

The Reform Böhm System

The Right Compromise Between French And German Systems?

by Luigi Magistrelli

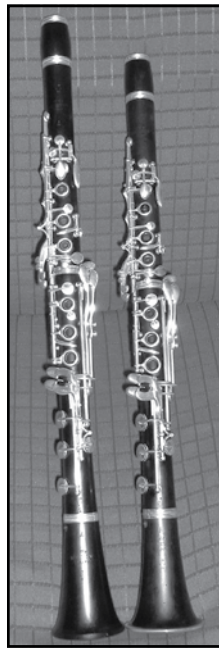
Introduction

Prof. Nicholas Shackleton was so fond of the Fritz Wurlitzer Reform Boehm system clarinets that this is the reason for me to choose the subject for this paper. He also offered me very important help when my Fritz Wurlitzer B \flat Reform Böhm clarinet was stolen on a night train from Prague to Vienna more than 10 years ago. He informed me that a set of such instruments was available on sale in Cambridge during that period, so I was able to get one more pair of nice Fritz Wurlitzer Reform Böhm clarinets! I also had the opportunity to visit his unique clarinet collection and test his precious Reform Böhm instruments in order to compare them with mine. In spite of the good tone qualities, hand-forged mechanism, flexibility and evenness over all the registers, Reform Böhm system clarinets didn't receive wide acceptance in the clarinet world. Actually they are very highly regarded, especially in the Netherlands, and they are also played in Germany, England, and the U.S.A., and in Italy there are a few players who are using them. The reason could be that this system is perhaps considered a sort of hybrid between the French and German Oehler system clarinets without its own identity. However, my personal opinion is just the opposite! I would consider this instrument to be an ideal compromise between the dark, compact and warm sound of the German Oehler system and the more flexible, brighter and technically easier to handle French Böhm system.

Reform Böhm System and Oehler System

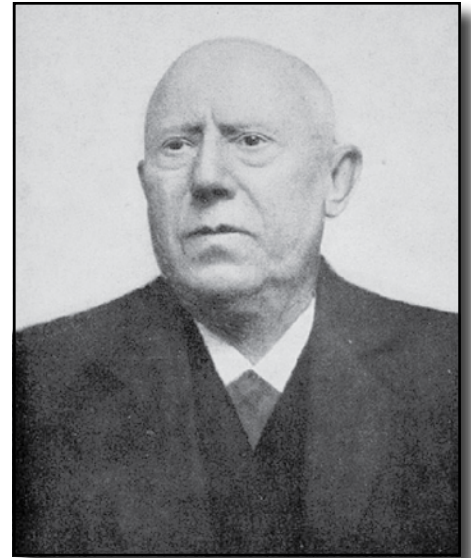
The Reform Böhm clarinet has its roots in the Oehler system used today mainly in Germany, Austria and in a few northern European countries. The German clarinetist Oskar Oehler (1858–1936), a founding member of the Berlin Philharmonic Orchestra, developed this new model after opening his workshop in Berlin in 1887, a period in which he also gave up playing.

His system sums up the main improvements of the 19th century and offers several solutions for problematic technical issues as well as intonation and volume. Oehler was an indefatigable traveler, and he even had the opportunity to meet Carl Baermann in Munich, inventor of his Baermann clarinet system used also by Richard Mühlfeld, dedicatee of the clarinet masterworks of Brahms. He also met A. Neff in Kassel who played with Hermstedt under the guidance of Ludwig Spohr. Oehler was a highly acknowledged clarinet maker as well as being a good player. His clarinets became very well appreciated and in demand in Germany. The speaker key of the Oehler system corresponds with a ring + vent for L1 to improve intonation of F \sharp (vent open) and C \sharp (vent closed). It also features a ring + vent for L2 to improve intonation of B \flat ⁵, a ring for L3 corresponding with the R1



Reform Boehm system clarinets in A and B-flat made by Fritz Wurlitzer in 1966 (personal instruments of Luigi Magistrelli)

ring to improve intonation of forked B \flat ⁵, and a duplicate lever for R1 C \sharp /G \sharp ⁵. On this clarinet the player has the option of using the patent C \sharp mechanism or to turn it off. The lower section has a ring on R1 to improve E 6 and F 6 . A plate for R2 closes the tone hole on the right side of the instrument and also activates vent keys to improve forked B \flat ⁵/F 5 . There is also a ring for R3 with connection to a vent key. The key for R4 (G \sharp /E \flat ⁵) also closes vents to improve notes above C \sharp . He also began



Oskar Oehler, inventor of the Oehler-system clarinet

the improvements to the forked F fingering of the right hand which was later finalized by F. A. Uebel. The Oehler clarinets had a rather large bore (14.8) and very good response and projection. Oskar Oehler had three good pupils who became very well known makers as well: G. Graessel, L. Warschewski and F.A. Uebel. Uebel was the most prolific maker in terms of number of clarinets made, starting from the 1940s. Due to the characteristics of their bore, the sound was quite well centered, warm and thick. L. Warschewski (1888–1950) was an apprentice to Oehler in Berlin and moved to Stockholm after World War I. He was the solo clarinetist with the Stockholm Philharmonic Orchestra and rebuilt Uebel clarinets according to his own patented design (the details of this are unclear but there could be something to do with bulges in the bore) and was professor at the Stockholm Royal Academy of Music. His



Fritz Wurlitzer Oehler system Schmidt-Kolbe clarinet

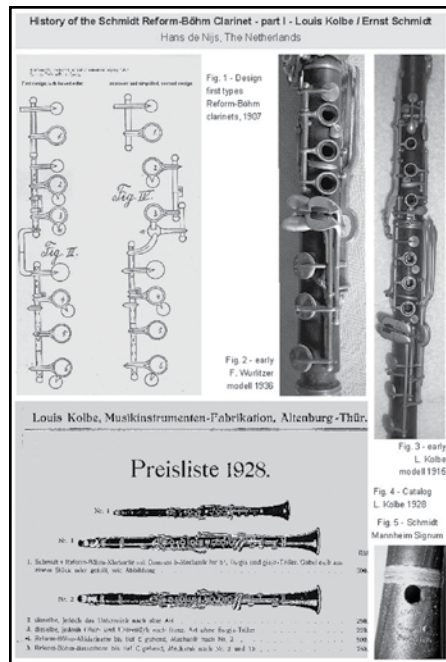
instruments were of high quality and quite popular. Unfortunately, he does not seem to have kept any records of his production or sales. He died during a performance of the Shostakovich *Sixth Symphony*. His clarinets keep the good qualities of the Uebel instruments but produce a mellower tone. At least this is my personal idea being fortunate enough to own a pair of L. Warschewski clarinets. I used them in several CDs I have recorded, and I think that the more I practised on them the more I understood their unique qualities. I definitely would choose them for classical and romantic repertoire.

The first maker who took into great consideration the theories of E. Schmidt and L. Kolbe was Fritz Wurlitzer who made his first Reform Böhm clarinets in the 1930–40s. He worked in Erlbach (formerly in the DDR) and conceived his clarinets with a somewhat larger bore (15.2) compared with the ones made nowadays by the Wurlitzer factory in Neustadt an der Aisch. Fritz Wurlitzer also developed the Schmidt-Kolbe system clarinets with the Oehler system which was used then by some eminent principal players in German orchestras. This system has some advantages, but on the whole I think it is a bit awkward with a heavy keywork when compared with the normal Oehler-system clarinets.

A Brief History Of The Reform Böhm System: Ernst Schmidt and Louis Kolbe

Ernst Schmidt (1870–1954)

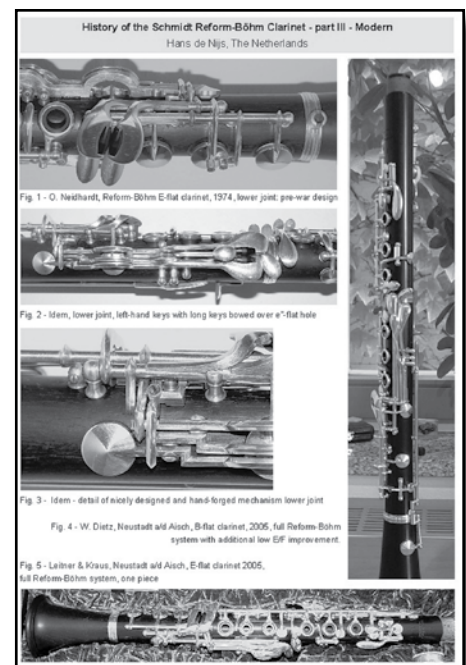
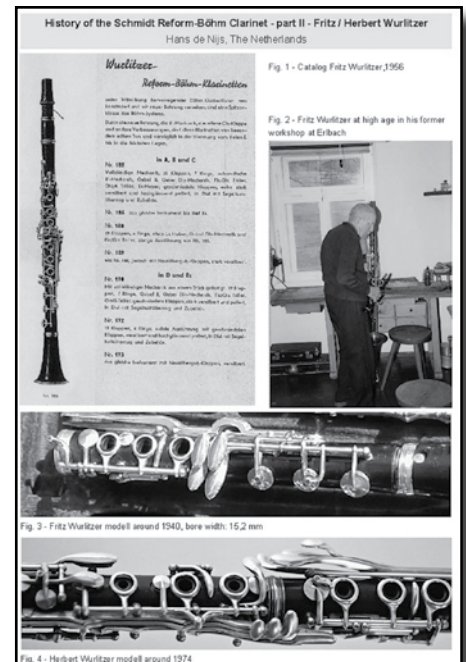
Schmidt studied clarinet at the Conservatory of Leipzig and showed at an early age a great interest in acoustics. Stimulated by Traugott Gentzch, a clarinetist from Leipzig, Ernst Schmidt decided in 1895 to switch to the Böhm system, which then was quite unusual for a German clarinetist. Although he recognized the advantages of the Böhm keywork, he was not satisfied with the overall tuning of the clarinets of his day and considered the improvement of the whole design by recalculating the position and dimensions of the tone holes based on acoustical principles. This investigation was patented in 1905 (no. 193727) for the Schmidt-Kolbe clarinet with a B[♭] improvement system (extra hole) in 1912. Nearly all members of the clarinet family had been taken into consideration, from the E[♭] clarinet to the contrabass clarinet. He was solo clarinetist in the Hof and Nationaltheater of Mannheim from 1902 to 1935. He was a musician and clarinet



tuner but never owned a workshop for the manufacturing or maintaining of clarinets. He collaborated with well known clarinet makers such as Louis Kolbe from 1902 until 1931 and from 1932 until about 1950 with Fritz Wurlitzer. After his retirement in 1935 he collaborated also with the physician Friedrich Rösch from Heidelberg and redesigned the Reform-Böhm and Schmidt-Kolbe clarinets for a second time recalculating the positions of the tone holes and the dimensions of mouthpieces. These redesigned Schmidt clarinets were ready in 1936 and were tested in some important German and Dutch orchestras. They also were promoted in an interesting article in 1937 by both Fritz Wurlitzer and Ernst Schmidt, which included also very positive comments by well known solo clarinetists (e.g. Rudolf Gall, principal of the Amsterdam Concertgebouw orchestra), together with fingering charts and maintenance instructions. Ernst Schmidt tuned the Schmidt clarinets made by Fritz Wurlitzer during this period and was responsible for the final quality control test. Those tested clarinets were signed by his stamp “Schmidt-Mannheim.” Ernst Schmidt passed away in 1954.

Louis Kolbe (1863–1952)

Unfortunately we don't have much information on Louis Kolbe. He was born in Leubeth, Germany, a little village near Adorf. He decided to settle in Altenburg in 1893. He received his education as a clarinet builder from Meister A.H. Penzel (1843–1892) in Markneukirchen in 1879–1882. He collaborated from the beginning of the 20th century with Ernst Schmidt de-



veloping different clarinets in the German and Böhm systems. The firm's pricelist of 1928 has fortunately survived and can show us a broad spectrum of soloist models in all pitches and different systems. (See *Illust. No. 1, figure 4*)

History and Pre-war Development of the Reform-böhm System

Very little information can be found on this clarinet system, searching both in the Internet or in all the books written so far. This system can be characterized as a combination of the Oehler bore with limited flare



Pair of Louis Kolbe clarinets (ca. 1915–1925) (Luigi Magistrelli collection)

in the lower joint in different bore widths of 15.2 mm (early types) and 14.70 mm (modern types). It has the Böhm basic keywork but with various modifications, with somewhat different altissimo fingerings.

On the Web site of Herbert Wurlitzer and also in Wikipedia it is stated that the Reform Böhm system was invented more than 50 years ago by Fritz Wurlitzer, the late Herbert Wurlitzer's father. However the starting point of the development of the Schmidt Reform Böhm system, as well as the Schmidt-Kolbe system, can be found more than 100 years ago. Ernst Schmidt's ideas and concepts had been realized (ca. 1900) by Louis Kolbe in Altenburg. A very early model can be seen in an article by W. Altenburg from 1907¹. The design of the earliest keywork in two modifications is shown in Illust. No. 1, figure 1². The first modification (prototype) was very complicated and difficult to make with the forked E^b mechanism. The second modification is shown in Illust. No. 1, figure 3, a stamped L. Kolbe B^b clarinet. I assume that only a few clarinets of this type have been manufactured because only a few clarinets of this type have survived. The pricelist of the Louis Kolbe's firm from 1928 has survived³, and it is an interesting document, that shows the Reform Böhm models from that period. The clarinets were offered with a complete Reform Böhm lay-out or equipped with a standard Böhm upper joint with a Reform Böhm lower joint or a complete traditional Böhm system, indicated as "*nach alter Art*" (according to the "old" French design), as shown in Illus. 2, fig. 4. It is remarkable that the three long keys of the lower joint (left hand) are bowed over the E^b hole. The left c" rod during this period was not designed as a rotating rod, but as a balanced one. This arrangement is shown in Illust. 3, figs. 2, 3, 4. Around 1935 Schmidt gave new impetus to the development of his clarinet system after his retirement. He

recalculated the position of the tone holes according to certain acoustical laws and strived to be a successor to Louis Kolbe. At first he asked the clarinet maker Oskar Neidhardt in Schöneck/Sachsen, who manufactured both types of Schmidt clarinets already on a small scale but on a very high level of workmanship. However, Neidhardt refused this request for various reasons. In Illust. No. 3, figures 1–3, a Neidhardt E^b Reform-Böhm clarinet is shown, manufactured in 1974, but still conceived according to the pre-war design described above. The detailed illustrations show the high level of workmanship of this rare but fine model with various special features. Oskar Neidhardt specialized in his own developed Neidhardt system and manufactured a few Reform Böhm clarinets, but only on special request. After Neidhardt's refusal Ernst Schmidt visited Fritz Wurlitzer (Illust. No. 2, figure 2) in Erlbach. From this point on the development of both the Oehler Schmidt Kolbe and Schmidt Kolbe Reform Böhm clarinets was continued by this successful duo. Two clarinets made by Fritz Wurlitzer in the first period (1936–1940) are shown in Illust. No. 1, figure 2 and in Illust. No. 2, figure 3. A typical feature of this design can be found on the upper joint with the B^b fork mechanism still in German style and an innovative f[#]/g[#] and g[#]/a" trill. The B^b improvement (two independently operating keys for register and throat-tone B^b) is also present. The lower joint shows a resonance key on the third ring and the double c" hole, as well as the right-hand rollers for the little finger. Both clarinets are stamped with the Signum Schmidt/Mannheim, as in Illust. No. 1, figure 5. They both published an interesting article⁴ in 1937 which promoted the Schmidt type clarinets with recommendations of leading clarinetists, a lot of information about fingering charts, about mouthpieces and maintenance instructions. Around 1946 the lower joint was adapted

and the long keys of the left hand were rearranged in order to be similar to the traditional Böhm system. Numerous small variations in the keywork can be seen in some clarinets made in different years. The bore width was also reduced around 1951. Fritz Wurlitzer published in 1956 a catalog⁵ which shows also the Reform Böhm clarinet in all pitches from the small E^b clarinet to the bass clarinet (Illust. No. 2, figure 1). Fritz Wurlitzer the Schmidt Reform Böhm clarinet in this catalog as the "Wurlitzer Reform Böhm clarinet." His son Herbert worked in the workshop at Erlbach until his move in 1959 to Bubenreuth (West Germany) and he has continued manufacturing Reform-Böhm clarinets until today while his son Ulrik keeps alive this tradition. See Illust. 2 for an example from 1974. The Oehler Schmidt-Kolbe system clarinet was not made anymore by Herbert Wurlitzer. From the 1970s the Reform-Böhm clarinet became more and more popular in different countries, and in the Netherlands it is still used by many professional players. The Reform Böhm clarinet was also made by the firm Hammerschmidt/Burgau and from the 1990s by some of Herbert Wurlitzer's former workers, such as Leitner & Kraus (Illust. No. 3, figure 5), Harald Huying and Wolfgang Dietz (Illust. No. 3, figure 4) and also by Schwenk und Seggelke in Bamberg, Germany. The Italian maker Orsi also tried to make some clarinets with the Reform Böhm system design.

Considerations and Comparison Between the Reform Böhm and the French-System Clarinets

The Reform Böhm clarinet was conceived with the tone characteristics of the German Oehler system, therefore it should, in my opinion, be played only with a German mouthpiece. Otherwise, it would make no sense to buy and use them because the German timbre would be lost. The French-system clarinet could, on the contrary, be played with a German mouthpiece (the Wurlitzer M3+ actually fits very well with good intonation!), and the sound would still keep the "French" Buffet timbre, but with a darker and more compact tone. As was mentioned above, the first Schmidt Reform Böhm clarinets had a very large bore in comparison with the ones built later and today. My clarinets have a quite compact but also flexible sound compared with the modern Wurlitzer model. Moreover, built in 1966, they still have a hole on the right side of the bell (on the tenon!), and this can produce better intonation,

bigger and warmer sound on the low notes (so often flat on the Buffet and other clarinets!). The Oehler Schmidt Kolbe system clarinets could have such a hole on the left side, and I found something similar even on some early boxwood clarinets of German makers! I wonder why the modern Wurlitzer Reform Böhm clarinets don't have it (they had it in the recent past, but not placed on the tenon), but only a more flared bell that can only partially solve the problem of intonation and the round shape of the low notes! However, Wurlitzer is making (on special request) an extra hole on the bell which is closed and opened by a long key, just like the Oehler system clarinets. The key design of the modern Reform Böhm clarinets has a certain resemblance to the Boehm-system clarinets, but the early Fritz Wurlitzer clarinets have a more peculiar, interesting and "German" design. The Reform Böhm clarinets are, like the French system, suitable for any kind of music, like the French Boehm clarinets. The Oehler system clarinets, because of the sophisticated and complicated fingering system, could be in a way unsuitable for the modern and contemporary repertoire, but certainly we can find some great German or Austrian virtuoso players who could have been able to play the most

difficult repertoire! All the extra resonance holes of the Reform Böhm allow a more homogeneous and well projected sound. The extra hole of the throat B^b produces a very good, in tune and clean tone. The upper register on the Reform Böhm is much easier to obtain even though some notes (high b[♭] and high c[♭]) could be a little bit sharp, exactly like in the Oehler system clarinets. It is clearly a matter of opinion and sound conception, but I consider the tone of the Reform Boehm clarinet more charming and interesting than the usual French-system clarinet. However, for some classical and romantic clarinet compositions the warmer and thicker timbre of the German Oehler clarinet could be really something more recommended!

Conclusions

The Reform Böhm Schmidt-Kolbe system has survived to the present day, and it could be considered as a very valid alternative to the standard Böhm-system clarinets for a lot of professional players because of its focused, flexible and charming sound, German bore and accurate keywork. My aim in this article has been to describe the Reform Böhm and German system clarinets, to compare them and to comment on their distinctive but also, in a way, similar

tone characteristics. I have also attempted to find some connections with the French-system clarinets. Fritz Wurlitzer, father of Herbert Wurlitzer, was the first maker before World War II to make good Reform Böhm system clarinets which were based on the teaching of Schmidt and Kolbe. I still consider them to be the best Reform Böhm clarinets ever made.

BIBLIOGRAPHY


Article of Hans De Nijs, May 2007
O. Kroll : *Die Klarinette* (Bärenreiter, Kassel 1965)

END NOTES

1. Altenburg W. "Neue Fortschritte im Klarinettenbau," 28, 1907, pp. 324-326
2. Altenburg W. "Neue Mitteilungen über die Schmidt-Kolbe Klarinette," 29, 1908, pp. 617-620
3. Price list/catalog
4. Publication/advertisement Ernst Schmidt and Fritz Wurlitzer, 1937
5. Catalog Fritz Wurlitzer, 1956

ACKNOWLEDGEMENTS

I wish to thank Hans De Nijs from Holland for helping me to find information on the history of the Reform Boehm System clarinets. His article and iconographic material were very valuable to me.



**Fratelli
PATRICOLA**
*Strumenti Musicali
Musical Instruments*

**If you like a clarinet with a strong sound, then the Virtuoso clarinet is your instrument!
This instrument has a powerful sound, that is, as comfortable to play in the Orchestra, Chamber music, Jazz.**

Just try and you'll see!

E♭-B♭-A-C

Rosewood

Grenadilla

New "Virtuoso"

P.o.box 36
15053 Castelnuovo Scrivia
Italy
Tel. +39 0131 826616
Fax +39 0131 823231
patricola@patricola.com

This is what you will find in all our clarinets:

- Only 11/13 years naturally seasoned wood .
- Very few probabilities of wood cracking.
- Great intonation with a big sound projection.

Please place online your request for a free catalogue and our sales points address at
www.patricola.com