

Hirsbrunner, Peter, "The History of the Big York-Hirsbrunner Tuba: The Instrument-Maker's Point of View", BRASS BULLETIN, no 40 (1982) p34-39

It is fully ten years since we began collaborating with our representatives in the United States. Our associates there felt that practically no new development had taken place in the tuba field for several decades. Indeed since the Second World War several well known American tuba manufacturers had gone out of business although they made very good instruments.

Ten years ago, therefore, began close collaboration with American professional tuba players in order to develop new instruments which would meet the requirements of modern professionals. We invested a lot of time and money in these experiments and it was four years before we could put on the market models which really met today's needs and wishes.

For seven years I have attended tuba symposiums, talking to dozens of tuba players about their ideas and concepts. In the USA, particularly, one particular model came up again and again in conversation, one which is unfortunately not longer produced today. I don't know how often I heard people say, "Your! tubas are great, but that big York of Arnold Jacobs in Chicago, that's unbeatable". Only two are supposed even to have been built. So I told these players all they had to do was let me have one of these instruments and I would show them we can still build tubas like it today. But the answer was always, "Well, lots of firms have tried but nothing much has ever come of it".

In the summer of 1979 I had the pleasure of having Mr. Arnold Jacobs visit me in Sumiswald during a Chicago Orchestra tour of Switzerland. He was impressed by our factory and I think that this was the deciding factor in making him feel confident enough to place one of his instruments at our disposal for the purposes of making a copy. I well understand the fear that every musician has when his instrument has to be repaired for he feels that it just won't sound the same afterwards. When I think what terrible repair jobs I have seen, carried out by so-called repairers in the States, I can fully understand this fear. Only an instrument maker who has thoroughly mastered his craft is in a position to carry out this kind of work and really give the musician back his instrument.

I therefore had the job of giving Mr. Jacobs back a completely overhauled tuba, technically and musically as new, while at the same time we could use this opportunity to take the instrument's measurements, make a record of its exact construction and produce a single Copy.

I must explain at this point that hydraulic and mechanical production of tubing sections like this was completely unknown 55 years ago. All parts were cut to size from flat, and quite thin, metal sheet and formed into tubes. For bending, these tubes were filled with lead and experienced craftsmen bent them into the desired shape laboriously by hand. So, if we wanted an exact copy of this instrument, one that would have the same qualities of sound and response, we were going to have to make it by the same method. For me the task had become a matter of prestige and I brought all the knowledge and ability of myself and my best workers to bear on the job of proving that we were still instrument makers.

The bell section was a real problem for it could not be produced without a suitable metal template and the idea of spending 7000 or 8000 Swiss Francs on a template to make one tuba was just too much for me. For the first copy we therefore used the original bell section of the repaired York tuba.

I will never forget the moment when I impatiently picked up the completed copy, put the mouthpiece to my lips and blew the first notes. I myself was amazed at how easy this big tuba was to blow.

Then came the great day when Bob Tucci, as one of the initiators of the project, was to give his verdict. Bob is just as much of a perfectionist in the musical and brass-playing sphere as I am in my own work so I could scarcely wait to hear what he had to say. Once he had played it for three weeks he was convinced that it is still possible to build such instruments today.

Next came the first surprise for the players. Probably none had imagined what it would cost to have such unusual work done by hand by highly paid specialist workers. The cost of an instrument like this is enormous and the little group of potential customers evaporated into thin air right away.

In many factories making tubas today the starting material for the conical tube sections is a seamless cylinder. This means that in each individual section there are differences in wall thickness of nearly 1mm. At each point where two sections are joined with a ferrule there is therefore a difference in the wall thickness of the metal. This unevenness cannot be seen on the outside of the finished instrument. When we set the air column of a brass instrument in motion, however, we are using the inner diameter of the tube, not the outer. If then we have ridges of 1/2 mm or more on the inside of every joint between two sections of tube, then the air column is no longer evenly conical but is broken up by little steps. Neither high-lustre polishing nor beautiful silver plating will do anything to change this. However good a brass instrument looks from the outside, note production uses the inside of the tubing and the musician cannot see this on a finished instrument. All he can tell is that one instrument is different to play, and sounds different, from another although it looks exactly the same on the outside.

With a handmade instrument these causes of unevenness are ruled out from the start since every section, from the smallest to the largest diameter, is cut to size from sheet of the same thickness. I could describe the extreme difference between these two methods of production as follows: one kind of instrument appeals to the eye, the other to the ear. Curved conical tube sections with almost constant wall thickness can be produced by machine but the expense in work and tools is substantially greater and this is of course reflected in the musical quality and the price.

Musicians simply must realize that the instrument they buy is the tool with which they do their work and earn their living. If I can buy a better tool or a more modern machine which will make the work easier for me and my colleagues, I simply have to decide whether the improvement in my working methods thereby achieved is worth the cost. A fully equipped working position for a good instrument maker in my factory costs about 30,000 Francs. Nor is this a once-in-a-lifetime investment for the position must constantly be adapted and updated according to market demands. If we renounce all the technical aids of modern series production and go back to making everything by hand, we must realize that, with all the deductions from pay which have to be faced nowadays, one employee costs, per hour worked, forty times as much as fifty years ago. If these tubas cost \$ 200 fifty years ago, today's price will be around \$ 8000. Then again we can produce large and expensive tools in order to reduce the time spent but the expensive tools and equipment must also be paid for and tubas of this size cannot be series-produced by the thousand like trumpets and cornets. If we wish to recoup the high cost of the tools through the number of instruments we may sell, we arrive, one way or another, at this high price.

I decided to look on the whole undertaking as costly but sure-fire publicity for our products and laid all the arithmetic aside. A year later four definite customers turned up: Bob Tucci, Michael Lind, Gerard Buquet and Dan Perantoni - all prepared to lay out the sum in question.

In 1981 we therefore built a series of four of these tubas. The reader must just realize that every valve, every tube section, in fact every components was produced individually by hand. When the four tubas were finished in the summer of 1981, all of us who had worked on them were really pleased with the way the job had turned out but all of us, myself included, said, "Never again!" It is certainly interesting to work the way our grandfathers did but we nearly worked ourselves into the ground in the process.

The four tubas are certainly masterpieces of handcrafted instrument making. The absolutely constant wall thickness of the metal over the entire length of the instrument and the meticulously precise hand processes really turned out absolutely identical instruments.

Naturally the four happy owners have been asked by many colleagues for their verdict and they all seem to be really pleased with their instruments. At the beginning of 1982 orders arrived for eight more York-Hirsbrunner tubas. This series was made with exactly the same use of exacting hand processes during the first half of 1982 and five of the instruments were handed over in August. Each instrument was collected by its owner in Sumiswald and my colleagues and I are proud of the recognition which this has brought to our efforts.

It is nice, and it spurs us further along the road we have chosen, when our efforts are recognized. But a relatively small business such as ours cannot afford to put all its eggs in one instrumental basket; we must try to maintain our building program of many types of instrument. This is the only way to survive in the long term. And so the York-Hirsbrunner tuba will remain an exclusive instrument, a small series of then probably being included in this building program once every two years as long as there are customers for them.