Tucci, Robert, "A Closer Look at the Hirsbrunner York Model CC-Tuba", T.U.B.A. JOURNAL, Fall 1989

A cycle of events initiated more than fifty years ago was gloriously completed in August 1982 when Paul Kryzwicki took delivery of his Hirsbrunner York Model CC-Tuba while on tour in Europe with the Philadelphia Orchestra.

Leopold Stokowski, illustrious conductor of that orchestra in the 1930's, had approached the tubist, Phillip Donatelli. He requested an instrument be obtained that would provide a true organ-like quality to the bass register of the orchestra, and approach the dynamic qualities of the "King of Instruments."

Mr. Donatelli consulted with the J.W. York Band Instrument Company of Grand Rapids, Michigan, a firm noted for excellent tubas. Two unique instruments were built to order, incorporating a medium-large valve section and a large-bore rotary fifth valve into the body of a large tuba specially designed to agree with Maestro Stokowski's tonal concept.

One of the tubas was given to the Philadelphia Orchestra, but due to his immense physical girth, Mr. Donatelli did not feel comfortable with this instrument. He sold it to Arnold Jacobs, who was at that time a student at the Curtis Institute of Music.

Mr Jacobs paid off the tuba at the rate of $5.00 a week - the price was $175.00! Upon his retirement in 1989, he sold this instrument to the Chicago Symphony Orchestra for $20,000.

The second instrument, initially retained as a factory master model, was later sold to the University of Oklahoma. Mr. Jacobs obtained this instrument many years later.

Leopold Stokowski's concepts of orchestral sound were obviously way ahead of their time. It was not until the late 1940's and early 1950's that they were perfected by the unique brass section of the Chicago Symphony Orchestra.

Mr. Jacobs needed an exceptional vehicle for his concepts of sound and dynamics and one of the most famous marriages in the history of the tuba began. He became world famous as the father of modern orchestral tuba playing, and the big York tuba was part of the picture.

Many of his students and admirers sought such an instrument, but for many years no one would attempt to duplicate the famous York tuba. No plans or tooling for the original instrument existed, every piece would have to he recreated from scratch.

The challenge was great - the instrument in question had been played for four decades by the most articulate symphonic artist in history - future purchasers would have great expectations for such an instrument. Such a task involved not only a highly competent master craftsman, but someone equally understanding of the artistic and musical value of such an instrument.

Enter Peter Hirsbrunner. Mr. Jacobs had opportunity to meet Mr. Hirsbrunner, having been an admirer of his instruments. He visited the factory

on two occasions while on tour with the Chicago Symphony Orchestra, and generously put one of his treasured tubas at Mr. Hirsbrunner's disposal.

Mr. Jacobs had considered this instrument the better of the two originals until it was altered by someone at a repair shop in Chicago. The original leadpipe had developed a leak, and was to be patched.

Instead, it was replaced by a smaller one. At the same time, the fifth valve was removed, supposedly due to wear. Mr. Jacobs was quite aggravated by this action, particularly when this valve reappeared attached to someone else's tuba.

The instrument was in poor condition, so a complete restoration was necessary. This was a considerable challenge by itself. The piston-valve section was worn out and the rotary fifth valve assembly with corresponding branch and trigger mechanism had to be reconstructed. Several weeks of work were involved before the original parts were ready for use in development of the first duplicate instruments.

In 1979 Mr. Hirsbrunner built a prototype using the original leadpipe, valve section and bell. Mr. Robert Tucci tested this instrument thoroughly in his work with the orchestra of the Bavarian State Opera. The results proved positive, and plans were made to construct four complete instruments.

No bell mandrel was available, but it was possible to fabricate suitable bells using the combined facilities of an outside supplier and Mr. Hirsbrunner's staff. The piston-valve section was engineered to the original specifications, making use of recently-acquired modern honing equipment. The unique large-diameter finger buttons were made one at a time and a specialty manufacturer was located to provide suitable mother-of-pearl inlays.

When work began, Mr. Hirsbrunner remarked, "If an instrument is to sound and respond like the original, it must be built in the same manner. " Every curved and conical part had to be formed by the traditional process of filling hand made specially- prepared tubes with molten lead, then bending them with great accuracy to the prescribed shape.

When the lead has cooled and become solid, each tube is strapped into a massive bending jig. A long metal bar is attached to provide necessary leverage. After a few degrees of bending, ripples appear along the inside of the tube. The tube must then be removed from the jig and carried to an appropriate work area where these ripples are flattened by careful hammering. The tube is lifted and strapped back into position in the jig, and the process continues.

Mr. Hirsbrunner and two assistants kept count with a piece of chalk, making marks on the shop wall: the top bows had to be lifted into position an average of 32 to 35 times each. This work is physically the most demanding associated with the fabrication of large brasswind instruments.

Forming the large bottom bow is another extremely difficult task when no tooling is available. A pattern is worked out on sheet brass that will give the correct shape after being formed into a bow. Two halves are brazed together and formed into a round piece. The requires as much hammering and shaping from the inside as it does from the outside, involving a few days of extremely difficult and strenuous work. Mr. Hirsbrunner was a very taxed man when this was finished, vowing " Never again! "

Tooling to enable easier fabrication of this part in the future was built after the successful presentation and professional acceptance of the first group of instruments.

The smaller bows and other parts pose no special difficulties, but must be made up with great accuracy in order to achieve the desired taper and to guarantee a perfect fit with natural assembly.

If the work is executed in a knowledgeable manner and with absolute attention to detail, hand-making results in instruments with consistent

wall-thickness and temper throughout - prerequisites for even response and beautiful tone quality, given a good basic design.

Absolute mastery of metal forming techniques is a priority, to obtain the correct tapers and enable perfect assembly when the time comes. The slightest deviation can result in terrible inconsistencies in the finished products. Crude workmanship shows quickly in parts that corrode or crack in a short time as a result of too much hammering or filing to cover it. One can easily understand why manufacturers prefer to make standard models. Parts are quickly and accurately formed by powerful presses. Assembly and finishing is much simpler.

People frequently ask about the high price of a York Model tuba. Mr. Hirsbrunner began construction of the second group of eight instruments immediately after New Years Day 1982. He and two assistants worked almost constantly until mid-April just to produce the large bows. In the meantime the bells, the piston valve sections, the special top-open rotary valves, the slide bows, slide tubes, ferrules, braces and all other related parts were made under his close supervision.

Assembly is equally important in producing a master instrument. Many instruments are built to please the eye, but it is really the inside of an instrument that must be smooth and clean, allowing the sound waves to travel freely from one end to the other. Internal joints must be as neat as possible. This is an area where the greatest of sins take place on many lesser instruments.

Buffing must be performed by expert and experienced hands. Each large part represents a considerable investment by the time it nears completion. Overzealous or careless buffing can ruin such a part in an instant.

The leadpipe is one of the last parts to be mounted. It must be made with the greatest of accuracy. Once again, the slightest fault can spell the

difference between greatness and mediocrity.

Polishing and plating such a large and complicated instrument is quite involved and time-consuming. A special plating technique was recreated for the York Model instruments to obtain satisfactory results.

To date thirty-six Hirsbrunner tubas have been built, the last one as conscientiously as the first. One instrument remains at the factory as a model and exhibition instrument, but the others have taken their places in the world's finest musical ensembles. These are destined to serve their owners for fifty or more years, just as the original still serves Mr. Jacobs today.

Hirsbrunner York Tubas have been built and sold to date as follows:

1981: FOUR INSTRUMENTS

1. Michael Lind - Stockholm Philharmonic Orchestra

2. Daniel Perantoni - Arizona State University (later sold to David Pack, Phoenix Symphony Orchestra)

3. Gerard Bequet - Ensemble Intercontemporain Parisiene

4. Robert Tucci - Bavarian State Opera, Munich

1982: EIGHT INSTRUMENTS

1. Thomas Walsh - Munich Philharmonic Orchestra

2. Chester Schmitz - Boston Symphony Orchestra

3. Chester Schmitz - Private instrument

4. David Fedderly - Baltimore Symphony Orchestra

5. Floyd Cooley - San Francisco Symphony

6. Peter Sykes - ABC Symphony Orchestra, Melbourne

7. Dennis Miller - Vancouver Philharmonic Orchestra

8. Paul Kryzwicki - Philadelphia Orchestra

A ninth instrument was built at this time to remain at the factory as a model and exhibition instrument.

1984: TWELVE INSTRUMENTS

1. Richard Nahatzki - Berlin Radio Symphony Orchestra

2. Finn Schumacker - Bavarian State Opera, Munich

3. Ame Svendsen - Royal Guard Band, Copenhagen

4. Simon Styles - Tonhalle Orchestra, Zurich

5. Simon Styles - Private instrument

6. Pierre Pillaud - Orchestra de la Suisse Romande

7. Michael Sanders - San Antonio Symphony Orchestra

8. Donald Little - University of North Texas (now

owned by Warren Deck - New York Philharmonic)

9. Aldo Tohannsen - Stockholm Radio Symphony Orchestra

10. Fritz Kaenzig - University of Michigan/Grant Park (Chicago) Symphony

11. Russel Ward - Orlando Symphony

12. Donald Strand - Austell, Georgia

1985: EIGHT INSTRUMENTS

1. Scott Mendokei - New York tuba artist

2. Wesley Jacobs - Detroit Symphony Orchestra

3. David Glidden - Symphony Orchestra, Turin

4. Hans Anderson - Aarhus Symphony Orchestra

5. Serge Goessen - Belgium symphonic artist

6. Ronald Tasa - Ft. Worth tuba artist

7. Peter Govorchin - Fullerton, California artist

8. Custom Music Co. - Later sold to private owner in Europe

1986: TWO INSTRUMENTS

1. Jens Bjom Larsen - Copenhagen Radio Symphony

2. Eugene Pokorny - St. Louis Symphony Orchestra (In 1988 Mr. Pokorny was appointed successor to Arnold M Jacobs)

1987: ONE INSTRUMENT

1. Adi Hersko - Israel Philharmonic Orchestra

1989: TWO INSTRUMENTS

1. Hans Nickel - West German Radio Symphony Orchestra, Cologne

2. One instrument sold to Rotterdam Philharmonic Orchestra, Holland

What is so unique about the York Model tuba!

To answer this question we must first look at the tradition of American brass manufacture that began late in the last century and reached its peak during the 1920's and 30's.

Conn, York and other makers had perfected their machining, lathing and plating techniques to the point where valve sections and other turned parts were masterpieces of mechanical engineering. The York valve sections were typical with beautiful layout of all tubes, perfect porting, and a design concept that was pure elegance - the thin-walled lightweight pumps, the beautiful top and bottom valve caps, the finger buttons all so typical of a consequent design policy.

Conn and other manufacturers had produce many excellent designs by 1920 for E-flat and BB-flat tubas and, in a few instances, for medium-size CC tubas. York's design philosophy carried these practices one step further, with strong emphasis on tonal output. The acoustical design of this tuba is a perfect example of tonal efficiency, balanced intonation and light response. The influence of these concepts can be observed in instruments produced by Martin and other companies, and it is from this proud evolution of fine craftsmanship that today's York Model tuba traces its lineage.

The second part of our answer lies not in the instrument itself, but in its use by Arnold Jacobs. It was in his capable hands that a new kind of orchestral tuba sound evolved. Broad, possessing great volume and power on the one hand, yet having a beautiful singing core on the other. A vibrant sound...alive... art in itself.

The final element is Mr. Hirsbrunner's uncompromising recreation of the original. Through his efforts the instrument has become available to many fine artists following Arnold Jacobs' footsteps in a musical world he helped to create.