

# The Vibraphone At 100: Why 2021?

By Brian Graiser

It seems to me that if ever there were a time to celebrate, it is 2021. New vaccines for COVID-19 have arrived, and with the end of the pandemic hopefully, *finally* in sight, an international musical extravaganza seems like the *perfect* response to the darkened concert halls and self-imposed isolation that we have endured over the past year. It therefore seems entirely appropriate to see the entire percussion world coming together to celebrate the vibraphone's 100th birthday in 2021. After escaping the Year of the Pandemic, of *course* this new year should be forever remembered as the Year of the Vibraphone!

Of course, the big question is, "How did we come up with 2021 as the 100th anniversary?" It's not an unfair question, and having already encountered some skepticism and even whispers of dissent, I'll admit that there are a few thorny historical issues that must be addressed before any claim to the vibraphone's "official" birthday can be made. I am therefore pleased to share my supporting evidence for identifying 2021 as The Big Year, the bulk of which comes from my 2015 DMA project at the University of Cincinnati. Much of the following historical narrative stands on the shoulders of earlier work done by researchers Jacqueline Ann Meyer and Harold Howland, including their personal correspondences with the actual people involved in the vibraphone's creation, and I highly encourage

any interested readers to take a look at the utterly fascinating articles written by those two (their articles are easily accessible online through the PAS Publication Archives).

## ORIGINS OF THE VIBRAPHONE

The creation and evolution of the vibraphone can be attributed to what was essentially a "musical arms race" fought in the early 20th century between two American businesses, the Leedy Drum Company (based in Indianapolis) and J.C. Deagan, Inc. (based in Chicago). Despite some conjecture to the contrary, the vibraphone is *not* the direct descendant of similar instruments (such as gamelan) from other parts of the world. As Jack Deagan (the grandson of John Calhoun Deagan and then-President of J.C. Deagan, Inc.) said to *Newsweek* in 1967, "It's been yakked about that the only American instrument is the banjo...but the banjo has the same principle as the violin or the guitar. The vibraharp [Deagan's proprietary name for their vibraphone] is unique, the only truly American musical instrument."

The two companies had previously only been in partial competition with one another, coming from different backgrounds: Ulysses G. Leedy began his company based on the success of his invention of drums and drum hardware, whereas John Calhoun Deagan's company began with his scientific interest

in glockenspiels and other tuned percussion. Leedy quickly expanded its production to include every kind of percussion instrument (with the exception of cymbals), and by 1920 was the world's largest percussion manufacturer, building and selling xylophones, glockenspiels, drums, hardware, and accessories. While it also eventually expanded its line of products, Deagan never strayed far from its tuneful roots, choosing to add products such as tuning forks, chimes, gongs, novelty instruments, organ attachments, and bells (such as the famously broadcasted "NBC" set). Where the companies found themselves in direct competition was



for the business of vaudeville (and, to a growing degree, orchestral) performers, who depended on both companies to offer reliable xylophones, marimbas, and glockenspiels, as well as new novelties to capture their audiences' attention.

Two such novelties that both companies had been producing for several years before the invention of the vibraphone were the steel marimba and the steel- or wood-bar "marimbaphone." Besides the difference in bar material (and subsequent difference in tone and sustain), these marimbaphones were primarily different to the marimba in that the bar manuals and resonators could be tilted 90 degrees, perpendicular to the floor, so that the performer could bow the ends of the bars with greater ease (the ends of the bars were curved inwards to further facilitate bowing), although it was, of course, possible to play them with mallets as well. Steel marimbas and marimbaphones are rarely seen or heard today, and in 20th-century musical scores, the term "marimbaphone" was sometimes used in error by composers and arrangers when they meant to call for a standard marimba (similar to how scores erroneously list tam tams as "gongs" to this day). Perhaps the most noteworthy usage of actual steel marimbas and marimbaphones can be found in the musical works of Percy Grainger (who, not coincidentally, had been in direct contact with J.C. Deagan regarding his company's development of these instruments).

In 1916, Leedy Vice President Herman Winterhoff began experimenting with one of his company's three-octave (F-F) steel marimbaphones, seeking to add a "vox humana" (tremolo) effect to the instrument by adding a motor to the base of the frame, which moved the resonators themselves; Winterhoff experimented with moving the entire bank of resonators up and down as well as laterally. Meanwhile, in Chicago, the Deagan company keenly felt the pressure to produce new innovations, likely caused in no small part by Leedy's large Chicago

sales office run by brothers William F. and Theo Ludwig, who would later form their own successful percussion company. In 1918, Deagan took the concept of their Parsifal Bells one step further and introduced a new product, the steel-bar Song Bells, which sounded one octave lower than orchestral bells and featured its own stand-up frame and full-length resonators. These Song Bells were available in ranges of two-and-a-half (G-C) or three (C-C) octaves.

While this was going on, another Deagan product, the "Harp-Celeste" theatre organ attachment, was gaining popularity. This attachment was intended to mimic the sound of the harp or celeste and consisted of a steel-bar assemblage that was struck by mallets within the organ. Although the device was not an independent instrument in its own right, its development placed the Deagan company alongside Leedy at the precipice of the vibraphone's invention in the early 1920s.

## THE CASE FOR 1921

In 1921, the Deagan and Leedy companies both arrived at separate breakthroughs that would greatly impact the birth and future of the vibraphone. In Indianapolis, Herman Winterhoff finally solved the "vox humana" puzzle by developing a set of fully turning fans situated at the top ends of the resonators. At first, these fans had been designed to twist back and forth in order to open and close the openings of the resonators in relation to the bars suspended above them, but later in 1921 Winterhoff replaced them with fans that rotated completely (and more quietly).

In Chicago, Deagan's Chief Tuner Henry Schluter designed a pulsating fan system for the Harp-Celeste organ attachment similar to the one created by Winterhoff for his steel marimbaphone. This new organ attachment, termed the "Organ Vibrato Harp" (later "Vibra-Harp"), included a system of automatic dampers and was available in three-, four-, or five-octave models (the

five-octave model boasted a range from C3-C8, an octave above today's five-octave marimbas). Also that year, Schluter experimented with replacing the steel bars on Deagan's "Song Bells" with tempered aluminum ones to produce a more mellow and focused tone.

Finally, back in Indianapolis, Winterhoff's experimental steel marimbaphone with fully-rotating discs was gaining notoriety within the Leedy company, and before too long, Leedy Sales Manager George Way (himself a noted innovator whose contributions include the "floating head" double-flanged snare drum hoop) first coined the name "vibraphone" to describe the new instrument. This is the instrument on which vaudeville performer Louis Frank Chiha, better known as "Signor Friscoe," recorded two tracks ("Aloha Oe" and "Gypsy Love Song") in 1924, thereby introducing the mesmerizing new sound to a generation of music performers and listeners, and this is the instrument whose hundredth anniversary we are celebrating in 2021.

## THE CASE AGAINST 1921

It is true that the first attempts to create the vibraphone began in 1916, and those early developments should be appreciated for the crucial first steps that they were. However, when considering the actual birth of the instrument, we should remember that inventions of any kind are not born when a question is asked, but when a question is answered, and therefore arguments that the vibraphone existed as a work-in-progress prior to 1921 have little merit. Of course, that initial Leedy instrument was still quite different from the modern vibraphone, and it would be years before an instrument was produced that would demonstrate all of the traits and capabilities expected by today's vibraphonists. As a matter of fact, modern percussionists would likely have little use for that original Leedy instrument when contending with the demands of modern vibraphone repertoire. The bars were much wider than they are today,

and since they were made of steel, as opposed to anodized aluminum, they produced a much brighter sound with strong overtones that could obscure the fundamental tone of the bars.

An even bigger difference is that Leedy's original instrument had no damper mechanism of any kind; the notes always rang freely. In this way the instrument had more in common with the glockenspiel or crotales than the modern vibraphone, and therefore would be insufficient for most modern vibraphone performances. Given the near-universal importance of the damper pedal throughout the history of vibraphone performance, it can be convincingly argued that the 1921 Leedy vibraphone was by no means a "finished product!"

In fact, it wasn't until 1927 that an aluminum-bar vibraphone with a damper mechanism was introduced. In 1926, after hearing Chiha's recording, Deagan Sales Manager M. L. Jones asked Henry Schluter if he could produce an instrument similar to the Leedy vibraphone heard on the Edison record, but which sounded better (Jones had correctly concluded that the undampened steel bars of the Leedy instrument produced intense side overtones, which made recording difficult). Schluter, having already incorporated aluminum bars into the Deagan model 101 Song Bells in 1925, then built the first "Vibra-Harp," which featured narrower aluminum bars set on a marimba-like frame, a motorized fan vibrato, and (most importantly) a pedal-operated damper bar to control the length of sustain. This prototype instrument was then released in 1927 as the first "Vibraharp," Deagan model no. 145, and may be considered the first instrument truly capable of handling all of the typical demands found in modern vibraphone performance.

One final dilemma that has obscured the "true" birth year of the vibraphone is the fact that Ulysses G. Leedy did not feel it necessary to apply for a patent for his company's instrument. Despite the

admiration many of us feel towards the instrument today, Leedy himself considered his company's new vibraphone to be little more than a gimmick and a novelty, and by the time it had become apparent that the vibraphone had real staying power in the instrument market, several other companies (Deagan being foremost among them) had already developed similar instruments, and a patent was no longer worthwhile. Therefore, researchers and historians have relied upon less-reputable sources, such as internal company documentation, marketing materials, and personal correspondences, when cobbling together a timeline of the instrument's invention.

Of course, history is written by the victors, and by 1929 Deagan had clearly won its contest with Leedy, which was sold to the Conn Company to become its new drum division after a disastrous attempt to enter the market as a banjo maker. This truism is certainly apparent in Deagan's 1970 catalog insert introducing the Model 515 ElectraVibe, where the advertising department's revisionist history curriculum (and marketing bravado) is on full display: "Years of research by the Deagan company, the inventors of the vibes in 1927, have finally resulted in an instrument which combines so many outstanding features that you shouldn't even think of tackling today's music without one." However, even the most closed-minded Deagan adherents must admit that Leedy's legacy has not faded entirely, as its original term "vibraphone" has outlived both companies as the universally accepted name for the instrument.

## CONCLUSION

Whether or not we consider 1921 to be the birth year of the vibraphone (and therefore, 2021 to be the 100th anniversary) largely depends on how we define "vibraphone." As a response to any engineering enthusiasts who might claim that the 1921 Leedy vibraphone's steel bars and absence of a damper mechanism removes it from contention, I of-

fer three points. First, I would point out that the primary purpose for the *vibraphone's* creation (its *vibrato*) was indeed accomplished by Herman Winterhoff's 1921 instrument, and with only a few exceptions, the mechanical means of producing that effect (the fully-rotating rod-mounted fans) have been oft-replicated but largely unchanged—although I personally would advocate revisiting one of the quirkier innovations of the vibraphone's first decade, a wind-up clockwork motor that required no electrical power to operate. In any event, Winterhoff unequivocally answered in 1921 the question he had asked in 1916.

Second, I would point out that despite its substantial design improvements since that time, the first keyboard percussion instrument to bear the name "vibraphone" was in fact the Leedy instrument built in 1921. It's true that the name itself wasn't made public until the first marketing materials for public sales were put together in 1924–25, following Signor Friscoe's recording; on that Edison record, the instrument was listed as the "Leedy Vibratone-Bells." However, even if one ignores George Way's earlier creation of the name "vibraphone" for that very same instrument, the public Leedy marketing materials from 1924–25 using that name certainly predate the 1927 Deagan Vibraharp.

Finally, there can be little doubt in any listener's mind that the instrument heard on the 1924 Signor Friscoe record is a vibraphone—damper bar or no damper bar. I can personally confirm this, having listened to my own copy of the Signor Friscoe record, but you don't have to take my word for it; as of this writing, there are publicly available videos on YouTube containing playbacks of both sides of the record (Edison Record 51401, if you're interested in looking them up for yourself). All of the characteristic components to the vibraphone's sound are there, from the ringing metal bars to the pulsing vibrato. As that instrument was the very one that Herman Winterhoff had developed in 1921, we

can safely and confidently say that the vibraphone was indeed born in that year.

So, what does all this mean? It means that it's time to celebrate! The past hundred years have led the vibraphone to this moment! More companies than ever before are producing vibraphones with new and exciting design innovations, more composers than ever before are writing fresh and interesting music for the vibraphone, and more students, teachers, and performers than ever before are playing the vibes. Truly, this is an age of wonder and promise for the instrument and those associated with it, and thanks to the leadership of the Percussive Arts Society, The Vibraphone Project, and likeminded organizations and individuals, the Year of the Vibraphone will be the end of one era and the start of another. I hope you'll come along for the ride!

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