

The Double Bell Euphonium, I Beg Your Pardon?

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“The disappearance of the double-bell euphonium from manufacturer’s catalogs is mysterious.”¹

When the words “Double Bell Euphonium” are spoken, the common question asked is what kind of musical instrument is that? In my own experience, the thought of a euphonium, which a common person might not even know exists, that has two sound producing bells instead of one, is quite intriguing. This hybrid duplex instrument existed mostly and was quite popular in the “Golden Age of Bands,” an era of time marked from 1880 to 1930 where bands of America were evolving, admired, and accepted by many.² Our forefathers provided the ideas, developments, and trends of our band world today and yet the double bell euphonium has seemed to disappear. The intention of this research is to provide you with an understanding of the double bell euphonium so you can help pass on the knowledge of this vanishing instrument.

Before we gander into the double bell euphonium age, let's first understand what a euphonium (Greek for sweet-voiced sound) is. Early instruments were made from the horns of animals such as a cow, oxen, or a goat. Animal herders would make these instruments by piercing holes into the horns so they could play a calling melody.³ The cornett and bugle were the two principle instruments that evolved from this creation.

¹ Mary Petersen, “Double-Bell Euphoniums in the Arne B. Larson Collection,” *T.U.B.A Journal*/Vol. 8/4 (Spring 1981): 7.

² Harry Wayne Schwartz, *Bands of America* (New York: Doubleday & Co. Inc., 1957), 16.

³ Gretchen Renae Bowles, “The “Golden Age” of Euphonium Playing” (DMA Dissertation, The University of Southern Mississippi, 2004), 14.

In the cornett family the serpent was created which was basically a bass cornett, an obviously longer, lower sounding conical instrument.⁴ Around the same time arrived the ophicleide, French for “young bull,” a direct connection to the ancient cow horns and a member of the cylindrical bugle family. “The ophicleide’s timbre, full and resonant, was characteristic of both the saxophone (which developed from it) and the euphonium (which replaced it)...considered the baritone/bass voice in the ensemble, was even at times called the euphonion or euphonium.”⁵ 1838 seems the time when the euphonium (large bore version) and baritone (small bore version) make their debut. It was really noticed in 1843 when Concert master Sommer of Weimar designed a bugle with three valves bored in baritone range first called *Euphonion* in Germany, later *Barytonhorn* that was built in C, Bb, and A keys.⁶

Instrument creators over time evolved different instruments and resulted in combining both a conical (from the cornett family) and a cylindrical (from the bugle family) instrument into one duplex instrument. In this sense duplex refers to “two instruments of the same pitch but of different tone qualities, connected by a single leadpipe.”⁷ Not to be confused with our modern French horn, which is a duplex instrument of two different pitched instruments (Key of F and Bb), connected by one single leadpipe. In the euphonium world, a double bell euphonium is born by “combining a conical euphonium and a cylindrical valve trombone, both sharing the

⁴ Bowles, “Golden Age,” 15-16.

⁵ Ibid, 18.

⁶ Sibyl Marcuse, *A Survey of Musical Instruments* (New York: Harper & Row, Publishers, 1975), 769.

⁷ Edward K. Mallet, “The Double-Bell Euphonium; The History of a Forgotten Instrument,” *T.U.B.A. Journal*/Vol. 21/3 (1994): 24.

same valve cluster and lead pipe.”⁸ Below you will find a timeline of the evolution of the double bell euphonium as compiled from my research. Please remember that combining these instruments did not take place until the invention of the valve:

- **1788** Thomas Clagget (Irish), combined two trumpets (D and Eb) using the primitive valve mechanism.⁹
- **1851** Gismore (London) combined a cornet and flügelhorn and McNeil (Dublin) combined a trumpet, cornet, and a flügelhorn all with a valve to redirect air stream through different shaped tubing and different types of bores.¹⁰
- **1855** during a Paris Exposition, Pelitti, an Italian brass manufacturer, introduced a family of *Gemelli* (Italian for twins)...cornet and flügelhorn; alto horn and Eb trumpet; baritone and valve trombone (ancestor of double bell euphonium); and tenor tuba and bass trumpet.¹¹
- **1859** London Newspaper advertised an echo cornet made by Köhler...cornet with second bulb-shaped bell (first to use multiple bells), which produced a distant echo effect (for soloists).¹²
- **1859** Adolphe Sax produced six valve, seven-bell instruments.¹³
- **1873** Vienna Exposition presented the first double-belled instrument – F. Hirschberg of Breslau introduced his B-C Clairon (flügelhorn in Bb and cornet in C).¹⁴
- **1870’s** Bohland and Fuchs (Graslitz) built the next direct ancestor to the double bell euphonium...combination of a baritone (or *baryton*), and a valve trombone (example did not survive).¹⁵
- **1887** J.J. Chediwa (Odessa) invented *Lyrophone* with two tubes of the same length but with different bores...the narrow tube used for solo and piano passages, the wide bore tube for tutti and forte passages (Double Bell euphonium direct intended special effects use).¹⁶
- **1888** C.G. Conn built a 5-valve double bell euphonium for Harry Whittier (John Philip Sousa Band [US Marine Band]).¹⁷
- **By 1890** Higham (Manchester), produced the *Highamphone*, and Fontanie Besson (Paris), produced the *Doblophone*. In America, J.W. Pepper imported

⁸ Bowles, “Golden Age,” 29.

⁹ Edward Mallett, “The Double Bell Euphonium: Design and Literature Past and Present” (DMA Dissertation, Michigan State University, 1996), 4.

¹⁰ Bowles, “Golden Age,” 29.

¹¹ Curt Sachs, *Real-Lexicon der Musikinstrumente* (New York: Dover Publications, 1964), 123.

¹² Ibid, 126.

¹³ Bowles, “Golden Age,” 31.

¹⁴ Sachs, *Real-Lexicon*, 42.

¹⁵ Ibid, 123.

¹⁶ Marcuse, *Survey of Musical Instruments*, 323.

¹⁷ Robert Reifsnnyder, “A Short History of the Euphonium in America,” *The Brass Bulletin* XXXV (1981): 16.

their instrument from C.A. Mouchel (Paris), and the Coleman Music Company imported from Missenharter (Stuttgart).¹⁸

- **1890** Besson's stock report showed they made a *Basse et trombone* (probably a double bell euphonium).¹⁹
- **By 1900**...duplex echo instruments being produced were only double bell euphoniums (most popular) and echo cornets.²⁰ Makers such as King (H.N. White and Company), Holton, Beuscher, Distin, York, C.G. Conn, Martin, and Sliver Piston – Chicago.
- **1902** D.C. Hall and Company exhibited a complete line of echo instruments.²¹

This idea of making a duplex instrument by combining two instruments into one can be traced back to the fourth century in Central and South America, where natives combined pipes and whistles together creating double, triple, and even quadruple instruments.²² It was also found in ninth century Morocco, Egypt, Greece, Slavic territories, and India where double flutes and clarinets were created.²³ It seems once an instrument was invented, it was altered to create new advancements, which also happens still today with modern musical instruments. With any contemporary popular technology there are always improvements and as far as the double bell euphonium, it was the only multi-belled brass instrument that was mass-produced due to its admired use in the twentieth century concerts bands. The double bell euphonium even made its appearance in the lyrics of *The Music Man* production by Meredith Willson:

Seventy-six trombones caught the morning sun,
 With a hundred and ten cornets right behind.
 There were more than a thousand reeds
 Springing up like weeds,
 There were horns of every shape and kind.

¹⁸ Bowles, "Golden Age," 32.

¹⁹ Arnold Meyers and Niles Eldredge, "The Brasswind Production of Marthe Besson's London Factory," *The Galphin Society Journal* Vol. 59 (May, 2006): 47.

²⁰ Bowles, "Golden Age," 32.

²¹ Reifsnyder, "Euphonium in America," 17.

²² Ruth Midgley, ed., *Musical Instruments of the World* (New York: Bantam, 1976), 24.

²³ *Ibid*, 3745.

There were copper-bottomed timpani in horse platoons,
Thundering, thundering, all along the way.
Double bell euphoniums and big bassoons...²⁴

A double bell euphonium is basically constructed like any single bell euphonium except it has two bells and double the instrument. These instruments are either based on a large bore, usually referred to as a euphonium, or a small bore type of instrument, typically called a baritone. The difference from a single bell is it has two complete instruments worth of tubing, similar to the amount of tubing found on a double French horn.²⁵ However the double bell euphonium is different because it has two bells that can produce two different timbres at the same pitch. The large bell creates a warm, mellow euphonium sound and the small bell timbre resembles a more pointed trombone sound.

Each double bell euphonium either has four or five valves to operate the different pitches. A four valve double bell euphonium will contain valve one through three being the basic euphonium/baritone valve combinations and valve four will activate the small bell. Once valve four is pressed the large bell is shut off and the air is redirected to the small bell only. Five valve double bell euphoniums have the same function except valve four becomes the alternate one/three valve combination referred to as the F attachment and valve five becomes the activator between small and large bells. Each double bell euphonium is different because "bell placement, valve

²⁴ Meredith Willson, *The Music Man* (New York: Frank Music, 1957).

²⁵ John R. Floyd, "The Double-Bell Euphonium, Vanishing But Not Forgotten," *Woodwind World, Brass, and Percussion XXI/4* (1982): 7.

placement, and tubing wraps differed greatly from company to company, and even within the same company from year to year."²⁶

As stated before, the double bell euphonium was mainstreamed into "The Golden Age of Bands" and during that time period if a band had a euphonium player; he or she was probably a double bell euphonium player. The euphonium provides an important role in the concert band setting. It is used to create a beautiful, resonant, sweet sound to round out the band's overall timbre and help connect all the low sounds. Karl King, famous march composer, once referred to the euphonium as being the "cello of the band but the soul of the band, too."²⁷ This is very much the case when we refer to the large bell of the double bell euphonium as it provides this full, rich sound. The small bell offers the opposite side of the spectrum, as it presents the impulsive, bright, strong sound of the trombone head at the end of John Philip Sousa's famous *Stars and Stripes Forever*. Paul LaValle a conductor of the Ringling Brothers and Barnum and Bailey Circus Band once said, "the euphonium section would often use the small bell for a thinner sound to blend with the trombone section, and the broader sound of the large bell to blend with the tubas."²⁸

Double bell euphoniums were also marketed to soloists to use for special effects during their spotlight solo performances. In 1912 C.G. Conn, a large manufacturer of double bell euphoniums, advertised that this instrument "enables the performer to

²⁶ Mallett, "The Double Bell Euphonium," 9.

²⁷ Karl M. Holvik, "The Karl King Story: An Informal Interview," *Journal of Band Research* Vol. 3/2 (Spring 1967): 9.

²⁸ Mallett, "The Double Bell Euphonium," 15.

obtain an echo effect in solo work."²⁹ Since the small bell is a small bore and cylindrically made, it offers a very bright, more hushed sound than the large bell. Soloists can offer tricks in their playing by switching between these two bells and providing an echo effect. Another practice was to put a mute in the small bell therefore leaving no need to change mutes during a performance. A performer could play a theme and variations, for example, and use many timbres and tools to provide a very compelling and interesting sounding performance. "This new breed of soloist chose music that allowed him to show off his abilities by amazing the audience with his technique, or endearing the audience to him with his lyricism, much in the same manner as had the piano and violin virtuosos of the orchestral world."³⁰

The euphonium became the stand tenor voice instrument in 1872 when Patrick Gilmore employed two euphonium players in his band. There is also evidence of this movement when John Philip Sousa employed two euphonium players in his various bands starting in 1880.³¹ The first musician to use a double bell euphonium was Harry Whittier, soloist for Patrick Gilmore's Band, in which he played a horn made for him by C.G. Conn in 1888.³² The next to follow in Harry Whittier's path was Joseph Raffayolo who was Gilmore's other euphonium player. Raffayolo continued his growth on double bell euphonium and took the instrument with him to John Philip Sousa's band in 1892.³³ At the turn of the century, since the double bell euphonium was ordinary in bands, many played the instrument such as Joseph DeLuca, Aaron Harris, Salvatore Florio,

²⁹ Floyd, "Vanishing But Not Forgotten," 7.

³⁰ Bowles, "Golden Age," 2.

³¹ Ibid, 27.

³² Schwartz, *Bands of America*, 200.

³³ Reifsnyder, "Euphonium in America," 17.

Charles Caputo, and Charles Bezucha, all performers and soloists with many famous circus bands. Other double bell euphonium virtuosos from John Philip Sousa's Band included Noble Howard and the well-known Simone Mantia who performed exclusively on Conn Double Bell Euphoniums and was also a soloist of Arthur Pryor's Band.³⁴ "Of all the musicians who have used my instruments in the past, I have regarded you are the squarest and best," said C.G. Conn about double bell euphonium soloist of John Philips Sousa's Band John J. Perfetto.³⁵ Pasquale Funaro and Ole May, members of several bands during their careers, were also double bell euphonium performers.³⁶ Even at age five, Tommy Dorsey switched from playing alto horn over to a double bell euphonium.³⁷

More recent solo performers of double bell euphonium include Leonard Falcone, Brian Bowman, David Werden, and Neal Corwell to name a few. Double bell euphoniums even made it into a new area of performance and repertoire when it entered the jazz world. The late jazz artist Ashley Alexander can be heard playing a double bell euphonium on the Matteson-Phillips Tubajazz Consort's *Noreen's Nocturne*, from the "Superhorn" album.³⁸ Even though many recordings of early twentieth century double bell euphonium soloists performing do not exist, recent performers listed above have recorded performances using this instrument. "Betty O'Hara played her valve trombone and double-bell euphonium during that memorable evening. On "S

³⁴ Floyd, "Vanishing But Not Forgotten," 8.

³⁵ Paul Edmund Bierley, *The Incredible Band of John Philip Sousa* (Chicago: University of Illinois Press, 2006), 70.

³⁶ Glenn Bridges, *Pioneers in Brass* (Detroit: Sherwood Publications, 1965) 96.

³⁷ Peter J. Levinson, *Tommy Dorsey: Livin' in a Great Big Way, A Biography* (Cambridge: First Da Capo Press Edition, 2005), 4.

³⁸ The Matteson-Phillips Tubajazz Consort, "Superhorn," (New York: Mark Records, 1982).

Wonderful," blowing thorough euphonium's alternate bells, she traded profound statements with herself."³⁹

The most popular pieces double bell euphonium performers perform are theme and variations. The most admired piece that comes to mind is *Carnival of Venice* in which the musician can alter each variation with the tricks of the two bells. Many perform pieces like this for historical reasons and others do it for pure fascination of the instrument's capabilities. *Original Fantasie* by the well-known Simone Mantia has certain editions to offer the use of two bells for the played double stops in honor of the way Mantia would perform it.⁴⁰ However the only unpublished piece specifically written for the double bell euphonium, around 1950, was entitled *Father and Son Fantasy* by W.W. York, which recently has been nostalgically performed.⁴¹ More recently Jan Bach's *Concert Variation for Euphonium and Piano* contains stopped trills that can be generally performed by a double bell euphonium. The score of the piece gives a description about making the timbre of the trills sound like a double bell euphonium.⁴² In the ensemble side of early repertoire you can find "SB" or "LB" (Small Bell or Large Bell) embedded in the euphonium/baritone music. In 1965 Philip Palmer wrote *8 Artistic Brass Sextets*, which are brass sextets that have small bell markings.⁴³

So why did the double bell euphonium practically disappear from the band world? There really exists no exact ending dates although King removed them from

³⁹ Floyd Levin, *Classic Jazz: A Personal View of the Music and the Musicians* (Los Angeles: University of California Press, 2000), 263.

⁴⁰ Mallett, "The Double Bell Euphonium," 302.

⁴¹ Charles Guy, "Exploring the New Double-Bell Euphonium: A Review/Commentary of Edward Mallett's Lecture/Recital," *T.U.B.A. Journal*/Vol. 23/4 (1996): 64.

⁴² Jan Bach, *Concert Variations for Euphonium and Piano*, Annandale, VA: T.U.B.A., 1991.

⁴³ Philip Palmer, *8 Artistic Brass Sextets* (Bloomington: Brass publications, 1965.)

their catalogs in the 1960s and Conn removed them in 1956 when they ended their contract with the Marine Band.⁴⁴ Holton seemed to stop production sometime between 1931 and 1935 as the double bell euphonium is missing in the catalogue after 1935.⁴⁵ The cost of making the double bell euphonium might have much to do with the halt of production as manufacturers were marketing to schools that were starting music programs. Also the tuning between the two bells was a problem. Some notes were off by more than a half step, between the two bells. This was found in Edward Mallet's DMA Dissertation for Michigan State University where he compared 49 double bell euphoniums and found a very consistent tuning issue.⁴⁶

The most compelling double bell euphonium vanishing story told was about a British Navy vessel docking for repairs, which included the on-board brass band needing repairs as well. Americans decided to give the band brand new instruments. It was Harold Brasch, soloist of the United States Navy Band, who took one of the left behind Boosey & Hawkes compensating euphoniums. This particular instrument featured a darker, mellow tone due to the larger bore, which was much different than the American euphoniums. Brasch decided to use this Boosey & Hawkes instrument instead of his King Double Bell Euphonium.⁴⁷ So by the 1950s everybody used this larger bore instrument.

The new music also did not call for the use of the small bell present in the double bell euphoniums. Arthur W. Lehman, a famous euphonium soloist, said about

⁴⁴ Bowles, "Golden Age," 33.

⁴⁵ Mallett, "The Double Bell Euphonium," 11.

⁴⁶ Ibid, 269.

⁴⁷ Ibid, 17.

the second bell during a Marine Band concert, "we use it to hold our white gloves when we are not wearing them."⁴⁸ Some performers would have repairman disengage the small bell making it a single bell euphonium for weight reasons. Many players would just keep their small bell off during rehearsals and it was only during performances they would add the small bell for show.⁴⁹ But the true reason might be "excellent baritone horn/euphoniums are manufactured nowadays whose tone and response far excel many instruments of yesteryear."⁵⁰

Fast forward to today, since the double bell euphoniums are not preferred in bands anymore, the instruments are now found hung on the walls at bars or in classrooms. Like any piece of history, you can find them in the hands of collectors and museums. There are 15 European and American made double bell euphoniums in the Arne B. Larson Collection of Musical Instruments of the Shrine to Music Museum on the campus of University of South Dakota in Vermillion, South Dakota.⁵¹ There exists a highly decorated, engraved C.G. Conn Double Bell Euphonium at one of the Ellis Island buildings in New York. Also a 1936 C.G. Conn Double Bell Euphonium is on display at the Metropolitan Museum of Art in New York, given by Werner Kramarsky as a gift.⁵² Double bell euphoniums also can be found occasionally on eBay where they run approximately \$2,000 for a four valve and \$3,000 for a five valve. Some of these

⁴⁸David Werden, "What is a Double-Bell Euphonium," Last modified September 10, 2012, <http://www.dwerden.com/forum/entry.php/117-What-is-a-DoubleBell-Euphonium>.

⁴⁹Lloyd E. Bone, Eric Paull, & R. Winston Morris, *Guide to the Euphonium Repertoire: The Euphonium Source Book* (Indiana: Indiana University Press, 2007), 13.

⁵⁰Floyd, "Vanishing But Not Forgotten," 8.

⁵¹Pary Petersen, "Arne B. Larson Collection," 4-5

⁵²John K. Howat, et al, "Curatorial Reports and Departmental Accessions," *Annual Report of the Trustees of the Metropolitan Museum of Art* No. 120 (July 1, 1989 – June 30, 1990): 29.

instruments are restored and some might require extensive repair from being used or unused over the years. I bought a five-valve Conn Double Bell Euphonium over eBay, which was stored in somebody's attic. It needed repair and a great deal of cleaning to get it back into playing condition and this Conn once again entered the performance stage.

For nearly seventy years since these double bell euphoniums started disappearing from the band world, several avid collectors and aficionados throughout the United States and Canada have kept this instrument alive. Enthusiasts such as Edward Mallet, mentioned earlier, kept the tradition going by creating a new double bell euphonium made from a Canadian Brass type euphonium and Getzen trombone bell. This instrument was created to minimize the two bell pitch issues, but was never mass-produced due to high costs.⁵³

This hybrid instrument has quite a rich heritage and history. The oddity of this two bell duplex instrument is quite interesting and intriguing to hear and see played. For an instrument that once was a popular staple in the "Golden Age of Bands" to going almost extinct, is quite disconcerting to say the least. The simplest thing I would ask of the readers of this paper is, please do your part and pass on the understanding of the double bell euphonium!

"Probably the remaining double bell euphoniums still in existence are in the hands of collectors or rest silently, unknown, in some people's attics."⁵⁴

⁵³ Guy, "New Double-Bell Euphonium," 64.

⁵⁴ Floyd, "Vanishing But Not Forgotten," 8.

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