EMANUELE RAGANATO

The Sistema Brevettato Delle Piane Saxophone

The saxophone known as *Sistema brevettato Delle Piane* was conceived in a climate of great creative fervour in the field of wind instrument construction. The innovation consisted in the addition of a further octave in order to increase the normal range of an alto or tenor saxophone. It was achieved by a simple structural solution: making the most of the positions in order to simplify the fingering and reach the highest notes. The need to use the extremes of the range had already been felt in the musical field, and we do not know for certain the maximum range that Sax conceived for his instrument. We will run through the story in order to investigate the reasons that drove constructors to experiment with structural solutions to a problem that was actually just a matter of musical technique.

The very first saxophone, introduced by Adolphe Sax at the *Exposition des produits de l'Industrie in Bruxelles* (1841), was quite different from the one to which we are accustomed.[1] It was probably a Bass in C, which, in spite of its size, was surely lighter than the hypothetical equivalent modern one. Glancing through the old magazines[2] welcoming its invention, we find not the characteristic modern 'pipe' shape but the curve of an ophicleide. Furthermore, it had a range of three octaves starting from low B, a very strange and remarkable feature, compared to the modern instrument's range of two and a half octaves.[3] In my opinion this feature can be explained only by referring to the earliest saxophone players, who, like Adolph Sax himself, used to play other instruments such as clarinet, flute and oboe, for all of which players use a *fork position* for the highest notes. Thus, the transfer of this technique to the new instrument was surely felt as a normal

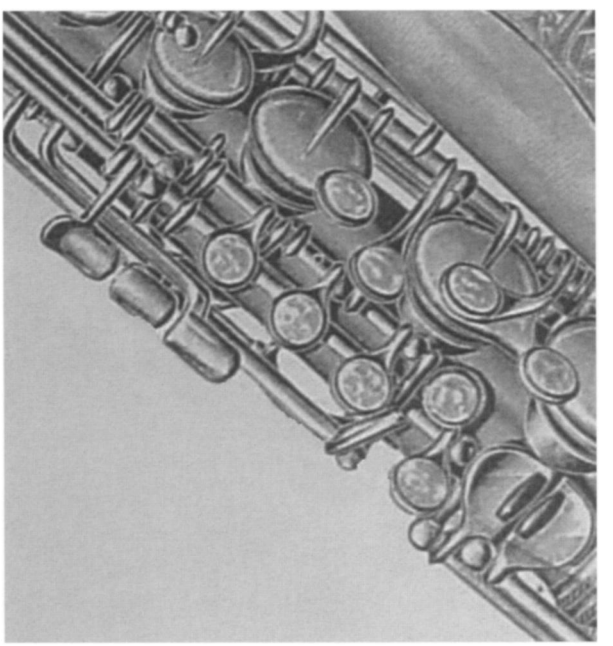

Figure 1. *Sistema Brevettato Delle Piane Double Keyboard.*

[1] Georges Kastner, *Manuel general de la musique militaire* (Paris: Firmin Didot Frères, 1948) p.233 (cited by Howe). It was a very discreet presentation, which took place behind a curtain to prevent the other candidates from seeing Sax's invention.

[2] For example: *Revue et Gazzette Musicale de Paris* 9/11 (March 13, 1842): 99-100; *Journal des Dèbats* (June 12, 1842) 3 ; *La France Musicale* (June 12, 1842) 245.

[3] Hector Berlioz: 'Instruments de musique', *Journal des Dèbats* (June, 12, 1942).

Figure 2. *Ditte Riunite A.Rampone e B.Cazzani catalogo generale 1930 Saxofono Sistema Brevettato Delle Piane.*

shift; big instruments would have spontaneously and easily offered a good range of harmonics. But the saxophone was born to be used in bands, where its medium-low compass and its particular sound could make up for the lack of volume provided by other instruments such as the ophicleide.[4] The saxophone's reputation suffered from this lowly role until vaudeville set it free. Beyond a series of countless 'noises' (which were undoubtedly embarrassing for the contemporary public[5]), vaudeville also promoted such techniques as the controlled emission of higher notes and harmonics, which are now acknowledged as 'contemporaneous'. The first recording appeared in 1911, when Benny Henton experimented with an extreme compass in *Eleven o'clock cadence*.[6]

Among the factories involved in making such extreme passages easier to play, we have to mention Evette & Schaeffer. This French company has been one of the most innovative and inventive in the history of saxophone manufacture. Evette & Schaeffer tried to bring the 'ghost octave' of the saxophone back into the limelight by making various prototypes. The first of these was a realization of the Buffet-Powell, with its four quiet octave tone holes (two of which are on the neck), which assist the player to achieve good intonation of the higher notes.[7] This was introduced by Jean Ledieu at the *International Congress of Saxophones* in Nuremberg (1978). Nevertheless, there was still a problem to tackle: the change of fingering. Clarinet players would have never have found it to be an obstacle, because they were accustomed to changing position to play different octaves. But it was a real problem for saxophone players who, in contrast to clarinettists, were accustomed to the particular physical layout of the instrument which allowed them to keep the same fingering for two octaves with an octave key and a simple instinctive fingering of the palm keys for the remaining notes (though a fluent style required great skill). The simplified use of the palm keys was one of the more urgent requirements for the players, and led to an idea introduced by Prof. Rinaldo Delle Piane in 1930. He was a saxophonist from Milan (as well as a technician engaged by Rampone & Cazzani[8]) whose skill and inventive talent led to the

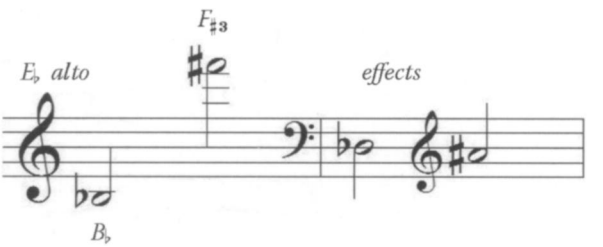

Figure 3. *Compass of standard alto in E♭.*

[4] 'leur médium a quelque chose de profondément expressif. C'est, en somme, in timbre sui generis, offrant des vagues analogies avec les sons du violoncelle, de la clarinette, du cor anglais, et revetu d'une demi-tinte cuivrée qui lui donne un accent religieux et rèveurs'. Hector Berlioz, *Grand Traité d'Instrumentation et d'Orchestration modernes*, (Paris, 1943).

[5] 'It was played without any observance of its real nature, it was used before knowing it, and it was shamelessly distorted.' Jean-Marie Londeix, *Le origini del sassofono*, (1998).

[6] We find a high G in the score of *Il Concerto* by Paul Gilson, 1902. The very first written and reiterated use of harmonic sounds dates back to A.Schoemberg's *Von Neute auf Morgen* op.32 composed between 1928 and 1929 (cited by Londeix).

[7] The idea of enlarging the extension of a saxophone through the use of an additional octave key had been suggested by an experimental model developed for Couesnon by Andrè Beun, of Garde Republicaine.

[8] Personal communication with Claudio Zolla, owner of Rampone & Cazzani, 14 July 2004.

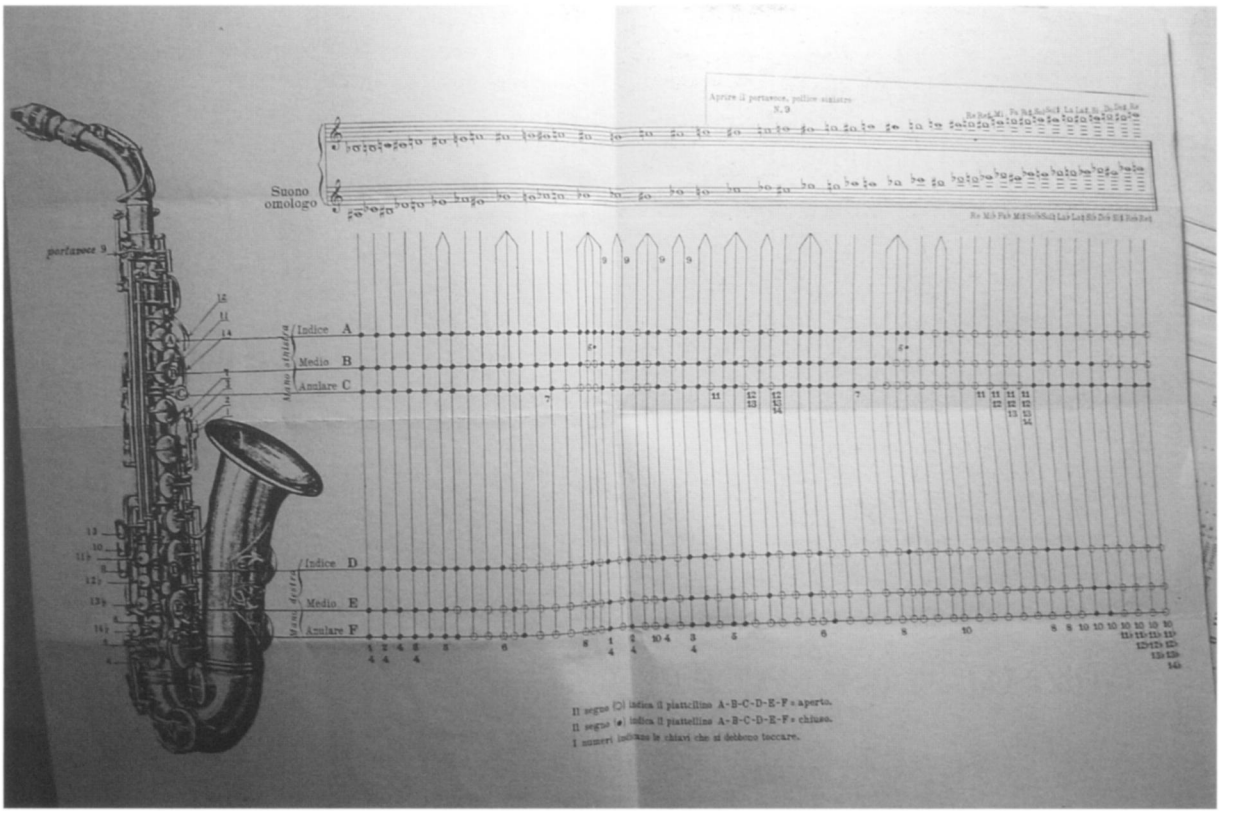

Figure 4. *Table of Fingering Positions for Saxofono Mod. Delle Piane, 1930.*

design of an innovative instrument with a double keyboard for the higher notes, known as *Sistema Brevettato Delle Piane*.

His system did not completely solve the problem; it did not equalize the fingering of the whole range, because the double keyboard's mechanism is the opposite of the normal one (in which it is necessary to press a button in order to close a pad). This is the reason why playing a D_3 only requires a single button to be pressed, corresponding to the right ring finger, compared with the three buttons required for a D_2. Nevertheless, an efficient use of the double keyboard (the Italian *bottoniera*) needed a period of practice to get used to the new positions. The merit of the *bottoniera* was that the simple addition of a new mechanism could stabilize the holding of the saxophone without modifying the structure of the standard instrument, by spreading the load evenly on both hands. Two different versions of the instrument were produced, alto and tenor, but the system could be applied to any other saxophone. In 1930 the Rampone & Cazzani company published a fingering chart of the 'Delle Piane' system, but thorough examination reveals that the creator's initial purpose had been completely disregarded. In the chart, the use of the *bottoniera* was restricted to the higher notes, while its original purpose included the gradual replacement of the palm keys (up to D_4). We could conjecture that the company itself lacked confidence in the efficacy of the new system, but against this hypothesis, the above-mentioned chart was published in their 1930 general catalogue as a technical explanation supporting the introduction of the new instrument.

Probably such an instrument would have been utilized more effectively by Sigurd Rascher, a German musician, who was at this time developing a systematic approach to the extremities of the instrument's range. His experience and knowledge would have been publicised and popularised later through the vast amount of saxophone works which were commissioned by, or dedicated to, him (the speculative *summa* was represented by the *Top Tones for Saxophones* method[9]). However, the limited production,[10] and the prohibitive price compared to a normal professional saxophone,[11]

[9] Carl Fischer ed., New York, 1941.

[10] Probably less than fifty were made. Personal correspondence with Claudio Zolla, 03/11/2004.

[11] 1900 liras (*Delle Piane* alto saxophone), 1220 liras (*Non Plus Ultra Americano Completissimo* alto saxophone). General Catalogue (1930).

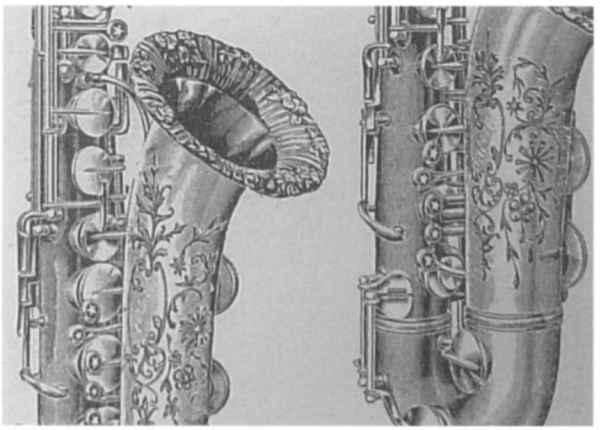

Figure 5. *Catalogo Generale 1930 - Saxofoni Non Plus Ultra embossed bell.*

constrained the spread of the instrument. Moreover, besides its remarkable glamour and its advanced technique, the Delle Piane saxophone was seen as merely an experiment, an eccentricity of its age, arising from the 'Saxophone Craze' and inevitably destined to follow the fading of this *Age d'Or* of the instrument's production.

Catalogues dating back to 1930 give evidence of how the factory was going through a high point of production. It produced, directly or indirectly,[12] a great quantity of musical instruments, especially wind-instruments, a field in which the factory combined its mastery of production with a high standard of artistic finish. Within this context, the liberty design[13] was no 'off-the-peg' model, but provided a select instrument made by musicians for musicians. All the professional models were produced in parallel, with or without artistic finishing. The Rampone & Cazzani company availed itself of the collaboration of professional players such as Caramia, Allegri and Quaranta, as well as highly-qualified players such as Delle Piane. This great skill can be confirmed by the *Tavola delle Posizioni* itself, which focuses attention on a remote option for the contemporary medium saxophone player (the production of an almost 'ghost' octave). The personal ideas of famous players were usually accepted, but then tested and improved (or at least adapted to the requirements of the other schools) before marketing. As well as the *Tavola delle Posizioni* itself, a typical case is *Quaranta Bis Clarinet*, which is a variation of the previous first *Quaranta* Clarinet.

The earliest models of *Delle Piane* saxophone did not have the frontal plateau of the F^3, as a result perhaps of both its obstructive mechanical complexity and a different fingering solution. Later, the patented system was applied to the *Non Plus Ultra* saxophones. The double keyboard has five keys and the following fingering:

Pression (in order from the highest to the lowest on the neck):

- Only the second = D_3
- Second and third = $D\sharp_3$
- Second, third and fourth = E_3 (and three central keys between F and E)
- Second, third and first = E_3
- Second, third, fourth and fifth = F_3

The instrument had 14 buttons (including the nacreous ones of the double keyboard) and 13 keys; it was equipped with a microtuner neck and could be supplied with a finish of sand-blasted silver or gold lacquer.[14] The other features of the model called *Americano completissimo, Non Plus Ultra dell'Artista, con tutti i perfezionamenti* (General Catalogue, 1930) were:

- B-C Trill
- $B\flat$ Cadence
- $F\sharp$ and $G\sharp$ Trill
- Double key of $F\sharp$ and $E\flat$
- Double $G\sharp$ Trill right ring finger
- Drawn (as opposed to soldered) tone holes

The logo on the bell of the models introduced in the General Catalogue (1930) had a shield shape, but the models which were actually produced had floral engravings and the name *A.Rampone* engraved in cursive writing (see Figure 6 in the colour section).

In my opinion the *Delle Piane Saxophone* was just one of the many short-lived wonders that this famous Italian factory introduced during the period of its maximum splendour.[15] It failed

[12] The company often relied on independent craftsmen, especially for making other instruments (excluding wind instruments), as testified by the present owners.

[13] The liberty design was a floral decoration in fashion during the early years of the twentieth century. It was a typical feature of famous American marques (Conn, Buescher, and sometimes King).

[14] Recently the Italian company has resumed this process for the antique effect finish of the new R1 JAZZ models.

[15] Such as: Caramia oboe, Horn Brevettato Cazzani, Prof. Quaranta bis clarinet, Straight Alto Saxophone, and many others.

like all the other systems based on extra-keys.[16] Nevertheless, it is useful to show how players with irrepressible needs to overcome the limits of range, to reach the highest peaks of sound, to display to themselves and to the public the nearly supernatural nature of their own performance, were helped to achieve these goals by a saxophone, an instrument that was just beginning to outclass other wind-instruments as a vehicle for stage virtuosity. Artists such as Rudy Wiedoeft were considered the repositories of a developing musical technique, yearning for the academic honour already assigned to other instruments for various historical reasons.

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[16] This has been the destiny of alternative systems such as those of Leblanc, Rationale, and *Apogée* by Evette & Shaeffer, or the Holton Wiedoeft extra key system.

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Figure 6. *Alto Saxophone Delle Piane (R&C property).*