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DAVID RYCROFT

# A Six-Finger Hole Saxophone: The *Saxie*<sup>1</sup>

HAVE you ever encountered a saxie? Nobody I asked has even heard of one, and it is not listed in any standard reference works I have consulted. Nevertheless, in the mid-1970s, I purchased what is definitely a 'saxie' (see Fig 1) from an antique shop in the village of Turners Hill, West Sussex. Stamped on one side of its bell is the following inscription:

COUSENON 7 C<sup>IE</sup>  
- PARIS -  
CHATEAU-THIERRY  
FRANCE  
= SAXIE =  
U.S. Patent June 3R<sup>d</sup> 1924  
B<sup>TE</sup> S.G.D.G. -

The instrument is a small, rather crude and very down-market version of a saxophone, made from three brass tubes soft-soldered together to form a main body, u-bend, and bell. At the end of the main body there are two large (16.9 mm diameter) laterally placed sound holes directly opposite each other. The instrument is shaped like an E<sup>b</sup> alto but is only about half that size with a tube length of 625 mm and bore varying between 95 and 100 mm. But there the resemblance ends because the saxie has only two post-mounted keys – small closed, seesaw-type ones, exactly like water keys on a trumpet – and six finger holes. With all the finger holes closed, it provides the scale:  $d^1$ ,  $e^1$ ,  $f^1$ ,  $g^1$ ,  $a^1$ ,  $b^1$ ,  $c^2$  (2nd hole covered) and  $c^{\#2}$  when all holes are open. The upper, on the back of the left thumb serves as an octave key; the lower, for the little finger of the right hand, produces  $f^{\#1}$  and  $d^{\#2}$  and  $f^{\#2}$ . At the back, behind the R1 finger-hole, is a hooked support to fit over the right thumb, and midway between this and the upper key there is a small ring to take a sling.

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<sup>1</sup> This title was chosen by the late David Rycroft for a paper which he planned to give in August 1997 at the Colloquium on the Acoustics and Technology of Musical Instruments held at the Edinburgh University Collection of Historic Musical Instruments. This article was completed by Albert Rice from a compilation of three drafts, notes written by Dr. Rycroft, and additional materials provided by Dr. Nicholas Shackleton, Dr. Arnold Myers, Michael T. Wright, Lloyd Farrar, and Dr. Albert Rice.



Fig. 1.

The mouthpiece is wood (with slight teeth marks) and an E<sup>b</sup> soprano clarinet reed fits the tip better than one for a soprano saxophone. Though this is still too long and protrudes some 8 mm past the back end of the

mouthpiece, it serves the purpose. Apart from the marks previously mentioned, the mouthpiece bears no further indentations or scratches to imply previous use of a metal ligature. So I tied the reed on with string.

Since I found my saxie, it has hung in my study among other curiosities, and has seen little use. Notable exceptions, however, occur during occasional visits from my good friend Herr Professor Doktor Gerhard Kubik of Vienna, an eminent ethnomusicologist and Africanist by profession, but also an ardent jazz fan and busker (on the 'simple system' C clarinet) by inclination. Whenever he turns up, the saxie comes down and we have a great saxie jam session (with me on piano). How he gets what he does out of the saxie is beyond my comprehension. But it makes one wonder whether perhaps, back in the 1920s or '30s, saxie playing might just possibly have caught on for a while among buskers, here or there. Or was the saxie just a rather feeble experiment that failed?

Presently, there are only two extant examples in public museums: Frankfurt (Oder) and Vermillion, South Dakota.<sup>2</sup> Two additional examples in private collections have also been reported.<sup>3</sup> The inventor and patent holder of the instrument was Frederick B. Hammann of Baltimore, Maryland. According to correspondence from Lloyd Farrar, Hammann was a vaudeville performer who probably played his instrument on stage. The patent application was filed on 25 March 1922 describing the saxie as 'a toy saxophone [which] has for its object the providing of a reed musical instrument capable of being played without keys with a curved exterior to resemble a saxophone . . . [which] may be easily played by anyone familiar with the flageolet.' Hammann stated four objects as important aspects of his invention. The first is an 'extending amplifier' on the fixed range of the instrument, which was a saxophone-shaped bell below the two sound holes. The second is 'an improved construction of finger holes to give a flat surface to the finger.' These finger holes are known as 'drawn holes' and were applied to saxophones by the Conn company of Elkhart, Indiana about 1920.<sup>4</sup> The third is 'adopting an external reed mouthpiece to what is known as a flageolet.' This was achieved by doing what most saxophone

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<sup>2</sup> Herbert Heyde, *Historische Musikinstrumente der Staatlichen Reka-Sammlung am Bezirksmuseum Viadrana Frankfurt (Oder)*. (Leipzig: VEB Deutscher Verlag für Musik, 1989), 146, no. 202, ill. 99. Dr Margaret Downie Banks of the Shrine to Music Museum reported an example to Albert Rice.

<sup>3</sup> *Saxofoons: Keuze uit de verzameling Leo van Oostrom*. (Eindhoven: Museum Kempenland, 1994), 45, no. 65. Mr. Frank Mesich of Herndon, Virginia, also owns a saxie.

<sup>4</sup> Margaret Downie Banks, *Elkhart's Brass Roots. An Exhibition to Commemorate the 150<sup>th</sup> Anniversary of C. G. Conn's Birth and the 120<sup>th</sup> Anniversary of the Conn Company*. (Vermillion: Shrine to Music Museum, 1994), 50.

manufacturers were already doing: coating the upper end of the tube with a shellac adhesive and then applying powdered cork to form a sleeve on which the mouthpiece fitted. The fourth is his design of a single-reed mouthpiece with two hooks on the outside on which a stretched rubber band holds the reed on the table of the mouthpiece.

The patent (No.1,496,535) illustration (see Fig. 2) reveals a keyless instrument that is in all respects, except the mouthpiece identical with my example. Figures 2, 3, 4 and 5 of the patent are views and cross sections of the mouthpiece or the rubber band ligature. The Cousenon company in Paris must have quickly bought the patent rights from Hammann based on the appearance of a method book and the extant instruments made by the Cousenon company engraved with the 1924 patent number. It appears from the existing saxies that Cousenon added two keys and modified the mouthpiece. A copy of the *Method for the Cousenon Saxie* (New York: Simson & Frey, MCMXIV [sic, should read MCMXXIV]) is in the collection of Frank Mesich and is also reported in the catalogue of the Frankfurt Museum, The two pages of text contain a foreword and brief sections on How to Hold the Saxie, How to Produce the Tone; and a Preliminary to the Table. The Foreword reads:

The *Saxie* is the latest addition to the grand family of musical instruments manufactured by *Cousenon & Cie.*, Paris, and introduced to the music lovers of America. It is bound to win instant recognition. The Saxie has been aptly described as the musical "missing link", having in mind the eventual Saxophone. In fact, it could be called the Little Brother of the Saxophone, for indeed, the Saxie is a Saxophone. Even better, the Saxie is easier to play. Other manifold points - attractive appearance, quality and volume of tone, ease of carrying, rapidity of mastery - commend the Saxie to the ever-widening circle of admirers of the Saxophone. Anyone with a little talent for music, can, with a few hours' pleasant practice, play popular pieces. Such ready accomplishment is welcome as a delightful entertainment at home, besides making the performer much sought after among his friends.

In the preliminary to the Table section we are told that: 'A very close, detailed, laborious study of the Table is not expected nor even advised. A *general* idea is the thing to get. The Table . . . is more particularly serviceable as a back reference . . . The above instructions with the Table, comprise about all there is to learn.' In the Table of fingerings given in the *Method*, diatonic notes for  $d^1$  to  $c^3$  are listed, plus  $f^{\#1}$ ,  $c^{\#2}$ ,  $d^{\#2}$ ,  $f^{\#2}$ . The fingering given for  $d^{\#2}$  shows all six holes closed and both keys open. But from actually testing this out on the saxie, this fingering yields a distinct  $e^2$  and certainly not  $d^{\#2}$ .

It seems surprising that so few chromatic notes are listed because perfectly good G sharps and B flats in both octaves can easily be obtained by cross-fingerings (and in fact cross-fingerings are already given for the two highest notes  $b^2$  and  $c^3$ ).

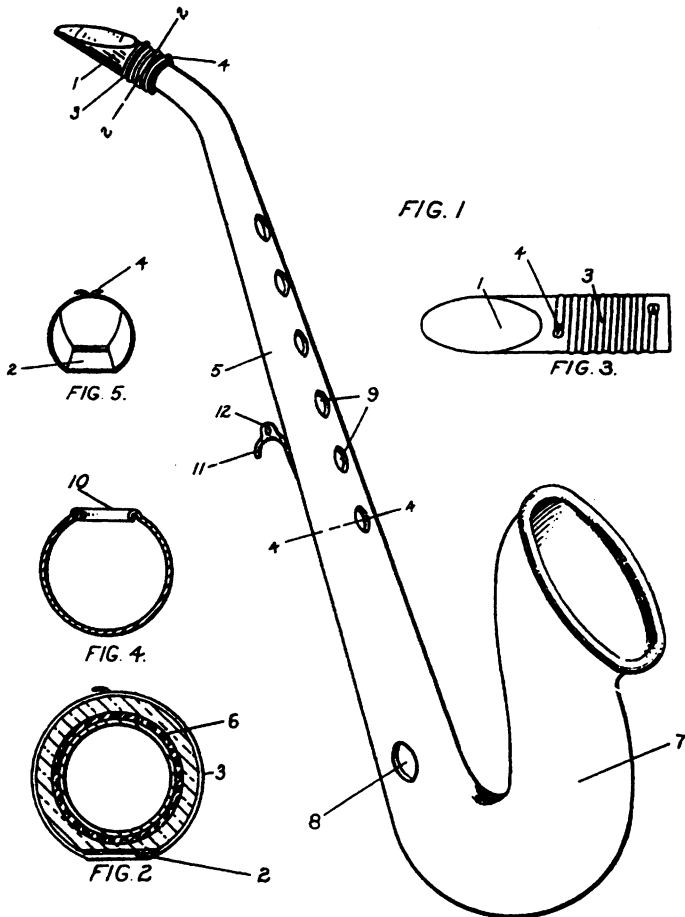
June 3, 1924.

1,496,535

F. B. HAMMANN

TOY

Filed March 25, 1922



*Frederick B. Hammann*  
INVENTOR.

BY

*William W. Varney*  
ATTORNEY.

Fig. 2.

$g\sharp^1$	$b\flat^1$	$g\sharp^2$	$b\flat^2$	
		k	k	(k = register key open; ● = closed hole; ○ = open hole)
●	●	●	●	
●	○	●	●	
○	●	○	○	
●	○	●	●	
●	○	○	●	
○	○	○	●	

However, the two D sharps are only obtainable through half-closure of the lowest hole and they tend to be rather poor in quality. Nevertheless, allowing for this slight disadvantage, a fully chromatic scale from  $d^1$  to  $c^3$  is in fact possible on the instrument. So it really has a wider potential usefulness than is claimed in the *Method*.

The fingering given in the Table for high  $c^3$ :  $k\circ\bullet\bullet\bullet\bullet\bullet$  does not work well with my own saxie. What works better is:  $k\circ\bullet\bullet\bullet\bullet\circ$ , this is the same fingering given for high  $b^2$  but with hole no. 6 open instead of closed. The descant recorder fingering for  $b^2$  also works:  $k\circ\bullet\bullet\bullet\circ\circ$ .

The *Method* contains nineteen popular pieces suitably arranged for the saxie but with no acknowledgement for sources or composers. Eleven are in the key of G, five in C, two in D, and one in D minor (but lacking  $B\flat$ ). Titles are: *Go Tell Aunt Rhoda*; *My Country 'Tis of Thee*; *Home Sweet Home*; *Zampa*; *Old Black Joe*; *Yankee Doodle*; *Good Night Ladies*; *Surprise Symphony*; *Dixie*; *Over the Waves*; *Blue Bells of Scotland*; *The Shepherd Boy*; *Russian Folk Song*; *The Harp That Once Thro' Tara's Halls*; *My Old Kentucky Home*; *Auld Lang Syne*; *Maryland My Maryland*; *Way Down Upon the Swanee River*; *For He's a Jolly Good Fellow*.

The catalogue of Van Oostrom's collection of saxophones gives an alternative name for the saxie as 'saxette' (p. 45, no. 65). This must be an error, however, since the saxette is a straight, keyless brass flute or penny whistle, plated with German silver, with a plastic 'fipple' mouthpiece. It was invented in 1939 by Elver Joseph Fitchhorn of Delaware, Ohio according to William Waterhouse's *New Langwill Index of Musical-Wind Instrument Makers and Inventors*.<sup>5</sup> An example is preserved in the Fiske Museum (no. W4) of the Claremont Colleges.

Because of the small number of extant saxies we must conclude that this instrument was an interesting experiment but not a commercial success.<sup>6</sup> Its use was limited to a few talented performers who could coax a convincing melody out of a primitive instrument.

<sup>5</sup> London: Tony Bingham, 1993, 118.

<sup>6</sup> Several other Saxophone-inspired instruments were made at about the same time as the saxie. These include the 'saxoprano' – a slide saxophone with a leather strap placed over the finger holes, by the Cleveland Musical Instrument Co. of Cleveland (American patent, 25 October 1921; two examples in the Fiske (contd)

(<sup>6</sup> contd) Museum, no. W96, W97); the slide saxophone made by Reiffel & Husted of Chicago (American patent, 17 June 1924); the 'Swanee Sax' (a slide saxophone) patented by Samuel Bowley Barnes of London (English patent, 15 September 1927); the 'Couénophone' or 'Goofus' – a saxophone body with 25 reeds (in two rows of 10 and 15) activated by buttons, by the Couesnon Co.; a keyless saxophone with a vibrating membrane as a sound source, by the C. A. Lux company of Ruhla, Thüringia (German patent, 18 August 1932); the 'Normaphon,' a brass instrument made in saxophone shape by the C. A. Wunderlich company of Siebenbrunn (an alto is preserved in the Fiske Museum, no. B97); the 'Jazzophone,' a brass instrument in saxophone shape with a metal mute operated by a lever to produce a 'Wah-Wah' effect (German patent, 27 August 1926); and the 'Playasax' a paper-roll reed organ made with the body of a small sax by the Q-R-S Music Rolls company of New York. See Lloyd Farrar, 'Under the Crown & Eagle,' *Newsletter of the American Musical Instrument Society*, XX, no. 1 (Feb. 1991): 4–5; *Saxofoons*, p. 44, no. 64; p. 45, no. 66; Günter Dullat, *Blasinstrumente und Deutsche Patentschriften 1877-1970 Holzblasinstrumente* (Nauheim: The Author, 1987), 133–34; Edward H. Tarr, *Die Trompeten von Säckingen: Eine Gesamtschau der Sammlung von E. W. Buser*. (Katalog; Bad Säckingen: Trompetenmuseum, n.d.), 33; Q. David Bowers *Encyclopedia of Automatic Musical Instruments*. (New York: The Vestal Press, 1972), 727, 741, 776.