Tool Enthusiasts' Round-up

Volume II, Number 2

Newsletter: September 1999

Horological Tool Chapter #173 of NAWCC

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- Rivett Watchmaker Lathe Study by member Tom Hammond
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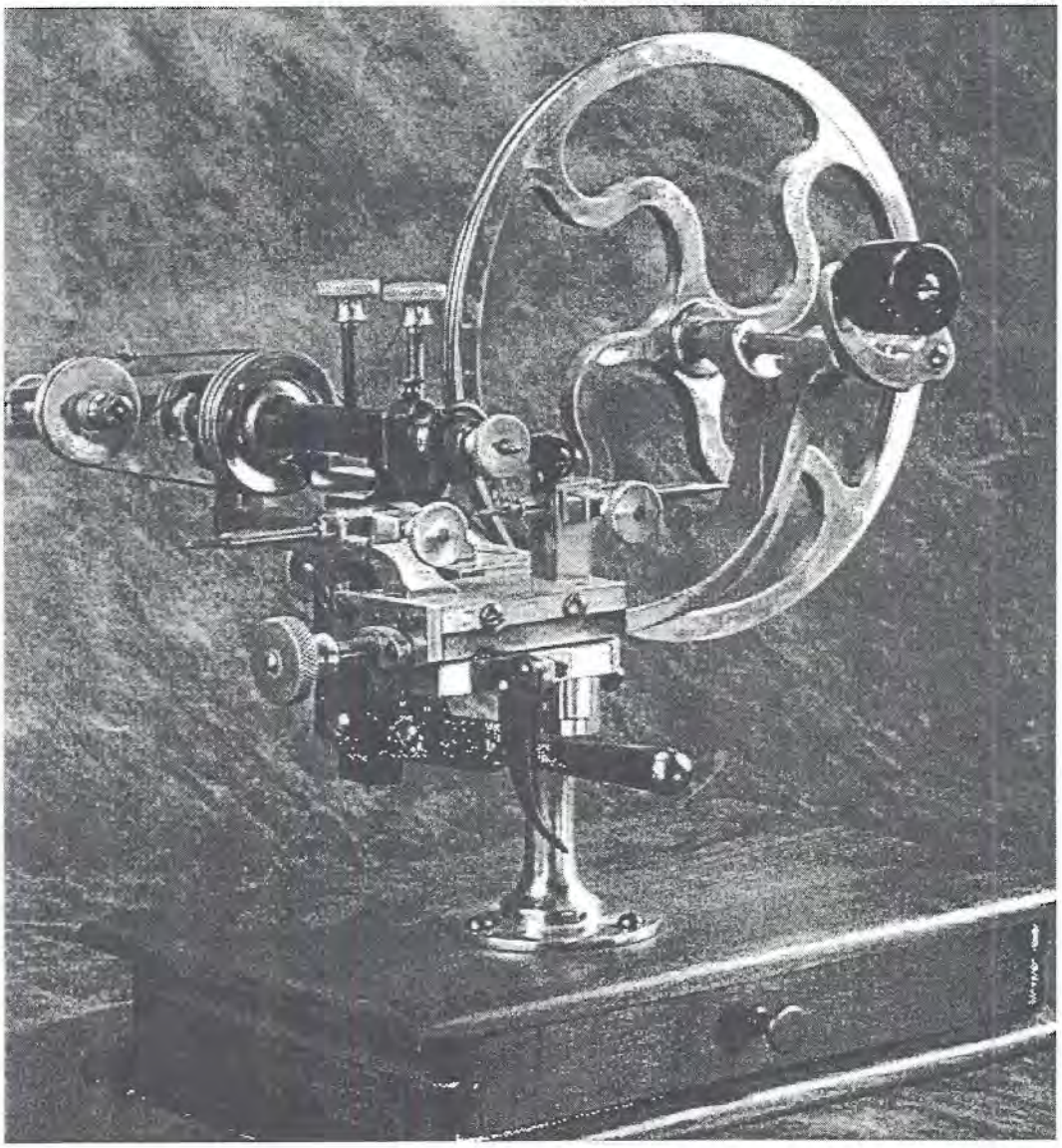

Rounding Up Tool (Wheel Topping Engine)

Evolution of the American Watchmaker Lathe Continued

Chapter #173 of NAWCC:

Horological Tool Enthusiasts

This is the seventh issue of the newsletter for a new national chapter of NAWCC that is now formed. Already well over 100 people have joined and expressed an interest in contributing to and learning from a chapter devoted to the understanding and collection of horological tools of all sorts. If you are interested in joining this chapter, which will meet at various large regionals and also at the National each year, please send your annual dues to the Secretary at the address below.

Tool Enthusiasts' Round-up is the newsletter of the National Horological Tool Chapter # 173 of the National Association of Watch and Clock Collectors, Inc., a non-profit educational organization. This is a national chapter, and open to any member of NAWCC.

Annual chapter dues of $10 will ensure that members in the Horological Tool Enthusiasts receive the quarterly newsletter and are included in the Membership Directory of this specialized chapter when it is published. Members also are entitled to one personal ad (see last page) in each issue.

For further information, contact one of the officers.

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This chapter and its newsletter are intended to foster interaction among NAWCC members who share a common interest in the use and collection of horological tools. If you have an item you have researched, a book of interest, or notes on a project you have made, please consider sharing your knowledge with others through this newsletter. Editorial help and writing assistance are available to help you organize an article. Submissions should be sent to Harry Blair, Newsletter Editor, at 7 Hansom Lane, Marlboro, NJ 07746.

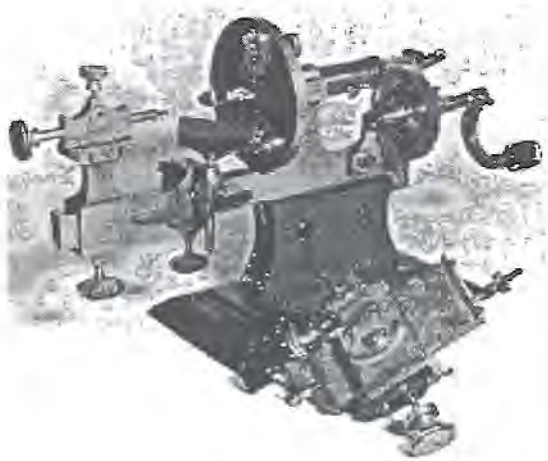
Chapter Meeting News

The Horolgical Tool Chapter will meet at NAWCC regionals. Look at the bulletin board at each event for time and location.

This issue addresses the Rivett Watchmakers Lathe evolution by member Tom Hammond.

Our next issue will cover the rounding up tool by member John Grass and others.

What is it ?



Answer on page 10

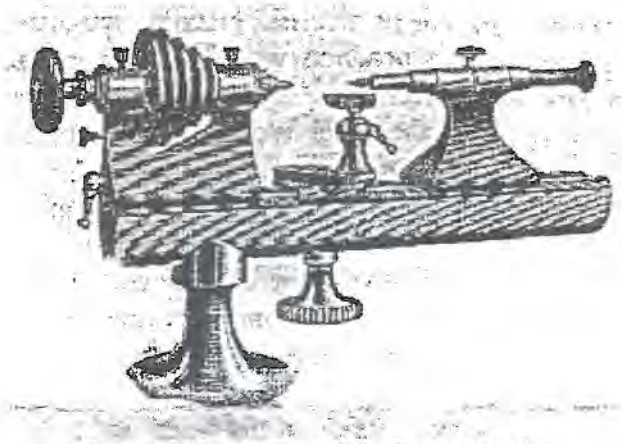
President's Message

The regularly scheduled meeting of the Horological tool chapter took place at the National in Houston on June 23, 1999.There were 28 members and guests present to hear a talk by John Grass (Califomia) on gear cutting and rounding up tools. John brought examples of the tools he used and adapted to make the movements formerly made by Kilborn and Proctor. As most of their machinery had long outlived its useful life, he had to improvise and purchase new tools to make the movements reliable and economical. Many of these were ingenious adaptations that were simple yet practical. He explained the differences in the various types of gear tooth shapes and the advantages and disadvantages of each type. Then he explained how to round up the resulting gear when necessary. The talk was followed by a question and answer period, that had many formerly misunderstood practices explained very simply and informatively. Considering that the time slot allotted to Chapter 173 was at 10AM on the first day of the National, it was a tribute to our speaker that so many people attended. John was awarded a Certificate at the Banquet, later that weekend. The Meeting at the Syracuse Regional was a total surprise to me, as my first notice was in the Program. However, time marches on, and we had a good turnout with a little show and tell and a lot of questions thrown up for general discussion. once again I was surprised at the number of people who showed up for the meeting. Obviously, there is a great interest in vatchmaker's tools, and the interest is growing. For those who missed out the first time, we have a video of the exhibit at Syracuse last year, "The History Of the American Watchmaker's Lathe and It's Attachments." Cost is $15 post paid. Respectfully submitted,

Harvey Schmidt, President

Rivett Watchmaking Lathe Study

by Tom Hammond



Faneuil Watch Tool Co. Type 1a lathe

This is an in-progress report on my study of Rivett watchmakers lathes, resulting from examination of a sample of 51 lathes, as well as study of catalogs and advertising in trade journals. If anyone can help with additions, corrections, or suggestions, please contact me. My postal and e-mail addresses and telephone number are given at the end of this paper. Thank you all very much for your past and future assistance. With your help, I have been able to study the features of a considerable sample of Rivett lathes. However, 51 is only about 1l/2% of the estimated total production. Clearly there is much more that can and should be done.

SOME HISTORICAL BACKGRQUND

Edward Rivett was French Canadian, having been born in L'Assomption, Quebec (near Montreal) in 1851. Little seems to be known of his early years, but he was said to have received only a common school education — perhaps the equivalent of completing eighth grade. He must have moved to New England by his teens, for he was working in a Rhode Island cotton mill at the age of fifteen. By twenty, after employment in Massachusetts shoe factories and a Louisiana textile mill, he was working at the New York Watch Company (which later became Hampden Watch Company) in Springfield, Massachusetts. The next year (1872) he left Springfield and moved to Boston, where he went to work for C. A. W. Crosby, a Washington Street jeweler. At tirst Rivett seems to have worked as a watch repairman, and his earliest patent that I have found, dated 1880, is for an improved hairspring stud. At some point he and his employer decided to start a company to manufacture watchmakers tools. During the late 1870s and early 1880s, such companies were being formed widely in New England, the Middle Atlantic states, and the Midwest. Most had relatively short lives, but this one would endure, under various names, for more than eighty years.

In 1884 the Faneuil Watch Tool Company was formed, with Rivett as general Manager and Crosby as Treasurer. The company name may have been taken from Boston's Revolutionary War landmark Faneuil Hall, or from Faneuil Station on the Boston and Albany Railway, near the company's location in Boston's Brighton district. Later on the factory's address is given as 1 Brooks Street, but it is not clear whether this was the original location — said, in Rivett's obituary, to have been "a wooden extension of his own home." Some library and field work (by someone familiar with the local geography) with old Boston directories and maps could be informative.

The first Faneuil Watch Tool Co. lathes must have appeared fairly soon after the company's formation: in 1887 Rivett was granted patent #363,000 for several features of his lathe that would characterize Rivett tools for the next thirty years. The early lathes were similar in size to No. 2 lathes made by other firms such as Ameri-

can Watch Tool Company or Moseley Brothers, but with several unique attributes: a steel rather than cast iron bed, headstock and tailstock with 2 3/16" center height, a toolholder tor the sliderest taking round tools in an eccentric quill, and a knee (which Rivett called a revolvable tailstock) to hold the sliderest upright for wheelcutting and milling. The early lathes, which I refer to as Type Ia, had outside guides with a top-of-bed width of 1.46 inches; later this was increased to 1.55 inches. It is uncertain whether the run of serial numbers began at I — no serial numbers below 100 are known to me. A friend in Calitornia has # 106, and I have # 111. Perhaps the serial numbers began with 100 or 101? If anyone knows of an early Rivett lathe with a two-digit serial number, I would be most interested to learn of it.

By 1890 Faneuil Watch Tool *Co.* was also manutacturing a staking tool and other watchmakers small tools and had begun production of mechanic's bench lathes, which would become the company's dominant product and eventually exclude further production of watch tools. Edward Rivett received numerous patents in the late 1880s and 1890s, with the focus gradually shifting toward larger precision machinery such as internal grinding machines. The company's products won the highest award at the 1887 Mechanics' Fair in Boston, and a gold medal at the 1893 World's Fair. In their advertising in jewelers' trade journals, the company claimed to make only tools of the highest possible quality, and their prices were always slightly above those of their competitors. There may have been some internal conflict between the partners over this market positioning, and in 1893 they put on the market a less expensive version of the watch lathe. One could buy a "Crosby" lathe for $45 or "The Rivett" tor $52. At this time an American Watch Tool Company "WW" lathe cost $38, a Moseley No. 2 Conoidal lathe (with 7 collets), $42. The prices of all watchmakers lathes steadily dropped (presumably due to oversupply) between 1880 and 1900, but Rivett lathes always commanded a premium over their competition.

By 1892 Faneuil Watch Tool Co. had built at its I Brooks Street location a new three-story, 10,000 sq. ft., brick factory building which they claimed was "the largest in the country tor the manufacture of watch-tools." Actually, this claim was a bit disingenuous, as the same factory was also producing the No. 3 and No. 4 bench lathes, but this seems to have been typical of the business: American Watch Tool Company also made a bench lathe and factory tooling tor watch manufacturers, as did Moseley; Stark even made ballot boxes to keep his company busy!

C. A. W. Crosby died in April 1894, and his son John D. took-over as company treasurer, but the majority ownership was now split among several Crosby heirs and Edward Rivett seems to have exercised more complete control of the company. In 1895 he brought out a greatly modified version of his watchmakers lathe, after having made approximately one thousand of the earlier model. This had center guides (like Moseley lathes) — as far as I am aware Rivett's was the only "midstream" change in guide location by any American watch lathe manufacturer.

However, the most significant change was in the headstock bearing design. Rather than using the industry-standard double angle (3° and 45°) conical bearings at both ends of the spindle, the new Rivett lathe had a parallel rear bearing with a conical outer surface, adjusted by a screw which drew it into a matching tapered hole in the headstock casting. He retained the double-angle bearing at the front of the spindle to absorb end thrust from cutting tools and the tailstock, and controlled end shake by making the spindle pulley, with integral cast iron sleeve keyed to the spindle, moveable under control of a fine-pitch nut. Rivett apparently arrived at the parallel bearing form through his experiments on the design of high-speed grinder spindles (whicIh he advertised as able to withstand running at 100,000 RPM) and used it extensively thereafter. interestingly, a similar bearing was used on both ends of the spindles of Hardinge "Cataract" lathes and mills, with end thrust taken by a ball bearing. Rivett also redesigned the tailstock tor his new watchmakers lathe, with a stronger if less graceful casting and a relocated binder for the spindle.

In the late 1890s Faneuil Watch Tool Co. began manufacturing a line of lower-cost watch lathes tor sale by various wholesalers under their own trade names; these are similar but not identical to contemporary Rivett lathes. There were also, apparently, a few "Rivett" and "Rivett Special" lathes with less expensive specifications than "The Rivett" but I have so far been unable to find significant documentation on these.

Also at this time, Rivett introduced his "Eight Inch Precision Lathe" which was a development of the No. 4 bench lathe, with a massive saddle sliding in a dovetail on the front of the bed, and leadscrew and feedshaft drives. These sold for $500 when the price of the watch lathes had dropped below $50, and their success further encouraged the company to specialize in toolroom-size machinery. Interestingly, not only were many features of the large lathe, including its spindle and bearings, directly derived from the new version watch lathe, but a large proportion of the very wide line of attachments and accessories could be obtained in sizes to match any of Rivett's lathes. An 1898 catalog specifically states in the introduction to the watchmaker's lathe section: "Any of the following attachments which are not regularly made for the large lathes will be made to order when desired."

In 1904 Edward Rivett was able to purchase the late C. A. W. Crosby's interest in Faneuil Watch Tool Co. from his

heirs, and renamed the firm "Rivett Lathe Manufacturing Company". This name began appearing on lathes with serial numbers from around 2100, indicating production of approximately another one thousand lathes to the new design between 1895 and 1904: an output of about one lathe every three days. At this time the American Watch Tool Co. was producing two lathes a day, and J. Stark reported making one every two days. Moseley's production numbers are not known, but were probably somewhere in the same range.

Around 1906, Rivett began making his "Ideal" or "New Model" lathes. These were externally almost identical to the contemporary "The Rivett" lathes, but had a slightly larger diameter spindle to accept a new collet, .325" in diameter, with a larger thread, a longer shank and a more acute head angle than the .300" shank collets used on all Rivett watch lathes previously. Both Rivett lathes, and collets to fit them, may have continued in production simultaneously, at least for a few more years. Serial numbers for the Ideal lathes were.in the 2400 - 2750 range.

Business appears to have grown rapidly after the turn of the century, and in 1908 Rivett opened an addition to his factory which doubled its capacity. However, it became clear that the watch lathe market did not offer the scope for revenue and growth that the toolroom machinery market did — a Rivett ad from 1911 states "Our ads. have been absent for some time because we could not keep up with our orders; we were so busy that we had neither time for, nor need of, advertising. While we are devoting most of our time to the more profitable manufacture of our Grinders and Precision Bench Lathes, which sell on an average of $1000.00 each, being the highest price Bench Lathes in the world, we are still making a certain number of Watchmakers' Lathes every year, following the urgent request of expert Watchmakers throughout the country who appreciate an accurate and up-to-the-minute Lathe. "

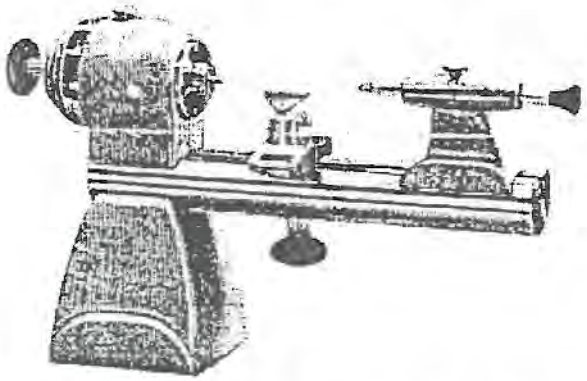
In 1912, at the age of 61, Edward Rivett decided to retire (although he took no further part in the company, he lived to almost 87, dying in December of 1937) and sold the company to a group of investors who renamed it The Rivett Lathe and Grinder Company. Probably due to demand arising out of World War I, business was initially very good, and further additions to the tactory were made in 1915 and 1920. However the company's finances became increasingly troubled, and the company was reorganized yet again, emerging as The Rivett Lathe and Grinder Corporation in 1923. At about this time the company, which had probably made few if any watchmakers lathes in the past ten years, disposed of its remaining stock of replacement parts, attachments, etc. to F. W. Derbyshire of Waltham, Massachusetts. Derbyshire continued to service Rivett watchmakers lathes for some time.

The company barely survived the Great Depression, making only a few dozen lathes in some years, but business began to improve as World War 1I neared. A substantial number of the company's premium model 608 toolroom lathes were sent to England on Lend-Lease, and after American rearmament began, production of the larger lathes and grinders soared. Peace, unfortunately for Rivett as for most other tool makers, left the company with production capacity greatly in excess of demand, and led to the search tor other means of survival. Hydraulic controls were added to the product line, along with some very sophisticated but rather unwieldy toolroom and turret lathes.

In the late 1940s and early 1950s Rivett Lathe and Grinder Corporation recommenced the manufacture of watchmakers lathes, to a design that was new in some ways and old in others: these were known as the IR or Ball Bearing lathes. I have been told that the idea of making them arose in response to the large number of returning servicemen needing vocational training, some of whom would be learning watchmaking. Both for their training schools and later as they set up in business, the company hoped that there would be a market for a high-quality, American made watchmakers lathe.

Somewhat in parallel to the design of the company's large lathes of the period such as the new 1020S model, the new watchmakers lathe's spindle was supported by high precision angular contact ball bearings. The three-step spindle drive pulley overhung the headstock assembly, so the belt could be replaced without disturbing the bearing adjustment. The traditional 60 position indexing capability was provided through a knob, which could be turned to lock out the detent or alternatively to allow it to be engaged or released, on the top of a rather large and distinctively rounded headstock casting.

Maintaining the Rivett steel bed tradition, the IR lathe's was 12" long, machined from stainless steel, with outside guides to "WW" dimensions The lathe's center height was also to the "WW" dimension of 50 mm. Oddly, at a time when most other manufacturers were offering collet holding tailstocks, the new Rivetts had plain, small-spindle tailstocks with knobs molded from rather lurid red transparent plastic (which proved quite brittle and fragile in service); the draw tube handw heels and hand-nuts for attaching the toolrests to the bed were also made from this same plastic. Most IR lathes seem to have had a rectangular cast-iron pedestal but some had a rounded one; both had "RIVETT" cast in raised letters on the front. Many of these lathes, including my own # 213, have had their pedestals removed for mounting on a Borel-type base with attached motor drive; if anyone knows of an orphaned Rivett base of either type, I would be glad to hear of it.



Rivett Lathe & Grinder Corp. 1R Ball Bearing lathe

Only a few hundred of the I R Ball Bearing lathes were produced, but I have been unable to find any evidence for when production ended. The company as a whole disappeared rather abruptly in 1966 and 1967. Applied Power Industries Incorporated, makers of fluid drive components, purchased Rivett to gain control of the hydraulic valve and control part of the business. This was combined with Dynex Co. (another Applied Power subsidiary) to form Dynex-Rivett, still surviving in Pewaukee, Wisconsil1 with a branch in Ashland, Massachusetts. The machine-tool part of Rivett was sold to Leland-Gifford Co. of Worcester, Massachusetts who were known for their line of production drilling machinery. Rivett machine tools continued to be advertised for about a year, under the title "Rivett Lathes & Grinders, manufactured by Leland-Gifford Co." However, in 1967 Leland-Gifford Co. itself was acquired by White Consolidated. An advertisement from June, 1967 offered "Rivett Lathes and Grinders from Leland-Gifford Subsidiary of White Consolidated Industries, [nc." However, that same year the machine-tool business was transterred to White's Fay-Scott Division in Dexter, Maine, and for reasons that are still unclear all relics of the Rivett machine-tool business were apparently disposed of in a Maine landfill during the 1970s.

RIVETT WATCHMAKERS LATHE TYPES

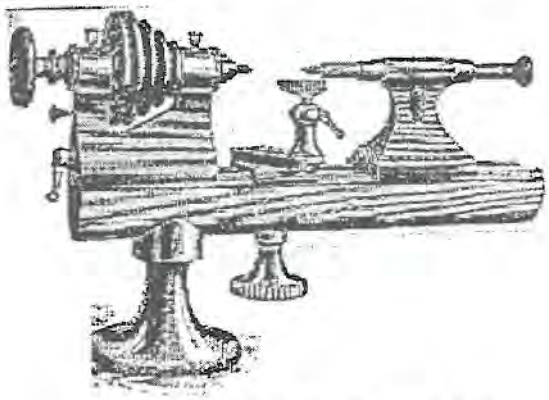
There may be as many as nineteen recognizably different versions of the various Rivett watchmakers lathes. I have chosen to designate the two most common groupings as Type 1 and Type 2, with letter suffixes to distinguish the smaller variations. Rivett himself used the designation "No. 2" for what I am calling Type 2, but never, as far as I have learned, designated any of his lathe types "No. 1". One must be careful not to confuse this use of numbers with the different system used by companies such as American Watch Tool Co., where the numbers indicate size (a WW lathe being essentially a No. 11/2 lathe taking a No. 2 collet, for example.)

All Rivett lathes up to the IR Ball Bearing lathe had the same 2 3/16" center height, and most had serial numbers on the bottoms of their headstocks and tailstocks and between the ways on their beds. All previous to the Ideal lathes took the same .300" shank diameter collets, with a numbering system that began as the Stubs wire gauge but which Rivett quickly rationalized for more uniform steps between adjacent numbers.

Type 1: This is the grouping of the earliest models, characterized by edge guides and double-angle conical bearings at both ends of the spindle, with an adjusting nut threaded onto the rear extension of the spindle. All are marked Faneuil Watch Tool Co. There are (at least) four variants:

Type Ia: These were the earliest production models; they can be distinguished by the tailstock binder, which is a knurled nut above the tailstock body, acting on a "banjo" bolt surrounding the spindle. Eight examples were found in my survey, with serial numbers from 106 to 568.

Type Ib: These are very similar to Type Ia except the tailstock binder is now a knurled tubular nut set into the body of the tailstock below the spindle. The width of the bed was changed from 1.46 inches to 1.55 inches at some point close to the change of tailstock binder design, but it is impossible to be certain whether these changes occurred together or not — there may be wide-bed models with the old tailstock binder or narrow-bed models with the new one, but they have not yet come to my attention. Four examples were found, with serial numbers from 606 to 867.

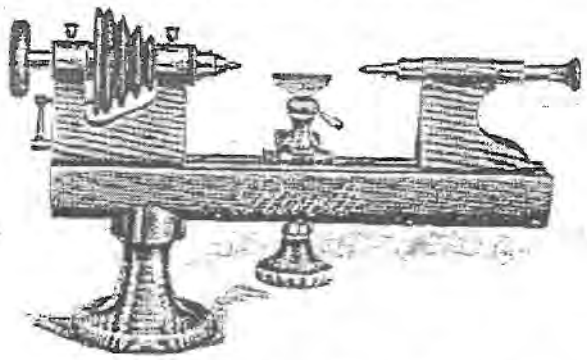


Faneuil Watch Tool Co. Type Ib lathe

Type Ic: In March, 1895 Faneuil Watch Tool Co. began marking the beds of the RIVET T lathes "STEEL" to distinguish them from the cast-iron beds of the Crosby and various Special lathes. Since the Type 2 lathes appeared within a year, there should be only a tew Type I lathes so marked, and I have not yet been able to confirm the existence of any.

Type Id: Apparently some Type Ib or Ic lathes were produced with Rivett's new bearing arrangement featured in the Type 2 lathes. I only know of one such example, with a double serial number (# 693/1132) which I am uncertain how to interpret.

Type 2: This is the grouping of the improved models introduced in 1895 or 1896 with center guides and Rivett's new spindle bearing arrangement. The tailstock casting now has a straight, vertical face on the end facing the headstock, and the spindle binder lever is at the left end, above the vertical face. As with the type 1 lathes, there were several changes during the approximately ten years of production.Type 2a: A few of the very first new lathes had the rear spindle bearing adjusted by an externally threaded nut that fits an internal thread in the bearing recess. I have only seen this design in a Rivett advertisement; if any were actually made in this way and still exist, I have not yet learned of them.



Faneuil Watch Tool Co. Type 2b lathe

Type 2b: These are the earliest of the new Rivett lathes commonly encountered. The rear bearing adjustment is by a screw threaded into the headstock casting below the spindle, engaging with a transverse slot in the bottom of the tapered bearing. The easiest characteristic by which to identify Type 2b lathes is their 4step pulleys. They were produced from 1895 to about 1901 — the 1902 Faneuil Watcll Tool Co. catalog shows a 4-step pulley but states that the new model now has a 3-step pulley. Seven examples, with serial numbers from 1269 to 1538, were found.

Type 2c: The only change from type 2b was the substitution of a 3-step pulley with a wide, rounded gripping flange at the left end. Production was from 1902 through about 1904; are all marked Faneuil Watch Tool Co. Five examples were found, with serial numbers from 1945 to 2066.

Type 2d: These are the same as type 2c except they are now marked Rivett Lathe Mfg. Co. Three examples, with serial numbers from 2178 to 2235, were found.

Type 2e: (Hypothetical — none have yet been found.) These would be the same as a Type 2c or 2d but marked Rivett Lathe & Grinder Corp. If any exist, they would have been made after 1912, but before Rivett's watchmakers lathe line was sold to Derbyshire.

Ideal model: these were similar to Type 2c except they take "Ideal" collets with .325" diameter shanks and 15° head angle. They were produced from about 1906 to at least 1913 and perhaps later. All known examples are marked Rivett Lathe Manufacturing Co., but there should be some marked Rivett Lathe and Grinder Co. Five examples, with serial numbers from 2509 to 2725, were found. Interestingly, one of these has a 16 inch, two-pedestal bed — probably a special order.

Type IR or Ball Bearing model: These were produced after World War II, during the late 1940s and/or the 1950s, and represent a totally new design, with an unmistakable bulbous headstock casting and bright red plastic knobs, which are fragile and often have not survived. They take Rivett I R collets which are very similar to Derbyshire WW. The serial numbers form a new series: the range of numbers 011 the eleven examples found is 89 to 503. They can be found in two versions (wllicll I have not yet attempted to match with portions of the serial number run) identical except for the base. Their serial numbers are stamped on the bearing housing tacing the tailstock.

OTHERS: There were also at least five different lower-grade lathes made by Faneuil Watch Tool Co.; some were sold directly and others through certain jewelers' supply houses under their own brand names.

The Crosby: This was a less-expensive lathe offered by Faneuil Watch Tool Co. for "our customers who want us to put the price of our lathe as low as other manufacturers." (ad in Jan. 1893 issue of *The Keystone]) t*he Crosby has a cast-iron bed, no oil-cups, a pulley with an index ring rather than a flanged sleeve, and soft rather than hardened tailstock bushing and taper. At first Crosby lathes used edge guides, but some were produced later with center guides. I know of only one example, with serial number 398.

Rivett Lathe: This appears to have been a less expensive version of the Rivett Type 2, offered via a *Keystone* ad in January, 1904. It had a cast-iron bed and an indexing ring rather than a flange; otherwise it was "exactly like the regular RIVETT." I know of no example of this version — presumably they would be marked "Rivett Lathe" but not "STEEL."

Rivett "Special" Lathe: One example (# 59) of this has been reported to me. I do not know to what extent it differs from the previous model.

The Lancaster Special was sold by L. C. Reisner of Lancaster, Pennsylvania in 1899. This looked superficially like a Type 2b with center guides and a tour-step pulley, but has a slightly-differently shaped headstock, doubleangle conical bearings at both ends of the

spindle, a fixed rather than tip-over tee-rest, a totally different tailstock whicl1 is curved on both ends (but shaped differently thall the Type I tailstock.) The price with 6 wire chucks, I each screw and taper chucks, 6 cement brasses and belting was $24.44 "net cash" or $34.50 with 24 wire chucks and a chuck block with glass shade.

The Monogram Special was sold by Otto Young & Co. of Chicago, Illinois in 1898. In the single ad seen, this appeared very similar to the Lancaster Special but there are some apparent differences which may be the result of a different cut-maker. Also, the bed is specified as shorter than on a genuine Rivett (103/4~ " vs. 11/2") but it is not clear if this also applied to the Lancaster Special. It is supposed to carry a "monogram" O. Y. & Co. It sold for $26 with the same chuck combination as the $24.44 Lancaster Special, but this price is "less 6 per cent for cash" which reduces the cash price to the same $24.44 exactly.

The Vulcan Special was sold by Nordman Bros. of San Francisco, California. In 1897 ads, this appears to be much like the Monogram and Lancaster lathes. I suspect that all three of these were exactly the same lathe, made somewhat more cheaply than either a Rivett or a Crosby, and sold through (at least) these three jobbers to raise some cash at a time of fiscal difficulties. I know of only one example, with serial number 508 but no other definitive markings, of any of them.

ANALYSIS OF THE KNOWN SERIAL NUMBERS

I — Total number produced: using simply the highest known serial numbers in each "run" (# 2775 for the standard lathes and # 503 for the Ball Bearing lathes) gives us an estimate of 3228 lathes produced. Of course this may be too high if both runs did not start with #1, and/or if there were gaps in the runs (see below.) Alternatively, it could be too low if there were actually three runs, with the Crosby and Special lathes separated, or if lathes with higher serial numbers were produced, but have not yet turned up. The only solution to this ambivalence is further data — I hope by continued study of additional examples to reduce the uncertainty.

Please send me any additional Rivett lathe inforlllation that you can; I will reciprocate with updates as appropriate.

2 — Continuity: in addition to the question already raised of whether each run of serial numbers began with # 1, or perhaps with some larger number such as 100 (in the Type I series), ~here is also the issue of whether gaps were left in the serial number sequence, perhaps at the time of model changes. There may have been such a gap, from around 900 to around 1200, at the Type 1 to Type 2 changeover. Another possible gap, between about 1550 and 1900, may correspond to the change from Type 2b to Type 2c; another, from the mid-2200s to 2500, may be between Type 2d and Ideal lathes. If these gaps are real, the estimated total production would be substantially lowered. If they are unreal, lathes bearing some of the missing numbers should eventually turn up.

3 — Statistical guesswork: if we assume tentatively, for the purposes of computation, that the sample of 51 known serial numbers is representative of total production, its makeup of 14 Type I lathes, 18 Type 2 lathes, 5 Ideal lathes, 11 IR BB lathes, and 3 "others" would infer, by straight proportion, that there were 886 Type 1s, 1139 Type 2s, 316 Ideals, 696 IR BBs, and 190 "other" lathes actually produced. But one ought to factor in something for the later models, especially the much more recent Ball Bearing lathes, being more likely to have survived to be counted, and therefore being over-represented in the sample.Inote that counts of Type I and 2 lathes above do not agree with the sum of the different variants given earlier. I have a few examples tor which I am lacking intormation needed to classity them appropriately.I

A plausible guess is that there were somewhere around 1000 Type Is, around 1100 to 1200 Type 2s, around three or four hundred Ideals, and perhaps five or six hundred IR Ball Bearing lathes produced; supplemented (more speculatively) by possibly several hulldred "others." To learn more than this, we must have more data.

Finally, then, an appeal: I am certain that there are many more Rivett lathes out there than I have yet learned of, and that the characteristics of some which are known would merit further study. If you have, or encounter at a friend's or a MART or anywhere, any Rivett lathe not already fully documented, please send me its serial number, and brief (or lengthy, if possible) indications of its salient features.

I would particularly like to learn about the following:

a) Any serial numbers outside the currently known runs: 106 to 586 for Type Ia, 606 to 867 for Type Ib, 1269 to 1538 for Type 2b, 1945 to 2066 for Type 2c, 2178 to 2235 for Type 2d, 2509 to 2725 for Ideal, and 89 to 503 for the Ball Bearing lathes.

b) Any examples of the lower-priced lathes: Crosby, Rivett Special, Lancaster, Monogram, or Vulcan Special, or any Rivett lathe with a cast-iron rather than steel bed and/or an index ring rather than a flange at the back of the spindle pulley.

c) Serial number, bed width, tailstock binder type, and bed lettering details for any Type I lathe with a serial number greater than 500, to clarify the timing of these changes.

d) Any information on unusual or transitional Rivett lathes.

e) Any information on Rivett attachments and accessories — they are another study just waiting to happen, as are the large lathes.

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HOROLOGICAL TOOLS CHAPTER 173

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July 9, 1999

Financial Statement for FY 1998

Starting Balance July 1,1998		$1,091.38
Income		
Member Dues	$1,640.00	
Gifts and Misc.	120.00	
Video Sales	240.00	
Total Income		$2,000.00
Expense		
Postage	$388.99	
Printing	511.63	
Phone	25.87	
Supplies	41.49	
Video Costs	200.00	
Total Expense		$1,167.98
Ending Balance June 30, 1999		$1,923.40

Robert H Chapman

Dr. Robert H. Chapman, FNAWCC
Treasurer, NAWCC Chapter 173

WANTED:

Favorite Jeweling Tool and Portescap Gradoscope Type GD # 7. John Barrs 3924 SW Holden St. Seattle Wash. 98136

Pieces of wheel cutting engines for parts / restoration Mel Smith 2631 Amawalk Road Katonah N.Y. 10536

Serial numbers of any Faneuil watch tool co. or Rivett Lathe mfg co. as part of my history study: also looking to buy Faneuil / Rivett items. Tom Hammond 3258 Forest Gale Drive Forest Grove, Or. 97116

Webster Whitcomb well equipped lathes & original lathe and tool catalogs with prices .Greg Mc Creight 1336 Allentown rd Lima Ohio 45805

Swiss or German made Machinery. gear cutting equipment, unusual knurls. Shop and lab. measuring devices Mark Fulmer collect 330-877-2021 or e-mail markusfu@hotmail.com

I collect ManSon / Master lathes. They are small,black, grey or aluminum and of unusual shape. Were current in the 50's. Daniel Semel 245 E. 80 Street N. Y. N.Y.10021-0515

Watchmakers Lathe Accessories. Cross Slides, Mlling Attachments, 3 & 4 jaw chucks, collets .Harvey Schmidt 75-80 179 th st. Flushing N.Y. 11366

Metric 10mm "D" collets and other 10mm tooling plus name of shop to replace bearings in Levin grinding spindle David Blocker POB 75003 Dayton Ohio 45475-0003

Antique Clock and Watch Tools before 1900. Bruce Forman 509 E.Mosser St. Apt. 18, Allentown, Pa. 18103, 610-770-1529

Levin 3C Instrument Lathe, Aciera Precision Mill, Favorite Jeweling Tool. John Barrs 3924 S.W. Holden St. Seattle Wash. 98136

Derbyshire ELECT model lathe attachments.ie: pivot polisher, screw cutting attach. , roller file rest, will trade. J. Dill Box 5044 Greeley Co. 80634 970 353 8561

OFFERED:

Early Levin 8 mm Milling head original grey OBO or trade for antique tools . Bruce Forman 509 E. Mosser St. Apt 18, Allentown Pa. 18103, 610-770-1529

Elgin Horizontal milling machine. 5C spindle. 3 phase variable motor and cabinet $ 850 Mark Fulmer 3044 Smith Kramer St Hartsville OH 44632

Each current chapter member can place one "wanted" and one "offered" ad in each issue at no charge. Additional ads placed are $25 per column inch per issue. **Send ad copy to: Horological Tool Chapter #173 of NAWCC C/O Harry Blair 7 Hansom Lane Marlboro N.J. 07746** Include stamped self addressed envelope if reply is needed

Source material for this issue:

Tom Hammond

Mystery Tool is

Typical 19th century Swiss mandrel in Britten's Watch and Clockmaker handbook

General Information:

Video Tapes of " The History of the American Watchmaker Lathe and it's attachments"made at the Syracuse Regional last year are available thru Harvey Schmidt at $ 15 post paid

The Henry B. Fried Annual Memorial Horological Tour has been putting a growing emphasis on horological tools, factories and tool museums and visited these in England,Scotland, Isle of Man, Ireland and Norway in August 1999. For info. on next years horological tour call Nick Lerescu (tool chapter member) and President of Advantage Tours 1 800 262-4284