 8” range -- made for them by the Central Tool Co. around 1966.

Satin chrome, in good condition in its original black case and instruction slip.

$40 donation

Moore & Wright

Moore & Wright (Sheffield etc., England) was founded in 1906 by Frank Moore. Over the years it became a full range and world-class supplier much like B&S and Starrett in the US and Mitutoyo in Japan. Indeed, there is so much competitive give and take among leading suppliers that many examples of tools look to be copied back and forth; and sometimes manufactured for each other. For example, the 1970 M&W catalog (printed before any mention of the Neill acquisition) shows mechanical digital mechanisms the same as used in Brown & Sharpe and likely sourced from Switzerland. Other designs closely copy Mitutoyo (enamel frame mics) and Starrett (mics with decimal equivalents on the thimble).

The peak of production may have been WWII. Ownership passed from Frank Moore to his daughter. She, in turn, sold it to the John Shaw Co. in 1945. Shaw embarked on making M&W a full range supplier. The company was acquired by the Neill Tools Group in 1970 (Shardlow was another Neill acquisition). To its credit, the company went on the create the world’s first hand-held digital micrometer (the Micro 2000), for which it received the Queens Award for Technological Achievement in 1977.

M&W is now part of the Bowers Metrology Group, with factories in the UK and China. It appears that many recent micrometers (2009 catalog) are sourced from China. All in all, another chapter in the consolidation of precision tools manufacture.

I addition to generally high quality for most of its years, one neat feature of the M&W outside mics is a pointer tally, useful in repetitive measurement comparisons.

Item #316

Moore & Wright #961BY all satin chrome 0-1” mic

with friction thimble, pointer tally, lock, and decimal equivalents. Old eyeglass style case.

$30 donation
Item #317  
**Moore & Wright #965F 0-1” mic**

from the Handsworth factory (since leveled). One of the later designs before cost-reducing much of the line. Enamel frame, friction thimble, lever lock. Probably built not too long of Neill acquired M&W.

$25 donation

Item #318  
**Moore & Wright #961B (0-1”) mic in satin chrome, with lock, ratchet, etc.**

Comes with original packaging, outstanding condition, and likely from a period not too long after the Neill acquisition.

$35 donation

Item #319  
**Moore & Wright #965 (0-1”) and #966 (1-2”) micrometers.**

Good quality mics with decimal equivalents on the thimble (much as Starrett did in the mid 1900’s before cost-reducing the #436 line)

$45 donation

Item #320  
**Moore & Wright #961 (0-1”) and #966 (1-2”) micrometers.**

The 1” is in an older eyeglass style case, very nicely made in all satin chrome. The 2”is a wood case. Both are near mint.

$55 donation

Item #321  
**Moore & Wright 0-1” Braille micrometer formerly owned by the Sperry Gyroscope Co, Ltd.**

(see the slip of paper within). Somewhat amazing as a tool and very amazing when one considers the users.

$90 donation
Item #322
Moore & Wright 0-1” bench micrometer with very large “pearl chrome plated” thimble, direct reading in ten thousandths of an inch.

This shows up as model No. 476 in Moore & Wright's 1952 catalogue. It has a speeder on the end; with its original wood case and paperwork. Near new condition with a silky feel.

$100 donation

Item #323

Mid 70's. Recognized as the world’s first hand-held digital micrometer. This unit is in good cosmetic condition, but there was a break in the charger plug and the (35 year old?) NiCad batteries are surely dead. Possibly restorable. Maybe just an artifact, complete with its “Patent Pending” notice.

$50 donation.

MTG, Inc.
was founded in 1967 and has began making a modular line of hand-held indicating gages 1970. Small company, well respected in its niche.

Item #324
MTG internal gage frame with fingers and German-made .0005” comparator.

This is set to a desired internal measurement, inserted using plunger to retract the fingers, with deviations noted on the comparator dial. Can be set up with different fingers to measure bores, grooves, internal features, and the like. Costly gage, in excellent condition.

$225 donation

Mueller Gages Co.
(Pasadena, then San Gabriel, CA) was founded in 1949.
Muskegon Tool Industries, Inc.
(Muskegon, MI) was founded in 1958. It focuses on tools for drilling and boring.

**Item #325**
Muskegon 0-6.5” bore setting gage.

This is set to zero with gage blocks, and then used to check and set various boring tools. Includes a .0001” reading Starrett dial comparator. Near mint condition in nice fitted wood case.

$90 donation

**MZB**
(Germany). Some of their tools are marked “Western Zone.” Possibly the same company as Messzeugbau Reichenbach GMBH?? My example looks to be made for export.

**Item #326**
MZB 0-1” micrometer,

nice overall construction will all the usual higher end features (satin chrome, lock, ratchet, decimal equivalents).

$25 donation

**Nachi**
(Japan) dates to 1889. They started making micrometers in the late 30’s.

**Item #327**
Nachi

0-25mm, 25-50mm, and 50-75mm micrometers in original fitted wood boxes. Long ratchet / speeder, and lock. A standard all-steel micrometer design seen worldwide. As best I can tell this set (3) of micrometers dates from the late 30’s to before or after WWII. These are still quite usable; and also make an interesting comparison to US and other mics of the same era.

$90 donation

**National**

-see Central Tool Company
Neue Berliner Messingwerke

(Berlin). English translation: must “messing” around means metalwork. Patents assigned to this company go back to the late 1800’s and early 1900’s (including a US patent granted in 1909).

Item #328
Neue Berliner Messingwerke

0-15mm micrometer with brass frame and nicely knurled steel frame. Perhaps as much as 100 years old?

$30 donation

Nippon Seisoku

(Tokyo, Japan) roughly translates as Japan proper/correct. Logotype is a curved “N” superimposed over an “S” with in a circle.

Item #329
Nippon Seisoku 25-50mm interchangeable anvil thread micrometer.

Includes three anvil pairs to cover threads from .6 to 3mm, original wood box, ratchet, and lock. Satin chrome thimble and plain steel frame. The 4mm diameter anvil size will fit at least some Mauser and Fein-mess thread micrometers.

$40 donation.

NSK

(Tokyo, Japan). Nippon Seiko Kabushik Kaisha, a.k.a. Japan Micrometer Mfg. Co., began in 1916 as Japan’s first bearing manufacturer. NSK started development work on micrometers in the early 30’s, along with Japanese competitors like Mitutoyo, Misuiseiki, and Fugikochi.

NSK made a variety of precision products, and were distributed in the US by Fred V. Fowler (marked NSK/Fowler) to the manufacturing industry and by Snap-on to the automotive industry. Draper branded mics were also made by NSK. The NSK Japan factory is no longer making micrometers according to one source. These are of high quality, and very similar in such details as the lock to Mitutoyo.

Item #330
NSK 0-1” micrometer in original plastic case with 1968 factory calibration report (“A” rating) and original paperwork, chamois cloth, etc.

Model AA02 with all satin chrome frame, .001 reading, ratchet, and machined lever lock. Like new.

$30 donation
<table>
<thead>
<tr>
<th>Item #331</th>
<th>NSK 0-1” micrometer with friction thimble, lock, carbide anvils, and .0001 vernier. Good condition but unmarked (painted) thermal pads. Excellent “user” micrometer. $25 donation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item #332</td>
<td>NSK 0-1” micrometer with gray hammertone frame, friction thimble, lock, carbide anvils, and .0001” reading vernier. Good cosmetic (no markings) and working condition. $25 donation</td>
</tr>
<tr>
<td>Item #333</td>
<td>NSK 0-1” micrometer #UAAB02 in original wood box. Gray hammertone frame with ratchet and .0001” vernier. Likely one of their earlier mics, given the wood case, the stamped frame inscription versus plastic pads, and the wood rather than plastic case. Late 50’s or early 60’s? Very good condition. $30 donation</td>
</tr>
<tr>
<td>Item #334</td>
<td>NSK 0-1” micrometer in gray case marked #YUXB 01-1. Grey hammertone frame, friction thimble, lock, and .0001” reading vernier with original paperwork. Mic inside is in mint condition. $30 donation</td>
</tr>
</tbody>
</table>
Item #335
NSK 0-1” micrometer with carbide anvils,

a ratchet, machined lever lock, .0001” vernier, satin chrome frame, and plastic thermal pads. Also includes a 1967 factory test report showing zero screw thread errors and an “A” rating, plus an NSK manual. Note that the box description and the micrometer do not match; though this does appear to be a circa 1967 or earlier mic. Mic is in excellent condition, excepting some cosmetic delamination from within the clear plastic pads

$35 donation

Item #336
NSK matched set of four mechanical digital micrometers with gray hammertone frames, .001” mechanical readouts, and .0001” verniers.

Includes ratchets and locks. Very good quality, on par with Mitutoyo and with some unique features such as easy zero setting. While all four micrometers are in very good to excellent condition, there are some differences. The 0-1” looks near new, but has no case. The 1-2” looks like new old stock and has its original wood case, standard, adjustment tools (which work for all mics in the set), and manual. The manual is clear, but with a few “charming” bits of translation. The 2-3” size is in very good shape. It includes a standard but no case. The 3-4” size looks near new, with its original wood case, standard, tools, and paperwork. NSK no longer makes micrometers; but an equivalents set of Mitutoyo mechanical digital micrometers would cost about $800 today. These are accurate mics, easy to read.

$195 donation for the set of 4
Item #337
NSK matched set of two mechanical digital micrometers with gray hammertone frames, .001” mechanical readouts, and .0001” verniers.

Includes ratchets and locks. Very good quality, on par with Mitutoyo and with some unique features such as easy zero setting. The 0-1” mic is in very good condition, with no case. The 1-2” micrometer looks to be near new, with its original wood case, standard, adjustment tools (which work for both mics in the set), and manual. NSK no longer makes micrometers; but an equivalent set of Mitutoyo mechanical digital micrometers would cost about $400 today. These are accurate mics and easy to read.

$95 donation for the pair

Item #338
NSK 0-2” micrometer with anvil adapter to measure 0-1” (which is removed for 1-2” measurements).

The mic looks like new, but has a cracked gray plastic case. It includes a ratchet, lock, and all satin chrome frame. The adapter idea goes back about a hundred years.

$50 donation

Item #339
NSK #YUX01 (0-1”) and #YUX02 (1-2”) analog micrometers.

Mint condition.

$115 donation

Item #340
NSK #YUX01 (0-1”) and #YUX02 (1-2”) analog micrometers.

The 0-1” in this set has a small flaw – it is lightly marked “QA” for quality assurance dept. on the back. similar in such details as the lock to Mitutoyo.

$95 donation
Pacific Gage Co., Inc.
(Hermosa Beach, CA)

Item #341
Pacific Gage Co. “Height Master” 0-16” height gage, with large .001” direct reading micrometer head.

An interesting design (many had a continuous beam), included mainly because a COFES tables full of micrometers will be a little less boring with something standing above the ray. These are used on a large surface plate to lay out and measure work (see also the Cadillac gage). A Mitutoyo .001 test indicator (with reversing switch, indicator clamp, height gage adapter, and height gage clamp have been included so it can be set up to give a sense of use. It might also be used with a sharp scriber. Includes the 16” height gage, fitted case, and .001” Mitutoyo test indicator.

$120 donation

PAV
(Liechtenstein). High quality supplier of precision tools, still in business.

Item #342
PAV 0-25mm micrometer

with heavier and easier to read construction than most. Ratchet, lock, thermal pads, satin chrome, in wood box. Excellent.

$50 donation
Pi Tape Corporation
was founded in the mid-40’s (company information can be found at www.pitape.com). The idea seems obvious in retrospect. Make a very precise steel tape where $3.14159\ldots$ inches is marked as an inch, put a vernier on the end to measure to .001, and wrap the whole flexible tape around cylindrical objects to determine their diameter. Obvious, perhaps, but ignored in a century of prior measurement art. This may be because no one was making many highly precise cylindrical objects until we started making turbines, jet engines, rockets and the like? Not a micrometer (no screw thread), but a worthy competitor for measuring large work.

Item #343
84 to 96” Pi Tape in open aluminum case.

Formerly owned by Airco Temescal, which made things such as large stainless steel vacuum chambers – maybe up to the 8’ diameter of this tape. Dirty case, clean Pi tape.

$30 donation

Pierre Roch S.A.R.L.
(Rolle, Switzerland). The company adopted the Etalon trademark after WWII. A fine quality maker, it’s micrometers and other precision measuring tools became part of TESA. TESA then became part of Hexagon.

Item #344
P.ROCH 175-200mm micrometer marked “PROCH” and “ROLLE, SUISSE” within a shield-shaped logo and a Swiss cross.

Includes a ratchet, knurled circling type lock, wrinkle black frame, large plastic thermal pads, and a black leatherette case. “PROCH” is almost surely Pierre Roch (P.ROCH) of Rolle, Switzerland and bears some resemblance to that company’s subsequent Etalon micrometers. Fine quality micrometer of conventional design.

$65 donation
**Item #345**

Elaborate 0-4” micrometer set with Microfix rapid/mechanical digital thimble.

This is the most gorgeous, bordering on anal retentive toolmaker’s micrometer set I’ve seen. Only the Swiss would have made it. It includes a very high quality rapid thread thimble, exactly as also seen in some rare Steinmeyer micrometers (also in the collection) and similar to the famed Etalon Microrapid. What makes this set unique is a set of 9 attachments, built to gage block tolerances, that expand the range in 1” increments up to 4.” The set then includes six different anvil types for a wide variety of measurements. These include a small circular base to use it as a bench micrometer and others to use it as a standard micrometer (attached), a V-angle (3 point and concentricity), pin micrometer (tubing etc.), blade (small spaces), and triangle (thread?) micrometer. I’ve never seen another example of this micrometer and doubt it could be made for much less than $2000 today.

$400 donation
Lufkin / Pratt & Whitney

began in 1860 as a maker of guns and gun making machinery – using the then-innovative idea of interchangeable parts. By 1885 they were making a precision measuring machine; by 1918 “Hoke blocks” (following the general idea of “Jo blocks”); and by 1926 they introduced their first Supercmicrometers. Their famed aircraft engine business (now part of United Technologies) was an offshoot of Pratt & Whitney Machine Tool around 1925. P&W acquired Lufkin’s precision tools business in November 1966. Pratt & Whitney marked micrometers are of identical design and high quality to the last Lufkin micrometers.

**Item #346**

Pratt & Whitney set of 3 micrometers 0-3” made by Lufkin.

Lufkin made gorgeous precision tools, as well as the carpenter’s rules it is better know for. This set is from right around the time that Pratt & Whitney acquired Lufkin, with the 0-1” and 1-2” mics marked P&W, but the (identical model) 2-3” mic marked Lufkin. Nice mics with a bit of business and competitive history behind them.

$90 donation

**Item #347**

No. 1961 Pratt & Whitney 0-1” micrometer in near mint condition.

Nice mic with satin chrome friction thimble, lever lock, and black wrinkle paint frame.

$35 donation
**Item #348**
Pratt & Whitney precision end measures and inside micrometers, in original wood box.

Includes two micrometer heads and nine precision rods (made to gage block tolerances) ranging from 1” to 12” in length. Lined up together they provide more than 36” of range, with .0001” increments set on the micrometer heads. The Moore Tool Company, with its Moore jig bores established a unique method of precise coordinate measurement – to even tighter tolerances than were possible with a precision screw. Basically, a set of gages like these were laid in a sort of tray on the X or Y axis (thus two micrometer heads, one for each axis) and the jig bore table moved to a hard stop. These appear to be in very good condition, with QC calibration numbers on the mic heads.

$70 donation

**Rank Taylor Hobson Ltd.**

**Item #349**
Rank Taylor Hobson #142/43 type TB 100 Microptic Clinometer in fitted wood case with instructions.

Not exactly a micrometer (though precision screws drive the angular adjustments) and a “micrometer scale” vernier is used to measure angles to 10 seconds of arc. Angles are read through the eyepiece at the top. I decided it was cool enough to include for the discerning COFES crowd. Now you can truly know if your colleagues are on the level. As can be seen with the enclosed paperwork, these were pricey bits of mechanical ingenuity, still fetching around $1600 on the used market/

$395 donation
Reed & Prince Mfg. Co.

(Worcester, Mass) was incorporated in 1902 by Edgar Reed and others. It acquired micrometer patents dating to 1901 and soon began making micrometers. Reed’s son (E. Howard Reed) took over the company and formed the Reed Small Tool Works in 1916.

Item #350
R&P Mfg. Co. 0-1” with chrome plated frame.

This dates between 1902 and 1916; likely before WWI.

$30 donation

Reed Small Tool Works

1916 to circa 1945 was formed out of Reed & Prince Mfg. Co. By 1921 it was manufacturing micrometers for sale by others; including Cenco, Fleming, and others. The micrometer business was sold to the Tubular Micrometer Co.; probably just after WWII. Reed designs showed up as solid frame micrometers in the Tubular Micrometer / Tumico / Scherr-Tumico lines.

Item #351
Reed Small Tool Works 0-1” micrometer with a patent date of Jan 1901 engraved on the thimble.

A nicely designed and forged frame along with the thimble-based adjustment design that would (slightly modified as it moved down the thimble) continue through to Scherr-Tumico days.

$30 donation

Item #352
Reed Small Tool Works 0-1” micrometer with a cool set of decimal equivalents pressed into the frame.

Excepting the equivalents markings, this is essentially the same design as the plain forged frame. It has the early style of adjustment, with the spanner hole towards the end of the thimble. Early 1900’s.

$35 donation
Item #353
Reed Small Tool Works 0-1” micrometer with all the features; pressed decimal equivalents in the frame, a ratchet, and a lock.

Nice mic with a bit of history. Has the older location for the adjustment spanner. Reference “A.”

$45 donation

Item #354
Reed Small Tool Works #901 0-1” micrometer with decimal equivalents conventionally stamped.

Includes .0001” reading vernier. I suspect this came as either a cost reduction to their forged frames or a response to requests for easier readability.

Otherwise, typical Reed design.

$25 donation

Item #355
Reed Small Tool Works #901 0-1” micrometer with decimal equivalents conventionally stamped.

Similar to the other #901 example with plain stamped decimal equivalents, a ratchet and lock -- but without the vernier markings.

$20 donation

Item #356
Reed Small Tool Works 0-1” micrometer with what would become their classic black frame (continued in style with Tumico and Scherr-Tumico).

Includes .0001” reading vernier. It would be easy to improve the cosmetic condition of this mic; and the accuracy is good. Reference “B.”

$25 donation
Item #357
Reed Small Tool Works 1-2” micrometer.

Classic frame with .0001” vernier and a lock. This would make a nice set with the micrometer marked “Reference A” – also with a lock.

$30 donation / $65 for this plus “A”

Item #358
Reed Small Tool Works 1-2” micrometer with .0001” vernier and no lock.

This would make a good set with the micrometer marked “Reference B.”

$25 donation / $40 for this plus “B”

Regal Beloit, Inc.
began in 1955 (as Beloit Tool) in a roller skating rink in Beloit, WI; moved to South Beloit, IL in 1961; renamed itself Regal-Beloit in 1969; and moved its headquarters to Beloit, WI in 1991. Typical products were cutting tools and gear boxes. After a series of acquisitions it is now a sort of electrical conglomerate with around $2 billion annual sales.

Item #359
Regal Beloit marked 0-1” and 0-25mm combination metric and inch micrometer made by the Ambrose Shardlow Co. (Sheffield, England).

A clever combination inch and metric micrometer. I presume that Regal Beloit thought this would be a sensible companion product to cutting tools?? Note the dual scales on the barrel and thimble. Near mint condition, with soft case. Well made, with ratchet thimble, a unique push button lock, and instructions for reading.

$40 donation
Rimat Tool Co.
(Glendale, CA)

**Item #359**
Rimat bore micrometer .7” to .9” range.
Carefully made tool from a seldom seen maker.

$30 donation

Sawyer Tool Co.
(Athol, then Fitchburg, then Ashburnham, MA) was founded by Burnside Sawyer in 1894. Montgomery & Co was an early distributor beginning even earlier (1891). The company moved from Athol to Fitchburg in 1902. The company was sold to Carl Hubbell in 1908 (who was also involved with the T.R. Almond Co.) and moved to Ashburnham in 1912.

**Item #360**
Sawyer Tool Co. inside micrometer set in original black leather case.
It's marked “Fitchburg,” dating it from 1902 to 1912. Very good condition, with four of its spacers.

$50 donation

George Scherr Co.
(NY) The company advertised in such places as Popular Mechanics and Popular Science (1942-48) and, as a distributor, affixed its name to such products as Mauser vernier calipers and indicating mics and Tumico micrometers. The only (undated) catalog I've seen dates from about 1950; listing the 1950 edition (14th) of Machinery's Handbook.

**Item #361**
Scherr 0-1” micrometer made for them by Reed (or, later, Tumico).
Satin chrome thimble, .0001 reading, in good shape. Reference X.

$20 donation
Item #362
Scherr 1-2” micrometer made for them by Reed.

.0001 reading. Slight paint wear, scratches.

$15 donation / $30 for this plus “X” above

Item #363
Scherr 0-1” and 1-2” micrometer set with .0001 verniers.

Made for Geo. Scherr Co. by Reed (or possibly Tumico after acquiring Reed). A vintage set, probably from the late 40's or early 50's, that looks to be accurate and in good condition. Includes ratchets and locks.

$50 donation

Item #364
Geo. Scherr Co. 0-1” branded micrometer likely made for them by either Reed Small Tool Works or the Tubular Micrometer Co.

The date is likely around the time Reed sold to Tubular. Includes ratchet, lock, .0001 vernier, and all chrome frame. Marked #901 and of the same basic design of Reed Small Tool Works #901 and later #901 Tumico micrometers.

$30 donation

Item #365
Geo. Scherr Co. 1-2” micrometer made for them by the Tubular Micrometer Co.

Reed design frame with .0001” vernier. Good example of how one thing leads to another. Scherr puts its house brand on Tumico mics. Later, the companies merge to form Scherr-Tumico.

$30 donation
Scherr-Tumico Company

Scherr-Tumico Company (St. James, Minnesota) has a heritage going back decades. It started just (before?) after WWII as the Tubular Micrometer Company (Tumico) and was famous for its lightweight vacuum sealed tubular micrometer frames. Especially in larger sizes these were easier to use. Along the way it acquired the micrometer business of Reed Small Tool Works which itself dates back to 1902 as the Reed & Prince Company. Later, the Tubular Micrometer Company merged with a precision tools distributor, the George Scherr Company, to become Scherr-Tumico; probably around 1960. At some point it was part of the Rank organization (e.g. Rank Scherr-Tumico, Inc.). More recently it has gone by the name S-T Industries and also established the Accupro brand.

The smaller micrometers (including several sets available here) may have solid frames along the lines of the Reed designs.

The company has always made good quality micrometers, but was a perennial runner up to Starrett and Brown & Sharpe in brand recognition (and also a good example of how the top two suppliers in a market often dominate; as in Pepsi and Coke versus Dr. Pepper etc.) It’s niche for many years was selling precision tools to the US government. Scherr-Tumico also built micrometers for others to sell under their brand name. These included the Central Scientific Company (laboratory equipment) and Sears Roebuck. As with many US suppliers it most recently started selling Chinese-made tools; usually of a somewhat lower quality. The old US-made micrometers are, in my opinion, equivalent in quality to the Starrett #436 series, but not nearly so well known.

**Item #366**

Scherr-Tumico 0-1” micrometer; listed in their 1961 catalog as the new “190” series.

This is a well designed micrometer with a speeder at the end, a large thimble-base ratchet with a soft action, and a nicely detailed lock. Lead error is held to less than 50 millionths (as with all of S-T’s ground screws) and the “Silver Mist” chrome frame includes decimal equivalents. Try it.

$40 donation

**Item #367**

Scherr-Tumico tubing micrometer 0-1” with black wrinkle frame, ratchet, and lock.

This is designed for measuring the wall thickness of tubing and pipe. Works for a variety of other measurements as well. Excellent condition apart for a spot or two of paint wear.

$40 donation
Item #368
Scherr-Tumico 0-1” and 1-2” pair of micrometers in their own fitted wood boxes.
Black wrinkle frames, ratchets, locks, and .0001 verniers. Good quality micrometers in near mint condition. 1 of 2.

$60 donation for the pair

Item #369
Scherr-Tumico 0-1” and 1-2” pair of micrometers in their own fitted wood boxes.
Black wrinkle frames, ratchets, locks, and .0001 verniers. Good quality micrometers in near mint condition. 2 of 2.

$60 donation for the pair

Item #370
Scherr-Tumico 0-1” x 3” deep throat micrometer with wrinkle black frame, in original wood box.
Includes ball end anvils, a ratchet, and lock. Near new condition.

$45 donation
Item #371  
Scherr-Tumico 0-1” by 12” deep throat micrometer.

The heavy frame allows accurate measurements deep into sheet materials (metal, paper, plastic . . .). This was formerly owned by Tektronix, Inc. and other than numbering the gage for quality control in 1987, it looks to be unused. Here’s the urban legend (I’m making this up) you can spread: Tektronix bought this to better control sheet metal thickness for its amazing new (way back when) 4014 storage tube workstations. However, just as they bought it, demand for storage tubes tanked. That leaves this as one of the remaining manufacturing artifacts from a period some of us can remember. FWIW, a new 12” deep throat micrometer runs about $300.

$100 donation

Item #372  
Scherr-Tumico 0-1” test stand with huge (3”) thimble, reading directly in .0001”

A costly micrometer head in like new condition ($435 new) mated to a fixture designed for checking the linearity of dial indicators. Includes a Central Tools 0-1” dial indicator. By leaving a plug gage (or the indicator) in the fixture it can be used as a bench micrometer, after adjusting to zero.

$80 donation

Item #373  
Scherr-Tumico 1-2” micrometer in fitted black case. ratchet, lock, and all chrome design.

Nice working condition, but cosmetic damage to the tubular frame (presently covered by chromed film).

$25 donation
**Item #374**
S-T Industries Accupro “Gold” new old stock set of gage blocks.

Import, but calibrated. In a useful range for checking and calibrating micrometers.

$35 donation

**Item #375**
S-T Industries Accupro “Gold” new old stock set of gage blocks.

Import, but calibrated. In a useful range for checking and calibrating all those micrometers you’ve so generously bought. Second instance.

$35 donation

**Item #376**
Scherr-Tumico set of three “850 series” micrometers; 0-1, 1-2, and 2-3 inches.

Black wrinkle finish solid frames of the Reed-origin design. “Silver Mist Chrome” thimbles, .0001” vernier reading, with a somewhat unique spindle lock design. Useful set of good quality micrometers.

$75 donation

**Item #377**
Scherr-Tumico 0-3” micrometer set (three .0001” reading mics) in a fitted wooden case.

Like new condition with ratchets, locks, standards, and black wrinkle finish frames. A nice set for use.

$90 donation
**Item #378**  
Scherr-Tumico set of four micrometers 0-4” in blue vinyl case.

Includes ratchets and locks. Black wrinkle paint is a bit rough, but easily restored to like-new condition. Otherwise, very good condition. Add the 4-5” and 5-6” sizes for a complete 0-6” set for $140.

$70 donation.

**Item #379**  
Scherr-Tumico 4-5” micrometer with .0001” vernier, ratchet, lock, setting standard, and black wrinkle frame.

Near mint, in old B&S case. USA made.

$40 donation; $35 if bought with 0-4”

**Item #380**  
Scherr-Tumico 5-6” micrometer with .0001” vernier, ratchet, lock, setting standard, and black wrinkle frame.

Near mint, in old B&S case. USA made.

$45 donation; $35 if bought with 0-4” & 4-5”

**Item #381**  
Scherr-Tumico / Accupro 0-6” micrometer set; new old stock with original box and still-sealed micrometers and standards.

.0001 reading with ratchets, locks, and wrinkle black frames. A good US-made set that cost nearly $600 before manufacturing was moved to China. See, above, for a 0-6” set at $140.

$245 donation
Item #382
Scherr-Tumico 2-6” and 6”-9” interchangeable anvil micrometers

with the famous hollow frames in a black wrinkle finish. The 2-6” size is government surplus, complete, and in near-new condition in its wood case. The 6-9” size is in good shape, but with no case and just the 8-9” anvils. However, it can use the anvils from the 2-6” set to get a full range. This would be ideal for a hobby machinist who does most of the measuring with 0-1” and 1-2” mics, but occasionally needs to work with something larger. Two mics, one price.

$85 donation

Item #383
Central Scientific Co. 0-25mm micrometer built for them by Scherr-Tumico.

Good quality mic for a budding scientist.

Donation $25

Louis Schopper
(Leipzig)

Item #384
Deep throat micrometer, including display stand. Louis Schopper founded his Leipzig workshop in 1881, aimed at the textile and paper industries. This is a paper micrometer of exceptional and elegant design, with flat anvils to avoid indenting the paper. As best I can tell it was made in the 1920’s and influenced by Art Deco design. Most micrometers destined for a manufacturing life were pretty much oblivious to fashion, but perhaps the paper/graphics industry was an exception? In any case a rare and exceptional instrument. Schopper’s company has now become WPM Leipzig Testing Machines.

$150 donation
Schmutz Mfg. Co.

(Louisville, KY). Decorative brass plates with the maker’s distinctive logotype – probably meant to be affixed to machinery -- have been found. The company is also famous in legal circles for its involvement in a statute of limitations / product liability case.

Item #385
Schmutz / B&S 6-12” interchangeable anvil micrometer.

This mic is a bit of a puzzle. The frame is clearly marked with a Schmutz Mfg. Co. logo and no other identification except the 6-12” size marking on the reverse side. However, the frame is clearly an old style #57 B&S and the actual micrometer head is a Brown & Sharpe and so marked. This micrometer frame style first appeared in B&S catalogs during WWI (first appearing in Catalog #27, 1916) and was phased out for a different style after 1935 (Catalog #32). The micrometer spindle, lock, and frame are in good shape, but it is missing all but the 11-12” anvil. One could likely get a used 0-6” B&S interchangeable mic set and use the anvils from that to get full coverage to 12”. I’d be more inclined to restore the paint on the frame, polish the bright bits, and clean up the logo. The name “Schmutz” is worth the price of admission alone; along with the company’s subsequent legal woes. Here’s a micrometer a lawyer could love?

$55 donation
Scru Meter

**Item #386**
Scru Meter 0-1” thread gage with all chrome frame marked Pat. Apl. (patent applied for). The indicator dial is B.C. Ames (see their listing) and the tool was probably made by them. The traditional method of measuring thread sizes is the “three wire method.” It involves using sets of precise wires of different diameters which are set into the threads; two on one side and one on the other. A measurement over the threads then shows the actual pitch diameter.

The problem, which this invention solves, is keeping the threads in place while holding a screw and manipulating a micrometer. This includes 8 pairs of wires embedded in anvils plus various setting standards. Rare – the only one I’ve seen – and likely dating from the early 1900’s (Ames indicators go back that far). An imaginative person will have an idea of just who should receive their very own Scru Meter. Fitted wood box with sliding trays.

$100 donation
Sears Roebuck and Co.

Sears Roebuck and Co. (Chicago, IL) was formally formed in 1893. It revolutionized the catalog business and early one provided most everything a homeowner might want (including the home, appliances, and furnishings) right through to farming, blacksmithing, and other equipment plus bicycles, clothing, sporting goods, and even automobiles from about 1905 to 1915. The early catalogs are a hoot.

My 1901 Sears catalog shows a wide variety of tools, including “Starrett’s Fay Patent” calipers; but not yet micrometers. By 1927 Sears was also selling Fulton branded tools; which may also have been carried by Montgomery & Co (extensive tool catalog; with Fulton looking much like a house brand) in the early 1900’s. The 1927 date is also when Sears registered its “Craftsman” brand for tools; but it does not yet appear in that year’s catalog. By 1933 (likely earlier; that’s the next catalog I have) Fulton was Sears’ economy brand for tools and Craftsman was the premium brand. Craftsman went on to become a respected brand for many decades; due to both the quality and relative affordability of the tools and their unconditional lifetime warranty.

While items were made to Sears specifications and branded by them, virtually everything was manufactured by someone else. On the micrometer front, perhaps a dozen different companies were suppliers at one time or another. Goodell-Pratt looks to have made some early Craftsman micrometers; and the later Millers Falls.

The 1940 catalog shows a micrometer sourced from Millers Falls.

Craftsman micrometers were made by the Central Tool Co. in the early 1950’s.

Sears also distributed a C.E. Johansson micrometer in and around 1958.

The 1960 hand tool catalog features Sears “best” Craftsman micrometer on the front cover; made for them by the Central Tool Co. It cost $16.98 at the time; about $125 in today’s dollars. In this same catalog (1960) Dunlap is the economy brand and Craftsman the top.

The 1975 catalog shows only Craftsman branded mics; made for them by Scherr-Tumico and Mitutoyo (mechanical digital).

The 1980 catalog shows the same Craftsman-branded Mitutoyo mechanical digital micrometer, a low cost mic made by the Central Tool Co., and the bulk of the Craftsman line made by Scherr-Tumico.

By 1990 the mechanical digital micrometers were made by NSK (probably at slightly lower cost), the low cost apprentice micrometer made by the Central Tool Co. (Sears brand), and Scherr-Tumico made the bulk of the product line – but without the Craftsman brand name. Sears at that point was downplaying its own brands, with more of a “brand central” strategy. The ST mics were offered in both rolled (not so accurate, .001) and ground (more accurate, .0001) threads.

By the 1995 catalog the NSK and Scherr-Tumico made mics (now Craftsman branded) were still there; along with Starrett micrometers.

The 1997-1998 catalog shows both a Sears (NSK made, now demoted from “Craftsman” status) and a Craftsman (Mitutoyo made) mechanical digital micrometer. This must have been an interesting discussion with these competing Japanese suppliers and the Sears buyer. Both the Sears and Craftsman analog mics look to be made by Scherr Tumico (with rolled threads vs. ground threads setting the quality levels).

By the 2000 catalog, Sears retained the Starrett micrometers as well as featuring “Craftsman” mechanical digital and electronic micrometers made by Mitutoyo. The Scherr-Tumico-made micrometers – after more than two decades of partnership --were gone.

Machinists’ tools, including micrometers, completely disappeared in the 2004 catalog (kiss those customers goodbye), then reappeared in 2005. That year’s catalog showed “special order” sets that look much like Chinese imports; but branded Craftsman. Starrett and S-T branded as Craftsman were also there.
In 2008 and 2009 Sears once again killed off its Craftsman branded micrometers, carrying only Starrett on special order.

The current Craftsman Tools web site (2011) once again carries a variety of Craftsman-branded micrometers with Scherr-Tumico back with analog micrometers and what looks to be a Chinese-made “Craftsman” mechanical digital micrometer. There is also what might be a Starrett-made electronic micrometer sourced from China and sold as Craftsman.

The 2011 Sears web site also includes a variety of clearly Chinese micrometers branded “Skill Tech,” “KD Tools,” and “Chicago Brand.” The “Central Tools” branded micrometers shown may have also been sourced from China. All of these put Sears in the position of offering undifferentiated products, at slightly higher prices than the competition for the same merchandise, with a somewhat less convenient fulfillment process.

In a sense, the history of micrometer sales at Sears traces the business fortune of Sears.

Early catalogs often show Sears offering three tiers of products. We humans tend to think we're doing our homework with a consideration set of three; but quickly converge to a paired comparison. So, three tiers is just about right. By the mid 1960's Sears was the first company I know to have an explicit strategy of selling “good, better, and best” products. This fits human decision making and is now widely seen. Consider, for example, luxury cars with three levels – BMW’s 3, 5, and 7 series or Mercedes C, E, and S classes.

Early on, Sears had two tiers. The original top tier was the Craftsman brand. The lower tier was variously branded “Fulton,” “Sears,” “Dunlap” (late 30's to 1960 or so) and then the “Companion” brand. “Craftsman Commercial” and then “Craftsman Professional” later added a third and top tier.

With the influx of other brands (for example the Taiwanese “GearWrench” in wrenches) Sears tool branding is now a bit chaotic. It has also been possible to find (e.g. with adjustable wrenches a decade ago) the lower priced Chinese import product that has better features and build quality than the higher priced US-made Craftsman product.

Beginning around, say, 1990 the catalog/store business model was in decline. Perhaps Amazon.com and eBay – today’s retailing business model pioneers -- will face similar issues long before their own 100th anniversaries?

In recent decades Sears has made a number of moves that show a company managed more by accountants than retail wizards. For example, they sold off its parts division so that a third party could jack up prices and alienate its customers. Later, the company was taken over by Kmart. Some Craftsman products, to the dismay of some once-loyal customers, have dropped the unconditional warranty and/or are being sourced from Asia.

Item #387
Sears Craftsman 0-1” micrometer likely made for them by Goodell-Pratt.

The desirable speeder and thimble-based ratchet design, plus a lock. Adjustment is through a screw at the anvil end. Probably one of the first Craftsman-branded mics; late 30’s to early 40’s. The 1933 catalog shows the same Craftsman logo style with a micrometer clearly made by Goodell-Pratt (with its unique lock at the rear arc of the frame)

$35 donation
Item #388
Sears branded 0-1” micrometer made for them by the Central Tool Co.

This has a friction speeder and silver painted frame, just as the “Apprentice” micrometers noted elsewhere. A cheap but usable micrometer.

$20 donation

Item #389
Sears “Fulton” 0-1” micrometer with chrome plating over an aluminum die cast frame.

Includes friction/speeder and likely made for Sears by Henry L. Hanson (see). Good condition.

$20 donation

Item #390
Sears “Companion” micrometer set 0-3” with three micrometers in fitted black vinyl case.

Almost certainly made for them by the Central Tool Co. Friction / ratchets and locks; and generally along the lines of the “Apprentice” micrometers.

$35 donation

Item #391
Sears Craftsman 0-1” micrometer made by Scherr-Tumico.

Satin chrome frame, .0001” vernier, ratchet, lock, and decimal equivalents. Good quality micrometer in good condition. This will have had ground threads.

$30 donation

Item #392
Sears Craftsman Commercial 0-1” micrometer

made by Scherr-Tumico. All satin chrome, carbide faces, ratchet, .0001” vernier, decimal equivalents, and lock. Top of the line. Example “A” in a clear front vinyl case.

$35 donation
Item #393
Sears Craftsman Commercial 0-1” micrometer

made by Scherr-Tumico. All satin chrome, carbide faces, ratchet, .0001” vernier, decimal equivalents, and lock. Top of the line. Example “B” without a case and signs of use (but no non-original markings).

$25 donation

Item #394
Sears Craftsman 0-1” micrometer in blue cardboard box (marked No. 4090) and made for them by the Central Tool Co.

Painted frame marked “FORGED STEEL” with friction “ratchet” and lock. The thimble would clean up a bit with a brass brush.

$20 donation

Item #395
Sears Craftsman 0-1” micrometer in black leatherette case, made in Germany.

Nice made of heavy construction, all satin chrome, with a ratchet and lock. The Craftsman logo of is the 1970’s style.

$35 donation

Item #396
All satin Sears Craftsman 0-1” micrometer with full satin chrome frame, vinyl pouch case, original cardboard box and paperwork.

Model #40691 as appears in the 1960 Hand Tools catalog. The best micrometer they sold at that time, featured on the front cover of the catalog, and made for them by the Central Tool Co.

$35 donation
Item #397
Sears Craftsman 0-1” micrometer with wrinkle black frame and original box marked #38601.
Made for them by Scherr-Tumico with a ratchet and lock. Near mint condition.
$25 donation

Item #398
Sears Craftsman 0-1” mechanical digital micrometer made for them by the Central Tool Co.
In very good condition with carbide anvils, satin chrome finish, a friction thimble and lock. I would guess it to be mid to late 60’s
$45 donation

Item #399
Sears Craftsman Commercial 0-1” micrometer with black wrinkle frame, vinyl tool pouch, and original box marked #38624.
Includes ratchet, lock, and an effective but cost-reduced calibration (set screw to spindle). Made for them by Scherr-Tumico, with a ratchet and lock. While this is a nicely made micrometer in mint condition, such features as the screw-type lock and the lack of a vernier really don’t merit the “Craftsman Commercial” name. Confusion at Sears . . .
$30 donation

Seidensticker
(Oakland, U.S.A.)

Item #400
Seidensticker 4.5 to 7 pitch 0-1” thread micrometer.
Robust frame design with speeder and lock. The “Seidensticker” name and “Oakland – U.S.A” descriptions stand out from the wrinkle black frame.
$30 donation
Shardlow Micrometers, Ltd.

(Sheffield, England). Also known as Ambrose Shardlow & Co. Ltd. I believe the company was founded in 1869 based on this entry in the UK National Archives: http://www.nationalarchives.gov.uk/a2a/records.aspx?cat=1448-mnas&cid=-1#-1 A huge workshop was active in a wide variety of manufacturing (especially crankshaft’s, including for the Spitfire) during WWII and thereafter. Apparently they began manufacturing micrometers for their own use, perhaps seeing scarcity during the war, and also developed a metric version for sale abroad. The company was taken over by GKN in 1963. At some point, Shardlow’s micrometer business was acquired by the Neill Tools Group (see the Moore & Wright entry).

Item #401
Ambrose Shardlow & Co. (Sheffield, England) 0-1” micrometer.
Carefully made, with a somewhat unusual lock mechanism.

$40 donation

Item #402
Unique Shardlow 0-1” / 0-25mm micrometer
in belt hook case, complete with spanner inside the case. An innovative (if somewhat hard to read) inch-metric micrometer. Note the dual scales on the barrel and thimble. Also includes a unique (but more expensive to manufacture) and effective spindle lock. Well made, with ratchet thimble. A version of this micrometer was made for Regal Beloit and likely others.

$35 donation
J. T. Slocomb Co.

J.T. Slocomb Co. (Providence, R.I.) was established in 1891 by John Tibbets Slocomb. His first invention and product was a center drill; a type still commonly used today. Slocomb writes that the first micrometer he ever saw, in 1884, was made by A. J. Wilkinson – an example of which is in this collection. He then worked briefly at Brown & Sharpe before inventing “the longest lived micrometer that can be bought.” His first micrometer was produced in 1893.

Slocomb was all about function – he defended his black painted frames in a “Machinery” article (which were mistaken for cast iron rather than forged steel) while others were polishing theirs. Instead, he talked about the special lathe he built to make precise micrometer screws, and the larger spindle and high quality tool steel he used. Slocomb also felt that spindle locks weren’t necessary for micrometers – that they would just encourage its use as a fixed gauge rather than a measuring instrument.

Many precision tools at the end of the 19th and beginning of the 20th centuries still relied on some custom fitting. Slocomb highlighted his use of “Jo blocks” (see Johansson) and other high precision tools to achieve truly interchangeable parts. His best known invention is a two-piece adjustment nut with a spring in between. The overall effect of all these design and process elements was a long-wearing micrometer. Many century-old examples remain accurate today.

By 1915, perhaps earlier, the company was using a graphic trademark on catalogs and correspondence with a micrometer measuring the globe and the tag line “Slocomb micrometers are used all over the world.” The company was then competing for third place or fourth market share at that point, behind Starrett and Brown & Sharpe.

Slocomb sold the company to J.H. Drury (sales manager of Union Twist Drill) in 1914. Drury incorporated the firm as J.T. Slocomb Co. Edward Blake, Jr. is listed as General Manager in Catalog #14 from about that time (1915). However, Kenneth Cope (in his excellent “Maker’s of American Machinist’s Tools”) says that Slocomb was kept on as General Manager. Catalog #15 no longer lists anyone as General Manager.

The company introduced the “Davenport-Slocomb” mechanical digital micrometer in 1920; based on Davenport’s 1916 patent. A patent tubing micrometer was introduced in 1917. A duplex micrometer for gauging was introduced in 1921. There are examples of each in the collection.

Court documents suggest the company was largely unprofitable from 1944 until it went in receivership in 1952. The company was sold in 1953, along with its micrometer-making jigs and fixtures, and its manufacturing operations moved to South Glastonbury, CT. The “SpeedMike” (a digital mechanical micrometer) was one of the featured tools in the new facility; and also sold under other brand names, including, Central Tools, Moore & Wright, and Snap-on. It looks to be the same design as the 1916 patent.

Item #403

J. T. Slocomb 0-1/2” ball anvil micrometer, bearing the 1896 and 1897 patent dates on the thimble.

This wonderful small micrometer has a cut-away frame (tube micrometer) allowing its use within tubing as well as normal measurements. Overall excellent condition.

$40 donation
Item #404  
J. T. Slocomb 0-1/2” ball anvil micrometer, bearing the 1896 and 1897 patent dates on the thimble.

Same as above, with some paint loss (easily fixed) and clean and sharp markings. Same cut-away frame.

$38 donation

Item #405  
J. T. Slocomb 0-1/2” ball end anvil and spindle, with friction speeder at end and 1896 and 1897 patent dates.

This doesn't have the cut-away frame of the others and may have been a special order for the double ball end arrangement. Good condition considering its age.

$40 donation

Item #406  
J. T. Slocomb 0-1” ball anvil tubing micrometer with a cut-away frame.

Somewhat later manufacturing date; lacking the engraved patent dates.

$30 donation

Item #407  
J.T. Slocomb 0-1” standard design micrometer with friction speeder at the end.

Includes the 1896 and 1897 patent dates, along with decimal equivalents, on the thimble.

$20 donation
**Item #408**  
J.T. Slocomb 0-1” standard design micrometer with plain thimble.

Still has the smooth drag that Slocomb mics are know for – due to the split and spring-loaded adjustment screw.

$15 donation

**Item #409**  
Slocomb 0-1” micrometer with forged frame and pressed decimal equivalents, first introduced in 1903.

Slocomb may have vigorously defended his plain black enameled frames; but he also produced one of finest looking polished frames made. These were forged, then followed by a 300 ton stamping press to raise the decimal equivalents. This mic, possibly a century old, is in excellent cosmetic and working condition.

$40 donation

**Item #410**  
J.T. Slocomb 0-1” micrometer with forged frame and pressed decimal equivalents.

Includes 1896/97 patent dates, with the main difference being the desirable and somewhat uncommon addition of a friction thimble. Looks and works well.

$45 donation

**Item #411**  
J. T. Slocomb 0-1” micrometer with forged frame, pressed decimal equivalents, plus a friction speeder at the end.

Includes the 1896/97 patent dates. Same polished frame as above, with the 300 ton stamping to raise the decimal equivalents. There is a small, lightly, and neatly engraved inscription dating this mic to an owner in Lubec, Maine, 1923. Excellent working condition.

$40 donation
**Item #412**

J. T. Slocomb 14-20 pitch and 0-1” capacity thread micrometer.

Note the anvils. This has the desirable frame with pressed decimal equivalents and the 1896/97 patent dates. This is probably the most common thread range many will use (I made lots of ¼-20 threads for camera mounting equipment and it will also handle 5/16, 3/8, and 7/16 NC threads). Very good cosmetic and working condition micrometer.

$35 donation

**Item #413**

J.T Slocomb 8-13 pitch and 0-1” capacity thread micrometer.

Excellent condition, all-satin chrome finish from the Glastonbury era.

$25 donation

**Item #414**

J.T. Slocomb 0-1” direct reading (mechanical digital) micrometer, introduced nearly 100 years ago.

Fairly uncommon mic, in excellent condition. The Davis-Slocomb 1916 patent date is pressed into the frame, along with the decimal equivalents. The case is not original; but for protection.

$100 donation

**Item #415**

Slocomb mechanical digital depth micrometer with a streamlined look.

Sold to me by Lionel, with his neat cursive mark on one side.

$30 donation
**Item #416**  
J.T. Slocomb 0-1” all chrome micrometer.  
Glastonbury (later) era in excellent condition.  
$30 donation

**Item #417**  
J.T. Slocomb set of three micrometers in original fitted black velvet lined box.  
Includes 0-1” with polished frame and decimal equivalents, and standard 1-2” and 2-3” micrometers. All have the 1896/97 patent dates and adjustment instructions are included. A nice set – usable and collectible. Duel at .001” paces.  
$100 donation

**Item #418**  
J. T. Slocomb set of four micrometers, 0-1”, 1-2”, 2-3”, and 3-4” capacities.  
Good measuring condition, but with worn paint on the frames and no cases. A bargain for use.  
$75 donation

**Item #419**  
J.T. Slocomb set of four micrometers in original two-tier fitted box.  
All four micrometers have a black enamel frame, speeder / friction thimbles and roll type locks. Set includes standards and adjustment instructions. Collectible and usable.  
$100 donation
**Item #420**  
**J. T. Slocomb fly type tool micrometer with 1896/97 patent dates.**

Similar micrometers are meant for setting boring bars and fly cutters prior to use. The graduations reflect twice the actual spindle measurement, since a bored out hole in a lathe will get twice as large as the movement of the cutting tool (it cuts both sides of the bore). This may have been a special order; since other fly type tools had V anvils without the added precision of hardened anvil pads. This can stand upright on a desk, holding the cylindrical object of your own desire. Restore the bright bits and paint??

$40 donation

**Item #421**  
**J. T. Slocomb 0-1” and 1-2” SpeedMikes.**

These are near new condition mechanical digital micrometers. The 0-1” micrometer is all satin chrome in its original plastic case. The 1-2” micrometer is the same satin chrome thimble design, with a blank wrinkle frame. Both have a .0001” reading vernier. This is a significantly more streamlined design than the Mitutoyo and NSK mechanical micrometers, with a heritage that dates back to the original Davis-Slocomb patent.

$140 donation

**Item #422**  
**J. T. Slocomb 0-2” marked micrometer with three interchangeable anvils to cover a range that looks to be up to 2.5”**

These are from Slocomb’s Glastonbury days and have an unusual interchange design that looks to be accurate and repeatable. Clean micrometer with just the slightest wear to the paint.

$35 donation
**Item #423**  
J. T. Slocomb 0-1” snap gauge micrometer with double spindles.

This one is in poor cosmetic condition with one replaced locking screw, but the chrome is clear and it looks to be accurate. Not hard to restore the wrinkle black paint if you want cosmetic perfection; and usable as is.

$60 donation

**Item #424**  
J. T. Slocomb 1-2” snap gauge micrometer with double spindles.

This is free of previous owner’s markings (somewhat rare for a gauge); from the earlier Providence factory.

$65 donation

**Item #425**  
J. T. Slocomb large (8-9”) snap gauge micrometer.

I wouldn't trust this for accuracy, but it looks pretty cool. Put it in a micrometer stand and give it to a doctor friend. That way, they’ll always have a second opinion right at hand.

$50 donation

**Item #426**  
Slocomb 0-1” x 3” deep throat mechanical digital micrometer with digits to .001” and a .0001” vernier.

Glastonbury made. Faint control number marked on the thimble. Needs adjustment, possibly reconditioning, and a new coat of wrinkle black paint.

$20 donation
Item #427
J. T. Slocomb 2-3” by 6” deep throat micrometer.

Glastonbury marked with black wrinkle frame. Measures features that can’t be reached by ordinary micrometers. Unlike horse shoes, these need not be hung open side up for best luck. Very good condition.

$70 donation

Item #428
J. T. Slocomb 3-4” by 9” deep throat micrometer.

Glastonbury marked with black wrinkle frame and a match to the 2-3” size above. This one’s just bigger, deeper. There’s a Watergate etc. joke somewhere here about deep throat micrometers, which we’ll leave to you. Very good condition.

$80 donation

Sonoike Manufacturing Co.

is (according to a Mitutoyo history of the micrometer), the first Japanese company to make a micrometer. The company had two main parts; one making machine tools and the other small tools. Their 1918 micrometer prototype was based on C.E. Johansson’s mode and by 1921 the company was exhibiting micrometers at a Japanese machine tool show.

Item #429
Sonoike 0-25mm micrometer marked “Sonoike Tokyo.”

This is of a completely conventional design – almost identical to some German exports for example – but made to a high standard. Someone at COFES may be able to decipher the paperwork affixed to the lid – which appears to be a detailed inspection report.

$30 donation
Sorensen Center-Mikes, Inc.
(Bridgeport, Conn). Makers of an ingenious device to measure the distance between hole centers to .001”

Item #430
Sorensen Center-Mike to measure hole centers from .24 to 7.4” apart.

In wood box with instructions and advertising brochure. Likely late 50’s to 60’s. An unusual but still useful tool

$50 donation

Standard
brand; as sold by Majestic Tool & Hardware Co. of Chicago, IL. The same unknown manufacturer made a mic with a Chicago brand decal. The frame design looks to be copied from Slocomb. Cheap import? US?

Item #431
“Standard” brand 0-1” micrometer with black painted frame and cardboard box marked Majestic Tool & Hardware Co.

Low cost mic (poorly made) from an unknown maker. The first wave of really cheap imports? A US manufacturer?

$10 donation

Item #432
“Standard” brand 1-2” micrometer with black frame and slightly fancier knurled thimble.

Decal is largely missing.

$10 donation
Item #433
“Standard” brand 0-1” and 1-2” micrometers with slightly fancier knurled thimbles.

$20 donation.

Item #434
“Chicago” brand 0-1” mic with the slightly fancy thimble, as above.

$10 donation
L. S. Starrett Co.

L.S. Starrett Co. (Athol, MA) was founded in 1880 by Laroy S. Starrett (1836-1922). Starrett received early patents for a food chopper (1865; without the “it slices, it dices . . .” tag line), a washing machine, and a food press (1873). The food chopper and press were later made by the Athol Machine Co. By 1876 he invented the combination square – in a form which is still dominant today. Foreshadowing today’s patent battles, Starrett had a massive battle with former associates of the Athol Machine Co. over his combination square patent. Starrett prevailed, at a cost, and saw patent strategy as a key to competitive success for the next several decades. As a measure of his competitiveness, Starrett later acquired the Athol Machine Co. in 1905.

By Catalogue No. 13 (1895) Starrett was making his #3 “speeded screw” micrometer – examples of which are in the collection.

Beginning around 1902 (Catalogue #16) or earlier, Starrett tools have been marked with “L. S. Starrett Co.” rather than “L.S. Starrett.” A old tool without the “Co.” is likely from the late 1800’s.

Starrett now has manufacturing facilities in the US, Brazil, the United Kingdom, and China, with annual sales around $250 million.

Item #435

#3 Starrett 0-1” micrometer with May 4, 1897 and Dec. 5, 1906 patent dates; protected in a now-worn Starrett case.

In excellent condition for its age.

$50 donation

Item #436

#3 and #217 Starrett 0-1” and 1-2” micrometers; looking great for centurions.

Both have the old three knurl thimble and front lock; with 1890, 1891, and 1897 patent dates on the frame. The 1” is slightly newer vintage with a (slipping) ratchet and a 1900 patent date on the end of the thimble. The 2” has a plain thimble, made prior to the 1900 patent. No extra markings – very good condition for their age.

$75 donation
**Item #437**  
#2 Starrett 1-2” micrometer with old patent dates.

All polished steel with a ratchet and lock. This has 1880, 1881, and 1897 patent dates on the frame and a 1900 date on the end of the thimble. Three knurls on the thimble. A perfect mate to one of the century-old #3 micrometers below; in very good condition.

$60 donation

**Item #438**  
#2 Starrett 1-2” micrometer with patent dates of May 4, 1897 and Dec. 10, 1907 stamped on the back.

Good condition with all the usual #2 features for the time.

$35 donation

**Item #439**  
#2 Starrett 1-2” micrometer plus a #212 anvil extension for a range of 0-2 inches.

Frame has decimal equivalents and a December 30, 1902 patent date on the back. Very good condition.

$50 donation

**Item #440**  
#2 Starrett 1-2” micrometer with 1880, 1881, and 1897 patent dates.

Single knurl on the thimble and no 1900 patent date suggest a late 1890’s build date. Rare micrometer in poor condition with pitting (home electro polishing might help) and deep scratches.

$30 donation
**Item #441**

#T2XFL Starrett 1-2” micrometer. Mint condition, modern design, in somewhat worn Starrett clamshell case.

Includes friction thimble, lock, and decimal equivalents on the frame. Factory marked “No. 2” on the thimble. Stiff spindle from congealed oil – it will ease up with cleaning and fresh oil. Pair this with a mint condition #230F or #231-F micrometer.

$70 donation

**Item #442**

#3 old Starrett “Speeded Screw” micrometer 0-1” with 1890 and 1891 patent dates.

This is one of the first Starrett micrometers (with only this model and single-knurl thimble type listed in their 1895 catalog No. 13). The “Speeded Screw” reference is to the small diameter thimble at the back – the first instance of this useful feature. An auction note is included, showing a $295 final price for one example.

$150 donation

**Item #443**

Unbranded micrometer – but almost surely a rare Starrett example given both the very old style Starrett micrometer body and a frame style the company briefly used (more info under “unknown”)

$?? donation

**Item #444**

#3 Starrett 0-1” micrometer with old patent dates.

Similar to the old #220 micrometer elsewhere, but without the finger hold. This has 1880, 1881, and 1897 patent dates on the frame and a 1900 date on the end of the thimble. Includes a ratchet and front-side roller type lock. Old micrometer in original black case.

$60 donation
Item #445
#3 Starrett 0-1” micrometer with Dec. 30, 1902 patent date.

All polished steel with ratchet, lock, and decimal equivalents. Tiny H.G. neatly stamped on the lower frame. Includes Starrett wood box. We should all look so good around 110 years old.

$30 donation

Item #446
#3 Starrett 0-1” micrometer with old patent dates.

Another vintage example, in an old Starrett eyeglass type case. This has 1880, 1881, and 1897 patent dates on the frame and a 1900 date on the end of the thimble. Includes a ratchet and front-side roller type lock.

$60 donation

Item #447
#3 and #226 Starrett 0-3” set in plush fitted black case with standards.

This is an old set of three micrometers in good condition. The 0-1” micrometer is an all-steel #3. The 1-2” and 2-3” have the heavier frames of the #226 series, ratchets, and locks. Living history.

$100 donation

Item #448
#52 Starrett

surface gage with a patent date of March 21, 1882. The date is visible around the top part of the collar holding the scriber. There is a fine height adjustment knob and lock in the base. The cutout in the circular base allows the gage to scribe low to the base and, especially, to be used as a depth gage. This is how parts were laid out a century or more ago.

$35 donation
Item #449
#52 Starrett

A surface gage in a larger size, probably dating from around the 20's. The Starrett name is inscribed on the spindle about 5” up from the base. Note the fine height adjustment knob. The cutout in the circular base allows the gage to scribe low to the base and, especially, to be used as a depth gage. Nice shape, still quite usable.

$30 donation

Item #450
#86 (though not so marked) Starrett 0-1” U.S. standard sheet micrometer and weight indicator.

The #86 designation appeared around 1900. This has Starrett's oldest style thimble (a single narrow knurl) and dates from the 1890’s. It includes a stamped iron sheet gauge on the front side of the frame and 1890 and 1891 patent dates on the rear side of the frame. An old a rare micrometer in remarkably good condition for its age.

$150 donation

Item #451
#124 Starrett inside micrometer (very common) and a #447 (somewhat rare) mount to convert it to a height gage.

Includes 9 extension rods and a half inch spacer to cover a range up to 12” inside or height measurement. For height measurement, the #447 attachment is used on a flat surface plate. See the Lufkin listings for the same idea, executed with even more flair. The #124 is in good condition, with a slight tarnish on some rods and one rod (8-9”) missing. The #447 attachment is in very good condition.

$65 donation for both kits
**Item #452**

#127 Starrett “United States Government micrometer gage” with interchangeable anvils, a capacity from 4 – 8”, and its original fitted oak wood case.

These first appeared around 1902. “These gauges are designed to meet the requirements of the Government in making big guns and other work in the Ordnance Department . . .” The nicely designed frame is covered by a hard rubber – predating the age of plastics. The thimble type and absence of a “127” marking suggest this one was built around 1905.

$150 donation

**Items #454 to 456**

#128 Starrett six inch micrometer calipers.

Despite three examples, this is a fairly uncommon micrometer. All three include a front locking micrometer head (dating from about 1900 on). The idea of this tool was to provide the range of calipers with the precision of a micrometer. The beam has precisely located holes, allowing the head to be set at one inch intervals. Typical eBay prices on these have been around $200 (e.g. $216.06 on 10/30/02 and $237.50 on 5/17/2003).

**Item #454**

#128 Starrett six inch micrometer caliper, neatly engraved “The Crosby Co.”, with patent dates to 1897 lightly stamped on the rear of the frame.

This one likely dates from 1902-1905. It has a thimble style seen around 1902, but doesn’t have the front side company that show up in Catalog #18 (circa 1905).

$135 donation

**Item #455**

#128 Starrett six inch micrometer caliper likely dating from near the end of World War II (it has the inch markings on the beam, that are first shown in Catalog #22).

Somewhat rough condition (though no owner markings); but an example of an uncommon type.

$85 donation
Item #456
#128 Starrett six inch micrometer caliper.

I'd estimate this one from around the 1920's. It looks to still be accurate within the limitations of the design. The L.S. Starrett Co. logo is shown on the fixed anvil end of the beam.

$100 donation

Item #457
#175 Starrett 0-2" Inspector’s Micrometer with ratchet, lock, standard, and two curved anvils; all in original black fitted case.

This is meant to insert in plug holes to inspect the thickness of boilers and pressure vessels. A clever idea. New cost on these is $759 (Amazon.com). Given ASME's corner on pressure vessel standards, a must for ME's!

$100 donation

Item #458
#202 Starrett 0-1” micrometer with old patent dates.

Similar to the very old #3 micrometers elsewhere, but without a cut-away frame or front lock. This has 1880, 1881, and 1897 patent dates on the frame and a 1900 date on the end of the thimble. Includes a ratchet and decimal equivalents on the frame.

$55 donation

Item #459
#203 Starrett 0-1” micrometer in original black leather covered case.

Pretty simple. No ratchet, no lock, just decimal equivalents. First mic I owned, first year in college.

Gone to a college friend
**Item #460**  
#205 Starrett steel mill micrometer 0-1” with heavy all-satin chrome frame with decimal equivalents, a large thumb lock, large numbers, and a handle.

This type first appeared with catalog #26A around 1938. Just in time for our growing steel industry. This example is in near mint condition, but with chipping to the paint on the handle. No reason it won't work fine for ordinary .001” measurements.

$100 donation

**Item #461**  
#205 Starrett steel mill micrometer 0-1” with heavy all-satin chrome frame with decimal equivalents, a large thumb lock, large numbers, and a handle.

This type first appeared with catalog #26A around 1938 (just in time for our growing steel industry). This example is fairly good used condition, but with an identifier (“HM1”) etched into the rear of the frame. Includes handle. The method of handle attachment is different from the above; with a screw through the handle and into the frame – it may have been an early design, later abandoned?

$65 donation

**Item #462**  
#205 Starrett steel mill micrometer 0-1” with heavy all-satin chrome frame with decimal equivalents, a large thumb lock, and large numbers.

This one is missing its handle, but is in otherwise very good condition. The type first appeared with catalog #26A around 1938. Fit your own desktop stand?

$50 donation
Item #463
#207 Starrett 0-1” micrometer, all polished steel with a center roll lock, a .0001” vernier, and a June 2, 1914 patent date stamped into the back of the frame.

A style commonly used for WWI production; that still looks to be in good condition.

$45 donation.

Item #464
#207 Starrett 0-1” micrometer with a front side lock and a .0001” reading vernier.

Lightly tarnished and scratched, but still personable and accurate. This one is a bit of a puzzle. Catalog #17 (1903) is the last one to show the #207 with a front side lock. However, the thimble is of a later type. Perhaps—a testament to interchangeable parts—it was switched along the way? The #207 was retired, and later used for can seam micrometers.

$20 donation

Item #465
#207/208 -style “can seam” micrometer in stainless steel.

Tiny Starrett micrometer head (with no model number stamped) and a specialized anvil for measuring the seams on beverage cans. Marked with the “Canco” (the American Can Company) logo near the anvil. Canco itself went from being a part of the Dow Jones Industrial Average to being a part of history. This mic is in mint condition in a Starrett cardboard box. It would also work as a wire micrometer.

$45 donation
Item #466
#209-F (and C) Starrett 0-1” micrometer with all-satin frame, decimal equivalents, friction thimble, and .0001” vernier.

Also includes the cut-way frame, often designated “C.” This is another vintage micrometer where Starrett has retired the number and later reused it (for a “Can Curl” micrometer). Near mint condition, in Starrett cardboard box.

$40 donation

Item #467
#210-A Starrett 0-1” point micrometer.

For thread comparisons and small grooves (compare to Lufkin No. 1911 C).

$25 donation

Item #468
#210-A Starrett 0-1” point micrometer.

Nice shape, but with slightly tarnished pads and a frame (nicely) modified to fit in even tighter spaces.

$25 donation

Item #469
#211 Starrett 0-1” ball anvil micrometer; reaches into holes as small as 5/8 of an inch.

Satin chrome thimble with decimal equivalents. Includes red Starrett #910 clamshell case. New, they’re around $125 without the case. This is like new.

$45 donation
Item #470
#212 Starrett anvil attachment for two inch micrometers; in original cardboard box.

Converts Starrett 2” micrometers to 0-1” reading. Near mint condition.

$30 donation

Item #471
#212 Starrett anvil attachment for two inch micrometers in used condition.

Converts Starrett 2” micrometers to 0-1” reading. Buy one of the older Starrett 2” micrometers and have it do double duty.

$20 donation

Item #472
#212 anvil extension and #2RL micrometer; for a combined 0-2” range.

Satin chrome, with a center roll lock, ratchet, and decimal equivalents on the frame; all in original black plush fitted case. The #212 idea goes back to about 1900, but this is a more recent vintage in excellent condition.

$65 donation

Item #473
#213 Starrett 1-2” micrometer with an old style front locking nut and a single knurled thimble.

Essentially the same as an early #2 Starrett, with the addition of a .0001” reading vernier. Worn look on the back side of the frame; otherwise good.

$30 donation
**Item #474**

#215 Starrett 0-1/2” micrometer with ratchet and decimal equivalents.

Missing the knurled lock nut.

Free to the first person who anyone who:
- 1) Buys more than $300 of mics.
- 2) Plans to learn how to knurl on a lathe

**Item #475**

#216 Starrett 0-1/2” micrometer; predecessor the #232 model.

Has a ratchet and decimal equivalents. Starrett retired the number and later used it for their mechanical digital micrometers. A bit of tarnish and wear, but overall very good.

$35 donation

**Item #476**

#216 Starrett 0-1” mechanical digital micrometer.

Recent ones have a cost-reduced painted frame. This has the earlier (sleek!) all-satin chrome design. New condition in its cardboard box, clamshell case, and paperwork. Includes a friction thimble and lock.

$90 donation

**Item #477**

#217-C Starrett 1-2” micrometer in excellent condition.

Bright steel with center roll lock and decimal equivalents on the frame. The included 1” Starrett standard shows it to be right on. Right on! Good match to an earlier (no chrome for us) Starrett 0-1” mic.

$30 donation
**Item #478**  
#220 Starrett 0-1” micrometer with finger-holding ring in original case.

This has the old style thimble with three knurled bands, plus 1880, 1881, and 1897 patent dates on the frame and a 1900 date on the end of the thimble. Includes ratchet and front-side roller type lock. The number 220 was retired and then later used for Mul-T-Anvil micrometers. Uncommon mic due to both the age and the finger hold. A 12/24/02 auction price for an identical mic was $156.62.

$80 donation

**Item #479**  
#220 Starrett 0-1” micrometer with finger-holding ring.

This has 1897 patent dates on the frame and a 1900 date on the end of the thimble. It will be slightly newer than the example above. Note that the number 220 was retired by Starrett for a while and then later used for Mul-T-Anvil micrometers. Uncommon mic.

$65 donation

**Item #480**  
#220 Starrett 0-1” special (Braille) Mul-T-Anvil micrometer in original cardboard box.

These multiple anvil micrometers allow special anvils to be inserted. Pins, for example, can reach into tubes and holes. A flat anvil can measure grooves to shoulders. What’s rare about this one is that the graduations are all in Braille. This surely beats the usual motivational poster hanging on corporate walls?

$80 donation
Item #481
*T221XL Starrett Hi-Precision micrometer.*

This unusual micrometer measures directly in .0001” and uses a constant pressure system for accurate and repeatable measurements. New cost is $363 (Amazon.com). This one is in mint condition in its original cardboard box. A somewhat older vintage with a patent number on the reverse side of the satin chrome frame.

$95 donation

Item #482
*T221XL Starrett Hi-Precision micrometer.*

This unusual micrometer measures directly in .0001” and uses a constant pressure system for accurate and repeatable measurements. New cost is $363 (Amazon.com). Mint condition in its original modern eyeglass type case.

$105 donation

Item #483
#222 Starrett 0-1” by 6” deep throat micrometer with a ratchet.

Reaches deep into sheets as well as regular measurements. The original and beat up fitted black case looks to have kept the micrometer, it's older style (decimal equivalents) satin chrome thimble, and wrinkle black painted frame in pristine condition.

$70 donation

Item #484
#223 Starrett 0-1/2” paper gauge micrometer with ratchet, lock, and decimal equivalents in #921 Starrett clamshell case.

Includes finger hold. All in very good condition.

$70 donation
**Item #485**

#223 Starrett 0-1/2” paper gauge micrometer with ratchet, lock, and decimal equivalents.

Worn but working, with the interesting finger hold.

$25 donation

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**Item #486**

#224-A Starrett 2-6” interchangeable anvil set in original oak case.

Overall good condition with all four anvils and four standards. A good way to extend one of the many 1-2” sets.

$65 donation

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**Item #487**

#225 Starrett 0-1/2” vintage paper micrometer with wide anvils.

Mint condition in small hinged black leather case. Includes ratchet, lock, and decimal equivalents on the frame. This has been superceded by the #223 paper micrometer, with the #225 number going to wire micrometers.

$100

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**Item #488**

#225 tiny Starrett micrometer 0-.5” with 1890-1897 patent dates engraved.

This is a fairly rare mic; but bit of a project – turning an anvil to fit.

$25 donation
Item #489
#226 Starrett 1-2” micrometer two pack. One has the plain steel and the other a satin chrome thimble.

Something old, something new. Both are in good shape; but there is only one front lock nut to share between them. Put it on whichever mic you want.

$30 donation for the pair

Item #490
#226RL Starrett 1-2” micrometer with steel thimble; user modified for the blind.

This was custom machined with added elements. It’s unclear if this is an early Starrett special or user modified. Compare to the other #226 Braille version, which has different elements for reading. People rise to meet the challenges facing them.

$70 donation

Item #491
#226RL Starrett 1-2” micrometer with satin chrome thimble; Starrett special for the blind in original cardboard box.

This was a custom order Starrett item, manufactured after the other example. The system of markings is consistent with the “Special” #220 Braille micrometer listed elsewhere.

$70 donation

Item #492
#226 Starrett 1-2” and 2-3” micrometers with ratchets, locks, and 1891 and 1897 patent dates on the rear pads.

These have the desirable heavier frame style and are in very good condition; even disregarding their age. Mate them to a 0-1” Starrett for a micrometer set that has both history and accuracy on its side.

$65 donation
**Item #493**  
**#226 Starrett 0-6” micrometer set with carbide anvils, ratchets, and locks.**  
These are in a B&S case. These have a stronger and heavier weight frame than Starrett’s ubiquitous #436 series. The 0-1” mic is an all-chrome #230. Both it and the 1-2” mic have .0001” verniers. The chrome is pretty much flawless; while there are minor flaws to the paint. Note the clip-over pieces which are non-original. Overall, a nice set in a fitted velvet lined case, which while non-original, beats cardboard boxes.  

$195 donation

**Item #494**  
**#228 Starrett 0-1” hub micrometer; all-satin chrome with ratchet and roller type lock.**  
Includes original red Starrett snap case. Designed to reach into areas such as pulley, wheel, and gear hubs; but works fine for any measurement within its depth. An engraving on the back has been covered with chrome tape. Compare this to the #263 micrometer head mated to a hub frame.  

$35 donation

**Item #495**  
**#T230RL Starrett 0-1” micrometer with all satin chrome frame, decimal equivalents, a ratchet, and lock.**  
Reads to .0001” and is in very good condition. Nice mic.  

$30 donation

**Item #496**  
**#T230RL Starrett 0-1” micrometer with all satin chrome frame, decimal equivalents, a ratchet, and lock.**  
Reads to .0001” and is in very good condition. Includes black Starrett leatherette case.  

$35 donation
**Item #497**

#T230XFL Starrett 0-1” micrometer. Modern design with friction thimble, lock, all satin chrome, .0001” vernier, carbide anvils, and decimal equivalents.

Stamped No. 230 on the thimble. Pair this with the #T2XLF in a red clamshell case. Near mint condition in original cardboard box.

$55 donation

**Item #498**

#231 Starrett 0-1” micrometer – predecessor to the same-featured and looking #230 but with an all steel finish.

These older #231 models have a slightly more pronounced cut away frame (for reaching tight spots). This one is faintly scratched or marked in several places; but the ratchet, lock, and spindle all work fine. #1 example. New versions of this micrometer have added thermal pads.

$20 donation

**Item #499**

#231 Starrett 0-1” micrometer – predecessor to the same-featured and same looking #230 but with an all steel finish.

Same as the #1 example, but somewhat brighter and better condition. Call this the #2 example.

$25 donation

**Item #500**

#231 Starrett 0-1” micrometer with all-satin chrome frame with decimal equivalents, a ratchet, lock, and .0001 vernier.

Very nice, but with the faintest inscription on the back.

$30 donation
Item #501
#231-F Starrett 0-1” micrometer. Modern design with friction thimble, lock, all satin chrome, .0001” vernier, and decimal equivalents.

An excellent pair to the This model number (stamped No. 231-F on the thimble) has since been superceded by #230. Near mint condition in original cardboard box.

$55 donation

Item #502
#232 Starrett 0-1/2” micrometer. Identical to those below (T232RL) except a slightly older (better?) vintage with all satin chrome for even the ratchet and lock.

Mint condition in older Starrett cardboard box.

$75 donation

Item #503
#232 Starrett 0-1/2” micrometer.

Identical to later T232RL mics; but bright chrome all over. Good condition; lock ring needs work.

$35 donation

Item #504
#T232RL Starrett 0-1/2” micrometer. Like new in original cardboard box – a great gift.

Tiny mic includes a ratchet, lock, and .0001” vernier. May have a stiff action from sitting.

$75 donation
**Item #505**

#T232RL Starrett 0-1/2” micrometer. A second mint condition micrometer in original cardboard box.

Last person I gave one of these to has turned into an extremely gifted architect, specializing in LEED certified design. Tiny mic includes a ratchet, lock, and .0001” vernier.

$75 donation

**Item #506**

#T232RL Starrett 0-1/2” micrometer.

A fourth #232 micrometer in excellent condition. No box. These tiny mics fit anywhere from a pocket to an auto ashtray to a purse. Justify a man-purse? Fit it to a necklace for a bold fashion statement?

$55 donation

**Item #507**

#T232RL Starrett 0-1/2” micrometer.

Like those above, but with slight signs of use and no case. Tiny mic includes a ratchet, lock, and .0001” vernier.

$45 donation

**Item #508**

#234 Starrett micrometer calibration standards.

There are two 5” (for up to 5-6” mics), two 4” (for 4-5” mics, you get the idea, two 3”, four 2”, The 1” usually runs around $20 new; going up a bit in cost with larger lengths. If you want to be able to check and adjust – and your mic doesn’t have one included . . .

$7 donation each
Item #509
#238RL  Starrett heavy duty 0-1” micrometer with all satin chrome, ratchet, lock, and decimal equivalents on the frame.

This is designed for heavy work, such as grinding or when using the micrometer with the lock fixed. Desired by some due to its heft, reliability, and relative scarcity. Near mint condition in original cardboard box with paperwork and adjustment wrench.

$70 donation

Item #510
#263 Starrett 0-1” micrometer head mated to an shallow frame for use as a hub micrometer.

Hub micrometers are meant to reach into holes (e.g. pulleys) and measure thickness. Well executed; perhaps well enough to have been an early Starrett build of this type micrometer?

$30 donation

Item #511
#436 Starrett 0-1” and 1-2” micrometers.

The Starrett #436 series has been one of the best selling micrometers over a period of decades. These earlier examples have the plain steel thimbles with decimal equivalents, ratchets, and locks. Enamel black frames. Larger “STARRETT” on the front pad. Everything (spindle, ratchet, lock) works fine on these, but they could use paint and polish all around.

$25 donation

Item #512
#436 Starrett 0-1” and 1-2” matched pair.

Older satin chrome spindle (decimal equivalents) and black enamel frame. Good condition, with slight tarnish to the pads and control numbers in the paint. A good father/son, mother/daughter and other permutations project to spiff it up like new.

$30 donation
Item #513  
#436 Starrett 1-2” micrometers (two) showing product evolution.

Both have older plain steel decimal equivalents thimbles. The first example has a deeper frame and “STARRETT” on the front pad (with the thimble headed to the right). The second example has a center roll lock; with the size and model designation on the “front” and the Starrett name on the “back.” The paint is damaged on both.

$30 donation

Item #514  
#436 Starrett 2-3” micrometer with the deeper frame style, decimal equivalents on the plain steel thimble, a ratchet, and center lock.

Possible addition to matching age #3 and #2 mics. Checks OK with a 2” standard.

$15 donation

Item #515  
#436 Starrett 5-6” micrometer with the older satin chrome spindle (decimal equivalents), ratchet, lock, carbide anvils and black enamel frame.

Very good, save for a bit of tarnish to the pad and scratches in the paint – both easily fixed.

$25 donation

Item #516  
#436 set of six Starrett micrometers 0-6” in Starrett wood case.

Mics have satin chrome thimbles with decimal equivalents on them, dark ratchets, bright locking knurls, and .0001” verniers. Carbide anvils on the two most commonly used (1” and 2”) Also includes Starrett standards within their own wood case.

$395 donation
Item #517
#436 Starrett 6-7” micrometer with older satin chrome spindle (decimal equivalents), ratchet, lock, and wrinkle black frame.

Perfect to add to the 0-6” set above. Excellent condition.

$35 donation

Item #518
#436M Starrett 125-150mm micrometer with rounded anvils, friction thimble, and lock.

Very good condition, with a tiny P-6 in the pad.

$25 donation

Item #519
#436 special 1-2” steel mill micrometer. This may be an earlier attempt (before 1938) at the #205 steel mill micrometer or just a larger size built to order.

It includes a standard Starrett #436 frame with an older style satin chrome thimble with decimal equivalents on it. The addition is a boss on the frame allowing a wood handle to be affixed. A complement to the #205 micrometers listed elsewhere.

$60 donation

Item #520
#436 special 2-3” steel mill micrometer.

This is a later version (Starrett decal on the front pad), with the same spindle and thimble design as the #205 series. It is mated to a #436 style frame with the added boss, a wood handle, plus a thumb lock. The thimble is engraved “Special.” This was destined for someone who wanted a hot and heavy duty micrometer in a larger size. Very good condition, with a tiny inscription in the front pad.

$60 donation
Item #521
#447 Starrett height gage attachment.
for #124 inside micrometer.

Included with Item #451

Item #522
#486-1 Starrett 0-1” blade micrometer in near mint condition.

Used to measure grooves in shafts. New, they’re $313 (Amazon.com).

$100 donation

Item #523
#569 Starrett 0-1” tubing micrometer.

Rather than the ball anvil type, this has a 3/16” minimum diameter stem. Older style satin chrome thimble with the decimal equivalents. With original (marked up) cardboard box. Mic is in near mint condition.

$60 donation

Item #524
#576 Starrett 0-1/2” micrometer with rounded anvil, satin chrome cut-away frame, decimal equivalents, and ratchet.

Around $160 new. Very good, near excellent condition (a ding on the end of the frame).

$55 donation

Item #525
#576 tiny Starrett ball anvil micrometer 0-.5”

As above. Meant primarily for measuring the wall thickness of tubing and pipe, but suitable for occasional use on flat work as well.

$30 donation
Item #526
#650 – see Item #443.

Surely a Starrett, under the “unknown” section for what may have been an early prototype headed towards the #650 style.

Item #527
#733XFL-1 Starrett 0-1” electronic digital micrometer with SPC output.

Includes friction thimble and lock and boasts “American Made” on the rear thermal pad. Newer ones may now be made in China. Has a sort of Darth Vader-like design that looks better than the equivalent Mitutoyo; but the battery life isn’t as good. This is in like new condition with its red Starrett case and paperwork.

$100 donation

Item #528
#914 “Handy Automotive Service Set” consisting of #224-AA micrometer 0-4” and #452-B cylinder gage.

Remember when everyone did their own work on cars? This set likely dates from around 1954. It has the decimal equivalents on the thimble (mostly abandoned for a knurled thimble by 1955) but the then-newfangled satin chrome plating. Given the case, it looks to have been used on at least one engine. The tools, however, appear have retained their accuracy.

$70 donation

Item #529
#1230 Starrett 0-1” all stainless steel micrometer.

The #230 / #231 style of micrometer, but built to be corrosion resistant. Includes a ratchet, lock, and stamped decimal equivalents on the frame. Mint condition in Starrett eyeglass-type case.

$90 donation
Item #530
#T1230 Starrett 0-1” all stainless steel micrometer.

The #230 / #231 style of micrometer, but built to be corrosion resistant. Includes a ratchet, lock, and stamped decimal equivalents on the frame. Excellent condition in soft vinyl case.

$70 donation

Item #531
Starrett “Special” 0-1/2” x 2” deep throat micrometer with pointed anvils.

All satin-chrome with ratchet, lock, and decimal equivalents on the frame. Like new condition in original cardboard box with paperwork.

$45 donation

Item #532
Starrett “Special” large micrometer with pointed anvils, plus a black stand.

My thought was to get a 6-8” world globe and then place the micrometer with the anvils located at the poles. Follow the world’s happenings with greater precision.

$60 donation

Steinmeyer
(Germany); founded by August Steinmeyer in 1920, beginning with the manufacture of high quality micrometers. The founder died in 1940 and his company acquired after the war, in 1950. August Steinmeyer’s original house and attached workshop became the starting point for what is now an factory complex on 8 acres. Steinmeyer made a variety of high quality micrometers, but now concentrates on ball screws. So, the saga of precision screw manufacturing continues. Steinmeyer still makes micrometers, but at the FMS (Feinmess) Suhl plant in Thuringia.

Item #532
Steinmeyer 0-1” micrometer.

All satin chrome with a ratchet, lock, and decimal equivalents on the frame. Well made and very good condition.

$35 donation
**Item #533**  
Steinmeyer 0-1” blade micrometer with a stronger frame, spindle, and larger thimble than most competitors.

Very nicely made with a satin chrome finish, decimal equivalents on the thimble, a ratchet, and large thermal pads. These are costly mics, designed for reaching into groove depths and other tight spaces. Marked as meeting DIN standards. Excellent condition in a Steinmeyer wood box.

$80 donation

**Item #534**  
Steinmeyer 0-1” Microfix micrometer.

This is a slightly earlier version than the 0-1” mic included in another listing with a 1-2” mic. It has a fraction/decimal chart instead of thermal pads. It still includes both a rapid precision screw (like the much esteemed Etalon Microrapid) plus a reading window. Note that this Microfix screw mechanism is the same as found in an elaborate Polyplan (Geneve) micrometer set. A very high quality mic, even harder to find than the Etalon Microrapid, but not quite as smooth in operation due to the digital window.

$105 donation
**Item #536**  
**Steinmeyer 0-1” and 1-2” Microfix micrometers.**

This pair of micrometers is a rare “Rolls Royce” sort of endeavor. It includes both a rapid precision screw (like the much esteemed Etalon Microrapid) plus a reading window. It includes the fine finish, lock, thermal pads, and pressure ratchet required of any top quality micrometer. The 0-1” mic is in mint condition, with all its paperwork (including a certificate of compliance with DIN standards). The 1-2” mic came from another source and is well used. It should clean up pretty well. Judging from the enclosed standard, it also appears to be in perfect adjustment. Cool, rare, and collectible; with a donation price less than the value of just the 1” mic. Note that this Microfix screw mechanism is the same as found in an elaborate Polyplan (Geneve) micrometer set described elsewhere.

$220 donation

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**C. Stiefelmayer**

(Esslingen, Germany) was founded by Carl Stiefelmayer in 1874 to produce measuring instruments. At some point it made micrometers, witness our example. The company continues today as a producer of various 3D metrology instruments and more.

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**Item #537**  
**C. Stiefelmayer**

0-50mm micrometer with original accessory anvil for 0-25mm and a basic frame for 25-50mm. Essentially two micrometers in one. The accessory anvil idea was also seen in early Starrett micrometers, more recent Mitutoyo and NSK micrometers, and others). Includes ratchet and lock. The frame style is along the lines of some Brown & Sharpe mics from the early 1900’s.

$40 donation
Stoetling Co.
was founded in 1886 as the Chicago Laboratory Supply and Scale Co. It has long supplied psychometric and other lab instruments.

Item #538
Stoelting/Krieg stereotaxic positioner No. 51200.

Here's a macabre bit of mechanism; meant for probing small minds. This is a jig meant for brain stimulus/response research with rats. Put it your desk and get the inevitable “what's that?” question. Then, watch them step away unsteadily as you explain . . . This is repeatable to .01mm in two axes and 1 degree of rotation.

$100 donation

Sunnen Products Co.
(St. Louis, MO) was founded in 1924. Leaders in a lot of boring (and we mean that in the best manufacturing sense) stuff.

Item #539
Sunnen 0-1” large thimble satin chrome micrometer head; made for them by the Starrett Co.

Reads directly in .0001” coming and going. This wants to be put to use.

$35 donation.

Supreme
(Germany)

Item #540
Supreme 0-1” micrometer with long speeder / ratchet (nice design feature – allows use of the speeder without engaging the ratchet)

with a lock and the typical black fitted case of German export mics. Nicely made, likely during the time when Germany was split East and West. It looks to have once had an applied label with decimal equivalents. See also the “Unknown 0-1” micrometer with long speeder / ratchet . . . ”

$30 donation
Swedish Gage Co.
(Eskilstuna, Sweden) – see also the CEJ (Johansson) company. The Swedish Gage Co. is noted (Google e-book) in the 1917 Machinery (Volume 23) as having been capitalized under this name. The management apparently remained the same as C. E. Johansson AB, founded in 1911. Johansson is best noted for the invention of gage blocks ("Jo blocks") in 1896; with his first Swedish patent granted in 1901 – an amazing technical achievement for the time. The first set of gage blocks sold here went the Henry Leland at Cadillac Automobile Company around 1908. Henry Ford made a significant investment in the company; and Johansson himself moved to Detroit around 1923.

Item #541
Swedish Gage Co. 1 3/8 to 2” bore gage in wood box, as sold in Detroit.

The patent numbers place this in the early 1930’s. One of the four supplied “legs” is adjusted exactly to size for the desired bore size. Measured differences are shown as plus or .001 and .0001 through a clever dual reading indicator. On each side of the measuring leg there is a pair of spring-loaded retracting pins to center the indicator in the bore.

$75 donation

Item #542
Set of 3 Swedish micrometers
(Eskilstuna, Sweden) from the Swedish Gage Co. These share the standard design features of high quality micrometers established among most makers by the early 1920’s or so – a ratchet thimble, a spindle lock, a .0001 reading vernier and so on. In many ways the standard micrometers from the US (e.g. Starrett, B&S), Japan (see the Nachi set), Germany, and the U.K. (e.g. Moore & Wright) are variants on this theme. However, these three have a bit of pedigree. Carl E. Johansson invented the gage block in 1896 – and with the help of Henry Ford it became the world standard as a measurement reference. Johansson’s CEJ Company also of Eskilstuna was the forerunner maker of these mics. This set was still in use (see the calibration stickers) in 1981. Given the Ford connection, and significant penetration of Swedish precision instruments into Detroit (through Ford), it’s likely these were used by an auto supplier of the time.

$85 donation

Swiss Precision Industries
– SPI – is a distributor
Syracuse Twist Drill Co.
was founded prior to 1885 in Syracuse, NY.

Item #543
Syracuse Twist Drill Co (S.T.D. Co)
(Syracuse, NY) 0-6” micrometer. Patented by John Sweet March 10, 1885 and sometimes known as Sweets Measuring Machine. Marked 582 along with “S.T.D. Co.” and the Sweets System patent date. A rare precision tool, about 125 years old, from a city that was once a manufacturing center. It is adjusted to size with gage blocks or micrometer standards. Note (from a calibration sticker) this looks to still have been used as recently as 1987 – a testament to its robust design. This should be restored to like-new condition. Bring the frame to bare metal, add new black enamel, carefully polish the bright bits, and make a stand. It will then happily reside on any engineer’s desk.

$170 donation

Tavannes Machine Co. S.A.
(Tavannes, Switzerland). Tavannes Watch Co. was founded by master watchmaker Henri-Frédéric Sandoz in 1891. The company grew; in part as the Swiss railroad system made accurate timekeeping necessary. In 1923 the company began to make machine tools for the Swiss watch industry. The Smithsonian notes literature from the Tavannes Machine Co. from the mid 1950’s. Contemporary watch industry catalogs also list the Tavannes / Bergeon horizontal micrometer (below) for well over £600 (about $1000).

Item #544
Tavannes 0-1” bench micrometer with large satin chrome rapid spindle and with a .0001” vernier.

Sold through the watch supply company Bergeron, Moore & Wright and others. Like all the Tavannes micrometers listed here, it has the same micrometer head as the fancier vertical model. Includes a friction/speeder and a fast-acting (.050/rev) thread. Wrinkle black painted body. Tavannes sells at least a dozen different anvil combinations for these micrometers. This has the standard type. Very good condition, with a bit of paint loss below the measuring area.

$80 donation
**Item #545**
Tavannes 0-1” bench micrometer with large satin chrome rapid spindle and with a .0001” vernier.

As above, with case and better condition. Note that the anvils of these bench micrometers are replaceable in different configurations; this has anvils of a somewhat larger than standard diameter – which is good for all but the smallest features. The case is marked with the dealer or owner’s information (Albert S. Roethelli Co., NY). Inside, there’s a calibration notice from 1992. Excellent condition.

$100 donation

**Item #546**
Tavannes/Bulova 0-25mm bench micrometer with plain steel thimble directly reading in .01mm.

In a custom case marked Tavannes, with the thimble end marked Bulova Watch Co. #9023. Likely sold to Bulova watch repair outlets. Wrinkle black painted body and what look to be small carbide anvils. Good condition.

$80 donation
Item #547
Tavannes 0-1” vertical design “instrument makers” micrometer, perhaps dating from the 50’s.

Looks a bit like a microscope in aspect, with a tilting vertical black wrinkle finish frame and a height adjustable “stage” with a rotating dial to hold various pin and arbor sizes. The large dull chrome thimble is marked “Swiss Made” and has a friction/speeder. It has a rapid acting screw (advancing .050 rather than .025 per revolution) and easily reads in widely spaced .001 increments plus a .0001” vernier. Pretty cool.

$90 donation

TESA

(Switzerland) was founded in 1941 as “Telephone SA.” One of the world’s top providers of micrometers for many years. The company initials TSA appear on its MINMETAL micrometers prior to renaming the company TESA in 1945. It developed TESA “IMICRO” bore gages in 1950; with some of them being sold under brand names such as Shardlow (England). The ingenious TESAMASTER digital mechanical micrometer (with a sort of rotating cube mechanism) was introduced in 1957; and distributed by Brown & Sharpe in the US. The company essentially merged into B&S in 1967. Around 1993, recession hit many precision measuring companies and TESA acquired Mercer Ltd., ROCH France (and its subsidiary Mauser), and Compac Geneve.

Brown & Sharpe (and TESA with it) was then taken over by the Hexagon AB (a large metrology conglomerate) in 2001. Cary (exquisite bench micrometers for the watchmaking industry – of which I have two examples) was also folded into the mix around this time.

Item #548
TESA (then, TSA) MINMETAL metric micrometer 0-25mm ;

probably manufactured between the company’s founding in 1941 and its name change to TESA in 1945. Very well made WWII era mic in excellent condition.

$50 donation
Item #549
Tesa 0-1” Micromaster micrometer in fitted leatherette case with ratchet and lock.

This is an early model of their mechanical digital micrometers in mint condition. The design (e.g. the printed decimal equivalents plates) looks to be shortly after the TSA > TESA name change. Beautiful and uncommon Swiss tool.

$70 donation

Item #550
TESA 0-1” Tesamaster Swiss-made micrometer with combination direct mechanical readout and .0001” vernier.

Brown & Sharpe sold this as their #200 model as the companies first cooperated and later merged. Outstanding micrometer in excellent condition.

$100 donation

Item #551
TESA 0-1” ISOMASTER Swiss-made micrometer with satin chrome and thermal pads.

Speeder, friction thimble, lock, slant lines, and Euro-style vernier (5 steps, since the mic reads directly to .0005 in. Slight flaw on front side of frame, otherwise near perfect in original case.

$60 donation

Item #552
TESA: imitation-is-flattery (?) two pack, consisting of a vintage TESA Swiss-made micrometer and its more recent Chinese clone.

The carefully made TESA has a friction “ratchet,” lock, thermal pads, carbide anvils, and a Euro-style five step vernier. The Chinese near-clone imitates most elements, but has a ten step vernier.

$50 donation (two mics)
Toyo Seiki Co. Ltd.
(Japan) appears to be a wide ranging manufacturer of components and materials.

**Item #553**
Toyo Seiki 0-1” micrometer with long ratchet / speeder, carbide anvils, and a lock.

The age (almost surely after WWII) is not clear to me. The Toyo logo is of an older style but the chrome thimble looks fairly recent. The locking mechanism also looks a bit older. In general, lever lock designs have gone from being machined (like this lock), to stamped steel (like, say, many Mitutoyo mics), to injection molded plastic (perhaps a majority of contemporary mics). In any case, this micrometer works well and has modest signs of use.

$30 donation

**Triumph**

**Item #554**
Triumph 0-25mm micrometer branded for and distributed by Swartchild – a long-time Chicago supplier of watchmaking and jeweler’s supplies. Cheaply made.

$5 donation
Tubular Micrometer Company (Tumico)
of St. James, Minnesota was manufacturing a line of micrometers with lightweight tubular steel frames by the “early 1940’s” according to the current S-T Industries web site. Their catalog numbering system (e.g. Tumico catalog 22 in January 1953) would suggest an earlier company start date since most competing toolmakers printed catalogs no more often than annually. Company catalogs describe their micrometer frames as hermetically sealed and containing a vacuum. The advantage, especially in larger sizes, was up to a 50% reduction in weight. While brands like Brown & Sharpe and Starrett commanded most of the US market during the Tumico years, the quality of their micrometers is generally quite good. Tumico also made micrometers for others to distribute; most notably the sapphire tipped models for the Elgin National Watch Co. See also the Scherr-Tumico company entry.

Item #555
Tubular Micrometer Co.
0-13mm mic with plain steel finish. Nice condition small micrometer for a metric age.

$20 donation.

Item #556
Tubular Micrometer Co.
0-13mm mic with satin chrome plated finish; in original cardboard boxed marked model H-50M. Essentially identical to the above micrometer, but with a more rust resistant finish.

$30 donation

Item #557
Tubular Micrometer Co. 0-1” micrometer with ratchet, sealed in plastic bag with blue cardboard box and paperwork.
Directly of the Reed design, with a slightly updated speeder/ratchet. Excellent condition but will likely need a solvent flush and re-oiling.

$30 donation
Item #558
Tubular Micrometer Co. 0-1” mic with chromed hollow frame, ratchet, lock, and a wood case.

Signs of wear to the hollow chrome frame; otherwise in good shape.

$30 donation.

Item #559
Tubular Micrometer 0-1” micrometer with a ball anvil, hollow frame, chrome plated, in a fitted black case.

$30 donation

Item #560
Tubular Micrometer Co. “rolling mill micrometer” with 1” range, a 3” depth throat, and a radius ground anvil.

Black frame, satin chrome thimble, with a ratchet. The deep throat allows measurements away from the edge of a sheet or part. The radius anvil allows the measurement of tubes and pipes in addition to flat articles. This micrometer was probably made in the 50’s and remains in good condition with a small brass plate marked “VEREZ” added (and most likely removable if desired).

$30 donation

Item #561
Tubular Micrometer Co. (Tumico) 0-4” interchangeable anvil micrometer (#M04) with a hollow (vacuum sealed) chrome plated frame.

Excellent addition for someone who may occasionally need a larger mic than 0-1” – and complete with standards and a black padded case. While in excellent condition, this is the older of the two examples, with a plain steel thimble.

$50 donation
**Item #562**
Tubular Micrometer Co. (Tumico) 0-4” interchangeable anvil micrometer (#M04) with a hollow (vacuum sealed) chrome plated frame.

Excellent addition for someone who may occasionally need a larger mic than 0-1” – and complete with standards and a wood case. This is the newer of the two examples, with a satin chrome thimble.

$55 donation

**Item #563**
Tumico 2-3” crankshaft micrometer with chromed finish in wood case.

Meant for measuring main bearing journals without removing the crankshaft from the engine block. Win “what is it?” bets in bars.

$50 donation

**Item #564**
Tumico 2-3” crankshaft micrometer with black wrinkle finish in wood case.

Meant for measuring main bearing journals without removing the crankshaft from the engine block. Well made.

$50 donation

**Item #565**
Tumico 200-300mm interchangeable anvil micrometer in original fitted wood box.

This is complete and in excellent condition with all four anvils and standards. The micrometer head is satin chromed with a ratchet and lock. The frame is brightly chromed and of the tubular form – prized in larger micrometers like this. Cool. Useful for those making larger parts to metric dimensions.

$95 donation

See Elgin for a rare sapphire-tipped micrometer made by the Tubular Micrometer Co.
Turner

is a century-old leather processing equipment company located in France but with international operations.

**Item #566**
**Turner leather thickness gage.**

I believe this is designed for measuring leather thickness; where 1/16” represents about a 4 ounce leather weight. Also marked in mm. Looks to be designed for quick use.

$35 donation

**Union Tool Co.**

(Orange, Mass). The Union Caliper Co. was established in 1915 and then reorganized as the Union Tool Co. in 1916. The company had about 100 employees when it was sold, in 1957, to the Millers Fall Co. I’ve also seen micrometers branded “Union Tool” that were clearly of Millers Falls design (with the ratchet at the end of the thimble and a small diameter speeder beyond that).

**Item #567**
**Union Tool Co. 0-1, 1-2, and 2-3” micrometers made for them by the Central Tool Co.**

Includes friction thimbles and lever locks. The 0-1” has a chrome frame, .0001” vernier, and carbide anvils. The 1-2” and 2-3” have wrinkle black frames. New-old-stock condition in original red cardboard cases. Probably Central /Union's best model. micrometers. A collectible bit of precision history (likely 60+ years old?) and also quite usable.

$90 donation

**Item #568**
**Union Tool Co. 0-1” micrometer #8210 made for them by Millers Falls.**

Includes the nicely designed combination of a speeder plus ratchet near the thimble end; plus a lock and decimal equivalents. It isn't clear if this tool preceded the Millers Falls acquisition or was an attempt to leverage Union Tool distribution (weak as it was). Example “A.”

$20 donation
Item #569
Union Tool Co. 0-1” micrometer #8210 made for them by Millers Falls.

Includes the nicely designed combination of a speeder plus ratchet near the thimble end; plus a lock and decimal equivalents. It isn't clear if this tool preceded the Millers Falls acquisition or was an attempt to leverage Union Tool distribution (weak as it was). Example “B.”

$25 donation

Unknown makers

These include a variety of possibly rare, but short-lived, makers with undecipherable names and others who failed to engrave their micrometers with a brand.

Item #570
Unknown maker 0-1” – almost surely by Starrett -- and possibly an early prototype.

This micrometer is a puzzle. The thimble and front lock looks very much like the earliest Starrett micrometers (late 1890's), such as the “Speeded Micrometer” shown on page 87 of Ken Cope’s “Maker’s of American Machinist’s Tools.” But the frame is of a different ribbed style (carefully made and fitted to the old micrometer head). This frame looks very much like a Starrett #650 micrometer (e.g. Catalogs #21 and #22), but those micrometers show a thimble design 20 years more recent, with both the thimble and frame (as seen in the catalogs) marked Starrett.

The entire micrometer has no company or patent markings of any sort; just the graduations. It came in an owner-built fitted wood box with what also looks like an owner-made adjustment spanner.

$100 donation
Item #571
**Unknown manufacturer.**

Warning/ “ass whoopin” sticker designed to protect your micrometers!

FREE to anyone who donates over $500

---

**Item #572**

**Unknown 0-25mm micrometer; likely very old given the style of micrometer and case.**

Of standard design; borrowing an early 1900’s design, judging by late 1800’s Starrett equivalents from which it may have copied. Marked with what is likely a model number (1933r, with the r likely for ratchet) and a No. 21898. It looks to be marked with a K and a reversed N; which might be KU in the Cyrillic alphabet. Nicely made; showing how the same basic design was duplicated by many manufacturers.

Note: later micrometer boxes from Kalibr in the Soviet Union were embossed with this logo. It is almost certainly an early Russian micrometer.

$45 donation.

---

**Item #573**

**Unknown maker, 0-25mm micrometer**

with knurled friction thimble and made to resemble a very early style. This is likely a more recent (say, 1950’s) and modestly priced import. The thread wear adjustment screw is not original.

$5 donation
**Item #574**  
*Unknown maker, early 0-15mm+ micrometer,*  
most likely for the watchmaking trade (note the small anvils). The carefully inscribed indications, fancy and large friction knurled thimble, open threads, and (worn) chrome-plated brass construction suggest a somewhat older micrometer.

$25 donation

**Item #575**  
*Unknown maker tiny circular form metric micrometer with a thickness gage (tenths of a mm) around the periphery of the brass disk.*

The whole thing is about 3 cm. in diameter. Meant for watch/clock/jeweler's trades.

$30 donation

**Item #576**  
*Unknown Swiss 0-10mm open thread micrometer* with brass frame. Despite the Swiss origin (marked Suisse and Switzerland on the frame) this is a modest quality mic made to be sold into the watchmaking and jewelry industry. Almost surely post WWII. Looks quite usable.

$15 donation

**Item #577**  
*Unknown maker 0-1” key micrometer in black leather case.*

While somewhat similar in appearance to a wire micrometer this is meant for measuring keys; to identify which pins go into the mating lock cylinder. The blade anvil fits the indentations of the key. With satin chrome micrometer head, friction thimble, and purpose-built frame and anvil. Well made, in excellent condition.

$30 donation
**Item #578**
Unknown maker 0-1” micrometer with chrome plate over a non-ferrous die cast frame.

The die casting has raised decimal equivalents, a fake lock is cast in, and the frame is marked “No. 86” and “G.L.” Chrome plated steel thimble with a speeder. Low cost mic.

$15 donation

**Item #579**
Unknown manufacturer. Group of four promotional micrometers; Case Iron & Metal; Sheldon Printing Machines, Penn Electric/Stanley Tools; and Garsite Products.

There is also a U.S. Steel version, sold separately. These were for valued customers; and have sold at auction for as much as $30+ each. Chrome and gold tone versions. Why buy four? Establish a secret micrometer conspiracy with four neighbor kids (grandkids, nieces, nephews . . .) each with their own micrometer!

$45 donation

**Item #580**
Unknown maker “United States Steel” 0-.5” micrometer.

Promotional micrometer (unknown manufacturer) given to the best customers at a time when U.S. Steel was still the globe’s dominant supplier. Pretend you were once a big time steel customer. This is by the same maker of the group of four promotional mics above.

$20 donation

**Item #581**
Unknown maker (West Germany) 0-25mm micrometer distributed by HR.

Note also a French-made (E.D.A.) micrometer in this collection distributed by HR to the watchmaking and jewelry trades. Good quality with an open thread and a nicely made friction/speeder.

$25 donation
<table>
<thead>
<tr>
<th>Item #582</th>
<th>Unknown maker, cast copy of a Starrett #230 micrometer.</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Like the broken clock, it's dead accurate every once in</td>
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<tr>
<td></td>
<td>a while? Someone went to a great deal of trouble to</td>
</tr>
<tr>
<td></td>
<td>make this; but note the casting shrinkage in the frame</td>
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<tr>
<td></td>
<td>area.</td>
</tr>
<tr>
<td></td>
<td>$25 donation</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Item #583</th>
<th>Unknown 1-2” micrometer marked “Made in Germany.”</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Includes a long ratchet / speeder, a lock, and decimal</td>
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<tr>
<td></td>
<td>equivalents on the frame. A design match (likely the</td>
</tr>
<tr>
<td></td>
<td>same German factory) as the “Zeus” micrometer noted</td>
</tr>
<tr>
<td></td>
<td>elsewhere -- and it would make sense to acquire both.</td>
</tr>
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<td></td>
<td>$25 donation</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Item #584</th>
<th>Unknown 0-1” micrometer with long speeder / ratchet</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>and marked “Made in Germany.”</td>
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<tr>
<td></td>
<td>This is a useful design feature, as it allows use of</td>
</tr>
<tr>
<td></td>
<td>the speeder without engaging the ratchet. This appears</td>
</tr>
<tr>
<td></td>
<td>to the same maker as the “Supreme” branded micrometer</td>
</tr>
<tr>
<td></td>
<td>described elsewhere; with the addition of a bright</td>
</tr>
<tr>
<td></td>
<td>chrome frame and stamped decimal equivalents. Also,</td>
</tr>
<tr>
<td></td>
<td>marked “Made in West Germany” on the bottom of the</td>
</tr>
<tr>
<td></td>
<td>black case; dating it from the end of WWII until</td>
</tr>
<tr>
<td></td>
<td>reunification around 1990. Well made micrometer in</td>
</tr>
<tr>
<td></td>
<td>mint condition.</td>
</tr>
<tr>
<td></td>
<td>$35 donation</td>
</tr>
</tbody>
</table>
**Item #585**  
**Unknown Japanese maker 0-25mm micrometer with fancy knurling and unusual anvil adjustment design.**

Necked anvils, for small parts. Nicely executed. An imperfect translation of the Kanji suggests this is a model no. 142 made at the Tokyo precision equipment manufacturing division. I don't have enough information to date this as pre-WWII (it's an older style) or later.

$45 donation

**Item #586**  
**Unknown (Japanese) maker 0-25mm micrometer with fancy knurling and unusual anvil adjustment design.**

Same design and manufacture as the liberally marked example above, but completely bare of any markings (and likely for export?).

$40 donation

**Item #587**  
**Unknown maker -- Shanghai micrometer box.**

From earlier export days, when Chinese goods had pride of place?

$5 donation

**Item #588**  
**Unknown manufacturer 1-2” micrometer marked “ITI New York” within a triangular logo and made in Japan.**

The mic looks close in design to either NSK or Mitutoyo; but isn't an exact match for any I've seen. It's remotely possible that ITI refers to the old home study institute, a distributor, or ?? In any case, a well made mic with a ratchet, lock, carbide faces, decimal equivalents on the pads, and a .0001 vernier. Includes its painted (black) wood box.

$35 donation
Item #589
Unknown large 6-12” interchangeable anvil micrometer set in large purpose-built wood case.

The micrometer heads are Starrett-made with a style from around the 1940 time period. The two unmarked heavy frames (6-9” and 9-12”) look to be one-off castings. One possible explanation is that this set was created by an enterprising machinist / foundry man during WWII. At that time, it was extremely difficult to acquire less common precision measuring tools unless one had a high defense priority – and even then there were often long waits. In any case, this is truly a bit of Yankee ingenuity, well executed, and still accurate for use.

$140 donation

Item #590
Unknown
– Mitutoyo-style outside micrometer stand still in original cardboard box. An Asian import, but of fully acceptable quality for its intended purpose. Show off your generosity and precision acumen (or acuwoman as the case may be). #1

$15 donation

Item #591
Unknown
– Mitutoyo-style outside micrometer stand still in original cardboard box. An Asian import, but of fully acceptable quality for its intended purpose. Show off your generosity and precision acumen (or acuwoman as the case may be). #2

$15 donation
Item #592
Unknown

Outside micrometer stand still in original cardboard box. Needs a rubber pad at the back, otherwise good. Eases use by leaving a hand free. Improves precision by reducing the effect of hand warming on the micrometer frame. Also, turns anything cool into desk art. Comes in industry’s always-favorite black and blue.

$15 donation

Item #593
Union lapel pin (Qualified Millwright & Machine Erector)

featuring a micrometer as its iconic symbol.

$25 donation

Item #594
Unknown maker -- male die for micrometer pins; deep paper embossing, or ???

$20 donation

Item #595
Unknown Chinese maker 0-1” mechanical digital micrometer.

Compare to Brown & Sharpe, Central Tools Co, Mitutoyo, NSK, Slocomb, Starrett and others.

$15 donation
**Item #596**
Unknown Chinese-maker 3-4” micrometer of a type now widely and inexpensively available.

Satin chrome, ratchet, lever lock, and a vernier that almost inspires visions of .0001” accuracy. An Etalon micrometer spindle is included to note the rough similarity in design.

$20 donation

**Item #597**
Unknown German maker 0-1” micrometer with ratchet, center lock, and decimal equivalents – pretty much the worldwide standard design.

Compare to similar makes from the US, Japan, Sweden, etc. In nice wooden box with a dovetail fit sliding cover with one end rounded.

$20 donation

**The Van Keuren Co.**

was founded March, 1920 to manufacture “Light Wave Measuring Equipments.” It invented the extremely accurate and unique light wave micrometer and also went on to become a premier supplier of optical flats and gauging equipment. The company is now operated as a division of PMC Lodestar. For years, VK produced a hardbound catalog and handbook, itself valued for the information provided on optical flats, reading fringes, precision gages, and light wave microscopy.

**Item #598**
Van Keuren 0-2” Light Wave Micrometer in case.

While average micrometers are accurate to .001 and better micrometers to .0001, this is accurate to .00001 (10 millionths of an inch). It includes an adjustable and extremely repeatable system for maintaining the same pressure in readings; along with a “near perfect” micrometer screw. Included is the valuable Handbook No. 36, which has a chapter covering use and a price list. This micrometer would cost nearly $5000 in today’s inflated dollars.

$300 donation
**VIS/SPI/etc.**

These micrometers were among the first to combine satisfactory quality with a lower price. They also signaled a Poland that was leveraging the talents of its people and becoming more open to the world. The basic design/build was sold under several names (e.g. VIS) and by several distributors (e.g. SPI – Swiss Precision Industries – which apparently didn’t bother to rename itself Polish Precision Industries).

**Item #599**

0-1” and 1-2” micrometers made in Poland.

The mics bear a strong resemblance to Mitutoyo micrometers with a friction thimble, green enamel frame, a similar lock, etc. These were popular a decade or two ago; but Chinese variants now own the low cost niche. See also the “Mitutoyo > Poland two pack” for a Mitutoyo mic and a Polish mic for comparison.

$35 donation

**Warszawa**

(Poland)

**Item #600**

Warszawa (a.k.a. Warsaw) 0-1” micrometer with heavy satin chrome frame, thermal pads, ratchet, and lock in fitted wood case.

This was likely made after WWII, along the lines of Russian micrometers of the time, and meant for export. An early step towards Poland becoming one of Europe’s leading manufacturers today. Marked N-10004 on the back thermal pad. Well made and excellent condition.

$45 donation

**Item #601**

Warszawa logo

0-25mm indicating micrometer with black wrinkle frame. The comparator reads to .002mm and it includes all the usual indicating micrometer features such as an anvil release and lock. These mics have a reputation of offering good quality at a somewhat lower price. Excellent condition in original wood box.

$75 donation

**Welch**

--see Central Tool Company
Wells Brothers Company

(Greenfield, Mass) was founded in 1876 by Frederick E. and Frank O. Wells. In 1879 the name became known as Wells Brothers & Co and in 1888 Wells Brothers Co. Their specialty was the manufacture of taps and dies, under the famed “Little Giant” trademark. In 1912, Wells Brothers was acquired by Greenfield Tap & Die (itself founded in 1912).

Item #602
Wells Bros. Company 0-1” unusual point/thread micrometer with a patent date of July 28, 1903 (corresponds to #734,784) stamped on the rear of the frame.

This has a clever side-adjustable anvil to accommodate different pitches. Tarnished all over (it might electro-polish) but in good working condition. Probably designed as a complement to the tap and die business. This is rare enough to have escaped mention in both of Ken Cope’s definitive works – Makers of American Machinist’s Tools and More Makers of American Machinist’s Tools.

$120 donation

A.J. Wilkinson & Co.

(Boston, Massachusetts)

Item #603
0-1” micrometer

with 1883 patent dates. Rare and valuable micrometer in very good condition, with an original case that needs repair. The donation price is less than I paid for it and less than it should bring at auction.

$300 donation
WJZ Gage & Tool Corp.
(Hyde Park, NY) was founded in 1951.

**Item #604**

WJZ 1-2” pistol grip snap gage with a good ($$$)
Federal .0001” reading indicator.

Adjustable within its range for both size and depth. It looks to have carbide pads inset into the anvils. Fitted wood box with an “inactive” standard enclosed. Needs a cleaning and the paint will still be spotty – but looks to be in good measuring condition. Cool enough to grab pistol style and say “don’t make me use this.”

$60 donation

Woodman Mfg. and Supply Co.
rpm indicator Sept. 12, 1876 patent.

**Item #605**

Kind of a Victorian look to it. The idea is to count the revolutions (say, a steam engine driven line shaft) over a measured time to get rpm’s. No idea what it’s worth, beyond the $70 one dealer wants for his. Starrett and others still sell a modern version. If your head is spinning, now at least you’ll know how fast.

$25 donation

Carl Zeiss Jena
(Jena, Germany) – best known as a precision optical firm, founded in 1846. The company has a long history in optical metrology and coordinate measuring machines, while micrometers appear to have been a brief fling. The firm was partitioned after WWII with “Carl Zeiss” in West Germany and “VEB Carl Zeiss Jena” in East Germany.

**Item #606**

Carl Zeiss Jena 0-.75” disk micrometer with built-in comparator and push button anvil release.

The extra large disk anvils allow measuring soft materials and reaching difficult features (such as gear teeth). The built in comparator as well as the vernier read directly to .0001” -- a cool and useful micrometer in good condition.

$90 donation
<table>
<thead>
<tr>
<th>Item #607</th>
<th><img src="image" alt="Item #607" /></th>
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<tbody>
<tr>
<td><strong>Item #607</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Carl Zeiss Jena 0-10mm bench micrometer with large steel thimble reading in .01mm.</strong></td>
<td></td>
</tr>
<tr>
<td>Includes a ratchet and the Zeiss nameplate affixed within the deep “U” throat of the micrometer. Very good condition – would clean up to be worthy of either measuring duties and/or a spot in your office.</td>
<td></td>
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<tr>
<td>$65 donation</td>
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<tr>
<td><strong>Item #608</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Carl Zeiss Jena 0-25mm micrometer.</strong></td>
<td></td>
</tr>
<tr>
<td>Standard design but carefully made of high quality tool steel. And note the tiny engraved admonition to measure at 20 degrees C. My guess is that this tool predates WWII.</td>
<td></td>
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<tr>
<td>$35 donation</td>
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<tr>
<td><strong>Item #609</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Carl Zeiss Jena 25-50mm indicating micrometer in original black wooden case.</strong></td>
<td></td>
</tr>
<tr>
<td>This is in good operating condition, but needs calibration and the window cover replaced if it is to be put into service. Includes the calibration spanners and standard.</td>
<td></td>
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<tr>
<td>$50 donation</td>
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<tbody>
<tr>
<td><strong>Item #610</strong></td>
<td></td>
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<tr>
<td><strong>Carl Zeiss Jena 8-10” indicating micrometer with unusual comparator on the anvil end,</strong></td>
<td></td>
</tr>
<tr>
<td>carbide anvils, a ratchet, lock, and .0001” vernier. Includes large wood case and a setting standard. This is cool enough to mount on a display stand and large enough to dispel any slurs about manhood. Probably a $1000 mic when Zeiss was still in this business. An esoteric question with this tool is the 62o marking on the frame. Assuming this is calibration temperature it is several degrees cooler than normal.</td>
<td></td>
</tr>
<tr>
<td>$140 donation</td>
<td></td>
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</tbody>
</table>
Zeus
(Germany)—likely an export brand rather than a maker.

Item #611
Zeus 0-1” micrometer with long ratchet / speeder, a lock, decimal equivalents on the frame, and a black fitted case.

Typical German design for export. This would be a same-design pair with an unknown 1-2” “Made in Germany” micrometer noted elsewhere.

$30 donation

Zim Manufacturing Co.
(Chicago, IL) makes automotive tools.

Item #612
Zim #165 cylinder gauge for small engines, range 1 ¾” to 3 ¼” bore.

Missing a couple extension arms (one is attached), which look easy to make to any bore size you want as long as it’s 1 ¾” or larger. Pretty crude, but likely serviceable to rebuild your Briggs & Stratton. It’s preset to zero, and measures to .001 in.

$20 donation

Miscellaneous items

Item #613
Explora-micrometer-em kit of about 25 micrometers.

These have previous owner’s marks or broken parts or signs of beating and abuse. But many are salvageable and a few date back to the late 1890’s or early 1900’s. A few are OK as is. Also lots of assorted parts.

Maybe some group of kids will have fun seeing how many micrometers they can fix up out of the lot? With the rest as C-clamps?? Also some new parts for Mitutoyo, Starrett, etc. There’s at least one micrometer worth the near the $25 alone (e.g. the larger Millers Falls).

$25 donation
Item #614
Adjustment wrenches.

If yours is missing (many are) find the correct type (a modest challenge – basically match up the diameter of the hub and pin spanner) and find one that matches. There are usually at least two adjustments. One to rotate the barrel graduations. Another to tighten the spindle adjustment screw. There should be enough of these to go around at one per attendee . . .

Free with a micrometer donation