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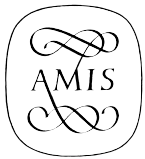

The Android Clarinetist by Cornelis Jacobus van Oeckelen (1838)

Albert R. Rice

From the beginning of the nineteenth century, the mass production of clockwork devices encouraged wind-up musical clockwork toys such as drummers, guitarists, and violinists. Apart from singing birds and cuckoo clocks, they can be grouped into two types: animated androids that appear to perform using a musical instrument and figures that move to the accompaniment of a mechanical instrument.[1]

A definition of an android appears in Diderot and D'Alembert's 1751 *L'Encylopédie* published in Paris: "Android, a mechanical automaton having a human figure and who, in certain activities, is well disposed to move and function exteriorly, extremely similar to a man."[2] The example given in this definition is a famous flute-playing automaton (1737) by Jacques de Vaucason, successfully exhibited in Paris in 1738 (fig. 1). Vaucason's automaton played twelve different selections on a flute through air pumped by a bellows and mechanical levers covering tone holes.[3] Vaucason later made and exhibited two other automatons: a mechanical duck that pecked grain, drank water, and evacuated the digested food, and a Provençal shepherd who played twenty tunes on the galoubet (a shepherd's pipe) with his left hand while beating a drum with his right. All three figures were submitted to the Académie Royale des Sciences in 1738.[4] Unfortunately, all three are now lost.

1. Hugh Davies, "Toy instruments." *Grove Music Online. Oxford Music Online.* Oxford University Press, accessed April 2, 2014, http://www.oxfordmusiconline.com/subscriber/article/grove/music/47633.

2. "Androide, (Méchan.) Automate ayant figure humaine & qui, par le moyen de certains ressorts, & bien diposés, agit & fait d'autres fonctions extérieurement semblables à celles de homme." Jean Le Rond D'Alembert, *Encyclopèdie raisonné des sciences, des arts et des métiers par und sociéte des lettres* (Paris: Briasson, David l'aîné, Le Breton, Durand, 1751), vol. 1, 448.

3. A detailed explanation of how the mechanism of Vaucanson's flute player was constructed is in Alfred Chapuis, with the collaboration of Louis Cottier et al., *History of the Musical Box and of Mechanical Music,* trans. J. E. Roesch, eds. H. M. Fitch and H. F. Fitch (Summit, NJ: Musical Box Society International, 1980), 32–35.

4. See [Jacques de] Vaucason, *Le mécanisme du fluteur automate,* Paris: J. Guerin, 1738 with [Jacques de] Vaucason, *An Account of the mechanism of an automaton or image playing on the German-Flute,* trans. J. T. Desaguliers, London: T. Parker, 1742; facsimile

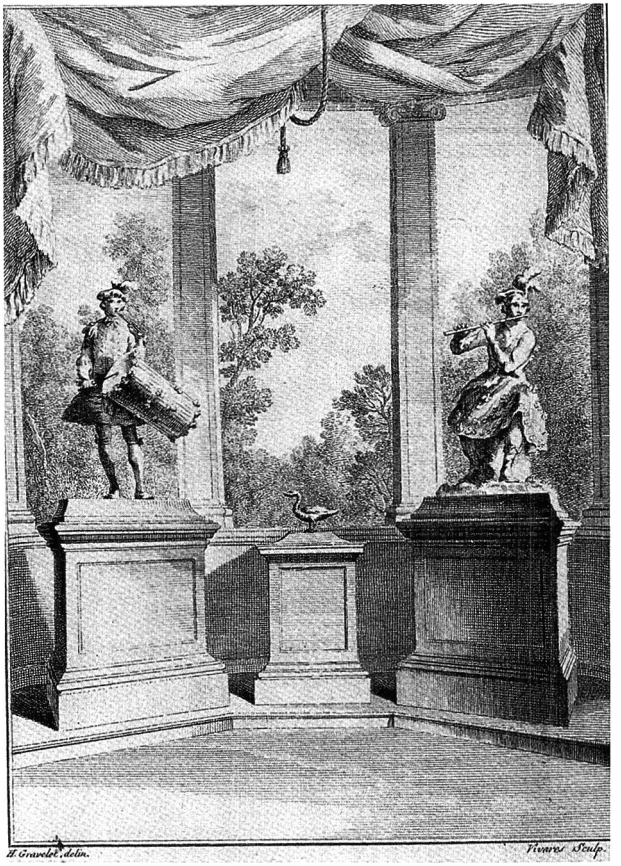

FIGURE 1. Jacques de Vaucanson's three automatons, galoubet and drum player (left), duck (middle), and flute-player (right). Frontispiece in J. De Vaucanson, *Le mécanisme du fluteur automate/An account of the mechanism of an automaton or image playing on the German-flute* (Buren: Frits Kunf, 1979). Courtesy of Frits Kunf.

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ed., preface by David Lasocki, *The Flute Library,* First Series no. 5, Edition F. Vester (Buren: F. Knuf, 1979).

Three later, famous automatons are "La musicienne" (1773), a woman playing an organ by Pierre Jaquet-Droz and his son, Henri-Louis Jacquet-Droz, of Paris;[5] the "Trompeterautomat," an android trumpeter (1810–1812), by Johann Friedrich Kaufmann of Dresden,[6] and the android clarinet player (1834–1838) by Cornelis Jacobus van Oeckelen of Breda, The Netherlands, now in the private collection of John Gaughan, Los Angeles. All require a crank to wind a spring mechanism that propels one or two wooden pinned cylinders that operate the mechanism. The complex nature of these mechanisms is reflected in the actions of the automaton. For example, the female musician plays five different works, her eyes move from her hands to the score, and at the end of each work, she bows her body and nods her head.[7] The trumpeter plays a difficult work by Carl Maria von Weber.[8]

This article provides biographical information on Cornelis van Oeckelen and a brief list of his inventions; briefly describes and illustrates some of the android clarinetist's mechanisms; describes the android's movements and the music it performed; reviews van Oeckelen's financial problems; describes his departure from The Netherlands; mentions his activities in Java; and describes performances in Boston and New York. Much of the biographical information about van Oeckelen and the account of his concerts in The Netherlands given here are from Haastert's 1980 study and an unpublished English translation by Robert Barrow of Haastert's book.[9]

Van Oeckelen and his Inventions in The Netherlands

Van Oeckelen's father, Cornelis Jacobus van Oeckelen (1762–1837), was a self-taught maker of clocks, carillons, and mechanical instruments in Breda, The Netherlands. He worked on organs in 1805 and made his first organ in 1822. He had three sons, one of whom, Petrus, became the

5. In the Musée d'Art et d'Histoire, Neuchâtel; see Siegfried Richter, *Wunderbares Menschenwerk: Aus der Geschichte der mechanischen Automaten* (Leipzig: Edition Leipzig, 1989), 92–93.

6. In the Deutsches Museum, Munich; Richter, Ibid., 94–95.

7. J. van Haastert, *Cornelis Jacobus van Oeckelen kunstwerker: leven en werken van een uitvinder van mechanische muziekinstrumenten (Breda, Batavia, Boston/New York) (1798–1865)* (Utrecht: Vereniging voor Nederlandse Muziekgeschiedenis, 1980), 31.

8. Richter, *Wunderbares Menschenwerk*, 93.

9. The translation was completed at the request of John Gaughan.

most important organ builder in the family.[10] Cornelis Jacobus van Oeckelen was born in 1798 in Breda; he worked on and repaired organs, but his main interest was his own inventions. In 1820, his father, Cornelis senior, and Cornelis junior each entered a mechanical piano in the Exhibition of Trade and Fine Arts in Ghent. Cornelis senior received a bronze medal; Cornelis junior received an honorable mention.[11] Cornelis junior is recorded as a piano and organ maker in 1824. The next year, he and his father exhibited a desk containing a mechanical piano that played twelve arias at the General Exhibition of Products of National Industry in Haarlem. They received a silver medal.[12] In 1827, van Oeckelen married Amalia Jespers and in 1829, they had a son, Karel.[13]

There were four inventions for which van Oeckelen received greater recognition outside The Netherlands. The first was the 1825 "Salpinorganon" shown at exhibitions in Ghent and Haarlem. It consisted of a large mahogany pedestal containing twenty reed trumpets behind small doors. It used pinned cylinders to play well-known military pieces, the Dutch National anthem, and a folk song.[14] The next was the "Hamaton," produced in 1830 with an associate, Cuming Heijlinger. It was a metal clarinet-shaped instrument with a cupped metal mouthpiece, equipped with free reeds to produce twenty-five notes from *a* to *a′* (fig. 2). When the performer blew and opened keys, the reeds vibrated to produce tones similar in timbre to the clarinet and oboe. More than one note could be played at a time, including chords. Van Oeckelen and Heijlinger applied for a ten-year patent and asked for money to cover the patent fee; they promised to pay back the fee within three months if

10. Richard Kassel, "Oeckelen, Van," in *The Organ: An Encyclopedia*, eds. D. E. Bush, R. Kassel, (New York: Routledge, 2005), 378.

11. *Rapport de la commission central sur les produits de l'industrie nationale exposés a Gand au mois d'Aout 1820* (The Hague: L'Imprimerie d'État, 1820), 163; see also Haastert, *Cornelis Jacobus van Oeckelen*, 31.

12. *Catalogue des objets d'art et d'industrie nationale admis à la seconde exposition générale ouverte à Harlem, pendant le mois de juillet 1825* (Harlem: J. Enschedé et fils, 1825), 207, no. 1062; *Rapport de la commission supérieure sur les produits de l'industrie nationale exposés à Harlem, dans les mois de juillet et août 1825* (The Hague: L'Imprimerie d' État, 1825), 184. These exhibitions are mentioned by Haastert, Ibid., 32.

13. Haastert, Ibid., 24.

14. Haastert, Ibid., 32–34. Marcuse states that van Oeckelen based this instrument on the "Salpingion," a mechanical musical instrument by Johann Gottfried and Johan Friedrich Kaufmann with nine trumpets and a pair of timpani. See Sibyl Marcuse, *A Survey of Musical Instruments* (New York: Harper & Row, 1975), 744.

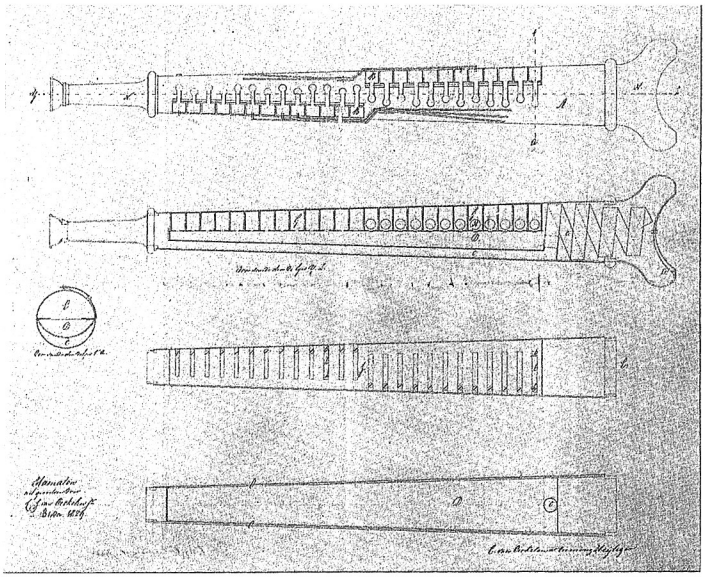


FIGURE 2. Sketch of the hamaton by Cornelis van Oeckelen, Dutch patent no. 103 (April 7, 1830), Rijksarchief, The Hague. J. van Haastert, *Cornelis Jacobus Van Oeckelen kunstwerker* (Utrecht: Vereniging voor Nederlandse Muziekgeschiedenis, 1980), 35. By permission of the Royal Society for Music History of The Netherlands (KVNM).

the patent was granted. A Dutch patent (no. 103) was registered and granted on April 7, 1830,[15] and the Hamaton was shown at the 1830 Brussels Exhibition.[16]

The third was the 1831 "Achordical Piano," an organ in an upright piano case with a soft pedal and a cylinder to operate bellows to provide air when any key was pressed (fig. 3). Van Oeckelen requested a patent for this instrument and after an examination by an expert, a patent was recommended and the patent fee paid by the government for patent

15. Haastert, Ibid., 34–37.

16. *Catalogue des produits de l'industrie nationale admis à la troisième exposition générale à Bruxelles, au mois de juillet 1830* (Bruxelles: Fonderie et Imprimerie Normales, 1830), 229.

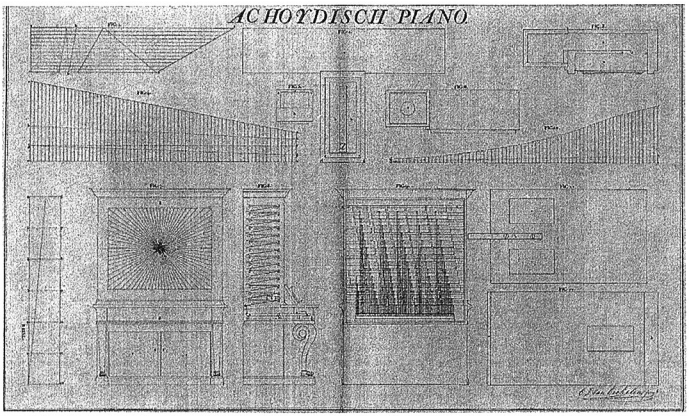


FIGURE 3. Sketch of the Acordical Piano by Cornelis van Oeckelen, Dutch patent no. 63 (July 31, 1831) Rijkarchief, The Hague. J. van Haastert, *Cornelis Jacobus van Oeckelen kunstwerker* (Utrecht: Vereniging voor Nederlandse Muziekgeschiedenis, 1980), 38. By permission of the Royal Society for Music History of The Netherlands (KVNM).

no. 63 (July 31, 1831). In 1832, a concert introduced the Hamaton and Achordical piano in Breda.[17] The fourth invention was the 1833 "Keyboard-Oboe," a free-reed instrument with a keyboard that operated a bellows to produce a tone similar to the oboe. This instrument was less successful than the others. It is likely that it was similar to the Harmoniphon patented in 1836 in France by Jacques Reine, Michel-Louis Lecrosnier, and Louis-Antonie Tremblai, all from Dyon. It had a rectangular case with a keyboard, free reeds attached inside (similar to early accordions), played by blowing into a small rubber hose. A pair of bellows could be attached to the hose, if desired. Van Oeckelen possibly made a tour of several cities in The Netherlands playing his instrument to create interest. After the failure of this last invention, he withdrew for a few years to a country place close to Princenhage to work on a much more important invention that took about three and one-half years to com-

17. Haastert, Ibid., 37–40.

plete: the android clarinetist.[18] None of van Oeckelen's earlier inventions are extant.

The Android Clarinetist

Originally, the android clarinetist was a man 6′ 5¾″ tall (1.975 m)[19] standing on a thin iron platform holding a pseudo-clarinet (hereafter called clarinet), dressed as a medieval troubadour in a silk, gold-trimmed velvet cape, neck ruff, formal shirt, pantaloons, stockings, and buckled shoes (fig. 4).[20] In the illustration, the android clarinetist has a striking, friendly facial expression. Its clarinet had a conical bore and is wider than normal to accommodate the reeds placed inside. Its length is about 30″ (76.2 cm), the length of a modern G clarinet, with a bell diameter of 4.92″ (12.5 cm).[21] Its finger and key holes are covered by sixteen plateau keys, allowing the free reeds in the instrument to vibrate when air is pumped through tubes concealed in both thumbs while the fingers open the plateau keys.

The android has pinned wooden and brass barrels, bellows, and two clockwork motors in the body; many complex linkages in the shoulders, elbows, arms, and fingers, and connections between the two. Its complexity is evident in photos by the present owner, the magic illusion builder and restorer, John Gaughan, who required six years to restore the android.[22] The right side of the undressed android (fig. 5a) reveals the long metal linkages in the right arm, parts in the body, and the hand crank to wind two different clockwork motors that operate the music and body motions. In the chest, under the arm, is a small return spring that helps operate the bellows positioned across the upper chest. A spring inside the bellows opens and closes it. Below the return spring are

18. Haastert, Ibid., 40–44; a reconstructed drawing based on the French patent is on 42–43. The Harmoniphon or keyboard-oboe was said to be invented in 1837 by J. P. Panis in an article in *La France Musicale* (no. 14, 1837) and translated into German in the *Allgemeine Musikalische Zeitung* 40/16 (18 April 1838), 256–258. See also, Hermann Mendel, *Musikalisches Conversations-Lexikon,* (Berlin: L. Heimann, 1875), vol. 5, 55.

19. The android's height is given as 197.5 cm in Albert A. Stanley, *Catalogue of the Stearns Collection of Musical Instruments,* 2nd ed. (Ann Arbor, Michigan: University of Michigan, 1921), 98.

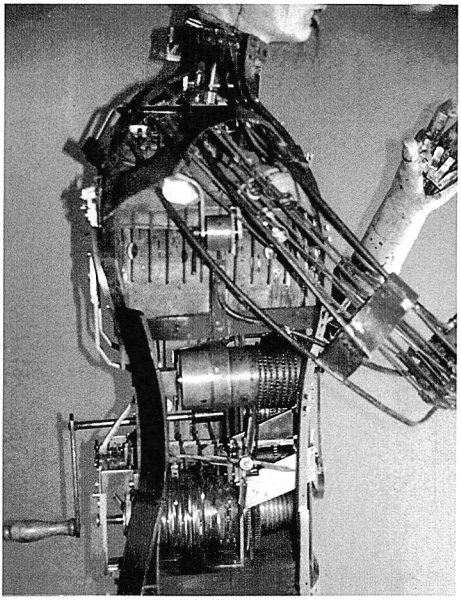
20. An early engraving is preserved in the Civic Archive of Schiedam, The Netherlands in Haastert, Ibid., 45.

21. Stanley gave the length as 36 cm, but he may have meant 36″; Stanley, *Ibid.*, 98. These dimensions of the original clarinet were estimated by John Gaughan from a photograph of the original lost clarinet.

22. John Gaughan contributed the observations in the following two paragraphs.

FIGURE 4. Engraving of the Android clarinetist by Cornelis Jacobus van Oeckelen, Archive of the City of Schiedam. J. van Haastert, *Cornelis Jacobus van Oeckelen kunstwerker* (Utrecht: Vereniging voor Nederlandse Muziekgeschiedenis, 1980), 45. By permission of the Royal Society for Music History of The Netherlands (KVNM).

(a)



(b)

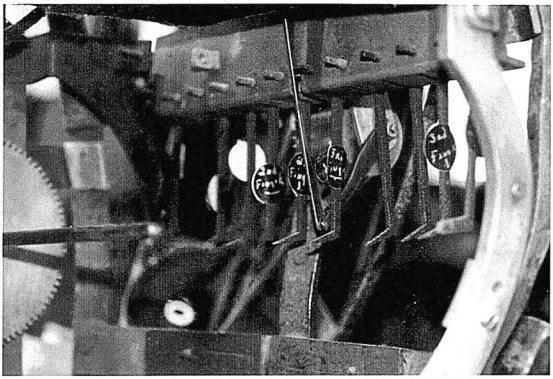


FIGURE 5. (a) Right shoulder of the Android. (b) Detail of the mechanism. Courtesy of John Gaughan. See color photo p. 230.

two wooden pinned barrels, 7″ (17.78 cm) in diameter and 12″ (30.48 cm) in length (not visible in fig. 5a). These translate the air from the bellows to the movement of the fingers to play about eight minutes of music per selection.

For a performance, van Oeckelen wound the mechanism. As part of each selection, he played a piano accompaniment, the introduction, and interludes while the android moved and wetted the reed with his tongue. For a new android music selection, van Oeckelen had to change both wooden pinned barrels (only two wooden barrels survive with the android).

A brass spring barrel with a chain attached (beneath the two wooden barrels) provides power for android movements: turning left and right, bowing, head movement, and eye movement as well as operating the sound box. The chain is attached to a large barrel that is connected to linkages that move the android. The back of the large barrel is called a fusee which is a grooved, cone-shaped pulley that maintains the motion produced by the brass spring barrel so the android moves smoothly and naturally. One of the two wooden pinned barrels (fig. 5b) in the chest is shown with the short linkages used to operate the left and right hand fingers.

The photo of the chest (fig. 6a) shows a small return spring with its linkage to the bellows (not shown) and short linkages (cam followers) to move the fingers of both hands, as indicated. There are shoulder linkages (fig. 6b) for both the left and right sides. Gaughan's drawing (fig. 7a) of the left elbow joint shows connections for finger movements, an air tube, and thumb. The left arm elbow joint reveals the attached linkages (fig. 7b). Finger and thumb brass linkages that connect at the elbow joint are shown in fig. 8. A close-up of the left hand (fig. 9) shows flat springs that return the fingers after they press keys. In the left side of the body are two brass spring barrels (not shown in the photos) that assist in moving the fingers.

The android holds a facsimile made by Gaughan of the original clarinet (fig. 10), and there is a close-up of its right hand section (fig. 11). Its written compass of thirty-two notes for a B-flat clarinet is three octaves and a fourth, from E-flat to a-flat‴ with all accidentals except a few lower notes.[23] The music is created when air, supplied by the bellows high in

23. The descriptions of the compass of the Android's clarinet in advertising broadsides list an incorrect compass of B-flat to a-flat‴. Based on the music played by the android, the instrument had to include most of the notes of the usual B-flat clarinet; thus, its compass was likely D-flat to a-flat‴ or written E-flat to b-flat‴.

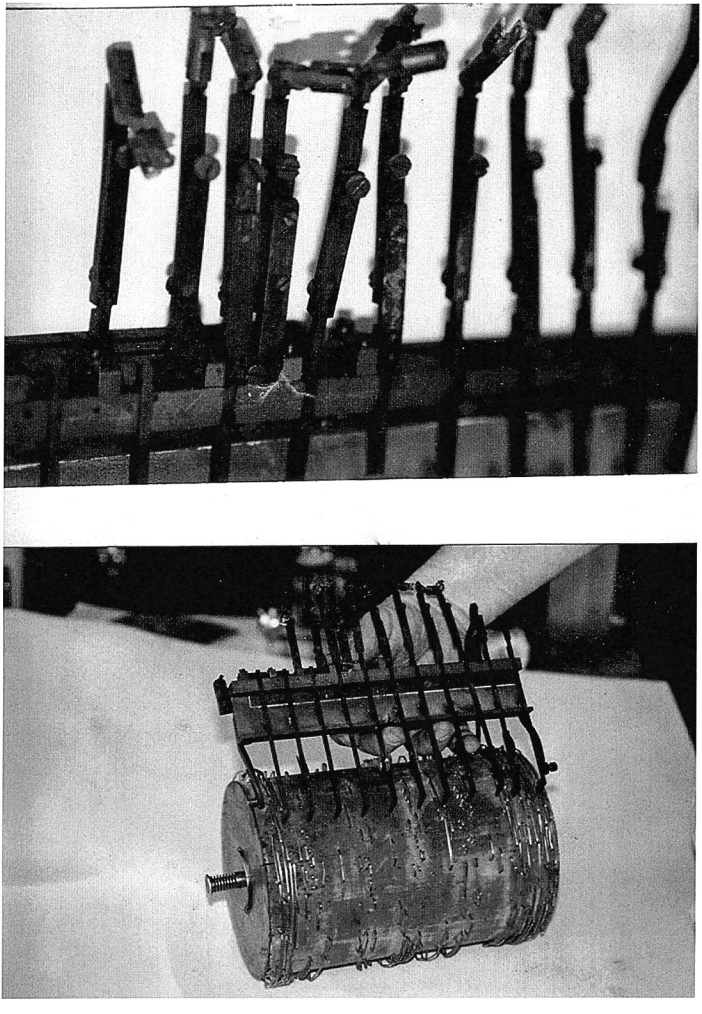


FIGURE 6. Barrel and levers in the right shoulder. Courtesy of John Gaughan. See color photo p. 231.

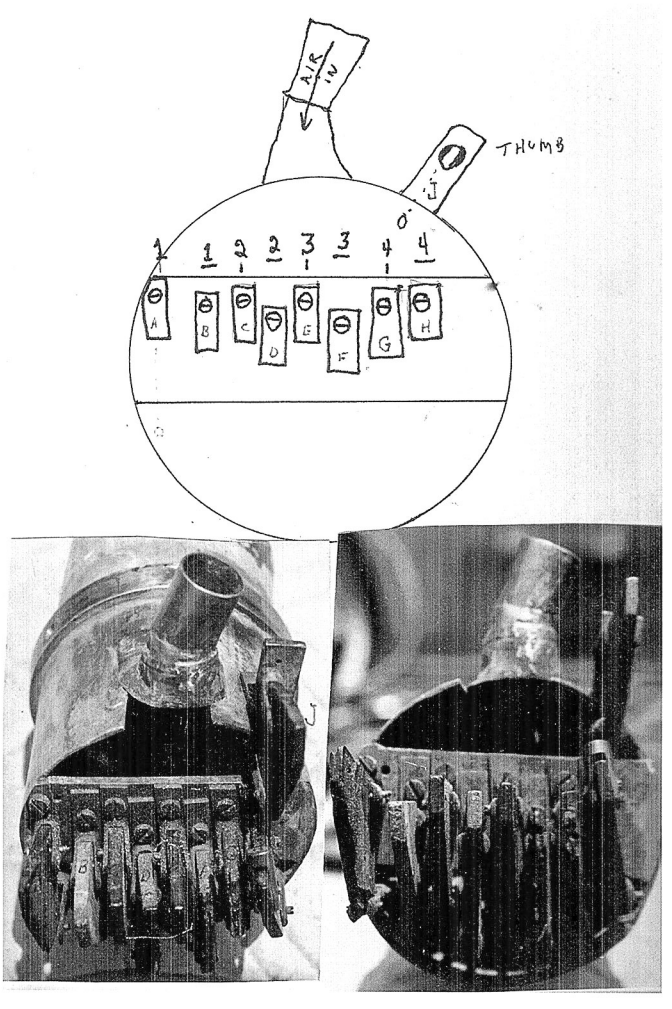


FIGURE 7. Drawing of the left arm reeds, photos of the reed plates and air tubes for the thumbs. Courtesy of John Gaughan. See color photo p. 232.

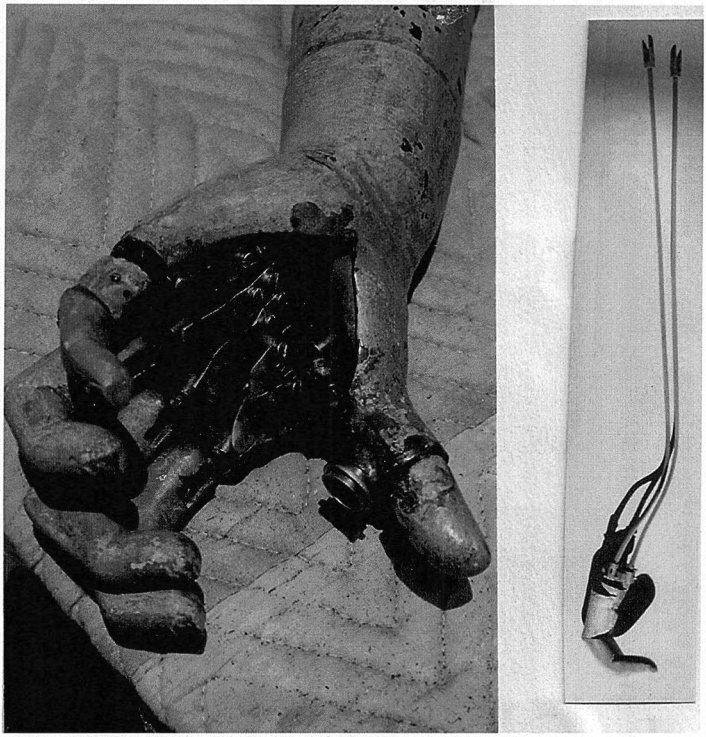


FIGURE 8. Left hand. Courtesy of John Gaughan. See color photo p. 233.

the chest, is expelled through the thumbs, enters the clarinet's bore, and moves the fingers rapidly, closing the plateau keys. The sound is fairly homogeneous and pleasant, varying between a clarinet and an oboe.

In one hour, up to four musical works play from the following selections: Carl Maria von Weber, Rondo;[24] Weber, "Fantaisie-concertante" from *Der Freischütz*;[25] Ludwig van Beethoven, "Andante-Varie" (clarinet

24. Probably the last movement or Rondo from Carl Maria von Weber, *Grand Duo concertant pour & clarinette, op. 47* (Berlin: Schlesinger, 1817).

25. Probably C.M. von Weber, *Potpourri brilliant pour pianoforte et violon ou clarinette sur motifs de l'opéra Der Freyschütz*, ed. Aloys Schmitt (Mayence: Schott, ca. 1820).

FIGURE 9. Close up photos of the left hand. Courtesy of John Gaughan. See color photo p. 234.

FIGURE 10. Android clarinetist holding a clarinet made by Gaughan. Courtesy of John Gaughan. See color photo p. 235.

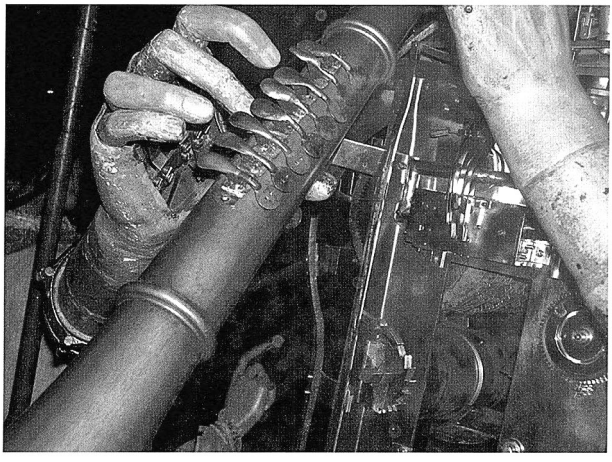


FIGURE 11. Close up of the clarinet and the android. Courtesy of John Gaughan. See color photo p. 235.

arrangement), and Charles de Bériot, "Introduction with variations" (clarinet arrangement).[26] To begin, the android clarinetist bows to the audience and makes a sign to van Oeckelen that it is ready. Imitating a living clarinetist, it moistens the clarinet reed twice and looks at the music on the stand. After that, it performs without errors all *pianos, fortes, crescendos,* and *diminuendos.* As the accompanying pianist plays a few solo bars, the android clarinetist follows the music by counting softly in Dutch. His movements are so skillful that one easily forgets it is a mechanical player. At the end of the concert, van Oeckelen showed interested audience members that the android clarinetist operates on a purely mechanical level, showing the hand crank to wind it up, as well as the barrels and bellows in his body.[27]

Beginning March 1838, van Oeckelen and his android clarinetist went on a fourteen month tour of many cities through The Netherlands, each presentation following a pattern. An editorial announcement in the local newspaper discussed the automaton with further details given in another advertisement that was repeated several times, including the time and place of the presentation. He began in The Hague with six or seven hour long presentations. The admission fee was 75 cents in all cities, except in The Hague and Amsterdam, where it was 99 cents and 1 guilder, respectively (100 cents=1 guilder). These were normal prices for unusual or important performers. All the reviews were positive.[28] Table 1 shows the cities, dates, and newspaper reviews at which van Oeckelen and the android clarinetist performed during 1838 and 1839 and in America during 1856 and 1861.

The number of performances per city varied between thirty and fifty, although it is unknown how many people were at each. In 1838 and 1839, van Oeckelen tried to arrange a concert for the King of The Netherlands, but the King was in mourning for the loss of a family member. An announced performance in Rotterdam in 1838 was cancelled, and while van Oeckelen travelled to Brussels for an 1839 performance, it is uncertain if the performance took place. The press coverage of the automaton was unprecedented for Dutch newspapers, which consisted of only four pages or less.[29]

26. Probably Charles-Auguste de Bériot, *Introduction et variations brillantes: op. 67: sur un theme favoris de Ch. De Bériot,* ed. Ch. Hummel (Mayence: Schott, ca. 1828).

27. Haastert, *Cornelis Jacobus van Oeckelen,* 44, 46, 48.

28. Haastert, Ibid., 48.

29. Haastert, Ibid., 50–59.

TABLE 1. The android clarinetist in concerts in The Netherlands, 1838–1839 and in America, 1856, 1861.

City	*Dates*	*Reviews or Announcements*
The Hague	April 2–12, 1838	*Journal de la Haye,* April 12, 1838 *Dagblad van 's-Gravenhage,* April 2, 4, 9, 11, 1838 *De Haagse Nieuwsbode,* April 4, 1838
Amsterdam	April 30–May 5	*Nieuwe Amsterdamsche Courant,* April 27, 1838 *Algemeen Handelsblad,* April 27, 1838
Groningen	May 16–23	*Groninger Courant,* May 15, 22, 25, 1838
Leiden	May 31–June 13	*Leydsche Courant,* June 1, 4, 6, 8, 11, 1838
Utrecht	June 18–23	*Utrechtsche Courant,* June 20, 22, 1838
Leeuwarden	July 18–26	*Leeuwarder Courant,* July 20, 24, 1838
Sneek	July 27	*Leeuwarder Courant,* July 27, 1838
Zwolle	August 6–8	*Overijsselsche Courant,* August 7, 10, 1838
Arnheim	September 26–28	*Arnhemsche Courant,* September 29, 1838
's-Hertogenbosch	October 20–26	*Provinciaal Dagblad,* October 23, 1838
Middleburgh	January, 1839	*Bredasche Courant,* December 28, 1838
Breda	June 1–4, 6	*Bredasche Courant,* June 2, 3, 5, 7, 8, 1839
Boston	March 29, 31–April 3, April 5, 1856	*New England Telegraph* *Dwight's Journal of Music,* March 29, 1856
Boston	May 5–6	*Boston Transcript,* May 5–6, 1856
New York	March 1, 1861	*New York Herald,* March 1, 1861
New York	May 19	*Evening Post,* March 20, 1861

The Financial Problems of van Oeckelen

The number of concerts given by van Oeckelen in 1838 and 1839 suggest that he succeeded financially. Apparently this was not the case, however. During the three years he took to build the android clarinetist, van Oeckelen's family lived almost entirely from money borrowed from his friend and neighbor, Franciscus Johannes Jespers. In addition to this debt, Oeckelen was obliged to pay back the patent costs of 600 guilders for the Achordical Piano. Since he was unable to raise more money to pay this debt, it was reduced to 425 guilders, and he informed the King that he would try his luck in the Dutch West Indies. By a Royal decree of December 30, 1840, his debt was forgiven and bankruptcy avoided. During the years of his financial problems, van Oeckelen received a coveted award, an honorary membership in the Provincial Society of Arts and Sciences in North Brabant. Others who received this award

were titled nobility, two generals, eight professors, and a state councilor. Obviously, van Oeckelen's talents and abilities were recognized.[30]

Departure from The Netherlands for the East Indies (1839–1855)

Cornelis van Oeckelen, his wife, and their ten-year-old son left for the East Indies in November 1839. They sailed from Rotterdam on the "Jonge Adriana" (Young Adriana) under Captain Hempel. The passage for the family cost 1,400 guilders; half was paid in cash, the balance plus interest was to be transferred to the shipping company, Antony van Hoboken, within a year. The family arrived in Batavia in March 1840. There is no trace of a performance with the android clarinetist, but it is known from a later advertisement in *Dwight's Journal of Music* (March 29, 1856) that van Oeckelen reconstructed it so it could also play a reed-cornet with a compass of sixteen notes. In 1855, Cornelis and Amalia, along with Karel and his wife and son, traveled by ship to America.

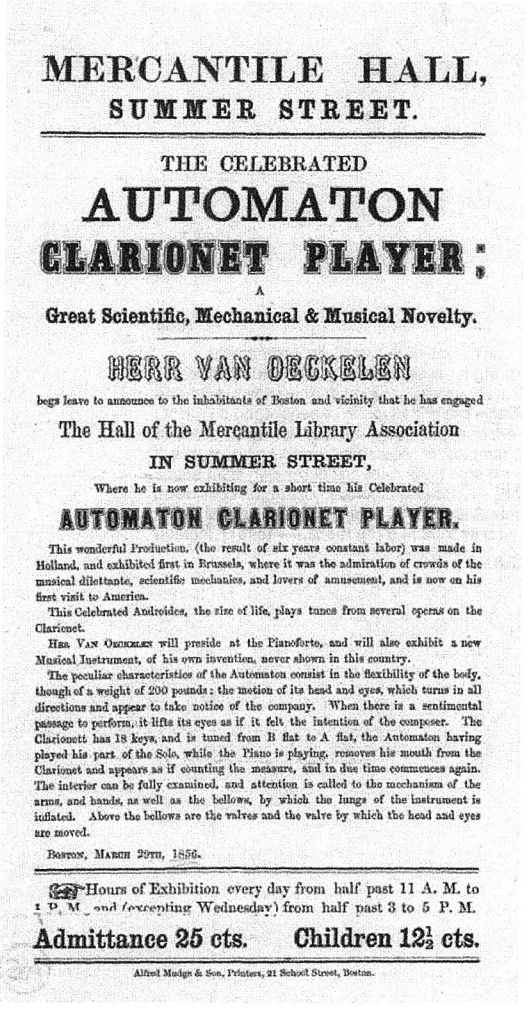
In Boston and New York, 1855–1865, and Oeckelen's Inventions

After two hurricanes and the destruction of the masts of two ships, they reached Boston in 147 days. They were met by Eaton, a merchant, whom they had met in Java. The android clarinetist had to be repaired before performances could be offered. By March 25, 1856 it was ready and van Oeckelen advertised his "Automaton Clarionet Player" in the *New England Telegraph* and *Dwight's Journal of Music* as able to play thirty-two notes on the clarinet and sixteen notes on the cornet.[31] A March 29, 1856 broadside advertised the concert at Mercantile Hall, Summer Street, Boston (fig. 12).[32] He limited his performances to five one hour concerts per day, and in addition to Saturday, March 29, probably performed for another week from Monday, March 31 through April 5, except Wednesday, April 4.

30. Haastert, Ibid., 59–61.

31. Cited by Haastert, Ibid., 66, n. 119. The description from the *New England Telegraph* was quoted in "Musical chit-chat," *Dwight's Journal of Music*, vol. VIII/26 (March 29, 1856), 205.

32. This broadside is reproduced courtesy of the American Antiquarian Society and is in the online series, Archive of Americana; American broadsides and ephemera, Series 1, no. 9631. The advertisement's mention of the android clarinetist in Brussels was likely hyperbole since there is no evidence that a performance took place in Brussels, although van Oeckelen was in Brussels in 1839.



MERCANTILE HALL,
SUMMER STREET.

THE CELEBRATED
AUTOMATON
CLARIONET PLAYER;
A
Great Scientific, Mechanical & Musical Novelty.

HERR VAN OECKELEN

begs leave to announce to the inhabitants of Boston and vicinity that he has engaged

The Hall of the Mercantile Library Association
IN SUMMER STREET,

Where he is now exhibiting for a short time his Celebrated

AUTOMATON CLARIONET PLAYER.

This wonderful Production, (the result of six years constant labor) was made in Holland, and exhibited first in Brussels, where it was the admiration of crowds of the musical dilettanti, scientific mechanics, and lovers of amusement, and is now on his first visit to America.

This Celebrated Androides, the size of life, plays tunes from several operas on the Clarionet.

Herr Van Oeckelen will preside at the Pianoforte, and will also exhibit a new Musical Instrument, of his own invention, never shown in this country.

The peculiar characteristics of the Automaton consist in the flexibility of the body, though of a weight of 200 pounds; the motion of its head and eyes, which turns in all directions and appear to take notice of the company. When there is a sentimental passage to perform, it lifts its eyes as if it felt the intention of the composer. The Clarionett has 18 keys, and is tuned from B flat to A flat, the Automaton having played his part of the Solo, while the Piano is playing, removes his mouth from the Clarionet and appears as if counting the measure, and in due time commences again. The interior can be fully examined, and attention is called to the mechanism of the arms, and hands, as well as the bellows, by which the lungs of the instrument is inflated. Above the bellows are the valves and the valve by which the head and eyes are moved.

Boston, March 29th, 1856.

☞ Hours of Exhibition every day from half past 11 A. M. to 1 P. M. and (excepting Wednesday) from half past 3 to 5 P. M.

Admittance 25 cts. Children 12½ cts.

Alfred Mudge & Son, Printers, 21 School Street, Boston.

FIGURE 12. Broadside of a concert featuring the Android clarinetist on March 29, 1856 at Mercantile Hall, Boston. Courtesy of the American Antiquarian Society.

A second broadside advertised the automaton clarinet player at Mercantile Hall, Boston, for three performances on Monday and Tuesday, May 5 and 6, 1856: "The Greatest mechanical wonder of the age: The celebrated automaton clarionet player! A great scientific, mechanical and musical novelty. Herr van Oeckelen will give three entertainments at Horicultural Hall, on Monday and Tuesday, May 5th and 6th."[33] In New York City it was exhibited from late September through October 1856 at Dr. Chapin's Church, 548 Broadway, according to a broadside "A Great Mechanical, Anatomical and Musical Wonder the Automaton Musician from the island of Java" (fig. 13).[34] The long description is credited to the *Boston Transcript* (with an engraving similar to the first engraving). Evening performances were at 7:00 P.M.

Late in 1858, van Oeckelen and his family moved to New York where he was active as a performer, composer, and inventor. On November 23, 1858, he was granted a US patent (no. 22,139) for a reed organ called a "triolodeon." It "has the capacity of increasing and diminishing each note independently of all the others." The mechanism of this instrument consisted of three rows of valves producing differences of dynamics on any note.[35] Van Oeckelen and his neighbor, a grocer, Melchior Ducker, were partners in manufacturing triolodeons at 618 Broadway. They received a silver medal for the triolodeon at the 1859 American Institute Fair,[36] and advertised the instrument in *The New-York Daily Tribune*[37], twelve ads in *The New York Musical World* from April–July 1860, and nine ads in *The New-York Times* for January, February, and March, 1860: "A New Instrument, TRIOLODEON Warerooms, No. 618 Broadway, VAN OECKELEN & DUCKER Patentees. Highest testimonials of Thalberg and Vieuxtemps. Large Silver Medal." Even the testimonials from the famous pianist and violinist, Sigismund Thalberg and Henri Vieuxtemps,

33. This broadside is in the online series, Archive of Americana; American broadsides and ephemera, Series 1, no. 9578. Also cited on the Electronic Resources of the University of Hong Kong Libraries website, http://sunzi.lib.hku.hk/ER/detail.hkul/3904519, accessed March 19, 2014.

34. Courtesy of the American Antiquarian Society. The author thanks John Gaughan for a copy.

35. Cornelius van Oeckelen, "Wind Musical Instrument," US patent, no. 22,139 (November 23, 1858).

36. *Transactions of the American Institute, of the City of New York for the Years 1859–60* (Albany, New York: C. Van Benthuysen, 1860), 77.

37. Jan. 18, 1860, 2.

A GREAT MECHANICAL, ANATOMICAL —AND— MUSICAL WONDER

THE AUTOMATON MUSICIAN

FROM THE ISLAND OF JAVA.

The following description is taken from the Boston Transcript:—

It is the invention and production of Mynheer Van Oeckelen, who has recently arrived from the Island of Java, and is in the form of a full-sized anatomical figure of a man, the body of which is filled with many thousand parts of machinery, by which it plays quite artistically upon the Clarionet, &c. The illusion is so perfect in all respects that at a short distance the figure might well be mistaken for a living artist.

This automaton, being seven feet in height, and dressed in a very elegant troubadour's costume, is indeed worth seeing, as an extraordinary production of genius and labor, both by its playing on the clarionet and its various bodily motions. Acting entirely by the force of its own springs, it produces by internal wind, every tone upon its instrument; on which it plays with its fingers in such a graceful, life-like manner, that nothing could be preferred to its execution of a rondo of Weber, a fantasy concertante from the Freischutz, a varied andantino of Beethoven, an introduction with the variations of Beriot, &c., and it is not exaggeration to say that the performance of every piece is united with such a tasteful expression as has hitherto been peculiar to highly cultivated artists alone. The crescendo, diminuendo, affectuoso, &c., are applied with so much accuracy, that the inspired musician can hardly surpass this inanimated image.

As soon as Mr. Van Oeckelen sits down at the piano to accompany the obligato of the player on the clarionet, the automaton begins to act, turning its head and eyes in different directions, while the whole body follows these motions in an easy and natural manner. After looking round a moment or two, it turns its face to the pianist to give the signal of commencement; it then brings its instrument to its lips to wet the reed; this it repeats twice, and then begins its solo with all that peculiar motion of the head, eyes, mouth and body, either each separately, or in such a happy combination that the most accomplished musician on the clarionet could have no more accuracy, neither better expression of feeling, nor higher energy; in a word, no more efficacious and delightful handling of an instrument.

By its elaborate and artistic construction, this curious figure can give 32 tunes, and adapt every motion with the greatest ease by blowing and fingering. Sometimes the piano having several measures of solo, the automaton not only follows its pauses, but also marks them softly with its lips. It has been the labor of a lifetime.

Exhibiting daily at Dr. Chapin's Church, No. 548 Broadway, from 11 A. M. to 10 P. M. Especial Evening performances commence at half-past 7 P. M.

ADMITTANCE - - - - 25 CENTS

Young persons under 15 years of age ..... Half-price

☞ WILL CONTINUE ON EXHIBITION DURING THE MONTH OF OCTOBER.

FIGURE 13. Broadside of a concert at featuring the Android clarinetist, on October, 1856 at Dr. Chapin's Church, 548 Broadway, Boston. Courtesy of the American Antiquarian Society.

were insufficient to encourage sales. Van Oeckelen left the firm in 1860, which Ducker continued until 1864.[38]

On May 10, 1860, van Oeckelen participated in a benefit concert for the Music Fund of the Chelsea Presbyterian Church (22nd Street near 9th Avenue) in New York.[39] Van Oeckelen, was granted a US patent (no. 29,023) on July 3, 1860 for a portable melodeon with a four octave compass (C-c″). It included a horizontal support positioned below the wrists that operates the bellows inside the instrument. On March 1, 1861, van Oeckelen again offered performances of his android clarinetist as advertised in the *New York Herald*: "Van Oeckelen's Automaton Musician—THIS wonderful piece of Mechanism on exhibition, day and evening for a short time only, at 710 Broadway, first block below New York Hotel. Admission 25 cents."[40]

A concert on March 19 featured the popular pianist, Gustav Satter, with van Oeckelen and his Automaton Musician and two other of his inventions, the Clavier Oboe and Clavier Contrabasso, both wind instruments with free reeds played by piano-like keyboards. A newspaper description of the android clarinetist appeared in the *Evening Post* (March 20, 1861).[41] The Clavier Contrabasso is another van Oeckelen invention about which very little is known. The android clarinetist's "fantasy on Weber's Preciosa" was not mentioned in previous broadsheets and must have existed on two different barrels for the android clarinetist.[42]

38. Nancy Groce, *Musical Instrument Makers of New York: A Directory of Eighteenth-and Nineteenth-Century Urban Craftsmen* (Stuyvesant: Pendragon, 1991), 47, 163.

39. The other perfomers were Fanny Stockton (soprano singer), Madame Franz Stoepel (Kazia Lovarny, mezzo soprano), George Wooster (amateur singer), Louis Schreiber (cornetist), and Louis Schmidt (accompanist). Reported in *The New York Musical World* XXV, no. 3 (May 19, 1860), 2–3, also see, Vera Brodsky Lawrence, *Strong on Music: The New York Music Scene in the Days of George Templeton Strong*, vol. 3 Repercussions 1857–1862 (Chicago: University of Chicago Press, 1999), 384.

40. *New York Herald* (March 1, 1861).

41. ". . . is dressed in the old court costume of three centuries ago. In response to the applause which greets its appearance it bows to the audience, turning its head slowly in doing so. At the proper moment it places the instrument, to all appearances a normal clarionet, to its lips and plays a few musical phrases, lowers the instrument to allow an interlude on the pianoforte, surveys the audience, nods, and soon resumes its playing [of a fantasy on Weber's *Preciosa*, another on *Der Freischütz*, and an *Air Varié* by de Bériot]." See Lawrence, *Strong on Music*, 453.

42. The Fantasy was possibly Carl Maria von Weber, ed. William R. Ceulen, *Air favorit sur une romance de l'opera Preciosa pour la clarinette ou violon avec accompagnement de piano ou guitarre* (Amsterdam: Roumen, 1833).

In 1863, van Oeckelen approached the tobacconist and railroad investor, John Anderson, who was looking for someone to invent and build a machine to package tobacco mechanically. An agreement with van Oeckelen stipulated that he receive $6,000 upon success in making the machine. If the machine were useable, he would receive a share in the business after one year. By mortgaging the android clarinetist, van Oeckelen received the funds to start the project, which turned out so well that two machines could perform the work of one hundred people. The machine was shown at the 1863 American Institute Fair in New York, and on August 30, 1864, a US patent (no. 44,028) was issued. However, Anderson withdrew and van Oeckelen died less than two years later. The tobacco machine was marketed by an individual named Quintard but the van Oeckelen heirs never profited.[43]

Van Oeckelen composed and published at least three piano works in America in 1864 and 1865.[44] On June 18, 1864, van Oeckelen played the piano at the Rockland Female Institute, accompanying tenor D. D. Griswold in "a selection of sentimental and humorous English, Irish, and Scotch songs and ballads."[45] Rockland is fifteen miles northwest of Manhattan. After a four month illness, van Oeckelen died in New York on February 20, 1865.[46]

Provenance of the Android Clarinetist and Conclusion

After van Oeckelen's death, the android clarinetist was likely repossessed. According to Stanley, the android clarinetist was damaged and its original clothing destroyed in a fire when it was owned by J. P. Barnum's Museum,[47] although documentation of its sale to Barnum is lacking.[48] The android clarinetist resurfaced in 1898 when it was purchased in

43. Haastert, Ibid., 67–68.

44. *Kearsarge Grand March (simplified)* (New York: Wm. Hall & Son, 1864); *Song of the Soldiers* (New York: Wm. Hall & Son, 1864); and *Grand Reunion March for the Piano Forte* (New York: Wm. Hall & Son, 1865). Earlier, van Oeckelen published a "Marche Triomphante pour le Piano Forte," (The Hague: F. L Dony & Comp., 1830); and "Ana Rosa," (s'Hertogenbosch, 1830); Van Haastert, Ibid., 27, 73.

45. *Rockland County Journal*, vol. XXVI/25 (June 18, 1865), 2.

46. Haastert, Ibid., 68. Haastert was unable to obtain any of van Oeckelen's US patents.

47. Stanley, *Catalogue of the Stearns Collection of Musical Instruments*, 98.

48. A former curator of the Circus World Museum in Baraboo, Wisconsin claimed that he found a listing of items owned by Barnum including the android clarinetist, according to John Gaughan's statement to the author.

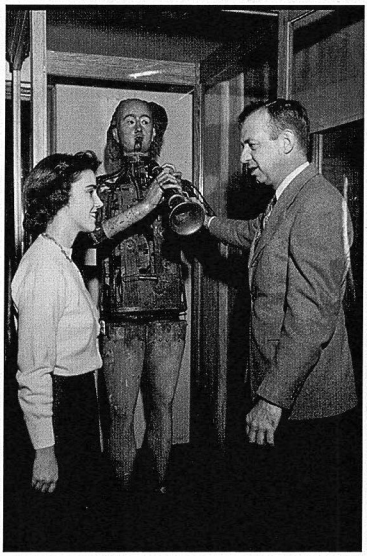
Europe by the collector, Frederick Stearns (1838–1907), among about one hundred instruments acquired that year.[49] His entire collection was given in 1899 to the University of Michigan in Ann Arbor. It was incorrectly cataloged as no. 644, an automatic clarinet player made in Germany. Albert Stanley, the editor of the Catalogue, wrote that "The *androide*, a designation erroneously applied to No. 644, was a mechanical instrument invented by Cornelis van Oeckelen (1798–1865) of Breda."[50] In 1996, John Gaughan purchased the android clarinetist from William Malm, curator at the Stearns Collection. Unfortunately, the android's clarinet could not be found. It was probably misplaced during the 1980s move to a storage facility. There are three photos of the android clarinetist with the clarinet when exhibited in a glass case in 1953 and about 1960 (figs. 14 a, b, c). Gaughan is still avidly searching for this clarinet and offers a reward for its return (fig. 15). After six years of work, Gaughan carefully restored the android clarinetist and it was included, without clarinet, in an exhibition at the J. Paul Getty Museum in Los Angeles called "Devices of Wonder: From the World in a Box to Images on a Screen" from November 13, 2001 to February 3, 2002 (fig. 16).[51]

The android clarinetist remains a remarkable, unique mechanical instrument that displays the ingenuity and talent of van Oeckelen. He used pinned barrels and bellows to produce air to play the clarinet as Vaucanson had done with his flute. However, van Oeckelen's android clarinetist was much larger than Vaucanson's flute player, and its music selections longer and more complicated. In addition, a complex mechanism controlled the movements of the android's body, head, fingers, tongue and the counting of measures. In fact, another comparable musical playing automaton is not known.

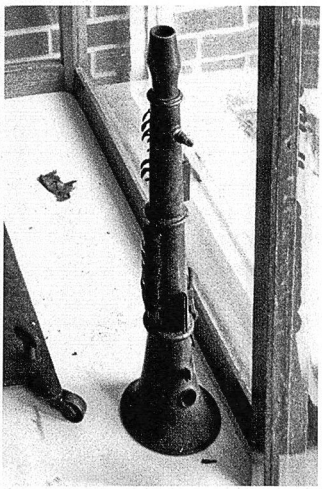
49. A letter from Stearns dated November 18, 1898, in the Stearns Collection, University of Michigan, mentions the android clarinetist. The author thanks Christopher Dempsey, curator at the Stearns Collection, for this information.

50. Stanley, *Catalogue of the Stearns Collection of Musical Instruments*, 98.

51. See Barbara M. Stafford, Frances Terpak, Isotta Poggi, *Devices of Wonder: From the World in a Box to Images on a Screen* (Los Angeles: Getty Research Institute, 2001), 269, 271, fig. 96.



(a)



(b)

(c)

FIGURE 14. Android clarinet at the University of Michigan, Ann Arbor.

(a) Android with its clarinet, student, and curator Marion McArtor, January 1953.
(b) Close-up of the clarinet.
(c) Torso, ca. 1960. Courtesy of Christopher Dempsey, the Stearns Collection. See color photo p. 236.

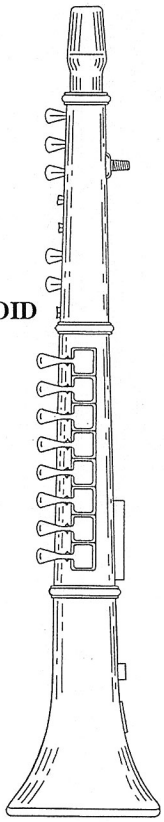
LOST INSTRUMENT

*

FROM THE UNIVERSITY OF MICHIGAN, ANN ARBOR -STEARNS COLLECTION THIS OLD BRASS CLARINET WAS LOST IN A MOVE BACK IN THE 1980s. THE INSTRUMENT WENT WITH THE "ANDROID CLARINETIST", A FULL-SIZE MECHANICAL ROBOT THAT PLAYED THE CLARINET.

LARGE REWARD!!!

Please contact:
John Gaughan 213 245 4412



26"h.

FIGURE 15. John Gaughan poster for return of the lost clarinet.

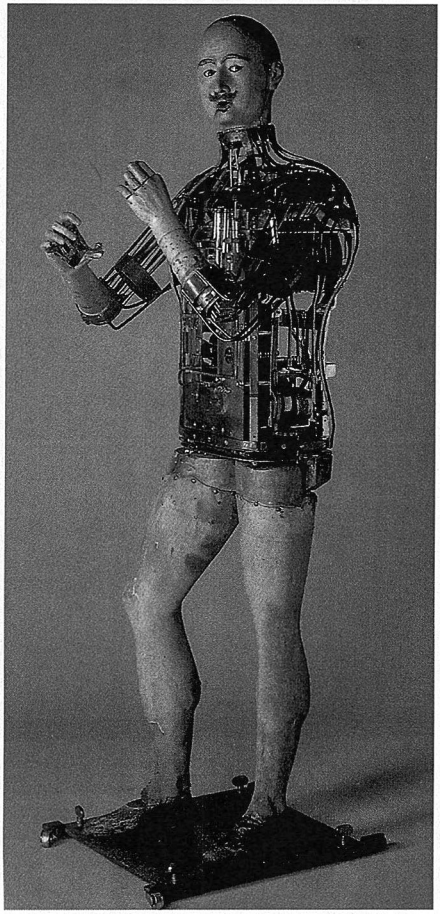


FIGURE 16. The Android Clarinetist in the exhibition "Devices of Wonder: From the World in a Box to Images on a Screen" November 13, 2001 to February 3, 2002 at the Getty Museum, Los Angeles. Barbara M. Stafford, Frances Terpak, Isotta Poggi, *Devices of Wonder: From the World in a Box to Images on a Screen* (Los Angeles: Getty Research Institute, 2001), fig. 96. Courtesy of John Gaughan. See color photo p. 237.