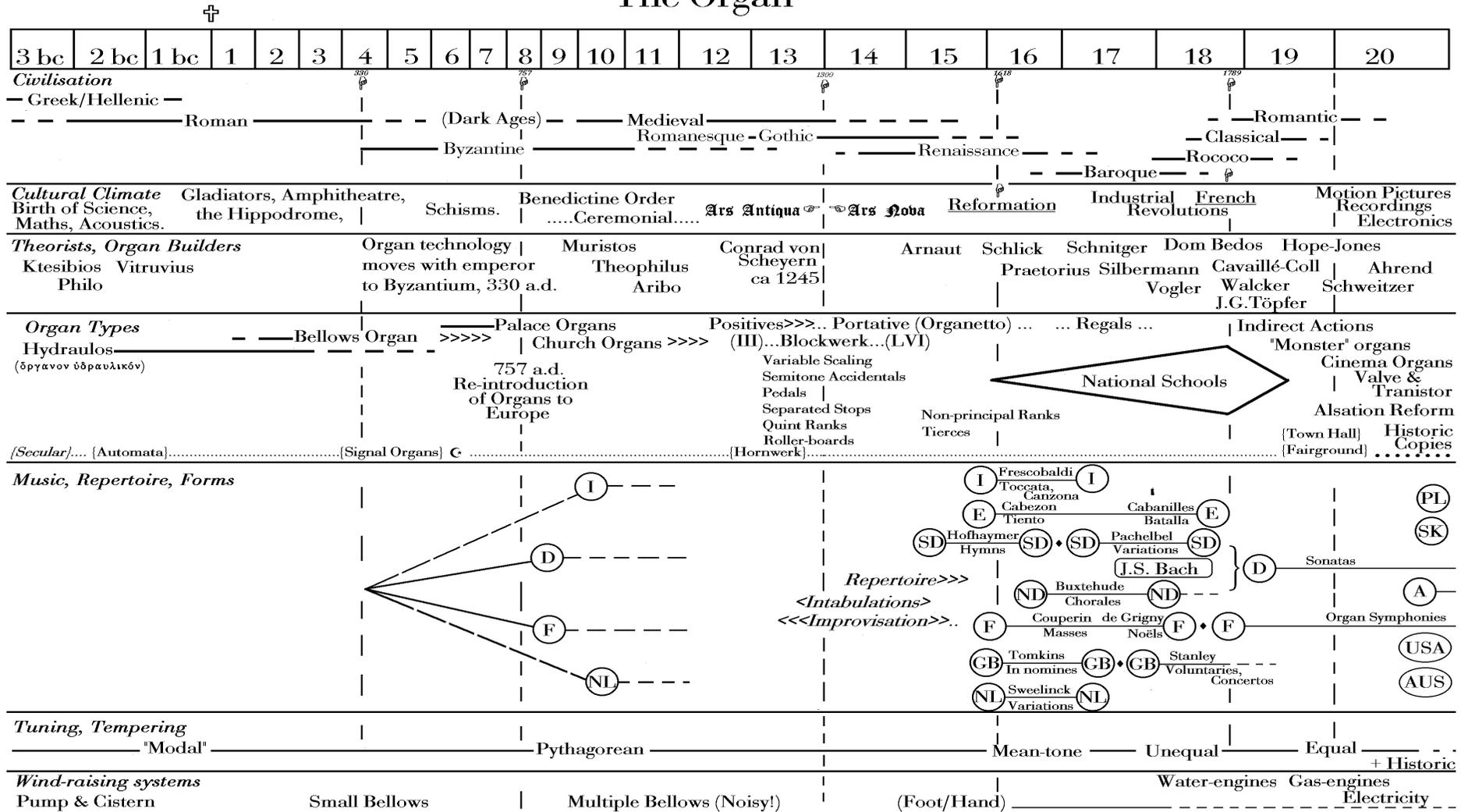


3BC-21stc

The Organ



c1500 BC- 21stc

AUTOMATA - Musical instruments played automatically - i.e. by a machine rather than a player. *Automata* are usually either hydraulic-pneumatic contrivances, or musical instruments controlled from pinned barrels, punched information storage devices (typically metal plates, paper rolls or strips), electronic systems (e.g. MIDI) or some combination of these. The playing **action** may be mechanical, pneumatic, electric, electro-pneumatic or electronic. They may be driven by hydraulic, human, clockwork, or electrical motive power. The sounding instrument itself may include everything from simple twittering birds or cuckoo clocks, to music boxes, carillons, harpsichords, chiming clocks, small and large organs (both indoors and outdoors, including **signal organs** and sirens) or may use **electronic tone generation**.

c1500BC

* Egypt - a great statue of the Theban God, Memnon sounded a signal at daybreak.

3rdc BC

* From the earliest development of the organ in the 3rdc BC (**Ctesibius; Arabic Organ**) there has been a close relationship with *Automata*: they have a natural affinity.

* The **rhytum**, one of the sound-producing "musical" contrivances of ancient Greece, was possibly a variety of **automata** or **signal organ**. It was another invention of **Ctesibios** related to, and probably preceding, the **hydraulis**. Hydellus of Alexandria referred to the rhytum in a poem dating c250BC:

Come, all ye lovers of pure wine,
Come, and within Arsinoë's shrine
Behold the Rhytum: like the Egyptian dancer
Besas, giving forth tones pure and bold,
Such is the Rhytum's mouth, outpouring.
It makes no sound of war;
But from its golden mouth
It signals mirth and revelry,
Such as the Nile, King of flowing rivers
Pours in watery sound from holy shrines,
Dear to the priests of sacred mysteries.
Then honor this invention of Ktesibios,
And hasten ye to fair Arsinoë's shrine.

* this and similar devices sometimes had religious associations: "waking the god" was one of the implied usages of organs or similar instruments (**Kyros; Dion; magrephà**)

11thc

* **Theophilus**: "*gilded trees, shining in the distance with a ruddy glow of yellow gold, whereon perched musical birds, fashioned of gold, just as though they were among the leaves of some pine or lofty fir tree, twittering forth a sound sweet as honey by means of a mechanism*".

13thc

* Roger Bacon's talking head. (See also 1860)

* Continuing development of organ-related automata - today vestiges of the hydraulic-pneumatic ingenuity of early *Automata* technology still survive in certain organ **accessories**, e.g. as twittering birds: **Rosignol, Kuckuk, Vogelgesang**, also **Cymbelsterne, Glockenspiele**

14thc

* From the 1300s the earliest self-playing carillons appear.

c1500 BC- 21stc

16thc

- * **Salzburger Stier** 1502
- * automatically playing harpsichords (including a virginal of Henry VIII in England)
- * often related to the fascination with astronomic clocks.
- * 1599 an automatic organ, incorporated into a clock, was sent by Elizabeth I of England to the **Sultan of Turkey**.

17thc

- * a number of important treatises (**Kircher, de Causs, Fludd**, Caspar Schott) were published which included details on organ-related automata, **Garden Organs** such as the “water organ” in the Villa d’Este, Tivoli (recently restored)
- * by this time various adaptations of *Automata* were becoming widespread e.g. the cuckoo clock

18thc-early 19thc

- * *Automata* now became more complex and played an important part in the sociology of upper-class Europe
- * **Flötenuhr** (especially Bavaria, Austria).
- * Highly dedicated and often quite ingenious organ builders, such as **Joseph Niemicz**, now made it possible to play quite lengthy works on their *Automata*. This was the era of the **barrel organ**. Important treatises included details of their construction and manufacture (**Engramelle, Dom Bedos**). In the late 18thc various inventions, usually with Greek names - **Panmelodikon, Apolonicon, Orchestrion** - were intended to imitate whole orchestras. Manufacturers included **Strasser** and **Mälzel**. **G. F. Handel, F. J. Haydn** and **W. A. Mozart** were associated with, and Haydn (smaller pieces) and Mozart (longer works) wrote some music specifically for barrel and clockwork organs.
- * the British, had been placing **barrel organs** in churches since the beginning of the 18thc

19thc

- * Beethoven’s *Wellington’s Victory* was intended for **Mälzels’ Panharmonicon**.
- * the **street organ** appeared
- * The British exported barrel organs to their colonies to provide voluntaries and congregational accompaniment for church
- * Alongside the more serious and useful 19thc developments some amazing gimmickry was also produced: the bustle of Britain’s Queen Victoria played “God Save the Queen” when she sat down
- * **Serinettes** (Vogelorgeln), **organettes** etc.
- * “signal organs” and their derivatives found new uses and forms - e.g. Birmingham and St Petersburg Railways signaling systems were developed by organ builders - the development in turn had influence on high-pressure organ reed stops such as the **Ophicleide** or **Tuba Mirabilis**
- * 1860 a device was contrived by Josef Faber (Vienna) in the form of a talking head employing ivory reeds (vocal cords), a rubber tongue and lips, all of which could be “played” from a keyboard to reproduce the mechanics of speech (cf. the vowel sounds of the organ stop **vox humana**, with which this device had a strong affinity.)
- * some more refined developments were applied to new methods of control of *Automata*, notably paper rolls and strips. In France in 1863 the creation of the first player pianos took place. The technology operated from a **pneumatic action** controlled by **player rolls**. At about the same time rolls and strips were applied to organs, amongst the most significant

c1500 BC- 21stc

form of which was the popular **Fairground organ** or **limonaire**.

* *Welte's* **orchestrions** were developed manufactured and very successfully marketed, as were similar instruments by the American Aeolian Company amongst others

20thc

* early 20thc several companies, again especially Aeolian and Welte, developed **player organs** on which recordings made by organists, playing standard organ repertoire, could be played back automatically from rolls.

* signaling systems were further developed by organ builders - **Robert Hope-Jones** and the Diaphone = the naval foghorn (the Diaphone was particularly associated with the cinema organ)

* the Welte **Vorsetzer** was developed early 20thc

Does this thing play?

Like a musical gorilla,

With fingers all of one length.

And with a sort of soul ...

(H. G. Wells in *Tono-Bungay*, 1909)

* The first applications of *Automata* applied to electronic sound reproduction and synthesizers followed on from the 200-ton New York **Telharmonium** with, in the 1920s, **Coupleux and Givélet** and then later (1930s) with **Percy Grainger's** experiments.

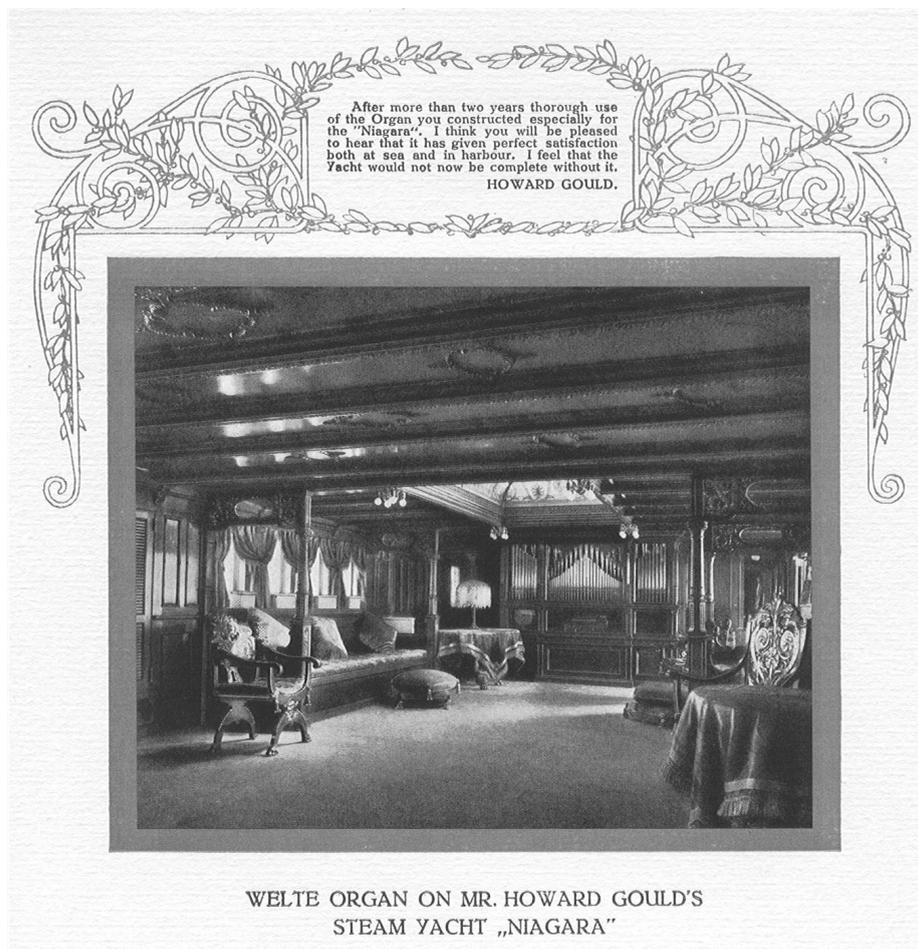
* 1913 Britannic organ built (also that surviving in Tunbridge Wells) - the instrument is now in the *Museum für Musikautomaten* at Seewen (Solothurn)

* c1920s automatically-playing **cinema organs** were also developed.

* The combination of **electric action** and modern computer **MIDI** technology is now frequently applied to automatically record and/or play back performances on some modern organs. Applications, such as that found at **Paris, Notre Dame** or **Sydney, Opera House**, use related computer technology primarily as a registration aid.

c1850-1916

SHIPS' ORGANS - during the mid-19thc, beginning with the **calliope**, keyboard musical instruments increasingly came to be featured on the river boats, yachts and ocean liners of Europe and North America. Calliopes were a "health and safety in the workplace" nightmare, burning their players' fingers and destroying their hearing - they could also use so much steam that they slowed the boats' progress! Jules Verne's 1869/70 novel *Twenty Thousand Leagues under the Sea* contains a reference to captain *Nemo* playing a pipe organ installed on his ship, *Nautilus*. From fiction to fact took a little time. **Harmoniums** and grand pianos were featured in such ships as the Cunard line's *Campania* and *Lucania* (both 1893). *Campania* even had false pipes arranged, as was sometimes the custom with harmoniums, to make it look like a pipe organ. A race was sparked off for luxurious on-board musical entertainment, which became a serious pursuit in the greatest luxury liners of early 20thc. In their catalogue of c1913/14, **Welte** identified and illustrated a number of piano and organ installations, including player pianos such as the *Welte-Mignon*, and **player organs** aboard yachts and ships. Their New York branch, which existed 1865-1917, installed at least one **orchestrion** aboard the *Pocahontas*, an American river boat. But the largest of these was eventually the **Britannic organ**, a Welte "**Philharmonie**" which was built for this sister ship to the Titanic. Others, mainly on vessels of the White Star Line or Lloyds, but including some private yachts such as Howard Gould's steam yacht, "Niagara," which also featured a *Philharmonie*, are chronicled in these catalogues. The **Aeolian** company were also involved: originally the Britannic was intended to have a player organ from this firm. (**Salon organ; Titanic organ**)



c1850-1916

1902-1903

- ☛ Die Planung an *Olympic* und *Titanic* startet. Orchestrien diverser Produzenten von mechanischen Musikinstrumenten sind seit längerer Zeit bekannt.

1908

- ☛ 16. Dezember: Kiellegung der *Olympic*.

1909

- ☛ Die erste Aufnahmeorgel der Firma *Welte* wurde in Freiburg gebaut.
- ☛ 31. März: Kiellegung der *Titanic*.

1910

- ☛ 20. Oktober: Die *Olympic* wird vom Stapel gelassen.

1911

- ☛ 31. Mai: Die *Titanic* wird vom Stapel gelassen; die *Olympic* wird der Reederei *White Star Line* ausgeliefert.
- ☛ November: Die Welte-Philharmonie-Orgel wird an der Weltausstellung von Turin erstmals der breiten Öffentlichkeit vorgestellt und das Bestellbuch der Firma eröffnet.
- ☛ 30. November: Kiellegung der *Britannic*.

1912

- ☛ 1. April: Jungfernfahrt der *Titanic*.
- ☛ 15. April: Untergang der *Titanic*.
- ☛ Die Arbeit an der *Britannic* wird eingestellt, solange die Ermittlungen zum Untergang der *Titanic* noch laufen. Einige Änderungen an der Konstruktion der *Britannic* werden vorgenommen, vor allem bei Sicherheitselementen.
- ☛ Welte-Philharmonie-Orgel werden von der Firma *Welte* erstmals in Katalogen angeboten.

1913

- ☛ *Welte* modifiziert die Konstruktion der Welte-Philharmonie-Orgeln, was auch Veränderungen an der Freiburger Aufnahmeorgel von 1909 nach sich zieht, möglicherweise auf Anraten des berühmten Organisten Edwin Lemare (Kurt Binniger, 1987). Im gleichen Jahr werden die modifizierten Modelle lieferbar, einschliesslich des grössten Modells, welchem das Instrument von Seewen entspricht und dessen Disposition nahe an der Freiburger Aufnahmeorgel liegt. Nun beginnt die eigentliche Produktion. Es ist genug Zeit vorhanden, die Orgel der *Britannic* zu bauen; da sich die Arbeiten auf dem Schiff verzögerten, stand sogar noch mehr Zeit zur Verfügung.

1914

- ☛ 26. Februar: Die *Britannic* wird vom Stapel gelassen und man startet mit dem Einbau der Innenausstattung.
- ☛ 28. Juli: Beginn des Ersten Weltkriegs.
- ☛ August: Zum ersten Mal wird gemeldet, dass die *Britannic* von der Marine eingefordert werden könnte. Der weitere Einbau der Innenausstattung des Schiffes verzögert sich.

1915

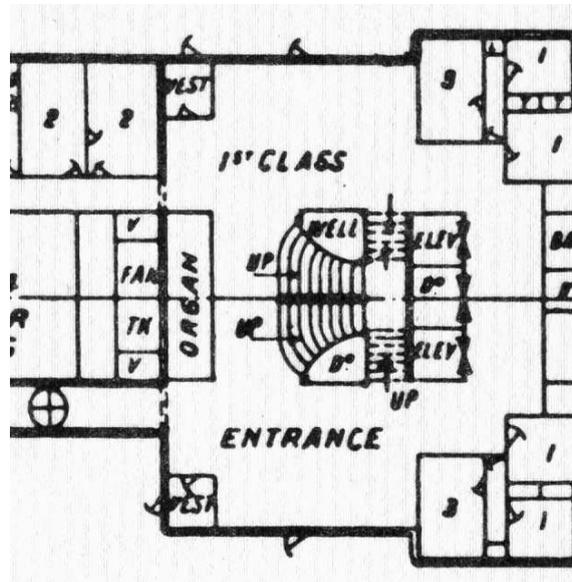
- ☛ Mai: Erste Tests werden durchgeführt. Gleichzeitig muss die *Britannic* innerhalb von vier Wochen in militärische Bereitschaft gestellt werden.
- ☛ 13. November: Die *Britannic* wird offiziell als Spitalschiff eingezogen und entsprechend umgerüstet.
- ☛ 11. Dezember: Die *Britannic* nimmt Kurs auf England und wird am 23. Dezember von der britischen Marine in Betrieb genommen.

1916

- ☛ 21. November: Die *Britannic* trifft auf eine deutsche Mine und sinkt vor der griechischen

c1850-1916

Insel Kea (Tzia) in der Ägäis.



Britannic: original plans



WELTE-PHILHARMONIE-ORGEL
auf S. S. Britannic der White Star Line

Welte catalogue c1914

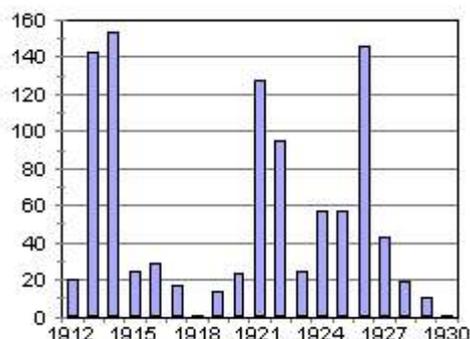
c1850-1916

Welte's rolls

1912	20
1913	143
1914	153
1915	25
1916	29
1917	17
1918	1
1919	14
1920	23
1921	128
1922	95
1923	24
1924	57
1925	57
1926	146
1927	43
1928	19
1929	10
1930	1

The Welte firm engaged the most famous organists of the day to make player-rolls for sale with their *Philharmonie* and certain other models. This could include smaller orchestrions where the registration playback had to be adapted, although usually severely compromised. One of the Seewen organ's great advantages is that it is easily large enough to accommodate all the original organist's registrations with the caveat that Welte's own changes to it took into consideration a slightly larger instrument than these organists had had at their disposal. The original registrations are thus recorded "true" on the rolls, the adjustment of them to smaller and larger instruments is revealing and allows some interesting case studies.

The accompanying table and graph show the firm's yearly output of new roll-titles from 1912-1930. They are based on the Seewen catalogue. There were more rolls made than Seewen now possesses, but currently the full extent of production is not known. There are 271 undated rolls at Seewen aside from those forming the basis of these tabulated and graphed statistics. As can be seen, the wartime-affected 1915-1920 period was a poor time for Welte and a lapse in demand around 1923 seems to have presaged the final decline after 1926.



All records of the company's recording sessions with organists have disappeared except for the earliest seasons 1912-13. The first artist was Bossi in September

1912. The exact date has not survived but it is clear that it must have been between 1st and 8th. Artists - and sometimes their families, as we know was the case with Lemare - spent a good week or so "in residence" while their recordings were made. There appear to have been "seasons" of them. During the "organ seasons" recordings of piano rolls were to some extent curtailed. However, even in the periods covered below, Louis Diémer, Eugen d'Albert, Fanny Davies, Claude Debussy, Rudolph Ganz, Josef Hofmann, Serge Liapunow, and Enrique Granados were also at times present and making recordings. Organists' commencing dates were:

c1850-1916

1912

September

? Bossi
9th Sittard
16th Breitenbach
30th Erb

20th R. Goss-Custard

July

8th Baldwin
14th Faulkes
26th Reger

August

November

26th Gigout

1913

February

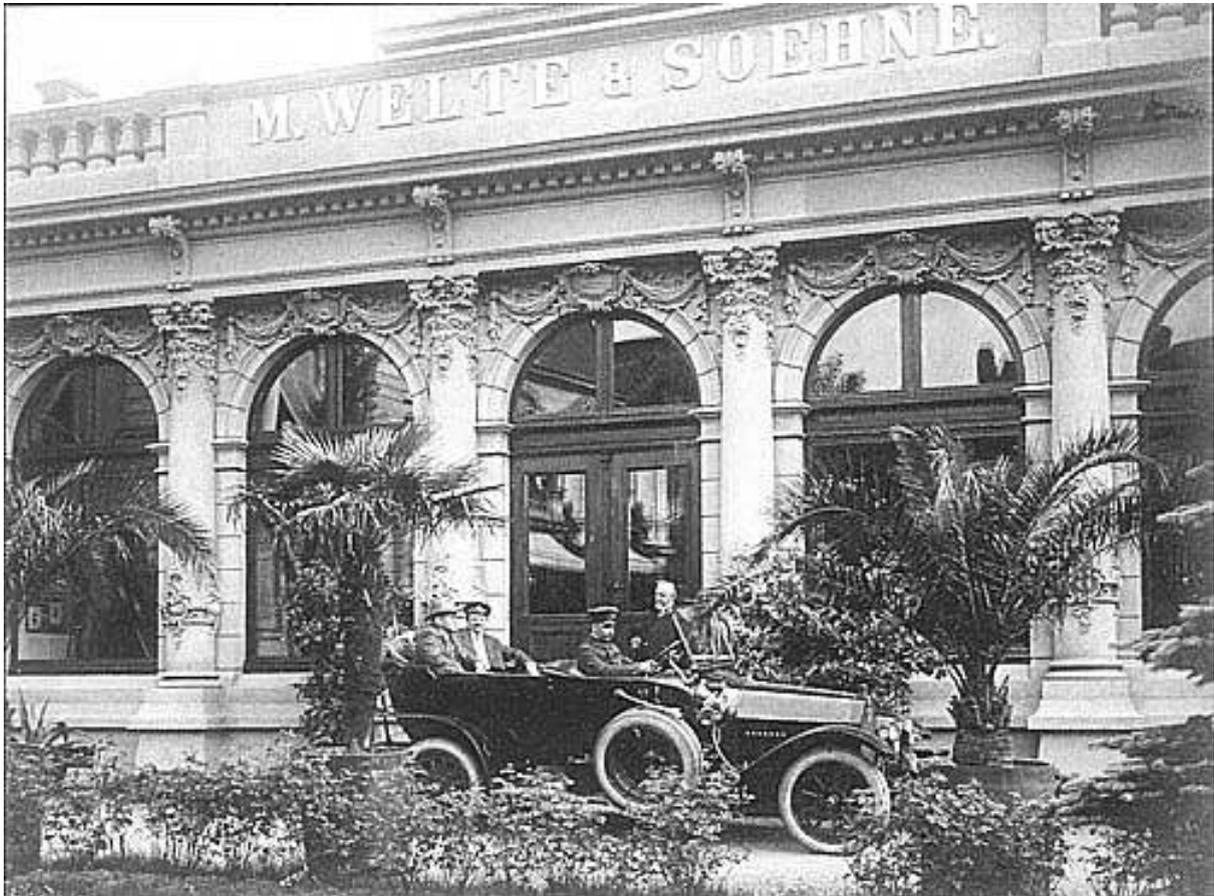
6th Bonnet

28th Hollins

September

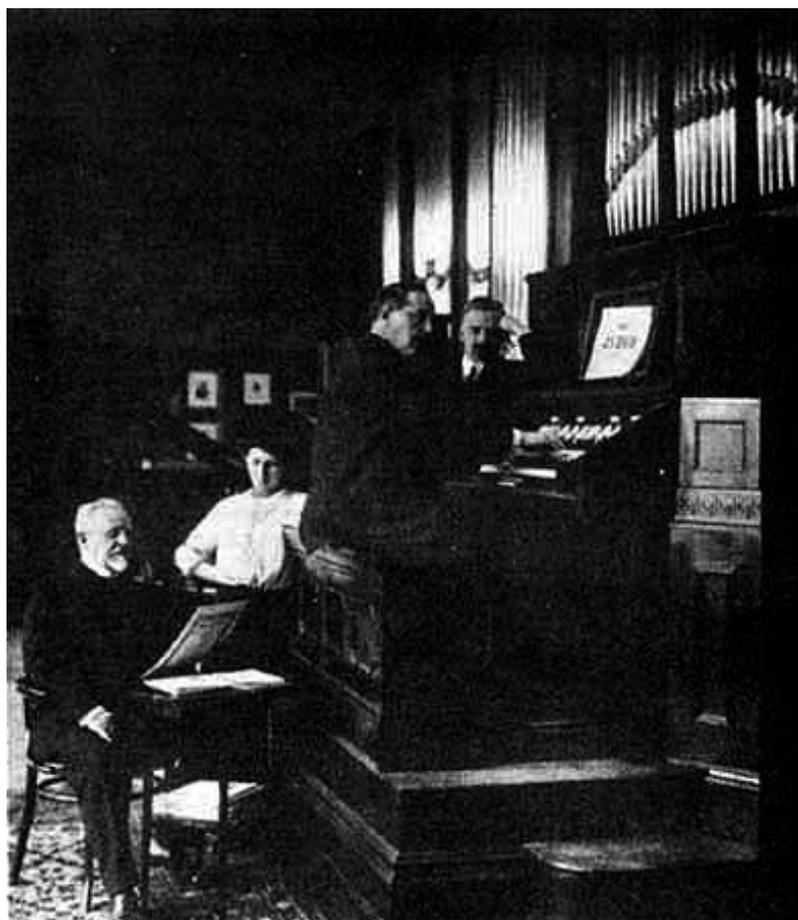
2nd Lemare
15th Walton
26th Wolstenholme

The Welte company struggled on through the first world war - roll releases dwindled (judging by Seewen's acquisitions) to just 1 in 1918 and then recovered in the early 1920s. The firm began to face serious problems from the late 1920s. The last roll was dated 1930; it was possibly the only new roll-title released dated that year.



Max Reger arriving for his recording session, July 26th 1912, in a Maibach

c1850-1916



Lemare recording in the Welte premises, September 1913

Lemare, Edwin Henry - internationally renowned organist, composer, arranger and compiler. *1865 Sep 9 Ventnor/Isle of Wight (GB:) 1888 was the year of first performance of his most famous work *Andantino in D^b* - the song-writer, Charles Daniels, later pirated it and, under the pseudonym of Neil Moret, issued it as a "work of an old master" entitled *Moonlight and Roses*; 1895 organist and choirmaster at London, St. Margaret Westminster; 1900 Dec 27 left for a visit to New York and played a recital there on New Year's Day; 1901 Jun recital for the Glasgow Exhibition; Sep a 15-recital tour of USA; .Mid-Dec took a post at the Carnegie Institute in Pittsburgh (62-stop Farrand & Votey organ); 1903 invitation to play a series at Sydney Town Hall; 1906 second Australia tour - included inauguration of Melbourne Town Hall organ and concerts in New Zealand; 1917 he held civic positions in San Francisco and Portland. †1934 Sep 24 Los Angeles (USA:)

Lemare recorded at least 89 rolls for Welte. Release dates were between 1912 and 1928. The repertoire is music transcribed from, based on or by J. S. Bach, Bach-Gounod, Brahms, Bizet, Bocherini, Chauvet, Chopin, d'Evry, Dubois, Dvorak, Elgar, Faulkes, Goldmark, Gounod, Guilmant, Händel, Hofmann, Hollins, Horseman, Humperdinck, Johnson, Mendelssohn, Mozart, Nevin, Offenbach, Rheinberger, Saint Saëns, Sandiford Turner, Schumann, Wagner, Weber, Wolstenholme and some popular songs. His own works are well-represented: Adagio patetico a Symphonie D moll Op. 50; Allegro pomposo; Andantino B^b major; Arcadian Idyll

c1850-1916

(Serenade, Musette Solitude,) Op. 52; Bell-Scherzo Op. 89; Benediction nuptiale Op.85; Chant du bonheur, Op.62; Chant seraphique, Op.75; Frühlingslied ("From the South") Op. 56; Intermezzo "Moonlight" Op.83 No.2; Madrigale; Marche héroïque Op.74; Morning day Op. 94; Pastorale E major; Romance in D^b major; Rondo Capriccio Op. 64; Scherzo a Symphonie d minor Op.50; Sonnenschein "Melodie"; Souvenir joyeux Op. 87; Stabat mater: Quis es homo (Rossini-Lemare); Summer Sketches: 1.Dawn 2.the bee 3 Cuckoo 4.Twilight 5.Evening Op.73; Sunset - Song without Words Op.69; Weihnachtslied Op.82; Wiegenlied Op. 81. His Opus 64 mentioned above is his famous "*Rondo Capriccio: A Study in Accents*". He recorded "Moonlight and Roses" but this roll is not contained in the Seewen collection. Finally there are 4 rolls with improvisations of his, one entitled "4.Februar für meinen Freund Karl Bockisch" (foreman at Welte, Freiburg), one noted in Seewen as "Improvisation mit Harfen-und Glocken-Effekt", one as "Improvisation on a given Theme tutti" and one as "Improvisation über ein Menuett".

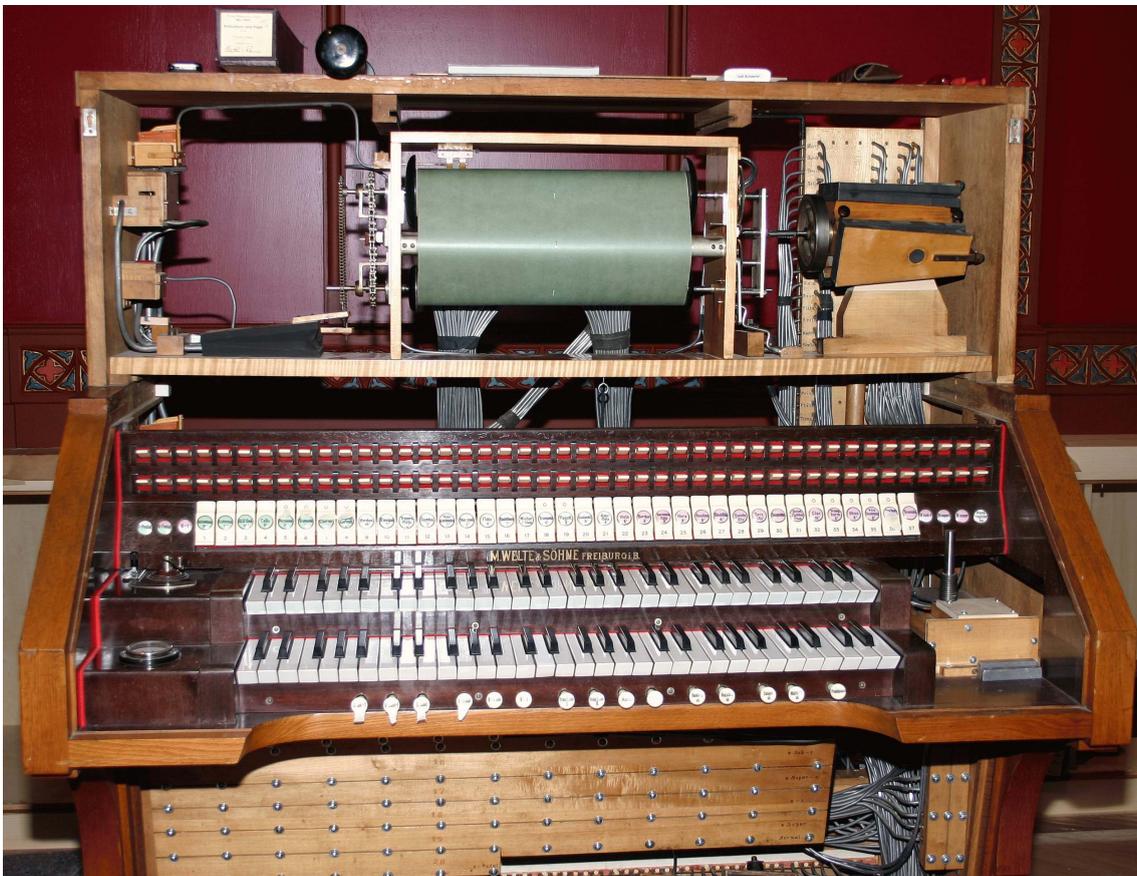
For sources, further reading and acknowledgments see
<http://www.davidrumsey.ch/origins.pdf>



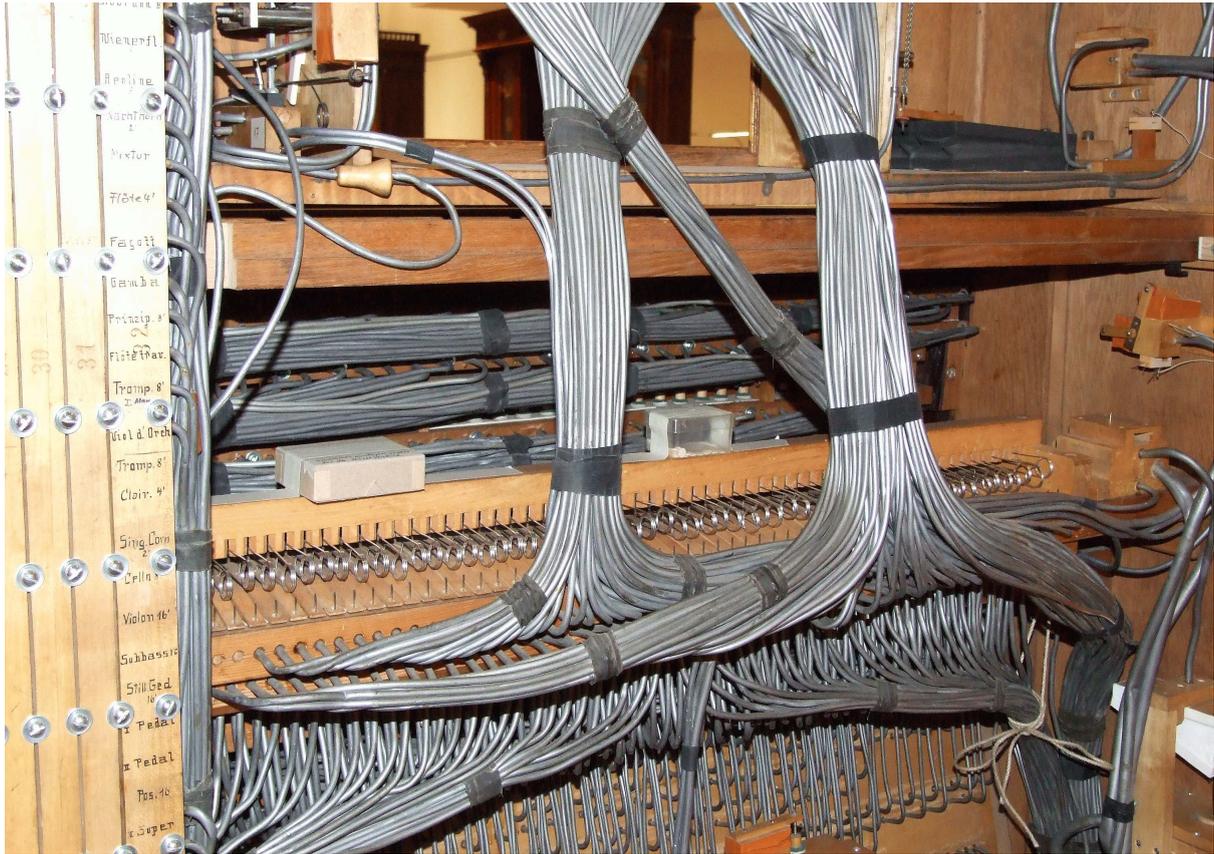
The Seewen organ, without case, prior to storage and restoration in 1998



The pipework inside - note the cardboard resonators of the Clarinet (center)



The Console and roll-playing mechanism during restoration 2007



Some of the lead tubing at the rear of the console



View of the completed organ in the Museum's Klangkunstsaal, October 2007

